

THIRTEENTH EDITION

Radio's MASTER

OFFICIAL MANUAL
AND BUYING GUIDE
OF ELECTRONIC AND
RADIO EQUIPMENT

UNITED CATALOG PUBLISHERS, INC.
106-110 LAFAYETTE STREET
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OFFICIAL
PARTS and EQUIPMENT MANUAL
of the
RADIO AND ELECTRONIC INDUSTRY

What to Buy and Where to Buy It

- **ILLUSTRATIONS**
- **DESCRIPTIONS**
- **SPECIFICATIONS**
- **PRICES**

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FOREWORD

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K-12	Television Industries Co.
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L-9	General Control Co.
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L-11 to 14	Advance Electric & Relay Co.
L-15, 16	Guardian Electric Mfg. Co.
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L-25	Detect-O-Ray Company
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U-10	Ungar Electric Tool Co., Inc.
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U-50	Kester Solder Co.
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DIRECTORY OF ADVERTISERS
and
THEIR SALES REPRESENTATIVES



C O N T E N T S

1. **ADVERTISERS:** Alphabetical listing of their names, together with addresses and telephone numbers. See Index Pages 11 to 17.



2. **GEOGRAPHICAL CHART** showing at a glance the territory covered by Sales Representatives for their Manufacturers. See Index Pages 18 to 35.



3. **REPRESENTATIVES:** Alphabetical listing of names, together with addresses and telephone numbers. See Index Pages 37 to 52.



NOTE: The listing of Sales Representatives was compiled from information supplied by advertisers in RADIO'S MASTER, 13th Edition. A few advertisers, however, have not availed themselves of this free listing. Therefore, while every precaution has been taken to insure accuracy in the preparation of this directory, the publishers cannot guarantee against the possibility of error or omission.

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NOTE: Listing of Manufacturers' Sales Representatives, the territories they cover, local office addresses and telephone numbers, will be found in the geographical chart and alphabetical index pages 18 to 52 following.

— A —

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Alliance
Ohio

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Tel. TRiangle 5-4763

ALPHA WIRE CORPORATION
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Tel. CANal 6-7666, 7667, 7668

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1161 N. Vine Street
Hollywood 28, Calif.

NEW YORK OFFICE
161 Sixth Avenue
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AMERICAN CONDENSER CO. ("AMCON")
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Tel. Longbeach 1386

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(See Radio Essentials, Inc.)

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West Hartford 7, Connecticut

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St. Paul 1, Minnesota
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Tel. MAIn 5-2050

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Tel. CANal 6-1446

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New York 6, N. Y.
Tel. COrtlandt 7-1074

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(See Standard Arcturus Corp.)

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Conneaut
Ohio

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Tel. VIRginia 7-10087

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Minneapolis 7, Minnesota

AUDIO DEVICES, INC.
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Tel. PLaza 3-0973

Branch Office
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844 Seward Street
Tel. HOLlywood 8902

— B —

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Tel. Boulevard 1821

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— C —

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Tel. Michigan 6808

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Tel. PProspect 2251

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Tel. Mulberry 1200

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Tel. EVErgrade 1600

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Radio Corporation of America
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415 South 5th Street
Harrison, New Jersey
Tel. HArrison 6-8000

— D —

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DeJUR-AMSCO CORPORATION
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Tel. ULster 5-4535

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Tel. HUmboldt 2-5978

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New York 21, N. Y.
Tel. BUTterfield 8-2300

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New York 12, N. Y.
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Tel. Stadium 7440

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13000 Athens Avenue
Cleveland 7, Ohio

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2007 Engineers Bldg.
205 West Wacker Drive
Tel. RANDolph 1868
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521 Fifth Avenue
Tel. MUrray Hill 2-3877

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Apparatus Department
Scheneectady 5, New York

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12 South Sixth Street
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837 Gravier Street
New Orleans 12, La.
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Niagara Falls, N. Y.
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GEORGIA	111	470	491		634	670	470		72	470	295
IDAHO	161	73,385	30	273		520	503			93	
ILLINOIS	647		52,182	170	626	647-A	647		150	91	
Northern		281					647			579	
Southern							52			579	
INDIANA	467	281	52,182	7	203	19,647-A	412	145	90	412	162
IOWA	377	595	182	471		348	348		493	415	
KANSAS	377	595	348	137		348	348		493	561	
KENTUCKY	467	510	166	7		19	412		75	412	
LOUISIANA	56	517	491,722			110	139			139	
MAINE	22	126	226	474		6	226			61	
MARYLAND	536	61	622	389,604		607	585		66	61	
MASSACHUSETTS	22	126	226	474	116	6	226			61	477
MICHIGAN	467	281	651	610	699	699	245	502	90	4	502
MINNESOTA			210		208	210	359			415	285
MISSISSIPPI	56	470	491			670	470			139	
MISSOURI	377	595	52,348	137	57	348	52	561	493	561,70	561,345
MONTANA		73,385	30	222,273		520	503			93	
NEBRASKA	377	595	182	137		348	348		493	561	
NEVADA			290			520	520		185	73	
NEW HAMPSHIRE	22	126	226	474		6	226			61	
NEW JERSEY	536	61	622	604		577	585		545	61	
NEW MEXICO		73	133	222		520	520		89	614	
NEW YORK		666	622	604	200	727	728	114	209	61	61
Metropolitan N. Y. C.	536	61		604	577,687	398,577	585		545	61	61
NORTH CAROLINA	111	470	491			670	470		72	470	682
NORTH DAKOTA			210			210	359			415	
OHIO	487	510	166	610	537,522	19	412,510	178	75	510	164
OKLAHOMA	56	517	348	379		348	348		89	561	
OREGON	161	385	30	273		520	503	462	185	93	93
PENNSYLVANIA			622	389,604	572	670				61	667
Eastern	536	61					585		66	61	
Western	467	510	484				510		209	510	
RHODE ISLAND	22	126	226	474		6	226			61	
SOUTH CAROLINA	111	470	491			670	470		72	470	
SOUTH DAKOTA			210			210	359			415	
TENNESSEE	111	470	491			670	470			470	
TEXAS	56	517	722	222,379	139	110	139	20	89	139	107
UTAH		73	133	222		520	520			73	
VERMONT	22	126	226	474		6	226			61	
VIRGINIA	111		622,491			670	585		72	373	572
WASHINGTON	161	385	30	273		520	503		185	93	
WEST VIRGINIA	467	510	484,622			670	510		75	510	
WISCONSIN	647	281	182	170		647-A	359,647		150	579	
WYOMING		73	133	222		520	520			73	
CANADA		747	759			760		772		772	765,779
U.S. EXPORT AGENCY		799	826		823	831	789				

MANUFACTURERS' REPRESENTATIVES—By Territory

	AMERICAN TELEVISION & RADIO	AMPERITE COMPANY	ASTATIC CORPORATION	ATLAS RESISTOR	ATLAS SOUND CORPORATION	AUDIO COMMUNICATION MFG. CO.	AUDIO DEVELOPMENT	AUDIO DEVICES, INC.	BARKER & WILLIAMSON	BELDEN MFG. CO.	BELL SOUND SYSTEMS
ALABAMA	670	634	295		697	254	111	295	491		102
ARIZONA	549		380	698	487	197		28	316		380
ARKANSAS	56	632	111	366	593	719	111	111	719	219,239	111
CALIFORNIA		696		696						74,293,850	
Southern	549		380		571	197		28	571		380
Northern			538		625	129		290	538		538
COLORADO	497		73		487	675			316	239	487
CONNECTICUT	228	606	116	373	116	564	95		477	423	116
DELAWARE	670	684	572		402	454	95				430
DIST. COLUMBIA	670	684	572	373	402	454			402		430
FLORIDA	670	634	295		697	254	317	295	491	642	102
GEORGIA	670	634	295		697	254	111	295	491	642	102
IDAHO	497	696	708		504		351	30	329		706
ILLINOIS		342,345	468,628			688	49	182	281	264,292,388,292	468
Northern	147,636		468		147						
Southern	147	415	468		730						
INDIANA	596	599	596	425	412	598	49	182	651,371	264,279	412
IOWA	371	415	638		147,364,730	675	49,57	269	371	233,239	208
KANSAS	371	345	638	425	730	675	57		371	239	57
KENTUCKY	510	599	387		178	598		303	281	279,594	412
LOUISIANA	58	632	111	366	593	719	111	111	719	219	111
MAINE	226	606	116	373	116	564	95		477		116
MARYLAND	670	684	572	373	402	454	95		402	38	430
MASSACHUSETTS	226	606	116	373	116	564	95		477	349,423	116
MICHIGAN	413	204	699		476		49	303	651	264	154
MINNESOTA	358	415	208		364		703	269	364	233	208
MISSISSIPPI	56	634	111			254,719	111	111	491,719		111
MISSOURI	371	345	638	425	730	675	57		371	239,594	57
MONTANA	497		706		504		351	30	329		706
NEBRASKA	371	415	638		730	675	57	269	371	239	57
NEVADA			538,380			129		290			380
NEW HAMPSHIRE	226	606	116	373	116	564	95		477		116
NEW JERSEY	395	684	525,572	373	82,402	82,454			588,402	36,423	525
NEW MEXICO	497	696	73		487			593	316	239	487
NEW YORK	395		13	373	116	13	95		59	349,423	116,525
Metropolitan N. Y. C.	395		525,577	373	82	82			588		525
NORTH CAROLINA	670	634	295		189	254		295	491	642	102
NORTH DAKOTA	359	415	208		364		703	269	364	233	208
OHIO	670,510	599	387,32		178	347	507	303	651	264,419	412,510
OKLAHOMA	56	632	593	366	593	719	57		719	219	722
OREGON	161	696	706	696	504	129	351	593	329	293	706
PENNSYLVANIA	670	684						30	402	36,16	
Eastern	670		572	373	402	13,454	95				430
Western	670	599	667		178	347	507		59		510
RHODE ISLAND	226	606	116	373	116	564			477	423	116
SOUTH CAROLINA	670	634	295		189	254	111	295	491	642	102
SOUTH DAKOTA	359,497	415	208		364		703	269	364	233	208
TENNESSEE	670	634	111,295		216-A	254	111	111	491	279	102,111
TEXAS	56	632	593	366	593	719	29	593	719	219	722
UTAH	497	696	73	696	487				316	239	487
VERMONT	226		116	373	116	564	95				116
VIRGINIA	670	684	572		402	454			402		102
WASHINGTON	181	696	706	696	504	129	351	30	329	293	706
WEST VIRGINIA	670	599	667		178	347			402	419	510
WISCONSIN	147	342,415	468		147,364	688	49,703	248	281	233	468
WYOMING	497	696	73		487				316	239	487
CANADA	764,779	696,747	749	757	747				329,764		776
U.S. EXPORT AGENCY	812		791	828	826			826	828		791

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MANUFACTURERS' REPRESENTATIVES—By Territory

	BLILEY ELECTRIC	BOGEN, DAVID, CO., INC.	BOONTON RADIO CORP.	BRADLEY LABS., INC.	BRADSHAW INSTRUMENTS	BRITISH INDUSTRIES CORPORATION	BROWNING LABS.	BRUSH DEVELOPMENT	BUD RADIO	BURGESS BATTERY	BURLINGTON INSTRUMENT
ALABAMA.....	102	295		195		470	195	670	111	483	731
ARIZONA.....	46	449	655			380	520	472			
ARKANSAS.....	517	139	399	29		111	519	593	366	460	230
CALIFORNIA.....	46	449	655	557	259	380	520	472			
Southern.....									129	702,571	35
Northern.....									565	501	565
COLORADO.....	73	222				432	520	675	497	51	432
CONNECTICUT.....	251	64	704	294		338	251	95	603		717
DELAWARE.....	588	64		438			609	670	609		352
DIST. COLUMBIA.....	588	64		438	536		609	670	609		329A
FLORIDA.....	102	295	532	195		470	195	670	111		317
GEORGIA.....	102	295		195		470	195	670	111		731
IDAHO.....	73,385	503		504		385	329	385	497,707		273
ILLINOIS.....	131	735	144	248			343	54	2,147	357,115	
Northern.....						118		675			485
Southern.....								675			238
INDIANA.....	424	735	144	187		541	343	19,54	640	511,453	691
IOWA.....	131,595	638	144	248		415		675	638		543
KANSAS.....	595	638				405		675	638	466	485
KENTUCKY.....	424	424		510	80	709	343,484	19	640		691
LOUISIANA.....	517	139	399	29		111	519	593	366	739	230
MAINE.....	251	64	704	294		338	251	95	603		429
MARYLAND.....	588,667	64		438	663,536	709	609	670	609	199,88	329-A
MASSACHUSETTS.....	251	64	704	294		338	251	95	603	486,301	429
MICHIGAN.....	651	386	144	583,163	546	607		461		617	370
MINNESOTA.....	285	269	144	248		415		553	2	282	33
MISSISSIPPI.....	102	139		195		111	519	670	111		230
MISSOURI.....	131,595	70,638				405	343	675	638	174	485
MONTANA.....	73,385	222		504		385		385	497		273
NEBRASKA.....	595	638				415		675	638	171	543
NEVADA.....	46	449				380	520	472			
NEW HAMPSHIRE.....	251	64	704			338	251	95	603		429
NEW JERSEY.....	588	64		438,639	536		179,609	95,670	569,609	96,98	352,568
NEW MEXICO.....	73	222				432	520	593	497		230
NEW YORK.....	480	64	512			480	728	95	728	520,420 465	34
Metropolitan N. Y. C.....	588	64		639	599-A		179		569	439,321 718	568
NORTH CAROLINA.....	102	295			663	470	195	670	111		195
NORTH DAKOTA.....	285	269				415		553	497		33
OHIO.....	424,651	424	144	510	80	709	44,484	19,670	164	436	467,691
OKLAHOMA.....	517	139	399	29	379	79	570	593	368		362
OREGON.....	385	503		504		385	329	385	707	161	109
PENNSYLVANIA.....		64						95,670		498,265	
Eastern.....	588	64		510,438	536		609		609		352
Western.....	667	667		510		709	484		667		612
RHODE ISLAND.....	251	64	704	294		338	251	95	603		717
SOUTH CAROLINA.....	102	295		195		470	195	670	111		195
SOUTH DAKOTA.....	285	269				415		553	497		33
TENNESSEE.....	102	295		195	663	470	195	670	111	721	195,485
TEXAS.....	517	139	399	29	379	79	570	593	366	643,242	230
UTAH.....	73	222				432	520	675	497		432
VERMONT.....	251	64	704	294		338	251	95	603		429
VIRGINIA.....	102	64		195			609	670	609		135
WASHINGTON.....	385	503		504		385	329	385	707		109,273
WEST VIRGINIA.....	667	667		510	663	709	44,484	670	667		612
WISCONSIN.....	131	269	144	248			343	54,553	2	725	180-A
WYOMING.....	73	222				432	520	675	497		432
CANADA.....	760,777	786		747	816		769	385,765	762		750
U.S. EXPORT AGENCY.....	799,789	803		844			809		825	837	799

MANUFACTURERS' REPRESENTATIVES—By Territory

	CAMBRIDGE THERMIONIC CORP.	CAMBURN, INC.	CANNON, C.F. COMPANY	CANNON ELECTRIC DEVELOPMENT	CARDWELL, ALLEN D., MFG. CORP.	CARRON MFG. CO.	CARTER MOTOR CO.	CHICAGO CONDENSER CORP.	CINEMOGRAPH SPEAKERS	CLARKSTAN CORP.	CLAROSTAT MFG. CO., INC.
ALABAMA	195	697			295	697	470			216A	470
ARIZONA	130	560			316	520	520		659	479	520
ARKANSAS	360			29	348	111	366		348		111
CALIFORNIA	130	560		78		520	520		659	479	520
Southern			287		571						
Northern			308		501						
COLORADO	130	560		211	316	520	432		487	222	520
CONNECTICUT	297	226			606		294		226	251	391,603
DELAWARE	430	339		723	597	402	410		214		384
DIST. COLUMBIA	430	339		723	597	402	410		214		224,384
FLORIDA	195	697		229	295	697	470			216A	470
GEORGIA	195	697		229	295	697	470			216A	470
IDAHO	130	560			504	520				222	520
ILLINOIS	184	330		354	318	325	49	40	182	646-A	149,730
Northern						2					
Southern					345						
INDIANA	184,649	204		735	318	424	49,596		640	646-A,599	506
IOWA	360	371			318,348	405	60		182	646-A	703
KANSAS	360	371			348	405	405		348		730
KENTUCKY	649	178			166	424	596		640	599	491
LOUISIANA	360			641	632	111	368		56		111
MAINE	297	226			606		294		226	251	391,603
MARYLAND	430	339		723	597	402	410		214		224,384
MASSACHUSETTS	297	226		260,523	606		294		226	251	391,603
MICHIGAN	649	204		699	651	386.2	154	154		649	204
MINNESOTA	184	330		662	364	2	415		364	703	703
MISSISSIPPI	195	697			519	111			58	216-A	111
MISSOURI	184,360	371		459	348,345	325,405	405,591		348		730
MONTANA	130	560			504	520	504		487	222	520
NEBRASKA	360	371			348	405	415		182		730
NEVADA	130	560				520			659	479	520
NEW HAMPSHIRE	297	226			606		294		226	251	391,603
NEW JERSEY	198	339			597	232,402	108,430		214,108	3	224,384
NEW MEXICO	130	560			316	520	432		487	222	520
NEW YORK	297	694		575	597		480	568	480	576	224,13
Metropolitan N. Y. C.	198	339		395,398		232	108	568	108	3	5,58
NORTH CAROLINA	195	697		229	295	697	470		189	216-A	470
NORTH DAKOTA	130	330			364	2	415		364	703	703
OHIO	649	178		32	168	424	510		320,840	599	510
OKLAHOMA	360	722			348	139	366		348	652	593
OREGON	130	560		112	504	520	504				520
PENNSYLVANIA	430	339,178			597		510				
Eastern				723		402	410		214		384
Western				510		667	510			599	510
RHODE ISLAND	297	226			606		294		226		391,603
SOUTH CAROLINA	195	697			295	697	470		189	216-A	470
SOUTH DAKOTA	130	330			364	2	415		364,487	703	703
TENNESSEE	195	697			295,519	111	111		189	216-A	470,111
TEXAS	360	722		29	632	111,139	368		56	222,652	593
UTAH	130	560		488	316	520	432		487	222	520
VERMONT	297	226			606		294		226	251	391,603
VIRGINIA	430			723		402	410		189	216-A	484
WASHINGTON	130	560	30	30	504	520	504				520
WEST VIRGINIA	430	178		510		667	510			599	510
WISCONSIN	184	330		464	318,364	2	49		182,364	646-A,703	703,149
WYOMING	130	560			316	520	432		487	222	520
CANADA	762	560,760		751-A	504,772		504,772		749	769	520,751
U.S. EXPORT AGENCY		828		792,799	789		792,799		826		831

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	COASTWISE ELECTRONICS CO., INC.	CONANT ELECTRICAL LABS.	CONTINENTAL CARBON, INC.	CONTINENTAL ELECTRIC CO.	CORNELL DUBILIER ELECT. CORP.	CORNISH WIRE CO., INC.	CRESCENT INDUSTRIES, INC.	CREST TRANSFORMER CORP.	CUNNINGHAM TUBES	DETECORAY COMPANY	DIAL LIGHT COMPANY OF AMERICA
ALABAMA.....	195	111			470		108-A		608	195	
ARIZONA.....	479	696	321		369		108-A	190	85		380
ARKANSAS.....	547	719	366		107	517	108-A	79	322	593	56
CALIFORNIA.....		696	321	256				190		278	380
Southern.....	479				369	201	108-A		85		
Northern.....	261				289	278	400		623		
COLORADO.....	222	432	487		487		108-A		104		
CONNECTICUT.....	338	627	294	381	523	562	551		451	116	6
DELAWARE.....	338	627	684		410	25	108-A	430	720		402
DIST. COLUMBIA.....	338	627	684	454	410	25	108-A	430	720		402
FLORIDA.....	317	111			470		108-A		608	195	
GEORGIA.....	195	111		470	470		108-A		608	195	
IDAHO.....	222,516	696	706		504,487		108-A		623	385	503
ILLINOIS.....		49		437	105,556	531	108-A	524-A	671		227,286
Northern.....	117		49		105				220		
Southern.....	425		405		556				24		
INDIANA.....	735	49	49		411	531	108-A	524-A	220,24		640
IOWA.....		208,49	405		556	269	108-A		104		638
KANSAS.....	425	561	405		526	52	108-A		104		638
KENTUCKY.....	735	599	510		411	119	108-A	510	24		640
LOUISIANA.....	547	719	366		107	517	108-A	79	322	593	56
MAINE.....	338	627	294		523	562	551		451	116	6
MARYLAND.....	338	627	510,684		410	25	108-A	430,510	720	402	402
MASSACHUSETTS.....	338	627	294	305	523	562	551		350,451	116	6
MICHIGAN.....	396	49	607	607	386	370	108-A		169		204
MINNESOTA.....		208	553	415	269	269	108-A		220		236
MISSISSIPPI.....	547	719	111		107		108-A		322	195	
MISSOURI.....	425	561,70	405	425,482	526	52	108-A		104		638
MONTANA.....	222,516	696,432	706		504,269		108-A		623	385	503
NEBRASKA.....		561	405,487		556,487	52	108-A		104		638
NEVADA.....	222	696	321		289		400	190	85,623		380
NEW HAMPSHIRE.....	338	627	294		523	562	551		350,451	116	6
NEW JERSEY.....	338	627	588,684		64	25	108-A	430	15,165	402	402
NEW MEXICO.....	222	432	487		487		108-A		440		
NEW YORK.....		627	294		480	475	108-A		165, 15 330	116	
Metropolitan N. Y. C.....	338		588	173	64		108-A			375	
NORTH CAROLINA.....	195	111			470		108-A		215	195	
NORTH DAKOTA.....		208	553		269	269	108-A		220		
OHIO.....	467	599	510	599	164	335	108-A	510	534,24		640
OKLAHOMA.....	56	561	366		107	517	108-A	79	440	593	56
OREGON.....	516	696	706		504	580	108-A		623	385	503
PENNSYLVANIA.....				605,167			108-A				
Eastern.....	338	627	684		410	25		430	720	402	402
Western.....	467	599	510		667			510	534	667	640
RHODE ISLAND.....	338	627	294		523	562	551		451	116	6
SOUTH CAROLINA.....	195	111			470		108-A		215	195	
SOUTH DAKOTA.....		208	553		269	269	108-A		104		
TENNESSEE.....	195,547	111	111		470		108-A		322,608	195	
TEXAS.....	56	719	386	366	107	517	108-A	79	440	593	56
UTAH.....	222	696	487	222	487		108-A		85		380
VERMONT.....	338	627	294		523	562	551		350,451	116	6
VIRGINIA.....		111	684		410		108-A	430	215,720	195	402
WASHINGTON.....	516	696	706	516	504	580	108-A		623	385	503
WEST VIRGINIA.....	467	599	510		667		108-A	510	24	567	640
WISCONSIN.....		49	49,553		556	269	108-A	524-A	220		286
WYOMING.....	222	432	487		487		108-A		104,623		
CANADA.....		761,696		747	766,778					385	746,503
U.S. EXPORT AGENCY.....	804	828	804			794			824		

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	DRAKE ELECTRIC WORKS, INC.	DRAKE MFG. COMPANY	DUNMONT, A. B. LABORATORIES INC.	DUSTONE COMPANY, INC.	EASTERN MIKE STAND COMPANY	EBY SPECIALTY SALES CO.	EITEL, McCULLOUGH, /INC.	ELECTRO MECHANICAL INSTRUMENT	ELECTRONIC INDICATOR CORP.	ELECTRONIC INSTRUMENT CO., INC.	ELECTRONIC LABORATORIES /INC.
ALABAMA	295	111	491,519	189		697	470	302	195		
ARIZONA	557		287	696		287	46		190		614
ARKANSAS	719	111	12,519	139		722	517				
CALIFORNIA			287	696			46	146	190	190	560
Southern	557	542			197	287					
Northern	400				501	631					
COLORADO	432		222	487			73				73
CONNECTICUT	603	226	704	45		551	126	22			
DELAWARE	410	684	224	223		214	597	402	414		
DIST. COLUMBIA	410	684	224	223		214	597		414		
FLORIDA	295	111	491,519	189		697	470	302	195		317
GEORGIA	295	111	491	189		697	470	302	195		470
IDAHO	432		30	385		30	385,73		273		
ILLINOIS	574,664			444	296	147	281	187			416
Northern			144						635	615	
Southern			12						425		
INDIANA	599	691	735	444		640	281	187	635	506	
IOWA	194	194	12,144	405		371	595,281		415	194	
KANSAS	194	194	12	405		371	595		425	194	
KENTUCKY	599		735	444		640	281	187			
LOUISIANA	719	111	519	139		722	517				641
MAINE	603	226	704	45		551	126	22			
MARYLAND	410	684	224	223	536	214	597	402	414		
MASSACHUSETTS	603	226	704	45		551	126	22			126
MICHIGAN	396	607	649,144	154,266		245	281	396		607	396
MINNESOTA	359		248	266			281		415		183
MISSISSIPPI	295,719	111	519	189			470	302	195		
MISSOURI	194	194	12	405		371	595	187	425	194	638,348
MONTANA	385,432		30	266		30	385,73		273		
NEBRASKA	194	194	12	405		371	73		415	194	
NEVADA	432		287	696		287,631	46		190		
NEW HAMPSHIRE	603	226	704	45		551	126	22			
NEW JERSEY	134,410	684,633		223	536	214	597	402	414		
NEW MEXICO	432		222	487			73				
NEW YORK	729,664 410	205	512	45			597	13			669
Metropolitan N. Y. C.	134	633	224,672	45	536	665		639	414	26	559
NORTH CAROLINA	295	111	491	189		697	470	302	195		
NORTH DAKOTA	359		248	266					415		
OHIO	599	691	144,649	444		640	281	187	528		164
OKLAHOMA	719		399,12	139		722	517			194	
OREGON	385	706	30	385		30	385		273		
PENNSYLVANIA				223,444			597				410
Eastern	410	684	543-A		536	214		402	414	489	
Western	599	510	224			640			528		
RHODE ISLAND	603	226	704	45		551	126	22			
SOUTH CAROLINA	295	111	491	189		697	470	302	195		
SOUTH DAKOTA	359,295 194		248	266					415		
TENNESSEE		111	491,519	189		697	470	302	195		
TEXAS	719		399	139	366	722	517			27	593
UTAH	432	222	222	696			73				
VERMONT	603	226	704	45		551	126	22			
VIRGINIA	410		224	189			597	402	195		
WASHINGTON	385	706	30	385		30	385		273		
WEST VIRGINIA	599,410	510	543-A	444		640	597		528		
WISCONSIN	574		144	266		147	281	187	635		
WYOMING	432		222	487			73				
CANADA	780,385	747	755		772	30					784
U.S. EXPORT AGENCY		826	795				799				793,826

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	ELECTRONIC MEASUREMENTS CORP.	ELECTRONS, INC.	ELECTRO PRODUCTS LABS, INC.	ELECTRO-VOICE, INC.	ENSIGN INDUSTRIES, INC.	ESPEY MFG. CO., INC.	FREED TRANSFORMER CO., INC.	GARRARD SALES CORP.	GENERAL CONTROL CO.	GENERAL DRY BATTERIES	GENERAL ELECTRONICS, INC.
ALABAMA.....	195		491	634		255		470			491
ARIZONA.....	696		494	176	190	527		380	277	624	527
ARKANSAS.....	652		719	517		632	360	111		111,43	366
CALIFORNIA.....	696	494			190	659	278	380	277	261	
Southern.....			494	176						567	472
Northern.....			400	290							501
COLORADO.....	696		432	432	222	527	360	432	497	624	527
CONNECTICUT.....	342		114	114		226	603	338	181		373
DELAWARE.....	705		114	597		394	705		723	724	373
DIST. COLUMBIA.....	705		114	597		394	705		723		373
FLORIDA.....	195		491	634		255		470		111	317
GEORGIA.....	195		491	634		255		470		111	491
IDAHO.....	696		385	503,432	222	30		385	30	706,540	148
ILLINOIS.....	55		49						286	533	
Northern.....						646-A		118			492
Southern.....						455					492
INDIANA.....	55		49	640		506			735	533	467
IOWA.....			405			^{455,589} ₂₀₈	360	415	735	363	71
KANSAS.....	652		405			589	360	405		363	730
KENTUCKY.....	510		44	537,640		506	164	709	735	533	80
LOUISIANA.....			719	517		632		111	593	111,43	366
MAINE.....	342		114	114		226	603	338	181		373
MARYLAND.....	705		114	597		394,667	705	709	723	724	373
MASSACHUSETTS.....	342		114	114		226	603	338	181		373
MICHIGAN.....	607		248,649			154		607			467
MINNESOTA.....	55		248			208		415	662		71
MISSISSIPPI.....	195		491	634		255		111		111,43	491
MISSOURI.....			405			455,589	360	405		363	730
MONTANA.....	696		432,385	503,432	222	30		385	497	706,540	148
NEBRASKA.....			405	432		589	360	415	497	363	71
NEVADA.....	696		400	290	190	659,527		380			527,501
NEW HAMPSHIRE.....	342		114	114		226	603	338	181		373
NEW JERSEY.....	705		114	597		604,394	705	217	341A-723	724	373
NEW MEXICO.....	696		432	432	222	527	360	432	497	624	527
NEW YORK.....	705		114	114		604,669	705	480	677,736	243	373
Metropolitan N. Y. C.....				597		604			341-A		232
NORTH CAROLINA.....	195		491	634		255		470		189	491
NORTH DAKOTA.....						208		415	497		71
OHIO.....	510		44	537		31	164	709	735,80	533	80
OKLAHOMA.....	652		719	517		632	360	79	593	593	366
OREGON.....	696		385			30	161	385	30	706,540	148
PENNSYLVANIA.....	705			597							
Eastern.....			114	114		394	705		723	724	373
Western.....			44	537		667	164	709		243	80
RHODE ISLAND.....	342		114			226	603	338	181		373
SOUTH CAROLINA.....	195		491	634		255		470		189	491
SOUTH DAKOTA.....			248			208		415	497		71
TENNESSEE.....	195		491	634		255		470		111,43	491
TEXAS.....	652		719	517		632	360	79	593	593	366
UTAH.....	696		432	432	222	527		432	497	624	527
VERMONT.....	342		114	114		226	603	338	181		373
VIRGINIA.....	195		114	114		255			723	189	373
WASHINGTON.....	696		385	503		30	161	385	30	706,540	148
WEST VIRGINIA.....	510		44	537		667	164	709		533	467
WISCONSIN.....	55		248			208,646A			286		492
WYOMING.....	696		432	432	222	527		432	497	624	527
CANADA.....	751		747	764				772	765		
U.S. EXPORT AGENCY.....	834		833	826				801		802	789

MANUFACTURERS' REPRESENTATIVES—By Territory

	GUARDIAN ELECTRIC MFG. CO.	HALLDORSON COMPANY	HALLCRAFTERS COMPANY	HAMMARLUND MFG. CO., INC.	HEACON ELECTRIC COMPANY	HICKOK ELECTRIC INSTRUMENT CO.	HYTRON RADIO & ELECTRONICS CORP.	INDUSTRIAL CONDENSER CORP.	INDUSTRIAL INSTRUMENTS, INC.	INSULINE CORP. of AMERICA	INTERNATIONAL RESISTANCE COMPANY
ALABAMA	435		678	491	421	295	697	697		295	295
ARIZONA	550	446	449	614		37	369	680		520	449
ARKANSAS	632	456	348	107	186	632	56	632		719	20
CALIFORNIA		446			143	37			120	520	
Southern	550		449	680		37	369	680			449
Northern	400		538	291		37	289	501			278
COLORADO	222	446	73	222		487	497	432		520	73
CONNECTICUT	496	274	126	340	495	126	529		704	294	523
DELAWARE		670	569				69	402			
DIST. COLUMBIA		670	202				69		454		
FLORIDA	435	670	678	491	421	295	697	697		295	295
GEORGIA	435	670	102	491	421	295	697	697		295	295
IDAHO	222	446	73,30	93	368	37	324,504	706		520	73
ILLINOIS		457	131	149	14				144	405,49	153
Northern					14	2,416	246	247			
Southern				506	14	2	425	710			
INDIANA		122	424	506	14	162	^{425,125} ₂₀₄		144	162	411
IOWA	216	457	131	208	14	675	269	589		405,49	646
KANSAS	216	457	348	194	186	675	425	589		405	345
KENTUCKY		122	424	506	14	162	404	424		162	411
LOUISIANA	641	456	490	107	421	632	56	632		719	20
MAINE	551	274	126	340	495	126	529		704	294	523
MARYLAND		670	202	667	53,427		69,404	402	454		
MASSACHUSETTS	551	274	126	340	495	126	529		704	294	523
MICHIGAN	333	86	651	699	14	651	125,204	396	649	607	370
MINNESOTA	2	457	285	208	14	2	269	359	248	553	153
MISSISSIPPI	641	670	490	491	421		56	697		719	20
MISSOURI	216	457	131,348	194	14	336,675	425	710,589		405	345
MONTANA	222	446	73,30	93	368	37	324,504	432		520	73
NEBRASKA	216	457	131	194	14	675,487	269,497	589		405	646
NEVADA	222	446	538	222		37	289,369	501		520	278
NEW HAMPSHIRE	551	274	126	340	495	126	529		704	294	523
NEW JERSEY	244	586	569		172	311	69		224		
NEW MEXICO	222	446	73	614		487	497	432		520	73
NEW YORK	244,628	307	64		495	311,480	69	677	512		669
Metropolitan N. Y. C.		586	569		172	311		207	224		
NORTH CAROLINA	435	670	102	491	421	295	189	189		295	295
NORTH DAKOTA		457	285	208		2	269			553	646
OHIO	275	86	424,651	31	14	374	^{125,204} ₄₀₄	424	144	32	31
OKLAHOMA	632	456	348	107	186	632	56	632		719	20
OREGON	445	446	30	93	368	37	324,504	706		520	385
PENNSYLVANIA	708	670							224		
Eastern			569		172		69	402			
Western	94		64	667	427	241	404			32	667
RHODE ISLAND	551	274	126	340	495	126	529		704	294	523
SOUTH CAROLINA	435	670	102	491	421	295	189	189		295	295
SOUTH DAKOTA		457	285	208		2	269			553	646
TENNESSEE	435	670	102	491	421	295	189	189		295	295
TEXAS	431,632	456	431	107	186	632	56	632		719	20
UTAH	222	446	73	222		37	497	432		520	73
VERMONT	551	274	126	340	495	126	529		704	294	523
VIRGINIA		670	102	309	421		189	402,189			
WASHINGTON	445	446	30	93	368	37	324,504	706		520	385
WEST VIRGINIA	445	670	64	667	427		404			32	667
WISCONSIN	2	457	131	149,208	14	2	246,269	247	144	49,553	646
WYOMING	222	446	73	222		487	497	432		520	73
CANADA	780		771	787	368,745	783	^{324,504} ₇₆₉			520,9,764	
U.S. EXPORT AGENCY	804		843	826	805,812	840	840	799		807	

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MANUFACTURERS' REPRESENTATIVES—By Territory

	JACKSON ELECTRICAL INSTRUMENT CO.	J-B-T INSTRUMENTS INC.	JENSEN INDUSTRIES, INC.	JENSEN MFG. CO.	J.F.D. MFG. CO., INC.	JOHNSON, E.F. COMPANY	JONES, HOWARD B., DIVISION	KAINER & COMPANY	KENYON TRANSFORMER CO., INC.	KINGS ELECTRONICS CO., INC.	KNIGHTS, JAMES, CO.
ALABAMA.....		470	697	670	255	470	111	111	519,697	634	
ARIZONA.....		630	252	614	197				557	446	
ARKANSAS.....		517	79	517	27		29	719	107	456	
CALIFORNIA.....	380	630						472	557	446	100
Southern.....			252	680	197	696					
Northern.....			625	50	501	400					
COLORADO.....	432		497	73	133	73			487	222	
CONNECTICUT.....		606	606	126	114	661	523		477	274	294
DELAWARE.....		315	114	670	114	410	410	430	597	653	
DIST. COLUMBIA.....		454	114	670	114	410	410	430	597	653	
FLORIDA.....		470	697	670	255	470	317	111	519,697	634	
GEORGIA.....	634	470	697	670	255	470	111	111	697	634	
IDAHO.....			497	73	133	385		706	161	445	100
ILLINOIS.....		318	343		726	182		91	248		
Northern.....										122	
Southern.....		52		345						457	
INDIANA.....	640	^{318, 52} ₇₆₆	343	42	598	424		91	248	122	
IOWA.....		269	194	589	194			101	638	457	
KANSAS.....		561	194		194	561	425		638	269	
KENTUCKY.....		166	537	42	598	424	111	510	467	122	510
LOUISIANA.....		517	79	517	27	182,490	29	719	519	456	
MAINE.....		506	606	126	114	661	523		477	274	294
MARYLAND.....		^{454, 315}	114	670	114	410	410	510	597	653	
MASSACHUSETTS.....	257	606	606	126	114	661	523		477	274	294
MICHIGAN.....	86	413	343	607	726	386	204	4	467	86	
MINNESOTA.....	359	269	71	285	101	285		101	248	269	
MISSISSIPPI.....		470	697	670	255	490	111	719	519	634	
MISSOURI.....	405	^{52, 561}	194	589	194	561	425		638	457	
MONTANA.....			497	73	133	385, 73		706		222, 445	
NEBRASKA.....		561	194	589	194	561		101	638	269	
NEVADA.....		630	625	50	501	400			487	222	
NEW HAMPSHIRE.....		606	606	126	114	661	523		477	274	294
NEW JERSEY.....		^{681, 315}	114	213, 670	114	410	395	430	597	106, 653	
NEW MEXICO.....			497	614	133	73			487	222	578
NEW YORK.....		^{669, 681}	114	669	114	666	395		597	106	294
Metropolitan N. Y. C.....	64	^{535, 681}	114	213	114	508				106	639
NORTH CAROLINA.....		470	697	670	255	470	111	111	697	634	
NORTH DAKOTA.....		269	71	285	101	285		101	487	269	
OHIO.....		166	537	424	^{528, 598} ₇₂₆	424	599	510	467	32	510
OKLAHOMA.....		561	194	517	139	561	29	719	107	456	
OREGON.....		30	1	30	161	385		472, 706	161	445	100
PENNSYLVANIA.....				670		^{410, 424}	410			586	
Eastern.....		315	114		114			430	597	653	430
Western.....		484	537		528			510	467	32	510
RHODE ISLAND.....		606	606	126	114	661	523		477	274	294
SOUTH CAROLINA.....		470	697	670	255	470	111	111	697	634	
SOUTH DAKOTA.....		269	71	285	101	285		101	487	269	
TENNESSEE.....		470	697	670	255	470	111	111	519, 697	634	
TEXAS.....	139	517	79	517	139	722	29	719	107	456, 446	578
UTAH.....			497	73	133	73			487	222	
VERMONT.....		606	606	126	114	661	523		477	274	294
VIRGINIA.....		454	114	670	114	410	410	430		552, 634	
WASHINGTON.....	445		1	30	161	385		706, 472	161	445	100
WEST VIRGINIA.....		454	537	670	528	410	410	510	467	32	510
WISCONSIN.....		^{318, 269}	343	285	101	182, 285		91, 101	248	269	
WYOMING.....			497	73	133	73			487	222	
CANADA.....		^{764, 777}	752	754	786	^{780, 385} ₇₇₇	752	205, 706		747	
U.S. EXPORT AGENCY.....	791		829	138	^{791, 816, 810}	831	833	825			

MANUFACTURERS' REPRESENTATIVES—By Territory

	LEACH RELAY CO.	LECTROHM, INC.	LITTELFUSE, INC.	LYMAN ELECTRONIC CORP.	MALLORY, P.R. & CO., INC.	MARION ELECTRICAL INSTRUMENT	MEASUREMENTS CORP.	MEISSNER MFG. DIV'N.	MERIT COIL & TRANSFORMER CORP.	MIDDLETOWN MFG. CO.	MILLEN, JAMES MFG. CO., INC.
ALABAMA		254		670		670	255	418	697	697	255
ARIZONA		230		497	276	520	693	252	46	100	369
ARKANSAS		230				456		741	517		719
CALIFORNIA	696,270		729	479	276,291	520	693	252		100	
Southern		680							46		369
Northern		400							501		289
COLORADO	497	527		497	313	222		432	497	100	
CONNECTICUT		342		406		95		234	114		226
DELAWARE		442		670		670		609	114		
DIST. COLUMBIA		442				670		609	114		
FLORIDA	317	254		670		670	255	418	697	339	402
GEORGIA	102	254		670		670	255	418	697	697	317
IDAHO		516		497	93	503		385,432	706,497	100	255
ILLINOIS	286		65			81		365			574
Northern		248									
Southern									194		
INDIANA	162	92		127		81		44	127		411
IOWA		248		675		457		269	194		589,574
KANSAS		527		675	313	457		365	194		589
KENTUCKY		92		127		19		44	19,127	80	411
LOUISIANA		230				456	399	741	517		719
MAINE		342		406		95		234	114		226
MARYLAND		442		670		670		609	114	339	402
MASSACHUSETTS	116	342		406		95		234	114		226
MICHIGAN		467				19	583	44	19	413	695
MINNESOTA	285	248			285			269	364		210
MISSISSIPPI		230		670		670	255	418	697	697	719
MISSOURI	561			675		457		365	194		589
MONTANA		516		497	93	503		432,385	497	100	
NEBRASKA		527		497	313	457		269	194		589
NEVADA		527			276,291	520		252		100	
NEW HAMPSHIRE		342		406		95		234	114		226
NEW JERSEY		134,442		670		582		134	106	339	134,402
NEW MEXICO		527		497	313	222		432	497	100	
NEW YORK	601	134	331			728		134	106	339	695
Metropolitan N. Y. C.	452	134		375		734,582		134	106	339	134
NORTH CAROLINA		254		670		670	255	418	697	597	255
NORTH DAKOTA		527			285			269	364		210
OHIO	327,326	374		80		19	583	44	19	80	695,411
OKLAHOMA		230				456	652	741	517		719
OREGON		516		462	93	503		385	706	100	329
PENNSYLVANIA	410			670		670				339	
Eastern		442						609	114		402
Western		528						44	19		695
RHODE ISLAND		342		406		95		234	114		226
SOUTH CAROLINA		254		670		670	255	418	697	597	255
SOUTH DAKOTA		527		497	285			269	364		210
TENNESSEE		254		670		670	255	418	127	697	255
TEXAS	107	230		497		456	399	741	517	100	719
UTAH		527		497	313	222		432	497	100	
VERMONT		342		406		95		234	114		226
VIRGINIA		254		670		670	255	609	114		402
WASHINGTON	698	516		462	93	503		385	706	100	329
WEST VIRGINIA		528		670		670		44	19		
WISCONSIN		248				81		365,269	364		574,210
WYOMING		527		497	313	222		432	497	100	
CANADA	768	762			780	760	760	772	706		329,760
U.S. EXPORT AGENCY	799	834	789			817	804	829	821		

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MANUFACTURERS' REPRESENTATIVES—By Territory

	MILLER, J.W. COMPANY	MUELLER ELECTRIC CO.	MURDOCK, W.H. J., CO.	NATIONAL CO., INC.	NATIONAL UNION RADIO CORP.	NEWCOMB AUDIO PRODUCTS CO.	OAK RIDGE ANTENNA CO.	OHMITE MFG. CO.	PARK METALWARE CO., INC.	PAR-METAL PRODUCTS CORP.	PETERSON RADIO CO., INC.
ALABAMA.....		499		634	670	255		697	102	470	195
ARIZONA.....		448		46	446	497	659	614	637		155
ARKANSAS.....		84		517	456	456		111	417	348	366
CALIFORNIA.....	479,408	448	353	46	446		659	513,46	637	557	155
Southern.....								46			
Northern.....								50			
COLORADO.....		539		432	432	497		432	637		432
CONNECTICUT.....		338	297	546-A	274	342	251	661	294	257	477
DELAWARE.....		338		77	670	653		410	430		597
DIST. COLUMBIA.....		338		77	670	653	536	410	430		597
FLORIDA.....		499		408	670	255		697	102	470	195
GEORGIA.....		499		634	670	255		697	102	470	195
IDAHO.....		539		161,432	432,445	93		432,445	637		445
ILLINOIS.....		49		117	457	457	231		147		281
Northern.....			554	595						635	
Southern.....			325					325		425	
INDIANA.....		49	554	117	122	457		691,424	412,147	635	281
IOWA.....		638		595	457	457	231	60	638		638
KANSAS.....		638		595	457	457	231	561	638	425	638
KENTUCKY.....				537	122	404		424,691	510		
LOUISIANA.....		84		517	456	456		111,632	417		366
MAINE.....		338	297	546-A	274	342	251	661	294	257	477
MARYLAND.....		338		77	670	653	536	410	430		597
MASSACHUSETTS.....		338	297	546-A	274	342	251	661	294	257	477
MICHIGAN.....			554	461	86,457	245	546	396	154	154	281
MINNESOTA.....		376	554	415	457	457	231	285	359		281
MISSISSIPPI.....		499		634	670	255		111	102		195
MISSOURI.....		638	325	595	457	457	231	561,325	638	425	638
MONTANA.....		539		432	432,445	93		432,445	637		432
NEBRASKA.....		638		595	457	457	231	561	638		638
NEVADA.....		448	353	46	446		659		637		
NEW HAMPSHIRE.....		338	297	546-A	274	342	251	661	294	257	477
NEW JERSEY.....		338	134	77,408	670,586	653,232	536	64,782 370	430		597
NEW MEXICO.....		539		432	432	497		614	637		432
NEW YORK.....		338	297,134	622,408	307	666		601	13	694	597
Metropolitan N. Y. C.....	569			408	586	232	536	61,452			
NORTH CAROLINA.....		152		634	670	255		111	102	470	195
NORTH DAKOTA.....		376		415	457	457	231	285	359		
OHIO.....	510			537	122, 65, 470	136	546	691,424	510		
OKLAHOMA.....		84		517	456	456		561	417	348	366
OREGON.....		448	353	161	445	93		445	637		445
PENNSYLVANIA.....	510			622, 77, 337	670			410	430,510		597
Eastern.....		338		77		653	536				
Western.....				537		404		424			
RHODE ISLAND.....		338	297	546-A	274	342	251	661	294	257	477
SOUTH CAROLINA.....		152		634	670	255		111	102	470	195
SOUTH DAKOTA.....		376		415	457	457	231	285	359		
TENNESSEE.....		152		634	670	255		111	102	470	195
TEXAS.....	456	84		517	456,446	456		632	417		366
UTAH.....		539		432	432	497		432	637		432
VERMONT.....		338	297	546-A	274	342	251	661	294	257	477
VIRGINIA.....		152		622	670	255		410	430		195
WASHINGTON.....	707	448	353	161	445	93		445	637		445
WEST VIRGINIA.....				537	670	404		410	510		597
WISCONSIN.....		49,376	554	117,415	457	457	231	285	447,359		281
WYOMING.....		539		432	432	497		432	637		432
CANADA.....		753						777,780	772		782,762
U.S. EXPORT AGENCY.....					826					826	826

MANUFACTURERS' REPRESENTATIVES—By Territory

	PHILMORE MFG. CO.	PICKERING & CO., INC.	POTTER & BRUMFIELD SALES CO.	PRECISION APPARATUS CO., INC.	PREMAX PRODUCTS	PREMIER CRYSTAL LABS., INC.	PRESTO RECORDING CORP.	PYRAMID ELECTRIC CO.	QUAM NICHOLS CO.	RACON ELECTRIC CO., INC.	RAD-EL. CO. MFG. CO.
ALABAMA	237	670	670	670	189		670	255	491	491,519	470
ARIZONA				659	614		494	659	159	696	497
ARKANSAS	236		258	456	719		632	79	719	579	56
CALIFORNIA	129	60A		659	380	278	494	659		696	392
Southern									159		
Northern									501		
COLORADO			675		487		73		432	432	497
CONNECTICUT	237		661	434,340	661		676	234	257	22	603
DELAWARE	237	670	670	670	410		670	192	684	609	
DIST. COLUMBIA		670	670	670	410	272	670	192	684	609	
FLORIDA	237	408	670	670	189		670	255	491	491,519	470
GEORGIA	237	670	670	670	189	634	670	255	491	491	470
IDAHO			93	503	487		445	385	503	351	445
ILLINOIS	236	49	81	457	81	636	49	312,281	147	635	182
Northern				81							
Southern											
INDIANA		49	81	122	81		49,599	506	412	635	412
IOWA	236	49	81	457	638		457	312,377	269	208	348
KANSAS	236	561	675	457	638		674	377	194	348	348
KENTUCKY	237		81	178	80		599	44	412	467	412
LOUISIANA	236			456	719		632	79	491,719	519	56
MAINE	237		661	434,340	661		676	234	257	22	603
MARYLAND	237	670	670	670	410		670	192	684	609	
MASSACHUSETTS	237		661	434,340	661		676	234	257	22	603
MICHIGAN			81	204	154		4	476	461	236	154
MINNESOTA	236		703	457	359		457	703	269	208	208
MISSISSIPPI	237	670	670	670	719,189		670	255	491	519	56
MISSOURI	236	561	675,258	457	638		457,674	377	194	348	348
MONTANA			93	503	487		445,73		503	351,432	497
NEBRASKA	236	561	675	457	638		674	377	269	348	497,348
NEVADA	129				380		494	659		696	392
NEW HAMPSHIRE	237		661	434,340	661		676	234	257	22	603
NEW JERSEY	237	670	670,232	340,670	410,232		10,670	5,221	684	609,179	207
NEW MEXICO					614		73		432	432	497
NEW YORK	237		587	728	200		480	23	83,73	713	480
Metropolitan N. Y. C.	237	5	232	340	232	95	10		83	179	207
NORTH CAROLINA	237	670	670	670	189		670	255	491	491	470
NORTH DAKOTA	236		703	457	359		457	703	269	208	208
OHIO	237		599	670,178	80		599	44	31	236,467	484
OKLAHOMA	236	561		456	719		674,632	79	719	348,722	56
OREGON	129		93	503	385		445	385	503	351	445
PENNSYLVANIA	237	670	670	670	80,410			192,44			
Eastern							670		684	609	
Western							599		528	467	404
RHODE ISLAND	237		661	434,340	661		676	234	257	22	603
SOUTH CAROLINA	237	670	670	670	189		670	255	491	491	470
SOUTH DAKOTA	236		703	457	359		457	703	269	208	497,208
TENNESSEE	237	670	670	670	189		670	255	491	519,491	470
TEXAS	236			722	719,614		632	79	719	722	56
UTAH					487		73		432	432	497
VERMONT	237		661	434,340	661		676	234	257	22	603
VIRGINIA	237	670	670	670	410		670	192	684	609	
WASHINGTON	129		93	503	385		445	385	503	351	445
WEST VIRGINIA	237	670	670	670	410		599	44	528	467	404,484
WISCONSIN	236	49	81	457	81		49,457	281	147	635	182
WYOMING			675		487		73		432	432	497
CANADA	237		749,93	747,503	780		756	760	786,757	762,785	767,779 445
U.S. EXPORT AGENCY			833	817	831	842			814		826

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MANUFACTURERS' REPRESENTATIVES—By Territory

	RAD/ART CORP.	RADIO CITY PRODUCTS CO., INC.	RADIO CORPORATION OF AMERICA	RADIO ESSENTIALS, INC.	RADIO MFG. ENGINEERS, INC.	RADIO MUSIC CORP.	RADIO RECEPTOR CO., INC.	RAYTHEON MFG. CO.	RECORDISC CORP.	REK-O-KUT COMPANY	RESISTORS, INC.
ALABAMA	418	195	608	195	670	189	519,673		634	254	195
ARIZONA	252	520	85	129	696	693	494		380	310	693
ARKANSAS	741	741	322	348	366	593	652		107	593	719
CALIFORNIA	252			129	696			520		310	
Southern		129	85			693	494		380		693
Northern		501	623			278	400		289		372
COLORADO	432	133	104	487	497	487	497	624	432	487	527
CONNECTICUT	234	226	451	340	294	477	262	606	61	373	716
DELAWARE	609	192	720	454	670	59	454		684	373	
DIST. COLUMBIA	609	192	720	454		454	454		684	373	
FLORIDA	418	195	608	195	670	189	519,673		634	254	195
GEORGIA	418	195	608	195	670	189	673	102	634	254	195
IDAHO	385,432	133	623	487	497	161	30		706	504	527
ILLINOIS	365	236	671	117	457			247	574	671	
Northern			220		281	81	2				227-A
Southern			24			70	730,40				
INDIANA	44	598	220,24	117	281	735	383	127	640	671	
IOWA	269	377,71	104	348	457	81	40		415	371	638
KANSAS	365	377	104	348	457		730		561	371	638
KENTUCKY	44	598	24	178		735	599	127	640	401	80
LOUISIANA	741	741	322	722	366	593	519		107	593	719
MAINE	234	226	451	340	294	477	262	606	61	373	716
MARYLAND	609	192	720	454	670	454	454		684	373	
MASSACHUSETTS	234	226	350,451	340	294	477	262	606	61	373	716
MICHIGAN	44	476	169	154	683	136	2,370	44	651	401	
MINNESOTA	269	71	220		457	81	2	285	415	359	543
MISSISSIPPI	418	195	322	195	670	189	519			254	719
MISSOURI	365	377	104	348	457	70	730	405	561	371	638
MONTANA	432,385	133	623	487	497	487	30		706	487,504	527
NEBRASKA	269	377,133	104	348,487	457,497		497		415	371	638
NEVADA	252		85,623	129	696	81	494		380		
NEW HAMPSHIRE	234	226	350,451	340	294	477	262	606	61	373	716
NEW JERSEY	134	192	15,165		597,670	59	644,454		61	373	260,489
NEW MEXICO	432	133	440	487	497	487	497		432	487	527
NEW YORK	134		165,75 330	602	597	59	13	694	728	373	
Metropolitan N. Y. C.	134			306		59			61	373	280
NORTH CAROLINA	418	216-A	215	195	670	189	454		634	254	195
NORTH DAKOTA	269	71	220		457				415	359	543
OHIO	44	528,598	534,24	178	281,670 683	136	599,370	44,127	320,640	401	80
OKLAHOMA	741		440	348	366	593	652	348	107	593	719
OREGON	385	520	623	30	696	161	30	93	706	504	527
PENNSYLVANIA					670			402	684,640	473	
Eastern	609	192	720	454		59	454				489
Western	44	528	534	178		454	599		640		94
RHODE ISLAND	234	226	451	340	294	477	262	606	61	373	716
SOUTH CAROLINA	418	216-A	215	195	670	189			634	254	195
SOUTH DAKOTA	269	71,133	104		457		497		415	359	543
TENNESSEE	418	216-A	322,608	195	670	189	509		634	254	195
TEXAS	741	133,741	440	722	366,497	593	652	107	107	593	719
UTAH	432	133	85	487	497	487	497		432	487	527
VERMONT	234	226	350,451	340	294	477	262	606	61	373	716
VIRGINIA	609	216-A	215,720	454	670	454	454		684	373	195
WASHINGTON	385	520	623	30	696	161	30		706	504	527
WEST VIRGINIA	44	528	24	454	670	454	454		640	473	94
WISCONSIN	365,269	236,71	220		457	81	2	247	574	671	
WYOMING	432	133	104,623	487	497	487	497		432	487	527
CANADA	772	520		747,30	696	762			765	504,781	
U.S. EXPORT AGENCY	829		824		839	826	826		828	817	798

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	REX RHEOSTAT CO.	RIDER, J. F. PUBLISHER, INC.	ROLLER- SMITH	S.M.C. MFG. CO., INC.	S.A.M.S. H.W. & CO., INC.	SANGAMO ELECTRIC CO.	SCHAUER MACHINE CO.	SCHOTT, WALTER L. CO.	SHALLCROSS MFG. CO.	SHUR- ANTENNA- MOUNT, INC.	SHURE BROS., INC.
ALABAMA		670		491	302	111	470			491	102
ARIZONA	130	446		520	369	46	38		121	494	369
ARKANSAS		107		722	517	366	348	366	139	593	107
CALIFORNIA	130	446	400,472	520						494	369,289
Southern					369	46	38	685	121		369
Northern					291	505	392	446			289
COLORADO	130			520	73		133	497	222		222
CONNECTICUT	458	226		661	257	294	381	22	228	116	257
DELAWARE	458	670		410	402	588	430	402	132	402	410
DIST. COLUMBIA		670		410	402	588	196	402	132	402	410
FLORIDA		670		491	302	317	470			491	102
GEORGIA		670		491	302	111	470			491	102
IDAHO	130			520	385	516		707	222,30		504
ILLINOIS			450				318	390		426	182,635
Northern				318		131	318		281		182
Southern		2		345		193			735		730
INDIANA	382	44		318		640	318	390	281,735		182
IOWA		371	158	318,345	638	543	348	377,390		706	182
KANSAS		371		345	638	193	348	377		57	730
KENTUCKY		166			537	640	166	390,387		402	424
LOUISIANA		107		641,490	517	366	632	366	139	491,593	107
MAINE		226		661	257	294	515	22	228	116	257
MARYLAND	458	670		410	402	588	430	402	132	402	410
MASSACHUSETTS		226		661	257	294	515	22	228	116	257
MICHIGAN		44				370		390	651	401	386
MINNESOTA		2		183,210	285	543		703	359	210	285
MISSISSIPPI		670		641,490	302	111	470			491	107
MISSOURI		371		345	638	193	348	377		57	730
MONTANA	130			520	385	516	133	707	30	706	504
NEBRASKA		371		345	638	193	348	377,497		57	182
NEVADA	130	446		520	291	505		685	121	494	289
NEW HAMPSHIRE		226		661	257	294	515	22	228	116	257
NEW JERSEY	458	443	114	622,410	375,402	588	681,430	402,188	668,132	134,402	410
NEW MEXICO	130			520	73		133	497	222	593	222
NEW YORK	458	602		622	622	744	140	116	668,677 736	134	588,622
Metropolitan N. Y. C.		443			375	588	681	188	668	134	588
NORTH CAROLINA		670	189	491	302	111	470			491	102
NORTH DAKOTA		2		183,210	285			703	359	210	285
OHIO	510	166	44		537	640	166	387		401	424
OKLAHOMA		107		722	517	366	348	366	139	593	107
OREGON	130	445		520	385	516		707	30	706	504
PENNSYLVANIA	458			410						402,401	410
Eastern		670			402	588	430	402	132		410
Western	510	484			537	268	667	387			410
RHODE ISLAND		226		661	257	294	515	22	228	116	257
SOUTH CAROLINA		670		491	302	111	470			491	102
SOUTH DAKOTA		2		183,210	285			703	359	210	285
TENNESSEE		670		491	302	111	470			491	102
TEXAS		107	110	722	517	366	632	366,497	139	593	107
UTAH	130	446		520	73		133	497	222	494	222
VERMONT		226		661	257	294	515	22	228	116	257
VIRGINIA		670		410	402	111	430	402		402	410
WASHINGTON	130	445	385	520	385	516		707	30	706	504
WEST VIRGINIA		484		410	537	640	667	387,402		402	410
WISCONSIN		2		318,183 210		131	318	703,390	281,359	426	182
WYOMING	130			520	73		133	497	222		222
CANADA		158			780	765	769	747	30,763		780,777
U.S. EXPORT AGENCY		826		806	789	819	825	789			806

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	SHURITE METERS	SIGNAL ELECTRIC MFG. CO.	SIMPSON ELECTRIC CO.	SIMPSON MARK. MFG. CO., INC.	SOLA ELECTRIC CO.	SOLAR MFG. CORP.	SPECIAL PRODUCTS CO.	SPRAGUE PRODUCTS CO.	STANDARD ARCTURUS CORP.	STANDARD TRANSFORMER CORPORATION	STANWYCK WINDING CO.	STEPHENS MFG. CORP.
ALABAMA	470	302	491	189		102	670	634	634	295	189	254
ARIZONA	630	21	407	520		614	259	159	267	369	100	648
ARKANSAS	517	20	111	632		593	456	517	111	111,431	632	348
CALIFORNIA	630				618		259		267		100	648
Southern	584	21	407	520		380		159	267	369		
Northern		500	538	400		278		538	267	289		
COLORADO		740	73	133		73	222	341	267	73	100	648
CONNECTICUT	606	715	661	603	262	39,8	294	686	114	257	603	114
DELAWARE	315	300	410	622		430,328	670	684	114	108	454	
DIST. COLUMBIA	454	300	410	622		430,328	670	684	114	108		653
FLORIDA	470	302	491	189		102	670	634	634	295	189	254
GEORGIA	470	302	491	189		102	670	634	634	295	189	254
IDAHO		353	93	¹⁶¹ / ₁₃₃		73,161	503	503	267	93	100	648
ILLINOIS	318			671	131		81	341		2,70	105	49
Northern		619				147,191			636			
Southern	52	730	345			730			371			
INDIANA	^{318,52} / ₁₆₁	619	412	596		^{191,191} / ₁₆₁	81	341	467	424	105	
IOWA	269	619	208	405		638	457	405	371	415	415	348,49
KANSAS	561	730	345	405		638	457	405	371	405	632	348
KENTUCKY	166	428	412	596		162	19	537	467	424	80	49
LOUISIANA	517	20	111	632		593	456	517	111	111	632	456
MAINE	606	715	661	603		8	294	551	114	257	603	114
MARYLAND	454,315	300	410	622		^{430,328} / ₃	670	684	114	108	454	653
MASSACHUSETTS	606	715	661	603	68	8	294	551	114	257	603	114
MICHIGAN	413	157	461	502	177	461,2	81	204	154	607	502	49
MINNESOTA	269	269	208	210		2	457	553	364	2	415	703
MISSISSIPPI	470	302,20	111	189		102	670	634	111	111	189	254
MISSOURI	52,561	730	345	405		730,638	457	341,405	371	70,405		348
MONTANA		740,353	93	133		73,161	503	503	267	93	100	648
NEBRASKA	561	730	208	405		638	457	405	371	415	415	348
NEVADA	630	500	538			278	259,222		267	289	100	648
NEW HAMPSHIRE	606	715	661	603		8	294	551	114	257	603	114
NEW JERSEY	681,315	168,300	207,410	⁵⁵⁵ / ₁₆₁		^{430,328} / ₂₁₈	670	684,573	114	108	82,454	653,114
NEW MEXICO		740	73	133		614	222	159	267	73	100	648
NEW YORK	669,681	250	727	622	481	601	602		114	480	13	114
Metropolitan N. Y. C.	681	168	207	639	480	375,39	734	573	114	108	82	
NORTH CAROLINA	470	302	491	189		102	670	634	634	295	189	254
NORTH DAKOTA	269	269	208	210		2	457	553	364	2	415	703
OHIO	166	428,250	31	19		^{17,182} / ₃₂₀	19	537	467	424	80	49
OKLAHOMA	561	20	593	632		593	456	517	593	431	632	348
OREGON	30	353	93	161		161	503	503	706	93	100	445
PENNSYLVANIA			410		94	430,328	670	728				
Eastern	315	300		622		17,510	670	684	114	108	454	653
Western	484,581	123		19			670	537	467			49
RHODE ISLAND	606	715	661	603		8	294	551	114	257	603	114
SOUTH CAROLINA	470	302	491	189		102	670	634	634	295	189	254
SOUTH DAKOTA	269	269	208	210		2	457	553	364	2	415	703
TENNESSEE	470	302	111	189		102	670	634	111	111,295	189	254
TEXAS	517	20	593	632		593,614	456	517	593	431	632	456
UTAH		740	73	133		73	222		267	73	100	648
VERMONT	606	715	661	603		8	294	551	114	257	603	114
VIRGINIA	454	592	410	189		102	670	684	114		189	114
WASHINGTON		353	93	161			503	503	706	93	100	445
WEST VIRGINIA	454	123	410	19		510	670	537	467		454	
WISCONSIN	318,269	269,619	208	671		2	81	341,553	364	2		49,703
WYOMING		740	73	133		73	222		267	73	100	648
CANADA	764,777	764,777	93,748				757				773	445,648
U.S. EXPORT AGENCY		796	806	825	833	832	817				831	831

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	STERLING MFG. CO.	SUPERIOR ELECTRIC CO.	SUPERIOR INSTRUMENTS COMPANY	SUPREME, INC.	SWITCHCRAFT, INC.	TAYLOR TUBES, INC.	TECHNICAL APPLIANCE CORP.	TEKTRONIX, INC.	TELEGRAPH APPARATUS COMPANY	TELEVISION ASSEMBLY TELEVISION INDUSTRY	TELEX, INC.	THERMADOR ELECTRIC MFG. CO., INC.
ALABAMA		240		102	111				102		102	
ARIZONA		693	100	449		156	369	494	449		494	175
ARKANSAS		700		107	79		519		593		348	
CALIFORNIA		693	100		565	156		494	449		494	400
Southern	35			449			369			100		
Northern	501			278			289			565		
COLORADO		497	100		487		316		222		629	
CONNECTICUT			114	603	251	620	257	95		251	61	
DELAWARE				95		609	430	95				
DIST. COLUMBIA			114	95	609	609	430					
FLORIDA				102	111				102		102	
GEORGIA				102	111				102		102	
IDAHO		497	100	385	487		30		93	462	494	
ILLINOIS				556	426,378				238		314	
Northern	99			284			18					
Southern						52	730					
INDIANA	599			556	44	52,103	18		236		314	
IOWA		253		638	378,194	47	269		236		348,314	
KANSAS				638	194	52	730		236		348	
KENTUCKY	599			164		103,52	510		537	510	467	
LOUISIANA		240		107	79		519		593		110	
MAINE			114	603	251	620	257	95		251	61	
MARYLAND			114	95,164	609	609	430	95			214	
MASSACHUSETTS			114	603	251	620	257	95		251	61	
MICHIGAN		283		386	44	651	461		236		502	154
MINNESOTA					378,208	47	269		236			
MISSISSIPPI		240		102			519		102			
MISSOURI				638	194	52	730		236		348	124,743
MONTANA		497	100		487		30		93	462	629	
NEBRASKA		253		638	487,194		269		236		348	
NEVADA		693				156	289,369	494	449	565	494	
NEW HAMPSHIRE			114	603	251	620	257	95		251	61	
NEW JERSEY			114	95	452,609	609	430	95			61,214	
NEW MEXICO		497	100		487		316		593		110	
NEW YORK			114	95	34	59	13	95		728	666	
Metropolitan N. Y. C.				452	59		95				61	398
NORTH CAROLINA				102	111				102		102	
NORTH DAKOTA					208		269					
OHIO	599	63,283		164	44	103	510		537	510	467	
OKLAHOMA		700		107	79		110		593		348	
OREGON		385	100	385			30		93	462	494	
PENNSYLVANIA			114									
Eastern				95	609	609,59	430	95			214	
Western	599			164	44		510			510	467	
RHODE ISLAND			114	603	251	620	257	95		251	61	
SOUTH CAROLINA				102	111				102		102	
SOUTH DAKOTA		253			208		269					
TENNESSEE				102	111				102		102	
TEXAS		700	100	107	79		110		593		110	366
UTAH		497			487		316	494	222		629	
VERMONT			114	603	251	620	257	95		251	61	
VIRGINIA			114	102	609	609	430				214	
WASHINGTON		385	100	385			30		93	462	494	329
WEST VIRGINIA	599			164	44		510			510	467	
WISCONSIN	99			556	378,426 208	47	18,269		238		314	
WYOMING		497	100		487		316		222		629	
CANADA	780	385,775		385,772 779	747				205,93	462		
U.S. EXPORT AGENCY				790	835				803			

For explanation of code numbers, see Index pages 37 to 52 following.

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MANUFACTURERS' REPRESENTATIVES—By Territory

	THORARSON ELECTRIC MFG. DIV.	TRIMM, INC.	TRIPLET ELECTRICAL INSTRUMENT	TUNG-SOL LAMP WORKS, INC.	TURNER COMPANY	UNGAR ELECTRIC TOOL CO., INC.	UNITED TRANSFORMER CORP.	UNIVERSAL MICROPHONE COMPANY	UNIVERSITY LOUSIENNES INC.	UTAH RADIO PRODUCTS	VACO PRODUCTS COMPANY	VALPEY CRYSTAL CORP.
ALABAMA	418	470	470		189	670		697	295	634	111	
ARIZONA	252		313		449	449	659	393	449	287	702	
ARKANSAS	741		517		719	366	593	366	139	79	111	
CALIFORNIA	252	696		621	449	449	659	129	449			
Southern			584			449				287	571	557
Northern			289			449				625	501	372
COLORADO	432	432	313	67	487	377,432	222	393	222	67	487	133
CONNECTICUT	234	738	606		603	403	226	342	603	606	433	
DELAWARE	609	192	315		288	670	402	384	64	114	64	
DIST. COLUMBIA	609	192	454			670	402	384	64	114	64	
FLORIDA	418	470	470		189	317	470	697	295	634	697	
GEORGIA	418	470	470	600	189	670	470	697	295	634	697	
IDAHO	385,432	432	30		329	30	222	393	222	67	503	
ILLINOIS	365			397	281,2	647-A	732,182					
Northern			318					149	81	314	206	
Southern			52					194	70	220A		
INDIANA	44	640	318		281	647-A	182	476	735	329A	742	596
IOWA	269		318,269		405	377	182	194	638	371	194	
KANSAS	365		561		405	377	589,312	194	638	371	194	
KENTUCKY	44	640	166		164	178		178	164	220A, 537	404	
LOUISIANA	741	722	517		719	366	593	366	139	79	111	
MAINE	234	738	606		603	403	226	342	603	606	433	
MARYLAND	609	192	454		288	670	402	384	64	114	64	
MASSACHUSETTS	234	738	606		603	403	226	342	603	606	433	226
MICHIGAN	44	245	413	298	651	647-A	699	476	386	386	136	
MINNESOTA	269	364	269		2	647-A		101	269	210	346	
MISSISSIPPI	418	470	470		189	670	470	697		634	111	
MISSOURI	365		52,561		405	377	589,697	194	638,70	371	194	
MONTANA	432,385	432	30,313		329	30		393		67	503	
NEBRASKA	269	432	561		487,405	377	182	194	638	371 67	194	
NEVADA	252				449	449	222	393	449	625	501	
NEW HAMPSHIRE	234	738	606		603	403	226	342	603	606	433	
NEW JERSEY	134	633,192	681,315		288,232	403	402	384,705	64	114	64	
NEW MEXICO	432	432	313		487	432		393	222	67	487,702	
NEW YORK	134		602		288,232	403	602	705	64	114	64	
Metropolitan N. Y. C.	134	633	681	141	232	403			64	179		
NORTH CAROLINA	418	470	470		189	670	470	697	295	634	111	
NORTH DAKOTA	269	364	269					101	269	210	346	
OHIO	44	640	166		164	178	32	178	164	537	136	
OKLAHOMA	741	722	517,561		719	366	593	366	139	79	139	
OREGON	385	696	30		329	30	504	30	503	445	503	
PENNSYLVANIA			581	297		670						
Eastern	609	192	581		288	670	402	384	64	114	64	
Western	44	640	315		164	670	667	178	667	537	404	
RHODE ISLAND	234	738	606		603	403	226	342	603	606	433	
SOUTH CAROLINA	418	470	470		189	670	470	697	295	634	111	
SOUTH DAKOTA	269		269					101	269	210	346	
TENNESSEE	418	470	470		189	670	470	697	295	634	111	111
TEXAS	741	722,432	517	79	719	366	593	366	139	67,79	139	
UTAH	432	432	313		487	432	222	393	222	67	487	
VERMONT	234	738	606		603	403	226	342	603	606	433	
VIRGINIA	609		454		189	670	402		64	114	111	
WASHINGTON	385	192	30		329	30	504	30	503	445	503	
WEST VIRGINIA	44	640	581,454		164	670	667	178	667	537	404	
WISCONSIN	365,269	364	318		2	647-A	182	101,149	269	514, 270	346	
WYOMING	432	432	313		487	432	222	393	222	67	487	
CANADA	772	772,696	764,717		751	760	749,504	747	822		747	765
U.S. EXPORT AGENCY	829				789		826	799	822		800	

MANUFACTURERS' REPRESENTATIVES—By Territory

	VERTROD CORP.	VIBROPLEX CO., INC.	WARD LEONARD ELECTRIC CO.	WARD PRODUCTS CORP.	WEBSTER-CHICAGO CORP.	WEBSTER ELECTRIC CO.	WELLER MFG. CO.	WESTON ELECTRICAL INSTRUMENT	WILCOX-GAY CORP.	WIRT COMP. INC.	WORKSHOP ASSOCIATES, INC.
ALABAMA.....			491	634	491	491,138	111		361-B	102	111
ARIZONA.....	446	696	369	614	614	494	197	548	91-A	530	562-A
ARKANSAS.....	632		652	517	517	348	111	657		457	111
CALIFORNIA.....	501	696	369			494		618	91-A		
Southern.....					680		197			530	447-A
Northern.....				625	538		625	270		530	400
COLORADO.....	432	696	487	487	73	51		524			562-A
CONNECTICUT.....	95	22	8	728	126		114	319		340	22
DELAWARE.....	95		609	597	410	214	114				609
DIST. COLUMBIA.....	95		609	597	410	214	114		482-A		609
FLORIDA.....			491	634	491	491	111	701	361-B	102	131-A
GEORGIA.....			491	634	491	491	111	679	361-B	102	111
IDAHO.....	432		504,487	93	329	51	161				385
ILLINOIS.....			147		579	258		711	636-A	671	318
Northern.....				2,147		469					
Southern.....											
INDIANA.....			44	640	640,579	469,258			117-A	671	44,318
IOWA.....			348,147	377		158			361-A 636-A	371	60,318
KANSAS.....			348	377		348			361-A	371	360
KENTUCKY.....		19	44	640		258	709		117-A		44
LOUISIANA.....			652,491	111		138	111	355		457	111
MAINE.....	95	22	8	728		515	114			340	22
MARYLAND.....	95		609	597		214	114,709		482-A		609
MASSACHUSETTS.....	95	22	8	728	126	515	114	142	211-A	340	22
MICHIGAN.....	136		147,461	386	579,204	563,558	370	113	552-A	671	44
MINNESOTA.....	364		364	2	285	558		225	636-A	703	
MISSISSIPPI.....			491	111	491	138	111			102	111
MISSOURI.....			348	377	457,589	348,258		193	361-A	671,371	360
MONTANA.....	432	696	504,487	93	329	51			372-A		385
NEBRASKA.....			348	377	457	158			361-A	371	360
NEVADA.....	446	696	369	614	538	494				530	562-A
NEW HAMPSHIRE.....	95	22	8	728	126	515	114			340	22
NEW JERSEY.....	95		108,609	597		478,214	114	271	193-A	340	408,609
NEW MEXICO.....	432		487	614	614	51					562-A
NEW YORK.....	95		140	728	728	478	114	587	193-A 576-A	340	44,622
Metropolitan N. Y. C.....	95		108	597	179			712		340	408
NORTH CAROLINA.....			491	634	491	491	111	544	361-B	102	111
NORTH DAKOTA.....	364		364	2	285	558			636-A	703	562-A
OHIO.....	136	19	44	537	640	467	370,709	48,17	117-A 515-A 552-A		44
OKLAHOMA.....	632		652	517	517	348				457	360
OREGON.....		696	504	93	329	30	161		372-A		385
PENNSYLVANIA.....					410			337	482-A 576-A		
Eastern.....	95		609	597,728		214	114				609
Western.....			44	537		612	709	123			44
RHODE ISLAND.....	95	22	8	728	126	515	114		211-A	340	22
SOUTH CAROLINA.....			491	634	491	491	111			102	111
SOUTH DAKOTA.....	364		364	2	285	558				703	562-A
TENNESSEE.....			491	111	491	491,258	111	304	361-B		111
TEXAS.....	632,432		652	517,614	614,517	722		570		457	652
UTAH.....	432	696	487	487	73	494					562-A
VERMONT.....	95	22	8	728	126	515	114			340	22
VIRGINIA.....	95		609	111	410	214	114		482-A		609
WASHINGTON.....	432	696	504	93	329	30	161	180	372-A		385
WEST VIRGINIA.....		19	44	537	410	612	709		515-A		44
WISCONSIN.....	364	696	364,147	2	579,204	558			636-A	671	318
WYOMING.....	432		487	487	73	51					562-A
CANADA.....	747	696,825			329	30		770,774		772	786
U.S. EXPORT AGENCY.....	813	825	789		820	841				828	

For explanation of code numbers, see Index pages 37 to 52 following.

DIRECTORY OF FACTORY REPRESENTATIVES AND EXPORT AGENCIES

NOTE: This listing is arranged both alphabetically and numerically. Code number opposite each name refers to geographical chart immediately preceding this index (see Index pages 18 to 35).

— A —

1. A. & S. Equipment Co.
4 West Roy Street
Seattle 99, Washington
Tel. Garfield 8386
2. Aaron & Associates, Inc., Irvin I.
4028 North 16th Street
Milwaukee 9, Wisconsin
Tel. Concord 7799

Branch: Room 214 Merchandise Bldg.
Minneapolis, Minn.
Tel. Atlantic 7605

Branch: 3704 N. 11th Street
Milwaukee 6, Wisc.
Tel. Concord 2861-2
3. Aaron, Paul D.
71 Murray Street
New York 7, N. Y.
Tel. Beekman 3-6063
4. Adams Co., R. A.
13000 MacKenzie Ave.
Detroit 27, Mich.
Tel. Hogarth 6131
5. Adelman, Leon L.
25 Chittenden Avenue
New York 33, N. Y.
Tel. WAdsworth 7-8589
6. Adrem Company, The
143 Newbury Street
Boston 16, Mass.
Tel. KEnmore 6-5785
7. Ahrbecker Co., Fred W.
1916 North Meridian Street
Indianapolis, Indiana
Tel. Highland 1539
8. Akeroyd, Arthur E.
129 Washington Street
Newton 58, Mass.
Tel. Lasell 7-1483
9. Album, R.R.
331 Second Avenue N.
Minneapolis 1, Minn.
10. Aldrich, Thomas B.
242 W. 55th Street
New York 19, N. Y.
Tel. Circle 5-7760
12. Alfco Products Corp.
718-21 Louderman Bldg.
317 No. 11th Street
St. Louis 1, Mo.
13. Allen-Ball Corporation
201 E. Water Street
Syracuse 2, N. Y.
Tel. Syracuse 2-8267-8
14. Allen Co., Geo. A.
9 S. Clinton Street
Chicago 6, Illinois
Tel. Franklin 8470
15. Allen, W. H.
Radio Corporation of America
RCA Victor Division
36 W. 49th Street
New York 20, N. Y.
16. Alvis, R.
401 N. Broad Street
Philadelphia, Pa.
Tel. Lombard 1169
17. Ambos-Jones Company
401 Euclid Avenue
Cleveland 14, Ohio
Tel. Main 4017-4018
18. American Manufacturers Agency
208 N. Wells Street
Chicago 6, Illinois
19. Anderson Co., C.E.
Rockefeller Bldg.
Cleveland 13, Ohio
Tel. Main 1557

Branch: Chamber of Commerce Bldg.
Cincinnati 2, Ohio
Tel. Main 5085
20. Anderson, George E.
1903 Griffin Street
Dallas 2, Texas
Tel. Riverside 1272
21. Anderson Co., Kenneth
412 Seaton Street
Los Angeles 13, Calif.
Tel. Michigan 6593
22. Anderson Sales Co.
172 State Street
Boston 9, Mass.
Tel. CApitol 7-4831
23. Andrews & Andrews
P.O. Box 872
Hartford, Conn.
Tel. 32-6400
24. Angel, Les
Oakland Road
Loveland, Ohio
25. Anschuetz, H. G.
1237 Public Ledger Bldg.
Philadelphia 6, Pa.
Tel. Market 7-2024
26. Ashley, Harry R.
Electronic Instrument Co., Inc.
926 Clarkson Avenue
Brooklyn 3, N. Y.
27. Associated Sales Agency
1807 Laws Street
Dallas, Texas
Tel. Riverside 2930
28. Audio Devices, Inc.
844 Seward Street
Hollywood 38, Calif.
Tel. Hollywood 8902
29. Aymond Co., Edward F.
4310 Maple Avenue
Dallas 9, Texas
Tel. Lakeside 1022

Branch: c/o J. B. Guenther
P. O. Box 776
2711 1/2 Reeder Place
Ft. Smith, Arkansas
Tel. 7072

Branch: c/o Donald Aitken
707 Broadway
Houston, Texas
32. Baier, Arthur H.
20849 Shaker Blvd.
Shaker Heights 22, Ohio
Tel. Erieview 1112
33. Balch Sales Company
Baker Building
Minneapolis 2, Minn.
Tel. GE 6120
34. Ball Associates Inc.
74 Niagara Street
Buffalo, N. Y.
Tel. Cleveland 7532
35. Barbera & Co., A. A.
311 No. Martel Avenue
Los Angeles 36, Calif.
Tel. Webster 3-3811
36. Barr, D. B.
401 N. Broad Street
Philadelphia 8, Pa.
Tel. Lombard 1169
37. Barricks, Arthur
615 Belvedere Street
San Francisco 17, Calif.
Tel. Montrose 7857
38. Barstow & Doran
1406 S. Grand Avenue
Los Angeles 15, Calif.
Tel. Prospect 0438—Richmond 6191
39. Baum, Sidney H.
1445 Hudson Blvd.
North Bergen, N. J.
Tel. NYC Pennsylvania 6-2240
40. Bauman & Bluzat
2753 W. North Avenue
Chicago 47, Illinois
Tel. Humbolt 6809
41. Baumann, Leonard
208 N. Wells Street
Chicago 6, Illinois
42. Baxter, J. M.
2528 Eade Avenue
Ft. Wayne, Indiana
Tel. Anthony 5-8221
43. Bean, Everett P.
1276 Peabody Avenue
Memphis 4, Tenn.
Tel. 2-0612
44. Bear Corporation, Neal
R.F.D. No. 1
Peninsula, Ohio
Tel. West Richfield, Ohio 100

Branch: 1623 N 8C Bldg.
Cleveland, Ohio
Tel. Florida 2003
45. Beck, A. J.
233 Lincoln Road
Brooklyn 25, N. Y.
46. Becker, Herb
1406 So. Grand Avenue
Los Angeles 15, Calif.
Tel. Richmond 6191
47. Beebe, John R.
4123 North Pittsburgh
Chicago 34, Illinois
Tel. Tuxedo 9586
48. Beedle Equipment Co.
406 Elm Street
Cincinnati 2, Ohio
Tel. Cherry 5743
49. Beier, Leroy W.
600 S. Michigan Avenue
Chicago 5, Illinois
Tel. Harrison 4240

— B —

- 29A. Bach Electric, Pete
1233 N.W. 12th Street
Portland, Oregon
Tel. Broadway 2173
30. Backer Co., James J.
2321 Second Avenue
Seattle 1, Washington
Tel. Main 8811
31. Baehr, Albert M.
11621 Detroit Avenue
Cleveland 2, Ohio
Tel. Lakewood 8468

Directory of Factory Representatives (Continued)

50. Belchamber, Phil
212 Ninth Street
Oakland 7, Calif.
Tel. Glencourt 1-4460
51. Belt, C. D.
1509 17th Street
Denver 2, Colorado
Tel. KEystone 1393
52. Beneke Co., Jules W.
575 Arcade Bldg.
St. Louis 1, Mo.
Tel. Central 1677
53. Benson Co., L. A.
6-8 E. Lombard Street
Baltimore 2, Maryland
Tel. Plaza 0340
54. Berggren, Walter J.
2007 South Michigan
Chicago 16, Illinois
Tel. Calumet 1450
55. Bernst Sales Co.
624 So. Michigan Avenue
Chicago 5, Illinois
Tel. Harrison 5810
56. Berthold Sales Co.
4308 Maple Avenue
Dallas 9, Texas
Tel. Logan 6-6336
57. Bettis & Co., Maury E.
3119 Gillham Road
Kansas City 3, Mo.
Tel. Logan 9545
58. Bialek, Samuel
205 East 42nd Street
New York 17, N. Y.
Tel. MURray Hill 4-1655
59. Biggs, J. Alan
48 Curtis Lane
Yonkers, N. Y.
Tel. Yonkers 5-9401
60. Bigham, N. J.
Hotel Franklin
Des Moines 5, Iowa
Tel. 3-6121
- 60A. Birkenhead, Warren
318 Center Street
Manhattan Beach, Calif.
Tel. 8034
61. Bittan Co., Inc., D. R.
53 Park Place
New York 7, N. Y.
Tel. BRaclay 7-2789
- Branch: 1505 Race Street
Philadelphia 2, Pa.
Tel. Rittenhouse 6-2310
63. Blackburn, Don
1637 St. Clair Avenue
Cleveland 17, Ohio
64. Blair-Steinberg Co.
395 Broadway
New York 13, N. Y.
Tel. WORth 4-7321
65. Blake, Thomas M.
4757 Ravenswood Avenue
Chicago 40, Illinois
Tel. Longbeach 4970
66. Blazer, C. M.
816 Merrick Avenue
Collingswood, N. J.
Tel. Collingswood 5-1283
67. Blinn Co., The James H.
1140 Spear Blvd.
Denver 4, Colorado
68. Block & Co., Wesley
c/o W. D. Brenckman
P. O. Box 14
Winthrop 52, Mass.
Tel. Ocean 2476
69. Boise, Everett B.
432 Fourth Avenue
New York 16, N. Y.
Tel. MURray Hill 4-4178
70. Borghoff, Wm.
4018 Greer Avenue
St. Louis 7, Mo.
Tel. Franklin 0482
71. Bork, R. J.
.2494 University Avenue
St. Paul 13, Minn.
72. Boush, K. C.
324 52nd Street
Newport News, Virginia
73. Bowen, Ronald G.
1886 So. Humboldt Street
Denver 10, Colorado
Tel. Spruce 9368
74. Bowen, Russell
102 Cambon Drive
San Francisco 8, Calif.
Tel. Greystone 8000
75. Bowers, C. J.
1531 Kenova Avenue
Cincinnati 16, Ohio
Tel. Valley 2757
77. Braddock, Edward
111 So. Broad Street
Philadelphia 7, Pa.
78. Brainard, Wm. V.
778 Natoma Street
San Francisco 3, Calif.
Tel. HEMlock 1-2822
79. Branum Company, The
1022 Republic Bank Bldg.
Dallas 1, Texas
Tel. Riverside 4995
80. Brauer, Walter J.
15631 Lakewood Heights Blvd.
Cleveland 7, Ohio
Tel. Lakewood 7268
81. Brengle Sales Co., Ralph T.
549 W. Washington Street
Chicago 6, Illinois
Tel. Andover 7367, 7368, 7369
82. Bressler, Jules J.
341 Madison Avenue
New York 17, N. Y.
Tel. MURray Hill 3-6620
83. Breuer Company, R. E.
250 West 57th Street
New York 19, N. Y.
Tel. Columbus 5-0440
84. Brockenbrough & Sanders
1002 Amicable Bldg.
P. O. Box 291
Waco, Texas
85. Brokaw, C. A.
Radio Corporation of America
RCA Victor Division
621 South Hope Street
Los Angeles 14, Calif.
86. Brotherson, Robert M.
325 N. Hibbard
Jackson, Michigan
Tel. Jackson 2-9654
87. Brown, George K.
1506 Jasmine Street
San Mateo, California
88. Brown III, J. B.
3008 N. Calvert Street
Baltimore, Maryland
Tel. Belmont 1735
89. Brown, Roland H.
608 N.W. 33rd Street
Oklahoma City 3, Oklahoma
Tel. 4-7098
90. Bruckman, A. P.
3781 West Euclid Avenue
Detroit 6, Michigan
Tel. TYler 7-2503
91. Bruning, A. H.
208 N. Wells Street
Chicago 6, Illinois
- 91A. Buchanan, Boyd
1613½ Glen Rock Ave.
Glendale, Calif.
92. Bullock, Thomas W.
233 E. Market Street
Louisville 2, Kentucky
93. Burcham Company, Don H.
917 S.W. Oak Street
Portland 5, Oregon
Tel. Broadway 3830
- Branch: 803 Mercer Island
Washington
94. Burke Electrical Equipment Co.
416 Maple Avenue
Pittsburgh 18, Pa.
Tel. PENhurst 5357
95. Burlingame Associates, Ltd.
11 Park Place
New York 7, N. Y.
Tel. WORth 2-2171
96. Burnett, G. G.
504 S. 21st Street
Irvington, N. J.
Tel. Essex 5-0932
98. Burns, T. V.
9 Crest Drive South
Cresskill, N. J.
99. Burrill, P. J.
800 N. Clark Street
Chicago 10, Illinois
100. Burroughs Sales Co.
1406 So. Grand Avenue
Los Angeles 15, Calif.
Tel. Richmond 6191
101. Bursell-Chermak Sales Co.
2233 University Avenue
St. Paul 4, Minn.
Tel. Elkhurst 0858
102. Burwell, Inc., Henry W.
105 Forrest Avenue N.E.
Atlanta 3, Georgia
Tel. Cyprus 4024
103. Bury & Watson
508 Hippodrome Bldg.
Cleveland 14, Ohio
Tel. Prospect 0196
104. Byquist, S. H.
Radio Corporation of America
RCA Victor Division
221 W. 18th Street
Kansas City 8, Mo.
- C —
105. Caine Sales Company
605 W. Washington Street
Chicago 6, Illinois
Tel. State 3841
106. Camber, Marty
30 Dongan Place
New York 34, N. Y.
Tel. LORraine 7-1420
107. Campion Sales Company
211 Republican Nat'l Life Bldg.
Dallas 8, Texas
Tel. Winfield 9902
108. Carduner Sales Corp.
315 Broadway
New York 7, N. Y.
Tel. BRaclay 7-0210

Directory of Factory Representatives (Continued)

- 108A. Carcile, J. Wayne
c/o Crescent Industries, Inc.
4140 W. Belmont Ave.
Chicago 41, Ill.
Tel. Mulberry 1200
109. Carlson, Fred W.
307 Wall Street
Seattle 1, Washington
Tel. Elliott 6630
110. Carson, Ray
1133 W. Agarita Street
San Antonio, Texas
Tel. Parkview 2-8305
111. Cartwright & Sons, J. M.
1336 Madison Avenue
Memphis 4, Tennessee
Tel. Memphis 2-0612
112. Cavanaugh Agencies, J. M.
821 N.W. Flanders Street
Portland 9, Oregon
Tel. Atwater 9862
113. Cawthorne Company, T. S.
570 Maccabees Bldg.
Detroit 2, Michigan
Tel. Temple 1-0402
114. Cerf & Co., Art
744 Broad Street
Newark 2, N. J.
Tel. Mitchell 2-6735
115. Chabot, H.
2937 Lincoln Avenue
North Riverside, Illinois
Tel. Riverside 5750
116. Chamberlin, Harold A.
31 Milk Street
Boston 9, Mass.
Tel. Hubbard 2-7022
- Branch: c/o Fred Hess
18 Cayuga Street
Auburn, N. Y.
117. Chambers Co., L.A.
565 W. Washington Blvd.
Chicago 6, Illinois
Tel. Franklin 9095
- 117A. Cheney, Gordon C.
112 S. Sheldon St.
Charlotte, Michigan
118. Chicago Sales Corp.
1500 No. Halsted Street
Chicago 22, Illinois
Tel. Mohawk 5300
119. Chick & Co., L.P.
405 Wallace
Louisville, Kentucky
120. Church, L. F.
750 Natoma Street
San Francisco 3, Calif.
Tel. Underhill 1-2840
121. Cinema Engineering Co.
1510 W. Verdugo Avenue
Burbank, California
Tel. Stanley 7-2621
122. Clancy, Joe
3611 Webster
Fort Wayne, Indiana
Tel. Harrison 2250
123. Clark Co., Russell F.
1404 Clark Bldg.
Pittsburgh 22, Pa.
Tel. Atlantic 8089-8090
124. Cleary Co., M. J.
1730 Pine Street
St. Louis 3, Mo.
125. Clements, James H.
Wolverine Hotel
Detroit, Michigan
Tel. Cherry 9000
126. Coakley, Tim
11 Beacon Street
Boston 8, Mass.
Tel. Capitol 7-0050
127. Cobb & Associates
1107 South Preston Street
P.O. Box 303
Louisville, Kentucky
Tel. Jackson B144
129. Cohn, Sigmund H.
2533 S. Hill Street
Los Angeles 7, Calif.
130. Cole Instrument Co.
1320 So. Grand Avenue
Los Angeles 15, Calif.
Tel. Prospect 2251
- Branch: 7 Front Street
San Francisco 11, Calif.
Tel. Douglas 7810
131. Cole Sales Co., G. McL.
920 N. Michigan Avenue
Chicago 11, Illinois
Tel. Delaware 8850, 8838
- 131A. Communications Equipment Co.
P. O. Box 87
Lake Placid, Florida
Tel. 2131
132. Connor Co., Dan J.
807 City Centre Bldg.
121 N. Broad Street
Philadelphia 7, Pa.
Tel. LO 4-2870
133. Connors Co., W. H.
390 Ash Street
Denver 5, Colorado
Tel. Em 0566
134. Cooper-DiBlasi Co.
259 West 14th Street
New York 11, N. Y.
Tel. Watkins 9-3920
- 134A. Corak, J. Ernest
1630 Vine St.
Philadelphia 3, Pa.
Tel. Locust 7-1010
135. Corcoran-Hall Company
15-A East Franklin Street
Richmond 19, Virginia
Tel. Richmond 7-9792
136. Cornell, Paul M.
4422 Silsby Road
Cleveland 18, Ohio
Tel. Yellowstone 2314
137. Cornhusker Sales Co.
Lee Konecky
205 Courtney Bldg.
Omaha 8, Nebraska
138. Corrigan, C. E., Jr.
812 Union Street
New Orleans 12, La.
Tel. Magnolia 2833
139. Corry, Hal F.
3522 Gillon Avenue
Dallas 5, Texas
Tel. J-8-3949
140. Costello, J. V.
547 Ellicott Square Bldg.
Buffalo 3, N. Y.
Tel. Com 3828
141. Cotsen, L. E.
4111 Empire State Bldg.
New York 1, N. Y.
Tel. LACKawanna 4-7237
142. Cowperthwait & Brodhead
126 Newbury Street
Boston 16, Mass.
Tel. Commonwealth 1825
143. Cox Company, Omer
171 Second Street
San Francisco, Calif.
Tel. Sutter 4557
144. Crossley, Alfred
549 W. Randolph Street
Chicago 6, Illinois
Tel. State 7-444
145. Croysdill, W. T.
908 East 53rd Street
Indianapolis 5, Indiana
146. Culco Engineering
2806 Clearwater Street
Los Angeles 26, Calif.
147. Cumming & Associates, Bruce
228 No. LaSalle Street
Chicago 1, Illinois
Tel. Andover 5837
148. Curts, Congdon
Box 611
Phillipsburg, Montana
149. Cushing Company, L. G.
664 North Michigan Avenue
Chicago 11, Illinois
Tel. Delaware 6456

— D —

150. Dalton, J. J.
6224 N. Albany Avenue
Chicago 45, Illinois
Tel. BRiargate 9550
152. Darling Bros.
P. O. Box 1532
Atlanta, Georgia
153. Darmstader, S. B.
308 W. Washington Street
Chicago 6, Illinois
Tel. Franklin 4818
154. Davenport, J. P.
606 Kerr Bldg.
Detroit 26, Michigan
Tel. Cherry 7647
155. Davidson & Associates, Joe
P. O. Box 108
South Gate, Calif.
Tel. Kimball 7244
156. Davis, George
Room 234 Consolidated Bldg.
607 South Hill Street
Los Angeles 14, California
Tel. Tucker 4697
157. Day, Phil M.
1100 S. West Avenue
Jackson, Michigan
Tel. 2-8282
158. Delavan Engineering Company
414 12th Street
Des Moines 9, Iowa
Tel. 4-5231
159. Dempster, Burgess
2008 W. 7th Street
Los Angeles 5, Calif.
Tel. Drexel 8323
161. Detsch Co., Arthur S.
234 Sherlock Bldg.
Portland 4, Oregon
Tel. Atwater 5403
162. DeVoe Company, Leslie M.
4014 Washington Blvd.
Indianapolis 5, Indiana
Tel. Humboldt 1395
163. Dewey, E. B.
1204 American Nat'l Bank Bldg.
Kalamazoo 4, Michigan
Tel. 7707
164. Dietrich Co., Earl S.
320 Hanna Bldg.
Cleveland 15, Ohio
Tel. Cherry 7770
165. Dittman, G. E.
Radio Corporation of America
RCA Victor Division
36 W. 49th Street
New York 20, N. Y.

Directory of Factory Representatives (Continued)

166. Dolfuss Jr., Charles H.
2108 Payne Avenue
Cleveland 14, Ohio
Tel. Prospect 0719
167. Donnelly, Thomas R.
1104 Investment Bldg.
Pittsburgh 22, Pa.
Tel. Locust 1878
168. Dreyfuss, P. M.
120 Liberty Street
New York 6, N. Y.
Tel. Barclay 7-0898
169. Driver, J. P.
Radio Corporation of America
RCA Victor Division
718 Keith Bldg.
421 Euclid Avenue
Cleveland 15, Ohio
170. Drury, Tom
4721 North Oketo Avenue
Chicago 31, Illinois
Tel. Newcastle 1539
171. Duncan, J. R.
6728 N. 31st Avenue
Omaha 11, Nebraska
Tel. Kanwood 1129
172. Dunn & Bryan
44 Murray Street
New York 7, N. Y.
Tel. Cortlandt 7-7236
173. Dusault Jr., Raymond A.
55 West 42nd Street
Room 1527
New York 18, N. Y.
Tel. Lackawanna 4-2348
174. Dye, K. R.
Woodson Terrace
9524 Corregidor
St. Louis 21, Mo.
Tel. Mulberry 4227
- E —
175. Ealy Sales Company, Doug.
Room 4—Printery Bldg.
Phoenix, Arizona
176. Ealy Company, M. D.
1421 South Flower Street
Los Angeles 15, Calif.
Tel. Richmond 9121
177. Ecclestone & Son, S. P.
525 Free Press Bldg.
Detroit 26, Michigan
Tel. Cadillac 8941
178. Edwards Sales Co.
2123 East 9th Street
Room 504
Cleveland 15, Ohio
Tel. Prospect 7265-3432
179. Egert Company, S. S.
11 Park Place
New York 7, N. Y.
Tel. Rector 2-0230
180. Eicher & Co.
263 Colman Bldg.
Seattle 4, Washington
Tel. Elliot 2722
- 180A. Electric Sales & Engineering Co.
2209 South First Street
Milwaukee 7, Wisconsin
Tel. Humboldt 4722
181. Electrical Apparatus Co.
1200 Soldiers Field Road
Boston 34, Mass.
Tel. Stadium 7440
182. Ellinger Sales Co.
9 S. Clinton Street
Chicago 6, Illinois
Tel. Central 1894-95
183. Elliott Equipment Company
708 Sixth Avenue S.
Minneapolis 15, Minn.
Tel. Ma. 1551
184. Ellis Co., Arthur J.
20 E. Jackson Blvd.
Chicago 4, Illinois
Tel. Webster 3021-2
185. Ellis, R. G.
1005 N. Crescent Heights Blvd.
Los Angeles 46, Calif.
Tel. Hemstead 6119
186. Enderson, A. W.
1810 8th Avenue
Ft. Worth 4, Texas
Tel. Ft. Worth 4-7535
187. Engineering Products
2208 E. Washington Street
Indianapolis 3, Ind.
Tel. Capitol 1488
188. Erde, Seymour
6 East 46th Street
New York 17, N. Y.
Tel. Murray Hill 2-0365
189. Erickson Co., Herb
P. O. Box 179
Hendersonville, N. C.
Tel. 1351
190. Erlanger Sales Co.
228 West 4th Street
Los Angeles 13, Calif.
Tel. Mutual 3500
191. Eschner, Leroy
9 So. Clinton Street
Chicago 6, Illinois
Tel. Central 1533
- F —
192. Fairbanks, Howard J.
401 No. Broad Street
Philadelphia 8, Pa.
Tel. Lombard 3-9023
193. Fall Company, C. B.
317 N. 11th Street
St. Louis 1, Mo.
Tel. Chestnut 2433-4
- 193A. Farrell, Bernard E.
1847 Manor Dr.
Union, N. J.
194. Farris Company, R. W.
406 West 34th Street
Kansas City 2, Mo.
Tel. Logan 7495
195. Fausett & Son, Floyd
1347 Beecher St., S.W.
Atlanta, Ga.
Tel. RAYmond 3104
Branch: P. O. Box 1016
Hendersonville, N. C.
196. Federal Sales & Engineering Co.
Transportation Bldg.
Washington 6, D. C.
Tel. National 6532
197. Feldman, Henry
1935 Bay Street
Los Angeles 21, Calif.
Tel. Trinity 4493
198. Feldman, M. S.
1361 College Avenue
New York 56, N. Y.
Tel. Jerome 8-4574
199. Fickling, T. W.
Vermilion Street
Abbeville, La.
200. Fillmore and Fillmore
259 Delaware Avenue
Buffalo 2, N. Y.
Tel. Madison 2795
201. Fincke, J. M.
114 E. Union Street
Pasadena 1, California
Tel. Sycamore 2-2074
202. Finlay, Robert
11 Warren Street
New York 7, N. Y.
203. Fisch, Bud
419 Sherwood Terrace, West
Fort Wayne 6, Indiana
Tel. Hanison 1089
204. Fitzner & Co., B. J.
1409 Kales Bldg.
Detroit, Michigan
Tel. Randolph 3297
205. Fordco Agencies
5 Van Tromp Street
Albany, N. Y.
Tel. Albany 3-2100
206. Foreen, Marshall C.
7928 Ellis Avenue
Chicago, Illinois
207. Forshay, John M.
27 Park Place
New York 7, N. Y.
Tel. Barclay 7-4977
208. Foster Company, Mel
409 Lumber Exchange Bldg.
Minneapolis 1, Minn.
Tel. Geneva 5622
209. Fox, A. C.
320 McCully St., Mt. Lebanon
Pittsburgh 16, Penn.
Tel. LEhigh 5690
210. Franklin, Merrill K.
712 Sixth Ave. South
Minneapolis 15, Minn.
Tel. Geneva 1805
211. Franklin Sales Co.
Security Life Bldg.
Denver 2, Colorado
Tel. Keystone 0641
- 211A. Fredenburg, Sam
96 Mountfort St.
Boston, Mass.
212. Frey, Chester
181 Crocker Street
Buffalo 12, N. Y.
Tel. Taylor 2750
213. Friedman, Adolph
220 E. 23rd Street
New York 10, N. Y.
Tel. LExington 2-6677
214. Friedman, Martin
Real Estate Trust Bldg.
Broad & Chestnut Sts.
Philadelphia 2, Pa.
Tel. Pennypacker 5-4778
215. Frisbee, R. W.
2600 Sherwood Avenue
Charlotte 4, N. C.
216. Fry & Co., Wm. E.
909 Wyandotte
Kansas City 6, Mo.
Tel. Grand 8670
- 216A. Frye, Tom S.
P. O. Box 283
Morristown, Tenn.
Tel. 1051-J
217. Furman, Nat
395 Broadway
New York 13, N. Y.
Tel. WOrth 5-7321
- G —
218. Gal, Nicholas
285 Madison Avenue
New York 17, N. Y.
Tel. LExington 2-0626

Directory of Factory Representatives (Continued)

219. Garrett, K. C.
7807 Lovers Lane
Dallas 9, Texas
Tel. Lakeside 3536
220. Garrett, W. L.
Radio Corporation of America
RCA Victor Division
445 North Lake Shore Drive
Chicago 11, Illinois
- 220A. Garstang-May Co.
1422 Circle Tower Bldg.
Indianapolis, Indiana
221. Gary, Al
c/o Pyramid Electric Co.
155 Oxford Street
Paterson, New Jersey
222. Gates, Franklin Y.
200 So. Main Street
Salt Lake City 1, Utah
Tel. 9-1101
223. Gatty, Sidney H.
1011 Chestnut Street
Philadelphia 7, Pa.
224. Gawler-Knoop, Inc.
1060 Broad Street
Newark 2, N. J.
Tel. Mitchell 2-2198
225. Geeseka & Pinkney
552-3 Plymouth Bldg.
Minneapolis 2, Minn.
Tel. Main 3570
226. Gerber Sales Company
739 Boylston Street
Boston 16, Mass.
Tel. Copley 7-0061
227. Gianaris & Gianaris
6643 North Lemay
Lincolnwood, Illinois
Tel. Mohawk 5300
- 227A. Gianaras Sales Co.
2345 W. Devon Street
Chicago, Illinois
228. Gibson, William S.
1018 Commonwealth Avenue
Boston 15, Mass.
Tel. Aspinwall 5074
229. Glenn & Larson
801 Healy Bldg.
Atlanta 3, Ga.

Branch: c/o Frank P. Larson, Jr.
700 South College Street
Charlotte 2, N. C.
Tel. 4-3994

Branch: c/o R. B. Roberts
2620 S.W. 34th Avenue
Miami, Florida
Tel. 48-8540
230. Glidden Engineer'g & Equipment Co.
3802 Winchester Avenue
Houston 3, Texas
Tel. Charter 4-6471

Branch: 416 Texas Avenue
El Paso, Texas

Branch: 701 Main Street
Little Rock, Arkansas
231. Goetze Co., The Earl
2205 Grand Avenue
Kansas City 8, Mo.
232. Gold, William
304 E. 23rd Street
New York 10, N. Y.
Tel. GRamercy 3-4322, 3
233. Goodman, R. A.
4537 Colfax St. S.
Minneapolis 9, Minn.
Tel. Pleasant 8477
234. Goss, John
26 Gloucester Street
Arlington, Mass.
Tel. Arlington 0547-M
236. Granat, Gary
330 S. Franklin Street
Chicago 6, Illinois
Tel. Webster 4595
237. Granat, Gerard
113 University Place
New York, N. Y.
238. Gray, G. E.—Hill, R. M.
1 No. Crawford Avenue
Chicago 24, Illinois
Tel. Van Buren 0650
239. Greenwood, R. E.
1930 McGee Street
Kansas City, Mo.
Tel. Harrison 5800
240. Gregory, Herbert S.
1511 Louisiana Avenue
New Orleans 15, La.
241. Groetzinger, H. W.
224 Penn Avenue
Pittsburgh 22, Pa.
Tel. Atlantic 8387
242. Grogan, Wm. M. L.
3616 Watonga Street
Fort Worth, Texas
Tel. 7-6339
243. Groundwater, John
189 Breckenridge Street
Buffalo 13, N. Y.
244. Guardian Elec. Mfg. Co.
160 Fifth Avenue
Room 703
New York 11, N. Y.
Tel. CHelsea 2-9063
- H —
245. Haggerty Sales Co.
10226 Woodward Avenue
Detroit 2, Michigan
Tel. To. 9-8230
246. Haines, Donald G.
4000 West North Avenue
Chicago 39, Illinois
Tel. Capitol 6500
247. Haines, E. Ralph
949 Lake Street
Oak Park, Illinois
Tel. Euclid 4060J
248. Halinton, Harry
612 N. Michigan Avenue
Chicago 11, Illinois
Tel. Whitehall 4822
250. Handel-Davies Co.
The Union Commerce Bldg.
Cleveland 14, Ohio
Tel. Prospect 1862
251. Hannigan, Walter T.
United Bldg.
43 Leon Street
Boston 15, Mass.
Tel. Garrison 0238
252. Hardie, Bob
117 S. Lafayette Park Pl.
Los Angeles 4, Calif.
253. Hardie, L. C.
Box 1491
Des Moines, Iowa
254. Hardy & Associates, A. Sidney
723 Ponce de Leon Ct., N. E.
Atlanta 4, Georgia
Tel. Hemlock 4416
255. Harrell, Atcheson & Adams, Inc.
P. O. Box 2158
Greensboro, N. C.
Tel. 6838
- Branch: P. O. Box 4311
Atlanta, Georgia
256. Harris, Alfred W.
Western Electronic Enterprises
3348 West Compton Blvd.
Gardena, California
Tel. Hawthorne 1816-R
257. Harris Co., Stanley A.
126 State Street
Boston 9, Mass.
Tel. LAfayette 3-2125, 6
258. Harris-Hanson Company
427 No. Euclid Avenue
St. Louis 8, Mo.
Tel. Forest 5841
259. Harris-Siegel
521 North La Cienega Blvd.
Los Angeles 36, California
Tel. Bradshaw 2-4441
260. Hart, Frederick H.
258 Park Square Bldg.
Boston 16, Mass.
Tel. Devonshire 7174
261. Haskell, R. B.
200 Davis Street
San Francisco 11, Calif.
Tel. Douglas 8590
262. Hatton & Co., Arthur T.
410 Asylum Street
Hartford 3, Conn.
Tel. Hartford 5-2159
263. Hauck & Bishop
278 Chronicle Bldg.
San Francisco 3, Calif.
Tel. Exbrook 7058
264. Hawkins, Marvin
1111 Holley Court
Oak Park, Illinois
Tel. Estabrook 1000
265. Heberling, T. F.
1545 Westfield Street
Pittsburgh 16, Pa.
Tel. Lehigh 6279
266. Hedquist, J. R.
415 Essex Bldg.
Minneapolis 2, Minn.
267. Heeger, O. L.
1406 So. Grand Avenue
Los Angeles 15, Calif.
Tel. Prospect 0438
268. Heidorn, E. F.
Rose Building
Cleveland 15, Ohio
269. Heimann Company, The
1215 Harmon Place
Minneapolis 3, Minn.
Tel. Main 5457
270. Held, Herman E.
420 Market Street
San Francisco 11, Calif.
Tel. Garfield 1-6 30
271. Hemion, J. R.
614 Frelinghuysen Avenue
Newark 5, N. J.
Tel. Bigelow 3-4700
272. Hemphill, Robert F.
3228 Hiatt Place N.W.
Apt. 5
Washington 10, D. C.
273. Hendrickson & Associates, Ernest G.
1717 West Broadway
Spokane 8, Washington
Tel. Broadway 3630
274. Hendrickson, William A.
First Parish Road
Scituate, Mass.
Tel. Scituate 652

Directory of Factory Representatives (Continued)

275. Henger-Fairfield Co.
1812 Columbus Road
Cleveland 13, Ohio
Tel. Cherry 1018
276. Henger-Seltzer Co.
130 S. Hewitt Street
Los Angeles 12, Calif.
Tel. Madison 2631
277. Henry Company, The Paul
2310 South La Cienega Blvd.
Los Angeles, California
Tel. Ashley 4-2722
278. Hermans Co., James P.
1234 Folsom Street
San Francisco 3, Calif.
Tel. Market 4166
279. Hernly, Wayne
Greens Fork, Indiana
Tel. Greens Fork 10-L
280. Hicks, W. M.
41 Park Row
New York 7, N. Y.
281. Higgins Co., Royal J.
600 S. Michigan Avenue
Chicago 5, Illinois
Tel. Harrison 5948
282. Hilger, J. O.
910 East Geranium Avenue
St. Paul 6, Minn.
Tel. Van Buren 5265
283. Hill Co., B. R.
16190 Harlow Blvd.
Detroit 27, Michigan
284. Hill, Dormand S.
327 N. Justine Street
Chicago 7, Illinois
Tel. Seeley 0193
285. Hill Co., Fred B.
256 First Avenue N.
Minneapolis 1, Minn.
Tel. Main 8353
286. Hill, R. M.—Gray, G. E.
1 North Crawford Avenue
Chicago 24, Illinois
Tel. Van Buren 0650
287. Hill Sales Co., J. T.
800 W. 11th Street
Los Angeles 15, Calif.
Tel. Prospect 7503
288. Hilliard, D. M.
Box 246
Jenkintown, Pa.
Tel. Ogontz 3249
289. Hines Co., Russ
234 Ninth Street
San Francisco 3, Calif.
Tel. Hemlock 1-2635
290. Hitt Co., W. C.
1147 South Broadway
Los Angeles 15, Calif.
Tel. Prospect 2105
- Branch: c/o A. J. Hitt
1355 Market Street
San Francisco 3, Calif.
Tel. Underhill 1-2727
291. Hodges and Glomb
1264 Folsom Street
San Francisco 3, Calif.
Tel. Underhill 2367
292. Hodowal, John
4647 W. Van Buren St.
Chicago 44, Illinois
Tel. Estabrook 1000
293. Hofman, Harold W.
P.O. Box 2922 Terminal Annex
Los Angeles 54, Calif.
Tel. Union 1-8769
294. Holiday-Hathaway Sales Co.
238 Main Street
Cambridge 42, Mass.
Tel. Eliot 1751
- Branch: c/o E. R. Vizard
43 Sanford Street
Bridgeport, Conn.
Tel. Bridgeport 6-6136
295. Hollingsworth & Still
407 Whitehead Bldg.
Atlanta 3, Georgia
Tel. Main 5878
296. Holst, W. L.
28 E. Huron Street
Chicago 11, Illinois
Tel. Delaware 4566
297. Hooker, Samuel Co.
10 Boylston Street
Boston 16, Mass.
Tel. Kenmore 6-1487
298. Hoover, J. N.
5-150 General Motors Bldg.
Detroit 2, Michigan
Tel. Trinity 2-4178
299. Hopkin Brothers
116 North 7th Street
Philadelphia 6, Pa.
300. Hopkins, H. R.
Delaware Avenue & Brown Street
Philadelphia 23, Pa.
Tel. Market 1660 (Bell)
Park 5456 (Keystone)
301. Hopkins, W. J.
91 Prescott Street
West Medford, Mass.
Tel. Mystic 0144W
302. Hopper & McCoy
454 Marietta Street
Atlanta 3, Georgia
Tel. Walnut 3183
303. Hoskins, N. K.
210 So. Franklin
Chagrin Falls, Ohio
304. Hough, A. R.
P.O. Box 1452
15 Nokomis Circle
Knoxville 9, Tenn.
Tel. 4-6
305. How Inc., J. Duncan
Rm. 445, Statler Office Bldg.
20 Providence Street
Boston 15, Mass.
Tel. Hubbard 4638
306. Howard, Joel H.
2728 Henry Hudson Parkway
New York 63, N. Y.
307. Huber, E. G.
350 Scotland Road
Orange, N. J.
Tel. Orange 2-6600
308. Huber Sales Agency
1280 Mission Street
San Francisco 3, Calif.
Tel. Underhill 6374
309. Hudson, George W.
401 N. 27th Street
Richmond 23, Virginia
Tel. Richmond 3-5598
310. Hughes, Emmett N.
1709 W. 8th Street
Los Angeles 14, Calif.
Tel. Exposition 1169
311. Huges, K. E.
303 W. 42nd Street
New York 18, N. Y.
Tel. Circle 5-8831
312. Hurd Company, Harry G.
308 North Jefferson Avenue
St. Louis 3, Mo.
Tel. Chestnut 5678
313. Hursch Co., Jack L.
436 Continental Oil Bldg.
Denver 2, Colorado
Tel. Tabor 7325
314. Hutmacher & Associates, Ray R.
4804 West Chicago Avenue
Chicago 51, Illinois
Tel. Mansfield 4458
315. Hyde Electric Co., E. N.
117 W. Ashmead Street
Philadelphia 44, Pa.
Tel. Germantown 6253
316. Hyde, Richard A.
4253 Quitman Street
Denver 12, Colo.
Tel. GRand 1768
- I —
317. Industrial & Communications Equip. Co.
1707 Grand Central Avenue
Tampa 6, Florida
Tel. H-1237
318. Instrument Sales Co.
325 West Huron Street
Chicago 10, Illinois
Tel. Superior 9312, 3
319. Isdale, John S.
144 Curtis Street
Meriden, Conn.
Tel. Meriden 4008
- J —
320. Jackman, L. H.
1696 Belvoir Blvd.
South Euclid 21, Ohio
Tel. Evergreen 3724
321. Jackson, Keene Company
215 Security Bldg.
102 No. Brand Blvd.
Glendale 3, Calif.
Tel. Chapman 5-2998
322. Jackson, William M.
1896 Snowden Avenue
Memphis 7, Tenn.
323. Jacobs, Morris F.
3321 North Frederick Avenue
Milwaukee 11, Wisconsin
Tel. EDgewood 2-2260
324. James Jr., R. C.
4130 First Avenue S.
Seattle 4, Washington
325. Jaques, L. E.
8112 Tulane Avenue
University City, Mo.
Tel. Cabany 5349
326. Jay, Harry F.
Jay Engineering Co.
1604 E. 66th Street
Cleveland, Ohio
327. Jay, Joseph H.
Jay Engineering Co.
335 St. Louis Avenue
Dayton 5, Ohio
328. Jeffries, Samuel A.
1513 Packard Bldg.
Philadelphia 2, Pa.
Tel. Rittenhouse 6-6408
329. Jensen Co., Verner O.
2616 Second Avenue
Seattle 1, Washington
Tel. Elliott 6871
- 329A. J-H Electronic Sales Co.
P.O. Box 6844
Towson 4, Maryland
Tel. Evergreen 1401-J

Directory of Factory Representatives (Continued)

330. J. & H. Sales Company
2635 S. Wabash Avenue
Chicago 16, Illinois
331. Johnson, George R.
70 Pine Street
New York 5, N. Y.
Tel. WHitehall 4-0494
333. Johnson Sales Co.
P.O. Box 287
Bay City, Michigan
Tel. 6413

Branch: 6505 Second Blvd.
Detroit 2, Michigan
Tel. Trinity 1-7431

335. Jones, Everett
606 Williamson Bldg.
Cleveland, Ohio
Tel. Cherry 2292
336. Jones Sales Agency
1427 N. Hanley Road
St. Louis 14, Mo.
Tel. Parkview 9302
337. Joralemon & Craig
112 South 16th Street
Philadelphia, Pa.
Tel. Ri. 6-2291, 2
Ri. 6-0354
338. Joseph, Ben
258 Broadway
New York 7, N. Y.
Tel. REctor 2-0594
339. J. T. L. Sales Co.
120 Liberty Street
New York 6, N. Y.
Tel. WHitehall 4-2983

— K —

340. Kaelber & Mack
17 West 17th Street
New York, N. Y.
341. Kahan, Irving J.
333 North Michigan Ave.
Chicago 1, Illinois
Tel. Franklin 1478
- 341A. Kahant Associates
11 Park Place
New York, N. Y.
Tel. COrtlandt 7-5326
342. Kohn & Co., Irving I.
3324 Main Street
Hartford 1, Conn.
Tel. 2-6929
343. Karet Associates, Inc., R. M.
510 North Dearborn Street
Chicago 10, Illinois
Tel. WHitehall 6345
344. Karns Company, Jack
154 Nassau Street
New York 7, N. Y.
Tel. REctor 2-1008
345. Kathrinus & Co., Norman W.
1218 Olive Street
St. Louis 3, Mo.
Tel. Central 6300
346. Kaufmann, Mel S.
20 Park Lane
Minneapolis 5, Minn.
347. Kaufman Sales Agency, Inc.
631 Penn Avenue
Pittsburgh 22, Pa.
Tel. Emerson 1885
348. Kay Sales Company
3527 Broadway
Kansas City 2, Mo.
Tel. Logan 7640-41
349. Kayworth, Al
640 Prospect Avenue
Lawrence, Mass.
Tel. Lawrence 2-5991

350. Kearney, J. J.
995 James Street
Apartment #8
Syracuse 3, N. Y.
351. Kearns, James L.
Box 5125
Portland 16, Oregon
352. Keefe Electronic Sales Co.
326 Cooper Street
Camden, N. J.
Tel. Camden 4-2215
353. Keeler, White Company
1041 Sixth Avenue So.
Seattle 4, Washington
Tel. Elliott 2367

Branch: 302 N.W. Fourth Ave.
Portland 9, Oregon
Tel. Broadway 0593

Branch: 436 Colyton Street
Los Angeles, California

Branch: 615 Seventh Street
San Francisco 3, Calif.
Tel. Hemlock 1-2900

354. Kelburn Engineering Co.
600 W. Jackson Blvd.
Chicago 6, Illinois
Tel. Dearborn 2828
355. Keller, W. J.
304 Natchez Bldg.
New Orleans 12, La.
356. Kelly, William T.
90 Lathrop Street
Beverly, Mass.
Tel. Beverly 65
357. Kennedy, M. D.
103 N. Foley Avenue
Freeport, Illinois
Tel. Ridge 711
358. Kennedy Sales Co.
2362 University Avenue
St. Paul 4, Minn.
359. Kennedy Sales & Engineering
405½ So. Broadway
Rochester, Minn.
Tel. 5012
360. Kerns, Frank
Automatic General Sales
210 W. 8th St.—Room 125
Kansas City 6, Mo.
Tel. Grand 8-575
361. Kerus, Frank
210 W. 8th Street
Kansas City 6, Mo.
- 361A. Kimball, Fred
11000 E. 19th St.
Independence, Mo.
- 361B. Kimball, H. Douglas
1140 E. National St.
Springfield, Mo.
362. King, Paul
1519 So. Boston Avenue
Tulsa 5, Oklahoma
Tel. 24478
363. Kirchburg, Robert J.
205 W. Wacker Drive
Chicago 6, Illinois
Tel. Randolph 1868
364. Kirkeby, Marvin H.
237 Sheridan Avenue So.
Minneapolis 5, Minn.
Tel. Kenwood 1080
365. Kleker, Jerome
4311 N. Mason Avenue
Chicago, Illinois
366. Klicpera, M. F.
Box 3113
Houston 1, Texas
Tel. Jackson 2-8459

Branch: c/o H. Courtney
1216 S. Columbia St.
Tulsa, Oklahoma
Tel. Tulsa 6-3957

368. Knight Company, A. S.
3010 Western Avenue
Seattle 1, Washington
Tel. Eliot 7390
369. Knight Company, W. Bert
908 Venice Blvd.
Los Angeles 15, Calif.
Tel. Richmond 6363
370. Koehler-Pasmore Co.
11833 Hamilton
Detroit 3, Michigan
Tel. Townsend 8-3322
371. Koenig Sales Co.
19 W. Linwood Blvd.
Kansas City 2, Mo.
Tel. Valentine 7523
372. Krueger, Henry M.
735 Laguna Street
San Francisco 2, California
Tel. Market 1-0647
Juniper 5-0735

— L —

- 372A. Ladd, Robert
3646 N.E. 113th St.
Portland, Oregon
373. Land-C-Air Sales Inc.
1819 Broadway
New York 23, N. Y.
Tel. Circle 7-7975
374. Landfear, J. M.
1223 Sylvania Road
Cleveland Heights 21, Ohio
375. Landis, B. C.
1472 Broadway
New York 18, N. Y.
Tel. BRyant 9-9642
376. Langager, T. O.
2401 Grand Avenue So.
Minneapolis 5, Minn.
377. Larrabee, Fred H.
6033 Main Street
Kansas City 2, Mo.
Tel. Delmar 2804
378. Larson, Wilfred L.
1328-30 N. Halsted Street
Chicago 2, Illinois
Tel. Michigan 7136
379. Lassberg, Alexander A.
The Texport Company
304 E. Fifth Street
Austin, Texas
Tel. 3193
380. Lasure Company, Harry A.
2216 West Eleventh Street
Los Angeles 6, Calif.
Tel. DRexel 1263
381. Lavin, Henry
28 Sherman Avenue
Meriden, Conn.
Tel. Meriden 5843
382. Law Instrument Co.
P. O. Box 95
Angola, Indiana
383. Law, Ted
Box 97
Angola, Indiana
384. Leban & Co., A.D.
5716 Nassau Road
Philadelphia 17, Pa.
Tel. Trinity 1638
385. Lee Co., Dave M.
2626 Second Avenue
Seattle 1, Washington
Tel. Main 5512

Directory of Factory Representatives (Continued)

386. Lee, William S.
2033 Park Avenue
Detroit 26, Michigan
Tel. Cherry 1148
387. Lehner, Jack C.
4301 Daisy Avenue
Cleveland 9, Ohio
Tel. Shadyside 0903
388. Leims, John
4647 W. Van Buren Street
Chicago 44, Illinois
Tel. Estabrook 1000
389. Lesco Distributors
Ed. Cohn
N.E. Corner 15th & Venago Streets
Philadelphia 40, Pa.
Tel. Radcliff 5-6050
Radcliff 5-5805
390. Levin, Sol H.
c/o Walter L. Schott Co.
537 S. Dearborn Street
Chicago 5, Illinois
Tel. Webster 3500-01
391. Levitre, Raymond
3182 Fairfield Avenue
Bridgeport 5, Conn.
392. Lewis Associates, Dean
1797 Solano Avenue
Berkeley, California
Tel. Landscape 5-7318
393. Lewis Company, Don R.
1528 Princeton Avenue
Salt Lake City 5, Utah
Tel. 4-6798
394. Lewis Herman
1622 68th Avenue
Philadelphia, Pa.
395. Lewis & Sachs Co.
Empire State Bldg.
New York 1, N. Y.
Tel. Pennsylvania 6-9710
396. Liddle, Edwin F.
18925 Grand River Ave.
Detroit 23, Michigan
Tel. Vermont 7-5310
397. Lindborg, D. L.
111 North Canal Street
Chicago 6, Illinois
Tel. Franklin 1163
398. Linter & Son, H. M.
50 Warren Street
New York 7, N. Y.
Tel. BEekman 3-2906, 7
399. Lipscomb, Earl W.
4433 Stanford Street
Dallas 5, Texas
400. Logan Company, Les
530 Gough Street
San Francisco 2, Calif.
Tel. Hemlock 5127, 8
401. Lohse, Perry
406-410 Western Reserve Bldg.
Cleveland 13, Ohio
402. Lowery Company, L. D.
1343 Arch Street
Philadelphia 7, Pa.
Tel. Locust 7-5135-6
403. Lucas, Vincent
1565 Odell Street
New York 62, N. Y.
404. Ludgate Associates, John P.
345 Fourth Avenue
Pittsburgh 2, Pa.
Tel. Atlantic 1805-06
405. Lundgren Co., E. B.
402 Manufacturers Exch. Bldg.
Kansas City 6, Mo.
Tel. Victory 7057
406. Lyman, John R.
12 Cass Street
Springfield, Mass.
Tel. 7-5361
407. Lynch, C. R.
210 West 7th Street
Los Angeles 14, Calif.
Tel. Van Dyke 3805
408. Lynch & Gentry
136 Liberty Street
New York 6, N. Y.
Tel. WWhitehall 4-1165
- M —
410. Macdonald, Samuel K.
1531 Spruce Street
Philadelphia 2, Pa.
Tel. Kingsley 5-1205
- Branch: 715 State Theatre Bldg.
335 Fifth Avenue
Pittsburgh 22, Pa.
Tel. Atlantic 2253
411. MacNabb, Vernon C.
915 Westfield Blvd.
P. O. Box 5971
Indianapolis 20, Indiana
412. MacPherson Company, B. L.
601 Fort Wayne Bank Bldg.
Fort Wayne 2, Indiana
Tel. Anthony 9460
413. McCaffry, J. A.
6432 Cass Avenue
Detroit 2, Michigan
Tel. Madison 9100
414. McCann, James J.
2826 119th Street
College Point, L. I., N. Y.
415. McCarthy, J. U.
1725 Hillcrest Avenue
St. Paul, Minn.
Tel. Emerson 8619
416. McCarthy, L. C.
9 So. Clinton Street
Chicago 6, Illinois
Tel. Andover 2104
417. McClintock Sales Co., Inc.
2126 Jackson Street
Dallas 1, Texas
418. McCorvey Company, V. Avis
214-B Evans Drive
Decatur, Georgia
Tel. CRescent 6167
419. McCoy, D. T.
136 E. Weisheimer Road
Columbus, Ohio
Tel. Jefferson 7475
420. McCullough, M. L.
Box 156
Fayetteville, N. Y.
Tel. 475-J
421. McDonough, W. Bert
1320 C. & S. Nat'l Bank Bldg.
Atlanta 3, Georgia
423. McEwen, John
47 E. 87th Street
New York 28, N. Y.
Tel. LEhigh 4-5900, Ext. 15
424. McFadden, William E.
85 E. Gay Street
Columbus 15, Ohio
Tel. Main 3363
425. McGary, William T.
4030 Chouteau Avenue
St. Louis 10, Mo.
Tel. Jefferson 5252
- Branch: 313 Reliance Bldg.
Kansas City, Mo.
Tel. Victor 5252
426. McGee, Larry
1811 Carroll Avenue
Chicago 21, Illinois
427. McGinley, Edward D.
2938 W. Liberty Avenue
Pittsburgh, Pa.
Tel. Locust 2831
428. McKenzie Co., S. M.
Temple Bar Bldg.
Court & Main Streets
Cincinnati 2, Ohio
Tel. Cherry 2334
429. McKerrow, A. D.
41 Prouty Lane
Worcester 2, Mass.
Tel. 3-5344
430. McKinley and Stratton
2601 North Broad Street
Philadelphia 32, Pa.
Tel. RADcliff 5-7912
431. McKinney, J. F.
112 Johnson Building
2011-13 Cedar Springs
Dallas 1, Texas
Tel. R-5271
432. McCloud & Company, W. Cliff
711 Colorado Bldg.
Denver 2, Colorado
Tel. KEystone 8511
433. McTighe, William
744 Main Street
Worcester 8, Mass.
434. Mack, P. W.
Easy Street
Granby, Mass.
Tel. Granby 4, Ring 32
435. Macon & Co., H. L.
P. O. Box 500
Atlanta, Georgia
Tel. Jackson 0751
436. Maerlender, H. G.
3381 West 125th Street
Cleveland 11, Ohio
Tel. ORchard 6786
437. Magnus & Associates, Inc., E. D.
188 W. Randolph Street
Chicago 1, Illinois
Tel. Franklin 8785
438. Maguire, James A.
522 Drexel Bldg.
Philadelphia 6, Pa.
Tel. Market 1670
439. Maguire, J. E.
1507 Metropolitan Avenue
Box 62
New York City, N. Y.
Tel. TAlmadge 3-1119
440. Mallard, A. K.
Radio Corporation of America
RCA Victor Division
1907-11 McKinney Avenue
Dallas 10, Texas
441. Manassa, Al.
2130 E. 5th Street
Charlotte 4, N. C.
442. March, Elliot
115-80 221st Street
St. Albans 11, N. Y.
Tel. LAurelton 5-8204
443. Marcus, William J.
John F. Rider Publisher, Inc.
404 Fourth Avenue
New York 16, N. Y.
444. Markham, Lyle E.
17 West 11th Street
Erie, Pa.

Directory of Factory Representatives (Continued)

445. Marsh Agencies
110 Battery Street
Seattle 1, Washington
Tel. MAin 8762
446. Marsh Company, J. W.
1515-19 W. Pico Blvd.
Los Angeles 15, Calif.
Tel. EXposition 1204

Branch: 65 Ninth Street
San Francisco 3, Calif.
Tel. MARket 1-6851
447. Marshall, Frank E.
25 Huntington Avenue
Boston 16, Mass.
Tel. Kenmore 7661
- 447A. Marshall Co., G. S.
1056 Pagoda Pl.
Los Angeles, Calif.
Tel. Capitol 1-8356
448. Marshall, Harry E.
104 Olive Street
San Francisco 9, Calif.
449. Marshank Sales Company
672 So. Lafayette Park Place
Los Angeles 6, Calif.
Tel. Drexel 8235

Branch: 1048 Flood Bldg.
San Francisco, Calif.
Tel. GARfield 5989
450. Marsland-Welby Co.
20 N. Wacker Drive
Chicago, Illinois
451. Martin, T.
15 Grove Hill Park
Newtonville, Mass.
452. Masin, O. F.
17 E. 42nd Street
New York 17, N. Y.
Tel. MURray Hill 2-4580
453. Mason, J. R.
214 W. Elm Street
Washington Courthouse
Ohio
454. Massey Associates, Inc.
1124 Vermont Avenue N.W.
Washington 5, D. C.
Tel. National 1957
455. Mayer & Company, Al
6376 Clayton Road
St. Louis 17, Mo.
456. Maynard, John M.
4507 Shenandoah Street
Dallas 5, Texas
Tel. Lakeside 1537
457. Maynard, Lee W.
139 Central Ave. North
Clayton 5, Mo.
Tel. Delmar 3723
458. Mayorga, H. Colman
55 West 42nd Street
New York 18, N. Y.
459. Melton & Co., E. L.
2901 E. Meyer Blvd.
Kansas City 5, Mo.
Tel. Jackson 0467, 2514
460. Melton, W. M.
1223 Dennison Street
Little Rock, Arkansas
461. Merchant, Ross C.
4829 Woodward Avenue
Detroit 1, Michigan
Tel. Temple 1-1677
462. Merritt, Ron
1515 S.W. 5th Avenue
Portland 1, Oregon
Tel. Broadway 0045
463. Meyer, Chas. N.
65 Ninth Street
San Francisco, Calif.
464. Meyer, Fritz A.
207 E. Michigan Street
Milwaukee 2, Wisconsin
Tel. Marquette 6439
465. Meyer, W. V.
Kingsley Road
Huntington, N. Y.
466. Middaugh, H. G.
3892 Roseberry Drive
Wichita 10, Kansas
Tel. 6-9679
467. Midwest Sales Co.
246 Hanna Bldg.
Cleveland 15, Ohio
Tel. Main 9392
468. Miles, Paul H.
333 N. Michigan Blvd.
Chicago 1, Illinois
Tel. Franklin 7100
469. Pierre Miles, Nagel & King
35 East Wacker Drive
1178 Pure Oil Bldg.
Chicago 1, Illinois
Tel. Central 8999
470. Millar Associates, James
1000 Peachtree St., N.E.
Atlanta 5, Georgia
Tel. Hemlock 1648
471. Miller, Clair R.
P. O. Box 243
Cedar Rapids, Iowa
Tel. 2-3408
472. Miller Co., Gerald B.
1051 No. Havenhurst Avenue
Hollywood 46, Calif.
Tel. Hollywood 6305
473. Miller & Polite
17th & Sansom Street
Philadelphia 3, Pa.
474. Mills, Gil
2 Park Square
Boston 16, Mass.
Tel. Devonshire 8756
475. Mills, Henry L.
83 Fairfield Avenue
Bridgeport 3, Conn.
Tel. Bridgeport 5-7900
476. Milsk, Robert
642 Beaubien Street
Detroit 26, Michigan
Tel. Randolph 4969
477. Mims Co., Morrill P.
43 Leon Street
Boston 15, Mass.
Tel. Garrison 7-0456
478. Mingins, L. H.
70-10 108th Street
Forest Hills, L. I., N. Y.
Tel. BOulevard 3-1643
479. Mitchell Company, C. H.
Mitchell C. Hirsch
769 Venice Blvd.
Los Angeles 15, Calif.
Tel. BRadshaw 2-3885
480. Mitscher, R. W.
487 Ellicott Square Bldg.
Buffalo 3, N. Y.
Tel. Washington 2517
481. Mongrief and Graf
120 West 18th Street
New York 11, N. Y.
Tel. WATkins 9-7927
482. Moore, C. E.
P. O. Box 7619
Station D.
Kansas City 3, Mo.
Tel. Wabash 4656
- 482A. Morey, Ed W.
241 N. Bostwick St.
Charlotte, Mich.
483. Moring, G.
1210 West North Street
Dothan, Alabama
Tel. 1403 L
484. Morrow Company, Les A.
2103 Mars Avenue
Cleveland 7, Ohio
Tel. LAkewood 6348
485. Morse Engineering Co.
600 Fullerton Bldg.
St. Louis 1, Mo.
Tel. GARfield 0076

Branch: 7041 College Street
Kansas City 1, Mo.
486. Mosher, Robert D.
51 Alden Road
Weymouth 88, Mass.
Tel. Weymouth 4197J
487. Moss, Gordon G.
P. O. Box 428
1530 13th Avenue
Greeley, Colorado
Tel. Greeley 770
488. Mountain States Engineering Co.
63 West 7th South Street
Salt Lake City 4, Utah
Tel. 4-1772
489. Moyer, Kenneth J.
Ruth & Clearfield Sts.
Philadelphia 34, Pa.
Tel. GARfield 3-4710
490. Muniot, Jr., J. E.
918 Union Street
New Orleans 13, La.
Tel. Canal 1881-2
491. Murphy & Cota
5 Ivy Street, N.E.
Atlanta 3, Georgia
Tel. Main 1005
492. Mykroy, Inc.
Arlington Heights Airport
Arlington Heights, Illinois
- N —
493. Nats, O. F.
5403 Aberdean Road
Kansas City 3, Kansas
Tel. LUcerne 6524
494. Neely Enterprises, Norman B.
7422 Melrose Avenue
Hollywood 46, Calif.
Tel. WHitney 1147

Branch: c/o Jack Ingersoll
420 Market Street
San Francisco, Calif.
Tel. SUTter 1-8854

Branch: c/o W. K. Dallas
1516 S.E. Seventh Avenue
Portland, Oregon
Tel. LANcaster 3205
495. Neff, H. D.
66 Deerfield Avenue
Hartford 5, Conn.
Tel. Hartford 2-4330
496. Nelms, Robert L.
177 State Street
Bridgeport, Conn.
Tel. 5-9634

Directory of Factory Representatives (Continued)

497. Nelson Company, A. J.
P. O. Box 2244
1639 Blake Street
Denver 1, Colorado
Tel. Keystone 6751
498. Neutra, J. E.
6241 Osage Avenue
Philadelphia 43, Pa.
Tel. Sherwood 2940
499. Nevins, W. W.
301 Kemper Insurance Bldg.
Atlanta 3, Georgia
500. Nicholas Co., Fred M.
1123 Harrison Street
San Francisco 3, Calif.
Tel. Underhill 4830
501. Nickerson & Rudat
383 Brannan Street
San Francisco 7, Calif.
Tel. Douglas 8530
502. Nordstrom & Co., R. C.
5057 Woodward Avenue
Detroit 2, Michigan
Tel. Temple 1-1120
503. Norris Company, George D.
3010 First Avenue
Seattle 1, Washington
Tel. El. 1344
504. Northwestern Agencies
4130 First Avenue
Seattle 4, Washington
Tel. Eliot 8882
505. Nott, L. A.
1061 Howard Street
San Francisco 3, Calif.
506. Nulsen, Marvin E.
333 Kenyon Avenue
Indianapolis 1, Indiana
- O —
507. Odell, M. P.
1748 Northfield Avenue
Cleveland, Ohio
Tel. Potomac 6960
508. Olander, L. W.
880 Bergen Avenue
Jersey City, J. J.
Tel. Journal Square 2-1364
509. Oliphant & Co., J. E.
505 Uhler Bldg.
Marion, Ohio
Tel. Marion 2163
510. Olsen Company, John O.
1456 Waterbury Road
Cleveland 7, Ohio
Tel. ACademy 4932
- Branch: c/o Tony C. Wahl
5229 Arrow Road
Cincinnati 11, Ohio
Tel. MOnfana 6835
- Branch: c/o Wm. F. Lowry
3239 Faronia Street
Pittsburgh 4, Pa.
Tel. WAlnut 2959
511. Osborne, E. E.
431 W. Fifth Street
Rushville, Indiana
Tel. 3461
- Branch: Arrow Road
Cincinnati 11, Ohio
Tel. Humboldt 2210J
512. Ossmann, Edward A.
4671 Ridge Road, West
Spencerport, N. Y.
Tel. Spencerport 312F41
513. Otis & Co., W. I.
600 Camelia Street
Berkeley 2, Calif.
Tel. Ashberry 3456

— P —

514. Pacific Airmotive Corp.
1626 McGee Street
Kansas City 8, Mo.
515. Parker, Blair H.
610 Atlantic Avenue
Boston 10, Mass.
Tel. Liberty 9214
- 515A. Parker, Paul
1630 Blair Street
Lansing, Mich.
516. Parsons & Co., C. B.
119 Belmont Avenue N.
Seattle 2, Washington
Tel. Capitol 7307
517. Patterson & Company
Commerce & Ervay Streets
Dallas 1, Texas
Tel. Central 5764
519. Peirce, George H.
715 Camp Street
New Orleans, La.
520. Perlmuth-Colman & Associates
942 Maple Avenue
Los Angeles 15, Calif.
Tel. Trinity 7353-54-55
521. Pero, J. F.
13 Old Farm Road
Island Trees
Hicksville, L. I., N. Y.
522. Perrier, C. J.
1630 Hanna Building
Cleveland 15, Ohio
Tel. Skyline 1424
523. Perron & Co., Ray
131 Clarendon Street
Boston 16, Mass.
Tel. KEmore 6-1370
524. Peterson Company
1921 Blake Street
Denver 2, Colorado
Tel. Alpine 0365
- 524A. Pettit Co., George
549 W. Washington Blvd.
Chicago 6, Ill.
525. Pickett, James M.
12 East 78th Street
New York 21, N. Y.
Tel. Plaza 9-7466
526. Pieksen, G. W.
3020 Olive Street
St. Louis 3, Mo.
527. Pierson & Associates, Inc., Jos.
1255 S. Flower Street
Los Angeles, Calif.
Tel. Richmond 7-2358
- 527A. Pitts, Lou
1935 Felix Avenue
Memphis 4, Tenn.
528. Podolny, James H.
5844 Beacon Street
Pittsburgh 17, Pa.
Tel. Hazel 8342
529. Pope, Herbert J.
1 Mohawk Road
Marblehead, Mass.
530. Pope, Jr., Jas. C.
1425 S. Flower Street
Los Angeles 15, Calif.
531. Potter, George Ray
605 N. Michigan Avenue
Chicago 11, Illinois
Tel. Delaware 6054
532. Powers, Vernon L.
1001 1/2 W. Gregory Street
Pensacola, Florida

533. Pratt, T. J.
2826 Observatory Road
Cincinnati 8, Ohio
Tel. Ea. 4225
534. Price, J. M.
Radio Corporation of America
RCA Victor Division
718 Keith Building
1621 Euclid Avenue
Cleveland 15, Ohio
535. Printz Co., William
358 Fifth Avenue
New York 1, N. Y.
Tel. Wisconsin 7-7764 & 7779
536. Progressive Marketers
41 Union Square
New York 3, N. Y.
Tel. ALgonquin 4-7486
537. Pugh Company, C. L.
1670 Doone Road
Columbus 8, Ohio
Tel. Kingswood 4855
538. Purdy Co., William J.
420 Market Street
San Francisco 11, Calif.
Tel. Douglas 2-1108
539. Putnam Co., L. B.
509 17th Street
Denver 2, Colorado
540. Pyle, A. J.
212 Third Avenue, No.
Minneapolis 1, Minn.
Tel. Atlantic 8191

— Q —

541. Queisser Brothers
110 E. 9th Street
Indianapolis 2, Indiana
Tel. Riley 2518

— R —

542. Radio Products Sales Co.
238 West 15th Street
Los Angeles 15, Calif.
Tel. Prospect 2488
543. Raff, Leonard
1429 Fifth Avenue, S.E.
Cedar Rapids, Iowa
Tel. 3-0720
- 543A. Ransford Co., H. E.
Standard Life Bldg.
Pittsburgh 22, Pa.
544. Ranson, Russell
116 1/2 E. 4th Street
Charlotte 2, N. C.
Tel. 4-4244
545. Rau, O. C.
P. O. Box 141
Madison, N. J.
Tel. MADison 6-1648
546. Rauer, Frank W.
4144 Marvin Avenue
Cleveland 9, Ohio
Tel. Melrose 8350
- 546A. Ready, W. P.
National Company, Inc.
61 Sherman Street
Malden 48, Mass.
547. Redmann, S. M.
73 Allard Blvd.
Box 1325
New Orleans 10, La.
Tel. Audubon 7825
548. Redmond Supply Co., J. E.
402 W. Macison Street
P. O. Box 869
Phoenix, Arizona
Tel. Phoenix 3-3383, 3-1396

Directory of Factory Representatives (Continued)

549. Reid Company, Ralph K.
1911 West Ninth St.
Los Angeles 6, Calif.
550. Renz, Roy E.
1406 S. Grand Avenue
Los Angeles 15, Calif.
551. Reynolds Co., Harrison
419 Commonwealth Avenue
Boston, Mass.
Tel. COMmonwealth 6-2505-6
552. Reynolds, H. W.
1312 Park Road, N.W.
Washington, D. C.
- 552A. Rhines, Robert
Dimondale, Michigan
553. Richardson & Co., H. M.
2210 Foshay Tower
Minneapolis 2, Minn.
Tel. Geneva 4078
554. Ridley Associates
6 No. Hamlin Street
Chicago 24, Illinois
Tel. Sacramento 2831
556. Ritter Sales Company
612 No. Michigan Avenue
Chicago 11, Illinois
Tel. Superior 7759
557. Roberts & Associates, E. V.
5014 Venice Boulevard
Los Angeles 35, Calif.
Tel. WEbster 3-2456
558. Robinson, Clem
2711 No. 76th Street
Milwaukee 13, Wisconsin
Tel. Bluemound 3884
559. Rocke, Lee
13 East 40th Street
New York 16, N. Y.
Tel. MUrray Hill 3-7585
560. Rodman & Company
1827 S. Hope Street
Los Angeles 15, Calif.
561. Roes & Company, H. A.
Grand Avenue Bank Building
1805 Grand Avenue
Kansas City 8, Mo.
Tel. HARRison 2036
562. Rogers, A. J.
43 Bristol Road
Wellesley Hills 82, Mass.
Tel. Wellesley 3781
- 562A. Rome, Emile J.
1255 S. Flower Street
Los Angeles, Calif.
Tel. Rich. 7-2358
563. Roseberry, H. A.
322 Stephenson Bldg.
Detroit 2, Michigan
Tel. Madison 1868
564. Ross Associates
1275 Tremont Avenue
Boston 20, Mass.
Tel. Highlands 5630
565. Ross Co., David H.
104 Ninth Street
San Francisco 3, Calif.
Tel. Klondike 2-3038
566. Ross, Milton L.
505 Fifth Avenue
New York 17, N. Y.
567. Rotstein, Pete
1807 East Olympic Blvd.
Los Angeles 21, Calif.
Tel. Van Dyke 8049
568. Rowland, Ernest W.
110 Washington Street
New York 6, N. Y.
Tel. WHitehall 4-8395
569. Roye Sales Agency
11 Warren Street
New York 7, N. Y.
Tel. COrtlandt 7-1148
570. Ruhling Co., T. C.
P. O. Box 537
5020 Bradford Drive
Dallas 9, Texas
Tel. Lakeside 7344
571. Rupp Company, V. T.
1150 W. Olympic Blvd.
Los Angeles 15, Calif.
Tel. Prospect 9516
572. Russell, Frank B.
1411-19 Walnut Street
Philadelphia 2, Pa.
Tel. Locust 7-1323
573. Rutt, William
401 Broadway
New York 13, N. Y.
Tel. CAnal 6-7545
574. Ryan Co., Gerald G.
549 Washington Blvd.
Chicago 6, Illinois
Tel. State 7665
- S —
575. Sachs Co., R. T.
5475 Main Street
Buffalo 21, N. Y.
Tel. Williamsville 522
576. Sachs, Robert T.
243 Huxley Drive
Snyder 21, N. Y.
Tel. Amherst 3215
577. Saffler, Perry
53 Park Place
New York 7, N. Y.
Tel. REctor 2-5334
578. Sales Company, The
1624 North First Street
Albuquerque, N. Mex.
579. Salescrafters
510 N. Dearborn
Chicago, Illinois
580. Sanderlin Company, The
129 First Avenue West
Seattle 99, Washington
Tel. Beacon 7259
581. Sanderson Sales Co.
4 Smithfield Street
Pittsburgh 22, Pa.
Tel. GRant 3090
582. Sanford, L. C.
202 Woodland Avenue
Rutherford, N. J.
583. Satullo, Anthony R.
7635 East Jefferson
Detroit 14, Michigan
Tel. MELrose 1508
584. Saul, Howard M.
409 S. Fairfax Avenue
Los Angeles 36, Calif.
Tel. WEbster 8901
585. Schaeffer, Samuel
c/o Alpha Wire Corp.
50 Howard Street
New York 13, N. Y.
Tel. CAnal 6-7667
- 585A. Schaffner, Mort
c/o General Transformer Corp.
4321 W. Knox Ave.
Chicago 41, Ill.
Tel. Spring 3300
586. Schenck, LeRoy
58 E. Park Street
Newark 5, N. J.
Tel. MITchell 2-7613
587. Schiefer Electric Co., Inc.
311 Alexander Street
Rochester 7, N. Y.
Tel. Stone 0044
- Branch: 100 State Street
Albany 7, N. Y.
Tel. Albany 3-3628
- Branch: 527 Ellicott Square
Buffalo 3, N. Y.
Tel. Washington 8218
- Branch: 204 State Tower Bldg.
Syracuse 2, N. Y.
Tel. Syracuse 2-3494
588. Schmitt Co., F. Edwin
136 Liberty Street
New York 6, N. Y.
Tel. WOrth 2-6550, 1
589. Schmitz Co., J. O.
Porter Building
34th & Broadway
Kansas City 2, Mo.
Tel. Logan 9824
590. Schnitter, J. C.
15 Cary Avenue
Oakfield, N. Y.
Tel. Oakfield 2662
591. Scholz, Paul G.
2455 Ashland Ave.
Overland 14, Mo.
592. Schooler & Co., S. T.
5 Shockoe Slip
Richmond 19, Va.
593. Schoonmaker Co., J. Y.
2011 Cedar Springs Avenue
Dallas 1, Texas
Tel. Central 5535
594. Schreyack, C.
554 Park Blvd.
Glenn Elynn, Illinois
Tel. Glenn Elynn 1641
595. Schryver Sales Co., Clyde H.
108 Walttower Building
Kansas City 6, Missouri
Tel. Highland 8959
596. Schulz, Edwin A.
P. O. Box 4087
Indianapolis 5, Indiana
Tel. Broadway 1993
597. Schwartz, Adolph
220 Broadway
New York 7, N. Y.
Tel. CO. 7-0011
598. Schweitzer Co., Paul H.
5918 N. Olney
Route 13, Box 38-F
Indianapolis 44, Indiana
Tel. BR 7903
599. Scott, Ernest P.
1836 Euclid Avenue
Cleveland 15, Ohio
Tel. Main 1565
- 599A. Schwartz Assoc., M. B.
420 Lexington Ave.
New York 17, N. Y.
Tel. MUrray Hill 5-5878
600. Secrist, J. B.
529 Peachtree Street, N.E.
Atlanta 3, Georgia
Tel. Atwood 1224
601. Seeman, Wm. F.
248 Delaware Avenue
Buffalo 2, N. Y.
Tel. Cleveland 2836
602. Segar & Taylor
4508 E. Genesee St.
Dewitt P.O.
Syracuse, N. Y.

Directory of Factory Representatives (Continued)

603. Segel Co., Henry P.
143 Newbury Street
Boston 16, Mass.
Tel. Kenmore 6-3012-6333-9755
604. Selbey Sales Co.
893 First Avenue
New York 22, N. Y.
Tel. ELdorado 5-5898
605. Sewell, Norman M., Inc.
Susquehanna Ave. at Derstine
Lansdale, Pa.
Tel. 888
606. Seyd, Ernest K.
Andover, Connecticut
Tel. Willimantic 1131-J-2
607. Shaffer, Grant
6432 Cass Avenue
Detroit 2, Michigan
Tel. Madison 5300
608. Shanafelt, L. O.
Radio Corporation of America
RCA Victor Division
530 Citizens & South Bank Bldg.
Atlanta, Georgia
609. Shapp and Co., M. J.
121 North Broad Street
Philadelphia 7, Pa.
Tel. LOcust 7-5470
610. Shastock Co., L. W.
1399 E. 86th Street
Cleveland, Ohio
612. Shaw, Sam J.
207 Empire Bldg.
Pittsburgh 22, Pa.
Tel. Atlantic 4872
613. Sheets, William J.
1039 Investment Bldg.
15th & K Streets
Washington 5, D. C.
Tel. Executive 6223
614. Sheffer Co., H. George
P. O. Box 1587
240 So. Central Avenue
Phoenix, Arizona
Tel. 5-1535
615. Shellow, Robert
Rollan Sales Corp.
526 S. Wells Street
Chicago 3, Illinois
617. Shockey, O. L.
17353 Beaverland Ave.
Detroit 19, Michigan
Tel. Kenwood 2-1740
618. Sievers, Edward S.
5171 Hollywood Blvd.
Los Angeles 27, Calif.
Tel. NORmandy 2-1105
619. Signal Electric Mfg. Co.
600 W. Jackson Blvd.
Chicago 6, Illinois
Tel. Andover 4363
620. Silbert, Paul H.
177 Milk Street
Boston, Mass.
Tel. Hancock 6-2435
621. Silvey, Charles
1816 South Flower Street
Los Angeles 15, Calif.
Tel. Prospect 5957
622. Simberkoff, S. W.
347 Fifth Avenue
New York 16, N. Y.
Tel. LEXington 2-2184
623. Simon, E. L.
Radio Corporation of America
RCA Victor Division
827 Mart Building
1355 Market Street
San Francisco 3, Calif.
624. Simon, Felix
P. O. Box 614
Denver, Colorado
Tel. Keystone 0035
625. Sinai, Arnold A.
65 Ninth Street
San Francisco 3, Calif.
626. Singer & Associates, Edward
1722 West Arcade Place
Chicago 12, Illinois
Tel. Haymarket 7584
627. Skidmore & Co., W. K.
20 Vesey Street
New York 7, N. Y.
Tel. REctor 2-2888
628. Slocum, Lester
617 Case Bldg.
Rochester 4, N. Y.
Tel. Hillside 2920W
629. Sluman & Company, D. H.
130 W. 12th Street
Denver 4, Colorado
Branch: c/o Benjamin T. Clark
319-20 Atlas Bldg.
Salt Lake City, Utah
630. Smedley, A. B.
470 East Orange Grove Avenue
Pasadena 6, Calif.
Tel. Ryan 1-6738
631. Smiley & Associates, R. E.
404 Cunard Bldg.
503 Market Street
San Francisco 5, Calif.
632. Smith, J. Earl
Suite 205
2102 Bryan Street
Dallas 1, Texas
Tel. C-2966
633. Smith, Howard F.
265 West 14th Street
New York 11, N. Y.
Tel. CHelsea 2-2398
634. Smith, Maitland K.
315-317 Forest Avenue, N.E.
Atlanta 3, Georgia
Tel. Walnut 6094
635. Smith Company, Oren H.
225 W. Huron Street
Chicago 10, Illinois
Tel. Superior 7919
636. Smith Company, O. P.
100 W. Chicago Avenue
Chicago, Illinois
Tel. SUperior 2799
- 636A. Smith, Robert
614 N. Cochran Ave.
Charlotte, Mich.
637. Snow Sales Company
West 1125 First Avenue
Spokane 8, Washington
638. Somers & Company, F. C.
315 Grand Avenue Bank Bldg.
Kansas City 8, Mo.
Tel. Grand 1355
639. Sonkin, David
1775 Broadway
New York 19, N. Y.
Tel. Clrcle 7-6946
640. Southern Sales Company
1135 Lincoln Tower
Fort Wayne 2, Indiana
Tel. Anthony 5278
Branch: 418 Frick Bldg.
Pittsburgh 19, Pa.
Tel. Atlantic 5766
641. Southern Sellers
918 Union Street
New Orleans 13, La.
Tel. Canal 1881, 2
642. Spade, R. L.
425 45th Street
West Palm Beach, Fla.
643. Spencer, J. C.
1212 North San Marcos
Route 1, Box 290 A
Seguin, Texas
644. Sprung, Joseph
254 W. 31st Street
New York 1, N. Y.
Tel. Longacre 5-1820
645. Standard Equipment Co.
603 Electric Bldg.
Omaha, Nebraska
646. Starkey, K. S.
1115 Riverview Drive
Des Moines, Iowa
- 646A. Stemm, R. Edward
21 East Van Buren St.
Chicago 5, Illinois
Tel. WEbster 4840-41
647. Stemm, R. Edward and Royal A.
21 E. Van Buren Street
Chicago 5, Illinois
Tel. WEbster 4840-41
- 647A. Stemm, Royal A.
21 E. Van Buren St.
Chicago 5, Illinois
Tel. WEbster 4840-41
648. Stephens Mfg. Corp.
10416 National Blvd.
Los Angeles 34, Calif.
Tel. Texas 0-3776
649. Sterling & Co., S.
1125 East Milwaukee Avenue
Detroit 11, Michigan
Tel. Madison 9530
650. Stern, Paul J.
Fenway Hall Hotel
Euclid Ave. at University Circle
Cleveland 6, Ohio
651. Stevens, Fred J.
15324 Mack Avenue
Detroit 24, Michigan
Tel. TUxedo 1-2277
652. Stevens Co., T. W.
P. O. Box 37
Oklahoma City 4, Oklahoma
Tel. 9-4849
653. Stewart, William G.
5060 City Line Avenue
Philadelphia 31, Pa.
Tel. Greenwood 0799
655. Stone, Carl A.
3832 Wilshire Blvd.
Los Angeles, Calif.
656. Storminger, J. G.
1224 Amador Street
Vallejo, Calif.
Tel. Vallejo 3-6370
657. Stout, Curtis H.
1808 Beechwood Road
Little Rock, Arkansas
Tel. 3-2958
659. Strassner Co., Conrad R.
5108 Melrose Avenue
Los Angeles 38, Calif.
Tel. GRanite 3052
Branch: 65 Ninth Street
San Francisco 3, Calif.
Tel. UNderhill 6259
660. Stuart, Warren
700 N. Alabama
San Gabriel, Calif.
661. Sturgeon, Paul R.
25 Huntington Avenue
Boston 16, Mass.
Tel. Kenmore 5580

Directory of Factory Representatives (Continued)

- 662. Sturman, George T.
712 6th Avenue South
Minneapolis 15, Minn.
Tel. Geneva 1805
- 663. Superior Sales Co.
2808 Chestnut Street
Portsmouth, Va.
Tel. 1979-M
- 664. Surpless, Dunn & Co.
34 No. Clinton Street
Chicago 6, Illinois

Branch: 74 Murray Street
New York 7, N. Y.
- 665. Sussman, Jules
220 East 23rd Street
New York 10, N. Y.
- 666. Swank, Wally B.
4000 Cherry Road
Syracuse 9, N. Y.
Tel. 8-1528

— T —

- 667. Tanner, George O.
600 Grant Street
Pittsburgh 19, Pa.
Tel. Court 0131
- 668. Taylor, B. B.
107 Williams Street
Room 1626
New York, N. Y.
- 669. Taylor Company, Frank W.
4508 E. Genesee Street
DeWitt P. O.
Syracuse, N. Y.
Tel. Syracuse 4-1924
- 670. Taylor Co., Morris F.
8416 Georgia Avenue
Silver Spring, Maryland
Tel. Shepherd 4003

Branch: c/o Clark Adair
1654 N. Decatur Road
Atlanta, Georgia
Tel. Dearborn 3416

Branch: c/o P. A. Boyd
434 Biddle Avenue
Pittsburgh 21, Pa.
Tel. Pennhurst 1210

Branch: c/o G. E. DeNike
8416 Georgia Avenue
Silver Spring, Md.
Tel. Shepherd 4002

Branch: c/o H. W. Densham
148 Washington Avenue
Collingswood, N. J.
Tel. Collingswood 5-0145

Branch: c/o Wilfred Graham
747 Revere Road
Yeadon, Pa.
Tel. Madison 3855R

Branch: c/o Burke C. Hill
331 E. Park Avenue
Fairmont, W. Virginia

Branch: c/o J. P. Johnson
3535 Dell Trail
Chattanooga 4, Tenn.
Tel. Chattanooga 4-4026

Branch: c/o E. Kling-Mueller
212 Bonita Drive
Birmingham, Alabama

Branch: c/o M. A. Peckham
130 S. Fairview Avenue
Upper Darby, Pa.
Tel. Sunset 2383R

Branch: c/o Robert Peel
2307 41st Street
Washington, D. C.
Tel. Ordway 1931

- Branch: c/o R. E. Tydings
4719 S. 29th Street
Fairlington, Arlington, Va.
Tel. Temple 0460
- Branch: c/o R. H. Van Dusen
940 Lake Elbert Drive
Winterhaven, Fla.
Tel. Winterhaven 22-684
- 671. Taylor, Robert F.
308 West Washington Street
Chicago 6, Illinois
Tel. Andover 1808
- 672. Teldisco, Inc.
444 William Street
East Orange, N. J.
- 673. Television Electronics Co.
305 Techwood Drive N. W.
Atlanta, Georgia
Tel. Cypress 2705
- 674. Terry, C. E.
309 Reliance Bldg.
Kansas City 6, Mo.
Tel. Victor 5631
- 675. Terwilliger Sales
3527 Broadway
Kansas City 2, Mo.
Tel. WEstport 5830
- 676. Thacher Brothers
Rm. 459, Statler Office Bldg.
Boston 16, Mass.
Tel. Liberty 3769
- 677. Thomas, Dean M.
728 Main Street
Buffalo 2, N. Y.
Tel. Cleveland 3257
- 678. Thompson, Joseph G.
8154 S. Maryland
Chicago, Illinois
Tel. Hudson 2680
- 679. Thornwell Inc., E. A.
217 Whitehall Street S.W.
Atlanta 3, Georgia
Tel. WALnut 3548
- 680. Tivy, George S.
1148 South Grand Avenue
Los Angeles 15, California
Tel. PR. 8806 & 1686
- 681. Tobias & Company, David F.
30 Church Street
New York 7, N. Y.
Tel. COrtlandt 7-4350-1
- 682. Tonkin & Schiffer, Inc.
209½ West Market Street
Greensboro, N. C.
Tel. Greensboro 3-5578
- 683. Town, R. A.
424 Book Building
Detroit 26, Michigan
Tel. CAdillac 9704
- 684. Trinkle, Wilmer S.
2601 No. Broad Street
Philadelphia 32, Pa.
- 685. Tubergen, John B.
1406 S. Grand Avenue
Los Angeles 15, California
Tel. Richmond 6191
- 686. Tucker, John
Box 221
Westport, Conn.
- 687. Turner Company, Port
60 East 42nd Street
New York 17, N. Y.
Tel. MUrray Hill 7-7897
- 688. Twyman & Associates, B. G.
Suite 805
21 East Van Buren Street
Chicago, Illinois
Tel. AMBassador 1131

— V —

- 691. Valentine, Forrest C.
912 Fort Wayne Bank Bldg.
Fort Wayne 2, Indiana
Tel. Anthony 9122
- 693. Van Groos, J. C.
1406 So. Grand Avenue
Los Angeles 15, California
Tel. Richmond 6191
- 694. Vawter, James H.
351 Berryman Drive
Buffalo 21, N. Y.

— W —

- 695. Wall Company, Eugene J.
1836 Euclid Avenue
Cleveland 15, Ohio
- 696. Wallace, Don C. & William H.
Bendix Building
1206 Maple Avenue
Los Angeles 15, California
Tel. Richmond 7-0401
- 697. Wallace, Stanley K.
Box 744
Lutz, Florida
Tel. Tampa 99-493

Branch: c/o John T. Butters
Box 744
Lutz, Florida

Branch: c/o V. Hutto
255 Matthews Avenue N.E.
Atlanta, Georgia
Tel. Crescent 4691

Branch: c/o Wm. C. Jaudon
207 W. Alfred Street
Tampa, Florida

Branch: c/o H. J. Odom
223 N. 22nd Street
Birmingham, Alabama
- 698. Walthew, James M.
3219 1st Avenue South
Seattle 6, Washington
Tel. Seneca 6790
- 699. Walton Company, H. E.
1012 Francis Palms Bldg.
2111 Woodward Avenue
Detroit 1, Michigan
Tel. Cherry 6460-1
- 700. Ward Company, L. R.
2711 Commerce Street
Dallas 1, Texas
- 701. Ward Engineering Co., Inc.
302 Hildebrandt Bldg.
Jacksonville 2, Fla.
Tel. 5-1384-5
- 702. Ware, John Allen
301 W. "G" Street
San Diego 1, California
- 703. Warner Company, A. J.
5022 29th Avenue South
Minneapolis 6, Minn.
Tel. DRexel 1895
- 704. Waters, Robert A.
4 Gordon Street
Waltham 54, Mass.
Tel. WALTHam 5-6900
- 705. Weber Associates, Jack
210 E. 40th Street
New York 16, N. Y.
Tel. MUrray Hill 3-4398
- 706. Weber, Dale G.
7026 S.W. Capitol Highway
Portland 1, Oregon
Tel. Cherry 2650
- 707. Wedel, Frank
8113 Latona Avenue
Seattle 5, Washington

Directory of Factory Representatives (Continued)

- 708. Wehrheim, W. J.
6707 North Oakland Street
Philadelphia, Pa.
- 709. Weller, Roy H.
214 Oak View Avenue
Pittsburgh 18, Pa.
Tel. FRemont 4771
- 710. Wells-White Co.
308 Connor Bldg.
6625 Delmar Boulevard
St. Louis 5, Mo.
- 711. Weston Electrical Instr. Corp.
205 W. Wacker Drive
Chicago 6, Illinois
Tel. Franklin 4656
- 712. Weston Electrical Instr. Corp.
50 Church Street
Room 2076
New York 7, N. Y.
Tel. COrtlandt 7-0507-08-09
- 713. Whetzle, George L.
30 Rugby Road
Buffalo 16, N. Y.
- 714. Whitby, H. W.
1521 Burroughs Drive
Dayton 6, Ohio
Tel. Randolph 5907
- 715. White Co., Charles D.
589 Atlantic Avenue
Boston 10, Mass.
Tel. Liberty 8828-9
- 716. White, P. H.
111 Hoover Road
Needham Heights 94, Mass.
- 717. White Sales Company
10 High Street, Room 502
Boston, Mass.
Tel. Liberty 1277
- 718. Widmer, R. V.
149 Madison Avenue
Franklin Square, L. I., N. Y.
Tel. Floral Park 9567J
- 719. Wilks Company, Ernest L.
1212 Camp Street
Dallas 2, Texas
Tel. R-4059
- 720. Williams, V. W.
117 Green Hill Road
Broomall, Pa.
- 721. Williamson, Olan
Box 123
Loudon, Tenn.
Tel. 144R
- 722. Willison Company, G. G.
2020 Harold Street
Houston 6, Texas
- 723. Willow Sales Engineering Co.
408-10 York Road
P. O. Box 6766
Towson 4, Maryland
Tel. Towson 2585-6
Branch: c/o C. R. Hile
P. O. Box 675
52 Longview Road
Springfield, Pa.
Tel. Swarthmore 3229-W
- 724. Willoughby, D. J.
Suite 304
1518 Walnut Street
Philadelphia 2, Pa.
Tel. Pe 5-3152
- 725. Wilson, M. T.
125 Warner Street
Fond du Lac, Wisconsin
Tel. 738
- 726. Wineblatt, Edward
Hotel Eastgate
162 E. Ontario Street
Chicago, Illinois
Tel. Superior 3580

- 727. Wink, Willis
235 Henricks Blvd.
Buffalo 21, N. Y.
Tel. Amherst 6426
- 728. Wolfe-Marsey Sales Co.
74 Park Avenue
Rochester 7, N. Y.
Tel. Monroe 6228
- 729. Wood, Ash M.
El Monte, California
Tel. Cumberland 3-1201
- 730. Wood & Anderson Co.
915 Olive Street
St. Louis 1, Mo.
Tel. Garfield 2233
Branch: 210 W. 8th Street
Kansas City, Mo.
Tel. Grand 8784
- 731. Woodman, Rayfield & Potter Co.
1570 Northside Drive, N.W.
Atlanta, Georgia
Tel. Vernon 7771
- 732. Woods, Allen A.
643 Roscoe Street
Chicago 13, Illinois
- 733. Wooley Instruments Service
1869 S.W. Broadway
Portland 1, Oregon
- 734. Woolf, Irving W.
135 Liberty Street
New York 6, N. Y.
Tel. COrtlandt 7-9673
- 735. Wright Engineering
4241 Melbourne Road
Box 276, RR17
Indianapolis 44, Indiana
Tel. HUMBoldt 8800
- 736. Wulfetange, Jr., J. F.
State Tower Building
Syracuse, N. Y.
Tel. Syracuse 3-8013
- 737. Wynes, J. A.
P. O. Box 5181
Dallas 2, Texas
Tel. T. 3-8352

— Y —

- 738. Young, C. W.
56 Washington Street
Providence 5, R. I.
- 739. Young, J. L.
2425 Bay Street
Charlotte 4, N. C.
- 740. Young Company, W. E.
2134 Curtis
Denver 2, Colorado
Tel. Tabor 4148-9
- 741. Yount, Jack
Pleasant Grove Station
Dallas 10, Texas

— Z —

- 742. Ziegler, Philip
317 East Ontario Street
Chicago, Illinois
- 743. Zimmerman, M. H. Company
304 Merchandise Mart
Kansas City 8, Mo.
- 744. Zimmerman, Wilson
304 Hillsboro Parkway
Syracuse 3, N. Y.
Tel. 6-6616

CANADIAN REPRESENTATIVES

- 745. Adlam Tool & Supply Co., Ltd.
1015 St. Alexander Street
Montreal, Quebec
- 746. Alpha Distributing Co.
29 Adelaide Street, West
Toronto, Ontario
Tel. Elgin 3186
- 747. Atlas Radio Corporation
560 King Street West
Toronto 2, Ontario
Tel. Adelaide 1397-8
- 748. Bach-Simpson, Ltd.
71 Carling Street
London, Ontario
Tel. Fairmont 2930
- 749. Cahoon & Co., Ltd., L. D.
2271 Danforth Avenue
Toronto, Canada
Tel. Oxford 1127
- 750. Canadian Line Materials, Ltd.
Station "H"
Toronto 13, Canada
Tel. Howard 2111
- 751. Canadian Marconi Company
St. Sacrament Street
Montreal, Canada
Tel. Marquette 7081
- 751A. Cannon Electric Co., Ltd.
342 University Tower Bldg.
Montreal 2, Canada
Tel. HABour 0624
- 752. Controlite Engineering & Sales Ltd.
20 Bloor Street, W.
Toronto 5, Ontario
Tel. Randolph 5103
- 753. Cooper, W. H.
1103 Yonge Street
Toronto 5, Canada
- 754. Copper Wire Products, Ltd.
137 Oxford Street
Guelph, Ontario
Tel. Guelph 3880
- 755. Cyclograph Services, Ltd.
494 King Street, East
Toronto 2, Ontario
- 756. Downs, Walter P.
Dominion Square Bldg.
Montreal, Quebec
Tel. Marquette 6368
- 757. Fordco Agencies
230 Herbert Street
Waterloo, Ontario
Tel. 2-1053
- 758. Franks Agencies
Frank Meadows, Jr.
Calgary, Alberta
- 759. Furneaux, W. H.
1551 Barton Street E.
Hamilton, Ontario
Tel. 5-1186-7-8
- 760. Gray, Hubert R.
Astral Electric Co.
56-58 Wellington Street E.
Toronto, Ontario
Tel. Adelaide 2891
- 761. Grogan, James
50 Yarmouth Road
Toronto, Ontario
- 762. Hefco Agencies
1382 Queen Street E.
Toronto 8, Ontario
- 763. Herring, John
107 Front Street E.
Toronto, Ontario
- 764. Kelly Co., Wm. F.
1207 Bay Street
Toronto 5, Ontario
Tel. Randolph 1661

Directory of Factory Representatives (Continued)

Canadian Representatives (Cont'd)

765. Longstaffe Ltd., J. R.
11 King Street West
Toronto 1, Ontario
Tel. Adelaide 1377
766. McQueen, A. A.
304 King Street
Toronto, Ontario
767. Manley & Sons, Ltd., F.
82 Adelaide Street E.
Toronto 1, Ontario
Tel. AS 7924
768. May Electrical Equipment, Leonard
9-11 Wellington Street East
Toronto, Ontario
769. Measurement Engineering Ltd.
61 Duke Street
Toronto, Ontario
Tel. El 2881
770. Northern Electric Company Ltd.
Montreal 3, Quebec
- Branch: 102 11th Avenue
Calgary, Alta.
- Branch: 86 Hollis Street
Halifax, N. S.
- Branch: 1620 Notre Dame St. W.
Montreal, Quebec
- Branch: 302 Sparks Street
Ottawa, Ontario
- Branch: 2300 Dewdney Avenue
Regina, Saskatchewan
- Branch: 599 Main Street
Moncton, N. B.
- Branch: 131 Simcoe Street
Toronto, Ontario
- Branch: 150 Robson Street
Vancouver, B. C.
- Branch: 65 Rorie Street
Winnipeg, Manitoba
771. Paterson, S. G.
Rogers Majestic Ltd.
11-19 Brentcliffe Road
Leaside, Toronto 12, Ontario
772. Pointon, Charles W.
Queen at Bay Streets
Toronto 2, Ontario
Tel. Elgin 5957
773. Pound, Harris D.
2235 Addington Avenue
Montreal 28, Quebec
Tel. Walnut 3402
774. Powerlite Devices, Ltd.
807 Keefer Bldg.
Montreal, Quebec
- Branch: 171 John Street
Toronto, Ontario
775. Powertronic Equipment Ltd.
494 King Street, East
Toronto 2, Ontario
776. Reid, Howard N.
Canadian Asiatic Ltd.
2271 Danforth Avenue
Toronto, Ontario
777. Robinson Co., C. M.
207 Scott Block
Winnipeg, Manitoba
Tel. Winnipeg 96-789
- Branch: c/o D. J. Paterson
94 W. Pender
Vancouver, B. C.
778. Rutherford, E. D.
306 Ross Avenue
Winnipeg, Manitoba
779. Selkirk Agencies, Ltd.
744 West Hastings Street
Vancouver, B. C.
Tel. Pacific 3195 - Marine 5539

780. Simmonds & Sons, A. C.
301 King Street, E.
Toronto 2, Ontario
Tel. Waverly 8077
781. Sni-Dor Radioelectric, Ltd.
455 Craig Street, West
Montreal, Quebec
Tel. Belair 3271
782. Sparling Sales Ltd.
270 Fort Street
Winnipeg, Manitoba
Tel. 97 854-92 009
783. Stark Electronic Instruments Ltd.
37 Hanna Avenue
Toronto 5, Ontario
784. Stromberg Carlson Co., Ltd.
211 Geary Avenue
Toronto 4, Ontario
785. Thompson, Ltd., Charles L.
744 West Hastings Street
Vancouver, B. C.
786. Tilton, John R.
230 Herbert Street
Waterloo, Ontario
Tel. 2-1053
787. White Radio Ltd.
41 West Avenue, North
Hamilton, Ontario

U. S. EXPORT REPRESENTATIVES

789. Ad. Auriema, Inc.
89 Broad Street
New York 4, N. Y.
790. American Steel Company
347 Madison Avenue
New York 17, N. Y.
791. Brandes, C. O.
4900 Euclid Avenue
Cleveland 3, Ohio
Tel. Henderson 0414
792. Cannon Electric Co., Ltd.
2451 Danforth Avenue
Toronto 13, Ontario
793. Donnelly Sales Company
P. O. Box 1034
Honolulu, T. H.
794. Douglas Export-Import Co.
80 Warren Street
New York, N. Y.
Tel. Cortlandt 7-4448
795. Dumont Labs, Inc., Allen B.
Export Division
630 Fifth Avenue
New York 20, N. Y.
796. Electrical Mfgs. Export Co.
61 Broadway
New York 6, N. Y.
Tel. Digby 4-1833
797. Espin, Jose M.
Calle Obispo 255
Habana, Cuba
Tel. A 5-4691
798. Export Management Company
5120 Harper Avenue
Chicago 15, Illinois
799. Frazer & Hansen Ltd.
301 Clay Street
San Francisco 11, California
Tel. Exbrook 5112
800. French-Van Breems Inc.
630 Fifth Avenue
New York 20, N. Y.
- 800A. GTC International Corp.
75 West Street
New York 1, N. Y.
Tel. Whitehall 4-0226
801. Garrard Sales Corporation
Export Division
315 Broadway
New York 7, N. Y.

802. General Dry Batteries, Inc.
Export Division
521 Fifth Avenue
New York 17, N. Y.
803. Genex Corporation
663 Broadway
New York 12, N. Y.
804. Ginsbury, Sylvan
55 West 42nd Street
New York 18, N. Y.
Tel. Pennsylvania 6-9239
805. Hexacon Electric Company
Export Department
36 Pearl Street
New York 4, N. Y.
806. Hill, John C.
308 W. Washington Street
Chicago 6, Illinois
Tel. Franklin 4704
807. ICA Export Corp.
154 Nassau Street
New York 7, N. Y.
808. Intercontinental Development Co.
27 William Street
New York, N. Y.
Tel. BOWling Green 9-2440
809. Janik, C. L.
9 Rockefeller Plaza
New York 20, N. Y.
Tel. COLUMbus 5-0428
810. Jones, Kenneth H.
Sinaloa 26
Mexico D. F.
Tel. Mex 36-49-4
812. Lincoln Export Company
36 Pearl Street
New York 4, N. Y.
813. Magnus & Associates, Inc., E. D.
188 West Randolph Street
Chicago 1, Illinois
Tel. Franklin 8785
814. Mallegg, O. O.
400 W. Madison Street
Chicago 6, Illinois
Tel. Fra. 4868
815. Maritime International Company
27 Whitehall Street
New York, N. Y.
816. Minthorne Co., Leonard L.
15 Moore Street
New York 4, N. Y.
Tel. BOWling Green 9-6272
817. Morhan Exporting Corp.
458 Broadway
New York 13, N. Y.
818. Muller and Phipps (Asia) Ltd.
1 Park Avenue
New York 16, N. Y.
819. Nehls, Herbert E.
60 East 42nd Street
New York 17, N. Y.
820. Neuert, Wilton & Associates, Inc.
32 W. Randolph Street
Chicago 1, Illinois
821. Ortiz, Dan M.
Export Division
Merit Coil & Transformer Corp.
1607 Howard Street
Chicago 26, Illinois
Tel. Ambassador 2546
822. Pan-Mar Corporation
1270 Broadway
New York 1, N. Y.
823. Plasencia, Inc., Joseph
401 Broadway
New York 13, N. Y.
Tel. Digby 9-1512
824. Radio Corporation of America
RCA International Division
745 Fifth Avenue
New York 22, N. Y.

Directory of Factory Representatives (Concluded)

U. S. Export Representatives (cont'd)

- | | | |
|--|--|--|
| <p>825. Roburn Agencies, Inc.
23 Park Place
New York 7, N. Y.
Tel. WOrth 2-0647</p> <p>826. Roche International Corp.
13 East 40th Street
New York 16, N. Y.
Tel. MUrray Hill 9-0200</p> <p>827. Rodriguez, William
San Ignacio 313
P. O. Box 1976
Habana, Cuba
Tel. A-4521</p> <p>828. Royal National Company
75 West Street
New York 6, N. Y.
Tel. WHitehall 4-0226-7</p> <p>829. Scheel International, Inc.
4237-39 No. Lincoln Avenue
Chicago 18, Illinois
Tel. DIversey 3672-73</p> <p>830. Shallcross Mfg. Company
Export Department
Drexel Bldg.
Philadelphia 2, Pa.
Tel. Walnut 2-1045</p> | <p>831. Simons & Son Co., Inc., M.
25 Warren Street
New York 7, N. Y.
Tel. BArcly 7-5513-4</p> <p>832. Solar Manufacturing Corp.
International Division
285 Madison Avenue
New York 17, N. Y.
Tel. LExington 2-0626</p> <p>833. Stone, Carrington H.
205 W. Wacker Drive
Chicago 6, Illinois
Tel. RAndolph 7725</p> <p>834. Technical Export Corp.
135 Liberty Street
New York 6, N. Y.</p> <p>835. Thomas International, Inc.
1328-30 N. Halsted Street
Chicago 22, Illinois
Tel. Michigan 8702</p> <p>837. Torres, A.
1791 Howard Street
Chicago 26, Illinois
Tel. Rogers Park 8350</p> <p>839. United Export Corporation
P. O. Box 741
South Bend 24, Indiana</p> | <p>840. Urquhart, W. L.
11 West 42nd Street
New York 18, N. Y.
Tel. PENnsylvania 6-2980</p> <p>841. Webster Electric Company
Export Department
13 East 40th Street
New York 16, N. Y.
Tel. LExington 2-8555</p> <p>842. Westinghouse Elec. International Co.
40 Wall Street
New York 5, N. Y.
Tel. WHitehall 3-4321</p> <p>843. Williams Export Associates
37 Wall Street
New York 5, N. Y.
Tel. CHickering 4-6582</p> <p style="padding-left: 40px;">Branch 643 N. Michigan Avenue
Chicago 11, Illinois
Tel. Superior 4849</p> <p>844. Wright Company, Masten
185 Church Street
New Haven 10, Conn.
Tel. 7-5957</p> |
|--|--|--|



RECEIVING TYPES

**metal
glass
miniature**



A receiving tube for every radio equipment need! General Electric's complete line offers you a wide selection of metal, miniature and glass types. The G-E monogram means tops in quality and performance. A few receiving types are listed below—Ask for complete prices and ratings!

Type	Price	Type	Price	Type	Price
1B3GT/8016	\$3.20	<i>6BJ6</i>	\$2.00	<i>12AT7</i>	\$2.90
1R5	2.00	<i>6CA</i>	1.65	<i>12A U6</i>	2.00
1S5	1.80	6H6	1.65	<i>12A U7</i>	2.40
1T4	2.00	6J5	1.50	<i>12AF6</i>	1.50
1U4	2.00	6K6-GT	1.50	<i>12A X7</i>	2.40
3S4	2.00	6L6-G	2.90	<i>12BA6</i>	1.80
3V4	2.00	6SA7	1.65	<i>12BE6</i>	1.80
5U4-G	1.50	6SC7	2.00	12SA7	1.65
5V4-G	2.40	6SG7	2.00	12SG7	2.00
5Y3-GT	1.05	6SJ7	1.65	12SK7	1.65
6AG5	2.65	6SK7	1.65	12SQ7	1.50
6AL5	2.00	6SL7-GT	2.40	19T8	2.90
6AQ5	2.00	6SN7-GT	2.20	35B5	2.00
6A U6	2.00	6SQ7	1.50	35L6-GT	1.65
6AV6	1.50	6T8	2.90	35W4	1.25
6BA6	1.80	6V6-GT	2.00	35Z5-GT	1.25
6BE6	1.80	6X4	1.50	50B5	2.00
6BG6G	4.80	6X5-GT	1.50	50L6-GT	1.65

Type numbers of metal tubes are shown in bold-face type.
Type numbers of miniature tubes are shown in italics.

Prices and other data subject to change without notice.

FOR BEST PERFORMANCE ALWAYS USE

GENERAL  ELECTRIC



TRANSMITTING AND INDUSTRIAL ELECTRONIC TUBES

PLIOTRONS—GRID-CONTROLLED HIGH-VACUUM TUBES FOR USE AS MODULATORS, AMPLIFIERS, OSCILLATORS



GL-813 Pliotron



GL-592 Pliotron



GL-7D21 Pliotron



GL-502A
Midget Thyatron



FG-95 Thyatron

Type No.	Price	No. of Electrodes	CATHODE		PLATE				MAX. FREQ. MC.	
			Volts	Amp.	Max. Volts	Max. Amp.	Max. Input, Watts	Max. Dissipation, Watts	@ Max. Plate Input	@ 50% Max. Plate Input
GL-2C39	\$41.50	3	6.3	1.1	600	0.100	15.8	4.8	500	.....
GL-2C13	11.00	3	6.3	0.9	500	0.010	16.7	6.7	3370	.....
⊙ GL-7D21	285.00	4	6.3	30.0	4000	1.0	3000	1200	110	.....
⊙ GL-9C21	550.00	3	6.3	250	6500	2.0	12000	5000	220	.....
GL-592	34.00	3	10	5.0	3500	0.250	600	200	110	.....
GL-805	13.50	3	10	3.25	1500	0.210	315	125	30	80
GL-807	2.50	5	6.3*	0.90	600	0.100	60	25	60	125 @ 55%
					750	0.100	75	30		
GL-812	4.05	3	6.3	4.00	1250	0.125	155	40	60	100 @ 60%
					1500	0.150	225	55		
GL-813	16.00	5	10.0	5.00	2000	0.180	360	100	30	60 @ 75%
GL-814	14.25	5	10.0	3.25	1250	0.150	180	50	30	100
					1500	0.150	225	65		
⊙ GL-833-A	49.50	3	10.0	10.0	4000	0.500	1800	400	30	75 @ 72%
					1000	0.500	2000	450		
⊙ GL-862-A**	1150.00	3	33	207.0	20000	10.00	20000	100000	1.6	.....
⊙ GL-880	483.00	3	12.6	320.0	10500	6.0	60000	20000	25	100
⊙ GL-889-A	210.50	3	11	125	8500	2.00	16000	5000	50	150
⊙ GL-889-R-A★	308.00	3	11	125	8500	2.00	16000	5000	25	.....
⊙ GL-893-A★	630.00	3	10§	61.0§	20000	4.00	70000	20000	5	40
⊙ GL-893-R★	1150.00	3	10§	61.0§	20000	4.00	70000	20000	5	25
⊙ GL-8000	14.50	3	10	4.5	2250	0.275	620	150	30	100
⊙ GL-8002	132.00	3	16	38	3500	1.00	3000	1200	150	300
⊙ GL-8002-R	150.00	3	16	38	3500	1.00	3000	1200	120	200

Figures in bold type are ICAS ratings.

*Heater-type cathode.

★Lower prices apply when new tube is purchased and radiator in good condition is returned prepaid, to Schenectady.

**Credit for return, prepaid, to Schenectady—carton \$5.00; tube \$10.00.

§Single-, three-, or six-phase filament. Voltage is per strand, current is per terminal.

⊙Forced-air cooled type.

⊙Water-cooled type.

THYRATRONS— GRID-CONTROLLED GASEOUS-DISCHARGE-RECTIFIER TUBES

Type No.	Price	No. of Electrodes	CATHODE		ANODE			Starting Grid Voltage
			Volts	Amp	Peak Volts	Peak Amp	Avg Amp	
GL-3C23	\$12.50	3	2.5	7.0	1250	6.0	1.5	Neg
FG-27-A	21.00	3	5.0	4.5	1000	10.0	2.5	Neg
			5.0	10.0	2500	40.0	6.4	Var
FG-105	48.00	4	±5.5	11.0	750	77.0	2.5	Var
			±5.5	10.0	10000	16.0	4.0	Var
FG-172	50.00	4	5.0	10.0	2000	40.0	6.4	Var
			±5.5	11.0	750	77.0	2.5	Var
GL-502-A	1.85	4	6.3	0.6	1300	0.500	0.100	Neg
			6.3	0.15	500	0.100	0.020	Neg
GL-5557/FG-17	7.00	3	2.5	5.0	5000	2.0	0.5	Neg
GL-5560/FG-95	23.00	4	5.0	4.5	1000	15.0	2.5	Var
			±5.5	5.0	1000	40.0	0.5	Var

†These ratings apply only when the tube is used for ignitor firing.

‡These ratings apply only when the tube is used in thyatron welding-control service.

Prices and other data subject to change without notice.

There's a G-E Electronic Tube for Every Purpose:

- Pliotrons
- Thyatrions
- Phanotrons
- Kenotrons
- Ignitrons
- Phototubes
- Lighthouse Tubes
- Phasitron
- Ballast Tubes
- Cathode-Ray Tubes
- Glow Tubes
- Vacuum Capacitors
- Vacuum Switches

Ask for—ETX-10
For complete Prices, Descriptions and Ratings.





TRANSMITTING AND INDUSTRIAL ELECTRONIC TUBES



FG-32 Phanotron



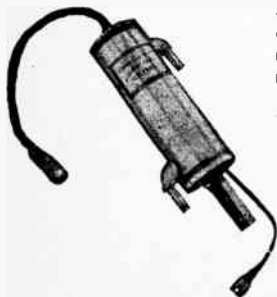
GL-872A/872
Phanotron



GL-8020 Kenotron



FG-235-A Ignitron



FG-271 Ignitron

PHANOTRONS— GASEOUS OR MERCURY-VAPOR RECTIFIER TUBES

Type No.	Price	No. of Electrodes	CATHODE		ANODE		
			Volts	Amp	Peak Volts	Peak Amp	Avg Amp
FG-280	\$ 47.00	2	5.0	10	2000	40	6.4
GL-866-A	1.95	2	2.5	5	10000	1	0.25
GL-869-B	132.00	2	5	18	{20000 15000*}	15	{2.5 5.0*}
GL-870-A	1150.00	2	5	65	16000	.....	75.0
GL-872-A/872	8.20	2	5	7.5	10000	5	1.25
GL-5558/FG-32	14.00	2	5.0	4.5	1000	15	2.5
GL-5561/FG-104	38.00	2	5.0	10	3000	40	6.4

*Quadrature operation.

KENOTRONS—HIGH-VACUUM RECTIFIER TUBES

Type No.	Price	No. of Electrodes	CATHODE		PLATE		
			Volts	Amp	Max. Inv. Volts	Max. Amp.	Average Amp.
GL-411	\$187.00	2	10	14.5	100000	0.750	.....
GL-836	8.25	2	2.5*	5.0	5000	1.0	0.25
GL-1641	2.75	3	5.0	3.0	2120	0.250	.....
GL-8013-A	10.30	2	2.5	5.0	40000	0.150	0.020
K-C1	230.00	2	20	24.5	150000	0.750	.....
GL-8020	22.00	2	{5.0 5.8Δ}	6.0	{40000 12500Δ}	0.750	0.100

*Heater-type cathode.
ΔSurge-limiting diode operation.

IGNITRONS—HIGH-PEAK CURRENT, POOL-CATHODE TUBES

Type No.	Price	Supply Volts	MAXIMUM RATINGS			
			Kva Demand	Corresponding Average Anode Current, Amps.	Maximum Average Anode Current, Amps.	Corresponding Kva Demand
GL-5550/GL-415*	\$ 41.00	250-600 rms	300	12.1	22.4	100
GL-5551/FG-271*	73.50	250-600 rms	600	30.2	56.0	200
GL-5552/FG-235-A*	110.00	250-600 rms	1200	75.6	140	400
GL-5553/FG-258-A*	241.00	250-600 rms	2400	192	355	800
GL-5554/FG-259-B†‡	173.00	2400 rms	1200	75	113	600
GL-5555/FG-238-B†‡	336.00	2400 rms	2400	135	207	1105

*Ratings are for voltages of 600 volts rms and below. Ignitor requirements for all welding-control types are 200 volts and 30 amperes.

†Typical ignitor requirements for power-rectifier ignitrons are 75-125 volts, 15-20 amperes. Maximum

requirements are 150 volts, 40 amperes.

‡In addition to ratings given above for welder-control service the FG-238-B and FG-259-B may be used as power-rectifiers in the 125 to 900 d-c voltage fields (ratings will be supplied upon request).

Prices and other data subject to change without notice.



RCA AMATEUR-TYPE TUBES

THERE'S AN RCA TUBE FOR EVERY AMATEUR SERVICE

New Tubes are Your Best Buy! Specify RCA Power Tubes and you get the advantages of new ratings, longer life.

Tubes represent only a fraction of the total cost of your rig. But they play a vital part in determining your operating results.

Every new RCA Tube is sold with a warranty from the Radio Corporation of America.



RCA Headliners for Hams (HAM-103). Get your copy of this important new publication at your RCA Distributor's today. It contains new ratings, new operating conditions, new data on modulators, and lists many of RCA's most popular Amateur types.

RCA Type	Sugg'd User Price	RCA Type	Sugg'd User Price
OA2	\$ 2.20	811	\$ 3.30
OA3/VR75	1.35	812-A	4.05
OB2	2.30	813	16.00
OC3/VR105	1.35	814	14.25
OD3/VR150	1.30	815	6.90
2BP1	9.60	816	1.30
2C43	10.30*	826	12.50
2D21	2.00	828	13.75
2E26	3.85	829-B	16.25
2X2-A	2.05	832-A	11.75
203-A	13.75	833-A	49.50
3A4	1.20*	838	13.75
3A5	1.95	866-A	1.95
3KP1	14.50	872-A	8.20
304-TH	55.00	954	5.65*
4-125A/4D21	27.50	955	3.60*
4E27/8001	24.50	956	6.30*
5R4-GY	1.50*	958-A	6.25*
6AG7-Y	1.75*	1614	2.05*
6AK5	1.80*	1620	6.60*
6AS7-G	4.90	1622	2.30*
6F4	6.40*	1623	4.05
6J4	8.05*	1654	4.55
800	11.50	2050	1.85
801-A	3.75	5527	47.50
802	4.75	5557	6.50
805	13.50	8000	14.50
806	34.25	8003	13.00
807	2.50	8005	7.40
808	10.75	8025-A	10.00
809	4.00	9001	3.10*
810	14.50	9002	2.50*
		9003	3.10*

* Subject to Federal Excise Tax which is included. Prices in effect 8/14/48.

RCA REPLACEMENT DIRECTORY OF NON-RECEIVING TUBE TYPES

for INDUSTRY • COMMUNICATIONS • LABORATORIES



Direct Replacement Types

RCA types shown below are direct replacements under all circumstances for corresponding types to be replaced. Tube types covered include: Vacuum Power

Tubes, Rectifier Tubes, Thyratrons, Ignitrons, Voltage Regulators, Phototubes, Cathode-Ray Tubes, and Special Types.

Type to be Replaced	Replace by RCA Type	Type to be Replaced	Replace by RCA Type	Type to be Replaced	Replace by RCA Type
CE-1 (A-D)	868, 918	FG-67	1904	C-833	833-A
2AP1	2AP1-A	VR75-30	0A3/VR75	857	857-B
2B4	885	FG-95	5566	862	862-A
3AP1	3AP1-A	FG-104	5561	866	866-A
3BP1	3BP1-A	VR105-30	OC3/VR105	866-A/866	866-A
4D21	4-125A/4D21	VR150-30	OD3/VR150	869-A	869-B
5BP1	5BP1-A	CE-226	4B26/2000	870	870-A
5CP1	5CP1-A	FG-235A	5552	872	872-A
5CP7	5CP7-A	FG-238B	5555	872-A/872	872-A
5HP1	5HP1-A	HK-257 (B)	4E27/8001	F-872B	872-A
6Q5-G	884	FG-258A	5553	879	2X2/879
7GP4	7JP4	FG-259B	5554	889	889-A
PJ-8	5556	FG-271	5551	893	893-A
G-9	868	WT-272	5557	902	902-A
CE-11V (A-D)	917	WE-289A	4B26/2000	UE-905	805
		WT-294	OD3/VR150		
		WE-295A	203-A	905	905-A
RK-11	1623	UE-303A	203-A	906-P1	3AP1-A
FG-17	5557			908	908-A
RK-20A	804	WE-304B	834	914	914-A
CE-20	927	F-307A	207	931	931-A
CE-21 (A-D)	920	CE-309	5557	UE-938	838
CE-23 (A-D)	923	CE-311	3C23	UE-949	849
		UE-311	211	UE-952	852
PJ-23	868			UE-966A	866-A
CE-25 (A-D)	927	UE-311C	835	UE-967	5557
RK-25	802	UE-317C	217C		
RK-25B	802	WE-322A	803	UE-972-A	872-A
CE-28 (A-D)	928	UE-342B	211	UE-975-A	575-A
		375A	575-A	1642	2C21/1642
RK-28	803	FJ-401	1P29	1802-P1	5B1P1-A
RK-28A	803	GL-415	5550	1803-P4	12AP4
CE-29 (A-D)	929, 1P39	GL-451	8020		
CE-30 (A-D)	930, 1P40	WL-630	2051	1804-P4	9AP4
RK-30	800	WL-631	5559	1811-P1	7CP1
FG-32	5558	WL-632A	5560	1849	1850-A
RK-33	2C21/1642	KU-634	677	1850	1850-A
RK-39	807	WL-651/656	5552	2000	4B26/2000
CE-41	921	WL-652/657	5551		
CE-42	922	WL-653B	5555	2525A5	5BP1-A
				8001	4E27/8001
RK-44	837	WL-655/658	5553	8016	1B3-GT/8016
RK-47	814	WL-679	5554	189049	4B26/2000
R51A	927	WL-681/686	5550	289416D	4B26/2000
FG-57	5559	NL-715	5557		
RK-57	805	WL-735	868		
RK-58	838	801	801-A		
R59A	868, 918	829	829-B		
R60A	920	829-A	829-B		
HY-61/807	807	832	832-A		
R61A	930	833	833-A		

See the reverse side of this page for a complete listing and suggested user's prices of more than 200 RCA Non-Receiving Tube Types.

For complete technical information on RCA Tubes for Industry and Communications see your RCA Distributor or write: Commercial Engineering, RCA Tube Department, Harrison, New Jersey.



RCA NON-RECEIVING TUBES

for INDUSTRY • COMMUNICATIONS • LABORATORIES

Type	Sugg'd User Price	Type	Sugg'd User Price	Type	Sugg'd User Price	Type	Sugg'd User Price	Type	Sugg'd User Price
OA2	\$ 2.20	6AS7-G	\$ 4.90	828	\$ 13.75	931-A	\$ 9.75	2050	\$ 1.85
OA3/VR75	1.35	6C24	54.25	829-B	16.25	934	3.40	2051	1.90
OA4-G	1.35	6F4(t)	6.40	830-B	11.50	935	7.80	5527	47.50
OB2	2.30	6J4(t)	8.05	832-A	11.75	954(t)	5.65	5550	42.00
OC3/VR105	1.35	6L4(t)	6.60	833-A	49.50	955(t)	3.60	5551	70.00
OD3/VR150	1.30	6SJ7-Y(t)	.85	834	14.50	956(t)	6.30	5552	105.00
1C21	2.45	6SN7GTY(t)	1.40	835	16.25	957(t)	3.75	5553	230.00
1P21	50.00	7BP7A	48.50	836	8.25	958-A(t)	6.25	5554	165.00
1P22	14.75	7C24	159.50	837	4.75	959(t)	6.25	5555	320.00
1P28	15.50	7CP1	30.75	838	13.75	991	.75	5556	8.00
1P29	2.95	7CP4	35.25	841(t)	4.35	1603(t)	7.90	5557	6.50
1P37	2.85	8D21	1775.00	842	4.05	1608	7.90	5558	12.00
1P39	1.85	9C21	906.75	843	2.30	1609	8.60	5559	17.50
1P40	1.85	9C22*	1275.00	845	13.75	1610(t)	2.50	5560	21.00
1P41	2.80	9C25*	1158.25	846	250.00	1612(t)	3.00	5561	33.00
1P42	5.70	9C27	855.50	849	138.00	1613(t)	2.65	5563	43.90
2AP1-A	10.55	10-Y(t)	1.95	850	43.25	1614(t)	2.05	5581	2.25
2BP1	9.60	12A6(t)	1.25	851	230.00	1616	8.65	5582	2.65
2BP11	11.00	12DP7A	77.00	857-B	209.00	1619	2.50	5583	3.05
2C21/1642(t)	1.40	12K8-Y(t)	1.30	858	450.00	1620(t)	6.60	5584	3.95
2C22(t)	1.60	12L8GT(t)	2.25	860	34.50	1621(t)	2.15	5588	110.00
2C40(t)	13.60	12SW7(t)	1.10	861	178.25	1622(t)	2.30	5592*	1257.50
2C43(t)	10.30	12SX7GT(t)	1.40	862-A†	1050.00	1623	4.05	5618	3.60
2E21	2.00	12SY7(t)	1.30	864	1.75	1624	4.00	5651	3.30
2E24	5.10	26A6(t)	2.20	865	11.50	1625	2.65	5652	6.55
2E26	3.85	26A7-GT(t)	5.95	866-A	1.95	1626	1.85	5655	1300.00
2F21	105.00	26C6(t)	1.85	868	2.50	1629	1.40	5671*	1425.00
2K26(t)	192.00	26D6(t)	2.00	869-B	132.00	1631(t)	2.50	5691(t)	7.75
2K56(t)	185.00	89-Y	1.10	872-A	8.20	1632(t)	3.10	5692(t)	7.75
2P23	1200.00	105	44.00	874	2.75	1633(t)	1.95	5693(t)	6.40
2V3-G	3.15	172	42.00	876	5.50	1634(t)	1.40	5713	160.00
2X2-A	2.05	203-A	13.75	878	12.75	1635(t)	2.15	5769	1200.00
3A4(t)	1.20	204-A	115.00	880	483.00	1644(t)	3.10	8000	14.50
3A5	1.95	207	242.00	884	1.85	1654	4.55	8003	13.50
3AP1-A	14.25	211	12.00	885	2.00	1816-P4	85.00	8005	7.40
3B25	6.40	217-C	21.50	886	4.60	1840	1300.00	8008	8.20
3BP1-A	16.50	304TH	55.00	889-A	210.50	1848	500.00	8012-A	15.50
3C23	12.00	502-A	1.80	889R-A*	308.00	1850-A	540.00	8013-A	10.30
3C33	21.25	559	5.35	891	223.00	1851(t)	2.90	8020	20.00
3D23	13.25	575-A	25.25	891-R*	377.75	1904	21.00	8025-A	10.00
3DP1A	18.00	579-B	12.00	892	223.00	1945	109.25	9001(t)	3.10
3DP1-S2A	18.25	627	15.00	892-R*	377.75	1946	10.90	9002(t)	2.50
3E22	8.30	629	6.00	893-A	570.00	1947	8.40	9003(t)	3.10
3E29	20.25	672-A	33.00	893A-R*	1050.00	1949	11.30	9004(t)	2.30
3FP7A	23.00	673	25.25	898-A†	1050.00	1950	7.80	9005(t)	3.45
3JP1	16.50	676	44.00	902-A	12.50			9006(t)	1.60
3JP7	21.00	677	44.00	905-A	65.25				
3KP1	14.50	800	11.50	908-A	16.50				
4B26/2000	9.85	801-A	3.75	912	170.50				
4C33	182.75	802	4.75	913	15.50				
4-125A/4D21	27.50	803	24.25	914-A	93.50				
4E27/8001	24.50	804	17.50	917	3.50				
4X500A	97.50	805	13.50	918	2.85				
5BP1-A	22.50	806	34.25	919	3.50				
5CP1-A	23.25	807	2.50	920	4.15				
5CP7-A	27.25	808	10.75	921	1.95				
5CP11A	27.50	809	4.00	922	1.95				
5FP4-A	41.75	810	14.50	923	2.05				
5FP7-A	30.25	811	3.30	924	2.60				
5R4-GY(t)	1.50	812-A	4.05	925	2.15				
5UP1	17.75	813	16.00	926	2.90				
5UP7	20.25	814	14.25	927	2.50				
5UP11	22.00	815	6.90	928	3.15				
5WP15	70.00	816	1.30	929	1.75				
6AG7-Y(t)	1.75	826	12.50	930	1.65				
6AK5(t)	1.80	827-R	172.50						

* The following credits currently apply when radiators or crates are returned prepaid, in acceptable condition, to the address shown on our return authorization.

Tube Type	Radiator Credit	Crates Credit
9C22	110.00	40.00
9C25	130.00	40.00
889R-A	30.00	
891-R	35.00	10.00
892-R	35.00	10.00
893A-R	110.00	40.00
5592	130.00	40.00
5671	110.00	40.00

† \$5.00 credit allowed for prepaid return of shipping container and \$10.00 salvage credit allowed for prepaid return of 862-A and 898-A at time of new tube purchase, both to be in good condition.

Types marked with (t) are subject to Federal Excise Tax which is included, where applicable, in the prices shown above.

Prices in effect 8/14/48.

SYLVANIA RADIO RECEIVING TUBES



Type	Retail Price	Type	Retail Price	Type	Retail Price
O1A	\$1.25	2A5	\$2.20	6C8G	\$3.20
OY4, G	4.80	2A6	2.65	6D6	1.65
OZ4	2.20	2A7	2.65	6D8G	3.20
OZ4G	2.20	2B7	2.65	6E5	2.20
1A1/5E1	1.65	2E5	2.65	6F5, G, GT	1.65
1A4P	3.90	2W3, GT	1.80	6F6	2.00
1A5GT	1.80	2Z2/G84	3.20	6F6G, GT	1.65
1A6	3.20	3A8GT	4.80	6F7	3.20
1A7GT	2.00	3B7(3B7/1291)	2.65	6F8G	3.20
1AB5	2.65	3C6/XXB	3.20	6G6G	2.65
1B1	1.65	3D6(3D6/1299)	2.65	6H6, G, GT	1.65
1B3GT	3.90	3E6	2.65	6J5, G, GT	1.50
1B4P(1B4/951)	3.90	3LF4	2.65	6J6	2.90
1B5(1B5/25S)	3.20	3Q4	2.20	6J7, G, GT	2.00
1B7GT	3.20	3Q5G, GT	2.40	6J8G	3.20
1C5GT	2.20	3S4	2.00	6K5GT	2.40
1C6	3.20	3V4	2.00	6K6GT	1.50
1C7G	3.20	4A1	3.20	6K7, G, GT	1.65
1C8	2.20	5AZ4	1.35	6K8	2.40
1D1	1.65	5T4	3.90	6K8G	2.65
1D5GP	3.90	5U4G	1.50	6K8GT	2.40
1D7G	3.20	5V4G	2.40	6L5G	2.65
1D8GT	3.90	5W4	2.65	6L6	3.55
1E1	1.65	5W4GT	1.65	6L6G, GA	2.90
1E5GP, G, GT	3.90	5X4G	1.80	6L7	2.40
1E7G	3.20	5Y3G, GT	1.05	6N6G	3.90
1E7GT	3.90	5Y4G	1.50	6L7G	2.90
1F1	1.65	5Z3	1.80	6N7, G, GT	2.40
1F4	2.65	5Z4	2.65	6P5GT	2.40
1F5G	2.65	6A3	3.20	6Q7	2.00
1F6	3.90	6A4(6A4/LA)	3.20	6Q7G, GT	1.80
1F7G, GH, GV	3.90	6A5G	3.90	6R7	2.65
1G4GT	2.65	6A6	2.65	6R7GT	2.65
1G6G, GT	2.65	6A7	2.00	6S7	2.65
1H4G	2.20	6A8, G, GT	2.00	6S7G	3.20
1H5GT	1.65	6AB5/6N5	2.65	6S8GT	2.65
1H6G, GT	3.20	6AB7(6AB7/1853)	3.20	6SA7, GT	1.65
1J6G, GT	3.20	6AC5GT	2.90	6SB7Y	2.40
1K1	1.65	6AC7(6AC7/1852)	2.90	6SC7, GT	2.00
1L4	2.00	6AD7G	3.20	6SD7GT	2.90
1LA4	2.65	6AE6G	1.80	6SF5	1.65
1LA6	2.65	6AF6G	2.65	6SF5GT	1.80
1LB4	2.65	6AG5	2.65	6SF7	2.00
1LC5	2.65	6AG7	3.20	6SG7	2.00
1LC6	2.65	6AH6	3.55	6SH7, GT	2.20
1LD5	2.65	6AK6	2.40	6SJ7, GT	1.65
1LE3	2.65	6AL5	2.00	6SK7, GT	1.65
1LG5	2.65	6AL7GT	2.65	6SL7GT	2.40
1LH4	2.65	6AQ5	2.00	6SN7GT	2.20
1LN5	2.65	6AQ6	1.80	6SQ7	1.50
1N5GT	2.00	6AQ7GT	2.20	6SQ7GT	1.50
1P5G, GT	2.65	6AR5	1.65	6SR7	1.80
1Q5G, GT	2.65	6AT6	1.50	6SR7GT	1.80
1Q6	2.20	6AU6	2.00	6SS7	1.80
1R1G	1.50	6AV6	1.50	6ST7	2.65
1R4(1R4/1294)	2.20	6B4G	3.20	6SV7	2.90
1R5	2.00	6B5	3.90	6T7G(6Q6G)	3.20
1S4	2.40	6B6G	2.20	6T8	2.90
1S5	1.80	6B7	3.20	6U5(6U5/6G5)	2.00
1T4	2.00	6BA6	1.80	6U6GT	2.00
1T5GT	2.65	6BD6	1.80	6U7G	1.80
1U4	2.00	6BE6	1.80	6V6	3.20
1U5	1.80	6BF6	1.65	6V6G, GT	2.00
1V	2.20	6BG6G	4.80	6W7G	2.65
1V5	2.20	6BH6	2.00	6X4	1.50
1W5	2.20	6BJ6	2.00	6X5	2.20
1X1	1.65	6B8, G	3.20	6X5GT	1.50
1Y1	1.65	6C4	1.65	6Y6G	2.40
1Z1	1.65	6C5, GT	1.65	6Y7G	2.20
2A3(2A3H)	3.20	6C6	2.00	6Z7G	3.90

(Effective August 26, 1948)

CONTINUED ON NEXT PAGE

(CONTINUED FROM PREVIOUS PAGE) •

PENNSYLVANIA RADIO RECEIVING TUBES

Type	Retail Price	Type	Retail Price	Type	Retail Price
6ZY5G	\$2.20	12SC7	\$2.20	38	\$2.20
7A4	1.80	12SF5	1.80	39/44	2.65
7A4/XXL	1.80	12SF5GT	2.00	41	1.65
7A5	1.80	12SF7	2.00	42	1.65
7A6	1.80	12SG7	2.00	43	1.65
7A7	1.80	12SH7, GT	2.20	45	1.65
7A8	1.80	12SJ7, GT	1.65	45Z3	1.80
7AD7	2.65	12SK7, GT	1.65	45Z5GT(40Z5)	1.80
7AF7	1.80	12SL7GT	2.40	46	2.65
7AG7	2.20	12SN7GT	2.20	46A1	1.80
7AH7	2.20	12SQ7	1.50	46B1	1.80
7B4	1.80	12SQ7GT	1.50	47	2.40
7B5	1.80	12SR7, GT	2.20	49	2.65
7B6	1.80	12Z3	2.65	50	3.90
7B7	1.80	14A4	2.65	50A5	2.20
7B8	1.80	14A5	3.90	50B5	2.00
7C4	2.65	14A7(14A7/12B7)	2.20	50C5	2.00
7C5	1.80	14AF7(XXD)	2.20	50C6G	2.90
7C6	1.80	14B6	2.20	50L6GT	1.65
7C7	1.80	14B8	2.20	50X6	2.20
7E5	2.65	14C5	2.20	50Y6G, GT	1.80
7E6	1.80	14C7	2.20	50Y7GT	2.00
7E7	2.20	14E6	1.80	53	2.65
7F7	2.20	14E7	2.20	55	2.20
7F8	2.65	14F7	2.20	56	1.80
7G7(7G7/1232)	2.65	14F8	2.65	57	2.00
7H7	2.00	14H7	2.20	58	2.00
7J7	2.65	14J7	2.65	59	3.55
7K7	2.65	14N7	2.65	70L7GT	3.90
7L7	2.20	14Q7	2.20	71A	2.00
7N7	2.20	14R7	2.20	75	1.65
7Q7	1.80	14S7	2.65	76	1.65
7R7	2.20	14W7	2.65	77	1.65
7S7	2.65	14X7	2.65	78	1.65
7V7	2.65	14Y4	2.20	79	2.65
7W7	2.65	18	2.65	80	1.15
7X7(XXFM)	2.65	19	3.20	81	3.90
7Y4	1.80	19T8	2.90	82	2.65
7Z4	1.80	20	3.90	83	2.65
10	3.90	22	3.20	83V	3.20
12A5	3.20	24A	2.20	84/6Z4	1.80
12A6, GT	2.65	25A6, G, GT	2.65	85	2.20
12A7	3.20	25AC5GT	2.90	89	2.20
12A8G, GT	2.00	25C6G	2.90	99(X99)	3.20
12AH7GT	2.65	25L6	3.20	V99	3.20
12AL5	2.00	25L6GT	1.65	100-70	2.00
12AT6	1.50	25Y5	2.90	100-77	2.00
12AT7	2.90	25Z5	1.50	100-79	2.00
12AU6	2.00	25Z6	2.20	117L7GT	3.90
12AU7	2.40	25Z6G, GT	1.50	117L7/M7GT	3.55
12AV6	1.50	26	1.80	117N7GT	3.90
12AW6	2.65	27	1.50	117P7GT	3.90
12AX7	2.40	30	2.00	117Z3	1.50
12BA6	1.80	31	2.65	117Z4GT	2.90
12BD6	1.65	32	3.20	117Z6G, GT	2.40
12BE6	1.80	32L7GT	3.20	FM-1000	3.20
12C8	3.20	33	3.20	1273	2.40
12F5GT	1.80	34	3.20	1280	2.40
12H6	1.80	35(35/51)	2.00	XXB(3C6/XXB)	3.20
12J5GT	1.50	35A5	1.80	XXD(14AF7)	2.20
12J7G, GT	2.00	35B5	2.00	XXFM(7X7)	2.65
12K7G	2.00	35C5	2.00	XXL(7A4/XXL)	1.80
12K7GT	1.65	35L6GT	1.65		
12K8	2.40	35W4	1.25		
12K8GT	2.40	35Y4	1.80		
12Q7G	1.80	35Z3	1.80		
12Q7GT	1.80	35Z4GT	1.50		
12S8GT	2.65	35Z5GT	1.25		
12SA7	1.65	36	2.65		
12SA7GT	1.65	37	1.80		

(Effective August 26, 1948)

All radio tubes are
guaranteed for not
less than 90 days
from date of sale.

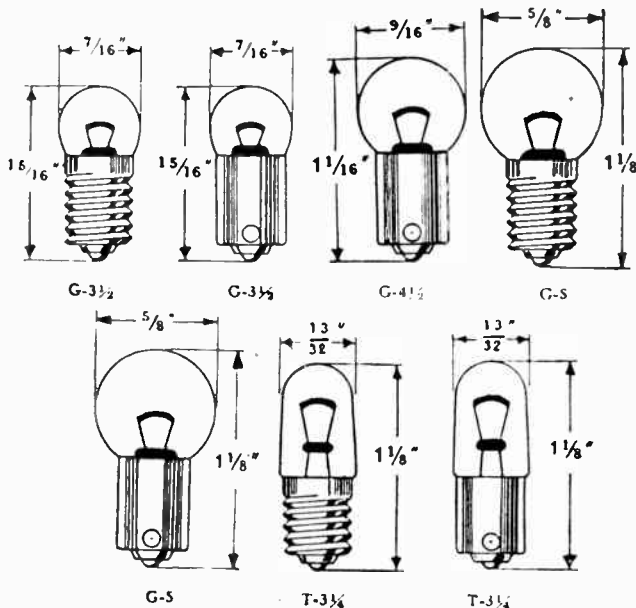
SYLVANIA PANEL LAMPS



SYLVANIA PANEL LAMPS

DIMENSIONS (Actual Sizes)

Type No.	Filament Volts	Filament Ampere	Bulb Style	Type of Base	Bead Color
S40	6-8	0.15	T-3¼	Screw	Brown
S41	2.5	0.50	8-3¼	Screw	White
S42	3.2	0.50	T-3¼	Screw	Green
S43	2.5	0.50	T-3¼	Bayonet	White
S44	6-8	0.25	T-3¼	Bayonet	Blue
S45	3.2	0.50	T-3¼	Bayonet	White
S46	6-8	0.25	T-3¼	Screw	Blue
*S47	6-8	0.15	T-3¼	Bayonet	Brown
S48	2.0	0.06	T-3¼	Screw	Pink
*S49	2.0	0.06	T-3¼	Bayonet	Pink
S50	6-8	0.20	G-3½	Screw	White
S51	6-8	0.20	G-3½	Bayonet	White
S55	6-8	0.40	G-4½	Bayonet	White
S291	2.9	0.17	T-3¼	Bayonet	White
S292	2.9	0.17	T-3¼	Screw	White
S1455	18.0	0.25	G-5	Screw	Brown
S1456	18.0	0.25	G-5	Bayonet	Brown



Sylvania's complete line of Panel Lamps is now available. These lamps are especially designed for radio dials, tuning meters, flash-tuning arrangements. Many types are ideal for use in flashlights, auto panels, pin ball machines—wherever a miniature lamp of this style is required.

*Sylvania Types S47 and S49 are interchangeable with Types S40A and S49A respectively, in any other brand.

Information regarding other Electronic Products and Sylvania Laboratory Equipment available upon request.

SYLVANIA RADIO AND ELECTRONIC PRODUCTS

Available from Sylvania Distributors

RADIO RECEIVING TUBES

TRANSMITTING TUBES

CATHODE RAY TUBES

SYLVANIA TEST EQUIPMENT

Type	Description	Type	Description
131	3" Oscilloscope	139	Counter Tube Tester
132	7" Oscilloscope	140	Portable Tube Tester
134Z	Polymeter (V.T.V.M.)	145	Audio Oscillator

ELECTRONIC PRODUCTS

Silicon Crystal Diodes	Trigger Tubes	Pirani Tubes	Gas Discharge Control Tubes
Germanium Crystal Diodes	Radio Receiving Tubes	Thermocouple Tubes	Thyratrons
Glow Modulator Tubes	Cathode Ray Tubes	Power Measurement Lamps	Anti-TR Tubes
Gas Pressure Measuring Tubes	Counter Tube Testers	Gas Voltage Regulators	T-R Tubes
Stroboscopes	Portable Tube Testers	Electronic Devices	Silicon Video Detectors
Modulation Meters	Polymeters	Accelerometer Tubes	Voltage Regulator Tubes
Selenium Rectifiers	Oscilloscopes	Radiation Sensitive Tubes	Modulation Monitor
Flash Tubes	Audio Oscillator	Magnetrons	Transmitting Tubes

SYLVANIA ELECTRIC

RADIO TUBE DIVISION, EMPORIUM, PA.

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**SYLVANIA
ELECTRIC**

NATIONAL UNION

RECEIVING TUBES

PRICE LIST Effective November 1, 1948*

TYPE	USER'S PRICE	TYPE	USER'S PRICE	TYPE	USER'S PRICE	TYPE	USER'S PRICE	TYPE	USER'S PRICE	TYPE	USER'S PRICE
0Y4	\$.40	3Q5GT	\$.40	6H6GT	\$.15	6X5GT	\$.15	12S8GT	\$.25	35W4	\$.15
0Z4	2.20	3S4	2.00	6J5	1.50	6Y3G	3.90	12SA7	1.65	35Y4	1.80
0Z4G	2.20	3V4	2.00	6J5GT	1.50	6Y6G	2.40	12SA7GT	1.65	35Z3	1.80
1A3	2.20	5AZ4	1.35	6J6	2.90	6Z7G	3.90	12SC7	2.20	35Z4GT	1.50
1A4P	3.90	5T4	3.90	6J7	2.00	6ZY5G	2.20	12SF5	1.80	35Z5GT	1.25
1A5GT	1.80	5U4G	1.50	6J7G	2.00	7A4/XXL	1.80	12SF5GT	2.00	35Z6G	2.65
1A6	3.20	5V4G	2.40	6J7GT	2.00	7A5	1.80	12SF7	2.00	36	2.65
1A7GT	2.00	5W4	2.65	6J8G	3.20	7A6	1.80	12SG7	2.00	37	1.80
1AB5	2.65	5W4GT	1.65	6K5GT	2.40	7A7	1.80	12SH7	2.20	38	2.20
1B3GT	3.20	5X3	2.20	6K6GT	1.50	7A8	1.80	12SH7GT	2.20	39/44	2.65
1B4P	3.90	5X4G	1.80	6K7	1.65	7AD7	2.65	12SJ7	1.65	41	1.65
1B5/25S	3.20	5Y3G	1.05	6K7G	1.65	7AF7	1.80	12SJ7GT	1.65	42	1.65
1B7GT	3.20	5Y3GT	1.05	6K7GT	1.65	7AG7	2.20	12SK7	1.65	43	1.65
1C5GT	2.20	5Y4G	1.50	6K8	2.40	7AH7	2.20	12SK7GT	1.65	45	1.65
1C6	3.20	5Z3	1.80	6K8G	2.90	7B4	1.80	12SL7GT	2.40	45Z3	1.80
1C7G	3.20	5Z4	2.65	6K8GT	2.40	7B5	1.80	12SN7GT	2.20	45Z5GT	1.80
1D5GP	3.90	6A3	3.20	6L6G	2.65	7B6	1.80	12SQ7	1.90	46	2.65
1D7G	3.20	6A4	3.20	6L6	3.55	7B7	1.80	12SQ7GT	1.50	47	2.40
1D8GT	3.90	6A6	2.65	6L6G	2.90	7B8	1.80	12SH7	2.20	49	2.65
1E5GP	3.90	6A7	2.00	6L6GA	2.90	7C4/1203A	2.65	12SR7GT	2.20	50	3.90
1E5GT	3.90	6A8	2.00	6L7	2.40	7C5	1.80	12Z3	2.65	50A5	2.20
1E7GT	3.90	6A8G	2.00	6L7G	2.90	7C6	1.80	14A4	2.65	50B5	2.00
1F4	2.65	6A8GT	2.00	6N6G	3.90	7C7	1.80	14A5	3.90	50C5	2.00
1F5G	2.65	6AB5/6N5	2.65	6N7	2.40	7C8	2.65	14A7/12B7	2.20	50C6G	2.90
1F6	3.90	6AB7/1853	3.20	6N7GT	2.40	7E5/1201	2.65	14A7/XXD	2.20	50L6GT	1.65
1F7G	3.90	6AC5GT	2.90	6P5GT	2.40	7E6	1.80	14B6	2.20	50X6	2.20
1G4GT	2.65	6AC7/1852	2.90	6Q6G/6T7G	3.20	7E7	2.20	14B8	2.20	50Y6GT	1.80
1G5G	2.65	6AD7G	3.20	6Q7	2.00	7F7	2.20	14C5	2.20	53	2.65
1G6GT	2.65	6AF6G	2.65	6Q7G	1.80	7F8	2.65	14C7	2.20	55	2.20
1H4G	2.20	6AG5	2.65	6Q7GT	1.80	7G7/1232	2.65	14E6	1.80	56	1.80
1H5GT	1.65	6AG7	3.20	6R7	2.65	7H7	2.00	14E7	2.20	57	2.00
1H6G	3.20	6AK6	2.40	6R7GT	2.65	7J7	2.65	14F7	2.20	58	2.00
1H6GT	3.20	6AL5	2.00	6S7	2.65	7K7	2.65	14F8	2.65	59	3.55
1J5G	2.65	6AL7GT	2.65	6S7G	3.20	7L7	2.20	14H7	2.20	70L7GT	3.90
1J6GT	3.20	6AQ5	2.00	6S8GT	2.65	7N7	2.20	14J7	2.65	71A	2.00
1L4	2.00	6AQ6	1.80	6SA7	1.65	7Q7	1.80	14N7	2.65	75	1.65
1LA4	2.65	6AQ7GT	2.20	6SA7GT	1.65	7R7	2.20	14Q7	2.20	76	1.65
1LA6	2.65	6AR5	1.65	6SB7Y	2.40	7S7	2.65	14R7	2.20	77	1.65
1LB4	2.65	6AS5	2.00	6SC7	2.00	7V7	2.65	14S7	2.65	78	1.65
1LC5	2.65	6AT6	1.50	6SD7GT	2.65	7W7	2.65	14W7	2.65	79	2.65
1LC6	2.65	6AU6	2.00	6SF5	1.65	7X7/XXFM	2.65	14X7	2.65	80	1.15
1LJ5	2.65	6AV6	1.50	6SF5GT	1.80	7Y4	1.80	14Y4	2.20	81	3.90
1LE3	2.65	6B4G	3.20	6SF7	2.00	7Z4	1.80	15	3.20	82	2.65
1LG5	2.65	6B5	3.90	6SG7	2.00	10	3.90	19	3.20	83	2.65
1LH4	2.65	6B6G	3.20	6SH7	2.20	12A6	2.90	19T8	2.90	83V	3.20
1LN5	2.65	6B7	2.20	6SH7GT	2.20	12A6GT	2.90	20	3.90	84/6Z4	1.80
1N5GT	2.00	6B8	3.20	6SJ7	1.65	12A7	3.20	22	3.20	85	2.20
1P5GT	2.65	6B8G	3.20	6SJ7GT	1.65	12A8GT	2.00	24A	2.20	89	2.20
1Q5GT	2.65	6BA6	1.80	6SK7	1.65	12AH7GT	2.65	25A6	3.20	99V	3.20
1R4	2.20	6BA7	2.40	6SK7GT	1.65	12AL5	2.00	25A6G	2.65	99X	3.20
1R5	2.00	6BE6	1.80	6SL7GT	2.40	12AT6	1.50	25A6GT	3.20	117L7GT/	
1S4	2.40	6BF6	1.65	6SN7GT	2.20	12AT7	2.90	25AC5GT	2.90	117M7GT	3.90
1S5	1.80	6BG6G	4.80	6SQ7	1.50	12AU6	2.00	25C6G	3.20	117N7GT	3.90
1T4	2.00	6BH6	2.00	6SQ7GT	1.50	12AU7	2.40	25L6	3.20	117P7GT	3.90
1T5GT	2.65	6BJ6	2.00	6SR7	1.80	12AV6	1.50	25L6GT	1.65	117Z3	1.50
1U4	2.00	6C4	1.65	6SR7GT	1.80	12AW6	2.65	25Y5	2.90	117Z4GT	2.90
1U5	1.80	6C5	1.65	6SS7GT	1.80	12AX7	2.40	25Z5	1.50	117Z6GT	2.40
1V	2.20	6C5GT	1.50	6ST7	2.65	12BA6	1.80	25Z6	2.20	FM-1000	3.20
2A3	3.20	6C6	2.00	6SZ7	2.20	12BA7	2.40	25Z6GT	1.35	1201/7E5	2.65
2A5	2.20	6C8G	3.20	6T7G/6Q6G	3.20	12BD6	1.80	26	1.80	1203A/7C4	2.65
2A6	2.65	6D6	1.65	6T8	2.90	12BF6	1.80	27	1.50	XXB/3C6	3.20
2A7	2.65	6D8G	3.20	6U5/6U5	2.00	12C8	3.20	30	2.00	XXD/14AF7	2.20
2B7	2.65	6E5	2.20	6U6GT	2.00	12F5GT	1.80	31	2.65	XXFM/7X7	2.65
2E5	2.65	6F5	1.65	6U7G	1.80	12H6	1.80	32	3.20	XXL/7A4	1.80
2Z2/G84	3.90	6F5GT	1.65	6V5G	3.90	12J5GT	1.50	32L7GT	3.20		
3A8GT	4.80	6F6	2.00	6V5GT	3.90	12J7G	2.00	33	3.20		
3B7	2.65	6F6G	1.65	6V6	3.20	12J7GT	2.00	34	3.20		
3C6/XXB	3.20	6F6GT	1.65	6V6GT	2.00	12K7G	2.00	35/51	2.00		
3D6	2.65	6F7	3.20	6W4GT	1.80	12K7GT	1.65	35A5	1.80		
3E6	2.65	6F8G	3.20	6W7G	2.65	12K8	2.40	35B5	2.00		
3FL4	2.65	6G6G	2.65	6X4	1.50	12K8GT	2.40	35C5	2.00		
3Q4	2.20	6H6	1.65	6X5	2.65	12Q7GT	1.80	35L6GT	1.65		

*Prices on types not appearing on this list, gladly furnished on request.

Prices subject to change or withdrawal without notice

NATIONAL UNION RADIO CORP. - - - - ORANGE, NEW JERSEY

Precise engineering techniques and rigid quality control under skillful technical supervision make National Union Transmitting and Special Purpose Tubes the "preferred" tubes for replacement and initial equipment service. "War-born know-how" through National Union Research continues to assure the reputation that National Union Tubes enjoy for long life, economy and reliability.

Effective Jan. 15, 1948

TYPE	FUNCTION	SUGG'D USER PRICE	TYPE	FUNCTION	SUGG'D USER PRICE
0A3/VR75	Diode Voltage Regulator	\$1.20	804	Power Amp. Pentode	\$15.00
0B3/VR90	Diode Voltage Regulator	1.20	805	Power Amp. Osc. Triode	11.75
0C3/VR105	Diode Voltage Regulator	1.20	806	Power Amp. Triode	32.00
0D3/VR150	Diode Voltage Regulator	1.20	807	Beam Power Amp.	2.30
122 Miniature	H. V.-H. W. Rectifier	3.75	808	Power Amp. Osc. Triode	8.50
2C34/RK34	Twin Triode Power Amp.	3.25	809	Power Amp. Mod. Triode	3.50
2C46	Power Amp. Triode	1.83	810	Power Amp. Mod. Triode	12.50
2C53	High Mu Triode Amp.	15.00	811	High Mu Triode	3.50
2D21	Thyratron-Gas	1.80	812	Low Mu Triode	3.50
3B24	Diode Vacuum Rectifier	7.50	812H	R. F. Amp. Osc. Mod. Triode	6.90
3B25-	H. W. Gas Rectifier	5.90	813	Beam Power Amp.	14.50
3B27	H. W.-H. V. Rectifier	10.00	814	Beam Power Amp.	12.50
3E29	U. H. F. Beam Power Amp.	17.25	815	U. H. F. Beam Power Amp.	6.25
4B26/2000	H. W. Gas Rectifier	9.00	816	H. W. Mercury Vap. Rectifier	1.25
10Y	Trans./Rec. Triode Amp. Osc.	4.80	826	U. H. F. Med. Mu Triode	9.25
FG17	Thyratron Triode	6.50	828	Beam Power Amp.	12.50
HV18	Power Amp. Triode	24.50	829B	U. H. F. Beam Power Amp.	14.75
KU23	Triode Amp.	30.00	830B	Power Amp. Triode	10.00
TB35	Beam Power Tetrode	10.00	832A	U. H. F. Beam Power Amp.	10.60
40T	Med. Mu Triode	3.95	834	U. H. F. Beam Power Amp. Triode	12.00
40TZ	High Mu Triode	3.95	836	H. W.-H. V. Rectifier	6.00
T55	Triode Amp.	6.90	837	Power Amp. Pentode	4.15
V70D	Triode Amp.	6.90	838	Power Amp. Triode	12.00
100TH	High Mu Triode	16.65	845	A. F. Power Amp. Triode	12.00
UE100	Triode Amp. Osc.	15.00	852	Power Amp. Triode	29.00
114B	U. H. F. Amp. Triode	2.25	866A	H. W.-M. V. Rectifier	1.75
HF150	Triode Amp. Osc.	18.00	866Jr.	H. W.-M. V. Rectifier	1.25
200	Power Amp. Triode	24.50	872A	H. W.-M. V. Rectifier	7.50
203A	Power Amp. Osc. Triode	12.00	873	H. W.-M. V. Rectifier	17.25
211	Power Amp. Osc. Triode	12.00	878	H. W.-H. V. Rectifier	11.00
217C	H. W.-H. V. Rectifier	20.00	884	Thyratron Triode	1.70
Z225/866A	H. W.-M. V. Rectifier	1.95	885	Grid Controlled Gas Rectifier	1.80
274A	F. W. Vacuum Rectifier	3.60	967	Thyratron Triode	6.50
274B	F. W. Vacuum Rectifier	3.60	973	H. W.-M. V. Rectifier	17.25
300	Power Amp. Triode	30.00	975A	Diode Gas Rectifier	27.50
311CH	H. V. Triode	18.00	R1038	Ionization Gauge	29.50
371B	H. W.-H. V. Rectifier	20.00	1616	H. W.-H. V. Rectifier	7.50
575A	H. W.-M. V. Rectifier	28.00	1625	Beam Power Amp.	2.30
615	U. H. F. Power Amp. Triode	2.25	1626	Low Mu Amp.	1.60
801A	Power Amp. Triode	3.00	2050	Grid Controlled Gas Rectifier	1.70
802	Power Amp. Pentode	4.25	2051	Grid Controlled Gas Rectifier	1.70
803	Power Amp. Pentode	21.00	8005	Power Amp. Triode	7.00
			8020	H. W.-H. V. Rectifier	20.00

The Transmitting and Special Purpose Tubes here listed represent the faster moving types in demand by Industrial, Communication, Ham, Military and Experimental Users. Stocks are maintained for prompt delivery. This list is continually being supplemented and inquiries are therefore invited on any types not shown in this list.

N. U. BASIC REPLACEMENT

CAPACITORS

are especially selected for the Radio Serviceman's everyday needs.

131 TYPES

- ★ **"NUMITES"** —Dry Electrolytic—Sealed Metal Tube—Cardboard Sleeve
SINGLES & DUALS
53 Sizes—from 4 Mfd. to 100 Mfd.
4-4 Mfd. to 80-40 Mfd.
at Working Voltages 25 to 525
- ★ **"NUCARMITES"** —Dry Electrolytic—Wax Super-Seal Tubulars—Mounting Strap
DUALS
Common Negative or Separate Section
9 Sizes—from 16-16 Mfd. to 40-80 Mfd.
at Working Voltages 150
- ★ **"NUPAMITES"** —Paper Capacitors — Super-Seal Wax Filled — Cardboard Tubular
15 Sizes—from .0001 Mfd. to .5 Mfd.
at 600 W.V.D.C.
- ★ **"THREDMOUNT"** —Dry Electrolytic — Aluminum Can — Threaded Screw Base
SINGLES & DUALS
Common Negative or Separate Section
21 Sizes—from 4 Mfd. to 40 Mfd.
8-8 Mfd. to 20-20 Mfd.
at Working Voltages 450 to 600
- ★ **"TWISTAB"** —Dry Electrolytic — Aluminum Can — Twist Tab Mount
SINGLES, DUALS, TRIPLES & QUADRUPLES
33 Sizes—from 10 Mfd. to 500 Mfds.
(Single) to 10-10-10-10 (Quadruple)
at Working Voltages 25 to 450

Average 24% SMALLER and more COMPACT—yet more rugged and durable.

LONG-LIFE performance to protect Serviceman's "Customer Repair Guarantee".

Extra long SHELF LIFE to protect Serviceman's stock investment.

WIDE RANGE of types, capacities and working voltages for complete repair service requirements.

Clear, legible RATING IMPRINT.

PRICED for full profit on every Service job. Competitively advanced Distributor pricing structure.

Complete Data and Pricing information on request.

NATIONAL UNION

PHOTOTUBES VIBRATORS

N. U. PHOTOTUBES

41—"In-demand" types. Wide DIRECT REPLACEMENT coverage in motion picture, relay and industrial photoelectric equipment.

Gas-filled or Vacuum Types • Cartridge • Standard and Special Red Sensitive • Blue Sensitive.

PRICES

N. U. Type	Class	List† Price	N. U. Type	Class	List† Price	N. U. Type	Class	List† Price	N. U. Type	Class	List† Price
NU-1	C	\$4.10	NU-10	C	\$35.00	NU-25V	C	\$5.00	NU-55	C	\$5.00
	D	2.60		D	25.00		D	3.00		D	2.25
NU-1V	C	3.50	NU-11V	C	5.00	NU-26	C	5.50	NU-56	Prices on request	
	D	2.60		D	3.00		D	3.30	NU-57	Prices on request	
NU-2	C	5.50	NU-13V	C	5.00	NU-29	Q	8.00	NU-58	R	10.00
	D	3.30		D	3.00		R	1.75		R	4.00
NU-2V	C	5.50	NU-15	C	30.00	NU-30	C	2.60	NU-59	Q	6.00
	D	3.30		D	22.00		D	1.50		R	2.25
NU-3	C	5.50	NU-18	C	12.00	NU-30V	C	2.80	NU-60	Q	10.00
	D	3.30		D	7.00		D	1.85		R	4.00
NU-4	C	5.50	NU-21	C	5.60	NU-31V	C	5.00	NU-61	Q	8.00
	D	3.30		D	3.60		D	3.00		R	4.50
NU-4V	C	5.50	NU-22	C	4.00	NU-34	Q	8.00	NU-64	Q	8.00
	D	3.30		D	2.40		R	3.00		R	2.85
NU-5	C	6.00	NU-23	C	2.90	NU-36	C	4.20	NU-74	Q	8.00
	D	3.50		D	1.75		D	2.50		R	4.50
NU-7	C	5.50	NU-20	Replace with NU-25		NU-41	Cartridge Type	1.75	NU-91	Q	8.00
	D	3.30	NU-25	C	4.20	NU-42	Cartridge Type	1.80		R	4.50
NU-8	C	5.50		D	2.50	NU-54	C	5.00		Q	8.00
	D	3.30					D	2.50		R	2.50

†Effective July 1, 1948.

ORDERING: When ordering, indicate SENSITIVITY desired by adding the Class to the type number, as for NU-1, Class C, order NU-1-C, etc. Class C type will be shipped unless other-

wise specified on the order.

Tubes available on Special Order with Sensitivities greater than that of Class C and D tubes—write for prices. Phototubes available WITHOUT BASE upon special request.

INTERCHANGEABILITY CHART

To Replace	Use	To Replace	Use	To Replace	Use	To Replace	Use	To Replace	Use	To Replace	Use
1P37	NU-91	G7	NU-7	NU-20	NU-25	CE-42	NU-42	CE-64	NU-64	868	NU-1
1P41	NU-22	CE-8	NU-8	CE-21	NU-21	51A	NU-25	71A	NU-2	917	NU-11V
CE-1	NU-1	G9	NU-1	CE-22	NU-22	53ABB	NU-22	71AV	NU-2V	918	NU-1
CE-1V	NU-1V	V9	NU-2	PJ22	NU-1V	CE-54	NU-54	CE-74	NU-74		NU-13V
CE-2	NU-2	CE-10	NU-10	CE-23	NU-23	CE-55	NU-23	75A	NU-7	919	or
CE-2V	NU-2V	G10	NU-3	PJ-23	NU-1	CE-56	NU-56	79A	NU-3		NU-31V
CE-3	NU-3	CE-11V	NU-11V	CE-25	NU-25	CE-57	NU-57	CE91	NU-91	920	NU-21
WE-3A	NU-3	G12	NU-4	CE-25V	NU-25V	58A	NU-4	441	NU-61	921	NU-41
4QC	NU-2	CE-13V	NU-13V	CE-26	NU-26	58AL	NU-4	WL728	NU-3	922	NU-42
4Q3A	NU-3	G14	NU-21	CE-29	NU-29	58AV	NU-4V	WL734	NU-1V	923	NU-23
CE-4	NU-4	CE-15	NU-15	CE-30	NU-30	CE-58	NU-58	WL735	NU-1	924	NU-22
CE-4V	NU-4V	G-15F	NU-25	CE-30V	NU-30V	CE-59	NU-59	WL737	NU-2	925	NU-30V
CE-4 Spec	NU-8	G16B	NU-5	CE-31V	NU-31V	59A	NU-1	WL738	NU-3	927	NU-25
CE-5	NU-5	G17F	NU-22	CE-34	NU-34	59AV	NU-1V	WL739	NU-5	929	NU-29
G4	NU-5	CE-18	NU-18	CE-36	NU-36	CE-60	NU-60	WL741	NU-23	930	NU-30
WE6A	NU-26	G18T	NU-21	CE-41	NU-41	CE-61	NU-61	803A	NU-3	934	NU-34
CE-7	NU-7	CE-20	NU-25								

N. U. UNIVIBES

Auto Radio Vibrators

Standardized Stock

• Minimum Inventory

• Maximum Profit

Only 8 N.U. Univibes needed to replace types used in over 2500 Radio Set Models . . . covering 182 Brand Names.

Only 8 N.U. Univibes needed to replace 290 types of competitive brand* Vibrators.

N. U. Type	List†	Suggested Inventory Stock Ratio	6 Volt 115 Cycle	Overall Length	Seated Height	Diameter (Max.)	Pin Length	Basing Fig.
400	\$4.10	23%	Non-Sync.	3	2 1/2	1 1/2	1 1/2	D
402	4.10	13%	Non-Sync.	3 1/4	2 3/4	1 1/2	1 1/2	B
404	4.10	23%	Non-Sync.	3 1/4	3 1/4	1 1/2	1 1/2	D
406	3.45	16%	Non-Sync.	3 1/4	2 3/4	1 1/2	1 1/2	D
408	4.10	4%	Non-Sync.	3 1/4	3 1/4	1 1/2	1 1/2	D
500	6.90	10%	Sync.	4 3/4	4 1/4	1 1/2	1 1/2	A
600	6.90	7%	Sync.	3 3/4	3 3/4	1 1/2	1 1/2	F
602	6.90	4%	Sync.	3 3/4	3 3/4	1 1/2	1 1/2	C

†Effective 9-25-46—but subject to change without notice.

*INCLUDING—A. T. R. • Electronic Labs • James • Mallory • Oak • Philco • R. C. A. • Radiart • Utah.

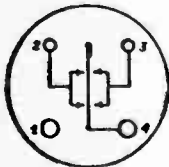


FIG. A

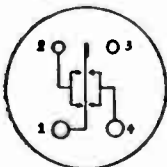


FIG. B



FIG. C

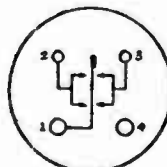


FIG. D

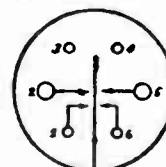


FIG. E

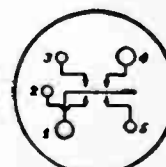


FIG. F

DETAIL SUBSTITUTION CHART AVAILABLE AT N.U. DISTRIBUTORS

NATIONAL UNION RADIO CORP. - - - - ORANGE, NEW JERSEY

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

A-15

BATTERIES

Engineered to TOP QUALITY Standards • Complete Replacement coverage for the Service Engineer • 27 N. U. types replace 415 competitive types in 21 makes.

"A"-type BATTERY PACKS

Nu. CAT. No.	Voltage	Physical Specs. in Inches			Std. Pkg. Wt. (Lbs.)	Std. Pkg. Quan.	PRICES EACH LIST
		Length, Max.	Width, Max.	Height, Max.			
N801	1 1/2-90	16 1/16	4 1/16	6 1/16	1	21 1/2	\$7 50 *7 80
N803	1 1/2-90	12 1/16	1 1/16	6 1/16	6	38 1/2	5 25
N804	6-90	2 1/2	4 3/8	6	6	33 1/2	5 25
N805	1 1/2-90	10 3/4	2 1/16	6 1/16	1	39	5 35 *5 60
N807	9-90	16 1/16	4 1/16	6 1/16	1	21 9	7 50 *7 80
N808	7 1/2 & 9-90	9 1/2	2 1/8	4 1/16	1	7 1/2	5 45

FARM "A" BATTERIES

A832	1 1/2	7 1/16	2 1/16	6 1/16	4	34 25	2 95 *3 25
A840	3	10 1/16	4 1/16	6 1/16	1	16 1/4	4 73 *5 15

STANDARD "B" BATTERIES

B850	45	7 3/16	3 1/2	7 1/16	6	51	2 50 *2 65
B851	45	7 1/16	4 1/4	7 1/16	6	68	2 95 *3 14
C880	22 1/2	4 7/16	2 1/8	2 1/8	10	15 4	1 70

STANDARD "C" BATTERIES

C870	4 1/2	3 1/8	1 5/8	2 1/4	10	7 5	75
C872	7 1/2	4 1/8	1 3/8	3 3/4	10	6 3	90
C880	22 1/2	4 3/8	2 1/8	2 1/8	10	15 4	1 70

*These Prices Apply to West Coast.
Prices subject to change without notice.

PORTABLE "A" BATTERIES

Nu. CAT. No.	Voltage	Physical Specs. in Inches			Std. Pkg. Quan.	Std. Pkg. Wt. (Lbs.)	PRICES EACH LIST
		Length, Max.	Width, Max.	Height, Max.			
A830	1 1/2	2 1/2	2 1/2	3 1/2	6	9 1	\$ 90
A830L	1 1/2	3 1/2	1 1/2	6 1/2	6	11 4	75
A831	1 1/2	3 1/2	2 1/2	4 1/2	6	13 2	1 25
A835	4 1/2	3 1/2	1 1/2	4 1/2	6	8	75
A837	6	2 1/2	2 1/2	4 1/2	6	9	90
A839	7 1/2	3 1/2	2 1/2	4 1/2	4	8 6	1 25
(HEAVY DUTY)	1 1/2	.....	.....	.....	.....	.....	.....
AA	.....	.....	.....	.....	240	58 1/2	.10
(PEN-LIGHT)	1 1/2	.....	.....	.....	180	8	.075

PORTABLE "B" BATTERIES

B860	45	4 1/8	2 1/2	5 1/4	6	17 1	\$2 15
B861	45	4 3/8	2 1/2	5 3/4	6	11 3	2 15
B862	45	3 1/2	1 1/2	5 1/4	6	12	2 15
B863	45	3 1/2	2 1/4	4 1/8	6	11 4	2 15
B864	45	3	2 1/8	4 1/4	6	9	2 58
B865	67 1/2	2 3/8	1 1/8	3 3/8	12	10	2 43

Complete interchangeability—with 21 competitive makes. An NU Battery for every "demand-type" replacement. Ask for NU Cross Index.

VOLUME CONTROLS • "SAV-A-SHAFT"

NO stock problem
NO replacement headaches **\$1.25** complete
All MIDGET size list switch

INDIVIDUAL CARTON PACKED

10 TYPES HANDLE 95% OF YOUR SERVICE WORK

CAT. NO.	RES.-OHMS	APPLICATION
NU 5M-A	5,000	Voltage Divider Potentiometer
NU 10M-B	10,000	Antenna Grid Bias
NU 25M-A	25,000	Voltage Divider Potentiometer
NU 50M-B	50,000	Audio Grid—Tone—Antenna Control
NU 100M-B	100,000	Antenna Control—Audio Grid—Tone
NU 250M-TX	250,000	Tone Compensation—Audio Grid
NU 500M-TX	500,000	Tone Compensation—Audio Grid
NU 1 MEG-TX	1 MEG	Tone Compensation—Audio Grid
NU 2 MEG-TX	2 MEG	Tone Compensation—Audio Grid
NU 500M-CB	500,000	Special Tone Control—Audio Grid

SPECIFICATIONS: Max. Diameter (not including terminals) 1 1/8" approx.—Max. Length (not including terminals) 1 1/2" approx.

NOTES: Each Control is supplied with SWITCH. TAPPED Controls indicated by letter "T" in Catalog Number. Special TONE Control indicated by letter "C" in Cat. No.

UNIBALLASTS •

The National Union UNIBALLAST is a metal shell plug-in type LINE VOLTAGE DROPPING RESISTOR designed to supply Filament and Pilot Light voltages to Radio Sets operating from A.C. or D.C. 117 (Mean) Volt Power Supply Lines. The Voltage Dropping Range is indicated on every Uniballast.

ONLY TEN UNIBALLASTS are required to provide adequate replacement for over 875 types of ordinary ballasts.

ALL TYPES \$1.25 LIST, EA., Individual Carton Packed.

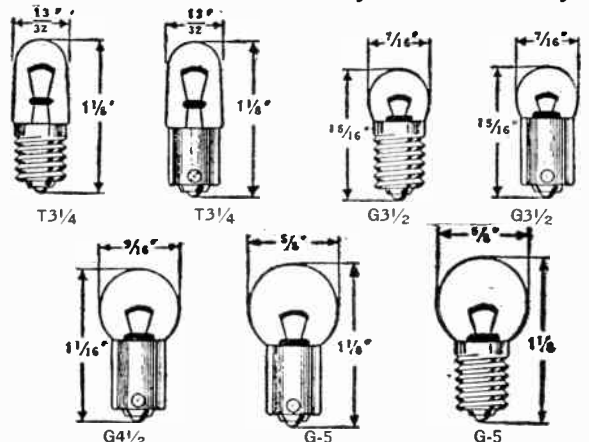
Use N.U. Uniballast	To Replace Ballasts with Prefix	Having Voltage Drop Range From	And Suffix	PHYSICAL SPECIFICATIONS
10-23-1	BK, BL, K, L, M	10 to 23	A, B, C, D	Envelope Metal Shell (MTS)—Black
10-23-2	BK, BL, K, L, M	10 to 23	E	Base Small Wafer—Octal 8 Pin
10-23-3	BK, BL, K, L, M	10 to 23	F, G, H	Overall Length 3 1/2"
23-55-1	BK, BL, K, L, M	23 to 55	A, B, C, D	Seated Height 2 1/4"
23-55-2	BK, BL, K, L, M	23 to 55	E	Bulb Diameter 1"
23-55-3	BK, BL, K, L, M	23 to 55	F, G, H	
60-92-1	BK, BL, K, L, M	60 to 92	A, B, C, D	
60-92-2	BK, BL, K, L, M	60 to 92	E	
60-92-3	BK, BL, K, L, M	60 to 92	F, G, H	
92-105-1	BK, BL, K, L, M	92 to 105	A, B, C, D	

Use—"Uniballast Service Manual" for Complete Replacement Data

PANEL LAMPS • Shock Tested • Torque Tested • Life Tested • Brighter Service—Longer

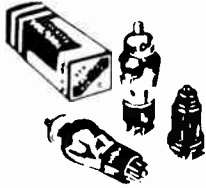
TYPE No.	Rated Volts	Amps.	Base	Bead Color	Bulb Style	LIST PRICE†
N-13	3.8	.30	Screw	Green	G3 1/2	\$ 10
N-14	2.5	.30	Screw	Blue	G3 1/2	10
N-40*	6-8	.15	Screw	Brown	T3 1/4	.09
N-40A	6-8	.15	Bayonet	Brown	T3 1/4	.09
N-41	2.5	.30	Screw	White	T3 1/4	.09
N-42	3-2	.35	Screw	Green	T3 1/4	.12
N-43	2.5	.50	Bayonet	White	T3 1/4	.09
N-44*	6-8	.25	Bayonet	Blue	T3 1/4	.09
N-45	3-2	.35	Bayonet	Green	T3 1/4	.12
N-46*	6-8	.25	Screw	Blue	T3 1/4	.09
N-47†	6-8	.15	Bayonet	Brown	T3 1/4	.09
N-48	2-0	.06	Screw	Pink	T3 1/4	.15
N-49	2-0	.06	Bayonet	Pink	T3 1/4	.15
N-49A	2-1	.12	Bayonet	White	T3 1/4	.18
N-50*	6-8	.20	Screw	White	G3 1/2	.10
N-51*	6-8	.20	Bayonet	White	G3 1/2	.08
N-55*	6-8	.40	Bayonet	White	G3 1/2	.08
N-292	2-9	.17	Screw	White	T3 1/4	.12
N-291	2-9	.17	Bayonet	White	T3 1/4	.12
N-292A	2-9	.17	Bayonet	White	T3 1/4	.12
N-1455	18-0	.25	Screw	Brown	G5	.10
N-1455A†	18-0	.25	Bayonet	Brown	G5	.10
N-1456†	18-0	.25	Bayonet	Brown	G5	.10
N-1450	3-2	.16	Bayonet	White	T3 1/4	.11

*Used also in Coin Operated Machines. †Used also in Toy Trains.
†All subject to Excise Tax—except N-51 and N-52.



PACKING: 10 Lamps to the Unit Carton, 20 Unit Cartons (200 lamps) to the Standard Package.

All prices and types on this page subject to change and/or withdrawal without notice.



TUNG-SOL

RADIO TUBES

EFFECTIVE APRIL 26, 1948

List prices include Manufacturer's Federal Excise Taxes levied up to and including April 26, 1948

This list is supplied for convenience of our trade. The listing of price for any tubes does not necessarily indicate availability.

Type	List Price	Type	List Price	Type	List Price	Type	List Price
0X1	\$3.90	2B7	\$2.20	6AR5	\$1.65	6R6G	\$3.90
0Z1 Met.	2.20	2E5	2.20	6AL6 Min.	1.35	6R7 Met.	2.20
0Z4G	2.20	2G5	2.20	6AL6 Min.	1.80	6R7GT	1.80
0YA	1.25	2W3GT	1.80	6AV6	1.35	6S7 Met.	2.20
1A3	1.80	2Z2 G-4	3.20	6B1G	2.65	6S7G	2.6
1A4P	3.20	3A5	1.50	6B5	3.20	6S8GT	2.40
1A5GT	1.50	3A8GT	3.90	6B6G	1.80	6SA7 Met.	1.50
1A9	2.65	3B5GT	2.20	6B7	2.65	6SA7GT	1.80
1A7GT	1.80	3B7 1294 Loc.	2.65	6B8 Met.	2.65	6SB7V	2.20
1A85 Loc.	2.65	3D6 1299 Loc.	2.65	6B8-G	2.65	6SA7 Met.	1.80
1B1P (1B4/951)	3.20	3E6 Loc.	2.65	6BA6 Min.	1.65	6SC7GT	1.80
1B5-258	2.65	3E4 Loc.	3.20	6B6 Min.	1.65	6SD7G4	2.6
1B7G1	1.80	3G6 XAR	3.20	6BE6 Min.	1.65	6SE5 Met.	1.80
1C5GT	1.80	3E4 Loc.	2.65	6B6 Min.	1.50	6SF5GT	1.50
1C6	2.65	3Q4 Min.	1.80	6B6 Min.	1.80	6SF7 Met.	1.80
1C7G	2.65	3Q5GT	2.20	6B6 Min.	1.80	6SF7GT	1.80
1C8	2.20	3S4 Min.	1.80	6C4 Min.	1.50	6SG7 Met.	1.80
1D5GP	3.20	3V4 Min.	1.80	6C5 Met.	1.50	6SG7GT	2.20
1D7G	2.65	3AZ1 Loc.	1.35	6C5GT	1.50	6SH7 Met.	1.80
1D8GT	3.20	5T4	3.20	6C6	1.80	6SH7GT	1.80
1E5GP	3.90	5U6	1.35	6C7	3.20	6SJ7 Met.	1.50
1E7G	3.20	5V4G	2.20	6C8G	2.65	6SJ7GT	1.50
1F4	2.20	5W1 Met.	2.20	6D5G	2.20	6SK7 Met.	1.50
1F5G	2.20	5W4GT	1.50	6D6	1.50	6SK7GT	1.50
1F6	3.20	5X1G	1.50	6D8G	2.65	6SL7GT	2.20
1F7G	3.20	5Y3G	.95	6E5	1.80	6SN7GT	2.20
1G1GT	2.20	5Y3GT	.95	6E5 Met.	1.50	6SQ7 Met.	1.35
1G5G	2.20	5A1G	1.25	6E5GT	1.50	6SQ7GT	1.35
1G6GT	2.20	5Z3	1.50	6E6 Met.	1.80	6SR7GT	1.80
1H1G	1.80	5Z4 Met.	2.20	6E6G	1.50	6SR7 Met.	1.50
1H5GT	1.50	6A3	2.65	6E6GT	1.50	6SS7GT	1.80
1H6G	2.65	6A4 (A-A)	2.65	6E7	2.65	6SS7 Met.	1.65
1H6	2.65	6A5G	3.90	6E8G	2.65	6ST7 Met.	2.20
1J6G	2.65	6A6	2.20	6E8	2.20	6SA7 Met.	2.20
1L1 Min.	1.80	6A7	1.80	6E9GT	2.65	6SZ7 Met.	1.80
1L4 Loc.	2.65	6AS Met.	1.80	6E6 Met.	1.50	*6T5	3.20
1L6 Loc.	2.65	6ASG	1.80	6E6G	1.50	6T7G (6Q6G)	2.65
1L84 Loc.	2.65	6ASGT	1.80	6E6G4	1.50	6T8 Min.	2.65
1L85 Loc.	2.65	*6AB5-6N5	2.20	6E5 Met.	1.35	*6L5-6G5	1.80
1L86 Loc.	2.65	6A5GT	3.20	6E5GT	1.35	6T6GT	1.80
1L85 Loc.	2.65	6AR7/1853 Met.	2.65	6E6 Min.	2.65	6T7G	1.50
1L83 Loc.	2.65	6AC5G	1.80	6E7 Met.	1.80	6V6 Met.	2.65
1L85 Loc.	2.65	6AC5GT	2.65	6E7G	1.80	6V6	1.80
1L11 Loc.	2.65	6AC6GT	1.50	6E7GT	1.80	6V6GT	1.80
1L85 Loc.	2.65	6AC7 1852	2.65	6E8G	2.65	6V7 Met.	3.20
1N5GT	1.80	6AD5G	2.20	6E5GT	2.20	6V7	1.80
1N6G	1.80	*6AD6G	2.20	6E6GT	1.35	6V7G	2.20
1P5GT	2.20	6AD7G	2.65	6E7 Met.	1.50	6V1 Min.	1.35
1Q5GT	2.20	6AE5G	2.20	6E7G	1.50	6V5 Met.	2.20
1Q6	2.20	6AE5GT	1.80	6E7GT	1.50	6V5GT	1.35
1R5 Min.	1.80	*6AE6G	1.80	6E8	2.20	6V8G	3.90
1S1 Min.	2.20	6AE7GT	1.80	6E8GT	2.20	6V6G	2.20
1S5 Min.	1.65	6AE5G	1.80	6E5G	2.20	6V7G	2.20
1T4 Min.	1.80	6AE6G	2.20	6L6 Met.	3.20	6Z5/12Z5	3.20
1T5GT	2.20	6AG5 Min.	2.40	6L6A	3.20	6Z6	3.20
1U4 Min.	1.80	6AG7 Met.	2.65	6L7	2.20	6ZV5G	1.80
1U5 Min.	1.65	6AH6 Min.	3.55	6L7G	2.65	7A4 Loc. (XXL)	1.80
1V	1.80	6AH7GT	2.20	6E6G	3.20	7A5 Loc.	1.80
1V5 Min.	2.20	6AK6 Min.	2.20	6E7 Met.	2.20	7A6 Loc.	1.80
1W5 Min.	2.20	6AL5 Min.	1.80	6E7GT	2.20	7A7 Loc.	1.80
2A3	2.65	*6AL7GT	2.65	6P5GT	2.20	7A8 Loc.	1.80
2A4G	3.20	6AO5 Min.	1.80	6P7G	3.20	7AD7 Loc.	2.65
2A5	1.80	6AO6 Min.	1.65	6O7 Met.	1.80	7AF7 Loc.	1.80
2A6	2.20	6AQ7GT	2.20	6O7G	1.50	7AG7 Loc.	2.20
2A7	2.20			6Q7GT	1.50	7AH7 Loc.	2.20

*Non-taxable types

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

TUNG-SOL RADIO TUBES (con.)

Type	List Price	Type	List Price	Type	List Price	Type	List Price
7B4 Loc.	\$1.80	128F7	\$1.80	35L6GT	\$1.50	XND/11AF7	\$2.20
7B5 Loc.	1.80	128F7GT	1.80	35W4 Min.	1.15	XPM/7N7	2.65
7B6 Loc.	1.80	128G7 Met.	1.80	35Y1 Loc.	1.80	XX1/7A1	1.80
7B7 Loc.	1.80	128H7 Met.	1.80	35Z3 Loc.	1.80		
7B8 Loc.	1.80	128H7GT	1.80	35Z10.1	1.25		
7C4/1203 Loc.	2.65	128J7 Met.	1.50	35Z6GT	1.15		
7C5 Loc.	1.80	128J7GT	1.50	35Z8G	1.80		
7C6 Loc.	1.80	128K7 Met.	1.50	35Z6GT	1.80		
7C7 Loc.	1.80	128K7GT	1.50	37	2.20		
7C8 Loc.	2.65	128L7GT	2.20	38	1.80		
7E5/1201 Loc.	2.65	128N7GT	2.00	39 44	2.20		
7E6 Loc.	1.80	128O7 Met.	1.35	41	1.50		
7E7 Loc.	2.20	128O7GT	1.35	42	1.50		
7E7 Loc.	2.20	128P7 Met.	1.80	43	1.50		
7E8 Loc.	2.65	128P7GT	1.80	45	1.50		
7G7/1232 Loc.	2.65	12Z3	2.20	45Z3 Min.	1.50		
7H7 Loc.	2.00	12Z5 6Z5	3.20	45Z5GT (40Z5GT)	1.50		
7J7 Loc.	2.65	11A3 Loc.	2.65	46	2.20		
7K7 Loc.	2.65	11A3 Loc.	3.90	47	2.20		
7L7 Loc.	2.20	11A7 12B7 Loc.	2.20	48	3.90		
7N7 Loc.	2.20	11AF7 Loc. (XXD)	2.20	49	2.20		
7Q7 Loc.	1.80	11B6 Loc.	2.20	50	3.90		
7R7 Loc.	2.20	11B8 Loc.	2.20	50A5 Loc.	2.20		
7S7 Loc.	2.65	11C5 Loc.	2.20	50B5 Min.	1.80		
7V7 Loc.	2.65	11C7 Loc.	2.20	50C6G	2.65		
7W7 Loc.	2.65	11E6 Loc.	1.80	50E6GT	1.50		
7X7 Loc. (XXFM)	2.65	11E7 Loc.	2.20	50X6 Loc.	2.20		
7Y4 Loc.	1.80	11E7 Loc.	2.20	50Y6GT	1.50		
7Z4 Loc.	1.80	11F8 Loc.	2.65	50Z7G	1.80		
10	3.90	11H7 Loc.	2.20	51	3.90		
12A5	3.20	11J7 Loc.	2.65	53	2.20		
12A6 Met.	2.65	11K7 Loc.	2.65	55	1.80		
12A6GT	2.65	11Q7 Loc.	2.20	56	1.50		
12A7	2.65	11R7 Loc.	2.20	57	1.80		
12A8GT	1.80	11S7 Loc.	2.65	58	1.80		
12AH6GT	2.20	11Y4 Loc.	2.20	59	2.65		
12AH7GT	2.20	13	2.65	70A7GT	3.90		
12AL5 Min.	1.80	19	2.65	70L7GT	3.90		
12AF6 Min.	1.35	19FS	2.65	71A	1.80		
12AY7 Min.	2.65	21A	1.80	75	1.50		
12AU6 Min.	1.80	25A6 Met.	2.65	76	1.50		
12AL7 Min.	2.20	25A6GT	2.65	77	1.50		
12AW6 Min.	2.40	25AC5GT	2.65	78	1.50		
12B7 (14A7/12B7)	2.65	25B5	3.20	79	2.20		
12BA6 Min.	1.65	25B6G	2.65	80	1.05		
12BD6 Min.	1.65	25C6G	2.65	81	3.20		
12BE6 Min.	1.65	25L6 Met.	2.65	82	2.20		
12BF6 Min.	1.50	25L6GT	1.50	83	2.20		
12C8 Met.	2.65	25N6G	3.20	83V	2.65		
12E5GT	2.20	25V5	2.65	84/6Z4	1.50		
12F5GT	1.50	25Z5	1.35	85	1.80		
12H6 Met.	1.50	25Z6 Met.	1.80	89	1.80		
12J5GT	1.35	25Z6GT	1.35	90A	3.90		
12J7GT	1.80	26	1.50	90V	3.90		
12K7GT	1.50	27	1.35	117L7/M7GT	3.55		
12K8 Met.	2.20	30	1.80	117N7GT	3.55		
12R8GT	2.20	31	2.20	117P7GT	3.55		
12Q7GT	1.50	32	2.65	117Z3 Min.	1.35		
12S8GT	2.40	32L7GT	3.20	117Z4GT	2.65		
12SA7 Met.	1.50	33	2.65	117Z6GT	2.20		
12SA7GT	1.50	34	2.65	483/183	2.65		
12SC7 Met.	1.80	35/51	1.80	485	2.65		
12SC7GT	1.80	35A5 Loc.	1.80	FM 1000	3.20		
12SF5 Met.	1.50	35B5 Min.	1.80	ANR/306	3.20		
12SF5GT	1.50						

SPECIAL PURPOSE TUBES

70A2	\$2.30
70A4G	1.15
70B3	1.20
70C3	1.20
70D3	1.20
2A4G	1.60
2E22	6.00
2X3 879	1.80
2Y3G	2.75
3A4	1.05
3A5	1.50
3R4GY	1.30
3X3	3.50
3R4GV	1.30
6AJ5	3.00
6AK5	1.80
6AR6	5.75
6D4	2.85
6K4	5.25
6SU7GT	4.25
668AS	19.50
703A	19.00
708A	30.00
717A	5.50
954	4.90
955	3.10
956	5.45
1603	6.15
1625	2.30
1626	1.60
1629	1.20
2000	1.70
2051	1.70
25A7GT	5.00
9001	2.70
9002	2.15
9003	2.70
9006	1.35

Ballast and Resistor Types

*1A1	\$1.50
*1B1	1.50
*1D1	1.50
*1E1	1.50
*1F1	1.50
*1K1	1.50
*1R1G	1.50
*1T1	1.50
*1X1	1.50
*1Y1	1.50
*1Z1	1.50
*16A1	1.80
*16B1	1.80
*100-70	1.80
*100-77	1.80
*100-79	1.80

*Non-taxable types

TUNG-SOL RADIO DIAL LAMPS

Lamp No.	Volts	Amperes	Approx. Candle-Power	Bead Color	Base	Bulb Type	List Price
40	6-8	0.15	0.5	Brown	Miniature Screw	T-3 1/4	\$0.09
41	2.5	0.5	0.5	White	Miniature Screw	T-3 1/4	.09
43	2.5	0.5	0.5	White	Miniature Bayonet	T-3 1/4	.09
44	6-8	0.25	0.8	Blue	Miniature Bayonet	T-3 1/4	.09
46	6-8	0.25	0.8	Blue	Miniature Screw	T-3 1/4	.09
47	6-8	0.15	0.5	Brown	Miniature Bayonet	T-3 1/4	.09
48	2.0	0.06	...	Pink	Miniature Screw	T-3 1/4	.15
49	2.0	0.06	...	Pink	Miniature Bayonet	T-3 1/4	.15
50	6-8	0.2	1.0	White	Miniature Screw	G-3 1/2	.10
51	6-8	0.2	1.0	White	Miniature Bayonet	G-3 1/2	.08
55	6-8	0.4	2.0	White	Miniature Bayonet	G-4 1/2	.08

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE



RADIO RECEIVING TUBES

ELECTRONIC AND RADIO TUBES

Price List

SUGGESTED LIST PRICES EFFECTIVE SEPTEMBER 1, 1948

TYPE	PRICE	TYPE	PRICE	TYPE	PRICE	TYPE	PRICE	TYPE	PRICE	TYPE	PRICE		
00A	\$3.20	2E35	\$3.20	6E16	\$2.00	6SD7GT	\$2.90	7N7	\$2.20	11E8	\$2.20	42	\$1.65
01A	1.50	2E36	3.20	6E16	1.80	6SF5	1.65	7Q7	1.80	11C5	2.20	43	1.65
0Y4	4.80	2E11	2.65	6E16	1.65	6SP5GT	1.80	7R7	2.20	14C7	2.20	45	1.65
0Z4	2.20	2E12	2.65	6E16G	4.80	6SF7	2.00	7S7	2.65	11E6	1.80	45Z3	1.80
0Z4G	2.20	2E21	2.65	6E16	2.00	6S07	2.00	7V7	2.65	11E7	2.20	45Z5GT	1.80
1A3	2.20	2E22	2.65	6E16	2.00	6S17	2.20	7W7	2.65	14F7	2.20	46	2.65
1A4P	3.90	2Z2/G84	3.20	6G1	1.65	6S17GT	2.20	7X7/XXFM	2.65	14F8	2.65	47	2.40
1A5GT	1.80	3ASGT	4.80	6G5	1.65	6S47	1.65	7Y1	1.80	14H7	2.65	48	4.80
1A6	3.20	3B7/1291	2.65	6G5GT	1.65	6S47GT	1.65	7Z1	1.80	14J7	2.65	49	2.65
1A7GT	2.00	3C6/XXB	3.20	6G6	2.00	6S47	1.65	10	3.90	14N7	2.65	50	3.90
1B3GT/8016	3.20	3D6/1299	2.65	6G8G	3.20	6S7GT	1.65	12A	1.35	11Q7	2.20	50A5	2.20
1B4P	3.90	3E6	2.65	6D6	1.65	6S7GT	2.40	12A5	3.20	11R7	2.20	50B5	2.00
1B5/25S	3.20	3F4	2.65	6D8G	3.20	6S7GT	2.20	12A6	2.65	14S7	2.65	50C5	2.00
1B7GT	3.20	3Q4	2.20	6E5	2.20	6S7	1.50	12A6GT	2.65	11W7	2.65	50L6GT	1.65
1C5GT	2.20	3Q5GT	2.40	6E6	2.65	6S7GT	1.50	12A7	3.20	14X7	2.65	50S6	2.20
1C6	3.20	3S4	2.00	6E7	3.90	6S7	1.80	12A8GT	2.00	14Y4	2.20	50Y6GT	1.80
1C7G	3.20	3V1	2.00	6E8	1.65	6S7GT	1.80	12AH7GT	2.65	15	3.20	50Z7G	1.80
1D5GT	3.90	5A21	1.35	6E5GT	1.65	6S87	1.80	12AL5	2.00	18	2.65	52	3.90
1D7G	3.20	5T1	3.90	6F6	2.00	6S7	2.65	12AT6	1.50	19	3.20	53	2.65
1D8GT	3.90	5T4G	1.50	6F6G	1.65	6S7	2.20	12AT7	2.65	19T8	2.65	55	2.20
1E5G	3.90	5V4G	2.40	6F6GT	1.65	6S7	2.20	12AU6	2.00	20	3.90	56	1.80
1E7G-1E7GT	3.90	5W1	2.65	6F7	3.20	6T7/6Q6G	3.20	12AU7	2.40	22	3.20	57	2.00
1F1	2.65	5W1GT	1.65	6F8G	3.20	6T8	2.65	12AV6	1.50	24A	2.20	58	2.00
1F5G	2.65	5X1G	1.80	6G6G	2.65	6U5/6G5	2.00	12AW6	2.65	25A6	3.20	59	3.55
1F6	3.90	5Y3GT	1.05	6H4GT	2.65	6U6GT	2.00	12AX7	2.40	25A6G	2.65	70A7GT	3.90
1F7G	3.90	5Y1GT	1.50	6H6	1.65	6U7G	1.80	12B8GT	3.90	25A6GT	2.65	70L7GT	3.90
1G4GT	2.65	5Z3	1.80	6H6GT	1.65	6V6	3.20	12BA6	1.80	25A7G	4.80	71A	2.00
1G5G	2.65	5Z1	2.65	6J5	1.50	6V6GT	2.00	12BA7	2.40	25A75G	3.90	75	1.65
1G6GT	2.65	6A3	3.20	6J5GT	1.50	6V7G	1.80	12BD6	2.00	25AC5GT	2.90	76	1.65
1H4G	2.20	6A14LA	3.20	6J6	2.90	6W5G	2.65	12BE6	1.80	25B5	3.90	77	1.65
1H5GT	1.65	6A5G	3.90	6J7	2.00	6W7G	2.65	12C8	3.20	25B6G	2.65	78	1.65
1H6G	3.20	6A6	2.65	6J7G	2.00	6X4	1.50	12F5GT	1.80	25B8GT	3.90	79	2.65
1J5G	2.65	6A7	2.00	6J7GT	2.00	6X5	2.65	12H6	1.80	25C6G	2.90	80	1.15
1J6GT	3.20	6A8	2.00	6J8G	3.20	6X5GT	1.50	12J5GT	1.50	25C8	3.90	81	3.90
1L1	2.00	6A8G	2.00	6K5GT	2.40	6Y6G	2.40	12J7GT	2.00	25L6	3.20	82	2.65
1LA4	2.65	6A8GT	2.00	6K6GT	1.50	6Y7G	3.20	12K7G	2.00	25L6GT	1.65	83	2.65
1LA6	2.65	6A85/6N5	2.65	6K7	1.65	6Z7G	3.90	12K7GT	1.65	25N6G	3.90	83V	3.20
1LB4	2.65	6A17/1853	3.20	6K7G	1.65	6Z5G	2.20	12K8	2.40	25Y5	2.90	84/6Z4	1.80
1LC5	2.65	6A5GT	2.90	6K7GT	1.65	7A1 XXL	1.80	12K8GT	2.40	25Z5	1.50	85	2.20
1L6G	2.65	6A7/1852	2.90	6K8	2.40	7A5	1.80	12Q7GT	1.80	25Z6	2.20	89	2.20
1L65	2.65	6A7GT	3.20	6K8G	2.90	7A6	1.80	12S8GT	2.65	25Z6GT	1.50	V99	3.90
1LE3	2.65	6A7G	1.80	6K8GT	2.40	7A7	1.80	12S87	1.65	26	1.80	X99	3.90
1L65	2.65	6A7G	2.65	6L5G	2.65	7A8	1.80	12SA7GT	1.65	27	1.50	117L/M7GT	3.90
1LH4	2.65	6A5	2.65	6L6	3.55	7A17	2.65	12S07	2.20	30	2.00	117N7GT	3.90
1LN5	2.65	6A5GT	3.20	6L6G	2.90	7A7	1.80	12SF5	1.80	31	2.65	117P7GT	3.90
1N5GT	2.00	6A16	3.90	6L6GA	2.90	7A7GT	2.20	12SF5GT	2.00	32	3.20	117Z3	1.50
1P5GT	2.65	6A15	3.90	6L7	2.40	7A17	2.65	12SF7	2.00	32L7GT	3.20	117Z4GT	2.90
1Q5GT	2.65	6A16	2.40	6L7G	2.90	7B4	1.80	12S07	2.00	33	3.20	117Z6GT	2.40
1R1/1294	2.65	6A15	2.00	6N6G	3.90	7B5	1.80	12SH7	2.20	34	3.20	485	2.65
1R5	2.00	6A17GT	2.65	6N7	2.40	7B6	1.80	12SH7GT	2.20	35/51	2.60	950	2.65
1R4	2.40	6A15	2.00	6N7G	2.40	7B7	1.80	12S17	1.65	35A5	1.80	FM1000	3.20
1R5	1.80	6A16	1.80	6N7GT	2.40	7B8	1.80	12S17GT	1.65	35B5	2.00	XXB	(See 3C6)
1T4	2.00	6A17GT	2.20	6P5GT	2.40	7C4	2.65	12SK7	1.65	35C5	2.00	XXD	(See 14AF7)
1T5GT	2.65	6A15	1.80	6P7G	3.20	7C5	1.80	12SK7GT	1.65	35L6GT	1.65	XXFM	(See 7X7)
1U4	2.00	6A85	2.00	6Q7	2.00	7C6	1.80	12SL7GT	2.40	35W4	1.75	XXL	(See 7A4)
1U5	1.80	6A7G	1.50	6Q7G	1.80	7C7	1.80	12SN7GT	2.20	35Y4	1.80		
1V	2.20	6A7G	2.00	6Q7GT	1.80	7E5	2.65	12S07	1.50	35Z3	1.40		
2A3	3.20	6A7G	1.50	6R7	2.65	7E6	1.80	12S07GT	1.50	35Z4GT	1.00		
2A1G	3.20	6B1G	3.20	6R7GT	2.65	7E7	2.20	12SR7	2.20	35Z5GT	1.25		
2A5	2.20	6B5	3.90	6S7	2.65	7F7	2.20	12SR7GT	2.20	35Z6G	1.80		
2A6	2.65	6B9G	2.20	6S7G	3.20	7F8	2.65	12Z3	2.65	36	2.65		
2A7	2.65	6B7	3.20	6S8GT	2.65	7G7/1232	2.65	14A4	2.65	37	1.30		
2B7	2.65	6B8	3.20	6S7	1.65	7H7	2.00	11A5	3.90	38	2.20		
2E5	2.65	6B8G	3.20	6SA7GT	1.65	7J7	2.65	14A7/12B7	2.20	39/44	2.55		
2E31	2.65	6B6	1.80	6S7	2.40	7K7	2.65	11AF7/XXD	2.20	40	2.00		
2E32	2.65	6B7	2.40	6SC7	2.00	7L7	2.20	14B6	2.20	41	1.65		

Tube prices listed above are for your convenience and do not necessarily indicate type availability.

PRICES SUBJECT TO CHANGE OR WITHDRAWAL WITHOUT NOTICE.



ELECTRONIC AND RADIO TUBES

TRANSMITTING, RECTIFIER AND KLYSTRON TUBES

RAYTHEON TRANSMITTING TUBES												
Type No.	Construction	Special Applications	Filament			Maximum Voltages				Power-Watts		Suggested User Price
			Volts	Amps	Type	Plate	Grid	Screen	Suppressor	Dissipation	Output	
2C34/RK34	Dual Triode	H. F. Oscillator Amp.	6.3	0.8	Heater	300	-36			10*	16*	\$3.50
RK-4D22	Beam Tetrode	R-F Oscillator Amp.	25.2 12.6	0.8 1.6	Cathode	750	-200	350		50	100	9.75
RK-4D32	Beam Tetrode	R-F Oscillator Amp.	6.3	3.75	Cathode	750	-200	350		50	100	9.75
5D23/RK65	R-F Tetrode	R-F Amplifier	5.0	11.0	Thor.	3000	-250	500			565	34.50
RK-6D22	Tetrode	R-F, A-F Amplifier	5.0	28.5	Thor.	3500	-250	500		450	1000	55.00
RK-20A	R-F Pentode	Suppressor Mod.	7.5	3.25	Thor.	1250	-100	300	+15	40	84	15.00
RK-25	R-F Pentode	Suppressor Mod.	6.3	0.9	Heater	500	-90	200	+45	10	22	3.95
RK-28A	R-F Pentode	Suppressor Mod.	10.0	5.0	Thor.	2000	-100	400	+15	125	250	21.00
RK-38	Triode	R-F, A-F Amplifier	5.0	8.0	Thor.	3000	-200			100	225	13.50
RK-48A	Beam Tetrode	R-F Oscillator Amp.	10.0	5.0	Thor.	2000	-100	400		100	250	27.50
RK-59	Dual Triode	Quick Heating	6.3	1.0	Oxide	500	-60			15*	32*	4.50
RK-63	Triode	R-F, A-F Amplifier	5.0	10.0	Thor.	3000	-200			200	525	22.00
RK-807	Beam Tetrode	R-F Osc. Amp.	6.3	0.9	Heater	600	-45	250		25	40	2.25
814/RK47	Beam Tetrode	R-F Oscillator Amp.	10.0	3.25	Thor.	1250	-70	300		50	120	14.70
RK-837	R-F Pentode	Suppressor Mod.	12.6	0.7	Heater	500	-75	200	+40	12	22	2.80

*Indicates value for both sections combined.

RAYTHEON RECTIFIER TUBE											
Type No.	Construction	Filament			Max. Peak Inverse Volts	Max. Peak Current	Average Current DC*	Av. Tube Drop	Max. Height	Base	Suggested User Price
		Volts	Amps	Type							
0Z4A/CK1003	Full Wave Gas			Cold Cathode	880	330 ma	100 ma	24	2 1/2"	Octal	\$1.20
BH	Full Wave Gas			Cold Cathode	1,000	400 ma	125 ma	50	4 1/2"	4-Pin	4.75
RK-3B24	Half Wave—High Vacuum	2.5 5.0	3.0 3.0	Thoriated Thoriated	20,000 20,000	150 ma 300 ma	30 ma 60 ma		4 1/2"	4-Pin	7.25
RK-3B26	Clipper Diode—High Vacuum	2.5	4.75	Cathode	15,000	8 amp	20 ma	130	4 1/2"	Octal	12.50
RK-3B29	Half Wave—High Vacuum	2.5	4.75	Cathode	16,000	250 ma	65 ma	130	5 1/2"	4-Pin	13.30
RK-4B31	Clipper Diode—High Vacuum	5.0	5.25	Cathode	16,000	10 amp	60 ma	130	7"	Jumbo 4-Pin	19.55
RK-72	Half Wave—High Vacuum	2.5	3.0	Thoriated	20,000	150 ma	30 ma	200	4 1/2"	4-Pin	7.20
RK-73	Clipper Diode—High Vacuum	2.5	4.25	Oxide Fil.	13,000	3 amp	20 ma	135	4 1/2"	Octal	12.50
RX-120	Half Wave—Mercury, Argon	2.5	30.0	Cathode	150	120 amp	20 amp	5	8 1/2"	Mogul	17.75
RX-120A	Half Wave—Mercury	2.5	30.0	Cathode	300 750	20 amp 120 amp	20 amp 10 amp	6	8 1/2"	Mogul	20.00
RX-212	Half Wave—Mercury	2.5	30.0	Cathode	1,000	120 amp	20 amp	10	12"	Mogul	27.15
RX-215	Full Wave—Mercury	2.5	30.0	Cathode	500	90 amp	15 amp	10	8"	8 Jumbo 4-Pin	24.30
RX-235	Half Wave—High Vacuum	2.5	3.0	Thoriated	25,000	90 ma	30 ma	200	6 1/2"	4-Pin	14.85
RK-705A	Half Wave—High Vacuum	2.5 5.0	5.0 5.0	Thoriated	35,000 35,000	375 ma 750 ma	30 ma 100 ma		5 1/2"	Special 4-Pin	14.05
1005/CK1005	Full Wave—Gas	6.3	0.1	Oxide	450	210 ma	70 ma	20	2 1/2"	Octal	3.80
1006/CK1006	Full Wave—Gas	1.75	20.0	*Oxide	1,000	600 ma	200 ma	20	4 1/2"	4-Pin	3.25
CK-1007	Full Wave—Gas	1.0	1.2	*Oxide	980	300 ma	110 ma	24	2 1/2"	Octal	1.90
1641/RK60	Full Wave—High Vacuum	5.0	3	Oxide	4,500 2,500	150 ma 330 ma	50 ma 250 ma	61	5 1/2"	4-Pin	2.75
5517/CK1013	Half Wave—Gas			Cold Cathode	2,900	100 ma	12 ma	100	2 1/2"	Miniatur	2.25

* May be used as unrec heated cathode rectifier under some conditions.

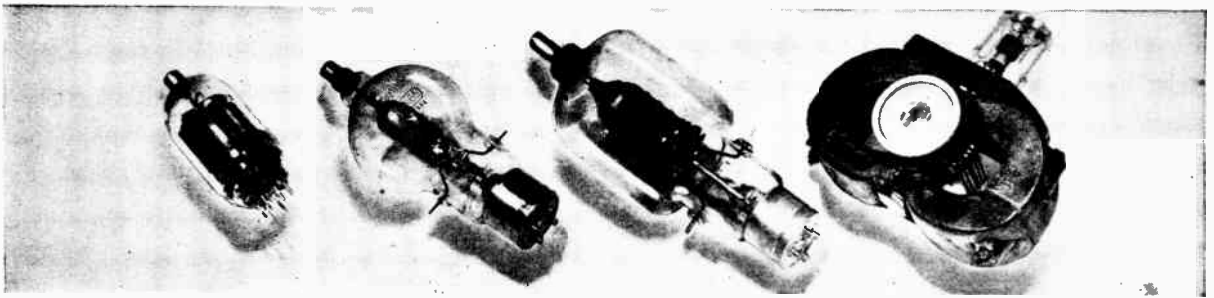
CK (R) RK (R)

RAYTHEON REFLEX KLYSTRONS

Type No.	Heater		Class	Range Mc	Maximum Ratings			Typical Operation			Suggested User Price	
	Volts	Amps			Egt. Volts	Egt. Egt. Volts	Rep. Volts	Egt. Volts	Egt. Egt. Volts	Rep. Volts		P. O. Mw
(t) RK-2K25/723A-B	6.3	.41	Internal Cavity	8500-9600	Res. = 330v	0 to -400	Res. = 300v	300	300	-130, -185	33	\$38.22
(t) RK-2K28	6.3	.45	External Cavity Req.	1200-3750	300	0 to -300	300	300	300	-155, -290	140	38.43
(t) RK-707B	6.3	.65	External Cavity Req.	1200-3750	300	0 to -300	300	300	300	-155, -290	140	34.43

(t) Types subject to 10% Federal Excise Tax, which has been added.

SUBJECT TO CHANGE OR WITHDRAWAL WITHOUT NOTICE





ELECTRONIC AND RADIO TUBES

SUBMINIATURE TUBES

Here they are—and here's why more Raytheon Subminiature Tubes are on the job than all other makes combined—five million of them for commercial applications.

1. REDUCED PRODUCT SIZE . . .

INCREASED PRODUCT SALABILITY.

Raytheon filamentary Subminiatures are flat. Batteries can be little instead of big because of extremely low filament drain.

2. PLUG INTO STANDARD SOCKETS.

All Raytheon Subminiatures can either be soldered in or plugged into sockets available from a number of manufacturers.

3. AS RELIABLE AS A FINE WATCH.

The result of Raytheon's unique precision assembly methods backed by eight years' continuous production of long-life Subminiature Tubes.

4. READILY AVAILABLE FROM STOCK.

Over half a million of the Tubes described below are on tap at all times. They are standard throughout the world.

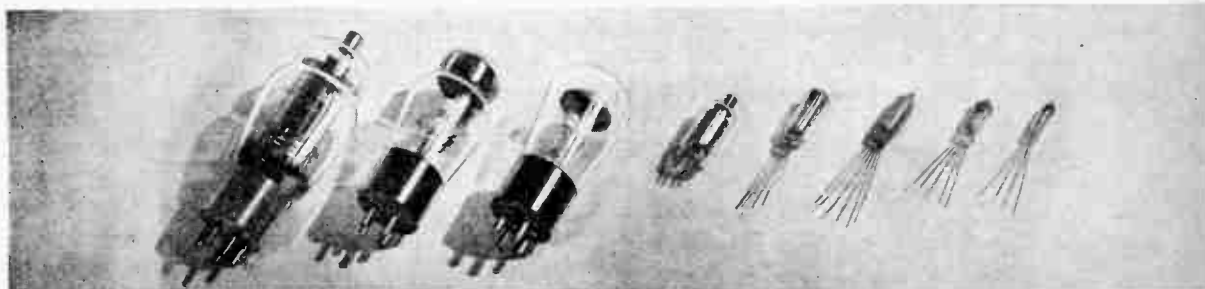
5. AT YOUR LOCAL DISTRIBUTOR.

Over three hundred Raytheon Special Purpose Tube Distributors stand ready to serve you quickly and intelligently.

RAYTHEON SUBMINIATURE TUBES

Type No.	Remarks	Bulb Size Inches	Heater		Mutual Conductance Umhos	Power Output MW	Voltage Gain X	Typical Operating Conditions					Suggested User Price
			Volts	MA				Plate Volts	Plate Current MA	Screen Volts	Screen Current MA	Grid Volts	
HEATER CATHODE TYPES													
CK605CX	Characteristics of 6AK5	0.38	6.3	200	5000			120	7.5	120	2.5	-2	\$8.00
CK606BX	Diode, equivalent to one-half 6AL5	0.28	6.3	150				150 ac	9.0 dc				6.40
CK608CX	Triode UHF Oscillator, 50 watts at 500 Mc	0.38	6.3	200	5000			120	9.0			-2	7.00
CK619CX	Triode High mu.	0.38	6.3	200	4000			250	4.0			-2	7.00
FILAMENT TYPES													
2E31-32	RF Pentode for pocket radio	0.28	1.25	50	500			22.5	0.4	22.5	0.3	0	2.65
2E35-36	Output Pentode for pocket radio	0.28	1.25	30	385	1.2		22.5	0.27	22.5	0.07	0	3.20
2E41-42	Diode Pentode for pocket radio	0.28	1.25	30	375		20	22.5	0.35	22.5	0.12	0	2.65
2G21-22	Triode Heptode for pocket radio	0.28	1.25	50	75 conv.	cond.		22.5	0.20	22.5	0.30		2.65
RK61	Gas Triode, Radio Control for model planes, etc.	0.52	1.4	50				45	1.5	special	circuit		3.50
CK502AX	Output Pentode	0.28	1.25	30	550	6.0		45	0.6	45	0.15	-1.25	3.20
CK503AX	Output Pentode	0.28	1.25	30	550	9.5		45	0.8	45	0.25	-2.0	3.20
CK505AX	Voltage Amp. Pent.	0.28	0.625	30	180		38	22.5	0.125	22.5	0.04	-0.625	3.20
CK506AX	Output Pentode	0.28	1.25	50	500	25		45	1.25	45	0.4	-4.5	3.20
CK510AX	Double Space Charge Tetrode Amplifier	0.28	0.625	50	65 ca. unit		150 both units	45	0.06			0	5.35
CK512AX	Low microphonic voltage amplifier	0.28	0.625	20	160		37	22.5	0.125	22.5	0.04	-0.625	3.20
CK522AX	Output Pentode 20 ma filament	0.28	1.25	20	450	1.2		22.5	0.30	22.5	0.08	0	3.20
CK523AX	Output Pentode	0.28	1.25	30	360	2.5		22.5	0.30	22.5	0.075	-1.2	3.20
CK524AX	Output Pentode	0.28	1.25	30	300	2.2		15	0.45	15	0.125	-1.75	5.35
CK525AX	Output Pentode	0.28	1.25	20	325	2.2		22.5	0.25	22.5	0.06	-1.2	4.05
CK526AX	Output Pentode	0.28	1.25	20	400	3.75		22.5	0.45	22.5	0.12	-1.5	5.35
CK551AXA	Diode Pentode	0.28	1.25	30	235			22.5	0.17	22.5	0.04	0	1.50
CK553AXA	RF Pentode	0.28	1.25	50	550			22.5	0.42	22.5	0.13	0	3.15
CK5672	Output Pentode	0.28	1.25	50	625	60		67.5	2.75	67.5	1.0	-6.25	3.20
CK5676	Triode, UHF Oscillator for radio use	0.28	1.25	120	1600			135	4.0			-5.0	3.90
CK5677	Triode, UHF Oscillator for radio use	0.28	1.25	60	650			135	1.9			-6.0	3.90
CK5678	RF Pentode	0.28	1.25	50	1100			67.5	1.8	67.5	0.48	0	2.60
CK570AX	Electrometer Triode Max. grid current 5 x 10 ⁻¹³ amps.	0.28	0.625	20	125		1.5	12	0.22			-3	10.00

SUBJECT TO CHANGE OR WITHDRAWAL WITHOUT NOTICE





The Oldest Name in Electronic Tubes

EFFECTIVE NOVEMBER 1, 1948

TYPE	USER'S PRICE	TYPE	USER'S PRICE	TYPE	USER'S PRICE	TYPE	USER'S PRICE	TYPE	USER'S PRICE	TYPE	USER'S PRICE
0Y4	\$4.80	3LF4	\$2.65	6F8G	\$3.20	6V6GT	\$2.00	12J7GT	\$2.00	33	\$3.20
0Z4	2.20	3Q4	2.20	6G6G	2.65	6W4GT	1.80	12K7GT	2.00	34	3.20
0Z4G	2.20	3Q5GT	2.40	6H6	1.65	6W7G	2.65	12K7GT	1.65	35/51	2.00
1A3	2.20	3S4	2.00	6H6GT	1.65	6X4	1.50	12K8	2.40	35A5	1.80
1A4P	3.90	3V4	2.00	6J5	1.50	6X5	2.65	12K8GT	2.40	35B5	2.00
1A5GT	1.80	5AZ4	1.35	6J5GT	1.50	6X5GT	1.50	12Q7GT	1.80	35C5	2.00
1A6	3.20	5T4	3.90	6J6	2.90	6Y3G	3.90	12SRGT	2.65	35L6GT	1.65
1A7GT	2.00	5U4G	1.50	6J7	2.00	6Y6G	2.40	12SA7	1.65	35W4	1.25
1AB5	2.65	5V4G	2.40	6J7G	2.00	6Z7G	3.90	12SA7GT	1.65	35Y4	1.80
1B3GT	3.20	5W4	2.65	6J7GT	2.00	6ZY5G	2.20	12SC7	2.20	35Z3	1.80
1B4P	3.90	5W4GT	1.65	6J8G	3.20	7A4/XXL	1.80	12SF5	1.80	35Z4GT	1.50
1B5/25S	3.20	5X3	2.20	6K5GT	2.40	7A5	1.80	12SF5GT	2.00	35Z5GT	1.25
1B7GT	3.20	5X4G	1.80	6K6GT	1.50	7A6	1.80	12SP7	2.00	35Z6G	2.65
1C5GT	2.20	5Y3G	1.05	6K7	1.65	7A7	1.80	12SG7	2.00	36	2.65
1C6	3.20	5Y3GT	1.05	6K7G	1.65	7A8	1.80	12SH7	2.20	37	1.80
1C7G	3.20	5Y4G	1.50	6K7GT	1.65	7AD7	2.65	12SH7GT	2.20	38	2.20
1D5GP	3.90	5Z3	1.80	6K8	2.40	7AP7	1.80	12SJ7	1.65	39/44	2.65
1D7G	3.20	5Z4	2.65	6K8G	2.90	7AG7	2.20	12SJ7GT	1.65	41	1.65
1D8GT	3.90	6A3	3.20	6K8GT	2.40	7AH7	2.20	12SK7	1.65	42	1.65
1E5GP	3.90	6A4	3.20	6L5G	2.65	7B4	1.80	12SK7GT	1.65	43	1.65
1E5GT	3.90	6A6	2.65	6L6	3.55	7B5	1.80	12SL7GT	2.40	45	1.65
1E7GT	3.90	6A7	2.00	6L6G	2.90	7B6	1.80	12SN7GT	2.20	45Z3	1.80
1F4	2.65	6A8	2.00	6L6GA	2.90	7B7	1.80	12SQ7	1.50	45Z5GT	1.80
1F5G	2.65	6A8G	2.00	6L7	2.40	7B8	1.80	12SR7GT	1.50	46	2.65
1F6	3.90	6A8GT	2.00	6L7G	2.90	7C4/1203A	2.65	12SR7	2.20	47	2.40
1F7G	3.90	6AB5/6N5	2.65	6N6G	3.90	7C5	1.80	12SR7GT	2.20	49	2.65
1G4GT	2.65	6AB7/1853	3.20	6N7	2.40	7C6	1.80	12Z3	2.65	50	3.90
1G5G	2.65	6AC5GT	2.90	6N7GT	2.40	7C7	1.80	14A4	2.65	50A5	2.20
1G6GT	2.65	6AC7/1852	2.90	6Q6GT	2.40	7C8	2.65	14A5	3.90	50B5	2.00
1H4G	2.20	6AD7G	3.20	6Q6G/6T7G	3.20	7E5 1201	2.65	14A7/12B7	2.20	50C5	2.00
1H5GT	1.65	6AF6G	2.65	6Q7	2.00	7E6	1.80	14AF7/XXD	2.20	50C6G	2.90
1H6G	3.20	6AG5	2.65	6Q7G	1.80	7E7	2.20	14B6	2.20	50L6GT	1.65
1H8GT	3.20	6AG7	3.20	6Q7GT	1.80	7F7	2.20	14B8	2.20	50X6	2.20
1J5G	2.65	6AK6	2.40	6R7	2.65	7F8	2.65	14C5	2.20	50Y6GT	1.80
1J6GT	3.20	6AL5	2.00	6R7GT	2.65	7G7/1232	2.65	14C7	2.20	53	2.65
1L4	2.00	6AL7GT	2.65	6S7	2.65	7H7	2.00	14E6	1.80	55	2.20
1LA4	2.65	6AQ5	2.00	6S7G	3.20	7J7	2.65	14E7	2.20	56	1.80
1LA6	2.65	6AQ6	1.80	6S8GT	2.65	7K7	2.65	14F7	2.20	57	2.00
1LB4	2.65	6AQ7GT	2.20	6SA7	1.65	7L7	2.20	14F8	2.65	58	2.00
1LC6	2.65	6AR5	1.65	6SA7GT	1.65	7N7	2.20	14H7	2.20	59	3.55
1LC6	2.65	6AS5	2.00	6SB7Y	2.40	7Q7	1.80	14J7	2.65	70L7GT	3.90
1LD5	2.65	6AT6	1.50	6SC7	2.00	7R7	2.20	14N7	2.65	71A	2.00
1LE3	2.65	6AU6	2.00	6SD7GT	2.65	7S7	2.65	14Q7	2.20	75	1.65
1LG5	2.65	6AV6	1.50	6SP5	1.65	7V7	2.65	14R7	2.20	76	1.65
1LH4	2.65	6B4G	3.20	6SP5GT	1.80	7W7	2.65	14S7	2.65	77	1.65
1LN5	2.65	6B5	3.90	6SP7	2.00	7X7/XXPFM	2.65	14W7	2.65	78	1.65
1NSGT	2.00	6B6G	2.20	6SG7	2.00	7Y4	1.80	14X7	2.65	79	2.65
1P5GT	2.65	6B7	3.20	6SH7	2.20	7Z4	1.80	14Y4	2.20	80	1.15
1Q5GT	2.65	6B8	3.20	6SH7GT	2.20	10	3.90	15	3.20	81	3.90
1R4	2.20	6B8G	3.20	6SJ7	1.65	12A6	2.90	19	3.20	82	2.65
1R5	2.00	6BA6	1.80	6SJ7GT	1.65	12A6GT	2.90	19T8	2.90	83	2.65
1S4	2.40	6BA7	2.40	6SK7	1.65	12A7	3.20	20	3.90	83V	3.20
1S5	1.80	6BE6	1.65	6SK7GT	1.65	12A8GT	2.00	22	3.20	84/6Z4	1.80
1T4	2.00	6BF6	1.65	6SL7GT	2.40	12AH7GT	2.65	24A	2.20	85	2.20
1T5GT	2.65	6BG6G	4.80	6SN7GT	2.20	12AL5	2.00	25A6	3.20	89	2.20
1U4	2.00	6BH6	2.00	6SQ7	1.50	12AT6	1.50	25A6G	2.65	99V	3.20
1U5	1.80	6BJ6	2.00	6SQ7GT	1.50	12AT7	2.90	25A6GT	3.20	99X	3.20
1V	2.20	6C4	1.65	6SR7	1.80	12AU6	2.00	25AC5GT	2.90	117LGT	3.90
2A3	3.20	6C5	1.65	6SR7GT	1.80	12AU7	2.40	25C6G	3.20	117MGT	3.90
2A5	2.20	6C5GT	1.50	6SS7	1.80	12AV6	1.50	25L6	3.20	117N7GT	3.90
2A6	2.65	6C6	2.00	6SS7GT	1.80	12AW6	2.65	25L6GT	1.65	117P7GT	3.90
2A7	2.65	6C8G	3.20	6ST7	2.65	12AX7	2.40	25Y5	2.90	117Z3	1.50
2B7	2.65	6D6	1.65	6SZ7	2.20	12BA6	1.80	25Z5	1.50	117Z4GT	2.90
2E5	2.65	6D8G	3.20	6T7G/6Q6G	3.20	12BA7	2.40	25Z6	2.20	117Z6GT	2.40
2Z2/G84	3.90	6E5	2.20	6T8	2.90	12B6G	1.80	25Z6GT	1.35	FM-1000	3.20
3A8GT	4.80	6F5	1.65	6U3/6G5	2.00	12BE6	1.80	26	1.80	1201/7E5	2.65
3B7	2.65	6F5GT	1.65	6U6GT	2.00	12C8	3.20	27	1.50	1203A/7C4	2.65
3C6/XXB	3.20	6F6	2.00	6U7G	1.80	12P5GT	1.80	30	2.00	XXB/3C6	3.20
3D6	2.65	6F6G	1.65	6V5G	3.90	12H6	1.80	31	2.65	XXD/14AF7	2.20
3E6	2.65	6F6GT	1.65	6V5GT	3.90	12J5GT	1.50	32	3.20	XXFM/7X7	2.65
		6F7	3.20	6V6	3.20	12J7G	2.00	32L7GT	3.20	XXL/7A4	1.80

Cathode-Ray, Industrial, Special Purpose, Transmission, Photo-Electric, X-Ray, Low-wattage Rectifier, Welding, Grid-controlled Rectifier Tube prices and discounts on request. ALL PRICES ARE SUBJECT TO CHANGE OR WITHDRAWAL WITHOUT NOTICE.



KEN-RAD RADIO TUBES

metal - glass - miniature
ALL TYPES AND RATINGS

Ken-Rad's complete line of tubes is widely known and highly regarded by service men and owners of radio sets. Top quality means outstanding performance and long life. With Ken-Rad tubes your radio plays better! . . . Some of the many popular types in the Ken-Rad line are listed below: Ask for complete prices and ratings!

Type	Price	Type	Price	Type	Price
1B3GT, 8016	\$3.20	6B16	\$2.00	12A17	\$2.90
1R5	2.00	6C4	1.65	12A16	2.00
1S5	1.30	6H6	1.65	12A17	2.40
1T4	2.00	6J5	1.50	12A16	1.50
1U4	2.00	6K6-GT	1.50	12A17	2.40
3S4	2.00	6L6-G	2.90	12BA6	1.80
3I4	2.00	6SA7	1.65	12BE6	1.80
5U4-G	1.50	6SC7	2.00	12SA7	1.65
5V4-G	2.40	6SG7	2.00	12SG7	2.00
5Y3-GT	1.05	6SJ7	1.65	12SK7	1.65
6AG5	2.65	6SK7	1.65	12SQ7	1.50
6AL5	2.00	6SL7-GT	2.40	19T8	2.90
6AQ5	2.00	6SN7-GT	2.20	35B5	2.00
6A16	2.00	6SQ7	1.50	35L6-GT	1.65
6A16	1.50	6T8	2.90	35W4	1.25
6B16	1.80	6V6-GT	2.00	35Z5-GT	1.25
6BE6	1.80	6X4	1.50	50B5	2.00
6BG6G	4.80	6X5-GT	1.50	50L6-GT	1.65

Prices and other data subject to change without notice.

Type numbers of metal tubes are shown in bold-face type.

Type numbers of miniature tubes are shown in italics.

"PRECISION MADE
FOR
FINER TONE"



THIS TUBE CARTON
STANDS FOR
QUALITY

KEN-RAD TUBES ARE A PRODUCT OF GENERAL ELECTRIC COMPANY



TO HELP YOU PICK THE BEST

Here are a few facts to help you choose the best: In approximately 90% of the new commercial mobile transmitter designs, you will find Hytron instant-heating tubes. Over 2,500,000 Hytron gaseous voltage regulators speak for themselves. Ratings of Hytron vhf tubes are CCS and based on actual equipment performance which you can duplicate. No other transmitting triode can touch the new all-purpose 5514 for economical versatility. Famed for transmitting tubes, Hytron also originated the popular "GT", and is the oldest manufacturer specializing in receiving tubes. You pick the best when you pick Hytron.



New data sheets: 2E25, 2E30, HY31Z, HY69, HY75A, HY1231Z, HY1269, 5514, 5516. Free.

HYTRON TRANSMITTING AND SPECIAL PURPOSE TUBES CONTINUOUS COMMERCIAL SERVICE RATINGS

Description	Type No.	Filament Volts	Ratings Amps	Type	Max Plate Volts	Max Plate Ma	Max Plate Dis	Amateur Net Price
LOW AND MEDIUM MU TRIODES	10Y	7.5	1.25	Thor	450	65	15	\$1.95
	HY24	2	0.13	Oxide	10J	20	2	1.50
HIGH-MU TRIODES	801A/801	7.5	1.25	Thor	60J	70	20	3.00
	864	1.1	0.25	Oxide	145	5	—	1.50
VHF TRIODES	1626	12.6	0.25	Cath	250	25	5	1.6J
	HY31Z §	6	2.55	Thor	500	15J*	30*	5.50
	HY1231Z §	6	3.2	Thor	500	15J*	30*	5.50
BEAM PENTODES AND PENTODES	5514#	7.5	3	Thor	1500	175	65	4.95
	2C26A	6.3	1.15	Cath	3500	NOTE	10	7.75
	HY75A* §	6.3	2.6	Thor	450	90	15	4.70
	HY114B §	1.4	0.155	Oxide	180	12	1.8	2.25
	HY615	6.3	0.175	Cath	300	20	3.5	2.25
ACORNS MINIA-TURES	955	6.3	0.15	Cath	200	8	1.8	3.10
	90C2	6.3	0.15	Cath	200	8	1.8	2.15
	2E25* §	6	0.8	Thor	450	75	15	5.50
	2E30 §	6	0.65	Oxide	25J	60	10	2.25
	3D21A	6.3	1.7	Cath	3500	NOTE	15	7.50
RECTIFIERS	HY69 §	6	1.6	Thor	600	100	30	5.50
	807	6.3	0.9	Cath	600	120	25	2.30
	837	12.6	0.7	Cath	500	80	12	4.15
GASEOUS VOLTAGE REGULATORS	HY1269 §	6	3.2	Thor	750	120	30	5.50
	1625	12.6	0.45	Cath	600	120	25	2.30
	5516 §	6	0.7	Oxide	600	90	15	5.95
RECIPIENTS	954	6.3	0.15	Cath	Sharp cutoff pentode			4.90
	90C1	6.3	0.15	Cath	Sharp cutoff pentode			2.70
	Type No.	Filament Volts	Ratings Amps	Type	Peak Plate Ma	Max D C Ma†	I _v Peak Put.	Amateur Net Price
RECTIFIERS	816	2.5	2.0	Mer	500	250	5000	\$1.25
	800A/866	2.5	5.0	Mer	1000	500	10,000	1.75
	1616	2.5	5.0	Vac	600	260	6000	7.50
GASEOUS VOLTAGE REGULATORS	Type No.	Average Operating Voltage	Operating Ma Min. Max.		Av Volts Req.	Min Starting Voltage		Amateur Net Price
	0A2	150	5	30	2	165		\$2.00
	0B2	105	5	30	1	153		2.30
	0C3/VR105	108	5	40	2	133		1.20
0D3/VR150	150	5	40	3.5	165		1.20	

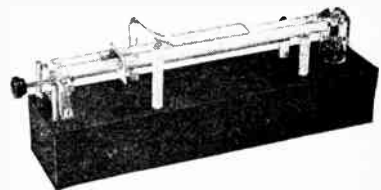
*Both sections of twin triode. NOTE: Special pulse tube, not recommended for c.w., consult Hytron Commercial Engineering Dept. for data. †5514 supplants the HY30Z, HY40, HY40Z, HY51A, HY51B, and HY51Z, the HY75A the HY75, and the 2E25 the HY65. *Current for full wave. †Instant-heating.



Keep up to date with the Hytron Reference Guide for Miniature Electron Tubes. Free.



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Simple, sure-fire vfo for 1 1/2 or 2 meters. HY-Q75 kit: unassembled, \$9.95; assembled, \$11.95.

For better reception, it's also Hytron — GT, G, lock-in, or miniature.

HYTRON RADIO & ELECTRONICS CORP.

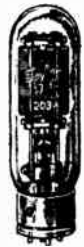
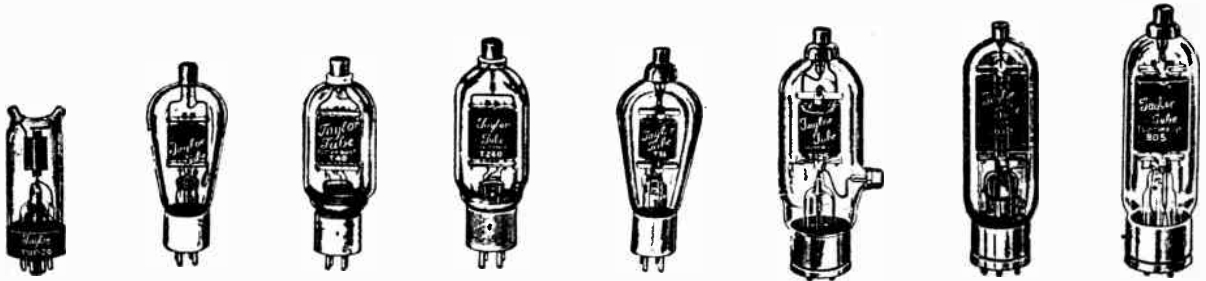
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**CUSTOM
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Tubes

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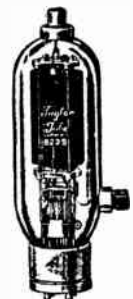


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TRIODES



Type	—Filament—		—Max. Plate—			Max. Grid Drive Watts	Amp. Factor	Base	—Size—		Max. Mg. For 100% Input	Price
	Volts	Amps	Dissipation Watts	D.C. Volts	D.C. M.A.				L.	D.		
TUF-20	6.3	2.75	20	750	100	6.0	10	OCTAL	3.75	1.5	250	\$5.50
T-20	7.5	1.75	20	750	85	3.5	20	4 P.MED.	6.0	2.37	60	2.75
TZ-20	7.5	1.75	20	750	85	3.5	62	4 P.MED.	6.0	2.37	60	2.75
T-40	7.5	3.0	40	1500	150	9.0	25	4 P.MED.	6.25	2.5	60	3.95
TZ-40	7.5	3.0	40	1500	150	9.0	62	4 P.MED.	6.25	2.5	60	3.95
T-55	7.5	3.0	55	1500	165	7.0	20	4 P.MED.	7.0	2.62	125	6.50
T-60	10.0	3.0	60	1500	150	9.0	15	4 P.MED.	6.75	2.5	60	7.00
TW-75	7.5	4.15	75	2000	175	13.0	20	4 P.MED.	6.25	3.25	125	9.00
T-100	10.0	3.0	75	1500	150	9.0	23	4 P.MED.	7.62	2.67	60	12.50
T-125	10.0	4.5	125	2500	250	12.5	25	4 P.JUM.	8.25	3.0	60	13.50
TW-150	10.0	4.1	150	3000	200	17.0	35	4 P.JUM.	8.75	3.87	60	16.00
T-200	10.0	5.75	200	2500	350	20.0	17	4 P.JUM.	9.5	3.75	20	21.50
203A	10.0	3.25	100	1250	175	10.0	25	4 P.JUM.	7.5	2.32	20	12.00
HD203A	10.0	4.0	150	1750	250	15.0	25	4 P.JUM.	9.5	2.5	20	14.50
HD203C	10.0	4.0	150	1750	250	15.0	25	4 P.JUM.	9.5	2.5	20	14.50
203Z	10.0	3.25	75	1250	175	10.0	85	4 P.JUM.	8.25	2.32	20	9.00
211	10.0	3.25	100	1250	175	10.0	12	4 P.JUM.	7.5	2.32	20	12.00
211C	10.0	3.25	100	1250	175	10.0	12	4 P.JUM.	7.5	2.32	20	12.50
HD211C	10.0	4.0	150	1750	175	15.0	12	4 P.JUM.	9.5	2.5	20	14.50
T-300	10-11	6.0	300	3000	300	18.0	23	4 P.JUM.	12.0	4.87	30	30.00
805	10.0	3.25	125	1750	210	10.0	45	4 P.JUM.	8.5	2.32	30	10.00
810	10.0	4.5	125	2250	275	15.0	36	4 P.JUM.	8.75	3.0	30	12.50
814	10.0	4.0	200	2500	300	17.0	12	4 P.JUM.	9.0	2.62	30	18.50
822	10.0	4.0	200	2500	300	17.0	30	4 P.JUM.	9.0	2.62	30	18.50
822-S	10.0	4.0	200	2500	300	17.0	30	4 P.JUM.	9.0	3.0	30	21.50
833A	10.0	10.0	400	4000	500	40.0	35	SPEC.	8.62	4.62	75	50.00
838	10.0	3.25	100	1250	175	10.0	45	4 P.JUM.	7.87	2.32	20	12.00
845	10.0	3.25	100	1230	175	10.0	5	4 P.JUM.	7.5	2.32	20	12.00



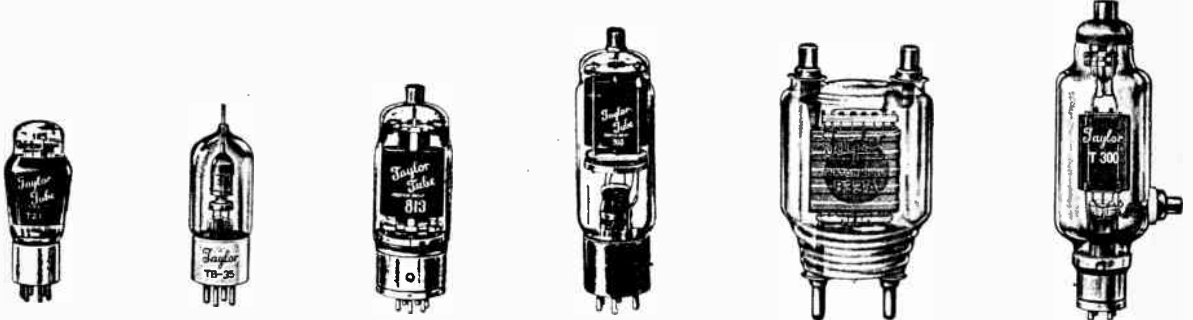
“More Watts per Dollar”

Taylor

**CUSTOM
BUILT**

Tubes

2312-18 WABANSIA AVENUE, CHICAGO 47, ILLINOIS



TETRODES AND PENTODES

Type	—Filament—		—Max. Plate—			Max. Grid Drive Watts	Amp. Factor	Base	—Size—		Max. Mg. For 100% Input	Price
	Volts	Amps	Dissipation Watts	D.C. Volts	D.C. M.A.				L.	D.		
T-21	6.3	0.9	21	400	95	0.4	1.38	6 PIN	5.37	2.06	60	\$2.50
TB-35	6.3	3.0	35	1500	125	5.0	65	4 P.MED.	4.87	1.56	250	10.00
282-A	10.0	3.0	75	1000	100	8.0	100	4 P.MED.	6.75	2.25	50	22.50
803	10.0	5.0	125	2000	160	4.0		5 P.JUM.	9.37	2.56	20	21.00
813	10.0	5.0	100	2000	180	1.5		7 P.JUM.	7.5	2.56	30	14.50

HALF WAVE RECTIFIERS AND *CONTROL TUBES

Type	—Filament—		—Anode—			Base	Price
	Volts	Amps	Volts Peak Inverse	Amps. Peak	Amps. Average		
866 JR	2.5	2.5	5000	.5	.125	4 P.Med.	\$1.25
866A	2.5	5.0	10000	1.0	.250	4 P.MED.	1.75
249B	2.5	7.5	10000	1.5	.375	4 P.MED.	5.00
872A	5.0	6.75	10000	5.0	1.25	4 P.JUM.	7.50
8008	5.0	6.75	10000	5.0	1.25	SPEC.	7.50
875A	5.0	10.0	15000	6.0	1.5	4 P.JUM.	30.00
*TT-17	2.5	5.0	2500	2.0	0.5	4 P.MED.	6.50
*873	5.0	6.75	3000	10.0	2.5	4 P.JUM.	17.25

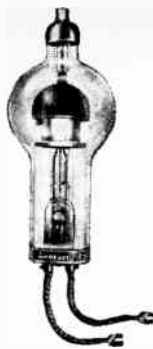
TRIODES — CLASS B AUDIO (Ratings for 2 Tubes)

Type	Max. Plate Volts	Max. Plate Curr.	Zero Sig. Plate Curr.	Max. Sig. Drive Power Watts	Bias Volts	Plate To Plate Load Ohms	Power Output Watts
TZ-20	800	136	20	1.8	0	12,000	70
	1000	280	35	5.5	0	7,350	175
TZ-40	1250	280	32	6.0	-4.5	10,000	225
	1500	250	28	6.0	-9	12,000	250
838	1000	320	70	7.0	0	6,900	200
	1250	320	100	7.5	0	9,000	260
203Z	1000	350	36	6.5	0	6,200	230
	1250	350	30	6.75	-4.5	8,000	300
805	1250	400	102	6.0	0	6,700	300
	1500	400	48	7.0	-16	8,200	370
810	1500	500	52	12.	-30	6,600	510
	2000	500	50	7.2	-45	9,500	720
822	2500	500	50	7.4	-57.5	12,000	900
	3000	450	50	8.0	-67.5	16,000	1000

Ask for the Taylor Tubes Manual



233



857B



HF300



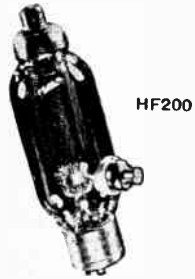
575A



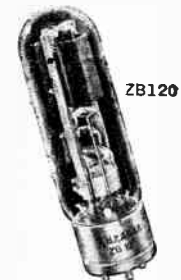
805

AMPEREX

RADIATION COOLED TYPES



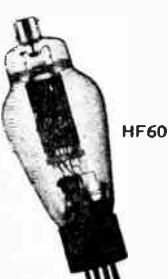
HF200



ZB120



HF100



HF60



VC25
VC50
VC100

TYPE NO.	PRICE	FILAMENT	
		Volts	Amps.
AB-150	\$15.00	10.0	3.25
HF-60	7.00	10.0	2.50
HF-100	12.50	10.0	2.50
HF-120	15.00	10.0	3.25
HF-125	17.50	10.0	3.25
HF-130	17.50	10.0	3.25
HF-140	15.00	10.0	3.25
HF-150	17.50	10.0	3.25
HF-175	19.00	10.0	4.00
HF-200	24.50	10.5	4.00
HF-201A	24.00	10.0	4.00
HF-250	27.50	10.5	4.00
HF-300	35.00	11.0	4.00
ZB-60	7.00	6.3	4.00
ZB-120	10.00	10.0	2.50
111H	12.50	10.0	2.50
203A	12.00	10.0	3.25
203H	17.50	10.0	3.25
204A	100.00	11.0	3.85
211	12.00	10.0	3.25
211C	17.50	10.0	3.25
211D	15.00	10.0	3.25
211H	17.50	10.0	3.25
212E, F	84.99	14.0	6.00
241B	90.25	14.0	6.00
242C	12.00	10.0	3.25
251A	194.45	10.0	16.00

TYPE NO.	PRICE	FILAMENT	
		Volts	Amps.
261A	\$17.50	10.0	3.25
270A	194.70	10.0	9.75
276A	15.00	10.0	3.25
279A	340.00	10.0	21.00
304B	12.50	7.5	3.25
308B	75.00	14.0	6.00
533T	8.50	10.0	2.5
533Z	8.00	10.0	2.5
801A	3.00	7.5	1.25
803	21.00	10.0	5.0
805	10.00	10.0	3.25
807	2.30	6.3	0.9
810	12.50	10.0	4.50
811	3.50	6.3	4.0
812	3.50	6.3	4.0
813	14.50	10.0	5.0
830B	10.00	10.0	2.50
833A	45.00	10.0	10.00
834	12.50	7.5	3.25
838	12.00	10.0	3.25
841	3.80	7.5	1.25
845	12.00	10.0	3.25
849	120.00	11.0	5.00
849A	135.00	11.0	7.70
849H	135.00	10.0	11.50
851	210.00	11.0	15.50
852	25.00	10.0	3.25
8005	7.00	10.0	3.25

FULLY INTERCHANGEABLE: Type 203H with Amperex HF125, Type 211 C with Amperex HF130, Type 211H with Amperex HF150.

FORCED-AIR COOLED TYPES

TYPE NO.	PRICE	FILAMENT	
		Volts	Amps.
220R*	\$472.35	21.5	57.0
228R*	428.35	21.5	41.0
3C22	80.00	6.3	2.0
889RA*	280.00	11.0	125.0
891R*	345.00	11.0▼	60.0

TYPE NO.	PRICE	FILAMENT	
		Volts	Amps.
892R*	\$345.00	11.0▼	60.0
893AR*	1050.00	10.0‡	61.0
8002R	137.50	16.0	38.0
HF3000‡	300.00	21.5	40.5
ZB3200‡	300.00	21.5	40.5

* Credits will be allowed for return of radiator and crate in good condition prepaid to factory in Brooklyn, N. Y., in accordance with this schedule.

\$30.00 for Type No. 889-RA
45.00 " " Nos. 891-R, 892-R
50.00 " " Nos. 220-R, 228-R
150.00 " " No. 893-AR

▼Single or two-phase filament (two units); voltage is per unit.
‡Single, three- or six-phase filament (three sections). Voltage is per section.
§All glass radiation and air-cooled transmitting tubes.



3C22

HELPFUL CHARTS AND LITERATURE FREE: Write for set of INTERCHANGEABILITY CHARTS, information at a glance, RAPID TUBE DATA REFERENCE TABLES, 8 pages of condensed information arranged for quick reference. Address your distributor of Amperex direct.



813



833A



838



845



866A/866

ELECTRONIC TUBES

COMMUNICATION - RECTIFICATION - INDUSTRIAL
ELECTRO-MEDICAL - SPECIAL PURPOSE

WATER COOLED TYPES

TYPE NO.	PRICE	FILAMENT	
		Volts	Amps.
207	\$220.00	22.0	52.0
220C	350.00	21.5	11.0
228A	270.00	21.5	11.0
232C	626.50	20.0	72.0
233	475.00	24.0	70.0
342A	555.00	20.0	67.0
343A	350.00	21.5	57.5
846	220.00	11.0	51.0
858	375.00	22.0	52.0
859	400.00	11.0▼	71.0
889A	190.00	11.0	125.0
891	200.00	11.0▼	60.0
892	200.00	11.0▼	60.0
893A	570.00	10.0	61.0

▼Single or two-phase filament (two units); voltage is per unit.
▲Single-, three- or six-phase filament (three sections). Voltage is per section.

RADIATION COOLED HIGH VACUUM RECTIFIERS

TYPE NO.	PRICE	FILAMENT	
		Volts	Amps.
217C	\$20.00	10	3.25
221A	15.00	5	10
404	190.00	20	35
836	6.00	2.5	5
1616	7.50	2.5	5.0
8020	18.00	5	6

HIGH VACUUM CONDENSERS

TYPE NO.	CAPACITY	RATING	PRICE
VC25	25 uuf	30,000 Volts Peak	\$18.75
VC50	50 uuf	30,000 Volts Peak	18.75
VC100	100 uuf	30,000 Volts Peak	24.00

MERCURY VAPOR RECTIFIERS

TYPE NO.	PRICE	FILAMENT	
		Volts	Amps.
249B, C	\$5.00	2.5	7.50
258B	9.85	2.5	7.50
266B, C	190.00	5.0	12.0
267B	23.00	5.0	6.75
315A	35.00	5.0	10.00
575A	26.00	5.0	10.00
673	26.00	5.0	10.00
816	1.25	2.5	2.00
857B	190.00	5.0	30.00
866A/866	1.75	2.5	5.00
869B	120.00	5.0	20.00
872A/872	7.50	5.0	6.75
8008	7.50	5.0	6.75

WATER COOLED— HIGH VACUUM RECTIFIERS

TYPE NO.	PRICE	FILAMENT	
		Volts	Amps.
222A	\$240.00	21.5	41.0
237A	435.00	20.0	61.0
562	300.00	22.0	52.0

WATER JACKETS

TYPE NO.	Suitable for these Amperex types:
DW-1580	207, 494, 495, 496, 497, 891, 892,
DW-2000	220C, 222A, 232C, 233, 237A, 312A, 313A.
DW-2100	889A.
DW-2200	501, 502, 8002.
DW-2500	858, 859, 562A.
DW-2600	846

NOTE: Amperex Water Jackets fit interchangeable tube types of other makers.



869B



872A/872



889A



889R-A

891
892891R
892R

AMPEREX

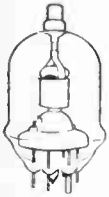
ELECTRONIC CORPORATION

25 Washington St., Brooklyn 1, N. Y

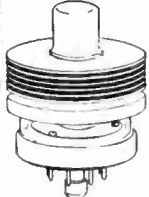


● ● ● ● ● ● ● **PROVEN IN SERVICE**
 ● ● ● ● ● ● ● **ASSURED DEPENDABILITY**
 ● ● ● ● ● ● ● **DESIGNED FOR APPLICATION**

TETRODES



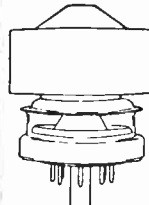
4-65A



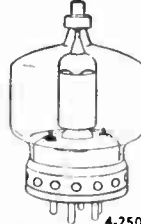
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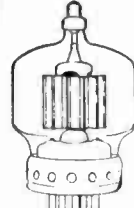
4-125A



4X150A



4-250A

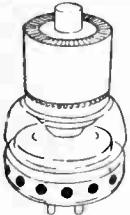


4-400A

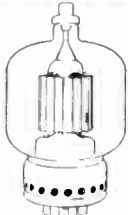


4X500A

TRIODES



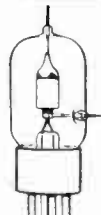
4X500F



4-1000A



25T



3C24



35T



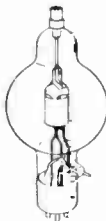
35TG



75T



2C39



100T



152T



250T



304T



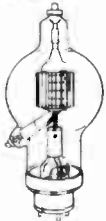
45DT



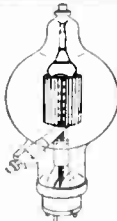
750T



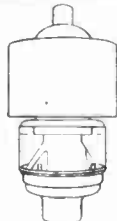
1000T



1500T



2000T



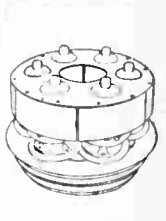
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3X2500F3



3X12500A3

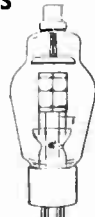


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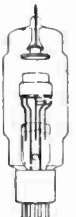
RECTIFIERS



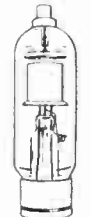
2-01C



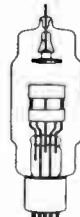
866A



RX21A



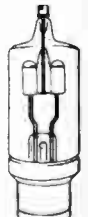
872A



KY21A



100R



2-150D

CAPACITORS



250R



Variable Vacuum Capacitor



VC, Fixed, Vacuum Capacitor



Air-system Sockets

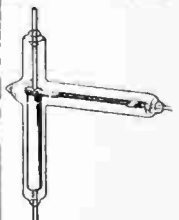


HR, Heat Dissipating Connectors

MISCELLANEOUS



Diffusion Pump



Vacuum Switch

EIMAC TRANSMITTING TUBES

EIMAC TUBE TYPES	MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS						DIMENSIONS		TUBE PRICE	RECOMMENDED HR HEAT DISSIPATING CONNECTORS			
	PLATE DISSIPATION, WATTS	PLATE VOLTAGE	PLATE CURRENT MILLIAMPERES	GRID DISSIPATION, WATTS	SCREEN VOLTAGE	SCREEN DISSIPATION, WATTS	FILAMENT, VOLTS	FILAMENT, AMPERES	AMPLIFICATION FACTOR	GRID-PLATE, MMF	INPUT, MMF	OUTPUT, MMF	TRANSCONDUCTANCE UMHOS	LENGTH, INCHES		DIAMETER, INCHES	PLATE	GRID	
TETRODES	4-65A	65	3000	150	5	400	10	6.0	3.5	5	0.08	8.0	2.1	4000	4.25	2.31	\$ 14.50	HR6	
	4X100A*	100	1000	250	2	300	15	6.0	2.8	4.5	0.02	14.1	4.7	12,000	2.87	1.64	30.00	HR6	
	4-125A	125	3000	225	5	400	20	5.0	6.5	6.2	0.05	10.8	3.1	2450	5.69	2.87	27.50	HR6	
	4X150A*	150	1000	250	2	300	15	6.0	2.8	4.5	0.02	14.1	4.7	12,000	2.47	1.64	34.00	HR6	
	4-250A	250	4000	350	5	600	35	5.0	14.5	5.1	0.12	12.7	4.5	4000	6.38	3.56	37.50	HR6	
	4-400A	400	4000	350	5	600	35	5.0	14.5	5.1	0.12	12.5	4.7	4000	6.38	3.56	55.00	HR6	
	4X500A*	500	4000	350	10	500	30	5.0	13.5	6.2	0.05	12.8	5.6	5200	4.75	2.63	97.50	HR6	
	4X500F*	500	4000	350	10	500	30	5.0	12.2	6.2	0.05	11.1	3.7	5200	5.38	2.75	85.00	HR6	
	4-1000A	1000	6000	700	20	1000	75	7.5	21	7.2	0.24	27.2	7.6	10,000	9.5	5.12	120.00	HR3	
	TRIODES	25T	25	2000	75	7			6.3	3.0	24	1.5	2.7	0.3	2500	4.38	1.43	8.00	HR1
3C24		25	2000	75	8			6.3	3.0	23	1.5	1.7	0.3	2500	4.38	1.43	8.00	HR1	HR1
35T		50	2000	150	15			5.0	4.0	39	1.8	4.1	0.3	2850	5.5	1.81	9.50	HR3	
35TG		50	2000	150	15			5.0	4.0	39	1.8	2.5	0.4	2850	5.75	1.81	10.00	HR3	HR3
75TH		75	3000	225	16			5.0	6.25	20	2.3	2.7	0.3	4150	7.25	2.81	12.00	HR3	HR2
75TL		75	3000	225	13			5.0	6.25	12	2.4	2.6	0.4	3950	7.25	2.81	12.00	HR3	HR2
2C39*		100	1000	100†	3			6.3	1.1	100	1.9	6.5	0.03	17,000	2.75	1.26	33.00	HR6	
100TH		100	3000	225	20			5.0	6.3	40	2.0	2.9	0.4	5500	7.75	3.19	16.50	HR6	HR2
100TL		100	3000	225	15			5.0	6.3	14	2.0	2.3	0.4	2400	7.75	3.19	16.50	HR6	HR2
152TH		150	3000	450	30			5 or 10	12.5 or 6.2	20	4.6	5.7	0.8	8300	7.63	3.0	26.00	HR5	HR6
152TL		150	3000	450	25			5 or 10	12.5 or 6.2	12	4.4	4.5	0.7	7150	7.63	3.0	26.00	HR5	HR6
250TH		250	4000	350	40			5.0	10.5	37	2.9	5.0	0.7	6450	10.13	3.81	30.00	HR6	HR3
250TL		250	4000	350	35			5.0	10.5	14	3.1	3.7	0.7	2650	10.13	3.81	30.00	HR6	HR3
304TH		300	3000	900	60			5 or 10	25 or 12.5	20	10.2	13.5	0.7	16,700	7.63	3.56	55.00	HR7	HR6
304TL		300	3000	900	50			5 or 10	25 or 12.5	12	9.1	9.5	0.6	16,700	7.63	3.56	55.00	HR7	HR6
450TH		450	6000	600	80			7.5	12.0	38	5.0	8.8	0.8	6450	12.63	5.13	70.00	HR5	HR3
450TL		450	6000	600	65			7.5	12.0	13	5.2	7.3	0.9	6450	12.63	5.13	70.00	HR5	HR3
750TL		750	10,000	1000	100			7.5	21.0	15	5.8	8.5	1.2	3900	17.0	7.13	125.00	HR5	HR3
1000T		1000	7,500	750	80			7.5	17.0	35	5.1	9.3	0.5	9000	12.63	5.13	125.00	HR5	HR3
1500T		1500	8,000	1250	125			7.5	24.0	24	7.2	9.9	1.5	10,000	17.0	7.13	200.00	HR5	HR3
2000T	2000	8,000	1750	150			10.0	25.0	23	8.5	12.7	1.7	11,000	17.75	8.13	250.00	HR5	HR3	
3X2500A3	2500	6,000	2000	150			7.5	48	20	20	48	1.2	20,000	9.0	4.16	180.00	HR5	HR3	
3X2500F3	2500	6,000	2000	150			7.5	48	20	20	48	1.2	20,000	9.0	4.16	180.00	HR5	HR3	
3X12500A3	12,500	6,000	8000	600			7.5	192	20	95	240	5	80,000	9.5	11.00	875.00	HR5	HR3	
3X20000A3	20,000	6,000	12,000	900			7.5	288	20				120,000	10.0	12.5	1275.00	HR5	HR3	

*External Anode requiring forced-air cooling
†Cathode Current

EIMAC RECTIFIERS

	MERCURY VAPOUR RECTIFIERS				HIGH VACUUM RECTIFIERS			
	866A (866)	RX21A (RX21)	872A (872)	KY21A (KY21) (Grid Control)	2-01C	100-R	2-150D (152 RA)	250-R
Filament Voltage	2.5	2.5	5.0	2.5	6.3	5.0	5.0	5.0
Filament Current	5.0 amp	10 amp	7.5 amp	10 amp	0.4	6.5	13.0	10.5
Peak Inverse Voltage	10,000	11,000	10,000	11,000	1000	40,000	30,000	60,000
Peak Plate Current	1.0 amp	3 amp	5.0 amp	3 amp	0.010 amp			
Average Plate Current	2.5 amp	7.5 amp	1.25 amp	7.5 amp		100 amp	150 amp	250 amp
Price	\$1.75	\$8.00	\$7.50	\$12.00	\$6.75	\$13.50	\$17.50	\$20.00

EIMAC VACUUM CAPACITORS

Type	VARIABLE	FIXED							
	VVCG0	VC6-20	VC12-20	VC25-20	VC50-20	VC6-32	VC12-32	VC25-32	VC50-32
Capacity	10-60 mmf	6 mmf	12 mmf	25 mmf	50 mmf	6 mmf	12 mmf	25 mmf	50 mmf
Rating	20 KV	20 KV	20 KV	20 KV	20 KV	32 KV	32 KV	32 KV	32 KV
RF Peak									
Price		\$13.50	\$15.00	\$18.00	\$22.00	\$15.50	\$18.00	\$21.00	\$25.00

HEAT DISSIPATING CONNECTORS

Type	Hole Dia.	Price	HR-5	1.25"	\$ 80
HR-1	0.531"	\$ 60	HR-6	3.60"	80
HR-2	0.625"	60	HR-7	1.25"	1.60
HR-3	0.70"	60	HR-8	5.70"	1.60
HR-4	1.015"	80	HR-9	5.70"	3.00

DIFFUSION PUMP

HV-1 Diffusion Pump	\$125.00
An air-cooled, oil diffusion type, vacuum pump. Ultimate vacuum, 4x10 ⁻⁷ mm of mercury. Speed (without baffle) approx 67 liters/seconds.	
100 IG, Ionization Gauge	\$22.50
An electronic vacuum pressure gauge. Filament voltage 3.5 to 7.5 volts.	
Eimac Pump Oil A	\$5.00 qt.

AIR-SYSTEM SOCKETS

Complete Assembly	
4-400A-4000	\$ 16.00
4-1500A-4000	22.50
Replacement Chimney	
4-400A-4006	6.00
4-1500A-4006	7.50

EIMAC VACUUM SWITCHES

Type	General Data	Price
VS-2	Single pole double throw switch within a high vacuum adaptable for high voltage switching. Contact spacing 0.15". Switch will handle R.F. potentials as high as 20 kv. in DC switching will handle approximately 1.5 amps at 5 kv.	\$12.00
VS-1	Same as above except for slightly smaller glass tubulation.	\$12.00

Long the criteria of good design in any electronic equipment, Eimac tubes are today the undisputed leaders of their field. Complete data on any of the Eimac products listed is available by writing direct.

EITEL-McCULLOUGH, Inc.
192 San Mateo Ave., San Bruno, California

Export Agents: Frazar & Hansen 301 Clay St., San Francisco, Calif.

Follow the Leaders to

Eimac
REG. U. S. PAT. OFF.
TUBES

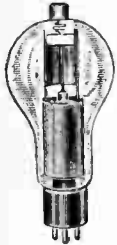
The Power for R-F



WESTINGHOUSE ELECTRONIC TUBES



PHOTOTUBES



WL-767
WL-773
WL-775



SR-50
SR-53

Type Number	Spectral Ranges Au.	Vacuum or Gas	Cathode Surface	Luminous Sensitivity Microamperes per lumen (o cycles)	Anode Volts Max.	List Price
WL-1P29	3300-9000		S3	40	100	\$ 2.55
SR-50		R E P L A C E M E N T O N L Y				7.00
SR-53		R E P L A C E M E N T O N L Y				10.00
SK-60		R E P L A C E M E N T O N L Y				7.00
SK-63		R E P L A C E M E N T O N L Y				10.00
WL-734	4000-12000	Vac.	S1	15	500	2.60
WL-767	2000-3150	Vac.	Zirconium	—	500	75.00
WL-773	2000-3675	Vac.	Thorium	—	500	75.00
WL-775	2000-3000	Vac.	Tantalum	—	500	75.00
WL-789	Below 2100	Vac.	Platinum	—	500	125.00
WL-868	4000-12000	Gas	S1	90	90	2.15
WL-917	4000-12000	Vac.	S1	20	500	3.00
WL-918	4000-12000	Gas	S1	150	90	2.60
WL-919	4000-12000	Vac.	S1	20	500	3.00
WL-920	4000-12000	Gas	S1	75	90	3.60
WL-921	4000-12000	Gas	S1	135	90	1.75
WL-922	4000-12000	Vac.	S1	20	500	1.80
WL-923	4000-12000	Gas	S1	135	90	1.75
WL-924	4000-12000	Gas	S1	55	90	2.25
WL-925	4000-12000	Vac.	S1	15	250	1.85
WL-926	3300-9000	Vac.	S3	65	500	2.50
WL-927	4000-12000	Gas	S1	125	90	2.50
WL-928	4000-12000	Gas	S1	65	90	2.75
WL-929	3000-6700	Vac.	S4	45	250	1.75
WL-930	4000-12000	Gas	S1	135	90	1.50
WL-931A†	3000-6700	Vac.	S4	*	1250	9.25

*Sensitivity 10 amps. per lumen at 100 volts per stage.
† Multiplier.

THYRATRONS

GRID CONTROLLED GAS OR MERCURY VAPOR RECTIFIERS

Type Number	Filament		Volts Peak Inverse	Amps. Peak	Amps. Ave.	Gas	Number of Electrodes	List Prices
	Volts	Amps.						
WL-2D21	6.3	0.6	1300	0.5	0.1	Inert	4	\$ 1.80
WL-3C23	2.5	7.0	1250	6.0	1.0	Hg.	3	12.00
WL-33	5.0	4.5	1000	15.0	2.5	Hg.	3	15.00
WL-41	5.0	20.0	10000	75.0	12.5	Hg.	3	165.00
WL-81A	2.5	5.0	500	2.0	0.5	Inert	3	14.50
WL-105	5.0	10.0	2500	40.0	6.4	Hg.	4	44.00
WL-172	5.0	10.0	2000	40.0	6.4	Hg.	4	42.00
WL-414	5.0	20.0	2000	100.0	12.5	Hg.	4	100.00
WL-502A	6.3	0.6	1300	0.5	0.1	Inert	4	1.80
KU-610	2.5	6.5	500	0.4	0.1	Inert	3	21.00
KU-618			R E P L A C E M E N T O N L Y					15.00
WL-624	5.0	10.0	2500	77.0	6.4	Hg.	3	40.00
KU-627	2.5	6.0	5000	2.5	0.64	Hg.	3	15.00
KU-628	5.0	11.5	2500	8.0	2.0	Hg.	3	29.00
WL-629	2.5	2.6	350	0.2	0.04	Inert	3	6.00
WL-632B	5.0	5.0	1500	30.0	2.5	Hg.	4	21.00
KU-636	2.5	7.5	350	0.4	0.1	Inert	3	20.00
WL-672A	5.0	5.0	2500	40.0	3.2	Hg.	4	23.00
KU-676	5.0	10.0	2500	40.0	6.4	Hg.	3	44.00
WL-677	5.0	10.0	10000	15.0	4.0	Hg.	3	44.00
WL-678	5.0	7.5	15000	6.0	1.0	Hg.	3	40.00
WL-759			R E P L A C E M E N T O N L Y					15.00
WL-884	6.3	0.6	350	0.3	0.075	Inert	3	1.78
WL-885	2.5	1.5	350	0.3	0.075	Inert	3	1.80
WL-2050	6.3	0.6	1300	1.0	0.1	Inert	4	1.73
WL-5557 / 17	2.5	5.0	5000	2.0	0.5	Hg.	3	6.50
WL-5559 / 57	5.0	4.5	1000	15.0	2.5	Hg.	3	17.50
WL-5664	2.5	6.3	1250	8.0	1.0	Inert	3	8.90
WL-5683	2.5	6.3	1250	8.0	1.0	Inert	3	8.90
WL-5684	2.5	9.0	1250	30.0	2.5	Inert	3	14.20
WL-5685	2.5	21.0	1250	77.0	6.4	Inert	3	28.10

Prices subject to change without notice.



KU-627



WL-629



WL-632B



KU-676



WESTINGHOUSE ELECTRONIC TUBES



PIOTRONS — Modulators, Amplifiers, Oscillators



WL-204A



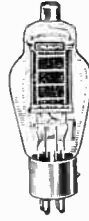
WL-211



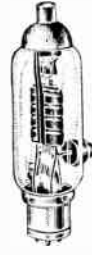
WL-803



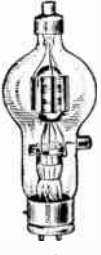
WL-807



WL-809



WL-460



WL-806

Type Number	Filament		Plate D-C*** Volts	Plate D-C** Ma.	Plate Diss** Watts	Plate Output Watts Class C	Ampl. Factor	Max. MC For 100% Input	List Prices	
	Volts	Amps.								
WL-3X2500A3-	7.5	48	5000	2000	2500	7500	20	50	\$ 180.00	
WL-4D21 4-125A	5.0	6.5	3000	225	125	375	Tetrode	120	27.50	
WL-4X150A	6.0	2.8	1000	250	150	74	Tetrode	500	34.00	
WL-4X500A	5.0	13.5	4000	350	500	1320	Tetrode	120	97.50	
WL-4-1000A	7.5	21.0	5000	700	1000	2200	Tetrode	110	120.00	
WL-5D22 4-250A	5.0	11.5	4000	350	250	1000	Tetrode	75	37.50	
WL-195	10.0	3.25	3000	150	125	325	12	15	29.00	
WL-196	10.0	3.25	3000	150	125	325	35	15	29.00	
WL-203A	10.0	3.25	1250	175	100	120	25	15	12.00	
WL-204A	11.0	3.85	2500	275	250	430	23	3	100.00	
WL-207	22.0	50.00	15000	2000	10000	20000	20	1.6	220.00	
WL-211	10.0	3.25	1250	175	100	150	12	15	12.00	
WL-285	10.0	3.25	1350	200	100	170	12	20	18.00	
WL-450TH	7.5	12.0	6000	600	450	1800	38	40	70.00	
WL-460	10.0	3.85	3000	200	150	400	18	30	29.00	
WL-463	11.0	5.00	2500	275	200	550	22	30	41.00	
WL-468	10.0	3.85	2500	200	150	400	18	6	27.00	
WL-473	6.0	60.00	5000	1400	2500	3900	22	60	125.00	
RH-507	2.0	0.06	9	0.6	0.6	0.6	0.8	.....	29.00
RJ-550			R E P L A C E M E N T O N L Y							16.50
RJ-563			R E P L A C E M E N T O N L Y							27.50
RJ-571			R E P L A C E M E N T O N L Y							15.00
WL-787	6.0	1.60	650	70	20	25	2	.....	18.00
WL-801A	7.5	1.25	600	60	10	15	8	60	3.00	
WL-802	6.3	0.90	600	60	10	15	.....	30	4.25
WL-803	10.0	5.00	2000	175	125	225	.....	20	21.00
WL-805	10.0	3.25	1500	210	125	215	50	30	11.75	
WL-806	5.0	9.50	3000	200	150	450	12.6	30	30.00	
WL-807	6.3	0.90	600	100	25	40	.....	60	2.30
WL-808	7.5	4.00	1500	150	50	150	47	30	8.50	
WL-809	6.3	2.50	750	100	25	55	50	60	3.50	
WL-810	10.0	4.50	2000	250	125	375	36	30	12.50	
WL-811	6.3	4.00	1250	125	40	115	160	60	3.50	
WL-812	6.3	1.00	1250	125	40	115	29	60	3.50	
WL-813	10.0	5.00	2000	180	100	260	.....	30	14.50
WL-814	10.0	3.25	1250	150	50	130	.....	30	12.50
WL-815	6.3	1.60	400	150	20	41	.....	150	6.25
WL-826	7.5	4.00	1000	65	60	25	31	2.0	9.25	
WL-828	10.0	3.25	1250	160	70	150	.....	30	12.50
WL-829B	6.3	1.125	750	240	40**	87**	.....	200	14.75
WL-832A	6.3	0.80	750	90	15	25	.....	200	10.60
WL-833A	10.0	10.00	1000	500	400	1410	35	20	45.00	
WL-837	12.6	0.70	500	80	12	20	.....	20	4.15
WL-838	10.0	3.25	1250	175	100	130	51	30	12.00	
WL-845	10.0	3.25	1250	120	100	57	5.3	.....	12.00
WL-849	11.0	5.00	2500	350	100	500	19	3	120.00	
WL-851	11.0	15.50	2500	1000	750	1750	20.5	3	230.00	
WL-860	10.0	3.25	3000	150	100	200	.....	30	30.00
WL-861	11.0	10.00	3500	350	490	890	.....	20	155.00
WL-880	12.6	315.00	10300	6000	20000	15000	20	25	440.00	
WL-889A	11.0	120.00	8500	2000	5000	10000	21	50	190.00	
WL-889RA	11.0	120.00	8500	2000	5000	10000	21	40	280.00	
WL-891	22.0	60.00	12000	2000	6000	12000	8	1.6	200.00	
WL-891R	22.0	60.00	10000	2000	4000	11000	8	1.6	345.00	
WL-892	22.0	60.00	15000	2000	10000	20000	50	1.6	200.00	

* Demonstration Triode.

** Max. C.C.S. ratings in Class C oscillator service.

* Forced air-cooled radiator.

(PIOTRONS continue on next page)

Prices subject to change without notice.



WESTINGHOUSE ELECTRONIC TUBES



WL-880



WL-889A

PLIOTRONS— Cont'd

MODULATORS

AMPLIFIERS

OSCILLATORS



WL-891, 892



WL-892R

Type Number	Filament		D-C** Volts	D-C** Ma.	Diss** Watts	Output Watts Class C	Ampl. Factor	Max. MC For 100% Input	List Prices
	Volts	Amps.							
*WL-892R	22.0	60.00	12500	2000	4000	14000	50	1.6	\$ 345.00
†WL-893A	20.0	183.00	20000	4000	20000	50000	36	5	570.00
‡WL-893AR	20.0	183.00	20000	4000	20000	30000	36	5	1,050.00
†WL-895	19.0	138.00	17000	9000	40000	100000	37	8	825.00
‡WL-895R	19.0	138.00	17000	9000	20000	90000	37	8	1,125.00
WL-1623	6.3	2.50	750	100	25	55	20	60	3.50
WL-5604 #	11.0	176.00	12500	3000	10000	22500	19.5	22.5	500.00
WL-8000	10.0	4.50	2000	250	125	375	16.5	30	13.25
WL-8003	10.0	3.25	1350	250	100	256	12	30	11.25
WL-8005	10.0	3.25	1250	200	75	170	20	60	7.00
WL-8025A	6.3	1.92	1000	80	40	35	18	560	9.25

** Max. C.C.S. ratings in Class C oscillator service.

† Two filament strands in series with large post at neutral junction; operate in series at 22 volts or two phase with 11 volts per strand.

‡ This rating applies only with forced air cooling.

Per unit, heater can be arranged to operate from either a 6.3 or 12.6 volt supply.

† Six filament strands connected from each post to floating neutral. See individual data sheets for connections.

‡ Three filament terminals Y-connected in 3 phase.

¶ Three filament terminals Y-connected in 3 phase with neutral center terminal.

#&R Indicates forced air-cooled radiator.

KENOTRONS — Vacuum Rectifiers



WL-456

Type Number	Filament		Anode		Amp. Average	Type of Cooling	List Price
	Volts	Amperes	Volts Peak Inverse	Amp. Peak			
WL-456	11.0	20	140000	0.50	0.06	Air	\$ 95.00
WL-481	2.5	5	25000	0.015	0.005	Air	3.50
WL-579B	2.5	6	20000	0.27	0.025	Air	12.00
WL-585	5.0	1.1	1500	0.011	0.003	Air	16.50
WL-608	REPLACEMENT ONLY						160.00
WL-612	REPLACEMENT ONLY						260.00
WL-613	REPLACEMENT ONLY						200.00
WL-616	20.0	24.5	150000	0.75	0.25	Air	210.00
WL-660	10.0	10	230000	0.10	0.03	Air	260.00
WL-836	2.5	5	5000	1.0	0.25	Air	6.00
WL-8020	5.0	6	40000	0.75	0.1	Air	20.00

PHANOTRONS — Gas and Mercury Vapor Rectifiers

Type Number	Filament		Anode		Amp. Average	Type of Cooling	List Price
	Volts	Amperes	Volts Peak Inverse	Amp. Peak			
WL-5558/32	5.0	4.5	1000	15	2.5	Convection	\$ 12.00
WL-5561/104	5.0	10.0	3000	40	6.4	Convection	33.00
WL-575A	5.0	10.0	15000	6	1.5	Convection	28.00
WL-670A	2.5	24	1000	9.5	6.0	Air	15.00
WL-816	2.5	2	5000	.5	.125	Air	1.25
WL-857B	5.0	30	22000	40	10.0	Forced Air	190.00
WL-860A	2.5	5	10000	1	0.25	Air	1.75
WL-869B	5.0	18	20000	10	2.5	Forced Air	120.00
WL-872A/872	5.0	7.5	10000	5	1.25	Air	7.50
WL-8008	Same as WL-872A/872 except for Base						7.50



WL-866A



WL-872A/872

Prices subject to change without notice.



WESTINGHOUSE ELECTRONIC TUBES



WL-5550/681 WL-5552/651

IGNITRONS

WELDER CONTROL SERVICE

Type Number	Size	RMS Volts Range	Max. KVA Demand and Corresponding Average Current		Max. Aver. Current and Corresponding KVA Demand		Type Cooling	List Price
			KVA	Amps	KVA	Amps		
WL-5550 681	A	200-600	300	12 1	100	22 4	Clamp	\$ 42.00
WL-5551 652	B	200-600	600	30 2	200	56	Water	70.00
WL-5552 651	C	200-600	1200	75 6	400	140	Water	105.00
WL-5553 655	D	200-600	2400	192 0	800	355	Water	230.00
WL-5554 679		2400	1200	75 0	300	113	Water	165.00
WL-5555 653B		2400	2400	135 0	1105	207	Water	320.00
WL-654 659	Replacement only							

IGNITRONS

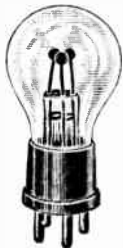
POWER RECTIFICATION SERVICE



WL-5555/653B

Type Number	D-C Output Voltage	Max. Average Amps Per Tube			Type Cooling	List Price
		Continuous	2-Hour Overload	1 Min. Overload		
WL-5554 679	300	100	150	200	Water	\$165.00
	600	75	112.5	150		
WL-5555 653B	300	200	300	400	Water	320.00
	600	150	225	300		

MISCELLANEOUS



KX-642

Type Number	Use	Cathode	D-C Anode Volts Min	D-C Operating Current Ma	D-C Operating Volts	Regulation Volts (5-40 Ma)	List Price
OA3/VR75	Voltage Regulator	Cold	105	5-40	75	5	\$1.20
OC3/VR105	Voltage Regulator	Cold	133	5-40	105	2	1.20
OD3/VR150	Voltage Regulator	Cold	185	5-40	150	4	1.20

Type Number	Use	Volts, RMS		Current		List Price
		Breakdown	Maximum Operating	Maximum 2 Sec.	Maximum 10 Min.	
KX-642	Protector	300-500	230	50 Amps.	7 Amps.	\$12.00

Prices subject to change without notice.

GRID CONTROL RECTIFIERS (THYRATRONS)



EL C1J

D.C. Output (Amps.) 1.0
 Peak Anode Current 8.0
 Peak Forward Volts... 450
 Peak Inverse Volts... 700
 Filament Volts 2.5
 Filament Amperes 6.3
 Overall Length 4 1/4"
 Price\$7.50



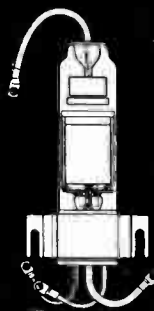
EL C3J

D.C. Output (Amps.) 2.5
 Peak Anode Current 30.0
 Peak Forward Volts... 750
 Peak Inverse Volts...1250
 Filament Volts 2.5
 Filament Amperes 9.0
 Overall Length 6 1/8"
 Price\$12.15



EL C6J

D.C. Output (Amps.) 6.4
 Peak Anode Current 77.0
 Peak Forward Volts... 750
 Peak Inverse Volts...1250
 Filament Volts 2.5
 Filament Amperes 21.0
 Overall Length 9"
 Price\$27.30



EL C16J

D.C. Output (Amps.) 16.0
 Peak Anode Current 160.0
 Peak Forward Volts...1000
 Peak Inverse Volts...1250
 Filament Volts 2.5
 Filament Amperes 31.0
 Overall Length 10"
 Price\$49.50



EL C6C

D.C. Output (Amps.) 6.4
 Peak Anode Current 77.0
 Peak Forward Volts...2000
 Peak Inverse Volts...4000
 Filament Volts 2.5
 Filament Amperes 24.0
 Overall Length 11"
 Price\$37.80

RECTIFIERS



FULL WAVE RECTIFIER
EL 1C

D.C. Output (Amps.) 1.0
 Peak Anode Current 4.0
 Peak Inverse Volts... 725
 Filament Volts 2.5
 Filament Amperes 6.0
 Overall Length 5 1/2"
 Price\$6.40



FULL WAVE RECTIFIER
EL 3C

D.C. Output (Amps.) 2.5
 Peak Anode Current 10.0
 Peak Inverse Volts... 725
 Filament Volts 2.5
 Filament Amperes 11.5
 Overall Length 7"
 Price\$8.25



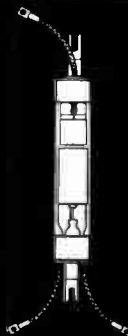
FULL WAVE RECTIFIER
EL 6C

D.C. Output (Amps.) 6.4
 Peak Anode Current 25.6
 Peak Inverse Volts... 725
 Filament Volts 2.5
 Filament Amperes 17.0
 Overall Length 7 1/2"
 Price\$14.80



HALF WAVE RECTIFIER
EL 6B

D.C. Output (Amps.) 6.4
 Peak Anode Current 40.0
 Peak Inverse Volts... 750
 Filament Volts 2.5
 Filament Amperes... 21
 Overall Length..... 9 1/4"
 Price\$10.80



HALF WAVE RECTIFIER
EL 16F

D.C. Output (Amps.) 16.0
 Peak Anode Current 96.0
 Peak Inverse Volts... 620
 Filament Volts 2.5
 Filament Amperes 36
 Overall Length 15 1/2"
 Price\$22.50

HALF WAVE RECTIFIER
EL 60B

D.C. Output (Amps.) 50
 Peak Anode Current 300
 Peak Inverse Volts...1250
 Filament Volts
 (Heater type) 115
 Heater Amperes 1.3
 Overall Length 10"
 Metal Envelope,
 Convection Air Cooled
 Price\$94.00

ELECTRONS INCORPORATED
 127 SUSSEX AVENUE
 NEWARK, N. J.

*Quick heating, stable
 Xenon gas-filled tubes.*



**TRANSMITTING • THYRATRONS
RECTIFIERS • DIATHERMY
ELECTRON TUBES**

General Electronics electron tubes have been designed by a well known electronic engineer, who was an early pioneer in the development of the tube industry.

Many induction heating applications and diathermy

oscillators and rectifiers have been designed by General Electronics, which means that we are constantly designing tubes for special applications in these various fields.

Inquiries are invited on types not listed, which may be required for special applications.

Type	Description	List Price
DR-100TH	Transmitting triode	\$ 15.00
DR-200	Power amplifier, oscillator Class B modulator	21.50
DR-250TH	Transmitting triode amplifier oscillator	27.50
DR-300	Power amplifier, oscillator, Class B modulator	29.50
DR-304TH	Transmitting triode power amplifier	50.00
DR-450TH	Transmitting triode amplifier.....	70.00
DR-575A	Half-wave mercury-vapor rectifier	28.00
DR-576A	Grid controlled mercury vapor rectifier	70.00
DR-757	Grid controlled mercury vapor rectifier	325.00
DR-801A	R-F, A-F power amplifier modulator	3.00
DR-803	R-F power amplifier pentode.....	21.00
DR-805	Transmitting triode.....	11.75
DR-808	Transmitting triode.....	8.50
DR-809	R-F power amplifier, Class B modulator	3.50
DR-810	Transmitting triode	12.50
DR-811	Transmitting triode-high MU.....	3.50
DR-812	Transmitting triode-medium MU....	3.50
DR-813	Beam power amplifier.....	14.50
DR-814	Transmitting beam power amplifier	14.00

Type	Description	List Price
DR-816	Half-wave, mercury-vapor rectifier	\$ 1.25
DR-826	Transmitting triode	9.25
DR-837	R-F power amplifier, pentode transmitter	4.15
DR-838	Class B modulator, R-F power amplifier oscillator	12.00
DR-849A	R-F, A-F power amplifier, oscillator, modulator	120.00
DR-851	Transmitting triode amplifier.....	230.00
DR-857B	Diode gas rectifier.....	190.00
DR-861	Screen grid R-F power amplifier.....	155.00
DR-864	Amplifier	1.20
DR-866A	Half-wave, mercury vapor rectifier	1.75
DR-869B	High-voltage, high wave mercury vapor rectifier	120.00
DR-872A	Half-wave, mercury vapor rectifier	7.50
DR-873	Half-wave, mercury-vapor grid control rectifier	15.00
DR-832A	Push-pull R-F beam power amplifier	10.60
DR-833A	Triode, amplifier, oscillator.....	45.00
DR-892R	R-F power amplifier Class B modulator AIR COOLED.....	345.00
DR-8008	Half-wave, mercury vapor rectifier	7.50
DR-8020	High vacuum, half-wave rectifier....	18.00

All tubes licensed under the patents of Radio Corporation of America
GENERAL ELECTRIC COMPANY and EITEL McCULLOUGH, Inc.

Electron Tubes with LONG LIFE AND PRECISION CONSTRUCTION

GENERAL ELECTRONICS, INC. • 101 Hazel St., Paterson, N. J.

CETRON ELECTRONIC TUBES



Engineered and Manufactured by Continental Electric Co., Geneva, Ill.
CETRON PHOTOTUBES

CETRON phototubes are either of the gas-filled or of the vacuum type. With the gas-filled type, greater effective response is obtained, particularly in low impedance circuits, while the vacuum type is recommended where maximum stability is desired.

CETRON phototubes are selected as to their sensitivity and priced accordingly. Phototubes of the Super Class A/B are generally used for experimental purpose where very high sensitivities are required; Class C mostly for motion picture equipment; Class D for relay work, etc.

CETRON BLUE SENSITIVE TUBES

CETRON blue sensitive tubes comprise the most complete line of phototubes designed for sound reproduction work from dye recorded film.

Continental Electric also manufactures a complete line of special purpose phototubes such as: CE-5, CE-7, CE-8, CE-10, CE-15, CE-18, CE-20, CE-26, etc. We will be happy to work with you on design and development problems. Full data, prices, etc., will be forthcoming upon request.

GAS-FILLED PHOTOTUBES

The rated sensitivity for Super Class A/B is 200 microamperes per lumen and up (average 300); Class C, 125-200 microamperes per lumen (average 160); Class D, 75-125 microamperes per lumen (average 100). These sensitivities are measured at recommended operation and test voltage as specified in our technical chart.

VACUUM PHOTOTUBES

The rated sensitivity for Super Class A/B is 30 microamperes per lumen and more (average 35); Class C, 22-30 microamperes per lumen (average 25); and Class D, 12-22 microamperes per lumen (average 16); all are measured at 250 Volts.

LIST PRICES

RED SENSITIVE TYPES, GAS-FILLED, RMA SPECTRAL RESPONSE S1.

Type	Class A/B	Class C	Class D	Replaces No.
CE-1	\$6.20	\$4.10	\$2.60	868 918 PJ-23 WL-735
CE-2	8.50	5.50	3.30	WL-737
CE-3	8.50	5.50	3.30	WL-728 WE-3A
CE-4	8.50	5.50	3.30	—
CE-21	15.00	5.60	3.60	920
CE-22	8.50	4.00	2.40	924 1P41
CE-23	5.50	2.90	1.75	923
CE-25	10.00	5.50	2.50	927
CE-30	5.50	2.60	1.50	930
CE-36	10.00	5.50	2.50	—

RED SENSITIVE TYPES, VACUUM, RMA SPECTRAL RESPONSE S1.

Type	A/B	Class C	Class D	Replaces No.
CE-1V	\$ 8.50	\$3.50	\$2.60	1P-22
CE-2V	8.50	5.50	3.30	—
CE-4V	8.50	5.50	3.30	—
CE-11V	12.00	5.00	3.00	917
CE-25V	12.00	5.00	3.00	—
CE-30V	5.50	2.80	1.85	925
CE-31V	12.00	5.00	3.00	919

BLUE SENSITIVE TYPES, GAS-FILLED, RMA SPECTRAL RESPONSE S4

Type	Class u Amp/Lumen		Q	R	Replaces No.
	Q	R			
CE-59	180-up	90-180	\$8.00	\$2.25	5581
CE-64	130-up	65-130	8.00	2.85	5583
CE-74	160-up	80-160	8.00	4.50	—
CE-83	180-up	90-180	9.00	6.75	—
CE-91	180-up	90-180	8.00	2.50	1P37
CE-97	180-up	90-180	9.00	6.75	—

BLUE SENSITIVE TYPES, VACUUM, RMA SPECTRAL RESPONSE S4

CE-29	55-up	25-55	\$8.00	\$1.75	929 1P39
CE-34	36-up	17-36	8.00	3.00	934
CE-61	55-up	25-55	8.00	4.50	GL 441
CE-99	55-up	25-55	13.00	6.20	—

MINIATURE TYPES

CE 58 Red sensitive, gas filled, RMA Spectral response S1.

Class Q: Sensitivity 100 microamperes per lumen and up \$6.00

Class R: Sensitivity 50-100 microamperes per lumen..... \$4.00

CE 60 Blue sensitive, vacuum, RMA Spectral response S1.

Class Q: Sensitivity 18 microamperes per lumen and up \$6.00

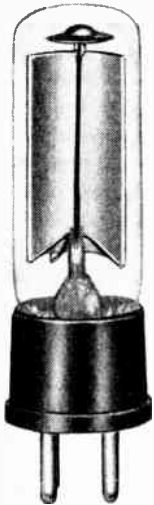
Class R: Sensitivity 8-18 microamperes per lumen..... \$4.00

CE 90 Blue sensitive, gas-filled, RMA Spectral response S1.

Class Q: Sensitivity 65 microamperes per lumen and up \$6.00

Class R: Sensitivity 32-65 microamperes per lumen \$4.00

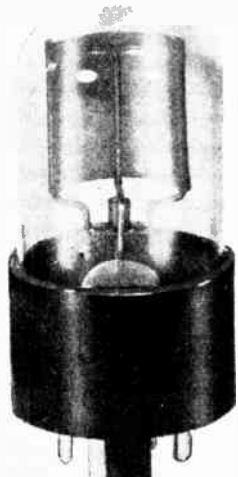
When ordering tubes state type and sensitivity desired; for instance, CE-1C.



CE-1
CE-91



CE-58-60-90



CE-59



CE-25
CE-64



CE-2-2V



CE-29

CETRON ELECTRONIC TUBES



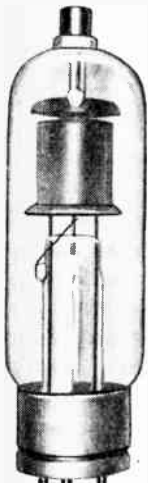
Engineered and Manufactured by Continental Electric Co., Geneva, Ill.

CETRON RECTIFIER and GRID CONTROL TUBES

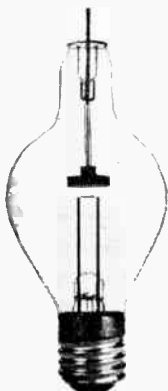
Type New No.	Old No.	Description	List Price	Data Sheet No.
CE-200A	CE-200	2 amp. full wave mercury vapor 250 volts DC with standard 4 pin base	\$ 7.75	111
CE-201A	CE-201	2 amp. full wave mercury vapor 250 volts DC with special 4 long pin base.	8.00	111
CE-202	—	15 amp. half wave mercury vapor 250 volts DC mogul Screw base	29.00	108
CE-203	—	15 amp. half wave mercury vapor 150 volts DC Mogul Screw base	10.50	104
CE-205	2-RA-5	5 amp. half wave mercury vapor 250 volts DC Mogul Screw base	12.60	105
CE-206	2-RA-6	6 amp. half wave mercury vapor 90 volts DC Mogul Screw base	4.75	106
CE-210A	CE-210	2 amp. full wave mercury vapor and gas 250 volts D.C. with standard 4 pin base.	7.75	131
CE-212A	CE-212	2 amp. half wave gas filled 60 volts DC Medium Screw Base	4.00	120
CE-213	2-RA-3	2 1/2 amp. half wave mercury vapor 600 volts DC standard 4 pin base	6.90	107
CE-215	2-RA-15	15 amp. half wave mercury vapor 75 volts DC Mogul Screw base	10.50	103
CE-220	CE-72	.020 amp. 20,000 half wave high vacuum, rect. tubes. Stand. 4 pin base	12.00	113
CE-221	4B25	6.4 amp. full wave gas filled 200 volts DC special 4 pin base	14.50	125
CE-224	4B24	2.5 amp. full wave gas filled 200 volts DC No. 412 4 pin base	9.60	124
CE-226	R-6-A	6 amp. half wave gas filled 50 volts DC Mogul Screw base	5.00	112
CE-230	3B24	.060 amp. 20,000 half wave high vacuum rect. med. 4 pin base	12.00	123
CE-235	R-15-A	15. amp. half wave gas filled 60 volts DC Mogul Screw base	10.00	109
CE-866A/866	VT-46A	.25 amp. half wave mercury vapor 10,000 peak inverse med. 4 pin base	1.75	129
CE-872A	VT-42A	1.25 amp. half wave mercury vapor 10,000 peak inverse jumbo 4 pin base	7.50	117
CE-8008	—	1.25 amp. half wave mercury vapor 12,000 peak inverse No. 4310 4 pin ind. base	7.50	128
CE-303	3C31	1 amp. grid control tube, gas filled standard 4 pin base	9.00	114
CE-304	—	12.5 amp. grid control mercury vapor 125 amp. peak current No. 4310 4 pin ind. base	59.00	119
CE-305	—	2 amp. grid control tube, gas filled, standard 4 pin base	16.40	116
CE-306	C6J	6 amp. grid control tube, gas filled, 77 amp. peak current, 4 pin base No. 412	25.00	118
CE-308	—	6 amp. grid control tube, gas filled, 40 amp. peak current, 4 pin base No. 412	25.00	122
CE-309	FG17	.5 amp. grid control tube mercury vapor 5000 peak inverse med. 4 pin base	6.50	126
CE-311	3C23	1.50 amp. grid control tube mercury and gas filled 1000 peak inverse med. 4 pin base	11.00	127
CE-393A	—	1.50 amp. grid control tube mercury and gas filled 1250 peak inverse med. octal base	11.00	127
CE-320	—	2.5 amp. grid control tube mercury vapor and gas filled 1250 peak inverse. Medium 4 pin base	14.20	134
CE-322	—	6.4 amp. grid control tube mercury vapor and gas filled 1500 peak inverse. 4 pin base No. A4-1-S	16.00	135
CE-323B	—	1.5 amp. grid control tube mercury vapor and gas filled 1250 peak inverse. Medium 5 pin base	11.00	133



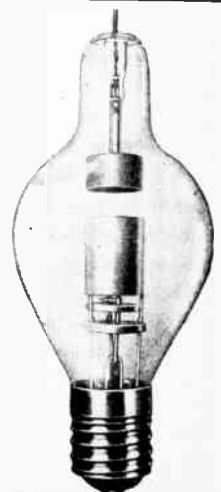
CE-202



CE-872A



CE-226



CE-203

Engineering bulletins giving detailed specifications on all tubes listed here are available and may be had upon request. The extensive engineering and manufacturing facilities which we have, make possible the development and production of many types of special tubes. If you have a problem involving the use of any CETRON tubes you are invited to consult with us. We are also prepared to make special tubes to your specifications.

WARRANTY

We guarantee all products manufactured by us to be free from all material and manufacturing defects and to give satisfactory service when operated in accordance with instructions indicated for their use.

Continental Electric Co.

ALTEC

LANSING CORPORATION

SPEAKERS

AMPLIFIERS

TRANSFORMERS

1161 N. VINE ST., HOLLYWOOD, CALIFORNIA • 250 WEST 57 STREET, NEW YORK, N. Y.

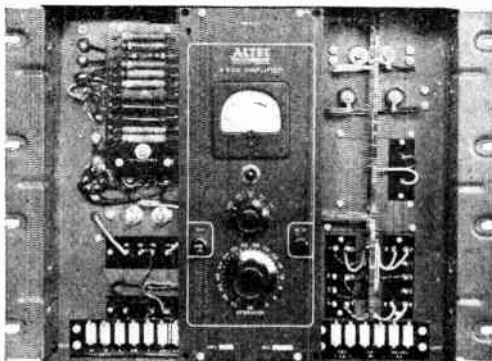
Altec Lansing A-126, A-127 and A-255 series beam power amplifiers have been designed for the most exacting demand of high quality audio frequency power. Particularly, they are adaptable for broadcasting, wired music studio equipment, premium quality public address and music distribution use, and for disc recording where particular stress is placed on having full power available at all frequencies up to 10,000 cycles for orthoacoustic pre-emphasized recording and where outside-inside high frequency equalization is used.

These amplifiers will deliver POWER within 1 db of rating from 40 to 10,000 cycles thus assuring against intermodulation distortion; when operating 3 db below rating their frequency response is uniform within 1 db from 20 to 20,000 cycles, more than adequately spanning the FCC requirements for FM transmission. Input

transformers have 90 db of shielding to allow operation near high external magnetic fields without danger of hum pickup.

These beam power amplifiers, finished in blue-grey baked enamel, are assembled on relay rack panels of recess pan construction making them adaptable for either rack or cabinet mounting. The front mat is readily removed exposing all wiring, terminals and components for quick servicing. A plate meter permits speedily checking the current of each vacuum tube, and a screw driver adjustment is provided for balancing the output tubes for optimum operation.

The A-125 amplifier has a built in equalizer with terminals which can be strapped to provide either low or high frequency boost or droop to compensate for pick-up deficiencies, transmission line losses and auditorium acoustics.



A-255 AMPLIFIER

SPECIFICATIONS

	A-126	A-127	A-255
GAIN	90 db (all models) fixed attenuation in steps of 4, 8 and 12db.	A-127 Max. 66 db for 100,000 ohm input A-127 A-B Max. 66 db for all impedances without fixed pad. A gain control of 40 db range in steps of 2 db is provided on the input.	65 db 500 ohm input. An additional input terminal is available which provides a bridging input of approximately 20,000 ohms. The gain on this tap is 37 db. A gain control of 40 db range in 2 db steps is provided on the input.
FREQUENCY RANGE	20-20,000 cycles within 1 db. Without equalization.	20-20,000 cycles within 1 db.	20-20,000 cycles within 1 db.
POWER OUTPUT	15 watts with not more than 8% intermodulation or 2% total harmonics.	15 watts with not more than 8% intermodulation or 2% total harmonics.	40 watts with not more than 8% intermodulation or 2% total harmonics. When strapped for reduced plate voltage power output 30 watts.
NOISE LEVEL	-27 dbm (ref. 0.01 watt)	-42 dbm (ref. 0.01 watt)	28 dbm (ref. 0.01 watt)
INPUT IMPEDANCE	30, 250 or 500, 600 ohms (all models)	A-127 Grid input 100,000 ohms. A-127 A-B 600, 500, 300, 250, 36, 30 ohms.	600, 500, 250, or 30 ohms (all models).
OUTPUT IMPEDANCE	10 or 20 ohms A-126 A 11, 54, 125, 220, 500 ohms. *A-126 B 500, 750, 2900, 3000 ohms.	A-127 and A-127 A, 10 or 20 ohms. *A-127 B, 3300, 2000, 750, 500 ohms.	A-255, 10 or 20 ohms. *A-255 A, 3000, 2000, 750, or 500 ohms.
POWER SUPPLY	105, 117, or 130 volts, 50-60 cycles—110 watts. Separately fused.	105, 117, or 130 volts, 50-60 cycles—110 watts. Separately fused.	105, 117, or 130 volts, 50-60 cycles—200 watts. Separately fused.
EXTERNAL SUPPLY	Provision is made to furnish 6.3 volts A.C. at 2 amps for pre-amplifier filaments and 340 volts at 8 milliamps for plate supply.	Delivers for external use 6.3 volts A.C. at 2.5 amp and 350 volts D.C. for plate supply for one pre-amplifier.	Delivers 6.3 volts A.C. for filament and 350 volts D.C. for plate supply for one pre-amplifier.
P. E. C. SUPPLY	Provides regulated and separately filtered current of 1 milliamp at 85 volts.		
TUBES	2 6J7, 1 6L5, 2 6L6G, 1 6X4, 1 5U4G.	1 6J7, 2 6L6G, 1 6L5, 1 5U4G.	1 6J7, 1 6V6, 2 807, 1 5R4GY or 1 5U4G.
PANEL EQUIPMENT	Plate Current Meter, Selector switch, A.C. fuse, A.C. switch, Pilot light.	Plate Current Meter, Selector Switch, Attenuator switch, A.C. fuse, A.C. switch, Pilot light.	Plate Current Meter, Selector Switch, Attenuator Switch, A.C. Fuse, A.C. Switch, Pilot light.
DIMENSIONS	12 1/4" high, 19" wide, 9 1/4" deep.	8 1/4" high, 19" wide, 7" deep.	14" high, 19" wide, 8 1/4" deep.
WEIGHT	39 pounds.	18 pounds.	55 pounds.
LIST PRICE INCL. VACUUM TUBES	\$333.33	A-127 \$246.67. A-127 A, and A-127 B \$280.00.	\$393.33.

* Particularly suitable for driving A-287W 250 watt Class B amplifier provided by output transformer with tertiary winding for feed back voltage.

ALTEC

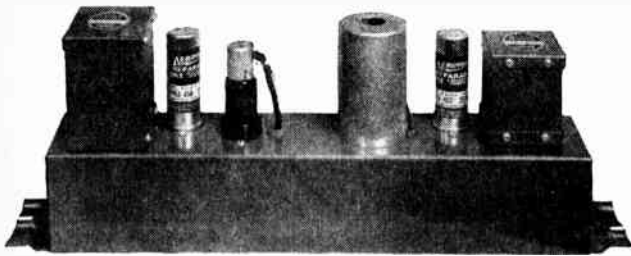
LANSING CORPORATION

SPEAKERS AMPLIFIERS TRANSFORMERS

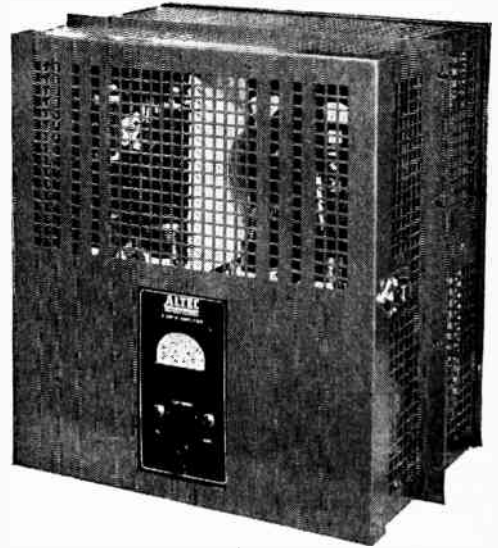
1161 N. VINE ST., HOLLYWOOD, CALIFORNIA • 250 WEST 57 STREET, NEW YORK, N. Y.

The Altec Lansing A-287 series of amplifiers are available for use where very high audio power is required. They are of the single stage push pull type with self contained power supplies and, in general, are constructed on the same lines as the A-126, A-127 and A-255 series amplifiers. Since these are strictly power amplifiers, having only 12 to 15 db gain, they must be operated from a driver amplifier such as one of the Altec Lansing A-126, A-127 or A-255 series.

These amplifiers, which are finished in blue-grey baked enamel and designed for rack mounting, are ideally suited for large auditoriums, electric organs, church chimes, skating rinks, sports fields and large industrial public address applications where audio power up to ¼ kilowatt is desired in one package.



A-420 PRE AMPLIFIER



A-287 F OR W AMPLIFIER

The Altec Lansing A-420 is a two stage fixed gain low level pre-amplifier designed to operate into the Altec Lansing A-126, A-127 and A-255 series of amplifiers from which it obtains its filament and plate supply. It is intended as a pre amplifier for microphone, photograph pick-ups and other low level signals. The input transformer has 90 db of

magnetic shielding so as to permit hum free operation when mounted on racks in close proximity to power equipment having high tray magnetic fields. This amplifier, which is finished in blue-gray baked enamel, is assembled on a relay rack panel of recess construction so that it can be readily mounted on a rack or in a cabinet.

SPECIFICATIONS

	A-287F	A-287W	A-420
GAIN	15 db from all input impedances.	Approximately 12 db from 3,000 ohm impedance driver	Normal 12 db, High 49 db.
FREQUENCY RANGE	20-20,000 cycles within 1 db.	100-10,000 cycles within 1 db.	20-20,000 cycles within 1 db.
POWER OUTPUT	75 watts with less than 5% intermodulation (2% total harmonic distortion). When strapped for reduced plate voltage power output 50 watts.	250 watts (5% total harmonics) Class B.	2 dbm (0.01 watt ref.)
NOISE LEVEL	22 dbm (0.01 watt ref.)	21 dbm (0.01 watt ref.)	77 dbm (0.01 watt ref.)
IMPEDANCE	Input 11, 55, 125, 220 and 500 ohms. The internal output impedance of the amplifier is 18, 9, 4.5 and 2.25 ohms depending upon input impedance. These impedances are intended to work into loads of 24, 18, 12, 24, 6, 12, and 3 ohms. Maximum power is obtained when the amplifier works into 30, 18, 9 and 4.5 ohms.	Input Use driver amplifier having minimum undistorted output of 15 watts and having an output impedance of 3,000 ohms with center tap output. Taps to work into loads from 2.25-40 ohms.	Input -30, 36, 250, 300, 500, 600 ohms. Output -500, 500, 300, 250, 150, 125, 75, 62.5 ohms.
POWER SUPPLY	195-117-130 volts - 50-60 cycles - 100 watts internally fused.	195-117-130 volts - 50-60 cycles - 700 watts - internally fused.	Requires 6.3 volts at 0.6 amp, 325 volts D.C. at 6 ma.
WEIGHT	111 pounds.	141 pounds.	12 pounds.
AMPLIFIER TUBES	2 - 845 or 281	2 - 805	2 - 4J7.
RECTIFIER TUBES	2 - 866A	2 - 866A	
PANEL EQUIPMENT	Plate Current Meter, Push Button Selector Switches, Fil-plate Switch	Plate Current Meter, Push Button Selector Switches, Fil-plate Switch	
DIMENSIONS	19 1/4" high, 19" wide, 12 1/2" deep.	19 1/4" high, 19" wide, 12 1/2" deep.	3 1/2" high, 19" wide, 7" deep.
LIST PRICE INCLUDING VACUUM TUBES	\$794.67.	\$913.33.	\$166.67.

ALTEC

LANSING CORPORATION

SPEAKERS AMPLIFIERS TRANSFORMERS

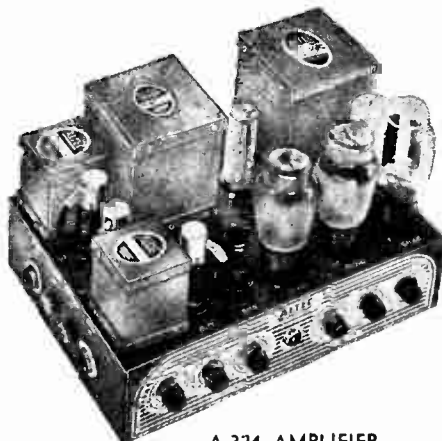
1161 N. VINE ST., HOLLYWOOD, CALIFORNIA • 250 WEST 57 STREET, NEW YORK, N. Y.



A-323B AMPLIFIER

The A-323B is a portable conventional chassis type general-purpose amplifier designed for high quality reproduction of sound, music, and speech from records, radio and microphone. It is engineered and manufactured to meet the high quality standards required of an amplifier when used in conjunction with Altec Lansing speakers.

The outstanding features are: (1) Full rated POWER output within 1 db from 35 to 12,000 cycles. (2) Hum balancing potentiometer to eliminate necessity of careful selection of tubes for quiet operation. (3) Two inputs with selector switch for high and low gain. (4) Continuously variable low frequency tone control. (5) High frequency equalization through use of a stepped controlled low pass filter which gives sharp cutoff of noise frequencies yet allows full reproduction of usable high frequencies. Operation of this low pass filter is quite different from customary treble tone control and is only available generally on the most expensive amplifiers. (6) Equalization for phonograph pickup in the first amplification stage designed primarily for the new General Electric variable reluctance or Pickering pickup but which also meets the requirements of other types of reproducers for the reproduction of commercial recordings. This phonograph equalization which is not in the low gain input circuit for radio, can be removed by unsoldering a strap when a microphone is used on high gain phonograph input for P.A. work. This leaves a flat frequency response that can be varied by means of the bass and treble tone controls.



A-324 AMPLIFIER

The Altec Lansing A-324 Amplifier is a portable 15 watt Public Address amplifier designed for use in high quality public address and music systems.

The outstanding features of this amplifier are: (1) FLAT frequency response ± 1 db from 20 cycles to 20,000 cycles (when tone controls are set for flat response). (2) Delivers full rated POWER within 1 db from 35 cycles to 12,000 cycles. (3) TWO high gain low impedance microphone inputs with individual volume controls on each input for mixing purposes. (4) TWO low gain high impedance inputs for AM or FM tuner, crystal phonograph pickup or high impedance microphone. These two inputs have a dual "fade" type volume control which allows fading smoothly from one input to the other. (5) Bass control gives flat bass response or continuously variable bass boost of 12 db at 50 cycles. When set at "FA" position, the bass response of the low impedance microphone inputs is attenuated to eliminate "boominess" due to improper microphone technique. (6) Continuously variable treble attenuator from flat response. (7) Microphone input transformers have electrostatic shield between primary and secondary, and 90 db of magnetic shielding—eliminating hum pickup from stray magnetic fields. (8) Extra AC power socket on chassis for connecting radio tuner or record player. (9) Pilot lamp jewel indicates when amplifier is in operation.

The Altec Model A-324 Amplifier is a professional amplifier, constructed of heavy duty parts and is designed for continuous service. Finish is grey crackle with chrome operating control panel.

SPECIFICATIONS

	A-323B	A-324		A-323B	A-324
GAIN	117 db (phono input) 77 db (radio input)	103 db (mic. #1 input) 103 db (mic. #2 input) 72 db (phono inputs #1 & #2)	OUTPUT IMPEDANCE	2.5-5, 8-12, 16-24 ohms	2.5-5, 8-12, 16-24 ohms
GAIN CONTROL	Continuously variable	Continuously variable. Individual controls for microphone inputs. Dual fader type control for phono inputs.	POWER SUPPLY	110-125 V. AC, 50-65 cycles 110 watts	110-125 V. AC, 50-60 cycles
FREQUENCY RESPONSE	20-20,000 cycles ± 1 db	20-20,000 cycles ± 1 db	TUBES USED	2-6J7, 1-6J5, 2-6L6G, 1-6U4G. Tubes furnished with amplifier	3-6J7, 1-6J5, 2-6L6G, 1-6U4G. Tubes furnished with amplifier
POWER OUTPUT	15 watts (+34 db, .006 watts reference)	15 watts (+34 db, .006 watts reference)	DIMENSIONS	9" x 12" x 9" high including cover	9" x 12" x 9" high including cover
POWER CHARACTERISTICS	Delivers full power within 1 db from 35 to 12,000 cycles	Delivers full power within 1 db from 35 to 12,000 cycles.	WEIGHT	12 lbs.	14 lbs.
DISTORTION	No more than 2% total harmonics—less than 8% INTERMODULATION at 15 watts output	No more than 2% total harmonics—less than 8% intermodulation at 15 watts output	FINISH	Dark Grey Crackle Chrome Operating Panel	Dark Grey Crackle Chrome Operating Panel
NOISE LEVEL	-30 db (.006 watts reference) high gain input; -50 db (.006 watt reference) low gain input	-25 db (.006 watt reference) microphone input -45 db (.006 watt reference) phono input	LIST PRICE	\$177.32 (price includes excise tax)	\$240.00 no excise tax
INPUT IMPEDANCE	Both inputs, phono and radio, are 500,000 ohms	Microphone #1 30-250-500/600 ohms Microphone #2 30-250-500/600 ohms Phono #1 and #2 500,000 ohms	ACCESSORIES	Input connector plugs supplied with amplifier. 10349 Carrying cover must be ordered as a separate item. List price—\$11.33	Input connector plugs supplied with amplifier. 10349 Carrying Cover must be ordered as a separate item. List price—\$11.33

Thank You!

When writing for additional
information or when ordering
from sources of supply listed
in this book, please mention

RADIO'S MASTER

BELL SOUND EQUIPMENT

Through years of satisfactory performance, recorded throughout the world by all classes of users, Bell Sound Equipment has proved its own high standards of quality and design leadership. A reputation for "sound" advancement that continues to grow.

As typified by the latest equipment described in the following pages, Bell Engineers have not only made effective utilization of the newest advances in the science of sound control, but also have offered technical advances resulting from their own research.

... ingenuity that enabled Bell to lead the way in modern sound equipment styling—to introduce improvements in circuit design that have enriched the quality and fidelity of amplified sound—to play a leading roll in introducing inexpensive, high-quality recording equipment—and to be one of the first to bring dependable inter-communication equipment into the low-price ranges.

Every Bell Sound System is designed to make sound amplification universally practical; to bring quality sound equipment

well within the reach of everyone who needs it. Bell Systems feature such remarkable ease, convenience, and simplicity of operation that excellent results can be obtained by any novice without special instruction or technical knowledge.

As the finished product readily reveals, Bell Equipment is built to the highest standard of precision in one of the most modern, best-equipped plants in the industry. Every unit is thoroughly tested and certified by expert technicians. Distribution is then made through jobbers and dealers known to be thoroughly reliable, capable of making correct recommendations, and fully equipped to offer complete service.

Although the extensive line of Bell Equipment covered in this catalog meets most requirements, Bell is prepared to build a wide range of special or tailor made equipment—either for industrial use or in quantities for other manufacturers to use as part of their product. Therefore, if you desire sound or amplification equipment of practically any description, write for detailed, special recommendations. They will be furnished promptly without obligation.

Bell has the "Sound" Answer

All Specifications and prices in this Catalog subject to change without notice.

Bell Amplifiers and Inter-Communication Systems are Licensed Under U. S. Patents of American Telephone and Telegraph Company and Western Electric Company, Incorporated.

BELL SOUND SYSTEMS, Inc.
Columbus 7, Ohio, U. S. A.

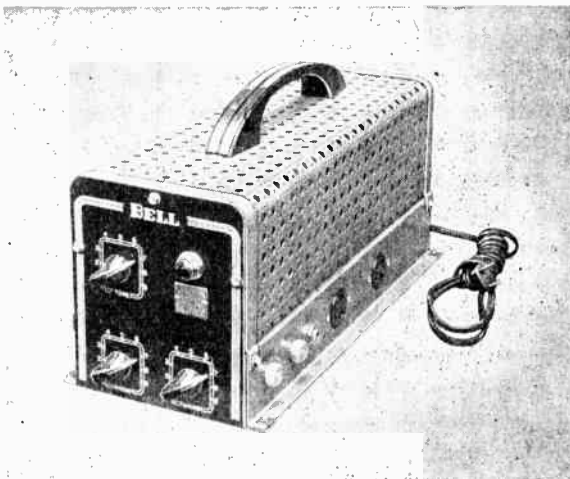
BELL AMPLIFIERS

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10 WATT AMPLIFIER

Model 3710



An ultra-modern 10 watt Amplifier ideal for many uses! It has incorporated in its construction, beam power, push-pull output tubes and has a rated output of 10 watts, with a peak of 12 watts. Harmonic distortion is decreased and the Amplifier is stabilized by inverse feedback. Three inputs are provided; microphone, phonograph and musical instrument such as an electrical guitar. Two volume controls are provided that permits the operator to mix the microphone and phonograph or instrument. The modern design of the cabinet with its large "man size" plastic handle provides the maximum in portability.

- Extremely Portable.
- Three Input Circuits.
- Modern Compact Design.
- Rugged Construction.
- Push-Pull Output.
- Easily Removable Top.
- Inverse Feedback Stabilizer.

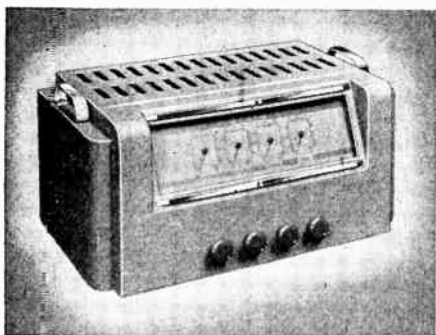
SPECIFICATIONS Model 3710

Power Output: 10 Watts at Less than 8%. Peak Power 12 Watts.
Freq. Response: Plus or Minus 2 db. 40 to 15000 cycles.
Overall Gain: Microphone Channels 108 db; Phono Channel 70 db.
Hum Level: —60 db Below Rated Output.
Inputs: 1 Microphone; 1 Phonograph; 1 Instrument.
Input Imped: Micro & Inst. Channels 10 Megs.; Phono Channel 1 Meg.
Controls: 1 Micro. Vol. Cont.; 1 Phono Vol. Cont.; 1 Tone Cont. W/AC SW.
Output Imp: 4; 8; 15 ohms.
Power Cons: 80 Watts, 117 Volts, 50-60 Cycles.
Tubes: 1—6SJ7; 1—6SL7GT; 2—6V6GT; 1—5Y3GT.
Dimensions: 14" Deep; 7¾" High; 6¼" Wide.
Shipping Weight: 14 lbs.

BELL AMPLIFIERS

15 WATT AMPLIFIER

Model 3715



- Three Input Circuits.
- Illuminated Control Panel.
- Beam Power Output Tubes.
- Simplified Operation.
- Exceptional Tone Quality.

This amplifier is as fine in performance as it's functional and modern design suggests. The beautiful gray and silver case, with it's illuminated, full-view control panel, is high lighted by distinctive red plastic control knobs. The amplifier has an undistorted output of 15 watts with a peak of 18 watts. It utilizes push-pull beam power output tubes, inverse feedback that reduces harmonic distortion, and has three input channels with separate volume controls that permit mixing of two microphones and a phonograph simultaneously.

SPECIFICATIONS

Model 3715

Power Output: 15 Watts at less than 5% Peak Power 18 Watts.
Freq. Response: Plus or Minus 1 db. 30 to 13,000 Cycles.
Overall Gain: Microphone Channels 120 db.; Phono Channel 87 db.
Hum Level: -63 db. Below Rated Output.
Inputs: 2 Microphone; 1 Phonograph.
Input Imped: Microphone Channels 10 Megs; Phono Channel 1/2 Meg.

Controls: 2 Microphone Volume Controls; 1 Phono Volume Control; 1 Tone Cont. W/AC Switch.
Output Imp: 2.5; 4; 8; 15; 250; 500 ohms.
Power Cons: 100 Watts; 117 Volts; 50-60 Cycles.
Tubes: 2-7B7; 1-6SF5; 1-6N7; 2-6V6G; 1-5U4G.
Dimensions: 11 1/2" Deep; 8" High; 16 1/2" Wide.
Shipping Weight: 32 lbs.

25 WATT AMPLIFIER

Model 3725

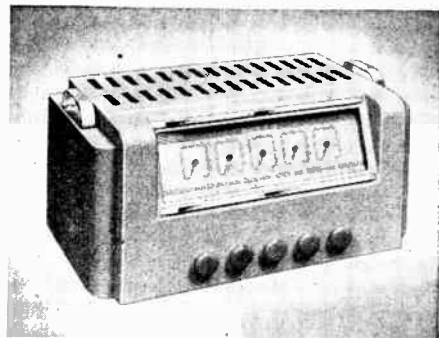
An ideal Amplifier of medium wattage. This seven tube model has proven to be one of the most popular units that Bell has ever manufactured. For a good all around amplifier of medium price it cannot be beaten. Experienced engineering and time proven circuits has made it one that thousands of users rely on day in and day out for continuous satisfactory service. The Model 3725 is truly the "Work Horse" of Bell's entire amplifier line.

SPECIFICATIONS

Model 3725

Power Output: 25 Watts at Less than 5%. Peak Power 33 Watts.
Freq. Response: Plus or Minus 2 db. 50 to 18,000 Cycles.
Overall Gain: Microphone Channels 122 db.; Phono Channel 89 db.
Hum Level: -65 db. Below Rated Output.
Inputs: 2 Microphone; 1 Phonograph.
Input Imped: Micro. Channels 10 Megs; Phono Channel 1/2 Meg.
Controls: 2 Microphone Volume Con-

trois; 1 Phono Vol. Control; 1 Bass Tone Cont.; 1 Treble Tone Cont. W/AC Sw.
Output Imp: 2.5; 4; 8; 15; 250; 500 ohm.
Power Cons: 150 Watts; 117 Volts; 50-60 Cycles.
Tubes: 2-7B7; 1-6SF5; 1-6N7; 2-6L6G; 1-5U4G.
Dimensions: 11 1/2" Deep; 8" High; 16 1/2" Wide.
Shipping Weight: 38 lbs.



- Treble and Bass Boost.
- Ultra-Modern Design.
- Three Input Circuits.
- Illuminated Control Panel.
- Built to Last—Easy to Service.

50 WATT AMPLIFIER

Model 3750

This unit offers "powerhouse" performance with sufficient wattage to cover 90% of all commercial sound requirements. It has power to spare and has been designed for the ultimate in flexibility and operation. Three microphones and a phonograph can be simultaneously mixed by the operator. New tone control circuits, operating in an inverse feedback network, provide extremely wide tone adjustments with greatly reduced distortion. For example, the Bass Control is adjustable from flat response to plus 10 db or to minus 20 db and the treble control from plus 8 db to minus 22 db, 30 db overall.

SPECIFICATIONS

Model 3750

Power Output: 50 Watts at Less than 5%. Peak Power 88 Watts.
Freq. Response: Plus or Minus 1 db., 30 to 15,000 Cycles.
Overall Gain: Microphone Channels 125 db.; Phono Channel 90 db.
Hum Level: -67 db. Below Rated Output.
Inputs: 3 Microphone; 1 Phonograph.
Input Imped: Microphone Channels 10 Megs; Phono Channel 1/2 Meg.
Controls: 3 Microphone Volume Controls; 1 Phono Volume Control, 1 Bass Tone Cont; 1 Treble Tone Cont. W/AC Switch.

Output Imp: 2.5; 4; 8; 15; 250; 500 ohms.

Power Cons: 260 Watts; 117 Volts; 50-60 Cycles.

Tubes: 3-7C6; 3-6SC7; 1-6SN7; 2-6L6G; 1-5U4G; 1-5R4GY; 1-5V4G.

Dimensions: 16 1/2" Deep; 8" High; 16 1/2" Wide.

Shipping Weight: 62 lbs.

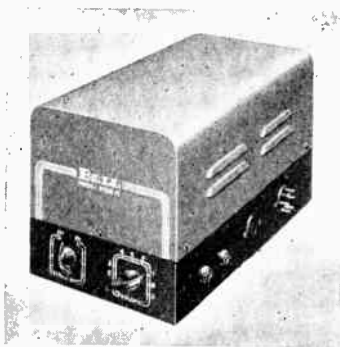
Model 3750-R same as above but provided with a relay to permit remote operation of "B" supply.



- Rugged Construction.
- Four Inputs.
- Bass and Treble Boost.
- Available for Remote Standby Operation.
- Excellent Frequency Response.

BELL MOBILE AMPLIFIERS

6 WATT MOBILE AMPLIFIER Model 3706-M



- Phono & Micro Inputs.
- Chassis Removable for Servicing.
- Fits under most dashboards.
- Battery Stand-by Switch.

Here is a brand new addition to the time-proven Bell line of amplifiers. A compact, rugged and amazingly efficient low wattage mobile amplifier. It was especially designed for use by Municipal Police and Fire Departments, Safety Patrols, Traffic Control and outdoor audible advertising. The tubes and vibrator can be inspected or changed without disturbing the installation because the chassis and front panel are so constructed that they easily slide out of the case. In an emergency a whole new spare unit can be inserted in the case. It will operate on 6 volts DC or 117 volts 60 cycles and is provided with a standby switch to conserve battery drain. It comes complete with two cables. Any high impedance microphone can be used with this amplifier.

SPECIFICATIONS Model 3706-M

Power Output: 6 Watts at Less than 5%
Peak Power 8 Watts.
Freq. Response: Plus or Minus 2 db., 60 to 15,000 Cycles.
Overall Gain: Microphone Channel 112 db.; Phono Channel 75 db.
Hum Level: -60 db. Below Rated Output.
Inputs: 1 Microphone; 1 Phonograph.
Input Imped: Microphone Channel 10 meg.; Phono Channel 1 meg.

Controls: 1 Microphone and Phono Volume Control with Power Switch; 1 Battery saver stand-by switch.
Output Imp: 4; 8; 15 ohms.
Power Cons: 45 Watts; 117 Volts; 60 Cycles; 8 Amperes; 6 Volts D.C.
Tubes: 1-6SJ7; 1-6SN7; 1-6L6; 1-6X5GT.
Dimensions: 10" Deep; 6½" High; 5½" Wide.
Shipping Weight: 15 lbs.

25 WATT MOBILE AMPLIFIER Model 3723-M

This unit is another new member of the Bell line of Amplifiers. It is a medium wattage mobile Amplifier of the most modern design. It has a microphone input and a built-in phono unit. The volume of both the microphone and phono are individually controlled and in addition, a tone control is provided to permit individual selection or adjustment of the bass or treble response. There is also a stand-by switch provided to turn off the "B" supply while the filaments remain heated. This permits economical operation and extends the life of the battery power supply.

SPECIFICATIONS Model 3723-M

Power Output: 25 Watts at Less than 5%. Peak Power 38 Watts.
Freq. Response: Plus or Minus 2 db. 30 to 15,000 Cycles.
Overall Gain: Microphone Channel 115 db.; Phono Channel 82 db.
Hum Level: -60 db. Below Rated Output.
Inputs: 1 Microphone; 1 Phonograph.
Input Imped: Microphone Channel 10 meg.; Phono Channel ½ meg.
Controls: 1 Microphone Volume Control; 1 Phono Volume Control; 1

Tone Control W AC Switch, 1 Standby Switch, 1 Phono motor off-on switch.
Output Imp: 2.5; 4; 8; 15; 250; 500 ohms.
Power Con: 115 Watts; 117 Volts 60 Cycles; 19 Amperes; 6 Volts D.C.
Tubes: 1-7B4; 1-6C5; 1-6SN7; 2-6L6; 2-6X5GT.
Dimensions: 11½" Deep; 10" High; 16½" Wide.
Shipping Weight: 40 lbs.



- Built in Phono unit.
- Standard Bell Cabinet.
- Illuminated Control Panel.
- Remote Drive on Controls.
- Heavy Steel Construction.

30 WATT MOBILE AMPLIFIER Model 3728-M



- Astatic AB-8M Mobile Pickup.
- Circuit Breaker Protection on 6 volts.
- Bass Boost and Treble Compensators.
- Power Economizer Switch.
- Three Input Channels.
- Heavy Duty Dual Vibrator.

One of the most completely satisfying mobile Amplifiers ever offered for general use. The "Moto-Master" combines a 30-watt amplifier of tone and quality, with a phono pickup of new design, that plays all 12" and smaller records. Market research proves it's capacity is more than ample for the majority of needs.

This high gain unit operates on either a 6 volt DC storage battery or 117 volt 60 cycle AC line current. Conversion from one type of current to another is achieved by simply removing one plug and inserting the other. Current consumption on battery is reduced by a power economizer switch. High fidelity; improved wide range tone controls; beam power output tubes; and two microphones inputs and one phono input, each with separate volume controls are features of the "Moto-Master".

Turntable speed of 78 r.p.m. New type crystal pickup stays "in the groove."

SPECIFICATIONS Model 3728-M

Power Output: 30 watts at Less than 5%.
Peak Power 45 Watts.
Freq. Response: Plus or Minus 2 db. 50 to 14,000 Cycles.
Overall Gain: Microphone Channels 120 db.; Phono Channel 84 db.
Hum Level: -60 db. Below Rated Output
AC: -58 db. on DC.
Inputs: 2 Microphone; 1 Phonograph.
Input Imped: Microphone Channels 10 Meg.; Phono Channel 1 Meg.
Controls: 2 Microphone Volume Controls;

1 Phono Volume Control; 1 Bass Tone Cont; 1 Treble Tone Cont. with Power Switch; 1 Stand by Switch; 1 Phono OFF-ON Switch.
Output Imp: 2.5; 4; 8; 15; 250; 500 ohms.
Power Cons: 22 amp., 6 volts DC; 120 watts; 117 volts; 60 Cycles.
Tubes: 1-7Y4; 2-7Z4; 3-7B4; 1-6SL7; 2-6L6GA.
Dimensions: 16½" Deep; 10" High; 16½" Wide.
Shipping Weight: 60 lbs.

BELL P.A. SYSTEMS

10 WATT PHONO-PA SYSTEM Model PA-3710-P



The Bandmaster

- A truly complete P. A. System.
- Self-contained Phono Unit.
- 10 Watts Undistorted Output.
- Musical Instrument Input.
- All in one three piece case.
- Inverse Feedback Stabilizer.
- Beam Power Output Tubes.
- Three Input Channels.
- Portable and easy to carry.

In quality, performance and economy, the Bell "BAND-MASTER" is one of the most completely satisfactory phono P.A. systems ever offered for general use. It will delight the emcee whether he be professional or amateur and is the neatest "package" of "sound value" ever offered in the low price field. One compact, easily carried system provides all the facilities for covering any medium-sized auditorium with public address, recordings or original music by voice or instrument for all occasions.

Design flexibility allows for simultaneous use of all 3 inputs when wanted. Exceptionally fine tone is provided by the 10 watt amplifier which utilizes beam power push-pull output tubes. Inverse feedback minimizes distortion and stabilizes the amplifier. The phono-motor and crystal pickup are of high quality.

The tone control assures pleasing reproductions of all recordings.

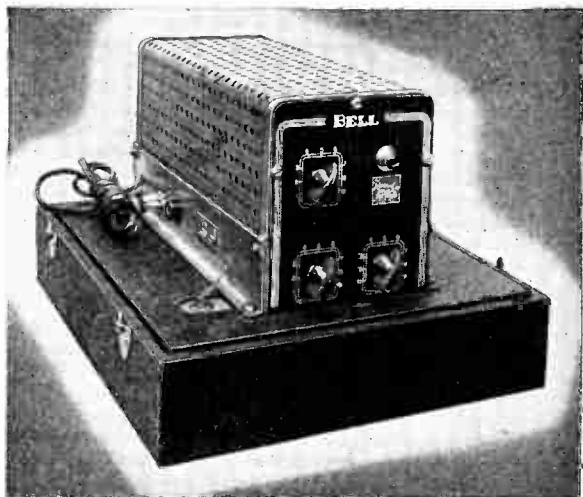
The complete system consists of three sections—the amplifier-phono unit and the two 10" heavy duty speaker housings—which, when assembled for transportation form a single, compact carrying case. The case is covered with attractive Bell-gray simulated leather.

The phono turntable is protected from harm when carrying or when not in use by being cleverly concealed, out of range of the curious, on the bottom side of the amplifier base, as pictured below. It is instantly available by simply reversing the amplifier base, even while in operation. Another pioneering achievement by Bell!

Showing how the turn-table is protected in the bottom portion of the carrying case when not being used.

SPECIFICATIONS Model PA-3710-P

- Amplifier: 3710 See Page 2.
- Speakers: 2-10" Heavy Duty P.M.
- Cables: 2-25' Type SV with Plugs.
- Phono Equipment: 78 RPM Turntable with Crystal Pickup.
- Microphone: JT-30 (see page 18) with desk type stand.
- Microphone Cable: 15' Shielded Rubber with Connector.
- Microphone Stand: Furnished with Micro.
- Case: Model 3710, 3 piece Portable.
- Dimensions: 12" Deep; 18½" High; 15¾" Wide.
- Shipping Weight: 50 lbs.



BELL P.A. SYSTEMS

15 WATT Single Case PA SYSTEM

Model PA-3715-E



The Speech - Master

- Three Input Channels.
- 15-Watts Undistorted Output.
- Illuminated Control Panel.
- Twin Heavy Duty Speakers.
- Complete System in One Case.
- Modern Design.
- Soundly Engineered.
- Inverse Feedback Network.
- Convenient Angle-Set Dials.

Traditionally accepted as the outstanding Public Address "sound" value in the medium wattage class, the Bell "Speech-Master" is winning new friends with its remarkable quality of performance, fidelity of tone, refined appearance, package-portability and simplified operation.

Ingenious design permits the incorporation of such features as: Bell amplifier with undistorted 15-watt output, peak 18 watts; push-pull beam power output tubes; inverse feedback that reduces harmonic distortion, three input channels with separate volume controls that permit mixing of two microphones and a phono pickup.

The beautiful gray and silver amplifier case with its illuminated, full-view control panel is high-lighted by distinctive red plastic control knobs. The two 10-inch high quality permanent magnet speakers, amplifier, microphone and necessary cables are all housed in a compact three-piece case. The dark gray simulated leather-covered case pleases the most exacting users.

Bell's true-rating of 15 watts is conservative to the point of modesty. The "Speech-Master" challenges comparison with any contemporary product in or near its price range. See and hear for yourself the superior features of the "Speech-Master."

This system is truly a portable system. Everything is complete in one package. The unit can be set up and ready to operate in an extremely short time. Just plug in the speakers, attach the microphone and insert the power plug into any 117-volt, 50-60 cycle AC socket and you are ready to operate. So simple that the most inexperienced person can set up the system and operate it with professional results.

SPECIFICATIONS

Model PA-3715-E

Amplifier: 3715 (See page 3).
Speakers: 2-10" Heavy Duty P.M.
Cables: 2-25' Type SV with Plugs.
Built-in Phono Equipment: None.
Microphone: JT-30 with desk-type stand (See page 18).
Microphone Cable: 15' Shielded Rubber with Connector.
Microphone Stand: Furnished with Micro.
Case: Model 15 Three pc. (See page 18).
Dimensions: 13 $\frac{3}{4}$ " Deep; 19 $\frac{3}{4}$ " High; 17 $\frac{3}{4}$ " Wide.
Shipping Weight: 62 lbs.

Model PA-3715

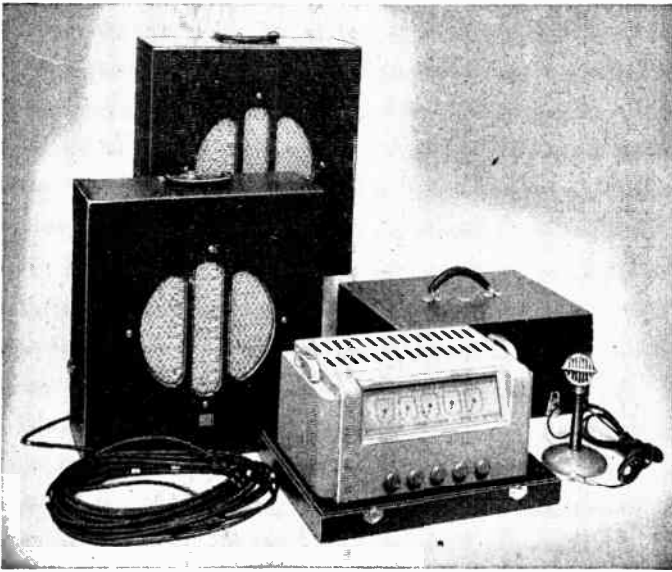
Same as Model PA-3715-E except with Model 20 Micro Stand (See page 18) and choice of Models T-3, D-8-T, or DN-HZ microphones with 25' cables and connector. Unless specified Model T-3 will be supplied.

Model PA-3715-D

Same as Model PA-3715-E except with Model 20 Micro Stand and Model 950 microphone with 25' Cable and Connector.

25 WATT Duo-Case PA SYSTEM

Model PA-3725-E



The Old-Master

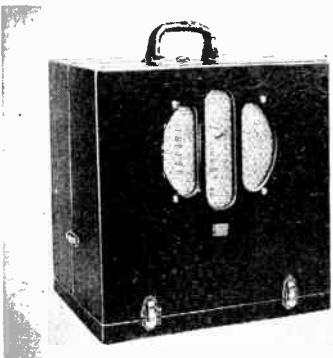
- Bell True-Rated 25 Watt Output.
- Electronic Bass Boost.
- Electronic Treble Boost.
- Inverse Feedback.
- Inclined Illuminated Dials.
- Indirect Driven Dial Pointers.
- Three Separate Input Controls.
- Smart, Modern Design and Finish.
- Compact and Rugged Construction.

Here is an amplifying system in a very popular wattage, with an impressive list of the most desirable features. Though inexpensive, compact and light in weight, it provides ample distortion-free volume to serve a wide range of applications.

Push-pull beam power output tubes in a highly efficient, thoroughly proved circuit, permit an undistorted output of 25 watts, with peak power of 30 watts. Through an inverse feedback stabilizer, harmonic distortion is minimized, the amplifier is well stabilized, and wave form is improved on low frequencies. Also, by properly adjusting the bass boost and treble compensators, feedback difficulties caused by varying acoustics in different locations, are greatly reduced.

The two electronic tone controls afford a wide range of tone selection, and separate controls for all three channels permit any combination or mixture of volume between two microphones and a phono pickup. A tap impedance switch is another feature, and a wide choice in microphones are offered.

The gray finished amplifier housing is striking in design, and contrasts effectively with the deep red of the Control knobs. The illuminated dial panel is set at an angle, for easier view, and the pointers are operated by indirect drive.



Model PA-3725-U
Left: Illustrates Model PA-3725-U closed into single carrying case. Same as Model PA-3715-E (See page 6) except with Model 3725 amplifier instead of Model 3715. Shipping Weight, 68 lbs.

SPECIFICATIONS

Model PA-3725-E

- Amplifier:** 3725 (See Page 3).
Speakers: 2-12" Heavy Duty P.M. with Line Matching Trans.
Cables: 2-50' Type SV with Plugs.
Built-in Phono Equipment: None.
Microphone: JT-30 with desk type stand (See Page 18).
Microphone Cable: 15' Shielded Rubber covered with Connector.
Microphone Stand: Furnished with Micro.
Case: 1 Model 95. 1 Model 14-A (See Page 18).
Dimensions: Model 14-A, 13½" Deep; 10¼" High; 18" Wide.
Model 95, 10¼" Deep; 19¾" High; 19" Wide.
Shipping Weight: Complete System, 90 lbs.

Model PA-3725

Same as Model PA-3725-E except with Model 20 Micro Stand (See page 18) and choice of Models T-3, D-8-T, or DN-HZ microphone with 25' cable and connector. Unless specified Model T-3 will be supplied.

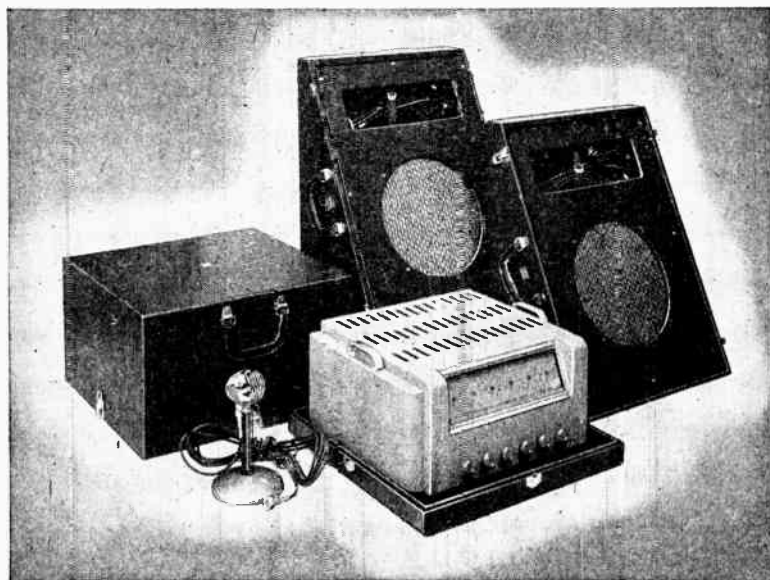
Model PA-3725-D

Same as Model PA-3725-E except with Model 20 Micro Stand and Model 950 microphone with 25' Cable and Connector.

BELL P.A. SYSTEMS

50 WATT Duo-Case PA SYSTEM

Model PA-3750-E



The Sound-Master

- Four Inputs—Separate Controls.
- Electronic Bass Boost.
- Electronic Treble Boost.
- Inverse Feedback.
- Available for remote stand-by operation.
- Inclined Illuminated Control Panel.
- Infinite Baffle Type Speaker Case.
- Exceptional Tonal Qualities.
- Sturdy—Built to Last.

This is one of the finest and most powerful portable public address systems on the market today. It has been designed to meet every type of application for indoor or outdoor use where high fidelity and dependable operation are a must! Whenever you have a high noise level to overcome, such as a roller skating rink or a small stadium, this unit, is ideal and has more than ample power or output to give complete coverage.

The extra heavy duty twelve inch P.M. Speakers are mounted in a separate carrying case which is a diagonally split case of the infinite baffle type. The amplifier is our famous "Soundmaster" Model 3750. Complete specifications on the Model 3750 are shown on page 3. The speakers used are Jensen P-12-Q or equal with universal line matching transformers. Plug-in fifty foot speaker cables connect the speakers to the ampli-

fier or one speaker may be plugged into the amplifier and the other speaker or additional speakers may be plugged into the outlet provided on each speaker housing. This permits connecting a number of speakers in parallel with only one speaker cable entering the amplifier. Both male and female receptacles or sockets are provided on each half of the speaker case for this purpose. The fifty foot cables have a plug on one end and a socket on the other and are carried in the speaker housings by means of a strap that is provided.

All of the 50 watt systems are available for remote operation. In other words, only the filaments are energized while the amplifier is idling. By use of a "grip to talk" micro stand or a foot pedal switch, the "B" supply can be turned on from a remote point or at the amplifier.

SPECIFICATIONS

Model PA-3750-E

Amplifier: 3750 (See page 3).
Speakers: 2-12" P-12-Q PM or equal with Line Matching Trans.
Cables: 2-50' Type SV with plugs.
Built-in Phono Equipment: None.
Microphone: JT-30 with desk type stand (See page 18).
Microphone Cable: 15' Shielded Rubber covered with Connector.
Microphone Stand: Furnished with Micro.
Case: 1—Model 14-B; 1—Model 93 (See page 18).
Dimensions: Model 14-B, 18 $\frac{1}{4}$ " Deep; 12 $\frac{1}{4}$ " High; 18" Wide.
Model 93, 14 $\frac{3}{4}$ " Deep; 18" High; 22" Wide.
Shipping Weight: 109 lbs. complete.

Model PA-3750

Same as Model PA-3750-E except with Model 20 Micro Stand (See page 18), and choice of Models T-3, D-8-T, or DN-HZ microphones with 25' cable and connector. Unless specified Model T-3 will be supplied.

Model PA-3750-D

Same as Model PA-3750-E except with Model 20 Micro Stand and Model 950 microphone with 25' Cable and Connector.

Note: If amplifier in above systems is to have remote stand-by operation, add the letter R to model number.

BELL PHONO-P.A. SYSTEMS

25 WATT PHONO-PA SYSTEM Model 2078 The School-Master



The Bell "Schoolmaster" has been received with great public acclaim. This unit has proven extremely popular with institutions and schools throughout the country. One city school system has over one hundred of these units in operation.

Practically every need for high quality public address and music coverage is met with this system. With its governor-controlled, two speed motor and professional type tone arm, it will give excellent reproduction of lateral cut records from 6" to 16".

For auxiliary equipment, the Model 98 (see page 18) speaker has been designed. This unit is identical with the speaker portion or top half of the model 2078 and comes complete with a P-12-Q speaker or equal, line matching transformer, fifty foot speaker cable and plug. Bell models 93 and 95 (See page 18) complete with speakers are also recommended for use with this equipment.

SPECIFICATIONS Model No. 2078

Amplifier: 3725 (See page 3).
Speakers: 1—12" P-12-Q or equal Heavy Duty P.M.
Cables: 25' Type SV with plug.
Phono Equip: Built-in 2-Speed (78-33½ RPM) Motor; Type HP-16 Tone Arm.
Microphone: JT-30 with desk type Stand (See page 18).
Microphone Cable: 15' Shielded Rubber covered with Connector.

Microphone Stand: Furnished with Micro. Case: Model 2078.
Dimensions: 19" Deep; 13¼" High; 19¾" Wide.
Shipping Weight: 73 lbs.

Model 2078-CH

Same as Model 2078 except with Webster 56 Changer in place of transcription unit.



5 WATT PHONO-PA SYSTEM Model 2079

The Model 2079 transcription phono and public address system is the ideal unit for Schools, Broadcasting Stations, Advertising Agencies, Sales Meetings, Training Programs and numerous other uses. This convenient portable unit is complete with dual speed (33½—78 RPM) governor controlled, heavy duty motor and professional type tone arm. It will reproduce with excellent clarity and fidelity all records from 6" to 16".

The unit has two microphone input connections wired in parallel. One control adjusts the volume of both. Any high impedance microphone may be used with excellent results with this system.

The Model 2079-CH is identical with the Model 2079 except that in place of the two speed motor and transcription tone arm, a Webster Model 56 record changer is supplied. This changer will play 10" or 12" records at 78 RPM only. A special locking bracket is provided to lock the tone arm for carrying.



SPECIFICATIONS

Model 2079 Amplifier
Power Output: 5 Watts at Less than 5% Peak Power 7 Watts.
Freq. Response: Plus or Minus 1 db. 70 to 12,000 Cycles.
Overall Gain: Microphone Channels 115 db.; Phono Channel 78 db.
Hum Level: —62 db. Below Rated Output.
Inputs: 2 Microphones.
Input Imped: Microphone Channels 5 Mex.
Controls: 1 Microphone Volume Control; 1 Phono Volume Control; 1 Tone Cont. W/AC Switch; 1 Motor Off-On Switch.
Output Imp: 4 Ohms.
Power Cons: 57 Watts; 117 Volts; 60 cyc.
Tubes: 1—5V4G; 1—6SC7; 1—7F7; 1—6V6GT.

Model 2079 System
Amplifier: Model 2079.
Speakers: 1—8" Heavy Duty P.M.
Cables: 1—25 ft. Type SV with plug.
Built in Phono Equip: 2 Speed (78-33½ RPM) Motor; Type HP-16 Tone Arm.
Microphone: None furnished.
Microphone Cable: None furnished.
Microphone Stand: None furnished.
Case: Model 2079.
Dimensions: 19" Deep; 10¼" High; 19¾" Wide.
Shipping Weight: 48 lbs.

Model 2079 CH

Model 2079 CH, same as Model 2079 except with Webster 56 Changer in place of Transcription Unit.



BELL PHONO-RECORD PLAYERS

78 RPM RECORD PLAYER

Model 10-R



The Model 10-R is a high quality general purpose record player for use with portable public address systems. All of Bell's standard models, portable public address systems, have a phono input for use with this record player. In addition, a 117 volt A.C. receptacle is provided on the back of Bell models 3715, 3725 and 3750, to plug into.

This unit is equipped with the well known and highly favored offset head, Astatic AB-8 pickup which provides wide-range performance with full bass and brilliant highs, free from distortion and objectionable surface noise.

The Model 10-R will play all size records up to 12" with the lid closed.

SPECIFICATIONS Model 10-R

Motor: High Quality, Rim Drive 78 RPM only.	Control: Motor Off-On Switch.
Turntable Size: Nine Inches.	Power Cons: 16 Watts Input; 117 Volts; 60 Cycles AC.
Tone Arm: Astatic Type AB-8.	Case: Model 10-R.
Power Cord: Seven ft. with Standard Plug.	Dimensions: 14½" Deep; 8½" High; 16¼" Wide.
Phono Cord Conn: Amphenol MC1F.	Shipping Weight: 20 lbs.

DUO-SPEED 16" RECORD PLAYER Model 10-T

This unit is a high quality, deluxe, portable transcription record player. It consists of a heavy duty, governor controlled, two-speed motor (33½—78 RPM) and an Astatic Professional HP-16 pickup mounted in a sturdy carrying case. It will play lateral cut 16" transcriptions and standard 10 or 12" records. Two lever controls permits selection of either speed and their adjustment to within 5%.

The Astatic HP-16 pickup is a long, slender, straight-arm crystal pickup of the Low Pressure Type, for use with all lateral transcriptions. This pickup is made with a ball-bearing swivel base, accurately counter balanced arm for one ounce needle pressure.

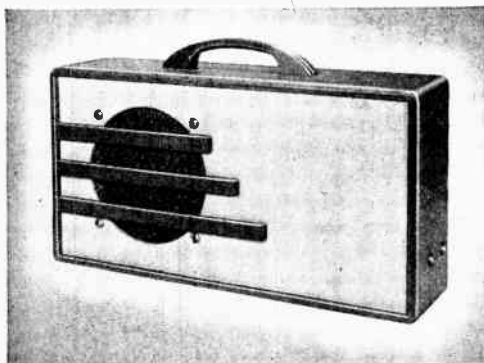
SPECIFICATIONS Model 10-T

Motor: General Industries, governor controlled, two speed (33½-78 RPM) heavy duty.	Phono Cord Conn: Amphenol MC1F.
Turntable Size: Twelve Inches.	Controls: Motor Off-On switch; Speed Regulator lever; Speed Change Lever.
Tone Arm: Astatic Type HP-16.	Power Cons: 36 Watts; 117 Volts; 60 Cycles AC.
Power Cord: Seven ft. with Standard Plug.	Case: Model 10-T.
Phono Cord: Four ft. shielded Rubber covered with connector.	Dimensions: 18½" Deep; 8¾" High; 21¾" Wide.
	Shipping Weight: 30 lbs.



PA SYSTEM

Model PA-3705



This unit is a remarkable compact, quality-toned amplifier that gives excellent results at a very economical cost. It is the ideal unit for window and store demonstrators, auctioneers, lecturers, entertainers, electric guitar players, bingo game operators, pitchmen and for use as a phono amplifier.

The amplifier and speaker are housed in a very attractively finished carrying case. The case is constructed of reinforced plywood and has an attractive brown with gold trim plastic carrying handle. The case is covered in cream and dark brown simulated leather and provisions are made for carrying a microphone.

Showing the remarkable compactness of this efficient little unit. Also note space at right provided for carrying microphone.

SPECIFICATIONS

Model PA-3705 Amplifier	Power Cons: 55 Watts; 117 Volts; 50-60 Cycles.
Power Output: Peak Power 5 Watts.	Tubes: 1-6AC7; 1-6SL7; 1-6F6G; 1-5Y3GT.
Freq. Response: Plus or Minus 2 db. 125 to 7500 Cycles.	Model PA-3705 System
Overall Gain: Microphone Channel 100 db; Phono or Inst. Channel 71 db.	Amplifier: 3705.
Hum Level: -59 db. Below Rated Output.	Speakers: 1-8" Heavy Duty.
Inputs: 1 Microphone; 1 Phonograph or Inst.	Cables: None.
Input Imped: Microphone Channel 10 Meg.; Phono or Inst. Channel 1 Meg.	Built in Phono Equip: None.
Controls: 1 Microphone Volume Control; 1 Phono or Inst. Volume Control; 1 Tone Control w/AC Switch.	Microphone: None furnished.
Output Imped: 4 ohms.	Microphone Cable: None furnished.
	Microphone Stand: None furnished.
	Case: Model 3705.
	Dimensions: 5" Deep; 11½" High; 19" Wide.
	Shipping Weight: 13 lbs.



BELL RECORDING EQUIPMENT

DUAL-SPEED DISC RECORDER Model RC-47



RE-CORD-O-fone

- Recording and Immediate Play-Back of Any Sound Event.
- Recording and Play-back speeds of both 78 and 33 $\frac{1}{3}$ RPM.
- Complete, Compact, Self-Contained, Easily Portable—Single Carrying Case.
- Can record direct from any Radio.
- Serves as a Public Address System.
- Separate Channel for Copying Records or Dubbing in Sound Effects.
- Visual Recording—Level Indicator.
- Headphone Monitoring Jack.

This attractive Bell Model RC-47 RE-CORD-O-fone is the Recorder of wide appeal.

Featuring simple, easy operation, it provides for permanent recording of sound from any source. PLUS immediate playback facility. The RE-CORD-O-fone records 12 minutes on a 10-inch disc at 33 $\frac{1}{3}$ RPM (the equivalent to four 12-inch commercial records). It copies a 12-inch commercial record on a 10-inch blank at 78 RPM.

One central control permits instant selection of all functions: recording, playback and P.A. use. Easy connection to your radio permits excellent recording of your favorite radio programs. Dubbing in your own comments or singing while recording a radio program or re-recording from another record is possible by a control on the convenient sloping panel. Plugging in a pair of headphones allows operator to judge every setup. The unit is entirely self-contained in a two-piece, portable case covered with artistic tan leatherette which blends with the rich tone of the unit.

The play-back and amplifying features of RE-CORD-O-fone render it especially adaptable as an instruction aid in all types of speech and language classes, voice, dramatics and training schools. The unit is also effectively used by sales groups, churches and lodges, hobbyists, night clubs, orchestras and entertainers, politicians and speakers.

SPECIFICATIONS

Model RC-47 Complete

Amplifier: RC-47.
Speakers: 1—6" Heavy Duty P.M. Alnico Five.
Cables: None.
Built in Phono Equip: Two-speed recording mechanism with cutting head and crystal Phono pick-up.
Microphone: Astatic HEB and stand.
Microphone Cable: 7 ft. shielded Rubber Covered with PL-55 plug.
Microphone Stand: Furnished with Micro.
Case: RC-47.
Dimensions: 18" Deep; 10" High; 16" Wide.
Shipping Weight: 41 lbs.

Model RC-47 Amplifier Only

Power Output: 3 Watts at Less than 5% Peak Power 5 Watts.
Overall Gain: Microphone Channel 108 db. Phono Channel 63 db.
Hum Level: —58 db. Below Rated Output.
Inputs: 1 Microphone; 1 External Phono; 1 Direct Radio Recording.
Input Imped: Microphone Channel 10 Meg.; Phono Channel $\frac{1}{2}$ Meg.
Controls: 1 Microphone or Phono Volume Control; 1 Tone Control with AC Switch; 1 Four position selecto Switch; 1 Motor Off-On Switch; 1 Speed Change Switch.
Output Imped: 4 ohm.
Power Cons: 75 Watts; 117 Volts; 60 Cycles.
Tubes: 1—7F7; 1—7C5; 1—7Y4.

PORTABLE RECORD PLAYER

Model 2075—Comparison of the "Portrola" Portable Electric Phonograph with any other on the market today—regardless of price—is convincing evidence that it rivals the best in all-round performance and popular appeal. It has remarkable tone quality and through the use of a newly developed dual-purpose tube circuit, it attains four-tube results with two tubes.

The "Portrola" is an attractive buy for teachers, students, record collectors, and a host of music lovers who want a light, easy-to-carry electric phonograph embodying performance features of the most expensive console models.

SPECIFICATIONS Model 2075

Speaker: 6" Heavy Duty P.M. Alnico Five.
Controls: Phono Vol. Control with AC Switch.
Tubes: 2—117L7GT.
Power Consumption: 50 Watts; 117 Volts; 60 Cycles.
Dimensions: 15 $\frac{1}{4}$ " Deep; 9" High; 14 $\frac{1}{2}$ " Wide.
Shipping Weight: 20 lbs.



BELL INDUSTRIAL EQUIPMENT

SYSTEMS FOR INDUSTRIAL BROADCASTING --BOTH MUSIC & VOICE PAGING

Bell Industrial equipment is the finest industrial equipment that can be purchased. This equipment utilizes in its construction heavy duty oil filled condensers, hermetically sealed and potted transformers, and transmitting type tubes.

Increases Efficiency

With today's high speed production, every emphasis possible is being placed on efficiency. Plant broadcasting over amplifying equipment is becoming more and more important—filling a vital and indispensable role in industrial operations. It not only increases the efficiency of industrial workers by broadcasting music to workers on the job or during rest and lunch periods, but also is the fastest and most efficient method of locating important key personnel through its voice paging feature. It can also be used to advantage by management in making plant-wide announcements or talks.

Improves Worker Morale

Actual tests have shown that music in industry, regardless of whether it is light or heavy manufacturing, actually increases the workers' output, decreases early departures and absenteeism, lessens fatigue, decreases accidents and rejects.

SPECIFICATIONS Model 1475 BELL "PLANT-MASTER"

A Standard unit consists of the following:

- A. Standard Rack
- B. Monitor Section
- C. Pre-Amplifier Section
- D. Phono Section
- E. Power Amplifier Section

Output: Full 80 Watts with less than 5% distortion.

Output Impedances: 31.2; 62.5; 125; 250 and 500 Ohms.

Input Impedances: Two low impedance (50 Ohms) for microphones and one high impedance for use as phono or microphone.

Input Switching: Relays provided for energizing any of three input circuits either at the main equipment or remote points.

Overall Gain: 126 db.

Frequency Response: Plus or Minus 1½ db from 30 Cycles per second to 15,000 Cycles per second.

Phono: Webster Changer Model 56-1 furnished as standard equipment. Two-speed transcription turntable with Astatic Model 400 pickup with QT cartridge optional at no extra cost.

Tubes: (a) Power Amplifier. (b) Pre-Amplifiers.

- 2 6SJ7
- 2 6F6
- 2 807
- 2 VR-150
- 2 5R4GY
- 1 5U4G
- 6 6N7
- 2 6F6
- 1 5U4G

Power Requirement: 117 Volts; 60 Cycles. Full output 375 Watts; idling 165 Watts.

Finish: Bell Gray Wrinkle with Red Control Knobs and etched aluminum Dial Plates.

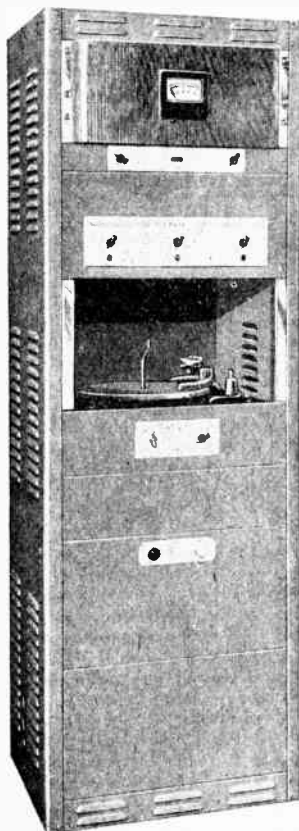
Dimensions: 66¾" High; 22" Wide; 18" Deep.

Net Weight: Approximately 350 Pounds.

Shipping Weight: Approximately 500 Pounds.

BELL PLANT-MASTER

Model 1475

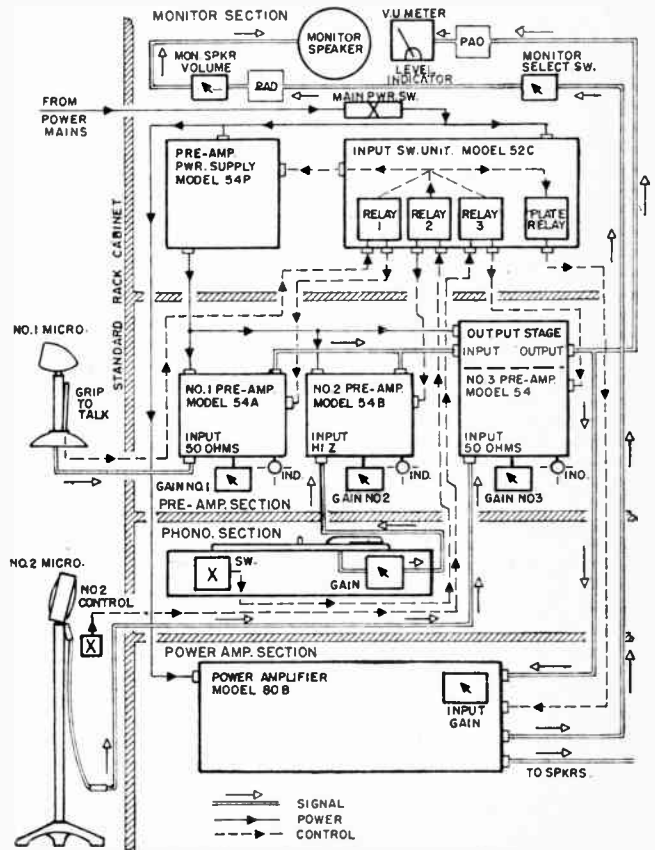


← Monitor Section

← Pre-amplifier Section

← Phono Section

← Power Amplifier Section



BELL INDUSTRIAL EQUIPMENT

DETAILED SPECIFICATIONS

Model 1475

Monitor Section Model 54-M

Speaker: Heavy Duty 8" permanent magnet speaker with adjustable pad volume control.

Level Indicator: Large 4" x 5" Volume Unit Meter Mounted in center of Speaker Grill.

Speaker Grill: Heavy, perforated, chrome plated steel. Extends across entire width of Rack panel.

Controls: Heavy Duty Main Power Switch, Monitor Speaker Volume Control, Monitor Selector Switch.

Dimensions: Panel Size 10 $\frac{1}{2}$ " x 19".

Finish: Control Panel, Grey wrinkle grill-chrome plated.

Function: Provides audible monitoring of any one of several outgoing program lines according to setting of selector switch. Permits continuous visual check on signal level feeding power amplifiers. Also contains master power switch for entire rack.

Pre-Amplifier and Driver Unit Model 54

Power Output: 1 Watt at less than 1% Distortion; 2 Watts at less than 5% Distortion; 5 Watts Peak Power.

Overall Gain: 73 db.

Hum Level: -65 db. Below Rated Output (1 watt).

Input: 1 Low impedance microphone.

Input Imped: 50 ohms

Controls: 1 Microphone Volume Control.

Output Imped: 500 ohms balanced to ground.

Tubes: 2-6N7; 2-6F6G.

Dimensions: 5 $\frac{1}{2}$ " Deep; 7" High; 14" Wide.

Weight: 11 lbs

Pre-Amp Power Supply Model 54-P

Voltage Output: 305 Volts D.C. 150 M.A.; 6.3 Volts A.C. Heaters.

Circuit: Relay Controlled.

Power Input: 117 Volts; 50-60 Cycles.

Tubes: 1-5U4G.

Connector: Jones S-2412-SB Connects to Model 52-C Input Switching Unit.

Function: Supplies filament and plate power to Model 54 Pre-amplifier, Model 54-A Pre-amplifier, and Model 54-B Pre-amplifier.

Dimensions: 5 $\frac{1}{4}$ " Deep; 9" High; 17" Wide.

Weight: 34 lbs.

Construction: Heavy Duty Oil filled capacitors, sealed transformers and choke.

Finish: Chassis is constructed of 1 $\frac{1}{2}$ gauge cold rolled steel zinc plated with chromate finish.

Input Switching Unit and Relay Power Supply Model 52-C

Voltage Output: 48 Volts D.C. 600 M.A.

Relays: 3 Input Channel Control Relays; 1 Plate Relay.

Connectors: Jones P-2412-SB plugs into Model 54-P Power Supply.

Function: Input relays control input channel switching. Priority can be established on these three channels. Plate Relay applies plate voltage to Model 80-B power amplifier.

Dimensions: 6" Deep; 8" High; 17" Wide.

Net Weight: 15 lbs.

Construction: Oil filled capacitors in sealed metal containers. Heavy Duty Relays, and sealed Power transformers.

Finish: Chassis is constructed of 1 $\frac{1}{2}$ gauge Cold Rolled Steel zinc plated with chromate finish.

Phono Section Model 54-X (Record Changer) Model 54-Z (Transcription Unit)

Controls: Motor "Off-On" Control Switch; Phono Volume Control.

Panel Size: 14" High by 19" Wide. This includes phono rack opening and phono control panel.

Phono Equip: Standard Equipment Webster Model 56, Record Changer. Single-post floating spindle type. Plays ten 12" or twelve 10" records in one loading. Heavy duty 78 RPM Cushion mounted motor. Has reject button and also can be operated manually. Shuts off automatically after last record has been played.

Note: Transcription phono unit consisting of 2 speed (33 $\frac{1}{3}$ -78 RPM) motor and Astatic Model 400 pickup for playing all commercial records and lateral transcriptions up to 16" in diameter can be supplied as optional equipment at no additional cost.

Pre-Amplifier Model 54-A

Output: Feeds output Section of Model 54 Pre-amplifier.

Overall Gain: 73 db. Including Model 54 output stage.

Hum Level: -60 db. Below Rated output Maximum Hum Including Model 54 output stage.

Input: 1 Microphone (Low Impedance).

Input Imped: 50 ohms.

Control: 1 Microphone Volume.

Output Imped: Feeds output section of Model 54 Pre-amplifier.

Tubes: 2-6N7.

Dimension: 5 $\frac{1}{2}$ " Deep; 7" High; 14" Wide.

Weight: 9 lbs

Pre-Amplifier Model 54-B

Output: Feeds output Section of Model 54 Pre-amplifier.

Freq. Response: Plus or Minus 1 $\frac{1}{2}$ db. 30 to 10,000 Cycles.

Overall Gain: 47 db.

Hum Level: -70 db. Below Rated Output.

Inputs: 1 Phonograph or Radio.

Input Imped: 500,000 Ohms.

Controls: 1 Phonograph Volume Control.

Output Imped: Feeds Output Section of Model 54 Pre-amplifier.

Tubes: 2-6N7.

Dimension: 5 $\frac{1}{2}$ " Deep; 7" High; 14" Wide.

Weight: 9 lbs.

Power Amplifier Model 80-B

Power Output: 80 Watts at less than 5% Peak Power 100 watts.

Freq. Response: Plus or Minus 2 db. 75 to 20,000 Cycles.

Overall Gain: 57 db.

Hum Level: -70 db. Below Rated Output.

Input: Bridging. Balanced to ground.

Input Imped: 20,000 Ohms.

Controls: 1-Overall gain control.

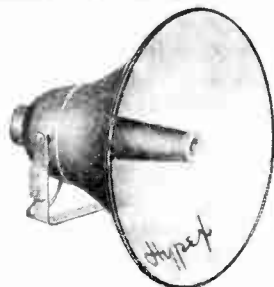
Output Imped: 31.2; 62.5; 125; 250; 500 ohms.

Power Cons: 300 Watts; 117 Volts; 50-60 Cycles AC.

Tubes: 2-68J7; 2-6F6G; 2-807; 2-VR150; 2-5R4GY; 1-5U4G.

Dimensions: 17 $\frac{1}{2}$ " Deep; 9" High; 17" Wide; Panel Size: 19" Wide by 21" High.

Shipping Weight: 97 lbs.

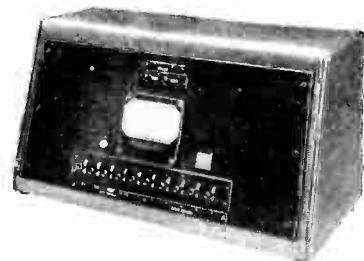


Model VH-20, Projector for speech and music reproduction where principal requirement is for speech. Frequency range 140 to 6000 cps. Developed acoustic path 52". Coverage angle 80 degrees. Mouth diameter 20 $\frac{3}{4}$ "; length 20 $\frac{1}{4}$ ". Power capacity 25 watts. Voice coil impedance 16 ohms. Shipping weight approximately 25 lbs.

Model VH-21, same as VH-20 except with 58 inch acoustical path length; Mouth diameter 21 $\frac{3}{4}$ "; length 22 $\frac{3}{4}$ " and shipping weight of approximately 30 lbs.



Model VH-91 Speech Master Projector meets a real need for paging and intercommunication applications. Particularly efficient in the voice frequency range, it delivers clear, intelligible speech with maximum "punch" to override high noise levels. By an extremely clever mounting bracket, projector can be pointed in any direction and securely locked into position with a single wing nut. Nominal voice coil impedance, 8 ohms. Power handling capacity, 15 watts. Mounting facilities are also provided on bracket for a $\frac{5}{8}$ x $\frac{5}{8}$ " transformer. Because of the Hypex formula, useful output is attained for a 100-degree total angle. Dimensions: Bell diam., 8 $\frac{7}{8}$ ", length of bell, 7 $\frac{3}{4}$ ".



Model 2111 Remote Control Console permits Input and Output Switching from a remote location. These consoles are custom built to the customers' specifications. Unit illustrated contains V.U. meter; two Pre-Amplifier switches; 2-Micro Input switches; Phono Input Switch; telephone line switch; 6-output or areas switches and pilot light indicator.

The Model 2111 is constructed of walnut and is 11 $\frac{1}{2}$ " High; 21" Wide; and 11" Deep. Telephone type of lever switches are incorporated for all switching. Shipping weight approximately 25 lbs.

BELL INDUSTRIAL EQUIPMENT

Model 1451

The Model 1451 Industrial Type Pre-amplifier is recommended as the ideal unit to drive one or more 80-B Industrial Power Amplifiers. It has capacity to drive up to 20 of the Model 80-B Power Amplifiers. Its heavy duty and rugged construction utilizes oil filled capacitors and sealed transformers. It is constructed and engineered for long life, continuous duty, service. It comes complete, mounted in an industrial Rack Cabinet with db Level Meter; Model 54-P Power Supply (see page 13); Master Power Switch; and two low and one high impedance pre-amplifiers with individual controls.

SPECIFICATIONS Pre-Amplifier Model 1451

Power Output: 1 Watt at less than 1% distortion. Maximum Power output 4 Watts.
Freq. Response: Plus or Minus 1½ db. from 30 to 10,000 Cycles. Measured in high impedance channel.
Overall Gain: 73 db.
Hum Level: Low impedance. —65 db. below rated output of 1 Watt. High impedance. —71 db. below rated power.
Input Imped: Two low impedance (50 or 500 ohms) for microphones (50 ohms furnished unless otherwise specified). One high impedance (500,000 ohms) for phono or radio.
Controls: 3 Volume Controls; Master Power Switch.
Output Imped: 500 Ohms.
Tubes: 6—6N7; 2—6F6; 1—5U4G.
Finish: Grey Wrinkle—Satin Chrome Trim.
Dimensions: 15" Deep; 28" High; 22" Wide.
Shipping Weight: Approximately 100 lbs.



Model 80-B Power Amplifier, illustrated at right, was designed with today's rigid requirements for industrial sound equipment in mind. It is the result of two years of development by Bell's Audio engineering specialists.

Dependability of operation and long life under continuous operating conditions is assured by the use of quality components. Transformers and chokes are potted, sealed and fully shielded in heavy steel housings; they are designed with ample electrical safety factors. Mica and oil-filled capacitors are utilized, sealed in metal containers and conservatively rated. Tubes are operated well within the manufacturers' maximum ratings of voltage, current, plate and screen dissipation for long life. Automatic relay overload protection is provided in case of failure of bias or screen regulation on the transmitting type 807 output tubes. Provision is made for stand-by operation in which plate power is applied only during announcements or during actual operation, further prolonging tube life.

Use of push-pull stages throughout and overall inverse feedback, results in an extremely stable amplifier with regard to tube and voltage fluctuations, good frequency and transient response and low distortion—results in low output driving impedance having excellent regulation against load impedance variations and mismatch.

The 807 output tubes with separate plate and bias supplies and regulated screen voltage provide a clean 80 watts of output signal. The specially designed oversize output transformer has four separate 125 ohm output windings which permit a wide choice of output impedances by proper series, parallel and series-parallel

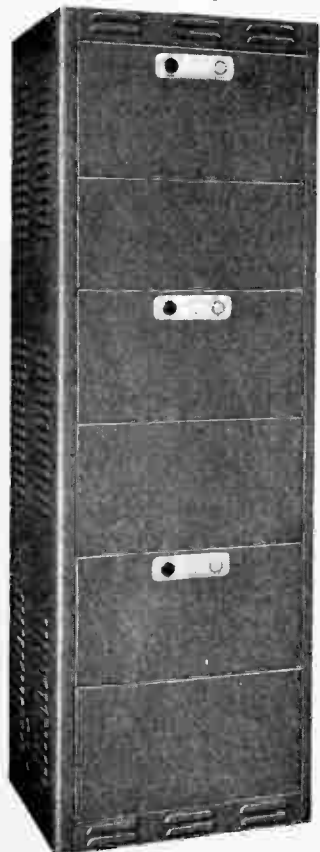
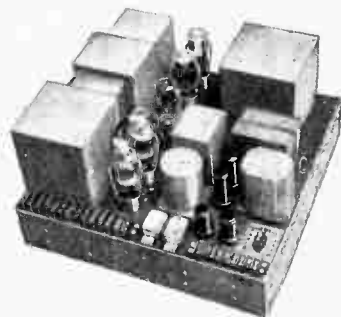
connections. By this method the correct copper-iron ratio is held fixed regardless of the output impedance used, and the transformer is always working at maximum efficiency.

The bridging type balanced input circuit and high overall gain permits operation of the amplifier from a zero level telephone line; or, up to 10 of these amplifiers may be operated from a single Bell Model 54 Pre-amplifier.

Construction of the amplifier is extremely rugged. Chassis is 16 gauge steel of welded construction; protected against rust and corrosion by zinc plating which has been treated to provide an extremely inert zinc chromate surface, far superior as a protective coating to zinc alone. A coat of clear lacquer over the chromateed zinc approximately doubles its life under salt spray tests, and the process conforms to Government specifications.

Ease of maintenance and servicing was an important consideration in the design. Standardized dimensions and mounting permit this amplifier to be vertically mounted in a standard rack cabinet. In addition to providing excellent air flow for ventilation purposes, vertical mounting makes accessible the tubes, control and cable terminals from the rear, while the components and under-chassis wiring are easily accessible by removing the front panel. Complete operational checks may be made while amplifier is in operation and without removing it from rack.

Rack mounting accessories are available for mounting the 80-B Power Amplifier in any standard 19" rack cabinet.



Model 1480 (right) consists of a Model 80-B power amplifier mounted in a small industrial type rack. It measures 15" Deep by 28" High by 22" Wide. Cabinet is finished in Grey wrinkle and contains two one-inch indicator lamps: one red, to show that the plate supply is on, and one white to show that only the filaments are heated. A Master Gain Control is located on the chassis and is available for adjustment through the rear door of the cabinet. All connections are made to barrier terminal strips in the floor of the rack. Amplifier has a balanced-to-ground bridging input suitable for operation from a zero level telephone line or from Bell Model 54 Industrial Pre-Amplifier.

The shipping weight is approximately 125 lbs. For detailed specification of the 80-B amplifier, refer to page 13.

Model 1490 consists of two Model 80-B power amplifiers mounted in a standard 66 1/2" rack panel cabinets. This model has a total undistorted output of 160 Watts and can be used with the Model 1451 or to supplement the power output of Model 1475. It can also be used to augment existing installations. Each amplifier has its own Master gain control and pilot light indicators. Cabinet is finished in grey wrinkle. Approximate shipping weight 300 lbs. For detailed specifications of the 80-B power amplifier refer to page 13.

Model 1500 illustrated at left consists of three Model 80-B power amplifiers mounted in a standard 66 1/2" industrial Rack Cabinet. This model has total undistorted power output of 240 watts and was designed to be used with Model 1451 Pre-Amplifier or to augment the power output of Model 1475. Cabinet is finished in grey wrinkle and each amplifier has its own Master Gain Control and Pilot light indicators. Indicators show at a glance when plate supply is on or when unit is idling with only the filaments of the tubes heated. Approximate shipping weight 400 lbs.

For detailed specifications of the 80-B power amplifier refer to page 13.

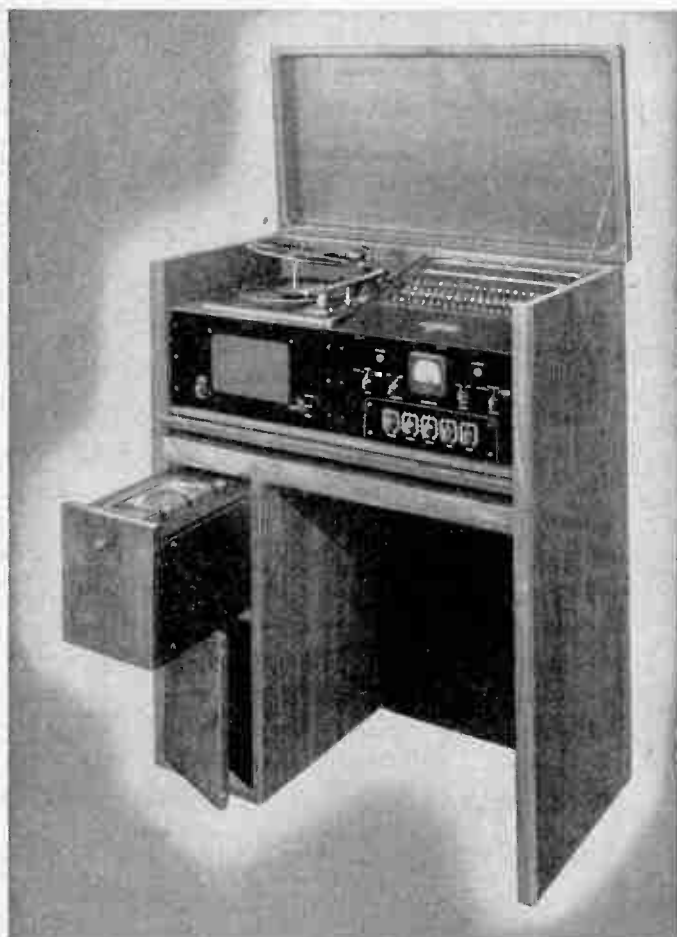


BELL CONSOLE SOUND SYSTEM

ZEPHYR SOUND SYSTEM

Model 701

Complete Console with AMPLIFIER CALL-REPLY - RADIO and PHONO - PICKUP



The Bell Zephyr provides the many facilities required of a central sound distribution system. Expertly engineered for distribution of microphone, radio or phonograph programs to any one or a number of rooms or remote loud speakers. Secretive two way communication is provided to any of the remote speakers. The central control operator can not listen in on a remote loud speaker unless their talk switch is depressed. The use of two amplifiers makes possible two way communication to remote loud speakers while a program is being sent to other speakers. Two microphones and radio or phonograph may be simultaneously mixed.

The Model 701 Zephyr Sound System comprises two units: the Model 701A Console unit and the Model 701B base unit.

The 701A Console is a complete sound distribution console less radio tuner. The 701B Base serves as a table for the console and can be supplied less radio tuner or with a combination A.M.-F.M. tuner.

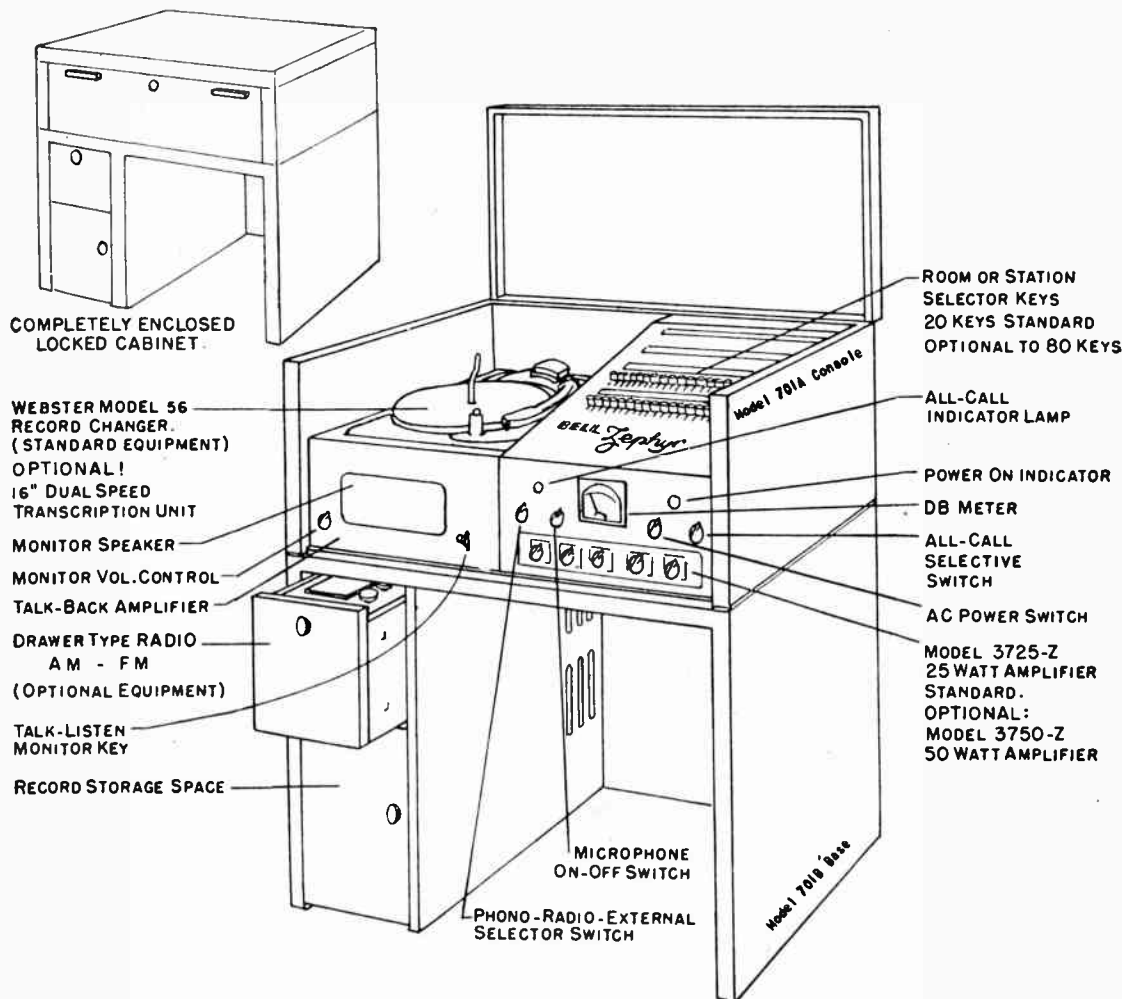
Illustration at right is the Model 701A Console Zephyr Sound System—a complete sound distribution system with exception of radio tuner.

- Secretive two-way communication —control operator can not listen in on remote speakers.
- May be wired for non secretive two-way communication if desired.
- Auditorium or remote pickup to any or all rooms.
- All-Call emergency switch.
- Separate Talk Back Amplifier.
- Automatic Record Changer or 16" transcription player (optional).
- D.B. Volume level meter.
- Monitor loud speaker
- A.M. - F.M. Radio Tuner.
- Entire amplifier power output readily switched to single group of loud speakers, Auditorium, Cafeteria or Stadium.
- All Station Selector Switches Resistor Loaded.
- Constant impedance match regardless of number of loud speakers in use.
- Locked cabinet prevents tampering with controls.
- Record storage space.
- All-Call indicator lamp.



BELL CONSOLE SOUND SYSTEM

Zephyr SYSTEM Model 701



AMPLIFIER SPECIFICATIONS

TALK-BACK AMPLIFIER, used in all console units:

Power Output: 3.5 watts.

Output Imped: 500 ohms.

Input Imped: 4-5 ohms.

Power Req.: 117 volts 60 cycles A.C.

Tubes: 1—6SL7GT; 1—6V6GT; 1—5Y3GT.

MODEL 3725-Z AMPLIFIER, used in Consoles 701A-20 and 701A-40.

Power Output: 25 watts at less than 5% distortion.

Freq. Response: Plus or Minus 2 db 45 to 18,000 cycles.

Output Imped: 12.5; 16.6; 25; 50; 500 ohms.

Inputs: Three—2 micro; 1 Phono or radio.

Input Imped: Micro 10 Megs; Phono or Radio ½ meg.

Controls: 2—Micro Vol. Cont.; 1—Phono or Radio Vol. Cont.; 1—Base Tone Cont.; 1—Treble Tone Cont. W/AC Switch.

Power Req.: 117 volts; 60 cycles AC.

Tubes: 1—7C7; 1—7B7; 1—6SF5; 1—6N7; 1—5U4G; 2—6L6G.

MODEL 3750-Z AMPLIFIER, used in Consoles 701A-60 and 701A-80.

Power Output: 50 watts at less than 5% distortion.

Freq. Response: Plus or Minus 1 db, 30 to 18,000 cycles.

Output Imped: 6.25; 8.3; 12.5; 16.6; 25; 50; and 500 ohms.

Inputs: Four—3 Micro; 1 Phono or Radio.

Input Imped: Micro 10 megs; Phono or Radio ½ meg.

Controls: 3 Micro Vol. Cont.; 1—Phono or Radio Vol. Cont.; 1—Bass Tone Cont.; 1—Treble Tone Cont. with AC Switch.

Power Req.: 117 volts; 60 cycles AC.

Tubes: 1—7C7; 2—7C6; 3—6SC7; 1—6SN7; 2—6L6G; 1—5U4G; 1—5R4GY; 1—5V4G.

CABLE REQUIREMENTS: *Three-conductor shielded cable from control console to each room loud speaker. Where intercommunication is not required, two-conductor un-shielded cable.*

BELL CONSOLE SOUND SYSTEM

GENERAL DESCRIPTION OF CONSOLE UNITS

Model 701A-20 Console Unit: Standard equipment comprises: Walnut finished cabinet size 35½" Wide, 17" High, 18½" Deep; 25 watt amplifier, model 3725-Z; 3.5 watt talk back amplifier; 20 room switches for speaker selection; Automatic record changer; D.B. meter for visual volume level indication; Monitor speaker with volume control; All-call switch for paging through all loud speakers; Other controls as illustrated in drawing of console on opposite page.

Model 701A-40 Console Unit: Same as Model 701A-20 except 40 room switches.

Model 701A-60 Console Unit: Same as Model 701A-20 except 60 room switches and 50 watt amplifier

instead of 25 watt. Provides 3 microphone and 1 radio or phono input channels.

Model 701A-80 Console Unit: Same as Model 701A-20 except 80 room switches and 50 watt amplifier instead of 25 watt. Provides 3 microphone and 1 radio or phono input channels.

Base Units

Model 701B Base Unit only (less radio tuner): Size 35½" Wide; 29" High; 18½" Deep.

Model 701B-AM-FM Base Unit with high quality A.M.-F.M. radio tuner. Tuning ranges, A.M. 540 KC to 1700 KC: F.M. 88 MC to 108 MC.

LOUD SPEAKERS

Model 88 WS, a moderately priced, good quality speaker suitable for the average classroom, hotel room, tourist cabin etc. metal housing beautifully finished in walnut, equipped with a high quality 6" Alnico Five Permanent Magnet Dynamic Speaker with line matching transformer. A push switch is provided to answer calls from the central control console (contacts are provided to operate an annunciator circuit where desired). Overall size: 10½" x 10½" x 4½".

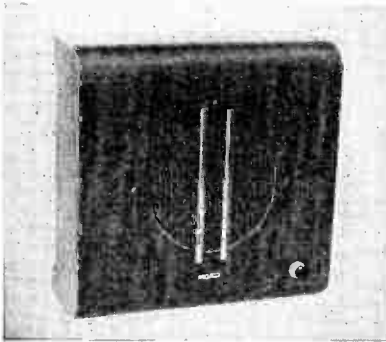
Model 88, same as above except less the push to answer switch.

Model 87-WS, a high quality 8" P.M. Dynamic speaker housed in an attractive wood cabinet (similar in appearance to Model 91), finished in walnut brown, supplied with line matching transformer and with a push switch to answer calls from the central control console (contacts are provided to operate an annunciator circuit where desired). Overall size: 10½" x 11" x 6½".

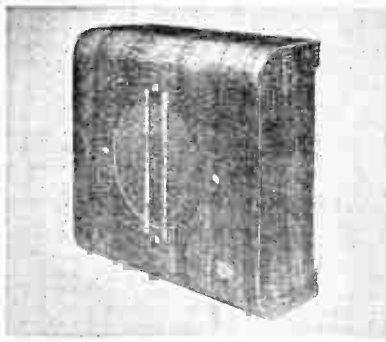
Model 87, same as Model 87-WS except less the push to answer switch.

Model 91, an excellent speaker for large rooms or auditoriums. A 12" high fidelity permanent magnet dynamic speaker with line matching transformer. Attractive walnut finish—wood construction. Overall size: 16" x 18" x 10".

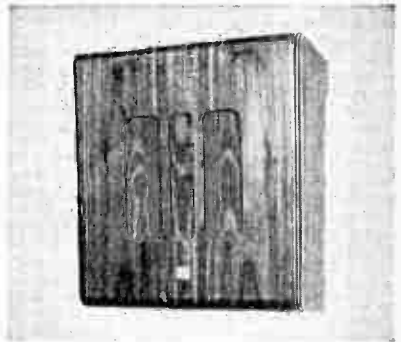
Model SW-10, not illustrated, room answer switch, for installations where it is impractical to use a room answer switch mounted on the speaker housing. A small compact switch unit that is easily mounted on wall or desk. Contacts are provided to operate an annunciator circuit where desired. Overall size: 2¼" x 2¼" x 2".



Model 88-WS

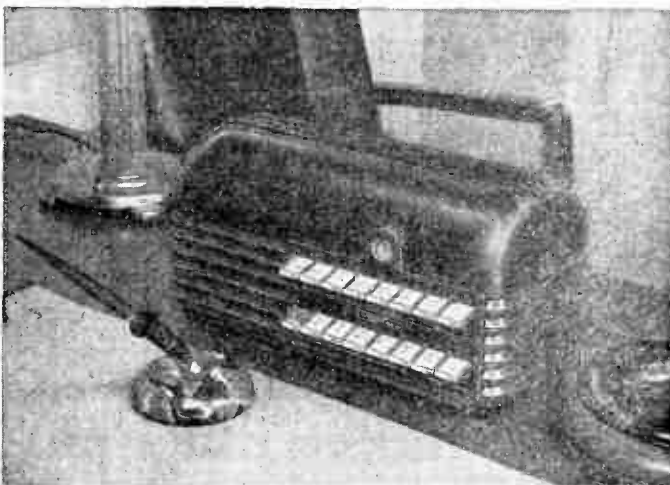


Model 88



Model 91

BELfone INTERCOMMUNICATION SYSTEMS



WE offer the finest and most complete line of inter-office communicating equipment in the world today.

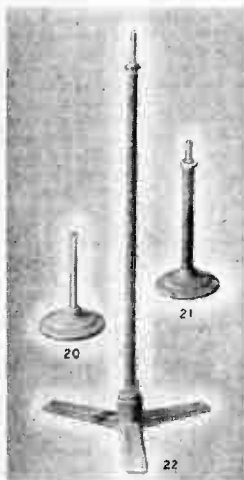
Four entirely different series of BELfones are available. The 350 Series, the 374-SS Series, the 440 Series and the 460 Series. There is a BELfone System that will meet every need; and for clarity of tone, appearance, low operating cost and maintenance, the Bell line has no peer.

The Bell Sound Systems, Inc., was the first company to design and produce reasonably priced electronic inter-office communication equipment commercially.

The complete line of BELfone equipment and accessories are shown in our special catalog for inter-office communicating equipment. Write for it today.

BELL ACCESSORIES

MICROPHONE STANDS -- MICROPHONES



Model 20—Desk Type. An attractive stand having a chrome-plated stem and a heavy, level-standing base finished in gray wrinkle. Overall height 9", diameter of base 6 1/4", weight 4 lbs. Furnished on all Standard and DeLuxe P.A. Systems.

Model 21—Banquet Type. A stand with a wide range of uses. Attractively finished in chrome and gray wrinkle. Adjustable from 13 1/2" to 24". Free of mechanical noise when being adjusted. Base is sufficiently large and heavy to prevent tipping. Weight 6 lbs.

Model 22—Pedestal Type. A deluxe stand; attractively finished in chrome and gray wrinkle and priced right. Adjustable from 38" to 69". A firm, stable-sitting, tripod base. A handy locking nut insures positive adjustment. Because of its mechanical perfection, adjustment can be made without noise or danger of stem accidentally dropping and damaging microphone. Weight 14 lbs.

NOTE: Because of space limitations in this catalog, many available Bell Accessories are not listed or illustrated. Therefore, when requiring items not shown, write BELL for prices and information.



Model JT-30. High Impedance Crystal Diaphragm Type

A wide range, excellent performing microphone for home recording or public address systems. Unit comes complete with convenient handle, interlocking metal base and 15 feet shielded cable. Can be used with any floor stand by removing handle.

Model T-3. High Impedance Crystal Diaphragm Type

A high quality microphone for studio use, voice paging, recording or public address systems. Swivel head permits operation as a semi or non-directional type. Supplied with 25 feet shielded cable.

Model DN-HZ. High Impedance Dynamic Type

Has very good frequency response, neat appearance and desirable size. This unit has excellent pick-up or sensitivity for general public address use, especially where high temperature or humidity is encountered. Ideal for outdoor use. Supplied with 25 feet shielded cable.

Model 950. High Impedance Cardioid Crystal Type

A new Cardax microphone that provides true cardioid unidirectional performance and relatively high output. Wide angle front pickup. Dead at rear. The Cardax is especially valuable in overcoming acoustic feedback. Simplifies speaker placement. Permits greater operating volume levels. Supplied with "Off-On" switch and 20 feet shielded cable.

Model DY-11. Adjustable Impedance Dynamic Type

A new super-cardioid microphone of the multi-impedance type. Has impedance switch that permits selection of 30-50 ohms; 150-250 ohms or high impedance. Microphone is supplied with 25 feet 2 conductor shielded cable.

LOW IMPEDANCE MATCHING UNITS

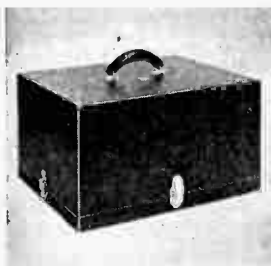


Here is a new series of units designed by Bell that will convert any standard amplifier with high impedance microphone inputs to low impedance. These units are so designed that no soldering or wiring changes are necessary in the amplifier. They are available in either single or Dual Channel and contain shielded, potted, matching transformers with three foot, single conductor, shielded microphone cables. The cables have Amphenol MC1F Standard Microphone connectors attached for connecting to the amplifier, and Amphenol MC3F connectors are utilized for connecting the microphones. Models 2105 and 2106 come wired for 50 ohms. But may be converted very easily to 200 ohms. Models 2107 and 2108

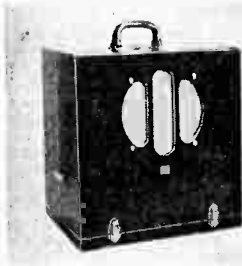
come wired for 500 ohms, but can be converted to 200 ohms. Complete diagrams showing how to make this conversion are supplied with each unit. Size 3 1/4" Deep; 5" High; 7 1/2" Wide. Weight: single channel 5 lbs.; Dual channel 9 lbs.

Model	Description	Impedance
2105	Single Channel	50 ohms
2106	Dual Channel	50 ohms
2107	Single Channel	500 ohms
2108	Dual Channel	500 ohms

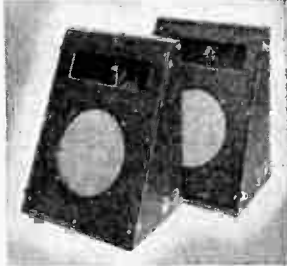
PORTABLE SPEAKER and AMPLIFIER CASES



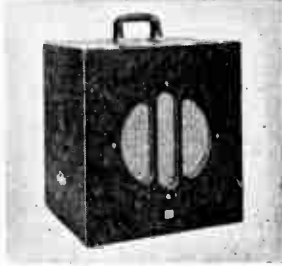
Model 14-A—Two piece portable amplifier case for Model 3725 amplifier. Constructed of reinforced 3/8" Fir plywood covered with heavy dark gray simulated leather with single carrying handle. Size 18" Wide; 13 3/4" Deep; 10 1/4" High. Weight 10 lbs.



Model 15—Three piece portable case for all PA-3715 Systems and PA-3725-1. Constructed of reinforced 3/8" Fir plywood and covered with heavy dark gray simulated leather. Double carrying handles. Speaker openings for 10" speakers. Size 22" Wide; 13 3/4" Deep; 19 3/4" High. Weight 17 lbs.



Model 93—Two piece De Luxe portable speaker housing. Furnished with all PA-3750 Systems. This is a diagonally split case of the infinite baffle type. It is constructed of reinforced 3/8" Fir plywood covered with a heavy dark gray simulated leather. Double carrying handles. Speaker openings for 12" speakers. Size 22" Wide; 14 3/4" Deep; 18" High. Weight 20 lbs.



Model 95—Two piece portable speaker case used to house the speakers for all PA-3725 Systems. It is constructed of reinforced 3/8" Fir plywood and covered with heavy dark gray simulated leather. Double carrying handles. Speaker openings for 12" speakers. Size 18" Wide; 14 1/2" Deep; 20" High. Weight 17 lbs.

Model 14-B (not illustrated)—Two piece portable amplifier case (similar to Model 14-A) for Models 3750 or 3728-M. Constructed of reinforced 3/8" Fir plywood covered with heavy dark gray simulated leather, with double carrying handle. Size 18" Wide; 18 1/4" Deep; 12 1/4" High. Weight 12 lbs.

Model 98 (not illustrated)—One piece portable speaker case. This unit is identical with the speaker or top half of the 2078 or 2078 CH case and was designed especially as an auxiliary speaker case for these two models. Size: 19 1/4" Wide; 7 1/4" Deep; 19" High. Weight 8 lbs.



LIST PRICE SHEET

For
BELL SOUND SYSTEMS, Inc.

Page No.	Catalog No.	Model	List Price
AMPLIFIERS			
B-6	3710	Amplifier	\$ 61.75
B-7	3715	Amplifier	\$ 93.00
	3725	Amplifier	108.00
	3750	Amplifier	189.00
	3750R	Amplifier w/Remote Stand-by Control.....	201.50
MOBILE AMPLIFIERS			
B-8	3706M	Mobile Amplifier	\$ 70.00
	3723M	Mobile Amplifier	165.00
	3728M	Mobile Amplifier	250.00
	3728ML	Mobile Amplifier less Phono Assembly	220.00
PA SYSTEMS			
B-9	PA 3710P	System	\$ 166.40
B-10	PA 3715E	System	\$ 179.00
	PA 3715	System	193.00
	PA 3715D	System	205.00
B-11	PA 3725E	System	\$ 232.00
	PA 3725	System	246.00
	PA 3725D	System	258.00
	PA 3725U	System	194.00
B-12	* PA 3750E	System	\$ 358.00
	* PA 3750	System	372.00
	* PA 3750D	System	384.00
			* These Systems can be equipped for Remote Standby operation. Please add Letter "R" to Model Number
			\$ 12.50 Additional
PHONO-PA SYSTEMS			
B-13	2078	PA Unit	\$ 258.90
	2078-CH	PA Unit w/Changer	270.40
	2079	PA Unit	169.50
	2079-CH	PA Unit w/Changer	181.00
PHONO-RECORD PLAYERS			
B-14	10-R	Record Player	\$ 41.50
	10-T	Transcription Player	86.00
	PA 3705	PA Unit	54.50
RECORDING EQUIPMENT			
B-15	RC-47	Re-cord-o-fone	\$ 150.00
	2075	Phonograph	41.80
INDUSTRIAL EQUIPMENT			
B-16	1475	Industrial Amplifier	\$1,475.00
B-17	VH-20	Projector	\$ 63.00
	VH-24	Projector	74.50
	VH-91	Projector	32.50
	2111	Console (Price available on request).....	

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE



LIST PRICE SHEET

For
BELL SOUND SYSTEMS, Inc.

Page No. Catalog No. Model List Price

INDUSTRIAL EQUIPMENT

B-18	1451	Industrial Pre-Amplifier	\$ 435.00
	80B	Industrial Amplifier	468.75
	1480	Industrial Amplifier	548.75
	1490	Industrial Amplifier	986.00
	1500	Industrial Amplifier	1,500.00

CONSOLE SOUND SYSTEM

B-19, 20, 21	701-A-20	Zephyr Console	\$ 624.00
	701-A-40	Zephyr Console	678.08
	701-A-60	Zephyr Console	826.80
	701-A-80	Zephyr Console	880.88
	701-B	Zephyr Base	140.00
	701-B-AM	Zephyr Base, w/Tuner	244.00
	701-B-AM-FM	Zephyr Base, w/Tuner	363.60
	88-WS	Room Speaker	19.50
	88	Room Speaker	17.85
	87-WS	Room Speaker	23.20
	87	Room Speaker	21.50
	91	Room Speaker	39.50
	SW-10	Room Switch	4.00

B-22 ACCESSORIES

Microphone Stands

20	Desk Type Stand	\$ 3.25
21	Banquet Type Stand	9.00
22	Pedestal Type Stand	15.00

Microphones

JT-30	Astatic JT-30 w/Stand	\$ 17.95
T-3	Astatic T-3	28.35
DN-HZ	Astatic DN-HZ	25.60
950	Electro-Voice 950	40.50
DY-11	Shure DY-11	63.50

NOTE: All microphones include connector attached.

Low Impedance Matching Units

2105	Matching Unit	\$ 20.00
2106	Matching Unit	40.00
2107	Matching Unit	20.00
2108	Matching Unit	40.00

Portable Speaker and Amplifier Cases

14A	Case	\$ 22.50
14B	Case	27.50
15	Case Only	30.00
115	Case Complete w/Speakers, Cables and Plugs	70.00
93	Case Only	35.00
193	Case Complete w/Speakers, Transformers, Cables and Plugs	125.00
95	Case Only	28.00
195	Case Complete w/ Speakers, Transformers, Cables and Plugs	86.00
98	Case Only	15.00
198	Case Complete w/Speaker, Transformer, Cable and Plug	60.00

NOTE: Prices shown are effective June 1, 1948, and include tubes and Manufacturers Federal Excise Tax. Prices are subject to change without notice.

Prices are 5% higher West of Rockies.

BOGEN HIGH POWER SOUND EQUIPMENT

MODEL E75

70 WATTS

SPECIFICATIONS

POWER OUTPUT: 70 watts (2 - 35 watt power amplifiers) at less than 4%. PEAK POWER: 100 watts.

FREQUENCY RESPONSE: 30-14,000 cycles, ± 1 db.

HUM: Fund.: -70 db. Mic.: -59 db.

OUTPUT IMPEDANCE: Each power amplifier tapped at 4-8-15-500-1000 ohms.

POWER CONSUMPTION: 290 watts, 117 V, 50-60 cycles AC.

TUBES: Total 14: 2-6SF5, 2-6SL7GT, 2-6F6G, 2-7Z4, 4-6L6G, 2-5U4G.

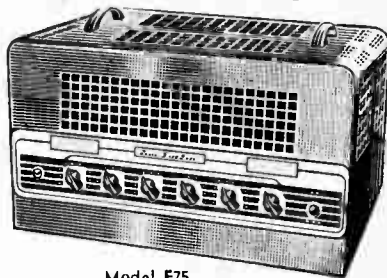
DIMENSIONS: 17 $\frac{1}{8}$ " long, 10" high, 12 $\frac{1}{2}$ " deep.

EXCLUSIVE DUAL-OUTPUT CONSTRUCTION — TWO MICROPHONE CHANNELS — ONE PHONOGRAPH CHANNEL — BASS-TREBLE TONE CONTROL — TWO MASTER GAIN CONTROLS.

The E75 amplifier has two separate power amplifiers, driven by a common preamplifier. Each power amplifier has its own separate power supply, inverse feedback circuit and master gain control.

E75 HIGH IMPEDANCE AMPLIFIER:
Complete with tubes.
List Price.....\$223.75

EL75 LOW IMPEDANCE AMPLIFIER:
Same as E75, but first microphone input is low impedance 200 ohms. 50 or 500 ohms available is specified.
List Price.....\$252.25



Model E75

MODEL GX50

50 WATTS

SPECIFICATIONS

POWER OUTPUT: 50 watts at less than 5%.

PEAK POWER: 90 watts.

FREQUENCY RESPONSE: 30-20,000 cycles ± 2 db. TONE CORRECTOR RANGE: bass control: -20 to +10 db at 60 cycles; treble control: -7 to +8 db at 10,000 cycles.

HUM: Fund.: -65 db. Mic.: -58 db.

OUTPUT IMPEDANCE: 4-8-16 ohm and 2 constant voltage taps (70 and 140 V).

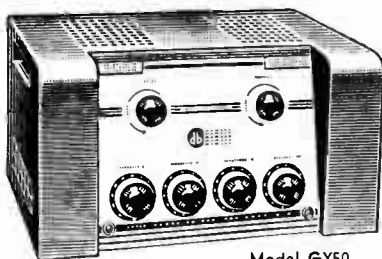
POWER CONSUMPTION: 240 watts, 117 V, 50-60 cycles AC.

TUBES: Total 11: 4-6SC7, 1-6SL7, 1-6SJ7, 1-6SN7, 1-5R4GY, 2-807, 1-5Y3.

DIMENSIONS: 17" long, 9" high, 13 $\frac{1}{2}$ " deep.

THREE MICROPHONE CHANNELS — ONE PHONOGRAPH CHANNEL — ELECTRONIC TONE CORRECTOR — CONSTANT VOLTAGE OUTPUT.

The proudest achievement in Bogen's 15 years of sound leadership. Push-Pull 807 output with constant voltage output taps, oil filled high voltage filter condenser. Cable and harness wiring and terminal board assembly throughout.



Model GX50

GX50 HIGH IMPEDANCE AMPLIFIER:
Complete with tubes.
List Price.....\$216.25

GXL50 LOW IMPEDANCE AMPLIFIER:
Same as GX50 but first microphone input is low impedance 200 ohms. 50 or 500 ohms available if specified.
List Price.....\$244.75

MODEL H50

50 WATTS

SPECIFICATIONS

POWER OUTPUT: 50 watts at less than 5%. PEAK POWER: 90 watts.

FREQUENCY RESPONSE: 30-20,000 cycles, ± 2 db.

GAIN: Microphone inputs (2): 120 db. Phono input (1): 80 db.

HUM: Fund.: -74 db. Mic.: -59 db.

OUTPUT IMPEDANCE: 4-8-16 ohms and two constant voltage taps (70 V and 140 V).

POWER CONSUMPTION: 240 watts, 117 V, 50-60 cycles AC.

TUBES: Total 9: 3-6SC7, 1-6SL7, 1-6SN7, 2-807, 1-5R4GY, 1-5Y3.

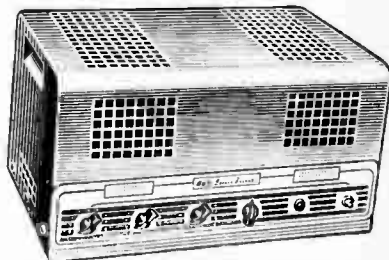
DIMENSIONS: 17" wide, 11 $\frac{1}{2}$ " deep, 9 $\frac{1}{4}$ " high.

TWO MICROPHONE CHANNELS — ONE PHONOGRAPH CHANNEL — BASS-TREBLE TONE CONTROL — CONSTANT VOLTAGE OUTPUT — UNDERWRITERS' LABORATORIES APPROVED.

Push-Pull 807 output with constant voltage output taps to simplify line matching transformer calculations.

H50 HIGH IMPEDANCE AMPLIFIER:
Complete with tubes.
List Price.....\$183.75

HL50 LOW IMPEDANCE AMPLIFIER:
Same as H50 but first microphone input is low impedance, 200 ohms. 50 or 500 ohms available if specified.
List Price.....\$212.25



Model H50

MODEL EX35

35 WATTS

SPECIFICATIONS

POWER OUTPUT: 35 watts at less than 5%. PEAK POWER: 50 watts.

FREQUENCY RESPONSE: 30-14,000 cycles, ± 1 db.

GAIN: Microphone inputs (3): 120 db. Phono input (1): 80 db.

HUM: Fund.: -64 db. Mic.: -59 db.

OUTPUT IMPEDANCE: 4-8-15-500 and 1000 ohms.

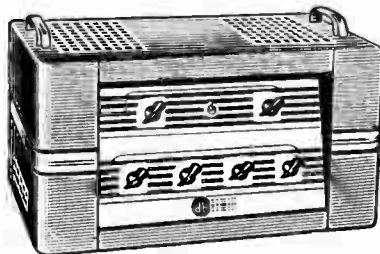
POWER CONSUMPTION: 190 watts, 117 V, 50-60 cycles AC.

REMOTE CONTROL PROVISION: Built-in — permits mixing and fading two of the 4 available inputs from a remote point.

TUBES: Total 12: 4-6SF5, 2-6SL7GT, 1-6SJ7, 1-6F6G, 1-7Z4, 2-6L6G, 1-5U4G.

DIMENSIONS: 16 $\frac{1}{2}$ " wide, 8 $\frac{1}{2}$ " high, 10 $\frac{1}{4}$ " deep.

THREE MICROPHONE CHANNELS — ONE PHONOGRAPH CHANNEL — ELECTRONIC TONE CORRECTOR — REMOTE CONTROL OF GAIN — 6L6 PUSH-PULL OUTPUT



Model EX35

EX35 HIGH IMPEDANCE AMPLIFIER:
Complete with tubes.
List Price.....\$167.25

EL35 LOW IMPEDANCE AMPLIFIER:
Same as EX35 but first microphone input is low impedance, 200 ohms. 50 or 500 available if specified.
List Price.....\$195.75

FOR FURTHER INFORMATION ON AMPLIFIERS AND COMPLETE BOGEN SYSTEMS ASK FOR THE LATEST BOGEN CATALOG
PRICES SLIGHTLY HIGHER IN ZONE 2 • ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

DAVID BOGEN CO., INC., NEW YORK 12, N. Y.

BOGEN MEDIUM POWER SOUND EQUIPMENT

MODEL E30

30 W ATTS

SPECIFICATIONS

POWER OUTPUT: 30 watts at less than 5%.
 PEAK POWER: 40 watts.
 FREQUENCY RESPONSE: 40-12,000 cycles, ± 1.5 db.
 GAIN: Microphone: 120 db. Phono: 78 db.
 HUM: Fund.: -68 db. Mic.: -59 db.
 OUTPUT IMPEDANCE: 4-8-15-250-500 ohms.
 POWER CONSUMPTION 180 watts, 117 V, 50-60 cycles AC.
 TUBES: Total 7: 2-6ZF5, 1-6SC7, 1-6SN7GT, 2-6L6G, 1-5U4G.
 DIMENSIONS: 15" long, 7 $\frac{3}{4}$ " deep, 9 $\frac{1}{4}$ " high.

TWO MICROPHONE CHANNELS — ONE PHONOGRAPH CHANNEL — BASS-TREBLE TONE CONTROL — 6L6 PUSH-PULL OUTPUT.

E30 HIGH IMPEDANCE AMPLIFIER:
 Complete with tubes.
 List Price \$112.25

EL30 LOW IMPEDANCE AMPLIFIER:
 Same as E30 but first microphone input is low impedance, 200 ohms. 50 or 500 ohms available if specified.
 List Price \$133.00



Model E30

MODELS F30M F30V and F30A

30 WATT AMPLIFIERS
 With Built-in Phonographs



Model F30A

The perfect answer to a general duty portable amplifier with built-in phonograph. F30M has a built-in single speed phonograph. F30A uses an automatic record changer and F30V is equipped with dual speed motor and speed regulator.

F30A — List Price \$186.50
 F30M — List Price 158.75
 F30V — List Price 183.75

MODEL E14

14 W ATTS

SPECIFICATIONS

POWER OUTPUT: 14 watts at less than 5%. PEAK POWER: 25 watts.
 FREQUENCY RESPONSE: 40-12,000 cycles, ± 1.5 db.
 GAIN: Microphone channels (2): 115 db. Phono channel (1): 75 db.
 HUM: Fund.: -64 db. Mic.: -57 db.
 OUTPUT IMPEDANCE: 4-8-15-250 and 500 ohms.
 POWER CONSUMPTION: 90 watts, 117 V, 50-60 cycles AC.
 TUBES: Total 7: 2-6SF5, 1-6SN7GT, 1-6SC7, 2-6L6G, 1-5Y3GT.
 DIMENSIONS: 14" long, 7 $\frac{3}{4}$ " deep, 8" high.

TWO MICROPHONE CHANNELS — ONE PHONOGRAPH CHANNEL — BASS-TREBLE TONE CONTROL — 6L6 PUSH-PULL OUTPUT — SEVEN TUBES.

E14 HIGH IMPEDANCE AMPLIFIER:
 Complete with tubes.
 List Price \$95.00

EL14 LOW IMPEDANCE AMPLIFIER:
 Same as E14 with first microphone input in low impedance, 200 ohms. 50 or 500 ohms available if specified.
 List Price \$115.75



Model E14

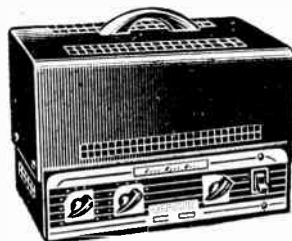
MODEL E10

10 W ATTS

SPECIFICATIONS

POWER OUTPUT: 10 watts at less than 5%. PEAK POWER: 17 watts.
 FREQUENCY RESPONSE: 60-10,000 cycles, ± 1.5 db.
 GAIN: Microphone channel (1): 115 db. Phono channel (1): 80 db.
 HUM: Fund.: -64 db. Mic.: -57 db.
 OUTPUT IMPEDANCE: 4-8-15-500 ohms.
 POWER CONSUMPTION: 75 watts, 117 V, 50-60 cycles AC.
 TUBES: Total 5: 2-6SC7, 2-6V6GT, 1-5Y3GT.
 DIMENSIONS: 7" deep, 11" wide, 7-5/16" high.

ONE MICROPHONE CHANNEL — ONE PHONOGRAPH CHANNEL — FULL RANGE TONE CONTROL — FIVE TUBES — PUSH-PULL OUTPUT.



Model E10

E10 HIGH IMPEDANCE AMPLIFIER:
 Complete with tubes.
 List Price \$61.50

EL10 LOW IMPEDANCE AMPLIFIER:
 Same as E10 but microphone input is low impedance, 200 ohms. 50 or 500 ohms available if specified.
 List Price \$82.25

FOR FURTHER INFORMATION ON AMPLIFIERS AND COMPLETE BOGEN SYSTEMS ASK FOR THE LATEST BOGEN CATALOG
 PRICES SLIGHTLY HIGHER IN ZONE 2 • ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

DAVID BOGEN CO., INC., NEW YORK 12, N. Y.

BOGEN MOBILE SOUND EQUIPMENT

MODEL EX326

32 WATT MOBILE SYSTEM

SPECIFICATIONS

POWER OUTPUT: 32 watts at less than 5%.
PEAK POWER: 40 watts.
FREQUENCY RESPONSE: 30-12,000 cycles, ± 2 db.
GAIN: Microphone 120 db. Phono: 70 db.
HUM: AC: -70 db; 6 volt DC: -60 db.
OUTPUT IMPEDANCE: 4-8-15-250-500 ohms.
POWER CONSUMPTION: ± 20 watts, 117 V AC; 28 amps, 6 V DC.
TUBES: Total 8: 3-6SF5, 2-6SL7GT, 2-6L6G, 1-5U4G.
DIMENSIONS: 16" long, 16" wide, 10 $\frac{1}{4}$ " high.

TWO MICROPHONE CHANNELS — ONE PHONOGRAPH CHANNEL — ELECTRONIC TONE CORRECTOR — BUILT-IN PHONOGRAPH — STANDBY SWITCH — 110 VOLT AC OR 6 VOLT DC OPERATION.



Model EX326

EX326 AMPLIFIER: Complete with phono and tubes. List Price \$250.00

EX326TU OUTDOOR SYSTEM: Includes: EX326 amplifier with tubes; 2 Bogen-University PH trumpets and SAH units; 1 Astatic N30 crystal microphone with 12 $\frac{1}{2}$ ' cable and plug. List Price \$399.25

EX326TJ OUTDOOR SYSTEM: Same as EX326TU substituting 2 Jensen H20 trumpets and U20 units. List Price \$405.25

MODEL E1620

23 WATT MOBILE SYSTEM

SPECIFICATIONS

POWER OUTPUT: AC: 23 watts at 5%; DC: 19 watts at 5%. **PEAK POWER:** AC: 39 watts; DC: 30 watts.
FREQUENCY RESPONSE: 30 - 14,000 cycles ± 2.5 db.
GAIN: Microphone channel: 109 db. Phono channel: 67 db.
HUM: AC: Fund: -66 db; Mic: -55 db. DC: Fund: -69 db; Mic: -58 db.
OUTPUT IMPEDANCE: 4-8-15-250-500 ohms.
POWER CONSUMPTION: 90 watts, 117 V AC; 17.5 amp, 6 V DC.
TUBES: Total 6: 1-6SJ7, 1-6SL7GT, 2-6L6G, 2-6X5GT.
DIMENSIONS: 15 $\frac{1}{2}$ " long, 10" deep, 12 $\frac{1}{2}$ " high.

UNIVERSAL OPERATION 6 VOLT DC OR 110 VOLT AC — ONE MICROPHONE CHANNEL — ONE PHONOGRAPH CHANNEL — BASS-TREBLE TONE CONTROL — BUILT-IN PHONOGRAPH.

E1620 AMPLIFIER: Complete with phono and tubes. List Price \$167.50

E1620TJ OUTDOOR SYSTEM: Includes: E1620 amplifier with tubes; 1 Jensen H20 trumpet and U20 unit, 1 Astatic JT30 crystal microphone with handle, interlocking base, 15' cable and plug. List Price \$252.75

E1620TU OUTDOOR SYSTEM: Same as E1620TJ, substituting Bogen-University PH trumpet with SAH unit. List Price \$249.75



Model E1620

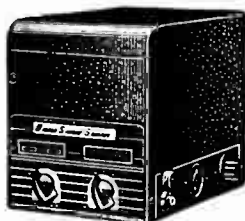
MODEL E66

6 WATT MOBILE SYSTEM

SPECIFICATIONS

POWER OUTPUT: 6 watts at 5%. **PEAK POWER:** 8 watts.
FREQUENCY RESPONSE: 60-9,000 cycles, ± 2 db.
GAIN: Microphone channel (1): 110 db. Phono channel (1): 75 db.
HUM: AC: -50 db, DC: -62 db.
OUTPUT IMPEDANCE: 4-8-15 ohms.
POWER CONSUMPTION: 50 watts, 117 V AC; 7 amps, 6 V DC.
TUBES: Total 4: 1-6SJ7, 1-6SL7GT, 1-6L6GA, 1-6X5GT.
DIMENSIONS: 5 $\frac{3}{4}$ " wide, 7 $\frac{3}{8}$ " deep, 6 $\frac{3}{4}$ " high.

ONE MICROPHONE CHANNEL — PHONOGRAPH JACK — STANDBY POSITION ON POWER SWITCH — 110 V AC OR 6 V DC OPERATION.



Model E66

MODEL E66 AMPLIFIER: Complete with tubes. List Price \$71.50

MODEL E66F SYSTEM: Includes: 1-E66 amplifier with tubes, 1 University 1B8 trumpet, 1 Astatic JT30 microphone with handle, interlocking base, 15' cable and plug. List Price \$121.75

MODEL E66J SYSTEM: Same as above but trumpet is Jensen VH-91. List Price \$121.75

PRICES SLIGHTLY HIGHER IN ZONE 2 • ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

DAVID BOGEN CO., INC., NEW YORK 12, N. Y.

BOGEN HIGH FIDELITY EQUIPMENT

MODEL PV15 15 WATT PHONO AMPLIFIER

SPECIFICATIONS

POWER OUTPUT: 15 watts at less than 2% distortion. PEAK POWER: 30 watts.
 FREQUENCY RESPONSE: 30 - 15,000 cycles $\pm 1/2$ db.
 TONE CORRECTOR RANGE: Bass control: -10 db to +10 db at 60 cps. Treble Control: -7 db to +8 db at 10,000 cps.
 GAIN: Maximum Gain: 106 db.
 HUM: -65 db. (referred to rated output).
 OUTPUT IMPEDANCE: 4-8-15-250-500 ohms.
 POWER CONSUMPTION: 117 V, 50-60 cycles, 105 watts.
 TUBES: Total 9: 1-6SK7, 3-6SJ7, 1-6SL7GT, 1-6SN7GT, 2-6L6G, 1-5Y3GT. (For PV15M, add 1-6SJ7).
 DIMENSIONS: 15" x 8" x 9 1/4".

BOGEN CONTROLLED EXPANDER — ELECTRONIC TONE CORRECTOR — 15 WATTS AT LESS THAN 2% — SEPARATE INPUTS FOR (a) GE VARIABLE RELUCTANCE PICKUP, (b) AMERICAN DYNAMIC OR PICKERING PICKUP, (c) HIGH IMPEDANCE MAGNETIC PICKUP, (d) LOW LEVEL CRYSTAL PICKUP, (e) HIGH LEVEL CRYSTAL PICKUP (OR TUNER OUTPUT).

THE MODEL PV15M has one microphone control in addition to the controls provided in the PV15. In the Model PV15L, the microphone channel is low impedance.

MODEL PV15 AMPLIFIER: Complete with tubes.

List Price \$140.25

MODEL PV15C AMPLIFIER: Same as PV15 with 4 foot extension controls for cabinet mounting.

List Price \$151.25

MODEL PV15M AMPLIFIER: Same as PV15 plus one high impedance microphone input.

List Price \$167.75

MODEL PV15MC AMPLIFIER: Same as PV15M with 4 foot extension controls for cabinet mounting.

List Price \$182.90

MODEL PV15L AMPLIFIER: Same as PV15M but microphone input is low impedance.

List Price \$195.75



Model PV15

MODEL PV10 10 WATT PHONO AMPLIFIER

MODEL PV10 AMPLIFIER: Complete with tubes.

List Price \$75.75

MODEL PV10C AMPLIFIER: Same as PV10 but with 4 ft. extension controls.

List Price \$85.25

STRAIGHT LINE EXPANDER — FULL RANGE TONE CONTROL — SEPARATE INPUTS FOR (a) HIGH IMPEDANCE MAGNETIC PICKUP, (b) HIGH LEVEL CRYSTAL PICKUP (OR TUNER OUTPUT), (c) LOW LEVEL CRYSTAL PICKUP.

SPECIFICATIONS

POWER OUTPUT: 10 watts at 5%. PEAK POWER: 17 watts.

FREQUENCY RESPONSE: 30-18,000 cycles ± 2 db.

GAIN: Magnetic pickup: 76 db., High Level Crystal: 50 db. Low Level Crystal: 60 db.

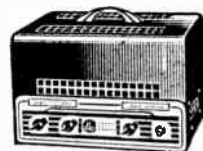
HUM: -60 db. (referred to rated output).

OUTPUT IMPEDANCE: 4-8-15-500 ohms.

POWER CONSUMPTION: 78 watts, 117 V, 50-60 cycles AC.

TUBES: Total 6: 2-6SL7GT, 2-6V6GT, 1-6SA7, 1-5Y3GT.

DIMENSIONS: 11" long, 7" wide, 7 1/4" high.



Model PV10

MODEL PH10 10 WATT MULTI-RANGE PHONO AMPLIFIER

MODEL PH10 AMPLIFIER: Complete with tubes.

List Price \$48.75

MODEL PH10C AMPLIFIER: Same as PH10 but with 4 ft. extension controls.

List Price \$53.75

MULTI-RANGE TONE SWITCH WITH FOUR LABORATORY SELECTED RESPONSE CURVES — VIRTUALLY HUMLESS PERFORMANCE IN ANY TONE POSITION — PUSH-PULL OUTPUT.

SPECIFICATIONS

POWER OUTPUT: 10 watts at 5%.

PEAK POWER: 14 watts.

FREQUENCY RESPONSE: (Full Range) 40-15,000 cps ± 1 db.

GAIN: 72 db.
 INPUT IMPEDANCE: (1) 500,000 ohms.

OUTPUT IMPEDANCE: 3.2 and 8 ohms.
 HUM: -80 db. (referred to rated output).

POWER CONSUMPTION: 60 watts, 117 V, 60 cycles.

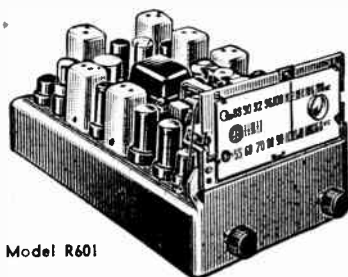
TUBES: Total 4: 1-6SL7GT, 2-6V6GT, 1-5Y3GT.

DIMENSIONS: 5" x 11" x 3" (overall height 6").



Model PH10

MODEL R601 AM - FM TUNER



Model R601

GROUNDING GRID RF AMPLIFIER — FIRST MIXER-DOUBLE HIGH FREQUENCY CONVERSION — PERMEABILITY TUNED, CERAMIC COIL FORM FM-IF AND DISCRIMINATOR TRANSFORMERS — BUILT-IN POWER SUPPLY — ONE STAGE OF AUDIO OUTPUT — 6AL7 VOLTAGE RATIO TUNING EYE.

SPECIFICATIONS

SENSITIVITY: AM — 5 microvolts
 FM — 25 microvolts

RANGE: AM — 540 KC to 1630 KC
 FM — 88 MC to 108 MC

INT. FREQUENCY: AM — 455 KC
 FM — 10.7 MC

POWER CONSUMPTION: 60 Watts, 117 V AC.
 TUBE COMPLEMENT: 2-7F8, 2-6AC7, 1-6H6, 1-6SL7GT, 2-6SK7, 1-6SA7, 1-6SJ7, 1-6AL7GT, 1-5Y3GT.

OUTPUT VOLTAGE: 3 volts.

DIMENSIONS: 8 1/4" wide x 7" high x 1 1/2" deep.

R601 List Price \$162.50

Available on panel for rack mounting List Price 184.50

PRICES SLIGHTLY HIGHER IN ZONE 2 • ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

DAVID BOGEN CO., INC., NEW YORK 12, N. Y.

BOGEN CENTRALIZED SOUND EQUIPMENT

MODE SA ECONOMY SCHOOL SYSTEM

MODEL SA10 — For 10 Rooms.	List Price.....	\$122.50
MODEL SA20 — For 20 Rooms.	List Price.....	145.00
MODEL SA30 — For 30 Rooms.	List Price.....	167.50
MODEL SA40 — For 40 Rooms.	List Price.....	190.00



Model SA

TWO WAY COMMUNICATION WITH CLASSROOMS — PUSH BUTTON CLASSROOM SELECTION — NO MICROPHONE NECESSARY AT MASTER — MASTER SWITCH TO CALL ALL ROOMS SIMULTANEOUSLY — CLASSROOM INITIATION OF CALLS — ANNUNCIATOR INDICATION OF ROOM CALLING (OPTIONAL) — BUILT IN 15 WATT AMPLIFIER — PROVISION FOR CONNECTING EXTERNAL RADIO AND PHONOGRAPH.

DIMENSIONS: 13 1/4" long, 11 1/2" deep, 9 1/2" high.

MODEL SB50 SOUND BROADCASTER

SPECIFICATIONS

SB50 DIMENSIONS: 31 1/2" high, 19 1/2" wide, 16 7/8" deep.

POWER OUTPUT: 50 watts at less than 5% PEAK POWER: 90 watts.

AMPLIFIER TUBES: Total 9: 3-6SC7, 1-6SL7, 1-6SN7, 2-807, 1-5R4GY, 1-5Y3.

TUNER RANGE: 540 KC to 1630 KC.

TUNER TUBES: Total 6: 2-6SK7, 1-6SA7, 1-6H6, 1-6X5, 1-6U5.

For music and voice distribution in hotels, hospitals, industrial plants, funeral homes, restaurants, stadia, resorts, large stores.



Model SB50

MODEL SB50 incorporates a broadcast band superheterodyne radio receiver, automatic record changer with silenced change function, bank of six area selector switches and all call switch plus monitor speaker and 50 watt amplifier. Cabinet is drawn steel, blue-grey hammerloid finished. List Price.....\$461.25

MODEL MS microphone unit consists of crystal microphone mounted on flexible gooseneck to 6 lb. cast base with Press-To-Talk Switch. List Price.....\$31.50

MODEL PS is optional plug-in unit to provide plate supply control and priority to microphone over music. List Price.....\$35.00

MODEL OS is optional plug-in oscillator for alarm or dismissal signals. List Price.....\$22.50

DELUXE MODEL SM SCHOOL SOUND SYSTEM For Up to 60 Rooms

SM15 — For 15 classrooms, less speakers and microphones List Price, \$647.25

SM30 — For 30 classrooms, less speakers and microphones. List Price, \$685.25

SM45 — For 45 classrooms, less speakers and microphones. List Price, \$723.25

SM60 — For 60 classrooms, less speakers and microphones. List Price, \$761.25

The Bogen SM is the complete school system. It actually provides two channels for use simultaneously — one for intercommunication with any room; the other for distribution of radio phonograph or microphone programs to any or all other rooms.

TWO MICROPHONES AND PHONOGRAPH USABLE SIMULTANEOUSLY. PROGRAM CAN BE PICKED UP FROM ANY ROOM AND RETRANSMITTED TO OTHERS. Available with AM-Short Wave or AM-FM Radio. Built-in Single Speed Phonograph Player. Available with Transcription Player or Automatic Change at slight cost increase. SM DIMENSIONS: 40 3/4" wide, 21" deep, 16 1/4" high.

SM15F — Same as SM15 but with AM-FM Radio. List Price, \$746.00

SM30F — Same as SM30 but with AM-FM Radio. List Price, \$784.00

SM45F — Same as SM45 but with AM-FM Radio. List Price, \$822.00

SM60F — Same as SM60 but with AM-FM Radio. List Price, \$860.00



Model SM

MODEL HT16 TRANSCRIPTION PLAYER



Model HT16

IDEAL PORTABLE TRANSCRIPTION PLAYER WITH BUILT-IN DUAL SPEED MOTOR FOR 78 OR 33 1/3 RPM — GOVERNOR SPEED CONTROL — 8 WATT BUILT-IN AMPLIFIER — HEAVY DUTY ALNICO V 8" SPEAKER IN REMOVABLE COVER.

SPECIFICATIONS

POWER OUTPUT: 8 watts at less than 5%. PEAK POWER: 11 watts.

FREQUENCY RESPONSE: 60-8,000 cycles, ±2 db.

GAIN: HT16: 72 db. MT16 — Phonograph channel: 70 db. Microphone channel: 103 db.

HUM: HT16: —64 db. MT16: Phonograph channel: —64db. Microphone channel: —55 db.

OUTPUT IMPEDANCE: 8 ohms.

POWER CONSUMPTION: 85 watts (with motor), 117V, 50-60 cycles AC.

TUBES: HT16: Total 4: 1-6SL7GT, 2-6V6GT, 1-5Y3GT.

MT16: Total 5: 1-6SJ7, 1-6SL7GT, 2-6V6GT, 1-5Y3GT.

DIMENSIONS: 19 1/4" deep, 17 1/2" wide, 10" high.

MODEL HT16—TRANSCRIPTION PLAYER.....List Price \$142.50

MODEL MT16—Same as HT16 plus one microphone input. List Price \$173.00

PRICES SLIGHTLY HIGHER IN ZONE 2 • ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

DAVID BOGEN CO., INC., NEW YORK 12, N. Y.

BOGEN COMMUNO-PHONES

THE NEW UNIVERSAL MODEL "X"

ONE MODEL TO SOLVE EVERY AC INTERCOMMUNICATION PROBLEM

DELUXE SERIES FOR 110V-125V 60 CYCLE AC UNDERWRITERS' LABORATORIES APPROVED

The new Model "X" Communophones represent the furthest advance in the design of electronic intercommunication equipment:

1. BOGEN MODEL "X" IS COMPLETELY UNIVERSAL. The one model will serve installations requiring a single master and several remote stations — installations requiring several master stations — or installations requiring several master stations and several remote stations. Remote stations are available to permit selective initiation of calls to master stations.
2. HAND-RUBBED FURNITURE-FINISHED CABINETS to complement the furnishings of the nation's best offices.
3. TYPEWRITER KEYBOARD ACTION for push button selection of stations.
4. TYPEWRITER BAR PRESS-TO-TALK SWITCH.
5. AUTOMATIC BUSY SIGNAL.
6. 3 WATTS AUDIO OUTPUT — reserve power to take noisy installations in stride.
7. PROVISION FOR PLUG-IN CONNECTION OF HANDSETS — permitting complete privacy of conversation, without need to operate the press-to-talk bar.
8. PROVISION FOR QUICK DISCONNECT OF MASTER STATIONS for ease of installation or transfer.
9. BALANCED LINES: 50 ohms.

MODEL 11X: MASTER can select up to 10 stations (masters or remotes in any combination)

MODEL 21X: MASTER can select up to 20 stations (masters or remotes in any combination)

MODEL RS50: REMOTE can reply when called by master and can also initiate calls to one master.

MODEL RS30: REMOTE can reply when called by master and can also initiate calls to one master.

MODEL RS110: REMOTE can reply when called by master and can also initiate calls to one master.

MODEL UX HANDSET plugs into any X, U or D master.

MODEL JU JUNCTION BOX is used in all X, U or D systems.

List Price	\$90.00
List Price	112.50
List Price	21.75
List Price	24.75
List Price	40.00
List Price	30.00
List Price	7.25

THE NEW UNIVERSAL MODEL "U"

ONE MODEL TO SOLVE EVERY AC-DC INTERCOMMUNICATION PROBLEM

STANDARD SERIES FOR AC-DC 105V-130V UNDERWRITERS' LABORATORIES APPROVED

The new — completely universal Model "U" Communo-Phone is the AC-DC version of the Model "X." It incorporates most of the functional and style features of the deluxe unit. Hand-rubbed cabinets — typewriter keyboard action for push button station selection — typewriter bar press-to-talk switch — provision for plug-in handset — provision for quick disconnect of the master station — 50 ohm balanced lines — Output Power is 1½ watts — no busy signal.

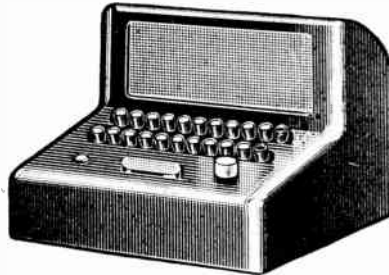
MODEL 11U: MASTER can select up to 10 stations (masters or remotes in any combination) List Price.....\$75.00

MODEL 21U: MASTER can select up to 20 stations (masters or remotes in any combination) List Price..... 98.75

MODELS RS50, RS30 and RS110: REMOTE STATIONS are used with models 11U and 21U.

MODEL UX PLUG-IN HANDSET and MODEL JU JUNCTION BOX are used with Models 11U and 21U.

TUBE COMPLEMENT MODELS 11U and 21U: 1-4F7, 1-50L6, 1-selenium rectifier.



Illustrated: Model 21X, 21U or 21D MASTER STATION



Model UX HANDSET

THE NEW DUAL-FUNCTION MODEL "D"

MODERATELY PRICED FLEXIBLE AC-DC COMMUNO-PHONE
UNDERWRITERS' LABORATORIES APPROVED

The new Model "D" Communo-Phone is designed to serve installations requiring either a single master and several remote stations or several master stations only. It will not serve systems requiring a combination of several master and several remote stations, and it operates on voice coil lines. In all other respects the Model "D" is the equivalent of the Model "U."

MODEL 11D: MASTER can select up to 10 stations (exclusively masters or remotes)

MODEL 21D: MASTER can select up to 20 stations (exclusively masters or remotes)

MODEL RS5: REMOTE can reply when called by master and can also initiate calls to master (for use with 11D or 21D masters)

MODEL UX HANDSET plugs into any master.

MODEL JU JUNCTION BOX.

List Price	\$61.25
List Price	82.50
List Price	19.50
List Price	30.00
List Price	7.25

FOR FURTHER INFORMATION ON COMMUNO-PHONES, ASK FOR THE LATEST BOGEN CATALOG
PRICES SLIGHTLY HIGHER IN ZONE 2 • ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

DAVID BOGEN CO., INC., NEW YORK 12, N. Y.

NEWCOMB PHONOGRAPH AMPLIFIERS

For the finest phonograph performance ever achieved

Logical culmination of years of electronic research and engineering development continuously carried on in Newcomb laboratories, these new phonograph amplifiers, used in conjunction with suitable accessories, will produce unbelievable realism from recorded music or from AM-FM radio tuners. Their improved response at low volume, their beautifully clear, undistorted treble tones and the exclusive new "Magic Red Knob" control, which virtually eliminates surface noise and distortion from records in any condition, make these two amplifiers the best possible choice for fine custom phonograph installations.

THE "MAGIC RED KNOB"
 For a new enjoyment of recorded music . . . simply turn the Magic Red Knob to one of the four positions, beginning at "A" for perfect records, beginning at very noisy records.

KXLP-30 DELUXE PHONOGRAPH AMPLIFIER

In the KXLP-30, Newcomb offers a phonograph amplifier unsurpassed by any other in the field, regardless of price. The ample power of the KXLP-30 permits use of the famous KX-Series dual tone control circuit, which provides tonal range and balance unattainable in less costly circuits. This circuit provides controlled emphasis of the desirable but power-consuming fundamental base tones, avoiding emphasis of harmonic bass—the "boomy" or one-tone bass so unacceptable to true music lovers. **KXLP-30 SPECIFICATIONS:** POWER OUTPUT: 30 watts at less than 5% distortion with flat power output versus frequency curve. FREQUENCY RESPONSE: 20 to 20,000 cycles within 1 db. Response of magnetic and variable reluctance inputs corrected for requirements of these pickups. INPUTS: For radio and choice of phonograph pickup from crystal to low level magnetic or variable reluctance types. GAIN: Crystal input, 90 db. at 1/2 meg. input impedance. Magnetic or variable reluctance input, 112 db. at 1/2 meg. input impedance or 95 db. at 10,000 ohms. Signal required at radio input to fully load amplifier to rated output is 6.6 volts. TONE COMPENSATION: Bass tone control 0 to +22 db. with special curve shape for maximum emphasis of fundamental bass tones and minimum emphasis of harmonic bass. Treble tone control -25 db. to +25 db. Automatic bass compensation of volume control from 0 db. bass boost at full volume to +10 db. at lowest volume. Fixed bass compensation (magnetic or variable reluctance input only) +10 db. RECORD CONDITION COMPENSATOR Five positions: #1, radio; #2, records, condition "A" (Perfect); #3, records, condition "B"; #4, records, condition "C"; #5, records, condition "D" (badly worn, very noisy).



KXLP-30. The "Magic Red Knob" virtually eliminates record noise and distortion from records in any condition.

CONTROLS (5): Power switch, bass tone control, Magic Red Knob control, treble tone control, volume control. **CONTROL PANEL:** Genuine etched metal. **HUM BALANCER CONTROL:** To correct for variations in tubes. **OUTPUT IMPEDANCES:** 3, 4, 6, 8, 16 and 500 ohms to octal socket. **POWER CONSUMPTION:** 150 watts, 129 volts, 60 cycles A.C. For use on 105-129 volts. **TUBES (7):** One 6SC7, three 6J5, two 6L6G, one 5U4G. **DIMENSIONS:** Chassis: 13 1/2" x 9 1/2" x 3". Height over-all, 7 7/8". **SHIPPING WEIGHT:** 26 lbs. **LIST: (with tubes) \$225.00. Plug Kit, \$60.**

HLP-14 PHONO AMPLIFIER

This new phonograph amplifier by Newcomb brings to music lovers an entirely new listening pleasure in a unit somewhat less expensive than the superb new KXLP-30. It, too, features the "Magic Red Knob" record condition compensator and its built-in pre-amplification and equalization, required for new low level pickups, make the HLP-14 ideal for the lower cost home installation.

Exceptional tonal balance at whisper volumes is an outstanding feature of the HLP-14 . . . a truly remarkable value in the custom phonograph field.

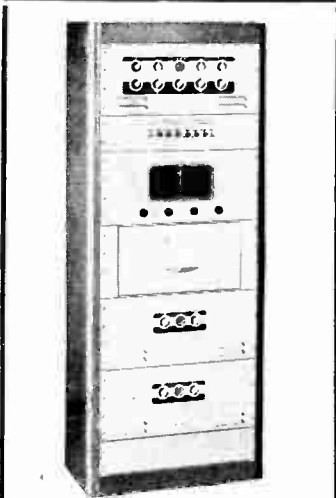
HLP-14 SPECIFICATIONS: POWER OUTPUT: 14 watts at less than 5% distortion with wide flat power output versus frequency curve. PEAK POWER OUTPUT: 19 watts. FREQUENCY RESPONSE: 30 to 15,000 cycles within 1 db. for crystal pickup and radio inputs. Magnetic and variable reluctance inputs have response adjusted to requirements of these pickups. INPUTS: for radio and choice of phonograph pickup from crystal to low level magnetic or variable reluctance types. GAIN: Crystal input 90 db. at 1/2 meg. input impedance. Magnetic or variable reluctance input 109 db. at 1/2 meg. or 92 db. at 10,000 ohms impedance. Signal output from radio required to load amplifier to rated output is 4.2 volts. TONE COMPENSATION: Variable: Bass tone control 0 to +16 db. Treble tone control -29 db. to +12.5 db. Automatic bass compensation on volume control from 0 db. at maximum volume to +16 db. at lowest volume. Fixed bass compensation (magnetic or variable reluctance input only) +10 db. RECORD CONDITION COMPENSATOR: (same as KXLP-30). **CONTROLS (5):** Power switch, bass tone control, record condition compensator and radio selector, treble tone control, volume control. **CONTROL PANEL:** Etched metal **OUTPUT IMPEDANCES:** 3, 4, 6, 8, 16 and 500. **POWER CONSUMPTION:** 75 watts, 129 volts, 60 cycles A.C. for use on 105-129 volts. **TUBES (6):** One 6SC7, one 6SJ7, one 6J5, two 6V6GT and one 5Y3GT. **DIMENSIONS:** Chassis, 13 1/4" x 8 1/8" x 3". Height over-all, 6 3/4". **SHIPPING WEIGHT:** 14 1/2 lbs. **LIST: (with tubes) 139.50 Plug Kit, \$62.**

(Prices and Specifications Subject to Change Without Notice)



HLP-14. The "Magic Red Knob," and other exclusive Newcomb features make this model ideal for the smaller custom installation.

RACK ASSEMBLIES



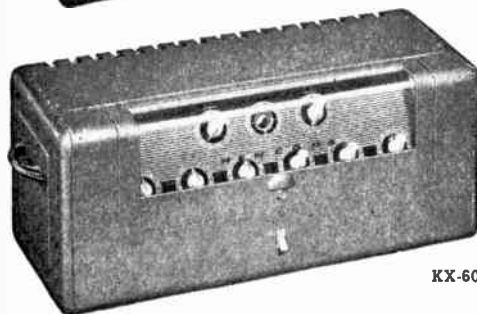
For all the varied sound applications of schools, industry, churches, fairs, stadiums, Newcomb offers the basic elements for custom cabinet type rack systems. Designed for flexibility, the Newcomb rack equipment enables the engineer to assemble and install public address equipment of the highest quality, tailored to each customer's exact needs. Write for literature.

Newcomb AUDIO PRODUCTS COMPANY
 6824 LEXINGTON AVENUE, HOLLYWOOD 38, CALIFORNIA

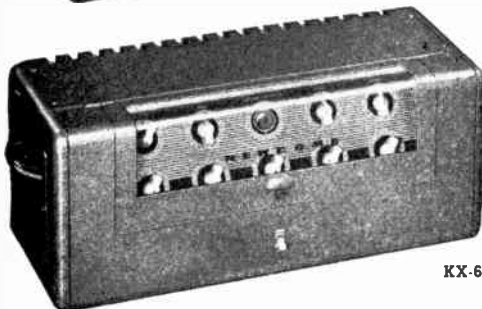
NEWCOMB DELUXE K-SERIES AMPLIFIERS



KX-30



KX-60



KX-6

Model A Power Supply

A compact, convenient power supply for use with the KX-6 Pre-amplifier when the power cannot be conveniently obtained from a K-60P Booster. Power consumption: 65 watts for 105-129 volts, 50-60 cycles A.C. DIMENSIONS: 3 1/2" x 6" x 8". SHIPPING WEIGHT: 8 lbs. LIST: \$49.50.



K-60P BOOSTER AMPLIFIER . . . A deluxe 60 watt Booster for the most particular installations. Use of four 6L6 tubes provides performance and dependability impossible with two tube designs. Ample inverse feedback minimizes effects of speaker load variations. Regulated screen voltage and improved plate circuit regulation and other circuit refinements insure lowest distortion at all levels. Provides power for KX-6 Pre-amplifier. Overload and volume indicators provide needed operating information at all times.

SPECIFICATIONS . . . POWER OUTPUT: 60 watts at less than 5% distortion. RESPONSE: 1 db., 20 to 20,000 cycles. INPUT to .1 meg. VOLUME CONTROL convertible to balanced line or bridging input by exclusive Newcomb plug-in transformers. GAIN 66 db. OUTPUT IMPEDANCES: 3, 4, 6, 8, 16 and 250 ohms to terminal strip and four bakelite moulded sockets. PLUG-IN FILTER CONDENSERS. SEPARATE PLATE AND FILAMENT POWER TRANSFORMERS, individually fused, brought out to 3 contact male A.C. receptacle. TUBES (11): one 6SJ7, one 6SN7, one 6SQ7, one 6V6GT, four 6L6G, one 6AF6G, two 5Z4. POWER CONSUMPTION: 193 watts, 129 volts 60 cycles A.C. for use on 105-129 volts. DIMENSIONS: 8 5/8" x 8 5/8" x 20 1/4". SHIPPING WEIGHT: 44 lbs. LIST: (with tubes) \$215.00. Plug Kit, \$2.69.

(Prices and Specifications Subject to Change Without Notice)

KX-30 AMPLIFIER . . . Flexibility, dependability, outstanding performance and many superior operating features characterize the KX-30, bringing new quality to the school auditorium, church, theatre, night club, dance bands, etc. Its versatility and ability to handle a greater variety of acoustic conditions makes it the ideal instrument for the rental engineer or traveling group. An ideal recording amplifier. Custom testing of each unit with attached performance certificate assures the purchaser of laboratory perfection in each instrument. Superior individual bass and treble tone controls in a more costly circuit greatly enhance listening quality.

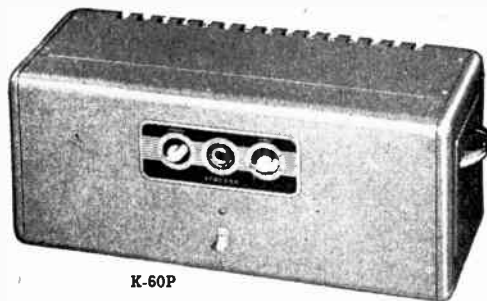
SPECIFICATIONS . . . POWER OUTPUT: 30 watts, distortion 5% or less. RESPONSE: 1 db., 20 to 20,000 cycles. THREE MICROPHONE INPUTS (2 megs. input impedance), Gain 126 db. LOW IMPEDANCE by means of exclusive plug-in transformer. TWO PHONO INPUTS (1/2 meg. impedance), Gain 78 db. MASTER VOLUME CONTROL VOLUME INDICATOR calibrated in actual watts output. OVERLOAD INDICATOR. Bass TONE RANGE: -17 db. to +24 db. TREBLE TONE RANGE: -24 db. to +24 db. OUTPUT IMPEDANCES: 3, 4, 6, 8, 16 and 500 ohms to terminal strip and two molded bakelite sockets. PLUG-IN FILTER CONDENSERS. MULTISTAGE INVERSE FEEDBACK and regulated screen voltage. Illuminated control panel protected by locking cover. WELDED STEEL CABINET, beautifully finished in silver gray hammertone baked enamel. TUBES (13): four 6J7, two 6J5, one 6SN7, one 6SQ7, one 6AF6G, one 6V6GT, two 6L6, one 5V4G. POWER CONSUMPTION: 136 watts, 129 volts 60 cycles A.C. for use on 105-129 volts. DIMENSIONS: 8 5/8" x 8 5/8" x 20 1/4". SHIPPING WEIGHT: 36 lbs. LIST: (with tubes) \$269.50. Plug Kit, \$3.20.

KX-60 AMPLIFIER . . . All the deluxe operating and circuit features of the KX-30 but with twice the power, for stadiums, church towers, large auditoriums or wherever high power with quality is desired. Conservative operation using four 6L6 tubes offers greater dependability, less distortion and more uniform power output at all frequencies than two tube designs. Compact for easy portability. Includes the same deluxe dual tone control circuits as the KX-30, assuring best performance under all acoustical conditions. Custom testing of each unit with attached performance certificate assures the purchaser of laboratory perfection in each instrument. Key locking cover protects control settings. Microphone inputs readily converted to low impedance by exclusive, hum-free plug-in transformers.

SPECIFICATIONS . . . for KX-60 exactly the same as KX-30, except as follows: POWER OUTPUT: 60 watts, distortion less than 5%. OUTPUT IMPEDANCES: 3, 4, 6, 8, 16 and 250 ohms to terminal strip and four bakelite molded sockets. TUBES (15): four 6J7, two 6SN7, one 6SQ7, one 6V6GT, one 6AF6G, four 6L6, two 5Z4. POWER CONSUMPTION: 240 watts, 129 volts 60 cycles A.C. for use on 105-129 volts. SHIPPING WEIGHT: 42 lbs. LIST: (with tubes) \$309.00. Plug Kit, \$4.26.

KX-6 MIXER PRE-AMPLIFIER . . . Five microphone and two phonograph inputs make the KX-6 mixer pre-amplifier ideal for large auditoriums, theatres, large church installations, large orchestras, etc. The advanced KX-Series bass and treble tone controls as used in all KX models, a Master Volume Control and Volume Indicator make tough jobs easy and operating a pleasure. Locking control cover prevents unauthorized tampering with adjustments. Ample power output for connection to an almost unlimited number of boosters or several telephone lines or both. Plenty of gain for distant pickups and extremely low hum. Filament and Plate Power obtained from Model A Power Supply or K-60P Booster. Used in conjunction with the K-60P, the combination makes the finest multiple input, 60 watt, amplifying unit obtainable.

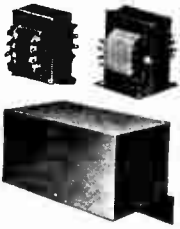
SPECIFICATIONS . . . POWER OUTPUT: +22 db. at less than 5% distortion. FREQUENCY RESPONSE: 20 to 20,000 cycles within 1 db. FIVE MICROPHONE INPUTS (2 megs.) Gain 97 db. LOW IMPEDANCE by means of exclusive Newcomb plug-in transformers. TWO PHONO INPUTS (1/2 meg.), Gain 47 db. MASTER VOLUME CONTROL VOLUME INDICATOR, Electric Ray type. BASS TONE CONTROL RANGE: -17 db. to +24 db. TREBLE TONE RANGE: -24 db. to +24 db. OUTPUT IMPEDANCES: 500 or 125 ohms. PLUG-IN FILTER CONDENSERS. PUSH-PULL OUTPUT TUBES. ILLUMINATED control panel protected by locking cover. WELDED STEEL CABINET, beautifully finished in silver gray hammertone baked enamel. TUBES (11): six 6J7, three 6J5, one 6SN7, one 6E5. POWER CONSUMPTION: 310 volts D.C. at 27 ma. 6.3 volts A.C. at 3.3 amps from Model A Power Supply or K-60P. DIMENSIONS: 8 5/8" x 8 5/8" x 20 1/4". SHIPPING WEIGHT: 25 lbs. LIST: (with tubes) \$239.50. Plug Kit, \$3.34.



K-60P

Newcomb AUDIO PRODUCTS COMPANY
6824 LEXINGTON AVENUE, HOLLYWOOD 38, CALIFORNIA

NEWCOMB IMPEDANCE MATCHING TRANSFORMERS



LS-2: (not shown) High Power Impedance matching auto-transformer having 28 impedance from 580 ohms to 1.21 ohms. Capacity 100 watts. Shipping weight, 5¼ lbs. **List: \$19.50**

LS-4: Multi-winding general purpose transformer. Range of impedances from 3,000 to 18,000 ohms in steps of 1,500 ohms. Capacity 8 watts. **List: \$6.50**

LS-5 TRANSFORMER: Similar to LS-4 with range of impedances from 500 to 3,000 ohms in steps of 250 ohms. Capacity 20 watts. **List: \$8.50**

TC-3: Weatherproof housing for use with all three transformers. Box size: 3¼" x 4" x 5¾". **List: \$5.00**

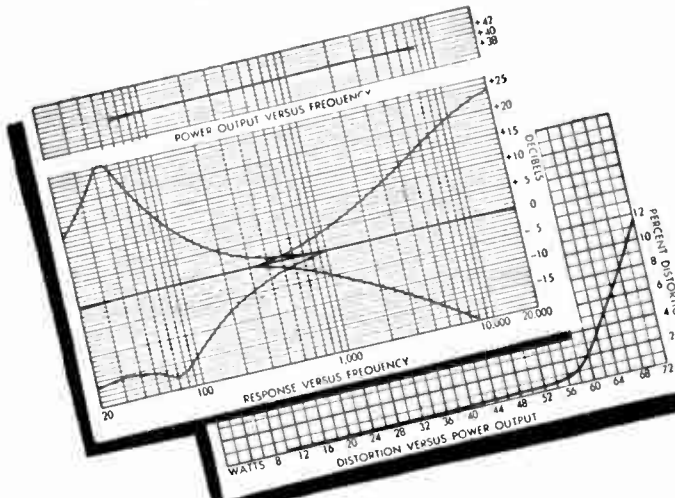
PLUG-IN INPUT TRANSFORMERS



TR-91: A distinct contribution to high quality p-a. systems. Features sextuple alloy and copper shielding for quiet operation right in amp. proper; alloy core and specially designed windings for extended frequency response from 20 to 20,000 cycles; plug base for easy installation without tools in any H or K series Newcomb amp. For use between 50 or 200 ohm mikes and grid. Shipping weight, 1¼ lbs. **List: \$23.50**

TR-92: Input impedance 5,000 ohms to grid for bridging a 500 ohm line. Alloy shielded for minimum hum. When plugged into the socket provided on K60-P, it converts this amp. for use as bridging amp. Shipping weight, 1¼ lbs. **List: \$19.50**

TR-100: Identical to TR-91 but designed for use between 125 or 500 ohm microphones and grid. **List: \$23.50**



THE ABOVE CHARTS SHOW ACTUAL RESPONSE AND DISTORTION CURVES FOR THE KX-60 AMPLIFIER

MODEL LP-1 SCRATCH FILTER



Another contribution by Newcomb to improved record response for the most critical and demanding listener. Simple to install in commercial or professional systems or home phonographs. Can be connected easily by any serviceman. Wired between a crystal pickup and an amplifier, it greatly improves the response of the pickup and provides a remarkably effective control of needle scratch. Unlike other methods the LP-1 retains excellent brilliance of response. Four steps of adjustment provide adequate control for all records, regardless of quality. **List: \$25.00**

NEWCOMB K-SERIES PORTABLE SYSTEMS

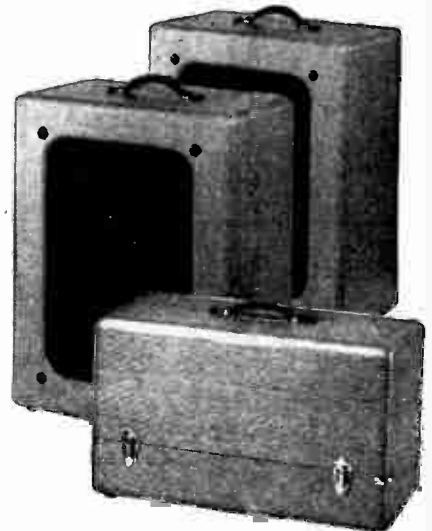
KX-6012A: 3-case port. system built around KX-60 amp. Genuine plywood, fabricoid cases. One carries amp. with space for mikes, cable and stand. Other houses two 12" speakers of finest, efficient type. Fifty ft. of cable with each speaker. No mikes or mtgs. included. Shipping weight, 185 lbs.

List: (with tubes and plugs) \$655.88



KX-660-12A: 4-case, 60 watt port. system combining KX-6 Pre-amp. with K60-P Booster. 4 top quality 12" speakers, each with 50 ft. cable. KX-6 and K60-P carried in separate cases. Space in each for mikes, cable and stand. Mikes and mtgs. not included. Shipping weight, 221 lbs.

List: (with tubes and plugs) \$834.42



KX-3012A: 2-case port. system with KX-30 amp. Smart genuine plywood cases give protection and excellent response. One case carries amp. with space for mikes, cable and stand; other, 2 of best quality 12" speakers, facing inside. No mikes or mtgs. included. Shipping weight, 118 lbs.

List: (with tubes and plugs) \$459.87

KX-30R12A: Superb 3-case comb. of 2 new RS-12 wide range speakers and KX-30 amp. Case has space for stand, mikes, accessories. Each speaker with 50 ft. of cable. No mikes or mtgs. included. Shipping weight, 147 lbs. **List: (with tubes and plugs) \$533.62.**

(Prices and Specifications Subject to Change Without Notice)

Newcomb-AUDIO PRODUCTS COMPANY
6824 LEXINGTON AVENUE, HOLLYWOOD 38, CALIFORNIA

NEWCOMB TR-16 TRANSCRIPTION PLAYER

MODEL TR-16: Portable Transcription Player & P.A. System

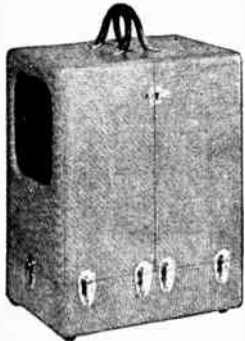
The TR-16 brings a new standard of reproduction to the field of portable record playing. Truly economical, yet characteristically Newcomb in quality of workmanship, performance and fresh originality of design. Never before has so much distortion-free power, quality of tone, and ruggedness been placed in such light, convenient, compact form. Weighs only 38½ lbs. Provides the best answer yet to the needs of schools, colleges, broadcast studios, theatrical agencies, lecturers, dance studios, music teachers, sales and advertising agencies, for more rugged equipment that would give more dependable service, yet provide better performance than heretofore. Useful not only as a very fine transcription player, but makes a splendid P.A. System by merely connecting a microphone to the input provided for this purpose. Tested and approved by the National Board of Fire Underwriters Laboratories. Every attempt has been made to make this unit simple, easy and foolproof in operation, with great emphasis on dependability and tone quality. Plays all records up to 17¼" in diameter at either 33-1/3 or 78 R.P.M. Handy vernier speed adjustment lever varies basic speed to meet pitch or tempo requirements. Heavy General Industries governor controlled motor with 12" turntable. Large 12" heavy weight Alnico V permanent magnet dynamic speaker protected by push-proof punched metal grill and connected with a 25 ft. cable permitting the speaker to be placed most conveniently for best coverage. Full 10 watt, push-pull 6V6 inverse feedback, low distortion amplifier. Response within 2 db from 50 to 10,000 cycles. Separate microphone and phonograph volume controls permit mixing of microphone speech with recorded music. Individual record bass boost tone control and separate high frequency tone control give effective control of all tonal requirements. Special circuit avoids excessive bass on voice when bass is emphasized on records. Design retains excellent bass even at low volumes.

Famous "Featherweight" Astatic Model "QT" crystal cartridge in deluxe tone arm for better tone quality, long record life, low distortion, and minimum tracking error. Semi-permanent, easily replaceable needle of new design eliminates direct needle talk, avoids nuisance of constant needle replacement and lengthens life of records. Rubber pad between turntable and pickup rest

protects cartridge if dropped in this area. Needle further protected by close fitting guard. Tubes, motor, and motor wiring are instantly accessible by merely turning two airlock fasteners ¼ turn each, using a dime or a penny. Inspection and ventilating plate beneath amplifier provides quick access to under-chassis wiring without need to remove amplifier. All steel motor board and front panel. Sloping amplifier control panel. Four controls consisting of: Combination Treble Tone Control and Amplifier A.C. Switch; Phonograph Bass Boost Control; Combination Phonograph Volume Control and Turntable Switch; Microphone Volume Control. Panel includes microphone jack, loudspeaker jack, and pilot lamp. Tubes: (5) 1-6SC7, 1-6SJ7, 2-6V6GT, 1-6X5GT. Power consumption: 70 watts, 117 volts 60 cycles A.C. Dimensions: 16¾" x 16¾" x 11¾". Shipping weight: 43½ lbs. **List: \$159.50 complete. Microphone extra.**

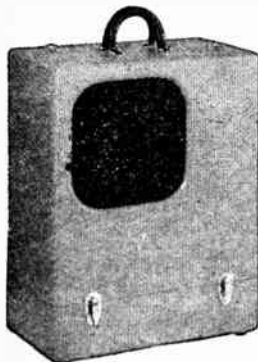


TR-16



H-1010C

SEE OTHER NEWCOMB PORTABLE SYSTEMS IN OTHER SERIES



H-1412C — H-3012H

H-1010C: 2-speaker, 10 watt system, with H-10 amp. 2 quality heavy duty 10" speakers, cable. Plywood case, 11" x 20¾" x 15¾". No mike or stand included. Shp. Wt.: 43 lbs. **List: (with tubes and plugs) \$184.97.**

H-1412C: Built around H-14 amp. 2 full 12" speakers with amp. in plywood case, 11" x 23¼" x 18½"; comp. for mikes, cable, stand. No mikes, mtgs. included in price. Shipping weight: 53 lbs. **List: (with tubes and plugs) \$222.44.**

H-3012H: H-30 amp. with 2 high efficiency 12" speakers, 50 ft. of cable, each in case 11" x 23¼" x 18½"; space for mikes, cable, stand. No mikes, mtgs. included in price. Shipping weight: 63 lbs. **List: (with tubes and plugs) \$277.04.**

(Prices and Specifications Subject to Change Without Notice)

TR-16M Portable Transcription Player

A deluxe model incorporating the new variable reluctance magnetic pickup and built-in Pre-amplifier. Includes a built-in scratch suppressor which can be cut in or out at will. Tubes used (6) 2-6SC7, 1-6SJ7, 2-6V6GT, 1-5Y4GT. Otherwise similar to Model TR-16. **List: \$179.50**

H - SERIES PORTABLE SYSTEMS

146-S PORTABLE SYSTEM:

Compact, powerful unit weighing only 39½ lbs. Efficient up to ½ mile on hand, 2 at sea. Power Output: 14 watts. Shipping weight, 53 lbs. **List: \$254.00**
146-SP: Same as 146-S. Rewired to permit use of crystal phonograph pickup. **List: \$270.48**



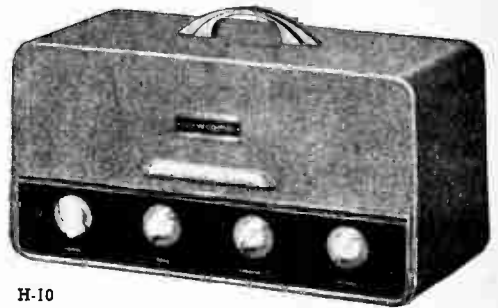
146-S

Newcomb-AUDIO PRODUCTS COMPANY
 6824 LEXINGTON AVENUE, HOLLYWOOD 38, CALIFORNIA

NEWCOMB H-SERIES AMPLIFIERS

H-10 AMPLIFIER: Compact, lightweight, dependable, the H-10 is the perfect answer for the better quality, low power jobs. A wide range tone control, multi-stage inverse feedback, careful design and certified custom testing assure superior performance.

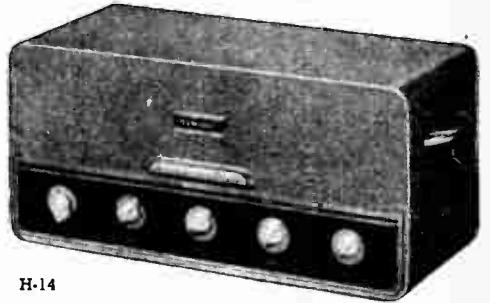
SPECIFICATIONS . . . POWER OUTPUT: 10 watts at less than 5% distortion with excellent power output at all frequencies and low distortion at all output levels. **FREQUENCY RESPONSE:** 40 to 10,000 cycles within 2 db. **INPUTS (2):** 1 mike (2 meg.) gain 112 db, 1 phono (1/2 meg.) gain 74 db. (Microphone input instantly convertible to low impedance input by use of TR-91 transformer). **OUTPUT IMPEDANCES (6):** 3, 4, 6, 8, 16 and 500 ohms to terminal strip and 2 bakelite molded sockets. **CONTROL PANEL:** Etched metal, illuminated. **CONTROLS (4):** 1 mike, 1 phono, 1 bass-treble, 1 A.C. power switch. **ALL RESISTANCE CAPACITY COUPLING; PUSH-PULL OUTPUT; THOROUGHLY IMPREGNATED HEAVY DUTY TRANSFORMERS. POWER CONSUMPTION:** 50 watts, 129 volts, 60 cycles A.C. for use on 105-129 volts. **TUBES (5):** 1-6SC7, 1-6SJ7, 2-6V6GT/G, 1-6X5GT. **DIMENSIONS:** 6-1/16" deep x 6 5/8" high x 12 3/4" long. **SHIPPING WEIGHT:** 14 lbs. **List: (with tubes) \$89.50. Plug Kit, \$1.83**



H-10

H-14 AMPLIFIER . . . An outstanding general-purpose amplifier designed for high quality performance and long life. This 14-watt amplifier has inputs for two microphones and one phonograph, two tone controls for individual control of bass and treble, a fully illuminated panel and many other features that make it a top value among all amplifiers in its power range. Plus certified custom testing assuring perfection in each unit.

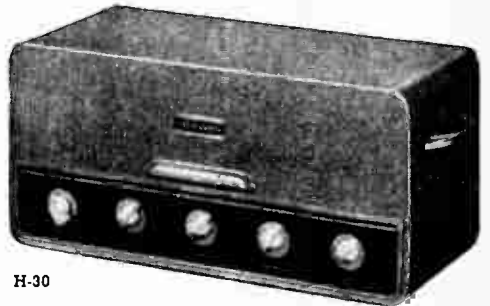
SPECIFICATIONS . . . POWER OUTPUT: 14 watts at less than 5% distortion with excellent power output at all frequencies and low distortion at all output levels. **FREQUENCY RESPONSE:** 30 to 15,000 cycles within 2 db. **INPUTS (3):** 2 mikes (2 meg.) gain 112 db, 1 phono. (1/2 meg.) gain 75 db. **OUTPUT IMPEDANCES (6):** 3, 4, 6, 8, 16 and 500 ohms. **CONTROL PANEL:** Etched metal. **CONTROLS (5):** 1 mike, 1 mike-phonograph, 1 bass, 1 treble, 1 A.C. power switch. **POWER CONSUMPTION:** 75 watts, 129 volts, 60 cycles A.C. for use on 105-129 volts. **TUBES (6):** 1-6SC7, 1-6SJ7, 1-6J5, 2-6V6-GT/G, 1-5Y3-GT. **DIMENSIONS:** 7" deep x 8 1/8" high x 15" wide. **SHIPPING WEIGHT:** 19 lbs. **List: (with tubes) \$119.50. Plug Kit, \$2.43.**



H-14

H-30 AMPLIFIER . . . For extremely faithful reproduction, for portability, for power, for complete dependability. The H-30 is an ideal unit for dance bands, school auditoriums, cafes and similar applications. Answers the majority of requirements in any sound field. Its outstanding features include individual tone controls, easily selected output impedances, plug-in filter condensers, linear mixer response, superb frequency response at any output power, remarkably low distortion, plus certified custom testing insuring perfection in each unit.

SPECIFICATIONS . . . POWER OUTPUT: 30 watts at less than 5% distortion with excellent output power at all frequencies and low distortion at all output levels. **FREQUENCY RESPONSE:** 30 to 15,000 cycles within 2 db. **INPUTS (3):** 2 mikes (2 meg.) gain 121 db, 1 phono (1/2 meg.) gain 78 db. **OUTPUT IMPEDANCES (6):** 3, 4, 6, 8, 16 and 500 ohms. **CONTROL PANEL:** Etched metal. **CONTROLS (5):** 1 mike, 1 mike-phonograph, 1 bass, 1 treble, 1 A.C. power switch. **CIRCUIT FEATURES:** multi-stage inverse feedback, all resistance capacity coupling, multiple winding output transformer. **POWER CONSUMPTION:** 144 watts, 129 volts, for use on 105-129 volts, 60 cycles A.C. **TUBES (7):** 2-6SF5, 1-SJ7, 1-6J5, 2-6L6-G, 1-5U46. **DIMENSIONS:** 7" deep x 8 1/8" high x 15" wide. **SHIPPING WEIGHT:** 23 lbs. **List: (with tubes) \$153.00. Plug Kit, \$2.43.**

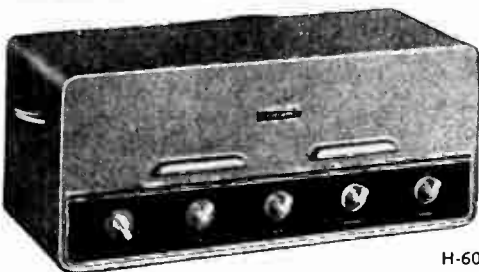


H-30

H-60 AMPLIFIER: Utilizing the most advanced circuit techniques for higher power, lower distortion and wider range of response, the Model H-60 offers a full 60 watts of clean, distortion-free power. Use of four 6L6 tubes provides performance and dependability impossible from 2-tube designs. Simplicity of design, precision assembly, and certified custom testing assure a superior product. For use in a great variety of applications where moderate cost is a factor, the basic amplifier superiority of the H-60 makes it a continuing favorite.

SPECIFICATIONS . . . POWER OUTPUT: 60 watts at less than 5% distortion with excellent power output at all frequencies and low distortion at all output levels. **FREQUENCY RESPONSE:** 2 db, 30-15,000 cycles. **INPUTS (4):** 2 microphone (2 meg.) gain 126 db, 2 phonograph (1/2 meg.) gain 85 db. **OUTPUT IMPEDANCES (6):** 3, 4, 6, 8, 16 and 250 ohms. **CONTROL PANEL:** Etched metal. **CONTROLS (5):** 2 microphone-phonograph, 1 bass, 1 treble, 1 A.C. power switch. **CIRCUIT FEATURES:** All resistance capacity coupling, multistage inverse feedback, plus regulated screen power for lower distortion and multiple winding output transformer. **POWER CONSUMPTION:** 228 watts, 129 volts, 60 cycles A.C. for use on 105-129 volts. **TUBES (11):** 2-6SF5, 1-6SJ7, 1-6SN7, 4-6L6G, 1-6V6GT, 2-5Z4. **DIMENSIONS:** 13 3/8" x 8 1/2" x 19". **SHIPPING WEIGHT:** 38 lbs. **List: (with tubes) \$190.00. Plug Kit, \$3.66.**

(Prices and Specifications Subject to Change Without Notice)



H-60

WRITE FOR COMPLETE INFORMATION

Newcomb-AUDIO PRODUCTS COMPANY
6824 LEXINGTON AVENUE, HOLLYWOOD 38, CALIFORNIA

NEWCOMB E-SERIES AMPLIFIERS

A LOW-PRICED LINE OF SUPERIOR UTILITY AMPLIFIERS

The same fine workmanship and materials as the incomparable KX- and H-Series. Designed to lead the low-price field. For performance, dependability and economy the E-Series is today's best combination of high quality and low cost.

E-10 AMPLIFIER . . . Delivers full 10 watts from push-pull 6V6 tubes. Inputs for mike and phono.

SPECIFICATIONS . . . POWER OUTPUT: 10 watts at less than 5% distortion. FREQUENCY RESPONSE: 50 to 10,000 cycles within 2 db. INPUTS (2): 1 mike (2 meg.) gain 116 db, 1 phono (1/2 meg.) gain 77 db. TONE CONTROL: range 0 to 24 db. MULTI-STAGE INVERSE FEEDBACK CIRCUIT. OUTPUT IMPEDANCES: 4, 8 and 16 ohms to octal socket. TUBES (5): 1-6SC7, 1-6SF5, 2-6V6GT and 1-6X5GT. FINISH: Two-tone gray hammertone baked enamel. PANEL: Genuine etched metal. DIMENSIONS: (incl. cover) 5 3/4" x 10 3/8" x 6 3/4" high. POWER CONSUMPTION: 60 watts at 117 volts; 60 cycles A.C. SHIPPING WEIGHT: amplifier only, less cover, 9 lbs. Including cover, 10 1/2 lbs. LIST: (with tubes, less cover) \$49.50. Cover, \$4.50. Plug Kit, \$1.10.

E-17 AMPLIFIER . . . For medium power applications, 17 watts of undistorted audio to easily selected impedances for matching various speakers. Mixed controls for one mike and a phono input.

SPECIFICATIONS . . . POWER OUTPUT: 17 watts at less than 5% distortion. FREQUENCY RESPONSE: 2 db, 50 to 10,000 cycles. INPUTS: 1 mike (2 meg.) gain 117 db, 1 phono (1/2 meg.) gain 79 db. TONE CONTROL: range 0 to -29 db. OUTPUT IMPEDANCES: 4, 8, 16 and 500 ohms. MULTI-STAGE INVERSE FEEDBACK CIRCUIT. TUBES (5): 1-6SC7, 1-6SJ7, 2-6L6G, 1-5Z4. PANEL: etched metal, illuminated. FINISH: Two-tone gray hammertone baked enamel. DIMENSIONS: (incl. cover): 8 3/8" x 14 1/8" x 8" high. POWER CONSUMPTION: 75 watts at 117 volts 60 cycles A.C. SHIPPING WEIGHT: 18 lbs. LIST: (with tubes and cover) \$79.50. Plug Kit, \$1.50. **E-17P PHONO TOP MODEL**. Shipping Wt: 21 lbs. List: (with tubes) \$102.50. Plug Kit, \$1.50.

E-25 AMPLIFIER: Delivers a full 25 watts. Multi-stage inverse feedback assures low distortion. Provision for two mikes to be mixed together, or one mike and one phono, with easy matching to various speakers.

SPECIFICATIONS . . . POWER OUTPUT: 25 watts at less than 5% distortion. FREQUENCY RESPONSE: 2 db, 50-10,000 cycles. INPUTS (3): 2 mikes (2 meg.) gain 119 db, and 1 phono (1/2 meg.) gain 78 db. TONE CONTROL: range 0 to -30 db. OUTPUT IMPEDANCES: 4, 8, 16 and 500 ohms. TUBES (6): 1-6SJ7, 1-6SC7, 1-6J5, 2-6L6G and 1-5Z4. FINISH: Two-tone hammertone baked enamel. PANEL: etched metal, illuminated. POWER CONSUMPTION: 90 watts at 117 volts; 60 cycles A.C. SHIPPING WEIGHT: 19 lbs. LIST: (with tubes and cover) \$99.50. Plug Kit, \$2.10. **E-25P PHONO TOP MODEL**. Shipping Wt: 22 lbs. List: (with tubes) \$122.50. Plug Kit, \$2.10.

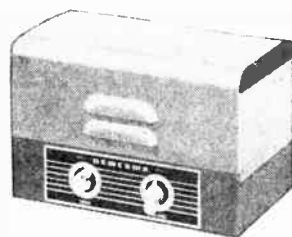
E-25MP Phono Top Mobile Amplifier . . . A full 25 watts from either 6 V. Storage Battery or 117 V. A.C. at new low price. Ideal for sound trucks, political gatherings, picnics, missionary work, camps, resorts, beaches, carnivals, parades, etc. Ruggedly built to stand hard usage. Consumes least possible battery power per watt output. "Stand-by" switch reduces battery consumption, keeps tubes warm for instant use. Separate A.C. power and turntable switches. Heavy duty Jones plugs and receptacles provide dependable connections to battery or A.C. power source.

SPECIFICATIONS . . . POWER OUTPUT: A full 25 watts at less than 5% distortion from either 117 volts A.C. or a 6-volt storage battery. RESPONSE: Within 2 db, 50-10,000 cycles. INPUTS for two mikes (2 meg.) gain 119 db, and one phono (1/2 meg.) gain 78 db. HIGH FREQUENCY ATTENUATOR range, 28 db. CIRCUIT FEATURES: multi-stage inverse feedback, resistance capacity coupling, phase correction for phono motor, 2000 volt oil buffer condenser. OUTPUT IMPEDANCES: 4, 8, 16 and 500 ohms to two octal speaker sockets and impedance selector. PHONOGRAPH MOTOR: Constant speed 78 R.P.M. PICKUP: Low pressure crystal. TUBES (7): 1-6SC7, 1-6SJ7, 1-6J5, 2-6L6, 2-6X5GT. POWER CONSUMPTION: 107 watts at 117 volts, 60 cycles A.C. Input 20.5 amps. including phono motor from 6-volt storage battery. FINISH: Two-tone gray hammertone baked enamel. PANEL: etched metal, illuminated. DIMENSIONS: (including cover) 8 3/4" x 14 1/8" x 10" high overall. SHIPPING WT: 30 lbs. List: (with tubes and power cables) \$169.50. Plug Kit, \$2.10.

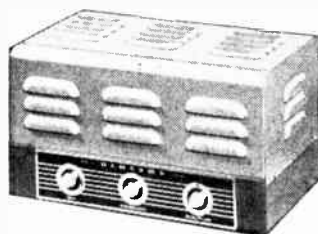
E-25M Mobile Amplifier Unit only, with cover and tubes, less phono unit. Power consumption: 91 watts. Dimensions: 8 3/8" x 14 1/8" x 8" high. Shipping Wt: 27 lbs. List \$154.50. Plug Kit, \$2.10.

E-50 AMPLIFIER . . . The 50 watt leader in its price class. Multi-stage inverse feedback and push-pull paralleled 6L6 tubes assure low distortion. Two mikes may be mixed, or one mike and one phono. Impedance selector simplifies speaker matching.

SPECIFICATIONS, same as E-25 except as following: POWER OUTPUT: 50 watts at less than 5% distortion. Mike gain 122 db.; phono gain 81 db. OUTPUT IMPEDANCES: 4, 8, 16 and 250 ohms TUBES (6): 1-6SJ7, 1-6SC7, 1-6J5, 4-6L6G and 2-5Z4. DIMENSIONS: (including cover) 11 1/4" x 8 3/4" x 14 3/4". POWER CONSUMPTION: 170 watts at 117 volts; 60 cycles A.C. SHIPPING WT: 31 lbs. List: with tubes and cover, \$154.50. Plug Kit, \$2.10.



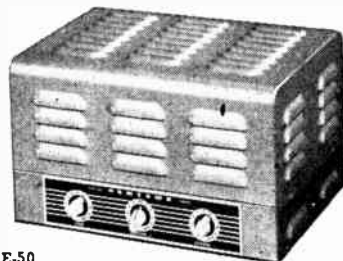
E-10



E-17 E-25



E25MP



E-50

E - SERIES PORTABLE SYSTEMS



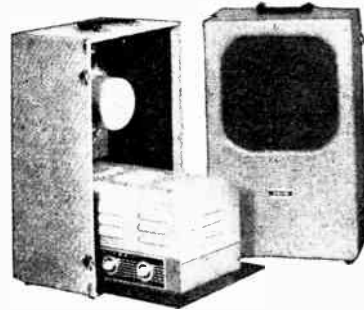
(All Prices and Specifications Subject to Change Without Notice.)

E-1010C . . . 10-watt basic port. system with 10" speaker, 25 ft. cable and plug; and 1 E-10 Amplifier. Mike and stand not included in price as requirements vary. Size: 12 1/4" x 15 3/4" x 8 3/4". Shp. Wt.: 25 lbs. List: \$99.95.

E-1712C . . . 17-watt dual 12" speaker port. system with 2 efficient speakers, each with 25 ft. cable and plug, and 1 E-17 amplifier. Mikes and stands not incl. Size: 12 1/8" x 17 1/4" x 13". Shp. Wt.: 48 lbs. List: \$163.00.

E-2512H . . . 25-watt basic port. system with two heavy duty 12" speakers, each with 25 ft. cable and plug and 1 E-25 amplifier. Mikes and stand not included. Size: 21 1/8" x 17 1/4" x 13". Shp. Wt.: 58 lbs. List: \$206.00.

E-2512C . . . 25-watt dual speaker basic port. system, similar to E-2512H, but with medium wt. speakers. Shp. Wt.: 49 lbs. List: \$183.60.



Newcomb AUDIO PRODUCTS COMPANY
6824 LEXINGTON AVENUE, HOLLYWOOD 38, CALIFORNIA

FOR BEST RESULTS SELECT



Masco manufactures a complete line of amplifiers and sound systems ranging in power output from 8 to 75 watts, including phono-top, mobile, high fidelity and musical instrument amplifiers and recorders, transcription players, school systems, plant broadcasting and intercommunication systems.

MA-8N 8-Watt Amplifier and MAS-8N 8-Watt Portable System

FEATURES: Microphone and phono input separately controlled • Bass-treble tone control • Hammertone-finish chassis • Light, compact and sturdy • U L Approved.

APPLICATION: Is the ideal unit for paging systems for bus and railroad stations and is recommended for side shows, auction rooms, sales meetings, small taverns and clubs.

MA-8N

AMPLIFIER SPECIFICATIONS MODEL MA-8N

POWER OUTPUT 8 Watts, Class A, at less than 5% distortion
PEAK POWER 13 watts
INPUTS Two: 1 microphone and 1 phono
FREQUENCY RESPONSE ± 2 DB 50 to 10,000 CPS
POWER GAIN Microphone 128.5 DB; Phono 75 DB
CONTROLS Three: Microphone, Phono, Tone (On-Off Switch)
TUBES 1-6SF5, 1-6SJ7, 1-6L6G, 1-5Y3GT (Rectifier)
OUTPUT IMPEDANCES 3, 2, 8 and 500 Ohms
HUM LEVEL 60 DB below output level of 8 Watts
POWER CONSUMPTION 75 watts at 117 volts
VOLTAGE 105-125 Volts 60 CPS
DIMENSIONS 10" x 6" x 7 1/2" high

PRICES List Price

MA-8N Amplifier (less cover, less tubes) \$47.75
Shipping Weight: 14 lbs.
Cover for MA-8N 4.50
Kit of Matched Tubes for MA-8N 7.25
Kit of Matched Plugs and Connectors 2.00
MAS-8N Portable System 110.45
Shipping Weight: 30 lbs.
Consists of: 1—MA-8N Amplifier with Cover (less tubes)
1—Jensen P10-S 10" PM Speaker, or equal
1—25 ft. Speaker, Cable and Plug
1—Model 303 Portable Carrying Case
1—Astatic JT-30 microphone with 12' cable and connectors.
(If microphone is not desired, deduct \$14.00 from above list price.)
(Note: If cover is not desired with system deduct from list price \$1.50.)

MAS-8N



MA-17N 17-Watt Amplifier

MAS-17N 17-Watt Portable System

FEATURES: Two microphone inputs • One phono input • Separate bass and treble tone controls • Tapped line and voice-coil impedances • U L Approved.

APPLICATION: Suitable for small orchestras, lecturers, ballyhoo, store demonstrations, night clubs and ballrooms.

AMPLIFIER SPECIFICATIONS, MODEL MA-17N

POWER OUTPUT 17 Watts, Class A, at less than 5% distortion
PEAK POWER 26 Watts
INPUTS Three: 2-microphone, 1-phono
FREQUENCY RESPONSE ± 2 DB 50 to 12,000 CPS
POWER GAIN Microphone, 132 DB; Phono, 78 DB
CONTROLS Five: 2-microphone, Phono, Bass, Treble, Separate Power On-Off Switch
TUBES 1-6SJ7, 1-6SL7GT, 1-6SC7, 2-6L6G, 1-5V4G (rectifier)
OUTPUT IMPEDANCES 4, 8, 15, 125, 250, 500 Ohms
HUM LEVEL 62 DB below output level of 17 Watts
POWER CONSUMPTION 125 Watts at 117 Volts
VOLTAGE 105-125 Volts, 60 CPS
DIMENSIONS 13" x 8" x 8 3/8" high



MAS-17N

PRICES

MA-17N Amplifier (Less Tubes) \$75.75
Shipping Weight: 45 lbs.
Kit of Matched Tubes for MA-17N 14.25
Kit of Matched Plugs and Connectors 2.95
MAS-17N Portable System 170.65
Shipping Weight: 47 lbs.

Consists of: 1—MA-17N Amplifier (less tubes)
2—Jensen P10-S 10" PM Speakers, or equal
2—25 ft. Speaker Cables and Plugs
1—Model 304 Portable Carrying Case
1—Astatic JT-30 microphone with 12' cable and connectors.
(If microphone is not desired, deduct \$14.00 from above list price.)

MODEL MA-17PN. Same Specifications as MA-17N but includes phono-top (less tubes) (chassis size 11" x 11" x 8 3/8" high) \$105.25
Shipping Weight: 28 lbs.
Kit of Matched Tubes 14.25
Kit of Plugs and Connectors 1.90



MA-17PN

These amplifiers may be obtained with low impedance microphone input. Add \$29.95 list per input.

WEST OF THE ROCKIES, ADD 5% TO ABOVE LIST PRICES

Amplifiers licensed under U. S. patents of Western Electric Company, Inc., and American Telephone and Telegraph Company.

Prices and specifications subject to change without notice.

MARK SIMPSON MANUFACTURING CO., LONG ISLAND CITY, N. Y.

FOR BEST RESULTS SELECT



MAS-25N

AMPLIFIER SPECIFICATIONS, MODEL MA-25N

POWER OUTPUT..... 25 Watts, Class AB-1, at less than 5% distortion
 PEAK POWER..... 40 Watts
 INPUTS..... Four: 3-microphone, 1-phon
 FREQUENCY RESPONSE..... ± 2 DB 50 to 15,000 CPS
 POWER GAIN..... Microphone, 233.5 DB; Phono, 79 DB
 CONTROLS..... Six: 3-microphone, Phono, Bass, Treble, Separate Power On-Off Switch
 TUBES..... 4-6J7, 2-6SC7, 2-6L6G, 1-5Y4G (rectifier)
 OUTPUT IMPEDANCES..... 4, 8, 15, 125, 250, 500 Ohms
 HUM LEVEL..... 64 DB below output level of 25 Watts
 POWER CONSUMPTION..... 145 Watts at 117 Volts
 VOLTAGE..... 105-125 Volts, 60 CPS
 DIMENSIONS..... 15" x 8 1/2" x 8 3/8" high



MA-50N

AMPLIFIER SPECIFICATIONS, MODEL MA-50N

POWER OUTPUT..... 50 Watt, Class AB-1, at less than 5% distortion
 PEAK POWER..... 70 Watts
 INPUTS..... Five: 4-microphone, 1-phon
 FREQUENCY RESPONSE..... ± 2 DB 50 to 15,000 CPS
 POWER GAIN..... Microphone, 136.5 DB; Phono, 82 DB
 CONTROLS..... Seven: 4-microphone, Phono, Bass, Treble, Separate Power On-Off Switch
 TUBES..... 1-6SJ7, 4-6J7, 2-6SC7, 4-6L6G, 2-5Y4G (rectifiers)
 OUTPUT IMPEDANCES..... 4, 8, 15, 125, 250, 500 Ohms
 HUM LEVEL..... 67 DB below output level of 50 Watts
 POWER CONSUMPTION..... 190 Watts at 117 Volts
 VOLTAGE..... 105-125 Volts, 60 CPS
 DIMENSIONS..... 16" x 11" x 8 3/8" high

PRICES	List Price
MA-50N Amplifier (less tubes).....	\$154.95
Shipping Weight: 41 lbs.	
Kit of Matched Tubes for Model MA-50N.....	30.05
Kit of Matched Plugs and Connectors.....	4.80

WEST OF THE ROCKIES ADD 5% TO ABOVE LIST PRICES

Amplifiers licensed under U. S. patents of Western Electric Company, Inc., and American Telephone and Telegraph Company. Prices and specifications subject to change without notice.

MARK SIMPSON MANUFACTURING CO., LONG ISLAND CITY, N. Y.

MA-25N 25-WATT AMPLIFIER MAS-25N 25-WATT PORTABLE SYSTEM

FEATURES: Four inputs • Four-channel electronic mixing • Separate bass and treble controls • Tapped line and voice-coil impedances • Overall negative feedback • Uniform frequency response • U/L Approved.

APPLICATION: An ideal system for the larger auditoriums, churches, night clubs, orchestras, indoor sports arenas, and also for outdoor use at fairs, bazaars, children's camps, and similar locations.

PRICES

	List Price
MA-25N Amplifier (less tubes).....	\$92.30
Shipping Weight: 30 lbs.	
Kit of Matched Tubes for MA-25N.....	20.20
Kit of Matched Plugs and Connectors.....	3.55
MAS-25N Portable System	194.75

Shipping Weight: 60 lbs.

Consists of: 1—MA-25N Amplifier (less tubes)
 2—Jensen P12-S 12" PM Speakers or equal
 2—25-ft. Speaker Cables and Plugs
 1—Model 305 Portable Carrying Case
 1—Astatic JT-30 microphone with 12' cable and connectors.

(If microphone is not desired, deduct \$14.00 from above list price)

MA-50N 50-WATT AMPLIFIER

FEATURES: Five input channels • Four microphone and one phono input • Individual bass and treble equalizers • Fifty watts of undistorted power • Negative feedback • Fully fused • U/L Approved.

APPLICATION: MA-50N has multi-tapped line and voice-coil impedances to match any speaker, or speaker groups and lines. Suitable for rack mounting for larger auditoriums, theatre re-inforcement, indoor and outdoor rinks, stadia, wherever numerous speakers are required. Excellent for church chime applications.

With suitable speakers and horns, the power can be concentrated where needed at points of high noise level, as at the starting line of an auto race, or in steel mills. Other speaker arrangements permit uniform coverage of large areas, such as football fields or circuses. Ideal as the basic unit for paging and fire-alarm systems in hotels.

Models MA-25NR and MA-50NR are respectively 25- and 50-watt remote control amplifiers which follow closely all specifications of above models, but have, in addition, built-in circuits for remote control of two of the microphone channels when used with Model RCB Remote Control Box.

PRICES	List Price
MA-25NR Remote Control Amplifier (less tubes).....	\$99.80
Kit of matched tubes for Model MA-25NR.....	20.20
MA-50NR Remote Control Amplifier (less tubes).....	159.95
Kit of matched tubes for Model MA-50NR.....	30.05
RCB Dual channel remote control box (less cable).....	12.50

These amplifiers may be obtained with low impedance microphone input. Add \$29.95 list per input.

MASCO MOBILE AMPLIFIERS



6-VOLT DC AND 117-VOLT AC

The only complete line of U/L Approved Mobile Equipment. Available in 7 different models.

MC-10 10-WATT MOBILE AMPLIFIER

FEATURES: Two inputs, microphone and phone • Push-pull output • Low battery drain • Separate microphone and phono control • U. L. Approved.
APPLICATION: The MC-10 is a compact Mobile Amplifier built expressly for operation in police safety and traffic work, transportation systems, ambulance service, fire departments and other emergency work. Universal mounting; it fits under the dashboard. Metal casing is finished in a two-tone gray and blue Hammettone.

MODEL RCM REMOTE CONTROL FOR MODEL MC-10

Clamps to steering-post of car, handy to the driver. By plugging the RCM unit into amplifier, it permits within-reach adjustment of controls, simplifying operation while driving. Individual control of the microphone and phono channels is provided.

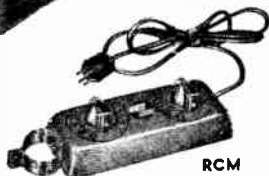
PRICES

List Price

MC-10 Mobile Amplifier with power cables (less tubes)	\$62.65
Shipping Weight: 16 lbs.	
Kit of Matched Tubes for MC-10	9.85
Kit of Matched Plugs and Connectors	2.00
RCM REMOTE CONTROL with 6-ft. Cable, Connector and Clamp	15.00



MC-10



RCM

AMPLIFIER SPECIFICATIONS, MODEL MC-10

POWER OUTPUT	10 Watts, Class A, at less than 5% distortion
PEAK POWER	14 Watts
INPUTS	Two: 1-microphone, 1-phonograph
FREQUENCY RESPONSE	± 3 DB: 100 to 8,000 CPS
POWER GAIN	Microphone, 110 DB; Phono, 75 DB
CONTROLS	Microphone, Phonograph, On-off Stand-by-operate (Battery-saver) Switch
TUBES	1-6SF5, 1-6SL7GT, 2-6V6GT, 1-7Z4 (rectifier)
OUTPUT IMPEDANCES	3, 2, 8, and 15 Ohms
HUM LEVEL	60 DB below output level of 10 Watts
POWER CONSUMPTION	A-C: 60 Watts at 117 Volts D-C: 8 Amps at 6 Volts (Battery)
VOLTAGE	105-125 Volts 60 CPS A-C or 6 Volts D-C (Storage Battery)
DIMENSIONS	7 1/2" x 6" x 6" high

25-WATT MOBILE AMPLIFIERS

FEATURES: Battery-saver stand-by switch • Low battery drain • Double-fused circuit • Hum- and ripple-free operation • Heavy-duty dual vibrator • Low-pressure pick-up • Push-pull output • U. L. Approved.

Built by the company which originated the Mobile Unit, the new Model MC-25PN is an outstanding achievement in this field. It operates as efficiently from 6-volt batteries as from the 117-volt a-c supply. It is a rugged, powerful phono top amplifier expressly designed for sound truck and outdoor applications. The battery-saver switch, which shuts off the vibrator during intermissions, reduces battery drain to a minimum. The extra-heavy-duty dual vibrator maintains steady voltage and frequency. The amplifier is provided with separate cables fitted with rugged heavy-duty plugs and receptacles, for each voltage supply.

The MAC-25PN Mobile Portable System is ideally suited for picnics and barbecues, outdoor gatherings, bathing beaches, traveling road shows, open-air theatres, and other locations where a-c power is unavailable.

The Model MCO-25PN outdoor mobile system is ideal for sound trucks and all other mobile applications. It is used in election campaigns and charity drives, by traveling evangelists, for outdoor classes, camp meetings, beach patrol, and police and fire-department rescue work.



MC-25PN

AMPLIFIER SPECIFICATIONS, MODEL MC-25PN

POWER OUTPUT	25 Watts, Class AB-1, at less than 5% distortion
PEAK POWER	40 Watts
INPUTS	Four: 3-microphone, 1-phonograph
FREQUENCY RESPONSE	± 2 DB: 50 to 15,000 CPS
POWER GAIN	Microphone, 133.5 DB; Phono, 79 DB
CONTROLS	Six: 3-Microphone, Phono, Bass, Treble, Separate Motor Switch - Battery-saver Switch
TUBES	4-6J7, 1-6BC7, 1-6SL7GT, 2-6L6G, 2-7Z4 (rectifiers)
OUTPUT IMPEDANCES	4, 8, 15, 125, 250, 500 Ohms
HUM LEVEL	A-C: 64 DB below output of 25 Watts D-C: Ripple-free
POWER CONSUMPTION	A-C: 145 Watts at 117 Volts (includes phono motor) D-C: 23 Amps, at 6 Volts (battery) (includes phono motor)
VOLTAGE	105-125 Volts, 60 CPS A-C or 6 Volts D-C (storage battery)

PRICES

List Price

MAC-25PN Portable Mobile System (less tubes)	\$260.65
MCO-25PN Outdoor Mobile System (less tubes)	317.65
MC-25RC Mobile Amplifier with Reo-ol Charger Top (less tubes)	233.20
MC-25PC Mobile Amplifier, Phono-Top with hinged cover (less tubes)	178.20
MC-25N Mobile Amplifier, plain cover without Phono-Top (less tubes)	148.20

ABOVE PRICES INCLUDE POWER CABLES

MC-25PN Phono-Top Mobile Amplifier with power cables (less tubes)	\$158.20
Shipping Weight: 44 lbs.	
Kit of Matched Tubes	21.80
Kit of Matched Plugs and Connectors	2.50

WEST OF THE ROCKIES ADD 5% TO ABOVE LIST PRICES

Amplifiers licensed under U. S. patents of Western Electric Company, Inc., and American Telephone and Telegraph Company. Prices and specifications subject to change without notice.

MARK SIMPSON MANUFACTURING CO., LONG ISLAND CITY, N. Y.

FOR BEST RESULTS SELECT



School System Amplifier

FEATURES: 28-watt amplifier • Two-way conversation • Simultaneous or selective paging • Provides for up to 24 rooms • External phono provision • Volume-level indicator • Input selector switch • External microphone provision • Provision for radio input • U/L Approved.

APPLICATION: May be used with up to 24 rooms. It assures ample power for each speaker, and ample gain is provided for external microphone and phonograph pick-up. Speaker switches are connected for group or selective paging. A master switch permits simultaneous paging. Calls may originate from any room. Separate volume controls for level adjustment of incoming and outgoing calls, and a Volume-Level indicator are incorporated.

Invaluable aid to the efficiency of an educational institution. Announcements of general interest, time signals, and other notices may be given to all at once. Control of fire drills or other emergencies is facilitated. The two-way conversation feature permits easy communication. Provision is made for connecting an external phonograph to the system, which enables the distribution of music. Any standard radio may be adjusted for use with this system. Many of these advantages apply with equal force to hospitals, institutions, clubs, hotels, and passenger ships.

SPECIFICATIONS:

POWER OUTPUT.....28 Watts, Class AB-1 at less than 5% distortion
 PEAK POWER.....10 Watts
 INPUTS.....External microphone, phono and radio provision. Built-in intercommunication speaker
 FREQUENCY RESPONSE.....2 DB 50 to 15,000 CPS
 POWER GAIN.....Microphone 130 DB; Phono 85 DB
 CONTROLS.....Separate incoming and outgoing volume controls. Function selector switch. "Talk-Listen" switch. Master call switch. Station selector switches. Power on-off switch. Eye level control.

TUBES.....1-6NC7, 1-6SL7GT, 1-6SN7GT, 2-6L6G, 1-6U5, 1-5Y4G (rectifier)
 OUTPUT IMPEDANCES.....80 ohm balanced line, constant voltage output
 HUM LEVEL.....64 DB below output level of 28 watts
 POWER CONSUMPTION.....115 Watts at 117 Volts
 VOLTAGE.....105-125 Volts, 60 CPS
 CABINET.....Metal, finished in brown Hammertone
 DIMENSIONS.....16" x 9 1/2" x 13" high



MS-24

PRICES

	List Price
MODEL MS-24-1 (for 6 rooms) Amplifier, with tubes.....	\$184.50
MODEL MS-24-2 (for 12 rooms) Amplifier, with tubes.....	189.50
MODEL MS-24-3 (for 18 rooms) Amplifier, with tubes.....	194.50
MODEL MS-24 (for 24 rooms) Amplifier, with tubes.....	199.50



MODEL
JM-5
MASTER



MODEL
JR
REMOTE

FEATURES: Master Station equipped with Volume Control with an off switch • Separate "press to talk" switch • Remote Station has "press to talk" switch to originate call to master station if desired and allow for privacy • Remote Station can be used for two-way conversation without manual operation • Natural Voice reproduction • Ample Sensitivity • Matching Master and Remote Stations • Unbreakable Cast-aluminum housings • Finished in attractive Walnut Hammertone • U/L Approved.

SPECIFICATIONS FOR IM-5, JM-5 & JMR MASTER:

VOLTAGE.....117 Volts AC or DC
 POWER OUTPUT.....2.5 Watts
 POWER CONSUMPTION.....30 Watts
 TUBES.....14F7 Dual Voltage Amplifier
 50L6 Beam Power Amplifier
 50Y6 Rectifier
 SPEAKER.....4" ALNICO V. Magnet 13 ohm voice coil used in Master and Remotes
 DIMENSIONS.....L 6 5/8", W 7 1/8", H 5 1/4"
 SHIPPING WEIGHT.....JM-5, 6 lbs.; JR, 3 1/4 lbs.
 IM-5, 6 lbs.; JMR System, 9 1/4 lbs.

	List Price
MODEL JMR—Two-station system. One master with tubes, one remote, and 50-ft. cable.....	\$42.50
MODEL JM5—Master, with tubes. Communication between it and 5 remote stations; master can converse with all 5 stations or can select any one remote station. Master has press-to-talk and station selector switch and volume control with on-off switch.....	37.50
MODEL JR—Remote. "Press-to-talk" switch allows remote to originate call to JM5 Master, permitting privacy. JR can be used as two-way paging system. Use of switch may be omitted.....	12.50
3-Wire Vinylite covered cable.....	per foot .05
MODEL IM-5—All master, with tubes. Communication between it and 5 other masters. Each master can converse two-way with any or all masters in system. Has press-to-talk and station selector switches and volume control with on-off switch.....	37.50
7-Conductor cable.....	per foot .25
5-Conductor cable.....	per foot .20

WEST OF THE ROCKIES ADD 5% TO ABOVE LIST PRICES

Amplifiers licensed under U. S. patents of Western Electric Company, Inc., and American Telephone and Telegraph Company. Prices and specifications subject to change without notice.

MARK SIMPSON MANUFACTURING CO., LONG ISLAND CITY, N. Y.

THORDARSON AMPLIFIERS



THORDARSON 8 WATT AMPLIFIER — T-31W08

This amplifier combines maximum performance with minimum size. It is ideal for ballyhoo installations, carnivals, or inter-phone applications. The quality is such that it may be used for reproduction of the finest records. Individual controls for phono and microphone provide electronic mixing. The treble attenuation tone control has sufficiently smooth operation for satisfactory elimination of needle scratch or objectionable highs; or with the control in a normal position the highest treble tone can be clearly reproduced.

POWER OUTPUT—8 Watts (+31.25 Db) at less than 9% distortion.
TWO INPUT CIRCUITS—

One high impedance microphone channel—115 Db gain (based on 100,000 ohms input impedance).
One high impedance phono channel—72 Db gain (based on 100,000 ohms input impedance).

All input circuits may be mixed.
Low impedance microphone input optional at slight additional cost (50, 250, or 500 ohms).

IMPROVED TONE CONTROL—(high frequency attenuator type). Maximum position attenuated 1,000 C.P.S. 4 Db, 5,000 C.P.S. 17 Db, 10,000 C.P.S. 22 Db.

FREQUENCY RESPONSE—Flat within 1 Db from 50 to 10,000 C.P.S.
CHASSIS TYPE CONSTRUCTION—Attractive three-tone control panel.

INVERSE FEED-BACK CIRCUIT.
OUTPUT IMPEDANCES—4, 8, 15, 250, 500 ohms—all available at an 8-prong receptacle.

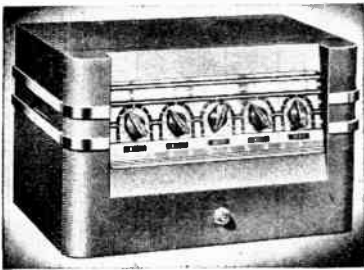
HUM LEVEL—60 Db below rated output.

TUBES—1-6J7; 1-6SJ7; 1-6L6; 1-5Y3.

DIMENSIONS—10" x 6" x 7½" high.

POWER CONSUMPTION—70 watts, 110-120 volts, 50-60 cycle (other primary voltages on special order).

(WEIGHT NET—14½ pounds; shipping 16 pounds.)



THORDARSON 25 WATT AMPLIFIER — T-31W25AX

Sufficient undistorted power is available from this unit for large auditorium or night club installations. Two low level inputs and one high level input will allow the use of two microphones with low impedances or high impedances to be satisfactorily mixed with a phono input for musical background. The attractive front panel is supplied with three gain controls and two tone controls. The tone controls provide individual bass or treble attenuation to eliminate undesirable highs in recordings or undesirable lows for crisp speech output. When the tone controls are in the normal position—Tru-Fidelity output is available.

POWER OUTPUT—25 watts (+36.2 Db) at less than 3% distortion.

THREE-INPUT CIRCUITS—

Two high-impedance microphone channels—116 Db gain (based on 100,000 ohms input impedance).

One high impedance phono channel—72 Db gain (based on 100,000 ohms input impedance).

Low impedance microphone input optional at slight additional cost (50, 250, 500 ohms).

All input circuits may be mixed.

IMPROVED TONE CONTROLS (Treble and bass attenuators).

Maximum attenuation positions.

Bass—50 C.P.S.—20 Db, 100 C.P.S.—12 Db.

Treble—1,000 C.P.S.—4 Db, 5,000 C.P.S.—15 Db, 10,000 C.P.S.—

23 Db.

FREQUENCY RESPONSE—Flat within 1 Db from 30 to 15,000 C.P.S.

FULLY ENCLOSED CONSTRUCTION—All steel streamlined cabinet—Attractive three-tone control panel.

MULTIPLE INVERSE FEED-BACK CIRCUIT.

OUTPUT IMPEDANCES—4, 8, 15, 250, 500 ohms—all available at 8-prong receptacles, selected by means of a switch.

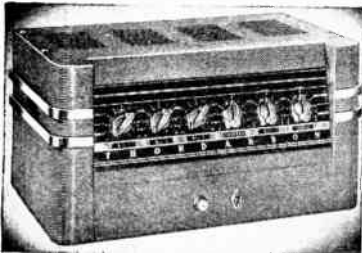
HUM LEVEL—65 Db below rated output.

TUBES—2-6J7; 1-6SJ7; 1-6N7; 2-6L6; 1-5X4G

DIMENSIONS—15½" x 10" x 9" high.

POWER CONSUMPTION—137 watts—110-120 volts, 50-60 cycles (other primary voltages on special order).

WEIGHT NET—28 pounds; shipping 32 pounds.



THORDARSON 50 WATT AMPLIFIER — T-31W50AX

This amplifier employs 4-Beam Power tubes; is conservatively rated at 50 watts and will supply over 65 watts of peak power. The unit is ideal for large stadium or roller-rink applications. The three low-level microphone and two high-level phono inputs will satisfactorily handle the most elaborate mixing applications. Dual tone controls will attenuate individually either the bass or treble or individually boost the bass or treble. Either low or high impedance inputs may be accommodated. The range of output impedances provided will accommodate multiple speaker applications.

POWER OUTPUT—50 Watts (+39.6 Db) at less than 5% distortion.

FIVE INPUT CIRCUITS—

Three input microphone channels—115 Db gain (based on 100,000 ohms input impedance).

Two phono fader inputs—75 Db gain (based on 100,000 ohms input impedance).

Low impedance microphone input optional at slight additional cost (50, 250, 500 ohms).

TWO TONE CONTROLS—

One bass control providing a bass boost of 9½ Db at 80 C.P.S. to a bass attenuation of 25 Db at 80 C.P.S.

One treble control providing a boost of 11½ Db at 8,000 C.P.S. to an attenuation of 25 Db at 8,000 C.P.S.

Nine extreme individual response curves available with the two tone controls.

FREQUENCY RESPONSE—Flat within 1 Db from 30 to 15,000.

CHASSIS TYPE CONSTRUCTION—All-steel streamlined cabinet—attractive three-tone control panel.

INVERSE FEED-BACK CIRCUIT.

OUTPUT IMPEDANCES—4, 6, 8, 15, 125, 250 and 500 ohms—selected by means of a selector switch.

HUM LEVEL—70 Db below rated output.

TUBES—2-5X4; 1-6X5; 4-6L6; 1-6V6; 3-6J7; 1-6SJ7; 1-6J5.

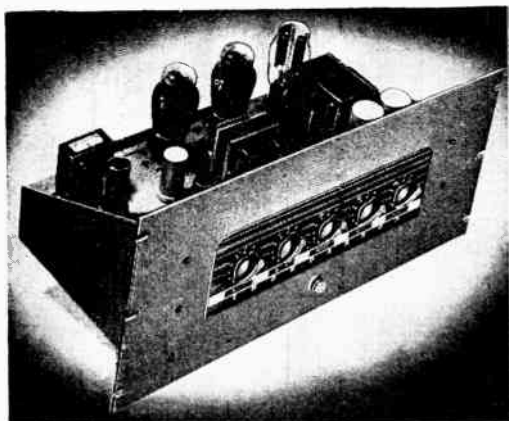
DIMENSIONS—17" x 11¾" x 8¾" high.

POWER CONSUMPTION—250 Watts at 110-120 volts, 50-60 cycles (other primary voltages on special order).

WEIGHT NET—44 pounds; shipping 50 pounds.

 **TRANSFORMER SPECIALISTS SINCE 1895 THORDARSON**

THORDARSON AMPLIFIERS



T-31W26A PRE-AMPLIFIER

This pre-amplifier, booster combination unit is exactly like the T-31W25AX amplifier but is constructed for rack and panel mounting. As both voice coil and line impedances are available, this unit may be used as a source of power and an exciter for T-31W27 booster amplifiers. If the unit is used only as a pre-amplifier a 500-ohm secondary must be loaded with a 500-ohm, 50-watt resistor. An unlimited amount of booster amplifiers may be connected in parallel across the output of this unit. Low impedance inputs are available and for further technical data see those accompanying the T-31W25AX.

This combination unit will satisfy the requirements for permanent installations. In addition to being used as a mixer, it will also deliver 25 watts of undistorted output for speaker installations in the vicinity of the pre-amplifier.

DIMENSIONS—19" x 8 $\frac{3}{4}$ " x 10 $\frac{3}{4}$ " behind back of panel,

WEIGHT NET—28 pounds; shipping 32 pounds.

T-31W10AX TRU-FIDELITY PHONO-AMPLIFIER

Unique in design the Thordarson 10 Watt Phono Amplifier combines versatility of application with Tru-Fidelity performance. Both microphone and phono input channels allow the 31W10AX to be used in conjunction with the High-Fidelity Meissner AM-FM Tuner and other tuners of comparable performance; as a speech amplifier in amateur transmitters; or as the amplifier section in a recording set-up. Little is left to be desired in naturalness and brilliance of tone.

Separate bass and treble controls with both boost and attenuation action assure complete adaptation of the output to all acoustical conditions, plus the pleasure of listening to music the way it is desired to be heard. Production cost is lowered by the mounting of this unit on a simple chassis inasmuch as the amplifier is usually installed in cabinet, no cover is required.

T-31W10AX Specifications

POWER OUTPUT—10 Watts at less than 5% distortion (50 to 10,000 cycles).

TWO INPUT CIRCUITS—

One high impedance microphone channel—107 Db gain (based on 100,000 ohms input impedance).

One high impedance phono channel—71 Db gain (based on 100,000 ohms input impedance).

TWO TONE CONTROLS—

One bass control providing a bass boost of 12 Db at 80 C.P.S. to a bass attenuation of 13 Db at 80 C.P.S.

One treble control providing a treble boost of 12 Db at 8000 C.P.S. to an attenuation of 18 Db at 8000 C.P.S.

FREQUENCY RESPONSE—Flat within 1 Db from 40 to 15,000 C.P.S.

CHASSIS TYPE CONSTRUCTION—Attractive three-tone control panel.

INVERSE FEED-BACK CIRCUIT

OUTPUT IMPEDANCES—4, 8, 15, 125, 250, 500 ohms—all available at an eight-prong receptacle.

HUM LEVEL—60 Db below maximum rated output.

TUBES—1-6J7; 1-6SJ7; 1-6J5; 1-6SN7; 2-6B4; 1-5U4G.

DIMENSIONS—14" x 8" x 7 $\frac{1}{2}$ " high.

POWER CONSUMPTION—117 Watts full signals—110-120 volts, 50-60 cycles (other primary voltages available on special order).

WEIGHT NET—19 pounds; shipping 22 pounds.

T-31W20AX 20 WATT MOBILE AMPLIFIER

Conservatively-rated, this universal mobile amplifier furnishes sufficient undistorted power for sound truck, picnic, carnival and similar installations that require the versatility of 6 volts D.C. volts and 115 volts A.C. operation.

The electric turntable and pick-up mounted on top of the amplifier operates practically in any position, whether tilted vertically or horizontally. Shock-mounted for smooth operation over rough terrain,

it is truly versatile. With all connections on the back of the chassis, simplification of hook-up is provided, leaving trimness of style for the front panel.

Treble attenuation tone compensation makes allowance for correcting to acoustical conditions and reducing record scratch. Mixing procedure is completely controlled with the coupled phono and microphone input channels.

T-31W20AX Specifications

POWER OUTPUT—20 Watts at less than 6% distortion (50 to 10,000 cycles).

TWO INPUT CIRCUITS—

One high impedance microphone channel—110 Db gain (based on 100,000 ohms input impedance).

One high impedance phono channel—72 Db gain (based on 100,000 ohms input impedance).

Both input circuits may be mixed.

FREQUENCY RESPONSE—Flat within 1 Db from 40 to 15,000 C.P.S.

IMPROVED TONE CONTROL—(high frequency attenuator type). Maximum position attenuated 1,000 C.P.S. 1 Db; 5,000 C.P.S. 10 Db; 10,000 C.P.S. 16 Db.

FULLY ENCLOSED CONSTRUCTION—Trim light grey wrinkle cabinet with three-tone control panel.

CRYSTAL PICK-UP—Specially-designed pick-up arm. Spring-action holds arm in place.

INVERSE FEED-BACK CIRCUIT.

OUTPUT IMPEDANCES—4, 8, 15, 125, 250, 500 ohms—all available at two 8-prong receptacles, selected with switch.

HUM LEVEL—66 Db below maximum rated output.

TUBES—1-6J7; 1-6SJ7; 1-6N7; 2-6L6; 2-6X5.

DIMENSIONS—15 $\frac{1}{2}$ " x 10" x 11" high.

POWER CONSUMPTION—140 Watts full signal—110-120 volts, 50-60 cycles; 6 volts D.C. 23 Amp. (6 volts standby current—5.15 Amps.).

WEIGHT NET—34 $\frac{1}{2}$ pounds; shipping 39 pounds.

T-31K09 COVER

A trim grey wrinkle finish cover, perforated for complete ventilation; for use on the T-31W08 amplifier.



TRANSFORMER SPECIALISTS SINCE 1895 THORDARSON

ADAPTOL COMPANY

MANUFACTURERS OF RADIO ELECTRONIC PRODUCTS

ADAPTOL MINIATURE AM SUPERHET TUNER—540 to 1700 KC.

HUNDREDS OF USEFUL APPLICATIONS:

1. With guitar amplifiers
2. Public address systems
3. Custom-built amplifiers
4. Amplified record players
5. Wire recorders
6. Tape recorders
7. Motion picture sound projectors



MODEL CT-1

List, complete with tubes.....\$20.00

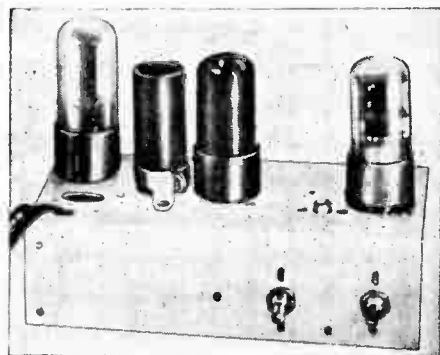
CIRCUIT FEATURES:

1. 3 tube AM superhet tuner (540-1700 KC) with self contained power supply.
2. Uses 12BE6 dual purpose oscillator and mixer, 12SF7 high gain I.F. stage, diode detector and A.V.C., 50B5 rectifier.
3. Permeability tuned drift-free I.F.'s.
4. Approximately .5 volt audio output across internal .5 megohm internal load resistor on average B.C. signal with five foot antenna.
5. Individually tracked at FOUR POINTS thru tuning range of 540-1700 KC.
6. Compact: 4 1/2" x 3 1/2" x 3 3/4".
7. Floating chassis.
8. 5 ft. antenna, output cable, line cord connection.
9. For 110 Volts AC-DC.

• ADAPTOL HI-FIDELITY AMPLIFIER •

FEATURES:

1. Exceptional quality high gain 3 tube AC-DC amplifier.
2. Inverse feed back.
3. Good high and bass response.
4. On-off switch volume control.
5. Variable tone control.
6. Permits boosting high's to three times normal flat response.
7. Tubes used—12SQ7, 50L6, 35Z5.
8. Size: 5" x 3 1/2" x 7".



MODEL AM-3

List, complete with tubes.....\$11.95

ADAPTOL COMPANY

MANUFACTURERS OF RADIO ELECTRONIC PRODUCTS

ADAPTOL PHONO AMPLIFIER



MODEL AM-2

List, complete with tubes
\$8.50

FEATURES :

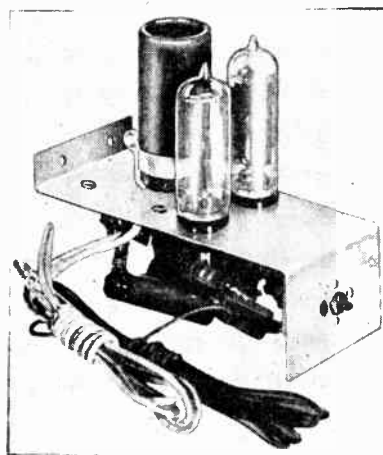
1. Compact, quality 2 tube AC-DC amplifier specially designed for limited space.
2. Good fidelity.
3. On-off switch, volume control.
4. Tubes used—50B5, 35W4.
5. Size: 4 1/2" x 2" x 3".

ADAPTOL 2-TUBE WIRELESS PHONO OSCILLATOR

Permits playing of records thru any radio without any wired connection between radio and record player.

FEATURES :

1. Acts as a miniature broadcasting station playing records thru any radio up to 75 feet away without any wire connections.
2. Can be used with automatic record changer or single record player.
3. Has leads for connecting phono motor, phono pickup.
4. 5 Ft. antenna.
5. Strong signal, good frequency stability.
6. Tunes from 1100 to 1700 KC.
7. Tubes used—50B5, 35W4.
8. Open chassis, ideal for mfg. purposes.
9. Size: 4" x 2" x 4".
10. For 110 Volts AC-DC.



MODEL MF-2

List, complete with tubes.....\$7.95

ADAPTOL 1-TUBE WIRELESS PHONO OSCILLATOR

Operation identical to Model MF-2 as above. NO WIRES TO CONNECT!



MODEL OS-1

List, complete with tube....\$9.75

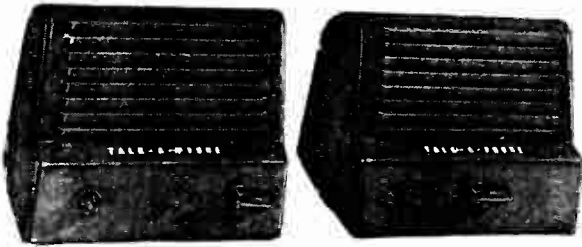
FEATURES :

1. One tube closed chassis, excellent for external application.
2. Can be used with any radio and record player.
3. 5 Ft. antenna, line cord with plug.
4. Tunes from 1100 to 1700 KC.
5. Tube used—117L7.
6. Size: 4 1/2" x 2" x 4 1/4".

TALK-A-PHONE

The World's Most Complete Line of
INTER-COMMUNICATION
Has Everything

"Elsie"
(LC-2)
"Has Everything"
**TWO-STATION
INTER-
COMMUNICATION
SYSTEM**



Complete with tubes, easy to follow instructions and 50 ft of cable.
List Price each system complete

\$39⁹⁵

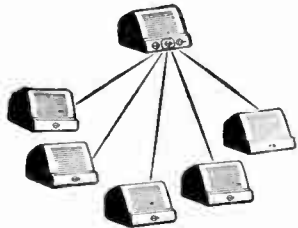
"Take It Easy—Tell It to 'Elsie'"

- "Elsie" carries messages with the speed of sound.
- An eager little helper that gives and gets information quicker than you can say "scat."
- Always ready to serve you instantly.
- Works willingly for a fraction of a cent a day.

- Simple to install — As easy as hanging a picture.
- "Elsie's" house is a handsome Bakelite cabinet of walnut hue, streamlined with that stunning "new look."
- Guaranteed by the makers of the world's most complete and highly perfected line of inter-communication.

The ideal communication system for the home. Saves thousands of steps and saves time — keeps you tuned in on baby's every move in the nursery through the "Supervisory Feature." No more getting up and down to see if baby is all right. You can rest at ease with "Elsie" on the job. Designed also for use in the farm, in professional offices, stores, and other commercial and private applications. Affords private or supervisory use. Supervisory use carries every sound to Master even though originating as far as forty feet from Sub-Station. When connected privately, Master cannot listen in on Sub-Station and

by the TALK-A-PHONE "Silent Feature," shuts out at the Master Station all sounds originating at the Sub-Station, yet permits the Sub-Station to originate calls. The volume can be adjusted from a whisper to full room volume. System consists of one Master unit, a Sub-Station and fifty feet of cable, with tube and instructions. Additional cable may be obtained in lengths up to 2,000 feet. Operates Universally on 110-115 AC-DC. The Sub-Station does not consume current and can be installed most anywhere. Cabinets measure 8 1/4" x 6 1/4" x 7 1/2". Weight packed, 9 lbs.



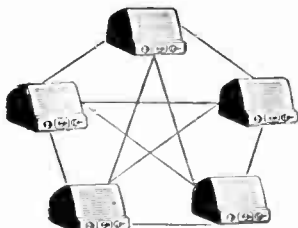
LM-5; LM-10 MASTER SELECTIVE SYSTEMS

Consists of one Master Unit which can be connected with one or more (up to ten) Sub-Stations. The Master Station can talk "privately" to any one of the Sub-Stations or to all at one time. Sub-Stations can be connected "privately" or "non-privately". Has the TALK-A-PHONE "Silent Feature". Sub-Stations, whether connected "privately" or "non-privately", can originate calls to the Master Station. The Sub-Stations can be at considerable distances from the Master unit. Once a conversation has been initiated, with a "non-private" system, persons at Sub-Station locations need operate no control and can reply from a distance. The Sub-Stations do not consume electric current and can be installed most anywhere. Cabinets measure 8 1/4" x 6 1/4" x 7 1/2". Weight packed — Master, 8 lbs., Sub-Stations, 5 lbs. Master Station operates universally on 110-115 volts, AC-DC.

Ordering LM-5; LM-10 Master Selective Systems

- MODEL LM-5** Master Selective Station for five Sub-Stations, complete with tubes and easy-to-follow instructions. List Price ea. \$38.00
- MODEL LM-10** Master Selective Station for ten Sub-Stations, complete with tubes and easy-to-follow instructions. List Price ea. \$51.00
- MODEL LR-3** Sub-Station unit for LM-5 or LM-10 Master Station. List Price ea. \$12.75

No. 5303 (three-conductor) Cable. For use between each LR3 Sub-Station and the LM-5 or LM-10 Master unit. List Price per foot 5c



LS-5; LS-10 SUPER SELECTIVE SYSTEMS

Consists of all Master units. Extreme flexibility of inter-communication whereby any station in the system can call any other and carry on a two-way conversation. You can begin with two Masters and add up to a total of five in the case of the LS-5 units, or up to a total of ten in the case of the LS-10 units. As many as five private two-way conversations can be held at the same time with ten LS-10 Masters. Two private two-way conversations can be accommodated at the same time with the LS-5 system. All Master Stations are private. Stations cannot listen in on each other, nor can a third unit listen in on a conversation of two others. Variable volume, adjustable at each unit, provides for the incoming voice to be adjusted from a bare whisper to full volume that can be heard easily at a considerable distance. Stations can be located even 1000 or 2000 feet apart. Six-conductor cable providing for a total of five units is used with the LS-5 system and is run from the first unit to the second only, from the second to the third only, etc., until the last unit in the system is reached. Similarly, an eleven-conductor cable, providing for a total of ten units, is used for inter-connecting the LS-10 system. It is not necessary to run cable between the first and last units in the system. Cabinets measure 8 1/4" x 6 1/4" x 7 1/2". Weight packed, 8 lbs. Operates Universally on 110-115 volts, AC-DC.

Ordering LS-5; LS-10 Super Selective Systems

- MODEL LS-5** Super Selective unit for five stations, complete with tubes and easy-to-follow instructions. List Price ea. \$38.00
- MODEL LS-10** Super Selective unit for ten stations, complete with tubes and easy-to-follow instructions. List Price ea. \$51.00
- No. 5506** (six-conductor) Cable. For inter-connecting LS-5 units as outlined above. List Price per foot 17c
- No. 9911** (eleven-conductor) Cable. For inter-connecting LS-10 units as outlined above. List Price per foot 34c

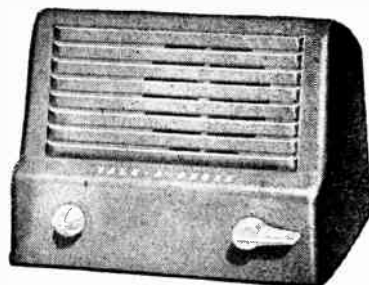
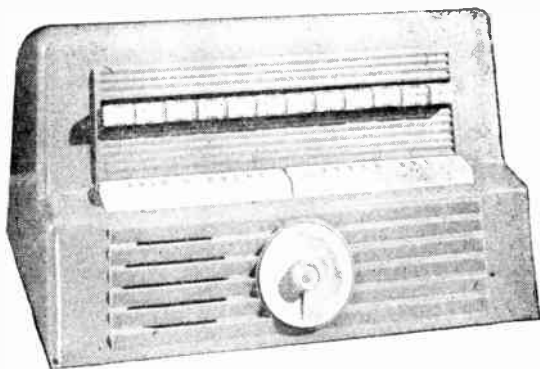
Prices and Specifications Subject to Change Without Notice

CHICAGO **TALK-A-PHONE CO.** ILLINOIS

TALK-A-PHONE

"Chief Forty Niner"
DOES EVERYTHING—HAS EVERYTHING
THE FINEST IN INTER-COMMUNICATION

Work faster, more efficiently, more economically — use the "Chief Forty-Niner." Eliminate "getting up and down," "going through" a busy switchboard, "waiting" to see your man. Touch of button gives you instant and direct two-way communication with sales, engineering, stockroom, shipping — without anyone leaving work. Direct that non-productive effort into productive results — add 20% to your day.



ONE MODEL DOES EVERYTHING

The SAME UNIT may be used for EVERY TYPE OF APPLICATION, whether it be as all Master Stations, or a Master and Staff Stations, or a number of Masters inter-mixed with Staff Stations. The Master Stations may talk with any other Master in the system as well as with all Staff Stations. Six, twelve, twenty, and thirty capacity Master Stations can be used within the same system. The Staff Station may answer the Master Station and originate calls, to one, two or six Master Stations, depending on its capacity. Staff Stations are not connected to electrical outlet. Staff Stations converse with Master Stations only.

Only TALK-A-PHONE, through its exclusive DIFFERENTIAL STAFF feature, permits any Staff Station to be used as either "private" or "non-private," and also permits some Staff Stations to be "private" and others "non-private" in the same system. "Private" Staff Stations have COMPLETE PRIVACY and no other station can listen in. "Non-private" Staff Stations can answer FROM A DISTANCE up to 50 feet from the unit WITHOUT LEAVING WORK. Volume individually controlled at each station — Staff as well as Master — from whisper to full room power. All Master and Staff Stations are assured of privacy, except where by choice, Staff Stations are designated as "non-private."

BEAUTIFULLY STYLED: The Bakelite walnut cabinet of the "CHIEF FORTY-NINER" is unsurpassed in simplicity of design and appearance.

TRANSLUCENT LIGHTING further enhances its beauty as well as indicating whether the unit is "on" or "off."

MULTI-MATIC SELECTOR: A patented exclusive TALK-A-PHONE feature. Twelve, twenty, thirty station capacity in SAME BEAUTIFUL CABINET with only TWELVE PUSH BUTTONS. Six-station Master has six push buttons.

HOLD-A-MATIC CONFERENCE CONTROL: TALK-A-PHONE "HOLD-A-MATIC" feature ALLOWS CONFERENCE between THREE or a GROUP of STATIONS by merely selecting desired buttons.

UNI-TRANS: Gives you "DICTATION CONTROL."

VOICE RANGE POWER: The powerful, rugged amplifier gives you amazing, brilliant "voice range" power. Stations may be up to 3000 feet apart.

DEPENDABILITY: PROVED IN BILLIONS OF HOURS OF ACTUAL USE.

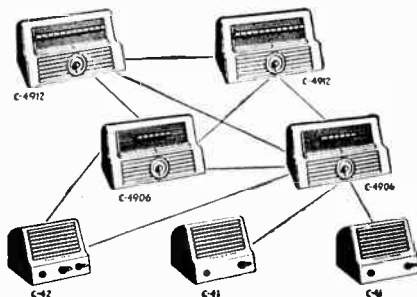
PRIVACY EARPHONE: Optional equipment on Master Stations. Provides listening privacy; and conversation with other Masters without continuous operation of touch bar.

POWER PAGING: Optional Booster for high power paging. May be added at any time.

UNIVERSAL UNFAILING OPERATION: Designed to withstand continuous day and night use. Operates anywhere on 110-120 volts, alternating current, 60, 50, 40 and 25 cycles; and 110-120 volts, direct current, at a cost of but a fraction of a cent a day.

UNDERWRITERS' LABORATORIES APPROVED!

COMPLETE PACKAGE UNIT: The "CHIEF FORTY-NINER" is complete with junction box — ready to plug in. Easy-to-follow instructions permit "anybody" to install TALK-A-PHONE.



All Master Stations and C-46 Staff Stations — 12" W x 9" D x 7" H.
C-41 and C-42 Staff Stations — 8 1/4" W x 7 1/2" D x 6 1/4" H.

C-4906 Push button Master for six-station capacity, complete with tubes, junction box, and easy-to-follow instructions. Wt. 13 lbs. **List Price ea. \$72.50**
6212 CABLE — For inter-connecting C-4906. **List Price per foot 30c**

C-4912 Push button Master for twelve-station capacity, complete with tubes, junction box, and easy-to-follow instructions. Wt. 13 lbs. **List Price ea. \$89.50**

C-4912X Same as C-4912 except equipped with privacy earphone. Wt. 13 lbs. **List Price ea. \$109.50**

6224 CABLE — For inter-connecting C-4912; C-4920; and C-4930. **List Price per foot 60c**

C-41 Staff Station for origination of call to one Master. Wt. 5 lbs. **List Price ea. \$18.70**

6204 CABLE — For connecting C-41 Staff Station. **List Price per foot 10c**

C-42 Staff Station for origination of calls to two Masters. Wt. 5 lbs. **List Price ea. \$28.00**

C-46 Push button Staff Station for origination of calls to six Masters. Wt. 9 lbs. **List Price ea. \$51.00**

6004 CABLE — For connecting C-42 and C-46. **List Price per foot 16c**

Master Stations also available for twenty and thirty station capacities. Write for full details.

HOW TO DETERMINE CABLE REQUIREMENTS: To interconnect Master Stations, measure from first Master to second Master only, from second to third Master only, etc., and total. For C-4920 use two lengths of 6224 Cable, and for C-4930 use three lengths of 6224 Cable. To connect C-41 Staff Station, measure from Staff Station to the one Master to which Staff Station originates calls. To connect C-42 and C-46 Staff Stations, measure a separate length of cable from Staff Station to each Master Station to which Staff Station originates calls (for each C-42 or C-46, follow same procedure).

Manufactured under exclusive TALK-A-PHONE Patents. Licensed under U. S. Patents of A. T. & T. Co. and Western Electric Co. Inc.

Prices and Specifications Subject to Change Without Notice

CHICAGO

TALK-A-PHONE CO.

ILLINOIS

Callmaster INTERCOMS

LYMAN ELECTRONIC CORPORATION

ONLY

Callmaster
ELECTRONIC INTERCOMS

have ALL these features:



- * Rugged shock proof cabinet of molded Phenolic plastic. High lustre mahogany finish.
- * High gain circuit producing 2 watts power output — full volume control.
- * Pilot light — paging switch, 3 standard General Electric radio tubes.
- * Compact—uses less desk space than a telephone—7" x 5½" x 3½".



Model CM-20

- * Attractive design — real eye appeal rivaling highest priced models of other makes.
- * Simplicity of installation — no shielded wires—no technical knowledge required.
- * Designed for continuous trouble free operation—constructed of best materials—full RMA guarantee.

* PRICE: LOWEST IN THE ENTIRE FIELD—COMPARE!

Available as follows:

CM-10

A kit comprising a master and sub-station with 50 feet connecting wire — complete in packaged form — both cabinets same as above except no selector switch. Designed for operation to one sub-station only — privacy switch on sub-station.

CM-20

Master station only (illustrated) — has station selector switch so that up to six sub-stations may be connected — all subs may be paged at once. Subs may call master at any time, but cannot "eavesdrop". Subs cannot call each other.

CM-30

Same in appearance as CM-20 but designed for master to master operation. Up to 7 CM-30's can be used in one system. Any station can talk with any other station or it may page all other stations at one time. Up to three separate conversations may be carried on simultaneously. Not designed for use with sub-stations.



CM-10 kit Complete—
Mahogany
\$39.95 List

CM-10W kit Complete—
Enameled Ivory
44.95 List



CM-20 Master only—
Mahogany
\$39.95 List

CM-20S Sub-station—
Mahogany each
10.95 List



CM-30 Mahogany
\$39.95 List

5% higher west of the Rockies

ALL PRICES SHOWN ARE LIST

3 Conductor wire used with CM-10 & CM-20 .06 ft. list. 8 Conductor wire used with CM-30 .25 ft. list.

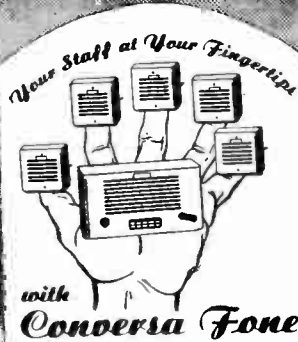
All units designed to operate on 110V AC or DC. Power consumption — 25 watts.

CONVERSA FONE

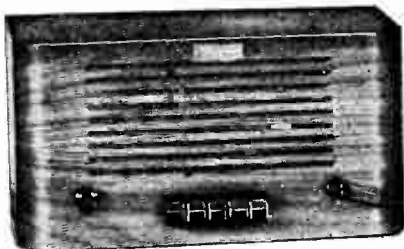
TODAY'S BIGGEST VALUE IN "INTERCOMS"

LUXURIOUS WALNUT CABINETS

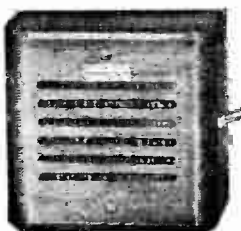
SIMPLIFIED INSTALLATION



DeLuxe Communicator for 1 to 5 Sub Stations



MASTER STATION MSS



SUB STATION SS5

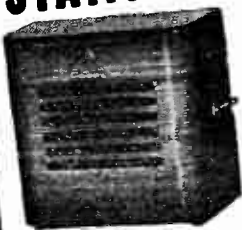
Here is CONVERSAFONE'S deluxe high efficiency intercom, featuring 5 SELECTOR PUSHBUTTONS and housed in an attractive cabinet of CHOICE WALNUT WOODS. A high gain, high quality amplifier produces over TWO WATTS of clear natural audio. The SILENT FEATURE eliminates unwanted sub-station hub-bub. Sub-stations are equipped with CALL IN SWITCH to originate calls. Tubes used: 2-12SJ7, 1-50L6, 1-35Z5. NOTE: Use 3-wire cable to connect each sub-station to the master station.

List Price Master Station Model MS5.....\$37.50
List Price Sub-Station Model SS5..... 11.95

1 to 3 SUB STATIONS



MASTER STATION MS3



SUB STATION SS3

Conversafone presents a LOW COST Communicator designed specifically for the "SMALL INSTALLATION". STURDY CONSTRUCTION, POWERFUL AMPLIFIER, and COMPACT SIZE make this model ideal for stores, garages, homes, farms, and small business organizations. A 4-POSITION ROTARY SWITCH selects any of the sub-stations, or the SILENT POSITION. When in silent position, the sub-stations may ORIGINATE CALLS to the Master Station. A compact unit, smartly styled in a handsome walnut cabinet, and built to give dependable, efficient service. NOTE: Use 3-wire cable to connect each sub-station to Master Station. Tubes used: 1-12SL7, 1-50L6, 1-35Z5.

List Price Master Station Model MS3.....\$29.95
List Price Sub-Station Model SS3..... 11.95

4-STATION MASTER TO MASTER

A low priced Master to Master set, using the same HIGH QUALITY AMPLIFIER and SMARTLY STYLED CABINET as model MS3. Up to four stations may be connected in the system and conversations held between any stations. NOTE: Use cable with one more wire than number of stations used.

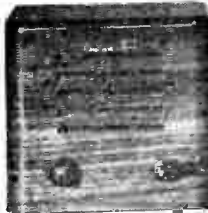
List Price Master Station Model MM4.....\$32.50

SIX STATION MASTER TO MASTER

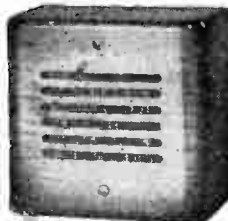
This model has the same high efficiency of performance and SMART STYLING as Model MS5 but is for use in an all-master system. Conversations may be held between any stations in the system. NOTE: Use cable having one more wire than number of stations used.

List Price Master Station Model MM5.....\$39.95

2-WAY, PERSON TO PERSON



MODEL MS1



MODEL SS1

The unbeatable answer to the tremendous demand for a LOW PRICED, COMPACT, EFFICIENT and ATTRACTIVE 2-WAY COMMUNICATOR. An ideal system for use between BABY'S ROOM AND BEDROOM. The high gain amplifier, VOLUME CONTROL, and attractive cabinet leave nothing to be desired where two-way communication is necessary. Tubes used: 1-12SL7, 1-12A6, 1-35Z5. NOTE: Use two-wire cable between master station and sub-station.

List Price Model MS1 Kit, consisting of one Master Station Model MS1 and one Sub-Station Model SS1.....\$35.90

AUDIO COMMUNICATION MFG. CO.

RCA ELECTRONIC COMPONENTS

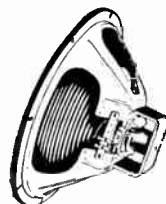
SPEAKERS — PICKUPS



PM LOUDSPEAKERS

Standard RMA Mounting
Rugged One-Piece Frame
Felted Cone

Alnico V Magnet
RCA Moistureproof Centering
Dustproof, Rust-Resistant



RCA 12" PM Loudspeaker

SIZE	TYPE	RESONANT FREQUENCY	MAGNET WEIGHT	VOICE COIL IMPEDANCE	POWER HANDL'G CAP.	SUGG'D LIST PRICE
2" x 3"	423S1	250-365 cycles	1.50 oz.	11.75 ohms at 900 cycles	1/8 watts	\$ 4.30
4" x 6"	246S2	150-200 cycles	1.00 oz.	3.2 ohms at 400 cycles	3 watts	3.50
4" x 6"	446S2	150-200 cycles	1.47 oz.	3.2 ohms at 400 cycles	3 watts	4.00
4"	304S2	150-200 cycles	.68 oz.	3.2 ohms at 400 cycles	3 watts	3.50
4"	404S2	150-200 cycles	1.47 oz.	3.2 ohms at 400 cycles	3 watts	3.80
5"	205S2	150-200 cycles	1.00 oz.	3.2 ohms at 400 cycles	3 watt-	3.40
5"	405S2	150-200 cycles	1.47 oz.	3.2 ohms at 400 cycles	3 watt-	3.90
5" x 7"	257S1	120-140 cycles	1.47 oz.	3.2 ohms at 400 cycles	8 watts	5.20
8"	208S2	75-95 cycles	2.15 oz.	3.2 ohms at 400 cycles	8 watts-	6.25
12"	312S1	70-85 cycles	2.15 oz.	3.2 ohms at 400 cycles	12 watts-	9.00
12"	412S1	70-85 cycles	6.80 oz.	3.2 ohms at 400 cycles	12 watts	11.50
12"	412S4	70-85 cycles	6.80 oz.	6-8 ohms at 400 cycles	12 watt-	12.50

CRYSTAL PICKUPS

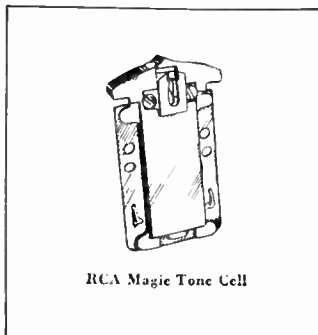
MAGIC TONE CELL

Replaces crystals in RCA Victor radio-phonographs and record players (1938 and later). Permanent-type jewel point stylus. At 400 cycles, it has approximate impedance of 200,000 ohms and an output of approximately 1 1/2 volts. When used as

replacement for needle-type pickups, slight adjustment of phono input circuit may be required for best tone and volume. Installation data included. Stock No. 211X1. Sugg'd List Price: \$7.00.

SILENT SAPPHIRE

Interchangeable with 70 different phonograph crystals. Similar to Magic Tone Cell in design and characteristics, but smaller in size. Comes complete with crystal, mounting plate, screws, and complete electrical and mechanical installation data. (For additional information see RCA Crystal Pickup Data sheet, Form 2F479.) RCA Silent Sapphire, Stock No. 212X1. Sugg'd List Price: \$7.00.



RCA Magic Tone Cell

RCA Crystal	Sugg'd List Price
31050	\$4.20
31156	4.75
33122	4.20
37158	4.75
38598	7.25
38610	5.55
39919	7.25
70332	7.25
70339	8.00

A complete line of Service Parts is available for all RCA apparatus.

All prices in effect 6/1/48



RCA ELECTRONIC COMPONENTS

TELEVISION PARTS

CONTROLS

- # 201R1 **Width Control.** Screwdriver-adjusted variable reactor. Powdered iron core. For use with RCA 211T1 where kinescope anode potential not over 9 KV. \$0.80
- # 201R2 **Projection Width Control.** Features same as 201R1. For use with RCA 211T2 in circuits with kinescope anode potentials up to 27 KV design center. \$2.20
- # 201R3 **Horizontal Linearity Control.** Features spring clip mounting. For deflection circuits using RCA 211T1 and 201D1 \$0.85

TRANSFORMERS

- # 201T6 **Power Transformer.** For use in 30-tube TV receivers requiring rectified current of 250 ma. at voltage of approx. 385 volts \$30.00
- # 204T1 **Horizontal Output Transformer.** Moisture-resistant. For deflection circuits with 50° mag. deflection kinescopes using RCA 201D1 or 201D2 \$23.00
- # 204T2 **Vertical Output Transformer.** Quiet operation. For use with RCA 201D1 or 201D2 where kinescopes require 50° magnetic deflection \$7.00
- # 204T3 **Horizontal Output Transformer.** Powdered iron core. For use where electro-magnetic deflection kinescopes with RCA 201D1 yokes are employed \$11.50
- # 208T1 **Horizontal Output Transformer.** Powdered iron core. For use where electro-magnetic deflection kinescopes with RCA 201D1 yokes are employed \$4.50
- # 208T2 **Vertical Blocking-Oscillator Transformer.** Generates 60 cps pulses required to drive the grids of horizontal discharge tubes \$3.60
- # 208T3 **Horizontal Blocking-Oscillator Transformer.** Similar to 208T1 except that bracket mounting is used in place of potted can construction \$3.20
- # 208T8 **Horizontal Sync-Discriminator Transformer.** Provides automatic horiz sweep freq control. Couples horiz-sweep oscillator to horiz-sync discriminator. \$2.75
- # 211T1 **Horizontal Output Transformer.** For use with RCA 201D1 and directly-viewed kinescopes requiring 50° magnetic deflection using typical circuits \$11.50
- # 211T2 **Horizontal Output Transformer.** Designed for use in recommended circuits employing projection kinescope RCA 5TP4. Powdered iron core \$22.75

YOKES

- # 201D1 **Deflection Yoke.** For use with directly-viewed kinescope requiring 50° magnetic deflection such as RCA 7DP4 and 10BP4 \$9.00
- # 201D2 **Deflection Yoke.** For use with projection kinescopes requiring 50° magnetic deflection such as RCA 5TP4. \$14.90
- # 201D77 **Deflection Yoke.** For use with RCA 2F21 and 1699 Monoscopes \$82.00*

COILS

- # 201D75 **Deflecting Coil Assembly.** (Includes jumbo annular 7-pin socket.) For use with RCA-2P23 and 5655 Image Orthicons \$186.50*
- # 201D76 **Deflecting Coil Assembly.** For use with RCA-1850-A Iconoscope \$96.50*
- # 202D1 **Focus Coils.** For magnetically focused kinescopes with deflection angles up to 50°, such as 10BP4. Utilizes large conductor size for long life \$9.10
- # 202D75 **Focusing Coil Assembly.** For use with RCA 2P23 and 5655 Image Orthicons \$106.50*
- # 204L1 **Filament Choke.** Eliminates undesirable RF currents from filament circuit. Consists of self-supported 16-turn coil on 1/4" inside diameter \$0.30
- # 204X1 **Television I-F and Video Coil Kit.** Contains all the coils for building a high quality receiver. 15 individual items \$22.00

MISCELLANEOUS

- # 201B1 **Spherical Mirror.** For use in reflective optics employing RCA-5TP4 kinescope in projection-type TV receivers \$150.00
- # 201E1 **Television Tuner** incorporating RF amplifier, converter and heterodyne oscillator, with 13-channel station selector and fine tuning control. Includes 3 RCA 6J6 tubes \$75.00
- # 201P2 **Correcting Lens.** For use in reflective optics employing kinescope in projection-type TV receivers. \$32.00
- # 201X1 **Yoke Mounting Hood.** Holds deflection yoke RCA 201D1 on kinescopes such as RCA 7DP4, 10BP4 \$1.60
- # 202B1 **Optics Aligner.** Can be substituted for RCA-5TP4 kinescope in TV projection receiver to facilitate accurate adjustment and alignment of reflective optics. \$66.00*
- # 202P1 **"Bright Picture" Viewing Screen.** For use in projection-type receivers employing reflective optics \$36.00
- # 202X1 **Optical Barrel Kit.** Includes Correcting Lens (201P2), Spherical Mirror (201B1), supports for RCA 5TP4 kinescope, noise, hardware, and mounting barrel for entire assembly \$370.00
- # 203D1 **Ion-Trap Magnet. (Coil Type).** Required for RCA-7DP4 and 10BP4. Eliminates ion spot on kinescope screen \$6.50
- # 203D2 **Ion-Trap Magnet. (PM Type).** Required for RCA-7DP4 and 10BP4. Eliminates ion spot on kinescope screen \$2.10
- # 203P2 **Television Picture Magnifier.** Enlarges pictures 1.5 times when used with TV receivers employing 7" or 10" kinescopes. Accurately made to assure freedom from distortion \$36.95**
- # 203P3 **Television Picture Magnifier without brackets** \$32.95**

All prices in effect 6/1/48.

**Prices slightly higher on Pacific Coast.

FOR COMPLETE LISTING AND LATEST PRICES OF RCA TELEVISION PARTS, ASK YOUR RCA DISTRIBUTOR FOR FORM 2F886.

All prices shown are suggested list prices, except (*) which are suggested users' prices.

ALTEC

LANSING CORPORATION

SPEAKERS AMPLIFIERS TRANSFORMERS

1161 N. VINE ST., HOLLYWOOD, CALIFORNIA • 250 WEST 57 STREET, NEW YORK, N. Y.

The Altec Lansing Model 604B Duplex and associated N-1000B Network represents the finest loudspeaker on the market. Manufactured by the same company which makes the famous "Voice of the Theatre" loudspeaker systems used by leading motion picture theatres, this compact unit has all of the fine design principles and construction that has heretofore been available only in the most costly loudspeakers offered for professional use and laboratory standards. Price has not been spared to make the Duplex the peer of all loudspeakers.

The unusual features are: (a) Two way operation utilizing separate diaphragms and voice coils for high and low frequencies. (b) Multicellular horn to provide uniform sound distribution over a wide area. (c) Alnico No. 5 permanent magnets designed for total absence of external stray fields. (d) Both the high and low frequency voice coils made of edge-wise wound ribbon to provide 22% greater efficiency. (e) Large 3" low frequency voice coil for high power capacity. (f) Frequency response of 30 to 16,000 cycles more than spans FM range. (g) Low crossover of 1,000 cycles to assure that the cone will operate as a stiff piston. (h) Overall acoustic efficiency 3 to 5 db greater than the ordinary loudspeaker.

The Model 604B Duplex Loudspeaker and associated N-1000B Network are available separately, or can be supplied together in a number of specially constructed baffle cabinets as illustrated. The cabinet combinations are known as Duplex Loudspeaker Systems.

The Duplex Loudspeaker particularly meets the critical requirements of broadcast and recording studio monitoring, high quality public address and music distribution systems, and when used with 16 mm. sound equipment will increase the audience coverage many fold. Music lovers and discerning people require the Duplex for home use with fine phonograph records and FM reception.

The new Model 604B Duplex Speaker and its associated N-1000B Network incorporates a number of improvements over earlier models. The lower crossover frequency, improved low frequency cone technique and redesigned high frequency diaphragm chamber has extended the frequency range and provided the smoothest frequency characteristic yet offered by any loudspeaker manufacturer.



MODEL 604B
DUPLIX SPEAKER



N-1000-B
Dividing Network

SPECIFICATIONS—604B DUPLIX SPEAKER

Area of Horizontal Distribution	60°
Area of Vertical Distribution	40°
Voice Coil Impedance	16 ohms
Dividing Network Impedance	16 ohms
Dividing Network Crossover	1000 cycles
Power Rating	30 watts
Weight (including network)	40 lbs.
Diameter	15 1/16"
Depth	11 1/2"
List Price, see Network	\$210.00
The N-1000-B network associated with the 604B Duplex must be ordered as a separate item. List Price \$24.06.	



MODEL 603B
DIAZONE SPEAKER

The Altec Lansing 603B Multicell Diacone is now available to meet the tremendous demand for an economical high quality speaker for customers who desire a speaker priced lower than the "professional" Model 604B Duplex. This unit has the advantages of a 2-way multicellular speaker system, and its performance, efficiency, high frequency distribution, frequency response, and absence of distortion are surpassed only by the 604B Duplex. It is designed for the discriminating customer who appreciates the quality sound in his home AM or FM radio, phonograph, music system, and for the manufacturer who earnestly attempts to meet these home requirements.

This speaker which is an Alnico 5 permanent magnet unit, incorporates a metal high frequency diaphragm and a low frequency cone coupled together by a mechanical dividing network and driven by a single 3" voice coil. The metal high frequency diaphragm operates into a multicellular horn to assure uniform sound distribution over a wide area.

A completely new cone technique has extended and smoothed out the frequency response of the new 603B Multicell Diacone to the point where this model represents a vast improvement over the earlier 603 model.

SPECIFICATIONS—603B MULTICELL DIAZONE SPEAKER

Area of Horizontal Distribution	60°
Area of Vertical Distribution	40°
Voice Coil Impedance	8 ohms
Voice Coil Diameter	3"
Power Rating	25 watts
Weight	18 lbs.
Diameter	15-3/16"
Depth	6 5/8"
List Price	\$84.00

The Altec Lansing Model 600B Diacone Speaker is similar in design to the Model 603B Diacone, using the exclusive Diacone principle. It meets the needs of those who do not wish to invest in more expensive speakers, yet whose training, musical education, sound consciousness and discriminating hearing, demand faithful reproduction of sound.

The Model 600B Diacone speaker has a Alnico V permanent magnet and is mounted in a 12" frame. It uses a 3" edge-wise wound aluminum voice coil to which is mounted a domed aluminum alloy metal diaphragm and a seamless molded paper cone. The cone vibrates with the voice coil as a piston up to approximately 2,000 cycles. Above this frequency, the domed metal diaphragm, with its high mass stiffness, continues to operate as a piston with the voice coil, resulting in true reproduction of the higher frequencies.

Because of its efficiency, small space requirements, light weight and superior quality of reproduction, the Model 600 Diacone Speaker is an ideal unit in the lower priced speaker field.

A completely new cone technique has extended and smoothed out the frequency response of the new 600B Multicell Diacone to the point where this model represents a vast improvement over the earlier 600 model.

SPECIFICATIONS—600 DIAZONE SPEAKER

Voice Coil Impedance	8 ohms
Voice Coil Diameter	3"
Power Rating	20 watts
Weight	12 lbs.
Diameter	12 1/2"
Depth	5 1/2"
List Price	\$60.00



MODEL 600B
DIAZONE
SPEAKER



MODEL 400B
DIAZONE SPEAKER

The Altec Lansing Model 400B Diacone 8" speaker has been designed especially for uses where the benefits of a larger speaker can not be taken advantage of because of space and weight limitations.

The Model 400B Diacone is a low-priced, high-quality unit of very high efficiency—a much greater efficiency than is found in the ordinary 8" speakers. Its light weight and small size make it ideally adaptable for portable uses such as 16MM sound, magnetic recorders, and in installations such as airplanes, buses, etc.

SPECIFICATIONS—MODEL 400B DIAZONE SPEAKER

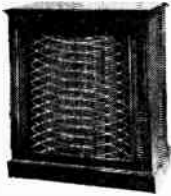
Voice Coil Impedance	8 ohms
Voice Coil Diameter	1 3/4"
Power Rating	12 watts
Required Amplifier Output Impedance	4-8 ohms
Weight	4 lbs.
Speaker Diameter	8 1/2"
Speaker Depth	3 5/8"
List Price	\$24.00

ALTEC

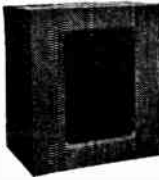
LANSING CORPORATION

SPEAKERS AMPLIFIERS TRANSFORMERS

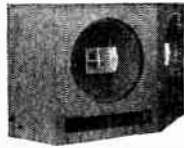
1161 N. VINE ST., HOLLYWOOD, CALIFORNIA • 250 WEST 57 STREET, NEW YORK, N. Y.



605



612



613



614



618



620

CABINETS

Altec Lansing offers a variety of baffle cabinets which are engineered for high quality sound reproduction. Construction is of heavy ply-wood, with all joints screwed and glued to eliminate spurious rattles. The interior of the cabinets are well padded with fibreglass to prevent side reflections. The following cabinets are available for Altec Lansing speakers listed in this catalogue. Note

carefully the code numbers of the cabinets when ordering. The suffix letter indicates the size of the hole in the baffle necessary to accommodate the required speaker. For example: the 620A Cabinet will accommodate a 15" speaker; the 620B Cabinets will accommodate a 12" speaker; the 620C Cabinet will accommodate an 8" speaker. There is no other difference in the three types of cabinet.—

604B Duplex

605A
612A
614A
620A
613

603B Multicell Dia-cone

605A
612A
611A
620A
613

600B Dia-cone

612B
614B
618B
620B

400B Dia-cone

614C
618C
620C

Type 605

Furniture Cabinet. Finish—Walnut or Mahogany. Dimensions: Height 38", Width 30", Depth 16".

List Price \$140.00

Type 612

Utility Cabinet. Finish—Blue Gray. Dimensions: Height 29 1/2", Width 25 1/2", Depth 17 1/4".

List Price \$62.00

Type 613

Public Address Cabinet. Finish—Blue Gray. Dimensions: Height 21 1/2", Width 36", Depth 18".

List Price \$80.00

Type 614

Portable Utility Cabinet. Finish—Blue Gray. Dimensions: Height 24 3/4", Width 18 3/4", Depth 14 1/4".

List Price \$56.00

Type 618

Small Portable Utility Cabinet with slanting front. Finish—Blue Gray. Dimensions: Height 22", Width 17", Depth 13 1/4".

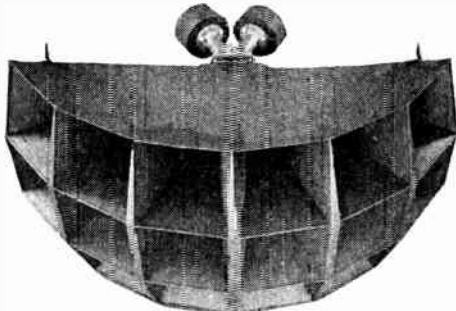
List Price \$42.67

Type 620

Small Furniture Cabinet. Finish—Walnut, Mahogany or White Birch. Dimensions: Height 33 1/2", Width 26 1/2", Depth 14 1/4".

List Price \$113.34

MULTICELLULAR HORNS



Altec Lansing multi-cellular horns are constructed from exponential horn cells grouped in different configurations to meet various sound distribution requirements. Each cell is a true exponential horn.

The large multi-cellular horn provides the best way of covering long distances and large areas with high levels of quality acoustic power in the frequency range above 200-300 cycles. By choosing the proper configuration of cells, the sound output can be directed for even distribution over any horizontal and vertical area desired; and conversely, to a large degree the sound can be kept from unwanted areas such as walls and ceiling which might produce echoes, slaps, reverberations, etc. These horns find particular application in large buildings with high noise levels, reverberant cathedrals, ball parks, skating rinks, stadia, race tracks, airports, church carillons, sports arenas, etc.

The chart shows multicellular horns available. Note that a throat is not supplied as part of the multi-cellular horn and must be ordered separately according to the type required.

Horn Code	Cell Configuration	Sound Distribution		Dimensions (L-W-H)	Net Weight (Less Speakers)	LIST PRICE	Code No., Throat Required			Throat Code No.	LIST PRICE
		Horizontal	Vertical				1 Unit	2 Units	4 Units		
H-803	2 x 1	70°	37°	36 x 32 x 18	86	\$155.53	30162			30162	\$22.20
H-1005	2 x 5	90	35	35 x 10 x 18	131	216.67	30216	30170		30166	22.20
H-1203B	2 x 6	105	35	36 x 43 x 18	152	216.67	30219	30170		30210	22.20
H-1504	2 x 5	105	60°	33 1/2 x 10 x 24	160	244.47	30170	30170		30170	44.40
H-1803	2 x 6	105°	51°	35 x 13 x 25	181	255.53	30168	30172	(2)30170	30172	44.40

* overall length of horn including throat and 2SS unit. † 1/2"

288 SPEAKER

The Altec Lansing 288 speaker unit is designed to fit on the throats of various Altec Lansing multi-cellular horns. Using Altec Lansing permanent magnets, its efficiency when mounted on a multi-cellular horn

is such that a sound level of 98 db (ref. 10⁻⁶ watts per square centimeter) is produced at five-foot distance for an electrical input of 0.1 watt at 100 cycles.

The use of tangential conductance in the diaphragm and zig-zag wound ribbon wire in the voice coil provide maximum power handling capacity and acoustic output. Beryllium copper lips, specially shaped to the voice coil, provide heavy duty connections which will not fatigue under use. The entire diaphragm and voice coil assembly, coded 20221, which is mounted in a cast baffle ring, is fold replaceable.

When using the 288 speaker unit for all range reproduction, it is necessary to attenuate the frequencies below 300 cycles which would otherwise damage the diaphragm and voice coil assembly. This attenuation may be accomplished by the proper sized condenser either in the input or output circuit of the final power amplifier.

288 SPECIFICATIONS

Signal Capacity—40 watts for frequencies above 300 cps
V.C. Impedance—21 ohms when operating under normal horn loading conditions
Dimensions—6 1/2" Diameter x 1 1/2" Deep
Weight—2 1/2 lbs.
List Price—\$200.00



ATLAS SOUND CORPORATION



NEW ATLAS "ALNICO-V-PLUS" MAGNETIC CIRCUIT

MODEL PD-V DRIVER UNITS with Full-Phenolic Unbreakable Diaphragms



MODEL PD-8V

Power 25 watts
 Impedance 16 ohms
 Frequency 90 to 9000
 List Price \$42.50



MODEL PD-5V

Power 25 watts
 Impedance 16 ohms
 Frequency 90 to 3000
 List Price \$32.50



MODEL PD-3V

Power 12 watts
 Impedance 8 ohms
 Frequency 100 to 6000
 List Price \$22.50

All models include the new ATLAS Alnico "V-PLUS" super-efficient magnetic assembly with its energy per unit volume over three times as great as any used before . . . Magnetically Shielded . . . Hermetically Sealed . . . One piece, unbreakable, high-temperature and fatigue-proof full phenolic diaphragm. All models 1 3/8"-13 thread size.



"DR" RE-ENTRANT — REFLEX — PROJECTORS

Non-resonant - Stormproof - Uniform response - Rugged construction

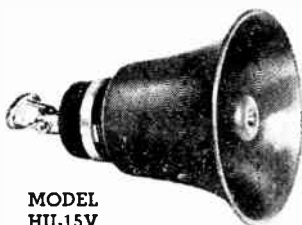
The utmost in performance can be obtained from these new, non-resonant reflex projectors. All resonance is eliminated by fibre gasket seals and special rubber rim which dampens rim vibration. The bracket mounting assembly is securely fastened to a main body steel casting which guarantees long life under extreme conditions of mechanical strain. All spinings are of weather-resistant, heavy gauge aluminum, finished in a high lustre gray enamel.

MODEL	Air Column	Dispersion	Low Frequency	Length	Diameter	LIST PRICE
DR-32	2 1/2 ft.	75°	175 c.p.s.	12 in.	14 in.	\$23.50
DR-42	3 1/2 ft.	80°	135 c.p.s.	15 in.	21 in.	28.00
DR-54	4 1/2 ft.	90°	105 c.p.s.	18 in.	26 in.	40.00
DR-72	6 ft.	100°	85 c.p.s.	25 in.	31 in.	60.00

NEW ATLAS "ALNICO-V-PLUS" PAGING & TALK-BACK SPEAKERS

Complete with unbreakable super-efficient "V-PLUS" Driver Unit

These speakers include the newly developed, unbreakable, hermetically-sealed driver units using the Alnico "V-PLUS" magnetic circuit. They offer a maximum of efficiency as a reproducer, and the utmost in performance as a microphone, in talk-back circuits. The new improved ball swivel mounting bracket permits quick and simple directional adjustment in every position, horizontal and vertical. All aluminum construction, finished in high lustre gray enamel.



MODEL HU-15V

Power 12 watts
 Impedance 8 ohms
 Frequency 300 to 7000
 Length 1 in.
 Diameter 8 1/2 in.
 Air Column 5 in.
 List Price \$29.75



MODEL HU-24V

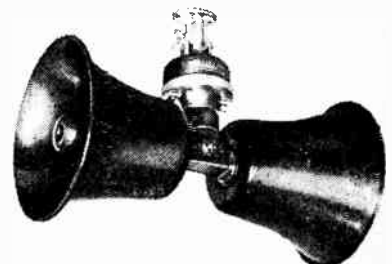
Power 12 watts
 Impedance 8 ohms
 Frequency 200 to 7000
 Length 1 1/2 in.
 Diameter 10 in.
 Air Column 24 in.
 List Price \$32.75

NEW ATLAS "ALNICO-V-PLUS" DUAL PROJECTORS

Two-way Projector complete with Driver Unit

This two-way speaker projects sound of equal intensity in a dual manner. Also excellent for talk-back application. Reduces cost of installation and offers installation advantages when used in critical locations of long corridors, industrial plants, and similar locations. All aluminum construction finished in gray lustre enamel. Universal mounting bracket. Power: 12 watts. Impedance: 8 ohms.

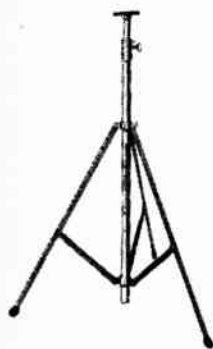
MODEL	Overall Length	Bell Diameter	LIST PRICE
TP-15V	15 1/2 in.	8 1/2 in.	\$47.00
TP-24V	22 in.	10 in.	53.00





ATLAS SOUND CORPORATION

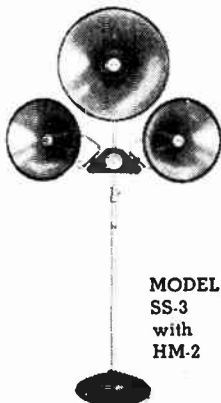
SPEAKER SUPPORT STANDS



MODEL SS-2

Both models extend from five to ten feet. Heavy steel construction finished in gray enamel and cadmium plating. PS-1 top fitting supplied. The HM-2 permits the use of three "DR" Projectors on a single support stand.

MODEL	LIST PRICE
SS-2	\$37.50
SS-3	30.00
HM-2	15.00



MODEL SS-3 with HM-2

MARINE Midget PROJECTOR for 5" Cone Speakers

- Re-entrant.
- Weatherproof.
- Efficient.
- Compact.



Will accommodate any standard 5" cone speaker. The efficient means of loading the cone diaphragm greatly increases the normal efficiency of any cone speaker. Offers protection against weather and mechanical abuse. Universal steel mounting bracket supplied. Bell diameter 10 inches . . . Overall length 8 inches . . . Finish: Gray enamel. Supplied less cone speaker unit.

MODEL WX-5

LIST PRICE \$13.50

TWO-WAY ENCLOSURE for 8" Cone Speakers

The front and back wave of the speaker is utilized to assist in good sound coverage in long corridors and central locations. Adjustable wall or ceiling mounting brackets supplied. All steel finished in gray enamel. Cloth screens on both sides. Speaker mounting screws included. Outside diameter 10" . . . Depth 5".



MODEL TW-8

LIST PRICE \$8.25

PIPE STANCHION FITTING

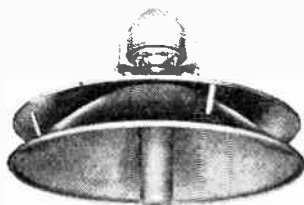


"DR" re-entrant or "RC" radial "U" brackets adapted to 3/4" pipe fittings. This steel adaptor has holes properly located to match holes in "U" bracket. All mounting bolts supplied. Female 3/4" pipe thread.

MODEL PS-1

LIST PRICE \$2.00

RADIAL DRIVER UNIT PROJECTOR



- Non-resonant.
- Dual Rubber Rims.
- 100% Storm-Proof.
- Uniform 360° Coverage.

The advantage of 360° coverage often permits the use of one speaker where normally a multiple of directional projectors may be required. The radial projectors are of all-aluminum construction finished in a weather-proof gray enamel. Thread size 1 3/8"-18. The use of the H-2U two-unit adaptor will double the power output for single projector high power application.

MODEL	RC-36	RC-48
Air Column	3 ft.	4 ft.
Bell Diameter	24 in.	28 in.
Overall Height	18 in.	21 in.
LIST PRICE (horn only)	\$40.00	\$50.00

TWO UNIT TO ONE PROJECTOR ADAPTOR



When it is found necessary to obtain the greatest possible power output from a single projector the H-2U is recommended. This device permits the use of two driver units with any type of projector. Construction: Cast aluminum. All threads 1 3/8"-18.

MODEL H-2U

LIST PRICE \$10.00

SPEAKER POWER VOLUME CONTROL



For adjusting volume of individual speakers. Power handling: 10 watts constant. Complete as illustrated.

MODEL RC-1

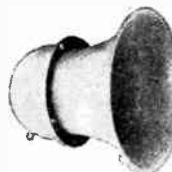
LIST PRICE \$5.25

PARABOLIC Baffles

for 8" and 12" Cone Speakers

All steel construction, waterproof interlock seal between sections. All mounting bolts and hanging loops supplied. Finished in gray enamel.

Model . SM-8 SM-12
Diam. 18 in. 20 in.
Bell
Length 14 in. 18 in.
Speaker
Size 8 in. 12 in.
List Price \$14.50 \$15.50



BAFFLE MOUNTING FIXTURE

Offers convenient mounting for Parabolic Baffles. Complete adjustable saddle fixture and base pedestal as illustrated.

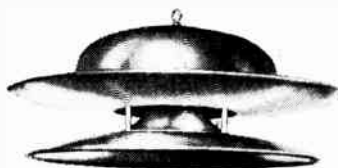
MODEL ST-8

LIST PRICE \$5.25

RADIAL CONE SPEAKER PROJECTOR

for 12-inch Cone Speakers

360° Coverage



This radial projector offers an excellent baffle for any standard 12" diameter standard cone speaker and produces smooth and uniform 360° coverage. With a good grade of cone speaker it will adequately load the reproducer down to 60 cycles. The enclosure is designed to shed water and can, therefore, be used indoors and out. Finished in gray enamel . . . Outside diameter 29 inches . . . Overall height 13 inches

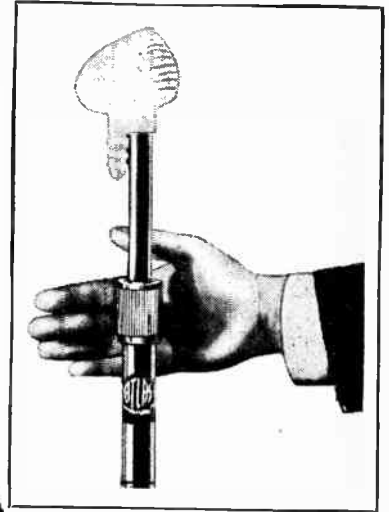
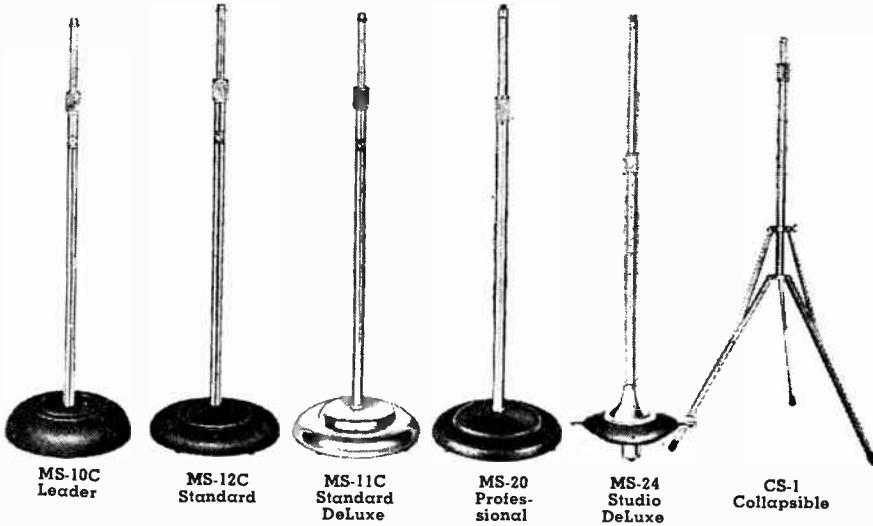
MODEL L-360

LIST PRICE \$35.00

ATLAS SOUND CORPORATION



"FULL GRIP — VELVET ACTION" Microphone Stands No slipping - No rattle - No noise - No scratching - No wear



Illustrating "Full Grip" Oversize Clutch

The "Full Grip" Clutch offers an extended length clutch body, permitting a secure, full-hand grip. The clutch mechanism is inner-lined with a wear-proof bakelite locking collet which grips without jamming, slipping, or sudden dropping. All bases are functionally designed to offer maximum stability for a given base weight. The maximum base mass is located at the outer periphery of the casting where the concentrated

weight is most useful. All bases include self-leveling, shock-absorbent base pads, plus three additional "anti-tip" points located between the base pads. All models, except the MS-10C "Leader" are constructed of heavy brass tubing. The complete tube assemblies of all models are "super-chrome" plated, assuring "life-time" wear. All models terminate in a $\frac{3}{8}$ "-27 carefully machined thread.

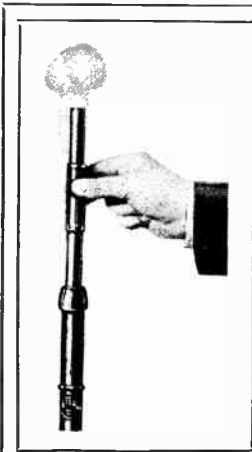
MODEL	Weight	Base Finish	Tube Finish	Height Adjst.	Base Diam.	LIST PRICE
*MS-10C	12 lbs.	Gray Shrivel	Full Chrome	35" to 64"	10"	\$ 8.50
MS-12C	12 lbs.	Gray Shrivel	Full Chrome	35" to 65"	10"	9.60
MS-11C	12 lbs.	Full Chrome	Full Chrome	35" to 65"	10"	11.40
†MS-20	15 lbs.	Gray Shrivel	Full Chrome	42" to 72"	12"	14.00
†MS-24	24 lbs.	Chrome & Gray Shrivel	Full Chrome	42" to 72"	17"	19.50
§CS-1	5 lbs.	Cadmium Plated	Full Chrome	23" to 62"	Collapsible	17.00

*The MS-10C "Leader" tube sections — seamless steel, chromium plated.

†The MS-20 and MS-24 use large diameter, oversize, telescoping brass tube assemblies ($\frac{7}{8}$ " telescoping tube — $1\frac{1}{8}$ " base tube)

resulting in a handsome and fine-appearing stand that supplements the professional appearance of large-size high quality microphones.

§Collapsible to a minimum overall length of 23 inches.



NEW AUTOMATIC "Sleeve Action" MICROPHONE STAND Quiet . . . No Rasp . . . Smooth . . . No Jolt or Jar

This amazing new automatic "Sleeve Action" clutch mechanism is a fully automatic means of adjusting the height of a microphone stand. A slight downward pressure on the "Sleeve Action" control permits the telescoping section to be lowered. To raise the stand, the telescoping tube can be grasped at any point and simply extended. The new "Sleeve Action" is built

for life-time use. It cannot creep or change position without a deliberate pressure on the actuating sleeve control.

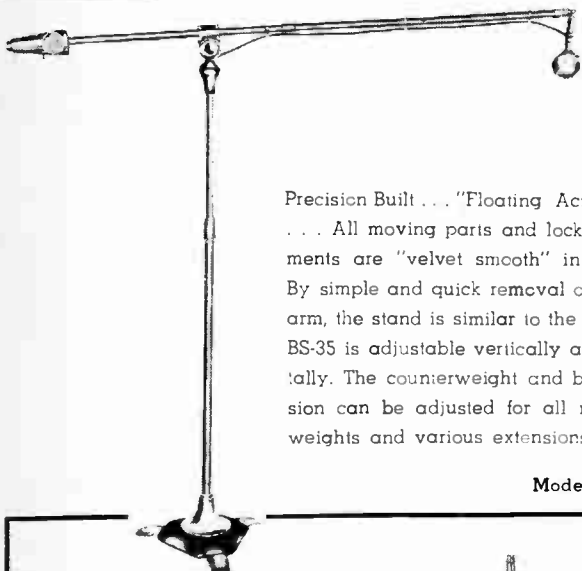
The quality of materials, plating, and general specifications are identical to the "Full Grip" models described above. The "Sleeve Action" stand is available in two models; either full chrome or shrivel base.

MODEL	Weight	Base Finish	Tube Finish	Height Adjst.	Base Diam.	LIST PRICE
MS-12S	12 lbs.	Gray Shrivel	Full Chrome	35" to 65"	10"	\$15.60
MS-11S	12 lbs.	Full Chrome	Full Chrome	35" to 65"	10"	17.40



ATLAS SOUND CORPORATION

PROFESSIONAL BOOM STAND



Finger-Tip Control by "Floating Action"
Precision Built
Attractively Styled
For Every Application
Professional Studio Microphone Support

Precision Built . . . "Floating Action" Stand . . . All moving parts and locking adjustments are "velvet smooth" in operation. By simple and quick removal of the boom arm, the stand is similar to the MS-24. The BS-35 is adjustable vertically and horizontally. The counterweight and boom extension can be adjusted for all microphone weights and various extensions.

Specifications . . . Dimensions: Maximum vertical extension 72", minimum 48" Length of horizontal boom arm 63". Base Diameter, at floor contact points, 17". Total weight 35 lbs. Tube diameters 1 1/8" and 7/8" brass, triple "super-chrome" plated . . . Base finished in chromium and gun-metal shrivel, rubber shock-absorbing bumpers. Snap-on hangers for holding cable to boom section supplied.

Model BS-35

List Price \$55.00

ADJUSTABLE BANQUET STAND

This stand incorporates the "Full Grip Velvet Action" principle of adjustment. The tube and base are completely finished in "super chrome" offering a fine appearing stand suitable for use on a banquet table. Adjustable for use on 18" to 32". Base diameter 8". Weight 5 lbs.

Model TS-6

List Price \$8.50



FLEXIBLE GOOSE NECK

Can be attached to any microphone stand so that some amount of overhang can be accomplished. Ends have 5/8"-27 male and female threads. Finished in bright chrome. Length 13".

Model GN-13

List Price \$2.00



SPEAKER'S or ORCHESTRA DESK ATTACHMENT

This desk attachment can be applied to any type of microphone stand. This is an item which has long been required in many permanent as well as rental installations. It offers the speaker facilities for holding notes or other reference material. A microphone can be directly attached to the desk by using the BC-1 Bracket Clamp. The DA-1 is complete with 5/8"-27 thread attachment and tilt adjustment. Sturdy construction finished in bright aluminum.

Model DA-1 (less floorstand))

List Price \$10.00



MODEL DA-1
(shown with
MS-20 floor
stand)



"BABY BOOM" ATTACHMENT

Easily attached to any type of microphone stand. Can be locked in any position. Length of tube 32", chrome plated; castings in gray shrivel. 5/8"-27 thread size.

Model BB-1

List Price \$7.00

"VELVET ACTION" DESK STANDS

ATLAS Desk Stands employ the same fine finish and workmanship as embodied in the floor models. The adjustable Model DS-7 uses heavy duty 5/8" and 7/8" tubing. Felt base pads included. Base diameter 6", finish gray shrivel; tube chromium plated.

Model	Height Adj.	List Price
DS-5	Fixed 6"	\$2.75
DS-7	8" to 13"	4.50



MODEL DS-7

BRACKET CLAMP

A multitude of useful applications. Can be used with Boom Arm, Goose Neck, etc. Chrome tube 6" long. Castings finished in gray shrivel. Can be clamped or permanently screwed or bolted in position. Thread size 5/8"-27".

Model BC-1

List Price \$3.00





Jensen



"Standard Series" speakers, in both PM and Field Coil models, are exceptionally good in performance and are highly recommended for radio receivers, low-power public address systems, intercommunication equipment, and similar applications. Completely redesigned in every feature, this postwar line embodies the highly efficient Alnico 5 magnets which insure unlimited life. All "Standard Series" speakers are completely dustproof and all field coil models have bucking coils.

No transformers are regularly furnished with these speakers but mounting facilities are provided for easy attachment of transformers. If transformers are desired mounted at the factory, add to the list price of speaker and transformer an installation charge of 75¢ list. Special field resistances are available on order. Write for prices, mentioning specific resistance required.

ALNICO 5 PM MODELS

Nominal Size	Model No.	Stock No.	Supersedes	VOICE COIL		*Transformer Size	List Price
				Impedance Ohms	Power Watts		
12"	P12-S	ST-102	PM12-C	6-8	10.0	7/8 x 7/8"	\$16.50
	P12-T	ST-101	PM12-GS	6-8	9.0	3/4 x 3/4"	11.85
10"	P10-S	ST-120	PM10-C	6-8	9.0	3/4 x 3/4"	15.25
	P10-T	ST-119	PM10-GS	6-8	8.0	3/4 x 3/4"	10.65
8"	P8-S	ST-104	PM8-C	6-8	8.0	3/4 x 3/4"	12.25
	P8-T	ST-117	PM8-GS	3-4	7.0	3/4 x 3/4"	9.50
	P8-U	ST-116	PM8-DS	3-4	6.0	3/4 x 3/4"	8.35
	P8-V	ST-115	PM8-FS	3-4	5.0	3/4 x 3/4"	7.30
6"	P6-T	ST-112	PM6-C	3-4	6.0	3/4 x 3/4"	7.75
	P6-V	ST-110	PM6-DS	3-4	4.0	3/4 x 3/4"	6.10
	P6-W	ST-109	PM6-FS	3-4	3.5	1/2 x 1/2"	5.65
	P6-X	ST-108	PM6-FS	3-4	3.0	1/2 x 1/2"	5.00
5"	P5-V	ST-107	PM5-DS	3-4	3.5	1/2 x 1/2"	5.40
	P5-X	ST-105	PM5-FS	3-4	2.5	1/2 x 1/2"	4.30
	P5-X	ST-740	PM5-FS	45-10	2.5	1/2 x 1/2"	4.95
4"	P4-X	ST-113	PM4-FS	3-4	2.0	1/2 x 1/2"	4.15
	P4-X	ST-739	PM4-FS	45-50	2.0	1/2 x 1/2"	4.85

FIELD COIL MODELS

Nominal Size	Model No.	Stock No.	Supersedes	VOICE COIL		FIELD		*Transformer Size	List Price
				Imped. Ohms	Power Watts	Resist. Ohms	Power Watts		
12"	F12-S	ST-173	G12-RS	3-4	10.0	1500	8.5	7/8 x 7/8"	\$14.60
	F12-S	ST-174	G12-RS	3-4	10.0	2500	8.5	7/8 x 7/8"	14.85
10"	F10-S	ST-175	G10-RS	3-4	9.0	1500	8.5	3/4 x 3/4"	12.70
	F10-S	ST-681	G10-RS	3-4	9.0	2500	8.5	3/4 x 3/4"	13.00
8"	F8-S	ST-177	†G8-RS	3-4	8.0	1500	8.5	3/4 x 3/4"	10.65
	F8-S	ST-178	†G8-RS	3-4	8.0	2500	8.5	3/4 x 3/4"	10.80
	F8-T	ST-179	D8-RS	3-4	7.0	1000	7.0	3/4 x 3/4"	8.85
	F8-T	ST-180	D8-RS	3-4	7.0	†1800	7.0	3/4 x 3/4"	8.95
	F8-T	ST-181	D8-RS	3-4	7.0	2500	7.0	3/4 x 3/4"	9.05
	F8-U	ST-170	†E8-RS	3-4	6.0	1000	6.0	3/4 x 3/4"	7.15
	F8-U	ST-682	†E8-RS	3-4	6.0	†1800	6.0	3/4 x 3/4"	7.20
	F8-U	ST-182	†E8-RS	3-4	6.0	2500	6.0	3/4 x 3/4"	7.25
	F8-W	ST-736	F8-RS	3-4	4.0	1000	5.0	3/4 x 3/4"	6.65
	F8-W	ST-737	F8-RS	3-4	4.0	†1800	5.0	3/4 x 3/4"	7.00
	F8-W	ST-738	F8-RS	3-4	4.0	2500	5.0	3/4 x 3/4"	6.80
	6"	F6-U	ST-186	E6-RS	3-4	5.0	1000	6.0	3/4 x 3/4"	6.75
F6-U		ST-187	†E6-RS	3-4	5.0	†1800	6.0	3/4 x 3/4"	6.75
F6-U		ST-188	E6-RS	3-4	5.0	2500	6.0	3/4 x 3/4"	6.80
F6-X		ST-189	H6-S	3-4	3.0	450	4.5	1/2 x 1/2"	5.55
F6-X		ST-166	H6-S	3-4	3.0	1000	4.5	1/2 x 1/2"	5.65
F6-X		ST-168	H6-S	3-4	3.0	†1800	4.5	1/2 x 1/2"	5.90
5"	F5-W	ST-191	†F5-RS	3-4	3.0	1000	5.0	1/2 x 1/2"	5.85
	F5-W	ST-192	†F5-RS	3-4	3.0	†1800	5.0	1/2 x 1/2"	6.20
	F5-W	ST-193	†F5-RS	3-4	3.0	2500	5.0	1/2 x 1/2"	6.00
	F5-X	ST-194	H5-S	3-4	2.5	450	4.5	1/2 x 1/2"	5.35
	F5-X	ST-165	H5-S	3-4	2.5	1000	4.5	1/2 x 1/2"	5.40
	F5-X	ST-167	H5-S	3-4	2.5	†1800	4.5	1/2 x 1/2"	5.65
	F5-X	ST-195	H5-S	3-4	2.5	2800	4.5	1/2 x 1/2"	5.60
4"	F4-X	ST-196	H4-S	3-4	2.0	450	4.5	1/2 x 1/2"	5.15
	F4-X	ST-164	H4-S	3-4	2.0	1000	4.5	1/2 x 1/2"	5.20
	F4-X	ST-198	H4-S	3-4	2.0	2800	4.5	1/2 x 1/2"	5.40

*Size recommended. See Transformer Listing.

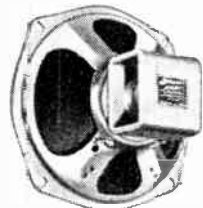
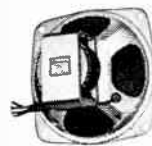
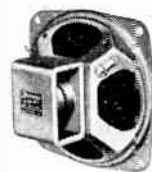
†Not previously catalogued.

‡Tapped at 300 ohms.

VOLUME CONTROLS

These "L Pad" type volume controls are highly satisfactory for use in voice coil circuits. Complete with pointer knob and escutcheon.

ST-276—For 6 ohm v.c. 5-watt rating.....	\$2.20
ST-411—For 8 ohm v.c. 15-watt rating.....	3.00
ST-606—For 16 ohm v.c. 15-watt rating.....	3.00





Jensen



Concert SPEAKERS

These are heavy-duty highly efficient speakers and are widely used for Public Address and high quality Radio and Phonograph applications. All Speakers are designed so that they may be used in the Jensen BASS REFLEX Enclosures and Cabinets. All field coil models have bucking coils.

Facilities are provided for easily attaching any of the transformers listed on page C-14. Speakers are supplied without transformers attached unless specifically ordered, in which case increase list price by \$1.25, plus list price of transformer.

FIELD COIL MODELS

Nominal Size	Model No.	Stock No.	Supersedes	VOICE COIL		FIELD		†Transformer Size	List Price
				Imped. Ohms	Power Watts	Resistance Ohms	Power Watts		
15"	F15-N	ST-662	A-15	8	17.0	5300	17.0	1x1"	\$44.00
	F15-Q	ST-664	None	8	14.0	2500	11.0	7/8x7/8"	28.35
12"	F12-N	ST-667	A-12	8	15.0	5300	17.0	1x1"	36.50
	F12-Q	ST-669	None	8	13.0	2500	11.0	7/8x7/8"	20.85

†Size recommended. See Transformer Listing.

ALNICO 5 PM MODELS

Nominal Size	Model No.	Stock No.	Supersedes	VOICE COIL		†Transformer Size	List Price
				Impedance Ohms	Power Watts		
15"	P15-N	ST-654	A15-PM	8	17.0	1x1"	\$55.00
	P15-P	ST-655	PM15-B	8	15.0	1x1"	47.25
	P15-Q	ST-678	PM15-H	8	14.0	7/8x7/8"	37.00
12"	P12-N	ST-656	A12-PM	8	15.0	1x1"	49.00
	P12-P	ST-657	PM12-B	8	14.0	7/8x7/8"	40.00
	P12-Q	ST-673	PM12-H	8	13.0	7/8x7/8"	27.75
	P12-R	ST-103	None	6-8	12.0	7/8x7/8"	19.50
10"	P10-Q	ST-676	PM10-H	8	12.0	7/8x7/8"	26.30
	P10-R	ST-121	None	6-8	10.0	7/8x7/8"	18.50
8"	P8-Q	ST-677	PA8-S	8	10.0	7/8x7/8"	24.20
	P8-R	ST-169	None	6-8	9.0	3/4x3/4"	15.25

SPECIAL EXTENDED RANGE — HIGH FIDELITY SPEAKERS

For those applications where high fidelity performance extending to 10,000 cps. is required, these Special Extended Range High Fidelity Speakers are recommended. Power handling capacity is limited by permissible distortion. They are designed for home and studio use and will accommodate indoor audiences on the order of 100 people. They are highly qualified for monitoring in broadcast stations and for high fidelity reproduction of voice at relatively low levels.

ALNICO 5 PM MODELS

Nominal Size	Model No.	Stock No.	Supersedes	VOICE COIL		†Transformer Size	List Price
				Impedance Ohms	Power Watts		
15"	P15-NH	ST-672	A15-PM	8	16.0	1x1"	\$57.25
12"	P12-NH	ST-674	A12-PM	8	14.0	1x1"	51.00
	P12-QH	ST-675	None	8	12.0	7/8x7/8"	29.25
	P12-SH	ST-127	PM12-CT	6-8	9.0	7/8x7/8"	18.00
8"	P8-SH	ST-126	PM8-CT	6-8	7.5	3/4x3/4"	14.20
6"	P6-TH	ST-199	None	3-4	4.5	5/8x5/8"	9.75

FIELD COIL MODELS

Nominal Size	Model No.	Stock No.	Supersedes	VOICE COIL		FIELD		†Transformer Size	List Price
				Imped. Ohms	Power Watts	Resistance Ohms	Power Watts		
15"	F15-NH	ST-679	A-15	8	16.0	5300	17.0	1x1"	\$52.55
12"	F12-NH	ST-680	A-12	8	14.0	5300	17.0	1x1"	44.25
	F12-SH	ST-652	G12-RT	3-4	9.0	1500	8.5	7/8x7/8"	18.20
	F12-SH	ST-653	G12-RT	3-4	9.0	2500	8.5	7/8x7/8"	18.00

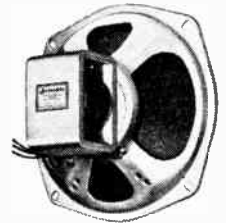
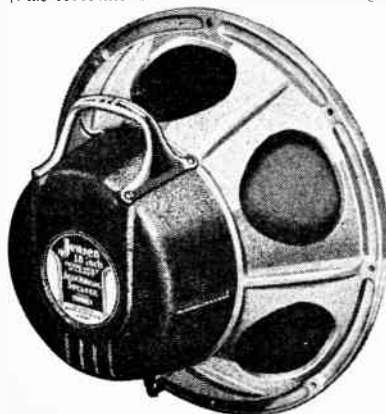
†Size recommended. See Transformer Listing.

"AUDITORIUM SERIES" SPEAKERS†

JENSEN Auditorium speakers are undeniably the best known and most respected high-quality single-radiator loud speakers available. Model PMM-15 is recommended as a general purpose unit while Model PMJ-18 was designed with greatest emphasis on reproduction of voice although in accomplishing this, bass response has not been sacrificed.

Nominal Size	Model No.	Stock No.	Supersedes	VOICE COIL		†Transformer Size	List Price†
				Impedance Ohms	Power Watts		
18"	PMJ-18	ST-541	None	8	21	1x1 1/4"	\$235.00
15"	PMM-15	ST-683	PMJ-15	8	25	1x1 1/4"	160.00

†Size recommended. See Transformer Listing.





Jensen



Hypex PROJECTORS

with *Annular Diaphragm Unit*

"Hypex" Projectors consist of a Type H "Hypex" Horn and Type U "Annular" Driver Unit. The "Hypex" Horn (Patents Pending) is a Jensen development—not "exponential," but with an entirely new flare formula that gives increased efficiency in the region above acoustic cut-off. Two horn sizes give nominal cut-off values of 165 cps. and 140 cps., either of which can be used with any Type U "Annular" Driver Unit below.

Type U "Annular" Driver Units (U. S. Pat. 1,845,768), offered in PM design, employ the exclusive Jensen "Annular" principle in which the diaphragm is clamped at periphery and center. This gives extra stability, greater freedom from harsh "breakup" sometimes encountered with "dome" diaphragms.

"Hypex" Projectors are especially suitable for speech reproduction, since response extends from the vicinity of acoustic cut-off to the 5,000 cycle region with greatest emphasis on middle highs that add "punch" and "carrying power." Commercially acceptable music reproduction, within the limitations of all small reflex horns, is also provided. Sturdy steel encased unit, plus reflex horn construction insures dependable operation indoors and out, under all weather conditions. Finish is durable baked two-tone gray lacquer.



STANDS AND SUPPORTS

EA-6. Adjustable Stand, Sturdy cast fitting with three-leg base, for mounting projector on wall or other surface. Horizontal and vertical adjustment.

ST-728—List Price..... \$3.00

EA-7. Adjustable Support. Provides adjustment when projector is mounted on pipe mast 3/4 inch pipe thread both ends.

ST-729—List Price..... \$2.00

ANTI-CORROSION TYPE

The anti-corrosion type Hypex Projectors, similar to the regular series, are distinguished by their ability to withstand the corrosive and other deteriorating effects of continued exposure to salt-laden atmosphere, highly humid climates and other severe weather conditions. Their use is therefore specifically recommended where there is exposure of the units to atmospheric and climatic conditions of the seacoast, the tropics and semi-tropics and they are obviously recommended for all installations in the open.

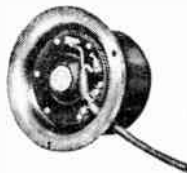
Mechanical and acoustical specifications are identical to those of the standard Hypex series except that protective screens, nuts, bolts, washers and clamps are brass, stainless steel or approved equivalents. Gaskets and grommets are rubber or approved rubber equivalents. All surfaces of steel parts are bonderized, after which two coats of

primer are applied and baked and one coat of gray enamel applied and baked. All parts not inherently proof against corrosion, rust, etc., are nickel plated and/or suitably treated. When separately tested, each complete projector, horn, driver unit and diaphragm is guaranteed to withstand a 100-hour salt spray test. Sound chamber, driver unit and re-entrant horn sections are provided with suitable drains to remove condensate or water seepage when projector is mounted in proper position.

U-201 Driver Unit, ST-732	List Price	\$52.00
H-201 Horn, ST-733	List Price	35.80
EA-61 Stand, ST-734	List Price	5.00
EA-71 Support, ST-735	List Price	3.50

TYPE U "Annular" DRIVER UNITS

U-20. "Annular" Driver Unit. Permanent Magnet type. Rated at 15 watts average, 25 watts maximum, with normal voice or music input. 16-ohm voice coil. Internal screw terminals. Dustproof, screened sound chamber. Diameter, 6 1/8". Depth, 3 3/8". Shipping weight, 11 lbs. Specify ST-630.



List Price \$41.00

Type H "Hypex" PROJECTOR HORNS

H-20. "Hypex" Horn only. Bell diameter, 20 3/4". Depth, 16 3/8". Acoustical length, 4 feet. Nominal acoustic cut-off, 165 cps. Stand coupling flange tapped for 3/4" pipe thread. Net weight, 11 1/4" lbs. Shipping wt., 18 1/4 lbs. List Price..... \$28.00

H-24. "Hypex" Horn only. Bell diameter, 24 3/4". Depth, 20 1/8". Acoustical length, 5 feet. Nominal acoustic cut-off, 140 cps. Net weight, 14 3/4 lbs. Shipping wt., 21 3/4 lbs. List Price..... \$35.80



JENSEN Type "S" Peri-Dynamic Projector ... 15-25 WATTS CAPACITY

These Projectors are complete assemblies of specially designed Driver Speaker and acoustic system utilizing the Peri-dynamic principle and correctly designed projector horn. Unusually good response is obtained in the 100-cycle region and high frequency response at good efficiency is maintained to 5500 cycles, thus especially qualifying these projectors for applications emphasizing music reproduction and naturalness in speech quality. Except for opening into horn, projector is completely weatherproofed, suitable for use indoors and out. Power rating is 15 watts average, 25 watts maximum, with normal voice or music input. Voice coil impedance, 8 ohms. Bell diameter, 24 3/4". Overall length, 30". Shipping weight, 30 lbs. Complete with plugs for voice coil and field connections.

SPH-81—Projector, complete, PM Type, ST-633 List \$82.50
EA-5—Adjustable Stand, ST-730.....List 5.00

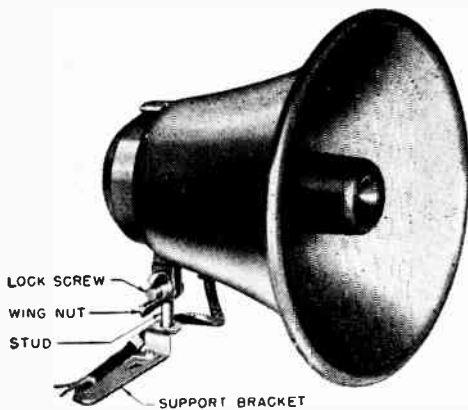
All above Projectors are furnished complete with Driver Speaker, but LESS stand.



Jensen



MODEL VH-91—HYPEX SPEECH MASTER PROJECTOR

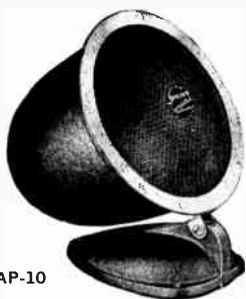


Model VH-91 Speech Master Reproducer meets a real need for paging and intercommunication applications. Particularly efficient in the voice frequency range, it delivers clear, intelligible speech with maximum "punch" to override high noise levels. By reason of an extremely clever mounting bracket, this projector can be pointed in any direction and securely locked into position with a single wing nut. Two holes in the bracket are provided for mounting on table, wall, ceiling or a post. The diaphragm is cloth base, phenolic impregnated. Nominal voice coil impedance, 8 ohms. Power handling capacity, 15 watts maximum speech signal input. Two-wire RC cable is provided for connections. Mounting facilities are also provided on the bracket for a $5\frac{1}{2} \times 5\frac{1}{2}$ " transformer. Because of the Hypex formula, useful output is attained for a 100-degree total angle. Dimensions: Bell diam., $8\frac{3}{8}$ ", length of bell, $7\frac{3}{8}$ ".

Model VH-91—Reproducer, ST-171.....\$32.50

JENSEN *Speech Master* REPRODUCERS

5-Watt "AP-10, 11" for DESK AND PANEL



AP-10

The truly remarkable performance of these new "Speech Masters" is due to the Peri-Dynamic principle and special radiating system. Normal room level requires less than 0.5 watt input; maximum rating of 5 watts on speech in-urses dependability. Speech reproduction is especially clear, crisp, intelligible . . . yet if required, music can be reproduced with better quality than that of the average "midget" radio.

Extra-sturdy construction, overall mechanical protection, double dust-proofing, beautiful streamlined design, exceptional acoustic performance . . . all these combine to set AP-10 and AP-11 "Speech Masters" entirely apart from conventional speakers.

AP-10 Desk Type "Speech-Master." Permanent Magnet design. For desk or wall mounting. Complete with "tilt" adjustment and base. Double dust-proofed, fully enclosed and protected. Internal mounting bracket for $\frac{1}{2}$ " x $\frac{1}{2}$ " transformer. R.C. cord 36" long. Height $6\frac{3}{4}$ "; depth $5\frac{1}{8}$ "; diameter 5". Shipping weight, $5\frac{1}{4}$ lbs. Attractive Hammered Gray finish.

AP-10. ST-590. (4 ohm v.c.) List.....\$13.90

AP-10. ST-591. (45 ohm v.c.) List..... 14.50

AP-11 Panel Type "Speech-Master." Similar to AP-10 less base and swivel bracket. Has clearance eyelets for mounting screws. Mounts in 4 27/64" cut-out, extends $4\frac{1}{2}$ " inside panel (from front surface). Screws and drilling template included. Shipping weight, $3\frac{3}{4}$ lbs.

AP-11. ST-592. (4 ohm v.c.) List..... \$11.30

AP-11. ST-593. (45 ohm v.c.) List..... 11.90



AP-11

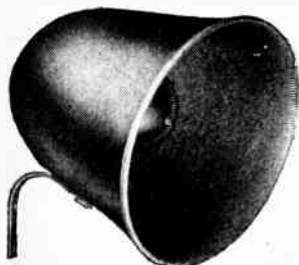
Phone Communication: For amateur, commercial, police, aviation, as separate unit or integral equipment.

C W Telegraph: Aids selectivity, helps signals override QRM and QRN. Husky voice-coil to withstand keying transients.

Intercom and PA: For modern Intercom, Paging and PA at moderate levels. Good "talk-back" performance.

Short-Wave Listening: Better than your regular speaker. Can be used on any receiver.

6-Watt "AR-10" REFLEX SPEECH MASTER PROJECTORS FOR GENERAL APPLICATIONS



This new Jensen reflex type "Speech Master" has many applications for paging, intercom and call systems operating at medium levels under moderate noise conditions. Specially designed reflex horn increases efficiency in mid-frequency range, giving added effectiveness and "punch" to speech quality. Though not classified as a strictly weatherproof device, reflex construction prevents direct access of rain and snow to speaker diaphragm. Voice coil impedance, 4 ohms or 45 ohms. Power rating, 6 watts. Internal space for $\frac{1}{2}$ " by $\frac{1}{2}$ " transformer (designs stocked for 4-ohm v.c. only). Overall diameter 10". Depth, 8". Complete with mounting bracket, P.M. design.

AR-10. "Speech Master." 4 ohm v.c. ST-643. List Price.....\$20.00

AR-10. "Speech Master" 45 ohm v.c. ST-644. List Price..... 20.75



JENSEN COAXIAL SPEAKERS

The four JENSEN Coaxial speakers shown here represent a wide range of performance and price and are recommended for FM-AM receivers, reproduction of transcriptions and commercial phonograph records, and recording and broadcast studio monitoring. Two speakers in a unitary assembly cover the entire frequency range, each speaker giving smooth, efficient response in that portion of the frequency range which it reproduces. Only "two-way" systems such as employed in JENSEN Coaxial speakers can give such excellent response and spatial distribution over the

wide frequency range required in advanced sound reproduction.

Two types of dividing networks are used in JENSEN Coaxial speakers: "Roll-off" network in Models HNP-51, JAP-60 and JHP-52 and "Shelving" type in Model JCP-40. The H-F Range Control, furnished with Models HNP-51, JAP-60 and JHP-52, provides a choice of four cut-off frequencies to match the program material: 15,000, 10,000, 7,500 and 5,000 cps. H-F Level Control ST-606 may be added to Model JCP-40 if desired.

MODEL HNP-51 (15-Inch)



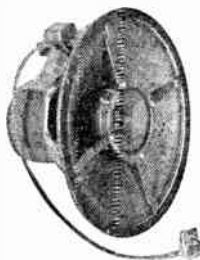
An articulated Coaxial speaker recommended for FM receivers, playback of transcriptions, and recording and broadcast studio monitoring where smoothest performance, minimum distortion and unusually good polar distribution and "presence" are required. Combines a cone-type h-f speaker with a horn-type l-f unit, both with Alnico 5 magnets. O.D. 15 1/4", Depth 10 3/8", Baffle 13 1/2".

Frequency Range: 50 to 15,000 cps. Maximum Input: 25 watts. Efficiency: Substantially higher than other 15-inch speakers. Fields: Alnico 5 magnets. Input Impedance: 500-600 ohms. Net-

work: Integral two-channel type. H-F Control: "Roll-off" type with 4-position switch.

Model HNP-51, ST-122, with H-F Range Control \$125.00

MODEL JAP-60 (15-Inch)

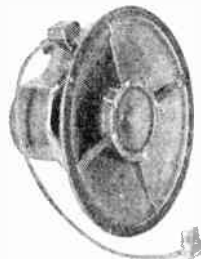


For FM-AM receivers, high quality phonographs, reproduction of commercial phonograph record and similar applications where smoother response and better balanced characteristics are required than offered by Models JHP-52 or single, direct-radiator speakers. O.D. 15 1/4"; Depth 8 3/4"; Baffle opening 13 3/4".

Frequency Range: 50 to 15,000 cps. Maximum Input: 17 watts. Field: PM. Input Impedance: 500-600 ohms. Network: Integral two-channel type. H-F Control: "Roll-off" type with 4-position switch.

Model JAP-60, ST-600, with H-F Range Control \$85.00

MODEL JHP-52 (15-Inch)

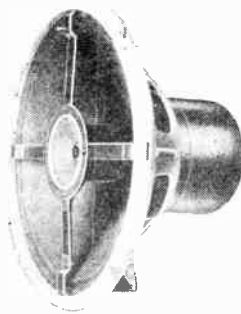


MODEL JHP-52 (15-Inch)

For FM-AM receivers and high quality phonographs where slightly less smooth response throughout the entire frequency range than available with Models JAP-60 and HNP-51 can be tolerated.

Frequency Range: 50 to 15,000 cps. Maximum Input: 14 watts. Field: PM. Input Impedance: 500-600 ohms. Network: Integral two-channel type. H-F Control: "Roll-off" type with 4-position switch. O.D. 15 1/4"; Depth 7 1/2"; Baffle opening 13 3/4".

Model JHP-52, ST-601, with H-F Range Control \$72.00



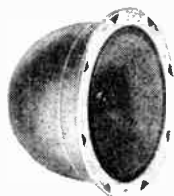
MODEL JCP-40 (12-Inch)

For FM-AM receivers and reproduction of commercial phonograph records where minimum space is an important factor. Excellent modernizing unit for replacement of single radiator, 12-inch speakers in radio receivers and phonographs. Can be mounted above the baffle for 10-inch speakers.

Frequency Range: 50 to 12,000 cps. Maximum Input: 10 watts. Field: PM. Input Impedance: 6-8 ohms. Network: Simple "Bridging" type. H-F Control: Furnished only in complete reproducer; "Shelving" type control, ST-606, may be added if desired. O.D. 12 1/8"; Depth 5 1/2"; Baffle opening 11".

Model JCP-40, ST-603 \$30.00

Q8P HIGH-FREQUENCY SPEAKER†



As used in 15" coaxials. Designed to reproduce the high frequencies from 4,000 to 15,000 cps., when used with dividing network (such as A40-1) and suitable low frequency speaker. Impedance, 16 ohms. Overall diameter, 5 1/2". Depth, 3 5/8". P.M. design.

Q8P—H-F. Speaker, ST-589. List Price \$13.00

ST-605—Mounting Arms. Set of 4 as used on 15" coaxials. List Price \$1.40

A40-1 NETWORK†



This uniquely designed two-channel network is offered to those who wish to assemble their own two-way speaker systems, or add a high-frequency speaker to an existing single speaker. Frequency division is at 4,000 cps., with an attenuation outside pass band of 10-12 db per octave. Low frequency

channel will accommodate any suitable 8 ohm 12" or 15" speaker. High channel takes one to four Q8P High Frequency Speakers (16, 8 and 4 ohm taps). Input, 500 ohms. High Frequency Range Control Switch feature included. Specify ST-604—List Price \$35.00

ACCESSORY H. F. LEVEL CONTROL FOR JCP-40



A simplified system of fidelity control which can be added by the purchaser to the JCP-40 Coaxial Speaker has been developed. This consists of a properly designed continuously variable resistance network which is easily connected to terminals provided for this purpose on the speakers. The control permits the user to adjust the level contributed by the high frequency speaker, thus permitting instant accommodation to program quality and listener preference. Control can also be used as general purpose 16-ohm 15-watt level control, 3/8" bushing 1" long for mounting on heavy cabinets. Complete with antique bronze escutcheon and brown bakelite knob.

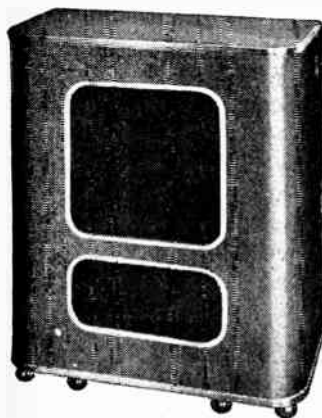
ST-606—High Frequency Level Control. List Price \$3.00



Jensen



BASS REFLEX CABINETS



Type "D" Bass Reflex cabinets are handsomely styled, and are well constructed of beautifully striped satin finish veneer walnut, with interlaced bronze strip grille over matching fabric.

Type "B" cabinets, inexpensive but durably built enclosures, are well constructed of impregnated composition board and finished in hammered brown lacquer.



Type "D"

Model No.	Stock No.	Speaker Size	Dimensions			Shipping Wt., Lbs.	List Price
			Height	Width	Depth		
D-121	ST-156	12"	31 $\frac{3}{8}$ "	27 $\frac{7}{8}$ "	13 $\frac{3}{8}$ "	50	\$77.50
D-151	ST-157	15"	31 $\frac{3}{8}$ "	27 $\frac{7}{8}$ "	13 $\frac{3}{8}$ "	50	77.50

Type "B"

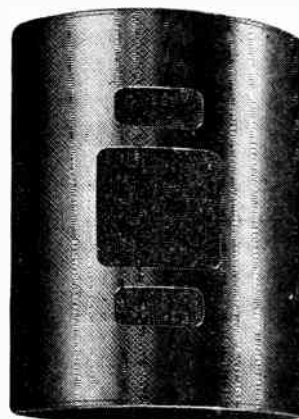
Model No.	Stock No.	Speaker Size	Dimensions			Shipping Wt., Lbs.	List Price
			Height	Width	Depth		
B-81	ST-741	8"	24	18	9 $\frac{1}{4}$ "	19	\$31.50
B-121	ST-742	12"	27	24 $\frac{3}{4}$ "	13 $\frac{1}{2}$ "	31	44.50
B-151	ST-743	15"	32 $\frac{3}{8}$ "	27 $\frac{3}{8}$ "	13 $\frac{1}{2}$ "	50	52.75

TYPE "H" CABINETS

Type "H" cabinets are sturdily built and incorporate the famous Bass Reflex principle. With front curved to a 14 $\frac{1}{8}$ inch radius, they are admirably shaped to fit into corners but may be placed in any number of positions as suggested by the accompanying sketches. Type "H" cabinets are finished in brown opaque lacquer but may be refinished by the purchaser to match the locale of the installation. Brackets are furnished for mounting on wall or post. Only one size is offered—for 8-inch speakers—and JENSEN Model P8-SH speaker is recommended for optimum performance although any 8-inch speaker may be used.

Type "H"

Model No.	Stock No.	Speaker Size	Dimensions			List Price
			Height	Width	Depth	
H-81	ST-141	8"	22 $\frac{1}{2}$ "	17 $\frac{3}{4}$ "	8 $\frac{1}{2}$ "	\$22.50

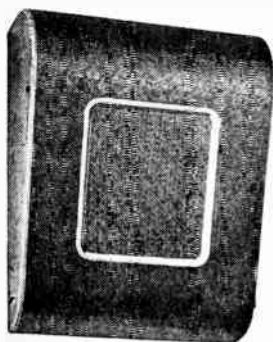


TYPE "J" CABINETS

Type "J" cabinets incorporate the Peri-dynamic principle and are designed for wall or post mounting. These cabinets are finished in simulated brown leather with grained effect, with chrome-trimmed grille. JENSEN Model P6-TH speaker is recommended with this cabinet although any 6-inch speaker may be used. Furnished with brackets for mounting.

Type "J"

Model No.	Stock No.	Speaker Size	Dimensions			List Price
			Height	Width	Depth	
J-61	ST-751	6"	16 $\frac{3}{4}$ "	12 $\frac{3}{4}$ "	6 $\frac{1}{4}$ "	\$14.50



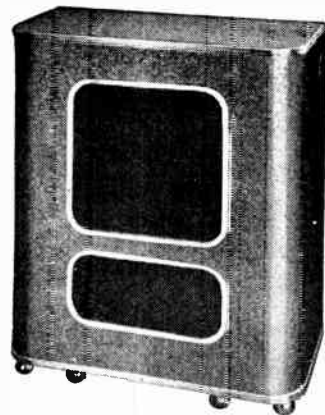


Jensen



BASS REFLEX REPRODUCERS

Type RD Jensen Bass Reflex reproducer is comprised of a combination of any one of the 4 models of Coaxial, with Type D Cabinet. Cabinet is beautifully styled, all walnut satin finished, Bass Reflex design. RD Reproducers all have program quality selector switches neatly installed on upper right hand side. "RB" Reproducer cabinets are heavily framed with solid lumber, and exterior panels of cabinet are shaped of high quality wood composition material. Finish is baked on, dark tan color in a new hammerlaid design. Trim is chromium and aluminum. Jensen built-in Bass Reflex.



"RD" REPRODUCER De Luxe Design

APPLICATIONS SPECIFICATIONS

"RB" REPRODUCER Utility Design

**MODEL RD-151
REPRODUCER**
Stock No. ST-160
List Price \$214.50
(With HNP-51
Coaxial Speaker
installed)

Articulated Coaxial model recommended for FM receivers, reproduction of transcriptions, and recording and broadcast studio monitoring where smoothest performance, minimum distortion and unusually good polar response and "presence" are required.

**MODEL RB-151
REPRODUCER**
Stock No. ST-748
List Price \$189.75
(With HNP-51
Coaxial Speaker
installed)

Frequency Range: 50 to 15,000 cps. **Maximum Input:** 25 watts. **Efficiency:** Substantially higher than other 15" models. **Field:** Alnico 5 P.M. **Input Impedance:** 500-600 ohms. **Network:** Integral two-channel type. **H-F Control:** "Roll-off" type with 4-position switch.

**MODEL RD-152
REPRODUCER**
Stock No. ST-161
List Price \$174.50
(With JAP-60
Coaxial Speaker
installed)

For FM-AM receivers, high quality phonographs, reproduction of commercial phonograph records and similar applications where smoother response and better balanced characteristics are required than with Model JHP-52 or direct radiator type speakers.

**MODEL RB-152
REPRODUCER**
Stock No. ST-749
List Price \$149.75
(With JAP-60
Coaxial Speaker
installed)

Frequency Range: 50 to 15,000 cps. **Maximum Input:** 17 watts. **Efficiency:** Higher than conventional 15" models. **Field:** P.M. **Input Impedance:** 500-600 ohms. **Network:** Integral two-channel type. **H-F Control:** "Roll-off" type with 4-position switch.

**MODEL RD-153
REPRODUCER**
Stock No. ST-162
List Price \$161.50
(With JHP-52
Coaxial Speaker
installed)

For FM-AM receivers, high quality phonographs and reproduction of commercial phonograph records, where slightly less smooth response throughout the frequency range than Models JAP-60 or HNP-51 can be tolerated.

**MODEL RB-153
REPRODUCER**
Stock No. ST-750
List Price \$136.75
(With JHP-52
Coaxial Speaker
installed)

Frequency Range: 50 to 15,000 cps. **Maximum Input:** 17 watts. **Efficiency:** Higher than conventional 15" models. **Network:** Integral two-channel type. **H-F Control:** "Roll-off" type with 4-position switch.

**MODEL RD-122
REPRODUCER**
Stock No. ST-159
List Price \$122.50
(With JCP-40
Coaxial Speaker
installed)

For FM-AM receivers and commercial phonograph records where minimum space is an important factor. Excellent as modernizing unit for replacement of single-radiator 12" speakers in radio receivers and phonographs.

**MODEL RB-121
REPRODUCER**
Stock No. ST-747
List Price \$89.50
(With JCP-40
Coaxial Speaker
installed)

Frequency Range: 50 to 12,000 cps. **Maximum Input:** 10 watts. **Field:** P.M. **Input Impedance:** 6-8 ohms. **Network:** Simple "bridging" type. **H-F Control:** "Shelving" type, ST-606.



TRANSFORMERS FOR JENSEN SPEAKERS

ADJUSTABLE IMPEDANCE TRANSFORMERS

Jensen loud speakers are priced without input transformers but are available with transformer attached at the factory when so specified. In every case, specify the transformer wanted by model number. When transformers are attached at the factory, a charge is added to the total cost of speaker and transformer: 75c for "Standard Series"; all others \$1.25.

Type "ZX"

For matching conventional "plate" impedance values. Adjustments are easily made with flexible lead and pin tip jack. Impedance values: voice coil, 4,500, 7,000, 10,000 and 14,000 ohms. All except voice coil are center-tapped for push-pull tubes.

Stock No.	Core Size	Impedance	For Use With:	List Price
ZX-3000	1x1 1/4"	8	PMJ-18, PMM-15	\$15.25
ZX-3001	1x1 1/4"	16	UH-20, UH-24	15.25
Pin-Tip Adjustment. Mountable on Speaker				
ZX-1007	1x1"	8	P15-N, P15-NH, P15-P, P12-N, P12-NH	9.75
ZX-1005	7/8 x 7/8"	6-8	P15-Q, P12-P, P12-Q, P12-QH, P12-R, P12-S, P12-SH, P10-Q, P10-R, P8-P	7.20
ZX-1002	3/4 x 3/4"	6-8	P8-Q, JCP-40	5.00
			P12-T, P10-S, P10-T, P8-R, P8-S, P8-SH, P8-T	

Type "ZY"

Same as Type "ZX" except for matching "line" impedance values. Impedances: 500, 1,000, 1,500, 2,000 and voice coil. No center tap available.

Stock No.	Core Size	Impedance	For Use With:	List Price
ZY-4001	1x1 1/4"	16	UH-20, UH-24	15.25
ZY-4000	1x1 1/4"	8	PMJ-18, PMM-15	15.25
Pin-Tip Adjustment. Mountable on Speaker				
ZY-2005	1x1"	8	P15-N, P15-NH, P15-P, P12-N, P12-NH	9.75
ZY-2003	7/8 x 7/8"	6-8	P15-Q, P12-P, P12-Q, P12-QH, P12-R, P12-S, P12-SH, P10-Q, P10-R, P8-P	7.20
ZY-4004	3/4 x 3/4"	3-4	P8-Q, JCP-40	5.00
ZY-2002	3/4 x 3/4"	6-8	P8-T	5.00
ZY-4002	5/8 x 5/8"	3-4	P12-T, P10-S, P10-T, P8-R, P8-S, P8-SH	3.35
ZY-4005	7/8 x 7/8"	6-8	P8-U, P8-V, P6-T, P6-TH, P6-V	3.35
			VH-91	5.00

Types "ZP" and "ZL"

Lower priced than "ZX" or "ZY" Types but perfectly satisfactory when used in proper application. Soldering iron required for making adjustments on terminal block. "ZP" for "plate", "ZL" for line.

Stock No.	Core Size	Impedance	For Use With:	List Price
ZP-1023	1/2 x 1/2"	4500/3-4 7000/3-4 10000/3-4 14000/3-4 1500/3-4	P6-X, P5-V, P5-X, P4-X	2.15
ZP-1025	1/2 x 1/2"	2000/3-4 2500/3-4 500/3-4	P6-X, P5-V, P5-X, P4-X	2.15
ZL-2021	1/2 x 1/2"	1000/3-4 1500/3-4 2000/3-4 4500/3-4 7000/3-4 10000/3-4 14000/3-4	P6-X, P5-V, P5-X, P4-X	2.15
*ZP-1024	5/8 x 5/8"	4500/6-8 7000/6-8 10000/6-8 14000/6-8	P8-U, P8-V, P6-T, P6-TH, P6-V	2.60
*ZP-1026	5/8 x 5/8"	4500/6-8 7000/6-8 10000/6-8 14000/6-8 500/6-8	VH-91	2.50
ZL-2022	5/8 x 5/8"	1000/6-8 1500/6-8 2000/6-8	VH-91	2.50

Type "Z"

FIXED IMPEDANCE

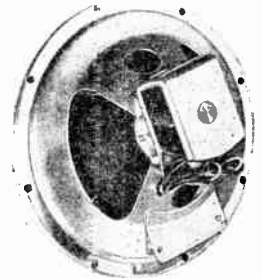
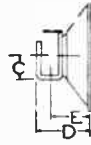
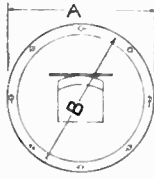
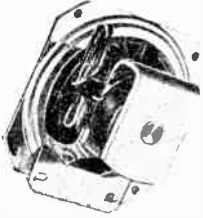
Stock No.	Impedance	For Use With:	List Price	Stock No.	Impedance	For Use With:	List Price
Z-2731	500/16 or 8	PMJ-18, PMM-15, UH-20, UH-24		Z-3344	500/8 or 4	PMJ-18, PMM-15	12.00
Z-2732	16/8	PMJ-18A, PLM-15A, P15-NLA	\$8.25	Z-3337	*3000/500		
Z-2733	16/8	PMJ-18, PMM-15, UH-20, UH-24	18.25	Z-3156	*5000/500	HNP-51, JAP-60, JHP-52	12.00
Z-3342	Size 1x1"	XP-101	12.00	Z-3157	*10000/500		
Z-3343	500/16 or 8 500/8 or 4	P15-N, P15-P, P12-N, UH-20, UH-24	10.25	Cased Type, Solder Lug Terminals. Not Mountable on Speaker			
Uncased, Pig-tail Leads. Mountable on Speaker				Size 3/4 x 3/4"			
Z-1888	Size 1x1"			Z-3335	500/3-4		
Z-2386	*3000/6-8	P15-N, P15-P, P12-N, P12-NH, F15-N		Z-3336	*3000/3-4	P8-T, P10-S, F8-S, F8-T	2.75
Z-2387	*5000/6-8	F15-NH, P12-N, P12-NH	6.00	Z-3337	*4500/3-4		
Z-3341	*6000/6-8			Z-3338	*7000/3-4		
Z-1891	*10000/6-8			Z-3339	*10000/3-4		
Z-2241	*14000/6-8			Z-3340	*14000/3-4		
Z-3346	500/16"		6.00	Size 5/8 x 3/4"			
Z-3319	Size 7/8 x 7/8"			Z-3310	500/3-4		
Z-3320	*3000/6-8	P15-Q, P12-P, P12-Q, P12-QH, P12-R		Z-3311	1500/3-4	P8-U, P8-V, P6-T, P6-TH, P6-V, F8-U	
Z-3321	*5000/6-8	P12-S, P12-SH, P10-Q, P10-R, P8-P		Z-3312	2000/3-4	F8-W, P6-U	1.90
Z-3318	*6000/6-8	P6-Q, P15-Q, P12-Q, JCP-40	4.00	Z-3313	2500/3-4		
Z-3322	*10000/6-8			Z-3314	*1500/3-4		
Z-3323	*14000/6-8			Z-3315	*7000/3-4		
Z-3329	Size 7/8 x 7/8"			Z-3316	*10000/3-4		
Z-3329	500/3-4			Z-3317	*14000/3-4		
Z-3330	*3000/3-4	F12-S, F12-SH	4.00	Z-3345	45-50/6-8	VH-91	2.10
Z-3331	*5000/3-4			Size 1 1/2 x 1/2"			
Z-3332	*6000/3-4			Z-3300	500/3-4		
Z-3333	*10000/3-4			Z-3301	1500/3-4		
Z-3334	*14000/3-4			Z-3302	2000/3-4		
Size 3/4 x 3/4"				Z-3303	2500/3-4		
Z-3324	500/6-8			Z-3304	4500/3-4		
Z-3325	*3000/6-8	P12-T, P10-S, P10-T, P8-R, P8-S		Z-3305	*7500/3-4		
Z-3326	*1500/6-8	P8-SH	2.75	Z-3306	*10000/3-4		
Z-3309	*7000/6-8			Z-3307	*12000/3-4		
Z-3327	*10000/6-8			Z-3308	3-4/gird	All 3-4 ohm V.C. speakers	1.70
Z-3328	*14000/6-8						

*Center-tapped.



SPEAKERS

QUAM ELECTRO-DYNAMIC SPEAKERS



These speakers manufactured under Quam patents Nos. 2,020,211 and 2,020,212 are the result of the vast experience gained through the manufacture of millions of this type of unit. Field coils are made from carefully selected constantly tested materials and by time proven methods, guaranteeing long life. 3", 4", 5", 5 1/4", 4x6" and 6 1/2" speakers are furnished with tapped holes in the base of the pot for chassis mounting and universal mounting brackets.

Cat. No.	Size	Field Ohms	Watts	Dimensions in Inches.					V. C. Imp	Ship. Wt. Lbs.	List Price
				A	B	C	D	E			
3E45*	3 1/2"	450	2.5-3.75	3 15/32	3 15/16	1 1/4	1 7/8	1 1/4	3.2	1.00	\$4.40
4E45	4"	450	2.5-3.75	4 1/32	4 11/16	1 1/4	2	1 7/16	3.2	1.25	\$4.40
4E10	4"	1000	2.5-3.75	4 1/32	4 11/16	1 1/4	2	1 7/16	3.2	1.25	4.40
4E27	4"	2700	2.5-3.75	4 1/32	4 11/16	1 1/4	2	1 7/16	3.2	1.25	4.40
46E45	4x6"	450	2.5-3.75	4 3/32x6 1/32	3 5/8x4 5/8	1 5/64	2 15/64	1 5/8	3.2	1.50	\$5.30
46E10	4x6"	1000	2.5-3.75	4 3/32x6 1/32	3 5/8x4 5/8	1 5/64	2 15/64	1 5/8	3.2	1.50	5.30
46E15	4x6"	1500	2.5-3.75	4 3/32x6 1/32	3 5/8x4 5/8	1 5/64	2 15/64	1 5/8	3.2	1.50	5.30
5EV6	5"	6-Volt	2.5-3.75	5	4 11/16	1 1/4	2 1/8	1 19/32	3.2	1.25	\$4.60
5E45	5"	450	2.5-3.75	5	4 11/16	1 1/4	2 1/8	1 19/32	3.2	1.25	4.60
5E10	5"	1000	2.5-3.75	5	4 11/16	1 1/4	2 1/8	1 19/32	3.2	1.25	4.60
5E18	5"	1800	2.5-3.75	5	4 11/16	1 1/4	2 1/8	1 19/32	3.2	1.25	4.60
5E27	5"	2700	2.5-3.75	5	4 11/16	1 1/4	2 1/8	1 19/32	3.2	1.25	4.60
52EV6	5 1/4"	6-Volt	3-4.5	5 3/32	5 7/8	1 1/4	2 1/2	1 15/16	3.2	1.25	\$5.00
52E10	5 1/4"	1000	3-4.5	5 3/32	5 7/8	1 1/4	2 1/2	1 15/16	3.2	1.25	5.00
6EV6	6"	6-Volt	3.5-5.0	6 1/2	6 1/8	1 1/4	2 23/32	2 1/32	3.2	1.75	\$5.40
6E10	6"	1000	3.5-5.0	6 1/2	6 1/8	1 1/4	2 23/32	2 1/32	3.2	1.75	5.40
6E18	6"	1800	3.5-5.0	6 1/2	6 1/8	1 1/4	2 23/32	2 1/32	3.2	1.75	5.40
6E25	6"	2500	3.5-5.0	6 1/2	6 1/8	1 1/4	2 23/32	2 1/32	3.2	1.75	5.40
69EV6	6x9"	6-Volt	3.75-5.5	6 3/8x9 1/4	4 5/8x6 17/32	1	3 13/16	.....	3.2	2.00	\$7.50
7EV6	7"	6-Volt	3.75-5.5	6 7/8	4 3/4x5 3/4	1 3/32	2 3/4	.....	3.2	2.00	\$6.75
8EV6	8"	6-Volt	4.0-6.0	7 1/2	5 3/8x5 3/8	1 1/4	3 3/32	.....	3.2	2.00	\$6.75
8E10	8"	1000	4.0-6.0	7 1/2	5 3/8x5 3/8	1 1/4	3 3/32	.....	3.2	2.00	6.75
8E18	8"	1800	4.0-6.0	7 1/2	5 3/8x5 3/8	1 1/4	3 3/32	.....	3.2	2.00	6.75
8E25	8"	2500	4.0-6.0	7 1/2	5 3/8x5 3/8	1 1/4	3 3/32	.....	3.2	2.00	6.75
10E60	10"	600	11-13	10 1/32	9 5/8	1 3/4	5 1/16	.....	6-8	4.50	\$10.50
10E10	10"	1000	11-13	10 1/32	9 5/8	1 3/4	5 1/16	.....	6-8	4.50	10.50
10E15	10"	1500	11-13	10 1/32	9 5/8	1 3/4	5 1/16	.....	6-8	4.50	10.50
10E25	10"	2500	11-13	10 1/32	9 5/8	1 3/4	5 1/16	.....	6-8	4.50	10.50
12E60	12"	600	12-18	12 1/32	11 9/16	1 3/4	5 5/8	.....	6-8	5.50	\$12.65
12E10	12"	1000	12-18	12 1/32	11 9/16	1 3/4	5 5/8	.....	6-8	5.50	12.65
12E15	12"	1500	12-18	12 1/32	11 9/16	1 3/4	5 5/8	.....	6-8	5.50	12.65
12E25	12"	2500	12-18	12 1/32	11 9/16	1 3/4	5 5/8	.....	6-8	5.50	12.65

*Not an Adjust-a-Cone speaker.

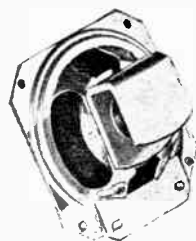
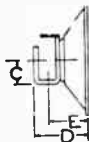
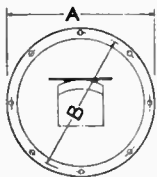
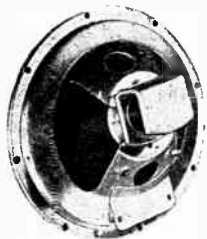
DESCRIPTIVE PART NUMBERS—Each part number conveys the essential specifications of each unit. The first digit indicates the size; the following single or double letter indicates the type of speaker, i. e., E indicates Electro-Dynamic, A Alnico Permanent Magnet. The last numbers of the Electro-Dynamics indicate the

field resistance. The last numbers of the Permanent Magnets indicate the approximate size of the magnet. For example, a 5E45 speaker is a 5" model of the Electro-Dynamic line with a 450-ohm field. A 46A1 is a 4 x 6 Alnico Permanent Magnet speaker with a medium-sized magnet.



SPEAKERS

QUAM PERMANENT MAGNET SPEAKERS



Originally designed for applications where no current was available for field excitation, these speakers have found a widespread use for replacements and original equipment where electro dynamics were formerly specified. All models

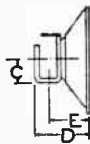
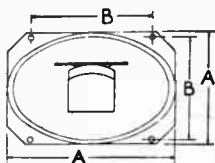
use the Alnico V magnet, providing maximum performance with minimum weight and size. 3", 4", 5", 5 1/4", 4x6", and 6 1/2" units are furnished with drilled and tapped pots for chassis mounting and universal mounting brackets.

Cat. No.	Size	Alnico V Magnet	Watts	Dimensions in Inches					V. C. Imp.	Ship. Wt. Lbs.	List Price
				A	B	C	D	E			
3A07*	3 1/2"	.68	2-3	3 15/32	3 15/16	3/4	1 19/32	1 3/16	3.2	.65	\$4.00
4A07	4"	.68	2.5-3.75	4 1/32	4 11/16	3/4	1 23/32	1 3/16	3.2	.75	\$4.00
4A1	4"	1	2.5-3.75	4 3/32	4 11/16	1	2 3/16	1 3/16	3.2	1.00	4.25
4A15	4"	1.47	2.5-3.75	4 3/32	4 11/16	1	2 3/16	1 3/16	3.2	1.00	4.70
46A07	4x6"	.68	3.0-4.5	4 3/32x6 1/32	3 3/8x4 3/8	3/4	1 15/16	1 23/64	3.2	1.00	\$4.45
46A1	4x6"	1	3.0-4.5	4 3/32x6 1/32	3 3/8x4 3/8	1	2 1/4	1 3/16	3.2	1.00	4.75
46A15	4x6"	1.47	3.0-4.5	4 3/32x6 1/32	3 3/8x4 3/8	1	2 1/4	1 3/16	3.2	1.00	5.15
5A07	5"	.68	3.0-4.5	5	4 11/16	3/4	1 7/8	1 7/16	3.2	1.00	\$4.20
5A1	5"	1	3.0-4.5	5	4 11/16	1	2 3/16	1 11/16	3.2	1.25	4.45
5A15	5"	1.47	3.0-4.5	5	4 11/16	1	2 3/16	1 11/16	3.2	1.25	4.85
52A1	5 1/4"	1	3-4.5	5 3/32	5 7/8†	1	2 23/64	1 3/8	3.2	1.00	\$4.65
52A2†	5 1/4"	2.15	3.5-5	5 3/32	5 7/8†	1 1/8	2 3/8	1 3/8	3.2	1.25	5.70
6A1	6"	1	4-6	6 1/2	6 3/8	1	2 3/8	2	3.2	1.25	\$4.80
6A15	6"	1.47	4-6	6 1/2	6 3/8	1	2 3/8	2	3.2	1.25	5.20
6A21	6"	2.15	5.0-7.5	6 1/2	6 3/8	1 1/8	2 7/8	2 3/8	3.2	1.50	5.85
69A2	6x9"	1.5	5-7.5	6 3/4x9 1/4	4 3/8x6 1/2	7/8	2 13/16	.....	3.2	1.5	\$7.50
69A3	6x9"	3.16	8-10	6 3/8x9 1/4	4 3/8x6 1/2	1	3 1/2	.....	3.2	2.5	8.95
7A21	7"	2.15	5-7.5	6 7/8	4 1/4x5 3/4	1	2 23/32	.....	3.2	1.5	\$7.25
7A31	7"	3.16	6-8	6 7/8	4 1/4x5 3/4	1 1/4	3	.....	3.2	1.5	8.50
8A21	8"	2.15	6-8	7 1/2	5 3/8x5 3/8	1 1/8	3 3/8	.....	3.2	2.00	\$7.20
8A31	8"	3.16	8-10	7 1/2	5 3/8x5 3/8	1 3/8	3 3/4	.....	3.2	2.50	8.50
8A4	8"	4.64	10-12	8	7 3/8	1 3/8	3 3/4	.....	6-8	4.25	10.20
8A6	8"	6.80	12-15	8	7 3/8	1 1/4	3 7/8	.....	6-8	4.50	12.10
10A31	10"	3.16	9-11	10 3/32	9 3/8	1 3/8	4 1/2	.....	3.2	4.50	\$10.50
10A4	10"	4.64	11-13	10 3/32	9 3/8	1 3/8	4 1/2	.....	6-8	4.50	11.70
10A6	10"	6.80	13-16	10 3/32	9 3/8	1 7/16	4 3/8	.....	6-8	5.00	13.60
12A4	12"	4.64	12-15	12 3/32	11 9/16	1 3/8	5 1/8	.....	6-8	5.00	\$12.65
12A6	12"	6.80	15-20	12 3/32	11 9/16	1 7/16	5 1/4	.....	6-8	5.50	14.50

*Not an Adjust-a-Cone speaker. †This dimension center to center of slots. Slot dimensions .100 x .350".

QUAM OVAL SPEAKERS

ELECTRO-DYNAMIC AND PERMANENT MAGNET



2 SIZES: 4 x 6" AND 6 x 9"

Designed for radios, record players, combinations, inter-office communicators and Auto Sets. Meet RMA electrical and mechanical standards. . . Available both in Permanent Magnet and Electro-Dynamic types.

THE QUAM ADJUST-A-CONE FEATURE

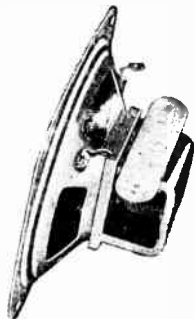
THE QUAM-ADJUST-A-CONE feature, consists of a clamping ring securely fastening the spider to the basket by means of two machine screws, instead of cementing or otherwise permanently affixing the spider. Thus the QUAM spider can be moved if necessary. To recenter a voice coil, merely loosen the two screws and move the spider and voice coil assembly laterally. This will relocate the voice coil concentrically around the pole piece.

In many cases, a rubbing coil may be adjusted by means of the QUAM ADJUST-A-CONE feature without removing the speaker from the chassis, or the chassis from the cabinet. Such repairs can be made in a matter of minutes with every assurance that they will be complete.

GENERAL ELECTRIC

ALINCO 5 P. M. LOUDSPEAKERS

All component parts of the new Alnico 5 Loudspeakers are made to the rigid specifications of G-E quality control. These features, in addition to highly efficient manufacturing skill combined with the "know-how" of G-E engineers, have made these new superb speakers possible — unsurpassed in fidelity, dependability and durability.



4"

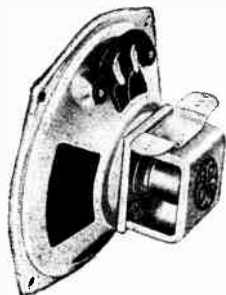
GENERAL ELECTRIC'S new 4-inch speakers are the result of years of intensive engineering research to produce units of reduced size with maximum efficiency for use in small portable and table model receivers. In addition to having the "stay-bright" finish and the aluminum foil base voice coil, the new 4-inch speakers are considerably lighter in weight and more compact. This reduction in weight and space has been accomplished through the use of Alnico V magnet material, all-weld construction, and smaller yoke assembly.

5 1/4"

GENERAL ELECTRIC'S 5 1/4-IN. PM speakers have all been designed and developed to provide full, true, low notes and excellent high frequency definition for voice or music reproduction. Skillful d-signing has been applied to all details to assure the best possible results.

6 1/2"

GENERAL ELECTRIC 6 1/2-inch loudspeakers are the result of years of persistent development to improve performance. Never were ideas introduced and combined with better quality materials. Greater sensitivity and power capacity in more compact space was achieved by these methods.



8"

The NEW ALNICO 5 PERMANENT MAGNET material was chiefly responsible for maintaining the excellent performance of the G-E 8-inch speakers and still keeping the over-

all size smaller. The speakers are capable of handling full audio power with very little distortion. These speakers are recommended for quality in design and faithful reproducing characteristics.



10"

GENERAL ELECTRIC'S new 10-inch P.M. speakers are the result of application of latest developments in scientific laboratory tone reproduction. Especially designed for brilliant reproduction of voice and music. They represent a perfect balance in relative factors of performance ability, cost, and appearance.



12"

GENERAL ELECTRIC'S powerful 12-inch permanent magnet loudspeakers are designed to provide faithful tone reproduction at high levels. They equal or surpass the performance of electro-dynamic speakers of the same size. All weld construction has minimized distortion at maximum operation levels by eliminating vibration.

SPEAKER CHARACTERISTICS

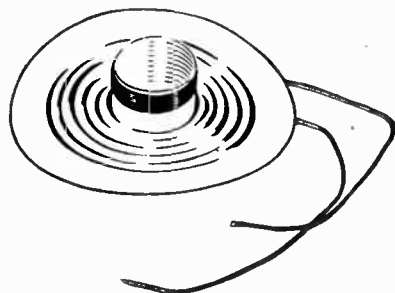
Cone Size, Inches	Speaker Type	Watts Output	Alnico 5 Mag. Wt. Oz.	VC Imp Ohms	List Price
4	S-400D	4	1.3	3.2	\$ 4.25
4	S-402D	4	1.0	3.2	4.00
4	S-403D	4	.68	3.2	3.75
5 1/4	S-525D	4	1.3	3.2	4.75
5 1/4	S-526D	4	1.0	3.2	4.35
5 1/4	S-527D	4	.68	3.2	4.00
6 1/2	S-625D	4	1.3	3.2	5.50
6 1/2	S-626D	4	1.0	3.2	5.00
6 1/2	S-650D	8	2.98	3.2	6.75
8	S-800D	8	2.98	3.2	8.95
8	S-810D	12	6.8	3.2	12.00
8	S-818D	12	6.8	8	12.50
10	S-1000D	12	6.8	3.2	15.25
10	S-1001D	25	14.5	8	24.75
10	S-1003D	25	9.0	8	18.50
10	S-1012D	12	3.16	3.2	10.25
10	S-1018D	12	6.8	8	15.75
12	S-1200D	12	6.8	3.2	16.50
12	S-1201D	25	14.5	8	29.50
12	S-1203D	25	9.0	8	20.50
12	S-1212D	12	3.16	3.2	11.25
12	S-1218D	12	6.8	8	17.00

G-E LOUDSPEAKER FEATURES

ALNICO 5 MAGNET MATERIAL is one of the great wartime engineering developments. Its energy per unit volume — approximately three times as great as other magnets — has enabled G-E engineers to design a new line of smaller speakers with better performance characteristics.

ALL WELD CONSTRUCTION of the newly designed G-E Alnico 5 Loudspeakers not only reduces the weight and size but also increases the rigidity necessary for perfect alignment of all parts. It also eliminates the possibility of dust and moisture accumulation and simplifies the replacement of damaged cones.

ALUMINUM FOIL BASE VOICE COILS only are used in all G-E permanent magnet speakers. Exact concentric location with the collar of the spider assembly insures excellent alignment. Humidity or excessive temperature variations do not affect the aluminum foil voice coils, making this type of speaker ideal for receivers designed for use in export markets.



PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE

Thank You!

When writing for additional
information or when ordering
from sources of supply listed
in this book, please mention

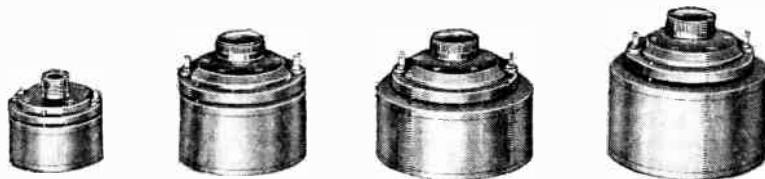
RADIO'S MASTER



RACON



PERMANENT MAGNET HORN UNITS



UNITS WITHOUT WATERTIGHT CASES



UNITS WITH WATERTIGHT CASES

Latest improvements as developed during the war are now included in all units. Higher watt-handling capacity, greater efficiency and practically lifetime operation. All Permanent Magnet units use the finest grade of Alnico steel magnets and Armco iron throughout. All steel parts plated to prevent corrosion. Units are magnetized, using an electromagnetic cutout switch which gives the maximum flux density obtainable in the gap. All magnets are measured for flux density and each unit is tested with special machines for power handling capacity as well as 300 volt ground-test, making for uniformity and ability

to withstand all types of service. All units are supplied with corrosion-proof metal diaphragms or plastic diaphragms on request, without extra charge. Voice coil impedance on all units: 15 ohms. Special ohmages on request. Supplied blastproof to withstand explosion and gunfire, when requested.

All units from Junior size to Giant size can be supplied with heavy aluminum case spun over them making for an hermetically sealed housing, watertight and useable outdoors in all kinds of weather. Additional List Price cost \$2.50 each.

NEW SUPER X UNITS USING LATEST ALNICO V MAGNETS

Code	Stock No.	Size	Total Weight	Flux Density per sq. cm.	Frequency Range	Capacity (watts) Peak Operating	Without Case	With Case
RETUF	PM-530	Magnum Giant	8 1/2 lb.	17000 gaussess	100-6500	60 30	\$70.00	\$72.50
RETAX	PM-523	Senior Giant	8 lb.	17000 gaussess	100-6500	60 30	57.50	60.00
RETOT	PM-515	Junior Giant	6 3/4 lb.	14000 gaussess	100-6500	60 30	47.50	50.00
RETIL	PM-508	Baby Giant	3 1/2 lb.	14000 gaussess	200-8500	35 25	32.50	35.00
RECOW	PM-505	Dwarf	1 lb.	8000 gaussess	700-10000	10-20 5-17	18.00	20.00

STANDARD TYPES USING ALNICO BLUE DOT MAGNETS

Code	Stock No.	Size	Weight of Alnico	Total Weight	Flux Density per sq. cm.	Frequency Range	Capacity (watts) Peak Operating	Without Case	With Case
REVUM	PM-383	Super Gt.	130 oz.	17 lb.	15000 gaussess	100-6500	60 30	\$65.00	\$67.50
REVUX	PM-365	Giant	104 oz.	13 lb.	14000 gaussess	100-6500	60 30	55.00	57.50
REVUE	PM-338	Master	60 oz.	9 lb.	12000 gaussess	100-6500	60 30	45.00	47.50
REVAT	PM-329	Junior	45 oz.	7 3/4 lb.	10000 g. uses	200-6500	60 30	35.00	37.50
REVEL	PM-311	Baby	17 oz.	3 lb.	8000 gaussess	700-8500	35 20	18.00	20.00

Permanent Magnet High Frequency Speaker



An efficient and precision built speaker, to meet the latest requirements for wide-range reproduction. Designed to cover the frequency band from 1000 to 12000 cycles. Supplied with horn. Designed to operate in conjunction with a suitable low frequency speaker (cone or horn type) in order to give high fidelity reproduction in the wide-range audio frequency band. Voice Coil impedance 15 ohms.

Code	Stock No.	Wattage Capacity	Frequency Range	List Price
RABAT	HF-3	3	1000-12000	\$20.00
RALAT	HF-5	10	200-10000	35.00

DIAPHRAGM REPLACEMENTS

Code	Description	Net Price
RUTEX	Type A Diaphragms only	\$2.60*
RUVEX	Type B Diaphragms only	3.60*
RUZEN	Type A Head Assembly (including diaphragm) Theatre Type	4.25*
RUZUR	Type B Head Assembly (including diaphragm) General PA Type	5.25*
RUBUF	Type A High Fidelity Head Assembly (including diaphragm)	6.00*

MULTIPLE HORN COMBINATIONS

Connectors made of heavy cast bronze with loose couplings for unit connection.

Combinations of two or three trumpet horns driven by one unit through properly designed connectors, will be found very efficient and flexible for public address service. Wider coverage can be obtained from the same power level input.

Double Connector — Dispersion angle 75°

Code	Stock No.	List Price
RADIX	DC-302A	\$17.00

Triple Connector — Dispersion angle 105°

Code	Stock No.	List Price
RACER	TC-303A	\$23.00

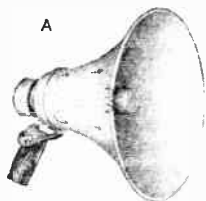




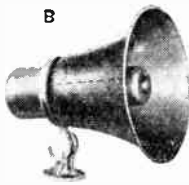
RACON



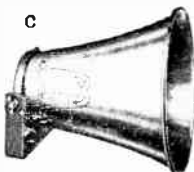
RE-ENTRANT TRUMPETS



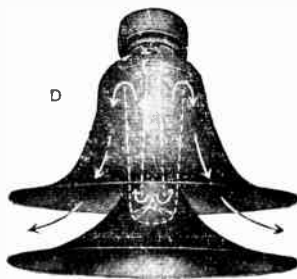
RE-35 RE-45
RE-60 RE-25



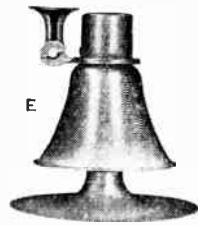
RE-15
RE-12



MN-16B



SR-35R
SR-60R



SR-15R
SR-12R

A compact trumpet of the double re-entrant type, made to occupy a small space, yet having a long air column and delivering highly concentrated sound with the greatest efficiency over long distances. ALL RACON RE-ENTRANT SPEAKERS have base and inside tone arm made of aluminum castings, outside bell of heavy gauge aluminum spinning; RE-35, RE-45, RE-60, SR-35R, SR-60R have center reflecting section

of RACON ACOUSTIC material to prevent resonant effects prevalent in all large reflecting surfaces. RE-15, RE-12, SR-15R and SR-12R, which have small reflecting surface, use heavy gauge aluminum spinings for center section. Sturdy construction makes them practically abuse-proof. Supplied with swivel mounting ratchet wall bracket.

Code	Stock No.	Type	Acoustic Length	Overall Dimensions		Cut-off (cycles)	Handling Capacity	Weight	List Price	
				Length	Bell Diam.				Without Unit	With Unit
REMOL	RE-60	A	6"	28"	25 1/2"	115	Unit Used	20 lb.	\$86.00	
REMOM	RE-45	A	4 1/2"	23 1/2"	24 1/2"	145	Unit Used	11 lb.	55.00	
REMOX	RE-35	A	3 1/2"	16"	18"	195	Unit Used	7 lb.	32.50	
REMOD	RE-25	A	2 1/2"	11"	12 3/4"	245	Unit Used	4 3/4 lb.	25.00	
REMAC	RE-15	B	18"	9 7/8"	8 3/4"	330	20 watts	4 3/4 lb.		\$24.00
REMAB	RE-12	B	12"	6 3/4"	6 3/8"	410	8 watts	2 1/2 lb.		26.00
REDIG	MN-16B	C	17"	10 1/4"	10 1/4"	480	20 watts	6 1/4 lb.		32.50

RADIAL RE-ENTRANT SPEAKERS

Designed to project sound over a complete circumference of 360 degrees, distributing the sound with an even intensity. For all sound installations where

complete coverage is desired. All reflecting surfaces on SR-60R and SR-35R use Racon Patented Acoustic Material for non-vibration and are unbreakable.

Code	Stock No.	Type	Acoustic Length	Length	Width	Cut-off	Weight	List Price	
								Without Unit	With Unit
RADAL	SR-60R	D	6"	34 1/2"	36"	115	35 lb.	\$85.00	
RADAK	SR-35R	D	3 1/2"	14"	17"	195	7 1/2 lb.	40.00	
RADAS	SR-15R	E	15"	12 3/4"	12"	330	5 lb.		\$36.50
RADAB	SR-12R	E	12"	8 3/8"	9"	410	2 3/4 lb.		28.50

RE-ENTRANT SPEAKER ACCESSORIES



Stock No. TB-150

RE-ENTRANT SPEAKER SWIVEL BRACKET—a three-legged base and ratchet for mounting Re-entrant Horns on wall or truck, bronze-cast base pipe and ratchet connection of steel. Overall height 9".

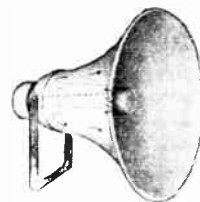
Code	Stock No.	List Price
RAMUG	TB-150	\$4.00



Stock No. CO-80

WATERTIGHT REAR HOUSING—for enclosure of driver unit and transformer when used.

Code	Stock No.	List Price
ROGET	CO-80	\$2.50



Stock No. UB-1A

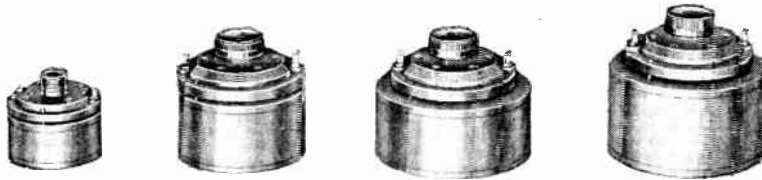
U-bracket mountings will be supplied, on request, instead of swivel ratchet, with any of the RE-entrant Trumpets, RE-35, R-45, RE-60, as listed above. No additional charge.



RACON



PERMANENT MAGNET HORN UNITS



UNITS WITHOUT WATERTIGHT CASES



UNITS WITH WATERTIGHT CASES

Latest improvements as developed during the war are now included in all units. Higher watt-handling capacity, greater efficiency and practically lifetime operation. All Permanent Magnet units use the finest grade of Alnico steel magnets and Armco iron throughout. All steel parts plated to prevent corrosion. Units are magnetized, using an electromagnetic cutout switch which gives the maximum flux density obtainable in the gap. All magnets are measured for flux density and each unit is tested with special machines for power handling capacity as well as 300 volt ground-test, making for uniformity and ability

to withstand all types of service. All units are supplied with corrosion-proof metal diaphragms or plastic diaphragms on request, without extra charge. Voice coil impedance on all units: 15 ohms. Special ohmages on request. Supplied blastproof to withstand explosion and gunfire, when requested.

All units from Junior size to Giant size can be supplied with heavy aluminum case spun over them making for an hermetically sealed housing, watertight and useable outdoors in all kinds of weather. Additional List Price cost \$2.50 each.

NEW SUPER X UNITS USING LATEST ALNICO V MAGNETS

Code	Stock No.	Size	Total Weight	Flux Density per sq. cm.	Frequency Range	Capacity (watts) Peak Operating	Without Case	With Case
RETUF	PM-530	Magnum Giant	8 1/2 lb.	7000 gauss-es	100-6500	60 30	\$70.00	\$72.50
RETAX	PM-523	Senior Giant	8 lb.	7500 gauss-es	100-6500	60 30	57.50	60.00
RETOT	PM-515	Junior Giant	6 1/2 lb.	14000 gauss-es	100-6500	60 30	47.50	50.00
RETIL	PM-508	Baby Giant	3 1/2 lb.	11000 gauss-es	200-8500	25 15	32.50	35.00
REDOW	PM-505	Dwarf	1 1/2 lb.	8000 gauss-es	700-16000	10-20 5-15	18.00	20.00

STANDARD TYPES USING ALNICO BLUE DOT MAGNETS

Code	Stock No.	Size	Weight of Alnico	Total Weight	Flux Density per sq. cm.	Frequency Range	Capacity (watts) Peak Operating	Without Case	With Case
REVUM	PM-383	Super Gt.	130 oz.	17 lb.	15000 gauss-es	160-6500	60 30	\$65.00	\$67.50
REVUX	PM-365	Giant	104 oz.	13 lb.	14000 gauss-es	160-6500	60 30	55.00	57.50
REVUE	PM-338	Master	64 oz.	9 lb.	12000 gauss-es	160-6500	60 30	45.00	47.50
REVAT	PM-329	Junior	45 oz.	7 1/2 lb.	10000 gauss-es	260-8500	40 30	35.00	37.50
REVEL	PM-311	Baby	17 oz.	3 lb.	8000 gauss-es	700-8500	25 20	18.00	20.00

Permanent Magnet High Frequency Speaker



An efficient and precision built speaker, to meet the latest requirements for wide-range reproduction. Designed to cover the frequency band from 1000 to 12000 cycles. Supplied with horn. Designed to operate in conjunction with a suitable low frequency speaker (cone or horn type) in order to give high fidelity reproduction in the wide-range audio frequency band. Voice Coil impedance 15 ohms.

Code	Stock No.	Wattage Capacity	Frequency Range	List Price
RABAT	HF-3	2	1000-12000	\$20.00
RALAT	HF-5	10	200-16000	35.00

DIAPHRAGM REPLACEMENTS

Code	Description	Net Price
RUTEX	Type A Diaphragm only	\$2.60
RUVEX	Type B Diaphragm only	3.60
RUZEN	Type A Head Assembly (including diaphragm) Theatre Type	4.25
RUZUP	Type B Head Assembly (including diaphragm) General PA Type	5.25
RURUF	Type A High Fidelity Head Assembly (including diaphragm)	6.00

MULTIPLE HORN COMBINATIONS

Connectors made of heavy cast bronze with loose couplings for unit connection.

Combinations of two or three trumpet horns driven by one unit through properly designed connectors, will be found very efficient and flexible for public address service. Wider coverage can be obtained from the same power level input.

Double Connector — Dispersion angle 75°

Code	Stock No.	List Price
RADIX	DC-302A	\$17.00

Triple Connector — Dispersion angle 105°

Code	Stock No.	List Price
RACER	TC-303A	\$23.00

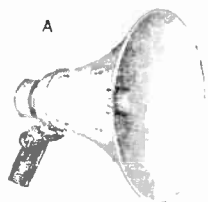




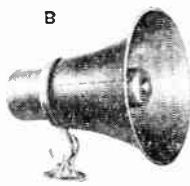
RACON



RE-ENTRANT TRUMPETS



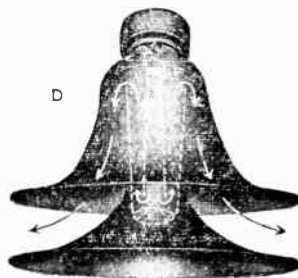
RE-35
RE-60



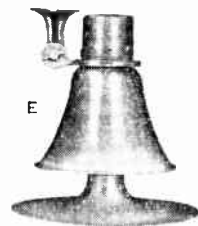
RE-15
RE-12



MN-16B



SR-35R
SR-60R



SR-15R
SR-12R

A compact trumpet of the double re-entrant type, made to occupy a small space, yet having a long air column and delivering highly concentrated sound with the greatest efficiency over long distances. ALL RACON RE-ENTRANT SPEAKERS have base and inside tone arm made of aluminum castings, outside bell of heavy gauge aluminum spinning; RE-35, RE-45, RE-60, SR-35R, SR-60R have center reflecting section

of RACON ACOUSTIC material to prevent resonant effects prevalent in all large reflecting surfaces. RE-15, RE-12, SR-15R and SR-12R, which have small reflecting surface, use heavy gauge aluminum spinings for center section. Sturdy construction makes them practically abuse-proof. Supplied with swivel mounting ratchet wall bracket.

Code	Stock No.	Type	Acoustic Length	Overall Dimensions		Cut-off (cycles)	Handling Capacity	Weight	List Price	
				Length	Bell Diam.				Without Unit	With Unit
REMOL	RE-60	A	6"	28"	75 1/2"	115	Unit Used	20 lb.	\$66.00	
REMOM	RE-45	A	1 1/2"	23 1/2"	71 1/2"	145	Unit Used	11 lb.	55.00	
REMOX	RE-35	A	3 1/2"	16"	18"	195	Unit Used	7 lb.	32.50	
REMOD	RE-25	A	2 1/2"	11"	12 3/4"	245	Unit Used	4 3/4 lb.	15.00	
REMAC	RE-15	B	18"	9 7/8"	8 3/4"	330	20 watts	4 3/4 lb.		\$21.50
REMAE	RE-12	B	12"	6 7/8"	6 7/8"	440	8 watts	2 1/2 lb.		26.00
REDIG	MN-16B	C	17"	10 1/4"	10 1/4"	480	20 watts	6 1/4 lb.		31.50

RADIAL RE-ENTRANT SPEAKERS

Designed to project sound over a complete circumference of 360 degrees, distributing the sound with an even intensity. For all sound installations where

complete coverage is desired. All reflecting surfaces on SR-60R and SR-35R use Racon Patented Acoustic Material for non-vibration and are unbreakable.

Code	Stock No.	Type	Acoustic Length	Length	Width	Cut-off	Weight	List Price	
								Without Unit	With Unit
RADAL	SR-60R	D	6"	34 1/2"	36"	115	35 lb.	\$85.00	
RADAK	SR-35R	D	3 1/2"	16"	17"	195	7 1/2 lb.	40.00	
RADAS	SR-15R	E	15"	12 3/8"	12"	330	4 lb.		\$36.50
RADAB	SR-12R	E	12"	8 3/8"	9"	440	2 3/4 lb.		28.50

RE-ENTRANT SPEAKER ACCESSORIES



Stock No. TB-150

RE-ENTRANT SPEAKER SWIVEL BRACKET—a three-legged base and ratchet for mounting Re-entrant Horns on wall or truck, bronze cast Base pipe and ratchet connection of steel. Overall height 9".

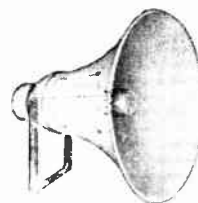
Code	Stock No.	List Price
RAMUG	TB-150	\$4.00



Stock No. CO-80

WATERTIGHT REAR HOUSING—for enclosure of driver unit and transformer when used.

Code	Stock No.	List Price
ROGET	CO-80	\$2.50



Stock No. UB-1A

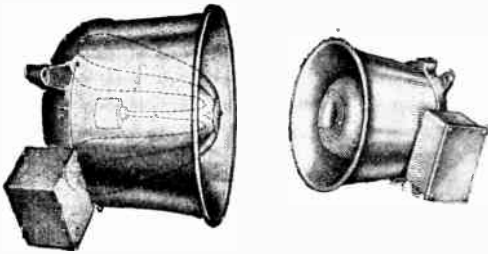
U-bracket mountings will be supplied, on request, instead of swivel ratchet, with any of the Re-entrant Trumpets, RE-35, R-45, RE-60, as listed above. No additional charge.


UNIT

RACON


TRUMPETS

DOUBLE RE-ENTRANT MARINE SPEAKERS



THE LATEST SPEAKERS IN MARINE PRACTICE!

A double re-entrant type of horn. The Regular, Midget and Miniature Marine speakers are approved by the Bureau of Marine Inspection and Navigation, Department of Commerce, for all Emergency Loud-speaker Systems on ships, under the 53rd Supplement of the Bureau, after tests made by the Bureau of Standards, Washington, D.C. These Marine Speakers are used both as Loudspeakers and as Microphones. The driving Unit and connections are

all enclosed, making a completely waterproof speaker not affected by temperature or weather, including use on sea. Made from a heavy aluminum spinning, having a base of heavy aluminum casting. Has special non-corrosive Aluminum casting; baked chromatic Undercoat Finish plus outside lacquer finish. Uses latest type of driver units. Supplied with three-legged flush type mounting or U-bracket mounting. All Speakers have waterproof boxes for interior mounting of transformers. Regular and Midget marine speakers supplied blastproof to withstand gunfire and explosion, when requested, at additional charge.

Code	Stock No.	Size	Bell Diam.	Depth	Weight	Capacity Peak	Capacity Operating	Units	List
RADCF	MB-64M	Bull Marine	28"	21"	118 lb.	240	120	4 Master	\$500.00
RADCT	MB-62M	Bull Marine	28"	21"	91 lb.	120	60	2-Master	400.00
REDIK	MR-30M	Regular Marine	14"	10"	25 lb.	60	30	1-Master	130.00
REDIT	MR-32M	Regular Marine	14"	10"	36 lb.	120	60	2-Master	185.00
RASOM	MG-21J	Midget Marine	9½"	6¾"	10½ lb.	60	30	1-Junior	55.00
RASCB	MG-21B	Midget Marine	9½"	6¾"	7½ lb.	35	20	1-Baby	40.00
REDUP	MN-15B	Miniature Marine	6¼"	4¾"	4¼ lb.	35	20	1-Baby	30.00

Bull Marine: For long range reproduction and pick-up.

Regular and Midget Marine: For long range reproduction and pick-up. Delivers 100 DB of sound 10 feet from horn with 1 watt input. Will pick up sound up to 100 feet. For Marine, General Public Address and Railroad work.

Miniature Marine: Has higher cut-off. Excellent for speech work in monitoring system, outdoor and indoor paging, intercom systems and railway work.

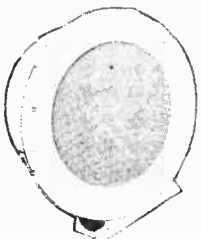
DWARF RE-ENTRANT



A small re-entrant speaker designed for speech reproduction only. Very highly efficient, using dwarf unit for DW-9-R, and the baby unit for DW-11-R. Flange around bell for flush mounting. Complete with unit and transformer housing. Can be supplied with ratchet mounting.

Code	Stock No.	Bell Diameter	Depth	Weight	List Price
REDOX	DW-9-R	5"	2¼"	24 oz.	\$27.50
REDUS	DW-11-R	6¼"	4"	27 oz.	30.00

MONITOR AND INTERCOM SPEAKER — CONE TYPE



A compact 4" cone speaker designed for voice and excellent music reproduction. Mounted on a small base in a steel case and completely enclosed with protective wire grill. For use where quality combined with small size is a requirement because of space limitation or esthetic appearance.

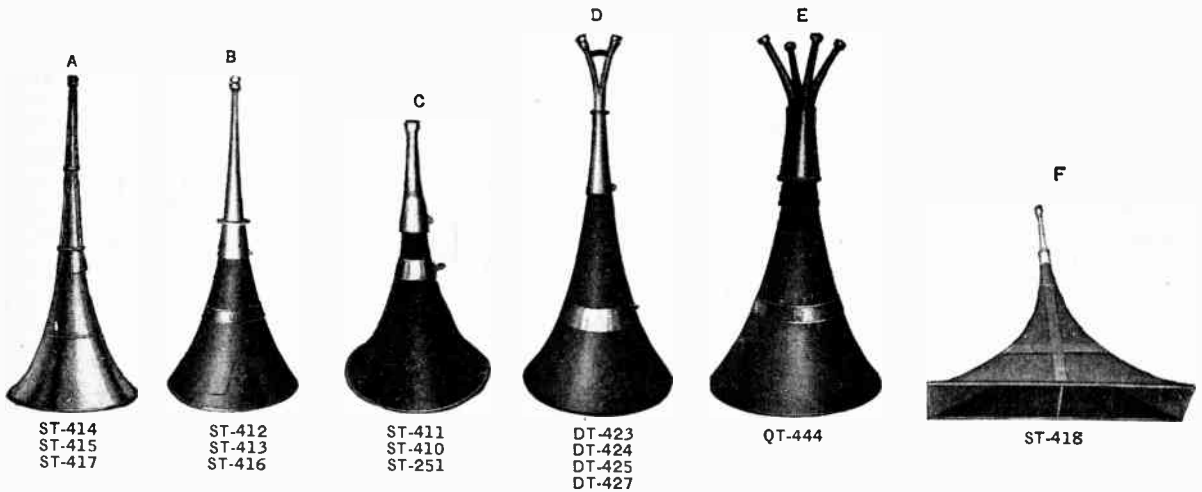
Code	Stock No.	Diameter	Depth	Weight	List Price
RYBOB	CS-4N	5¼"	2¾"	20 oz.	\$10.00

UNITS

RACON

TRUMPETS

STRAIGHT TRUMPETS



- **RACON STRAIGHT TRUMPETS** are the most efficient horns obtainable. Output from any straight trumpet is approximately 2 DB higher than any re-entrant type with the same input. This is because straight trumpets lack the attenuation from resistance and reflection which is inherent in all re-entrant horns. Will override extremely high noise level, indoors or outdoors.
- **RACON PATENTED ACOUSTIC TRUMPETS** are made of Racon Acoustic cloth processed by a patented method which gives a non-vibratory wall, thereby increasing the output of the horn without

loss due to wall vibration. Supplied for indoor use (DeLuxe type) and for outdoor use (Stormproof type)—guaranteed for life in all kinds of weather and temperature.

- **METAL TRUMPETS** are made of heavy gauge aluminum spinning and cast aluminum throat sections with rolled beaded edge.
- **UNBREAKABLE TRUMPETS** are made of heavy gauge aluminum spinning, reinforced and damped with Patented Racon Acoustic Material to prevent wall vibration.

Code	Stock No.	Figure	Air Column Length	Bell Diam.	Cut-off (cycles)	Material	Length of Casting	Number of Units	Weight	List Price
RIDER	ST-414A	A	6'	30"	115	Stormproof	34"	1	23 lb.	\$95.00
RHYME	ST-414B	A	6'	30"	115	DeLuxe	34"	1	18 lb.	79.50
RYDOX	DT-424A	D	6'	30"	115	Stormproof	28"	2	25 lb.	103.50
RYPAN	DT-424B	D	6'	30"	115	DeLuxe	28"	2	21 lb.	88.00
RHINO	ST-417A	A	6'	30"	115	All Alum.	34"	1	19 lb.	87.50
RHOMB	DT-427A	D	6'	30"	115	All Alum.	28"	2	21 lb.	96.00
REGON	ST-415A	A	6'	30"	115	Unbreakable	34"	1	21 lb.	121.00
REGAY	DT-425A	D	6'	30"	115	Unbreakable	28"	2	23 lb.	129.50
RECUR	QT-444A	E	6'	30"	115	Unbreakable	25"	4	30 lb.	200.00
ROBIN	ST-418A	F	6'	51" x 12"	115	Stormproof	34"	1	28 lb.	100.00
ROGUE	ST-418B	F	6'	51" x 12"	115	DeLuxe	34"	1	24 lb.	79.50
RACEY	ST-412A	B	4½'	25"	145	Stormproof	25"	1	18 lb.	71.00
RANCH	ST-412B	B	4½'	25"	145	DeLuxe	25"	1	16 lb.	52.50
RIANT	ST-413A	B	4½'	25"	145	All Alum.	25"	1	11 lb.	65.00
RIBES	DT-423A	D	4½'	25"	145	All Alum.	25"	2	16½ lb.	73.50
REFIX	ST-416A	B	4½'	25"	145	Unbreakable	25"	1	15 lb.	93.50
RENEW	ST-411A	C	3½'	22"	195	Stormproof	12"	1	12 lb.	50.00
REMIT	ST-411B	C	3½'	22"	195	DeLuxe	12"	1	10 lb.	35.00
REPEX	ST-410A	C	3½'	22"	195	All Alum.	14"	1	7 lb.	35.00
RISAT	ST-251A	C	2'	12"	250	Stormproof	4"	1	2¼ lb.	17.50
RIKAL	ST-251C	C	2'	12"	250	DeLuxe	4"	1	1¾ lb.	12.50
RIMAD	ST-251B	C	2'	12"	250	All Alum.	4"	1	2 lb.	13.50

Note: 3½', 4½' and 6' horns supplied with mounting brackets, without charge. 2' horns supplied with mounting bracket at a charge of 35¢ net each additional.



RACON



CONE SPEAKER PROJECTORS

PROJECTOR TYPE

RADIAL TYPE

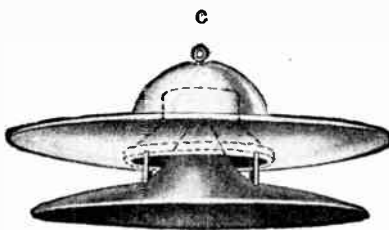
MARINE TYPE



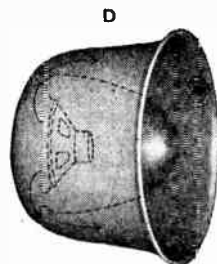
CP-12



CP-8



CR-6 CR-12



CM-5 CM-8 CM-12

PROJECTOR TYPE

Efficient, rugged, suitable for indoor and outdoor use. All projectors have steel back enclosures and waterproof overlap. Provided with two offset mounting hooks.

Code	Stock No.	Figure	Cone Size	Bell Diam.	Length	Description	List Price
RUMIX	CP-8A	B	8"	15"	15"	Aluminum Bell; Steel Back.....	\$11.00
RIFLE	CP-8AW	B	8"	15"	15"	Aluminum Bell; Steel Back acoustically damped, and cone opening protected by wire screening and silk gauze.....	12.50
RUMID	CP-12A	A	12"	17"	20"	Aluminum Bell; Steel Back.....	12.50
ROBOT	CP-12AW	A	12"	17"	20"	Aluminum Bell; Steel Back acoustically damped, and cone opening protected by wire screening and silk gauze.....	14.50

RADIAL TYPE

Speaker is designed to project sound over a complete circumference of 360 degrees, distributing the sound with even intensity and bringing out the high response lacking in direct cone horns. Particularly adapted for use on trucks and in auditoriums where complete coverage is desired. Can be camouflaged to blend with ceiling architecture.

IN ALL RACON RADIAL CONE HOUSINGS the upper deflector is made of heavy gauge steel, back cone cover of steel, and lower deflector of RACON ACOUSTIC material to prevent resonant effects prevalent in all metal reflecting surfaces. Stormproofed for all weather conditions. These cone housings are furnished without speakers.

Code	Stock No.	Figure	Cone Size	Bell Diam.	Depth	Weight	List Price
RADAG	CR-12	C	12" or 10"	31"	14"	10 lb.	\$31.00
RADAC	CR-6	C	6" or 5"	17"	7"	3 1/2 lb.	11.50

MARINE TYPE

A re-entrant speaker housing of the Marine type for cone operation. Owing to construction this housing can be used outdoors, as well, in all weather and temperatures without damage. Cone diaphragm is protected not only from direct contact of rain, but also from physical damage. Can be used for voice or music reproduction.

IN ALL RACON CONE MARINE SPEAKER HOUSINGS bell is made of heavy gauge aluminum; cone mounting is made of aluminum casting; centre bullet is made of Patented Racon Acoustic material to prevent resonant effects. Material is stormproofed for all weather conditions. Housings are supplied without Cone Speakers.

Code	Stock No.	Figure	Cone Size	Bell Diam.	Depth	Weight	List Price
RELIM	CM-12	D	12"	24"	15"	30 lb.	\$40.50
REFIM	CM-8	D	8"	17 1/2"	11 1/2"	4 1/2 lb.	21.50
REKIM	CM-5	D	5"	10 1/2"	8 1/2"	2 1/4 lb.	12.00

STEEL SWIVEL BRACKETS FOR CONE PROJECTORS

For wall or truck mounting; equipped with a tooth ratchet swivel, and swivel pipe connection to give 180 degrees angular movement. Supplied with or without stand.



Stock No. RB-150A

Code	Stock No.	Description	Cone Size	List Price
RAMIS	RB-150	Without Base	8" or 12"	\$3.50
RAMIT	RB-150A	With Base	8" or 12"	5.00
RAMUN	LB-150	Without Base	12"	4.00
RAMUB	LB-150A	With Base	12"	6.00



Stock No. LB-150A

UNITS

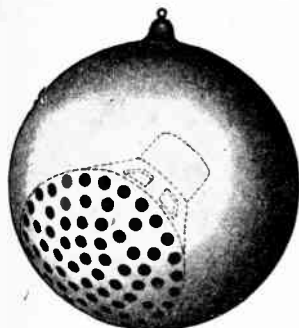
RACON

TRUMPETS

SPECIAL TYPE SPEAKERS

BALL TYPE CONE SPEAKER HOUSING

DESIGNED FOR 6" OR 8" CONE



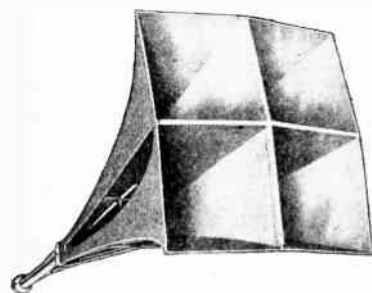
A new type ball speaker to be used where directional sound is required and where the standard type of cone projections clash with the surrounding furnishings or architecture.

Will project a beam at an angle of 45°.

Will operate with 6" and 8" cone speakers, and can be used for paging systems (voice reproduction) as well as for musical reproduction.

Made of steel, with hanging lamp fixture. Finished as desired.

Code	Stock No.	Type	Ball Diameter For 6" Cone 14"	Weight	List Price
RESAL	BC-6	B	14"	9 lbs.	\$16.00
REBAL	BC-8	B	For 8" Cone 14"	9 lbs.	16.00



CELLULAR HORN

A new type of cellular horn for operation between 195 and 12,000 cycles, with an angular distribution of 60°.

Made only in blocs of 4 cells—of Racon unbreakable material, having heavy aluminum throat castings and unbreakable bell sections.

Code	Stock No.	Type	Overall Length	Bell Opening	Weight	List Price
RAGIN	QB-641-C	A	42"	14" x 14"	18 lbs.	\$135.00

NEW! RACON MICROPHONE STANDS

All floor models have heavy cast iron base finished in black crinkle. All tubing of brass with heavy wall thickness and burnished chromium plated finish. Uses 5/8" inner tubing and 7/8" outer tubing. Table and banquet models use loaded heavy spun steel bases with special turned in beading so as not to scratch the finest polished table top.

RACON LATEST IMPROVED CLUTCH ACTION

A TOUCH to move the extension tubing up or down. Set in any position. No slipping, no wearing of fibre bushings, no turning and tightening of clutches, no turning of thumb screws to hold position of mike.

Special Improved Clutch supplied as part of mike stand or supplied as extra part to be added to old or new microphone stand to convert to latest type; merely remove old clutch arrangement and screw latest device to outer tubing for permanent adjustment.



Code: REFAL



Code: RINAL



Code: RODAT



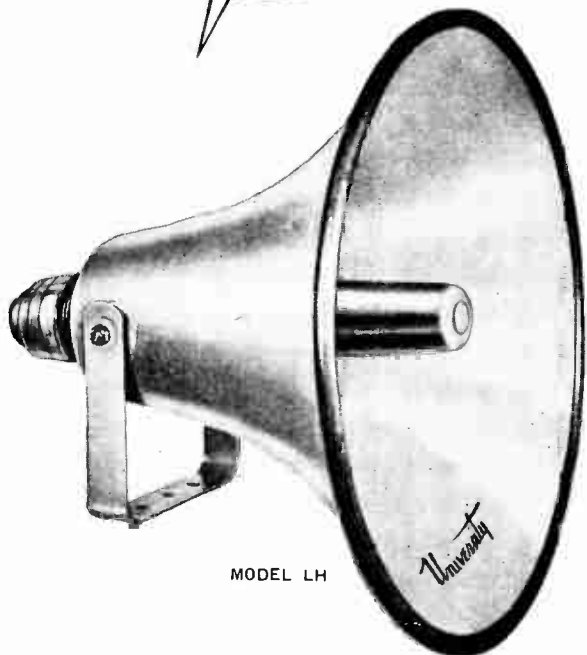
Code: RECAX

Code	Stock No.	Base	Clutch	Type	Height Adjustment	Weight	List Price
REFAL	FS-10-12	12"	Standard	Adjustable Floor	35"-65"	14 lbs.	\$11.00
REFAX	FS-10-12S	12"	*Special	Adjustable Floor	35"-65"	14 lbs.	13.50
RINAL	FS- 8-10	10"	Standard	Adjustable Floor	36"-66"	10 lbs.	10.00
RINAX	FS- 8-10S	10"	*Special	Adjustable Floor	36"-66"	10 lbs.	12.50
RIBET	BS-40	7 1/2"	Standard	Adjustable Banquet	19"-32"	2 1/2 lbs.	7.00
RODAT	TS-20	5 1/2"	Standard	Adjustable Table	7"-10"	1 1/4 lbs.	5.00
RODAS	TS-18	5 1/2"	Standard	Fixed Table	7"	1 1/4 lbs.	3.25
RECAX	SC-3	Special Barrel, threaded to fit standard 7/8"-27 threaded tubing			3"		3.50

* RACON LATEST IMPROVED CLUTCH ACTION.



SPEAKERS



MODEL LH

REFLEX LOUDSPEAKERS

The reflex horns pioneered by University represent the most efficient method of converting electrical power into acoustic energy. When used with University driver units, they are capable of conversion efficiencies up to 50% and in addition, provide compactness and weather protection without any sacrifice in performance.

Heavy gauge metal and corrosion resistant finishes on horn and hardware are assurance of trouble-free performance regardless of changes in temperature and humidity. Each speaker is equipped with a rubber damping rim which prevents vibration and mechanical resonance. Adjustable UNIVERSITY "U" bracket mounting simplifies installation and holds the speaker firmly locked in any position.

Four models cover every public address requirement. Model GII has the longest air column and is ideal for the reproduction of symphonic music. The model LH with a higher cutoff is designed as a general purpose speaker and is recommended for music transmission where economy without sacrifice of quality is essential. In installations where a smaller horn is required, the Model PH will render excellent service for both speech and music. The Model SMH will find its widest application in the reproduction of speech where clarity and a high degree of intelligibility are necessary. Accessories include Model PMA adapter and 2YC connector.

MODEL	SMH	PH	LH	GH
DISPERSION	75°	80°	90°	90°
AIR COLUMN	2½ FT.	3½ FT.	4½ FT.	6½ FT.
LOW FREQUENCY CUTOFF	200 CPS	150 CPS	120 CPS	85 CPS
DIAMETER	15½ INCHES	20 INCHES	25½ INCHES	30 INCHES
LENGTH	12 INCHES	15 INCHES	18½ INCHES	25 INCHES
WEIGHT	6 LBS.	10 LBS.	15 LBS.	22 LBS.
PRICE (Horn only)	\$24.50	\$29.00	\$44.50	\$69.50

BREAKDOWN PROOF DRIVER UNITS

University driver units are breakdown proof and guaranteed for one year. Ratings are conservative and operation over long periods is assured. They are of the PM dynamic type, incorporate highest quality Alnico magnets and one-piece molded phenolic diaphragms. Unique "rim centering" construction eliminates aligning pins and permanently centers the voice coil and head assembly in a much closer magnetic gap. This results in a higher conversion efficiency and misalignment due to shock or vibration is virtually eliminated.

Hermetically sealed housings provide complete protection from outdoor exposure and corrosion fumes.

The model PAH is recommended for extreme low frequency response. Its larger magnetic structure provides a 35% higher conversion efficiency than the SA-HF. Use the PAH or SA-HF for high power installations or where occasional overload is a problem. Model MA-25 offers the most economical service where power requirements do not exceed 25 watts. Note model 2YO connector.



MODEL PAH



MODEL SA-HF



MODEL MA-25

MODEL	PAH	SA-HF	MA-25
POWER	25 WATTS	25 WATTS	25 WATTS
IMPEDANCE	16 OHMS	16 OHMS	16 OHMS
FREQUENCY	80 to 6000 CPS	90 to 10,000 CPS	90 to 6000 CPS
DIAMETER	5¼ INCHES	4½ INCHES	3½ INCHES
HEIGHT	5 INCHES	5 INCHES	3 INCHES
WEIGHT	9 LBS.	5 LBS.	3 LBS.
THREAD SIZE	1⅝" - 18	1⅝" - 18	1⅝" - 18
FLUX DENSITY IN GAUSS PER SQ. CM.	16,000	13,000	11,000
PRICE	\$49.50	\$37.00	\$25.00

ACCESSORIES



Model PMA Adapter

For mounting any UNIVERSITY "U" bracket speaker on standard ½" pipe.

PRICE \$1.50



Model 2YC Connector

Use with two driver units to provide up to 50 watts for any UNIVERSITY trumpet or projector.

PRICE \$10.00



Unit Adapter

For adapting Western Electric horns for use with any UNIVERSITY driver unit.

PRICE \$2.50



SPEAKERS

INDUSTRIAL PAGING SPEAKERS

These speakers are reflex air column horns with built-in hermetically sealed driver units. Models CR, IB8, and MIL are directional and models RCR and IBR have radial deflectors for uniform 360° dispersion. They are capable of continuous use for intercommunication and paging on shipboard, docks, loading platforms, terminals and industrial plants.

Models CR and RCR can handle 18 watts of input power continuously, so that they are useful for high power alarm or announcing systems. Models IB8 and IBR have a continuous power

handling capacity of 12 watts, which recommends them for paging or announcing in noisy industrial areas. The models MIL and MIS with a 3 watt continuous power capacity are efficient intercommunication speakers. The model MIS is designed for flush panel mounting.

While capable of producing adequate volume with low power, these speakers can handle more power than any other speaker of comparable size and weight. Modernization of old sound systems is easily accomplished by replacement of obsolete speakers with these models. Standard voice coil impedances permit installation without changes in the existing line or amplifier.

DIRECTIONAL MODELS



MODEL MIS

MODEL	
POWER.	3 WATTS
IMPEDANCE	8 OHMS STANDARD 45 OHMS ON REQUEST
DISPERSION	150°
FREQUENCY	500-9000 CYCLES
DIMENSIONS	3 7/8" Deep, 5 1/2" O.D. 4 1/2" Mounting Dia.
WEIGHT.	2 1/8 LBS.
PRICE	8 OHM, \$20.00 45 OHM, \$21.25



MODEL MIL

MIS	
POWER	3 WATTS
IMPEDANCE	8 OHMS STANDARD 45 OHMS ON REQUEST
DISPERSION	150°
FREQUENCY	500-9000 CYCLES
DIMENSIONS	3 7/8" Deep, 5 1/2" O.D. 4 1/2" Mounting Dia.
WEIGHT	2 1/8 LBS.
PRICE	8 OHM, \$20.00 45 OHM, \$21.25



MODEL IB8

MIL	
POWER	3 WATTS
IMPEDANCE	8 OHMS STANDARD 45 OHMS ON REQUEST
DISPERSION	120°
FREQUENCY	400-9000 CYCLES
DIMENSIONS	6 INCHES DIA. 7 INCHES HIGH
WEIGHT	3 1/2 LBS.
PRICE	8 OHM, \$25.00 45 OHM, \$26.25



MODEL CR

CR	
POWER	18 WATTS
IMPEDANCE	16 OHMS STANDARD 4 OHMS ON REQUEST
DISPERSION	90°
FREQUENCY	250-6000 CYCLES
DIMENSIONS	11 INCHES DIA. 9 INCHES HIGH
WEIGHT	9 LBS.
PRICE	\$42.00

RADIAL MODELS



MODEL RCR

MODEL RCR

POWER	18 WATTS
IMPEDANCE	16 OHMS (4 OHMS ON REQUEST)
FREQUENCY	250-6000 CPS
DIAMETER	14 INCHES
LENGTH	10 INCHES
WEIGHT	10 LBS.
PRICE	\$48.50

MODEL IBR

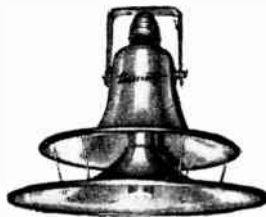
POWER	12 WATTS
IMPEDANCE	8 OHMS
FREQUENCY	300-6000 CPS
DIAMETER	9 INCHES
LENGTH	11 INCHES
WEIGHT	5 LBS.
PRICE	\$39.00



MODEL IBR

RADIAL REFLEX PROJECTORS

Air column horns with radial deflectors for uniform 360° sound distribution cover large areas and override high noise-levels, without blasting. Both rims rubber loaded to minimize mechanical resonance. The long air column of the RLH and its low frequency cutoff make it well suited for music and general applications. The smaller model RPH, with a somewhat higher cutoff, will serve for both music and speech. The RSH finds wide application for high clarity reproduction of speech. Shipped complete with hardware but less driver unit.



	MODEL RLH	RPH	RSH
LOW CUTOFF	120 CPS	150 CPS	180 CPS
AIR COLUMN	5 FT.	4 FT.	3 FT.
DIAMETER	28 1/2"	25"	18 1/2"
HEIGHT	18 1/2"	14"	11"
WEIGHT	21 1/2 LBS.	18 LBS.	12 LBS.
PRICE (Horn only)	\$59.00	\$45.00	\$38.50

RADIAL CONE-SPEAKER PROJECTORS

MODEL	RBP-12	RBP-8
FREQUENCY	UNIFORM DOWN TO 50 CYCLES	UNIFORM DOWN TO 80 CYCLES
DIAMETER	27 INCHES	18 INCHES
HEIGHT	11 INCHES	9 INCHES
WEIGHT	19 LBS.	9 LBS.
PRICE	\$35.00	\$19.60



These compact projectors consist of an acoustic chamber for housing a cone speaker and a radial deflector for uniform 360° dispersion. Of all metal, rubber cushioned construction, the model RBP-12, designed for a 12" cone speaker, provides uniform response down to 50 cycles and model RBP-8, designed for an 8" speaker, has a low frequency limit of 80 cycles. Any standard make of 8" or 12" cone speaker can be installed in these baffles. Both models are watershedding and may be used indoors or out. They are shipped complete with hardware but less cone speaker.



SPEAKERS

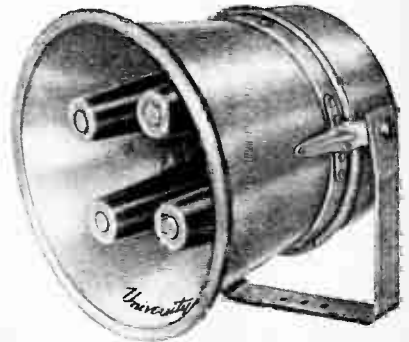
SUPER POWER SPEAKERS

UNIVERSITY super power speakers are the answer to every public address installation where tremendous amounts of concentrated power must be transmitted over long distances.

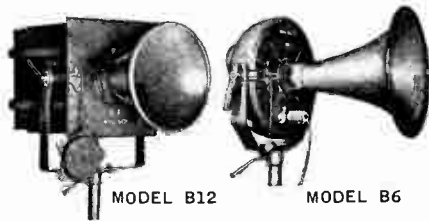
The Model 4A4 incorporates 4 PM driver units mounted on the back of a heavy cast mounting plate. Each driver opens into a reflexed air column on the front of the mounting plate. The four air columns feed into a common bell. Compactness makes them ideally suited for aeroplane broadcasting and use in Church towers.

In the Models B-6 and B-12, the PM driver units are mounted circumferentially on a rugged "tone chamber" casting which provides individual acoustic paths from each driver unit to a mixing chamber at the center of the casting. The patented design of the mixing chamber and the acoustic paths minimizes high frequency cancellation.

All speakers are completely waterproof and characterized by their ruggedness. Power ratings are conservative and projection ranges are often exceeded in actual operation. Speakers of this type were recently heard 15 miles in a carillon installation at the Empire State Building in New York City. "T" brackets permit a vertical swing of approximately 120° and locking in any position. Longer horns are available with B6 or B12 for music. For B6, diameter 30 inches, length 48 inches. For B12, diameter 30 inches, length 32 inches. Response 85 - 6000 cps. Prices on request. NOTE: Models 4A4, B-12, B-6 are sold and shipped less driver units. Standard driver units Model SA-HF may be used.



MODEL 4A4



MODEL B12

MODEL B6

POWER	150 WATTS
IMPEDANCE	90 OHMS
DRIVERS	6 UNITS
DISPERSION	90°
FREQUENCY	200-6000 CPS
PROJECTION	1 1/2 MILES
DIAMETER	16 1/2"
LENGTH	23"
WEIGHT	60 LBS.

MODEL B-6

MODEL B-12

MODEL 4A4

300 WATTS
DOUBLE INPUT
90 OHMS EACH
12 UNITS
90°
250-6000 CPS
2 MILES
19" SQUARE
28" LONG
30 LBS.

100 WATTS
4, 16, 60 OHMS
4 UNITS
60°
200-6000 CPS
1 MILE
16"
17"
23 LBS.

PRICE

\$93.00 (less Units)

RAILROAD AND MARINE TYPES

UNIVERSITY marine and railroad speakers are submergence, explosion, shock and vibration proof and are unaffected by live steam. Their reflex air columns are built of rugged castings and are equipped with Alnico V PM dynamic units.

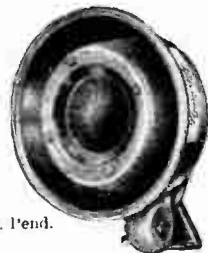
Models MSC, MM-2TC, MM-2 and MM-2F have hermetically sealed housings and built-in driver units. Models MSR and MM-2TC have space for volume control and line matching transformer. Tapped

holes provide access to volume control and for receiving a conduit. All are designed for bulkhead mounting — the Model MM-2F may be flush mounted.

These speakers will operate efficiently under the most arduous conditions — on ships, docks, in railroad yards or locomotive cabs, — in mines, laundries and mills — wherever dirt, salt spray, humidity, explosive dusts and vapors constitute a hazard.



MODEL MM-2TC



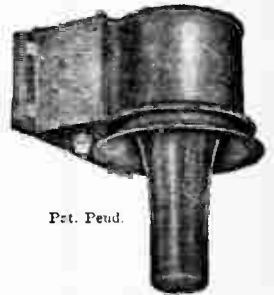
Pat. Pend.

MODEL MM-2



Pat. Pend.

MODEL MM-2F



Pat. Pend.

MODEL MSR

	MODEL MM-2TC	MODEL MM-2	MODEL MM-2F	MODEL MSR
POWER	15 WATTS	15 WATTS	15 WATTS	15 WATTS
TYPE MOUNTING	WALL	SWIVEL BRACKET	FLUSH PANEL	WALL
IMPEDANCE	16 OHMS	16 OHMS	16 OHMS	16 OHMS
DISPERSION	120°	150°	150°	360°
FREQUENCY	300-6000 CYCLES	300-6000 CYCLES	300-6000 CYCLES	250-6000 CYCLES
HEIGHT	10 3/4"			10 3/4"
DEPTH	4 1/2"			8 1/4"
WIDTH	6 7/8"			7 3/4"
WEIGHT	10 1/4 LBS.	5 1/2 LBS.	4 LBS.	8 3/4 LBS.
PRICE	\$65.00	\$37.00	\$37.00	\$65.00



SPEAKERS

HIGH FREQUENCY TWEETER SPEAKERS

The UNIVERSITY tweeter is designed to complement the conventional 12-15" cone speaker, providing an extended range to 15,000 cycles. No complicated wiring or networks are required. It can be connected to the voice coil terminals of an existing cone speaker through a simple, inexpensive high pass filter without creating any electrical imbalance. The shape of the die-cast dual horn provides wide distribution of the high frequencies and compact dimensions offer a variety of mounting methods. Where space does not permit the use of the dual unit, the model 4401 single tweeter is suggested. The model 4404 is housed in a walnut finished cabinet and incorporates the 4402 dual tweeter and the 4405 high pass filter.

The UNIVERSITY tweeter makes possible a high fidelity speaker system capable of reproducing every frequency audible to the human ear at a price considerably lower than comparable wide range speakers.



MODEL 4401



MODEL 4402



MODEL 4404



MODEL 4405

	MODEL 4401	MODEL 4402
RESPONSE	2,000-15,000 CPS	2,000-15,000 CPS
IMPEDANCE	12 OHMS	6-8 OHMS (Units in par.)
POWER	6 WATTS	12 WATTS
HOR. DISTRIBUTN.	50°	100°
VERT. DISTRIBUTN.	50°	50°
DIMENSIONS	4"W x 5"	9 1/2" W x 2 5/8" H x 5" D
PRICE	\$20.00	\$40.00

	MODEL 4404	MODEL 4405
RESPONSE	2,000-15,000 CPS	2,000-15,000 CPS
IMPEDANCE	6-8 OHMS	12 WATTS
POWER	12 WATTS	100°
HOR. DISTRIBUTN.	100°	50°
VERT. DISTRIBUTN.	50°	11 1/2" W x 4 1/4" H x 6 1/2" D
DIMENSIONS	11 1/2" W x 4 1/4" H x 6 1/2" D	
PRICE	\$60.00	\$10.00

High pass filter unit for use with model 4401 and 4402 — includes high frequency volume control. Cutoff frequency approximately 2000 cycles. Die cast container dimensions: 3 1/2" wide x 2 1/4" deep x 2 1/2" high.

WIDE RANGE WEATHERPROOF COAXIAL SPEAKERS

The Model WLC is a high fidelity co-axial speaker with a response range essentially flat from 50-10,000 cycles. It includes a 12" Cone speaker, a unit-driven tweeter and a built-in crossover network. Corrosion-resistant, all metal construction permits constant exposure regardless of temperature and humidity. Ideally suited for concert band-shells, drive-in theatres and all indoor or outdoor installations where high quality reproduction of music and voice are essential. A sturdy mounting bracket facilitates installation and permits tilting and locking the speaker in any desired vertical plane.

POWER	25 WATTS
IMPEDANCE	8 OHMS
RESPONSE	50-10,000 CPS
DISPERSION	90°
DIAMETER	33"
DEPTH	18"
CROSSOVER	
FREQ.	1000 CYCLES
WEIGHT	40 LBS.



PRICE \$175.00

MODEL WLC

WEATHERPROOF AND INDOOR LINE MATCHING TRANSFORMERS

The new UNIVERSITY line of matching transformers is designed for use with UNIVERSITY loudspeakers in indoor and outdoor installations. Excellent performance is assured throughout the useful audio frequency range at rated output. The models 5401, 5402, 5409 and 5410 are housed in watertight enclosures and incorporate die cast mounting brackets. They may be fastened to any surface with two screws or bolts or may be fastened to the brackets of the models MIL, 1B8 or CR. When used in the latter manner, the mounting bracket of the transformer acts as a combined mounting support for both the transformer and speaker. The model 5402 may be mounted on the U bracket of any loudspeaker by means of a simple clamp which is supplied or on any surface with two screws or bolts. The uncased transformers for indoor use may also be fastened to any surface with two screws or bolts.

Model No.	DESCRIPTION	IMPEDANCE - OHMS		LIST PRICE
		PRIMARY	SECONDARY	
5401	12 Watt, waterproof case	500, 1000, 1500, 2000	4, 8	\$12.50
5402	25 Watt, waterproof case	250, 500, 1000, 1500, 2000	4, 8, 16	20.00
5409	12 Watt, waterproof case	45	8	12.00
5410	20 Watt, waterproof case	500, 1000, 1500, 2000	16	13.50
5403	12 Watt, uncased, for indoor use	500, 1000, 1500, 2000	4, 8	3.50
5403-1	12 Watt, uncased, for indoor use	45	8	3.00
5408	20 Watt, uncased, for indoor use	500, 1000, 1500, 2000	16	4.50

Note: Connecting a speaker of twice the impedance across a given secondary will double all primary values. Conversely, a speaker whose impedance is half the secondary value, will halve all primary values. As an example, the following impedances are available with the model 5402:

PRIMARY IMPEDANCE	SECONDARY LOAD
125, 250, 500, 750, 1000, 1500, 2000	4 Ohms
125, 250, 500, 750, 1000, 1500, 2000, 3000, 4000	8 Ohms
250, 500, 1000, 1500, 2000, 3000, 4000, 6000, 8000	16 Ohms



MODELS 5401, 5409, 5410



MODEL 5402

See and Hear

KAINER SOUND PROJECTORS

NEW KAINER "High Intensity" REFLEX TRUMPETS

These NEW IMPROVED KAINER REFLEX TRUMPETS are unique in design and construction. Spun of a special steel alloy with attractive offsets adding extra strength, ruggedness and durability with improvement to the acoustic properties.

The Reflex Trumpets are beautifully finished with a gray hammerloid baked on enamel assuring increased acoustic value and durability.

The mounting fixture furnished with both the RT-26 and RT-21 Trumpets is constructed of cast malleable iron highly finished and adjustable to all practical angles. This fixture includes a handle for ease in carrying.

An optional feature is the back which encloses the driver unit adding a streamline effect to the contour of the Trumpet and protection for the unit.

As standard equipment, a moulded rubber rim attached to the beading on the edge of the bell is supplied. Both models are equipped with a threaded attachment 1 3/8" x 18 thread which will take a KAINER P. M. Driver Unit or any other standard unit.

The RT-16 Trumpet is very similar to the larger horns. It is a new addition to the KAINER line and various tests have proven it will meet every requirement for its purpose.

Permanent Magnet Driver Units—Manufactured to the highest of electrical and mechanical standards and of the finest available materials. Two models designed to take care of all public address work, rated at the same handling capacity in watts. The chief difference is in the increased efficiency in power output and in total range evident in the larger models. Diaphragms are breakdown proof at the rated capacity of 25 watts continuous operation and the unit is waterproof from all angles.

All units are equipped with 1 3/8" by 18 thread connection to fit either the R-T21 or the R-T25 Trumpet models.



Model No. DU-2
 Continuous Power Cap. 25 watts
 Freq. Response... 60-5500 cycles
 Rec. Trumpets... R-T21 & R-T25
 Net Weight... 7 lbs.
 List Price... \$53.00



Model No. DU-1
 Continuous Power Cap. 25 watts
 Freq. Response... 50-5000 cycles
 Rec. Trumpets... R-T21 & R-T25
 Net Weight... 4 lbs.
 List Price... \$37.00



Model RT-25

Overall Length 21"
 Bell Diameter 26"
 Acoustic Length 4'10"
 Projection Angle 90°
 Shipping Weight 28 lbs.
 List Price, Complete \$48.75
 With streamline weatherproof back \$54.50

Model RT-21

Overall Length 18"
 Bell Diameter 22"
 Acoustic Length 4'
 Projection Angle 80°
 Shipping Weight 21 lbs.
 List Price, Complete \$43.75
 With streamline weatherproof back \$49.00

Model RT-16

Overall Length 16"
 Bell Diameter 16"
 Acoustic Length 2'10"
 Projection Angle 85°
 Shipping Weight 16 lbs.
 List Price \$36.00



All Steel Exponential Sound Projector for 12" Speakers

Model J-12 all steel sound projector is the result of severe laboratory and field tests. It will accommodate all types of 12" speakers with or without matching transformers, including those with extra heavy permanent magnets.

Sturdily constructed of heavy spun steel alloy, it is light in weight yet strong enough to stand the abuse of heavy vibration under load as well as rough handling.

Breather opening is screened. Entire projector is beautifully finished with high lustre, baked-on, weatherproof art enamel. The malleable iron fixture to which the lower bracket can be attached is welded to the baffle and extends up the sides to include two of the speaker bolts which assures the minimum of vibration in the entire instrument.

The malleable iron base and bracket carries a tilting dog-toothed adjustment with a swivel and lock nut.

Model J-12

Overall Length 20"
 Circular Mouth Opening 17"
 Flare Extension 11"
 Shipping Weight 16 lbs.
 J-12—Horn
 List Price, Complete \$25.40

All Steel Exponential Sound Projector for 8" Speakers

Model J-8 is specially designed to accommodate all types of 8" speakers and is very similar in construction to Model J-12 above.

The sturdy spun steel alloy construction is light in weight yet very strong. The baffle is spun in only two pieces, with the exclusive KAINER wedge fit feature which overcomes vibrations under extreme load.

Built with perforated breather opening. Both baffle and bracket are attractively finished with a new high lustre, weatherproof, baked-on art enamel.

The malleable iron fixture to which the lower bracket extension can be attached is firmly welded to the baffle, and is tapped so that any distance from the floor, wall or ceiling may easily be obtained by using 1/2" pipe, nipples, couplings, etc.

Bracket attachment furnished consists of flange base with length of pipe and elbow for either wall or upright mounting.

Model J-8

Overall Length 17"
 Circular Mouth Diameter 14"
 Flare Extension 9"
 Shipping Weight 8 lbs.

J-8—Baffle
 List Price, Complete \$15.85



All Steel Exponential Sound Projector for 6" Speakers

Model J-6 is used extensively in parking lots, garages, small playgrounds, hallways, stock rooms, hotels, hospitals, warehouses and other places where call system are needed. A perfect accessory to installations where 6" speakers must withstand all weather conditions and heavy service. Severe tests have proved that the Model J-6 Baffle produces clearer and more perfectly projected speech than when unprotected speakers or flat type speaker housings are used.

Has perforated breather opening. The shell is built to accommodate any 6" P.M. speaker with matching transformer.

Constructed of heavy spun steel alloy all parts attractively finished in the new high lustre, weatherproof, baked-on art enamel. The malleable iron fixture is welded to the baffle and tapped so that any distance off the wall or ceiling may be obtained by attaching required length of 1/2" pipe, nipples, couplings, etc., thus insuring a permanent and rigid installation.

Model J-6

Overall Length 9 1/2"
 Circular Mouth Opening 10"
 Flare Extension 5"
 Shipping Weight 4 1/2 lbs.
 J-6 Baffle
 List Price, Complete \$10.15

See and Hear

KAINER SOUND PROJECTORS



A New KAINER DEFLECTOR TYPE Ceiling Baffle

360° Disbursement of Sound

A baffle designed to offer even distribution of sound for low ceiling restaurants, lounges, meeting rooms, etc., where an attractive unit is welcome. Baffle plates are cast aluminum—apron or speaker housing is spun of heavy high grade aluminum alloy sheets and vibration is held to a minimum with a full circular gasket. Installation is very simple. A metal bracket, furnished with unit, is fastened to the ceiling—an 8" speaker is bolted to largest baffle plate and with apron, is then bolted to bracket. Balance of plates are then locked in place by turning up small bottom baffle plate. Finished in a gray hammerloid baked on enamel.

Model DT-8

Overall Height 8"
 Diameter 17"
 Weight 8 1/2 lbs.
 List Price **\$32.50**
 Speaker.....any 8" standard

Without Apron

Should the unit be installed in a false ceiling where the speaker may be recessed, the unit can be furnished without the apron and the largest baffle plate may be fastened directly to the ceiling. Overall Height 3"
 Diameter 15"
 Weight 6 lbs.
 List Price **\$20.50**

CHANDELIER BAFFLES FOR UNIFORM COVERAGE

CB-12

A KAINER development in speaker baffles for uniform coverage. The construction of this horn affords 360° disbursement of sound with lower deflector reducing feed back and areas of concentrated sound. This design of horn is ideal for Restaurants, Clubs, Cabarets and Dance Halls where the necessity of projecting sound close to the performers is important. It will replace multiple wall speaker installations eliminating large installation cost with a minimum of maintenance. It is spun of heavy gauge steel and finished in a beautiful baked-on enamel. It is simple to install, suspended from the ceiling with link chain. Accommodates any heavy duty 12" P. M. speaker. A moulded rubber rim is used on both bells eliminating vibrations.

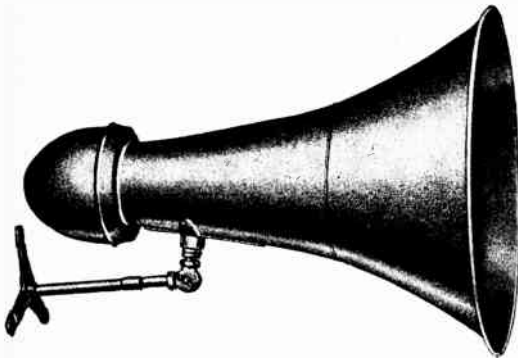
Diameter 32"
 Height 19"
 Weight 25 lbs.
 List Price, Complete.....**\$37.75**
CB-8

The CB-8 is constructed of the same quality materials and design of the larger CB-12. Made to take any standard 8" speaker it offers maximum uniform coverage at minimum cost. A horn that has everything—beauty in appearance—strength—uniform sound distribution—all at a low cost.

Diameter 20"
 Height 17"
 Weight 11 1/2 lbs.
 List Price, Complete.....**\$23.25**



AIR COLUMN HORN Model A-C-8



Specially effective for all outdoor work: Baseball Parks, Circuses, Athletic Fields, and all installations where power and direction of sound are particularly required. (The A-C-8 Air Column Horn is well suited for applications where sound must be projected great distances and with the minimum of feedback. When using a microphone under conditions where ordinary baffles would be unsatisfactory, this horn with its uni-directional qualities will allow in most cases double or more power to be used before the feed back point is reached. (The back of this horn is completely closed, eliminating to the best possible extent, interference to person or persons using a microphone, and allowing the best possible placement of speakers either directly above and slightly forward of the microphone, or to the left or right of the microphone and slightly forward. Both of these positions eliminate bothersome "double talk" and "lag" which is objectionable to audiences. This method of placement gives the best illusion that the sound is coming directly from the person using the microphone. (The bracket attachment is welded to the horn, properly balanced, and mounting fixtures with base can be furnished as a complete unit, permitting exceptionally convenient means for installation. (THE KAINER AIR COLUMN HORN is constructed of heavy spun steel alloy, light in weight, yet very strong. All parts finished with durable baked art metal enamel. Designed for 8" HEAVY DUTY Speaker—Bell Opening 24"—Overall Length 36".

Horn Complete with Mounting Fixture, Base and Adjustable Attachment List **\$44.80**

KAINER WEATHERPROOF HORNS

Model WH-8

Construction similar to Model WH-8 except size is for 6" speaker. (Used for all unsheltered outdoor and Fire Cars, Stadiums, etc., etc. (Exceptionally sturdy construction—Possible physical damage to the cone speaker is overcome due to its inverted position. The speaker faces the inside of the horn. (This construction will withstand exposure to rain, snow and wind. (The bell and housing are spun of heavy gauge steel alloy, light in weight, yet very strong; and all parts are heavily finished with a durable baked art metal enamel. (Bracket attachment is welded to the horn, properly balanced, and mounting fixture with base can be furnished as a complete unit, permitting exceptionally convenient means for installation on Sound Trucks, Wall, or Portable Use. (Designed for 8" HEAVY DUTY Speaker. Bell Opening 22 3/4". Over all Length 17 3/4"—Height from Base 27".

\$33.85

Horn Complete With Base and Fixture.

Model WH-6

Construction similar to Model WH-8 except size is for 6" speaker. (Used for all unsheltered outdoor and indoor installations, factories, airports, sound trucks, police and fire cars, stadiums, etc. (The bell and speaker housing are of spun heavy gauge steel alloy, all parts finished with a durable art baked enamel. (Heavy aluminum casting firmly holds speaker. Mounting is attached to casting on which the speaker is mounted. (Very sturdy construction throughout. Designed for 6" Heavy Duty P.M. Speaker.

SPECIFICATIONS
 Over All Length 12".
 Shipping Weight—11 lbs.
 mounting fixture..... List **\$18.50**

Horn complete with base and

baked art metal enamel. The bell and cone are mounted on an aluminum alloy casting to which the base fixture is also attached. This insures a rigid assembly and makes it convenient to install 5" cone speaker direct to the aluminum casting.

SPECIFICATIONS
 Over All Length—8".
 Shipping Weight—5 1/2 lbs.
 Horn complete with base..... List **\$12.60**



Model WH-5—FOR 5" SPEAKERS— COMPACT AND EFFICIENT

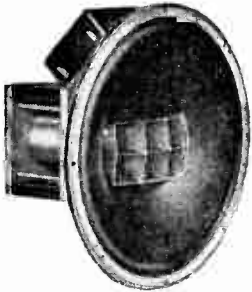
The inverted reflex design is similar to that used in the WH-6 and WH-8 models, which aids materially to the performance of any good cone speaker. (For all purpose use, including use as a microphone in Talk-Back installations—wide frequency range, good for both music and voice. (The very substantially constructed bell and reflex cone are of spun steel alloy, finished with gray



Speaker Systems for

Theater and Home

SPEAKERS

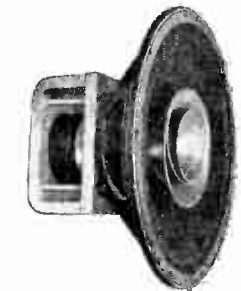


MODEL P-52A Coaxial Speaker

Combines in a single assembly a Low-Frequency unit of the cone type, a High-Frequency unit of the multicellular type and the complementary 2-channel crossover. Ideal for AM and FM reception, broadcast station monitoring and sound-motion picture reproduction. *Electrical Characteristics:* (1) Power input: 20 Wctts; (2) Crossover Frequency: 1200 C.P.S.; (3) High-Frequency distribution: 80° x 40°; (4) Field Excitation: 6½ lb. Alnico 5; (5) Input impedance: 16 Ohms; (6) Frequency response: ± 5 db from 40 to 14,000 C.P.S.; (7) Cone resonance: 55 cycles.

Physical Characteristics: (1) Overall Diameter: 15½"; (2) Baffle Opening: 13½"; (3) Depth behind mounting panel 10"; (4) Net Weight: 30 Pounds.

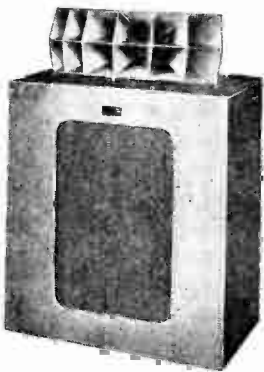
Licensed under Western Electric Patents. **Price \$205 List.**



MODEL P-52FR and P-22FR Co-Spiral Speakers

Subdues deficiencies both in the set itself and in source material. Built with the same precision limits and same engineering skill found in all Tru-Sonic units. Especially designed as a replacement speaker . . . Full 15 watts of power handling capacity. Seamless molded curvilinear cone of new design. Two acoustic sections, one for reproducing lowest bass, and one for extended high tones. Reproducing range 40 to 14,000 cycles. Powerful Alnico 5 magnet. Greatest electro-acoustic transfer efficiency and widest range of any speaker utilizing one voice coil. 90° High-Frequency dispersion. Silver Spiral differential diffuser. *Specifications:* (1) Power Input: 15 Watts; (2) 2½ lb. Alnico 5; (3) Input Impedance: 8 or 16 Ohms; (4) Overall Diameter: 15½"; (5) Net Weight: 23 lbs. . . . Licensed under Western Electric Patents.

Price, Model P-52FR, 15" dia. \$80; Model P-22FR, 12" dia. \$70 List.



MODEL P-52HF Separate 2-Way System

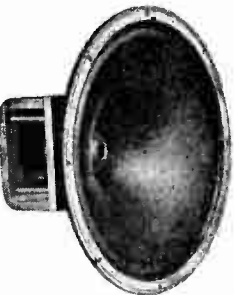
In order to provide a de luxe presentation for the most discriminating audience, Stephens engineers have designed the Tru-Sonic Separate 2-Way Speaker System. Space requirements are greater than for the Tru-Sonic Coaxial unit, for in order to extend the tone range and permit the ultimate in realism, larger physical proportions are necessary. The P-52HF is standard in the Tru-Sonic Model 52U Utility Cabinet. Components consist of a Tru-Sonic Type P-15 High-Frequency Driver, a Model P-52L Low-Frequency Driver, a Series 800 High-Frequency Cellular Horn and a Model 800X Crossover. *Electrical Characteristics:* (1) Power input: 20 Watts; (2) Crossover frequency: 800 cycles; (3) Number of high-frequency cells: 8, 10 or 12 (See below); (4) 6½ lb. Alnico 5; (5) Input impedance: 16 Ohms; (6) Cone resonance: 55 cycles; (7) Frequency response: ± 5 db from 40 to 14,000 cycles. Weight: 130 lbs. Licensed under Western Electric Patents. . . .

Price, with 2x4 horn \$320, with 2x5 horn \$332.50, with 2x6 horn \$345, with 2x4 horn in 52SD Cabinet \$440 List.

MODEL P-52L and P-22L Low-Frequency Drivers

Low-Frequency driver components for Tru-Sonic Separate 2-Way Systems. (Model P-52L illustrated and described. P-22L same as P-52L except 12" cone diameter and 2½-lb. magnet.) Powerful 15" speaker with curvilinear-designed, highly efficient seamless moulded and moisture-resistant cone. Suspension compliance has been carefully calculated to promote ideal piston-like action of the diaphragm. Effective driving area is approximately 125 sq. inches. Voice coil is 2 inches in diameter, treated with a refined temperature-resistant varnish, and wound with highly conductive copper wire. *Electrical Characteristics:* (1) Power Input: 20 Wctts; (2) 4 lb. Alnico 5; (3) Input Impedance: 8 or 16 Ohms; (4) Cone Resonance: 55 cycles. *Physical Characteristics:* (1) Overall Diameter: 15½"; (2) Baffle Opening: 13½"; (3) Depth behind Mounting Panel: 8½"; (4) Net Weight: 25 Pounds; (5) Mounting Dimensions: RMA Standard. Licensed under Western Electric Patents. . . .

Price, Model P-52L \$80; P-22L \$70 List.



STEPHENS MANUFACTURING CORPORATION



Speaker Systems for

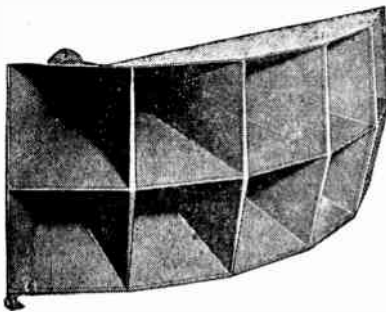
Theater and Home

Components for 2-Way Speaker Systems

Several systems of different crossover frequency and size may be assembled from the components shown here. However the same series of horns must be used with crossover networks of the same series number. For example, P-30 and P-40 Drivers should be used only with Series 400 and 600 Horns and Crossovers. The P-15 Driver is used with the Series 800 Horns and Crossovers only. It is desirable to use the lowest crossover and complementary components that the individual's space limitations and economy will permit. On the Series 400-600 Crossovers 2 L-F, 8 ohm drivers, preferably Model P-52L, are recommended.

HIGH-FREQUENCY HORNS

In order for the listener who is off the axis to receive his balanced proportion of high to low tones, the high-frequency beam must be properly deflected. This is accomplished in Tru-Sonic standard High-Frequency Horns by utilizing multiple cells nested together so as to provide coverage through a large horizontal angle and a smaller vertical angle. The normal listening area is entirely served in this manner with high frequencies. The High-Frequency Horn serves an additional important purpose: its design provides proper acoustic loading on the high-frequency unit without which it cannot operate efficiently.

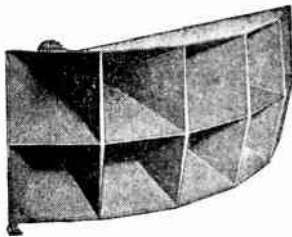


SERIES 400

Model 425H Horn. Takes P-30 or P-40 Driver. 400 cycle, 2 x 5 configuration, 40° x 100° dispersion. 43"W x 17½"D x 31½"H overall. Weight: 65 lbs. Price, \$200 List.

Model 436H Horn and Y Throat. For larger theaters. Takes 2 P-30 or P-40 Drivers. 400 cycle, 3 x 6 configuration, 60° x 120° dispersion. 56"W x 28½"D x 33"H overall. Weight: 135 lbs. Price, \$340 List.

Both Model 425H and 436H Horns take Model 400X Crossover. Size of each 400 cycle cell: 8" x 8" x 29". Intercepts 20° solid angle.



SERIES 600

Model 625H Horn. Takes P-30 or P-40 Driver and Model 600X Crossover. 600 cycle, 2 x 5 configuration, 40° x 100° dispersion. 23½"W x 16½"D x 11½"H overall. Size of each 600 cycle cell: 5" x 5" x 15". Intercepts 20° solid angle. Weight: 35 lbs. Price, \$110 List.

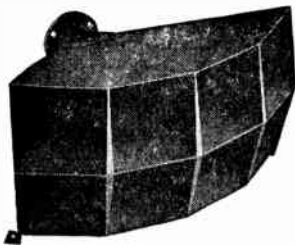
SERIES 800

Model 824H Horn. 800 cycle, 2 x 4 configuration, 40° x 80° dispersion. 16"W x 10"D x 11½"H overall. Weight: 15 lbs. Price, \$50 List.

Model 825H Horn. 800 cycle, 2 x 5 configuration, 40° x 100° dispersion. 18"W x 10"D x 11½"H overall. Weight: 18 lbs. Price, \$67.50 List.

Model 826H Horn. 800 cycle, 2 x 6 configuration, 40° x 120° dispersion. 20"W x 10"D x 11½"H overall. Weight: 20 lbs. Price, \$75 List.

All Series 800 Horns take a P-15 Driver and Model 800X Crossover. Size of each 800 cycle cell: 4" x 4" x 11". Intercepts 20° solid angle.



STEPHENS MANUFACTURING CORPORATION



Speaker Systems for

Theater and Home

Components for 2-Way Speaker Systems

HIGH-FREQUENCY DRIVERS

As generators of acoustic power in the upper end of the audible spectrum, the Tru-Sonic High-Frequency units present a perfect blend of sound-engineered design and listener preference. Acoustic response, in combination with Low-Frequency units, has been adjusted to levels picked as being most pleasing to a large majority of selected listeners. Actual listening tests on scores of representative groups of people have dictated the design of the acoustic proportions in the critical compression chamber.



TYPE P-40

40-Watt PM. Range: 350-16000 cycles.
16 Ohms. Dia. 6 1/4", Depth overall 5 1/2".
Weight: 35 lbs.

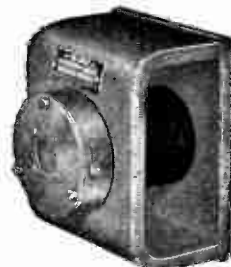
Price, \$200 List



TYPE P-30

30-Watt PM. Range: 350-16000 cycles.
16 Ohms. Dia. 5", Depth overall 4".
Weight: 25 lbs.

Price, \$120 List



TYPE P-15

20-Watt PM. Range: 500-16000 cycles.
16 Ohms. Dimensions: 4" x 6" x 3 3/4"
overall. Weight: 12 lbs.

Price, \$70 List

LOW-LOSS CROSSOVERS

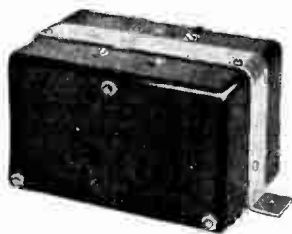
By means of the Tru-Sonic Dividing Network, or electrical crossover, the Low-Frequency reproducer receives the lower portion of the audible spectrum. The High-Frequency reproducer receives the energy carrying the treble tones and distributes them throughout the entire listening area without loss of level. Enclosed in non-metallic containers to eliminate distortion with varying frequency, the design of these crossovers allows 12 db attenuation per octave, the standard in universal practice. Attenuation is 3 db at crossover frequency; phase rotation is 270°. Low insertion loss through perfected construction is 1/2 db. Input impedance 16 ohms, low output impedance 16 ohms, high output impedance 16 ohms on all models.



MODEL 400X

400 cycle, up to 80 watts. 6"W x 4"D
x 4"H overall. Weight: 10 lbs.

Price, \$95 List



MODEL 600X

600 cycles, up to 80 watts. 5"W x 3 3/4"D
x 3 3/4"H overall. Weight: 8 lbs.

Price, \$67.50 List



MODEL 800X

800 cycle, up to 40 watts. 5"W x 3 3/4"D
x 3 3/4"H overall. Weight 6 lbs.

Price, \$45 List

STEPHENS MANUFACTURING CORPORATION



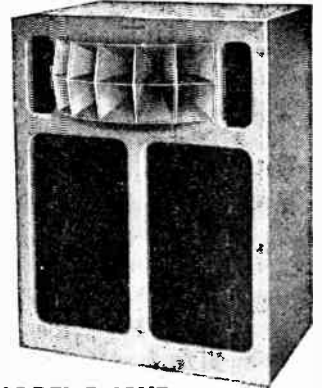
Speaker Systems for

Theater and Home

De Luxe 2-Way Systems and Cabinets

MODEL P-63HF: Specially designed for reproduction of the very highest quality source material; ideal for theaters and auditoriums up to 1750 seats. Over-size components make possible low level operation with negligible distortion for the de luxe FM station monitor room.

Conservatively rated at 30 watts to permit full dynamic impact at high levels of operation, it employs a 600 cycle crossover to relieve the two Model P-52L, 15", 20-watt low frequency drivers of high frequencies and consequent inter-modulation and cone breakup. Radical design permits horn loading down to 60 cycles. Special chamber behind drivers reinforces bass to 30 cycles. 2 x 5, 10 cell, 100° x 40° H-F dispersing horn. Model P-30, 30-watt H-F driver extends range beyond 15,000 cycles with efficiency over 50%. Total Alnico 5 magnet over 11 pounds. Equipped with H-F attenuator to perfectly balance room acoustics. Size, 25" deep by 36" wide by 45" high, allows this unit to be employed under practically any space limitation. Input: 16 ohms. Wt.: 245 lbs. **Price, \$675 List.**



MODEL P-63HF



MODEL P-63HF-SD

2-Way System in Period Cabinet, mahogany or bleached blonde (please specify). 30 cycle, 36"W x 25"D x 45 1/2"H. Wt.: 245 lbs. **Price, \$807.50 List.**

MODEL 52SD

Period De Luxe Cabinet, mahogany or bleached blonde (please specify). 8 cu. ft., 37 cycle, 15" baffle. 28 3/4"W x 19"D x 36 1/2"H. Weight: 80 lbs.

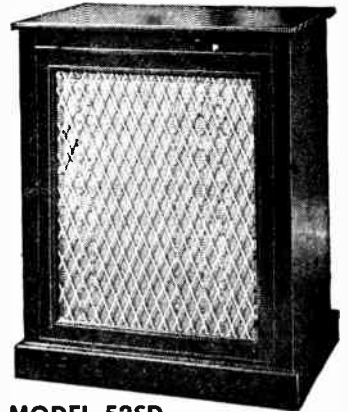
Price, \$180 List.

With P-52A Coaxial Speaker,

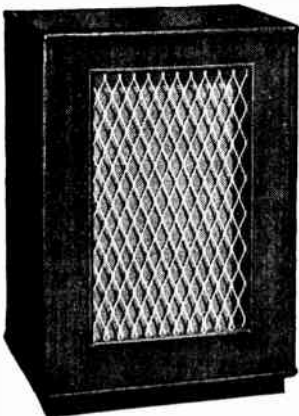
\$385 List.

With P-52HF 2-Way System,

\$440 List.



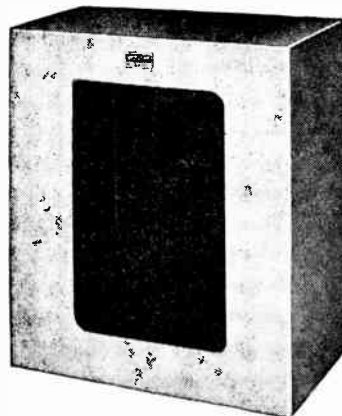
MODEL 52SD



MODEL 52D

De Luxe Cabinet in either mahogany or bleached blonde (please specify). 6 cu. ft., 42 cycle, 15" baffle. 23 1/2"W x 16 1/2"D x 34 1/2"H. Weight: 75 lbs.

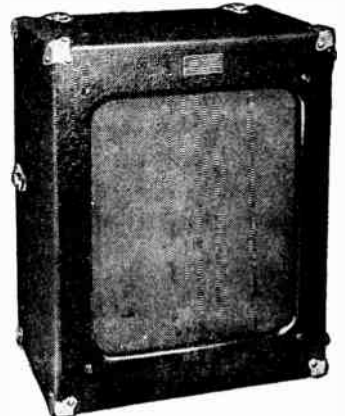
Price, \$130 List



MODEL 52U

Gray Utility Cabinet, wine flocked grill, 3/4" Pine Plywood, 6 cu. ft., 42 cycle (specify 12" or 15" baffle). 23 1/2"W x 17"D x 32"H. Weight: 70 lbs.

Price, \$60 List



MODEL 52P

Portable cabinet in black leatherette with chrome hardware (specify 12" or 15" baffle). 18"W x 12"D x 23 3/4"H. Weight: 28 lbs.

Price, \$75 List

STEPHENS MANUFACTURING CORPORATION

Cinaudagraph Speakers



DIVISION OF AIREON MFG. CORP.

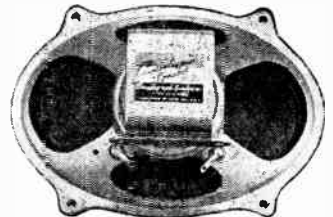
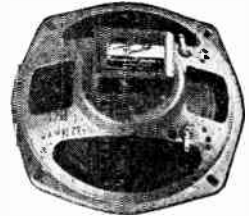
SALES OFFICE and FACTORY 1401 FAIRFAX TRAFFICWAY KANSAS CITY, KANSAS

ALNICO 5 - PERMANENT MAGNET SPEAKERS REPLACEMENT SERIES

This complete line has been designed especially for the serviceman, the amateur and those requiring lightweight units. Included in the line are all the necessary sizes and types for the replacement of speakers in most radio receivers from the smallest table model to the larger console models.

SIZE	MODEL	MAGNET ALNICO-5	VOICE COIL			LIST PRICE
			IMPED.	DIAM.	WATTS	
2 1/2"	P2A1	.68 oz.	3.2 ohms	1 1/4"	1.	\$ 3.65
	P2C1	1.47	3.2	1 1/4"	1.5	4.25
3 1/2"	P3A1	.68	3.2	1 1/2"	1.5	3.65
	P3C2	1.47	3.2	1 1/2"	2.	4.25
4"	P3A21	.68	45.	1 1/2"	1.5	4.25
	P4A1	.68	3.2	1 1/2"	2.	3.90
4" x 6"	P4C1	1.47	3.2	1 1/2"	2.5	4.50
	P4A21	.68	45.	1 1/2"	2.	4.50
5" Round	P46A1	.68	3.2	1 1/2"	3.	4.50
	P46C1	1.47	3.2	1 1/2"	3.5	5.10
5" Pin Cush.	P52F1	3.16	3.2	3/4"	5.	6.50
	P51A1	.68	3.2	1 1/4"	3.	4.15
5 1/4" Pin Cush.	P51C1	1.47	3.2	1 1/4"	3.5	4.75
	P51A21	.68	45.	1 1/4"	3.	4.75
5" x 7"	P53A1	.68	3.2	1 1/2"	4.	4.65
	P53C1	1.47	3.2	1 1/2"	4.	5.25
6 1/2" Pin Cush.	P57C1	1.47	3.2	1 1/2"	4.	5.50
	P57F1	3.16	3.2	3/4"	6.	7.25
6" x 9"	P6A1	.68	3.2	1 1/2"	3.	4.65
	P6C1	1.47	3.2	1 1/2"	3.5	5.25
7" Pin Cush.	P6F1	3.16	3.2	3/4"	5.	7.00
	P6H1	4.64	3.2	1 1/4"	6.	8.75
8"	P69F1	3.16	3.2	3/4"	6.	8.00
	P69H1	4.64	3.2	1 1/4"	8.	9.75
10"	P7E1	2.15	3.2	3/4"	5.	7.50
	P7E1A**	2.15	3.2	3/4"	5.	7.50
12"	P7G1	3.16	3.2	1 1/4"	6.	8.50
	P7H1	4.64	3.2	1 1/4"	8.	10.00
10"	P8D1	1.47	3.2	3/4"	5.	7.00
	P8G1	3.16	8.	1 1/4"	7.	8.50
10"	P8G2	3.16	3.2	1 1/4"	7.	8.50
	P8H1	4.64	8.	1 1/4"	8.	10.00
10"	P10G1	3.16	8.	1 1/4"	8.	10.50
	P10H1	4.64	8.	1 1/4"	9.	12.00
12"	P12G1	3.16	8.	1 1/2"	10.	11.50

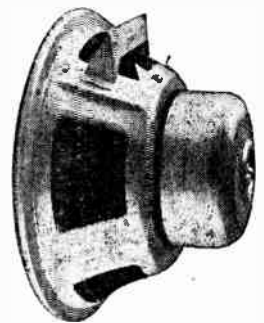
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PUBLIC ADDRESS SERIES

These units are primarily engineered for heavy duty public address service. They are conservatively rated, and are designed to give years of trouble-free service. The efficiency and the tone quality of these units are such that they are recommended for all purposes requiring heavy duty units.

Size	Model	Magnet Alnico-5	VOICE COIL			List Price
			Impedance	Diameter	Watts	
6"	P6J1	6.8 oz.	8	1 1/4"	8	\$10.75
8"	P8J1	6.8	8	1 1/4"	10	12.00
10"	P10J1	6.8	8	1 1/4"	10	14.00
12"	P10K1	12.1	8	1 1/4"	12	20.00
	P12J1	6.8	8	1 1/4"	12	15.00
15"	P12K1	12.1	8	1 1/4"	14	21.00
	P12M1	21.5	8	1 1/2"	17	40.00
15"	P15K2	12.1	8	1 1/4"	15	30.00
	P15M2	21.5	8	1 1/2"	18	45.00



EXTENDED RANGE SERIES

Designed expressly for F.M. and Television use, these units are also suitable for all installations requiring good performance to 10,000 c.p.s. CINAXIAL Models illustrated at left extend to 15,000 c.p.s. Especially recommended for high quality name phonograph reproduction, studio monitoring and similar wide range installations. These speakers are not recommended for general public address use because of limited power handling capacity. Models P8JHF1 and P12JHF1 are single cone speakers; CIN-12A consists of 12" low frequency speaker and 3" high frequency speaker. CIN-15B and CIN-15C have 15" low frequency speaker and 5" high frequency units. Bridging networks are built-in, require no controls.



Size	Model	Magnet Alnico-5	Voice Coil			List Price
			Impedance	Diameter	Watts	
8"	P8JHF1	6.8 oz.	8	1 1/4"	7	\$13.50
12"	P12JHF1	6.8	8	1 1/4"	10	17.50
12"	CINAXIAL CIN-12A	4.64	8	1 1/4"	10	27.50
15"	CINAXIAL CIN-15B	12.1	8	1 1/4"	15	47.50
15"	CINAXIAL CIN-15C	21.5	8	1 1/2"	18	62.50

Cinaudagraph Speakers



DIVISION OF AIREON MFG. CORP.

SALES OFFICE and FACTORY 1401 FAIRFAX TRAFFICWAY KANSAS CITY, KANSAS

FIELD COIL MODELS

This group was designed to be the most complete line of replacement units available in the world, from 3" to 12". These speakers are moderately priced consistent with CINAUDAGRAPH quality and workmanship, and the transformers have been engineered specially for the units which they serve.

SIZE	MODEL	—FIELD COIL—		—VOICE COIL—		LIST PRICE
		RESISTANCE	WATTS	IMPED.	DIAM.		WATTS
3 1/2" 4"	F3B2	450 ohms	3	3.2	3 1/2"	\$ 4.50
	F4B2	450	3	3.2	4"	4.75
	F4B3	1,000	3	3.2	4"	4.75
	F4B4	1,800 T-300	3	3.2	4"	4.75
	F4B6	2,750	3	3.2	4"	4.75
	F4B2	450	3	3.2	4"	5.00
4" x 6" 5" Rd.	F5B1	6-volt	3	3.2	4"	2.5
	F5B2	450	3	3.2	4"	5.00
	F5B3	1,000	3	3.2	4"	5.00
	F5B4	1,800 T-300	3	3.2	4"	5.00
	F5B6	2,750	3	3.2	4"	5.00
	F5B1	6-volt	3	3.2	4"	5.00
5" Pin Cush.	F51B2	450	3	3.2	5"	3.
	F51B3	1,000	3	3.2	5"	5.00
	F51B24	1,800	3	3.2	5"	5.00
	F51B6	2,750	3	3.2	5"	5.00
	F6B1	6-volt	3	3.2	5"	5.50
	F6B2	450	3	3.2	5"	5.50
6"	F6B3	1,000	3	3.2	5"	5.50
	F6B4	1,800 T-300	3	3.2	5"	5.50
	F6B6	2,750	3	3.2	5"	5.50
	F69D1	6-volt	4	3.2	6"	7.50
	F7D1	6-volt	4	3.2	7"	6.50
	F7D1A**	6-volt	4	3.2	7"	6.50
6" x 9" 7"	F8D3	1,000	4	3.2	7"	7.00
	F8D4	1,800 T-300	4	3.2	7"	7.00
	F8D5	2,500	4	3.2	7"	7.00
	F8H3	1,000	8	8.	8"	9.50
	F8H5	2,500	8	8.	8"	9.50
	F10H3	1,000	8	8.	10"	10.50
8" 10" 12"	F10H5	2,500	8	8.	10"	10.50
	F12H3	1,000	8	8.	12"	13.00
	F12H5	2,500	8	8.	12"	13.00

**Pot rotated 90°

TRANSFORMERS

FIXED IMPEDANCE

Size	Model	Impedance	List Price
1/2" x 1/2"	12A73	7000 ohms to 3.2 ohm V.C.	\$1.25
	12A43	4000 ohms to 3.2 ohm V.C.	1.25
	12A23	2000 ohms to 3.2 ohm V.C.	1.25
	12A53L	500 ohms to 3.2 ohm V.C.	1.25
5/8" x 5/8"	58A83	8000 ohms to 3.2 ohm V.C.	1.50
	34C53C	5000 ohms C.T. to 3.2 ohm V.C.	2.00
3/4" x 3/4"	34A53	5000 ohms to 3.2 ohm V.C.	2.00

ADJUSTABLE IMPEDANCE

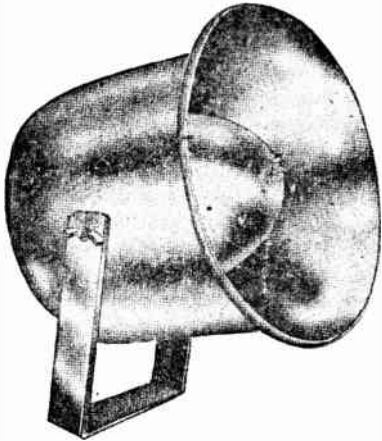
Size	Model	Impedance	List Price
1/2" x 1/2"	12A3U	* Plate to 3.2 ohm V.C.	2.10
5/8" x 5/8"	58A3U	* Plate to 3.2 ohm V.C.	2.35
3/4" x 3/4"	34A8U	** Plate to 8 ohm V.C.	3.50
7/8" x 7/8"	78A8UL	*** Line to 8 ohm V.C.	4.00

*Plate impedances of 2,000; 4,500; 7,000 and 10,000 ohms (No. C.T.)

**Plate impedances of 3,000; 5,000; 6,600; 7,000 and 10,000 (All C.T.).

***Line impedance of 2,000; 1,500; 1,000 and 500 ohms (No C.T.).

Manufactured and distributed by EMCO SOUND EQUIPMENT CORP., BROOKLYN, N. Y.



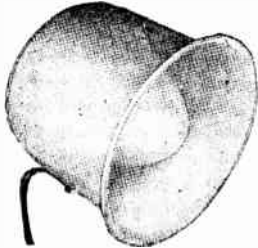
NEW! ARMORED ALL STEEL WEATHERPROOF MARINE STEEL

• FOR 6" — EASY MOUNTING

These weatherproof marine horns will withstand direct driving rain without damage to the cone speaker, constructed entirely of heavy gauge steel to withstand extreme hard use. The speaker dome is lined with acoustic felt to absorb back pressure and eliminate extra high frequencies and metallic resonance. Ideal for use in all indoor and outdoor installations. The special construction of these horns enables the reproduction of both voice and music with excellent fidelity of tone. Finished in a beautiful and durable weather resisting slate gray baked wrinkle enamel. Supplied with a unique and convenient mounting bracket which enables the speaker to be focused in any direction.

For 6" speakers.....Model MM-6.....List Price \$14.50

MARINE MIDGET BAFFLE

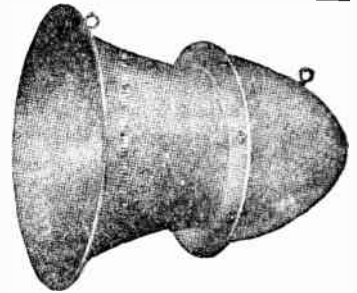


Designed for indoor and outdoor use. Inverted reflex design corresponds in effect to air column of 15 inches. Speaker housing is lined with a heavy acoustic felt to eliminate extra high frequencies and metallic resonance. Made of extra heavy gauge aluminum, finished in a beautiful battle ship gray. Adjustable bracket is supplied for mounting. Overall size 8", bell diameter 10".

Model MM-15List Price \$10.50
5" permanent magnet speaker ideally suited for use with above baffle. Output rating 5 watts.

Model PM-5List Price \$4.00

ARMORED ALL STEEL BAFFLE



This new armored all steel baffle is made to withstand the severest service, the all steel construction makes it impossible to dent or damage any part of this baffle. Resonance effects are eliminated due to the modern design incorporated in the construction. All holes for mounting speaker are punched, hardware for mounting speaker and hanging loops are supplied. Speaker dome large enough to accommodate all types of 12" P.M. and Dynamic speakers with sufficient room for transformer. Finished in a handsome and durable weather resisting slate gray wrinkle baked enamel.

Model No. AB-12List Price \$13.50

TRUCK MOUNTING BRACKET



Designed especially for our AB-12 baffles. A convenient fixture for mounting these baffles on sound trucks. Has four way swivel joint adjustment for tilting these baffles on sound trucks. Made of extra heavy malleable steel casting, finished in gray crinkle.

Model MT-8 List Price \$5.00



Saddle & Swivel

A convenient bracket for AB-12 baffles. Made of extra heavy malleable steel casting. Has four way swivel joint adjustment finished in gray crinkles with positive grip locks.

Model SS-7 List Price \$3.00

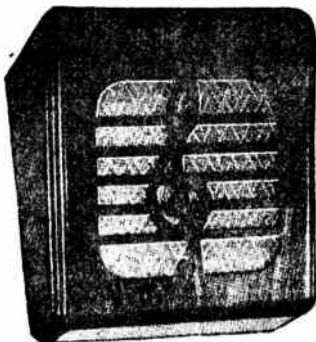


MOUNTING STAND

A heavy stand designed especially for AB-12 baffles. Extends from 5 to 9 ft. Weighs 40 lbs. Has 18 inch diameter base. A special bracket and clamp permit the tilting of baffle at any angle. Two locking collars prevent slipping. These stands are very excellent for temporary and permanent installations.

Model HS-40List Price \$25.00

Symphonic MUSIC BOX FOR 12" SPEAKERS



A beautifully designed cabinet made of choice Walnut Veneers, and handsomely finished. Heavily constructed and reinforced throughout. Cleverly designed grill adds to the beauty of this cabinet. The slope front gives the proper directional effect to the speaker. Supplied complete with

hardware for mounting speaker.

Model SM-12List Price \$12.00

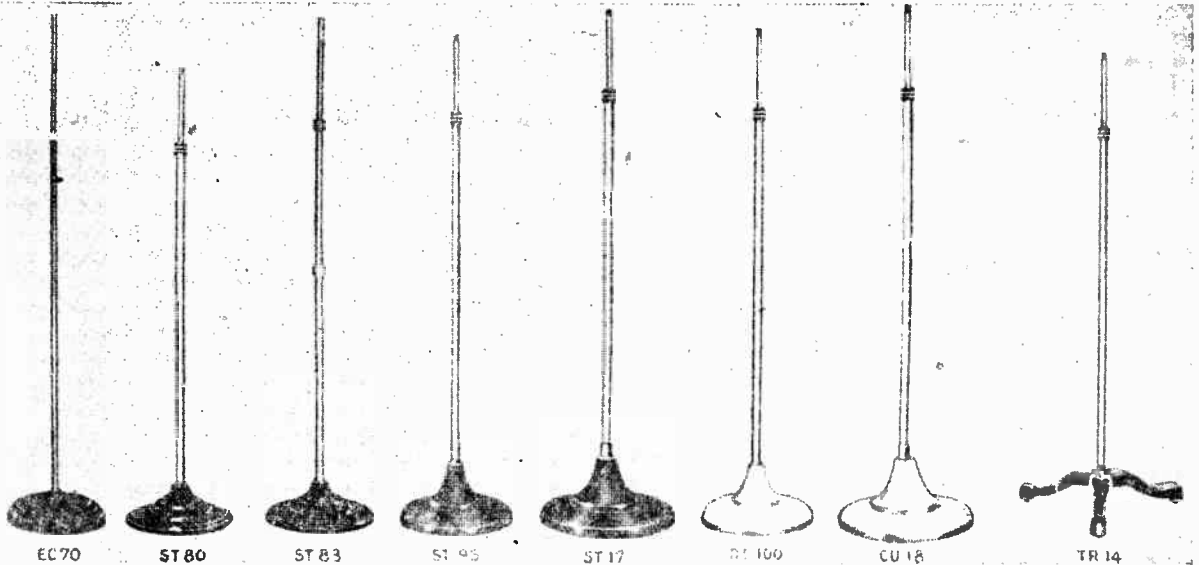
For 8" speakers, general construction and appearance same as above, physical size smaller to accommodate 8" speakers.

Model SM-8List Price \$9.00

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

EMCO • MICROPHONE STANDS

Manufactured and distributed by EMCO SOUND EQUIPMENT CORP., BROOKLYN, N. Y.



EMCO now introduces a new and more complete line of microphone stands, incorporating the latest features that modern engineering could produce. EMCO presents **smooth action**, a means for raising and lowering the microphone easily, smoothly and noiselessly. EMCO brings you the new **wear-ever, sure grip** automatic friction clutch lock, for locking the stand at any

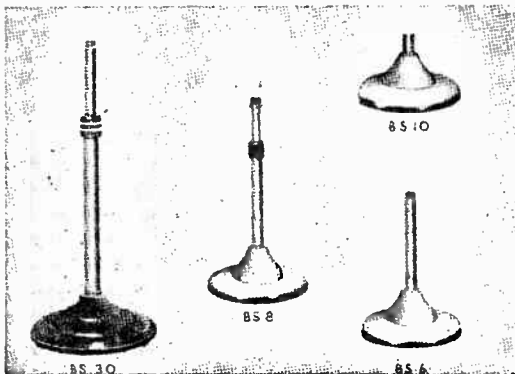
desired height. Due to the hardened fibre bushing incorporated in the clutch construction of these stands, all possible wear is eliminated, and will allow them to last for an indefinite period of time. All EMCO stands incorporate heavy gauge brass tubing throughout, which is extra heavily chrome plated. All have $\frac{5}{8} \times 27$ thread for all crystal or velocity microphones.

MODEL	BASE FINISH	TUBE FINISH	BASE DIAMETER	HEIGHT	WEIGHT	LIST
EC-70	gray crinkle	chromium	9 in.	35 to 68 in.	8 lb.	\$7.50
ST-80	gray crinkle	chromium	10 in.	35 to 68 in.	11 lb.	9.00
ST-83	gray crinkle	chromium	10 in.	24 to 68 in.	11 lb.	11.00
ST-95	gray crinkle	chromium	10 in.	35 to 68 in.	11 lb.	10.50
ST-17	gray crinkle	chromium	12 in.	35 to 68 in.	18 lb.	14.00
DE-100	chromium	chromium	10 in.	35 to 68 in.	11 lb.	11.40
CU-18	chromium	chromium	12 in.	35 to 68 in.	18 lb.	18.00
TR-14	gray crinkle	chromium	15 in.	35 to 68 in.	11 lb.	14.50

NOTE: Bases finished in gray crinkle are available in black crinkle on request

BANQUET STANDS

BS30—A modern banquet stand, incorporates **SMOOTH ACTION** and the new **SURE GRIP** automatic friction clutch lock, tubing of extra heavy gauge brass, heavily chrome plated. Base finished in beautiful gray crackle. Has rubber bumpers on base to eliminate scratching of table top. Base diameter 7", opens from 18 to 33 inches, has $\frac{5}{8} \times 27$ thread to fit all standard crystal and velocity mikes.
List Price \$6.00



BS5—An economically priced stand, base finished in gray crackle, tubing chrome plated. Base diameter 6 inches, height 9 inches. Has $\frac{5}{8} \times 27$ thread for microphone. Net weight 2½ lbs.
List Price \$2.25

BS6—A de luxe stand, all features same as model BS5, except base and tubing are both beautifully finished in chrome.
List Price \$3.50

BS7—A low priced stand. Has 6" diameter, base beautifully finished in gray crackle, tubing heavily chrome plated. Has automatic friction clutch lock for adjusting height. Opens from 10 inches to 15 inches. Has $\frac{5}{8} \times 27$ microphone thread, net weight 3 lbs.
List Price \$3.75

BS8—De luxe adjustable stand. All features same as model BS7, except base and tubing are both finished in chrome.
List Price \$4.75

BS10—A stand designed for use on desk with heavy velocity microphones. Base finished in beautiful gray crackle. Thread $\frac{5}{8} \times 27$ to accommodate microphone. Net weight 2 lbs.
List Price \$2.00

BS11—All features same as BS10 except the base is beautifully finished in chrome. $\frac{5}{8} \times 27$ thread for accommodating microphone.
List Price \$3.10

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE



CARRON CONES

'A CARRON CONE IMPROVES THE TONE'



Part No.	Model	List Price	Part No.	Model	List Price	Part No.	Model	List Price	Part No.	Model	List Price
1000	Atwater Kent 15142	\$2.48	1388	Quam 6"	\$1.65	1549	Jensen H68	\$1.65	1619	Zenith 49AG385	\$1.10
1035	Jensen D7	3.19	1390	Lyric 412	3.19	1552	Magnavox 1D-1400	1.38	1620	Zenith 49U334	1.10
1058	Majestic G1	2.48	1392	RCA 5T6	1.10	1555	RCA 9TA3	1.10	1621	Zenith 49BJ203	1.38
1059	Atwater G2	2.48	1400	Jensen 66R	1.65	1556	Utah 5PA2	1.38	1623	Belmont 510	1.10
1078	Philco 36-3170	1.54	1409	General Electric E61	1.38	1557	Philco 1708	1.21	1626	Chevrolet 985538	1.38
1079	Philco 36-3824	1.38	1411	Jensen G8R	2.48	1562	Emerson 4AN324	1.10	1627	Jensen G6RS	1.65
1124	Victor R32	1.93	1415	Operadio 334A	1.38	1564	Zenith 49B23	1.10	1629	Motorola 41-H	1.38
1198	Quam 5"	1.38	1417	Operadio M5	1.38	1566	Motorola 9-29	1.38	1630	Magnavox 1-D1894	3.19
1200	Magnavox 154D	2.48	1418	Arvin 467	1.38	1567	RCA RL-79-1	1.10	1634	Chevrolet 985538	1.38
1201	Utah 5D	1.38	1425	General Electric E61	2.20	1569	Motorola 17D	1.38	1638	Motorola 27D	1.93
1203	Philco 02861	1.10	1450	Crosley A157	1.38	1571	Jensen PM6GS	1.65	1639	Zenith 49H113	2.20
1204	Operadio 222	1.65	1455	Philco F1540, etc.	1.10	1572	Jensen E6RS	1.65	1640	Philco 73-0052-2	1.93
1225	RCA R37	1.10	1467	Philco 38-623	1.10	1575	RCA 85BT6	1.10	1641	Philco 73-0051-3	1.93
1236	RCA R28	1.10	1470	Utah F12P	3.19	1576	Jensen B15X	4.40	1642	Utah 12PG17-A	3.19
1244	Philco 54	1.10	1471	Chevrolet 985528S	2.20	1580	Utah ESP	2.48	1643	Motorola 50B20198	2.20
1245	Philco 36-3159	1.10	1473	Airline 62-350	1.38	1581	Utah 6B103	1.65	1644	Motorola 50B26880-0	1.93
1246	Philco 36-3157	1.10	1474	Jensen PM12B	3.19	1582	General Electric H508	1.10	1645	Motorola 50B25642-0	1.65
1248	Philco 02625	1.54	1483	Utah F12P	3.19	1583	Chevrolet 985536	2.20	1647	Utah 3P	1.10
1254	Grunow 650	2.48	1488	Oxford 5"	1.38	1584	Emerson DL330	1.38	1648	Motorola 50B26747-0	1.65
1281	Rola DP5B7	1.65	1489	Philco 38-12	1.38	1584	Crosley 519E	1.10	1653	Zenith 39-1-440	1.38
1282	Rola DP4	1.38	1491	Chevrolet 985425	1.38	1586	Philco TP12	1.00	1655	Jensen A12PM	3.19
1285	Jensen F6R	1.65	1495	Zenith 49-162	1.65	1587	Crosley 719	1.38	1658	Motorola 50B22637	2.20
1286	Jensen F5R	1.38	1498	Motorola 65	2.48	1589	RCA RL-78-3	1.10	1659	Motorola 50B24396-A	1.93
1313	RCA 80	1.65	1500	Philco 73-0026-2	1.10	1591	RCA 9X	1.00	1664	Utah 12PH15C	3.19
1315	Rola G12	3.19	1501	Philco C1550	1.38	1598	Jensen PM12B	3.19	1665	Utah H-L5-LP	3.58
1316	Magnavox 132	3.19	1503	Chevrolet 985426	1.38	1602	Jensen PM12GS	3.19	1666	Utah 12PG26A	3.19
1322	Ariston 5	1.38	1505	Emerson BA199	1.38	1603	Motorola 500	2.20	1667	Chevrolet 985695	2.48
1343	Philco C32	1.10	1507	Jensen PM5D	1.38	1604	Motorola 25F	1.65	1668	Zenith 49H491	2.48
1347	Rola K8 2 pt.	2.48	1516	RCA RL761	2.20	1606	Motorola 35N	1.65	1669	Zenith 49U491	2.48
1348	Rola K10 2 pt.	2.75	1517	RCA RL70F3	2.20	1607	Motorola 27-D	1.93	1670	Magnavox 1-D2308	2.48
1353	Oxford 5A 2 pt.	1.38	1528	Quam 4"	1.10	1609	Oxford 12AMP	3.19	1671	Emerson 9H8549	1.65
1366	Jensen A12	3.19	1529	Philco 920	1.10	1611	Philco AR-4	1.93	1672	Philco 36-1538-4	1.65
1372	Bosch 680	4.40	1532	Utah 3	1.10	1612	Utah 4A100	1.10	1680	Wurlitzer 750	4.40
1377	Philco 817	1.10	1534	Philco 39-6	1.38	1614	Utah H-12P	3.19	1681	Magnavox 1-D2309	4.40
1384	(Ford 1937)	1.10	1539	Philco 36-4089	2.48	1615	Utah 4A106A	1.10	1682	Wurlitzer 750	4.40
1387	Jensen PM12C	3.19	1540	Philco F1640	1.10	1616	Zenith 49AB341	1.93	1683	Magnavox 1-D2329	3.19
1387	Quam 5"	1.38	1542	Philco TH4	1.10	1617			1685	Philco 36-1433-0	1.65

CARRON UNIVERSAL FIELD COILS

Check maximum and minimum dimensions carefully. The winding must be physically close to the original. We have allowed a maximum variation of 1/8 inch spacing from coil to core, a variation in width of 1/4 inch and we suggest that the universal coil selected should have a diameter as close to the original as possible. 3/8 inch

smaller is the limit for safe operation. All of the wire in our universal field coils is in use at all times. Two resistance ranges are possible. One with the windings in parallel and the other with the winding connected in series. Complete directions furnished with each coil.

Cat. No.	Pole Piece		Inches O.D.	Length		Parallel .. Resistance	Series Resist	List Price
	Min.	Max.		Min.	Max.			
U300	3/4	1	2	3/4	1	*	1000	\$1.86
U301	3/4	1	2	3/4	1	*	1500	1.86
U302	3/4	1	2	3/4	1	*	2000	1.86
U303	3/4	1	2	3/4	1	*	2500	1.86
U304	3/4	1	2	3/4	1	*	3000	1.86
U309	3/4	1	2	3/4	1	*	450	1.86
U311	1 1/4	1 3/4	1 3/4	5/8	7/8	*	450	1.24
U312	1 1/4	1 3/4	1 3/4	5/8	7/8	*	1000	1.24
U313	1 1/4	1 3/4	1 3/4	5/8	7/8	*	1500	1.24
U314	1 1/4	1 3/4	1 3/4	5/8	7/8	*	2000	1.24
U315	1 1/4	1 3/4	1 3/4	5/8	7/8	*	2500	1.24
U316	1 1/4	1 3/4	1 3/4	5/8	7/8	*	3000	1.24
U305A	1-1 1/4	1-1 3/4	2 1/2	1 3/8	1 5/8	375-460	1500-1800	3.84
U305B	1-1 1/4	1-1 3/4	2 1/2	1 3/8	1 5/8	560-690	2250-2750	3.84
U305C	1-1 1/4	1-1 3/4	2 1/2	1 3/8	1 5/8	675-825	2700-3300	3.84
U305D	1-1 1/4	1-1 3/4	2 1/2	1 3/8	1 5/8	900-1100	3600-4400	3.84
U305E	1-1 1/4	1-1 3/4	2 1/2	1 3/8	1 5/8	1125-1375	4500-5500	3.84
U306A	1-1 1/4	1-1 3/4	2 1/2	1 3/8	1 5/8	375-460	1500-1800	3.84
U306B	1-1 1/4	1-1 3/4	2 1/2	1 3/8	1 5/8	560-690	2250-2750	3.84
U306C	1-1 1/4	1-1 3/4	2 1/2	1 3/8	1 5/8	675-825	2700-3300	3.84
U306D	1-1 1/4	1-1 3/4	2 1/2	1 3/8	1 5/8	900-1100	3600-4400	3.84
U306E	1-1 1/4	1-1 3/4	2 1/2	1 3/8	1 5/8	1125-1375	4500-5500	3.84
U307A	1-1 1/4	1-1 3/4	2 1/2	1 3/8	1 5/8	375-460	1500-1800	3.84
U307B	1-1 1/4	1-1 3/4	2 1/2	1 3/8	1 5/8	560-690	2250-2750	3.84
U307C	1-1 1/4	1-1 3/4	2 1/2	1 3/8	1 5/8	675-825	2700-3300	3.84
U307D	1-1 1/4	1-1 3/4	2 1/2	1 3/8	1 5/8	900-1100	3600-4400	3.84
U307E	1-1 1/4	1-1 3/4	2 1/2	1 3/8	1 5/8	1125-1375	4500-5500	3.84
U308A	1-1 1/4	1-1 3/4	2 1/2	1 1/4	1 1/2	375-460	1500-1800	3.84
U308B	1-1 1/4	1-1 3/4	2 1/2	1 1/4	1 1/2	560-690	2250-2750	3.84
U308C	1-1 1/4	1-1 3/4	2 1/2	1 1/4	1 1/2	675-825	2750-3300	3.84
U308D	1-1 1/4	1-1 3/4	2 1/2	1 1/4	1 1/2	900-1100	3600-4400	3.84
U308E	1-1 1/4	1-1 3/4	2 1/2	1 1/4	1 1/2	1125-1375	4500-5500	3.84
U310A	1-1 1/4	1-1 3/4	2 1/4	1 1/8	1 3/8	375-460	1500-1800	3.84
U310B	1-1 1/4	1-1 3/4	2 1/4	1 1/8	1 3/8	560-690	2250-2750	3.84
U310C	1-1 1/4	1-1 3/4	2 1/4	1 1/8	1 3/8	675-825	2700-3300	3.84
U310D	1-1 1/4	1-1 3/4	2 1/4	1 1/8	1 3/8	900-1100	3600-4400	3.84
U310E	1-1 1/4	1-1 3/4	2 1/4	1 1/8	1 3/8	1125-1375	4500-5500	3.84

*Single Winding, One Resistance Only.

CARRON MANUFACTURING CO.

CARRON COILS

ANTENNA AND R.F. COILS Important! Read This Before Ordering

The coils in the following list are so grouped that a selection may easily be made. Coils of the same group may be tracked together, and where used in a superheterodyne, choice of an oscillator coil having the same color code dot will result in proper tracking over the desired range.

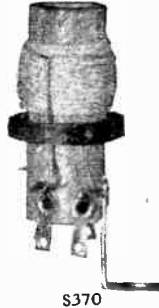
Two general ranges are covered—1715-560 K.C. and 1500-540 K.C. In each case, some overlap is obtainable. The coils for the 1715-550 K.C. range (coded red dot) are usually tuned with a 410 mmfd. gang condenser, while the latter (coded green dot) are tuned with 365 mmfd. condenser.

MIDGET COILS

Furnished shielded or unshielded, these coils represent the latest trend in the design of small air core inductances. "Universal Progressive" bank wound with "litz" wire on impregnated tubes, high impedance primaries of silk enamel wire, and careful design make these coils exceptionally "hot." Even gain is obtained over the broadcast band due to the use of "litz" wire and the choice of winding type. Oscillator Code "Green Dot."

Unshielded Type		
S370 Ant.	.....	\$0.69
S371 R.F.	.....	.69

Shielded Type		
Can size 1 1/8" x 1 1/4" long. Mounting centers 1 1/4".		
S372 Ant.	.....	\$0.87
S373 R.F.	.....	.87



PEE-WEE COILS

Designed for the experimenter and for use in service replacement for the miniature sets which have become so popular. Secondaries are "progressive" wound with litz wire on a 1/2" x 1 1/2" impregnated form, high impedance primaries and coupling turns are provided to give maximum response throughout the broadcast band. "Ear" lug mounting is provided on the Antenna Coil and a bent bracket on the R.F. Coil. RMA color coded for ease in connection, mounting space (maximum over primary) 7/8" x 1 1/2". Green dot oscillator code.

S407 Antenna, List	\$0.69
S408 R.F. List	.69

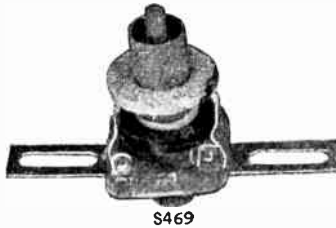


ECONOMY TYPE UNSHIELDED UNIVERSAL ADJUSTABLE COILS

For use in sets for which no exact duplicates are available. The secondary is adjustable with an iron core slug for all values of inductance usually encountered in replacement work. The primary is wound on a slip-over adjustable collar.

Color coded with Universal bracket for mounting in a can up to 2 1/8" O.D. or may be used unshielded and mounted in a single hole. Complete instructions furnished.

Cat. No.	Type	List
S469	Antenna	\$1.25
S471	R.F.	1.25
S472	Oscillator	1.25



PHONO OSCILLATOR COIL

S-374—Phono Oscillator Coils List \$2.25

HIGH TEMPERATURE AUTO I.F. TRANSFORMERS

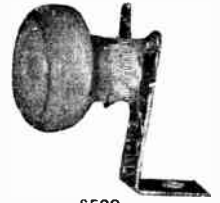
No wax is used. Polystyrene impregnation—will not "melt down" in the high temperatures frequently encountered in automobile installations. 1 1/4" x 1 1/4" x 2 1/2" cans. Spade bolt mounting.

S-356 HT—455 KC Input Trans.	.....	List \$1.55
S-358 HT—455 KC Output Trans.	.....	1.55
S-359 HT—262 KC Input Trans.	.....	1.55
S-361 HT—262 KC Output Trans.	.....	1.55

SEE OR WRITE YOUR LOCAL JOBBER
FOR OUR COMPLETE COIL LINE

OSCILLATOR COILS

Designed for operation with any tube using conventional feedback methods. Color coded for connection. Paddder values furnished. In choosing an oscillator coil be sure to choose the proper code to agree with the R.F. and antenna code, "red" or "green" dot. Wound on a special new form which we have developed, with cotton covered enamel wire thoroughly dehydrated, treated with Carron HQ711, and flash dipped in a high melting point wax.



Cat. No.	I.F. Freq.	Approx. Paddder Values	Code	List Price
S529	455/6	130 Mmfd.	Green	\$0.94
S614	455/6	437 Mmfd.	Red	.94
S616	262	930 Mmfd.	Green	.94
S528	175	1350 Mmfd.	Green	.94
S618	175	1548 Mmfd.	Red	.94

Tapped Oscillator Coil for "Electron Coupled" Converter Tubes
Designed particularly for use with converter tubes such as the 6SA7. These coils are for operation with 455/6 K.C. I.F. frequencies only.
S416 Green Dot \$0.94

MIDGET I.F. TRANSFORMERS

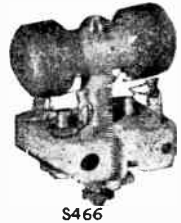
Mica Tuned, Ceramic Base Trimmer—1 1/8" x 1 1/8" x 2 1/2" Overall Wound with the most suitable wire and winding for its particular frequency. A stable, non-warping, ceramic base trimmer is employed, impregnated winding forms and overall "flash" d.p. Coupling and gain are set to the optimum value for "universal" application. May be used in either one or two stage amplifiers.

Cat. No.	Freq. K.C.	Midget Standard I.F. Position	List
S356	455	Input—Int.	\$1.55
S358	455	Output	1.55
S359	262	Input—Int.	1.55
S361	262	Output	1.55
S409	175	Input—Int.	1.55
S410	175	Output	1.55
Midget Iron Core I.F.			List
S362	455	Input—Int.	2.20
S364	455	Output	2.20

"CARTWHEEL" UNSHIELDED I.F.'s

Designed for unshielded operation in midget radios. Should not be employed in cases where the original was furnished in a shield can nor should they be placed in a shield.

Cat. No.	Freq.	Position	List
S466	455	Input—Int.	\$1.35
S429	455	Output	1.35



FM I.F. TRANSFORMERS

- S-775 10.7 MC I.F. TRANSFORMER—Band width plus or minus 150 KC, preloaded, mica trimmer, tuned from top—in 1 1/8" x 1 1/8" x 2 1/2" can. For F.M. broadcast receivers. 1st, 2nd, and 3rd stage. Spade lug mounting. List \$1.55
- S-777 10.7 MC I.F. DISCRIMINATOR—Band width plus or minus 150 KC, preloaded, mica trimmer, tuned from top—in 1 1/8" x 1 1/8" x 2 1/2" can. For FM, broadcast receivers. Companion coil for S-775. Spade lug mounting. List \$2.00
- S-774 10.7 MC I.F. TRANSFORMER—Band width, preloaded for plus or minus 75 KC, which can be increased to plus or minus 200 KC by additional loading. Mica trimmer, tuned from top. In 1 1/8" x 1 1/8" x 1 1/2" can. For amateur and communication F.M. receivers. Also for Broadcast F.M. receivers when additional loading is used. Spade lug mounting. 1st, 2nd, 3rd I.F. List \$1.55

STANDARD WAVE TRAPS

Additional Coils Not Shown In Our 1946 Catalog

Standard wave traps, mica trimmed tuned, in 1 1/8" x 1 1/8" x 2 1/2" can. Iron core coils. Ear lug mounting permits wood screw mounting to cabinets, etc.

S-399—3500 KC to 4000 KC	S-382—600 KC to 800 KC
S-627—1600 KC to 1800 KC	S-381—500 KC to 600 KC
S-398—1400 KC to 1600 KC	S-628—400 KC to 500 KC
S-395—1200 KC to 1400 KC	S-629—225 KC to 285 KC
S-396—1000 KC to 1200 KC	S-360—165 KC to 185 KC
S-397—800 KC to 1000 KC	

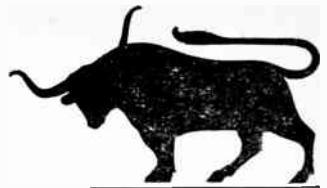
List \$1.75 each

NOTE: The can size has been changed on the above wave traps from the previously catalogued round can.

SPEAKERS BY OXFORD

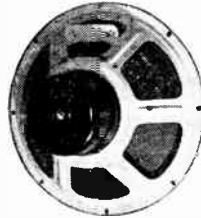
Oxford Speakers are one of the oldest lines in the radio industry. Literally millions of these fine speakers have been sold to manufacturers, radio servicemen, amateurs, P. A. specialists, sound equipment operators, broadcast stations, experimenters, etc.

From the 2- to the 15-inch speaker, the Oxford line is complete and every unit is built with the same painstaking care and engineering skill. Each unit is individually tested, and voice-coils are conservatively rated, assuring the buyer of a superior product.

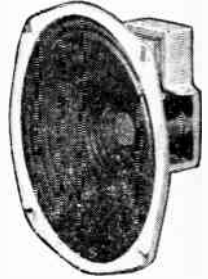


To the left is the famous 12" OXFORD Speaker such as is used in fine radio consoles.

The supreme speaker of them all, the OXFORD 15".



The well-known and widely-used smaller type of OXFORD Speaker with the transformer.



SOME FACTS ABOUT OXFORD SPEAKERS

Only Oxford Speakers are equipped, optionally, with the patented, pressure thread device which makes a more sensitive speaker than one with the usual magnetic assembly. Actual tests have shown this to be a fact. At Oxford, speakers are carefully tested individually to insure complete freedom from raps, rattles and chips. The production at Oxford is so arranged that it is impossible for a speaker to reach the packing stage without this test having been made. At Oxford a complete experimental engineering laboratory is maintained for the exploration of novel and untried means for the improvement of the general subject of loudspeakers. Many problems are tackled here, and while many are discarded for one reason or another, still the purchaser of an Oxford Speaker may rest assured that the unit he buys is entirely up to the minute in design.

PERMANENT MAGNET SPEAKERS

Model No.	Size	Watts Max	Watts Wkg.	Mag. Wt.*	Cone Res.†	O.A. Depth	Unit No.**	Cart. Wt.▲
2A5MS	2"	2	1	0.68	225§	1 1/2"	.34	54 22
2B5MS	2"	2	1	1.00	225§	1 1/2"	.34	54 22
2C5MS	2"	2	1	1.47	225§	1 1/2"	.50	54 22
3A5MS	3"	3	2	0.68	215	1 1/2"	.50	20 15
3B5MS	3"	3	2	1.00	215	1 1/2"	.50	20 15
3C5MS	3"	3	2	1.47	215	1 1/2"	.50	20 15
4A5MS	4"	3	2	0.68	185	1 1/2"	.50	32 18
4B5MS	4"	3	2	1.00	185	1 1/2"	.50	32 18
4C5MS	4"	3	2	1.47	185	1 1/2"	.50	32 18
5A5MS	5"	3 1/2	2 1/2	0.68	190	2 1/2"	.63	20 16
5B5MS	5"	3 1/2	2 1/2	1.00	190	2 1/2"	.63	20 16
5C5MS	5"	3 1/2	2 1/2	1.47	190	2 1/2"	.63	20 16
52A5MS	5 1/4"	4	3	0.68	150	2 1/2"	.63	20 16
52B5MS	5 1/4"	4	3	1.00	150	2 1/2"	.63	20 16
52C5MS	5 1/4"	4	3	1.47	150	2 1/2"	.63	20 16
61A5MS	6"	5	3 1/2	0.68	165	2 3/4"	1.00	20 22
61B5MS	6"	5	3 1/2	1.00	165	2 3/4"	1.00	20 22
61C5MS	6"	5	3 1/2	1.47	165	2 3/4"	1.00	20 22
61EVS	6"	6	4	2.15	115	2 3/4"	1.00	20 22
61FOS	6"	6	4	3.16	115	2 3/4"	1.00	20 22
8EVS	8"	6	4	2.15	125	3 3/4"	2.25	10 25
8FOS	8"	6	4	3.16	125	3 3/4"	2.25	10 25
8HBS†	8"	8	6	4.64	115	3 3/4"	2.25	10 25
8JES†	8"	8	6	6.80	115	3 3/4"	2.50	10 28
10HBS†	10"	10	8	4.64	85	4 1/4"	3.75	12 43
10JES†	10"	10	8	6.80	85	4 1/4"	3.75	12 43
12HBS†	12"	10	8	4.64	95	5 1/4"	4.50	8 38
12JES†	12"	10	8	6.80	95	5 1/4"	4.50	8 38
12XMS†	12"	40	25	22.00	75	6 1/4"	6.50	4 55
15XMS	15"	Information supplied on written request.						

Voice-Coil diameter: 3/8" thru Model 61C5MS; 1" thru Model 12JES; 1.5" for 12XMS.

Voice-Coil impedances: 3.2 ohms ±10% (400 cps) except ‡ 6-8 ohms optional.

*Alnico #5 Magnet weight in ounces. † In CPS ±10%.

‡ Optional 315 cps.

▲ In pounds. ** Number of speakers to the carton.

ELECTRO-DYNAMIC SPEAKERS

Model No.	Size	Field Res.*	Watts Max.	Watts Wkg.	Max. Depth	Unit Wt.▲	No.** Cart.	Cart. Wt.▲
4VF-45S	4"	450	3.5	2.5	2 1/8"	.50	32	18
4VF-10S	4"	1000	3.5	2.5	2 1/8"	.50	32	18
5VF-45S	5"	450	3.5	2.5	2 3/8"	.53	20	16
5VF-10S	5"	1000	3.5	2.5	2 3/8"	.53	20	16
52VF-4S	5 1/4"	4	4.0	3.0	2 3/8"	.75	20	25
52VF45S	5 1/4"	450	4.0	3.0	2 3/8"	.75	20	25
52VF10S	5 1/4"	1000	4.0	3.0	2 3/8"	.75	20	25
610AF45S	6"	450	6.0	4.0	2 1/8"	1.00	20	22
610AF10S	6"	1000	6.0	4.0	2 1/8"	1.00	20	22
80AF45S	8"	450	6.0	4.0	3 5/8"	3.25	10	34
80AF10S	8"	1000	6.0	4.0	3 5/8"	3.25	10	34
10LOF45S†	10"	450	10.	8.0	4 1/8"	4.50	12	56
10LOF10S†	10"	1000	10.	8.0	4 1/8"	4.50	12	56
12LOF45S†	12"	450	10.	8.0	5 3/8"	5.50	S	50
12LOF10S†	12"	1000	10.	8.0	5 3/8"	5.50	S	50

Voice-Coil diameters: 1 1/8" thru 52VF10S; 3/4" thru 80AF10S; 1" rest. Voice-Coil impedances: 3.2 ohms ± 10% (400 cps) except ‡ 6-8 ohms optional.

All units equipped with bucking coil. * in ohms. ** Number of units. packed in a carton. ▲ In pounds.

THE OVAL SPEAKERS

Model No.	Size	V-C Dia.	Watts Max.	Watts Wkg.	Mag. Wt.*	Cone Res.†	Max. Depth	Unit Wt.▲
46A5MS	4x6"	1 1/8"	3.5	2.5	0.68	190	1 5/8"	.75
46B5MS	4x6"	1 1/8"	3.5	2.5	1.00	190	1 5/8"	.75
46C5MS	4x6"	1 1/8"	3.5	2.5	1.17	190	2 1/8"	.75
69FOS†	6x9"	3/4"	5.0	3.5	3.16	90	3 3/4"	1.50
69HBS†	6x9"	1 1/4"	6.0	4.0	4.64	90	3 3/4"	1.75
69EVS†	6x9"	3/4"	5.0	3.5	2.15	90	3 3/4"	1.50

† Pot may be rotated 90°. Voice-Coil impedance: (400 cps) 3.2 ohms ± 10%.

* Alnico #5 magnet weight in ounces. † In CPS. ▲ In pounds.

• Optional Voice-Coil Impedance 6-8 ohms.

OUTPUT TRANSFORMERS

Oxford Transformers are specially designed to be used with Oxford Speakers, but they will serve excellently with other comparable speakers. Available in either horizontal or vertical mountings. Please specify which when placing orders.

Model No.	Core Size	App'lication	Terminal Connection
SP-1	1/2 x 1/2	Single Output	Leads
SP-2	1/2 x 1/2	Push-Pull Output	Leads
U-21	1/2 x 1/2	Universal Output	Lugs*
SP-3	5/8 x 5/8	Single Output	Leads
SP-4	5/8 x 5/8	Push-Pull Output	Leads
U-85	5/8 x 5/8	Universal Output	Lugs*
SP-5	3/4 x 3/4	Single Output	Leads
SP-6	3/4 x 3/4	Push-Pull Output	Leads
U-43	3/4 x 3/4	Universal Output	Lugs*

* Six secondary taps brought out to solder lugs. All transformers have 3.2-ohm nominal secondaries.

The Home of the World's Finest Custom-Built Cabinets



Announces the production of a new quality console cabinet line



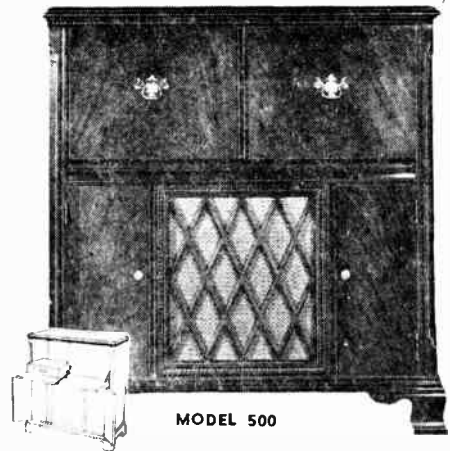
MODEL 700

To the already great line of quality cabinets JACKSON has added Model #700, the WINDSOR, which has two large record storage spaces, hand-rubbed piano finish and beautiful carved molding. Made of one-inch or heavier lumber core plywood. Will hold any standard record changer and almost every standard radio chassis. ALSO ADAPTABLE FOR TELEVISION. CAN BE USED WITH MOST TABLE MODEL TELEVISION SETS AS WELL AS MOST 7" AND 10" KITS.



MODEL 450

An ideal console in the lower-priced line. Lift-up type. High quality piano finish and genuine veneer. Will hold any standard record changer and most standard radio chassis.



MODEL 500

Another fine console from JACKSON. Two large record storage spaces, beautifully carved molding and hand-rubbed piano finish. Will hold any standard record changer and most standard radio chassis.

Space does not permit illustrations of the two other fine radio-phonograph console cabinets which are now available. However, both conform to the style set by the models shown above. They, too, will hold any standard record changer and most standard radio chassis.

ALL OF THESE CABINETS ARE AVAILABLE IN WALNUT, MAHOGANY AND BLONDE

Full information on these as well as all other JACKSON products, including table model radio replacement cabinets, speaker baffles, speaker and amplifier cases, portable phonograph cases, etc., can be obtained by writing to us for special cabinet catalogue.

It's JACKSON for QUALITY...WORKMANSHIP...ECONOMY

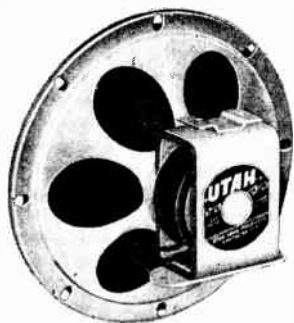
JACKSON INDUSTRIES, Inc.

1708 S. State Street

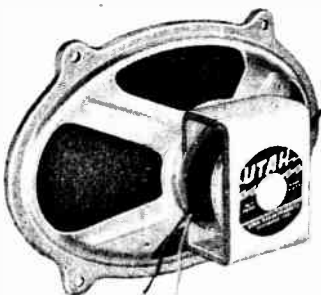
Chicago 16, Illinois



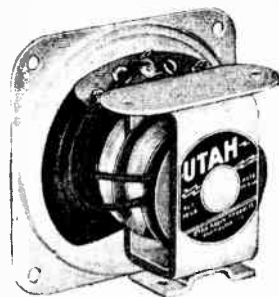
STANDARD RADIO



SE625



SE5710



SE345

ELECTRO DYNAMIC SPEAKERS

AUTO

Utah Catalog Number	Voice Coil Impedance Ohms	Voice Coil Diameter Inches	Optimum Audio Watts	Field Resistance Ohms
SE5Y6	3-4	9/16	2-4	4
SE5S6	3-4	3/4	2-4	4
SE6S6	3-4	3/4	4-9	4
SE7Y6	3-4	3/4	4-9	4
SE7Y6A	3-4	3/4	4-9	4
SE7Z6	3-4	3/4	4-9	4
SE69Y6	3-4	3/4	4-9	4

OVAL

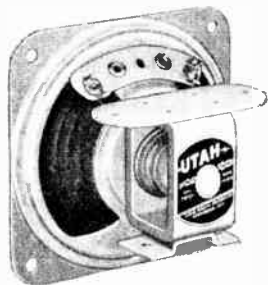
Utah Catalog Number	Voice Coil Impedance Ohms	Voice Coil Diameter Inches	Optimum Audio Watts	Field Resistance Ohms
SE4645	3-4	9/16	2-4	450
SE4610	3-4	9/16	2-4	1000
SE4618	3-4	9/16	2-4	1800
SE4627	3-4	9/16	2-4	2750
SE5745	3-4	3/4	4-9	450
SE5710	3-4	3/4	4-9	1000
SE5718	3-4	3/4	4-9	1800
SE5727	3-4	3/4	4-9	2750
SE6945	3-4	3/4	4-9	450
SE6910	3-4	3/4	4-9	1000
SE6918	3-4	3/4	4-9	1800
SE6927	3-4	3/4	4-9	2750

STANDARD

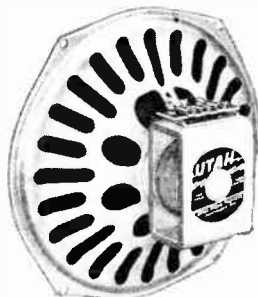
Utah Catalog Number	Voice Coil Impedance Ohms	Voice Coil Diameter Inches	Optimum Audio Watts	Field Resistance Ohms
SE345	3-4	9/16	2-4	450
SE310	3-4	9/16	2-4	1000
SE318	3-4	9/16	2-4	1800
SE327	3-4	9/16	2-4	2750
SE445	3-4	3/16	2-4	450
SE410	3-4	9/16	2-4	1000
SE418	3-4	9/16	2-4	1800
SE427	3-4	9/16	2-4	2750
SE545	3-4	9/16	2-4	450
SE510	3-4	9/16	2-4	1000
SE518	3-4	9/16	2-4	1800
SE527	3-4	9/16	2-4	2750
SE645	3-4	3/4	4-9	450
SE610	3-4	3/4	4-9	1000
SE618	3-4	3/4	4-9	1800
SE625	3-4	3/4	4-9	2500
SE810	3-4	3/4	4-9	1000
SE818	3-4	3/4	4-9	1800
SE825	3-4	3/4	4-9	2500
SE1010	3-4	1	6-12	1000
SE1015	3-4	1	6-12	1500
SE1025	3-4	1	6-12	2500
SE1210	3-4	1	6-12	1000
SE1215	3-4	1	6-12	1500
SE1225	3-4	1	6-12	2500
SE1510	8	1 1/2	20-30	1000
SE1515	8	1 1/2	20-30	1500
SE1525	8	1 1/2	20-30	2500

UTAH RADIO PRODUCTS

REPLACEMENT SPEAKERS



SP3A



SP7EA



SP12LW

PERMANENT MAGNET SPEAKERS

AUTO

Utah Catalog Number	Voice Coil Impedance Ohms	Voice Coil Diameter Inches	Optimum Audio Watts	Alnico V Weight Ounces
SP69D	3-4	3/4	4-9	1.47
SP5DA	3-4	3/4	2-4	1.47
SP6EA	3-4	3/4	4-9	2.15
SP7EA	3-4	3/4	4-9	2.15

OVAL

Utah Catalog Number	Voice Coil Impedance Ohms	Voice Coil Diameter Inches	Optimum Audio Watts	Alnico V Weight Ounces
SP46B	3-4	9/16	2-4	1.00
SP46C	3-4	9/16	2-4	1.47
SP57C	3-4	9/16	2-4	1.47
SP57E	3-4	3/4	4-9	2.15
SP57F	3-4	3/4	4-9	3.16
SP69D	3-4	3/4	4-9	1.47
SP69E	3-4	3/4	4-9	2.15
SP69F	3-4	3/4	4-9	3.16

WIDE RANGE

Utah Catalog Number	Voice Coil Impedance Ohms	Voice Coil Diameter Inches	Optimum Audio Watts	Alnico V Weight Ounces
SP8JW	8	1	6-12	6.80
SP12LW	8	1 1/4	12-20	10.00
SP12M	8	1 1/4	15-25	14.70
SP12P	8	1 1/2	20-30	21.50
SP15P	8	1 1/2	20-30	21.50
SP15R	8	2	30-40	31.80

STANDARD

Utah Catalog Number	Voice Coil Impedance Ohms	Voice Coil Diameter Inches	Optimum Audio Watts	Alnico V Weight Ounces
SP2A	3-4	9/16	1-2	.68
SP3A	3-4	9/16	2-4	.68
SP3B	3-4	9/16	2-4	1.00
SP3C	3-4	9/16	2-4	1.47
SP4A	3-4	9/16	2-4	.68
SP4B	3-4	9/16	2-4	1.00
SP4C	3-4	9/16	2-4	1.47
SP5A	3-4	9/16	2-4	.68
SP5B	3-4	9/16	2-4	1.00
SP5C	3-4	9/16	2-4	1.47
SP6B	3-4	9/16	2-4	1.00
SP6C	3-4	9/16	2-4	1.47
SP6D	3-4	3/4	4-9	1.47
SP6E	3-4	3/4	4-9	2.15
SP6F	3-4	3/4	4-9	3.16
SP8D	3-4	3/4	4-9	1.47
SP8E	3-4	3/4	4-9	2.15
SP8F	3-4	3/4	4-9	3.16
SP8J	3-4	1	6-12	6.80
SP8K	8	1 1/4	12-20	6.80
SP8L	8	1 1/4	12-20	10.00
SP10G	3-4	1	6-12	3.16
SP10H	3-4	1	6-12	4.64
SP10J	3-4	1	6-12	6.80
SP10L	8	1 1/4	12-10	10.00
SP12G	3-4	1	6-12	3.16
SP12H	3-4	1	6-12	4.64
SP12J	3-4	1	6-12	6.80
SP12K	8	1 1/4	12-20	6.80
SP12L	8	1 1/4	12-20	10.00

**DIVISION INTERNATIONAL DETROLA CORP.
HUNTINGTON, INDIANA**

American MICROPHONES

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VR2 DYNAMIC MICROPHONE

A Microphone with a NEW IDEA and a NEW USEFULNESS

For the first time, the many desirable characteristics found only in several different types of microphones have been combined in a single unit. The VR2 has an easily accessible external adjustment of the most important acoustical reactors in the dynamic microphone. A smooth change from a communication-type response, with a cutoff below 500 c. p. s., through a flat response to an augmented bass, attained by a simple, positive adjustment.

The response adjustment on the VR2 has a very broad effect and does not introduce narrow peaks. It is different from anything previously introduced.

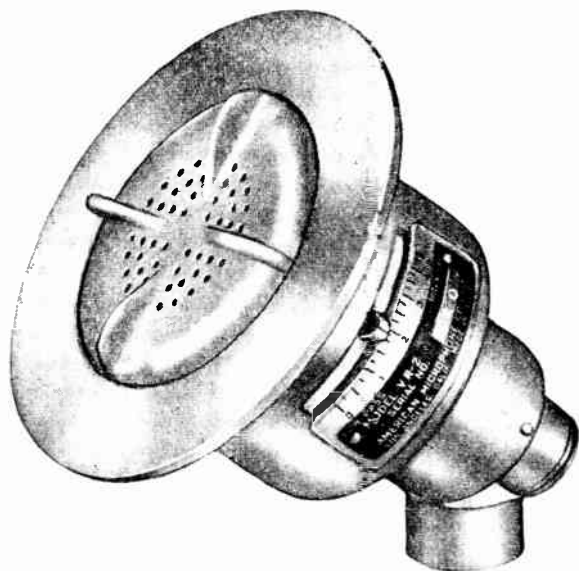
Complete with 12½' cable and plug at microphone providing balanced line. Dull chrome finish. Net wt. less cable, 15 ozs. Hgt. 4". Greatest diameter 3".

VR2T Dynamic (38,000 ohms), Code: VARIT. List \$42.15

Available on order in 200 or 500 ohms. List \$42.15
(Complete with 12½' cable)

VRT Dynamic (30-50 ohms), Code: VARIA. List \$39.15

(Complete with 12½' cable)



The above graph illustrates the average response characteristics for the various settings, as indicated on the scale.

D8T DYNAMIC MICROPHONE



THE D8T DYNAMIC MICROPHONE has been carefully designed to have a consistent, well-balanced response. It is exceptionally rugged and assures the user of trouble-free service over a long period of time.

The D8T is particularly useful for all types of public address installations, orchestra pick-up, as well as solo work and straight announcing.

The D8T is 3¼" long, 2" in diameter, weighs only 13 ozs. A swivel mounting permits either nondirectional or semidirectional pick-up. Comes complete with 12½' cable and plug at microphone and 5/8" x 27 thread for suspension or stand mounting. Platinum Chrome Finish.



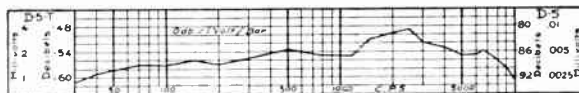
D8T Dynamic (38,000 ohms), Code: DATAH. List \$30.00
Available on order in 200 or 500 ohms. List \$30.00

D8 Dynamic (30-50 ohms), Code: DATAL. List \$27.00

D5T DYNAMIC MICROPHONE

IN FOURTH YEAR PRODUCTION

THE D5T DYNAMIC MICROPHONE is well known. An excellent, diversified-purpose microphone. The dynamic is the most rugged type microphone and its life of trouble-free operation is indefinite. Being a pressure-operated instrument, the response is unaffected by either a close or distant sound source. The D5T approaches the ideal microphone for general use due to its versatility and dependability. Sensitivity: 52 db below 1 V/bar.

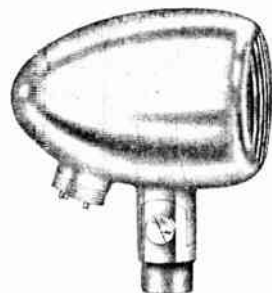


D5T Dynamic, 38,000 ohms, Code: DYHIM. List Price \$39.00

Available on order in 200 or 500 ohms. List Price \$39.00

D5 Dynamic, 30-50 ohms, Code: DYLOM. List Price \$33.00

Moving-Coil Permanent Magnet Dynamic • Semidirectional • Close or Distant Pick-up • Excellent Frequency Response • Freedom from Wind Noises • High Output, Low or High Impedance • Immune to Temperature Changes • Minimum Feed-Back (Flat Response) • Low-Level Mixing • Exceptionally Rugged.



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MC (MOVING COIL) PICKUP CARTRIDGES

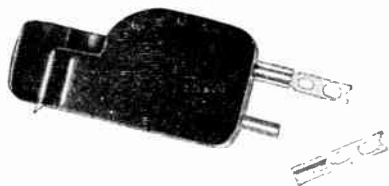
HIGH { Needlepoint
Compliance
Output
Vertical
Compliance

LOW { Needle Pressure,
one-half ounce
Impedance,
35 ohms
Needle Talk
Distortion

Model	List Price	Needle Pressure Ounces	*Output Voltage	Response ±5 db	Termin. Its.	Stylus **Semi-Replaceable	Code
MC-1C	\$ 7.50	1/2	0.1	50-5000	Pin Plug	Carboloy	Cable
MC-1S	7.50	1/2	0.1	50-5000	Pin Plug	Sapphire	Cable
MC-2C	10.00	1/2	0.1	50-7000	Pin Plug	Carboloy	Cable
MC-2S	10.00	1/2	0.1	50-7000	Pin Plug	Sapphire	Cable

*At 1000 cps using Columbia 10003-M Test Record and Model TMC transformer.

**Worn styli can be replaced at our factory.



Insures Minimum Record Wear. Performance not affected by climatic conditions. Standard cartridge mounting holes. Semi-permanent stylus.

.003 volt open circuit output at 1000 cps, using Columbia Test Record 10003-M. Transformer TMC (Sub-motorboard mounting) develops 0.1 volt into high impedance amplifier "Phono" input under above test conditions.

TRANSFORMER TMC, Code: CADET.....List Price \$2.50

C6 CRYSTAL MICROPHONE

EXTREME SENSITIVITY. New crystal driving lever twice as efficient as previously used, produces twice the voltage output with equal sound pressure.

BROADER RESPONSE. Results of new construction include extension of both low and high end.

BASS END IMPROVED. Naturalness insured by improvement in low frequency response.

LONGER LINES. By increasing the voltage output the cable length may be increased proportionately. In laboratory tests, regular cables 250 feet in length have been used with a net voltage sufficient to operate any standard high gain amplifier.

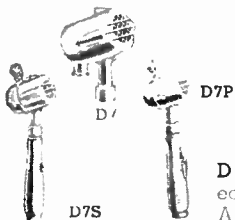
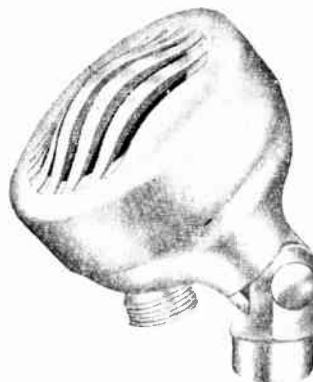
MECHANICAL NOISE REDUCED. Mechanical and stand noise is no longer a factor. The C6 method of crystal mounting reduces mechanical noises by 12 db.

LESS AMPLIFIER AND INDUCED NOISE. The high output of this microphone assures a very desirable signal-to-noise ratio.

SWIVEL HEAD. All carries for semidirectional and nondirectional pick-up are provided by the 5/8" x 27 (standard) mounting connector.

Complete with 7' cable and plug at microphone. Polished chrome finish. Net weight 6 oz.

Over-all height 3" Diameter 2 3/8" 1/4x27 thread provided for suspension or stand mounting.
C6 Crystal, Code CESIX.....List Price \$18.00



THE "Clipper" DYNAMIC

D7 and D7T MICROPHONES

equipped with 12 1/2' R/J cable and Amphenol plug. Chrome finish.

5/8-27 connector: Over-all height, 2 1/2". Diameter, 1 1/2". Net weight, 8 1/2 ozs.

APPLICATIONS: Excellent for communication purposes, airplane use, Marine safety-at-sea installations, police broadcasting, amateur communication, public address, indoor and outdoor installations.

D7T--High Imp., 38,000 or 500 or 200 Ohms;

Code: D1SETList Price **\$27.00**

D7TP (Press-contact Switch),

Code: D1MATList Price **\$31.00**

D7TS (Slide Switch), Code: D1AHT.....List Price **\$30.00**

D7-- Low Impedance, 50 Ohms.

Code: D1SEVList Price **\$24.00**

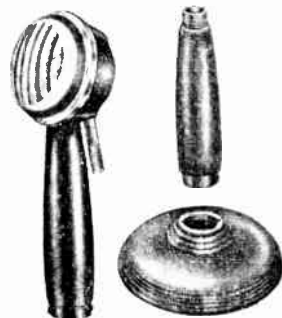
D7P (Press-contact Switch),

Code: D1MARList Price **\$28.00**

D7S (Slide Switch), Code: D1AHL.....List Price **\$27.00**

RC CRYSTAL MICROPHONE

Complete with
**NON-BREAKABLE
PLASTIC STAND
and 7 foot Cable**



RC Crystal Microphone may also be mounted on any stand equipped with standard 5/8" x 27 thread. . . . An excellent microphone for Communication, Public Address or Amateur Radio.

**HOME RECORDING OR BROADCASTING
HIGH OUTPUT, GOOD QUALITY**

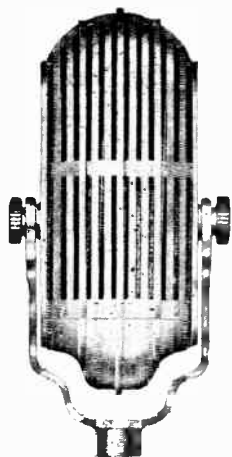
Base easily removed by quarter turn, releasing bayonet lock. Cable replacements accomplished by releasing set screw in back of microphone and pulling gently on spring cable protectorList Price **\$10.90**

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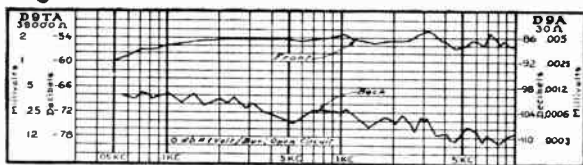
D9A Unidirectional MICROPHONE

GUARANTEED to produce 30% MORE VOLUME (power) than any microphone at twice the list price. UNIDIRECTIONAL, True CARDIOID pattern pickup, frequency response good to 10,000 c. p. s. Actual Tests are Convincing Arrange for Test with your Jobber



THE D9A DYNAMIC, a pressure-velocity combination microphone, with pick-up from front only, broad frequency response and high output, plus the usual dynamic microphone qualities of ruggedness, immunity to weather conditions, and circuit adaptability, should fill the majority of requirements.

The D9A Microphone is recommended for public address and general sound installations because its energy response field (cardioid of revolution) excludes extraneous pick-up and reduces feed-back by two-thirds. May be used for close talking due to the modified velocity section which also reduces wind noises to a minimum.



The above graph illustrates the average response characteristics for the D9A and D9AT. Voltage output levels, for 1 bar sound pressure (1 bar=1 dyne per sq. cm.) of the high and low impedance models. For 10 bar signal the output will be 20 db. higher.

Net weight, 2 1/2 lbs. Packed weight, 4 lbs. Height, 7 1/2" depth, 2 1/4"; breadth, 2 1/2". Standard 3/8-27 thread provided for suspension or stand mounting. Finish: Satin Chrome.

25' Shielded Rubber-jacketed Cable Supplied with each Microphone.

D9A. Low Imp. (50 ohms). Code: LOWEL.....List \$42.00

D9AT. High Imp. (38,000 ohms). Code: HIWEL.....List \$45.00
Available on Order in 200 or 500 ohms.....List \$45.00

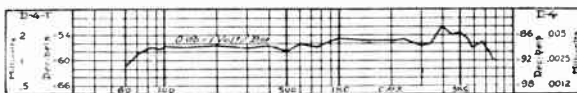
D4T DYNAMIC MICROPHONE

A QUALITY, LOW-PRICED, MOVING-COIL MICROPHONE. For general use where clear speech and natural music reproduction is required. This new AMERICAN microphone is a very efficient instrument, having a broad range, from 60 to 7500 c.p.s., and high output of -56 db (0 db=1 v/bar). The utility value lies not only in the quality and type of response but also in mechanical features, such as light weight (approximately 10 1/2 oz), a full 180° vertical angular setting, and positive friction lock at the swivel.

The D4T, high impedance, is equipped with a single-contact, shielded plug. The 50, 200 and 500 ohm models are equipped with a two-conductor plug and have a balanced line out.

The D4 model is of voice-coil impedance, approximately 30 ohms. Lines up to several hundred feet may be used on all models except the high impedance, where line should be restricted.

The complete assembly includes 12 1/2 feet of shielded, rubber-covered cable and shielded plug. Finished in platinum chrome. Standard mounting, 3/8" x 27 thread.



D4T Dynamic (38,000 ohms), Code: DFORT.....List Price \$24.00

Available on order in 200 or 500 ohms.....List Price \$24.00

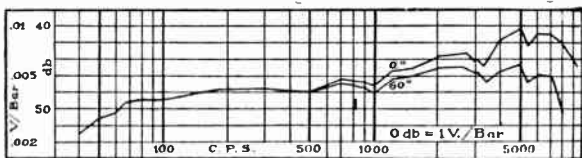
D4 Dynamic (30-50 ohms), Code: DEFOR.....List Price \$21.50

D6T DYNAMIC MICROPHONE

Ideal for general public address including stage sound-reinforcement, both permanent and portable installations. It is entirely suitable for playground and athletic field direction, police and amateur broadcasting, and recording.

Net weight, 1 3/4 lbs. Packed weight, 2 lbs. Height, 3 3/4", diameter 2 1/2". Standard 3/8-27 thread provided for suspension or stand mounting. Finish: Polished Chrome. 12 1/2' Shielded Rubber-jacketed Cable supplied with each microphone.

characteristics may be had by varying the angle of the microphone to the source of sound. For non-directional horizontal pick-up, the response is substantially flat.



D6T Dynamic (38,000 ohms), Code: DIXIT.....List \$33.00

Available on order in 200 or 500 ohms.....List \$33.00

D6 Dynamic (30-50 ohms), Code: DIXIE.....List \$30.00



Typical field calibration for the D6T. A choice of frequency

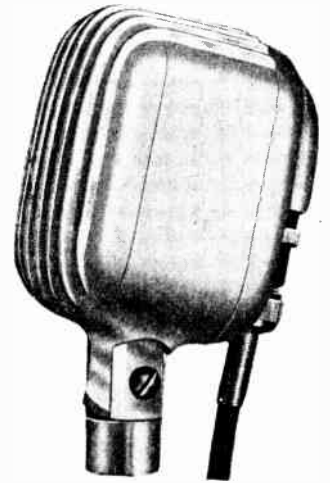
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D220 DYNAMIC MICROPHONES

A WIDE RANGE HIGH FIDELITY MOVING-COIL MICROPHONE

- ★ Two Dynamic Generators each with Specific Frequency Response.
- ★ Combined Outputs Electrically and Acoustically Coupled Produce an Ideal Response.
- ★ Total Band 25 to above 10,000 cps. Broad Crossover from 150 cps. to 5000 cps.
- ★ Crossover Band an Average for Both Generators Eliminates Peaks.



Complete with 25' cable. Balanced lines on low impedance models

- D220T** Dynamic (38,000 ohms), Code: CROST LIST **\$71.00**
 Available on order in 200-250 or 500 ohms LIST **\$71.00**
D220 Dynamic (30-50 ohms), Code: CROSS LIST **\$65.50**



THREE TYPES OF RESPONSE FOR ALL PURPOSES

HIGH—For all purposes requiring richness in the higher frequencies. Slightly rising characteristic. (From 150 to 10,000 cps.)

FULL—For high fidelity requirements where smooth, flat response and broad range are necessary. (30 to above 10,000 cps.)

LOW—For pickup systems requiring embellished lows and good intermediate range. (25 to 5000 cps.)

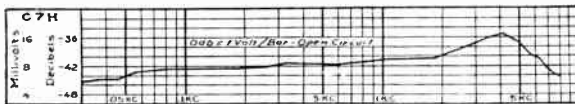
C7 CRYSTAL MICROPHONES

The development of the new American Crystal Microphones, Model C7H and Model C7L, represents many features which have been available only in several previous types. The response characteristics have been chosen so that the C7 can be used equally well for recording with a minimum amount of amplifier equalization and also for public address. **A new system of coupling the crystal element to the diaphragm is employed which produces a smoother response and 100% greater efficiency equivalent to double the output of usual direct drive type of coupling.** High or low impedance may be had in the Model C7. An efficient transformer is used to reduce the inherent high impedance of the crystal generator to standard line impedances. Long lines with negligible losses may be used.



Complete with 12½ ft. cable

- C7H** High Impedance Code: CSEVN LIST **\$24.50**
C7L Available in 50 ohm or 200-250 ohm or 500 ohm. Code: CSEVL LIST **\$29.00**



DHT DYNAMIC HAND-HELD MICROPHONE

Shock-proof Diaphragm - Press-to-talk Locking Type Switch Retractable Hanger



This compact, sturdy microphone was designed for all applications requiring a dependable hand microphone for voice communication. Small and lightweight, it can readily be concealed in the palm of the hand. An Alnico V magnet, efficient magnetic circuit and newly developed diaphragm and voice coil assembly combine to generate the high output of 56 db below 1 volt per bar for the high impedance model.

Other desirable features are: convenient hanger which retracts into the case of the microphone when not in use; molded plastic diaphragm not affected by heat, moisture or mechanical shock; supplied with five feet of low loss cable; press-to-talk locking type switch for operation of the microphone unit. Additional switch contacts on request.

- DHT** Dynamic (38,000 ohms), Code: CALEB LIST **\$25.00**
 Available on order in 200 or 500 ohms **\$25.00**
DH Dynamic (30-50 ohms), Code: CALYX LIST **\$22.50**

American PHONOGRAPH PICKUPS

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J-1 PHONOGRAPH PICKUP



LIST PRICE
\$5.50

The curved arm with off-set head was designed to provide optimum tracking for both ten and twelve inch records with minimum wear of record and stylus. Base of the arm is designed for single hole mounting. Assembly includes CR-1A Crystal Cartridge, twenty-four inch single conductor shielded wire, arm rest, mounting hardware and complete mounting instructions.

CR1A CRYSTAL CARTRIDGE

CR-1A Cartridge is a high output, wide range unit, which incorporates a number of new developments in cartridge design. High output and improved response are obtained by a unique method used to drive the crystal element. The cartridge is supplied with pin plug connectors for ease of



assembly into the arm—no soldering iron is required. The needle chuck design incorporates a "locked-in" feature whereby the chuck is prevented from moving when tension or pressure is applied to the needle screw. This feature also insures that the needle socket will remain centrally located in its opening in the cartridge. High needle point compliance and minimum record chatter are thereby guaranteed. The cartridge will operate satisfactorily with any conventional needles; however, its high-frequency response will vary somewhat with the type needle used. Best operation will be obtained with off-set needles using sapphire or precious metal styli.

Model	CR1A	CR2A	CR3A	PNMA
Needle Force, Ounces.....	1 1/4	1 1/8	1 1/8	1 1/4
Output Voltage.....	3.	1.5	1.	2.
Response	50-6000	50-6000	50-6000	50-6000
Terminals	Pin Plug	Pin Plug	Pin Plug	Pin Plug
Needle Screw	Thumb	Thumb	Thumb	Thumb
Needle	Optional	Optional	Optional	Optional
Code	Cream	Creep	Crimp	Crest
List Price.....	\$4.00	\$4.00	\$4.00	\$8.00

American FLOOR STAND

New! FLOOR STAND WITH MANY USES

PLACE THE MIKE ADVANTAGEOUSLY FOR EFFICIENT PICKUP
EXCELLENT FOR RECORDING AND ORCHESTRA PICKUP

IIB3 List Price **\$24.50**

Upper rod and fittings, polished chrome. Lower rod and angle adjustment, satin black. Microphone mounting, standard 5/8" x 27 thread.

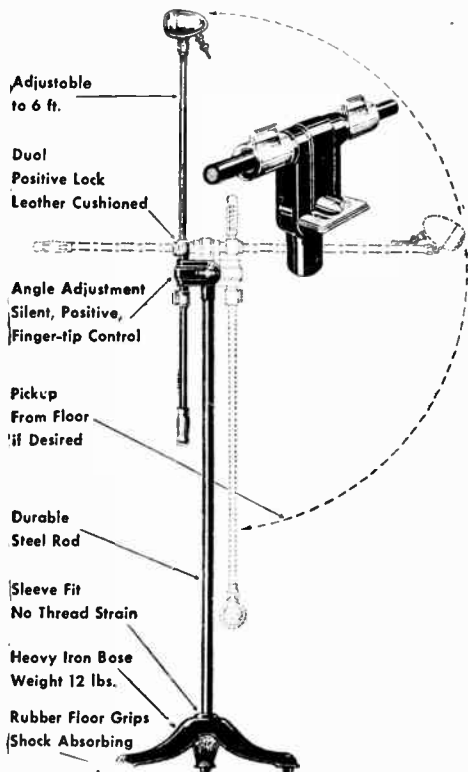
Total net weight 16 lbs. Code: BOOME

Upper Assembly, including 34" chrome rod, as illustrated at right of stand.

B3 List Price **\$8.75**

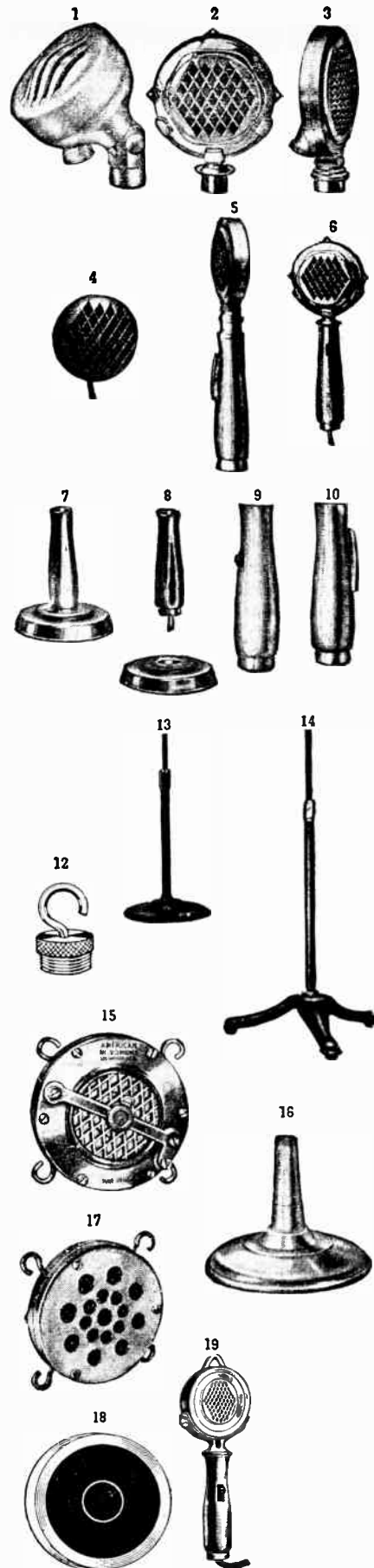
Microphone Mounting, Standard 5/8" x 27
Stand Mounting, Standard 1" x 27.

Code: TOPSE



American MICROPHONES

1. **C6 CRYSTAL MICROPHONE.** The best buy in a crystal microphone. New crystal driving lever, twice as efficient as previously used, produces twice the voltage output with equal sound pressure. Long cables, 250 feet or longer, may be used with this microphone. The increased output voltage assures only slight proportional losses in cable lengths. Provided with plug at microphone and mounting swivel with standard $\frac{3}{8}$ " x 27 thread. Chrome finish. Net weight 8 ozs. Complete with 7' cable and microphone plug. Accessories 7, 8, 9, 10, 11, 12, 13, 14, and 16 available for use with this model.
C6 Crystal Microphone, Code: CESIX List Price \$18.00
2. **AG CRYSTAL MICROPHONE.** Preferred by crystal buyers for four years. Communication-type response. Equipped with mounting yoke, providing rear or through cable outlet. Standard $\frac{3}{8}$ " x 27 thread. Accessories 7, 8, 9, 10, 11, 12, 13, 14, and 16 available for use with this microphone.
AG Crystal Microphone, Code: AGTAL..... List Price \$24.50
3. **B9 CRYSTAL MICROPHONE.** Semi-directional. Recommended for public address. Chrome finish. $\frac{3}{8}$ " x 27 thread. Complete with 8' cable and plug at microphone. Accessories 7, 8, 9, 10, 11, 12, 13, 14, and 16 available for use with this microphone. Code: BENIN..... List Price \$24.50
4. **CL2 CRYSTAL LAPEL MICROPHONE.** Built especially for lapel use. Maximum sensitivity in voice range. $2\frac{1}{2}$ " diameter. Weight $1\frac{1}{2}$ ozs. Complete with 25' cloth-covered, shielded cable and clip for attaching to clothing.
CL2 Crystal Lapel Microphone, Code: LATAL..... List Price \$27.25
5. The B9 as a hand microphone. Chrome finish. Available with two types of switches. 8' cord. B9P with press-contact switch in handle, and B9S with slide switch in handle.
B9P Crystal Hand Microphone, Code: BECON..... List Price \$28.50
B9S Crystal Hand Microphone, Code: BEHAN..... List Price \$27.25
6. The AG as a hand microphone. Chrome finish. Available with two types of switches. 8' cord. AH using slide switch, and AGP using press-contact switch.
AH Crystal Hand Microphone, Code: AHTAL..... List Price \$27.50
AGP Crystal Hand Microphone, Code: AGPAH..... List Price \$28.50
7. **AG DESK STAND.** Consists of upright (handle) and base. Chrome finish
Code: AGESK List Price \$2.75
8. **AG HANDLE.** Upright of AG Stand. Easily attached to AG Base by half turn, bayonet lock. Chrome finish. Code: AGHAN List Price \$1.65
AG BASE. For use with AG Handle. Code: AGBAS List Price \$1.10
9. **AH HANDLE.** Upright of AG Stand with slide switch. Chrome finish.
Code: SAHAND List Price \$3.00
10. **DH HANDLE.** Upright of AG Stand with press-contact switch. Chrome finish.
Code: DEPAH List Price \$4.10
12. **SUSPENSION EYE.** For suspending any microphone with standard $\frac{3}{8}$ " x 27 thread. Chrome finish. Sturdy. Code: DYEYE..... List Price \$1.20
13. **BS BANQUET STAND.** Round base 8" in diameter. Rods 12". Extended height 24". Satin Black finish. Code: FUDAS List Price \$9.30
14. **FH3 and FL3 FLOOR STANDS.** Approved by the best sound studios. Positive, leather, friction-lock clutch. Noiseless operation. Rods 38". Extended height 6'. Three-contact, "floor grip," rubber-mounted base. FH3, studio model, net weight 15 lbs. FL3, public address model, net weight 10 lbs.
FH3 Floor Stand, Code: FUHET..... List Price \$18.50
FL3 Floor Stand, Code: FLEXR List Price \$12.50
15. **EL4 CARBON MICROPHONE.** Double button. Semi-stretched diaphragm. Good quality. Mounting yoke included. No ring or springs necessary.
Code: LITEG List Price \$8.75
16. **DD DESK STAND.** Round base, 4" upright. Net weight $1\frac{1}{4}$ lbs. $5\frac{1}{4}$ " base. Chrome finish. Code: DYNES List Price \$3.00
DS Desk Stand. Same as DD Stand except with $4\frac{1}{4}$ " base. Chrome finish.
Code: DINAC List Price \$3.00
17. **SJ CARBON MICROPHONE.** Single button. Sensitive. Chrome finish.
Code: JOHNE List Price \$6.00
18. **FP CARBON MICROPHONE.** New single-button, sensitive, carbon microphone. Operates in any position. For use in French phones and other types of telephone and listening devices. Code: FRONE List Price \$3.50
19. **CARBON HAND MICROPHONES WITH SLIDE SWITCH.** Chrome finish.
D22. Double-button. Hand Mike. Code: DBTWO List Price \$18.00
SB2. Single-button. Hand Mike. Code: SUTRO List Price \$12.00
Either above models with press-contact switch list \$1.00 extra.



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AMERICAN MICROPHONE CO., INC.

PREFERRED BY LEADING P. A. MEN THE WORLD OVER



•UNI-DIRECTIONAL

NEW SUPERIOR ELIPSOID PICKUP PATTERN

•ELIMINATES FEEDBACK

TROUBLE BECAUSE IT HAS LOWEST FEED BACK POINT OF ALL DIAPHRAGM TYPE MICROPHONES

•FLAT RESPONSE. FREE FROM ANNOYING PEAKS, GIVING STUDIO QUALITY REPRODUCTION

The P.G. diaphragm follows air particle velocity where amplitude is a GRADIENT of the PRESSURE. In ordinary dynamics amplitude is restricted from following air particle velocity. The P.G. DYNAMIC is a radical improvement in this type of microphone. You can actually hear the difference. Case is designed according to modern acoustic principles. Rugged, not affected by temperature, altitude or humidity. Has unusually high output.

Model PGH —hi-imp. } **\$32.00**
Model PGL —50 ohms } **List**

Output —55 db
 Freq. Resp. 40-10000 CPS
 Cable Length 25 ft.
 Finish Chrome
 Switch Yes
 Cable Connector Yes
 Stand Thread 5/8-27
 Ship. Wt. 2 1/2 lbs.



PLASTIC BAFFLE FOR P.G. DYNAMIC

Increases output of the microphone 4 db. Especially useful when performer is at distance of 12" or more. Excellent for picking up entire stage, bands, etc. Snaps into place.
 Model PG.....List \$1.50

Model PGAH —hi-imp. } **\$25.00**
Model PGAL —50 ohms } **List**

Output —60 db
 Freq. Resp. 70-8000 CPS
 Cable Length 12 ft.
 Finish Chrome
 Switch Yes
 Cable Connector Yes
 Stand Thread 5/8-27
 Ship. Wt. 2 1/2 lbs.

AMPERITE MICROPHONE STANDS

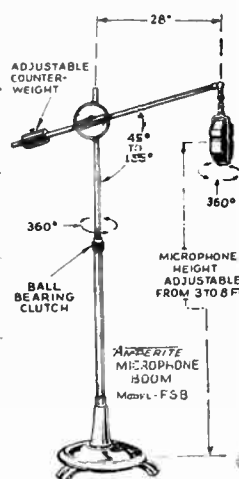
Scientifically designed, Amperite stands feature:

1. Positive, non-sliding clutch. Will never wear out, never require adjustment. Will not "creep".
2. Shock-absorbing rubber bottom.

The microphone can be rotated without loosening clutch. The action up and down is smooth, pneumatic-like.

AMPERITE MICROPHONE STANDS—SPECIFICATIONS

Model	Description	Base Wt.	Base Spread	Height Range	Thread	List Gunmetal or Chrome	Ship. Wt.
FS-14	Floor Stand Studio 3-legged	14 lb.	12"	37"-55"	1/2"-27"	\$18.00	15 lb.
FS-25M	Floor Stand Comb. desk & Banquet	16 lb.	17"	12"-69"	1/2" pipe	26.00	25 lb.
DS-M	Desk only	6 lb.	7 1/2"	16"-24"	5/8"-27"	12.00	11 lb.
DS	Desk only	6 lb.	7 1/2"	3"	5/8"-27"	6.00	11 lb.
5D	Floor Stand Boom	11 1/2 lb.	5"	0"	5/8"-27"	4.00	3 lb.
FSB	Floor Stand Boom	21 lb.	17"	36"-86"	1/2" pipe	70.00	43 lb.



Floor Stand Model FS-140-7

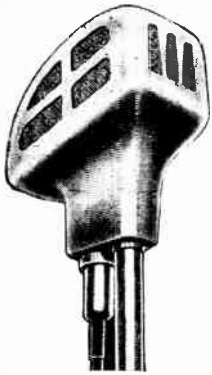
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New STUDIO "Ribbon" MICROPHONE

Models R80H—R80L

A "Blastproof" Velocity



Eliminates Feedback Troubles

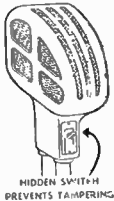
The finest in microphones, regardless of price. Reproduction is of the very highest type. Excellent for broadcasting, recording and public address. Eliminates feedback troubles. Will not become "boomy" on close talking. An entire orchestra can be faithfully reproduced.

Pick-up angle 120° front and back with practically no frequency discrimination. In spite of the wide pick-up angle, feedback is reduced to a minimum.

Not affected by temperature, altitude or humidity. Will operate under any climatic conditions—indoors or outdoors. Not affected by wind.

Frequency range 40-14,000 cps. Output—56 db. Complete with switch, (optional), cable connector, and 25' cable. Finish—Chrome. Stand thread, Standard 5/8"—27.

Model	List
R80L—200 ohms output.....	\$80.00
50 ohms available	
R80H—High impedance	80.00
Shipping Weight 10 lbs.	



New "RIBBON" MICROPHONE, RBHG—RBLG

Automatically Adjusted for Close or Distant Pick-Up
A "Blastproof" Velocity

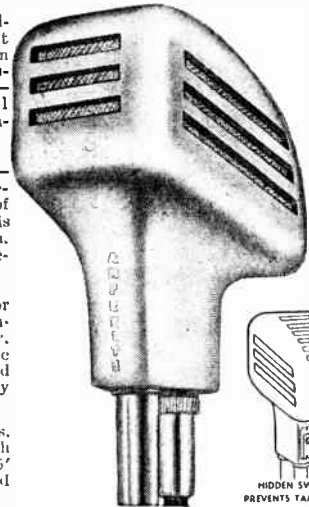
Studio reproduction—low feedback. A "ribbon" microphone that brings broadcast quality within everyone's reach. Perfectly natural reproduction on close talking—you can even shout into it. Will also faithfully reproduce an entire orchestra.

Pick up angle front and back—120° with practically no frequency discrimination. In spite of wide pick-up angle—feedback is reduced to an absolute minimum. Low feedback is due to flat response of the microphone.

Excellent for studio—P. A. or recording. Not affected by temperature, altitude or humidity. Can be used under all climatic conditions, and will withstand rough handling. Not affected by wind.

Frequency range 50-11,000 cps. Output—62 db. Complete with switch, cable connector, and 25' cable. Finish—Chrome. Stand thread—Standard 5/8"—27.

Model RBHG—High impedance	\$42.00
Model RBLG—200 ohms output	42.00
50 ohms available.	
Shipping Weight 8 lbs.	



COMPACT VELOCITY, ACH—ACL

The smallest complete velocity ever made



Compact—yet a complete Amperite "Ribbon" Microphone including transformer, switch and cable connector. Recommended wherever a compact microphone is a necessity. Can be used either as a hand microphone or on a stand. Frequency range 120 to 8,000 cps. Output—65 db.

Complete with switch—cable connector—12' cable. Stand thread—Standard 5/8"—27.

Model	List
Model ACH—High impedance	\$32.00
Model ACL—200 ohms output	32.00
50 ohms available	
Shipping Weight 5 lbs.	

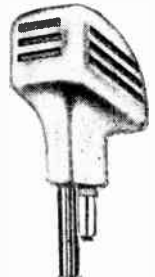
New RSHG—RSLG "RIBBON" MICROPHONES

Although low in price the RSHG and RSLG are excellent "ribbon" microphones built to Amperite standards. Can be used for P.A. or recording. Feedback very low. Not boomy on close talking—you can shout into it—or pick up an entire orchestra.

Not affected by temperature, humidity or altitude. Not affected by wind.

Output: —60 db. Frequency response—70 to 8,000 cps. Complete with switch, cable connector, and 12' cable. Finish—Baked Enamel. Stand thread—Standard 5/8"—27.

Model	List
Model RSHG—High impedance	\$32.00
Model RSLG—200 ohms output	32.00
50 ohms available.	
Shipping Weight 8 lbs.	



Amperite 7JH—7JL VELOCITY MICROPHONE

"Lapel" Type

Reproduction is so perfect—you can hardly tell a microphone is working. Free from annoying peaks or mechanical reproduction. Output does not change with any position of the head. It can be concealed in clothing. Will operate under all climatic conditions. Unusually low feedback. Frequency range 60-7,000 cps. Output: —63 db. Cable length 25'. Rubber case.

Model 7JH—High impedance	List \$32.00
Model 7JL—200 ohms output	List 32.00
50 ohms available.	
Shipping Weight 3 lbs.	



AMPERITE KONTAK MIKE

FOR MUSICAL INSTRUMENTS



Gives natural reinforcement without peaks. Easily attached without tools. Will operate with either low or high-gain amplifiers. Frequency response 40 to 9000 cps. Output, —10 db.

Shipping Weight 2 lbs.

Model SKH—Hi-impedance	List \$12.00
Model KKH—With Hand Volume Control	List 18.00
Model KF—Foot Pedal Only	List 18.00
Low impedance available in model SKH at same price.	

Model LGP—Input Transformer (Cable Type)

Enables the use of low impedance microphones and cable lengths up to 5,000' with amplifiers having high impedance input. Special shielding eliminates hum pick-up. Can be used with 25, 50, or 200 ohm microphones. Output connects directly into high impedance input of amplifier.

Standard grade recommended for speech. Laboratory grade for music.	
Model LGP—Standard—60 to 2,000 cps.	List \$8.00
Model LGP—Lab—40 to 14,000 cps.	List 10.00
Shipping Weight 3 lbs.	



ASTATIC

MICROPHONES

Astatic

KNOW THE WORLD OVER
CONNEAUT, OHIO

"VELVET VOICE" CRYSTAL

● Here is a convertible-type Crystal Microphone, providing ultra-smooth, velvety soft, wide range response, that may be used as desk, hand or floor stand microphone, to meet practically every microphone need. Beautiful gold finish housing and handle, bright chrome grille and brown baked enamel, detachable base. Output level—50 db. Two models: Model 200 with smooth, even frequency response characteristics from 30 to 10,000 c.p.s.; Model 241, with similar range but rising characteristics between 1,500 and 5,500 c.p.s. for added brilliance in speech range.



	List Price
	(Without Switch)
200—Code ASUVA	\$13.95
241—Code ASUVC	13.95
	(With OFF-ON Switch)
200-S—Code ASUVB	\$15.00
241-S—Code ASUCV	15.00

"VELVET VOICE" DYNAMIC

● This microphone is identical with Model 206, in appearance, but is equipped with a dynamic unit. Semi-directional. High output level. Frequency response, 30 to 10,000 c.p.s.

	(Without Switch)	List Price
VDL—(50 ohms)—Code ASANA		\$19.95
VD2—(200 ohms)—Code ASAM0		23.90
VDS—(500 ohms)—Code ASANU		23.90
VDM—(5 Meg.)—Code ASAMQ		22.50

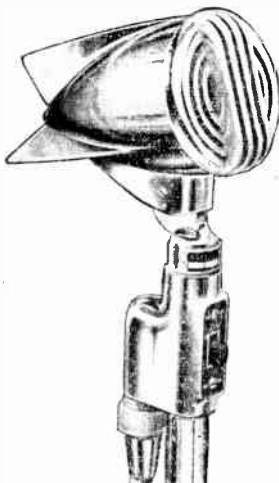
*High impedance model only available with ON-OFF switch, \$1.40 extra.

"VELVET VOICE" CERAMIC

● Also identical in appearance with Model 206, but employing the amazing, new piezoelectric ceramic element. Recommended where high temperatures and humidity are service factors. Output level approximately—62 db. Frequency response 30 to 10,000 c.p.s.

	List Price
VC—(5 Meg.)—Substantially flat—Code ASAQR	\$15.95
VC1—(5 Meg.)—Rising characteristics—Code ASAQP	15.95

(Available with ON-OFF Switch at \$2.05 extra.)



The CONNEAUT

● The "Conneaut," Model No. 600, is a new, streamlined, semi-directional crystal microphone with relatively high output and wide frequency range. Ideal for public address and paging systems, amateurs' rigs and other communication uses. Overall frequency response is exceptionally smooth up to 10,000 c.p.s. and will satisfy the most critical demands for high fidelity performance. The Conneaut is of modern, streamlined design and beautifully finished with bright chrome housing and grille. Standard equipment includes 25 ft. cable and spring or detector. Three models are available.

	List Price
600—Code ASUFZ	\$30.00
600-S—Code ASIFY, with S-Switch	32.70
G-600—Code ASIFX, with G-Stand	35.45

"CARDINAL" CRYSTAL

● A sparkling, low-cost beauty with performance comparable to high-priced units. Lifts from its streamlined, dark brown plastic desk stand for hand use. Wide range response, adaptable to standard AC or DC circuits.

	List Price
	(For Microphone only)
CX—Substantially flat—Code ASAOA	\$9.75
CX-1—Rising characteristics—Code ASAPZ	9.75

(Available with switch, \$1.50 extra. Hang-up hook, \$0.25 extra. "Cardinal" Base only, \$1.00. Stand Adapter, \$0.35 extra.)

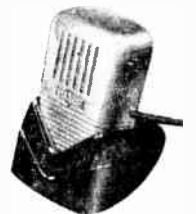


"CARDINAL" DYNAMIC

● Duplicate of Model CX in appearance, but equipped with dynamic unit, available in 500 ohm and high impedance models.

	List Price
	(For Microphone only)
CD-5—(500 ohms)—Code ASAOE	\$19.50
CDH—(High Impedance)—Code ASAOE	19.50

(Available with switch, \$1.50 extra. Hang-up hook, \$0.25 extra. Stand adapter, \$0.35 extra.)



The WR-SERIES

● The WR-Series, Multi-Unit Microphones, are highly recommended for studio, public address and high quality recording purposes. Substantially flat frequency response up to 10,000 cycles. Due to their special interior assembly design, the WR-Series Microphones are practically transparent to sound waves and cannot be acoustically overloaded. Model WR-20 may be used on cable up to 100 ft. with negligible loss of output and Model WR-40 is more than able to handle cable twice this length. Output level—56 db. Finish, bright chrome with satin chrome grille. Cable length, 25 ft.

	List Price
WR-20—Code ASVGZ	\$32.30
WR-40—Code ASVAL	43.25

(Available with S-Switch or G-Stand)

MODEL D-104

● For close talking applications, such as radio amateur communications and similar uses. With high output level—48 db, it possesses definitely reduced R.F. feedback tendencies. Yoke-driven, bridge-mounted Graphite crystal element, shock-proof mounting and barometric compensation. Speech range frequency response from 30 to 7,500, rising 500 to 4,000 c.p.s. Chrome finish. Standard equipment includes interchangeable plug and connector, spring cable protector.

	List Price
D-104—Code ASUPA	\$24.60
GD-104—Code ASVAX, with G-Stand	30.10
D-104-S—Code ASUPB, with S-Switch	27.35



Astatic Crystal Devices manufactured under Brush Development Co. patents.

Astatic

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ASTATIC

MICROPHONES AND STANDS



The JT-SERIES

• Because of its wide range of usefulness, excellent performance and low price, Astatic JT-Series Crystal Microphones are used extensively for amateur, public address and home recording. JT-Series Microphones are available in both wide and voice range models and, in addition to standard equipment, are furnished complete with concentric cable connector, convenient wood handle, interlocking metal base and 15-ft. shielded cable. Wood handle may be removed and microphone used on floor stand. Output level —52 db provides ample reserve for use with high gain amplifiers. Opalescent gray with bright chrome grille.

List Price

JT-30—Substantially flat,
Code ASVLG \$16.95
JT-40—Rising characteristics,
Code ASVLD 16.95

The DYNAMIC

• Model "DN" is a semi-directional, all-purpose dynamic microphone incorporating a new unitary moving coil system, and carefully proportioned acoustic circuit to highly damp the natural resonance of the moving system and provide a response characteristic substantially flat from 50 to 7,000 cycles. The "DN" design employs all features necessary for wide applicability, including Astatic's tilting-head, swivel mount, permitting semi- or non-directional positions. Opalescent gray and bright chrome finish.

List Price

DN-50 —(50 ohms)
Code ASVNI \$21.90
DN-200—(200 ohms)
Code ASVNI 24.60
DN-500—(500 ohms)
Code ASVNI 24.60
DN-HZ —(5 Meg.)
Code ASVNG 24.60
All Models available with G-Stand



The N-SERIES

• N-Series Crystal Microphones are especially desirable for modern public address installations. Swivel joint, tilting head permits adjustment to either semi-directional or non-directional position. Four models are available. N-30 Models with output level —52 db, are high fidelity, wide range microphones, 30 to 10,000 cycles. N-80 Models are voice range microphones, output level —49 db, with rising response to 3,000 cycles. Finished in opalescent gray with bright chrome grille. Complete with 15-ft. cable and spring protector.

List Price

N-30 —Wide Range,
Code ASVJR \$19.15
N-80 —Voice Range,
Code ASVJP 19.15
N-30-S—with S-Switch,
Code ASVJN 21.90
N-80-S—with S-Switch,
Code ASVJL 21.90

The MODEL T-3

• Definitely established by long and continued popularity, Model T-3 Crystal Microphone is highly practical for many and varied applications. Its use is suggested for studio set-ups, with amateur rigs, intercommunicating systems, public address installations and for high class recording purposes. Microphone head may be tilted with ease on unique swivel mounting and pickup pattern made semi- or non-directional, as desired. Output level —52 db. Frequency response substantially uniform from 30 to 10,000 cycles. Equipped with interchangeable plug and socket connector and 25 ft. cable. All chrome finish.

List Price

T-3 —Code ASVIX \$27.35
T-3-S—Code ASVCW,
with S-Switch 30.10
GT-3—Code ASUZD,
with G-Stand 32.85



MODEL K-2

• Because of its smooth, undistorted reproduction and the fact that it cannot be acoustically overloaded, Astatic Model K-2 crystal Microphone is favored and extensively used. In this model, Astatic provides a small size, dual-diaphragm type crystal microphone for studio use, recording, dance bands, public address installations and general applications where quality performance is required. With dual crystal unit design, Model K-2 has twice the capacitance of the usual crystal microphone and correspondingly longer cable lengths may be used. Standard equipment includes plug and socket connector and 25-ft. cable. Bright chrome finish.

List Price

K-2 —Code ASURX \$30.10
K-2-S—Code ASURW,
with S-Switch 32.85
GK-2—Code ASUZA,
with G-Stand 35.55

LAPEL TYPE MODEL L-1

• This very small dual-diaphragm crystal microphone was developed to meet especially difficult pickup conditions. Equipment includes lapel-type spring clip and over-shoulder cord to permit wide latitude of movement. Output level —62 db. Frequency response uniform from 30 to 10,000 c.p.s. Finish, statuary bronze. Furnished with 25-ft. cable.

List Price

Model L-1—Code ASUSN \$27.35



MICROPHONE STANDS AND ADAPTERS

MODEL	FINISH	PRICE
G—Grip-to-Talk	Chrome & Gray	\$10.95
F—Desk	Chrome & Gray	6.55
F-1—Desk	Chrome & Gray	3.25
F-5B—Desk	Chrome & Brown	2.70
F-5G—Desk	Chrome & Gray	2.70
F-11—Adapter	Chrome	3.50



Astatic Crystal Devices manufactured under Brush Development Co. patents.

ASTATIC

PICKUPS

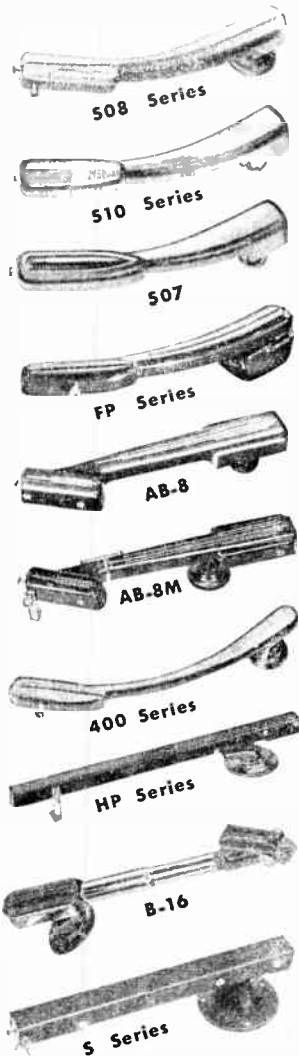
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The Specifications Chart shown on this page includes many types and sizes of Astatic Pickups for use with manually operated phonographs employing 10" and 12" records, as well as Transcription Pickup Arms for use with all lateral Transcriptions.

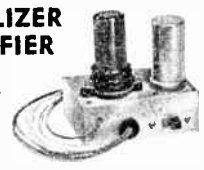
Model	List Price	Finish	Carrier Used	Frequency Range cps.	Output Voltage Avg. at 1000 0.5% Max. Load	Needle Pressure Changes	Mounting Center	Application	Overall Length	Overall Height	Overall Cable Length	Shipping Weight	Code
508-QT	\$18.15		QT-3-M	50 to 10,000*	0.85	1	8"	10" and 12" Records	15 1/2"	1 1/2"	1 1/2"	1 lb. 2.0 oz.	ASV-5
508-QT-M	17.95		QT-3-M	50 to 10,000*	0.85	1	8"	10" and 12" Records	15 1/2"	1 1/2"	1 1/2"	1 lb. 2.0 oz.	ASV-5
508-QT-FM	16.35	Light Brown Hammerlin	QT-3-M	50 to 10,000*	1.0	1	8"	10" and 12" Records	15 1/2"	1 1/2"	1 1/2"	1 lb. 2.0 oz.	ASV-5
508-Nylon	17.50		Nylon EJ	50 to 10,000**	1.0	1-2	8"	All Lateral Transcriptions	15 1/2"	1 1/2"	1 1/2"	1 lb. 2.0 oz.	ASV-5
508-Nylon-M	16.10		Nylon EJ	50 to 10,000**	1.0	1-2	8"	All Lateral Transcriptions	15 1/2"	1 1/2"	1 1/2"	1 lb. 2.0 oz.	ASV-5
508-L-10	16.40		ML-2-M	50 to 8,000	0.7	1	8"	10" and 12" Records	15 1/2"	1 1/2"	1 1/2"	1 lb. 2.0 oz.	ASV-5
508-ME-2-M	16.95		ML-2-M	50 to 12,000	0.1**	1	8"	10" and 12" Records	15 1/2"	1 1/2"	1 1/2"	1 lb. 2.0 oz.	ASV-5
510-QT	9.25	Smooth	QT-3-J	50 to 10,000	0.85	1	7"	10" and 12" Records	15 1/2"	1 1/2"	1 1/2"	1 lb. 2.0 oz.	ASV-5
510-QT-FM	7.25	Light Brown Enamel	QT-3-M	50 to 10,000*	0.85	1	7"	10" and 12" Records	15 1/2"	1 1/2"	1 1/2"	1 lb. 2.0 oz.	ASV-5
510-ME-2-M	8.35		ML-2-M	50 to 12,000	0.1*	1	7"	10" and 12" Records	15 1/2"	1 1/2"	1 1/2"	1 lb. 2.0 oz.	ASV-5
507-L-10	5.50	Smooth Light Brown Enamel	L-10	50 to 1,000	0.6	1-1-2	7"	10" and 12" Records	15 1/2"	1 1/2"	1 1/2"	1 lb. 2.0 oz.	ASV-5
FP-QT	18.45		QT-3-M	50 to 10,000*	0.85	1	8"	10" and 12" Records	9 1/2"	1 1/2"	1 1/2"	1 lb. 6.0 oz.	ASV-5
FP-QT-M	17.85		QT-3-M	50 to 10,000*	0.85	1	8"	10" and 12" Records	9 1/2"	1 1/2"	1 1/2"	1 lb. 6.0 oz.	ASV-5
400-QT	25.00		QT-3-M	50 to 10,000*	0.85	1	10 1/2 16"	All Lateral Transcriptions	12 1/2"	1 1/2"	1 1/2"	1 lb. 5.0 oz.	ASB-1
400-QT-M	21.50		QT-3-M	50 to 10,000*	0.85	1	10 1/2 16"	All Lateral Transcriptions	12 1/2"	1 1/2"	1 1/2"	1 lb. 5.0 oz.	ASB-1
400-LTM	23.10		LTM	50 to 10,000*	1.0	1-1-2	10 1/2 16"	All Lateral Transcriptions	12 1/2"	1 1/2"	1 1/2"	1 lb. 5.0 oz.	ASB-1
400-Nylon	23.65	Light Brown Hammerlin	Nylon EJ	50 to 10,000**	1.0	1-1-2	10 1/2 16"	All Lateral Transcriptions	12 1/2"	1 1/2"	1 1/2"	1 lb. 5.0 oz.	ASB-1
400-Nylon-M	23.15		Nylon EJ	50 to 10,000**	1.0	1-1-2	10 1/2 16"	All Lateral Transcriptions	12 1/2"	1 1/2"	1 1/2"	1 lb. 5.0 oz.	ASB-1
400-ME-2-M	23.60		ML-2-M	50 to 12,000	0.1**	1	10 1/2 16"	All Lateral Transcriptions	12 1/2"	1 1/2"	1 1/2"	1 lb. 5.0 oz.	ASB-1
HP-QT	27.85		QT-3-J	50 to 10,000	0.55	1	12"	All Lateral Transcriptions	15"	2 1/2"	2 1/2"	2 lbs. 6.0 oz.	ASV-2
HP-QT-M	27.35		QT-3-M	50 to 10,000*	0.85	1	12"	All Lateral Transcriptions	15"	2 1/2"	2 1/2"	2 lbs. 6.0 oz.	ASV-2
HP-Nylon	25.95	Rich Maroon	LTM	50 to 10,000*	1.0	1-1-2	12"	All Lateral Transcriptions	15"	2 1/2"	2 1/2"	2 lbs. 6.0 oz.	ASV-2
HP-Nylon-M	26.70		Nylon EJ	50 to 10,000**	1.0	1-1-2	12"	All Lateral Transcriptions	15"	2 1/2"	2 1/2"	2 lbs. 6.0 oz.	ASV-2
HP-Nylon-M	26.20		Nylon EJ	50 to 10,000**	1.0	1-1-2	12"	All Lateral Transcriptions	15"	2 1/2"	2 1/2"	2 lbs. 6.0 oz.	ASV-2
AB-8	11.15	Smooth Brown Enamel	B-2	50 to 1000	2.5	2-3-4	8"	10" and 12" Records	10 1/2 8"	2 1/2 12"	1 1/2"	2 lbs.	ASV-2
AB-8B	11.15	Smooth Black Enamel	B-2	50 to 1000	2.5	2-3-4	8"	10" and 12" Records	10 1/2 8"	2 1/2 12"	1 1/2"	2 lbs.	ASV-2
AB-8M	11.90	Smooth Black Enamel	B-2	50 to 1000	2.5	2-3-4	7"	10" and 12" Records	10 1/2 8"	2 1/2 12"	1 1/2"	2 lbs.	ASV-2
B-10	19.50	Black and Chrome	B-2	50 to 1000	2.5	2-3-4	9 1/2 16"	10" and 12" Records	1-1 1/2"	2 1/2 32"	2 1/2"	3 lbs. 2.0 oz.	ASV-2
B-16	25.00	Black and Chrome	B-2	50 to 1000	2.5	2-3-4	11 1/2 12"	All Lateral Transcriptions	13 1/2 16"	2 1/2 8"	2 1/2"	3 lbs. 1.0 oz.	ASV-2
S-8	11.15	Black Wrinkle	B-2	50 to 1000	2.5	2-3-4	8"	10" and 12" Records	9 1/2 16"	2 1/2 8"	1 1/2 10 0/2	1 lb. 10 0/2	ASV-2
S-12-B-2	13.90	Black Wrinkle	B-2	50 to 1000	2.5	2-3-4	12"	All Lateral Transcriptions	15"	2 1/2 8"	12 1/2 2"	2 lbs. 6.0 oz.	ASV-2
S-12-L-1-M	14.33	Black Wrinkle	LTI-M	50 to 10,000*	1.0	1	12"	All Lateral Transcriptions	21 8"	2 1/2 8"	12 1/2 2"	2 lbs. 6.0 oz.	ASV-2

*Exceptionally smooth response over entire frequency range with a gradual roll-off commencing at approximately 2,000 cps.
 **Exceptionally smooth response over entire frequency range with a gradual roll-off commencing at approximately 1,000 cps.
 ***Exceptionally smooth response over entire frequency range with a gradual roll-off commencing at approximately 1,000 cps.
 * Columbia Inimit Test Record



EQUALIZER AMPLIFIER

● Model EA-1, for operation with Astatic Magneto-Induction cartridge, compact unit. Provides "bass-boost" and a switch to adjust the high frequency response. Code ASAM-1. List Price \$9.90
 ● Model EA-2, for use with Magneto-Induction cartridge. Self-contained power supply. High frequency "roll-off" switch, "turn-over frequency" selector switch, and "bass boost" control. Light brown Hammerlin finish. Code ASAM-2. List Price \$39.50



Astatic Crystal Devices manufactured under Brush Development Co. patents.

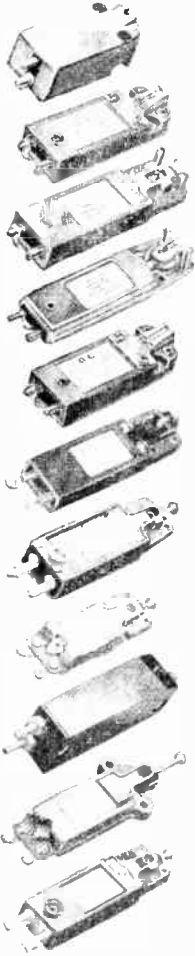
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KNOWN THE WORLD OVER CONNEAUT, OHIO

ASTATIC

CARTRIDGES AND NEEDLES

REPLACEMENT CARTRIDGES AND NEEDLES



- "MI-2"
- "QT" Series
- "LT1-M"
- "LT2-M" (Stamped Steel Housing, Weight 20 Grams)
- "LT3-M" (Stamped Aluminum Housing, 11 Grams)
- "QC" Series
- "Nylon" Series
- "L" Series
- "M" Type
- "B" Type
- 401-A Type for RCA Replacement
- "L-70" Series and "L-82" Series.
- "L-73," "L-74" and "L-80" "PN" Types

Model No.	Test Disc	Arm Rest Button	Minimum Needle Pressure	Output Voltage	Frequency Range cps	Terminals	Needle Screen No.	Needle Type	Code
TYPE "MI" SERIES									
MI-M	401-A	No	1.0 oz.	0.17	50 to 12,000	Pin	None	Fixed	ASMA
TYPE "L" SERIES									
L-21A	755	Yes	2.1 oz.	2.95	50 to 15,000	Eng	1210	Optional	ASWVY
L-21A	115	Yes	2.1 oz.	1.15	50 to 15,000	Eng	1210	Optional	ASWVZ
L-21A	115	Yes	2.1 oz.	0.6	50 to 15,000	Eng	1110	Optional	ASWVA
L-21A	655	Yes	2.1 oz.	3.2	50 to 15,000	Eng	1210	Optional	ASWVB
TYPE "LP" SERIES									
LP-1	(DISCONTINUED)								
TYPE "M" SERIES									
M-2	755	No	2.1 oz.	2.9	50 to 15,000	Eng	1210	Optional	ASWJM
TYPE "B" SERIES									
B-1	755	No	2.1 oz.	2.1	50 to 15,000	Universal	1205 or 1207	Optional	ASWHH
B-1	755	No	2.1 oz.	2.1	50 to 15,000	Universal	1205 or 1207	Optional	ASWHH
SPECIAL TYPE FOR RCA REPLACEMENT									
401-A	115	No	2.1 oz.	1.1	50 to 15,000	Eng	1207	Optional	ASWTA
TYPE "L-70" SERIES									
L-70	755	No	1.1 oz.	1.90	50 to 15,000	Pin	None	Optional	ASWVA
L-70A	755	Yes	1.1 oz.	1.90	50 to 15,000	Pin	None	Optional	ASWVA
L-71	655	No	1.0 oz.	1.50	50 to 15,000	Pin	None	Optional	ASWVQ
L-71A	655	Yes	1.0 oz.	1.50	50 to 15,000	Pin	None	Optional	ASWVQ
L-72	655	No	1.1 oz.	1.35	50 to 15,000	Pin	None	Optional	ASWVM
L-72A	655	Yes	1.1 oz.	1.35	50 to 15,000	Pin	None	Optional	ASWVM
L-73	755	No	1.1 oz.	0.25	50 to 15,000	Pin	None	Optional	ASWVA
L-73A	755	Yes	1.1 oz.	0.25	50 to 15,000	Pin	None	Optional	ASWVA
L-74	755	No	1.1 oz.	1.5	50 to 15,000	Pin	None	Optional	ASWVW
L-74A	755	Yes	1.1 oz.	1.5	50 to 15,000	Pin	None	Optional	ASWVW
TYPE "L-82" SERIES									
L-82	755	No	2.1 oz.	0.5	50 to 15,000	Pin	None	Optional	ASWSE
L-82A	755	Yes	2.1 oz.	0.5	50 to 15,000	Pin	None	Optional	ASWSE
L-82	755	No	2.1 oz.	1.5	50 to 15,000	Pin	None	Optional	ASWSE
TYPE "MLP" SERIES									
MLP-1	(DISCONTINUED)								
MLP-1	(DISCONTINUED)								
TYPE "NYLON" SERIES...NOTE: Exaggerated response over entire frequency range with a gradual roll-off commencing at approximately 7,000 cps.									
Nylon 11	755	No	1.1 oz.	1.0	50 to 15,000	Pin	None	Nylon	ASWVA
Nylon 11M	755	No	1.1 oz.	1.0	50 to 15,000	Pin	None	Nylon	ASWVB
TYPE "LT" SERIES...NOTE: Exaggerated response over entire frequency range with a gradual roll-off commencing at approximately 6,000 cps.									
LT-M	755	No	1.1 oz.	1.0	50 to 15,000	Pin	None	"L" Needle	ASWVA
LT-MA	755	Yes	1.1 oz.	1.0	50 to 15,000	Pin	None	"L" Needle	ASWVB
LT-MA	755	No	1.1 oz.	1.0	50 to 15,000	Pin	None	"L" Needle	ASWVA
LT-MA	755	Yes	1.1 oz.	1.0	50 to 15,000	Pin	None	"L" Needle	ASWVB
LT-M	755	No	1.1 oz.	1.0	50 to 15,000	Pin	None	"L" Needle	ASWVA
LT-M	755	Yes	1.1 oz.	1.0	50 to 15,000	Pin	None	"L" Needle	ASWVB
TYPE "QT" SERIES...NOTE: Exaggerated response over entire frequency range with a gradual roll-off commencing at approximately 5,000 cps.									
QT-M	(DISCONTINUED)								
QT-M	(DISCONTINUED)								
QT-1	1.90	No	1.0 oz.	0.85	50 to 15,000	Pin	None	"Q" Needle	ASWBJ
QT-1	1.90	Yes	1.0 oz.	0.85	50 to 15,000	Pin	None	"Q" Needle	ASWBJ
QT-1	1.90	No	1.0 oz.	0.7	50 to 15,000	Pin	None	"Q" Needle	ASWBI
QT-1	1.90	Yes	1.0 oz.	0.7	50 to 15,000	Pin	None	"Q" Needle	ASWBI
QT-1M	1.90	No	1.0 oz.	0.35	50 to 15,000	Pin	None	"Q" Needle	ASWBI
QT-1M	1.90	Yes	1.0 oz.	0.35	50 to 15,000	Pin	None	"Q" Needle	ASWBI
QT-1M	1.90	No	1.0 oz.	0.2	50 to 15,000	Pin	None	"Q" Needle	ASWBI
QT-1M	1.90	Yes	1.0 oz.	0.2	50 to 15,000	Pin	None	"Q" Needle	ASWBI
TYPE "QC" SERIES									
QC-1	755	No	1.0 oz.	0.5	50 to 15,000	Pin	None	Fixed	ASWPK
QC-1A	755	Yes	1.0 oz.	0.5	50 to 15,000	Pin	None	Fixed	ASWPK
"P. N." TYPES									
P-1	1115	No	1.0 oz.	1.00	50 to 15,000	Pin	None	Optional	ASWAL
P-1A	1115	Yes	1.0 oz.	1.00	50 to 15,000	Pin	None	Optional	ASWAL
P-1A	1115	No	11.2 oz.	1.4	50 to 15,000	Pin	None	Optional	ASWAL
P-1A	1100	No	11.2 oz.	1.1	50 to 15,000	Pin	None	Optional	ASWAD
P-1	1115								ASWFO
P-1	1115	No	1.0 oz.	0.1	50 to 15,000	Pin	None	Optional	ASWAO
PN-1	1115	No	2.0 oz.	1.35	50 to 15,000	Universal	1205 or 1207	Optional	ASWBA
PN-1	(DISCONTINUED)								ASWBB
QT-1PN	1115	No	1.0 oz.	0.1	50 to 15,000	Pin	None	"Q" Needle	ASWBD
QT-1PN	1115	No	1.0 oz.	0.1	50 to 15,000	Pin	None	"Q" Needle	ASWBE
QT-1PN	1115	No	1.0 oz.	0.1	50 to 15,000	Pin	None	"Q" Needle	ASWBD
QT-1PN	1115	No	1.0 oz.	0.1	50 to 15,000	Pin	None	"Q" Needle	ASWBE
ASW-1PN	1050	No	11.4 oz.	0.7	50 to 15,000	Pin	None	"S" Needle	ASWBC
ASW-1PN	1050	No	11.4 oz.	0.7	50 to 15,000	Pin	None	"S" Needle	ASWBC
ASW-1PN	1050	No	11.4 oz.	0.7	50 to 15,000	Pin	None	"S" Needle	ASWBA
ASW-1PN	1050	No	11.4 oz.	0.7	50 to 15,000	Pin	None	"S" Needle	ASWBA

NOTE: Exaggeratedly smooth response over entire frequency range with a gradual roll-off commencing at approximately 5,000 cps in "PN" Types of "QT" Series, and at approximately 2,000 cps in "PN" Types of "Nylon" Series.

* Column 1 - Test Record. † Supplire Tipped. ‡ Previous Metal Tipped.

Type "P" - Previous Metal Tipped Needle. For "LT" Series Cartridges. List Price \$1.50 Code ASWBZ.
 Type "Q" - Previous Metal Tipped Needle. For "QT" Series Cartridges. List Price 1.50 Code ASWBZ.
 Type "Q" - Supplire Tipped Needle. For "QT" Series Cartridges. List Price 2.50 Code ASWBZ.
 Type Nylon 11 Supplire Tipped Nylon Needle. For "Nylon" Series Cartridges. List Price 1.00 Code ASWBB.
 Type Nylon 11M Previous Metal Tipped Nylon Needle for "Nylon" Series Cartridges. List Price 2.50 Code ASWBB.

REPLACEMENT NEEDLES

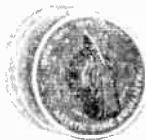


TYPE "NYLON"

TYPE "Q"

TYPE "T"

E4P TONE EQUALIZER



Model E4P is an adjustable tone compensation network for use between crystal pickup and amplifier. Recommended for use with all crystal pickups. Complete instructions supplied. Code ASVHD List Price \$3.30

"RECORDING HEAD" MODELS X-26 and X-29A

"RECORDING HEAD" MODEL M-41

"RECORDING HEAD" MODEL C-42

Model	Type	Driving Voltage	Useful Upper Limit	Finish	Dimensions	Net Weight	Code	List Price
X-26	Crystal	75 V. RMS	5,000 cps.	Oxidized	1 1/8" x 3/8" x 3 1/4"	5 1/2 oz.	ASXMI	\$12.80
X-29A	Crystal	120 V. RMS	6,500 cps.	Oxidized	1 1/8" x 3/8" x 3 1/4"	5 1/2 oz.	ASXMH	12.80
C-42	Crystal	75 V. RMS	5,000 cps.	Oxidized	2 5/8" x 1 1/8" x 3"	1 1/2 oz.	ASXMG	12.80
M-41-8 (8 ohms)	Magnetic	3 V. RMS	7,000 cps.	Oxidized	1 1/8" x 1 1/2" x 3 1/4"	3 1/2 oz.	ASXMF	12.80
M-41-500 (500 ohms)	Magnetic	22 V. RMS	7,000 cps.	Oxidized	1 1/8" x 1 1/2" x 3 1/4"	3 1/2 oz.	ASXME	12.80

Astatic Crystal Devices manufactured under Brush Development Co. patents.

DYNAMIC MICROPHONES

SHURE

SHURE MULTI-IMPEDANCE SUPER-CARDIOIDS



"UNIDYNE" SUPER-CARDIOID DYNAMIC
(For General Purpose)

The new Shure Super-Cardioid Dynamic Microphones are Multi-Impedance Microphones—giving you three microphones in one. Gives you a choice of low, medium, or high impedance in one unit. Model "556" is specially designed for Broadcasting. Held within extremely close tolerances in frequency response. Features internally isolated cartridge and external vibration absorbing unit. Model "55" is a "General Purpose," high-quality dynamic. It has the same mechanical properties as "556" with the exception of the external vibration absorbing unit.

Following is technical data covering both models: Reduces reflections and reverberation—decreases random noise pickup by 73%. Smooth response from 40 to 10,000 cycles over wide angle at front—dead at rear. Single unit construction accomplished through Shure "Uniphase" principle (Patented). Floating moving coil system. Swivel head. Standard $\frac{5}{8}$ "—27" thread. "556" has convenient terminals for attaching longer length cables. "55" has built-in connector. Case $\frac{1}{4}$ " high, $\frac{3}{4}$ " wide, $\frac{3}{2}$ " deep.



"556" SUPER-CARDIOID
(For Broadcast)

MODEL	CABLE	SHPG WEIGHT	CODE	LIST PRICE
556	7 ft.	4½ lbs.	RUMUB	\$87.50
55	25 ft.	4½ lbs.	RUMUL	\$62.50

Multi-Impedance Switch on Models "55" and "556"

IMPEDANCE TABLE	OUTPUT LEVEL
L—35-50 ohms	58.1 db below 1 Milliwatt per 10 bar signal
M—150-250 ohms	58.8 db below 1 Milliwatt per 10 bar signal
H—High	59.5 db below 1 volt per bar

"SONODYNE"

The Model 51 Sonodyne is a high-output pressure-type dynamic microphone with wide-range frequency response and typical semi-directional pickup characteristics. It features the Shure Multi-Impedance Switch. You may select the proper operating impedance by merely changing the position of the impedance switch. The "Sonodyne" operates on the principle of a moving-coil element in a magnetic field. A high-flux magnet is used in the magnetic circuit, which together with a specially designed moving system and associated acoustic network, provides high efficiency and smooth, peak-free response. Each microphone is provided with a built-in receptacle and a two-conductor shielded functional cable with microphone plug attached. The rich Pearl-Gray case is functionally designed for improved acoustical performance and modern appearance. Frequency response 60-10,000 c.p.s.

Applications: The "Sonodyne" is ideal for all general purpose use, including public address, recording, communications, and similar applications.

IMPEDANCE TABLE		OUTPUT LEVEL		
L—35-50 ohms		53.0 db. below 1 Milliwatt for 10 bar signal		
M—150-250 ohms		52.5 db. below 1 Milliwatt for 10 bar signal		
H—High Impedance		52.0 db. below 1 volt per bar		
MODEL	CABLE	SHPG. WEIGHT	CODE	LIST PRICE
51	20 ft.	4½ lbs.	RUSON	\$37.50



"SONODYNE"

"ECONODYNE"

The "Econodyne" is a sturdy dynamic microphone that offers high-quality performance for low cost. It is a pressure dynamic microphone with smooth frequency response and semi-directional pickup characteristics. Frequency response 60-8000 c.p.s. The microphone is provided with a single-conductor shielded attached cable.

Applications: The "Econodyne" is the ideal microphone for low-cost public address, recording, communications and similar installations.

MODEL	CABLE	OUTPUT	IMPEDANCE	SHPG WEIGHT	CODE	LIST PRICE
52	15 ft.	52 db below 1 volt per bar	High Impedance	2½ lbs.	RUMIN	\$25.00



"ECONODYNE"



CRYSTAL MICROPHONES

“MONOPLEX”

A high-output, unidirectional microphone that ranks far, far above ordinary crystal microphones. The "Monoplex" is a SUPER-CARDIOID microphone. This means that the "Monoplex" is twice as unidirectional as the Cardioid. It has wide angle pickup across the front of the microphone but it reduces sound pickup from the rear by 15 db—over a broad range of frequencies, and reduces pickup of random sound by 73%! The "Monoplex" employs the same type of acoustic phase-shifting network used in the highest-cost Shure Broadcast microphones. New "Metal Seal" crystal. The case is pivoted at the rear and can be pointed toward desired sound or upwards for horizontal plane pickup. The "Monoplex" is excellent for high-quality public-address, communications, recording and similar applications. It will operate under adverse conditions of background noise and reverberation where a conventional microphone would be practically useless. Built-in cable connector. Standard $\frac{5}{8}$ "-27 thread. Height 4". Width 3 $\frac{1}{2}$ ". Thickness 1 $\frac{7}{8}$ ". Shipping weight 2 $\frac{7}{8}$ lbs.



MODEL	CABLE	OUTPUT	IMPED.	CODE	LIST PRICE
737A	20 ft.	54 db below 1 volt per dyne per sq. cm.	High Impedance	RUMON	\$35.50

VERSATEX



The "Versatex," versatile crystal microphone: fits the palm of your hand; needs no desk stand, as it rests on its own base; fits on a floor stand. Features high-output, specially-engineered voice response, frequency of 60-8000 c.p.s., moisture-proof Crystal, shock-proof plastic case, R-F filter. Eliminates mechanical noise pickup. High Impedance. Shpg. weight 1 $\frac{1}{2}$ lbs. Ideal for Ham communications. Also fine for recording and low cost P.A. systems. Code RUTEX.

MODEL	CABLE	OUTPUT	LIST PRICE
718A	7 ft.	53 db below 1 volt per bar	\$11.50



LAPTEL MICROPHONE

707A CRYSTAL



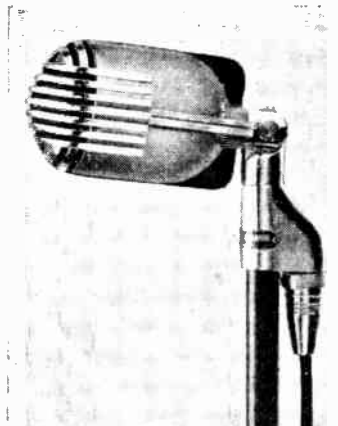
Designed to give good-quality performance at low cost. Has good response characteristics, is free from peaks, has typical semidirectional pickup. Uses moisture-proof Bimorph Crystal. Ideal for voice and music reproduction. Suitable for low-cost P. A. systems, call systems, amateur phone transmitters and similar applications.

Pearl Gray finish with high-polished plating on front grille. The case is a heavy die casting, is simple in design and in excellent taste. Standard $\frac{5}{8}$ "-27 thread. Diameter 2 $\frac{3}{8}$ ". Shipping weight 1 $\frac{1}{4}$ pounds. High Impedance.

707A. Code RUDOFF.
707A-20. Code RUDOK.

MODEL	CABLE	OUTPUT	LIST PRICE
707A	7 ft.	-53 db	\$13.50
707A-20	20 ft.	-56.5 db	\$15.00

STRATOLINER



An expensive-looking microphone for applications where low cost is an important factor. Wide-range response (free from undesirable peaks) for good reproduction of either voice or music. Bimorph Crystal. Placed horizontally, the 708A is semidirectional; used vertically (microphone pointed straight up) it becomes non-directional in the horizontal plane, and performers may be placed all around it without frequency discrimination. A swivel permits 90° tilting of the microphone. Case dimensions: diameter 2 $\frac{1}{2}$ ", length 4 $\frac{1}{8}$ ". Stand thread $\frac{5}{8}$ "-27. Shipping weight 2 $\frac{1}{2}$ pounds. Frequency response is 60-8000 c.p.s. Pearl Gray finish. High Impedance.

708A. Code RUDUM.
708A-20. Code RUVAT.

MODEL	CABLE	OUTPUT	LIST PRICE
708A	7 ft.	-53 db	\$25.80
708A-20	20 ft.	-56 db	\$26.50

SHURE 76B LAPEL MICROPHONE

Designed for Public Address, lecturing, portable transmitters, and all general uses for intelligible reproduction of speech. Pressure-actuated diaphragm-type crystal microphone. Graphoil Bimorph crystal, moisture-sealed. Microphone is inconspicuous, weighs only 1 $\frac{1}{2}$ ounces. Response from 40 to 6,000 c.p.s. High frequency response accentuated for maximum intelligibility. 1 $\frac{7}{8}$ " diameter. Gray finish. Lapel clip. 25-foot shielded single-conductor cable. Shipping weight 1 pound. Output level: 57 db below 1 volt per bar. Code RULOP.

Model 76B List Price \$27.00

CARBON MICROPHONES AND ACCESSORIES

SHURE

MODERN DESK STAND

Model S36A. Beautiful, stream-lined Desk Mount with stable support at correct height. Fits Shure connector-type Microphones, concealing plug in base. Adapter plate and tubing provided for other type microphones. Removable button at front for installation of 3/8" standard bushing switch or volume control. Pearl Gray finish. Base: 2 1/2" high, 5" wide, 7" long. Shipping weight 1 1/2 pounds. Model S36A.

Code: RUSEF List Price \$4.50



MILITARY CARBON—100 SERIES

High-quality, carbon microphones specially designed for military and police equipment and other uses where ruggedness and dependability are vital factors. Clear, crisp voice response. High output. Easy to use, fits snugly into palm of hand. Heavy duty furnished for push-to-talk performance. Furnished with hook for suspension and bracket for wall mounting, plus functional "Koilord" cable. Adopted as standard microphone by leading manufacturers of police transmitters. Output level: 32 db below 1 volt for 10 bar speech signal. Net weight 14 oz. Shipping weight 1 pound. Case dimensions: 3 3/4" high, 1 3/4" deep, 2 3/4" wide.



TAKE-APART STAND

Model S34B. Handy low-cost stand for desk or hand use. One twist of handle locks it securely in base for use as a table stand, or releases handle for use in hand. Metal base, wood handle. Metal top threaded 3/8"—Z7. Height over all 6 1/2". Base diam. 4 1/2". Length of handle 5 7/8". Shipping weight 1 lb.

Code: RUKAB..... List Price \$2.50
Model A41B Microphone Handle. Threaded 3/8"—27.
Code: RUJAD..... List Price \$1.00



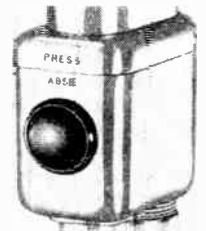
MODEL	SWITCH ARRANGEMENT	CABLE	CODE	LIST PRICE
101C	Two Wire Relay Switch normally open (No microphone switch).	4 ft. 4 Conductor Unshielded	RUCEG	\$10.00
102C	Relay normally open. Microphone switch normally open.	4 ft. 4 Conductor Unshielded	RUCEM	\$30.00



A83B



A84B



A85C

CABLE TYPE TRANSFORMER

Model A86A. Ideal for use with Multi-Impedance microphones. Cable-Type Transformer. Matches 35 to 50 and 150 to 250 ohm microphones to high impedance amplifier input. Compact, sturdy. Case diameter 1 5/8", length 2 7/8". 7 foot cable. Shipping weight 1 1/2 pounds.

Code: RUDEB..... List Price \$15.25



MICROPHONE "ON-OFF" SWITCHES

In many microphone applications a switch is not wanted at the microphone. Therefore switches are not built into Shure Microphones. But, whenever a switch is needed these "On-Off" switches plug into the microphone quickly and conveniently. You can depend on them. No soldering necessary. Model A83B. Quickly attached to any cable-connector type Shure Microphone. Internal plug establishes connections. Bakelite arrow knob.

Code: RUNIM..... List Price \$6.00
Model A84B. Momentary "On-Off" Switch. Press-to-talk. Bakelite disc.
Code: RUH1D..... List Price \$7.00
Model A85C. Momentary Relay-Type Switch. Normally-open switch closes circuit comprising one conductor and shield of outgoing cable for operation of relay or other device; remaining conductor and shield of cable carry microphone output. Must be used with two-conductor shielded cable, and only with crystal and high impedance dynamic microphones. Standard Shure cable-connector receptacle. Satin Chrome finish. Bakelite disc. 1 3/4" high x 1 1/2" wide x 2" deep. Furnished without cable. Shipping weight 3/4 pound.
Code: RUNAT..... List Price \$10.00

The new Shure Floor Stands have been designed to look smart and work perfectly. They will fit into any type of installation because of their design and rich hammered finish. Stabilized base cushioning reduces floor noise pickup by 10 to 18 db. Color: Pearl Gray.

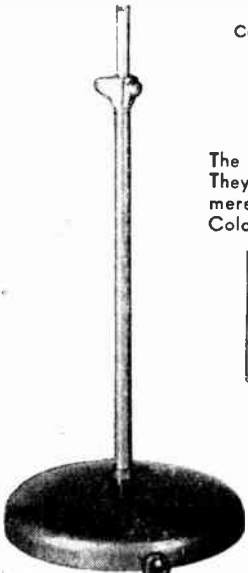
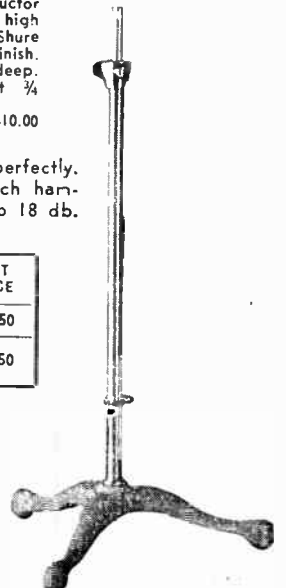
MODEL	BASE STYLE	WEIGHT OF BASE	BASE DIAM.	HEIGHT ADJUSTMENT	SHPG. WT.	CODE	LIST PRICE
S61	Round	9 1/4 lbs.	12"	44"—68"	14 lbs.	RUSIT	\$19.50
S65	Tri pod	9 1/4 lbs.	17 1/8"	46"—70"	14 lbs.	RUSIV	\$22.50

Pictured at right is the new Shure Locking Device that is compact and sturdy. Just push the button to raise or lower the microphone. Life-tested 5000 times. This lock is precision made, will stand up under rough and tumble treatment.

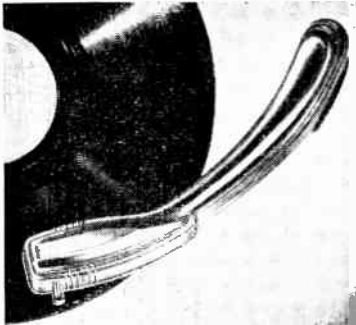
MODEL S61



MODEL S65



PHONOGRAPH PICKUPS AND CARTRIDGES



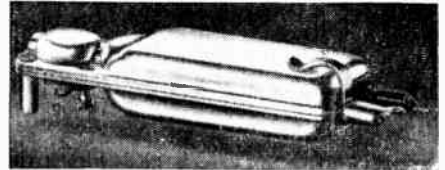
Model "900". Code: RUZUM
List Price \$11.50
Model "900-PN". Code: RUZUB
List Price \$15.50

SHURE "MUTED STYLUS" PICKUPS AND "MUTED STYLUS" CARTRIDGES

The "Muted Stylus" Crystal Pickups play with amazing needle quietness. A needle force of only 1 oz., high output, and smooth frequency response give the pickups a reproduction never before achieved.

The "Muted Stylus" Pickup Cartridge has a unique specially designed metal needle for longer record and needle life, faithful tracking, and marked reduction of surface noise.

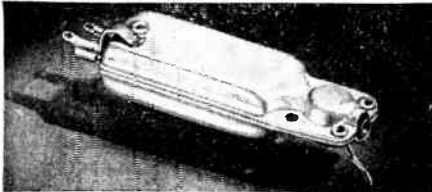
The "Muted Stylus" Pickups are ideal for high-quality home phonographs, coin-operated machines, and all similar applications where shellac or Vinylite records are used. They can be used as direct replacements for many of the old-fashioned heavy-weight crystal pickups. Available with Rochelle Salt or PN crystal.



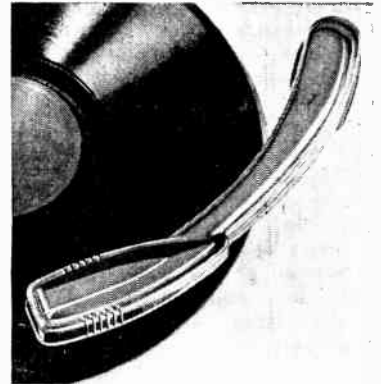
The Shure W60 Cartridges fit all standard flat-type pickup mountings—and directly replace the Shure P30. The location of the needle point is similar to that of the standard cartridge when the latter is provided with a full-tone needle.

Model W60B (Osmium). Code: RUSID List Price \$7.50
Model W60A (Sapphire). Code: RUSIS List Price \$8.50

SHURE "GLIDER" PICKUPS AND LEVER TYPE CARTRIDGES



The Shure "Gliders" are lightweight crystal phonograph pickups with a needle force of only 1 1/8 oz. They have extremely low needle-point stiffness but still have sufficient output to replace old-fashioned, heavy-weight arms. Shure "Gliders" save records and needles, have smooth response, reduce surface noise, and reproduce the full tone qualities of the record with natural life-like clarity.



LEVER-TYPE CARTRIDGES

MODEL	CODE	REPLACES SHURE	OR REPLACES	Min. Needle Force	Voltage	Shpg. Wt.	LIST PRICE
W57A	RUGLA	P87, P93, P87B	Any Standard	3/4 oz.	1.6	3/4 oz.	\$ 5.55
W58A	RUGLU	99-182, P90S, P92B, W42A	Flat-Type	3/4 oz.	1.6	1 oz.	5.55
W59A	RUGAT	99-181, 99-180, W40A, W41A	Cartridge of	1 oz.	2.5	1 oz.	5.55
W56A	RUGUS	P89	Equal Output	1 1/8 oz.	4.3	3/4 oz.	6.65
**W56PN	RUTAR	PN88, PN89		1 1/8 oz.	†1.9	3/4 oz.	10.00
**W60PN	RUTAP	PN30	‡See below	3/4 oz.	†0.7	3/4 oz.	13.00

**SPECIAL PN TYPE CARTRIDGE. †Any Standard Flat-Type PN Cartridge of Equal Output. ‡5.0 megohm load resistance 100 m.m.f.d. cable capacity

93A. Code: RUGLI. List Price \$7.50
96A. Code: RUGAB. List Price \$8.50



SHURE CARTRIDGE PACK

Solves service problems with phonographs and record changers . . . builds new profits! 5 crystal cartridges have been "standardized" to replace 58 different popular types of all makes. The "Pack" contains the 5 Shure Lever-Type Cartridges, including Model W60B with the "Muted Stylus." Specific cross-reference chart for exact cartridge replacement is enclosed in carton. The Shure Lever-Type Cartridges offer more than a replacement line—five cartridges, that feature low needle force . . . super moisture proofing . . . longer needle and record wear . . . high needle compliance (flexibility) . . . high output . . . crystal shock immunity . . . lightweight cases (aluminum and steel) . . . pin-tip terminals.

Model W50A. Code: RUPAC
List Price \$30.80



SHURE "MUTED STYLUS" NEEDLES

Shure "Muted Stylus" needles can be used only in the Shure "Muted Stylus" Cartridges. They are ideal for high quality phonographs, coin-operated machines, and in all other applications where shellac pressings are commonly used. Both the sapphire-tipped and the osmium-tipped needles were designed exclusively for use with the Shure "Muted Stylus" Cartridges, MODELS W60 and P30. These two needles bring record playing to a new unmatched standard of performance, greatly reducing the noise and distortion caused by ordinary needles. Surface noise, needle talk, and needle hiss are practically eliminated. These needles are so soft riding, so smooth working, so silent tracking that they permit unhampered fidelity of tone.

A61A (Sapphire). Code: RUZAN. List Price \$2.50
A62A (Osmium). Code: RUZAP. List Price \$1.50

MODEL	REPLACES SHURE	REPLACES	Min. Needle Force	Out. Volt.	Shp. Wt.	LIST PRICE
W57A	P87, P93, P87B	Any Standard	3/4 oz.	1.6	3/4 oz.	\$5.55
*W60B	P30, P30C, P30D, F30F	Flat-Type	1 oz.	1.6	3/4 oz.	7.50
W58A	99-182, P90S, P92B, W42A	Cartridge	3/4 oz.	1.6	1 oz.	5.55
W59A	99-181, 99-180, W40A, W41A	of	1 oz.	2.5	1 oz.	5.55
W56A	P89	Equal Output	1 1/8 oz.	4.3	3/4 oz.	6.65

*With Osmium Point Needle

No finer choice than

Electro-Voice

Microphones

Cardioid Unidirectional Microphones

IMPROVED CARDYNE BROADCAST DYNAMIC

True Cardioid with New Impedance Selector, New Dual-Type External Shock Mount, Smooth Wide Range Response, High Output.

Better than ever for high quality sound pick-up and reproduction. Response is improved . . . output increased. New impedance selector on rear of case instantly gives you high impedance (25,000 ohms) or match to all low impedances. New dual-type external shock mount prevents reproduction of external shocks and stand vibration, reduces side sway of microphone. Exclusive Acoustalloy diaphragm withstands severest service.

E-V Mechanophase* principle gives wide angle front pick-up, dead at rear . . . cuts reverberation and random noise pick-ups . . . stops feedback . . . nearly doubles conventional pick-up range . . . provides clear, natural close-up response . . . permits increased loudspeaker volume . . . gives users more freedom of movement. Used in studio and remote broadcasting, disc and film recording, public address and communications.

Output level: 50 db below 1 volt/dyne/cm². Frequency response, substantially flat, 30-12,000 c.p.s. Highest quality die cast case beautifully finished in satin chromium. Tiltable head. 3/8"-27 thread, Cannon XL-3 connector. Internal shock absorber. "On-off" switch, 20 ft. shielded cable. Size 2 1/2" x 3 1/2" x 9" including stud. Net wt. 2 1/2 lbs.

CARDYNE II Model 731. List Price **\$80.00**

(Also available without "On-Off" switch or with 50-250 ohm impedance selector.)

POPULAR CARDYNE DYNAMIC

CARDYNE I. Model 726. Performance characteristics similar to Model 731 above. Has Impedance Selector, but does not include external shock mount. Frequency response, substantially flat, 40-10,000 c.p.s. Output level -53 db. Has Amphenol MC-3 connector.

CARDYNE I. Model 726. List Price **\$59.50**

(Model 345 External Shock Mount also available separately. List Price \$11.50)

MODERN CARDAX CRYSTAL

The First and Only High Level! Cardioid Crystal Microphone with Dual Frequency Response.

Favorite of thousands! Easily solves everyday sound problems. E-V Mechanophase* principle provides *true cardioid* unidirectivity. Wide angle front pick-up—dead at rear. E-V *Dual Frequency Response Selector* gives wide range flat response for high fidelity pick-up of voice and music, or rising characteristic for extra crispness of speech.

The CARDAX overcomes background noise, reverberation, feedback. Simplifies microphone and speaker placement. Permits greater loudspeaker volume levels. Highly recommended for public address, recording, remote broadcast, paging, dispatching, and communications.

Output level: -57 db for high fidelity; -48 db for rising response. Smart, compact, easily portable. Rich satin chromium finish. High capacity Metal Seal crystal—fully enclosed for greater moisture protection. Tiltable head. 3/8"-27 thread. Built-in cable connector. "On-Off" switch. Size 2 1/2" x 2 3/8" x 6 1/4" including stud. Net wt. 1 3/4 lbs.

Cardax Model 950. List Price **\$39.50**
*Patents Pending.



No finer choice than

Electro-Voice

Microphones

Dynamic Microphones



Model 635—High Fidelity Broadcast Dynamic

Used on important radio network programs. Substantially flat response from 60-13,000 c.p.s. ± 2.5 db. Conforms to modern FM as well as AM broadcast standards. Essentially omni-directional, becoming directional at higher frequencies. Output -53 db. Can be used on a stand or in the hand—indoors and outdoors. Recessed switch in microphone stud gives selection of 50 or 250 ohms impedance. Excellent for studio, remote, audience participation, applause pick-up, recording; also high quality sound systems. Exclusive Acoustalloy diaphragm. Cannon XL-3 connector. Swivel head. $\frac{3}{8}$ "-27 thread. Highest purity pressure-cast case. Rich, durable satin chromium finish. 20 ft. shielded cable. Size 2" x $4\frac{1}{4}$ " x $4\frac{1}{2}$ " including stud. Net wt. $1\frac{1}{2}$ lbs.

Model 635. List Price\$60.00

Model 630—High Fidelity, High Output Dynamic

Finer performance than ever . . . in a moderately priced moving-coil dynamic! E-V Acoustalloy diaphragm provides exceptionally smooth response from 40-9000 c.p.s. Assures high quality reproduction of speech and music, indoors and outdoors. Compact, rugged . . . withstands heat, humidity and other severe operating conditions. Tilting head for directional or non-directional use. Built-in cable connector. $\frac{3}{8}$ "-27 thread. "On-Off" switch. Widely used in all types of applications. Highest purity pressure-cast case, finished in lustrous satin chromium. Output level 53 db below 1 volt/dyne/cm². Equipped with 20 ft. shielded cable. Net weight, $1\frac{1}{2}$ lbs. Available in Hi-Z (direct-to-grid, 25,000 ohms), 50, 200, 250, or 500 ohms impedance. Low impedances balanced to ground.

Model 630. List Price\$36.50



Model 600-D—Widely Used Dynamic Mobil-Mike

Specially designed for clear, crisp speech transmission in communications, public address, call systems, and recording. Frequency response, substantially flat, 100-6000 c.p.s. Gives higher articulation, provides more usable power level, and is less fatiguing to the listener. Output level: 55 db below 1 volt/dyne/cm². High impact black phenolic case. E-V Acoustalloy diaphragm. Extremely rugged, for indoor and outdoor use. Press-to-talk switch controls relay. Panel mounting bracket. Equipped with 6 ft. shielded cable. Size $2\frac{1}{4}$ " x 2" x 4". Net weight, 8 ounces. Available in Hi-Z (direct-to-grid, 25,000 ohms), 50, 200, 250 or 500 ohms impedance. Low impedances balanced to ground.

Model 600-D. List Price\$35.00

Model 600-DL. With switch lock. List Price\$36.50



Model 605—Durable, General-Utility Dynamic

A natural leader in the low-priced field. Attractive—dependable—highly satisfactory for general sound work, paging and call systems, dispatching, recording, communications. Frequency response 50-7500 c.p.s., substantially flat. Output level 57 db below 1 volt/dyne/cm². Exclusive E-V Acoustalloy diaphragm. Pressure cast case, with 22° fixed tilt. $\frac{3}{8}$ "-27 thread. Built-in cable connector. Satin Chromium finish. Net weight, 12 ounces. Available in Hi-Z (direct-to-grid, 25,000 ohms), 50, 200, or 250 ohms impedance. Low impedances not balanced to ground.

Model 605-8. With 8 ft. cable. List Price\$24.50

Model 605-20. With 20 ft. cable. List Price\$26.00



Model 610—Modern, Low-Priced Dynamic

Outstanding quality and value. Adds smartness to economical public address and paging systems, ham rigs, or similar installations. Fine reproduction of voice and music. Compact, convenient to use. Upright pressure cast case has 15° fixed tilt. Finished in rich satin chromium. Ruggedly built for durable service, indoors and outdoors. E-V Acoustalloy diaphragm. Frequency response, substantially flat 50-8000 c.p.s. Output level 53 db below 1 volt/dyne/cm². Built-in cable connector. $\frac{3}{8}$ "-27 thread. Net weight $1\frac{1}{4}$ lbs. Available in Hi-Z (direct-to-grid, 25,000 ohms), 50, 250, or 500 ohms impedance. Low impedances not balanced to ground.

Model 610-8. With 8 ft. cable. List Price\$29.50

Model 610-20. With 20 ft. cable. List Price\$31.00



Crystal

Model 910—Modern High Quality Crystal Microphone

Smooth, wide-range response, and high output assure fine reproduction of voice and music for public address, paging, amateur communications. Ruggedly built for durable service. Upright pressure cast case has 15° fixed tilt. Satin chromium finish. Built-in cable connector. $\frac{3}{8}$ "-27 thread. High capacity, moisture-sealed crystal. Frequency response, substantially flat, 50-8000 c.p.s. High impedance. Output level 48 db below 1 volt/dyne/cm². Net weight $1\frac{1}{2}$ lbs.

Model 910-8. With 8 ft. cable. List\$22.50

Model 910-20. With 20 ft. cable. List\$24.00



Model 902 COMET—Combination Crystal Microphone and Stand

Modern, air-flow design functionally integrated into one unit. Made of high impact, non-breakable molded plastic, in deep lustrous gray. Light weight. Easy to use as a hand microphone . . . or stands firmly on its base. Smooth, wide-range response and high output. Excellent for home recording, small public address systems and amateur radio communications. High capacity, moisture-sealed crystal. Frequency response, substantially flat, 70-7000 c.p.s. Hi-Z. Output level: 48 db below 1 volt/dyne/cm². 7½ ft. shielded cable. Net weight, 15 ounces.

Model 902. Comet. List Price\$13.25



Model 905—Crystal Microphone

Same design as the Model 605 Dynamic. Gives quality reproduction for low-cost public address, paging and amateur communications. Frequency response, substantially flat, 50-7500 c.p.s. High impedance. Output level: 54 db below 1 volt/dyne/cm². High capacity moisture sealed crystal. 22° fixed tilt. $\frac{3}{8}$ "-27 thread. Built-in cable connector. Satin chromium finish. Net weight 11 ounces.

Model 905-8. With 8 ft. cable. List\$16.50

Model 905-20. With 20 ft. cable. List\$18.00

Model 805—Contact Microphone

For guitar, banjo, mandolin, violin or any vibrating musical instrument. Increases natural sound volume, enriches tonal effects. Easily installed. Frequency response 40-8,000 c.p.s. High impedance. Inertia type crystal, sealed against moisture and acoustic feedback. 15 ft. shielded cable. Size $2\frac{1}{4}$ " x 1" x $7/16$ ". Net wt. 2 ounces.

Model 805. List Price\$15.00



No finer choice than

Electro-Voice

Microphones

Mobil Mikes

Model 210—Carbon Mobil-Mike

Gives high intelligibility speech transmission. Used in police, fire, taxi, aircraft marine and amateur communications, mobile public address, paging, dispatching and speech recording. Extra rugged, high impact black phenolic case. Withstands severest service indoors and outdoors. Frequency response substantially flat 100-4000 c.p.s. for high articulation. Output level: 10 db. below 1 volt/100 dynes cm². Single button. Press-to-talk switch. 5 ft. cable. Standard dash mounting clip. Size 2 1/4" x 2" x 4". Net wt. 7 ounces.



Model 210. List Price \$25.00

Model 210-L. List Price \$26.50

(Also available for exact replacement in Motorola, RCA, G. E. and similar equipment.)



Model 205—Hand-Held DIFFERENTIAL* CARBON

Close-talking, noise-cancelling microphone designed for maximum intelligibility under intense noise. Used in police, aircraft, marine, industrial and other communications applications; also in high power sound projection. Fits in the hand. Operates in all positions. High impact phenolic case, with panel mounting bracket on back. Blast proof, waterproof, shock resistant. Withstands temperatures from -40° to +185° F. Frequency response, substantially flat from 100-4000 c.p.s. Output level: 10 db below 1 volt/100 dynes cm². 10-50 m. a. button current. Press-to-talk switch actuates button and relay. Equipped with 5 ft. cable. Size 2 1/4" x 2 1/4" x 4". Net weight 7 ounces.

Model 205. List Price \$30.00

Model 205-L. With switch lock. List Price \$31.50

Model 602—Hand-Held DIFFERENTIAL* DYNAMIC

Close-talking, noise-cancelling speech microphone for use where ambient noise is 100 db or more. Assures high articulation. Especially suitable for marine, industrial and emergency communications, high power sound projection, and for speech in any windy wet or extremely hot or cold location. Frequency response, substantially flat, 100-6000 c.p.s. Output level: 55 db. below 1 volt/dyne cm². E-V Acoustalloy diaphragm. High impact phenolic case. Press-to-talk switch controls relay. Panel mounting bracket, size 2 1/4" x 2" x 4". Net weight, 8 ounces. Equipped with 6 ft. shielded cable. Available in Hi-Z (direct-to-grid, 25,000 ohms), 50, 200, 250, or 500 ohms impedance.

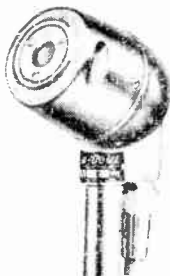


Model 602. List Price \$40.00

Model 602-L. With switch lock. List Price \$41.50

Model 606 DIFFERENTIAL* DYNAMIC

Effectively used in airport control towers, police dispatching, special events broadcasting, close-talking public address, and high noise industrial applications. Through exclusive E-V DIFFERENTIAL principle, surrounding or distant sounds are cancelled out. Transmitted speech gets through clearly and completely. Frequency response, substantially flat 100-6000 c.p.s. Output level: 57 db below 1 volt/dyne cm². E-V Acoustalloy diaphragm. Withstands severe service. Built-in cable connector. Pressure cast metal case, finished in satin chromium. Head at 22° fixed tilt. 3/8"-27 thread. Net wt., 12 ounces. Available in Hi-Z (direct-to-grid 25,000 ohms), 50, 200, or 250 ohms. Low impedances not balanced to ground.



Model 606-B. With 8 ft. cable. List Price \$36.50

Model 606-20. With 20 ft. cable. List Price \$38.00
Patent Number 2,350,010

Velocity

Proved E-V design makes the most of the ribbon velocity's high fidelity, bi-directional characteristics. It provides superb pick-up and reproduction of voice and music, for indoor public address, broadcasting and recording. That's why these Velocity Microphones are favorites of well-known orchestras and sound engineers. Response is substantially flat over a wide frequency range. Bi-directional polar pattern gives equal front and back pick-up and longer pick-up range; zero pick-up at sides, top and bottom. Proper tilting and placement of microphone reduces feedback and random noise—permit increased volume levels. Open-type, reflection-free housing. Internal shock absorber mounting. One-piece frame and internal mounting structure give extra ruggedness. Pole pieces scientifically designed to insure adequate high frequency reproduction, and yet provide ample output.



Model V-3 All Impedance Velocity

Combines all popular impedances in one microphone. Vari-Z selector on back gives ready choice of 50, 250, 500 ohms, or Hi-Z (35,000 ohms). Permits the use of short cables up to 30 feet direct-to-grid, or long lines with matching transformer. Low impedances balanced to ground. Substantial flat response 40-10,000 c.p.s. Output -58 db. Locking cradle for tilting microphone. Built-in cable connector. 3/8"-27 thread. Bronze gun metal finish. Size 3 1/2" x 2 1/4" x 8" including stud. Equipped with 20 ft. shielded cable. Net weight, 2 1/2 lbs.

Model V-3. List Price \$60.00

Model V-2 Velocity Microphone

Similar to the V-3, but without Vari-Z selector. Choice of single standard impedance: 50, 250, 500 ohms, or Hi-Z (35,000 ohms). Frequency response, substantially flat, 40-10,000 c.p.s. Output -62 db. Locking cradle mounting. Built-in cable connector. 3/8"-27 thread. Bronze gun metal finish. Size 3 1/2" x 2 1/4" x 8" including stud. Equipped with 20 ft. shielded cable. Net weight, 2 1/2 lbs.

Model V-2. List Price \$45.00

Model V-2A. Same as V-3, but in choice of one standard impedance, without Vari-Z selector switch. Output -58 db.

List Price \$50.00

Model V-1

Compact, Smaller Size Velocity



Unsurpassed for excellence of design and performance at such moderate cost. Gives you high fidelity, bi-directional advantages in a compact, smaller size velocity microphone. Highly satisfactory for public address, recording and remote broadcasting. Substantially flat response 40-9000 c.p.s. Output -65 db. Locking cradle mounting. Built-in cable connector. 3/8"-27 thread. Satin chromium finish. Size 2 3/4" x 2 1/8" x 6 1/2" including stud. Equipped with 20 ft. shielded cable. Net weight, 2 lbs. Available in Hi-Z (35,000 ohms), 50, 250 or 500 ohms impedance. Low impedances not balanced to ground.

Model V-1. List Price \$36.50

Model V-1A. Similar to V-1, but with higher output level (-59 db). List Price \$40.00

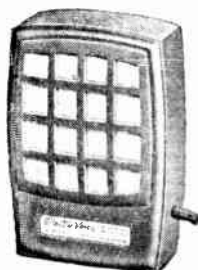
No finer choice than

Electro-Voice

Microphones

Multi-Purpose CENTURY Microphone

DESIGNED FOR ALL
LOW COST APPLICATIONS



CRYSTAL • DYNAMIC • CARBON

Brilliantly engineered and superbly styled low-cost microphones. Complete adaptability permits widest use in public address, paging, recording, communications. Choice of crystal, dynamic or carbon types. Can be used in any position—stands by itself on table or desk—rests on its back—can be comfortably hand-held, mounted on a stand or suspended overhead. Highest purity pressure-cast case is finished in lustrous gray-brown. Rugged. Light weight. Size 3" x 2-3/16" x 1".

Model 915—Century Crystal

Combines excellent frequency range, high level and mounting flexibility. Case provides ample shielding and stability. Moisture-sealed crystal. High impedance. Output —50 db. Frequency response 60-7500 c.p.s. 7 1/2 ft. black glazed cloth covered, shielded cable and 3/8"-27 thread stand adapter. Net wt. only 6 ounces. **Model 915.** List Price **\$10.00**
Model 915-S. With slide-to-talk switch. List Price **\$11.50**

Model 215—Century Carbon

Provides high output high articulation—exceptionally low hiss level (50 db below normal speech)—low distortion. Responds well in all positions. Positive Fiberglass carbon retention (E-V Patent). Normalized diaphragm seat (E-V Patent). Output —26 db using input transformer. Voltage developed by normal speech (100 dynes): .56. Speech response 200-4000 c.p.s. Single-button. 48" cable and 3/8"-27 thread stand adapter. Net wt. only 6 ounces. **Model 215.** List Price **\$8.25**
Model 215-S. With slide-to-talk switch. List Price **\$9.75**



Model 615—Century Dynamic

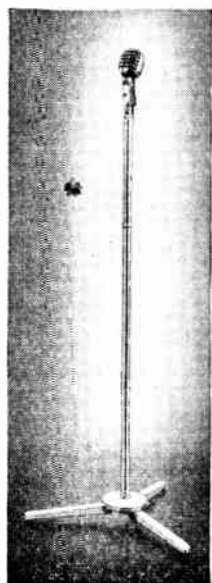
Has exclusive non-crushable Acoustalloy diaphragm. Withstands severe service. Output —57 db. Frequency response 55-7500 c.p.s. High impedance. 7 1/2 ft. black glazed cloth covered, shielded cable and 3/8"-27 thread stand adapter. Net wt. only 8 ounces. **Model 615.** List Price **\$16.50**
Model 615-S. With slide-to-talk shorting switch. List Price **\$18.00**

Century Mobil-Mikes

Designed for high articulation in radio amateur communications. Equipped with slide-to-talk relay control switch, 48" cable, and hang-up hook for dash mounting. **Model 215-SR.** Carbon. List **\$10.00**
Model 615-SR. Dynamic. List **\$20.00**

Model 415. Reclining Desk Stand. Mounts Century at 15° tilt. Gray-Brown finish. Size 2 1/2" x 2 3/8" x 1". Net wt. 4 oz. List Price..... **\$1.50**

ELECTRO-VOICE FLOOR AND DESK STANDS



Model 425—Deluxe Floor Stand

In this unique floor stand, all dead weight is eliminated, but full stability retained. Simply press red button to raise or lower shaft with same one hand. Locks automatically by releasing button. Shaft can be rotated without any adjustment device. Adjustable legs permit placing flush against wall or speaker's table. Easy to assemble or take apart. Folds into small, compact, portable package. Highest purity pressure-cast base. Satin chromium finish. Height adjustment 37" to 66". 3-leg spread 17". Net wt. 7 1/2 lbs. Shipping, wt., 9 lbs.

Model 425. List Price **\$24.50**

Model 430—Utility Floor Stand

Gives solid support, yet light in weight. Single button gives instant control of shaft height. Shaft may easily be rotated. Modern, sturdy, high-pressure-cast base. One bolt locks 3 legs in position. Comes apart to make small, compact package. Attractive Gray finish. Extension shaft finished in satin chromium. Height adjustment 36" to 67". 3-leg spread 17". Net wt. 7 1/2 lbs. Shipping wt., 9 lbs.

Model 430. List Price **\$15.00**



Model 424—Desk Stand

Small, light weight. Designed for use with E-V Models 210, 205, 600-D and 602. Made of aluminum. Easily lifted with microphone in hand. Very stable on desk or table. Rubber base buttons. Satin finish. Size 4 1/2" x 4 1/2" x 3 3/4". Net wt., 4 oz.

Model 424. Desk Stand. List Price **\$4.00**



Model 423—Desk Stand

Modern, sturdy, round die cast base. Rests firmly. Satin chromium finish. Rubber base buttons. 3/8"-27 thread. Base diameter 5 1/8". Net wt. 1 lb. Choice of 3" or 6" stem riser.

Model 423. List Price **\$4.00**



Model 427—Desk Stand

Attractive pressure-cast round base rests stably on desk or table. 6" stem riser. Lustrous gray-brown finish. 3/8"-27 thread. Base diameter 4 3/8". Net wt. 5/8 lb.

Model 427. List Price **\$2.50**

MICROPHONE ACCESSORIES

Low Impedance Microphone-to-Grid Matching Transformers



The windings of these transformers have low distributed capacity and are amply shielded against inductive hum by a high permeability shield, inside a pressure cast case. Designed for mounting on amplifier chassis or in series with the microphone line.

Model 500—A small, shielded carbon microphone transformer with universal mounting.

Finest silicon core. Tapped primary for single or double button. Three wire lead input (no connector). 36" shielded lead output. List Price **\$5.00**

Model 502—Designed for 50 and 250 ohm (500 ohms optional) microphones. Broadcast fidelity. Frequency response 40-20,000

c.p.s. —1 db, for either speech or music. MC-4 input connector. List Price **\$13.50**

Dynamic Microphone Baffle—Increases directivity at high frequencies. Available for microphone Models 630 and 605. Chromium finish. **Model 330-C.** List Price **\$2.50**

Suspension Bracket—Convenient for suspending microphone in inverted position (stage or orchestra installation). Standard 3/8"-27 thread. **Model 340.** List Price **\$.55**

Microphone Handle—Easily converts light weight microphone to a hand type. Turned from hard maple. Gun metal finish. Standard 3/8"-27 thread coupling.

Model 320. List Price **\$.75**

ELECTRO-VOICE, INC.

BUCHANAN, MICHIGAN

Microphones BY TURNER



GENERAL PURPOSE MICROPHONES

The Famous Turner 22X — 22D Crystal or Dynamic — Tops in value — tops in performance. Accurate pickup and faithful reproduction have made these units the most popular general purpose microphones on the market. $\frac{3}{4}$ " — 27 standard coupler.

22X CRYSTAL gives clear reproduction. Smartly engineered design cuts feedback to minimum. 90 degree tilting head. Built-in wind-gag permits outdoor operation. Crystal impregnated against moisture in mechanical shock proof mounting. Automatic barometric compensator. Level 52 db below 1 volt/dyne/sq. cm. Response: ± 5 db from 50 — 9000 c.p.s. Complete with 7 ft. removable cable set. Satin chrome finish. List\$20.00

22D DYNAMIC. Same appearance as 22X but has high level dynamic cartridge. Dependable indoors and out. Reproduces smoothly at all frequencies. Level: 54 db below 1 volt/dyne/sq. cm. at high impedance. Response: ± 5 db from 50 — 9000 c.p.s. Complete with tilting head, 7 ft. removable cable set.

200 ohms, 500 ohms, or high impedance. List\$25.50

50 ohms. List 23.50

High performance at moderate cost

33X — 33D CRYSTAL OR DYNAMIC — Recommended for quality P.A., recording, and communications work, the Turner 33X Crystal has a high quality 2-element crystal. Built for indoor or outdoor use with crystal impregnated against moisture, automatic barometric compensation, and mechanical-shock proofing. Will not blast from close speaking. Level 52 db below 1 volt/dyne/sq. cm. Response: ± 5 db from 50 — 9000 c.p.s. Handsome streamline case finished in satin chrome. Complete with tilting head, and 20 ft. removable cable set.

List\$24.50

33D DYNAMIC. Same appearance as 33X but with smooth high level dynamic circuit. Level: 54 db below 1 volt/dyne/sq. cm. at high impedance. Response: ± 5 db from 30 — 9000 c.p.s. Complete with 20 ft. cable set.

200 ohms 500 ohms, or high impedance. List\$27.00
50 ohms. List 25.00

Attractive, high fidelity semi-directional crystal microphone

34X CRYSTAL. — A microphone whose beauty is exceeded only by its performance. The 34X is the ideal all around semi-directional crystal microphone for use where feedback and acoustic conditions are unusually difficult. Advanced engineering design with full 90 degree tilting head permits tilting to most advantageous position to reduce audience noise and background disturbances. The 34X utilizes a moisture proof crystal, automatic barometric compensator, and is blast- and mechanical-

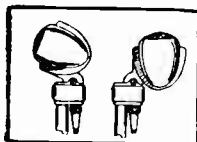
shock proofed. Level: 52 db below 1 volt/dyne/sq. cm. Response: ± 5 db from 50 — 10,000 c.p.s. Satin chrome finish. Complete with 20 ft. removable cable set.

List\$29.00

Broadcast Quality Dynamic

MODEL 211 — Precision engineered for outstanding performance the Turner 211 Dynamic utilizes a new type magnet structure and acoustic network. The high frequency range is extended and the extreme lows raised 2 to 4 decibels. Unique diaphragm structure results in extremely low harmonic and phase distortion without sacrifice of high output level. A sensitive unit yet ruggedly built for dependable use indoors or out under the most difficult acoustic and climate conditions. Withstands rough handling. For quality recording, P.A., sound system, and broadcast work, including FM. Level: 54 db below 1 volt/dyne/sq. cm.

at high impedance. Response: ± 5 db from 30 — 10,000 c.p.s. Equipped with tilting head, balanced line output connection, and 20 ft. 2-conductor, heavy duty removable cable set. Satin chrome finish.
200 ohms, 500 ohms, or high impedance. List\$47.50
50 ohms. List 45.00



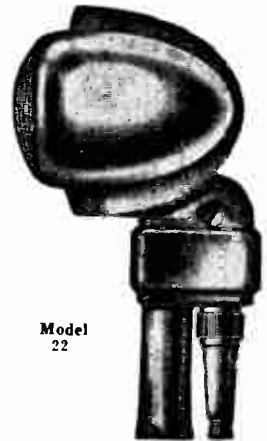
TILTING HEADS

Models 5X, 5D, 22X, 22D, 33X, 33D, 34X, and 211 are all equipped with 90° tilting heads.



MODEL "S" SWITCH EQUIPMENT

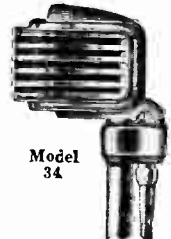
Turner Microphones in Models 22X, 22D, 33X, 33D, 34X, 5X, and 5D are available with built-in slide switch illustrated. Shorts the line quietly. Permits fingertip control of microphone regardless of distance from amplifier. Furnished only on order with Turner Microphones. (When ordering designate "S" plus microphone Model No. Example: "S22X".) For Switch Models add \$2.00 to list price.



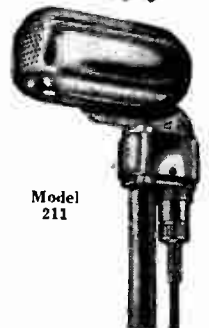
Model 22



Model 33



Model 34



Model 211

THE TURNER COMPANY



Microphones BY TURNER

MODEL 77 CARDIOID (Left)

New Super-Cardioid microphone of advanced design

Impressively styled, the new Turner Model 77 is brilliantly engineered with a combination 2-element interior structure. Improved circuit design utilizes both pressure and velocity operated units in series. Sound is effectively controlled to produce the true Super-Cardioid pickup pattern which reduces feedback to the minimum. The Model 77 features a wide range pickup at the front and a sharply attenuated output at the rear . . . with approximately 15 db discrimination between front and rear at all frequencies. Response: ± 5 db from 70 — 10,000 c.p.s. Level: 62 db below 1 volt/dyne/sq. cm. at high impedance. Built-in switch giving 50, 200, 500 ohms, or high impedance output permits use with any standard equipment. Smooth tilting action and quick-disconnect plug. Standard $\frac{5}{8}$ " — 27 mounting. Finished in gun-metal gray and/or chrome. Complete with 20 ft. balanced line removable cable set.

Model 77 Cardioid. List\$77.00



Model 77

MODEL 87 VELOCITY (Right)

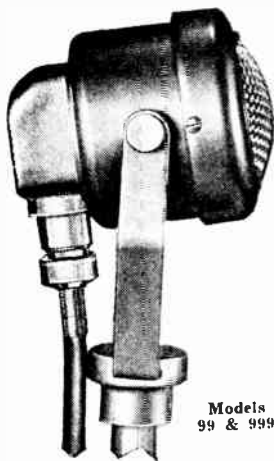
High fidelity response and bi-directional pickup

Developed to bring world famous Turner dependability to the velocity microphone field. Exceptional quality and trouble-free operation. Engineered with single element ribbon and Alnio V magnet for maximum sensitivity. Well shielded output transformers exclude hum pickup. Bi-directional figure 8 pickup pattern with smooth response within ± 5 db from 80 — 10,000 c.p.s. for most exacting studio work. Level: 62 db below 1 volt/dyne/sq. cm. at high impedance. 4-position output switch permits use with any 50, 200, 500 ohm, or high impedance input. Equipped with universal swivel mounting, $\frac{3}{8}$ " — 27 thread. Richly finished in gun-metal gray with satin chrome screen. Complete with 20 ft. attached balanced line cable.

Model 87 Velocity. List.....\$47.50



Model 87



Models 99 & 999

FAMOUS TURNER MODEL 99 DYNAMIC

MODEL 99 DYNAMIC is the most rugged microphone in the entire Turner line. Withstands toughest climate and temperature changes. Adjustable saddle. Fits any standard mike stand. Semi- or non-directional operation. Broadcast studios, large city police departments, and internationally famous manufacturers specify Turner 99 for crisp, clear results. Baked gunmetal finish. Level: 52 db below 1 volt/dyne/sq. cm. at high impedance. Response: ± 5 db from 40 — 9000 c.p.s. Complete with 20 ft. removable cable set.

200 ohms, 500 ohms, or high impedance. List\$34.00
50 ohms. List.....31.50

999 BALANCED LINE DYNAMIC

Same professional appearance as Model 99. Voice coil and transformer leads are insulated from ground and microphone case. Line is balanced to the ground. Assures studio results under critical conditions. Gunmetal finish. Level: 52 db below 1 volt/dyne/sq. cm. at high impedance. Response: ± 5 db from 40 — 9000 c.p.s. With 3-pin polarized locking connector and 20 ft. balanced line low-capacity cable.

200 ohms, 500 ohms or high impedance. List.....\$37.50
50 ohms. List35.00

U9S DYNAMIC

Four impedances at your fingertips

Whatever impedance you need — 50 ohms, 200 ohms, 500 ohms, or high impedance — you can get it quickly with the turn of the switch on the Turner Model U9S Dynamic. Same precision engineering and rugged construction as the Model 999 with built-in tapped multi-impedance transformer. Fill practically all needs with one microphone. A smooth, dependable performer at all impedances and frequencies. Level: 52 db below 1 volt/dyne/sq. cm. at high impedance. Response: ± 5 db from 40 — 9000 c.p.s.

Complete with 20 ft. balanced line removable cable set. List.....\$40.00



Model U9S

Microphones BY TURNER

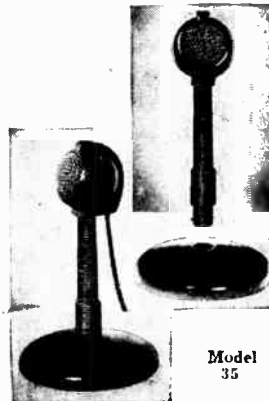


MODEL 35X FIREBALL

A new crystal desk microphone with instantly detachable base

Handsome, convenient and low priced. Model 35X is as easy to use as a fountain-pen desk set. It can be used as a desk microphone or a hand-held unit. A quarter turn releases handle from base instantly or locks it securely. The Model 35X is engineered with a high quality crystal circuit to give smooth performance to both voice and music pickups. Response: 70 — 7000 c.p.s. Level 52 db below 1 volt/dyne/sq. cm. Unit includes microphone with handle, base, and 7 ft. attached cable.

Model 35X, List \$13.25



Model 35

THE TURNER "Hand-D"9X or 9D Crystal or Dynamic

A rugged, all around multi-purpose microphone

One of the handiest and most useful microphones made. Hang it, hold it, or mount on any standard desk or floor stand. Especially engineered for maximum response to voice, "Hand-D" also delivers smooth, natural response to music pickups. Ideal for stage, paging, public address, amateur, police car, and traveling mike applications. Positive contact slide switch permits on-off operation.* Complete with 7 ft. removable cable set.



Model 9

* Also available with precision heavy duty push-to-talk switch at \$2.50 list additional. Specify: "With H.D. Push-Talk Sw."

9D DYNAMIC

Recommended for more severe service conditions and extremes of climate and temperature. Level: 52 db below 1 volt/dyne - sq. cm. at high impedance. Response: ± 8 db from 60 — 7000 c.p.s. 200 ohms, 500 ohms or high impedance. List \$27.00
50 ohms, List 25.00

9X CRYSTAL

Equipped with high quality, shock mounted, humidity protected crystal for indoor or outdoor use. Level: 52 db below 1 volt/dyne-sq. cm. Response: ± 5 db from 60 — 7000 c.p.s. List \$23.50

New, lightweight, low cost hand microphone with unusually fine response characteristics

TURNER 20X CRYSTAL — Designed to appeal to users of home recorders, economical public address, paging and call systems, and amateurs. Response to voice and music is smooth and even over a desirable range of frequencies. Level: 54 db below 1 volt/dyne/sq. cm. Response: ± 5 db from 50 — 7000 c.p.s. High quality crystal impregnated against moisture, mechanical-shock proofed. Lightweight, natural to hold and use. Equipped with hook ring for hanging. Finished in baked brown enamel. Complete with 7 ft. attached cable. List \$12.85

Also available with Slidelock Switch at \$2.00 extra list.



Model 20



Model 15

New, modern, convenient hand held general purpose microphones

15X CRYSTAL — 15D DYNAMIC — For public address, call systems, police communications, speech recording, amateurs, and broadcasting where hand-held microphones are required. Balanced to fit the hand naturally. When not in use it may be hung from a hook. Engineered for smooth response over a wide range of useful frequencies. Finished in attractive gunmetal and equipped with 20 ft. attached shielded cable.

15X CRYSTAL. Level: 52 db below 1 volt/dyne/sq. cm. Response: ± 5 db from 40 — 8000 c.p.s. Humidity sealed crystal. List \$25.00

"Push-to-talk" thumb switch optional at \$2.50 extra list.

15D DYNAMIC. For more severe operating conditions: Level: 54 db below 1 volt/dyne sq. cm. at high impedance. Response: ± 5 db from 40 — 7000 c.p.s. 200 ohms, 500 ohms, or high impedance. List \$30.00

50 ohms, List 27.50
"Push-to-talk" thumb switch optional at \$2.50 extra list.

15D-NC NOISE CANCELING DYNAMIC — For intelligible communications under adverse background noise conditions. Same case and finish as 15D. Circuit designed for use in factories, machine shops, railroad yards, aircraft, and other places where extreme background noise interferes with communications. The 15D-NC transmits only when spoken to at close range. Unwanted sound canceled out. Level: 52 db below 1 volt/dyne/sq. cm. at high impedance. Response: 50 — 5000 c.p.s.

200 ohms, 500 ohms, or high impedance. List \$32.50
50 ohms, List 30.00
"Push-to-talk" thumb switch optional at \$2.50 extra list.



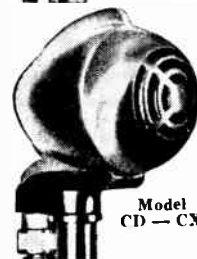
Microphones BY TURNER

TURNER CHALLENGERS

Turner Challengers offer performance, quality, and appearance usually found in microphones selling at twice their low cost. Engineered with a substantially flat response they give clear cut reproduction of both voice and music. Crystal models are complete with shock proof mounting, barometric compensation, moisture sealed crystal, and wind-gag to prevent blasting. Dynamic units are built to give dependable service indoors or out. You can rely on Turner Challengers — they are fully guaranteed.



Model
BD — BX



Model
CD — CX

BD DYNAMIC — Same appearance as BX. Equipped with dynamic cartridge. Works equally well indoors or out. Level: 52 db below 1 volt/dyne/sq. cm. at high impedance. Response: ± 8 db from 50 — 6000 c.p.s. Complete with 7 ft. attached cable. 50 ohms 200 ohms, 500 ohms, or high impedance. List..... \$15.75

CD-DYNAMIC — Same style and finish as CX. High quality magnets. 7 ft. removable cable set. Level: 52 db below 1 volt/dyne/sq. cm. at high impedance. Response: ± 8 db from 50 — 7000 c.p.s. 50 ohms 200 ohms, 500 ohms, or high impedance. List..... \$19.50

BX CRYSTAL — Ideal for recording, P.A., and amateur work. Brown enamel finish. Level: 52 db below 1 volt/dyne/sq. cm. Response: ± 5 db from 50 — 6000 c.p.s. Complete with 7 ft. attached cable. List..... \$10.85

CX CRYSTAL — Satin chrome finish with 7 ft. removable cable set. $\frac{3}{8}$ " — 27 standard coupler mounting. Level: 52 db below 1 volt/dyne/sq. cm. Response: ± 5 db from 50 — 7000 c.p.s. List..... \$16.25

MODEL VT-73

New improved crystal desk microphone engineered for quality speech

A world-wide favorite with amateurs for crisp, clear reports, the Turner VT-73 is also recommended for quality speech recording and public address work. Highest quality humidity sealed crystal. Rising curvature of response between 500 — 4000 c.p.s. increases intelligibility at effective voice frequencies without overmodulation. Shielded 2-conductor cable reduces R.F. pickup and harmonic resonance problems. Head is adjustable through 60° to almost any position. Level: 52 db below 1 volt/dyne/sq. cm. Response: ± 5 db from 50 — 7000 c.p.s. Complete with ball swivel head, stand, and 7 ft attached cable. Finished in black crinkle and chrome.

List..... \$21.50



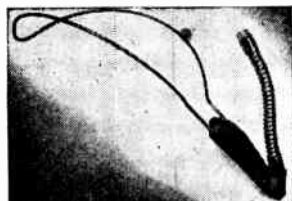
L40 LAPEL MICROPHONE

Small, lightweight and inconspicuous the L40 can be worn in the lapel used with the 3H, or concealed. Highest quality moisture sealed crystal produces high signal level. Engineered for crisp, clear speech reproduction. Chest sounds damped out. Comfortable to wear. Alligator clip secures unit to clothing. Level: 52 db below 1 volt/dyne/sq. cm. Response ± 8 db from 50 — 8000 c.p.s. Complete with 20 ft. attached cable. List..... \$25.00

TURNER "THIRD-HAND" MODEL 3H

Slips over your head in a jiffy and holds microphone close to your mouth, where you get excellent volume without feedback. As natural to wear as a necktie, and lets you use both hands elsewhere. Stays out of your line of vision. Talk close without craning your neck; cuts down background noises.

Can be used with long line, as traveling microphone. Ideal for window demonstrations. Has $\frac{3}{8}$ " — 27 thread. Recommended for use with Turner microphones, as they will not blast from close speaking. Can be furnished with microphone switch when ordered with Turner microphone.



List..... \$5.00
For switch when ordered with Turner Microphone, add \$1.00 list.



MICROPHONES HEARING AID

Small compact, lightweight crystal microphone cartridges for new hearing aids or replacement. Exceptionally high signal level and smooth response. Flush to panel mounting. Send for details.

Model HA-7L. List..... \$8.00
Model HA-12S. List (shown) 8.00

MAGNETIC CONTACT PICKUPS FOR MUSICAL INSTRUMENTS

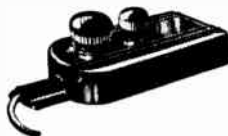
MODEL MM

Standard magnetic pickup. Provides uniform response over entire musical range. High impedance output. Easily and quickly attached. Complete with 20 ft. cable and finish.

With built-in volume control. List..... \$18.00

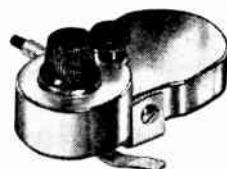
Without volume control. List 15.75

With phone plug attached to cable, add \$1.00 list.



"MIP" DELUXE

Turner's newest pickup. High level ALNICO V circuit. Gives immense volume and improved tone from any string instrument. Easily installed without tools or adhesives. High impedance output. Works directly into the grid circuit of any two-stage or larger amplifier. Polished chromium finish. Complete with built-in volume control, 20 ft. shielded cable, and mounting device for attaching to any string instrument. Built to stand abuse. List..... \$23.50
With phone plug attached to cable add \$1.00 list.



THE TURNER COMPANY

Prices subject to change without notice

WEBSTER



ELECTRIC

RACINE

WISCONSIN

Established 1909

Export Dept. 13 E. 40th Street, New York (16), N. Y. Cable Address "ARLAB" New York

Tone Arms

In keeping with the Webster Electric tradition for fine design, precise construction and dependable performance, these pickup arms are now being produced for modernization or repair of standard record-playing equipment. Each is a series of precisely-matched components built into an integral unit. All are designed to minimize track-

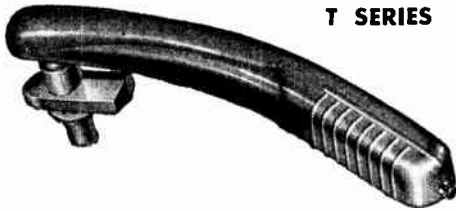
ing error, and are coupled to resonate at a very low frequency. Resonance distortion and microphonic feedback tendency have been reduced to the minimum. They will accommodate 10" or 12" records. Single-hole mounting. All models are supplied with arm rests and mounting base brackets

S SERIES



A new die-cast zinc alloy tone arm designed for use with F series cartridges, giving very low tracking pressure. Modern design complements the appearance of any record-player. Currently produced with cartridge models F2 and F5 (see reverse side for response characteristics). Model SF2 LIST PRICE \$ 7.70 Model SF5 LIST PRICE \$ 8.45

T SERIES



A lightweight, low-inertia tone arm constructed of stamped aluminum, attractively fluted and internally braced for required rigidity. Designed for use with N series cartridges; currently produced with N8, N10 and N11 (see reverse side for response characteristics). Grey-tan enameloid finish. LIST PRICE \$6.50

V SERIES



The latest Webster Electric tone arm. Combines beautiful styling with exceptional rigidity, incorporating a high lateral ridge as an integral feature of the design. Currently available with N7 and F7 high fidelity cartridges, tracking at 1 oz. or less (see reverse side for response characteristics). Model VN7 LIST PRICE \$15.95 (with Sapphire needle) Model VF7 LIST PRICE \$15.95 (with offset needle and guard)

THE NEW WEBSTER ELECTRIC Featheride RETRACTABLE

The "V" series arm shown at the left is now available with the new retractable cartridge, Webster Electric Company's latest development. If the arm is accidentally dropped or scraped across the record, there is no damage to record, crystal or needle. Finest response in normal playing, exceptionally quiet, low tracking pressure. Supplied with Q1 and Q2 cartridges (see reverse side for detailed specifications) complete with osmium-tipped offset needle and guard.

Model VQ1 LIST PRICE \$17.65

Model VQ2 LIST PRICE \$16.70

Recorder Heads

Webster Electric Recorder Heads are unique and outstanding in performance. They are of extreme simplicity in mechanical and electrical design. No "peaks" or "valleys" in the entire frequency range. Recordings are distinguished by their clean quality and remarkable musical detail.



MODEL R-84

A magnetic cutting head for professional and semi-professional use. 8 ohms impedance at 400 cps. Frequency range 30-6000 cps. Less than 1 1/2% distortion at 400 cps. Input power 1 watt nominal for maximum recording level. Standard 1 1/8 inch spacing between mounting holes. LIST PRICE...\$27.50

MODEL R-84G

Similar to above but with 500 ohms impedance at 400 cps. LIST PRICE.....\$27.50



WEBSTER

RACINE



ELECTRIC

WISCONSIN

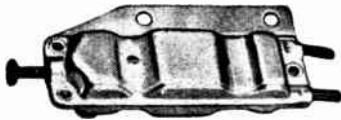
Established 1909

Export Dept. 13 E. 40th Street, New York (16), N. Y. Cable Address "ARLAB" New York

Crystal Cartridges

Webster Electric Crystal Cartridges are supplied in four general styles having universal replacement application. They are manufactured under exceptionally high standards of precision, and each cartridge is individually tested before release, assuring flawless performance and maxi-

mum customer satisfaction. The range of characteristics described below permits exact replacement of original cartridges found in the majority of record-players, record-changers and radio-phonograph combinations.



C SERIES

Cartridges of this series were incorporated as original equipment in many thousands of phonographs in use today. Model C2 equipped with flange for mounting, as shown. Model C3 supplied without flange for clamp-mounting. Model C4 equipped with special mounting stud. Solder terminals.



D SERIES

For tone arms designed for side-hole mounting. This style is also widely used for reconditioning of equipment now in use. Solder terminals.



N SERIES

Cartridges in this series have been standard in new equipment for several years. Models N6 through N11 were recently introduced and are being incorporated in leading postwar makes of record-playing equipment, thereby assuring a growing replacement market. All models are available with solder terminals or pin type terminals, and with choice of self-ground or separate ground lug.



F SERIES

A new series of cartridges of very light weight, designed to track at low needle pressure. High fidelity models have a uniform drop of 6 D B per octave up to 10,000 cps. Pin-type terminals. Choice of self-ground or separate ground lugs.

Y N SERIES

Cartridges of this type incorporate P. N. crystals and are to be used only for replacement in equipment designed for their use. Cartridge case similar to N series.



Q SERIES

Models Q1 and Q2 are the new retractable cartridges, designed to protect record, needle and cartridge from accidental injury due to rough handling of the tone arm. Mounted by means of a bracket that fits standard-make arms. Supplied with osmium-tipped offset needle and protective guard.

SPECIFICATION TABLE

Model No.	Average Output at 1000 CPS (Volts)	Impedance at 1000 CPS (Ohms)	Minimum Tracking Pressure	Approx. Cut-Off Frequency	NET WT.	LIST PRICE
C 2	2.3	200,000	2.5 oz.	5000	16 gr.	\$4.00
C 3	2.3	200,000	2.5 oz.	5000	16 gr.	1.00
C 4	2.3	200,000	2.5 oz.	5000	16 gr.	1.20
D 2	2.3	80,000	2.5 oz.	5000	25 gr.	5.10
N 6	1.0	200,000	1.0 oz.	5500	25 gr.	5.25
N 7	.5	200,000	.75 oz.	10000	25 gr.	6.75
N 8	1.4	200,000	1.25 oz.	3000	25 gr.	5.25
N 9	1.4	200,000	1.25 oz.	3000	25 gr.	5.60
N 10	2.25	200,000	1.25 oz.	5000	25 gr.	5.25
N 11	1.0	200,000	1.0 oz.	6000	25 gr.	5.25
F 1	1.0	200,000	1.0 oz.	5000	8 gr.	5.00
F 2	1.0	200,000	1.0 oz.	5000	18 gr.	5.00
F 3	.5	200,000	.75 oz.	10000	8 gr.	5.75
F 4	.5	200,000	.75 oz.	10000	18 gr.	5.75
F 5	1.0	200,000	1.0 oz.	4000	8 gr.	5.75
F 6	1.0	200,000	1.0 oz.	4000	18 gr.	5.75
F7P	1.0	200,000	1.0 oz.	8000	18 gr.	9.25 (with needle)
YN2	.7	2 meg.	1.0 oz.	5000	25 gr.	11.50
Q 1	1.0	200,000	1.0 oz.	8000	23 gr.	10.95
Q 2	2.0	200,000	1.5 oz.	8000	23 gr.	10.00



UNIVERSAL MICROPHONE CO.

INGLEWOOD, CALIFORNIA



New Improved UNIVERSAL D20 SERIES DYNAMIC MICROPHONE

Handsome! Combines modern lines with a stability of design which suits it to all settings. Sturdy metal case is finished in lustrous satin chrome.

Smooth Positioning! Exclusive Micro-Adjust Swivel responds in a velvet-smooth manner yet stays put in any desired position within a 60° angle.

New Switch Convenience! "On" or "Off" at the flick of a finger with new slide type switch. The switch is mounted on swivel housing and connects across microphone circuit. Wiping type contact surfaces assure positive operation.

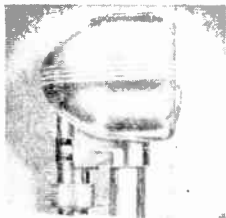
Applications: Transmitters, recording, p.a., and all uses where a full ranged, stable indoor or outdoor microphone is needed.

Specifications: Level: -54 DB (1v/bar). Range: 50-8000 cps. Complete with 20' cable, detachable connector, and dust-proof cover. Standard 1/8"-27 thread stand coupling. Shipping weight: 3 3/4 lbs. Various impedance models:

MODEL D20A	50 Ohms	List Price \$32.50
MODEL D20B	200 Ohms	List Price \$32.50
MODEL D20C	500 Ohms	List Price \$32.50
MODEL D20H	40,000 Ohms	List Price \$32.50

"308" DYNAMIC MICROPHONE

New and improved design. Ideal for general public address installations, recording, orchestras, dramatic presentations. Well built 15mm voice coil and substantial suspension provides the excellent reproduction of this reliable instrument. Its small size gives it "Artist Appeal." Well built for dependable service. Unaffected by temperature or humidity.



Frequency Response: 50-8000 cycles per second.
Output level: 60 db below one volt per bar.
Satin Chrome plated. Microphone size: 2 1/4 inches in diameter, depth: 2 3/8". Stand coupling: 1/8 inch 27 thread. Locking type connector at housing. Complete with 20 foot low capacity rubber covered cable. Shipping weight: 3 pounds.

MODEL 308. High Impedance (40,000 Ohms)
List Price \$26.80

"CU" CARBON MICROPHONE

Communications Type

For private aircraft, police and all types of mobile and marine applications. Frequency Response characteristics restrict pick-up to essential voice frequencies rejecting unwanted background noise. Single button type carbon microphone. Button impedance 100 Ohms. Output level 30 volts RMS across secondary of microphone input transformer. Double pole, single throw, press-to-talk switch connects microphone and relay control circuit. Complete with heavy duty "Push-in" mounting bracket. Moisture proof, flexible 3 1/2 foot cord. Rich black plastic housing. Strong, durable. No finish to wear off.
Microphone size: Diameter 2 1/4 inches, 1 1/2 inches thick. Net weight: 6 1/2 ounces. Shipping weight: 3/4 pound.
Available in two models:

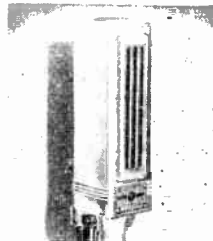


MODEL CU-1, with 3-way phone plug.
List Price \$10.50

MODEL CU-2, (illustrated) with 3-way switchboard type plug.
List Price \$12.50

"808" VELOCITY MICROPHONE

For use where a smooth responding microphone with a smart design is required. Suitable for stage presentations, orchestras and general public address applications indoors. Bi-directional response allows for pick-up of audience reaction without "feed-back." This microphone does not pick-up sound from the sides, thus it eliminates much of the feed-back difficulty encountered with other types of microphones.



Uses sensitive 5mm ribbon element designed to reduce phase shift at high frequencies. This feature improves the high frequency response over the conventional velocity microphone.
Frequency Response: 43-8000 cycles per second.
Output level: 63 db below one volt per bar.
Satin chrome plated. Complete with locking type connector at housing and 20 foot rubber covered, low capacity cable. Stand coupling: 1/8"-27 thread. Microphone size: 1 1/4 inches square by 4 1/2 inches high. Shipping weight: 2 pounds.

MODEL 808. High Impedance (40,000 Ohms.)
List Price \$26.80

New and Improved A174 CARBON MICROPHONE

Replaces "W" Cartridge Type

Highly sensitive, single button carbon microphone. Light in weight and compact. Ideal for field use. An experimenter's favorite. Clear cut response to voice frequencies. Excellent for midjet transmitters. Smallest complete microphone of its kind.



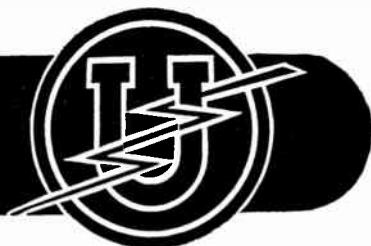
Ideal for student's electronics study kits, etc.
Button Impedance: 200 Ohms.
Output level 12db below 6 milliwatts for 100 bar signal.

Black plastic case with metal suspension eye. Screw terminals. Complete with circuit diagrams, application suggestions, etc. Microphone size: Diameter 7/8 inches, thickness 1/2 inch. Net Weight 24 ozs. Shipping weight: 2 ozs.

MODEL "A 174" Impedance 200 Ohms.
List Price \$14.00

UNIVERSAL MICROPHONE CO.

INGLEWOOD, CALIFORNIA



HANDI-MIKES CARBON MICROPHONE SERIES



A hand microphone whose popularity has been won by trustworthy performance and rugged dependability. Well balanced all-metal construction. For call systems, small transmitters; for use wherever a close-talking microphone with clear crisp voice reproduction is required. Single button carbon type with impedance of 200 Ohms.

Output level: 12 db below 6 milli-watts for high signal-to-noise ratio. Satin Chrome plated. Complete with snap switch on standard

Model 200-A 6 foot flexible cord included. Microphone size: 8 inches overall with 2 1/4 inch head. Shipping weight: 1 1/4 pounds.

MODEL	List Price
200-A. 200 Ohms with Snap Switch	\$13.65
200-TA. 200 Ohms with Push to Talk Switch	\$13.65
200-TC. With Push to Talk Switch; 3 Wire cord	\$14.65

DYNAMIC MICROPHONE SERIES



Built with the ruggedness of a carbon type microphone, this dynamic hand microphone represents the best in proven performance. Well built 15MM voice coil; substantial suspension and construction throughout. Internal spring return of switch button eliminates possibility of microphone being left "on."

Response characteristics provide extremely clear speech response

without over-emphasis of high frequencies. Available in various impedances listed below.

Frequency Response: 50-7500 cycles per second.

Satin Chrome plated. Complete with 6 foot flexible cord. Cord strain relief at handle. Microphone size: length overall 8 inches, diameter of head 2 1/4 inches. Shipping weight: 2 pounds.

Model	Impedance	Output	Level	Operating	Into	Input of	Price
204-TA	35-50 Ohms	-44DB;	0=6 mw/100 Bars	50 Ohms			\$24.60
210-TA	200 Ohms	-42DB;	0=6 mw/100 Bars	200 Ohms			\$26.80
211-TA	500 Ohms	-42DB;	0=6 mw/100 Bars	500 Ohms			\$26.80
212-TA	40,000 Ohms	-60DB;	0=1V/Bar	Grid			\$26.80

"KD" DYNAMIC MICROPHONE



New and improved design.

An economy microphone for home recording, amateurs, carnivals. Slightly rising frequency characteristics provides increased clarity. Unaffected by temperature and humidity.

Frequency Response: 50-7500 cycles per second.

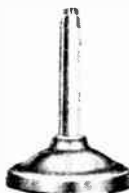
Output level: 63 db below one volt per bar.

Deep brown housing with polished chrome grille front. Microphone size 3 1/4 inches in diameter; depth 2 3/8 inches. Stand coupling: 5/8 inch 27 thread. Spring steel, cable strain relief at housing. Complete with 10 foot rubber covered cable. Shipping weight 1 3/4 pounds.

MODEL "KD." High Impedance (40,000 Ohms).	
List Price	\$17.75

MICROPHONE STANDS

A195 PROFESSIONAL STUDIO DESK STAND



Model A195

Ideal for broadcasting, banquets, paging and all desk level microphone use. Modern all-metal styling with satin chrome finish. Extra heavy base for added stability. Provision for wiring through upright. Size: 7" high, 5" diameter. Thread: 5/8" - 27. Shipping weight: 2 1/4 pounds.

List Price \$4.95

ST-3 NEW STUDIO FLOOR STAND

This three legged stand styled by Schaeffer of Hollywood is ideal for broadcasting, theatre productions, night clubs, etc. It is designed with low center of gravity for added stability and rubber cushioned vibration-absorbing feet to minimize floor noises. Smooth responding clutch provides noise-free action and positive-assurance against sudden dropping. Ruggedly built to stand

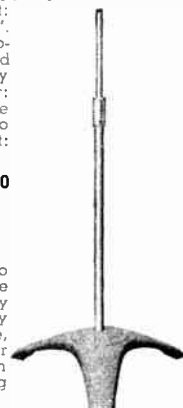
abuse. Minimum height: 40"; maximum height: 72". Satin chrome plated two-section upright. Three legged base has platinum gray wrinkle finish. Diameter: 18". 5/8" - 27 microphone coupling. Packaged in two containers. Shipping weight: 14 pounds.

List Price \$18.00

ST-R DELUXE FLOOR STAND

Same as ST-3, Studio Floor Stand, except the round base is slightly heavier. Platinum gray wrinkle finished base, diameter: 12". Rubber cushioned. Packaged in two containers. Shipping weight: 13 1/2 pounds.

List Price \$18.00



Model ST-3



Model ST-R

A31 COMBINATION DESK STAND



Two-piece desk stand with demountable upright (may be used as handle for converting desk into hand microphone). Upright is mounted into base with "push and twist" of wrist . . . to remove . . . simply "pull and turn" in reverse. Complete with rubber feet. Durable brown finish. All metal base with hardwood upright in matching finish.

Assembled height: 6". Upright 5 3/4" long, 5/8" - 27 thread on brass ferrule. Base 4 1/2" in diameter, 1 1/8" high. Shipping weight 1 1/4 pounds.

List Price \$3.00

A63 FLOOR STAND



Three-section type. Ideal for portable equipment. May be knocked down in two parts. Collapsed length 24". Base 9 1/2" in diameter, approximately 2" high. Fits all microphones with 5/8" - 27 thread. Rattle proof construction. Easy to operate. Adjustable height, 26" to 64". In low adjustment makes ideal banquet table stand.

Stand uprights are satin chrome plated. One-piece iron base is black wrinkle finished.

Base weight: Approximately 7 pounds. Floor Stand shipping weight 12 pounds. Packed in two cartons.

List Price \$12.50



UNIVERSAL MICROPHONE CO.

INGLEWOOD, CALIFORNIA

UNIVERSAL RC RECORDING CHASSIS

The Universal RC is the only home recording unit with these exclusive advantages: (1) Records extremely close to tangency. (2) Patented pantographic movement makes possible equally spaced cutting. (3) Groove depth adjustment is visible and adjustment can be made in recording position. (4) Pantographic action keeps guide shoe at correct angle in lead screw thread. Records inside to outside. (5) Lift lever at side of head allows operator to locate stylus in the exact location after the lead screw has been engaged. (6) Records at commercial levels and loudness. (7) Recording head automatically lifted at end of 10" record.



Specifications: 10" turntable. 110 volt, 60 cycle, 78 RPM motor (easily converted to 50 cycle operation). Audio Power: 1/2 w. for home recording, 3 w. for commercial levels. Complete with crystal pick-up to play back 12" records. Motor bearing dimensions: 14" x 20". Shipping weight: 24 lbs.

List Price.....\$59.50

UNIVERSAL A132A RECORDING HEAD

FOR HOME RECORDING

An especially designed magnetic Recording Head Cartridge for replacement in popular national makes of home recorders, such as: Wilcox-Gay, General Industries, etc. Uses spring temper phosphor bronze knife edge and steel spring attachment plate. The home recording version of Universal's patented Professional Recording Head—the first time our design and engineering skill has made a replacement recording head cartridge available to the general public.

Response range extends from 50 to 5000 cycles per second with a rise in the higher frequencies to offset loss in record materials, high frequency cut off of R.F. Tuners, etc.

Sensitivity: It requires only 1/2 watt to make a fine home recording. A feature of

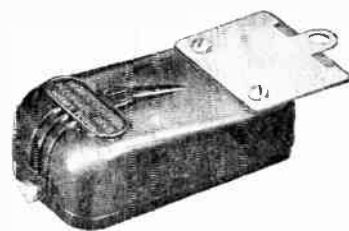
the A132A patented design is that in addition it takes only 3 watts to make a record of commercial level or loudness. Most recording heads in this price class cannot make a record at this level under any condition.

Unaffected by high temperatures. Has powerful alnico magnet. Available in one standard impedance for matching the 3.2 Ohms adopted by the R.M.A. as a standard for loud speakers. Dimensions: 1 3/8" x 2 1/4" x 1 1/8".

MODEL A132A Recording Head Replacement Cartridge. Complete with spring temper phosphor bronze knife edge, steel attachment plate and mounting screws. Shipping weight: 8 ounces.

List Price

\$11.50



D61B CONSTANT VELOCITY FREQUENCY RECORD

For Direct Checking of Response Characteristics of Phonograph Pick-ups, Complete Lateral Disc Recording Systems and Complete Lateral Disc Reproducing systems.

For Indirect Checking of Response Characteristics of Recording Heads, Loud Speaker Installations, Theatre Sound Equipment, Public Address Sound Equipment, and Almost any Component of Audio Frequency Equipment.

For Quick Checking of Equipment without Resorting to use of Complicated Calibration Equipment and Procedures.

A Handy Tool in the Hands of Technician, Engineer, and Student Alike. Data sheet includes output levels of popular pickups.

TECHNICAL DATA

A 12-inch Recording at 78 RPM. Duplicate recording on each side of record. Disc is "pressed" in the new high grade flexible recording stock. (Will not break in shipment or handling.)

Recorded in three parts.

- (1) A continuously rising tone of 50 to 10 000 cycles per second. Frequencies are voice announced in 15 "breaks." Range of frequencies is recorded at Constant Velocity in steps of 50 to 200 c.p.s. at +7 DB, 200 to 500 c.p.s. at +14 DB, and 500 to 10,000 c.p.s. at +21 DB.
- (2) A 1000 cycle tone recorded in steps of 2 DB from +8 to +18.
- (3) A 400 cycle tone recorded at +18 DB.

Zero reference is established at an arbitrary level.

D61B FREQUENCY RECORD with Data Sheet.

List Price

\$3.50



A178 PICK-UP WEIGHT SCALE

This small, vest-pocket size scale checks pick-up for proper needle pressure, checks pick-up arm bearings, measures stylus pressures and spring and lever control tension. Readings in half ounce steps from zero to eight ounces. Durable plastic case with screw-on cap.

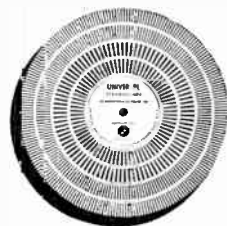
List Price \$4.25



A176 STROBOSCOPE

Shows at a glance whether the turntable speed is accurate, fast or slow. Measures both standard 78 RPM and transcription 33-1/3 RPM turntables under light sources of 25, 50 or 60 cycles. Cardboard disc packaged in protective folder.

List Price..... \$0.25



Brush

CRYSTAL PRODUCTS

Each application of headphones requires some special qualification for satisfactory performance. Brush has a most complete line of crystal operated headphones, and each model is designed for a specific group of applications. Brush crystal phones possess the following outstanding features:

1. BIMORPH* crystal drive element of such high impedance that line or circuit characteristics are not affected when monitored by Brush phones.
2. Wider range response with more uniform output.
3. Compensation for ear coupling.
4. Light-weight, rugged, shock-proof construction.

MODEL "BA-303" HUSHATONE*

A miniature, molded plastic extension speaker for under pillow use. Disc shaped ($4\frac{3}{16}$ " dia. by $1\frac{1}{16}$ " thick). Makes no uncomfortable lump beneath the pillow. Tone quality comparable to cone-type speaker because of specially designed plastic diaphragm. Speaker gives ample output with low power consumption (.001 watt). Hermetically sealed, can be dipped into disinfecting solution (temperature not above 120°F). Light weight BIMORPH* crystal drive element insures uniform response and high sensitivity. No parts to wear, loosen, or become detached. Furnished in maroon with satin chrome trim.

HUSHATONE* with 10' cord. Fair Trade Retail Price . . . \$9.75
 Net Wt. 8 oz. Shipping Wt. 2 lbs. Code Sepim



HIGH FIDELITY MODEL "A-1"



For use where HIGH FIDELITY and extended frequency response are of paramount importance. (60 to 10,000 cps. Corrected for rising response below 200 cps.) Especially suited to monitoring, sound measurement, audiometry, and similar exacting headphone applications. Sensitivity approx. 1.5 bars per volt at 1,000 cps. Impedance over 80,000 ohms at any frequency.

Headset complete with 5' cord and headband. List Price . . . \$18.00
 Net Wt. 6 oz. Shipping Wt. 2 lbs. Code Mihii

BRUSH MODEL "A" LORNETTE PHONE



The "A" lorgnette phone is designed for use in group hearing aid sound systems installed in churches, concert halls, theatres and auditoriums. Telescope extension from 12" to 17". Attractively finished in satin black. Light weight, easy to handle, and comfortable at the ear.

Single phone complete with 5' cord and lorgnette handle. List Price . . . \$8.20
 Net Wt. 5 oz. Shipping Wt. 1 lb. Code Milme

COMMUNICATIONS MODEL "BJ"



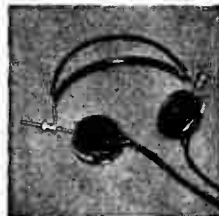
Developed for COMMUNICATIONS work where light weight, durability, and uniform response are required. Soft rubber housing insures good ear seal and wearing comfort over long hours of constant use. High output impedance .008 mfd. (40,000 ohms at 500 cps.), response 100 to 10,000 cps. Headset complete with 5' cord and adjustable lock-type headband.

List Price . . . \$15.85
 Net Wt. 6 oz. Shipping Wt. 2 lbs. Code Micom

BRUSH MODEL "A" GENERAL PURPOSE

Designed for GENERAL PURPOSE applications including laboratory, studio and skilled amateur home use. The BIMORPH* crystal drive element insures wide range, uniform response (100 to 10,000 cps.) and high sensitivity. High impedance; ideal for multiple installations.

Headset complete with 5' cord and adjustable lock-type headband. List Price . . . \$12.00
 Net Wt. 6 oz. Shipping Wt. 2 lbs. Code Millo



BRUSH MODEL "A" SINGLE PHONE

Particularly adapted to individual or group hearing aid and radio applications. Light weight, good ear seal, and comfortable to wear. Spring steel headband with soft rubber and cushion to eliminate slipping.

Single phone complete with 5' cord and headband. List Price . . . \$6.45
 Net Wt. 3 oz. Shipping Wt. 1 lb. Code Milod



BRUSH MODEL "B" SINGLE PHONE

Excellent for hearing aid applications because of extreme light weight. Has very low power consumption and high quality reproduction. Hermetically sealed against ear moisture and adverse humidity conditions. Same general characteristics as Communications Model BJ phones. Single phone complete with 5' cord and headband.

List Price . . . \$6.65
 Net Wt. 3 oz. Shipping Wt. 1 lb. Code Mibor



PRICES SUBJECT TO CHANGE WITHOUT NOTICE

Complete technical data on request

*Trade Mark Reg. U. S. Pat. Off.

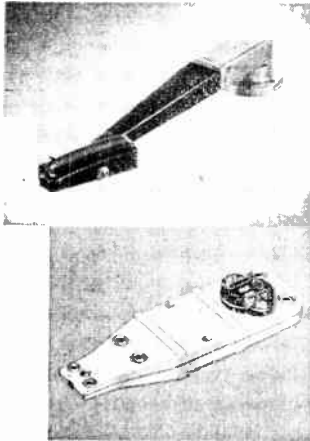
THE BRUSH DEVELOPMENT CO.

Brush

CRYSTAL PRODUCTS

The Brush PL-20 crystal phonograph pickup is a high quality instrument for use with all lateral cut records including broadcast transcriptions. Low stylus force (30 grams—approximately 1 ounce) virtually eliminates record wear and background noise. Permanent sapphire stylus has shown no measurable wear after 250 hours of continuous use—about 5,000 playings.

BRUSH MODEL "PL-20" CRYSTAL PICKUP



High impedance equalizers No. 3761-B at List Price **\$2.75**

For low impedance applications No. 3761-A equalizer for 50, 200, 500 ohm line available. List Price **\$15.00**
Net Wt. 5 oz. Shipping Wt. 1 lb. Code Laped

Designed for records up to 17 1/4 in dia. Black molded plastic arm with satin chrome metal parts. Pickup complete with 3761 B equalizer and arm rest.

List Price **\$50.00**
Net Wt. 2 lbs. 4 oz. Shipping Wt. 3 lbs. Code Payle.

PL-2Z CARTRIDGE heart of PL-20 crystal pickup.

Response: Flat within 25 db. up to approx. 6,000 cps; slight rise to 10,000 cps.

Output Voltage: .3 volts per .001" stylus displacement at 400 cps. to "Constant Velocity" recordings (with No. 3761-B equalizer). Sufficient to drive conventional two stage amplifier. 1.7 volts per .001" stylus displacement for "Constant Amplitude" recordings. List . . . **\$16.70**

BRUSH MODEL "RC-20" CRYSTAL CUTTER

The Brush RC-20 Crystal Cutter has been designed to satisfy the demand for high quality, low cost recordings in the home, school and studio. Due to its inherent stiffness, the RC-20 will cut lateral type records in virtually all hard or soft disc materials. Being of simple and compact design, it is readily adaptable to all types of transcription equipment. A three watt amplifier is sufficient to satisfactorily drive the RC-20 cutter. Frequency response flat within plus or minus 3 db. from 50 to 9,000 cps.

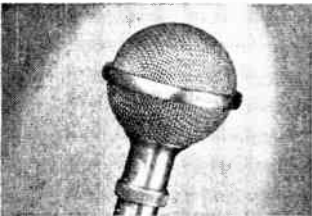
Cuts "Constant Amplitude" without equalization, and "Constant Velocity" or other desired frequency characteristics with suitable equalization. Complete technical data sent on request.

Cutter (less stylus)

List Price **\$25.00**
Net Wt. 4 oz. Shipping Wt. 2 lbs. Code Reco



BRUSH MODEL "BR2S" MICROPHONE



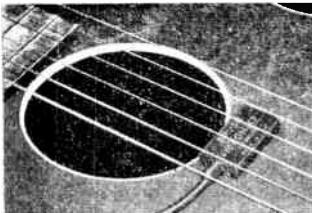
A non-directional, high quality microphone incorporating the well-known floating crystal SOUND-CELL.

Performance is unaffected by vibration, shock, or low frequency wind noise. Output level 65 db. (based on 1 volt per bar reference level).

Flat from 30 to 2,000 cps. with gradual rise to 4 db. maximum.

Especially suitable for public address systems, monitoring, recording, amateur radio, and industrial or institutional applications. Microphone complete with plug and socket. List Price **\$29.50**
Net Wt. 7 oz. Shipping Wt. 2 lbs. Code Maple

BRUSH MODEL "VM-1" "VIBROMIKE"



The VM-1 or "Vibromike" is a miniature CONTACT-TYPE microphone with high sensitivity and unusually wide-range frequency response (30 to 6,000 cps.) Output voltage from .05 to .1 volt or higher. Size of microphone 7/8" x 3/4" x 5/8".

Designed for a broad field of reproduction applications through direct contact. Adaptable to musical instruments, industrial uses detecting mechanical vibrations. Hermetically sealed in black rubber covered case.

Microphone complete with mounting clamp and 25' of cable. List Price **\$17.50**
Net Wt. 6 oz. Shipping Wt. 2 lbs. Code Music

BRUSH MODEL "BL-2" LAPEL MICROPHONE

The improved Model BL-2 lapel microphone features virtually flat response and extremely high output for a microphone of this type. Small and rugged (1 1/2" x 2 1/4") the BL-2 can be used in hand or as instrument pickup as well as in lapel.



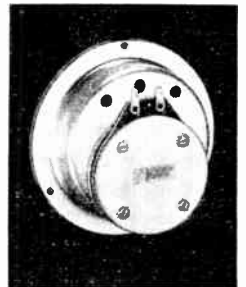
Microphone complete with 25' of cable. List Price . . . **\$25.00**
Net Wt. 8 oz. Shipping Wt. 2 lbs. Code Maize

BRUSH SM-37 MICROPHONE-SPEAKER

For use in cases where one unit serves as microphone and speaker. Natural and faithful reproduction. Microphone response from 200 to 5,000 cycles output level approx 35 db. (zero reference one volt per sq. cm.)

Speaker range from 1,500 to 5,000 cycles. Sensitivity in order of 5 volts for conversational level. Impedance is capacitive reactance. Size 3 3/4" in diameter 1 1/2" deep overall. Case finished in cadmium.

List Price **\$8.25**
Net Wt. 7 oz. Shipping Wt. 12 oz.



PRICES SUBJECT TO CHANGE WITHOUT NOTICE

Complete technical data on request
*Trade Mark Reg. U. S. Pat. Off.

THE BRUSH DEVELOPMENT CO.

Brush

CRYSTAL PRODUCTS

Brush Crystal Microphones

Model BA-106

The Brush Model BA-106 is a high quality microphone incorporating the hermetically sealed Acoustical. This microphone offers unexcelled response in microphones of this type and price range.

Vibration, shock or low frequency wind noise do not affect the performance of this microphone.

Unexcelled for home recording, public address systems, ham shacks, monitoring and institutional and industrial applications.

Special Features of the BA-106 Microphone are:

Flat from 40 to 6000 c. p. s.

Non-directional.

Load resistance recommended: 5 megohms.

Output impedance equivalent to approximately .002 mfd. (0.8 megohms @ 100 cycles).

Output level Minus 50 db below 1 volt bar.

Microphone shipped complete with 8' shielded cable and plug, and desk stand with removable base.

List Price . . . \$16.75

Net Wt. 1 1/4 lb. Shipping Wt. 3 1/4 lbs. Code ACEL



Brush BR-202

"VISCOCEL" BR-903 CARTRIDGE

Sensational new BR-903 cartridge offers outstanding characteristics at low cost. Maximum stylus life, high output, internal equalization, flat response, low distortion, 1/2 ounce stylus force required, removable stylus, low stylus talk, heat humidity resisting crystal.

Net Wt. 6 grs.

*Trade Mark

Code Visco



12" Pickup and BR-203 16" Pickup

Modern styling of both the 12" and 16" pickup arms assures appearance acceptance as well as excellent characteristics for the new Brush BR-903 crystal cartridge.

BR-202

Net Wt. 8 oz. Shipping Wt. 1 lb. Code TEPEE

BR-203

Net Wt. 8 oz. Shipping Wt. 1 lb. Code TRASP

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

Complete technical data on request
*Trade Mark Reg. U. S. Pat. Off.

THE BRUSH DEVELOPMENT CO.

TRIMM

KNOWN AROUND THE WORLD
HEADSETS
 MADE IN U.S.A. SINCE 1922



GROUP HEARING AID COMPONENTS

SINGLE EARPHONES — "FEATHERWEIGHT" SERIES

LOZNETTE HANDLE AND HEADBAND TYPES

The most widely used earphones, for group hearing aid systems in churches, theatres, mortuaries, etc., are of the "Featherweight" series. The acoustic response of these has been found, over a period of years, to be especially suitable for this class of service. The unit is molded of high strength black plastic material, measures 2 1/4" in diameter, has a maximum thickness of 3/4" and weighs approximately 1 1/4 ounces. A variety of ohmage are available, but most users will find the following table useful.

D.C. RESISTANCE	IMPEDANCE	APPLICATIONS
76 ohms	300 ohms	Low Impedance Lines (up to 50 ohms)
1000 ohms	4500 ohms	High Impedance Lines (200-500 ohms)
2000 ohms	9000 ohms	Large Installations or High Impedance Lines (500 ohms)



- No. 120 \$ 6.50
- No. 110—Single Earphone, non-adjustable headband type No. 685 (Specify ohmage)..... \$ 6.50
- No. 112—Single Earphones, adjustable headband type No. 688 (Specify ohmage)..... 6.50
- No. 115—Single Earphone, non-adjustable headband type No. 685, with No. 450 volume control in cord..... 11.00
- No. 120—Single Earphone, loznette handle type No. 670 (Specify ohmage)..... 7.50
- No. 125—Single Earphone, loznette handle type No. 670, with No. 450 volume control in cord (Specify ohmage)..... 12.00

No. 110

Phone plugs, although not included as part of these earphones, in the listing above, are required in most applications. These can be supplied attached to the units if so ordered. (See No. 512.)

VOLUME CONTROLS AND OUTLET BOXES



No. 460

Outlet Boxes 460 and 461 are recommended for the majority of installations, combines in a single unit volume control, phone jack, and terminal strip for incoming circuit. No. 460 has brown wrinkle finish to harmonize with woodwork. No. 461 has a glossy ivory finish to improve visibility in theatres. Standard ohmage, 1000 ohms for low impedance lines and 10,000 ohms for high impedance lines (up to 500 ohms). On special orders 25,000 and 50,000 ohms can be supplied at slight additional cost.

No. 460—Outlet Box (Brown—Specify ohmage).....\$4.40

No. 461—Outlet Box (Ivory—Specify ohmage)..... 4.40



No. 450

No. 450—Volume control inserted in cord type. Includes cord (No. 838-2 1/2') from control to plug, black plastic housing, all rounded edges. Measures 2" long. Standard ohmage 1000 and 10,000 ohms..... 4.95

No. 477—Outlet box, dual jack, brown finish, same general details as No. 460..... 3.50

No. 478—Outlet box, dual jack, ivory finish..... 3.50

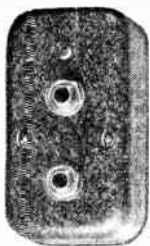
No. 480—Outlet box, dual jack, brown finish, similar to No. 477 except artificial load inserted by withdrawal of phone plug... 4.00

No. 481—Outlet box, same as No. 480 except ivory finish..... 4.00

No. 484—Outlet box, single jack, brown finish..... 3.00

No. 485—Outlet box, single jack, ivory finish..... 3.00

"A variety of special types of junction and outlet boxes can be supplied to customers' specifications."



No. 480

See additional bulletins and catalog pages published by TRIMM, Inc., on group hearing aid installations.

Prices subject to change without notice.

PHONE PLUGS

Most compact plug. Bakelite with nickel plated stem. Cord tips held tightly by screws. Easily attached to cord.



No. 512—Flat plug.....\$0.65

No. 511—Plug, standard type, bakelite shell and nickel plated stem. Easily attached to cards.....\$0.70

TRIMM QUIET RADIO ATTACHMENT KITS



No. 640

Essentially, the TRIMM Headset Attachment Kit consists of a device designed to be connected to the loudspeaker voice coil circuit in such a manner that the user may have either the headset or loudspeaker operate alone, or the two may be operated simultaneously.

Ideal for . . .

The bedside radio, providing reception without disturbing others.

The short wave listener, bringing many new and interesting programs.

The hard of hearing, bringing countless interesting radio programs that they have been missing in the past.

Model 640—Using the famous Trimm Featherweight Headset. List \$15.45

Model 643—Using Trimm Dependable Headset. List 9.60

Model 647—Using Trimm Acme Headset. List 8.20

TRIMM

KNOWN AROUND THE WORLD
HEADSETS
 MADE IN U.S.A. SINCE 1922

FEATHERWEIGHT



The world famous TRIMM Featherweight. Recognized as a leading quality headset. Weighs 4½ oz. complete with two units, 5 foot moisture-proof wear-resisting cord. Bakelite shell and cap. Magnet of highest quality cobalt steel alloy. Pole pieces of finest magnetic iron. Coils especially impregnated. A custom-built phone throughout. Standard resistances.

- No. 100—Double Headset with nickel-plated headband.....\$10.00
 No. 104—Double Headset with fabric covered wire headband... 10.00

PROFESSIONAL

The choice of countless users... the original TRIMM headset. Watch case bipolar type design, cap and shell molded of brown bakelite (unless specified otherwise). Magnet of forged chrome steel, coils impregnated. Cord and tinsel moisture-proof. 5 foot length. Concealed terminals. Fabric covered wire headband (double headset only). Standard resistances for double headsets, 10, 75, 600, 2000, 3000, 4000 ohm d. c.



- No. 70—Double Headset\$5.00
 No. 72—Single Headset 2.80

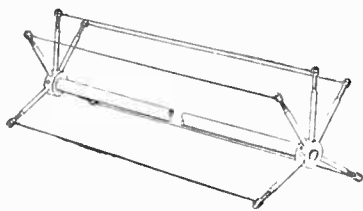
COMMERCIAL



The most ruggedly constructed yet lightweight headset available. Practically non-breakable. Shell and caps molded of special high strength plastic, dia. 2½", depth 3¼", cord, 5 foot tinsel, moisture-proof construction, type 501 telephone-type plug attached. Leather covered headband. This head-

- set is recommended for monitoring service because of its high quality performance.
 No. 156—Double Headset, 600 ohms Imp. per pair \$16.00
 No. 157—Double Headset, 17,000 ohms Imp. per pair 16.00
 No. 158—Double Headset, 600 ohms Imp. per pair, no plug 14.50
 No. 159—Double Headset, 17,000 ohms Imp. per pair, no plug 14.50

ANTENNA MATCHING STARS

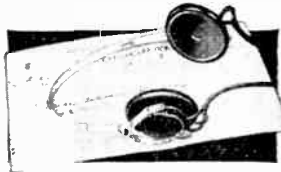


Unique impedance transforming device for use with multi-element beams raising antenna impedance to that of the line. Consists of a pair of hubs into which a number of spokes up to 8 are assembled, star shaped assemblies are attached to far ends of driven element. From the ends of the spokes are stretched wires parallel to driven element of array.

- No. 910-A—Antenna Matching Star Kit. Two stars with 5 spokes each, adjusting nuts, set screws, hub bored for 2½" max. O. D. tubing \$9.00
 No. 910-B—Same as 910-A except hub bored for 1½" max. O. D. tubing 9.00
 No. 912-A—Spokes (2) for 910 kit .80
 No. 913-A—Baby Antenna Matching Star Kit. Recommended for 2 meter arrays 8.00
 No. 914-A—Spokes (2) for 913-A kit .70
 See Bulletin R-1 for further information on Antenna Matching Stars.

Bulletin U. C. P. 4-48

24,000 ohms Imp. FEATHERWEIGHTS



Featherweight headset built especially for the Amateur. Precision built throughout, this phone embodies the results of years of experience. Again ultra-sensitivity combined with rugged construction makes a fine headset, which is very lightweight.

- No. 106—Double Headset with adjustable nickel-plated headband \$10.00
 No. 107—Double Headset with fabric-covered wire headband 10.00

ARMY-NAVY HEADSETS

Very sensitive. Meets both Army and Navy specifications. Modifications available. 6 ft. water proof cord, phone tip terminals. Leather headband. Bipolar magnets. Weighs 2 lbs. Available in 2 impedances.



- No. K29D—Double Headset, 2200 ohms d. c. (24,500 ohms Imp.) \$16.00
 No. W28D—Double Headset, 112 ohms d. c. (600 ohms Imp.) 16.00

ACME

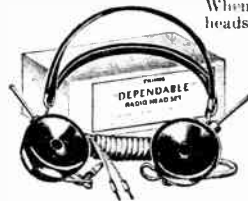
A superior headset in the lightweight low price field. Cap and shell of molded bakelite. Chrome steel magnets. Weighs six ounces complete, 4½ foot cord.



- No. 25—Double headset, 1000 ohms d.c. \$3.00
 No. 25—Double headset, 2000 ohms d.c. 2.75
 No. 27—Single headset, 2000 ohms d.c. 1.70
 No. 27—Single headset, 1000 ohms d.c. 1.65

See TRIMM general catalog for cords, headset replacement parts and special types of headsets. Prices subject to change without notice.

DEPENDABLE



When a high-grade headset is desired, but price must be considered, choose the Dependable. Bakelite caps and shells. Extra heavy bar chrome steel magnets, 5 foot tinsel cord, fabric-covered wire headband.

- No. 65—Double Headset, 2000 ohms d.c. \$4.15
 No. 67—Single Headset, 1000 ohms d. c. only, wire headband 2.15

TRIMM "E"



Light weight headset. Cobalt steel magnets. Weighs about 5 ozs. Two units, No. 684 fabric headband, 5 foot tinsel cord, 2000 ohms d. c.

- No. E-41—Double Headset\$8.30

TRIMM "B"

Designed for the government during the war for special applications and with a performance almost equal to that of higher priced phones. Suggested for hospital installations. Bakelite cap and shell. Chrome steel magnets. Fabric headband. 5' moisture-proof cord.



- B-42—Double Headset, 2000 ohms d.c. \$8.00
 B-43—Double Headset, 600 ohms Imp. 8.00

REX

A fine headset of bipolar construction having a laminated magnet structure of the best grade chrome steel; shell of polished aluminum; molded plastic cap; terminals entirely enclosed, 4½ foot length.



- No. 30—Double Headset, 2000 ohms d.c. \$2.85
 No. 30—Double Headset, 4000 ohms d.c. 3.25
 No. 30—Double Headset, 20M ohms Imp. 3.05
 No. 32—Single Headset, 1000 ohms d.c. 1.75
 No. 32—Single Headset, 2000 ohms d.c. 2.00

HEADPHONES By C. F. CANNON



THE "CHIEF" — Cannon-Ball Bakelite Headset

The "Chief" is a new addition to the Cannon-Ball family of headsets. There is a demand for a high grade bakelite phone, reasonably priced, and The "Chief" meets this requirement in every respect. It is an inside terminal type. The diameter of the diaphragm is $2\frac{1}{8}$ ". Bakelite cases and caps. Double coils, two in each receiver. Laminated Chrome Magnets. Braid covered headbands with permanent adjustment and having no removable parts. Cotton covered cord four and one-half feet long.

No.	List Price
CC-2—2000 ohms D.C.	\$4.00
CC-3—3000 ohms D.C.	4.50
CC-5—5000 ohms D.C.	5.50

Leather covered headband in place of the braid band, List 45c extra



THE CHIEF

THE BRANDES "SUPERIOR" MATCHED TONE HEADSET

The Brandes "Superior" headset has been on the market since 1908. It was one of the first headsets available to amateurs. It is the outside terminal type. The diameter of the diaphragm is $2\frac{1}{8}$ ". Aluminum cases. Black bakelite caps. Double coils, two in each receiver. Magnets made of chrome magnet steel. It has a steel headband with permanent adjustment and having no removable parts. Cotton covered cord four and a half feet long.

No. BS-2—2000 ohms D.C. List \$3.50



THE SUPERIOR

THE "MASTER" CANNON-BALL That Old Reliable Headset

The "Master" Cannon-Ball headset is of exceptional high quality and rugged construction. It is used extensively in institutions, hospitals and prisons, and by radio servicemen and amateurs everywhere. It is of the concealed terminal type. The diameter of the diaphragm is $2\frac{1}{8}$ ". Aluminum cases. Bakelite caps. Double coils, two in each receiver. Magnets made of chrome magnet steel. It has a steel headband with permanent adjustment and having no removable parts. Cord is cotton, four and a half feet long.

No.	List Price
MC-2—2000 ohms D.C.	\$3.50
MC-3—3000 ohms D.C.	4.00
MC-5—5000 ohms D.C.	5.50

THE BRANDES "ADMIRAL" MATCHED TONE HEADSET

The Brandes "Admiral" phone is of the same general construction as the Brandes Superior but has the terminals on the inside.

No. BA-2—2000 ohms D.C.	List \$3.75
No. BA-3—3000 ohms D.C.	List 4.25
No. BA-5—5000 ohms D.C.	List 5.75

THE "DIXIE" CANNON-BALL

The "Dixie" Cannon-Ball is the same general construction as the Master Cannon-Ball except that the terminals are on the outside.

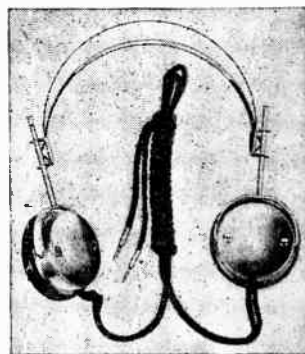
No.	List Price
CD-2—2000 ohms D.C.	\$3.00
CD-3—3000 ohms D.C.	3.25

THE "EMPIRE" CANNON-BALL New Lightweight Headset

The "Empire" Cannon-Ball is a lightweight, low priced headset, high in efficiency and attractive in appearance. Although it weighs less than six ounces, including headband and cord, it has a large magnet and double coils. It reproduces with clarity and volume equal to most of the larger, heavier and more expensive sets now on the market. It is of the concealed terminal type. The diameter of the diaphragm is $1\frac{3}{8}$ ". Aluminum cases. Black bakelite caps. Double coils, two in each receiver. A round chrome magnet of substantial size insures powerful magnetism. Cotton cords four and a half feet long. Headband is spring steel with adjustable yokes.

No. EC-2—3000 ohms D.C.	List Price \$2.75
No. EC-3—3000 ohms D.C.	List Price 3.00

Braid covered band in place of the plain steel 25c extra



THE MASTER



THE GRAND

CANNON-BALL "GRAND"—The Single Head Phone

The Single "Grand" Cannon-Ball headphone is a very fine piece of apparatus and is equal in volume and clarity of reproduction to most of the low priced inferior quality double headsets. Many people prefer the single headphone because they can hear a conversation addressed to them without removing the phone from the ear. It is the concealed terminal type. The diameter of the diaphragm is $1\frac{3}{8}$ ". Cases aluminum. Black bakelite caps. Double coils. Heavy bar magnets $\frac{1}{4}$ " square. Cotton cords four and a half feet long. The headband is spring steel permanently attached to the back of the phone.

No. SG-1—1000 ohms D.C.	List Price \$1.85
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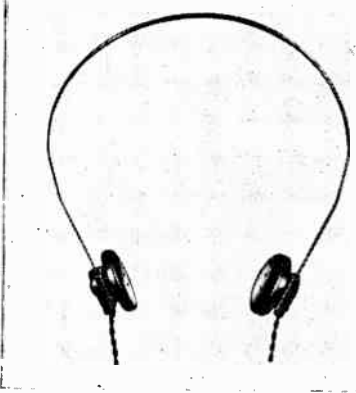
MURDOCK

Wm. J. Murdock Co. began making communication components for the telephone industry in 1896, and wireless equipment in 1904. Such equipment included crystal detectors, transmitting helixes, transmitting micro condensers, variable condensers, meters, loose couplers, loading coils, headphones, loud speakers, resistors and even complete receiving sets up until 1928. Converted from military production, MURDOCK is supplying many communication items including the following:



No. 111 HEADPHONES

These standard communication "solid built" headphones include precision bakelite case and cap, concealed terminals, stainless steel and nickel plated brass headbands with leather covering. Highly recommended for rugged service. In addition to radio, many are used in hospital service. Complete with pin tip cords, 10,000 ohm impedance.



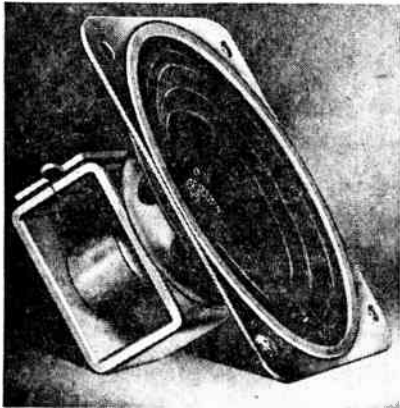
No. 100 HEADPHONES

The "atom" weight might be applied to the MURDOCK No. 100 headphones. The lightest practical headphones on the market — only 2. ounces with headband! This is designed around a hearing aid type receiver which has good frequency characteristics. No. 100 comes complete with PL-55 plug rated at 2000 ohms impedance.



No. 131 HEADPHONES

For general communications — especially CW (Code) — the MURDOCK No. 131 is tops, due to useful 1000 cycle peak. "Solid built" for fine performance. Headbands are all stainless steel and plated brass with proper leather covering. Supplied with wafer-thin ear cushions. No. 131 is complete with PL-55 Plug, 10,000 ohm impedance.



No. L-401 SPEAKER

MURDOCK Speaker No. L-301 (3 in.) and No. L-401 (4 in.) are PM loud speakers of quality design and construction. They are designed for clean reproduction of full frequency and dynamic ranges. Audition verifies the laboratory curves. Other impedances available for special applications.

Specifications for No. L-401

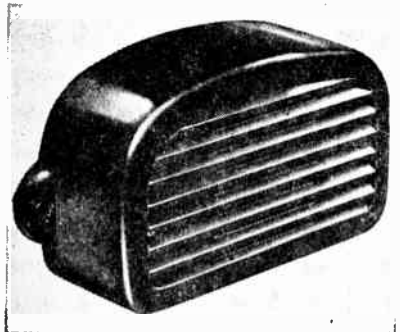
FORM: Square 4 1/8"
MOUNTING: Square or Round
BAFFLE OPENING: 3 3/4"
DEPTH: 2 1/8"
WEIGHT: 12 oz.

MAGNET: Alnico V, 1.47 oz.
TRANSFORMER MOUNTING: Lug Type
IMPEDANCE: RMA 3.2 ohms
POWER: Normal, 2 1/2 Watts
Maximum, 4 Watts

Specifications for No. L-301

FORM: Square 3 1/2"
MOUNTING: Square or Round
BAFFLE OPENING: 3"
DEPTH: 2-1/16"
WEIGHT: 11 oz.

MAGNET: Alnico V, 1.47 oz.
TRANSFORMER MOUNTING: Lug Type
IMPEDANCE: RMA 3.2 ohms
POWER: Normal, 2 Watts
Maximum, 3 1/2 Watts



No. 200 HANDI-SPEAKER

MURDOCK No. 200 Bakelite speaker mount is made available for the MURDOCK No. L-301 speaker. Meets the demand for a good but inexpensive baffle. There is room for a standard transformer (commercial 1/2" x 1/2") and a switch or volume control if desired. This unit may be wall mounted if desired. Baffle is available in Black, Brown, and Mahogany, with or without MURDOCK L-301 loud speaker.

Other MURDOCK products include hearing aid receivers, electrical door chimes, buzzers, push buttons, and similar devices.

WM. J. MURDOCK CO.



CHELSEA 50, MASS.

Established When "Wireless" Was The Word

EASTERN

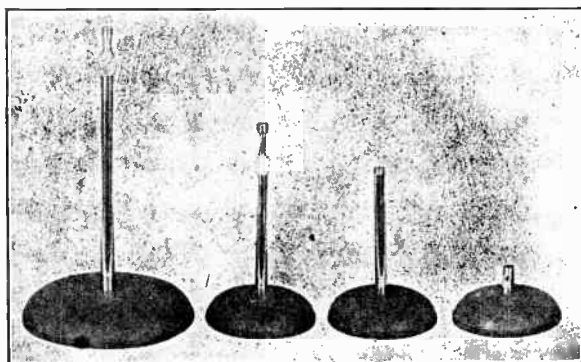
MICROPHONE STANDS

EASTERN PRESENTS . . . A complete new line of quality TABLE and BANQUET STANDS . . . featuring a series of smooth surface, oval type bases, in a range of diameters to fill all "HAM," PUBLIC ADDRESS and STUDIO microphone requirements. Smartly designed with low center of gravity for maximum stability. SPECIAL RUBBER RING INSULATION COVERING ENTIRE

BASE CIRCUMFERENCE, adds a beautiful finishing touch to stand appearance and provides perfect adhesion to table tops. Available in POLISHED CHROMIUM finish (stem and base) or with attractive fine GREY WRINKLE base. All stands have $\frac{5}{8}$ "-27 thread unless otherwise noted. For other threads, see adaptor listing on page D-40.

GENERAL PURPOSE TABLE AND BANQUET MODELS

Base Diameter	Style	Height	Weight	All Chromium		Grey Base	
				Cat. No.	List	Cat. No.	List
5 1/4"	Fixed	7 3/4"	1 1/2 lbs.	ED3	\$4.00	ED4	\$3.00
5 1/4"	Adjustable	8 1/2"-12 1/2"	2 lbs.	ED5	5.25	ED6	4.25
5 1/4"	Flush	3"	1 1/2 lbs.	ED7	3.75	ED8	2.75
8 1/4"	Banquet	13"-22 1/2"	4 lbs.	EB9	8.75	EB10	6.75

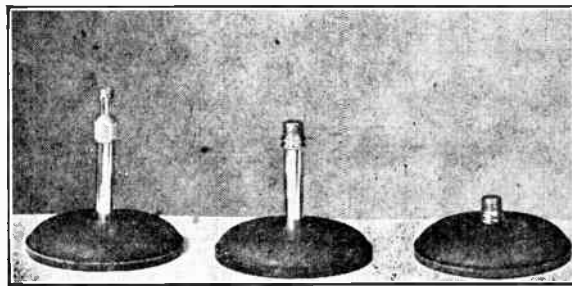


EB10

ED6

ED4

ED8



ED12

ED15P

ED18P

DELUXE STUDIO TABLE STANDS

The flush type model of the studio series is particularly suited for heavy microphones of the velocity type, such as the 8 1/2 pound, RCA 44-BX. However,

we list three styles which will take care of all microphones regardless of height or weight.

Base Diameter	Style	Height	Weight	Thread	All Chromium		Grey Base	
					Cat. No.	List	Cat. No.	List
6 1/2"	Adjust.	6"-10"	2 1/2 lbs.	5/8"-27	ED11	\$6.50	ED12	\$5.50
6 1/4"	Fixed	7"	2 1/4 lbs.	5/8"-27	ED13	5.25	ED15	4.25
6 1/8"	Fixed	6"	2 1/4 lbs.	RCA 1/2" PIPE	ED13P	5.25	ED15P	4.25
6 1/4"	Flush	2 1/4"	2 lbs.	5/8"-27	ED16	4.75	ED18	3.75
6 1/2"	Flush	2 1/4"	2 lbs.	RCA 1/2" PIPE	ED16P	4.75	ED18P	3.75

SWITCH TYPE TABLE STANDS

Amateurs and public address operators will welcome this new series of EASTERN "PRESS-TO-TALK" table stands, incorporating a single pole, double throw switch, which can be used for shorting microphone only or as a microphone-relay



ED20

switch on "HAM" transmitters. Hold button down for short QSO or break-in. Use locking feature for long conversation. Knurled locking rings line up microphone with cord, which enters tube through grommet. Available as follows:

Base Diameter	Style	Height	Weight	All Chromium		Grey Base	
				Cat. No.	List	Cat. No.	List
5 1/4"	Fixed	7 3/4"	1 1/2 lbs.	ED17	\$7.00	ED18	\$6.00
6 1/4"	Fixed	7"	2 1/4 lbs.	ED19	8.75	ED20	7.25

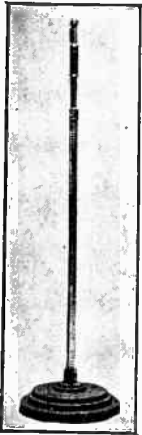
Appearance of models ED17 and ED18 is the same as that of ED4 above, with switch added.

ALL LIST PRICES 5% HIGHER WEST OF THE ROCKIES, AND CANADA

EASTERN • MICROPHONE STANDS

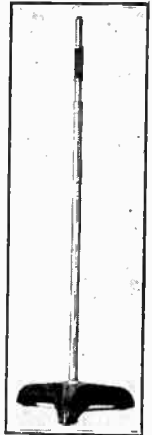
EASTERN "SLIDE-LOCK" . . AUTOMATIC . . POSITIVE-LOCKING . . FLOOR STANDS

THE IDEAL STAND FOR STUDIO USE



EF165
EF162
EF161

ONLY EASTERN MICROPHONE STANDS ARE EQUIPPED WITH THE POSITIVE ACTION, AUTOMATIC "SLIDE-LOCK" WITH "SLEEVE-GRIP" RELEASE. EFFORTLESS up or down movement of "SLEEVE" actuates MAGICAL "SLIDE-LOCK" which operates independently of the stem. Firmly . . . Automatically locks in position when hand is removed. "SLIDE-LOCK" has a tremendous load capacity . . . many times greater than the heaviest studio microphone. EASTERN "SLIDE-LOCK" stands are not to be confused with other mechanically operated stands utilizing a contacting disc within the stem. Special popular priced model for public address work with $\frac{7}{8}$ " by $\frac{3}{4}$ " upright. Heavier models for studio use have heavy gauge 1" by $\frac{3}{4}$ " tubes. Standard $\frac{5}{8}$ "-27 thread. For RCA $\frac{1}{2}$ " Pipe thread add letter P to catalog number. Bases in Grey Wrinkle. Uprights in Polished Chromium. At slight additional cost, station call letters and chain affiliation can be engraved four times vertically on circumference of "SLEEVE."



EF163



Illustrating
"Sleeve-Grip"

Model	Base	Diameter	Weight	Height	List
EF165	ROUND	10"	12 lbs.	44"-65"	\$22.50
EF163	TRIPOD	15"	17 lbs.	42"-66"	30.00
EF162	ROUND	12"	18 lbs.	44"-68"	27.50
EF161	ROUND	12"	25 lbs.	44"-68"	32.50

STANDARD STUDIO FLOOR STANDS WITH "BRAKE-LOCK"

In addition to "SLIDE-LOCK" stands, EASTERN also features a line of studio models utilizing regular friction "BRAKE-LOCK" method of height adjustment. Same heavy bases as above with heavy 1" by $\frac{3}{4}$ " upright.

Model	Base	Diameter	Weight	Height	List
EF167	TRIPOD	15"	16 lbs.	35"-63"	\$20.00
EF168	ROUND	12"	17 lbs.	37"-65"	17.50
EF169	ROUND	12"	24 lbs.	37"-65"	22.50

STANDARD TWO AND THREE SECTION FLOOR STANDS

TWO SECTION

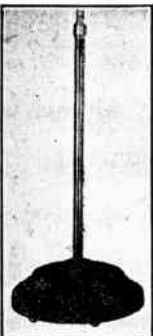
EF97 — A popular type full weight 2 section floor stand with "BRAKE-LOCK" grip upright. Adjustment is by knurled collar which can be adjusted for required tension. 10" modernistic grey wrinkle base has six bumpers. Upright in polished chromium. Height 35"-64". $\frac{5}{8}$ "-27 thread. Net weight 10 lbs. List Price \$14.50.

EF92 — A light weight compact stand, similar to above but with compact 9" by 3" base for portability. Height 34"-63". $\frac{5}{8}$ "-27 thread. Net weight 8 lbs. List Price \$12.50.

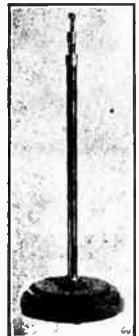
THREE SECTION

EF98 — A general purpose full weight three section stand with "BRAKE-LOCK" telescopic upright having non-removable sections. Requires only $20\frac{1}{2}$ " of space when demounted from base. Grey wrinkle base is 10" by $3\frac{3}{4}$ " high and has six floor bumpers. Instant height adjustment from 24" to 57". $\frac{5}{8}$ "-27 thread. Net weight 10 lbs. List Price 15.50.

EF94 — A three section stand similar to above but with compact 9" by 3" base for inclusion in carrying case. Upright requires only $20\frac{1}{2}$ " of space. Non-removable sections give instant height adjustment from $22\frac{1}{2}$ " to 56". Net weight 8 lbs. List Price \$13.50.



EF97



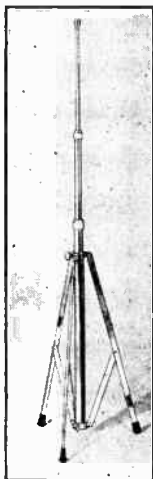
EF94

PORTABLE FOLDING STANDS

To take care of the varied demand for folding stands in the broadcast and public address fields, EASTERN has expanded its line to meet all possible minimum and maximum height re-

quirements in compact and standard height models. That "NEW LOOK" we've added to the tripods, makes them the most attractive line of folding stands in the microphone field.

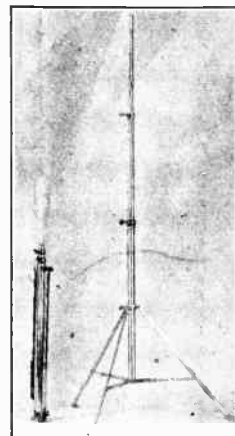
THREE, FOUR AND FIVE SECTION COMPACT MODELS



EF76

EF76 — A three section folding stand equipped with EASTERN'S popular "BRAKE-LOCK" telescopic upright as supplied with round base stands described on bottom of page D-38. Sections do not disengage but stand is ready for instant height adjustment from 26¼" to a maximum of 58¼". When not in use, folds to 21⅝" by 2½". Tripod legs are rubber insulated and base spread is 24". Has standard ⅝"-27 thread and ⅛" Pipe thread if fitting is removed. Chromium finish. Net weight 3½ lbs. List Price \$16.50.

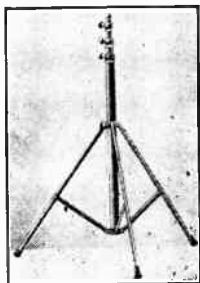
EF73 — A three section folding stand with somewhat larger tubing on the two upper sections than furnished with EF76 above, but has thumbscrew adjustment. Sections are non-removable and height adjustment is from 26" to 60". When not in use, folds to 21½" by 2½". ⅝"-27 thread. Chromium finish. Net weight 3½ lbs. List Price \$17.50.



EF73

EF74 — A four section folding stand, same as EF73 but addition of fourth section increases height range from 27" to 79", yet requires only 22½" by 2½" of space when not in use. Tripod legs are rubber tipped and base spread is 24". ⅝"-27 thread. Chromium finish. Net weight 4 lbs. Adjustment is by thumbscrews. List Price \$19.00.

EF77 — A five section folding stand same as EF74 but with fifth section added, increasing height range from 28" to 98". When not in use, takes only 23½" by 2½" of space. Tripod legs are rubber tipped and base spread is 24". Finished in Chromium and net weight is 4½ lbs. ⅝"-27 and ⅛" Pipe threads. List Price \$21.00.

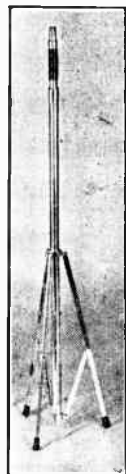


EF74

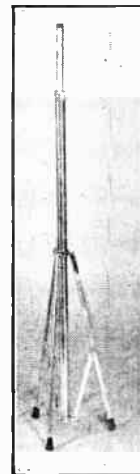
TWO SECTION STANDARD MODELS

EF79 — A two section folding stand, designed for broadcast field work. Utilizes the ⅞" by ¾" upright equipped with internal "SLIDE-LOCK" and "SLEEVE-GRIP" release. To increase height, simply lift tube by taking hold at any point. Automatically locked when hand is removed. To lower, push "SLEEVE" downward, thereby actuating lock. Adjustment is from 43½" to 65½". When not in use folds to 39" by 2½". Tripod legs are rubber insulated and base spread is 24". ⅝"-27 thread. Chromium finish. Net weight 5 lbs. For RCA ½" Pipe thread, specify EF79P. List Price \$25.00.

EF81 — A two section folding stand with standard ⅞" by ⅝" "BRAKE-LOCK" upright. Adjustment is by friction collar. Height range is 37½" to 66½". When not in use, folds to 33" by 2½". Base has rubber bumpers and spread is 24". ⅝"-27 thread. Chromium finish. Net weight 3¾ lbs. List Price \$16.50.



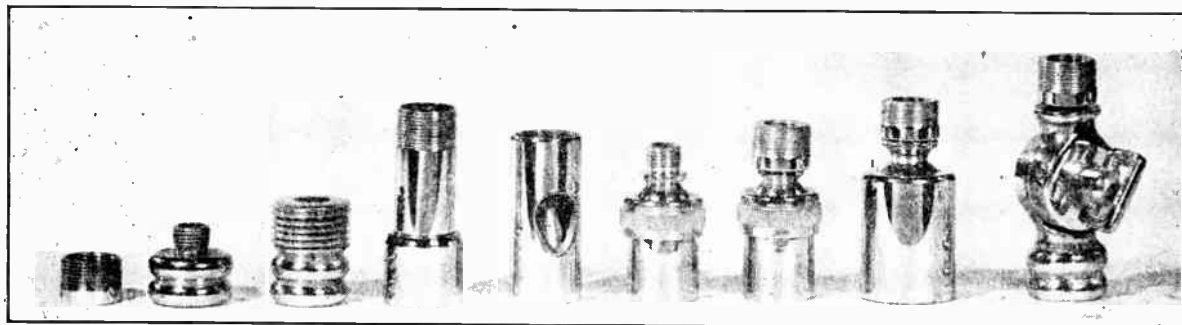
EF79



EF81

EASTERN

MICROPHONE STANDS



S F P A B D E G U

ADAPTORS

No.	Male	Female	Fig.	List
101	1/8" Pipe	5/8"-27	F	\$.75
107	1/2" Pipe	5/8"-27	P	1.00
108	1/2" Pipe	1/2"-27	P	1.00
109	5/8"-27	1/2"-27	S	.50
120	5/8"-27	1/2" Pipe	S	.50
112	5/8"-27	1/2" Pipe	A	1.00
118	5/8"-24	5/8"-27	B	1.50
132	5/8"-27	3/4"-27	A	1.00
145	1/2" Pipe	3/4"-27	P	1.00

Note: No. 118 for Western Electric 630A, 633A, 639A.

SWIVELS Standard Types

No.	Male	Female	Fig.	List
103	1/8" Pipe	5/8"-27	D	\$1.25
110	5/8"-27	5/8"-27	E	1.75
117	5/8"-27	5/8"-27	U	3.75

Heavy Duty Types

119	1/2" Pipe	5/8"-27	G	2.75
121	5/8"-27	5/8"-27	G	3.25

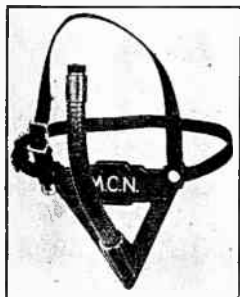
MICROPHONE SHOCK ABSORBERS



405 401

Cat. No.	Mike Thread	Stand. Thread	List
405	5/8"-27	5/8"-27	\$2.50
401	1/2" Pipe	1/2" Pipe	3.50
402	1/2" Pipe	5/8"-27	3.00

EASTERN "NECK SUSPENSION"

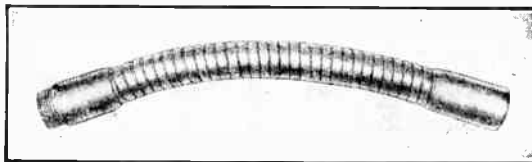


For switchboard and applications calling for a chest mounting, the EASTERN "THIRD HAND" leaves your two hands free for required manipulations. Made from cast metal and supplied with 7" flexible gooseneck. An integral part of the casting is a caller letter plate for engraving your own letters. Fitted with neck and body straps which prevent shifting of microphone when leaning forward. Finished in fine black wrinkle.

Cat. No. ES160

List Price \$5.00

FLEXIBLE GOOSE NECKS



FL83 — Has extra stiff coil spring, to maintain rigidity. Standard 5/8"-27 threads. Overall length 12". Chromium finish. List Price \$2.50.

EXTENSION ARM



BA82 — Horizontal extension arm with 18 1/2" tube ... 5/8"-27 threads. Swivels listed above can be added for tilting effects. List Price \$4.75.

CALL LETTER PLATES



Call letters plates made to order in plastics or metals with special shapes and designs.

Plastics can be furnished with black letters on white background, white letters on black background, white letters on red background, white letters on blue background as well as mahogany background.

Metal plates can be made from copper, brass or stainless steel.

Furnish blueprint or sketch with complete details for estimate. We do not have standard designs but make to order only.



Successor to the Headset . . .

Stethoscope design eliminates headchy ear pressure—swings lightly under the chin. Wear for hours without fatigue! Delivers sound directly *into* the ear—blocks out background noise, aids weak signals. Built-in volume control—adjust from where you sit or as you move about. Magnetic receiver—sensitivity 88 d.b. above .00024 dynes per sq. cm. for 10 microwatt input. Weight: 1.2 oz.—durable polished Tenite. 5-foot tinsel cord and standard plug.

TELEX MONOSET

NAME	DESCRIPTION	PART NUMBERS			LIST PRICE
		128 Ohms	500 Ohms	2000 Ohms	
Standard Monoset	Monoset with cord and plug (without volume control)	2570	2569	2568	\$12.50 ea.
Standard Cord Only	Cord and plug for Standard Monoset (without volume control)	2548	2548	2548	\$ 3.75 ea.
Volume Control Monoset	Monoset with volume control cord and plug	2843	2842	2841	\$16.50 ea.
Volume Control Cord Only	Cord with volume control and plug for volume control Monoset	2846	2845	2844	\$ 7.75 ea.



Thank You!

When writing for additional
information or when ordering
from sources of supply listed
in this book, please mention

RADIO'S MASTER



RECORDING CORPORATION

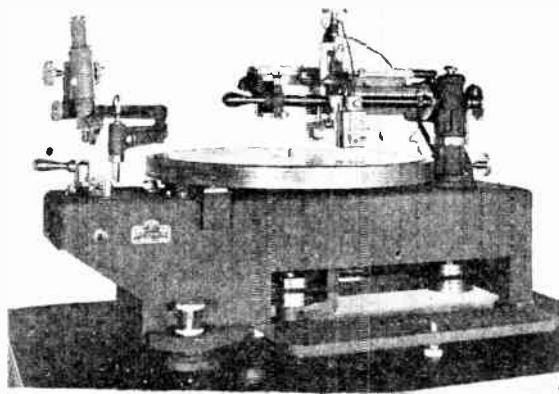
WORLD'S LARGEST MANUFACTURER OF INSTANTANEOUS SOUND RECORDING EQUIPMENT AND DISCS

PRESTO 8D and 8D-G RECORDERS

The Presto 8D and 8D-G recorders represent a marked improvement in the design of equipment for the most exacting requirements. Broadcast stations, recording studios, laboratories, and educational institutions offering courses in radio, will find this type of equipment adequate for the finest instantaneous and master recordings. The equipment has proven its ability to stand up under continuous operation for long periods of time. Its design provides the operator with unusual flexibility and easy manipulation of controls.

The 8D and 8D-G are identical except the former is a rim driven type and the latter is directly gear driven at both 33-1/3 and 78.26 rpm. The 8D may be purchased without a cabinet but a cabinet is always included with the 8D-G because the drive mechanism is mounted at the factory as an integral part of the whole assembly. The 8D recorder consists of a heavy cast iron base containing the motor and driving rollers, the turntable bearing and the multiple grooved pulleys controlling the cutting pitch. The overhead is a cantilever firmly supported at its right end and arranged to swing to the rear when changing records. No contact with the turntable is required. The feed screw driven by a shaft passing up through the support casting at the right hand end of the overhead assembly has a built-in reversing gear for changing direction of feed.

The 8D-G is equipped with a direct gear drive in place of the rim drive of the 8D. Separate motors are employed for 33-1/3 and for 78.26 rpm and selection of speed is made by actuating a special double-throw mercury switch. The design of the drive has completely eliminated the need for a mechanical speed change. Both motors are always engaged mechanically but only one motor at a time is in operation — the other motor remains at rest and is not carried along by the rotating mechanism. Adequate isolation of the drive mechanism from the turntable is accomplished by a mechanical filter. The design and construction of the transmission unit produces a mechanism of extreme accuracy which is, nevertheless, very rugged and composed of unusually few parts.



8 D Recorder (less Cabinet) List Price, \$1992.00
8 D-G Recorder List Price, \$2644.00

SPECIFICATIONS

Speed Accuracy: For 8D-G, no deviation from 33-1/3 and 78.26 rpm. For 8D, within 0.5% at both 33-1/3 and 78.26 rpm.

Pitch: Adjustable to cut 88, 96, 104, 112, 120, 128 or 136 lines per inch, inside-out or outside-in with the same feed-screw.

Noise Level: Mechanical noise originating in the 8D-G equipment over 50 db below program level; in the 8D equipment over 40 db below program level.

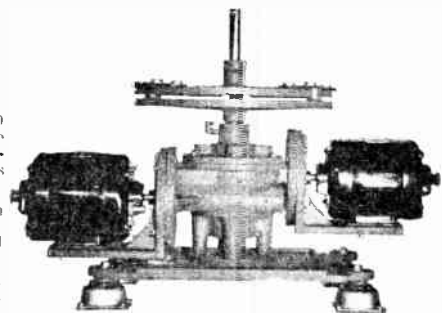
Impedance: 1-D cutting head 500 ohms; 15 ohms available.

Frequency Response: 50 - 10,000 cps. Refer to 1D circular.

Power Requirements: Approximately 180 watts from a 115 volt, 60 cycle, single phase line. Motors are of the 1800 rpm synchronous type and are available for other voltages and frequencies at additional cost.

Microscope: Magnification 40 power, area 5 in focus—7 grooves, equipped with rigid cast aluminum mounting bracket and a special lamp for illumination of the grooves.

Operating Clearances: 8D-G overall clearance 45 x 25 x 35 inches (89 x 58 x 135 cm); 8D without cabinet 31 x 18 x 19 3/4 inches (79 x 46 x 49 cm).



Twin Motor Drive

PRESTO 64-A TRANSCRIPTION TURNTABLE

The Presto 64-A transcription turntable offers the following features which are of major importance to the owner and operator: Unusual mechanical simplicity . . . low mechanical disturbance . . . maximum speed accuracy . . . extreme ruggedness for long continuous operation . . . instantaneous selection of desired speed . . . and no requirements for mechanical adjustments.

This transcription turntable is directly gear driven and employs two separate motors, one for 33-1/3, and the other for 78.26 rpm. There is no friction device of any kind in the mechanism and no mechanical shift is required to change speeds. To select 33-1/3 rpm, 78 rpm or "off," the operator merely throws a three position switch. These changes may be made as rapidly as desired while the turntable is in motion with no damage to the mechanism. Only one motor at a time is in operation. The transmission "over runs" the motor which is not turning and thus does not carry it along in rotation although the stationary motor is never disengaged from the mechanism.

SPECIFICATIONS

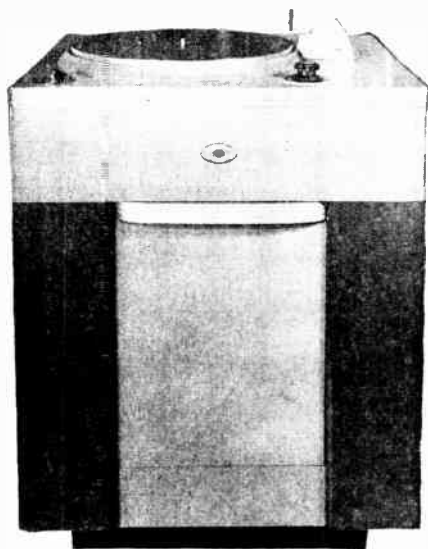
Standard Equipment: The 64-A transcription turntable includes the electro-mechanical gear drive, turntable and cabinet. A reproducer and network is not included.

Speed Accuracy: No deviation from 33-1/3 and 78.26 rpm.

Noise Level: Mechanical noise originating in the equipment over 50 db below program level.

Power Requirements: Approximately 75 watts from a 115 volt, 60 cycle line. Motors are of the 1800 rpm synchronous type and are available for other voltages and frequencies at additional cost.

Mounting: Turntable and gear drive mounted in heavy wood cabinet with in-laid Inoleum top is 24 x 24 x 33 inches (61 x 61 x 84 cm.) List Price, \$495.00



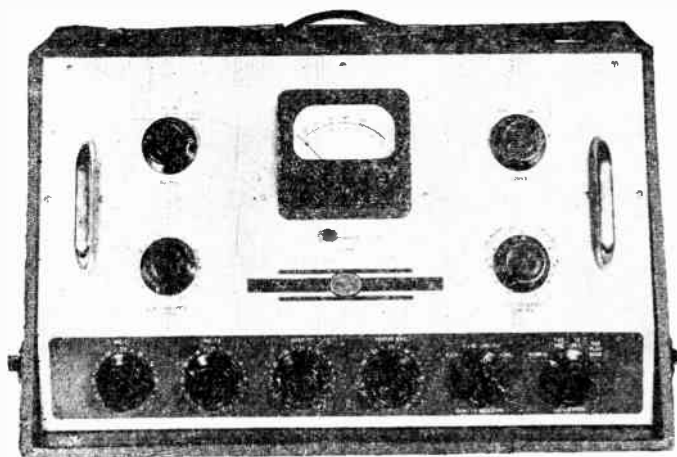
A reproducer of any make may be installed on the 64-A Transcription Turntable



RECORDING CORPORATION

WORLD'S LARGEST MANUFACTURER OF INSTANTANEOUS SOUND RECORDING EQUIPMENT AND DISCS

PRESTO TYPE 90-A RECORDING AMPLIFIER



The Presto 90-A recording amplifier is a portable console containing all the facilities necessary for operation on remote assignments, but with an overall performance found only in high fidelity studio equipment.

The 90-A consists of three preamplifiers, mixer, master gain control and recording amplifier.

A selector switch provides: A flat response, 30 to 15,000 cps \pm 1 db—NAB 33-1/3 RPM recording — playback characteristic complementing NAB recording — and, the present day 78 RPM recording characteristic. The flat response can be modified by variable bass and treble controls giving emphasis up to 20 db at 100 and 7,500 cycles per second or 20 db de-emphasis at 7,200 cycles per second.

Noise is 60 db below recording level. Distortion at maximum output is less than 1.5%.

The use of input and output selectors makes the 90-A amplifier unusually flexible. It permits combining the signals of three microphones or of two microphones and either one of two pickups. By using the "Line" position, recordings can be made from an incoming program line. The output selector has playback (public address), continuous recording and simultaneous recording positions. While recording, the line jack provides a monitoring outlet or permits feeding a program line at the correct level.

The recording level is monitored by means of a Weston Type 30 VU indicator with illuminated scale and its closely controlled electrical and dynamic characteristics make it an ideal volume indicator for recording.

90-A Recording Amplifier List Price, \$595.00

PRESTO 8-N RECORDER



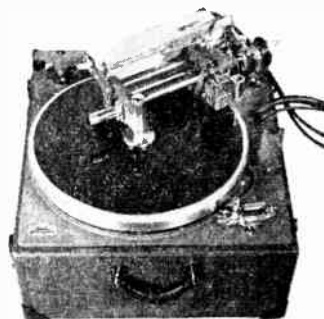
A precision instrument embodying the finest materials and workmanship throughout, designed in collaboration with engineers of the largest recording studios to include all of the operating conveniences necessary to produce consistent, high quality work.

The 8-N turntable records the widest frequency range with the lowest background noise obtainable on lateral recording. It is particularly recommended to studios making master recordings for the production of commercial pressings.

Standard Equipment: The 8-N recorder consists of a turntable, motor drive system and overhead cutting mechanism mounted on a cast iron base equipped with shockproof mountings. The cutting mechanism includes the high fidelity cutting head, spiraling feed screw, time scale, vertical damper and automatic equalizer. Also included are the microscope and pickup. Accessories necessary to operate the 8-N table include recording amplifier, microphone, discs and needles.

List Price, \$1683.00

PRESTO 6-N RECORDER



The Presto 6-N recorder is outstanding in its suitability for broadcast stations because it offers all the qualifications for good recordings, including master records, at the most economical price. It is ideal for the station requiring delayed broadcast of network programs, and for reference recordings.

The 6-N is the best type of unit for remote recordings because of the manner in which it packs so as to withstand transportation and yet is ready for operation within a few minutes. The overhead mechanism lifts off the table and is stored in a specially fitted compartment.

Standard Equipment includes the Presto cutting head, spiraling feed screw, vertical damper, time scale and pickup.

Accessory Equipment, which may be added to the 6-N Recorder if desired, includes the 160-A automatic equalizer and the 125-A microscope. A wood cabinet may be substituted in place of a carrying case at additional cost.

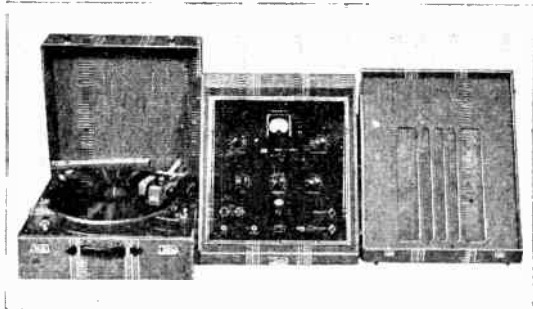
List Price, \$735.00

PRESTO

RECORDING CORPORATION

WORLD'S LARGEST MANUFACTURER OF INSTANTANEOUS SOUND RECORDING EQUIPMENT AND DISCS

PRESTO MODEL "Y" RECORDER



The PRESTO model Y recorder fills the need for a 16" transcription recording and playback equipment which is extremely portable and yet capable of producing high grade recordings. It makes continuous 15 minute, 33 1/3 RPM electrical transcriptions of sufficiently good quality to be used by broadcasting stations. It also makes 78 RPM recordings on 6", 8", 10" or 12" discs and may be used to cut 11 1/2", 13 1/2" and 17 1/4" master recordings from which commercial pressings are produced. In addition to recording, the model Y gives excellent reproduction of both electrical transcriptions and phonograph records and is widely used for auditioning recorded radio programs to prospective sponsors. As a public address system it will provide sound for audiences up to 1000 persons.

Among the important features of the model Y recorder are:

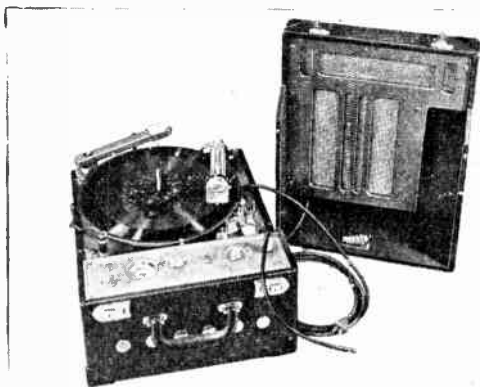
1. The exclusive Presto rubber-rimmed-turntable driven directly by a steel pulley on the motor shaft, a simple, foolproof drive system that eliminates vibration and holds the turntable speed absolutely constant. Maintenance is negligible. There are only two moving parts which need replacement about once a year.
2. A lever changes the turntable speed instantly without stopping the table or removing the record.
3. A lever adjusts the cutting mechanism to cut either from the outside of the disc toward the center or from the center out.
4. A cam lever lowers the cutting head gently on the record preventing accidental damage to sapphire needles.
5. A vibration damper attached to the cutting head suppresses vertical modulation in the record groove and eliminates variation in groove depth due to surface irregularities in

the disc. The damper also eliminates flutter when the records are played with pickups having a resonant peak in the low frequency range.

6. The cutting arm may be unlocked from the feed mechanism to cut spiral starting and runout grooves.
7. A time scale on the cutting arm shows the starting point for each size record and elapsed recording time at both 78 and 33 1/3 RPM.
8. The cutting head feed mechanism is located beneath the turntable where it is protected from dust or accidental damage. The parts of this mechanism are hand finished and fitted and its performance is equal in every way to the overhead lathe type mechanism commonly used.
9. The recording amplifier includes a two microphone mixer, high and low frequency equalizers and a change-over switch for continuous recording or re-recording. The amplifier and loudspeaker fit together to carry in a single case.

Y-2 Recorder List Price, \$741.00
Y-4 Recorder (low impedance inputs) 771.00

PRESTO MODEL "K" RECORDER



The Presto model K is a portable sound recorder, record player and public address system complete in a single carrying case. Exceptionally light and compact, it is ideally suited to the needs of sales training and industrial schools, teachers of speech, music and dramatics, as well as professional actors and musicians who require an instrument that can be carried easily and set up for operation in a few minutes time.

The model K records 15 minutes continuously at 33 1/3 RPM on one side of a 13 1/4" disc. It may be connected to any home radio set to record complete radio programs. It also makes 6, 8, 10 and 12 inch records, and plays all makes of phonograph records. As a voice amplifying system it will serve audiences of about 500 persons.

Although it is the lowest priced complete Presto recorder, it contains many valuable features of the more expensive instruments such as:

1. A magnetic cutting head and pickup, the design used in the highest grade equipment.
2. A full sized, 6 tube amplifier having push-pull triodes in the power stage.
3. A high frequency equalizer for 33 1/3 RPM recording and a tone control for suppressing needle scratch when commercial records are played.
4. A safety cam lever for lowering the cutting head to prevent accidental damage to sapphire needles.
5. A detachable, dynamic loudspeaker which may be operated at any desired distance from the recorder.
6. A cutter feed mechanism located beneath the turntable where it is protected from dust or accidental damage.
7. Provision for quick change from cutting outside-in to inside-out.
8. The exclusive Presto rubber-tired turntable driven directly by a pulley on the motor shaft, a drive system that eliminates rubber pulleys and belts which are subject to rapid wear. Turntable speed may be changed in 5 seconds from 78 to 33 1/3 RPM by removing a brass pulley on the motor shaft.

These features, not found in any other low-priced recorder enable the user to make high quality recordings, consistently. They simplify the operation of the instrument for non-technical owners and reduce operating costs by preventing spoilage of discs and needles. As a result of its excellent performance, more Presto model K recorders are now used by schools, industrial concerns and in the home than any other recorder in a similar price range.

K-8—Complete Recorder less microphone and stand . . . List, \$348.00

PRESTO MODEL "L" TRANSCRIPTION PLAYBACK



This equipment is designed for radio stations, advertising agencies and program producers, who demonstrate recorded programs at the offices of prospective clients.

Salesmen who use the Model L Playback will particularly appreciate its attractive, workman-like appearance, its small size and light weight which make it extremely easy to carry, its simplicity which makes it possible to set up for operation within a few seconds and the remarkably

clear, wide range reproduction . . . far superior to that ordinarily expected from portable equipment.

The Model L Playback was developed to meet an insistent demand among the larger broadcasting stations and agencies for "something better" in portable reproducing equipment. Those who use the Model L Playback in connection with important sales of station time and programs will consider its exceptional performance well worth its cost.

L-2—Portable Transcription Playback . . . List, \$290.00



RECORDING CORPORATION

WORLD'S LARGEST MANUFACTURER OF INSTANTANEOUS SOUND RECORDING EQUIPMENT AND DISCS

PRESTO DISCS AND NEEDLES FOR COMMERCIAL, EDUCATIONAL AND HOME RECORDING



PRESTO GREEN LABEL DISCS—ALUMINUM BASE

(All sizes packed in boxes of 30 discs)

Type	Size	Thickness	List Price ea.	Code
611-A	11 7/8"	.052"	\$1.80	ELVET
613-A	13 1/4"	.052"	2.25	THYRT
616-A	16"	.056"	3.25	SUIEV

PRESTO OVERSIZE MASTER DISCS—ALUMINUM BASE

(All sizes packed in boxes of 20 discs)

Type	Size	Thickness	Size of Pressing	List Price ea.	Code
623-A	13 1/8"	.066	11 7/8"	\$3.05	TREOS
627-A	17 1/4"	.066	16"	4.90	SEVYT

PRESTO ORANGE LABEL DISCS

(Medium Aluminum Base—Overall Thickness .036")

Type	Size	List Price, ea.	Code (Box of 10)
306-A	6 1/2"	\$0.35	ORSN
308-A	8"	.50	ORBL
310-A	10"	.75	ORCAR
312-A	12"	1.00	ORDEL

PRESTO BROWN LABEL DISCS

(Green label having only one side perfect)

*Packed 30 to box *Packed 20 to box.

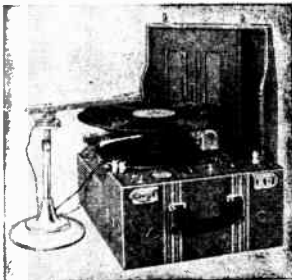
Size	List Price, ea.
11 7/8" (12")	\$1.30
13 1/4"	1.50
16"	2.25
13 1/8" (Masters)	2.05
17 1/4" (Masters)	3.25

PRESTO MONOGRAM DISCS

Economical composition base, but same coating as Green Seal discs. Overall thickness .050".

Type	Size	List Price, ea.	Code (Box of 50)
706-A	6"	\$0.20	MABEL
708-A	8"	.35	MANOR
710-A	10"	.50	MASEY
712-A	12"	.70	MATAN
716-A	16"	1.50	MATUD

Type 300-A Re-Recording Equipment



The type 300-A re recording equipment consists of an auxiliary turntable, which mounts on top of the recording turntable and an external pickup mounted on a pedestal. For re-recording or dubbing the 300-A equipment has several important advantages over a separately driven turntable. 1) The rotation of the recording and playing turntable is locked together so that the playing time and pitch of the duplicate record are identical with the original. 2) No waxes or wavers can be introduced during the re-recording since any variation in speed will occur simultaneously on both tables. 3) It is less expensive than a second complete turntable.

The 300-A equipment may also be used with the Presto model K-8 recorder to play 16", 33-1/3 RPM electrical transcriptions.

Standard Equipment: The complete 300-A equipment consists of a 140-A turntable, 141-A magnetic pickup and 142-A pickup pedestal. **Frequency Response:** Pickup 70 to 7,500 cycles. **Impedance:** Pickup 2,000 ohms. **Finish:** Gray enamel. **Shipping Weight:** 25 lbs. (11 kg.).

300-A Re-Recording Equipment List Price, \$82.60

PROFESSIONAL CUTTING AND PLAYING NEEDLES

Cat. No.	List Price	Code
603-A Short Dural shank sapphire cutting needle	\$ 8.00	PAIBST
604-A Long Dural shank sapphire cutting needle	8.00	PAECL
806-A Resharpener sapphire cutting needle	3.00	PADIM
631-A Disclube, pint (Record Preserver)	2.50	PAMUS

COMMERCIAL, CUTTING AND PLAYING NEEDLES

Cat. No.	List Price	Code
320-A Short Sapphire cutting needle	\$ 6.00	DABAG
321-A Long Sapphire cutting needle	6.00	DABIT
806-B Resharpener Sapphire Point	2.50	DACEL
330-A Short Stellite cutting needle	2.00	DADUS
331-A Long Stellite cutting needle	2.00	DADAR
807-A Resharpener Stellite Point	.75	DAFFE
420-A Sapphire playing needle	1.25	DAUVE
440-A Red Shank Steel playing needle (pkg. of 25)	.25	DAVID
440-B Red Shank Steel playing needle (carton, 40 pkg. of 25)	10.00	DAWES

NEW PACKING

Six Needles Per Carton

Each Presto cutting needle is packed in an individual Lucite container having a chunk that holds it tightly in place to prevent damage. An addressed mailing bag is furnished for sending the needle to Presto for resharpener. Standard shipping cartons contain six cutting needles.

Type 75-A Recording Turntable



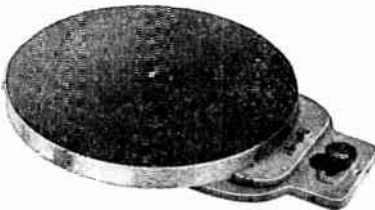
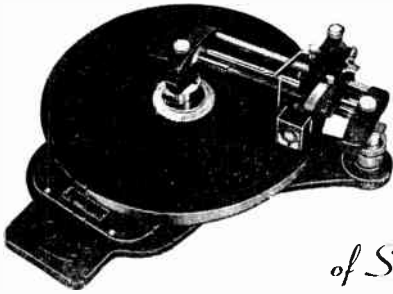
The lightest 16" dual speed recording turntable made. Recommended for all services requiring a high grade portable recorder. Widely used by broadcasting stations that record local news events for delayed broadcasts; a rugged, compact recording installation for mobile pick-up units.

Standard Equipment: The equipment consists of a 16" cast aluminum turntable, carefully machined to dynamic balance, weighing 10 lbs. It revolves on a single ball bearing at the base of a bronze shaft well. A heavy live rubber tire on the rim of the turntable engages with a steel, step-pulley on the motor shaft to drive the table. The motor is suspended by rubber grommets in a carriage which is moved up or down by a lever to change the turntable speed. The motor drive and turntable are mounted in a cast aluminum base designed to combine extreme rigidity with light weight. The cutting mechanism consists of a fan gear, worm and pinion driven by a worm on the turntable shaft. The 1-C high fidelity cutting head, 171-A vertical damper, 21-A time scale and 150-C lateral pickup are included as standard equipment. The 75-A table is mounted in the 2A carrying case. The 75-B turntable is mounted in the 3-A cabinet.

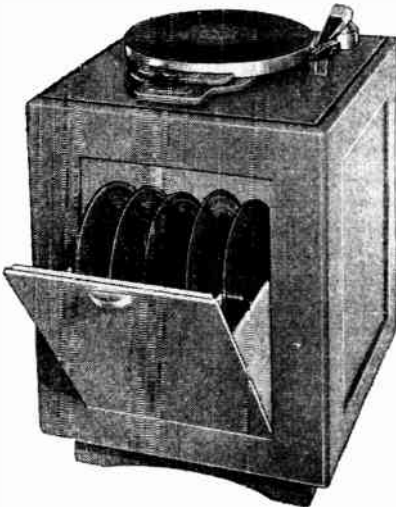
75-A Recording Turntable List Price, \$451.00

REK-O-KUT

V
RECORDING
TURNTABLE

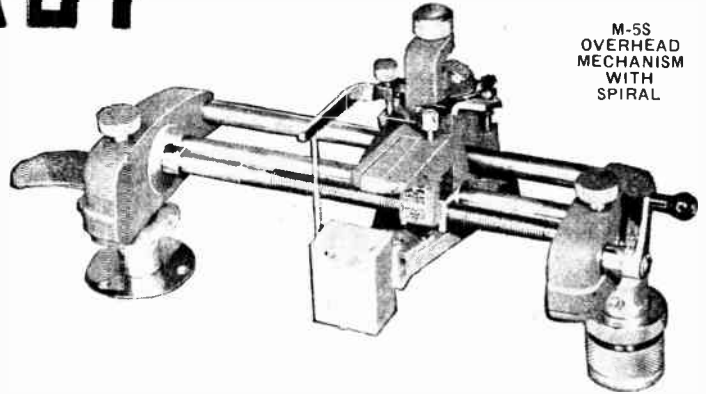


G-2 TRANSCRIPTION TURNTABLE



C-7
CONSOLE
CABINET

M-5S
OVERHEAD
MECHANISM
WITH
SPIRAL



*The Radio Stations' Leading Source
of Supply for Quality Recording and Transcription Equipment*

MODEL M-5S Description
MASTER PRO 16" OVERHEAD CUTTING MECHANISM with Spiraling Device

The "Master-Pro" is a universal machine that can be readily attached to any make recording turntable that has a standard centerpin.

Model M-5S \$215.00 Net **Model M-5 (less Spiral) \$175.00 Net**

Equipped with 8 ohm magnetic cutter & 120 O.I. leadscrews. Optional, 500 ohm cutter, 90-105-120-135 lines, O.I. or I.O. at no extra cost.

MODEL V Description
RECORDING TURNTABLE

Designed to be used with the REK-O-KUT M-5S or M-5 Overhead Recording Mechanism.

MOTOR: Hysteresis Synchronous capacitor start and run. Built to Rek-O-Kut rigid specifications.

IDLERS: Special neoprene compound. Resists oil and wear.

TURNTABLE: Aluminum alloy casting.

CHASSIS: Cast iron, ribbed, L Beam construction.

Model V De Luxe \$195.45 Net **Model V Standard \$165.45 Net**
equipped with Mastermatic Speed Shift

MODEL G-2 Description
TRANSCRIPTION TURNTABLE

CONSTRUCTION: Similar to Model V . . . Above.

STARTING: Accelerates from standing start to 78 RPM in $\frac{3}{4}$ turn. Accelerates from standing start to 33 $\frac{1}{3}$ RPM in $\frac{1}{4}$ turn.

CUEING: 15 $\frac{1}{2}$ " Turntable allows transcription record to overlap $\frac{1}{4}$ of inch permitting cueing from rim of disc.

SPEED: Meets all Broadcast Network tolerances in time limits.

Model G-2 De Luxe \$155.00 Net **Model G Standard \$125.00 Net**
Equipped with synchronous motor and mastermatic speed shift With constant speed induction motor

MODEL C-7 Description
CONSOLE CABINET

CONSTRUCTION: Beautifully finished in metallic gray. Record holder stores 100 transcriptions. 4 adjustable screw jacks for quick easy leveling. Built-in electrical outlets. Cutout for instantaneous mounting of Model "V" and "G" Turntables.

DIMENSIONS: 32" high x 24" wide x 26" deep.

VENTILATION: Ventilated compartment for self-contained amplifier.

Price \$129.00 Net

Write for technical literature on these and other REK-O-KUT Products.

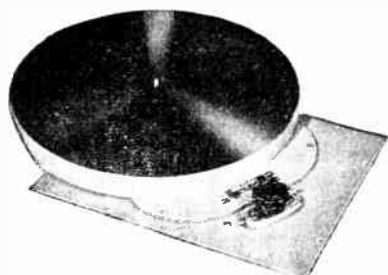
REK-O-KUT COMPANY

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N
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REK-O-KUT



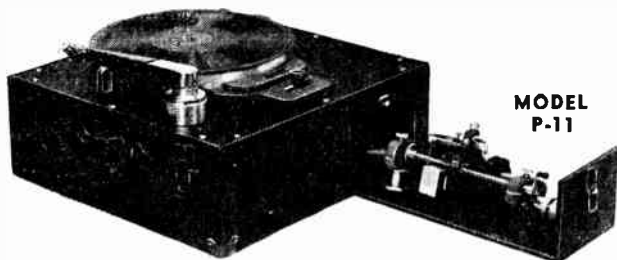
TR-12 RECORDING TURNTABLE
(Shown with M-12 mounted)



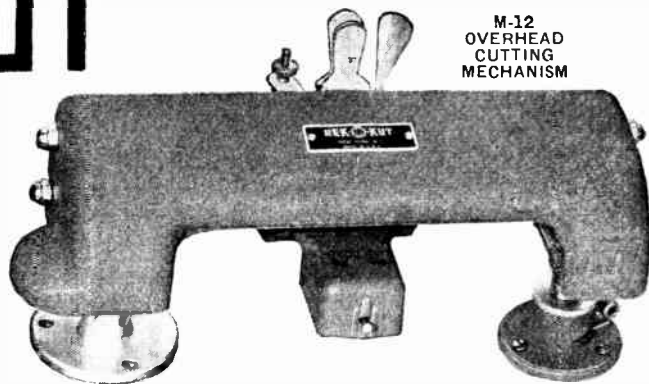
T-12 TRANSCRIPTION
TURNTABLE



VM-2 RECORDING
LEVEL METER



P-11 PORTABLE CASE



M-12
OVERHEAD
CUTTING
MECHANISM

"MASTER-PRO" 12" OVERHEAD CUTTING MECHANISM

Professional quality for the non-professional—cuts up to 13 $\frac{3}{4}$ inch discs.

MODEL
M-12

Description

CONSTRUCTION: Rugged, durable, with beautiful blue gray, streamlined housing enclosing all moving parts.

LEADSCREW: Stainless Steel.

CONSTANT MESH FEEDNUT: Prevents double cutting.

MAGNETIC CUTTER: New type, flat from 40 to 7,000 ops.

AUTOMATIC SAFETY: Raises cutter when feednut reaches end of lead-screw. Saves disc and stylus.

UNIVERSAL BALL ADJUSTMENT: For easy aligning to any 12" turntable.

Price
\$89.50
Net

MODEL
TR-12

Description

DUAL SPEED 12" RECORDING TABLE

Professional type.

TURNTABLE: Cast aluminum, precision lathe turned.

CHASSIS: Cast aluminum. Drilled and tapped for instantaneous mounting of the M-12 Recording Mechanism.

SPEED CONTROL: Internal rim drive thru large neoprene, compound drivers.

Price
\$89.50
Net

MODEL
T-12

Description

DUAL SPEED 12" TRANSCRIPTION TURNTABLE

Plays up to 16" records. Small dimensions make it easy to install in limited space. Construction similar to TR-12.

Price
\$79.50
Net

MODEL
VM-2

Description

"MASTER-PRO" RECORDING LEVEL METER

Mounted in an unbreakable, cast aluminum case, the VM-2 Recording Level Meter takes recording out of the hands of the expert. The possibility of overcutting is reduced to a minimum.

Operates from the output of an 8, 15, 200 or a 500 ohm terminal.

Price
\$29.50
Net

MODEL
P-11

Description

PORTABLE CASE FOR 16" REK-O-KUT RECORDING EQUIPMENT

MOTOR PANEL: Cut out for quick installation of Model "VM".

REMOVABLE DRAW: For carrying cutting mechanism, in transportation.

ELECTRICAL FACILITIES: Built-in electrical outlet.

Price
\$59.00
Net

REK-O-KUT COMPANY

Write for technical literature on these and other REK-O-KUT Products.

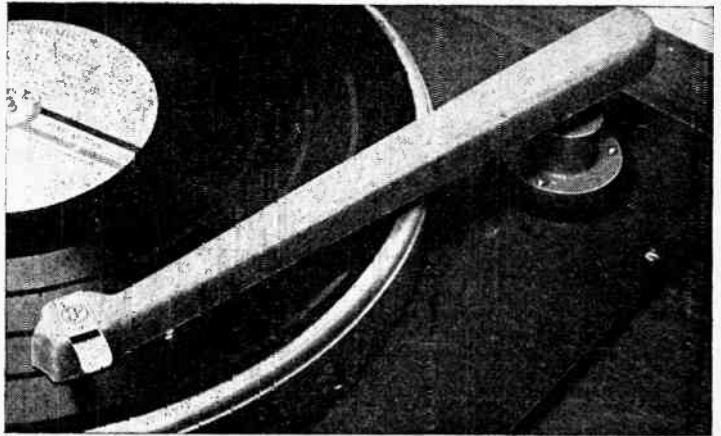


THE PICKERING PICKUP

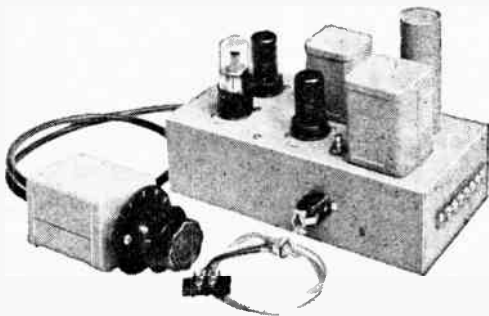


THE QUALITY UNIT THAT EXCELS THEM ALL!

Model 161 with Diamond Stylus. A professional magnetic type reproducer for lateral-cut phonograph records and transcriptions. It has virtually no intermodulation nor harmonic distortion at any amplitude capable of being recorded. There is no frequency discrimination over the range from 30 to 15,000 cycles per second and is completely free from any vertical response. Tracking pressure is 18 grams. Diamond stylus has .0025 inch radius for use with all 88 to 136 lines-per-inch recordings. Withstands practically any shock through unique guard into which stylus recedes. Arm is supported on frictionless hardened steel alloy cone pivots for perfect tracking, even on badly warped discs. Diamond stylus life is approximately 5,000 hours, at least ten times the life of sapphire. Overall length of arm, 14 $\frac{3}{4}$ " height, 2 $\frac{3}{4}$ ". Supplied with arm rest. Shipping weight, 2 lbs.



MODEL 161 L—500/600 ohms output, —40 db. List price \$165.00
MODEL 161 M—10,000 ohms output, .05 volt. List price \$165.00



Model 165L Equalizer-Amplifier Designed for use with Model 161M Pickup. Five-position equalizer switch compensates for American, European, N.A.B., Orthacoustic, etc., record characteristics. Supplied with output impedances of 30, 250 and 500/600 ohms at "0" db. Uses 6SJ7, 6SN7 and 6J5 tubes. Size 5 x 6 x 10 inches. Requires 250 volts D.C. at 15 ma. and 6.3 volts A.C. or D.C. at 1.2 Amperes. Supplied with tubes and input cable. Shipping weight, 9 lbs.
List price \$200.00

Model 163A Equalizer A loss-type equalizing network for use with the Model 161M Pickup. It is designed to compensate for most of the commonly encountered record characteristics. Position 1 — flat high frequency response to over 15,000 cps. Low frequency rise to give full compensation from 500 to 40 cycles. Position 2 — flat high frequency response. Low frequency response approximately 5 db. below position 1. Position 3 — for NAB or Orthacoustic transcriptions. Position 4 — Low frequencies same as position 2. High frequencies sharply attenuated to reduce surface noise. Attenuation starts at 4000 cycles. Position 5 — low frequencies same as position 1. High frequencies same as position 4. 250/600 ohms output, —60 db. Size 3 $\frac{1}{2}$ x 3 $\frac{3}{4}$ x 5 inches. Shipping weight 2 lbs.
List price \$70.00



EACH PICKERING PICKUP AND CARTRIDGE IS UNCONDITIONALLY GUARANTEED

Pickering reproducing equipment, with the exception of the stylus point, is fully covered by an unconditional guarantee provided that the units have not been tampered with, nor subjected to extraordinary abuse. Replacement styli can be installed in cartridge reproducers for the following net charges: .0027" sapphire — \$2.50; sapphire stylus of special radius \$5.00; diamond stylus \$15.00. Replacement diamond styli for the Model 161 transcription pickup can be installed for \$22.50 net. Unless otherwise specified diamond styli will be supplied with a radius of .0025". Other diamond stylus radii can be supplied at no additional charge. All returns should be sent direct to factory at Oceanside, L.I., N. Y.

Equipment returned to the laboratory for service will be reshipped within 24 hours after receipt. All frequency ranges indicated above denote region of response flat within 2 db. Voltage and db levels (6 mw/500 ohms) based on 10 cm./sec. stylus velocity.

Pickering Reproducing Equipment is Sold by All Principal Distributors

Pickering & Company Inc.

Audio Laboratories, Oceanside, Long Island, New York



THE PICKERING CARTRIDGE



Every Pickering Cartridge which leaves our laboratory has been carefully tested for the following characteristics, the allowable limits for which are shown:

FREQUENCY RESPONSE — plus or minus 2 db, 40 - 10,000 cps.

WAVEFORM DISTORTION — 1 per cent maximum.

OUTPUT LEVEL — 70 millivolts, plus or minus 2 db.

TRACKING PRESSURE — 15 grams max. at 40 and 10,000 cps.

In addition, optical inspection of the stylus polish and shape, mechanical inspection of the moving parts, and electrical inspection of the pickup coil has been made on each unit. Regular sampling tests reveal absolute stability, amazing ruggedness and complete insensitivity to the effects of temperature and humidity.

NO OTHER PICKUP CAN QUITE MATCH THIS PERFORMANCE

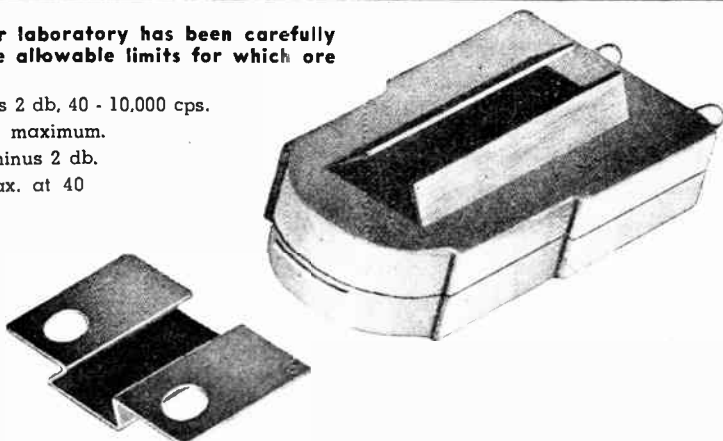
The Model 120M Cartridge will fit practically any arm which will accommodate a crystal cartridge. The ingenious "Keystone Clip" mounting permits adaptation to a wide variety of arm shapes and sizes, and permits adjustment of the stylus position for minimum tracking error.

Model S-120M with .0027" Sapphire stylus.
List price \$16.50

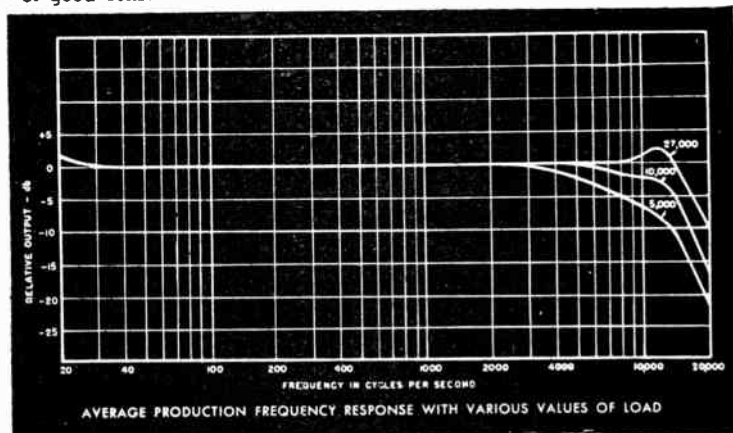
Model D-120M with .0025" Diamond stylus.
List price \$41.50

Model D-140S with .001" Diamond stylus for new MICROGROOVE type recordings.
List price \$60.00

Model 120M Cartridges are supplied in a standard impedance of 27,000 ohms. Units of special impedances can be supplied on order for a 10% additional charge.



The frequency response at a constant velocity of the stylus tip is shown in the curves below. The cartridge is assumed to be mounted in an arm of good construction. Production units fall within 2 db of these curves.



Model 125-H Preamplifier Expressly designed for use with the Model 120M Pickering Cartridge Reproducer. It compensates for the average recording characteristic, and raises the output voltage to a level at least as high as that obtainable from crystal pickups. It operates from the power supply of the amplifier or radio set with which it is used, saving the cost of a separate power supply. Normal high-frequency characteristic to play new records flat to 15,000 cps; filter cuts off above 4,000 cps at 20 db per octave. Furnished complete with 6SL7GT tube, power input cable and simple installation instructions.

List price \$32.50

Pickering & Company Inc.

Audio Laboratories, Oceanside, Long Island, New York

PARA-FLUX

(Trade-Mark)

REPRODUCERS

Specifically Designed For . . .

- ★ AM-FM BROADCAST STATIONS
- ★ RECORDING STUDIOS
- ★ WIRED MUSIC COMPANIES
- ★ THEATRES AND FACTORIES THAT UTILIZE RECORDINGS
- ★ HIGH FIDELITY HOME SETS

The PARA-FLUX reproducer with interchangeable heads, illustrated below, for vertical, lateral or universal, uses only one arm and equalizer. All possess the same impedance matching to the equalizer. High output level affords an important advantage in broadcasting as to value of signal level to background noise. Response, all models, linear from 40 to beyond 11,000 c.p.s.



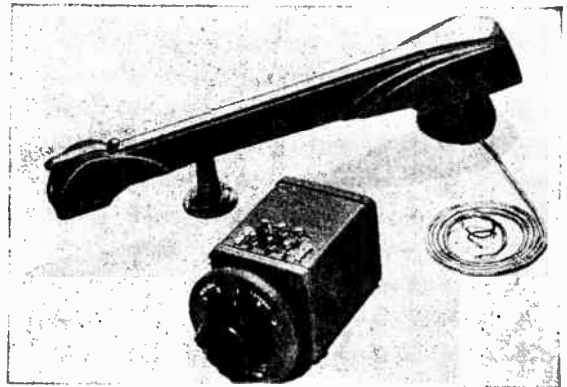
Universal Reproducer



Vertical Only Reproducer



Lateral Only Reproducer



Over 2,500 PARA-FLUX REPRODUCERS are now in service by FM and AM Stations.

PARA-FLUX reproducers set a new high standard for performance, flexibility and dependability. They are well suited for use wherever the most realistic reproduction of transcriptions is necessary. Among the outstanding design and construction features are found:

HIGH OUTPUT:	1 MW Ref. Level	6 MW Ref. Level
Vertical Head	—43 db	—50 db
Lateral Head	—53 db	—60 db
Universal Head	—53 db	—60 db

PLUG-IN HEAD: Vertical, lateral and universal heads use same arm and equalizer. Head can be removed and replaced in a few moments by means of plug connection.

LONG RECORD LIFE: Extremely low mass of moving element (only 18 milligrams) insures longer record life. Stylus pressure, all models, is under 20 grams (carefully factory adjusted).

DIAMOND STYLUS: Selected hard African diamond points, highly polished and finished to tolerances of 1/10,000 inch.

VARIABLE OUTPUT IMPEDANCE: 30, 250 and 500/600 ohms.

DESIGNED FOR CUING: "Hair-Line" indicator on head and precise stylus construction make accurate cuing possible and permit "back-tracking" without damage to record or head.

RUGGED CONSTRUCTION: So designed that no damage will result if reproducer is accidentally pushed across recording. A graceful finger lift prevents reproducer from slipping when lifted off the transcription.

The PARA-FLUX reproducer is delivered completely assembled, ready for use. It comprises the head (your choice of lateral, vertical or universal), arm and equalizer and switch.

UNIVERSAL HEAD MODEL UL-1DA: For superior performance where both lateral and vertical reproduction is required from the same unit. Selected hard African diamond stylus has 2 mil. radius. Design is such as to permit useful output should lateral transcription

be started while equalizer is accidentally left in vertical switch position, and vice-versa. For best results on shellac records, use LL-1D Head.

VERTICAL HEAD MODEL VL-1DA: Provides maximum in quality of reproduction from vertical ("hill and dale") recordings, while discriminating against lateral response. The selected hard African diamond stylus has a 2 mil. radius.

LATERAL HEAD MODEL LL-1DA: Designed to provide the most advanced quality in lateral reproduction, while discriminating against vertical response. Selected hard African diamond. Stylus has a 2.5 mil. radius.

REPRODUCER ARM MODEL A-16: Die-cast aluminum arm, swinging on a radius for 16" records, makes use of unique and exclusive (patent pending) friction-free bearings that insure less side-of-groove wear; no oiling, cleaning or adjusting necessary. Counterbalance keeps stylus pressure at under 20 grams. Height adjustment permits adapting arm to any turntable platters in use. Arm (with stand) is finished in attractive blue-gray and polished aluminum center.

EQUALIZER AND SWITCH MODEL EL-3: Since PARA-FLUX reproducers are all linear in response, an equalizer is required to correct any frequency pre-emphasis used in recording. Model EL-3 equalizer is effective with all three types of PARA-FLUX heads. It provides constant equalization over the full amplitude range of any recording. Equalizer switch, providing five positions (two for vertical and three for lateral recordings). The newly designed Equalizer, in one complete package, embodies double housing which gives double shielding against hum pickup. Combines the switch mechanism as well as impedance matching and correct equalization for the switch positions.

By means of an adjustable shank, the switch can be adapted to wood or metal panels of various thicknesses. Equalizer requires only single 3/8" diameter hole for mounting. Accommodates any panel thickness from 1/8" to 3/4".

NET PRICE SCHEDULE Complete Assembly

Model UL-1DA Universal Head.....	\$166.50
Model VL-1DA Vertical Head.....	\$120.00
Model LL-1DA Lateral Head.....	\$120.00

Heads Only

Universal Model UL-1D.....	\$106.50
Vertical Model VL-1D.....	\$ 60.00
Lateral Model LL-1D.....	\$ 60.00
Model A-16 — Arm only.....	\$ 25.00
Model EL-3 — Equalizer and Switch.....	\$ 35.00

Replacement Heads

All above prices F.O.B. Port Chester, N. Y.

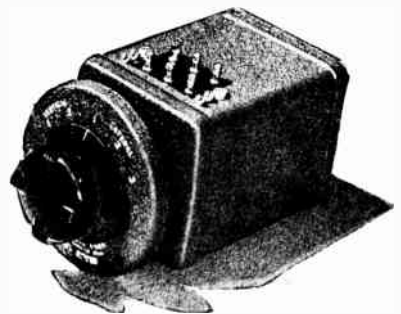
Prices subject to change without notice.

To insure uninterrupted service and economy to the user, damaged heads need only be returned to the local jobber who will make an immediate exchange for a new unit at a nominal charge.

Write for special data
on Vertical-Lateral
Combination
Kit

EL-3

Equalizer
and switch in
one compact unit.



Available through Authorized Jobbers

RADIO-MUSIC CORPORATION

Port Chester, New York

Export: Rocke International Corporation, 13 East 40th Street, New York 16, N. Y.

16" TRANSCRIPTION PLAYER 2-SPEED MODEL TP-16C

FEATURES

- ★ Finest reproduction for superior recorded entertainment.
- ★ Switch output impedance: 30, 250, and 500/600 ohms.
- ★ Fully Portable.
- ★ Small overall size: in carrying position 23" w., 17½" h., 8" d.
- ★ Light in Weight, 38 lbs. gross.
- ★ Compact for Convenient Carrying.
- ★ For Records up to 16".
- ★ 2-Speeds, 78 and 33-1/3 R.P.M.
- ★ Constant speed heavy duty motor, silent, smooth operation.
- ★ Easy installation.

Supplied with or without professional broadcast station reproducers. See details on preceding page.

Model TP-16C—TRANSCRIPTION RECORD PLAYER, precision built and expertly engineered, fills a long-felt need for an efficient, trouble-free unit at a reasonable price. It is especially well suited for use by wired music studios, broadcast stations, and in homes where superior recorded entertainment is required. Records up to and including those 16" in diameter can be played at either 78 or 33-1/3 r.p.m. Free of wow and rumble. Black leatherette covered case.

MOTOR: Constant speed type, incorporating oversize bronze bearings. Runs cool (temperature rise only 10° over ambient). Underwriters Approved. Full "floating mount" panel so that no metal touches metal. Drive wheel and idler have special formula neoprene "tires" that are precision ground for concentricity. These "tires" have natural adhesive properties that result in the turntable being driven with absolutely no slippage. Longer life is assured.

SPEED-CONTROL on panel permits instant selection of 78 or 33-1/3 r.p.m. Switch has center "off" position; when in "off" position, drive wheel and idler are auto-

matically disengaged—this means that no flat spots can develop on the wheels.

16" TURNTABLE—Platter is of cast aluminum, balanced and machine-finished to give "wowless" performance. Table fits snugly over a specially formed spindle assembly.

TP16C—Turntable and Case only.....	\$124.50 Net
TR16V—Turntable, Case, Vertical Reproducer Only, Tone Arm, Equalizer, Impedance Matching Switch	\$244.50 Net
TR16L—Turntable, Case, Lateral Reproducer Only, Tone Arm, Equalizer, Impedance Matching Switch	\$244.50 Net
TR16U—Turntable, Case, Universal Reproducer, Tone Arm, Equalizer, Impedance Matching Switch	\$291.00 Net
TR16A—Turntable, Case, one each of Vertical, Lateral and Universal Reproducer, Tone Arm, Equal- izer, Impedance Matching Switch	\$411.50 Net

*All above prices F.O.B. Port Chester, New York
Prices subject to change without notice.

TURNTABLE CHASSIS TP-16

The same TURNTABLE TP-16 as used in above model is available as a chassis for custom-built radio sets. Also ideal for audition rooms in broadcasting stations for record departments where one or more Turntables can be conveniently installed on shelves. Portable model TP-16C also can be used for same purpose.

Motor for 105-115 volts, 60 cycles A.C. only (other voltages and frequencies available, prices on request). Overall size, including wood mount, 21½" long, 5½" high, 10" deep; chassis plate 16" x 16".



*\$78.80 Net
Turntable
Chassis
Only

Packing frame, as illustrated, can be used for mounting purpose, if desired.

Available through Authorized Jobbers

RADIO-MUSIC CORPORATION Port Chester, New York

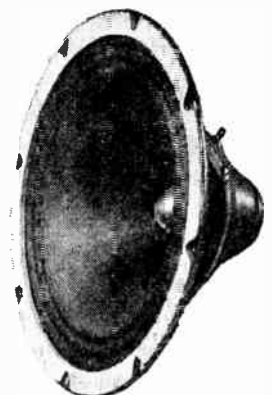
Export: Rocke International Corporation, 13 East 40th Street, New York 16, N. Y.

RMC HYPER-MAG LOUD SPEAKERS

featuring the new para-
bolic projector coupled
with the Hyper-mag
magnet FM RANGE
SPEAKERS.

The Hyper-Mag Loud Speaker is distinctly different because it is built and calibrated to BROADCAST STANDARDS. Provides high fidelity performance for FM and wired music installations, and as a standard replacement unit in custom-made radio sets.

8" size, 100-10,000 F.R.
\$14.20 List Price*





GENERAL INDUSTRIES



Smooth Power

PHONOGRAPH MOTORS, RECORDERS AND RECORD CHANGER-RECORDERS

CONSTANT SPEED ELECTRIC PHONOGRAPH MOTORS

Suitable for every phonograph in which low cost, dependable performance, compactness, light weight and quietness of operation are important considerations, GI phonomotors assure even turn-

table speed and have ample power to play 10" and 12" records. Fan cooling permits use in partially closed cabinets. Designed to comply with Underwriters Laboratories' requirements.

RIM DRIVE MOTORS



Model MX

Length: 3 1/4" Width: 2 1/4" Depth: 2 1/4" below mounting plate



Model LX

Length: 3 1/2" Width: 2" Depth: 2" below mounting plate



Model RX

Length: 4 1/4" Width: 3 3/8" Depth: 2 5/8" below mounting plate



Model GI-RM4

Length: 3 3/4" Width: 3 3/8" Depth: 2 1/8" below mounting plate

MODEL MX Rim drive, 2-pole motor with novel idler arrangement assuring quiet operation. Motor is insulated from mounting plate to further eliminate vibration. Turntable shaft revolves with turntable, and is grooved for turntable clip. Novel bearing construction insures rigid and permanent alignment of motor shaft. Oilless bearings. Furnished complete with 9" turntable and mounting plate ready for installation. Packed in individual cartons. Shipping weight: 4 lbs.

MODEL LX Rim drive, 2-pole motor. Rubber insulated from both mounting plate and turntable for quiet operation. Turntable shaft revolves with turntable, and is grooved for turntable clip. Furnished complete with 9" turntable and mounting plate ready for installation. Packed in individual cartons. Shipping weight: 4 lbs.

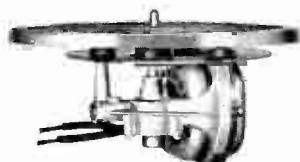
MODEL RX Rim drive, 4-pole motor. Rubber insulated from both turntable and mounting plate for quiet operation. Driving pulley, idler and turntable positively aligned in one plane for efficient performance. Turntable shaft revolves with turntable and is grooved for turntable clip. Furnished complete with 9" or 10" turntable and mounting plate ready for installation. Packed in individual cartons. Shipping weight: 5 lbs.

MODEL GI-RM4 Heavy-duty, rim drive, 4-pole motor. Rubber insulated from both mounting plate and turntable for exceptionally quiet operation. Turntable shaft revolves with turntable and is grooved for turntable clip. Retractable record drive pin in turntable permits playing standard records without adjustment. Efficient performance is assured by positive alignment of driving pulley, idler and turntable in one plane. Furnished complete with 10" weighted turntable and mounting plate. Packed in individual cartons. Shipping weight: 9 lbs.

Model	R.P.M.	Current	List
MX	78	115 V AC 60 c	\$ 7.95
LX	78	115 V AC 60 c	6.80
RX	78	115 V AC 60 c	9.90*
GI-RM4	78	115 V AC 60 c	16.50

* Add 20¢ for 10" turntable.

GEAR DRIVE MOTORS



MODEL CX & CX3

Length: 4 1/4" Width: 4 1/2" Depth: 3 1/8" below mounting plate

electrical insulation between turntable and motor. Furnished complete with mounting plate and choice of 9" or 10" turntable ready for installation. Packed in individual cartons. Shipping weight: 6 lbs. with 10" turntable.

Model	R.P.M.	Current	List
CX	78	115 V AC 60 c	\$13.25
CX3	33 1/3	115 V AC 60 c	15.75

Above prices include 9" turntable.
For 10" turntable add 30¢ each.

MODEL CX - 78 R.P.M.
MODEL CX3 - 33 1/3 R.P.M.

Gear drive, 4-pole motor. Fully enclosed, with silent, helical-cut gears running in oil bath within the sealed housing. Patented combination rubber turntable drive sleeve and record centering tip insures mechanical and

GREEN FLYER
MODEL D
DUAL SPEED
33 1/3 and 78 R.P.M.

Powerful, governor-controlled, shaded pole, induction, gear drive motor with ability to maintain uniformity of speed under normal variations of voltage and load. Has lever-type speed regulator and lever shift to 78 R.P.M. or 33 1/3 R.P.M. Fully enclosed with silent helical-cut gears running in a bath of oil in sealed housing. Furnished complete with mounting plate and choice of 10" or 12" turntable ready for installation. Packed in individual cartons. Shipping weight: 11 1/2 lbs. with 10" turntable.



MODEL D

Length: 8 3/8" Width: 5 1/2" Depth: 3 3/4" below mounting strap

Model	R.P.M.	Current	List
D	78 & 33 1/3	115 V AC 60 c	\$26.50

Above price includes 10" turntable.
For 12" turntable add 92¢ each.

MASTER JR. SPRING MOTOR

Plays two 10" selections from one winding. Exceptionally quiet and uniform in speed. Turntable is held in place by turntable-holding clip. Furnished with 9" turntable, winding crank and escutcheon; turntable brake; dial and pointer speed regulator, mounting screws and washers. Dimensions — Length: 5 3/4"; width: 4 3/4"; depth: 2 1/2" from top surface of casting to bottom.

Model	R.P.M.	Type	List
Master Jr.	78	Single Spring	\$10.25

Price includes 9" turntable and parts.

AUTOMATIC STOP SWITCH

Furnished optionally for use with all electric motors shown on this page. Cannot be used with spring motors, recording units or record changers.

12670 — Automatic Stop Switch for use with 9" or 10" turntables. . . . \$1.45



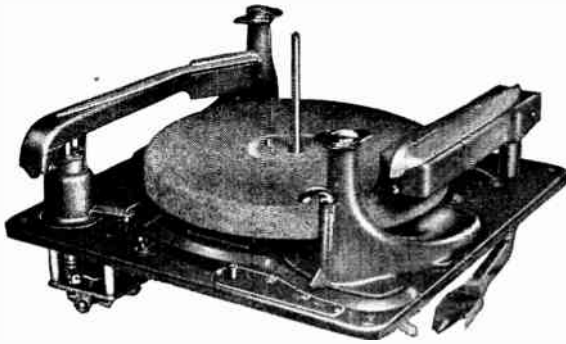
GENERAL INDUSTRIES



Smooth Power

PHONOGRAPH MOTORS, RECORDERS AND RECORD CHANGER-RECORDERS

COMBINATION RECORD CHANGER-RECORDER



MODEL GI-RC-130L 78 R.P.M.
... 115 volts AC — 60 cycles

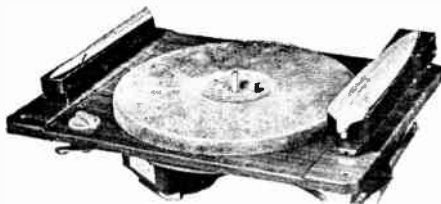
Dimensions: Base plate — 14" x 14" x 3/8"; height above lower edge of base plate — 5 1/4"; depth below lower edge of base plate — 2 1/4". Packed in individual cartons. Shipping weight: 24 1/2 lbs.

Cuts records up to 10" diameter. Plays twelve 10" or ten 12" records automatically. Only necessary to lower cutting arm over record disc to start recording operation. Convenient depth-of-cut adjustment driving pin. Self starting, dynamically-balanced, recording type motor. One lever to move when changing from 10" to 12" records, removing records or to set for manual operation and recording. With lever in extreme position, all sizes of records can be removed from the turntable without interference. In manual position, tripping mechanism is inoperative. Non-jamming record handling fingers which do not extend past record lead-in space. Pressing reject button drops the first record onto the turntable and automatically positions the pickup on the record. Records may be rejected instantly. Handles records with either run-in or oscillating trip grooves. Means provided for guiding pickup needle into the playing grooves on records without lead-in grooves. Pickup arm supported at all times when not resting on record. Changing mechanism is positive and quiet in operation. Shock mounting provided which permits isolation of the entire assembly from the cabinet. Brown iridescent finish, streamline plastic trim on pickup and cutter arms attractively engraved with legends "Reproducer" and "Recorder". Furnished with crystal pickup, 10" weighted turntable, on and off switch and spring mounting hardware.

List price \$72.50*

Above price includes the X-26 Crystal Cutter. For M-41-10 Magnetic Cutter add \$2.00 each. *NOTE: Price includes Federal Excise Tax.

HOME RECORDING and PHONOGRAPH ASSEMBLIES



MODEL GI-R90L 78 and 33 1/3 R.P.M.
... 115 volts AC — 60 cycles

Cuts records up to 10" diameter at 78 R.P.M. or 33 1/3 R.P.M. Plays records up to 12" diameter at 78 R.P.M. or 33 1/3 R.P.M. To shift motor from one speed to the other, merely turn the speed change dial. Beautiful walnut wood grain finish on steel base plate. Streamline plastic trim on pickup and cutter arm attractively engraved with legends "Reproducer" and "Recorder". Turntable recessed into well in base plate. Merely lower cutter arm over record disc to start recording. Convenient depth-of-cut adjustment. Dynamically-balanced, 4-pole, rim drive motor. Compensating switch operated by speed change dial. Assembly includes dual speed motor; 10" weighted turntable; cutting mechanism; crystal pickup; compensating switch; pickup and cutter arm rests; drawn steel base plate with formed down edges. Dimensions: Base plate — 15" wide, 11 1/2" front to back; height above lower edge of base plate — 2 3/4"; depth below lower edge of base plate — 3 3/8". Packed in individual cartons. Shipping weight: 17 lbs.

List price \$48.25*
Above price includes the X-26 Crystal Cutter. For M-41-10 Magnetic Cutter add \$2.00 each. *NOTE: Price includes Federal Excise Tax.

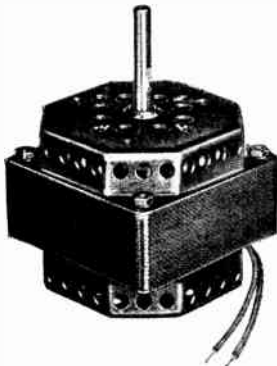


MODEL GI-R70L 78 R.P.M.
... 115 volts AC — 60 cycles

Cuts records up to 10" diameter. Plays records up to 12" diameter. Simple cutter feed mechanism requires merely lowering the cutter arm over the record disc to start the recording operation. Convenient depth-of-cut adjustment on top of cutting arm. Retractable record driving pin in the turntable permits playing standard records without adjustment. Heavy-duty, dynamically-balanced, 4-pole, rim drive induction motor. Self-starting and uniform in speed. Brown iridescent finish. Assembly includes motor; 10" weighted turntable; cutting mechanism; crystal pickup; pickup and cutter arm rests; drawn steel base plate with formed down edges. Dimensions: Base plate — 15" wide; 10" front to back with tone arm extending 1 1/2" at back of plate; height above lower edge of base plate — 2 1/4"; depth below lower edge of base plate — 2 5/8". Packed in individual cartons. Shipping weight: 15 3/4 lbs.

List price \$40.85*

Above price includes the X-26 Chystal Cutter. For M-41-10 Magnetic Cutter add \$2.00 each. *NOTE: Price includes Federal Excise Tax.



WIRE, TAPE and DISC RECORDING MOTORS

Heavy duty, 4-pole, shaded pole induction motors, 1/70th H.P. Free speed: 1740 R.P.M. Maximum running torque: 12 ounce-inches. Features include: A locating and locking arrangement for both top and bottom covers which assures high accuracy in alignment of rotor within the stator bore; new air intake; dual cooling fans and self-aligning, oil-impregnated sleeve bearings. These high torque motors are used in practically all tape, wire and disc recorders now being manufactured. Dimensions: Length — 3 3/8"; width — 3 3/8"; depth — 3" below mounting surface; shaft diameter — 1/8".

NOTE: Prices vary in accordance with different recorder requirements — i.e., shaft length, direction of rotation, etc. State model of recorder for which replacement motors are needed when requesting prices.

Webster-Chicago

AUTOMATIC RECORD CHANGER

DUAL SPEED
SINGLE SPEED

... for standard 78 R.P.M. or Microgroove 33½ R.P.M. records

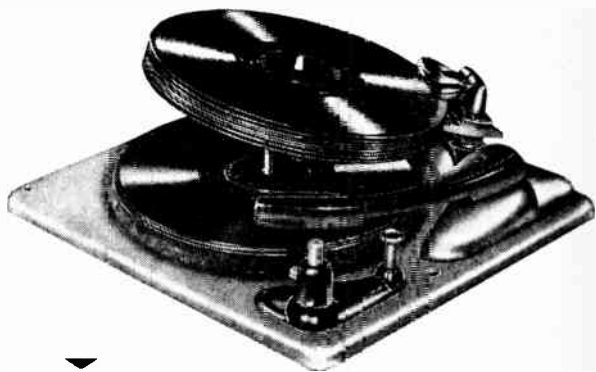
DUAL SPEED — Webster-Chicago Dual-Speed Record Changers have these outstanding features:

- *Tilt-O-Matic Arm* . . . gives proper balance and weight distribution for standard or Microgroove records with a simple finger-tip control.
- *Tandem-Tip Nylon Needle* . . . provides in one needle a Microground tip for Microgroove records and standard-ground tip for standard records. The TILT-O-MATIC finger-tip control automatically makes the proper needle tip selection.
- *Velocity-Trip Record Change Mechanism* . . . requires no "lead-in" springs, hence has no lateral pressure to injure the delicate record grooves. The tone arm tracks easily for maximum tone pick-up and moves freely in either direction. It is the only record changer mechanism which allows the playing of inside-out recordings. Change is fast, positive and easily adjusted.
- *Webster-Chicago Dual-Speed Record Changers* play 10 twelve-inch or 12 ten-inch records of either standard or Microgroove types at one loading.



Model 256 is the deluxe favorite of the Webster-Chicago Dual-Speed line. Design, workmanship and performance are unexcelled. Model 256 is ideal for custom or service installation.

Model 246 is a splendid model, similar to the Model 256. Slightly smaller, it will fit any radio console.



Model 156 . . . is the deluxe Webster-Chicago single-speed record changer . . . for standard 78 R.P.M. records.

SINGLE SPEED — Webster-Chicago Single-Speed Automatic Record Changers are the choice of over a million users and nationally-known manufacturers of radio-phonograph combinations.

- Plays 10 twelve-inch or 12 ten-inch records automatically at one loading.
- Change cycle is quiet and fast—approximately 4 seconds.
- Simple, foolproof—cannot be jammed.
- Velocity-Trip Mechanism assures perfect tracking.
- Stops automatically after last record has been played.
- Available with either standard crystal cartridge or low-pressure magnetic pick-up.

MODEL 146, for standard 78 R.P.M. records, is small enough to fit into any cabinet where space may be a problem.

ASK YOUR WEBSTER-CHICAGO DISTRIBUTOR
ABOUT THE WEBSTER-CHICAGO
RECORD CHANGER LINE



WEBSTER-CHICAGO

The Choice of Music Lovers Chicago

Webster-Chicago

MODEL 78 WIRE RECORDER



... for service installation in radio consoles

MODEL 78 Webster-Chicago Wire Recorder is designed specially to be installed in existing radio consoles for increasing the user's enjoyment of radio, records or microphone-recorded material.

Model 78 is compact and attractive in an all-metal case finished in silver-gray gloss enamel. The popular Webster-Chicago Wire transport mechanism is controlled by an easy-to-operate, positive-acting lever which brakes the spool and wind-up drum automatically when shifting from run to rewind. Circuits for "record-radio," "record-microphone" and "listen" through radio are push-button controlled. Recording volume level indicator is a Db type meter which permits the user to record accurately while the radio or record changer volume is at its lowest setting. This "silent" recording feature is especially popular.

On-off-tone control and volume control provide all desirable combinations.

All cables and plugs required for installation in the radio console are furnished with the Model 78 and a fine quality crystal microphone and a spool of Webster-Chicago pre-tested recording wire are included with the unit.



Model 78 is easy to install. Webster-Chicago SD-30 slide drawer kit is available for the purpose, and drawings showing these methods may be procured through Webster-Chicago distributors everywhere.



WEBSTER-CHICAGO

3610 WEST BLOOMINGDALE AVENUE • CHICAGO 39, ILLINOIS

GARRARD



GARRARD

New GARRARD RC65 Record Changer

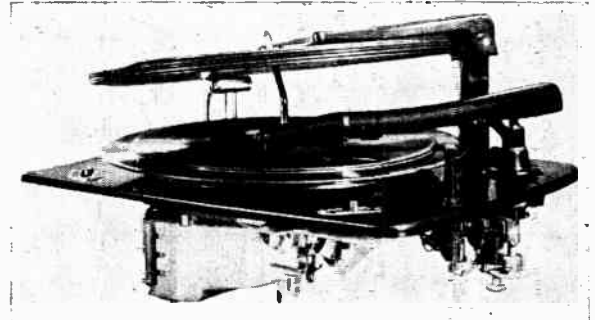
Radically improved in design and in mechanical operating features. Incorporates all the scientific and technical knowledge acquired through many years of critical testing, experimentation and manufacture.

Through the years, discriminating music lovers have learned to depend on this superior mechanism as the World's Finest in record playing equipment. They know that they can rely on a GARRARD to give them consistently quiet, efficient performance. The GARRARD RC65 is built to rigid standards and is fastidiously machined and assembled to assure trouble-free performance.

GARRARD's speed regulated, governor-controlled motor, using a steel governor disc, is fashioned to give powerful and regulated running at all times. The motor runs silently at maximum record loads without vibration, rumble or speed variations. The speed regulator feature permits adjustment of motor speed to 78 rpm or to retard or accelerate the tempo of any any record to suit individual tastes or to adjust for varying line voltages. The motor has a positive automatic stop which shuts the motor off after the last record is played. The on-off switch is located on the mounting plate in such a position as to prevent interference with the free movement of the tonearm.

The RC65 is a "mixer" Changer. It accommodates both 10" and 12" records intermixed in any assortment and in any combination. There are no buttons or switches to throw. It is entirely automatic.

GARRARD's exclusive true-tangent tone arm is jewel-mounted and equipped with ball-bearings. It is constructed to give perfect parallel lift, to set down on records gently, to track silently and to give genuine "floating" response.



GARRARD offers the unique advantage of having a replaceable pickup head which can accommodate any of the popular cartridges available. It is also initially offered to you with your choice of either a low-pressure Crystal with permanent needle OR Crystal for use with replaceable needles OR with the GARRARD Standard Magnetic Pickup OR with the GE Variable Reluctance Pickup. There is no change in price in any case. Simply specify which is preferred when ordering.

Minimum cabinet dimensions are 15" wide x 13" deep x 5 1/2" clearance above the unit plate and 4 1/2" clearance below the unit plate.

Model 65/D — AC Model, Dual Voltage Motor for 110/130 and 200/250 volts, 50/60 cycles; furnished with your choice of pickup as described above. Net price \$69.50

Model 65/U — Universal AC-DC Model; 25/60 cycles; 110/130 and 200/250 volts; furnished with your choice of pickup as described above. Net price \$89.50

Both the GARRARD Record Changer and the GARRARD Phono Assembly are available fully mounted, ready for operation (a) on a sturdy wooden box or (b) in a carrying case or tall-model cabinet, as illustrated on next page. Ask for prices.

GARRARD Type V Phono Assembly

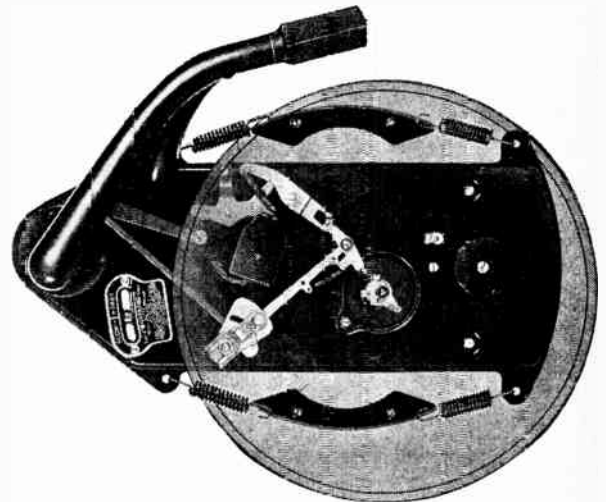
The newest unit of a long line of high quality phono assemblies for playing single records.

Here again, GARRARD has spared no effort or expense to produce the finest possible player for those who demand the best in record reproduction.

The entire assembly is typically GARRARD in that it features the finest type of phono motor—speed-regulated and governor-controlled. This exclusive feature makes it possible to adjust to perfect speed (78 rpm) or to accelerate or retard the tempo to suit the listener.

The Type V Assembly features an entirely new, unique mounting arrangement which represents the first genuine forward step in mounting design. This "bow" mounting is so efficient that even a blow struck on the motor board will not cause the tone arm to skip or repeat a groove. This is another exclusive feature and another GARRARD "first."

Available with your choice of quality pickups: (a) high fidelity Crystal pickup with permanent stylus, (b) Crystal pickup for use with replaceable needles, (c) GARRARD Magnetic Pickup, (d) G.E. Variable Reluctance Pickup.



Minimum cabinet dimensions are 15" wide x 13" deep x 4" clearance below the motorboard and 3 1/2" clearance above.

Type V/D — AC Model, for 110/130 and 200/250 volts, 50/60 cycles; furnished with your choice of pickup as described at left. Net Price \$33.50

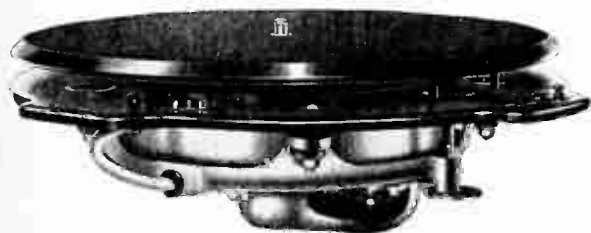
Type V/U — Universal AC-DC Model; 25/60 cycles; 110/130 and 200/250 volts; furnished with your choice of pickup as described at left. Net price \$45.00

NOTE: ALL OF THE ABOVE PRICES INCLUDE FEDERAL EXCISE TAX.

GARRARD



GARRARD



The new GARRARD 201-V two-speed motor is the new and improved model of our internationally famous 201T. It is now offered in its latest trouble-free form exactly as produced for the U. S. Navy and British Admiralty during the War.

The governor-controlled motor operates at either 33-1/3 or 78 rpm with absolute constancy and without waver or rumble. It is ideally suited for use where truly superior reproduction is desired.

Because of its extra-heavy rotor, which is slow-running, the resulting torque makes this motor amazingly smooth and silent. In sheer performance, it is the finest we have to offer. It is a self-starting induction type unit and is fitted with the patented GARRARD governor to insure perfect regularity.

The 201-V is equipped with Speed Regulator by means of which a wide range of speeds is possible—as well as perfect adjustment at 33-1/3 or 78 rpm. This regulator is on an extension arm so that 16" records can be speed-controlled.

MODEL 201-V—Two speeds, 33 $\frac{1}{3}$ and 78 rpm; dual voltage, AC-110/130 and 200/250 volts, 40/60 cycles.
Net Price \$65.00



GARRARD Carrying Cases and GARRARD Table Model Cabinets are made especially for us, to our standards.

The Carrying Case is of solid wood throughout and is covered with finest procurable parchment type material. Sewn leather edges run completely around the case. The Hardware used is the very finest and it has two locking snaps, with keys.

The Table Model Cabinet is a hand-finished case finished in striking mahogany. Its appearance is that of a high quality piece of furniture, and it makes possible the easy creation of "Combinations."



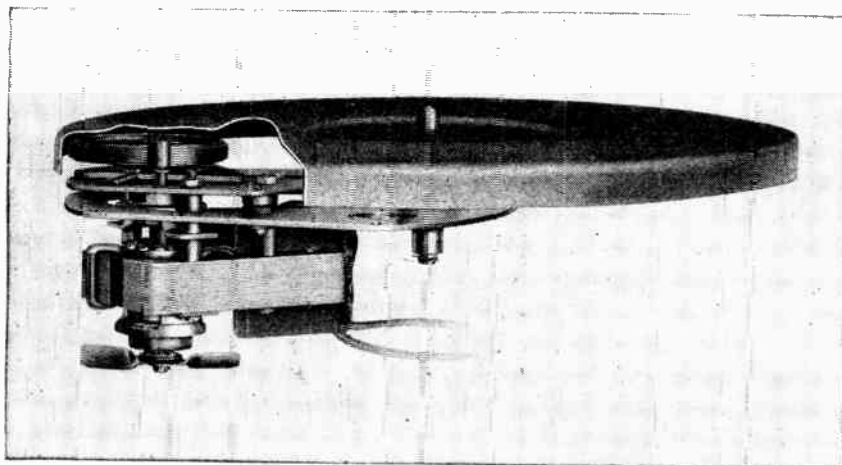
PRICES

- MODEL CC1—Carrying Case with Motor Board uncut. Net Price \$19.50
- MODEL CC6—Carrying Case with Motor Board cut out to accommodate GARRARD Model RC65 Record Changer. Net Price \$19.50
- MODEL TM1—Table Model Cabinet with Motor Board uncut. Net Price \$25.00
- MODEL TM6—Table Model Cabinet with Motor Board cut out to accommodate Model RC65 Record changer. Net Price \$25.00

GARRARD SALES CORPORATION

alliance PHONOMOTORS

Motors for driving turntables, record changers, tuning devices



MODEL 80

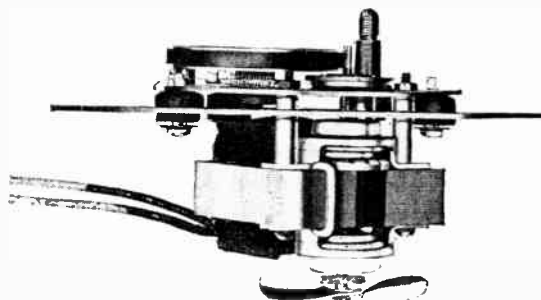
The famous Model 80 Alliance phonomotor, operating on 110 or 220 volts, is made for 40, 50 or 60 cycles, 16 watts input, 78 RPM. The Model 80 has no gears—runs at an even speed—has a smooth, quiet, positive friction-rim drive. Amply proportioned bearings with large reservoirs assure long life. Motor and idler plate are shock mounted to minimize vibration trans-

fer to turntable and motor board. Forced ventilation gives cool operation—the slip-type fan avoids any possible injury. Mounting plate maintains correct turntable height, regardless of mounting board thickness. Available with 8, 9 or 10-inch turntable tops. Maximum depth below base mounting plate, $2\frac{1}{16}$ inches.

New $33\frac{1}{3}$ r.p.m. Motors for Record Players

The successful playing of the new **slow-speed, long-play** records (Micro-groove) requires a lower "wow" tolerance. Alliance has developed this new $33\frac{1}{3}$ r.p.m. turntable drive motor which actually meets previous requirements normally prescribed for fine quality commercial transcription work.

This record player motor has improved vibration mountings which will reduce rumble and hum transferred to the turntable. The motor drive is ground on the motor assembly to eliminate all run-outs. The idler tires are precision ground to extremely close limits, virtually eliminating all "wow". The turntable bearing has been greatly improved to insure a smoother functioning part. **Here is an excellent motor for the slower record speeds!**



alliance

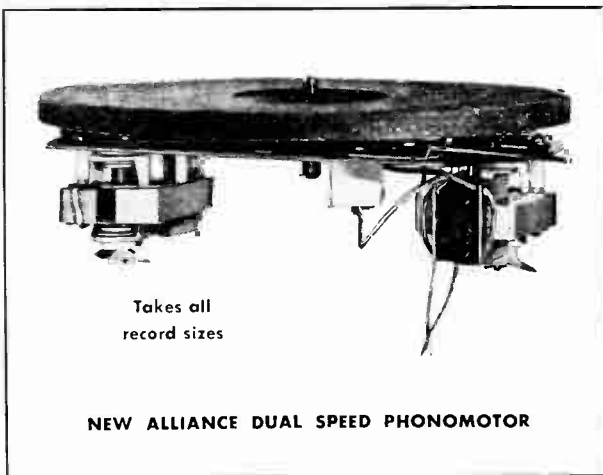
Powr-Pakt MOTORS

NEW DUAL SPEED PHONOMOTOR

Optional $33\frac{1}{3}$ r.p.m. or 78 r.p.m.

The new Dual-Speed Phonomotor is in reality a dual version of the famous Model 80. Two motors, instead of one, are mounted below the standard 12" turntable. This new unit is a complete record player assembly and will handle any existing records from the large transcriptions down to the "kid discs" or toy sizes.

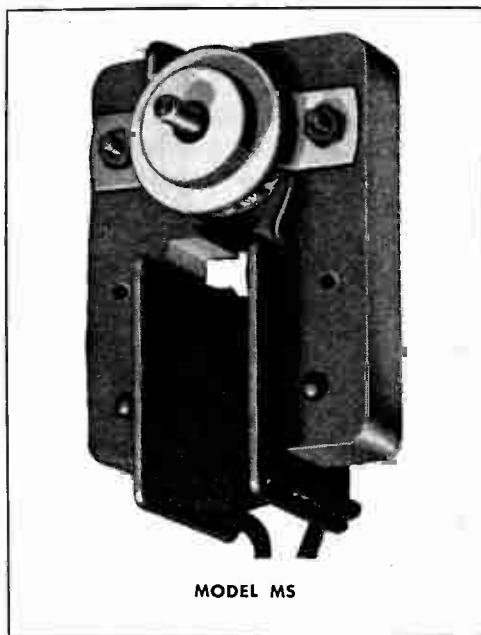
A single control in the form of a manual lever changes the turntable speed to $33\frac{1}{3}$ or 78 r.p.m. Only one motor is in the circuit at a time. Idler tires are disengaged from drive pulley when that motor is out of service. The entire dual assembly requires hooking up only two wires with the power source — is simple to operate, and is designed for high quality, long life and "wow" free performance. It can be furnished in any voltage from 220 to 110 volts at frequencies of 50 or 60 cycles and takes the same wattage as Model 80.



MODEL MS

The Alliance Powr-Pakt Model MS Motor is for 110 volt, 60 cycle operation. Here is a truly miniature power plant, so compact and light in weight that it can be used where many designs call for "tailored power". The Model MS has been developed to fill the growing need for small power units to increase the motion and utility features of thousands of new products!

SPECIFICATIONS—Draws about 25 watts at 3000 R.P.M. no load. The speed is 2500 to 3000 R.P.M. depending on frequency and load. Develops about .006 h.p., $\frac{5}{32}$ inch diameter, centerless, round steel shaft. Has latest type graphite bronze oilless bearings, self-aligning and amply proportioned. Motor measures: $\frac{3}{4}$ inches x 2 inches x $3\frac{1}{8}$ inches.



Audax TUNED-RIBBON

"The Standard by Which Others Are Judged and Valued"

reproducers

New . . .

R-55

For recordings up to 12".

OUTPUT, high enough for most amplifiers (about -20 db). Response, FLAT within about 2½ db from 50 cycles to 8000 cycles. Other details identical with R-61 below.

Listed at \$33.00

R-56

For recordings up to 18".

Performance identical with R-55.

Listed at \$48.00

R-61 . . . For recordings up to 12"

Response linear 50 cyc. to over 8 k.c. Point Pressure about 28 grams. Genuine Sapphire Stylus, EASILY REPLACED BY USER. Output about -25 db (connected to matching load). Standard impedance 200 ohms. May be made any imp. including high. Quick plug-in connectors. Arm is Tangent-Tracking, ball-thrust and pivot-point bearings. Bronze finish. Turntable center to rear end of arm 10". Listed at \$49.75

R-62 . . . For recordings up to 18"

Performance identical with R-61. French Grey and Chrome finish. Turntable center to rear end of arm 13 $\frac{9}{16}$ ". Listed at \$64.75

Because a "permanent-point" — be it diamond, sapphire or metal — will maintain its original shape for only a limited number of plays, after which it progressively erodes the record grooves, the importance of being able to replace it has always loomed big. Heretofore such replaceability carried with it a severe penalty in range, compliance, point-pressure, etc., etc. . . . important factors with modern discs. Most of the TUNED-RIBBON Models were designed to satisfy these factors. (For technical details on this remarkable development, send for editorial reprint.)

73-A . . . For recordings up to 12"

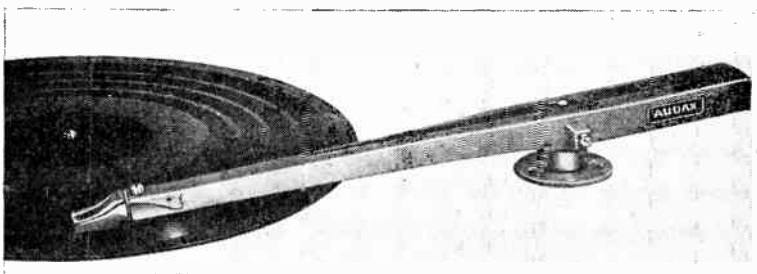
Response linear 50 cyc. to 10 k.c. Point Pressure about 24 grams. Genuine Sapphire Stylus, EASILY REPLACED BY USER. Output about 30 db (connected to matching load). Impedance 200 ohms. May be made in any imp. up to 500 ohms. Vibratory Momentum very low. Quick plug-in connectors. Arm is Tangent-Tracking, ball-thrust and pivot-point bearings. Bronze and Chrome finish. Turntable center to rear end of arm 10". Listed at \$66.50

74-A . . . For recordings up to 18"

Performance identical with 73-A above. French Grey and Chrome finish. Turntable center to rear end of arm 13 $\frac{9}{16}$ ". Listed at \$83.00

SA-79—STUDIO ARM, identical with Model 81 (at right). Linear 40 cyc to 10 k.c. Point-pressure about 24 grams. Genuine Sapphire replaceable stylus. Output about -30 db. Imped. 200 to 500 ohms. Listed at \$115.00

Bringing to Recorded Music Something That Was Not There Before



STUDIO - 81

For LATERAL recordings up to 18".

For use in Radio Stations, Studios and wherever superb-quality performance is paramount. Response Linear 20 cyc. to about 15 k.c. Point Pressure about 14 grams. Diamond Stylus. Output about -35 db (connected to matching load). Impedance 200 ohms. Moving Mass Near Zero. Quick plug-in connectors. Arm is Special Studio Design, aluminum, Tangent-Tracking, ball-thrust and pivot-point bearings in gimbal mounting—eliminating side-thrust and drag. French Grey and Chrome finish. Turntable-center to rear end of arm 18½". Listed at \$165.00 (less equalizer)

STUDIO - 99

For VERTICAL recordings up to 18".

For use in Radio Stations, Studios and wherever superb-quality performance is paramount. Response Linear 20 cyc. to about 15 k.c. Point Pressure about 25 grams. Diamond Stylus. Output about -40 db (connected to matching load). Impedance 200 ohms. Moving Mass Near Zero. Quick plug-in connectors. Arm is Special Studio Design, aluminum, Tangent-Tracking, ball-thrust and pivot-point bearings in gimbal mounting—eliminating side-thrust and drag. French Grey and Chrome finish. Turntable-center to rear end of arm 18½". Listed at \$195.00 (less equalizer)

AUDAX EQUALIZER FILTER — 200 ohms input — five positions, covering NAB Orthocoustic, Vertical, and 78 RPM—also includes Filter positions. Listed at \$83.00

AUDAX REPLACEMENT STYLUS—Genuine Sapphire Jewel—Designed expressly for TUNED-RIBBON reproducers. Listed at \$3.00

Any model TUNED-RIBBON head may be had for replacement on automatic changers or other machines.

PICK-UP UNITS

AUDAX

RECORDERS

The Standard by which Others are Judged and Valued

Audax PICKUPS using conventional needles

L-17—For records up to 12". FLAT within about ± 3 db to about 6500 cycles, with slightly rising bass curve reaching about 6 db at 50 cycles. Point-pressure about $1\frac{7}{8}$ oz. Output approx. —20 db. Black and Silver finish. Overall length from turntable center to rear end of arm $9\frac{1}{16}$ ". High impedance or 200 or 500 ohms. Listed at...\$27.50

L-18—For records up to 16". Performance identical with L-17 above. Overall length from turntable center to rear end of arm $12\frac{7}{16}$ ". High impedance or 200 or 500 ohms. Listed at...\$39.50

NEW AUDAX HIGH FIDELITY CUTTERS

AUDAX CUTTER H-5—Substantially FLAT to 10,000 cycles. Distortion about 1.2% at 1000 cycles. Fully modulates groove with input of about 18 db with 96 lines. Impedances up to 500 ohms. Listed at...\$185.00

AUDAX CUTTER H-4—Substantially FLAT to 8,000 cycles. Distortion about 1.7% at 1000 cycles. Fully modulates groove with input of about 16 db with 96 lines. Impedances up to 500 ohms. Listed at...\$125.00

AUDAX CUTTER H-3—Substantially FLAT to about 7500 cycles. Distortion about 2.1% at 1000 cycles. Fully modulates groove with input of about 18 db with 96 lines. Impedances up to 4000 ohms. Listed at...\$83.00

AUDAX CUTTERS are magnetically powered—their characteristics are not affected by temperature or atmospheric changes. They are readily interchangeable on most recording machines.



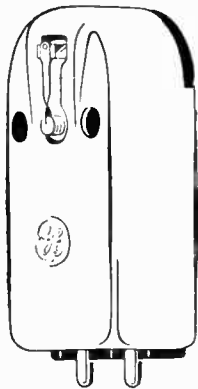
AUDAX instruments are NOT affected by temperatures or atmospheric changes.

There Is No Substitute for *EXPERIENCE*

When you are buying a motor car, washing machine or refrigerator, etc., almost instinctively you know that of first consideration is the experience of the manufacturer behind the product. Has he the all-important KNOW-HOW that comes only with years of experience? In no other field of endeavor is this KNOW-HOW more important than in the field of ELECTRONIC Sound Apparatus, where AUDAX has set the pace for over twenty-five years.

GENERAL ELECTRIC

VARIABLE RELUCTANCE PICKUP



- LOW NEEDLE TALK
- LOW NEEDLE SCRATCH
- LOW TONE ARM RUMBLE
- LOW DISTORTION
- LOW RECORD WEAR

General Electric sound engineers have developed the variable reluctance magnetic type phonograph record reproducer to fulfill the latest requirements for high quality reproduction of lateral records in commercial, studio, and home recording.

Catalog Number	Stylus	Stylus Radius in Inches	List Price
RPX-010	Sapphire	.003	\$ 7.95
RPX-025	Diamond	.0025	39.50
RPX-029	Diamond	.003	39.50

Also available in precious metal tips.

HIGH FIDELITY REPRODUCTION

At last, science has developed a pickup whose stylus recreates only the music—doesn't add harmonic vibrations of its own.

When the music recorded in the record grooves vibrates the stylus from side to side, currents are set up in the magnetic poles on each side. Unlike most other pickups, these currents are generated in the G-E Variable Reluctance Pickup at the record. Thus the resulting tone is free from non-musical foreign vibrations which in other pickups result from the generation of the current at a distance from the record. The stylus and cantilever arm are the only moving parts. Their entire weight and size is less than half of a "needle alone" on a conventional pickup. They are so small that their tiny area radiates scarcely any sound in the form of needle talk. Because the stylus is so mounted that it is insensitive to vertical vibration practically all surface noise automatically is eliminated. The result—pure tone—just as it originally was recorded in the studio. Flexible needle suspension plus low record pressure (between $\frac{3}{4}$ and $1\frac{1}{4}$ ounce—just enough pressure to assure dependable record changing) results in very low record wear. Rugged mechanically, this unit can take abuse and is not affected by high temperatures or humidity.

Accidental dropping or skidding of the tone arm head on the record normally will not damage the stylus or the record. This is due to the high vertical compliance of the cantilever in which the stylus is mounted. It retracts instantly to a position of safety.

MECHANICAL IMPEDANCE—

Dynamic mass of stylus 8 X 10^{-3} gm
Suspension compliance 87×10^{-6} cm/dyne

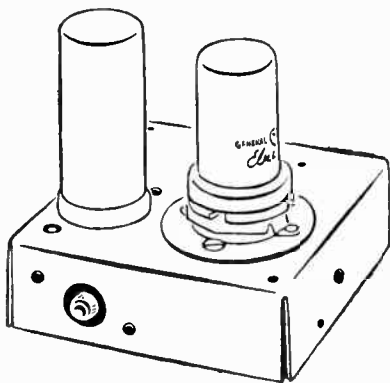
ELECTRICAL IMPEDANCE—The d-c resistance of the windings is approximately 360 ohms, and the inductance is approximately 240 millihenries. The equivalent circuit is the open circuit voltage in series with this resistance and inductance.

ELECTRICAL OUTPUT—Open circuit voltage of approximately 11 millivolts under stimulation of 4.8 cm/sec. This is the approximate velocity of the 1000-cycle band on the Columbia 10003-M frequency record.

FREQUENCY CHARACTERISTIC—This pickup has a uniform velocity-frequency characteristic, since the voltage output is proportional to the stylus velocity. Hence, measurements on frequency records indicate more nearly the characteristics of the records rather than those of the pickup. Characteristics of the open circuit voltage output, tracing the Columbia 10003-M record, are available on request.

STYLUS—Has an included angle of 45° to 50° .

PHONO PREAMPLIFIER



General Electric engineers have designed a new and compact phono preamplifier to be used with the sensational G-E Variable Reluctance Pickup.

This new preamplifier employs a 6SC7 dual triode tube, shock mounted on rubber grommets.

The General Electric Phono Preamplifier is a low voltage audio amplifier with an equalization circuit. Its plate and filament power are obtained from the associated receiver or amplifier.

An RMA standard female phonograph receptacle is mounted on the chassis. A 12" shielded cable with a standard phonograph plug is provided for connecting to amplifier of receiver. Fifteen inch leads are provided for obtaining electrical connections to the chassis.

SPECIFICATIONS

Gain—approx. 40DB at 1000 cycles.

Chassis— $3\frac{5}{8} \times 3\frac{5}{8} \times 1\frac{1}{4}$.

Overall height does not exceed $4\frac{1}{2}$ ".

Weight—12 ozs.

Finish—G-E Staybrite Lusteron finish.

Tube—1 type 6SC7.

Catalog Number SPX-001..... List Price \$9.90

PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE

**PLAYBACK
NEEDLES**

**RECORDING
NEEDLES**

**CHANGEABLE
NEEDLES**

**PRIVATE LABEL
NEEDLES**

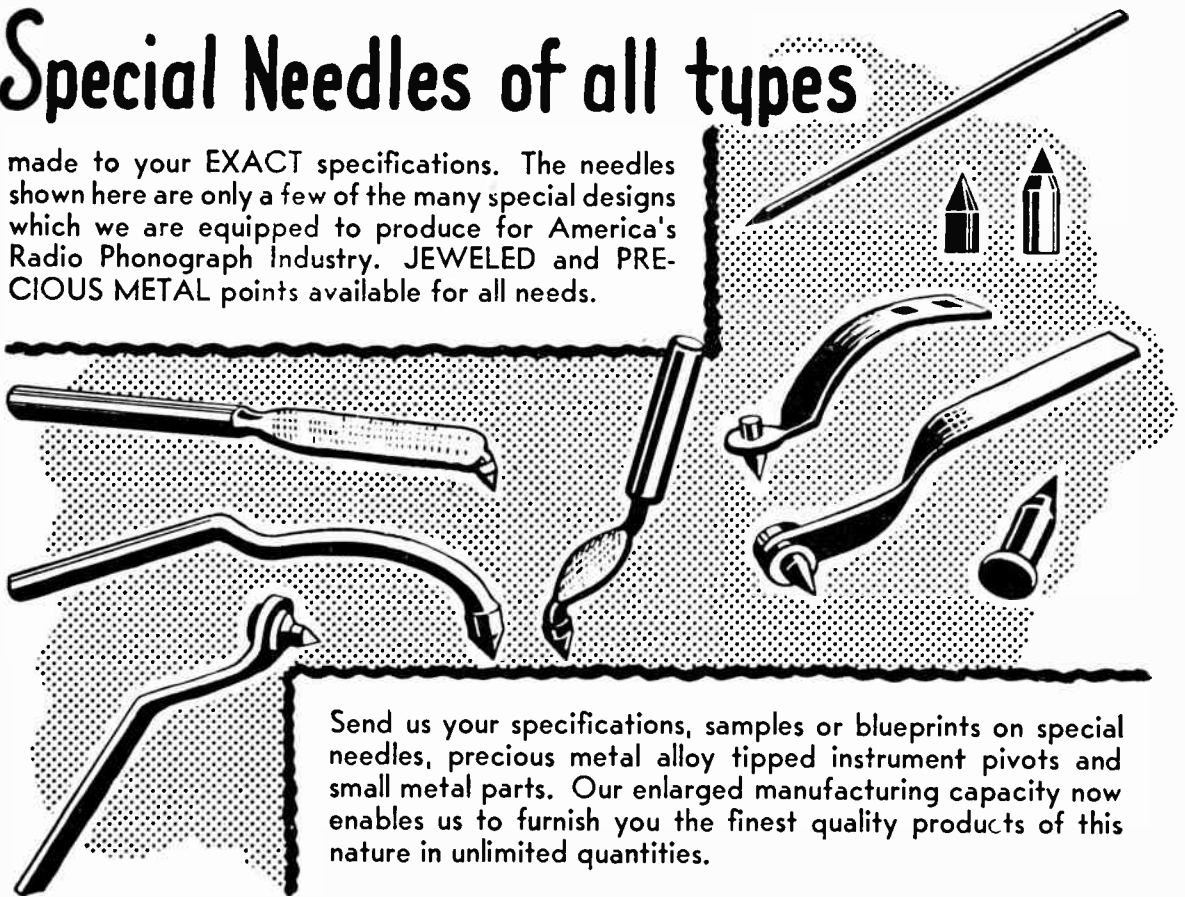
**FIXED TYPE
NEEDLES**

Whatever your requirements
M. A. MILLER Mfg. Co.

can supply you with America's **FINEST QUALITY** needles in any quantity, for original installation and your replacement needs.

Special Needles of all types

made to your **EXACT** specifications. The needles shown here are only a few of the many special designs which we are equipped to produce for America's Radio Phonograph Industry. **JEWELLED** and **PRECIOUS METAL** points available for all needs.



Send us your specifications, samples or blueprints on special needles, precious metal alloy tipped instrument pivots and small metal parts. Our enlarged manufacturing capacity now enables us to furnish you the finest quality products of this nature in unlimited quantities.

Manufacturers of the World's Largest Line of Long Life Recording and Playback Needles

M. A. MILLER MANUFACTURING CO. Inc.
1168 East 43rd Street Chicago, Ill.

Carillon Dynamic NEEDLES

COIN MACHINE NEEDLES



RIGID TYPE
Loud. A rigid needle especially adapted for the HEAVY pickups. Plays to 4000 records.
No. 544.....List \$1.00



MEDIUM
A semi-flexible type needle for HEAVY or LIGHTWEIGHT pickups, giving a medium tone and designed for the average juke installation. Up to 4000 plays.
No. 549.....List \$1.00

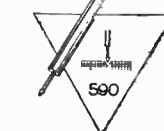


SOFT
A flexible type needle giving a high fidelity reproduction. Especially recommended for the LIGHTWEIGHT pickups. Unsurpassed for reproducing beautiful music. Plays up to 5000 records.
No. 547.....List \$1.00

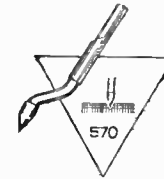


SAPPHIRE POINT
The peak of quality in coin phonograph needles, especially designed for the new lightweight pickups. Tipped with sapphire, this needle cannot be excelled for true economical operation. Up to 7,500 plays per needle.
No. 1003.....List \$1.50

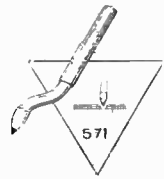
PLAYBACK NEEDLES



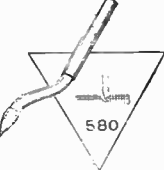
ALUMINUM SHANK
Osmium-alloy tip for high fidelity reproduction is carried on .020 needle shaft for low scratch level. The aluminum sleeve reduces vibration and needle-talk, minimizes record wear. One of the newest needle types.
No. 590.....List \$1.50



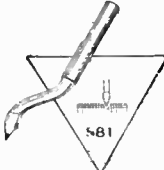
OSMIUM ALLOY
Scientific construction gives highest possible fidelity and full tone with lowest possible distortion and scratch. 1/8" offset. Precision shaped osmium alloy tip for long playing life.
No. 570.....List \$1.50



SAPPHIRE POINT . . . RUBY POINT
Our finest permanent type full tone needle with 1/8" offset Duraluminum shank and precision ground point set with finest quality long wearing jewel, good for 10,000 plays.
No. 571-S (Sapphire).....List \$2.00
No. 571-R (Ruby).....List \$2.50



OSMIUM ALLOY
Similar in all respects to our No. 570 needle, but has 3/16" offset shank which gives a softer tone. A very high fidelity needle with a minimum of scratch and noise.
No. 580.....List \$1.50



SAPPHIRE POINT . . . RUBY POINT
In all respects similar to our No. 571, but has 3/16" offset shank for softer tone. You cannot obtain a finer jeweled needle anywhere, regardless of price. Good for 10,000 plays.
No. 581-S (Sapphire).....List \$2.00
No. 581-R (Ruby).....List \$2.50

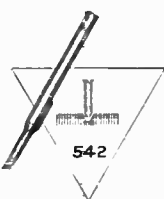
CUTTING NEEDLES



ALLOY TOOL STEEL
Made of the finest alloy tool steel, microscopically ground and polished with diamond dust. Recommended for amateur home use. Will cut approximately twenty-five six-inch records.
No. 543.....List 35c



PRECIOUS METAL ALLOY
A high grade recording stylus, for the advanced amateur and professional use. Electrically welded precious metal alloy tip, microscopically ground, and polished with diamond dust. Hand finished tip cuts smooth, clean groove for best possible results. Will cut approximately five hundred six-inch records.
No. 541.....List \$1.50



STELLITE
This patented Stellite recording stylus, when used by the advanced amateur or professional, will give results closely approximating the finest Sapphire. Hand-finished tip, cuts quiet smooth groove. Will cut approximately five hundred six-inch records.
No. 542.....List \$1.50

Manufacturers of the World's Largest Line of Long Life Recording and Playback Needles

M. A. MILLER MANUFACTURING CO. Inc.
1168 East 43rd Street Chicago, Ill.

RECORDING BLANKS

AIM

MANUFACTURED BY

Where **QUALITY** Counts



Yes, where quality counts — where success is measured by the faithful reproduction of the human voice — "AIM" Recording Blanks lead the field. Uniform cut and heavier coating mean successful cutting even by amateurs. The low needle wear and high degree of permanence mean they can be played back many, many times with clarity, fidelity and lack of surface noise.

Recording Blanks

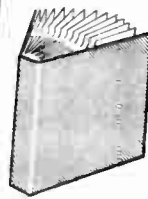
Record Blank Catalog Available. Write for Prices and name of nearest distributor. Inquiries invited from Jobbers & Dealers.		Size in Inches	Standard Pkg. Quantity	Weight per Standard Pkg.	List Price
DESCRIPTION					
"AIM" ORANGE LABEL "Bond Base"	A quality low priced blank, for home recording fans, or amateur transcriptions. The Perfected Bond Base and heavy construction guarantees the finest results.	6½"	100	6½ lbs.	\$.15
		8"	50	8 lbs.	.25
		10"	50	10 lbs.	.35
"AIM" BLUE LABEL "Thin Aluminum Base"	An aluminum base blank, of high quality at low prices to homes, schools, for demonstration and amateur work. Same coating material as heavy base aluminum, only difference being the thickness of aluminum base.	6½"	100	8 lbs.	\$.20
		8"	50	6 lbs.	.30
		10"	50	10 lbs.	.45
"AIM" YELLOW LABEL "Heavy Aluminum Base"	The most popular selling blank, made of the finest materials on heavy base aluminum. Used by recording studios, radio stations and professionals. A properly priced, quality blank.	6½"	100	10 lbs.	\$.30
		8"	50	8 lbs.	.40
		10"	50	12 lbs.	.60
		12"	25	9 lbs.	.80
"AIM" WHITE LABEL "Extra heavy Aluminum Base"	A quality product for Professional use, in making test cuts and regular recordings. An unsurpassed extra heavy aluminum blank.	10"	50	8 lbs.	\$.50
		12"	25	14 lbs.	.70
		16"	25	27 lbs.	1.50
"AIM" RED LABEL "Glass Base"	The Glass "Red Label" blank is of the same high standard as the "Yellow Label". Ideal for use in automatic phonograph machines, because it is of the same thickness as an ordinary phonograph record.	8"	24	12 lbs.	\$.60
		10"	24	15 lbs.	.80
		12"	24	19 lbs.	1.00

We'll be glad to furnish samples on request!

Accessories

"AIM" CUTTING NEEDLES	List Price
No. 500 Steel Cutting Needle	\$ 25 ea.
No. 501 Stellite Cutting Needle	1.50 ea.
No. 502 Sapphire Cutting Needle with (Brass Shank)	5.50 ea.
No. 503 Sapphire Cutting Needle with (Dural Shank)	7.25 ea.
"AIM" PLAYBACK NEEDLES (shadowgraphed)	
No. 504 Needle (packed 10 needles to pkg.)	per pkg. 10c
No. 505 Needle (packed 50 needles to pkg.)	per pkg. 50c
"AIM" RECORDING ACCESSORIES	
No. 506 Blank Preserver (2 oz. bottle)	\$.65 ea.
No. 507 Stroboscope	1.00 ea.
No. 508 6½" Mailing Envelope .....	.10 ea.
No. 509 8" Mailing Envelope .....	.12 ea.
No. 510 10" Mailing Envelope .....	.15 ea.

New VINYLITE COVERED RECORD STORAGE ALBUMS



An outstanding improvement in record album designing. Will outwear old style albums by at least 10 to 1. Looks like real leather, is washable, scuff-proof and double stitched. Gorgeously styled in solid colors including black, ivory, maroon, blue, and brown, with gold embossing. Index provided. 12 pockets. For 10" Records List Price \$1.35 For 12" Records List Price \$1.60 A Complete line of record storage albums available.

Write for **AIM MUSIC BOX CATALOG**; contains listing of Carousels, Radio Boxes, Phonographs, Cake & Sandwich Plates, etc.

AIM GENERAL CATALOG; Record Storage Albums, Record Carrying Cases, Record Cabinets, Phonographs, Recording Machines, Accessories.

SOME TERRITORIES STILL AVAILABLE FOR QUALIFIED DISTRIBUTORS

AIM INDUSTRIES

41 UNION SQUARE NEW YORK 3, N. Y. GRamercy 5-8231



audiodiscs

ALUMINUM BASE RECORDING DISCS

First produced in 1939, Audiodiscs quickly won the acceptance of both professional and amateur recordists. Because of their many superior qualities, these instantaneous recording discs have gained a place of eminent leadership in the recording world.

AN AUDIODISC FOR EVERY RECORDING NEED

RED LABEL AUDIODISCS are standard throughout the recording profession exceeding the professional demands of broadcasting stations, sound and movie studios and other exacting applications when top quality and dependability are essential requirements. Their many exclusive features have given new meaning to high fidelity recording and life-like reproduction. They are the finest discs obtainable.

SINGLE FACE RED LABEL AUDIODISCS have exactly the same fine qualities as standard Red Label and bring real economy to applications requiring but one side. Both sides are coated with the recordable side identified with embossed label.

YELLOW LABEL AUDIODISCS are the popular choice for all general purpose recording. Of high uniform quality, they are designed primarily for commercial recording studios, educational institutions, home recordists and other applications where the super quality Red Label Audiodiscs are not required.

REFERENCE LABEL AUDIODISCS are especially adapted for making test cuts, filing and reference recordings, auditions and equipment adjustments. Their unusually low price gives maximum economy.

BLUE LABEL AUDIODISCS offer the very best in recording quality for schools, homes, amateur and demonstration work. Made of exactly the same materials used in the manufacture of professional type Audiodiscs—except on a thinner aluminum base—these discs have brilliant tone, long-playing life, no audible needle scratch and are of consistent quality.

MASTER AUDIODISCS are the outstanding choice where copies of recordings (pressings) are to be made by the electroplating process. The excellence and consistent quality of these discs are well known to all record processors.

TYPE	Size (in.)	List Price Per Disc	Box Contains
RED LABEL	6 1/2	\$.55	25
	8	.80	25
	10	1.15	25
	12	1.85	25
	16	3.40	25
SINGLE FACE RED LABEL	10	.85	25
	12	1.40	25
	16	2.35	25
YELLOW LABEL	6 1/2	.45	25
	8	.70	25
	10	.90	25
	12	1.50	25
	16	2.70	25
REFERENCE LABEL	10	.70	25
	12	1.05	25
	16	1.90	25
BLUE LABEL	6 1/2	.35	50
	8	.70	50
	10	1.10	50
MASTERS	12	2.35	25
	13 1/4	3.05	25
	17 1/4	5.10	25
	13 1/4 S.F.	2.05	25
	17 1/4 S.F.	3.05	25

Prices slightly higher in Pacific Coast and Southwestern Areas.



PROPERTIES THAT MAKE FOR AUDIODISC LEADERSHIP

UNIFORM COATING

Audiogram's exclusive machine process produces a smooth flat coating seven thousandths of an inch thick, free from swirls, waves and "orange peel" effect. The depth of the coating is consistent within one-half thousandth of an inch.

LONGER STYLUS LIFE

The homogeneous coating is free from microscopic abrasive materials and surface imperfection which, in inferior discs, damage cutting points and cause extraneous noises in playback.

SILENT BACKGROUND

Audiogram, cut under good recording conditions, are entirely free from audible "background scratch."

LONG PLAYBACK LIFE

With correct playing equipment an Audiogram can be played for more than a hundred times with no noticeable increase in surface noise.

BRILLIANT FREQUENCY RESPONSE

These discs are noted for their brilliant high frequency response. Audiogram "speak for themselves" with quality performance that pleases the most critical recordist.

NO DETERIORATION WITH AGE

A special curing process removes from Audiogram the last trace of volatile constituents. Discs made over six years ago still cut easily and play back perfectly.

CONSISTENT QUALITY

Audiogram are manufactured by a unique automatic precision-machine process which assures consistent quality. This uniformity is a feature that helps engineer and amateur attain the highest degree of recording excellence.

GENERAL NOTE:

All Audiogram are manufactured on aluminum base. Red Label discs are embossed. Yellow and Reference discs have paper labels—Master Audiogram have no labels. All Audiogram have center-pin holes and three drive-pin holes except Master discs, which have one drive-pin hole. Lint-free envelopes are supplied in the packages of Red Label and Master discs. Other discs are packaged in their envelopes.

audiopoints



MICROSCOPICALLY MATCHED RECORDING AND PLAYBACK STYLI

THE NEWLY EXPANDED LINE of Audiopoints now covers the full range of recording and playback needs. There are Audiopoints that fully meet the requirements of the most exacting professional recordists. There are also Audiopoints which these engineers unhesitatingly recommend to the non-professional and the general public. Made by skilled craftsmen and conveniently packaged in cards, boxes or envelopes, Audiopoints are available in four types of recording styli and four types of playback points.

RECORDING AUDIPOINTS

SAPPHIRE No. 14. Long recognized by recording engineers as the best recording stylus obtainable. Manufactured to rigid specifications, the jeweled point with 87° included angle, correct radius and fine polish, cuts a silent, shiny groove for many hours. Disc-tested on a recording machine just before packaging. Also supplied with 70° included angle. List price \$7.25 (Resharp-ening cost \$3.25)

SAPPHIRE No. 202. A fine quality brass shank stylus, ideally suited for those recordists not requiring the super quality of Sapphire Audiopoint No. 14. List price \$5.25 (Resharp-ening cost \$2.60)

STELLITE No. 34. A favorite recording stylus with many professional and non-professional recordists. Though moderately priced, it is the very best stellite stylus produced. List price \$1.75 (Resharp-ening cost \$.85)

DIAMOND-LAPPED STEEL No. 50. Most practical stylus for home recordists when "first cost" is important. Being diamond-lapped, it cuts a quiet, shiny groove and gives from 15 to 30 minutes actual recording time. List price 3 for \$1.00

PLAYBACK AUDIPOINTS

SAPPHIRE No. 113. Materials, workmanship and design make this playback point the finest made for original recordings and vinyl transcriptions. For years the outstanding choice of professional recordists. (Should not be used on shellac pressings.) List price \$6.50 (Resharp-ening cost \$2.25)

"RED CIRCLE" SAPPHIRE No. 103. With straight dural shank and fine polished jewel point. Excellent for original recordings, vinyl pressings and phonograph records. List price \$2.00 (Resharp-ening cost \$1.00)

"RED CIRCLE" SAPPHIRE No. 303. Bent dural shank sapphire needle that is tops for phonograph records. For the first time a phonograph needle with a resharp-ening feature. List price \$2.00 (Resharp-ening cost \$1.00)

STEEL TRANSCRIPTION NEEDLE No. 151. The ideal all-purpose transcription needle for original recordings, vinyl pressings and phonograph records. Quality performance is assured since each point undergoes a shadowgraph test. List price 100 for \$1.25—20 for \$.25

RESHARPENING SERVICE

Established years ago, our Resharp-ening Service gives real economy in the use of Audiopoints No. 14, No. 202, No. 34, No. 113, No. 103 and No. 303. (When returning points, care should be taken to package them individually. For this purpose the original protective package cards are strongly recommended.)

AUDIPOINT PACKAGING

All Audiopoints except the No. 151 Steel Transcription needles are packaged in attractive cards. No. 151 are packaged 20 to the envelope and 100 to the box. Cards containing points No. 34, No. 50, No. 103 and No. 303 are mounted on colorful display cards—some dozen package cards to each display card. The package cards are cellophane wrapped and mounted in slots in the display cards. A strip of Scotch Tape on the back holds these cards in place and permits easy, neat removal that does not tear the cellophane wrapper. Envelopes containing No. 151 points are similarly mounted on display cards—50 envelopes per card or 1,000 needles. Package cards containing points No. 14, No. 202 and No. 113 are shipped in small boxes. **NOTE:** Points No. 14, No. 202 and No. 34 are supplied in standard short shank and long shank.

"HOW TO MAKE GOOD RECORDINGS"

"How to Make Good Recordings" is an authoritative handbook on all phases of recording equipment, materials and technique. Now in its fourth printing, the new edition has been completely revised and expanded to 133 pages. Prominently illustrated with scores of photographs, charts and drawings, this book is written in non-technical language that all can understand. List price \$2.00.



AUDIODISC CHIP-CHASER

When making a disc recording, with outside in tool, it is necessary to have some way of brushing the thread out of the way of the styli. The AUDIODISC Chip-Chaser is a perfect solution to this problem. It has a heavy base which is placed beside the turntable and requires no fastening down or adjusting. The Chip-Chaser automatically and intelligently brushes the thread toward the center, winding it up on the overhead post or drive pins, as the case may be. Available in two sizes: for 16" turntables and up to 12" turntables. List prices \$6.25 and \$5.00.



Jensen

"For the **WORLD'S FINEST Music**"

PHONOGRAPH NEEDLES

JENSEN INDUSTRIES, INC.

329 South Wood St., Chicago 12, Ill.



The famous Jensen Royal Jewel phonograph needle with the natural Sapphire tip and the original Jensen spring construction. Here's the long life needle that is so widely imitated but never equalled. Designed by Peter L. Jensen, the Royal Jewel incorporates latest developments of acoustical science. It absorbs vibration, minimizes surface hiss, prolongs the life of valuable records. Attractively packaged in a rich gold tray.

List Price

\$2.50

Catalog No. 25



The Jensen Classic—the newest member of Jensen's complete line of fine phonograph needles—designed especially for brilliant reproduction of instrumental and vocal recordings. The Classic has a wide tonal range and longer life with fidelity all the way. Its new spring construction absorbs "hiss" and scratch—delivers a "Stradivarius tone." Packaged in red and gold.

List Price

\$1.50

Catalog No. 15



The Jensen Concert phonograph needle is the most popular \$1 needle ever offered. Its full tonal range and long wearing qualities are assured by its flanged design. The spring action preserves the surface of records, lengthens their service life, provides clear, undistorted reproduction. Well over a million needles are in use. Packaged in a circular red and gold container.

List Price

\$1.00

Catalog No. 10



The Jensen Sweet—an outstanding Jensen needle at a low price. Rapidly becoming the popular choice of the teen age trade. Particularly designed for playing popular music. Remarkable tonal qualities, however, make it ideal for all good records. Individually packaged in green and black cards.

List Price

75c

Catalog No. 75



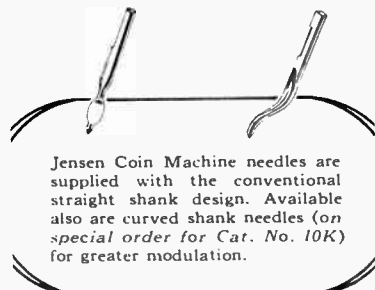


The Jensen Coin Machine Needle Sales Kit is a handy, pocket-size holder with note pad for reference notations. Supplied with 100 coin machine needles on interchangeable card units of 10 needles. Each needle card has space for a record of needle's playing history.

Jensen COIN MACHINE NEEDLE

Recent improvements in design and construction make the Jensen Coin Machine needle the outstanding and exclusive preference of many operators. Its locked-in osmium tip assures a definite saving in operating cost—fewer service calls—increased profits. Packaged two needles to a card, five cards to a unit.

Cat. No. 10J. 100 straight shank needles in units of 10 . . . Price on application



Jensen Coin Machine needles are supplied with the conventional straight shank design. Available also are curved shank needles (on special order for Cat. No. 10K) for greater modulation.

COUNTER DISPLAYS



Colorful, point-of-sales, Royal Jewel Display with 12 Genuine Sapphire needles. Attractive backboard printed in full color with convenient tray holding 12 beautiful individual red and gold oval packages.

Cat. No. 25D List price \$30.00



The new, Miniature Jensen Concert Needle display—the type that was introduced by Jensen and is so popular among dealers everywhere. Now supplied as standard display with Concert needles.

Cat. No. 10M. Unit of 1 Display and 12 individually packaged needles List price \$12.00



The familiar Jensen Counter display for Concert needles, holds twelve individual circular packages. Available on special order.

Cat. No. 10D List price \$12.00



The Jensen Sweet Display Card, a colorful green and black holder for 24 individual Jensen Sweet needle packages. Punched for hanging on wall. Has easel for counter display.

Cat. No. 75D . . . List price \$18.00



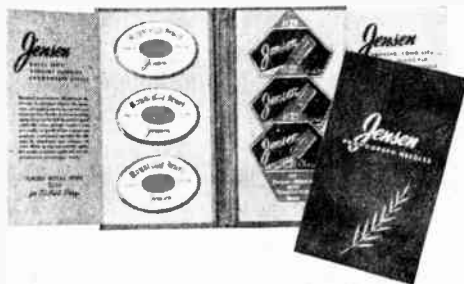
The Jensen COMBINATION Display Card, known as the 4-4-4 card because it holds 12 individually packaged Jensen needles, 4 each of the Jensen Royal Jewel, Jensen Classic and Jensen Concert needles. Definitely advantageous where space is limited and dealer prefers to show several needles.

Catalog No. 444 List price \$20.00



The Jensen Classic Miniature Display, small enough to fit nicely under glass counters or stand on top of counters as preferred. A new departure in display technique and another "Jensen first."

Cat. No. 15M. Unit of 1 Display and 12 individually packaged needles List price \$18.00



The Jensen Sales Kit for the Radio Serviceman. This compact kit is just the thing for slipping into pocket and taking on service calls, a definite aid in demonstrating fine phonograph needles. It's a real sales help. Descriptive copy printed alongside needles. Kit holds 3 each of the Jensen Royal Jewel and Jensen Classic. Catalog No. 612 List price \$12.00

Note:

To insure receipt of displays in undamaged condition and avoid billing confusion, we request your orders in standard carton quantities as follows:

No. 25D	4 Displays	No. 612	6 Kits	Nos. 10J or 10K	100 Needles
No. 10D	6 Displays	No. 444	6 Displays	No. 75D	4 Displays
No. 10M	6 Units of 12 Needles	No. 15M	4 Units of 12 Needles		



THE RECORDISC CORP.

395 BROADWAY, NEW YORK 13, N. Y., • CABLE ADDRESS: RECORDISC, NEW YORK, N. Y.

EXPORT DEPT.: ROYAL NATIONAL COMPANY, INC., 89 BROAD STREET, NEW YORK

Recordisc Home Recording Blanks "Snapshots-in-Sound"

Recordisc blanks manufactured for regular stock are coated with cellulose nitrate—the finest that money can buy. Users are assured of perfect performance *always!* Made up on special order, and at no increase in cost, is a complete line of Recordisc blanks employing ethyl cellulose with the U/L approved film. Recordisc blanks, with either type of coating, are available in the following bases and identifying labels:

Label	6 1/2"	8"	10"	11 1/8"	12"	13 1/4"	16"	17 1/4"
ORANGE	15c	25c	35c	.....	.....	.....	.....	.....
PURPLE	20c	30c	45c	.....	.....	.....	.....	.....
RED	30c	40c	60c	.....	80c	.....	.....	.....
"GM"	.....	60c	80c	.....	\$1.00	.....	.....	.....
PROFESSIONAL								
★Single Face	.....	.....	90c	.....	\$1.50	.....	\$2.70	.....
★★Double Face	.....	.....	85c	.....	\$1.40	.....	\$2.35	.....
★★★Double Face	.....	.....	\$1.15	.....	\$1.85	.....	\$3.40	.....
Master Disc (Double Face)	.....	.....	.....	.....	\$2.35	.....	\$3.05	\$5.10

ORANGE LABEL

BOND BASE

Designed primarily for the home recording fan, these discs are admirably suited to the average type of amateur transcription, where low price is required. Heavy and firm, with a compo base that is thick, these recording blanks are carefully coated with our standard Recordisc surface compound. Because of their low cost, they are a "party" favorite. Professional nitrate coated.

PURPLE LABEL

ALUMINUM BASE

A lighter weight, economical disc with .012 aluminum base. Priced to meet and beat competition.

RED LABEL

ALUMINUM BASE

These aluminum base discs, made on heavy .021 aluminum, are coated with the famous Recordisc flawless compound to assure high fidelity reproduction over wide frequency ranges. Comparable in quality to those used by broadcasting stations and professional recording studios, "Red Label" discs have been reduced in size for universal adaptation by those who want professional discs for equipment of non-professional size. "Red Label" discs are created for critical users who require the finest discs available in small sizes. Professional nitrate coated.

"GM" LABEL

ALUMINUM BASE

These discs, of heavy .021 aluminum base, represent the most critical selection and inspection standards of manufacture. Built to micrometric precision, they can receive the widest frequencies from the most sensitive recording equipment. Guaranteed not to age, dry out or deteriorate—capable of hundreds of bright, crisp playbacks. In the three largest sizes only.

ALSO AVAILABLE ON SPECIAL ORDER— Recordisc perfected ethyl cellulose coated discs, U/L approved.

YELLOW LABEL

Same quality and price as ORANGE LABEL

BROWN LABEL

Same quality and price as RED LABEL

PROFESSIONAL

Proven precision-perfect during years of laboratory research. Guaranteed to give flawless reproduction, even thread flow and frequency response in excess of 10,000 cycles. Produced under controlled conditions to make each disc absolutely uniform. Same-day shipments assured.

RECORDING AND PHONOGRAPH STYLI, NEEDLES AND ACCESSORIES

SAPPHIRE STYLUS

While this type of cutting needle represents a greater initial investment, it has the longest life and produces superior instantaneous recording. The specially lapped sapphire point cuts a clean shiny groove with the lowest surface noise. Ordinarily, these styli can be used for ten hours of recording time. In addition, they may be resharpened, periodically, as many as 15 times. Used extensively in professional recording as well as by the semi-professional and the advanced amateur. Packed in plush lined, individual jewel boxes. List price, each \$6.50

STELLITE STYLUS

Carefully machined, of a special metal alloy, these needles produce results almost as good as those obtained from the sapphires. Not as fragile as more expensive sapphire styli. Recommended for less experienced recording operators. Packed one to a protective card. List price, each \$2.00

Sapphire Phonograph Needles

Preferred by the most critical music lovers and discerning artists—for both phonograph records and recording discs. Advanced Recordisc design and features result in higher fidelity, bell-like clarity, greater listening enjoyment, uniform performance throughout playing life, and less wear on the record surface. It has been acclaimed as one of the best needles available today. 7000 plays. List price \$2.50

TRANSCRIPTION NEEDLES

Scientifically designed to fit perfectly into the grooves of recording and transcription blanks. They have a wide frequency response and unusual tonal brilliance. Wear on records reduced to minimum. 25 in envelope. List price..... per pkg. 25c

RECORD PRESERVER

This lubricant not only cleanses and preserves the fresh surface but lubricates the groove to a degree where the improvement in tonal qualities is readily discernible to the ear. List price..... 2 oz. bot., 45c

TURNTABLE LUBRICANT

This Recordisc lubricant is recommended for smooth operation of all parts subject to friction wear. List price per jar, 40c

RECORDISC

"Special QX-5" Recording Stylus

Here is a recording stylus which presents an unbeatable combination in tonal reproduction, top performance, long life and unusual value. Made to our exacting laboratory specifications, it has a filter cutting point and recessed shank for smooth and easy cutting. Precision made of processed and tempered steel, and especially designed for those who seek a very fine but not fragile recording tip. List price, each75c

HAND LAPPED STEEL STYLUS

Carefully hand lapped for greater fidelity. Packed one to the protective card. List price, each50c

STEEL STYLI (Nickel Plated Shank)

Recording life of approximately 1 hour each. Packed 3 to a card. List price, 3 for \$1.00

"Coronet" Phonograph Needles

Clear, clean brilliant reproduction throughout each musical note. Made from precious metal alloys, with a satin-smooth, non-corrosive tip. Your ears will convince you of the superiority of these needles, and tell you why they are the choice of juke box and record changer owners. May be used on any type of phonograph—electrical or mechanical. 3000 plays. List price.....\$1.00

"Imperial" Phonograph Needles

Made to our own special formula, Recordisc "Imperial" Needles provide full tonal range, less scratch and hiss, minimum needle "talk," and longer record life. Uniformly excellent in quality, these needles become an integral part of automatic record changers for which they are an especial favorite. 5000 plays. List price..... \$1.50

MAILING ENVELOPES

Heavy brown Kraft; lined with high test corrugated board; may be sent via Parcel Post or Express with absolute safety. Printed with provision for return address of sender.

For 6 1/2 inch record, list price.....each 10c
For 8 inch record, list price each 12c
For 10 inch record, list price each 15c



DUOTONE NEEDLES

FILTER POINT No. 6



The Filter Point needle is a newly developed needle which actually filters surface noise, yet retains the brilliance of your recordings. The highly polished and rounded point assures smooth movement in the record groove, reducing record wear to a minimum. The needles are hand picked and will play from 12 to 15 records without frequency loss or distortion. The specially designed point is guaranteed not to break when used with any type of record changer.

List

Package of 10 needles \$ 0.10
 Cat. No. 610-B—Carton of 100 pkgs..... 10.00
 Cat. No. 610-C—Display card of 50 pkgs... 5.00

Package of 25 needles \$ 0.25
 Cat. No. 625-B—Carton of 50 pkgs..... 12.50
 Cat. No. 625-C—Display card of 50 pkgs... 12.50

MIRO-POINT No. 21



The Miro Point Needle is the "low surface" specialist of the DuoTone Line. Despite this fact it still brings out the highs in a manner never before attained by a needle of this type. Designed to play at least 2000 records the Miro Point is the outstanding needle in the field today.

List Price

Needle list price, each.....\$0.50
 Cat. 21-B—Carton of 18 needles..... 9.00
 Cat. No. 21-C—Display card of 18 needles... 9.00



Transcription needles are individually shadowgraphed to insure each needle being perfect. They are especially designed to reduce record wear on home recordings and will give life-like reproductions when used on commercial or home records. This needle, because of its perfect point and fine frequency response, is extensively used by broadcasting stations, and recording studios. Economically packed for use in home and studios.

List Price

Package of 10 needles.....\$ 0.10
 Cat. No. 710-B—Carton of 100 packages..... 10.00
 Cat. No. 710-C—Display card of 50 packages..... 5.00
 Package of 25 needles.....\$ 0.25
 Cat. No. 725-B—Carton of 50 packages..... 12.50
 Cat. No. 725-C—Display card of 50 packages..... 12.50
 Package of 75 needles.....\$ 0.50
 Cat. No. 750-B—Carton of 20 packages..... 10.00

DURPOINT No. 15



Permanent needle for home use. Will play over 4000 records without changing. Takes additional polish from the groove of the record thus minimizing record wear, and reducing surface noise. Because of this feature the Durpoint should not be removed from pick up until replacement is necessary. Packed on individual cards.

List Price

Each Needle\$ 1.00
 Cat. No. 15-C—Display card of 12 needles..... 12.00
 Cat. No. 15-B—Carton of 12 needles..... 12.00

CACTUS NEEDLES No. 18



Made from specially selected cactus thorns chemically treated to prolong life of point and assure quiet reproduction. Each needle may be re-sharpened many times. Can be used on record changers as well as ordinary phonographs. Especially recommended for use on records with high surface noise.

List Price

Package of 12 needles\$ 0.35
 Cat. No. 18-B—Carton of 50 packages..... 17.50
 Cat. No. 18-C—Display card of 25 pkgs..... 8.75

DIAMOND NEEDLE No. 50



The world's finest needle for the world's finest phonographs. Transmits every tone with remarkable clarity and smoothness for years. Only needle which plays shellac and vinylite records interchangeably without wear. Warranty certificate with each needle. Also available in straight shank.

List Price

Cat. No. 50—Each Needle\$50.00

No. 19 "STAR" SAPPHIRE



Reproduces any type of record without surface noise yet maintains brilliant high frequencies. Finest quality gem, brightly polished for smooth riding in groove. Special design filters out all noise and needle talk. Has flat on shank for easy insertion in pickup. May be removed if desired. Individually packed in beautiful lucite box. Ideal for dubbing.

List Price

Each Needle\$ 5.00
 Cat. No. 19-B—Carton of 12 needles..... 60.00

CHROMIUM No. 17



The Duotone Chromium needle is Duo Chrome plated to insure long life and minimum record wear. Ideally suited for use on record changers. Each needle has a highly polished surface, and is shadowgraphed. Being of a semi-permanent type, the Chromium needle avoids the necessity of constantly changing needles. Each needle is guaranteed to play at least 50 records, assuring a full evening of music without requiring a change of needle.

List Price

Package of 5 needles\$ 0.25
 Cat. No. 17-B—Carton of 50 pkgs..... 12.50
 Cat. No. 17-C—Display card of 25 pkgs... 6.25

TRANSCRIPTION No. 7



DUOTONE
No. 20
"LIFETONE"
OSMIUM
TIPPED
5000
PERFECT
PLAYINGS

The DuoTone Lifetone Needle was especially designed for use with record changers. Its brilliant performance coupled with low surface noise makes it ideal for this purpose. When properly used, it will give at least 5000 perfect playings, maintaining throughout its life the same bright reproductive qualities. Packed in beautiful plastic container.

List Price

Each needle\$ 1.50
 Cat. No. 20-B—Carton of 12 needles..... 18.00
 Cat. No. 20-C—Display card of 12 needles... 18.00

NEW REGENT SAPPHIRE (Double Bend) No. 13



A permanent needle with a flat on the shank allowing removal from, and insertion into pickup as required. Will play approximately 6000 home recordings, or 5000 commercial recordings. Finest quality jewel assures natural tone reproduction and very low record wear. Especially recommended for use in lightweight pickups. Packed on individual card.

List Price

Each Needle\$ 2.00
 Cat. No. 13-B—Carton of 12 needles..... 24.00
 Cat. No. 13-C—Display card of 12 needles... 24.00

RUBY NEEDLE No. 35



The Ruby tops everything else in its price class. Second only to the famous Duotone "Star" Sapphire, the Ruby is known for its lifelike reproduction with minimum of surface noise. A display is included with each dozen needles.

List Price

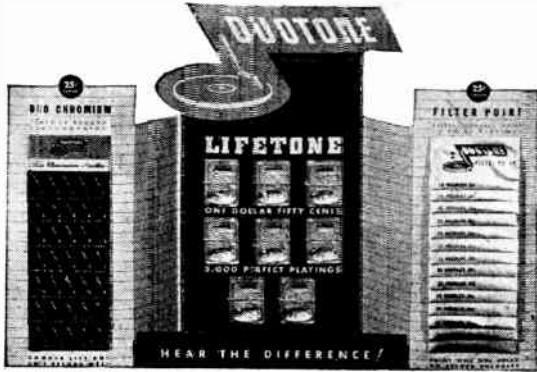
Each Needle\$ 3.50
 Cat. No. 35B—Carton of 12 Needles..... 42.00



DUOTONE NEEDLES

LUCKY SEVEN DEAL No. 777

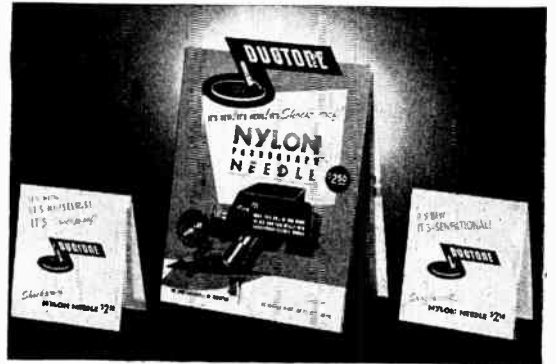
This popular deal includes three of our most popular numbers, all on one attractive display. It consists of the following:



14 packages Filter Point needles.....@ 25c..	\$ 3.50
7 packages Duo Chrome needles.....@ 25c..	1.75
7 packages New Lifetone needles.....@ 1.50..	10.50
	\$15.75
1 new Lifetone needle FREE	1.50
Total Value.....	\$17.25

SHOCKPROOF NYLON NEEDLE No. 25

Unique in design, this needle has an osmium tip on spring steel set into a Nylon bumper. This eliminates damage to either needle or record should the pickup arm be accidentally dropped. This needle also eliminates surface noise. Individually packed in attractive lucite container. This needle will play up to 3,000 recordings.



Each needle.....	\$ 2.50
Cat. No. 25-C—Display card of 12 needles.....	30.00

STEEL CUTTING SYLUS No. 8



The ideal needle for use in homes by amateur record makers. With ordinary care will make a quiet record of good quality, which can be played back many times. Will make approximately 15 to 25 10" records. Packed 4 to handy point-protecting felt-lined package.

Price \$1.00

	List
Cat. No. 8-B—Carton of 25 pkgs.....	25.00
Cat. No. 8-C—Display card of 25 pkgs.....	25.00

STELLITE CUTTING SYLUS No. 9

Available in Long and Short Shank



The Stellite cutting stylus with proper care, will make a record that compares favorably with a professional cutting. Its hand-lapped edge cuts a groove which as

sures a noiseless recording. Stellite stylus are recommended after some cutting experience has been acquired. The reduction in surface noise and the improved quality of the recording will be instantly noticeable, and will be well worth the difference in cost. Will cut approximately 500 6" records. Individually packed on cards. Price \$2.00.

	List
Cat. No. 9-B—Carton of 12 needles.....	24.00
Cat. No. 9-C—Display card of 12 needles.....	24.00

LAPPED STEEL CUTTING SYLUS No. 10



This new hand-made lap on the cutting edge of the needle makes a much smoother cut, thereby reducing surface noise and adding to the life of the needle. Especially recommended for making vocal recordings. List Price, 5 Needles on card.....\$1.50
Cat. No. 10-B—Carton of 10 cards.....\$15.00
Cat. No. 10-C—Display card of 10 cards..... 15.00

SAPPHIRE SYLUS No. 12



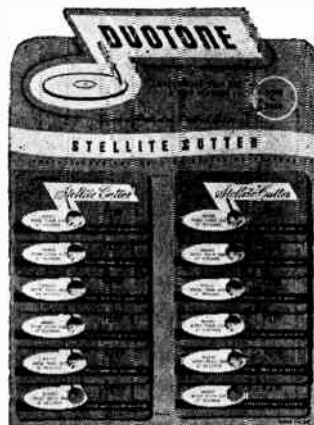
Available in Long and Short Shank. The sapphire Professional cutting stylus is the finest available. The cutting jewel is very highly polished and has a patented hand-lapped edge, which cuts and polishes the groove, making a record with the lowest surface noise. With proper handling will give 10-15 hours of cutting and can be re-sharpened many times.

DO NOT DIP
Packed in plastic container.
Cat. No. 12—Needle, list price, each.....\$5.50
(Re-sharpening—Each \$2.00)

DURAL SHANK No. 11
Available in Long and Short Shank
This needle is similar to No. 12, and in addition is held to more exacting specifications, as established by leading engineers. Mounted in Dural shank. Packed in plastic container. Each \$7.25
(Re-sharpening—Each \$2.00)

DUOTONE DISPLAY CARDS ARE AVAILABLE FOR THE FOLLOWING NEEDLES

Number	List
FILTER POINT	
610C—10c per pkg.—50 pkg. to card.....	\$5.00
625C—20c per pkg.—50 pkg. to card.....	12.50
TRANSCRIPTION	
710C—10c per pkg.—50 pkg. to card.....	5.00
725C—20c per pkg.—50 pkg. to card.....	12.50
DURPOINT	
15C—\$1.00 each—12 needles to card.....	12.00
CHROMIUM	
17C—5 needles to pkg.—25c. 25 pkg. to card.....	6.25
CACTUS	
18C—35c per pkg.—25 pkg. to card.....	8.75



Number	List
LIFETONE	
20C—\$1.50 per needle—12 cards to display ..	\$18.00
MIRRO POINT NEEDLE	
50c per needle.	
21C—18 needles to display.	9.00
STEEL CUTTING SYLUS	
\$1.00 per pkg. of 4 needles.	
8C—25 pkg. to display card.	25.00
STELLITE SYLUS	
\$2.30 per needle individually packed	
9C—12 needles to display card.....	24.00
LAPPED STEEL SYLUS	
\$1.50 per pkg. of 5 needles.	
10C—10 pkg. to display card.	15.00



DUOTONE RECORDING BLANKS

ALUMINUM DISCS

	IN CARTON	RED LABEL	PURPLE LABEL
6 1/2 inch	100	\$.30 ea.	\$.20 ea.
8 inch	50	.40 ea.	.30 ea.
10 inch	50	.60 ea.	.45 ea.
12 inch	25	.80 ea.	



RECORDING FLUIDS

DUOTONE RECORD PRESERVER

A newly developed fluid that helps make phonograph records (Victor, Columbia, Decca, etc.) last much longer. Duotone Record Preserver not only cleans the record, but actually puts a thin protective coating on it. This coating protects the record against excessive wear and in addition enables the needle to glide smoothly, thus reducing surface noise.

Each Bottle List \$0.50

Cat. No. 105-B

Attractive display carton of twelve 2-oz. bottles 6.00

PRE-RECORDING FLUID

For use on the disc before cutting. When applied to the surface with a piece of soft cotton, it allows the needle to cut smoothly, thus reducing surface noise and needle wear. Will not harm ANY kind of coating.

Each Bottle List \$0.50

Cat. No. 101-B

Carton of 12 Bottles 6.00

HARDENING FLUID

For use on home recorded records after cutting. Apply to surface with piece of soft cotton, covering entire surface of record. Preserves groove structure and record life. Materially reduces surface tension. Restores original tone quality on older records.

Each Bottle List \$0.50

Cat. No. 102-B

Carton of 12 Bottles 6.00

DUOTONE VAN EPS CUTTING HEAD

A new improved recording head of the finest quality for professional and semi-professional use. Very low distortion, especially on complex waves. Extended frequency range, peak practically negligible.

Used by leading recording studios in New York and broadcasting studios and motion picture companies, as well as many government agencies.

Especially designed for recording on cellulose-coated discs making possible instantaneous recordings that conform with high fidelity broadcast transmissions. Requires only 20 DB level (6 milliwatts and 500 ohms) for normal amplitude. Head has reed armature which acts as its own damper, eliminating rubber and other deteriorating materials. Normal response extended from 6500 cycles to 8000 and can be extended up to 10,000 with proper equalization.

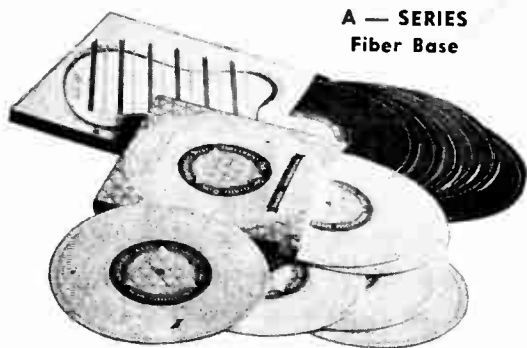
Can be easily installed. Head comes equipped with extra mounting plate for instant mounting on standard recording machines. All moving parts are machined with watchmaker's precision. The Head is hermetically sealed and guaranteed if the seal is not broken.

Net Price \$150.00*

Recordio Discs

by **WILCOX-GAY**

USE RECORDIO DISCS FOR THOSE BETTER RECORDINGS



A — SERIES
Fiber Base



D — SERIES
Aluminum Base
Packed in
Attractive Albums

Type	Diameter	Price	No. in Carton	No. in Shipping Case	Weight of Shipping Case
A-26½	6½"	\$.60 pkg. of 6	60	600	35 lbs.
A-28	8"	1.00 pkg. of 6	60	600	45 lbs.

The original Recordio Disc, lightweight and flexible. Just right for mailing. It carries the Underwriters' Stamp of approval. Combines high quality with low price.

Type	Diameter	Price	No. in Carton	No. in Shipping Case	Weight of Shipping Case
D-26½	6½"	\$1.25 album of 6	60	300	28 lbs.
D-28	8"	1.75 album of 6	60	300	42 lbs.
D-210	10"	2.50 album of 6	60	300	67 lbs.

A high quality, but inexpensive, aluminum base disc for your permanent recordings. Possesses remarkably good ageing qualities and will give many good playbacks. The Albums provide a storage place for your records. Carries the Underwriters' Stamp of approval.



THE "G" SERIES DISC

The "Jewel" of the Recordio Disc Line

Type	Diameter	Price	No. in Carton	No. in Shipping Case	Weight of Shipping Case
G-28	8"	\$.40 per disc	25	200	33 lbs.
G-210	10"	.60 per disc	25	200	50 lbs.

A beautiful, translucent, wine-red coating on a heavy-weight aluminum base. It combines permanence, fidelity and brilliant reproduction with complete safety. Carries the Underwriters' Stamp of approval.

RECORDIPOINT CUTTING NEEDLES

- D-2 Stellite Cutting Needle, \$1.50 each
Display Card contains 12
Std. Shipping Case contains 300
- D-3 Steel Cutting Needle,
Card of two, \$.50
Display Card contains 48
Std. Shipping Case contains 1200

RECORDIPOINT PLAYBACK NEEDLES

- D-8 Steel Playback Needle, pkg. of 35 \$0.25 pkg.
Standard Case, 750 pkgs.
- 49-2031 Long Life Curved Shank Needle \$1.50 ea.
Standard Pkg., 10.
- 49-2032 Spring Action Needle, For horizontal chuck mounting \$1.50 ea.
Standard Pkg., 10.
- D-5 Straight Shank, Long Life Needle \$1.00 ea.
Display Card, 12 needles
- D-6 High Quality Sapphire Needle \$2.50 ea.
Display Card, 12 needles
- D-7 Hard Metal Tipped Needle \$0.50 ea.
Display Card, 24 needles

Designed for **DOUBLE DUTY...**



COMBINATION WIRE RECORDER MECHANISM

Note: The C-1000 Series Wire Recorder Mechanism is a basic mechanism not suitable for use except in combination with proper associated equipment.

THE
C-1000
SERIES



*Quality Built
Throughout!*

This mechanism is a product of the famous Crescent Tool and Die shops and is equipped with the new Crescent-engineered Recording Head. Many exclusive features of design built into this head give recordings the "Front Row" realism so much desired in this type of equipment.

- Records magnetically on a stainless steel wire—up to one full hour program from any input source that can be fed into the associated amplifier equipment.
- Plays back magnetically with a fidelity, dynamic range, and absence of background noise that accounts for the present heavy demand for Crescent Wire Recorder mechanisms.
- Plays or records on the wire from phonograph records much better than most single purpose record players... because the heavy duty recording motor and the heavy, accurately machined, die cast take-up drum are used as a phonoturntable. The new Crescent tone arm, originally designed for Crescent Automatic Record Changers, adds its share to listening and recording pleasure.
- Rewinds at fast speed... 5 times as fast as recording speed... so that it takes only a short time to reach any part of the wire to Record, Play, Erase, or Re-record.
- One single knob controls the mechanism... because a special control assembly combines the electrical and mechanical control functions. Wire recorder automatically shuts itself off, at end of wire, in all positions of operation... recording, playing, or rewind.

A New Combination Record Player and Magnetic Recorder-Reproducer

Combined with proper associated equipment, the new Crescent Wire Recorder Mechanism becomes one of the most interesting devices now available to amateurs, experimenters, sound men, service men, or anyone else interested in the field of electronic equipment. There are at least a dozen practical uses for a good wire recorder in every home and office in America.

The current public demand for wire recorders is directly traceable to the last war. War production helped materially to expand the plant, personnel, machinery and engineering facilities of Crescent Industries to a position of leadership in the design and manufacture of wire recording equipment. The Crescent Recording Head is a specific example of Crescent engineering and manufacturing skill.

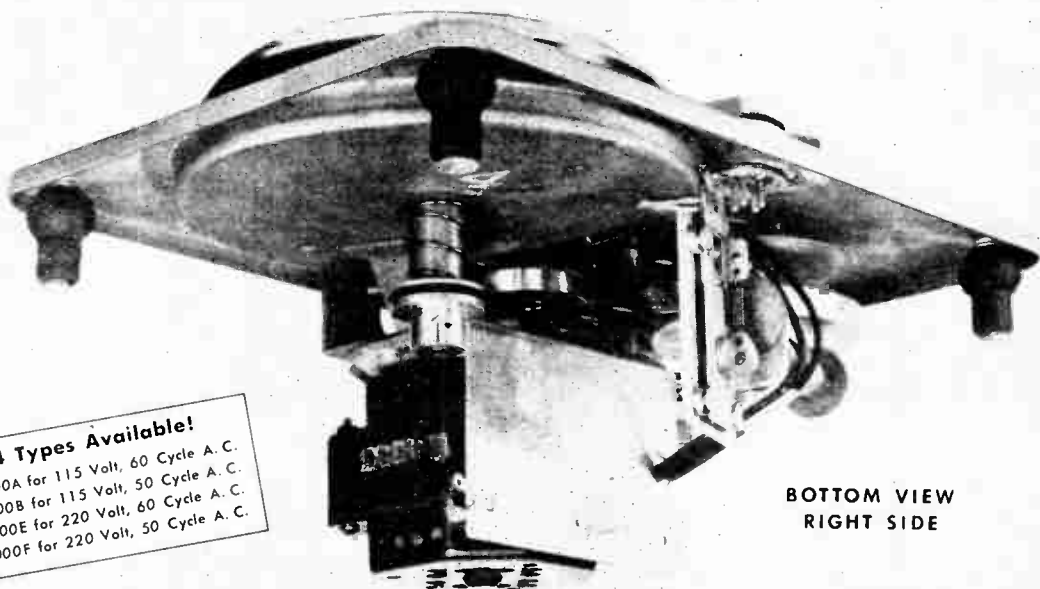
This is not the whole story behind Crescent's dominant position in the field, however. It remained for the men who originally made famous the name Crescent Tool and Die Co., to turn Crescent engineering developments and specifications into reality. Their experience, skill and precision workmanship achieved a steady, day-by-day production of wire recorder mechanisms that perform so fine they enhance the value and prestige of any other equipment with which they are combined to make up a complete system.

CRESCENT INDUSTRIES, INC.

4140 WEST BELMONT AVENUE • CHICAGO 41, ILLINOIS
EXPORT SCHEEL INTERNATIONAL, INC., CHICAGO 18, ILLINOIS, U. S. A.

Printed in U. S. A.

Crescent C-1000 SERIES WIRE RECORDER MECHANISMS



**BOTTOM VIEW
RIGHT SIDE**

4 Types Available!
 C-1000A for 115 Volt, 60 Cycle A. C.
 C-1000B for 115 Volt, 50 Cycle A. C.
 C-1000E for 220 Volt, 60 Cycle A. C.
 C-1000F for 220 Volt, 50 Cycle A. C.

TECHNICAL DATA

ELECTRICAL

- Power, Input See Types Listed Above
- Motor Underwriters' Approved
Heavy duty, even speed recording motor
- Motor Switch Underwriters' Approved
- Erase Current Switch S. P. D.T.
- Crescent Recording Head Type No. WR45-C
- Voice Coil Impedance
 - At 10,000 Cycles Approx. 12,000 ohms
 - At 5,000 Cycles Approx. 7,600 ohms
 - At 1,000 Cycles Approx. 2,240 ohms
 - At 100 Cycles Approx. 500 ohms
- Input to Voice Coil (Recording)
Peak recording level 0.6 volt rms at 1000 cycles.
- Output from Voice Coil (Playback)
Recording at a level of 0.6 volt rms 1000 cycles, on standard recording wire will give approximately 2 millivolts output on playback.
- Recording Wire
Uses .004 or .0036 stainless steel wire, spools, and leaders conforming to proposed R. M. A. standards.
- Wire Speed
 - Recording and playback 2 feet per second
 - Rewind Average of 10 feet per second
- Erase and Bias Coil Designed to operate at 30,000 cycles
Impedance at 30,000 cycles Approx. 64 ohms
Requires 700 milliamps at 4.5 volts 30,000 cycles
- Compensation Simplest form
Shunt a .001 mfd condenser across a 100,000 ohm resistor and connect this combination in series with the voice coil.

An input of 15 volts rms at 1000 cycles to the circuit mentioned above will give 0.6 volts rms across the voice coil. Total audio power required is less than 2 1/4 milliwatts. If additional compensation is desired, it should be included in the amplifier circuit, as any substantial reduction of the value of the series resistance will materially reduce the signal to noise ratio.

Phono-Record Player

Take Up Drum
Also serves as a turntable for records. The turntable is rim driven from the powerful recording motor and operates at 78 RPM. Accommodates either 10 or 12 inch records.

Phono Pick Up
Lightweight, scientifically designed arm equipped with L70 or P92B crystal cartridge accommodates all standard types of modern needles.

PHYSICAL

- Dimensions Mounting Plate 9" x 13"
Requires inside cabinet space of 12 1/2" x 15 1/4" to play 12" record with lid closed.
Requires 3" above cabinet mounting board and 5" below surface of cabinet mounting board.
- Mounting Floating
Mechanism "floats" on four live rubber "Borry" mounts. Mounting centers 7 1/2" x 11 1/2".
- Finish Mounting plate finished in beautiful mahogany Hommerloid with cream colored plastic shield and chrome trim.
- Weight
Actual weight of wire recorder mechanism 14 lbs.
Shipping weight 16 lbs.

Operating and Hookup, Service, and Application Data Packed With Each Unit.

CRESCENT INDUSTRIES, INC.

4140 WEST BELMONT AVENUE, CHICAGO 41, ILLINOIS, U.S.A.

MANUFACTURERS OF

RECORD CHANGERS • WIRE RECORDERS • LOUD SPEAKERS • TOYS • METAL STAMPINGS • TOOLS & DIES

For S-m-o-o-t-h TROUBLE-FREE Performance...

Simplicity of Adjustment—Sit-down position for 10 and 12 inch records...and position at which tone arm trips the change cycle mechanism...are all indexed to a single, stamped control plate which does not vary. One simple screw driver adjustment synchronizes the tone arm to this control plate...one of the reasons why Crescent Changers are Trouble-Free.

AVAILABLE IN
STANDARD C-350
SERIES and AUTOMATIC
SHUT-OFF C-400 SERIES



FREE-FLOATING—

It Floats...on 4 live rubber "Barry Mounts" that reduce transfer of vibration and motor rumble to a minimum! Easy to Mount...Drill 4-19/32" holes, then push the "Barry Mounts" into the holes (just try to get them out without tools).

No Shipping Bracket Required...After changer has been installed in its cabinet, "Barry Mounts" help protect it during transportation.



CONTROLS—

Single Knob...controls ON-OFF and AUTOMATIC or MANUAL operation. Knob moves in four directions and is clearly marked.

Reject Button...is conveniently located on top of the tone arm support. Operated by pushing down on the tone arm when the tone arm rests on the support, or by pushing the button itself when record is being played.



CHILD-PROOF — JAM-PROOF

Tone arm may be moved to any position at any time without jamming machine and without any danger of changing adjustments.



AUTOMATIC RECORD CHANGERS

You'll like this practical, precision built, high quality record changer. It's Trouble-Free! Ideal both as original or replacement equipment. Simplicity of design and durability of construction assure a minimum of trouble after installation...cut profit losses due to extra servicing.

Changer is of the single post type to avoid chipping or cracking of records. Center post is scientifically shaped to guide the records down, on an air cushion, to the thick, velvet-like coating on the turntable which runs on a shock absorbing cork washer.

Tone arm design is such that it trips and functions perfectly with no more needle pressure than that required by any of the modern, high grade crystal cartridges. This means reduced needle scratch, reduced "needle talk", and longer record life.

Plays, automatically, 12 ten inch or 10 twelve inch records. (Not intermixed). Plays, manually, home recordings and single records. Less than 5 second change cycle for greater continuity of music.

Powerful even speed motor, special turntable bearing design, smooth rim drive and many other Crescent-engineered features combine to reduce noise, wobble and wow in this changer, and to lengthen its life.

Beautiful mahogany Hammerloid finish with deep maroon turntable, tone arm, record shelf support casting, and plastic trim, gives just the right color contrast for plenty of eye appeal.

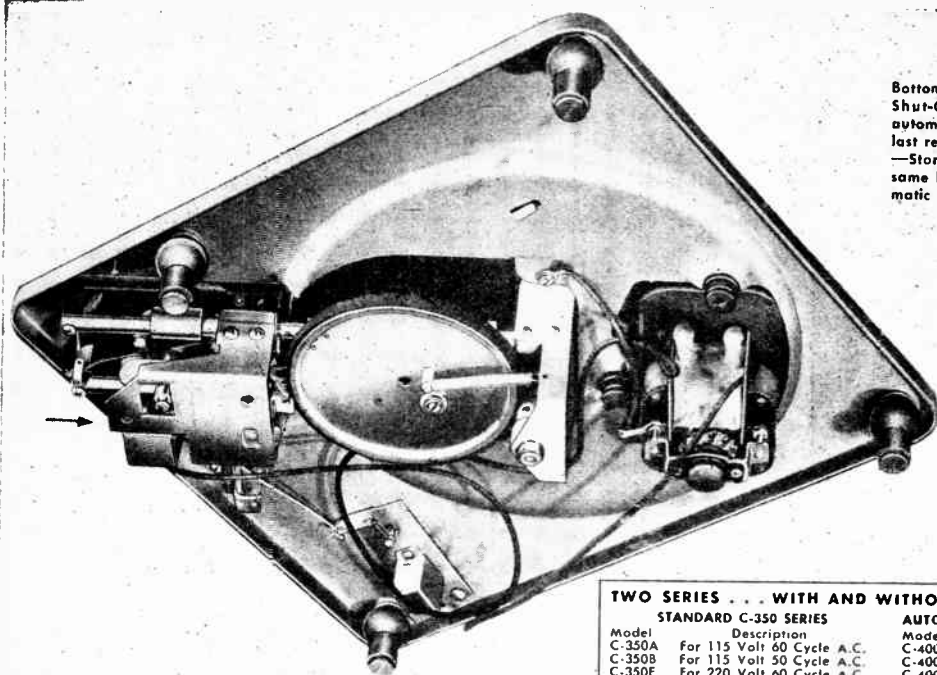
CRESCENT INDUSTRIES, INC.

4140 WEST BELMONT AVENUE • CHICAGO 41, ILLINOIS

EXPORT: SCHEEL INTERNATIONAL, INC., CHICAGO 18, ILLINOIS, U. S. A.

PRINTED IN U. S. A.

Crescent Automatic Record Changers



Bottom View of Automatic—Shut-Off Series—Changer automatically shuts off after last record has been played—Standard Series is just the same but without the automatic shut-off mechanism.

STANDARD C-350 SERIES		AUTOMATIC SHUT-OFF C-400 SERIES	
Model	Description	Model	Description
C-350A	For 115 Volt 60 Cycle A.C.	C-400A	For 115 Volt 60 Cycle A.C.
C-350B	For 115 Volt 50 Cycle A.C.	C-400B	For 115 Volt 50 Cycle A.C.
C-350E	For 220 Volt 60 Cycle A.C.	C-400E	For 220 Volt 60 Cycle A.C.
C-350F	For 220 Volt 50 Cycle A.C.	C-400F	For 220 Volt 50 Cycle A.C.

TECHNICAL DATA

ELECTRICAL

Power Input	See Types Listed Above
Motor	Underwriters' Approved
Type	Shaded Pole Induction
	Noiseless, constant speed, rubber mounted.
Insulated	To Withstand 1000 Volts
Pick-up	
Frequency Range	Standard
Output Volts, Rated	1.0-1.6 Volts
Pick-up, Crystal	Astatic L 70 or Shure Bros. P 92 B
Switch	Underwriters' Approved
	Mounted on Automatic-Manual Control. Lever makes only one control knob necessary.

MECHANICAL

Spindle	Nickel Plated Steel
	Especially designed to permit wider record shelf which prevents more than one record dropping at same time. Records drop flat to turntable where air cushion effect reduces chance of chipping and cracking.
Turntable	
Size	9"
Speed	78 R. P. M.
Drive	Rim
	Direct, cushioned, rim drive eliminates wow.
Bearings	Ball Thrust
	Stress-proof steel. Shock mounted on cork supports.
Eccentricity	.010 Max.
Tone Arm	
Weight	According To Cartridge Used
Mounting	Smooth, Free-Floating
Needle Accommodation	All Standard Types
Trip	No Extra Force Beyond Tone Arm Torque required to actuate automatic trip.

Automatic Ejector Mechanism

Operates with stock of ten 12-inch or twelve 10-inch records (not mixed), ejecting one record at a time without stalling. Automatically tripped at end of each record.

Lubrication None required. Lubricated for life at the factory.

PHYSICAL

Changer Base Plate	11 1/2" x 13 1/2"
Mounting	Floats On 4 "Barry Mounts"
	No shipping brackets required.
Mounting Hole Centers	Back Side 8 1/2"—Left side 10"—Front Side 11 1/2"
Mounting Hole Diameters	.593 or 19/32"
Clearance Required	
Above Cabinet Mounting Board	5 1/2"
	Includes stock of records and "Barry" mounts.
Below Cabinet Mounting Board C-350 and C-400 Series	2"
Minimum Inside Cabinet Measurements	12 1/2" x 14 1/2"
Finish	
Motor Board	Mahogany Hammerloid Baked Enamel
Tone Arm	Deep Maroon Baked Enamel
Tone Arm Support	Deep Maroon Plastic
Turntable	Deep Maroon Flock
Record Shelf Support Casting	Deep Maroon Plastic
Control Knob	Deep Maroon Plastic
Weight	
Record Changer Only	
Model 350 Series	Approx. 8 1/2 lbs.
Model 400 Series	Approx. 8 1/2 lbs.
Packed for shipping	
Model 350 and 400 Series	Approx. 11 lbs.

Operating Instructions and Service Manual Packed With Each Unit.

CRESCENT INDUSTRIES, INC.

4140 WEST BELMONT AVENUE, CHICAGO 41, ILLINOIS, U.S.A.

MANUFACTURERS OF

RECORD CHANGERS • WIRE RECORDERS • LOUD SPEAKERS • TOYS • METAL STAMPINGS • TOOLS AND DIES

V-M *Automatic* RECORD CHANGERS



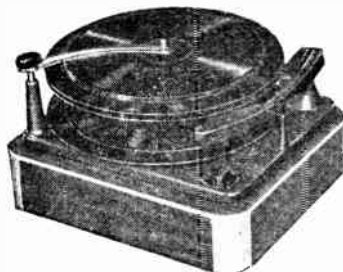
MODEL 402



MODEL 403



MODEL 400C



MODEL 401C

FEATURES OF THE V-M 400 SERIES RECORD CHANGERS

- **Positive Intermix:** Will play ten 10" and 12" records intermixed in any sequence. Also plays ten 12" or twelve 10".
- **Records Protected From Wear and Breakage:** Records are gently lowered on step in spindle — not dropped as in other changers. Records will not crack around center hole, edges cannot be chipped, and records will not crack due to uneven drop because they are handled from just one point, and dropped horizontally, creating an air cushion between records, virtually eliminating any slap or jarring stops.
- **Automatic Shut Off:** After last record has been played tone arm returns to rest and control knob turns to "off" position automatically.
- **Single Knob Control:** Controls are simple and easily understood. Only control settings necessary are "OFF," "ON" and "REJECT" on single knob.
- **Plays All Records:** Records are handled entirely from the center hole. Dropping mechanism is unaffected by variations in record diameter, uneven edges, and warped records.
- **Manual Operation:** Home recording of all sizes up to 12" of either the "Outside In" or the "Inside Out" type may be played manually.
- **Adjustments Eliminated:** There are no adjustments in the mechanism under the base to slip or vibrate out of adjustment. Parts are pinned or riveted together. The only adjustment on the machine is for needle height and set-down and is made from above the base plate.
- **Completely Jam-Proof:** Tone Arm may be held and Control Knob may be turned to any position during cycle. Records cannot jam in ejecting mechanism. If trouble occurs the current is automatically shut off and the control knob turns to the "OFF" position.
- **Solid One Piece Die Cast Base:** Construction assures uniformity of manufacture, great strength and ability to withstand unusual abuse.
- **Simple Design:** Mechanism is extremely simple with even fewer parts than most changers which do not have the intermix and automatic shut-off features.
- **Fast Cycle:** Total time required to change records is less than four seconds.
- **Resonance-Free Tone Arm:** Special design of tone-arm breaks up resonance and reduces distortion.
- **Depressed Turntable:** Improved appearance is achieved by setting the turntable in a depression in the baseplate.
- **Shipping Bolts Hidden:** Shipping Bolts are out of sight beneath turntable. Bolts need never be removed from changer but are merely turned down and left in place to be used again whenever necessary.
- **Ball-Bearing Tone Arm:** Tone arm turns on friction-free ball bearings, greatly improving tracking and tripping action.
- **Minimum Mounting Space Required:** 13 $\frac{1}{2}$ " wide, 12 $\frac{1}{4}$ " long. Overall height, 7 $\frac{1}{4}$ ".
- **Powerful, Rumble-Free Motor:** Special motor with less than 2% total rumble.

The beautifully styled plastic tone arm on the 400 series changers will take all standard makes of cartridges and all of the new magnetic pick-ups.

V-M *Corporation*

BENTON HARBOR, MICHIGAN

WALCO



Cutting

NEEDLES

Trade Mark

STANDARD OF THE RECORDING INDUSTRY

WALCO needles are made only by Electrovox Company, the original makers of jewel and precious metal tipped phono needles. WALCO cutting needles and WALCO playback needles for home and professional use are individually in-

spected for flaws in material and workmanship prior to shipment. WALCO users are thus assured of complete satisfaction on every needle purchased.

Walco SAPHIRE PROFESSIONAL RECORDING STYLUS

Hand lapped and polished genuine sapphire cutting needle. Standard 87 degree included angle on cutting edge. Highest professional recording quality guaranteed. Available in short shank ($\frac{3}{8}$ ") and long shank ($\frac{11}{16}$ ").

Resharpener charge \$1.25 each
Resharpener charge — 12 or more \$1.00 each



Model
WC-25

LIST PRICE
\$6.00 each†

Walco STELLITE PROFESSIONAL RECORDING STYLUS



Model
WC-30

LIST PRICE
\$2.00 each†

A precision made long-life cutting stylus for professional and home recorders. Characteristics similar to sapphire cutter with slightly shorter life. Cannot be resharpened.

Available on Counter-Dispenser Cards of 12
Also in Cartons of 25 Needles

Walco STEEL CUTTING NEEDLES



Model
WC-20

PACKAGE OF 5
LIST PRICE
\$1.00 each*

Made from the finest hardened alloy-steel, these cutters conform to exacting specifications with quality and uniformity guaranteed.

Available on Counter-Dispenser Cards of 12 Packages
Also in Cartons of 25 Packages

Quantity Discounts on Request

WALCO



Play Back NEEDLES

Trade Mark

QUANTITY DISCOUNTS QUOTED ON REQUEST

**WALCO "400"
FLOATING JEWEL SAPPHIRE**



MODEL WS-400

RATING: UP TO 10,000 PLAYS
LIST PRICE \$2.50

**WALCO "400"
RUBY JEWEL NEEDLE**



MODEL WR-400

RATING: UP TO 6,000 PLAYS
LIST PRICE \$2.00

**WALCO "400"
PRECIOUS METAL NEEDLE**



MODEL WA-400

RATING: UP TO 4,000 PLAYS
LIST PRICE \$1.50

These three needles are beautifully packaged and are available 12 to a counter-display card or in compact cartons of 12 needles. These needles are also available with microgroove (one mil radius) points for playing 33 1/3 RPM LONG PLAYING records.

**WALCO
DIAMOND NEEDLE
MODEL WD-90**

The Walco Diamond is the first professional broadcast-type needle to be offered for low cost, mass sale. Once installed in today's pickup, the needle problem is ended.

LIST PRICE \$12.50



**PROFESSIONAL DIAMOND
PLAY BACK STYLUS**

MODEL WD-95 — For users who prefer a straight shank needle or where a bent needle cannot be used, Walco provides the WD-95 Straight Shank. TIP: South African diamond; SHANK: 17ST duraluminum; POINT RADIUS: .0025"; INCLUDED ANGLE: 45 degrees; OVERALL LENGTH: Straight shank — 1 1/4".

LIST PRICE \$12.50



**WALCO SAPPHIRE
"Muted Stylus"
NEEDLE**



MODEL WP-30S
LIST PRICE \$2.50*

**WALCO PRECIOUS METAL
"Muted Stylus"
NEEDLE**



MODEL WP-30
LIST PRICE \$1.50*

**THE ENCORE
MODEL WA-100**

An exceptionally fine needle priced for volume sales. Precious metal tipped.

LIST PRICE \$1.00



**STRAIGHT SHANK
SAPPHIRE
MODEL WN-55**

Especially recommended for low-pressure pickup and professional use. Notched dual shank.

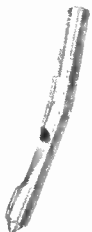
LIST PRICE \$1.00



**BENT SHANK
SAPPHIRE
MODEL WN-50**

For use on older type phonos with heavier pickups. Hand polished sapphire with dual shank.

LIST PRICE \$1.00



**GROOVE-MASTER
MODEL WA-150**

A high fidelity needle tipped with precious metal alloy. Hand polished point with filter type shank.

LIST PRICE \$.50



**COIN MACHINE
SAPPHIRE
MODEL WS-900**

For the light weight tone arms in new coin phonographs. Rated at 5,000 record plays.

PRICES ON REQUEST



**COIN MACHINE
PRECIOUS METAL
MODEL WA-700**

An all-purpose, long-life coin machine needle of superior quality.

PRICES ON REQUEST



RCA TEST EQUIPMENT

for SERVICE • LABORATORIES • INDUSTRY • SCHOOLS



MASTER VOLTOHMYST ELECTRONIC METER (WV-95A)

DC Ammeter: 7 Ranges to 10 amp.
 DC Voltmeter: 6 Ranges to 1000 volts
 Input Resistance.....11 megohms, all ranges
 Ohmmeter.....6 ranges to 1000 megohms
 AF Voltmeter...7 ranges to 1000 RMS volts
 Freq. Response Flat from 30 to 20,000 cycles
 RF Voltmeter (using RCA Diode Probe
 MI-8275 as accessory)
 4 Ranges...0.5, 0-10, 0-50, 0-100 RMS volts
 Freq. Response.....Flat to 250 Mc.
 (Crystal probe MI-8263 used for peak indica-
 tion)
 Capacitance Meter...6 ranges, 4 μ f to 1000 μ f.

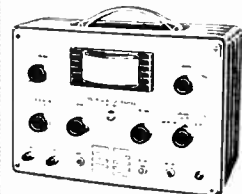
Virtually a universal test instrument in itself, this electronic meter has high input impedance and is practically "burn-out" proof. It measures ac, af, and rf voltages, dc voltage and current, capacitance, and resistance. Two probes can be provided for measuring RMS, peak-to-peak, or \pm peak voltages to 250 Mc; complex waveform voltages can be measured. Suggested User Price: \$152.50.



TELEVISION CALIBRATOR (WR-39A)

Tunable Oscillator Freq. Range:
 4 bands, 19-110 Mc;
 2 bands, 17-240 Mc.
 Scale Accuracy:
 0.25 Mc from 19-120 Mc
 0.5 Mc from 170-240 Mc
 Output Voltage.....0.1 volt RMS
 Maximum Output Attenuation Ratio...100:1
 Output Impedance.....10 ohms
 Primary Crystal Standard.....Freq. 2.5 Mc
 Accuracy 0.1%
 Modulating Crystal Standard...Freq. 0.25 Mc
 Accuracy 0.03%

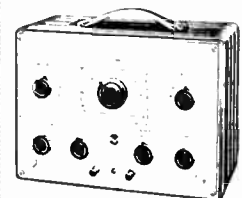
A precision signal source for accurate alignment of TV and FM receivers. Asymmetrical i-f pass bands are quickly determined when calibrator is used in conjunction with a suitable sweep generator and oscilloscope. Traps can be peaked precisely, and r-f circuits quickly aligned to proper frequency limits. Suggested User Price: \$250.00.



TELEVISION SWEEP GENERATOR (WR-59A)

Frequency Ranges:
 Video.....0.10 Mc
 Picture Intermediate,
 3 bands.....5-15, 20-30, 25-40 Mc
 FM Intermediate.....10-11.5 Mc
 TV Sound Intermediate.....20.25-22.25 Mc
 Television Radio.....Channels 1-13
 Output voltage, RMS, all freq ranges...0.1 volt
 RF Ranges—Output Impedance:
 (Bal. or Unbal.).....300 ohms
 Phase Control Range.....0°-160°
 Amplitude Variation Over
 Any Range.....less than 1 db

Sweep signal generator for visual alignment of television and FM receivers in conjunction with a suitable oscilloscope such as RCA WO-55A or RCA WO-58A. 13 television r-f ranges, 5 i-f ranges, and a video sweep range are provided to meet general shop and field requirements. Piston-type attenuator has a maximum ratio of 20000/1. Suggested User Price: \$325.00.



OSCILLOSCOPE (WO-58A)

Vertical Amplifier:
 Deflection—0.5 p-to-p volts/inch
 Sine-Wave Frequency Response:
 Flat within \pm 20% from 5 cycles to 2 Mc
 Frequency response curve has no positive slope above 1 kc
 Square-Wave Response:
 Tilt and overshoot less than 2% from 30 to 50,000 cycles
 Rise time less than 0.15 sec from 10% to 90% of total rise
 Horizontal Amplifier:
 Sine-Wave Frequency Response:
 Flat within \pm 10% from 6 to 100,000 cycles

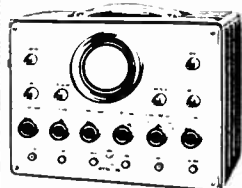
5" oscilloscope affording accurate presentation of synchronizing pulses, deflection waveforms, and composite video signals. Peak-to-peak voltages of waveforms can be read during operation. Defective waveforms can be traced step-to-step. The crystal probe can be plugged into the kinescope socket of the receiver under test to observe video-amplifier response. Sugg'd User Price: \$345.00.



OSCILLOSCOPE (WO-55A)

Vert. Amplifier Sensitivity...1.3 p-to-p v/in.
 Horiz. Amplifier Sensitivity...1.5 p-to-p v/in.
 Deflecting Electrode Sensitivity
 Horiz. 135, Vert. 120 p-to-p v/in.
 Input Resistance and Capacitance
 0.5 megohm shunted by 55 μ f
 Sine-Wave Frequency Response:
 Upper Limit of Ver. & Hor. Amp.....200 kc
 Max. Input Voltage to Amp...750 p-to-p volts
 All prices in effect 6/1/48.

General purpose, portable 3" oscilloscope for radio servicing. . . Useful for observing visual response curves during alignment, tracing audio distortion and hum, measuring frequency, determining percentage of modulation, and measuring peak-to-peak voltages. Suggested User Price: \$129.50.





RCA TEST EQUIPMENT

for SERVICE • LABORATORIES • INDUSTRY • SCHOOLS

VOLTOHMYST (195-A)



The ideal instrument for radio servicing. In one instrument, at one price, you get 6 testing devices: DC Voltmeter; Ohmmeter; AC Voltmeter; A-F Voltmeter; Outputmeter; FM Indicator. New features include diode for AC measurements, linear AC scale for all ranges; plastic meter case with unbreakable front; shielded AC cable and probe. Sugg'd User Price: **\$79.50.**

Electronic DC Voltmeter Range 0-3; 10; 50; 100; 500; 1000 volts
Input Impedance 10 megohms constant
Electronic Ohmmeter Range 0-1,000; 10,000; 100,000 ohms; 0-1; 10; 100 megohms
Internal Source 3 volts
Electronic AC Voltmeter Range 0-5; 10; 50; 100; 500; 1000 volts
Power Supply 105-125 volts; 50-60 cycles
Dimensions 6 3/4" w; 9 5/8" h; 6 1/4" deep
Weight 14 lbs.
Finish Grey wrinkle, brush chrome panel

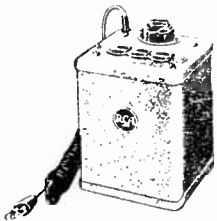
BATTERY VOLTOHMYST (WV-65A)



Portable electronic voltmeter-ohmmeter and ammeter combination for mobile, industrial or rural use. Works anywhere without AC power source thereby extending famous Volt-Ohmyst features to places remote from power lines. Neon panel lamp lights when battery is used. Unusually long battery life with normal use. Sugg'd User Price: **\$87.50** (Less batteries).

DC Ranges 0-3; 10; 30; 100; 300; 1000 v
Input Resistance 11 megohms constant
AC Ranges 0-100; 30; 100; 300; 1000 v
Sensitivity 1000 ohms per volt
Ohmmeter Ranges 0-1000; 10,000; 100,000 ohms; 0-1; 10; 100 megohms
DC Ammeter Ranges 0-3; 10; 30; 100; 300 millamp; 0-10 amp
Batteries Four 1 1/2 "A"; two 45v "B"
Dimensions 6 1/4" w; 9 1/2" h; 5 1/2" deep
Weight (incl. batteries) 9 lbs.

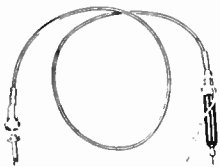
ISOTAP ISOLATION TRANSFORMER (WP-24A)



Eliminates shock hazard between ac-dc chassis and ground, speeds detection of receiver faults with high-low line tests, and facilitates testing of receivers at the design-center value of 117 volts. A six-position switch and three secondary receptacles afford maximum flexibility and operating convenience. Sugg'd User Price: **\$8.95**

Primary:
Line Voltage Range 105-130 volts
Switch Positions 105, 110, 115, 120, 125, 130 volts
Frequency 50-60 cycles
Secondary:
Output Voltages (approx.) 105-117-130
Power Output at unity power factor (Max.):
Cont. Oper. (30°C Amb.) 100 watts
Intermit. Oper. (30°C Amb.) 150 watts
Regulation (at 100 volt-amperes) 10%

CRYSTAL PROBE (MI-8263)



Makes any VoltOhmyst a VHF Voltmeter. Reads flat to 100 Mc. Adapts VoltOhmyst for HF, FM or TV test needs, within sensitivity range of the instrument. Withstands DC loads of 250 volts. Sugg'd User Price: **\$8.95.**

Input Voltage 22 rms volts (max)
Frequency Range 1000 cycles to 175 Mc
Frequency Response ± 10% from 1 kc to 100 mc
Overall Accuracy ± 7.5% at full scale
Input Capacity 3.5 μf

TESTPOINT ADAPTERS (MI-18760)



Set of 7 useful and versatile signal-tracing and voltage-checking aids. Ideal for quickly localizing trouble where socket contacts are inaccessible. Simplifies point-to-point signal tracing. Makes dynamic circuit test possible before chassis is removed from cabinet. Tube base types include

4-pin; 5-pin; 6-pin; 7-pin (small); 7-pin (large); octal and loctal adapters. Sugg'd User Price **\$7.50** per set including durable hardwood rack.

Miniature Tube Testpoint Adapter MI-8265 (not shown). Sugg'd User Price: **\$1.50.**

All prices in effect 3/1/48.

Simpson

SIMPSON ELECTRIC CO.

INSTRUMENTS THAT STAY ACCURATE

TWO-INCH ROUND OR RECTANGULAR INSTRUMENTS

DIRECT CURRENT MILLIAMMETERS

Model 125 (Rd.—Open Face), 126 (Shroud) and 127 (Rectangular)

Range	Price
0-1	\$6.75
0-5	6.30
0-10	6.30
0-15	6.30
0-25	6.30
0-50	6.30
0-100	6.30
0-150	6.30
0-200	6.30
0-250	6.30
0-300	6.30
0-500	6.30
0-1000	6.30

ALTERNATING CURRENT AMMETERS

Model 155 (Rd.—Open Face), 156 (Shroud) and 157 (Rectangular)

Range	Price
0-1	\$5.85
0-3	5.85
0-5	5.85
0-10	5.85

0-50	\$6.90
0-100	6.90
0-150	7.80
0-300	9.60

ALTERNATING CURRENT VOLTMETERS

Model 155 (Rd.—Open Face), 156 (Shroud) and 157 (Rectangular)

Range	Price
0-5	\$6.45
0-10	6.45
0-15	6.45
0-25	6.45
0-50	6.45
0-100	6.45
0-150	7.80
0-300	9.00
0-500	11.25

DIRECT CURRENT VOLTMETERS

Model 125 (Rd.—Open Face), 126 (Shroud) and 127 (Rectangular)

Range	Price
0-5	\$6.90
0-10	6.90
0-15	6.90
0-25	6.90

(Continued in next column)

WATTMETERS—Electrodynamometer Type

RANGES	2 INCH Model 175 (Rd.—Open Face), 176 (Shroud), and 177 (Rectangular)	3 INCH Model 75 (Rd.—Open Face), 76 (Shroud), and 77 (Rectangular)	4 1/2 INCH Model 79 (Rectangular)
0-75 Watts	150 V— .5 A \$16.95	\$18.00	\$23.40
0-150 Watts	150 V— 1 A 16.95	18.00	23.40
0-300 Watts	150 V— 2 A 16.95	18.00	23.40
0-750 Watts	150 V— 5 A 16.95	18.00	23.40
0-600 Watts	300 V— 2 A 18.75	19.80	25.20
0-1500 Watts	300 V— 5 A 18.75	19.80	25.20
0-3000 Watts	300 V—10 A 18.75	19.80	25.20

RADIO FREQUENCY AMMETERS

(Internal Thermocouple Type)

Model 35—3 inch round case.
Model 36—3 inch shroud case.
Model 37—3 inch rectangular case.
Ranges: 0-1, 0-1.5, 0-2, 0-2.5, 0-3, or 0-5 Amperes—\$9.60.
0-10 Amperes—\$12.00.
Model 135—2 inch round case.
Model 136—2 inch shroud case.
Model 137—2 inch rectangular case.
Ranges: 0-1, 0-1.5, 0-2, 0-3, or 0-5 Amperes—\$8.40. 0-10 Amperes—\$11.00.

VU METERS

Two types of scales are available with all VU Meters. Both meet the standards set up by Bell Laboratories. The "A" scale stresses the level in VU and is primarily used in monitoring wire lines. The "B" scale stresses percent use of the transmitter output and is the standard for broadcast service.

VOLUME LEVEL INDICATORS

(Copper Oxide Rectifier Type)

Model 45—3 inch round open face; Model 46—3 inch round shroud case; Model 47—3 inch rectangular case.

DB METERS

Calibrated for use on 500 ohm line. Power 6MW.

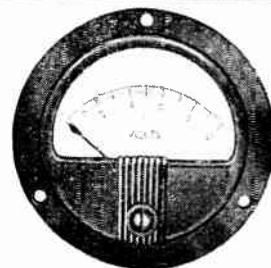
General Purpose	45, 46 or 47—10 to +6DB Meter—Resistance 2500 ohms.....\$13.20
	45, 46 or 47—10 to +6DB Meter—Resistance 5000 ohms.....\$16.50
High Speed	45, 46 or 47—10 to +6DB Meter—Resistance 5000 ohms.....\$24.00
Low Speed	45, 46 or 47—10 to +6DB Meter—Resistance 5000 ohms.....\$24.00
General Purpose	Model 145—2 inch round case. Model 146—2 inch shroud case. Model 147—2 inch rectangular case.
	145, 146 or 147—10 to +6DB Meter—Resistance 2500 ohms.....\$11.50
	145, 146 or 147—10 to +6DB Meter—Resistance 5000 ohms.....\$14.40

Model 45, 46 or 47 (Not Illuminated) "A" Scale or "B" Scale.....	\$21.00
Model 49 (Not Illuminated) "A" Scale or "B" Scale (4 1/2 in. rectangular).....	24.00
Model 49 (Illuminated) "A" Scale or "B" Scale (4 1/2 in. rectangular).....	28.50

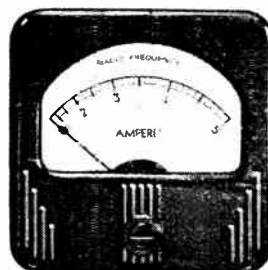
4 1/2" RECTANGULAR INSTRUMENTS

MODEL 29—D.C.		MODEL 59—A.C.	
MA	0-15 .....\$8.70	0-25 .....\$8.70	0-150 .....\$9.90
0-1	8.55	0-25	8.70
0-10	8.10	0-50	8.70
0-50	8.10	0-150	10.50
0-100	8.10	0-300	11.70
0-200	8.10	MICS	0-50 .....\$21.00
0-500	8.10	0-100	17.10
VOLTS	0-1 .....\$8.70	0-200	14.10
0-10	8.70	0-500	11.10
	0-5 .....8.70	AMPS	0-1 .....\$7.95
	0-10 .....8.70	0-3	7.95
	0-15 .....8.70	0-5	7.95
	0-25 .....8.40	0-10	7.95
		0-25	9.30

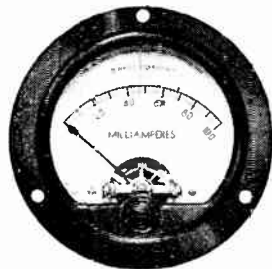
All Prices Dealer's Net



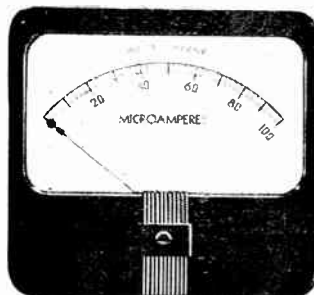
2" ROUND CASE—SHROUD STYLE. Flanged diameter, 2 3/4"; depth overall, 2 5/16"; body diameter, 2-11/64"; scale length, 1 7/8". Bakelite case.



2" RECTANGULAR CASE. 2 3/8" square. Mounts in round hole. Body diameter, 2-3/16". Bakelite case.



2" ROUND CASE—OPEN FACE STYLE. Flange diameter, 2 3/4"; depth overall, 2-5/16"; body diameter, 2-11/64"; scale length, 1 7/8". Bakelite case.

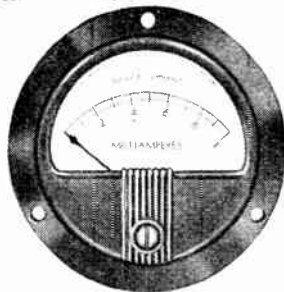


★ Simpson

SIMPSON ELECTRIC CO.

INSTRUMENTS THAT STAY ACCURATE

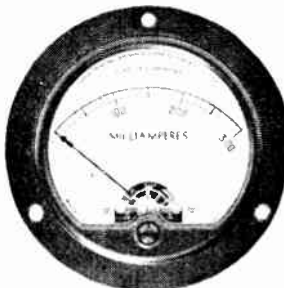
THREE-INCH ROUND OR RECTANGULAR INSTRUMENTS



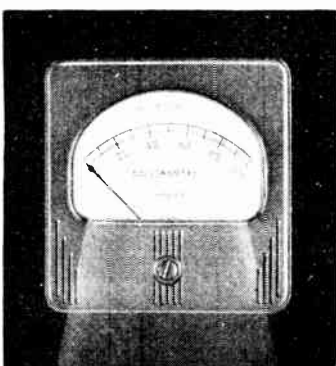
3" ROUND CASE—SHROUD STYLE. Flange diameter, 3½"; depth overall, 2¼"; body diameter, 2¾"; scale length, 2-9/16". Bakelite case.



3" RECTANGULAR CASE. Width, 3"; height, 3½". Mounts in round hole. Body diameter, 2¾". Bakelite case.



3" ROUND CASE—OPEN FACE STYLE. Flange diameter, 3½"; depth overall, 2¼"; body diameter, 2¾"; scale length, 2-9/16". Bakelite case.



DIRECT CURRENT VOLTMETERS
Model 25 (Rd. — Open Face), 26 (Shroud) and 27 (Rectangular)

Range	
0-3	\$7.80
0-5	7.80
0-10	7.80
0-15	7.80
0-25	7.80
0-50	7.80
0-100	7.80
0-150	9.60
0-200	9.60
0-300	10.80

(1000 ohms per volt)
Model 25 (Rd. — Open Face), 26 (Shroud) and 27 (Rectangular)

Range	
0-50	\$11.40
0-100	12.00
0-200	12.45
0-300	13.95
0-500	15.60
0-1000	17.25

DIRECT CURRENT MILLIAMMETERS
Model 25 (Rd. — Open Face), 26 (Shroud) and 27 (Rectangular)

Range	
0-1	\$7.65
0-3	7.65
0-5	7.20
0-10	7.20
0-15	7.20
0-25	7.20
0-50	7.20
0-100	7.20
0-150	7.20
0-200	7.20
0-250	7.20
0-300	7.20
0-500	7.20
0-1000	7.20

DIRECT CURRENT MICROAMMETERS
Model 25 (Rd. — Open Face), 26 (Shroud) and 27 (Rectangular)

Range	
0-1	\$17.25
0-100	15.00
0-200	12.60
0-500	9.90

DIRECT CURRENT AMMETERS
Model 25 (Rd. — Open Face), 26 (Shroud) and 27 (Rectangular)

Range	
0-1	\$7.80
0-3	7.80
0-5	7.80
0-10	7.80
0-25	7.80
0-50	7.80
30-0-30	7.80

ALTERNATING CURRENT VOLTMETERS
Model 55 (Rd. — Open Face), 56 (Shroud) and 57 (Rectangular)

Range	
0-3	\$6.90
0-5	6.90
0-10	6.90

(Continued in next column)

0-15	\$6.90
0-25	6.90
0-50	6.90
0-100	6.90
0-150	8.25
0-300	9.60
0-500	12.00

ALTERNATING CURRENT AMMETERS
Model 55 (Rd. — Open Face), 56 (Shroud) and 57 (Rectangular)

Range	
0-1	\$6.45
0-3	6.45
0-5	6.45
0-10	6.45
0-15	6.45
0-25	6.75
0-50	8.40

ALTERNATING CURRENT MILLIAMMETERS
Model 55 (Rd. — Open Face), 56 (Shroud) and 57 (Rectangular)

Range	
0-15	\$6.45
0-25	6.45
0-50	6.45
0-100	6.45
0-250	6.45
0-500	6.45

HIGH RANGE D.C. PLATE VOLTMETERS

(Complete with External Resistor)

Model 25—3 inch round case. Model 26—3 inch shroud case. Model 27—3 inch rectangular case.
Ranges: 0-1500, 0-2000, 0-3000, 0-4000 volts.....\$17.25
Range: 0-5000. List.....22.80
(Price includes resistor)
External resistors supplied with high range voltmeters are contained in bakelite cases with binding posts for connections.
All Prices Dealer's Net

RECTANGULAR ILLUMINATED METERS

3 INCH

3" wide, 3½" high. Mounts in round hole. Body diam., 2¾"

DIRECT CURRENT VOLTMETERS MODEL 27	DIRECT CURRENT MILLIAMMETERS MODEL 27
0-10	\$9.30
0-50	9.30
0-150	11.10
0-300	12.30
0-500	17.10
0-1000	18.75
0-2000	18.75
0-3000	18.75
0-4000	18.75
0-5000	24.30
RADIO FREQUENCY AMMETERS MODEL 37	ALTERNATING CURRENT VOLTMETERS MODEL 57
0-1	\$11.10
0-2	11.10
0-3	11.10
0-5	11.10
0-1	\$8.40
0-10	8.70
0-25	8.70
0-50	8.70
0-100	8.70
0-200	8.70
0-300	8.70
0-500	8.70
0-10	\$8.40
0-15	8.40
0-150	9.75
0-300	11.10

2 INCH

2½" square. Mounts in round hole. Body diameter, 2-3/16"

DIRECT CURRENT VOLTMETERS MODEL 127	DIRECT CURRENT MILLIAMMETERS MODEL 127	RADIO FREQUENCY AMMETERS MODEL 137	ALTERNATING CURRENT VOLTMETERS MODEL 157
0-10	\$8.40	0-1	\$8.25
0-50	8.40	0-10	7.80
0-150	9.30	0-25	7.80
0-300	11.10	0-50	7.80
		0-100	7.80
		0-200	7.80
		0-300	7.80
		0-500	7.80
		0-1	\$14.85
		0-2	14.85
		0-3	14.85
		0-5	14.85
		Above prices include external thermocouple*	
		0-10	\$7.95
		0-15	7.95
		0-150	9.30
		0-300	10.50

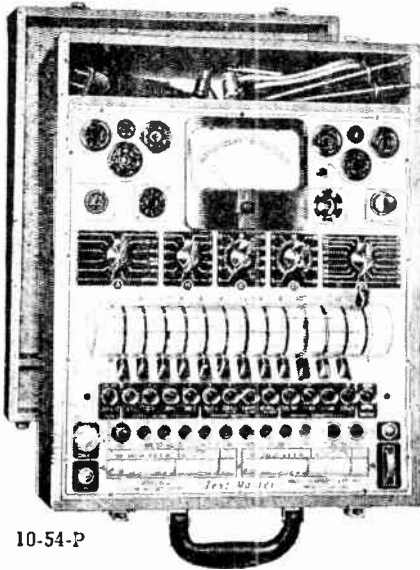
*Because of the Lucite construction there is no room to place a thermocouple within the 2" meter. Prices therefore include an external thermocouple.

PRECISION

TEST EQUIPMENT

STANDARD OF ACCURACY

All prices are subject to change without notice



10-54-P

CIRCUIT TESTING FEATURES

A complete, wide-range, high speed, push-button operated, super-sensitive test set without any additional panel controls. Self-contained.

- * Six D.C. Voltage Ranges
- * Six A.C. Voltage Ranges
- * Six Output Ranges at 100 ohms per volt.
- * Seven D.C. Current Ranges:
- * Four-Self-Contained Resistance Ranges:
- * Six Decibel Ranges
- * Automatic Interlocking Push-Button
- * 1% Wirewound and Metallized Resistors.
- * Only 2 Polarized Tip Jacks

Series 10-54 Electronamic Test Master

Combination Tube Performance Tester, Battery Tester, and 35 Range, Push-Button Operated, Supersensitive, A.C.-D.C. Set Tester. Ranges to 6000 Volts, 60 Microamps, 12 amps, +70DB, 60 Meg. 20,000 Ohms per Volt D.C.—1000 Ohms per Volt A.C.

More than just Mutual Conductance: (Technical details in main catalog)

The Series 10-54 affords to the discriminating instrument purchaser, a COMPLETE PORTABLE SERVICE LABORATORY; engineered to meet the rapidly developing needs of the electronics art; provides every necessary facility for high speed, reliable tube and circuit testing associated with Industrial, Electronics, Communications, Radio (A.M.-F.M.), Television, Laboratory, etc. . . .

TUBE AND BATTERY TESTING FEATURES

- * A TUBE "PERFORMANCE" TESTER "Precision" ELECTRONAMIC circuit, effectively tests all tubes over a complete "Path of Operation" not just at one arbitrary operating point or for just one inconclusive characteristic
- * TESTS ALL MODERN TUBE TYPES: Noval Button 9 pin, 5 and 7 pin Acorn, dual cased H.F. tubes, Single Ended TV, and F.M. amplifiers, low power transmitting tubes, subminiature types, etc. including direct facilities up to twelve element prongs!
- * ABSOLUTE FREE POINT LEVER ELEMENT SELECTION: Highest possible, practical order of insulation against back-charge. Locks every tube element to prevent displacement at the next test.
- * ABSOLUTE FREE POINT, INTER-ELEMENT SHORT CIRCUIT and Variable Filament Controlling System
- * DUAL SHORT CIRCUIT SENSITIVITY: At any test position, sensitivity is doubled for normal special applications.
- * INDIVIDUAL TUBE OPERATION TEST: of most test tubes with 100 hours of normal tube test record.
- * A.M. and F.M. CATHODE RAY TUNING INDICATORS directly tested
- * BALLAST UNIT TESTS.
- * NOISE and CONDENSER TESTS
- * MICRO-LINE ADJUSTMENT via continuously variable line voltage control
- * PILOT AND SIGNAL LIGHT TESTS
- * ACCURACY of test circuits closely maintained by use of individual, internal calibrating controls.
- * ROLL TUBE CHART BUILT-IN.
- * EXTRACTOR FUSE POST.
- * Test circuits completely isolated from power line
- * TELEPHONE-TYPE, CABLED, plastic insulated, non-ferrous wire.
- * 4 1/2" FULL VISION METER 50 microamps, 100 microamps
- * TESTS RADIO A, B and C DRY BATTERIES with a "PRECISION" engineered circuit which performance tests each battery under actual load conditions. Battery quality read directly on a 3-color scale.

10-54-P (illustrated) most Handy, rugged, portable, case, 12 1/2" x 19" x 6 3/4". With chrome plated, dual in-line voltage test terminals. Code: Habit. Complete: NET PRICE \$134.40

10-54-C (see 10-12-C) Color, rugged, portable, case, 12 1/2" x 19" x 6 3/4". With chrome plated, dual in-line voltage test terminals. Code: Handy, Complete: NET PRICE \$137.70

10-54-PM (see 10-12-PM) rugged, portable, case, 12 1/2" x 19" x 6 3/4". With chrome plated, dual in-line voltage test terminals. Code: Harem, Complete: NET PRICE \$137.70

Series 10-12 Electronamic Tube Master.

Truly Free-Point Tube and Battery Performance Tester.

More than just Mutual Conductance: (Technical details in main catalog)

The 10-00 Series of TUBE and TEST MASTERS represent the culmination of many years' development of tube testing equipment to meet the exacting needs of the rapidly advancing field of electronics.

Incorporating the exclusive ELECTRONAMIC tube performance testing circuit, plus an advanced, "PRECISION" developed, multiple element, master lever selector system, it truly can be said that the MASTER 10-00 Series offers, to the discriminating equipment purchaser, the highest possible practical order of: test results and anti-obsolescence insurance.

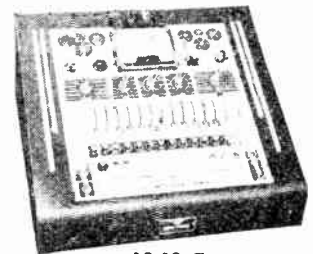
TUBE AND BATTERY TESTING FEATURES

The Series 10-12 Electronamic Tube Master incorporates the same circuit and exacting performance details described for the Series 10-54, above, under the heading "Tube and Battery Testing Features."

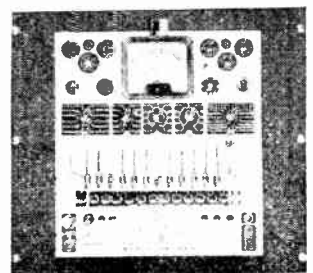
* 10-12-P (see 10-54-P illustration above) Handy, rugged, portable, case with cool compartment. Code: Facit. Complete: NET PRICE \$96.16

* 10-12-C (illustrated at right) Handy, rugged, portable, case with cool compartment. Code: Faith. Complete: NET PRICE \$99.40

* 10-12-PM (illustrated at right) Handy, rugged, portable, case with cool compartment. Code: Favor. Complete: NET PRICE \$99.40



10-12-C



10-12-PM

PRECISION

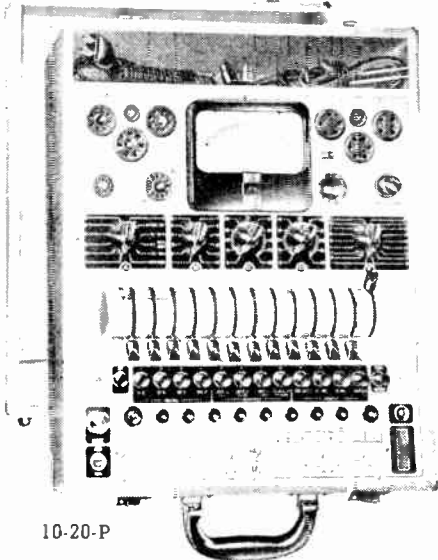
TEST EQUIPMENT

STANDARD OF ACCURACY

All prices are subject to change without notice

Series 10-20 *Electronamic Test Master*

Combination Master Electronamic Tube Performance Tester, Battery Tester and 34 Range A.C.-D.C. Push-Button Operated Circuit Tester. 1000 Ohms per Volt A.C. and D.C.



10-20-P

- 10-20-P (illustrated) In Full Range 34 Range A.C. and D.C. with tool compartment. Size 24" x 12" x 10". Complete with ohmmeter batteries and test leads. Code: Daily. Complete: NET PRICE \$119.80
- 10-20-C (see 10-15-C illustration and description on page 1) In the form of a carry case with tool compartment. Code: Dance. Complete: NET PRICE \$123.10
- 10-20-PM (see 10-15-PM illustration and description on page 1) In standard rack mount. Code: Dandy. Complete: NET PRICE \$123.10

More than just Mutual Conductance:

A complete, rugged service laboratory incorporating the exclusive "PRECISION" ELECTRONAMIC Tube Performance Tester, combined with full 1000 ohms per volt A.C. and D.C. Multi-Range features; plus a complete radio A, B and C Battery Tester.

Ideally suited and particularly engineered for general purpose radio-electronic maintenance, service and installation.

TUBE AND BATTERY TESTING FEATURES

The Series 10-20 TEST-MASTER provides the identical tube and battery performance testing features as outlined for the Series 10-54 on page 1.

CIRCUIT TESTING FEATURES

Wide-range, high speed, push-button operated set testing functions provide ranges to: 3000 volts, 600 microamperes, 12 amperes, 10 megohms, +70 DB. ALL SELF-CONTAINED AND WITHOUT ANY ADDITIONAL PANEL CONTROLS.

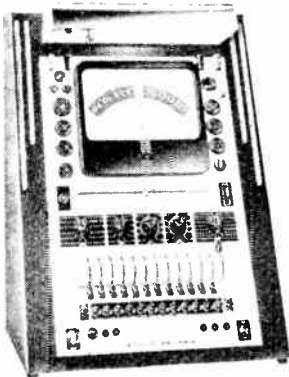
- SIX D.C. VOLTAGE RANGES
1000 ohms per volt
- SIX A.C. VOLTAGE RANGES
1000 ohms per volt
- SIX OUTPUT RANGES
1000 ohms per volt
0.6-1-2-3-30-3000 volts
- SIX D.C. CURRENT RANGES
600 microamperes
0.001-100MA and 100mA
- FOUR SELF-CONTAINED RESISTANCE RANGES:
0-1000-100,000 ohms 0-100 meg.
- SIX DECIBEL RANGES
from -10 to +4 DB
- 4 1/2" WIDE VISION METER
470 mm. material, +20
- 1% WIREWOUND AND METALLIZED RESISTORS
- 2 POLARIZED TIP JACKS
serve all standard ranges
- AUTOMATIC INTERLOCKING PUSH BUTTON RANGE SELECTION
- ALL CIRCUITS ISOLATED FROM POWER LINE

Series 10-15 *Electronamic Tube Master*

Ultra-Modern, De Luxe Tube and Battery Merchandiser with large 9" meter.

Series 10-22 *Electronamic Test Master*

De Luxe Tube-Battery Merchandiser and Circuit Tester with large 9" Meter. 1000 ohms per volt A.C. and D.C.



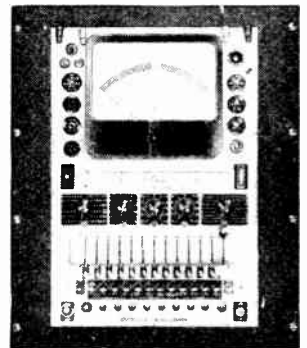
10-15

- 10-15 Tube and Battery Merchandiser. (Illustrated) Heavy gauge steel cabinet in line, dull black ripple finish with chrome trim and reflector. Size 24" high 17 1/2" wide base depth 10" mounting to 4" at top. Code: Gable. Complete: NET PRICE \$132.65

More than just Mutual Conductance:

(Technical details in main catalog)

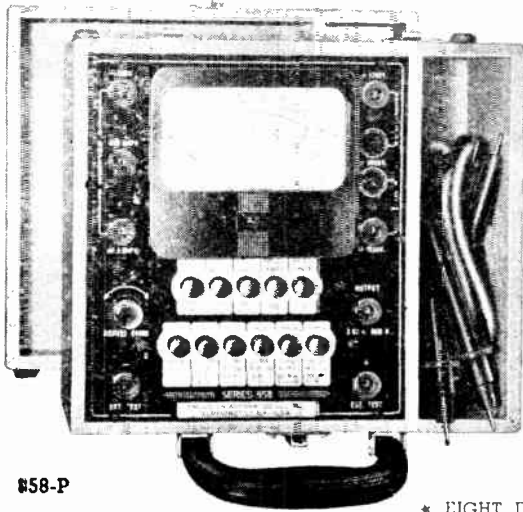
- Incorporates the advanced Electronamic tube performance and battery testing circuit described for Series 10-54 on page 1
- Designed particularly for equipment conscious, progressive radio service, sales organizations, and tube selling sections of department stores.
- PROMOTE CUSTOMER CONFIDENCE and tube sales via this impressive "Precision" Tube Merchandiser
- 9" RECTANGULAR METER.
- DIRECT READING non-confusing tube performance indications in large easy reading terms of *Best Case Work Good*.
- ILLUMINATED by built-in, large chromium reflector fixture.
- The Series 10-22 De Luxe Electronamic Service Laboratory is electrically identical to the Series 10-20 described above.
- Incorporates every customer-incident, and offers a tremendous advantage over the Series 10-15, at less plus a complete, rugged 34 range A.C.-D.C. push button operated, Multi-Range Test Set.
- Tube and Service Facilities no brighter, the foreground with the modern impressive "Precision" engineered instrument.
- Ideal for behind-the-counter flash instrument display also a highly suited for insertion into the center of tube rack-display shelving.
- 10-22-PM (see 10-22-PM illustration at right) On heavy gauge steel panel with dust cover. Panel: 22 1/2" x 19" for standard rack mount. Fine, dull black ripple finish. Code: Gavot. Complete: NET PRICE \$127.50
- 10-22 Combination Tube and Battery Merchandiser plus A.C.-D.C. Multi-Range Set Tester. In same cabinet plus-tered for the model 10-15 (at left). Complete with test leads and ohmmeter batteries. Code: Gauge. Complete: NET PRICE \$155.15



10-22-PM

- 10-22-PM (illustrated) On heavy gauge steel panel with dust cover. Panel 22 1/2" x 19" for standard rack mount. Fine, dull black ripple finish. Code: Gamut. Complete: NET PRICE \$150.00

All prices are subject to change without notice



Series 858 High Sensitivity *Multi-Master*

Dual-Range Sensitivity

High Speed, A.C.-D.C. Multi-Range Test Set. 24 Ranges to 6,000 Volts, 60 Microamperes, 12 Amps, 600 Megs. +70DB. 20,000 and 1,000 Ohms per Volt D.C. 1,000 Ohms per Volt A.C.

The Series 858 MULTI-MASTER features a "Precision" designed Push-Button Range and Function selection system, affording the ultimate in positive operational efficiency.

Designed for reliable measurements in modern T.V., F.M., A.M. and other critical electronic circuits where only minute current drain of the measuring instrument can be tolerated.

The dual-range sensitivity feature provides the equivalent of another instrument at standard 1000 ohms per volt sensitivity, in conformance with many point to point voltage readings listed by receiver service manuals.

858-P

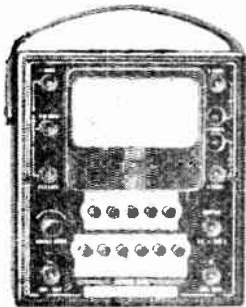
- * 858-P (illustrated) In hardwood, portable case, with tool compartment. Size 9"x10"x4 1/2". Complete with ohmmeter batteries and high voltage test leads. Code: Judge. NET PRICE \$57.35
- * 858-L In modern bakelite case (as illustrated for Series 847-L below). Complete with ohmmeter batteries and high voltage test leads. Code: Jetty. NET PRICE \$54.10

SPECIFICATIONS

- * EIGHT D.C. VOLTAGE RANGES both 20,000 and 1000 ohms per volt.
- * EIGHT A.C. and OUTPUT VOLTAGE RANGES at 1000 ohms per volt. 0-3-6-12-60-300-600-1200-6000 volts.
- * EIGHT D.C. CURRENT RANGES: 0-60-120 microamperes. 0-1-2-12-120-600 MA. 0-1-2-12 amps.
- * SIX RESISTANCE RANGES self-contained to 60 megohms. 0-6000-60,000-600,000 ohms. 0-6-60-600 megohms.
- * EIGHT DB RANGES --25 to +70DB.
- * Only two polarized pin jacks serve all standard ranges.
- * 4 3/8" 50 microampere wide angle meter. +2% accuracy.
- * 1% Wire and Metallized Resistors.
- * Safety Jacks for 6000 volt ranges.
- * CALIBRATION All instruments individually calibrated and sealed against laboratory standards.
- * HIGHEST GRADE MATERIALS and plastic insulated telephone type cabling employed.
- * ETCHED AND ANODIZED, heavy gauge aluminum panels: resistant to moisture and wear.

Series 847 Dual Sensitivity *Multi-Master*

High Speed, A.C.-D.C. Multi-Range Test Set
5000 and 1000 Ohms per Volt D.C.
1000 Ohms per Volt A.C.



The Series 847 MULTI-MASTER is a rugged, moderately high sensitivity, general purpose, A.C.-D.C. test set.

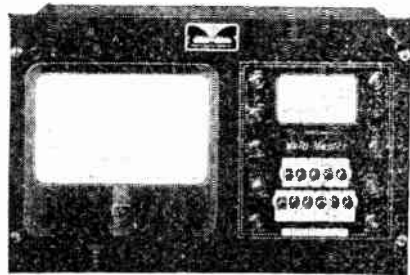
The same "Precision" Automatic Push-Button Range and Function selection system is employed as for the series 858 above. Ideally suited to continuous usage associated with electronic maintenance and service; classroom instruction; production testing, etc. . . . Incorporates all desirable features, assuring "Precision" quality, workmanship and performance standards.

847-L RANGE SPECIFICATIONS

- * 8 D.C. VOLTAGE RANGES at 5000 and 1000 ohms per volt.
- * 8 A.C. VOLTAGE and OUTPUT RANGES 1000 ohms per volt. 0-3-6-12-60-300-600-1200-6000 volts.
- * 8 D.C. CURRENT RANGES: 0-3-12-30-300-600 MA. 0-1-2-12 amperes.
- * 6 RESISTANCE RANGES: self-contained to 20 megohms. 0-200-1,000-1,000,000 ohms. 0-2-20-200 megohms.
- * 4 3/8" 20 microampere METER: 2% accuracy.
- * 1% Wire-wound and Metallized Resistors.
- * All standard measurements at only two polarized tip jacks. 6000 volt ranges at specially insulated, sub panel mounted jacks.
- * 847-L (illustrated) In modern bakelite case. Size 7 1/2"x8 1/2"x3". Complete with ohmmeter batteries and high voltage test leads. Code: Index. NET PRICE \$47.65
- * 847-P In hardwood, portable case per Series 858-P (illustration above). Complete with ohmmeter batteries and high voltage test leads. Code: Ivory. NET PRICE \$50.90

Series 866 De Luxe *Multi-Master*

Panel-Mounted, A.C.-D.C. Test Set, 9" Meter and Remote-Control Selector Unit. 5000 and 1000 Ohms per Volt D.C. 1000 Ohms per Volt A.C.



866

The Series 866 De Luxe Multi-Master is a laboratory type of high sensitivity test set indispensable to the well equipped, modern radio service laboratory and electronics classroom.

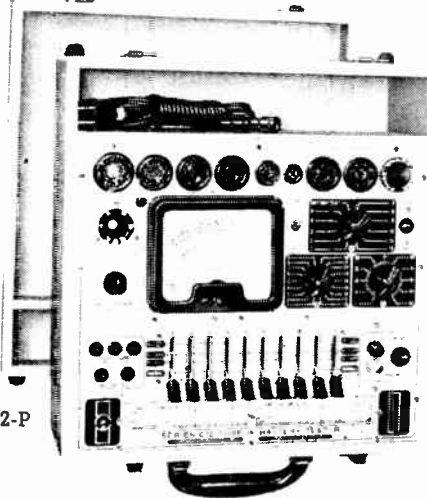
The extra-large 9" meter and remote-control selector unit afford unparalleled operational efficiency with maximum physical meter protection via permanency of panel mounting above the work level.

The 9" meter permits the ultimate in direct, easy reading of all scale-plate indications.

ELECTRICAL and RANGE SPECIFICATIONS OF SERIES 866 are identical to those described for Series 847-L at left.

- * 866 (illustrated) In standard panel mount, size 19"x12 1/4" with rear dust cover 6" deep. Complete with high voltage test leads and ohmmeter batteries. Code: Novel. NET PRICE \$71.65

All prices are subject to change without notice



612-P

Series 612 Cathode Conductance Tube Tester

A Modern, Free Point, Lever Operated
Tube and Battery Tester.

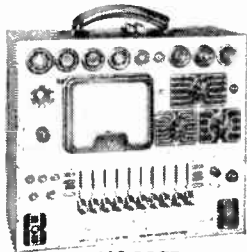
The new Series 612 represents the culmination of extended and intensive development in the field of modern tube checking requirements. *Combining the highest practical order of obsolescence insurance with utmost simplicity of operation*, "Precision" is pleased to meet the ever-present need for positive tube testing results at moderate cost. This goal has been achieved with full conformity to the accepted and self-imposed "Precision" high standards of workmanship, performance and quality components.

With tube testing parameters based upon the well established, time-proven emission testing principles as have been recommended by both tube manufacturers and R.M.A., the new "600" line affords advanced design features and performance which render it incomparable amongst instruments in its category and price range.

- * 612-P (illustrated) In hardwood, portable case. Size 12"x13"x6". Code: Bison. Complete: \$69.50
- * 612-MCP (illustrated) Open style Metal Case Portable. Fine black ripple finish. Size 10 1/2"x12"x6". Code: Brine. Complete: \$66.65
- * 612-C (illustrated) In modern, chrome plated counter cabinet. Fine black ripple finish. Size 16"x13 1/2"x7", slopes to 3" at front. Code: Bison. Complete: \$71.90
- * 612-PM (illustrated) In standard size panel mount 12 1/4"x19" with dust cover. Fine black ripple on heavy gauge steel. Code: Blaze. Complete: \$69.50

TUBE AND BATTERY TESTING FEATURES

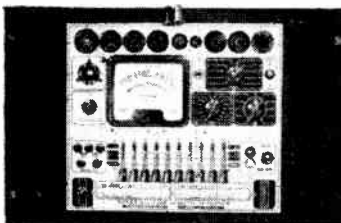
- * TESTS ALL MODERN TUBE TYPES including 7 pin Acorns, button 7 and Noval 9 pin types, dual-capped H.F. tubes, FM and TV amplifiers, etc.
- * FILAMENT VOLTAGES 3/4 to 117 volts.
- * ABSOLUTE FREE-POINT 10 element and short-check lever selection regardless of varying or multiple basing terminations.
- * 4 1/2" METER, 2% accuracy.
- * DUAL SHORT CHECK SENSITIVITY.
- * INDIVIDUAL TESTS OF MULTI-SECTION TUBES including tuning indicators, mix rectifiers, oscillator-converter, etc.
- * BALLAST UNIT TESTS.
- * MICRO-LINE ADJUSTMENT.
- * PILOT and SIGNAL LIGHT TESTS.
- * NOISE and CONDENSER TEST pin jacks.
- * DYNAMIC "UNDER-LOAD" TEST for all popular range A, B, and C dry batteries.
- * Built-in brass geared roll chart.
- * Anodized, deep etched, heavy gauge aluminum panel resistant to wear.
- * Panel mounted Fuse Extractor Post.
- * Telephone type cabled, plastic insulated, moisture resistant hook-up wire.
- * DUPLICATE PERFORMANCE of each instrument insured via use of internal, sealed calibrating controls.



612-MCP



612-C



612-PM

Series 620 Tube, Battery and Set Tester

Ranges to 3000 Volts, 12 Amperes, +64DB, 10 Megohms.

A complete, portable, service laboratory providing every essential feature for general purpose test and check of modern radio and electronic equipment. The Series 620 incorporates the identical tube test circuit and battery testing features of the Series 612 (described above), plus a complete A.C.-D.C. Multi-Range Circuit Tester of 1000 ohms per volt sensitivity.

CIRCUIT TESTING FEATURES

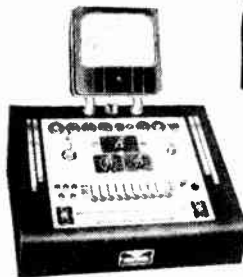
- * 5 A.C.-D.C. and OUTPUT VOLTAGE RANGES: 0-12-60-300-1200-3000 volts.
- * 5 D.C. CURRENT RANGES: 0-1-2-12-120MA, 0-1.2-12 amperes.
- * 3 RESISTANCE RANGES self-contained: 0-1000-100K-10 megohms.
- * 5 DECIBEL RANGES from -12 to +64DB.
- * Full rotary Range and Function Selectors.
- * ONLY 2 PIN JACKS serve all standard ranges.
- * 1% Wire and Metallized Resistors.
- * 400 microampere Rectangular 4 1/2" Meter, 2% accuracy.
- * All Circuits isolated from power line.

The Series 620 is available in the same four model types as described and illustrated for the Series 612 above and at left.

- * 620-P Code: Local, Net Price \$94.10
- * 620-MCP Code: Luffy, Net Price \$91.25
- * 620-C Code: Loyal, Net Price \$96.50
- * 620-PM Code: Legal, Net Price \$94.10

Series 614 DE LUXE TUBE AND BATTERY MERCHANDISER

Modern, Counter Type Tube and Battery Tester
with Large 7" Chrome Trimmed Meter.



614

The Series 614 is designated for the progressive tube and battery department wherein an exceptionally attractive instrument is desired to step-up tube and battery sales. The 7" meter provides a full view of test results to both operator and customer.

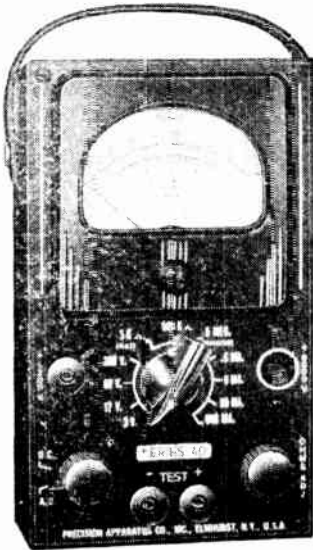
Employs the same circuit described for Series 612 above, assuring accurate and reliable performance.

- * 614 Tube and Battery Merchandiser (illustrated) is attractive, modern, chrome trimmed, fine black ripple finished cabinet. Offset mounted meter. Cabinet size 16"x13 1/2"x7", slopes to 3" at front. Code: Early. NET PRICE \$89.30

PRECISION

TEST EQUIPMENT

STANDARD OF ACCURACY



* Series 40 (illustrated) In molded bakelite case with plastic handle. 3 3/4" x 6 1/2" x 2 1/2". Complete with ohmmeter, batteries and test leads. Code: Visit. NET PRICE \$24.75

Series 40 Compact Wide-Range Circuit Tester

31 Range A.C.-D.C. Test Set ... Self-Contained to 6000 Volts, 600MA, +70DB, 5 Megohms with Full Size 3" Rectangular Meter, 1000 Ohms per Volt A.C. and D.C.

In a compact molded bakelite carrying case, the Series 40 is an unparalleled instrument of its type and size. Ideally dimensioned and engineered to meet the need for a portable, compact, yet rugged, accurate test set to withstand hard, long term usage as is imposed by the radio amateur, service technician, maintenance engineer, production inspector, trouble-shooter, etc.

The Series 40 offers every advanced design feature and full-bodied components as are regularly incorporated in "Precision's" larger multi-range test sets, including: Rotary Range Selection—1% shunts and multipliers—heavy duty insulated pin jacks—Large numerals, easy reading meter.

ALL RANGES, including 6000 volts and 5 Megohms, are SELF-CONTAINED and ready to operate. NO EXTERNAL BATTERIES OR MULTIPLIERS ARE REQUIRED.

RANGE SPECIFICATIONS

- * 6 A.C.-D.C. OUTPUT VOLTAGE RANGES: 1000 ohms per volt. 0-3-12-60-300-1200-6000 volts.
- * 4 D.C. CURRENT RANGES: 0-6-60-600 MA.
- * 3 RESISTANCE RANGES: self-contained batteries. 0-5000-500,000-5 megohms.
- * 6 DECIBEL RANGES: -22 to +70 DB
- * FULL SIZE 3" METER: 400 microamperes ±2%.
- * 1% WIRE & METALLIZED RESISTORS.
- * ONLY 2 PIN JACKS serve all standard functions.
- * Recessed 6000 volt safety jack.
- * Anodized, etched aluminum panel: resistant to moisture and wear.

Series 85 High Sensitivity Test Set

20,000 Ohms per Volt D.C. 1,000 Ohms per Volt A.C. 34 Self-Contained Ranges to 6000 Volts, 120 Microamperes, 12 Amperes, +70DB, 60 Megohms.

The Series 85 is a bakelite cased, laboratory styled, portable instrument. Compactly dimensioned, it affords every substantial physical and electrical refinement associated with the name "Precision." Its 4 5/8" meter, with large numerals, affords utmost visibility.

Combining high sensitivity with small overall size, Series 85 is "Application Engineered" for production, lab., school and service-maintenance phases of modern electronics: A.M., F.M., and TV.

SPECIFICATIONS

- * 6 D.C. Voltage Ranges: 20,000 ohms per volt.
- * 6 A.C.-Output Voltage Ranges: 1000 ohms per volt. 0-3-12-60-300-1200-6000 volts.
- * 6 D.C. Current Ranges: 0-100 microamps. 0-1-2-12 MA on 11, 12-12 amps.
- * 4 Resistance Ranges: Self contained. 0-6000-600,000 ohms. 0-6-60 megs.
- * 6 Decibel Ranges: -25 to +70DB
- * 4 5/8" Rectangular Meter. 50 Microampere 2% accuracy.
- * 1% Wire & Metallized Resistors.
- * Rotary Range Selectors afford all standard functions at only 2 tip jacks.
- * Recessed 6000 volt safety jacks.
- * Anodized, heavy gauge, etched aluminum panel resistant to moisture and wear
- * Series 85 (illustrated) in molded bakelite carrying case with plastic handle. 5 1/2" x 7 1/8" x 3". Complete with ohmmeter batteries and test leads. Code: Waist. NET PRICE \$38.75

Series 80 Wide Range Test Set

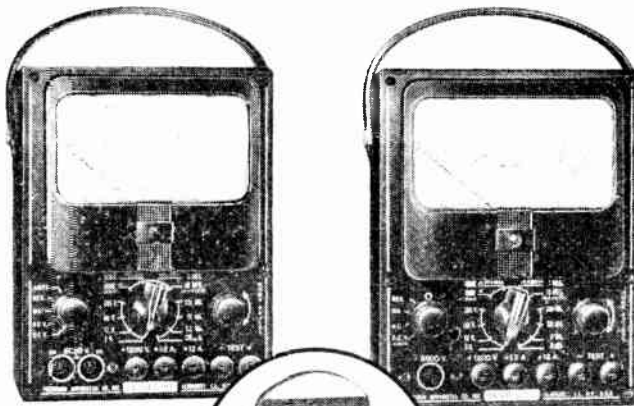
1000 Ohms per Volt A.C. and D.C. 34 Self-Contained Ranges to 5000 Volts, 12 Amperes, +70DB, 50 Megohms.

The Series 80, laboratory styled, rotary selective, multi-range circuit tester has been designed to meet the same high calibre performance standards as the Series 85 (at left) but is specifically intended for use where greater resistance to electrical and physical overload is of more importance than extremely high sensitivity.

"Application Engineered" for general purpose industrial and radio service-maintenance-test requirements.

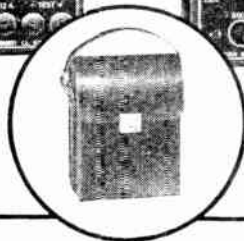
SPECIFICATIONS

- * 6 A.C.-D.C.-Output Voltage Ranges: 1000 ohms per volt. 0-3-12-60-300-1200-6000 volts.
- * 6 D.C. Current Ranges: 0-6-60-300 MA and 0-1-2-12 amps.
- * 4 Resistance Ranges: Self Contained. 0-1000-100,000 ohms. 0-1-10 megohms.
- * 6 Decibel Ranges: from -20 to +70DB.
- * 4 5/8" Rectangular Meter: 500 microampere, 2% accuracy.
- * 1% Wirewound and Metallized Resistors.
- * Recessed 6000 volt safety jack.
- * Anodized, etched aluminum panel resistant to moisture and wear.
- * Series 80 (illustrated) In molded bakelite carrying case with plastic handle 5 1/2" x 7 1/8" x 3". Complete with ohmmeter batteries and test leads. Code: Weave. NET PRICE \$32.70



Series 85

Series 80



Series LC-1

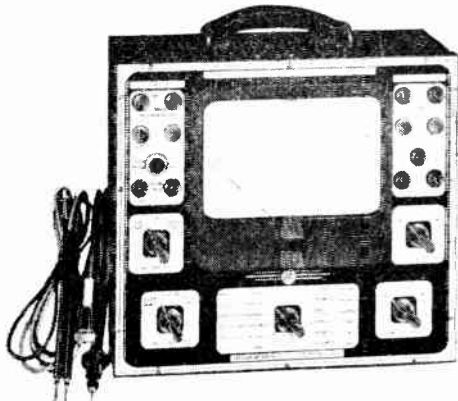
LEATHER INSTRUMENT CASE

The LC-1 case is custom designed exclusively for the Series 80 and 85 test sets. It affords the convenience of hand or shoulder carry with utmost protection to the instrument PLUS a tool and test lead compartment.

Genuine top-grain heavy cowhide with waterproof-lined inside interior. Adjustable hand or shoulder strap. Positive snap lock. Richly finished in dark brown. Code: Yearn. NET PRICE \$8.75

All prices are subject to change without notice

All prices are subject to change without notice



- **EV-10-MCP** (Illustrated) In black triple finish heavy portable case. Size 11" x 12 1/2". Complete with tubes, battery, and probes.
Code: Place. NET PRICE \$89.95
- **EV-10-P** In heavy portable steel cabinet for Series MCP on page 3. Code: Phone. NET PRICE \$92.70
- **EV-10-PM** Consists of Series EV-10 on steel panel size 12 1/4" x 19" for standard rack mount. Code: Panel. NET PRICE \$92.70

★ SERIES RF-10 VACUUM TUBE R.F. PROBE

An accessory item to Series EV-10, the RF-10 Vacuum Tube Probe provides direct means for measurement of superaudio, R.F. and U.H.F. voltages. Consists of flexible, rubber-shielded cable connecting directly to Series EV-10 panel, make-up probe tube housing with an extremely probing tip type 902 tube probe receiver. All operating voltages are applied through connecting cable. Complete with complete instructions. Code: Probe. NET PRICE \$14.40

Precision Series EV-10 VTVM - Megohmmeter with 7" Full-View Meter

Plus standard 1000 Ohms per Volt Functions.

Ranges to 6000 Volts • 2000 Megs. • 12 Amps. • +70 DB.

A WIDE-RANGE ELECTRONIC MEASURING INSTRUMENT, stressing the utmost in performance, accuracy, and ease of manipulation. Combining both VTVM as well as standard 1000 ohms per volt functions. Series EV-10 permits rapid, accurate check of voltage, current, and resistance conditions encountered in modern A.M., F.M., and TV. Networks, without materially disturbing the circuit under analysis.

IMPORTANT FEATURES

- **VOLTAGE REGULATED** — BRIDGE TYPE CIRCUIT: direct reading VTVM, with practical freedom from tube and line voltage variations.
- **ZERO-CENTER VTVM** — Provides both resistance and polarity at any test point, without reversal of test leads.
- **MASTER RANGE SELECTOR**
- **SHIELDED COAXIAL TEST PROBES** — Voltage measurement without disrupting performance.
- **DJO BALANCED ELECTRONIC-BRIDGE OHMMETER** — Providing unusually high accuracy throughout scale length.
- Each instrument individually calibrated.
- **TELEPHONE CABLED**, plastic insulated, hook-up wire.
- **7" RECTANGULAR METER** 400 microampere, $\pm 2\%$.
- 1% wire and metallized resistors.

RANGE SPECIFICATIONS

- Eight Zero-Center VTVM Ranges: $\pm 3, \pm 6, \pm 12, \pm 60, \pm 300, \pm 600, \pm 1200, \pm 6000$ volts D.C.
- Input Resistance:
13 1/3 megohms at 600 volts.
27 1/3 megohms at 1200 volts.
133 1/3 megohms at 6000 volts.
- Six Ohmmeter-Megohmmeter Ranges: (self contained).
0-200-200-600 ohms
0-2-20-200-2000 megohms
- Eight A.C.-D.C. and Output Voltage Ranges at 1000 ohms per volt:
0-3 • 12-60-300-600-1200-6000 v.
- Seven D.C. Current Ranges:
0-600 microamperes
0-3-12-60-300-1200 MA 0-12 amps.
- Eight Decibel Ranges: 0-10 to -70 DB

Precision Series E-200-C Signal Generator

A Modern Multi-Band Signal Generator for A.M., F.M., and Television Alignment:

Featuring "Servicing by Signal Substitution." The Dynamic Speed Approach to Receiver Alignment and Adjustment Problems.

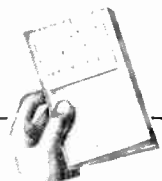
SPECIFICATIONS

1. FREQUENCY COVERAGE 80 KC. to 100 MC. on fundamental 100 direct reading in 8 bands to 1.0 MC. No charts required.
2. ACCURACY — CONSTANCY OF CALIBRATION: MAXIMUM of 1% DEVIATION on all bands, insured by use of the "PRECISION" developed "UNIT-OSCILLATOR" construction, which eliminates need to incorporate costly useless, single frequency reference crystals.
3. LARGE FULL VISION 6 1/2" INCH NO-GLARE DIAL.
4. 0-1000 POINT VERNIER SCALE, direct reading to one part in 1000.
5. THE CIRCUIT—single-ended 6SJ7 in stable E.C.O. circuit—modulated by a 6CS sine-wave audio oscillator. 5Y3 Full wave rectifier.
6. 400 CYCLE SINE WAVE AUDIO OSCILLATOR — provides both modulation and external test signal from 20 to over 50 volts.
7. DUAL R.F. ATTENUATORS—smooth stepless control of R.F. intensity.
8. SHIELDING—Compartment shielding of vital components—Power transformer electrostatically shielded. A.C. line is R.F. filtered.
9. SHIELDED COAXIAL OUTPUT CABLE and (LO-HI) cable connectors.
10. FOUR TYPES OF SIGNALS—"Unmod. R.F.", "400 cycle Mod. R.F.", "EXTERNALLY Mod. R.F.", (F.M. or A.M.) "400 cycle Audio Output."
11. DIRECT READING VARIABLE MODULATION—0-100%—triples signal utility as against obsolete fixed modulation of only 30 or 40.
12. DIRECT READING A.V.C. SUBSTITUTION SYSTEM—Overcomes alignment troubles arising from receiver A.V.C. Supplies ITS OWN A.V.C. VOLTAGE.
13. HAND CALIBRATED—Each instrument is INDIVIDUALLY calibrated.
14. FULLY LICENSED under patents of A. T. & T. and W. E. Co's.
15. Not only an efficient Signal Generator for purposes of alignment but also SPECIFICALLY DESIGNED for "Servicing by Signal Substitution." Yet priced within the reach of every progressive radio service engineer.



• **Series E-200-C** — (illustrated) in black triple finished, portable steel case. Size 10 1/2" x 12 1/2" x 6". Complete with tubes, output cable and FREE copy of "Servicing by Signal Substitution". Code: Trade. NET PRICE \$67.25

• **E-200-C-PM** Consists of Series E-200-C on steel panel size 12 1/4" x 19", for standard rack mount. Code: Trace. NET PRICE \$69.70



"SERVICING BY SIGNAL SUBSTITUTION" 9th Edition . . . The modern, ECONOMICAL solution to your daily service problems . . . Nothing complex to learn, no extraneous equipment to purchase . . . A systematic method of DYNAMIC SIGNAL ANALYSIS based entirely on fundamentals . . . Fully described in a bound illustrated text "Servicing by Signal Substitution." This highly valuable book is supplied with Series E-200-C at no charge. Additional copies available at your Precision distributor or directly from factory at 40c per copy.

★ Simpson

SIMPSON ELECTRIC CO.
CHICAGO, ILLINOIS

INSTRUMENTS THAT STAY ACCURATE

Model 374 D.C. Microammeter

RANGES: 0-50, 100, 250, 500, 1000 Microamperes.

Incorporates a basic movement of 50 microamperes sensitivity with self-contained shunts for all other ranges. Usually available only in expensive laboratory instruments, costing many times the price of this one. Conduct your experiments with one of these instruments. It's surprisingly accurate. Can be used with external resistors or multipliers for high sensitivity voltmeter at 20,000 ohms per volt. Of particular value in photoelectric cell ex-

perimental work. Meter may be shorted out of circuit by setting to "short" position.

SIZE: 3" x 5 $\frac{1}{8}$ " x 2 $\frac{1}{2}$ ". WEIGHT: 1 $\frac{1}{2}$ LBS.
SHIPPING WEIGHT: 2 $\frac{1}{2}$ LBS.

Dealer's Net Price.....\$20.90
Test leads with prods..... 1.25 extra
Test leads with Alligator clips
and insulated sleeves..... 1.25 extra



MODEL 374



MODEL 375

Model 375 D.C. Ammeter

(Self Contained)

RANGES: 0-1, 0-2.5, 0-5, 0-10, 0-25 Amperes.

A new multi-range instrument which is extremely useful in testing the current in D.C. circuits. Provides a complete range from a fraction of an ampere to 25 amperes without the necessity of using auxiliary external shunts. A good instrument for checking auto

radio sets, D.C. motors, etc. Excellent for school use and experimental work in D.C. circuits.

SIZE: 3" x 5 $\frac{1}{8}$ " x 2 $\frac{1}{2}$ ". WEIGHT: 1 $\frac{1}{2}$ LBS.
SHIPPING WEIGHT: 2 $\frac{1}{2}$ LBS.

Dealer's Net Price.....\$18.70
Test leads with prods..... 1.25 extra
Test leads with Alligator clips,
and insulated sleeves..... 1.25 extra

Model 376 A.C. Voltmeter

(Rectifier Type)

RANGES:

0-5, 10, 25, 50, 100, 250, 500, 1000 A.C. Volts

An A.C. Voltmeter, especially useful in circuits where a limited amount of current is present. Makes an excellent output meter when used with proper condenser. The wide

variety of ranges covers both primary and secondary voltage ranges of transformers used in radio sets, toys and appliances.

SIZE: 3" x 5 $\frac{1}{8}$ " x 2 $\frac{1}{2}$ ". WEIGHT: 1 $\frac{1}{2}$ LBS.
SHIPPING WEIGHT: 2 $\frac{1}{2}$ LBS.

Dealer's Net Price.....\$18.25
Test leads with prods..... 1.25 extra
Test leads with Alligator clips
and insulated sleeves..... 1.25 extra



MODEL 376



MODEL 377

Model 377 D.C. Voltmeter

RANGES:

0-1, 2.5, 5, 10, 25, 50, 100, 250, 500, 1000 D.C. Volts

Resistance 1000 ohms per volt. Measures all dry battery voltage, both A and B, for radio sets, also grid and plate voltage and filament voltage in battery-operated sets. High ranges

may be used for checking D.C. line voltage.

SIZE: 3" x 5 $\frac{1}{8}$ " x 2 $\frac{1}{2}$ ". WEIGHT: 1 $\frac{1}{2}$ LBS.
SHIPPING WEIGHT: 2 $\frac{1}{2}$ LBS.

Dealer's Net Price.....\$18.25
Test leads with prods..... 1.25 extra
Test leads with Alligator clips
and insulated sleeves..... 1.25 extra

Model 378 A.C. Milliammeter

(With self-contained current transformer)

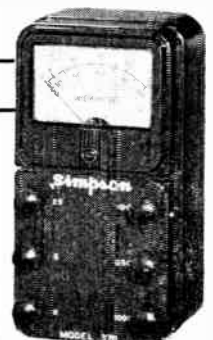
RANGES: 0-5, 0-25, 0-100, 0-250, 0-1000 M.A.

Here is the instrument that answers a big need—a low cost, handy size milliammeter that combines a current transformer and an indicating instrument in one case. It offers

five separate ranges, making it suitable for a wide variety of testing jobs.

SIZE: 3" x 5 $\frac{1}{8}$ " x 2 $\frac{1}{2}$ ". WEIGHT: 1 $\frac{1}{2}$ LBS.
SHIPPING WEIGHT: 2 $\frac{1}{2}$ LBS.

Dealer's Net Price.....\$20.50



MODEL 378

★ Simpson

SIMPSON ELECTRIC CO.
CHICAGO, ILLINOIS

INSTRUMENTS THAT STAY ACCURATE

Model 370 A.C. Ammeter

(With self-contained current transformer)
(For use on 60 cycles)
RANGES: 0-1, 0-2.5, 0-5, 0-10, 0-25 Amps.

For the first time, a current transformer and indicating instrument have been combined in one small case to meet the consistent demand for a small multiple range A.C. ammeter, at a price that even a student can afford. Providing a complete range, from a fraction of an ampere to 25 amperes, it deserves a place in

MODEL 370

the equipment of every manufacturing establishment, every school, service organizations and all other branches of the electrical industry. Its many uses include the measurement of current draw by all types of electric appliances and motors, heating elements, lamps, radio sets, etc.

SIZE: 3" x 5 $\frac{7}{8}$ " x 2 $\frac{1}{2}$ ". WEIGHT: 1 $\frac{1}{2}$ LBS.
SHIPPING WEIGHT: 2 $\frac{1}{2}$ LBS.
DEALER'S NET PRICE.....\$18.50



Model 371 A.C. Voltmeter

RANGES: 0-150, 0-300, 0-600 Volts.

Particularly adaptable to testing line voltage. When servicing motors, electric appliances, etc., it is most essential to know if line voltage is normal. High voltage may damage or burn out motors, heater elements, etc. Low speed in motors or improperly heated elements in appliances may be due to low line voltage. A very desirable unit for any industrial test kit or laboratory.

MODEL 371

SIZE: 3" x 5 $\frac{7}{8}$ " x 2 $\frac{1}{2}$ ". WEIGHT: 1 $\frac{1}{2}$ LBS.
SHIPPING WEIGHT: 2 $\frac{1}{2}$ LBS.

Dealer's Net Price.....\$16.75
Test leads with prods..... 1.25 extra
Test leads with Alligator clips
and insulated sleeves..... 1.25 extra



Model 372 Ohmmeter

RANGES:

0-500 ohms (5 ohms center)
0-5000 ohms (50 ohms center)
0-50,000 (500 ohms center)
0-500,000 (5000 ohms center)
0-5 Meg. (50,000 ohms center)
0-50 Meg. (500,000 ohms center)

A complete instrument with self-contained batteries. Has wide range from .2 Ohms to 50 Megohms. "Ohms" adjuster compensates for variations in battery voltage to provide greatest possible accuracy in an instrument of the

MODEL 372

size and price. Wire wound and matched metallized resistors used throughout. The basic movement has a sensitivity of 85 microamperes.

SIZE: 3" x 5 $\frac{7}{8}$ " x 2 $\frac{1}{2}$ ". WEIGHT: 1 $\frac{1}{2}$ LBS.
SHIPPING WEIGHT: 2 $\frac{1}{2}$ LBS.
Dealer's Net Price.....\$23.20
Test leads with prods..... 1.25 extra
Test leads with Alligator clips
and insulated sleeves..... 1.25 extra



Model 373 D.C. Milliammeter

RANGES:

0-1, 5, 10, 25, 50, 100, 250, 500, 1000 M.A.

Runs the whole gamut of milliamperes reading from .02 to 1000 M.A. Used in radio servicing and experimental work; checking burglar alarm circuits; railroad signal systems; telephone work; schools and colleges, etc. Particularly adaptable to reading current in circuits supplied by dry cells.

MODEL 373

SIZE: 3" x 5 $\frac{7}{8}$ " x 2 $\frac{1}{2}$ ". WEIGHT: 2 LBS.
SHIPPING WEIGHT: 3 LBS.

Dealer's Net Price.....\$18.25
Test leads with prods..... 1.25 extra
Test leads with Alligator clips
and insulated sleeves..... 1.25 extra



★ Simpson

SIMPSON ELECTRIC CO.
CHICAGO, ILLINOIS

INSTRUMENTS THAT STAY ACCURATE

MODELS 240 and 230 Volt-Ohm-Milliammeters

These two "Micro-Tester" portables, famous for their ruggedness and in-built accuracy, are typical of the construction features and utility that distinguish the entire line shown on the previous page and the pages following.

Both instruments are self-contained, need no external resistors and have a sensitivity of 1000 ohms per volt. Both are shock-proof and incorporate the celebrated Simpson movement with its bridge-type construction and soft iron pole pieces. Resistors are in matched pairs to provide greatest possible accuracy for all ranges.

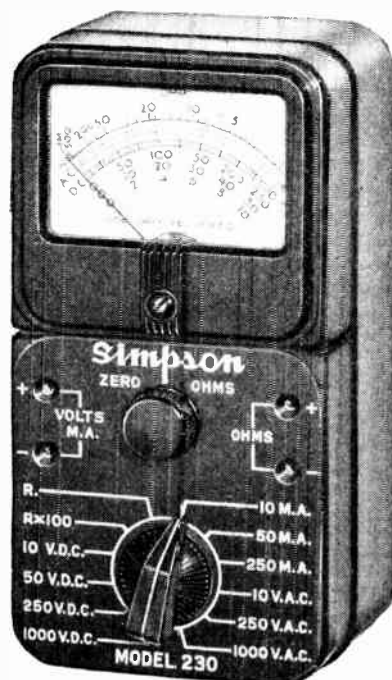
Model 230, with maximum voltage of 1000 volts A.C. or D.C., is ideal for most industrial testing. Its ranges are adequate for various line voltages, for telephone, teletype, and general purpose testing.

Model 240—the "Hammeter"—was designed for additional voltage and sensitivity demanded in radio testing. In fact, with its maximum voltage range of 3000 A.C. or D.C., it was the first self-contained pocket portable built expressly to check high voltage and all component parts of transmitters and receivers.

Both models are housed in heavily molded bakelite cases, with all numbers and symbols recessed in the panel and filled with white enamel for greatest legibility and ease of reading. Both have full size 3" meters. Both are furnished with test leads. Model 240's leads are insulated against 3000 volts and fitted with rubber guarded alligator clips.



MODEL 240



MODEL 230

MODEL 230 A.C. and D.C. Volt-Ohm-Milliammeter

RANGES

A.C. Volts: 0-10, 250, 1000
D.C. Volts: 0-10, 50, 250, 1000
D.C. Milliamperes: 0-10, 50, 250
Ohms: 0-1000, 0-100,000
Accuracy: D.C. 3%—A.C. 5%

Size: 3" wide x 5 7/8" long x 2 1/2" deep
Weight: 1 1/2 lbs.
Shipping Weight: 2 1/2 lbs.
Dealer's Net Price: \$19.85

MODEL 240 A.C. and D.C. Volt-Ohm-Milliammeter

RANGES

A.C. Volts: 0-15, 150, 750, 3000
D.C. Volts: 0-15, 75, 300, 750, 3000
D.C. Milliamperes: 0-15, 75, 300, 750
Ohms: 0-3000 (center scale 30)
0-300,000 (center scale 3000)

Accuracy: D.C. 3%—A.C. 5%
Size: 3" wide x 5 7/8" long x 2 1/2" deep
Weight: 1 1/2 lbs.
Shipping Weight: 2 1/2 lbs.
Dealer's Net Price: \$21.75

Simpson

SIMPSON ELECTRIC CO.
CHICAGO, ILLINOIS

INSTRUMENTS THAT STAY ACCURATE

SIMPSON'S Famous "Micro-Tester" Portables

The Simpson Model 390 is the first appliance tester ever made that gives you volt, ampere and wattage readings all in one compact instrument of its size. It embraces two ranges each of voltage and current, providing four wattage ranges which cover practically all types and makes of appliances. It is extremely rugged in construction and will stand up under full load, continuous operation.

The panel has volt-ampere combinations clearly indexed to the proper sectors on the scale to make the instrument quick, simple, and sure to use. The Break-In plug, furnished with the instrument, has 4-color coded leads which are first attached to the instrument. Then the plug is placed in an electrical outlet and the appliance to be tested is plugged into it. All readings are shown on one meter; in normal position the meter indicates volts; ampere and watt readings are obtained by depressing buttons on the panel. Because of the way binding posts are separated, the Model 390 can also be used as an individual voltmeter to check line voltages, or as an ammeter.

The accuracy of the Model 390 is 5% of full scale reading, or better. The errors due to phase angle error and frequency are so small that they can be disregarded within the normal frequency range of 50 to 133 cycles. For 25 cycle current, 2% can be added to readings. Loss is very low and has no appreciable effect on the readings.

Model 390 has a molded black bakelite case, with all figures recessed in the panel and filled in white, for greater legibility. In spite of its compact size, meter is full 3" with large scale for accurate reading.

MODEL 390 Volt-Amp-Wattmeter



RANGES: A.C. Current, 60 Cycles

Volts: 0-150, 0-300
Amperes: 0-3, 0-15
Watts: 0-300, 0-600, 0-1500, 0-3000
Size: 3" x 5 7/8" x 2 1/2". Weight: 1 1/2 lbs.
Shipping weight: 2 1/2 lbs.
Price, with Break-in plug and leads \$39.50

Leatherette covered carrying case, with compartment for Break-in plug and leads..... \$5.00

Genuine leather carrying case, with compartment for Break-in plug and leads..... \$8.00

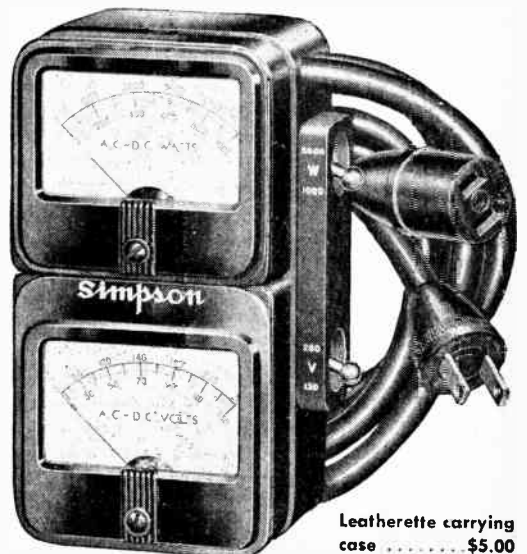
Here are two Simpson A.C.-D.C. Volt Wattmeters with all the compactness and sturdiness of the Model 390 (described above) and all the construction characteristics of the entire line of Microtester portables.

Each instrument consists of two separate full-size 3" square meters, one for volts and one for watts. This arrangement permits reading volts and watts simultaneously. The separate, uncrowded scales make quick and accurate readings an easy matter.

Each meter has two ranges, selected by separate toggle switches with positions clearly indicated by white figures recessed in the molded bakelite case. The low power consumption of these instruments and their high efficiency result in negligible loss and error in reading.

These volt-wattmeters can be used on all appliances and motors within their ranges. Each has built-in cord and plug for connecting to line outlet and female receptacle for connecting the appliance under test.

MODELS 391 and 392 A.C.—D.C. Volt Wattmeters



Leatherette carrying case \$5.00

MODEL 391

Ranges, A.C. or D.C.

Volts: 0-130, 0-260
Watts: 0-1500, 0-3000
Size: 3" x 5 7/8" x 2 1/2"
Weight: 2 lbs.
Shipping Weight: 3 lbs.
Dealer's Net Price..... \$30.00

MODEL 392

Ranges, A.C. or D.C.

Volts: 0-130, 0-260
Watts: 0-1000, 0-5000
Size: 3" x 5 7/8" x 2 1/2"
Weight: 2 lbs.
Shipping Weight: 3 lbs.
Dealer's Net Price..... \$35.00

RCA TEST EQUIPMENT

for SERVICE • LABORATORIES • INDUSTRY • SCHOOLS



AM-FM DYNAMIC DEMONSTRATOR (WE-82A)

Frequency Range 550 to 1800 kc
 AM i-f 455 kc
 FM i-f 10.7 Mc
 AM Sensitivity 200 microvolts
 Power Supply 105/125 volts, 50/60 cycles
 Dimensions 45" w; 33" h; 6" deep
 Weight 25 lbs.

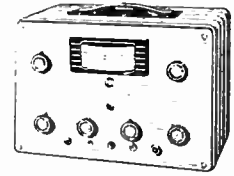
A working schematic diagram of a typical 5-tube superheterodyne radio. Parts are mounted near proper symbols; wired to operate. Pin jacks on 5 color sections make experiments, described in instructions, easy to perform. Additional tube and discriminator circuit included to show FM. Sugg'd User Price: \$149.50.



FM SWEEP GENERATOR (WR-53A)

I-F Oscillator:
 Frequency Range 8.3 to 10.7 Mc
 Output 1 microvolt to 0.1 volt
 R-F Oscillator:
 Frequency Range 85 to 110 Mc
 Output 5 microvolts to 0.1 volt
 Power Supply 105/125 volts, 50/60 cycle
 Finish (Case) Blue-Gray
 (Panel) Anodized Aluminum
 Dimensions 13 1/2" w; 9 1/4" h; 7 1/2" deep

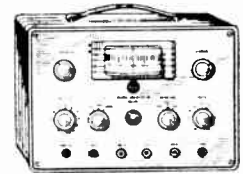
Designed especially for rapid and accurate alignment of FM receivers. Produces an i-f sweep frequency of 0 to 200 kc adjustable band width, which can be centered on any i-f from 8.3 to 10.7 Mc. Also has CW or AM signal in 85 to 110 Mc range for oscillator and mixer alignment. Sugg'd User Price: \$162.50.



AUDIO OSCILLATOR (WA-54A)

Frequency Range 20 to 17,000 cycles
 Distortion under 5% (rms) entire range
 Hum Level 60 db. below max. output
 Power Output 125 milliwatts
 Power Supply 105/125 volts, 50/60 cycles
 Finish (Case) Blue-Gray
 (Panel) Anodized Aluminum
 Dimensions 13 1/2" w; 9 1/4" h; 7 1/2" deep
 Weight 22 lbs.

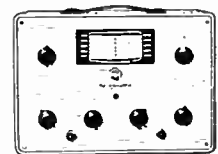
Continuous tuning 20 cycles to 17 kc with practically constant output. Output matches 250, 500 ohm line, or high impedance circuit. Ideal for testing speakers, acoustical response, measuring modulation, receiver fidelity, or audio amplifier frequency response. Sugg'd User Price: \$152.50.



TEST OSCILLATOR (WR-67A)

Frequency Range 100 ke to 30 Mc
 R-F Output up to 1 volt
 Modulation Frequency 400 cycles
 A-F Output 25 volts
 Power Supply 105/125 volts, 50/60 cycles
 Dimensions 13 1/2" w; 9 1/4" h; 7 1/2" deep
 Finish (Case) Blue-Gray
 (Panel) Anodized Aluminum
 Weight 15 lbs.

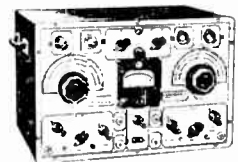
Three fixed frequencies, 455, 600, 1500 kc in addition to tuning range, enable fast alignment. Signal injection probe permits use of r-f, i-f or audio test signals to any part of a set with maximum speed and simplicity. Dual attenuation from minimum leakage low output up to 1 volt eliminates changing cable connections. Sugg'd User Price: \$89.50.



RIDER CHANALYST (162-C)

R-F, I-F range 100 ke to 1700 kc
 attenuation 10,000 : 1
 Osc. channel range 60 kc to 15 Mc
 attenuation 10 : 1
 A-F range 0.1 volt to 1000 volts
 DC range ± 5, 25, 125, 500 volts
 Wattage indicator 30-250 watts
 Power supply 105/125 volts, 50/60 cycles
 Dimensions 16" w; 9" h; 10 1/4" deep
 Weight 28 lbs.

Can be used to quickly check presence, absence or character of signal at any point in any AM receiver. Enables serviceman to determine wattage, voltage and signal level thruout the set. All tests can be made simultaneously for monitoring intermittent receivers. Sugg'd User Price: \$162.50.



All prices in effect 3/1/48.

RCA LABORATORY MEASURING EQUIPMENT



AUDIO VOLTMETER (WV-73A)

Voltage (AC) 0.001 to 1000 volts
 Frequency Range 20 to 20,000 cycles
 Input Impedance 1 megohm and 25 μ ohm
 Power Supply 105/125 volts; 50/60 cycles
 Dimensions 13 1/2" w; 9 1/2" h; 7 1/4" deep
 Weight 15 lbs.
 Finish (Case) Blue-Gray
 (Panel) Anodized Aluminum

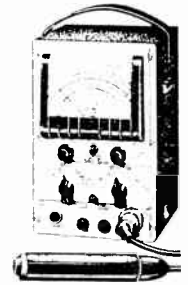
Ideal for measuring voltages in high-impedance circuits. Logarithmic scale and overlapping attenuator assure accuracy even when pointer is at either end of scale. Excellent frequency response. Sugg'd User Price: \$175.00.



ADVANCED VOLTOHMYST (WV-75A)

DC (6 ranges) 0 to 1000 volts
 AC (6 ranges)
 Using probe directly 0 to 100 volts
 Using probe and multipliers 0 to 1000 volts
 Frequency Response:
 Using probe directly 30 cycles to 250 Mc
 Using probe and multipliers 30 cycles to 15 kc
 Input Impedance (using probe directly):
 At 1 Mc 625 Kilohms; 15.6 μ ohm
 Resistance (6 ranges) 0 ohms to 1000 megohms
 Power Supply (AC) 105/125 volts; 50/60 cycles
 Dimensions 6 1/2" w; 9 1/2" h; 6 1/4" deep

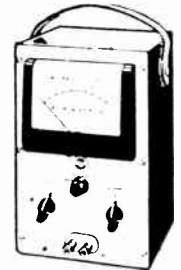
For High-Frequency, FM and TV measurements. Newly developed diode probe permits peak-to-peak AC voltage readings to 250 Mc. WV-75A is really 6 instruments: VHF Voltmeter, Audio Voltmeter, AC Voltmeter, DC Voltmeter, Ohmmeter, FM Indicator. Meter is burn-out proof. The WV-75A employs a push-pull DC Vacuum Tube Voltmeter circuit characterized by excellent linearity and stability. Sugg'd User Price: \$125.00.



ULTRA-SENSITIVE DC MICROAMMETER (WV-84A)

Readings 0.001 μ a to 1 μ a full scale
 Six Ranges 0.01; 0.1; 1.0; 10; 100; 1000 μ a
 Voltage Drop full scale 0.5 volts
 Power Supply (Batteries) 2-1 1/2 volts A (RCA VS100)
 2-2 1/2 volts B (RCA VS102)
 Dimensions 6 1/4" w; 9 1/2" h; 5 1/2" deep
 Weight (including batteries) 9 1/2 lbs.

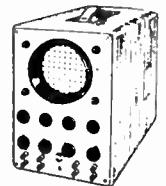
Reads from 0.001 to 1000 microamperes in six separate ranges. Useful for measuring high values of resistance; may be used as high resistance voltmeter. Approaches galvanometer sensitivity. Electronic protected non-burn-out meter. Accuracy, 0.01 range, \pm 5% of full scale reading; other ranges \pm 4%. Ideal for weak-current measurements in phototubes, multiplier phototubes, etc. Sugg'd User Price (less batteries): \$100.00.



INDUSTRIAL OSCILLOSCOPE (WO-60C)

Deflection Sensitivity:
 Vertical Amplifier 0.056 p-to-p volts/inch
 Horiz Amplifier 0.67 p-to-p volts/inch
 Input Impedance:
 Vert or Horiz Amp 1 meg shunted by 22 μ ohm
 Frequency Response:
 Sine Wave Flat \pm 10%; 5-80,000 cycles
 Flat \pm 20%; 2-100,000 cycles
 Square Wave No tilt or overshoot 20-5000 c
 Sawtooth Time Base 3 to 30,000 cycles/sec
 Power Supply 105/125 volts; 50/60 cycles
 Dimensions 9 1/2" w; 14" h; 19 1/2" deep

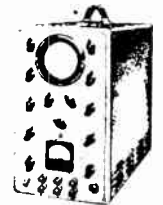
Portable scope with wide variety of uses. Excellent phase-shift characteristics, 1-f response. Holds high sensitivity even with violent shock. Designed for fast changeover from one type persistence C-R tube to another. Useful range 0.5 to 300,000 cycles. Sugg'd User Price: \$345.00.



PORTABLE OSCILLOSCOPE (WO-79A)

Frequency Range:
 Vertical Amplifier 10 cycles to 5 Mc
 Horizontal Amplifier 10 cycles to 500 kc
 Deflection Sensitivity:
 Vert. Amplifier 0.5 peak-to-peak volts/in
 Horizontal Amplifier 1.3 peak-to-peak volts/in
 Sawtooth Time Base 20 cycles to 250 kc/sec
 Triggered Time Base Repetition to 50 kc/sec
 Blanking Return trace blanked on triggered definition
 Power Supply 105/125 volts; 50/60 cycles
 Dimensions 8 1/4" w; 14 1/2" h; 16 1/4" deep

For detailed observation and accurate measurement of voltages produced by TV synch. and deflection circuits, ignition systems, pulse generators, etc. Wide horiz. deflection—up to twice screen diam. Calibrated meter for voltage measurements. Built-in delay line. Triggered sweep. Sugg'd User Price: \$550.00.



LABORATORY OSCILLOSCOPE (715-B)

Vertical amplifier flat to 11 Mc. Triggered and linear sweep. One microsecond markers. Sugg'd User Price: \$2400. Write for catalog.

DC OSCILLOSCOPE (WO-27A)

Both vertical and horizontal amplifiers flat from 1000 to 100,000 cycles. 5" C-R tube, quickly interchangeable. Sugg'd User Price: \$1150.

All prices in effect 3/1/48.

★ Simpson

SIMPSON ELECTRIC CO.

INSTRUMENTS THAT STAY ACCURATE

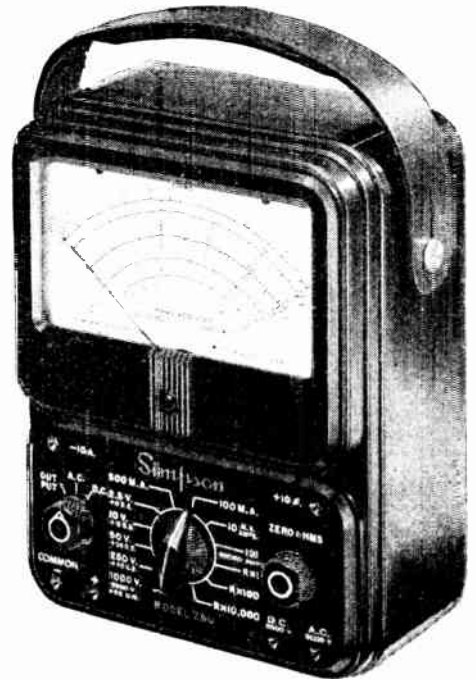
MODEL 260 Set Tester

World's Most Popular
High Sensitivity Set Tester
For Radio and Television

The popularity of this famous high sensitivity set tester is increasing every day. And it has always out-sold every similar test instrument in the field. As always, you cannot today touch its useful ranges, its precision, or its sensitivity in any other instrument of equal price or selling for substantially more.

You need only remove Model 260 from its handsome case of black, molded bakelite to see how it differs from other set testers. Look at the sub-panel—here are a score of small recesses, each holding a separate resistor or pairs. All connections are short and direct, eliminating the need for cable wiring. Here is a kind of strength and firmness of assembly you will not see elsewhere. The finest of insulation to reduce chances of shorts, the highest degree of accessibility of components. The front panel shows similar refinements: pin jacks firmly set into molded recesses so that there are no exposed metal parts; all figures and symbols molded into the heavy bakelite panel, then filled with white, so that they have greatest legibility and long wearing qualities.

At 20,000 ohms per volt, this instrument has no equal in its price class or in many instruments of much higher price. Its practically negligible current consumption assures remarkably accurate full scale voltage readings. It provides D.C. current readings as low as 1 micro-ampere and up to 10 amperes. Resistance readings are equally dependable. Tests up to 20 megohms and as low as 1/2 ohm can be made. With this super sensitive instrument you can measure automatic frequency control diode balancing circuits, grid currents of oscillator tubes and power tubes, bias of power detectors, automatic volume control diode currents, high-mu triode plate voltage and a wide range of unusual conditions which cannot be checked by ordinary servicing instruments



RANGES

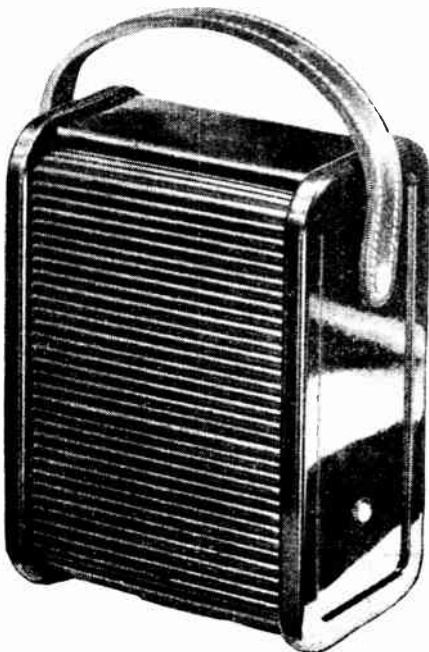
Model 260 Volt-Ohm-Milliammeter
20,000 Ohms per Volt D.C., 1,000 Ohms per Volt
A.C.
Volts, A.C. and D.C.: 2.5, 10, 50, 250, 1000, 5000
Milliamperes, D.C.: 10, 100, 500
Microamperes, D.C.: 100
Amperes, D.C.: 10
Decibels (5 ranges): -10 to +52 D.B.
Ohms: 0-2000 (12 ohms center), 0-200,000 (1200
ohms center), 0-20 megohms (120,000 ohms ce-
ter).

DEALER'S NET PRICES

Model 260, complete with test leads and 32-page Operator's Manual	\$38.95
Leather Carrying Case	8.00
(Size: 5 1/4" x 7" x 3 1/8". Weight: 3 1/2 lbs. Shipping Wt.: 5 lbs.)	
Model 260 in Roll Top Safety Case, complete with test leads and 32-page Operator's Manual	45.95
(Size: 5 3/8" x 9" x 4 3/4". Weight: 6 1/2 lbs. Shipping Wt.: 9 lbs.)	

◆ MODEL 260 Set Tester In Roll Top Safety Case

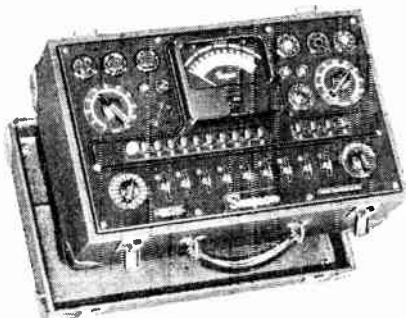
We take Model 260, place it inside a housing of heavily molded bakelite, and permanently faster: it there. Instrument and case become one unit. Beneath the instrument is a compartment for test leads. Over instrument's face a roll top (of molded bakelite, too) slides up to open, down to close, the case. A flick of the finger rolls the top up and out of sight and instrument is ready to use. A downward flick, and the instrument is closed, ready to carry, and fully protected.





Simpson

INSTRUMENTS THAT STAY ACCURATE



MODEL 330 Mutual Conductance Tube Tester

Tube manufacturers consider that a radio tube has reached the end of its usable life when it falls to a certain percentage of its rated value.

The new Simpson Model 330 tests tubes in terms of percentage of rated dynamic mutual conductance—a comparison of the tube under test against the standard rate micromho value of that tube. The colored zones on the dial coincide with the micromho rating or the percent of mutual conductance, indicating that the tube is good, fair, doubtful or definitely bad. Thus, at a glance, you can check the tube against manufacturers' ratings. If it becomes desirable to know the actual value in micromhos, the percentage reading may be easily converted.

Tubes are tested with voltage applied automatically over the entire operating range, reproducing more completely than ever before the actual conditions under which a tube functions in a radio set.

Besides this revolutionary new method, Simpson offers you an equally revolutionary switching arrangement. The circuit is so arranged that, even though there are numerous combinations possible, very few switches require moving to test any one tube. Many of the popular tubes are tested in the "normal" position without moving any of the nine tube circuit switches.

Ten push button switches and nine rotating switches of six positions each provide infinite combination in tube element and circuit selection. Only a few settings are necessary for the most complicated tube. The tube chart provided is arranged for quickly identifying the tube and setting the controls.

When you have finished a tube test, the Automatic Reset takes over to speed and simplify the next test. Just press the reset button and instantly all switches, both push button and rotary, return to normal automatically!

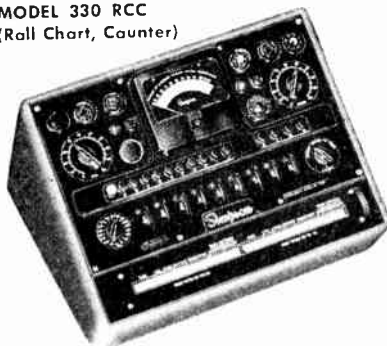
Dealer's Net Price \$118.50

- Panel—Molded bakelite, satin grained finish. Characters, numerals, and dial divisions engraved and filled in white, insuring long wearing qualities.
- Meter—4½" w/h four-colored dial indicating good, fair, doubtful, and bad—also "Percentage of Mutual Conductance" scale.
- Sockets provided for all types of tubes including acorn tube, 9-pin miniature, also sub miniature.
- Neon glow tube to indicate shorted tubes.
- New simplified switching arrangement (see above).
- Tube chart arranged for quickly identifying the tube and setting controls.
- Tests tubes with voltage applied automatically over the entire operating range, under conditions approximating actual operation in radio set.
- Case—sturdy fabricoid covered plywood. Removable cover with slip type hinges.

TWO MODELS with SIMPSON "NO BACKLASH" Roll Chart

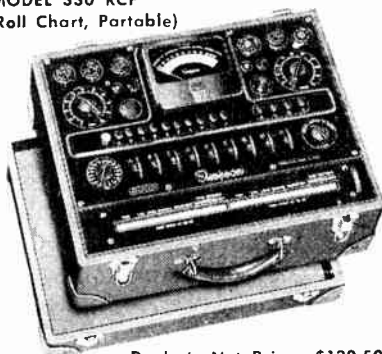
(See description on following page)

MODEL 330 RCC (Roll Chart, Counter)



Dealer's Net Price .. \$137.50

MODEL 330 RCP (Roll Chart, Portable)



Dealer's Net Price .. \$132.50



MODEL 335 Plate Conductance Tube Tester

Another Simpson innovation, the Model 335 tests tubes today's way—under conditions simulating actual use in a radio set. The dial indicates percentage of rated plate conductance. With a minimum of settings a percentage reading is quickly obtained which, for all practical purposes, is a true percentage of the tube's rated value.

Regardless of tube load, filament voltages are maintained practically constant automatically. Each tube element is individually connected to proper potential. Reliable short test is provided. Diodes tested on low voltage. Automatic reset switch clears way quickly for the next test.

All standard tube sockets are available, and additional space is provided for new sockets. Every socket connection, and all grid leads, are connected through separate switches to provide for future tubes.

Model 335 is housed in a handy portable case, with panel and switches of molded bakelite. Meter proper is large 4½" size for easy reading.

With Simpson "No Backlash" Roll Chart

For 105-130 volts, 50-60 cycle
SIZE: 15½" x 9½" x 6¼". WEIGHT: 9 LBS.
SHIPPING WEIGHT: 16 lbs.
Dealer's Net Price \$98.50

Simpson

INSTRUMENTS THAT STAY ACCURATE

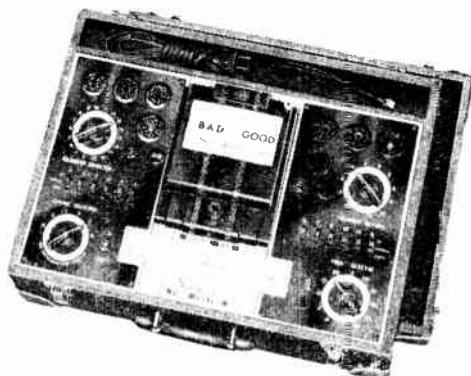
MODEL 555 Tube Tester

Here is a tube tester Simpson engineered to test all tubes for today's radio receivers and any that may come to market within the foreseeable future. It is outstanding in its simplicity of operation and its attractive appearance.

Using the basic RMA recommended circuit, it is possible to test any tube regardless of its base connections or the internal connections of its elements through the use of the new exclusive Simpson three-position lever-operated toggle switches. These new Simpson toggle switches use a molded rotor carrying silver plated contacts which are self-cleaning through their wiping action. Switches snap firmly into each position, yet move easily, due to inset spiral-spring-and-ball-bearing.

The Model 555 will test all receiving tubes, including the latest nine pin miniature tubes and the subminiatures as used in hearing aids, etc. Extra sockets are provided and the flexible individual element switching arrangement takes care of any future tube developments. The special Simpson acorn tube socket with floating contacts assures positive contact with insurance against damage to the delicate prong construction of acorn tubes. Tests can also be made on gaseous rectifiers, pilot lamps and continuity of ballast tubes.

No adapters or special sockets are required. Damage to tubes by plugging into the wrong socket is elim-



SIZE: 16³/₄" WIDE x 12¹/₂" HIGH x 5" DEEP.
 WEIGHT: 13¹/₂ lbs. SHIPPING WEIGHT: 20 lbs.
 Dealer's Net Price.....\$69.35

inated through the use of only one socket for each tube base type. This tube tester is properly fused and provides for line adjustment from 100 to 230 volts with smooth vernier control.

The Panel of Model 555 is distinguished by beautiful modern styling in the shining silver and black of highly polished, enduring, anodized aluminum. Case of handsome leatherette.

The SIMPSON "NO-BACKLASH" Roll Chart

The Simpson "No-Backlash" Roll Chart is so exactly everything a roll chart should be that we are proud to place it on our tube-testers. It is truly a precision chart.

The exclusive "No-Backlash" feature automatically takes up the slack in the paper chart and, by keeping the chart in constant tension, makes it impossible to turn the selector wheel without moving the chart. This results in precision selection at all times. The "No-Backlash" feature also prevents the paper chart from tearing and getting out of alignment, and presents at all times a neat, flat reading surface. Because of the ratio to which the selector wheel is geared up, tube selections can be made with a minimum of effort.

The whole Roll Chart mechanism is securely fastened to the instrument panel. Easy removal of the panel screws gives quick access to the chart so that new information may be written on the roll sheet easily and conveniently. Also, when the time comes for

the substitution of an entirely new chart, this may be done in a matter of minutes.

Further than this, the ingenious way in which the chart is fastened to the rollers adds to the ease of replacement and prevents the chart from getting out of alignment.

Everything has been done to make the tube-settings as easy to read as possible. In addition to the neat, flat reading surface made possible by the "No-Backlash" feature, the Lucite window is just wide enough to show 2 tube settings or both settings on a multi-purpose tube. Letters and figures are in clear, bold-face type.

Throughout, of course, the Simpson "No-Backlash" Roll Chart is manufactured to Simpson precision standards. Lightweight, rigid construction; gear driving mechanism that incorporates heavy duty precision gears and parts; roll chart paper of high tensile strength - all these contribute to making this the finest roll chart ever to be built for a tube tester.

SIMPSON MODEL 445 Tube and Set Tester with the famous Simpson "No-Backlash" Roll Chart



SIZE: 16" x 12¹/₂" x 6³/₄". WEIGHT: 9 LBS.
 SHIPPING WEIGHT: 12 LBS.

Dealer's Net Price.....\$128.50

Model 445 combines a 20,000 ohms per volt Set Tester and a Plate Conductance Tube Tester. The tube tester dial indicates percentage of rated plate conductance which can also be considered as percentage of mutual conductance since, in most cases, the amplification factor remains constant. When a tube test is finished the Simpson Automatic Reset mechanism clears the meter for the next test, returning all switches, both push button and rotary, to normal automatically. Sockets for all types of tubes are provided, including the new 9-pin miniature; also the sub-miniature as used in hearing aids, etc.

The volt-ohm-milliammeter set tester provides the ranges that have made the Simpson Model 260 the most famous set tester in the world.

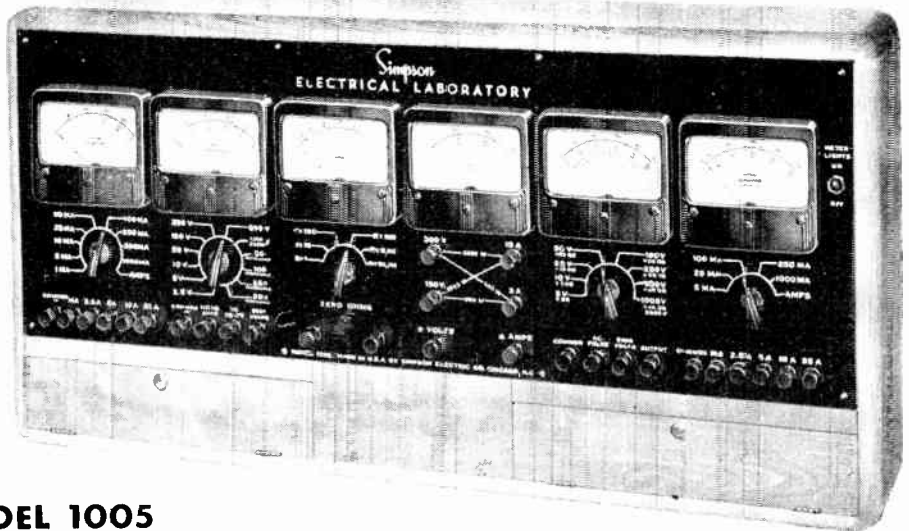
RANGES

Volts (20,000 ohms per volt D.C., 1000 ohms per volt A.C.): 0-2.5, 10, 50, 250, 1000, 5000.	Output (A.C.) volts: 2.5, 10, 50, 250, 1000, 5000.
Milliamperes (D.C.): 0-10, 100, 500.	Ohms: 0-2000 (12 ohms center); 0-200,000 (1200 ohms center); 0-20 megohms (120,000 ohms center).
Microamperes (D.C.): 0-100.	

Simpson

INSTRUMENTS THAT STAY ACCURATE

All the functions of over 60 separate instruments combined in one unit!



SIMPSON MODEL 1005 ELECTRICAL LABORATORY

Here is a complete test unit for use by radio, electronic, and electrical technicians in laboratories, shops, or service departments. It consists of six individual 4 1/2" rectangular instruments, each with a complete set of ranges.

In addition to the wide variety of A.C. and D.C. voltage and current ranges, a multi-range ohmmeter and a signal phase wattmeter have been incorporated. Also, to meet the need for extreme sensitivity required in testing circuits where only a small amount of current is available, an instrument is provided with a sensitivity of 50 micro-amperes, providing 20,000 ohms per volt on all D.C. voltage ranges. The Electrical Laboratory incorporates a rectifier type instrument for measuring A.C. voltage with a resistance of 1,000 ohms per volt on all

ranges. This latter instrument also has in combination a complete coverage of DB ranges from minus 10 to plus 54 for volume indications.

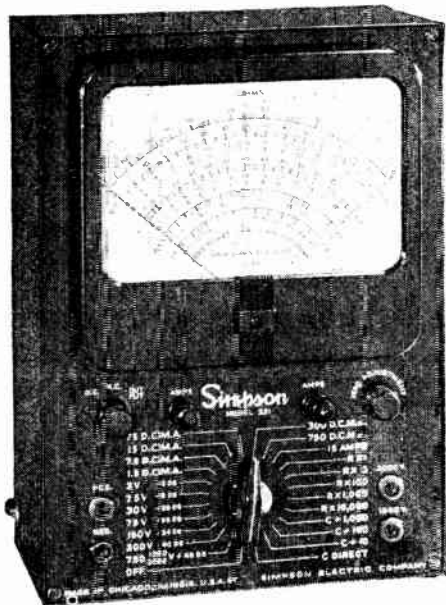
The Electrical Laboratory is adaptable for testing all electrical appliances, small motors, circuits, radio sets, etc. All of the instruments are indirectly illuminated, and all lights are controlled by one switch located at the right side of the panel. The panel is of lustrous, long-wearing anodized aluminum. Cabinet is natural finish birch, with lock-joint construction. Two compartments for accessories and instructions, with hinged doors, are located at the base of the cabinet. All connections are made to binding posts located on the panel. Test leads and Break-in plug are furnished.

RANGES OF MODEL 1005

Meter No. 1 (D.C. Milliammeter and Ammeter)	Meter No. 2 (D.C. Microammeter and Voltmeter)	Meter No. 3 (Ohmmeter)	Meter No. 4 (Wattmeter)	Meter No. 5 (A.C. Voltmeter, Output and DB meter)	Meter No. 6 (A.C. Milliammeter and Ammeter)
0-1 MA. D.C.	0-2.5 Volts D.C.	0-500 Ohms (5 ohms center)	0-300 Watts A.C.	0-5 Volts A.C.	0-5 MA. A.C.
0-5 MA. D.C.	0-5 Volts D.C.	0-5000 Ohms (50 ohms center)	0-600 Watts A.C.	0-10 Volts A.C.	0-25 MA. A.C.
0-10 MA. D.C.	0-10 Volts D.C.	0-50,000 Ohms (500 ohms center)	0-1500 Watts A.C.	0-25 Volts A.C.	0-100 MA. A.C.
0-25 MA. D.C.	0-50 Volts D.C.	0-500,000 Ohms (5,000 ohms center)	0-3000 Watts A.C.	0-50 Volts A.C.	0-250 MA. A.C.
0-50 MA. A.C.	0-100 Volts D.C.	0-5 Megohms (50,000 ohms center)		0-100 Volts A.C.	0-1000 MA. A.C.
0-100 MA. D.C.	0-250 Volts A.C.	0-50 Megohms (500,000 ohms center)		0-250 Volts A.C.	0-2.5 Amps A.C.
0-250 MA. D.C.	0-500 Volts D.C.			0-500 Volts A.C.	0-5 Amps A.C.
0-500 MA. D.C.	0-1000 Volts D.C.			0-1000 Volts A.C.	0-10 Amps A.C.
0-1000 MA. D.C.	0-5000 Volts D.C.			0-5000 Volts A.C.	0-25 Amps A.C.
0-2.5 Amps D.C.	20,000 ohms per volt			Rectifier type	
0-5 Amps D.C.				1000 Ohms	
0-10 Amps D.C.	0-50 Microamps	Size 33-9/16" x 16 13/16" x 9". Weight: 37 lbs. Shipping Weight: 60 lbs. Dealer's Net Price, complete with Leads and Break-in Plug \$218.00		per volt	
0-25 Amps D.C.	0-100 Microamps			DB Ranges	
	0-250 Microamps			- 10 to +54	
	0-500 Microamps			same as volts except 5000 Volt Range	

Simpson

INSTRUMENTS THAT STAY ACCURATE



MODEL 321 Giant Set Tester A New and Better Version of An Old Favorite

A giant in size and in performance, the Model 321 Set Tester incorporates 50 ranges. It's an old favorite among radio service men, further refined by Simpson to make it more useful than ever. It is ideally suited for either bench use or panel mounting.

The meter proper is large 7" size, housed in an attractive molded bakelite case. All D.C. scales are in black and A.C. scales in red, to simplify reading. Knife edge pointer insures correct determination of values. The panel is of black anodized aluminum, with silver etched characters, excellently arranged for quick selection of ranges. The range selector is fitted with a large, easy-to-operate bakelite handle. Cabinet is of steel with black wrinkle finish.

Test leads, insulated for 3000 volts, are furnished with each instrument. All voltage ranges both A.C. and D.C. have a resistance of 1000 ohms per volt.

RANGES

Volts: (Both A.C. and D.C.) 0-3, 7.5, 30, 75, 150, 300, 750, 1500, 3000
 All A.C. volt ranges available for output measurement
 Milliampers: (D.C. only) 0-1.5, 7.5, 15, 75, 300, 750
 Amperes: (D.C. only) 0-15

Ohms: 0-2000 (22 ohms center)
 0-20,000 (220 ohms center)
 0-200,000 (2200 ohms center)
 0-2 megohms (22,000 ohms center)
 0-20 megohms (220,000 ohms center)
 Microfarads: 0-.05, .5, 50
 Decibels: 7 ranges, from -20 to +48 DB

SIZE: 11 5/8" x 8 3/4" x 4"
 WEIGHT: 10 LBS.
 SHIPPING WEIGHT: 15 LBS.
 Dealer's Net Price\$59.50



MODEL 266 Vacuum Tube Voltmeter

Here is a vacuum tube voltmeter that offers the extreme accuracy modern electronic engineering demands. It is another new development—another new triumph of Simpson designing and manufacturing skill. It covers a wide range, and the high accuracy at 100 megacycles makes this instrument wholly suited for the new FM band.

The D.C. input circuit is well filtered so that the presence of superimposed alternating currents does not affect the D.C. measurements. A zero center switch is provided for discriminator circuit alignment, a feature which embraces all D.C. voltage ranges. The D.C. volt input resistance ranges from 50 megohms to 200 megohms; A.C. volts input impedance at 60 cycles is 40 megohms.

Special probe furnished for work on RF voltages has been designed to reach hard-to-get-at connections more easily; probe has input capacitance of approximately 4 micro-microfarads. Primary of the power transformer is well regulated, holding close control over filament as well as plate voltage.

Model 266 is housed in a handsome hardwood case, with sloping panel of anodized aluminum. Compartment for leads in rear of case. Large meter provides quick, accurate reading.

RANGES

Volts: (A.C. and D.C.) 0-1, 5, 10, 50, 100, 250, 500, 1000, 5000
 Milliampers: (D.C.) 0-1, 5, 10, 50, 100, 250, 500
 Amperes: (D.C.) 0-10

Size: 8 1/2" wide x 9 1/2" high x 8" deep.
 Weight: 8 lbs. Shipping weight: 15 lbs.

Ohms: 0-1000 (10 ohms center)
 0-10,000 (100 ohms center)
 0-100,000 (1000 ohms center)
 0-1 megohm (10,000 ohms center)
 0-10 megohms (100,000 ohms center)
 0-100 megohms (1 megohm center)
 0-1000 megohms (10 megohms center)

Dealer's Net Price\$94.50

Simpson

SIMPSON ELECTRIC CO.

INSTRUMENTS THAT STAY ACCURATE

New! Simpson Wide Range Signal Generator for A.M. and F.M. MODEL 415A WITH BUILT-IN SWEEP CIRCUIT

Model 415A Signal Generator incorporates all of the features of Model 415 and in addition has a built-in sweep circuit for alignment of FM receivers. The AM bands cover a complete frequency range 75 KC to 130 MC and the FM bands, 75 KC to 115 MC. A wide sweep of 1 MC is provided, which is more than adequate for FM alignments with synchronization potential for locking in scope trace. Used with an oscilloscope, Model 415A is the correct answer to FM servicing.

General Specifications of MODELS 415A and 415

1. Direct reading dial with continuous coverage from 75 Kilocycles to 130 Megacycles in the following ranges: 75-200; 200-600; 550-1800 Kilocycles and 1.7-4.2; 5-16.51; 16-32; 31-65; 62-130 Megacycles. Fundamental to 65 MC.
 2. Model 415 is practically independent of line voltage fluctuation. Calibration is stable regardless of wide variations in line voltage.
 3. RF output is controlled through its entire range, eliminating the necessity of a separate connection for high uncontrolled output as found in other signal generators.
 4. RF Output Voltage is practically constant throughout the entire frequency range.
 5. Modulation from 0 to 100% using either the 400 cycle internal sine wave or an external source. A range from 0 to over 9 volts of 400 cycle sine wave is available for external use.
 6. High fidelity modulation up to 100% from below 60 cycles per second to over 10 Kilocycles per second.
 7. No unwanted frequency modulation present.
 8. Each Signal Generator is individually calibrated against a crystal controlled frequency standard.
 9. Substantial construction assures maintenance of calibration accuracy indefinitely.
- PANEL**—Lustrous black anodized aluminum. Dial is encased in a molded bakelite escutcheon with glass covering for protection against damage and dirt. Fundamental switches and controls are mounted on engraved molded bakelite panels.
- CASE**—Steel, copper plated for shielding effect and finished in gray durable wrinkled enamel. Leather carrying handle.
- SHIELDING**—In addition to the overall shielding offered by the case and panel, the coils and tuning condenser are individually shielded, then an additional shield is placed over these two assemblies. This series of shields together with other factors reduce leakage to an absolute minimum.



COILS—Low loss RF coils are individually calibrated by means of variable inductance and variable minimum capacitance. These adjustments provide the means for greatest possible accuracy in calibration.

BAND SELECTOR—The rotating turret coil assembly permits the use of shortest possible wiring, resulting in minimum circuit capacitance and permits quick selection of any frequency range.

CONDENSER—A two section tuning condenser using either one section or the other provides for ideal inductance to capacity ratio on all bands. Smooth vernier tuning permits accurate adjustment of the selected frequency.

For 105-130 volts, 50-60 cycle

SIZE: 5 $\frac{5}{8}$ " x 11 $\frac{3}{8}$ " x 15 $\frac{1}{8}$ "

WEIGHT: 19 lbs.

SHIPPING WEIGHT: 24 lbs.

Model 415A, Dealer's Net Price.....\$145.00

Model 415, Dealer's Net Price.....115.00

MODEL 340 Signal Generator . . . 75 Kilocycles to 120 Megacycles

The Model 340 Signal Generator is designed down to the most minute detail for highest accuracy, greatest stability, minimum leakage and good wave form. Big nine-inch meter type dial, with knife edge pointer, gives high readability. Smooth vernier control permits close settings.

CIRCUIT—Electron coupled circuit assures extreme stability and output uniformity throughout the band. Three tubes are utilized in the circuit—full wave rectifier, modulator and oscillator. Standard 30% modulation at 400 cycles is used.

OUTPUT—Signal is controlled through an ingenious step attenuator of the ladder type. Volume level of each step is regulated by a smooth non-inductive control. Special jack is provided for high output specially desirable on the 120 MC band.

BANDS—RF coils provide ranges of 75-220; 200-600; 550-1700; and 1.5-4.5; 4.2-14; 9-30; 36-120 megacycles. Fundamentals to 30 MC. Direct reading dial to 120 MC. Coils designed to retain original inductance regardless of temperature or humidity changes. Special switch automatically eliminates "dead spots."

SHIELDING—Coils, attenuator and signal selector, individually shielded. Oscillator and modulator assemblies sealed in rigidly welded, entirely enclosed chassis. Effective line filter used. Even line cord is shielded. Result: leakage is negligible.

CALIBRATION—Each coil individually calibrated to close tolerances against crystal standards by means of variable inductance and variable minimum capacitance. Tests show negligible changes over long periods of time with extreme temperature and humidity variations.

PANEL—Lustrous black anodized aluminum. Dial is encased in a molded bakelite escutcheon with glass covering for protection against damage and dirt.

CASE—Steel, copper plated for shielding effect and finished in gray durable wrinkled enamel. Leather carrying handle.



For 105-130 volts, 50-60 cycle

SIZE: 16" x 10" x 6"

WEIGHT: 15 lbs.

SHIPPING WEIGHT: 20 lbs.

Dealer's Net Price.....\$69.85



Model 630

MODEL 630 VOLT-OHM-MIL-AMMETER

A Beautiful, streamlined Tester that is simple to operate. Only one switch—selects both circuit and range. A really new selector switch, completely enclosed and protected. Eliminates loss between contacts. Retains contact alignment permanently. Molded construction keeps dirt out. Unit construction—resistors, shunts, rectifiers, batteries—all housed in a molded base integral with the switch. All resistors are Precision Film or Wire-wound types—sealed for permanent accuracy, each in separate molded compartment. Large 5½" meter (RED • DOT Lifetime Guaranteed), black and red scale markings. Batteries easily replaced—double-spring tension grip assures permanent contact. Pre-calibrated rectifier. Molded black case, 3⅞" x 5½" x 7½", with removable leather strap handle. Black molded panel with white markings.

RANGES

- D. C. VOLTS: 0-3-12-60-300-1200-6000, at 20,000 Ohms/Volt (For greater accuracy on TV and other High Resistance circuits.)
- A. C. VOLTS: 0-3-12-60-300-1200-6000, at 5,000 Ohms/Volt (For greater accuracy in Audio and other High Impedance A. C. circuits.)
- DECIBELS: -30, +4, +16, +30, +44, +56, +70 (For Direct Reading of Output Levels.)
- D. C. MICROAMPERES: 0-60, at 250 M. V.
- D. C. MILLIAMPERES: 0-1.2-12-120, at 250 M. V.
- D. C. AMPERES: 0-12, at 250 M. V.
- OHMS: 0-1000-10,000 (4.4-44 at center scale.)
- MEGOHMS: 0-1-100 (4400-440,000 center scale.)
- OUTPUT: Condenser in series with A. C. Volt ranges

MODEL 630.....U. S. A. DEALER NET \$37.50

CARRYING CASE

MODEL 639, black leather, strap handle, snap-over cover.....DEALER NET \$5.75

MIRROR SCALE VOLT-OHM-MIL-AMMETER

Widest range tester of its type with additional brand new features: Long 5" mirror scale for better reading accuracy; Resistance ranges to 40 Megohm; Low Ohm Range 0-2000 (12 ohms center scale); D. C. Volt ranges with dual sensitivity (10,000/20,000 Ohm/Volt) provide double the number of full scale readings of average testers. A. C. Volt ranges at 10,000 Ohm/Volt permit checking many audio and high impedance A. C. circuits where a vacuum tube voltmeter usually is required. Low voltage ranges permit direct measurement of many bias and output voltages. Special film type resistors provide greater stability on all ranges.

6" RED • DOT Lifetime guaranteed meter. Long mirror scale guarantees greater reading accuracy. Insulated, black molded case with removable strap handle, 2½" x 5½" x 6". Molded black panel with white markings. Leads and instructions furnished.

Weight: Approx. 3 lbs.

39 RANGES

- D. C. VOLTS: 0-1.25-5-25-125-500-2500, 20,000 Ohm/Volt
- 0-2.5-10-50-250-1000-5000, 10,000 Ohm/Volt
- A. C. VOLTS: 0-2.5-10-50-250-1000-5000, 10,000 Ohm/Volt
- D. C. MICROAMPS: 0-50, at 250 Millivolts
- D. C. MILLIAMPS: 0-1-10-100-1000, at 250 Millivolts
- D. C. AMPERES: 0-10, at 250 Millivolts
- OHMS: 0-2,000-200,000 (12-1200 center scale)
- MEGOHMS: 0-40 (240,000 ohms center scale)
- DECIBELS: -30, +8, +15, +29, +43, +55, +69. (Reference level "0" DB at 1.73 V. on 500 Ohm line.)
- OUTPUT: Condenser in series with A. C. Volt ranges

Accessories available to special order for extending ranges: External pin jack shunts for A.C.-D.C. Current ranges, resistors for volt ranges, battery and resistors for Ohms ranges. MODEL 625-NA, U. S. A. DEALER NET \$45.00

CARRYING CASE

Attractive black leather carrying case with strap handle. Leather flap folds over the top and snaps in place. MODEL 629 CASE, U. S. A. DEALER NET \$5.50



Model 625-NA

POCKET-SIZE VOLT-OHM-MILLIAMMETER

A precision-manufactured marvel of compactness that provides a complete miniature laboratory for D. C. and A. C. voltage, Direct Current and Resistance analyses. Its many ranges, attractive appearance and other unique features provide an answer to the Volt-Ohm-Milliammeter requirements of radio service-men and amateurs, industrial engineers, laboratory technicians, etc. Refinements in design feature:

Greater scale readability on the 3" RED • DOT Lifetime guaranteed instrument with black and red scale markings.

Simplified switching provides greater ease in changing ranges.

Lower jack contact resistance and trouble-free plug-in connections by use of banana-type jacks. Banana jacks at top of panel reduce possibility of connecting leads over panel controls or meter scales.

Greater stability on voltage ranges by use of special resistors throughout and on current ranges by use of 250 M. V. instrument.



Model 666-HH

RANGES

- D. C. VOLTS: 0-10-50-250-1000-5000, 1000 Ohm/Volt
- A. C. VOLTS: 0-10-50-250-1000-5000, 1000 Ohm/Volt
- D. C. MA: 0-10-100-500, at 250 Millivolts
- OHMS: 0-2000-400,000 (12-2400 center scale)

Attractive new streamlined black molded case, completely insulated, 3½" x 5¾" x 2½". Black molded panel with white markings. Battery self-contained, plug-in type, 1.5 V. Eveready No. 935 or equivalent. 50" test leads with clips and plugs furnished.

Weight: 1½ lbs.

Accessories available to special order for extending ranges: External pin jack shunts for A. C.-D. C. Current ranges, resistors for volt ranges, battery and resistors for Ohms ranges. MODEL 666-HH, U. S. A. DEALER NET \$22.00

CARRYING CASE

Attractive black leather carrying case with strap handle. Leather flap folds over the top and snaps in place.

MODEL 669 CASE, U. S. A. DEALER NET \$4.75

ALL PRICES ARE SUBJECT TO CHANGE — ALL MODELS SUBJECT TO REVISION



Model 3413

TUBE TESTER

CONCLUSIVE tube tests for value, inter-element shorts and leakage. FULLY-BALANCED, MULTI-PURPOSE CIRCUIT: with accurately calibrated values for all makes of tubes—more than an emission test in the special switching flexibility.

AN APPLIANCE CHECK lead permits "short" and "continuity" test of motors, leads, resistance elements, etc. NEON SHORT TEST shows slightest inter-element short or leakage while cathodes are hot. NEW 3-POSITION LEVER SWITCHES give individual control for each tube element. (See center panel.)

TUBES TESTED—All receiving types, gaseous rectifiers, resistor and ballast tube continuity, and pilot lamps. SOCKETS: 4, 5 and 6 prong; 7 prong large and small with combination for pilot lights and flashlight bulbs; 8 prong octal; 8 prong octal; 5 prong bantam; 7 prong miniature; 7 prong subminiature; and 9 prong. Only one socket used for each tube base type eliminating possibility of plugging into the wrong socket.

LINE VOLTAGE INDICATOR permits observation and adjustment for line fluctuations. FILAMENT VOLTAGES (Full Range)—0.75 to 110 Volts in 19 steps. 6" meter with RED • DOT Lifetime guarantee, has 3-color GOOD-?-BAD scale. Brightly illuminated SPEED ROLL TUBE CHART located with markings below switches for convenience in testing. New tubes can be calibrated without manufacturers' data.

COUNTER-PORTABLE Type Case, metal, 15 1/2" x 11 1/2" x 6 1/2", finished in attractive baked-on "hammered" tan enamel. Panel with brown markings. Power supply—115 Volt, 50-60 cycle A. C.

Weight: 20 lbs.

MODEL 3413 TUBE TESTER.....
U. S. A. DEALER NET.....\$68.75



MODEL 3480

COMBINATION TUBE TESTER VOLT-OHM-MIL-AMMETER

VOLT-OHM-MIL-AMMETER RANGES:

- D. C. VOLTS: 0-3-12-60-300-1200, at 10,000 Ohms/Volt
- A. C. VOLTS: 0-3-12-60-300-1200, at 2000 Ohms Volt
- D. C. AMPS: 0-12, at 250 M. V.
- D. C. MILLIAMPS: 0-1.2-12-120, at 250 M. V.
- OHMS: 0-1000-10,000 (10-100 at center scale)
- MEG OHMS: 0-1-50 (10,000-500,000 Ohms at center scale)
- OUTPUT: Output Jacks, condenser in series with A. C. ranges.

TUBE TESTER-VOLT-OHM-MIL-AMMETER—A Combination Tester for conclusive tube testing and complete voltage, current and resistance analyses. Tube Tester has a fully-balanced, multi-purpose test circuit for emission, short and open element tests. See Model 3413 for complete details. GOOD-?-BAD tube testing and Volt-Ohm-Mil-Ammeter ranges are easily readable on the 6" RED • DOT Lifetime Guaranteed meter with multi-color scale. Volt-Ohm-Mil-Amp. markings are black on white except A. C. are red and 0-1000 Ohms are green.

Triplet lever switching makes possible an exclusive combination of tube testing advantages including: maximum circuit flexibility, simplicity of operation and anti-obsolescence design.

1. Thorough test of all tube elements.
2. Individual control of each tube element.
3. New tube test data can be set up without delay.
4. Lever switching is faster and more accurate.
5. No plugging into wrong socket.
6. Minimum number control settings needed.

COUNTER-PORTABLE Type Case, metal, has highly attractive two-tone "hammered" baked-on enamel finish, 15 1/2" x 11 1/2" x 6 1/2". Detachable hinged cover, strap handle.

Weight: 25 lbs.

MODEL 3480 COMBINATION TESTER.....
U. S. A. DEALER NET.....\$98.75

ELECTRONIC VOLT-OHM-MILLIAMMETER

Operational simplicity, broad test facilities and new engineering developments are embodied in this unit for Testing FM and Television, or any sensitive circuit requiring a high impedance measuring device. Simplified operation — no switching back and forth from range to range to balance the circuit. Ranges and meter scales are all straight forward multiples — no reading errors or confusion.

RANGES

- D. C.-A. C.-A. F. VOLTS: 0-2.5-10-50-250-500-1000
- R. F. VOLTS: 0-2.5-10-50
- D. C. MILLIAMPERES: 0-2.5-10-50-250-500-1000
- OHMS: 0-1 K-10 K-100 K
- MEG OHMS: 0-1-10-1000

6" instrument, with 5.6" top scale (RED • DOT Lifetime guarantee). D. C.-A. C.-R. F.-M. A. scales in black, Ohm and D. C. "zero" center scale in red on white background. Knife-edge pointer for greater reading accuracy. Isolation of meter from input circuit provides positive overload protection for this sensitive meter. Load Impedance — 11 Meg. on D. C. Volts. Detachable crystal diode probe supplied for accurate R. F. measurements up to 125 M. C. Another probe also available for V. H. F. frequencies up to 400 M. C. without circuit changes. "SQUARE LINE" metal case, 10" x 10" x 5". Tan enamel finish. Brown markings on the panel. Power: 115 Volt, 50-60 cycle A. C.



Model 2451

MODEL 2451..... U. S. A. DEALER NET \$76.50

ALL PRICES ARE SUBJECT TO CHANGE — ALL MODELS SUBJECT TO REVISION

Radio **TRIPL**ET Testers

SENSITIVE VOLT-OHM-MIL-AMMETER

20,000 OHMS PER VOLT



Model 2405 A

- D. C. VOLTS: 0-10-50-250-500-1000, 20,000 Ohm Volt
- D. C. AMPS: 0-10, at 250 Millivolt
- D. C. MILLIAMPS: 0-1-10-50-250, at 250 Millivolt
- D. C. MICROAMPS: 0-50, at 250 Millivolt
- A. C. VOLTS: 0-10-50-250-500-1000, 1000 Ohm Volt
- A. C. AMPS: 0-0.5-1.5-10, at 1 Volt-Amp
- OHM-MEGHOM: 0-1000-40,000 Ohms — 0-4-40 Meg. (Self-contained batteries.)
- OUTPUT: Condenser in series with A. C. Volt ranges
- DECIBELS: -10 to +15, +20, +33, +49, +55. (Reference Level "0" DB at 1.73 V. on 500 Ohm line.)
- CONDENSER TEST: Capacity check of Paper condensers

A perfect combination—ultra sensitive, extra large meter, impressively cased for either shop or portable use. Incorporates the ultimate sensitivity, 20,000 ohms per volt in a conventional meter of extreme accuracy.

6" Meter, RED • DOT Lifetime guarantee. 5 1/4" long scale enables easy reading. Plug-in, pre-calibrated rectifier simplifies replacement. Ruggedly constructed selector switch, "OHMS ADJUST" provides adjustment for all resistance ranges with maximum accuracy. Connections made through low contact resistance banana jacks, "SQUARE LINE" case, 10" x 10" x 5 1/4", tan enamel finish has detachable, hinged cover. Leads and instructions furnished.

Weight: Approx. 11 lbs.
MODEL 2405-A.....\$59.75
U. S. A. DEALER NET.....\$59.75

HIGH VOLTAGE PROBES

For measuring the high voltage employed in television receivers and in other applications, external probes are available for ranges from 10,000 to 30,000 D. C. Volts for Models 625-NA, 630, 666-HH, 2405-A and 2451. Specify Tester Model when requesting quotations or ordering.

The completely insulated Polystyrene test probe contains the voltage dropping resistors high stability composition type, protected from moisture with a sealed-in covering of Silicone high voltage insulating compound. An additional safe-guard is the guard-type handle. Each lead consists of a 3/8-inch high voltage wire with probe at one end and banana plug on the tester end. Probe is 11 3/4" long.

PORTABLE V-O-MA SHUNTS

Portable, external shunts as high as 120 Amps. are available to extend the current ranges of testers including Models 625-NA, 630, 666-HH, 2405-A and 3480. Shunt must be ordered for the specific tester with which it is to be used because of spacing and millivolt drop. Plug-in type connections are made by plugging shunt into the tester MA terminals. Connections for Portable shunts are made by using 12" leads. Quotations upon request.

TO EXTEND OHMMETER RANGE MODEL 666-HH

A plug-in ohmmeter multiplier for Model 666-HH. Compact tubular insulator with resistor, battery and plug. Will extend Model 666-HH Ohmmeter range to 4 megohms.

No. 9467..... DEALER NET \$3.85

APPLIANCE TESTERS

VOLTS - AMPS - WATTS

ELECTRICAL CIRCUIT ANALYZER of new advanced design for measuring the power wattage, current consumption, and line voltage of all household appliances and small motors under actual operating conditions. Just the tester for watt, current and volt analyses of electric refrigerators, washers, radios, ironers and other appliances, including ranges operating on 220-Volt single phase three-wire and three phase three-wire systems. Power used by the smallest appliance is readily checked on the extremely low scale



Model 2470

range of 0-20 watts (fused to prevent damage from accidental overload). All switches and leads are ample to carry full load continuously.

RANGES

- A. C. WATTS: Single-Phase, 130 V.—0-10-20 50-500-1000-2000 Single-Phase, 260 V.—0-20-40 500-1000-2000-4000 Three-Phase, 260 V.—0-80-7000-4000-0-000
- A. C. CURRENT: 0-0.13-0.26-3.25-6.5-13-26 Amps
- A. C.-D. C. VOLTS: 0-130-260

Model 666 Meter, Electrodynamometer type, RED • DOT Lifetime Guarantee, with 5.6" scale. "SQUARE LINE" metal case, 10" x 10" x 5 1/4", finished in tan "hamo-red" enamel with brown markings on the panel. Hinged, detachable cover has compartment for accessories and leads. One set 5 ft. (Two-Wire) leads with male plug at one end and terminals at other end for connection to tester binding posts; one set 2 1/2 ft. leads with dual socket at one end and terminals at other end for connection to tester binding posts.

Weight: Approx. 11 lbs.
MODEL 2470.....U. S. A. DEALER NET \$76.75

DUAL-METER TESTERS

Models

2002 and 2000-A are real helpers for installations and servicing. Show power consumption of industrial equipment, radios, electric ranges, refrigerators, washers and other household appliances under actual running conditions, on either D. C. or A. C. between 25 and 133 cycles. Checks Watts and Volts simultaneously! Shows if voltage remains within limits under operating loads. Simple operation, clearly marked switches, easy reading long Twin meter scales. Leather carrying case, 6 1/2" x 4 1/2" x 3 1/4", with strap handle, has flap cover to protect meter which is fixed in the case. Space for leads. Leather case eliminates possibility of scratching enamel appliance finishes.

Model 2002

Weight: 2 lbs.

MODEL 2002.....U. S. A. DEALER NET \$35.75
Ranges: 0-1500-3000 Watts A. C.-D. C. at 10 Amp. normal, 20 Amp. max., 40 Amp. momentary; 0-130-260 A. C.-D. C. Volts.

MODEL 2000-A.....U. S. A. DEALER NET \$34.75
Ranges: 0-750-1500 Watts A. C.-D. C. at 5 Amp. normal, 10 Amp. max., 20 Amp. momentary; 0-130-260 A. C.-D. C. Volts.

Models 2005-2006 — designed for those preferring Voltmeter-Ammeter method of testing household appliances and industrial applications. Simultaneous line voltage and current drain readings.

MODEL 2005.....U. S. A. DEALER NET \$33.00
Ranges: 0-10 A. C.-D. C. Amp.; 0-130-260 A. C.-D. C. Volts.

MODEL 2006.....U. S. A. DEALER NET \$33.00
Ranges: 0-25 A. C.-D. C. Amp.; 0-130-260 A. C.-D. C. Volts.

ALL PRICES ARE SUBJECT TO CHANGE — ALL MODELS SUBJECT TO REVISION

Radio



Testers

TEST OSCILLATOR



Model 3432

RANGES

A—165-525 KC	E—18-40 MC	Harmonics to 120 MC
B—500-1750 KC	E2—36-80 MC	
C—1700-6200 KC	E3—54-120 MC	
D—6-18.5 MC		

A wide-range oscillator with uniformly illuminated dial. Seven long scales with widely separated divisions easily read, have five fundamental ranges—165 KC to 40 MC, and two harmonic ranges directly calibrated 36 to 120 MC.

Unique new feature is the brightly illuminated dial providing distinct illumination of scale markings without the least possibility of glare. Lighting also provides an "ON-OFF" indicator.

The dial is big (330°) with seven scales quickly readable at a glance. It has 10 to 1 ratio vernier tuning for ease of adjustment.

RANGE SELECTOR — 5 position follow-up coil switching with complete shielding.

R. F. SELECTOR — Provides High and Low R. F. Output.

OUTPUT ATTENUATOR — Provides fine control of R. F. Output to Coaxial output cable connector.

CIRCUIT SELECTOR — Provides for internally modulated signal (Variable 0 to 100% at 400 cycles). Variable amplitude of external modulation 40 to 15,000 cycles, unmodulated signal or variable audio 0-10 Volts at 400 cycle.

DOUBLE SHIELDING—All R. F. and audio circuits are double shielded with copper plated steel shields.

Metal case, 15 $\frac{1}{2}$ " \times 11 $\frac{1}{2}$ " \times 6 $\frac{1}{4}$ ", with tan enamel finish. Has leather strap handle for ease in carrying. Power: 115 volt, 50-60 cycle A. C. (electrostatic shielded transformer).

Weight: 14 $\frac{1}{2}$ lbs.

MODEL 3432.....U. S. A. DEALER NET \$69.50

A.M.-F.M. SIGNAL GENERATOR

FM-AM Signal Generator with frequency coverage from 100 KC to 120 MC in 10 bands; plus additional 50 MC from fixed oscillator giving fundamental coverage continuously variable to 170 MC.

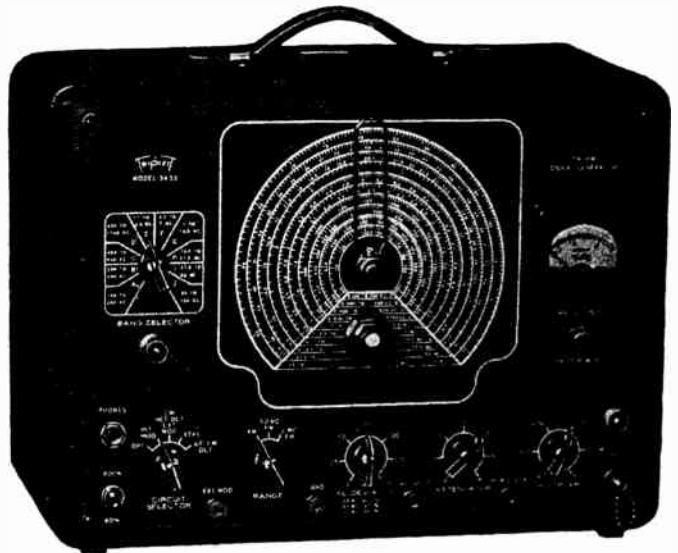
OUTPUT — 1 volt on low ranges from 100 KC to 20 MC and approximately 250,000 Microvolts on the high ranges.

SWEEP WIDTH VARIABLE IN THREE RANGES
60KC (+30 KC) 300KC (+150KC) 600KC (+300KC)

Other outstanding engineering features include: (1)—Deviation control of a fixed frequency reactance modulated oscillator. (2)—Output Meter for measuring relative R. F. output of generator. (3)—Double copper plated steel shielding throughout greatly minimizes R. F. leakage. (4)—Co-axial cable output lead with shielded impedance coupler for direct capacitance or balanced doublet connection. (5)—110 Volt A. C. line filter prevents leakage through power supply. (6)—Ladder attenuator with coarse and fine R. F. output adjustment. (7)—High R. F. Voltage output jack. (8)—High A. F. output available. (9)—Built-in provision for crystal oscillator calibration reference. Crystal not supplied. (10)—Air trimmer capacitor and permeability adjusted oscillator coils. (11)—Voltage regulated power supply for oscillator stability. (12)—Heterodyne Detector for frequency measurement. (13)—External A. M. modulation may be used. (14)—Attractive and easily read dial. (15)—Horizontal synchronized sweep voltage available. (16)—Best available components used throughout.

Metal case, 15 $\frac{1}{2}$ " \times 11 $\frac{1}{2}$ " \times 8 $\frac{1}{4}$ ", finished in lustrous black suede enamel with red and white panel markings. Power: 115 Volt, 50-60 cycle A. C. Weight: 25 lbs.

MODEL 3433.....U. S. A. DEALER NET \$173.25



Model 3433

10 VARIABLE FREQUENCY BANDS

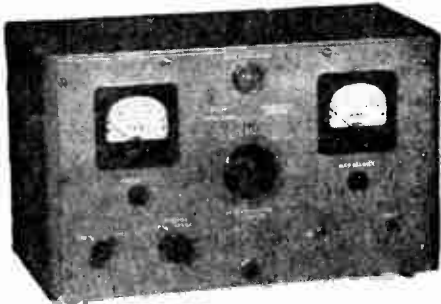
A—100-200 KC	F—3.5-7 MC
B—230-400 KC	G—7-14.5 MC
C—400-820 KC	H—14.5-27.5 MC
D—820-1700 KC	I—27.5-55 MC
E—1.7-3.5 MC	J—55-120 MC

(170 MC output available by adding the 50 MC fixed oscillator signal to 120 MC signal.)

ALL PRICES ARE SUBJECT TO CHANGE — ALL MODELS SUBJECT TO REVISION

RADIO AMATEUR EQUIPMENT

MODULATION MONITOR



Model 3296

With this new MODULATION MONITOR for radio amateur, police and Marine radiophone use, you've solved the problem of getting maximum efficiency from your transmitter. Four separate circuits for measuring amplitude modulation: (1) Percent Modulation (average). (2) Peak Flash Percent Modulation. (3) Carrier Shift. (4) Audio Output for Headphone. Unique advantages of this new model include the following: Peak Indicator may be preset for any percent of modulation from 20-120, and provides instantaneous flash when predetermined modulation level is reached. Percent modulation meter provides rapid up and slow down swing. Plug into your A. C. line—make simple coupling to the transmitter output and the monitor is ready for operation. R. F. and A. F. stages are isolated and separated by ample shielding. Tuned input circuit is coupled to R. F. source by a variocoupler. R. F. power requirements are small.

TUNING RANGES: 1550-2950 KC (Police Band) 14,000-14,400 KC
3500-4000 KC 28,000-30,000 KC
7000-7300 KC Audio Frequency
60-10,000 CPS

CASE: Metal, with dark gray "hammered" enamel finish; overall dimensions: 15 1/2" X 9" X 8". Weight: 20 lbs. Power: 115 Volt, 50-60 cycle A. C.

MODEL 3296..... U. S. A. DEALER NET \$109.75

VU METER

DB METER

Volume Unit and Decibel Meters are used to measure sound or noise levels in amplifiers for Public Address, Theatres, Broadcasting Studios, Broadcasting Static Equipment, etc.

VU meters are used for volume level measurements — including broadcast monitoring. Internal impedance 3900 Ohms. Steady state reference 1 Milliwatt. For 600 Ohm line, 0-100% scale also —20 to +3 VU. Specify Type "A" or "B" scale.

MODEL 426 VU..... \$23.10
MODEL 426 (Illuminated). 25.10

DB Meter permits the operator to make instant adjustments to prevent sound blasting or distortion. Up 6, down 10 DB. Zero DB at 1.73 volt, 560 ohms, 6 milliwatts. Standard damping furnished unless highly damped is specified.

426 DB (Dealer Net) \$15.20
321-T, 327-T " " 13.60

HIGH RANGE D.C. VOLTMETERS FOR AMATEURS

Designed particularly for radio amateurs. High range 3" D. C. Voltmeters—1000 ohms per volt. Provided with special external metalized multipliers mounted on bakelite strip. Specify this type when ordering, or standard voltmeters will be furnished. Available 3" case, Models 321-T, 327-T:

Range	Price	Range	Price
0-1000.....	\$11.90	0-4000.....	\$11.90
0-2000.....	11.90	0-5000.....	12.80
0-3000.....	11.90		

FREQUENCY METER

A new band-switching, tuned Absorption type Frequency Meter covering five amateur bands. Incorporates the new germanium crystal and a D. C. Milliammeter indicator for greater sensitivity. Direct calibration on panel—no coils to change; switching permits instantaneous band change. Audio Jack is provided for monitoring of phone signals—another new feature. Fully shielded. Calibration is in megacycles in the following bands: 3.5-4 MC; 7-7.3 MC; 14-14.4 MC; 20-21.5 MC; 28-30 MC. Coil is removable and other coils may be substituted for special bands, if desired.

USEFUL FOR CHECKING: (1) Fundamental frequency of oscillating circuits. (2) Presence, order and amplitude of harmonics. (3) For parasitic oscillations. (4) Neutralization of R. F. amplifiers. (5) Standing wave ratio on transmission lines. (6) Presence of undesirable or small quantities of R. F. (7) Monitoring of phone signals.

A fully shielded unit of compact pocket size. Overall height, including coil, 7 1/2"; width 2 1/2"; depth 2 1/4". Attractive gray "hammered" enamel finish with black trim.

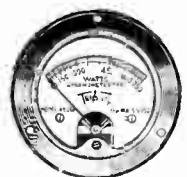
MODEL 3256..... U. S. A. DEALER NET \$16.25



Model 3256

WATTMETERS — ELECTRODYNAMOMETER

These instruments can be used on single phase A. C. or D. C. as Wattmeters. On special order they can be made up as Voltmeters or ammeters. Instruments are self-contained to 300 Volts—10 Amperes. Over that external connection can be made. For use on frequencies up to 133 cycles per second. Available in three-inch model 361. Case dimensions same as 321-T, except for depth, 2" back of the flange (2 1/2" over studs). Wattmeters can be combined in the Triplet Twin case with a voltmeter or Ammeter. Accuracy within ±2%. Standard ranges as follows:



MODEL 361 — SINGLE PHASE

Range Watts	Normal Voltage	Normal Amps.	Sc. D. V.	Net Price
0-75	150	1	75	16.00
0-150	150	2	75	16.00
0-300	150	5	75	16.00
0-750	150	5	75	16.00
0-1500	150	10	75	16.00
0-150	300	1 1/2	75	17.60
0-300	300	2	60	17.60
0-600	300	5	60	17.60
0-1500	300	2	75	17.60
0-3000	300	10	60	17.60

DOUBLE RANGE WATTMETERS (Double Voltage Limits Grey)

0-75-150	150-300	1 1/2	75	21.60
0-150-300	150-300	1	75	21.60
0-300-600	150-300	2	60	21.60
0-750-1500	150-300	5	75	21.60
0-1500-3000	150-300	10	75	23.10

SENSITIVE RELAYS

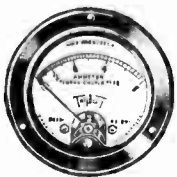
Highly sensitive Triplet relays are of the D'Arsonval Moving Coil type, carefully designed to give dependable, satisfactory performance. Since relays cover such a wide field and most of them are made to special order, no standard models are listed. Each application should be accompanied with information specifying maximum and minimum currents and voltages which will pass through relay coil and contact points, etc.

R.F. AMMETERS

Triplet R. F. Ammeters are the same case size and appearance as corresponding D. C. Models. Internal couples normally furnished at prices shown. If external couples are required, please specify on order, adding \$3.70 net to price of instruments listed below. External couples only (less meter), with 2 ft. leads are \$4.70 net each.

Range	Approx. Res.	Models		Models		Models		Model
		241-T, 243-T	242-T, 247-T	341-T, 347-T	342-T, 347-T	441, 441-A, 442, 446	447, 541	
0.5 Amps.....	.93	\$ 6.90	\$ 7.90	\$ 9.50	\$ 10.30	\$ 10.30	\$ 17.30	
0-1 Amps.....	.35	\$ 6.90	\$ 7.90	\$ 9.50	\$ 10.30	\$ 10.30	\$ 17.30	
0-1.5 Amps.....	.21	\$ 6.90	\$ 7.90	\$ 9.50	\$ 10.30	\$ 10.30	\$ 17.30	
0-2.5 Amps.....	.13	\$ 6.90	\$ 7.90	\$ 9.50	\$ 10.30	\$ 10.30	\$ 17.30	
0-5 Amps.....	.06	\$ 6.90	\$ 7.90	\$ 9.50	\$ 10.30	\$ 10.30	\$ 17.30	
0-10 Amps.....	.03	\$ 6.90	\$ 7.90	\$ 9.50	\$ 10.30	\$ 10.30	\$ 17.30	

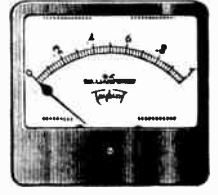
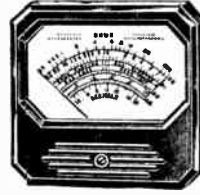
ALL PRICES ARE SUBJECT TO CHANGE — ALL MODELS SUBJECT TO REVISION



Measuring



Instruments



221-T, 321-T D. C.
231-S, 331-S A. C.

227-T, 327-T D. C.
237-T, 337-T A. C.

324, 524 D. C.
331, 534 A. C.

422, 521 D. C.
432, 531 A. C.

426 D. C., 436 A. C.

636, 736 A. C.
626, 726 D. C.

Models		Scale Lengths		Flange	Body Dia.	Body Depth		Material	Case (Mounting)	
D. C.	A. C.	D. C.	A. C.			D. C.	A. C.		Type	Style
221-T	231-S	1.75"	1.75"	2 1/8" Dia.	2 1/8"	1 1/2"	1 1/2"	Molded	Flush	Rim
222-T	232-S	1.75"	1.75"	2 1/8" Dia.	2 1/8"	1 1/2"	1 1/2"	Metal*	Flush	Rim
223-T	233-S	1.75"	1.75"	2 1/8" Dia.	2 1/8"	1 1/2"	1 1/2"	Metal*	Flush	Rear Clamp
227-T	237-T	1.75"	1.75"	2" Sq.	2"	1 1/2"	1 1/2"	Molded	Flush	Rear Screws
321-T	331-S	2.19"	2.19"	2 1/2" Dia.	2 1/2"	1 3/4"	1 3/4"	Molded	Flush	Rim
322	332	2.19"	2.19"	2 1/2" Dia.	2 1/2"	1 3/4"	1 3/4"	Metal*	Flush	Rim
324	334	2.19"	2.19"	2 1/2" Dia.	2 1/2"	1 3/4"	1 3/4"	Metal*	Projection	Rear Studs
327-T	337-T	2.19"	2.19"	2 1/2" Sq.	2 1/2"	1 3/4"	1 3/4"	Molded	Flush	Rear Screws
424	434	3.11"	3.11"	1 3/4" X 3 1/2"	1 3/4"	1 3/4"	1 3/4"	Molded	Flush	Rim
421-A	431-A	3.11"	3.11"	1 3/4" X 3 1/2"	1 3/4"	1 3/4"	1 3/4"	Molded	Flush	Rear Clamp
422	432	3.11"	3.11"	1 3/4" Dia.	1 3/4"	1 3/4"	1 3/4"	Molded	Flush	Rim
426	436	3.11"	3.11"	1 3/4" X 1 1/2"	1 3/4"	1 3/4"	1 3/4"	Molded	Flush	Rear Screws
427	437	3.11"	3.11"	1 3/4" X 1 1/2"	1 3/4"	1 3/4"	1 3/4"	Molded	Flush	Rear Screws
521	531	3.11"	3.11"	1 3/4" Dia.	1 3/4"	1 3/4"	1 3/4"	Molded	Flush	Rim
524	534	3.11"	3.11"	1 3/4" Dia.	1 3/4"	1 3/4"	1 3/4"	Molded	Projection	Rear Studs
626	726	6"	6"	7 1/2" X 6 1/2"	7 1/2"	6 1/2"	6 1/2"	Molded	Flush	Rear Screws
726	736	6"	6"	7 1/2" X 6 1/2"	7 1/2"	6 1/2"	6 1/2"	Molded	Flush	Rear Screws

*Molded base.

D.C. VOLTMETERS — 125 Ohms per Volt											
Range		Code		Models 221-T, 222-T, 223-T, 227-T	Models 321-T, 322, 324, 327-T	Models 421, 421-A, 422, 426	Models 427, 521, 524	Model 626	Model 726	Model 726	Model 726
0-5	TRNO			\$ 5.80	\$ 6.80	\$ 8.40	\$ 9.20	\$ 10.30	\$ 16.20	\$ 16.20	\$ 16.20
0-10	TRWD			5.80	6.80	8.40	9.20	10.30	16.20	16.20	16.20
0-25	TRVF			5.80	6.80	8.40	9.20	10.30	16.20	16.20	16.20
0-50	TRTG			5.80	6.80	8.40	9.20	10.30	16.20	16.20	16.20
0-100	TRSH			5.80	6.80	8.40	9.20	10.30	16.20	16.20	16.20
0-150	TRRI			5.80	6.80	8.40	9.20	10.30	16.20	16.20	16.20
0-300	TRLO			7.60	8.60	10.20	11.00	12.10	18.00	18.00	18.00

D.C. VOLTMETERS — 1000 Ohms per Volt											
Range		Code		Models 221-T, 222-T, 223-T, 227-T	Models 321-T, 322, 324, 327-T	Models 421, 421-A, 422, 426	Models 427, 521, 524	Model 626	Model 726	Model 726	Model 726
0-10	TARCA			\$ 8.40	\$ 9.40	\$ 11.00	\$ 11.80	\$ 12.90	\$ 18.80	\$ 18.80	\$ 18.80
0-150	TAINE			8.70	9.70	11.30	12.10	13.20	19.10	19.10	19.10
0-300	TRLL			10.80	11.80	13.40	14.20	15.30	21.20	21.20	21.20
0-1000	TURAL			12.20†	13.20†	14.80†	15.60†	16.70†	22.60†	22.60†	22.60†
0-1000	TURIN			25.20*	26.20*	27.80	28.60*	29.70*	35.60*	35.60*	35.60*

If sensitivity is not specified on orders for D. C. Voltmeters, 125 Ohms is normally supplied. †Indicates instruments supplied with external wire-wound series resistors at prices shown. *Supplied with external resistor boxes at prices shown above. All other instruments are self-contained. Double-range panel voltmeters available on special order. Prices on request.

D.C. MICROAMMETERS											
Range		Approx. Resis.		Code		Models 221-T, 222-T, 223-T, 227-T	Models 321-T, 322, 324, 327-T	Models 421, 421-A, 422, 426	Models 427, 521, 524	Model 626	Model 726
0-50	1770			TALBE		\$16.90	\$17.90	\$19.50	\$20.30	\$21.40	\$27.30
0-100	900			TRABA		15.00	16.00	17.60	18.40	19.50	25.40
0-200	360			TABDY		11.80	12.80	14.40	15.20	16.30	22.20
0-500	156			TWRL		8.10	9.10	10.70	11.50	12.60	18.50

D.C. MILLIAMMETERS											
Range		Approx. Resis.		Code		Models 221-T, 222-T, 223-T, 227-T	Models 321-T, 322, 324, 327-T	Models 421, 421-A, 422, 426	Models 427, 521, 524	Model 626	Model 726
0-1	55			TRAAAN		\$ 6.90	\$ 7.90	\$ 9.50	\$ 10.30	\$ 11.40	\$ 17.30
0-15	6.6			TRFFS		5.80	6.80	8.40	9.20	10.30	16.20
0-25	4			TRGGT		5.80	6.80	8.40	9.20	10.30	16.20
0-50	2			TRHFF		5.80	6.80	8.40	9.20	10.30	16.20
0-100	1			TRJAW		5.80	6.80	8.40	9.20	10.30	16.20
0-150	0.6			TRKKN		5.80	6.80	8.40	9.20	10.30	16.20
0-200	0.5			TRLLY		5.80	6.80	8.40	9.20	10.30	16.20
0-250	0.4			TRMMZ		5.80	6.80	8.40	9.20	10.30	16.20
0-300	0.33			TRNNA		5.80	6.80	8.40	9.20	10.30	16.20
0-300	0.2			TRROB		5.80	6.80	8.40	9.20	10.30	16.20

D.C. AMMETERS											
Range		Approx. Resis.		Code		Models 221-T, 222-T, 223-T, 227-T	Models 321-T, 322, 324, 327-T	Models 421, 421-A, 422, 426	Models 427, 521, 524	Model 626	Model 726
0-1	0.05			TALUS		\$ 5.00	\$ 6.00	\$ 8.40	\$ 9.20	\$ 10.30	\$ 16.20
0-10	0.005			TROCK		5.80	6.80	8.40	9.20	10.30	16.20
0-25	0.002			TANGS		5.80	6.80	8.40	9.20	10.30	16.20
0-50	0.0016			TANGO			6.80	8.40	9.20	10.30	16.20

Self-contained up to and including 50 Amperes. Shunts 75 Amperes (50 M.V.) and higher are switchboard type with 5 ft. leads. Prices on request.

A.C. VOLTMETERS											
Range		Approx. Ohms per Volt		Code		Models 231-S, 232-S, 233-S, 237-S	Models 331-S, 332-S, 334, 337-S	Model 431, 431-A, 432, 436	Models 437, 531, 534	Model 636	Model 736
0-5	4			TRISE		\$ 5.80	\$ 6.80	\$ 8.40	\$ 9.20	\$ 10.30	\$ 16.20
0-10	10			TRIMP		5.80	6.80	8.40	9.20	10.30	16.20
0-150	125			TOYTE		6.90	7.90	9.50	10.30	11.40	17.30
0-300	141			TWEAK		8.50	9.50	11.10	11.90	13.00	18.90

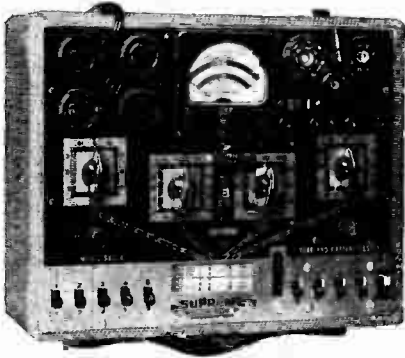
A.C. AMMETERS											
Range		Approx. Resis.		Code		Models 231-S, 232-S, 233-S, 237-S	Models 331-S, 332-S, 334, 337-S	Model 431, 431-A, 432, 436	Models 437, 531, 534	Model 636	Model 736
0-3	0.2			TRILP		\$ 5.80	\$ 6.80	\$ 8.40	\$ 9.20	\$ 10.30	\$ 16.20
0-5	0.1			TEUCH		5.80	6.80	8.40	9.20	10.30	16.20
0-10	0.05			TEHGE		5.80	6.80	8.40	9.20	10.30	16.20
0-25	0.01			TELEO		3.80	6.80	8.40	9.20	10.30	16.20

A.C. MILLIAMMETERS											
Range		Approx. Resis.		Code		Models 231-S, 232-S, 233-S, 237-S	Models 331-S, 332-S, 334, 337-S	Model 431, 431-A, 432, 436	Models 437, 531, 534	Model 636	Model 736
0-10	2670			TEETH		\$ 6.90	\$ 7.90	\$ 9.50	\$ 10.30	\$ 11.40	\$ 17.30
0-15	1150			TEESE		5.80	6.80	8.40	9.20	10.30	16.20
0-50	89			TEEMPT		5.80	6.80	8.40	9.20	10.30	16.20
0-100	21			THARM		5.80	6.80	8.40	9.20	10.30	16.20
0-200	6.7			TRFFT		5.80	6.80	8.40	9.20	10.30	16.20
0-500	0.8			THEOS		5.80	6.80	8.40	9.20	10.30	16.20

ALL PRICES ARE SUBJECT TO CHANGE — ALL MODELS SUBJECT TO REVISION — OTHER RANGES AVAILABLE

SUPREME INSTRUMENTS

Newest Engineering Developments

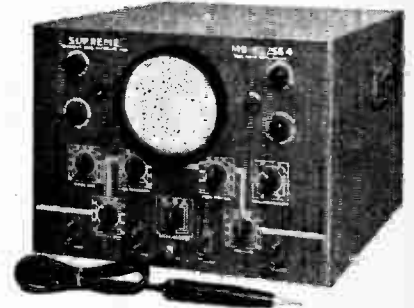


MODEL 589-A
TUBE AND BATTERY TESTER



MODEL 564

DELUXE 5" OSCILLOSCOPE



MODEL 589-A TUBE AND BATTERY TESTER has a completely modernized circuit. The tube test sockets are not wired directly to the circuit, but, instead, pass through the patented Supreme Double Floating Filament Return Selector system which automatically re-connects all tube elements to any possible tube base arrangement. Due to the fact that any or all elements of each socket can be rotated to any desired position, only one socket of each type is necessary. Tests every type of tube from 3/4 volt to full line voltage at its correct anode potential under proper load. Tests separate sections in multi-purpose tubes. Checks all leakage, shorts, open elements and filament continuity with a neon lamp. A circuit insert is provided for checking noise, leakage, loose and bad connections.

The battery testing circuit of the Model 589-A provides the proper load at which each battery is to operate, plainly marked on the panel, for all 1.5, 4.5, 6.0, 4.5 and 90 volt portable radio types. The condition of the battery is indicated on an English reading scale.

This is the fastest and easiest tester to operate. Just "follow the arrows"—you can't go wrong. Roller type tube chart with brass gear mechanism lists tubes in logical numerical order. Each tester carries a one year free tube setting service. SUPREME engineering and construction PLUS the best materials the market affords, make the 589-A your biggest dollar value. You will be proud to own this instrument.

Dealer Net Cash Price

\$48.95

SPECIFICATIONS FOR MODEL 564 DELUXE 5" OSCILLOSCOPE:
DEFLECTION SENSITIVITY—Vertical Amplifier—Direct to Vert. Amp. Input ... 1 v RMS. Horizontal Amplifier—Direct to Hor. Amp. Input ... 14 v RMS. **SWEEP OSCILLATOR**—Range of 7 cycles to 100 KC. in six steps. Synchronization: Int. EXT. **TUBE COMPLEMENT**—Cathode Ray Tube ... 5CP1. Rect. tube High Voltage ... 5Z8. Rect. tube Low Voltage ... 5Z3. **Vertical Amplifier**—1st stage Cathode Follower ... 6J5. 2nd stage Voltage Amplifier ... 6AC7. 3rd stage Power Amplifier ... 2-6AG7. **Horizontal Amplifier**—1st stage Cathode Follower ... 6J5. 2nd stage Voltage Amplifier ... 6AC7. 3rd stage Power Amplifier ... 2-6AG7. **Sweep Generator**—Generator tube ... 6SN7. Sweep control tube ... 6SN7. **Z Axis Amplifier**—Amplifier Tube ... 6SN7. **Voltage Regulator**—2-1/25 watt neon. **Probe**—Cathode Follower Tube ... 6C4. **INPUT IMPEDANCE**—Probe 9 muf 5 meg. Vert. Amp. direct 5 muf 5 meg. Hor. Amp. direct 10 muf 5 meg. Z Axis Amp. direct 10 muf 5 meg. **PERFORMANCE DATA**—Vertical Amplifier—Sine Wave frequency response: Plus or minus 2 db. 5 cycles to 5 mc. down 6 db. at 7 mc. Gain Control: Independent of frequency within range of the amplifier. Phase shift: Less than 1° at 60 cycles (overall). Square wave response: 30 cycles to 150 kc. Horizontal Amplifier—Sine Wave frequency response: Plus or minus 2 db. 5 cycles to 1.5 mc. down 4 db. at 2 mc. Gain Control: Independent of frequency within range of the amplifier. Phase shift: Less than 1° at 60 cycles (overall). Square wave response: 30 cycles to 50 kc. Z Axis Amplifier—Sine Wave frequency response: Plus or minus 2 db. 100 cycles to 100 kc. down 6 db. at 150 kc. **POWER SUPPLY**—110-125 volts, 50-60 cycles, 250 watts maximum. **SIZE**—12" x 16" x 20". **SHIPPING WEIGHT**—70 pounds.

Dealer Net Cash Price

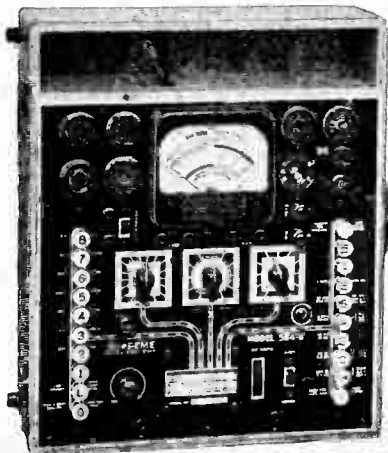
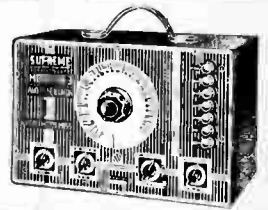
\$221.50

MODEL 563 AUDIO OSCILLATOR

The SUPREME Beat Frequency Audio Oscillator has many important service applications. It provides three output impedances of 250, 500, and 5,000 ohms; output frequency of 30 to 15,000 cycles \pm 1 db. from 30 to 10,000 cycles. Down 2 db. at 15,000 cycles; power output is 125 milliwatt; distortion less than 5% RMS over entire range; hum level—60 db. below maximum output; large ratio dial, calibrated scale 1" in length; tube complement of 2 type 6SK7, 2 type 6C5, and 1 6X5; power consumption 35 watts—fuse protection. Shipping weight 20 lbs.

Dealer Net Cash Price

\$62.95



MODEL 504-B COMBINATION TESTER

Model 504-B is radio's finest quality combination tube tester, battery tester, condenser leakage tester, and a 31 range push-button operated multimeter. Correctly tests all types receiving tubes with filaments from 3/4 volt to full line voltage. Uses patented Double Floating Filament Return Selector System which automatically re-connects each tube socket for any possible tube base arrangement. Due to this special circuit only one socket is required for each tube base. Tests all standard type tubes, including octals, locals, miniatures, Bantam, Jr., pilot lamps, etc. Speedy operation. Set controls from left to right—just "follow the arrows". Neon lamp checks for leakage, shorted elements, open elements and filament continuity. Pressing a button increases the sensitivity of the neon lamp to 2 meg. Circuit insert for noise test. Fast roll chart—free tube setting service for one year. Checks portable radio batteries under proper load. Checks leakage of electrolytic and electrostatic by-pass condensers. Quality of tubes, batteries, and electrolytic condensers all indicated on English reading "good-bad" scale. Multimeter section completely automatic with instantaneous push-button finger-tip control—7 ranges 0.1-5/25/100/250/500/1000/2500 D.C. volts; 5 ranges 0.1-5/10/50/250/1000 A.C. volts and output; 7 ranges 10-500 microamperes/2.5/10/50/250 mills., 1/10 amperes; 5 ranges 0.1 200/2000/20,000/2 meg./20 meg.—3.5 ohms center scale. Rectifier guaranteed—temperature compensated circuit. No external condenser required on output volts. Accuracy of calibration 2% on D.C. and 3% on A.C. Complete with batteries and detailed instructions.

Dealer Net Cash Price

SUPREME INSTRUMENTS

MODEL 576 SIGNAL GENERATOR



In the Model 576 SUPREME offers the radio service man a Signal Generator which represents the ultimate in simplicity of operation. No longer is it necessary to have an isolating capacitor dangling from the lead connected to the receiver, nor to worry about "burning out" the output transformer when using the audio output since each of these sections is isolated from damage by DC voltages by isolating capacitors. Only two dial scales—but five bands.

DESCRIPTION

Simple Operation—All ranges read on two basic scales, accurately calibrated at both ends. **Dual Tuning Ratio**—One for speed—one for vernier adjustments. **Stability**—Electron coupled circuit, impregnated iron tuned inductors and air dielectric trimmers provide the maximum frequency stability. **Guards against shift** due to line voltage, aging, temperature, and humidity. **Ladder Multiplier**—Four steps from minimum to maximum. Also, continuously variable control. **Double shielding** minimizes leakage. **Shielded line cord**. **Illuminated Hair Line Dial**.

SPECIFICATIONS

R. F. Ranges—65-205 KC; 650-2050 KC; 2050-6500 KC; 6.5-20.5 MC. **Harmonics** to 82 megacycles. **Audio Frequency**—400 cycles—voltage output continuously variable from minimum to maximum. **Internal Modulation**—R. F. Carrier modulated at approximately 50% at 400 cycles. Can be cut off to provide unmodulated signal. **External Modulation**—Jack provided for external audio modulation. **Professional Appearance**—Housed in heavy steel case; gray wrinkle finish. Supplied complete with shielded test leads and instructions. **Power Supply**—110-125 volts 50/60 cycles. Special voltage and frequency on request. **Dealer Net Cash Price** **\$68.95**

MODEL 546-A OSCILLOSCOPE

Model 546-A has merited the endorsement of servicemen, radio set manufacturers in research and production, industrial laboratories, factories and colleges for more than four years. A complete oscilloscope incorporating a cathode ray scope, vertical and horizontal amplifiers and linear sweep generator. Uses a high vacuum 3" cathode ray tube of the medium persistence type. All controls are on the front panel including special terminals for direct connection to deflecting plates. Can be used with or without the specially designed sensitive linear amplifiers. Both vertical and horizontal amplifiers have high impedance input and wide frequency response. Has built-in linear sweep generator for providing timing axis from 15 to 30,000 cycles. Positive, stable synchronization, internal or external. Observations may be made using external or internal sweep. Ideal for checking alignment of radio receivers, percentage of modulation on transmitters, waveforms. Extremely flexible design makes applications unlimited. Complete with detailed instructions. **Dealer Net Cash Price** **\$89.75**



Dealer Net Cash Price

MODEL 561 Combination A.F. & R.F. Metered Signal Generator



SPECIFICATIONS

Meter—Large three-inch round meter used to set the desired amount of amplitude modulation. Variable from 0 to 80%. **Simplicity**—All frequencies on the R. F. Oscillator read on two scales. Both A.F. and R.F. push-button operated. **Attenuator**—R.F. Oscillator has ladder type four position resistor push-button attenuator. Also, vernier control from maximum to minimum on either of the four steps of the multiplier. A.F. output is controlled from minimum to maximum with continuously variable control. **Laboratory Appearance**—This fine instrument is housed in beautiful golden tone, lock cornered, natural finish oak case. Black ribbed steel panel with silver and red highlights. **Tube Line Up**—6X5 Rectifier. 6SK7 A.F. Beat Oscillator. 6SK7A.F. Beat Oscillator. 6SK7 R.F. Oscillator. 6C5 A.F. Oscillator Mixer. 6C5 A.F. Amplifier. 6F8 Audio Vacuum Tube voltmeter-frequency modulation control tube. 6F8 R.F. vacuum tube voltmeter-I.M. Oscillator. 6K6 Buffer Mixer.

DESCRIPTION R.F. OSCILLATOR

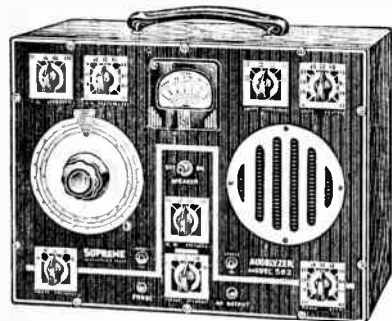
Ranges—5 band 65/205 KC, 205/650 KC, 650/2050 KC, 2050/6500 KC, 6.5/20.5 MC. **Harmonics** above 50 MC. **Tuning Mechanism**—Dual ratio from tuning knob to dial. One direct for speed, a second about 5 to 1 for vernier settings. **Accuracy**—Low end of band tuned with iron core inductors. High end of band tuned with air dielectric trimmers providing for greatest accuracy possible with printed scales. Meter used to set carrier level at a predetermined value, aligned for an accurate and variable per cent of modulation by the A.F. Oscillator. **Frequency Modulator**—F.M. signal available over range of R.F. Oscillator. Frequency modulated approximately plus or minus 15 KC. Rate of frequency modulation 120 cycles per second. 60 cycle time base provides for automatic positive synchronization.

A.F. OSCILLATOR

Range—15 to 15,000 cycles. **Output Impedances**—Center tap transformer of 50/500/5,000 ohms. High impedance resistor of 50,000 ohms. **Distortion**—Approximately 5%. **Voltage Output**—Open circuit 35 volts. **Frequency Characteristics**—Plus or minus 1 db between 30 and 10,000 cycles. 15 cycles and 15,000 cycles down approximately 2 db. **Attenuator**—Controls voltage output from 0 to maximum. **Power Output**—Approximately 150 milliwatts. **Power Supply**—110-125 volts—50/60 cycles. Special voltages and frequencies on request. **Dealer Net Cash Price** **\$136.60**

Dealer Net Cash Price

MODEL 562 AUDOLYZER



This is a quick, easy, inexpensive test instrument for DYNAMIC TESTING of every radio receiver using the Signal Tracing method. Easy to operate. You always HEAR the demodulated signal instead of watching a meter or magic eye. You can find the dead portion of any receiver by connecting your modulated signal generator to the receiver and touching the SUPREME AUDOLYZER'S probe first to the antenna post, then the grid of the R.F. tube, the R.F. tube plate, etc., right back through the complete receiver. You will hear a signal in the AUDOLYZER'S speaker (which has a volume control) until you hit the dead stage. You can use the AUDOLYZER'S vacuum tube volt meter to measure all D.C. voltages without disturbing receiver's normal operations. 7 D.C. voltage ranges of 0/1/3/10/30/100/300/1000 at 15 megs input. Meter is center-reading type with 'plus' and 'minus' readings to each side of center eliminating reversing test leads for polarity changes. You can measure resistance from 0.1 ohm to 20 megohms. 5 ranges give you perfect overlap as the 0/200 is the low range with 3.5 ohms center scale. Total ranges are 0/200/2000/20,000 ohms and 2/20 megohms. Next, you can check receiver's oscillator. If oscillator cuts out or is weak when receiver dial is rotated, AUDOLYZER meter immediately indicates it. To determine unknown frequency of oscillator, I.F., or R.F. signal, use tuning portion of SUPREME AUDOLYZER and AUDOLYZER'S V.T.V.M. as frequency meter.

For receiver's oscillator place probe on oscillator output and tune AUDOLYZER for greatest meter swing. Read frequency on AUDOLYZER'S direct-reading dial. For R.F. determination, connect your signal generator to receiver's input and place AUDOLYZER probe on antenna post. Stage under test. Adjust signal generator and AUDOLYZER for maximum meter swing. Adjust receiver trimmer until meter indicates correct frequency. To determine actual signal feed to I.F. or R.F. stage, place AUDOLYZER probe to first Det. output, feed a

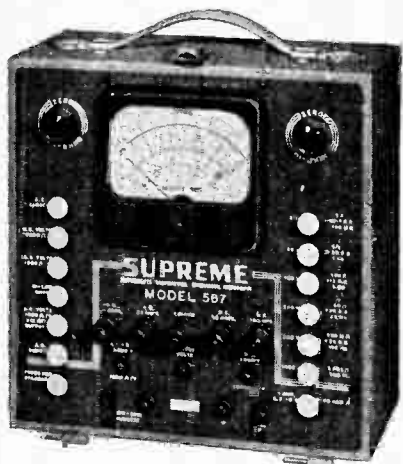
signal into receiver and adjust AUDOLYZER dial until you get maximum swing of its meter needle. Read actual I.F. signal's frequency on AUDOLYZER. Relative gain or loss of signal strength in any stage, tube or transformer can be determined. You can check A.V.C. circuits for correct applied voltage under actual operating conditions. You can adjust A.V.C. circuits. Distortion is easily noted by ear. **Dealer Net Cash Price** **\$127.00**

Dealer Net Cash Price

Net

SUPREME INSTRUMENTS

Supreme by Comparison



MODEL 567 SPEED SET TESTER

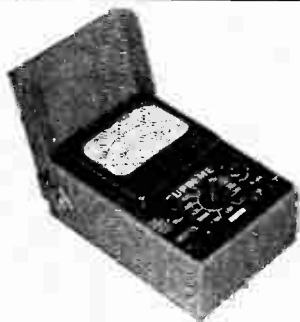
DESCRIPTION AND SPECIFICATIONS

OPERATION—All ranges (with the exception of the A-C and D-C, 10 and 50 ampere ranges) are selected by push-button operation. **DOUBLE METER SENSITIVITY**—1000 ohms per volt for regular D-C measurements and 20,000 ohms per volt for measurements in high resistance circuits. **DIRECT CURRENT RANGES**—9 ranges consisting of 0/100 microamperes, 1/5/25/100/500 milliamperes, 1/10/50 amperes. **A-C CURRENT RANGES**—3 ranges of 0/1/10/50 amperes. **D-C VOLT RANGES**—Total of 14 ranges, 7 ranges at 1000 ohms per volt, and 7 ranges at 20,000 ohms per volt, 0/5/25/100/250/500/1000/5000 volts. **A-C VOLT RANGES**—7 ranges at 1000 ohms per volt, 0/5/100/250/500/1000/5000. **OUTPUT VOLT RANGES**—7 ranges of 0/5/25/100/250/500/1000/5000. No external capacitor required. Covers all necessary ranges to provide indications for aligning receivers with Signal Generator. **DECIBELS**—5 ranges of -10/+9, 0/+23, 0/+35, 0/+43, 0/+49. Calibrated for 500 ohm line. **RESISTANCE RANGES**—7 total ranges. Low Ohms—(linear scale) two ranges of 0/5 and 0/5 full scale. A minimum reading of .01 ohms is indicated by one full division on meter scale. High Ohms—(non-linear scale) 0/500, 5000, 500M, 5 megohms, 50 megohms. All ranges are operated with self-contained batteries. Note the extremely wide range of .01 ohms to 50 megohms without additional power supply. **POWER SUPPLY**—Battery operated on all batteries supplied. **CARRYING CASE**—Sturdy steel carrying case finished in grey wrinkle. Panel grey wrinkle, white letters and markings; red highlights.

Size: 9 1/2" x 9 1/2" x 5 3/4". Shipping Weight: 14 pounds

Dealer Net Cash Price.....

\$63.40



MODEL 584

MODEL 542

MULTI-METERS

A POPULAR COMPACT POCKET LABORATORY



MODEL 584 MULTI-METER

The New Model 584 is a fitting companion to the extremely popular Model 542 which is so well known to radio servicemen wherever electronic equipment is used. The Model 584 uses a 50 microampere movement which has a sensitivity of 20,000 ohms per volt. All ohmmeter ranges including the 20 megohm range are operated by batteries furnished with the instrument and contained in its sturdy metal carrying case.

D-C VOLT RANGES—(20,000 ohms per volt), 0/5/25/100/500/1000/5000 (first scale division .1 volt). **D-C VOLT RANGES**—(1000 ohms per volt), 0/5/25/100/500/1000/5000. **A-C VOLT RANGES**—(1000 ohms per volt), 0/5/25/100/500/1000/5000. **DECIBEL RANGES**—-10/+9, 0/+23, 0/+35, 0/+49. **D-C CURRENT RANGES**—0/100 microamperes, 0/10/100/500 milliamperes. **RESISTANCE RANGES**—3 ranges, 0/2000/200M/20 megohms. **OUTPUT VOLT RANGES**—6 ranges, 0/5/25/100/500/1000/5000.

CARRYING CASE—Sturdy steel case with hinged cover to protect meter. Finished in grey wrinkle. Panel grey wrinkle, white letters and markings; red highlights.

Size: 5" x 7 1/2" x 3". Shipping Weight: 4 pounds.

Dealer Net Cash Price.....

\$34.45

MODEL 542 POCKET MULTI-METER

A regular little pocket laboratory with a case only 3 x 5 3/4 x 2" in size, weighing but 23 ounces—24 ranges—just as accurate and even more convenient than you would expect to find in an instrument twice its price. 4 DC mil ranges (with first scale division 5 microamperes) of 0/0.3/6/30/150; 4 DC volt ranges (with first scale division 0.1 volt) of 0/6/150/300/1500; 4 ohms ranges (with 1 ohm first scale division and 25 ohms center scale) of 0/2,000/20,000/200,000/2 meg; 4 AC volt ranges (with first scale division 0.1 volt) of 0/6/30/150/600; 4 output ranges of 0/6/30/150/600; 4 decibel ranges of -6/+10, +8/+24, +22/+38, +34/+50. The Model 542 is not a toy—it uses a full size 3" square meter with a rugged, accurate 200 microampere movement and a knife edged pointer. This movement has a sensitivity of 5000 ohms per volt. All ohmmeter ranges, including the megohm ranges, are operated by batteries furnished with the instrument and contained within its durable black molded bakelite case.

Dealer Net Cash Price.....

\$23.65

MODEL 548 MULTI-METER

SUPREME Model 548 gives the radio serviceman a large, easily read, seven inch SUPREME meter together with a total of 34 ranges. It makes an ideal instrument for installing in a work bench or for portable use. It requires no "squinting" to read this meter. **D-C VOLT RANGES**—0/5/25/100/250/500/1000/5000, at 1000 ohms per volt. **A-C VOLT RANGES**—0/5/25/100/250/500/1000/5000, at 1000 ohms per volt.

OUTPUT VOLT RANGES—0/5/25/100/250/500/1000/5000, at 1000 ohms per volt. Provides the proper ranges for indications when aligning receivers. **DECIBEL RANGES**—-10/+9, 0/+23, 0/+35, 0/+43, 0/+49. **D-C CURRENT RANGES**—6 ranges provided, 0/5/25/100/250/500/1000 milliamperes. Two ampere ranges of 0/10/25 are provided. **CAPACITANCE RANGES**—For convenience in reading capacitances of electrolytic capacitors and the larger paper capacitors three capacitance ranges of .1/4, 1/40, and 10/400 microfarads are provided. **RESISTANCE RANGES**—A total of 5 ranges, 0/2000/20M/200M, 2 megohms, 20 megohms provide facilities for reading most any resistor found in electronic equipment.

CARRYING CASE—Heavy steel case finished in grey wrinkle. Panel grey wrinkle finish, white letters and markings; red highlights.

Size: 11 3/4" x 8 3/4" x 4 3/4". Shipping Weight: 16 pounds

Dealer Net Cash Price.....

\$37.85



SUPREME INSTRUMENTS

Supreme by Comparison

MODEL 574 ELECTRONIC SET TESTER

In presenting the Model 574, SUPREME offers to the electronic technician a complete electronic Multimeter and Set Tester. For the repair man who does not have the requirements of measuring radio frequency voltages, means are provided to measure AC voltages through the audio range. If the technician desires to measure AC voltages through the radio frequency spectrum, he can do so by the use of the newly designed hand-fitting probe incorporating a small high frequency diode. With this device AC voltages can be measured with negligible frequency error up to 100 mc.

METER—Large, rugged 4" open face D'Arsonval movement. **METER REVERSING SWITCH**—Not necessary to change leads in reverse polarity measurements. **STABILITY**—Very small error due to change in line voltage of 10%. Practically no shift in zero setting when changing from range to range. **CARRYING CASE**—Steel with grey wrinkle finish. Panel steel with grey wrinkle finish, white letters and markings; red highlights.

SPECIFICATIONS

RANGES

DC Volts 0/1/2.5/50/250/500/2500.
 AC Volts 0/1/2.5/10/50/250 (by use of high frequency diode).
 Low Frequency 0/1/2.5/10/50/250/500/2500 (by use of standard test leads for low frequency measurement).
 Size—5" x 9½" x 12".
 Shipping Weight—16 pounds.

INPUT IMPEDANCE

DC—40 megohms maximum to 20 megohms minimum.
 AC—60 cycles, 9mmf—10 megohms.
 AC—100 mc., 20,000 ohms.
 DC Milliamperes—0/1/10/50/250.
 DC Amperes—0/1/10.
 Decibels—20 to 0, 0 to +15, +15 to +30, +30 to +45.
 Ohmmeter—1/1,000, 0/10,000, 0/100,000 ohms, 0/1/10/100/1,000 megohms.

Dealer Net Cash Price

\$6745

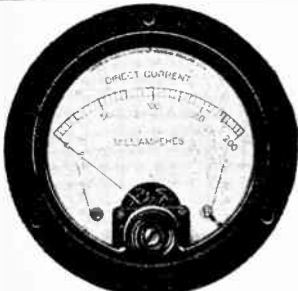


SUPREME PANEL METERS

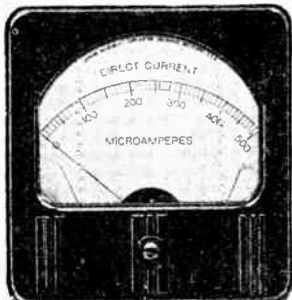
FEATURING A NEW DESIGN FOR GREATER EFFICIENCY!

ALNICO BAR MAGNET AND SOFT SINTERED POLE PIECES

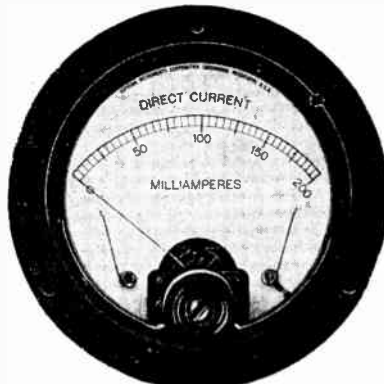
DOUBLE BRIDGE CONSTRUCTION—SIMPLE RUGGED ASSEMBLY



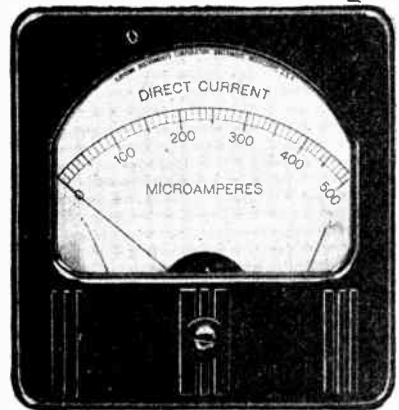
CASE MODEL 2400—2" round



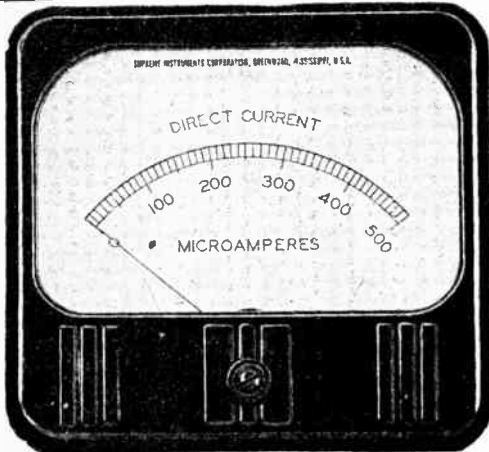
CASE MODEL 2100—2" sq.



CASE MODEL 3400—3" round



CASE MODEL 3100—3" sq.



CASE MODEL 4100—4" sq.

"HAIRLINE" ACCURACY ASSURED BY:

- (1) Efficient Alnico Bar Magnet.
- (2) Double Bridge Construction.
- (3) Selected Pivots and Jewels.
- (4) Strong, Tough Pointer.
- (5) Simple rugged assembly insures permanent alignment.
- (6) High torque movement reduces friction.

For More Complete Information Write for the Supreme Meter Catalog.

SUPREME INSTRUMENTS CORP
Greenwood, Mississippi, U. S. A.

Laboratory Standards MEASUREMENTS CORPORATION

STANDARD SIGNAL GENERATORS

MEASUREMENTS

MODEL 65-B

A leader in its field, this soundly designed and expertly manufactured instrument will greatly increase the efficiency of any laboratory.

SPECIFICATIONS

FREQUENCY RANGE: 75 kilocycles to 30 megacycles in 6 push button ranges.

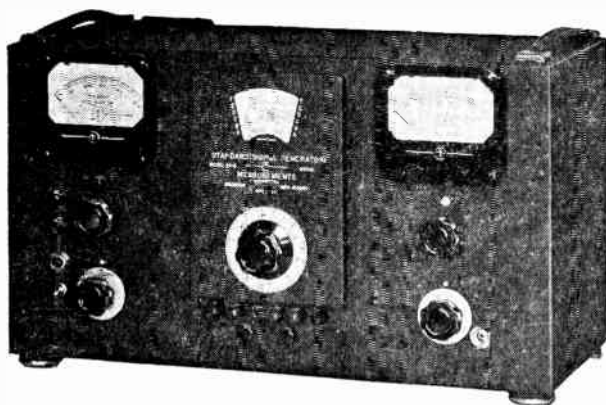
FREQUENCY CALIBRATION: The frequency dial is direct reading and individually hand calibrated for each range. It is accurate to $\pm 1/2\%$.

OUTPUT VOLTAGE: Continuously variable from 0.1 microvolt to 2.2 volts.

OUTPUT IMPEDANCE: 5 ohms to 0.2 volt, rising to 15 ohms at 2.2 volts.

MODULATION: Continuously variable from 0 to 100%. Modulation depth is indicated directly by a meter on the panel. Modulation may be obtained either from an internal source of 400 or 1000 cycles or from an external source.

ENVELOPE DISTORTION: Less than 4% at 100% modulation at 1 megacycle.

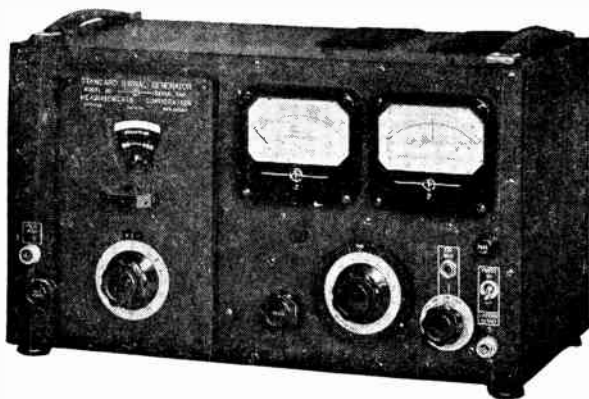


LEAKAGE AND STRAY FIELD: Less than 0.1 microvolt leakage with attenuator set for 0 output. Less than 1 microvolt per meter stray field at any frequency.

POWER SUPPLY: 117 volt AC, 60 cycle.

DIMENSIONS: 11" high x 20" long x 10 1/4" deep, overall.

WEIGHT: Approximately 50 pounds.



MEASUREMENTS MODEL 80

SPECIFICATIONS

FREQUENCY RANGE: 2 to 400 megacycles in 6 bands, individually calibrated direct reading dial.

FREQUENCY ACCURACY: $\pm .5\%$

OUTPUT VOLTAGE: Continuously variable from 0.1 to 100,000 microvolts.

OUTPUT IMPEDANCE: 50 ohms.

MODULATION: Amplitude modulation is continuously variable from 0 to 30%. Modulation depth is indicated by a meter on the panel. An internal 400 or 1000 cycle audio oscillator is provided. Modulation may also be applied from an external source. Pulse modulation may be applied to the oscillator from an external source through a special connector. Pulses of 1 microsecond can be obtained at higher carrier frequencies.

LEAKAGE IN STRAY FIELDS: Attenuator leakage less than 0.1 microvolt. Power line leakage less than .5 microvolt. Stray fields less than two microvolts.

POWER SUPPLY: 117 volts, 50 to 60 cycles.

DIMENSIONS: 10 3/4" high x 19" wide x 9 1/2" deep, overall.

WEIGHT: Approximately 35 pounds.

ACCESSORIES: (Order with instrument) Recommended — 80-ZH4 Cable; 80-ZH3 Pad. Available — 80-ZH1 Pad; 84-Z2-1 Cable; 84-Z2-2 Cable; 84-Z2-3 Cable; UG-201/U Adapter.

MEASUREMENTS

PULSE GENERATOR MODEL 79-B

This instrument is specially adapted for plate pulsing of the Model 80 Standard Signal Generator; this combination will provide pulses down to one microsecond at the higher carrier frequencies.

SPECIFICATIONS

FREQUENCY RANGE: 60 to 100,000 cycles.

PULSE WIDTH: Continuously variable from .5 to 40 microseconds.

OUTPUT VOLTAGE: Approximately 150 volts positive with respect to ground.

"SYNC" OUTPUT: 75 volts positive with respect to ground. Displaced by 1/2 period from pulse output.

"SYNC" INPUT: May be synchronized with as little as 2 volts peak from an external source.

POWER SUPPLY: 117 volts, 60 cycles AC.

DIMENSIONS: 10" high x 13 3/8" wide x 10 1/2" deep, overall.

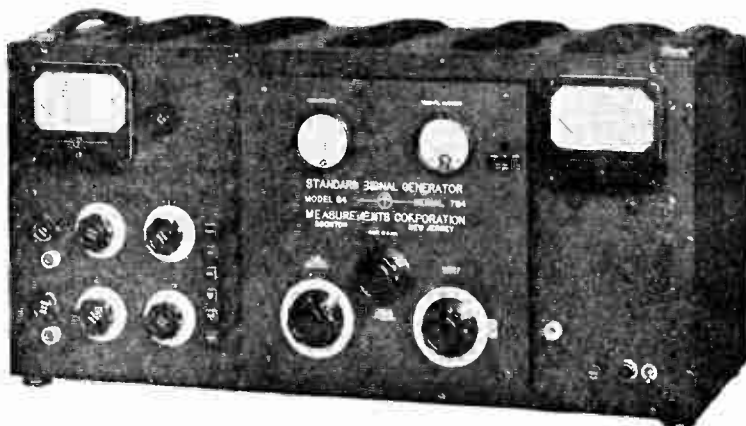
WEIGHT: Approximately 31 pounds.



MEASUREMENTS CORPORATION BOONTON · NEW JERSEY

Laboratory Standards MEASUREMENTS CORPORATION

STANDARD SIGNAL GENERATORS



MEASUREMENTS MODEL 84

SPECIFICATIONS

FREQUENCY RANGE: 300 to 1000 megacycles, individually calibrated direct reading dial.

FREQUENCY ACCURACY: $\pm .5\%$.

OUTPUT VOLTAGE: Continuously variable from 0.1 to 100,000 microvolts.

OUTPUT IMPEDANCE: 50 ohms.

AMPLITUDE MODULATION: Continuously variable from 0 to 30% indicated directly on panel meter. An internal sine-wave oscillator choice of 400, 1000, or 2500 cycles is provided. External modulation up to 30 kilocycles may be applied.

PULSE MODULATION: Repetition rate continuously variable from 50 to 100,000 cycles. Pulse width continuously variable from 1 to 50 microseconds indicated on directly calibrated dial. Pulse delay (with respect to synchronizing output) continuously variable from 0 to 50 microseconds indicated on directly calibrated dial. May be synchronized with an external sine-wave or pulse source.

POWER SUPPLY: 117 volts, 60 cycles.

DIMENSIONS: 12" high x 26" wide x 10" deep, overall.

WEIGHT: Approximately 125 pounds, including external line voltage regulator.

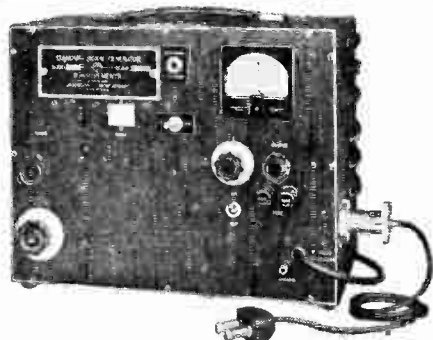
ACCESSORIES: Included with each instrument are four connecting cables, external voltage regulator, spare oscillator tube.

TELEVISION SIGNAL GENERATOR MODEL 90

This instrument is the first commercial wide-band, wide-range, standard signal generator ever to be developed. It is the master oscillator, buffer-amplifier, modulated power-amplifier type, and the output circuits are of the double-tuned, over-coupled, band-pass type, permitting modulation frequencies up to 5 megacycles. The excellent isolation between final amplifier and oscillator completely eliminates incidental frequency modulation. The carrier range of 20 to 300 megacycles is covered in eight

coil ranges. Video modulation is obtained from a built-in video modulator having a band width of 5 megacycles designed to operate from a standard R.M.A. television signal. Continuous monitoring is provided by a built-in oscilloscope. Audio modulation up to 100 percent may be obtained from a suitable external audio oscillator.

The Model 90 fills a long felt need for a real standard signal generator applicable to high definition television use.



MEASUREMENTS MODEL 78-FM

SPECIFICATIONS

FREQUENCY RANGE: 86 to 108 megacycles, individually calibrated dials. Accurate to $\pm .5\%$.

OUTPUT VOLTAGE: 1 to 100,000 microvolts.

LEAKAGE: Less than 1 microvolt.

MODULATION: Deviation continuously variable from 0 to 300 kc. Indicated on directly calibrated dial. 400 cycle internal audio oscillator can be modulated from an external source providing 6 volts across 5000 ohms.

FIDELITY: Flat within two db from DC to 15,000 cycles. Distortion is less than 1% at 75 kilocycles deviation. Transient response is excellent.

POWER SUPPLY: 117 volts, 50 to 60 cycles.

DIMENSIONS: 10" high x 13" wide x 7" deep, overall.

WEIGHT: Approximately 25 pounds.

MEASUREMENTS MODEL M-275 I.F. CONVERTER

This instrument is designed to be used with the Model 78-FM Standard Signal Generator to provide output frequencies in the I.F. range.

CARRIER FREQUENCIES: 4.5, 10.7, 21.7 Mc. plus provision for one extra frequency.

OUTPUT VOLTAGE: 10 microvolts to 1.0 v., variable with Model 78-FM attenuator.

BAND WIDTHS: 5% down, 250 Kc. from center frequency.

AMPLITUDE MODULATION: Provision for external AM up to approximately 80%, combined with, or exclusive of, FM. There is negligible spurious FM due to AM. The envelope distortion is less than 10% at 80% modulation.

DIMENSIONS: 10" x 13" x 7". 15 pounds.

POWER SUPPLY: 117 v., 50-60 cycles. 45 watts.

MEASUREMENTS CORPORATION BOONTON · NEW JERSEY

RADIO-FREQUENCY TEST INSTRUMENTS

MEASUREMENTS

U.H.F. RADIO NOISE and FIELD STRENGTH METER MODEL 58

This versatile, portable instrument is useful in measuring signal-to-noise ratios, noise levels and for field strength surveys on television and FM transmitters.

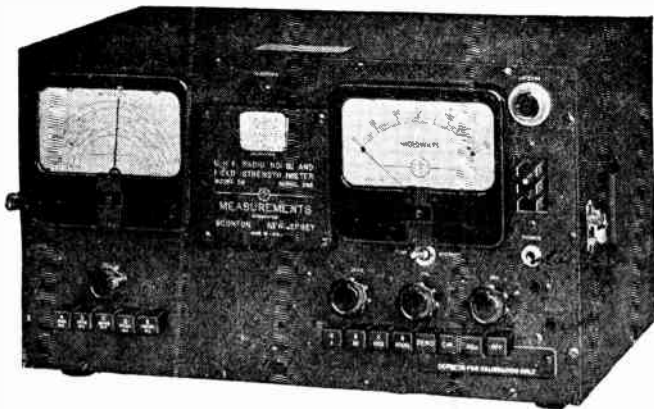
SPECIFICATIONS

FREQUENCY RANGE: 15 to 150 megacycles in five bands—dial directly calibrated in megacycles.

INPUT VOLTAGE RANGE: 1 to 100,000 microvolts across 72 ohm balance line. 1 to 100 microvolts on semi-logarithmic output meter, balanced resistance attenuator with ratios of 10, 100 and 1000 ahead of all tubes.

GAIN STANDARDIZATION: Internal "shot noise" diode provides calibration standard. Special dial eliminates need for charts.

CIRCUIT: Superheterodyne circuit with tuned RF amplifier eliminates image response.



BAND WIDTH: 150 kilocycles @ 2X down.

POWER SUPPLY: Built-in regulated dual power supply for operation from either 115 volts AC or 6 volts DC.

STANDARD EQUIPMENT: Power cables, 15 foot antenna cable, 9 inch loop antenna, carrying strap, and complete instruction book.

DIMENSIONS: 16" wide x 2" high x 11" deep, overall.

NET WEIGHT: 27 pounds.



R. F. MODULATOR: 5 volts maximum carrier input. Translation gain is approximately unity—Output impedance is 600 ohms.

POWER SUPPLY: 117 volts, 60 cycles.

DIMENSIONS: 7" high x 15" wide x 7½" deep, overall.

WEIGHT: Approximately 15 pounds.

MEASUREMENTS

SQUARE WAVE GENERATOR

MODEL 71

Recommended for television testing and many different applications in the development of AM and FM equipment where square-wave analysis is of great importance.

SPECIFICATIONS

FREQUENCY RANGE: 5 to 100,000 cycles.

WAVE SHAPE: Rise time less than 0.2 microseconds with negligible overshoot.

OUTPUT VOLTAGE: Step attenuator giving 75, 50, 25, 15, 10, 5 peak volts fixed and 0 to 2.5 volts continuously variable.

SYNCHRONIZING OUTPUT: 25 volts peak.

CAPACITANCE BRIDGE

The MODEL 101 has been designed to measure capacitance from 0.1 mmfd. to 1 mfd. in five ranges, with power factors from 0.1 percent to 10 percent. Small size, ease of operation and convenient grouping of all controls make this an extremely useful and necessary instrument for production-line or laboratory use.

R.F. ATTENUATOR

The M-234 is a co-axial attenuator of the mutual inductance type, operating on the transverse magnetic field as a wave guide type below cut-off. A rack and split gear drive assure long life and smooth operation. This attenuator is well suited to many specialized operations such as AM, FM and television receiver production test equipment, stage gain test sets, filter test sets, etc.

ACCURATE MEASURING INSTRUMENTS

MEASUREMENTS
**VACUUM TUBE VOLTMETER
MODEL 62**



A very compact, light instrument for either laboratory or field use where a zero current voltmeter is required. Its range selector push buttons and easily-read meter give it an ease of operation that has made it the most popular vacuum tube voltmeter with engineers.

SPECIFICATIONS

RANGE: Push button selection of 5 ranges—1, 3, 10, 30 and 100 volts full scale AC or DC.

ACCURACY: $\pm 2\%$ of full scale on each range, both DC and sine-wave AC.

INDICATION: Linear for DC and calibrated to indicate RMS values of a sine-wave or 71% of the peak value of a complex wave on AC.

FREQUENCY ERROR: Less than 10% from 30 cycles to over 150 megacycles. Resonant frequency of the probe with input terminals shorted is 350 megacycles.

INPUT IMPEDANCE: The input capacitance is approximately 7 mmf. The input resistance is a function of frequency.

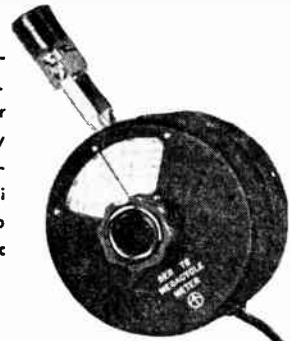
POWER SUPPLY: 115 volts AC, 50 to 60 cycles.

DIMENSIONS: 4 $\frac{3}{4}$ " wide x 6" high x 8 $\frac{1}{2}$ " deep overall.

WEIGHT: Approximately 6 pounds.

**MEGACYCLE METER
MODEL 59**

Radio's newest multi-purpose instrument. A grid-dip oscillator designed for many applications in television, FM, taxi radio, aircraft radio and other electronic work.



SPECIFICATIONS

FREQUENCY: 2.2 Mc. to 400 Mc.; seven plug-in coils.

MODULATION: CW or 120 cycles; or external.

DIMENSIONS: Power Unit, 5 $\frac{1}{8}$ " wide; 6 $\frac{1}{8}$ " high; 7 $\frac{1}{2}$ " deep. Oscillator unit, 3 $\frac{3}{4}$ " diameter; 2" deep.

POWER SUPPLY: 110-120 volts, 50-60 cycles; 20 watts.

MEASUREMENTS PEAK VOLTMETER MODEL 67

True peak values of complex wave forms encountered in radio and allied electronic work may be measured accurately with the Model 67. It indicates the true peak-to-peak value of symmetrical and asymmetrical waveforms varying from low frequency

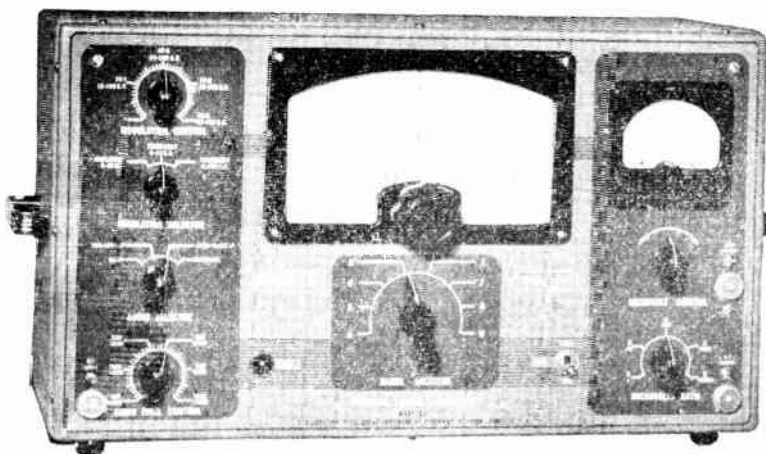
square waves to pulses of less than five microseconds duration. Full scale values of .03 to 300 volts peak-to-peak or .01 to 100 volts r.m.s. of a sine-wave in five decade ranges are indicated on semi-logarithmic scales.

JACKSON*Radio Testing Equipment*
THE JACKSON ELECTRICAL INSTRUMENT CO., DAYTON, OHIO

UNIVERSAL SIGNAL GENERATOR — MODEL 641

AM FREQUENCIES 100 KC TO 120 MC — FM FREQUENCIES 100 KC TO 160 MC

This instrument has been specifically designed to meet the requirements of the modern radio and electronic service-repair laboratory. Amplitude modulated, frequency modulated and television receivers are all within the scope of this entirely new instrument.



Model 641

FEATURES

FREQUENCY RANGE — Amplitude modulation 100 KC to 120 MC while the frequency modulation extends from 100 KC to 160 MC.

AMPLITUDE MODULATION percentage continuously variable 0-80 percent.

FREQUENCY MODULATION Two full frequency sweep ranges are provided, narrow band 0-40 KC and wide band 0-160 KC deviation (800 KC sweep).

AUDIO MODULATION FREQUENCY A built-in variable RC tuned audio oscillator is incorporated in the instrument independent of the RF oscillator, covering the audible frequency range of 100 to 10,000 cycles in two ranges. The audio modulation of either the AM or the FM signal output can be varied throughout the entire range of 100 to 10,000 cycles and is available externally for audio testing.

METERED OUTPUT The output is continuously read directly in microvolts on the meter dial of the high quality RF voltmeter section of the instrument. This RF voltmeter constantly monitors the output level (for constant reference) of the RF voltage and is adjustable by the attenuator controls. There is no reference adjustment required, eliminating tedious pre-adjustments.

OUTPUT IMPEDANCE — The output impedance is constant for all ranges. The carefully designed and excellently constructed attenuator circuit, coupled to the powerful oscillator, develops the rated output voltage with 30 ohms output impedance. This is a feature found only in laboratory standards costing three to four times more.

FULL VISION DIAL glass enclosed, providing quick accurate frequency settings, also protects scale from disfigurement.

COMPLETE RF & AF TESTS — Since the audio modulation frequency of both the amplitude and frequency modulated signal is variable throughout the audio range (100 to 10,000 cycles) the audio section including speaker of a receiver can be checked with a single connection to the instrument to the receiver antenna post and sweeping the band.

MULTIPLE RF SHIELDING and LINE FILTERS are featured to minimize stray RF and line leakage.

SPECIFICATIONS

AMPLITUDE MODULATION

- (1) Frequency Range 100 KC to 120 MC (ALL FUNDAMENTAL) in 8 ranges.
- (2) Accuracy: $\pm 1\%$ on all ranges.
- (3) Audio Modulation Frequency: 100 to 10,000 cycles adjustable. Can also be modulated with 60 cycles or externally if desired.
- (4) Calibrated Output: 0-100,000 microvolts, with a jack provided for high output.

FREQUENCY MODULATION

- (1) Frequency Range: 100 KC to 160 MC.
- (2) Narrow Band: 0-40 KC adjustable. Fixed oscillator 1000 KC.
- (3) Wide Band: 0-160 KC adjustable. Fixed oscillator 40 MC.
- (4) Modulation Frequency: 100 to 10,000 cycles adjustable. Can also be modulated with 60 cycle or externally if desired.

AUDIO OUTPUT

- (1) Variable Range: 100 to 10,000 cycles available from external (high impedance) jack.

VISUAL RESONANCE

- (1) A 60 cycle sweep frequency is provided for visual resonance analysis. Phase voltage is also furnished for CRO timing. The two ranges 0-40, 0-160 KC furnish any desired range for either AM, narrow or wide band frequency modulation analysis.

MECHANICAL SPECIFICATIONS:

- (1) Construction: Ruggedly assembled using finest material arranged for best electrical efficiency.
- (2) Multiple shielding on RF oscillator unit.
- (3) Dials and controls grouped for maximum operating convenience.
- (4) Designed to mount in any standard relay rack, such as Jackson's "Service Lab" or "Branch Lab" units.

ACCESSORIES

- (1) Furnished complete with tubes and coaxial output cable.
- (2) Instrument is protected by a fused line plug.

DIMENSIONS

16 $\frac{3}{4}$ " long x 9 $\frac{1}{2}$ " high x 7" deep.

POWER SUPPLY

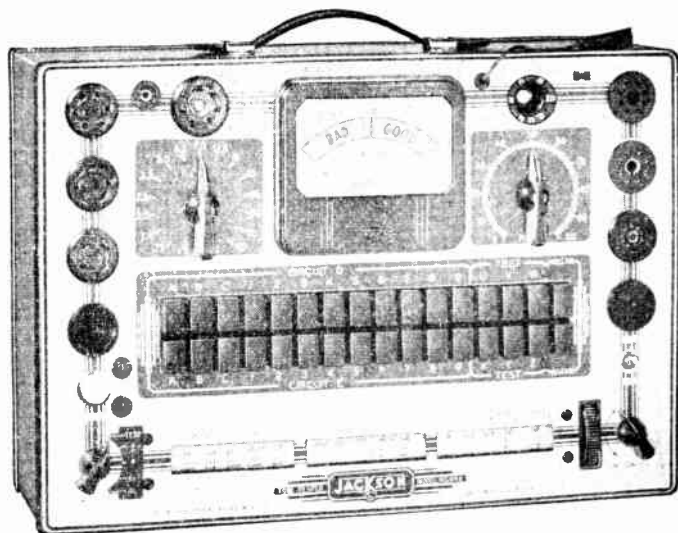
105 to 125 volts, 50-60 cycle

MODEL 641.....\$159.50

JACKSON

Radio Testing Equipment

THE JACKSON ELECTRICAL INSTRUMENT CO., DAYTON, OHIO



Model 648-B

MODEL 648 DYNAMIC* TUBE TESTERS

With Built-In Rotary Tube Chart

The newest of DYNAMIC* TUBE TESTERS -- the most important engineering advancement in 10 years of Tube Tester research. Simplified operation is accomplished by **sequence switching**, another exclusive Jackson feature.

COMPLETE DYNAMIC TESTING — SIMPLIFIED OPERATION

THE NEW JACKSON MODEL 648 incorporates all of the finest features of Dynamic* tube testing (first perfected by JACKSON over 10 years ago) **Plus** new features engineered to meet all of today's needs for accurate, up-to-date, simplified tube testing.

THE JACKSON DYNAMIC test circuit applies separate element voltages to each tube element. Separate load circuits are also used. These voltages and loads have been carefully selected for each tube to meet most ideally the normal operating condition of the tube. The current flowing only in the plate circuit of the tube under test is indicated on the meter in easy-to-read terms.

SEQUENCE SWITCHING, a new JACKSON engineering achievement makes possible **SIMPLIFIED OPERATION**, formerly unattainable in Dynamic* test methods. There are actually **only three control units** to be set according to chart listing for each tube. These are: Heater voltage (upper left), Plate Control (upper right) and the Sequence Switch (center). The only other adjustments are line voltage control and shorts test.

FAST, ACCURATE SHORTS TEST Lamp indicates only when tube is shorted. The shorts test control moves only through 4 positions -- yet completely tests each tube element for possible shorts or leakage. Tube under test cannot be damaged by shorts test voltage, yet even very high resistance leakage between elements is detected. The tube is tested under a heated cathode condition.

*Trademark Registered U.S. Patent Office

CORRECT TEST VOLTAGES AND LOAD CIRCUITS Proper test voltages protect tubes under test against damage by overload. Even low voltage battery types are provided with suitably low operating potentials. The full GOOD-BAD scale of the meter is used for each test. The meter is sufficiently sensitive that special "Low scale" readings are not required (such as for diodes, etc.).

HEATER VOLTAGE CONTROL shows actual voltage applied to tube filament or heater.

TEST SOCKETS FOR ALL TUBE TYPES 4, 5, 6, 7s-7L, Octal, Loctal, Noval, Acorn, Miniature and sub-miniature. Blank spare sockets on panel provide for future types.

ROLLER TUBE CHART is simplified, easier to read, is triple indexed for rapid location of test settings.

All existing commercial receiving tube types now listed on chart with correct test procedure for each. Includes recently released types, all generally used types and many "hard-to-find" older types. **Free chart and supplement service** for one year after purchase.

LARGE 4" METER ruggedly constructed, easy-to-read dial. Beautifully lettered 3 tone gray panel. Finest materials and construction throughout. Dimensions: 648-B Bench Style, 15 1/2" x 10 1/2" x 4 1/4" Gray Morocco Steel Case. For operation on 100-125 Volts, 50-60 Cycles.

PRICE: NET TO DEALERS AND SERVICEMEN

MODEL 648-B Bench Style.....	\$79.50
MODEL 648-P in Portable Case.....	\$84.50
MODEL 648-C Counter Style.....	\$89.50

JACKSON

Radio Testing Equipment

THE JACKSON ELECTRICAL INSTRUMENT CO., DAYTON, OHIO

DYNAMIC OUTPUT TUBE TESTER WITH COMPLETE UNIVERSAL METER RANGES

MODEL 637

IN THE SHOP OR OUT ON THE JOB here's the ideal tester for modern servicing. Combines 27 ranges and 10 functions including:

- (1) Dynamic output tube tester of the same type and quality as the Mod. 1616 series.
- (2) Multi-range AC Voltmeter 0-10/100 250 500 1000 2500.
- (3) Multi-range DC Voltmeter 0-10 100 250 500 1000 2500.
- (4) Decibel meter-ranges from minus 10 to plus 14/10 to 24 30 to 54.
- (5) Multi-range DC Milliammeter 0-1 10 100 250.
- (6) Ammeter range—0 to 10 amperes DC.
- (7) Triple range Ohmmeter 0-3000/300,000 0-100 ohms.

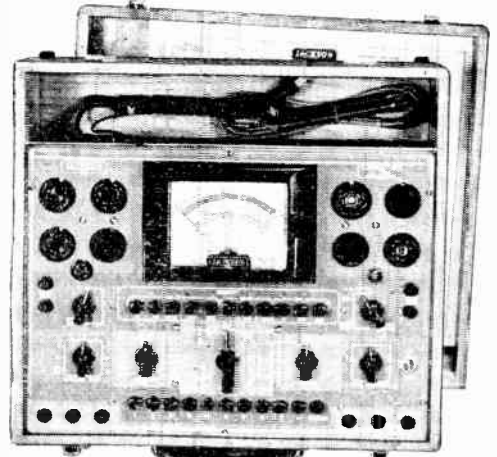
FEATURES

AUTOMATIC PUSH BUTTON SELECTOR provides for instant use of any meter range; the new selector is marked directly in volts and ohms position. This feature eliminates guess work and bears the operator to avoid mistakes.

REMARKABLY EASY TO USE—Notice the simplicity of panel and controls. The engineering is all BENEATH THE PANEL. You don't lose valuable time figuring out the next move.

FULL VISION Jackson meter is an exclusive feature on this tester. Meter measures 6 inches over diameter.

CASE is of finest material and construction, has removable hinged lid.



Model 637

ACCESSORIES—Furnished complete with self contained battery (or ohmmeter) and test leads.

DIMENSIONS Overall 14 3/4" x 13 3/4" x 6".

MODEL 637\$97.50

AUDIO OSCILLATOR MODEL 655

The Model 655 provides an audio frequency voltage DEVELOPED AT ITS FUNDAMENTAL FREQUENCY. The basic design of this instrument is entirely different from the "beat frequency" type of Audio Oscillator.

FEATURES

RESISTANCE CAPACITY TUNED CIRCUIT DESIGN, engineered for improved operating characteristics of audio measurements.

NO ZERO ADJUSTMENT—Tuned Fundamental Frequency method provides permanently locked calibration.

OUTPUT CHARACTERISTICS—A choice of either transformer-coupled or resistive output is available. The Model 655 meets the most exacting requirements as to WAVEFORM-UNIFORM FREQUENCY CHARACTERISTICS and OUTPUT LOAD IMPEDANCE SELECTION. A special feature of the output system is the 10 ohm tap for low impedance circuits such as speaker coils, etc.

VARIABLE FREQUENCY SELECTION throughout the four bands. There are over 33 inches of scale length making EXACT settings possible.

COMPLETE STABILITY—The stability of frequency calibration is constant throughout the entire range. The stabilized circuit permits large changes in line voltage to occur without affecting frequency or waveform and having negligible effect on output voltage.

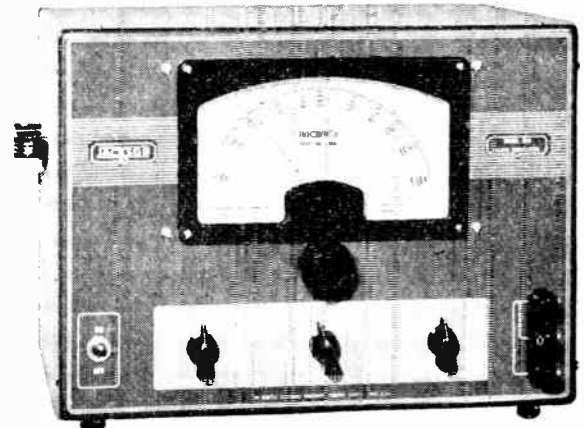
SIMPLIFIED OPERATION—It is only necessary to select desired FREQUENCY and OUTPUT. THERE ARE NO OTHER CONTROLS—The possibility of errors in operation are therefore eliminated.

HIGH OUTPUT POWER—More than THREE TIMES the output usually available from ordinary audio oscillators.

CONSTRUCTION—Frequency dial is glass enclosed so that calibrations cannot become disfigured. Rugged mechanical features assure trouble free operation under service conditions.

SPECIFICATIONS

FREQUENCY RANGE—20 Cycles to 200,000 cycles in 4 ranges: 20-200 cycles/200-2000 cycles/2000 to 20,000 cycles/20,000 cycles to 200,000 cycles.



Model 655

CALIBRATION—Logarithmic variation of frequency over the scale provides constant percentage accuracy at all frequencies.

SCALE LENGTH—Over 33 inches.

OUTPUT IMPEDANCE—Five values of output impedance: 10 ohms, 250 ohms/500 ohms/5000 ohms/RESISTIVE. Controlled by selector switch.

OUTPUT POWER—500 Milliwatts (20 to 20,000 cycles transformer coupled).

OUTPUT CONTROL—Continuously variable from zero to maximum.

WAVEFORM—Less than 5% distortion at all frequencies between 30 and 15,000 cycles.

FREQUENCY CHARACTERISTICS—Plus or minus 1 DB 30-15,000 cycles using transformer coupled output.

HUM LEVEL—Down more than 60 DB at maximum.

ACCURACY—3% or 1 cycle whichever is greater.

TUBES—1—6G6G, 1—6SL7G7, 2—5V6GT, 1—5Y3GT furnished installed.

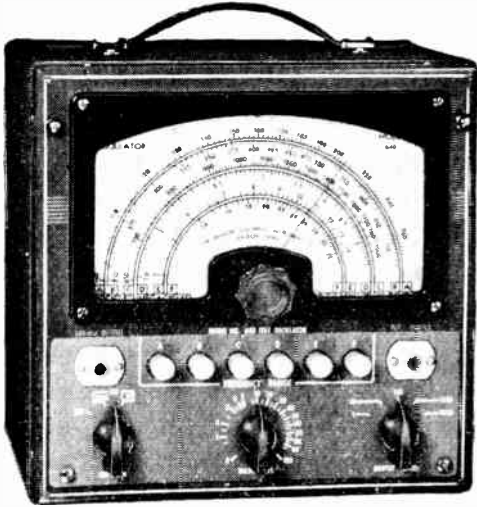
DIMENSIONS—13" wide x 9 1/2" high 9 1/2" deep.

MODEL 655\$125.00

JACKSON

Radio Testing Equipment

THE JACKSON ELECTRICAL INSTRUMENT CO., DAYTON, OHIO



Test Oscillator—Model 640

TEST OSCILLATOR — MODEL 640

A complete test oscillator for all general purpose work. Has full range direct reading dial from 100 KC up to 30 Megacycles, all fundamental. For added convenience there are Two Harmonic bands, 28 MC to 60 MC and 56 MC to 120 MC.

FEATURES

PUSH-BUTTON selection of all ranges makes speedy and accurate operation possible.

GLASS ENCLOSED DIAL—prevents dust and avoids possibility of damage to pointer.

TWO CIRCUIT ATTENUATOR provides variable ratio and also vernier control.

HAS POWERFUL SIGNAL OUTPUT which may be used either as pure R.F. or Modulated R.F. Carrier is modulated at approximately 30%. The A.F. voltage is available for external use.

ACCURACY GUARANTEED to 1/2 of 1% on all ranges. Operates from 100 volt 60 cycles. Uses three tubes (rectifier, oscillator and modulator).

MODEL 640.....NET CASH PRICE \$62.50

CONDENSER TESTER — MODEL 650-A

The Model 650 is a modern, accurate and complete instrument for detecting faulty condensers—ELECTROLYTIC, PAPER or MICA. Uses a new method for Leakage Test which will reveal otherwise unnoticed condenser defects.

FEATURES

AUTOMATIC PUSH BUTTON CONTROLLED—Amazing in speed and simplicity of use. Capacity readings almost instantaneous! Leakage test by just pressing a button.

SCALE IS GLASS ENCLOSED and is equipped with the new Jackson SCALE EXPANDER indicating pointer—doubles effective scale length.

MEASURES ALL VALUES direct reading in Microfarads

RANGES. .00001 to .001 mfd. .1 to 100 mfd.
.001 to .1 mfd. 50 to 1000 mfd.

MEASURES POWER FACTOR on direct reading dial. Power Factor range calibrated from 0 to 60%.

COMPLETE SELECTION OF TEST VOLTAGE. 20 volts to 500 volts.

ELECTRON RAY TUBE indicates exact balance or shows if leakage is present

INSTANTANEOUS LEAKAGE INDICATION—counting of flashes eliminated. No other guess-work with this modern tester. Has special built-in amplifier stage which actually responds to slightest leakage, if present. Thus all leakage defects may be located.

MODEL 650-A.....NET CASH PRICE \$54.50



Condenser Tester—Model 650-A

COMPACT VOLT-OHM-MILLIAMMETER — MODEL 615

An excellent general purpose instrument, compact in size but unusually complete in ranges. Panel is finished in attractive two-tone grey with white lettering.

FEATURES

RANGE SELECTION—Rotary switch method saves time and reduces errors.

HIGH QUALITY METER—Three inch square type meter with two jewelled bearings.

RANGES—

Two Ohms Ranges—0-1000/0-500,000

Five D.C. Volts Ranges—0-5/50/100/250/1000

Four D.C.M.A. Ranges—0-1 1/5/50/250

Five A.C. Volts Ranges—0-10/100/200/500/2000

Additional High Voltage D.C. Range—0-2500 v.

Each instrument supplied complete with self-contained battery for ohms ranges.

Test leads not included. Dimensions—7" x 4 1/4" x 3".

MODEL 615.....NET CASH PRICE \$24.95



Volt-Ohm-Milliammeter Model 615

JACKSON

Radio Testing Equipment

THE JACKSON ELECTRICAL INSTRUMENT CO., DAYTON, OHIO

VACUUM TUBE VOLTMETER



AC-DC Vacuum Tube Voltmeter—Model 645

Model 645 is an ultra-modern high sensitivity instrument, with all of the famous Jackson features, including exceptional accuracy and simplicity of use.

FEATURES

BOTH A.C. AND D.C. VOLT RANGES ARE ELECTRONIC. This provides the maximum of sensitivity and overload protection for all A.C. ranges as well as D.C. and ohms ranges.

MEASURES RESISTANCE UP TO 1 BILLION OHMS (1 thousand megohms)—and as low as 2 10 ohms

3 MILLION OHMS PER VOLT SENSITIVITY on 0.4 volt D.C. range. Constant input resistance 12 megohms on all D.C. volts range.

Over 4 million ohms per volt sensitivity on 0.1 volt A.C. range. Input resistance of 4.4 megohms on all A.C. ranges. Flat frequency response between 50 cycles and 200,000 cycles.

METER CANNOT BE DAMAGED BY ACCIDENTAL OVERLOAD on any electronic range. Electronic overload-protection on all A.C. and D.C. volts, and ohms ranges. Variations in line voltage do not affect accuracy within the range of 100 to 125 volts. Instrument is equipped with ballast control tube and compensating circuits.

Contains 3 tubes (6X5GT/6K6GT/7N7); 1—4½ volt battery and ballast; all self-contained and furnished with the instrument.

METER RANGES—

A.C. Volt: 0-1/4/10/40/100/400/1000.

D.C. Volt: 0-4/10 40 100/400/1000.

Ohms: 0-1000/10,000 100,000 1 meg/10 meg/100 meg/1000 meg.

M.A.: 0-1/4/10/40/100/400/1000.

Decibels: Minus 30 to minus 5/minus 10 to plus 15/10 to 35/30 to 55.

Either positive or negative D.C. voltmeter indications instantly by means of reversal switch. Signal Tracing type test lead with isolation resistor in probe furnished.

MODEL 645..... **NET PRICE \$59.50**

CRYSTAL PROBE

Using this high frequency crystal probe with the Model 645 high frequencies of 200 KC to 200 MC can be read directly on the 4, 10 and 4C volt DC scales. Ideal for FM and Television testing.



Model 645P

MODEL 645P..... **\$9.85**

UNIVERSAL VOLT-OHM-MILLIAMMETER—MODEL 642 (20,000 Ohms Per Volt)



Universal Volt-Ohm-Milliammeter—Model 642

A valuable and necessary instrument for all measurements of sensitive circuits such as A.V.C. voltages, etc. Many measurements may be made with current drain as low as 2 microamperes.

AUTOMATIC RANGE SELECTION — PUSH BUTTON CONTROLLED. Instant selection of any meter range is made simple with the eleven key push button selector.

TWENTY-THREE RANGES—SEVEN FUNCTIONS AC/DC volts—ohms—decibels—milliamperes—microamperes and amperes. Has special built-in shunt and 10 ampere range.

OHMS RANGES from ½ ohm up to thirty megohms. No external batteries or line power required.

METER RANGES—

A.C. Volts: 0-10/100/250/500/1000/5000. D.C. Volts: 0-10/100/250/500 1000 5000. Decibels: Minus 10 to plus 14/10 to 34/30 to 54. D.C. M.A.: 0-10/100/250. Microamps: 0 100. Amperes: 0-10.

Ohms: 0-3000/300,000/30,000,000. All D.C. volts ranges are 20,000 ohms per volt. A.C. ranges 1000 ohms per volt.

CONSTRUCTION is of the finest in materials and workmanship. Case is welded steel finished in grey morocco. Fitted with removable hinged steel cover. Protects meter and controls. Case dimensions: 8½" x 8½" x 6". Weight 6 lbs. Complete with self-contained battery. Furnished with test leads.

MODEL 642..... **NET CASH PRICE \$59.50**

UNIVERSAL VOLT-OHM-MILLIAMMETER—MODEL 643 (1000 ohms per volt)

MODEL 643..... **NET CASH PRICE \$45.00**

Same ranges as the Model 642 except micro-amps range is 0-1000 and ohms ranges are 0-3000/300,000/3,000,000.

JACKSON

Radio Testing Equipment

THE JACKSON ELECTRICAL INSTRUMENT CO., DAYTON, OHIO

MODERN "SERVICE LAB" UNITS

Jackson Laboratory units are designed to fill the need for attractive service benches.

STREAMLINED Angled front panel for easy visibility of each instrument. This type styling makes the Service Lab more convenient in use and attractive in appearance.

EXTRA ACCESSORY PANEL—Every Lab unit is equipped with this feature. The accessory panel (see illustration) is already machined for easy installation of any special test features you might wish to add. This is actually a "custom built" feature—yet is included at no extra cost with each Jackson Service Lab.

INTERCHANGEABLE PANELS —Standard Relay Rack Size Panels— a feature originated by Jackson years ago in the first "Service Labs."

CUSTOMER APPEAL—Your well equipped modern shop will attract more customers and instill customer confidence. Test equipment mounted in these units will accelerate your volume of work, increase your accuracy, enabling you to obtain higher prices per job.

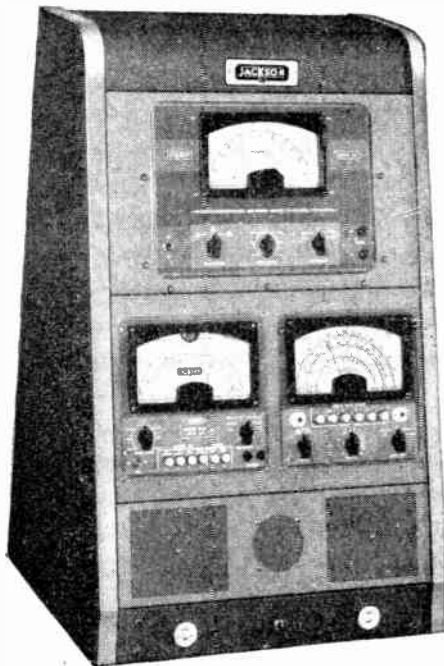
A.C. SWITCH and OUTLETS— Each lab is completely wired, ready for use. Two AC outlets and master switch on front panel. Also three AC outlets for installed instruments.

MODEL 805

Illustrated at left is one of the many combinations of instruments that may be installed in the Service Lab units. This unit Model 805 contains three separate instruments. Each is a complete portable instrument in itself and may be removed easily.

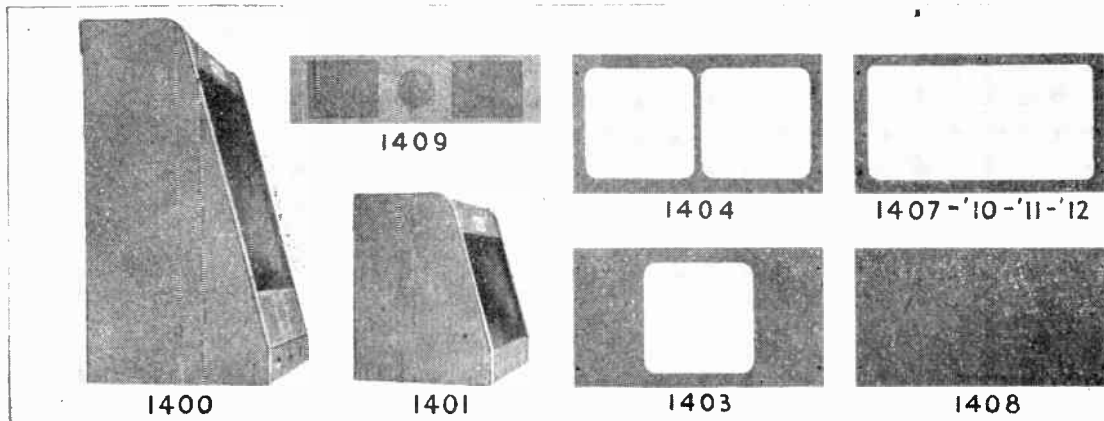
- Model 655 Audio Oscillator
- Model 640 RF Oscillator
- 650-A Condenser Tester

Start modernizing your shop today by ordering a Jackson Service Lab. Additional instruments may be added at any later date. Finished in attractive two tone grey mottro matching all Jackson instruments.



Model 805

SERVICE LAB RACKS AND PANELS



- 1401—Bench Lab rack only.
- 1400—Service Lab rack only. Completely assembled, wired with master AC switch and two outlets.
- 1403—Panel for single units such as 650, 642, etc.
- 1404—Panel for dual mounting of units such as 650, 642, etc.
- 1407—Panel for 637.

- 1408—Blank panel.
- 1409—Accessory panel 5'4" high.
- 1410—Panel for 655.
- 1411—Panel 636.
- 1412—Panel 641.

THE JACKSON ELECTRICAL INSTRUMENT COMPANY

Dayton, Ohio

DU MONT

Cathode-Ray TUBES ★ OSCILLOGRAPHS ★ EQUIPMENT

DU MONT TYPE 164-E 3" CATHODE-RAY OSCILLOGRAPH

★ A compact, portable instrument especially suitable for laboratory, shop, or field work. The 3" cathode-ray tube operates at an accelerating potential of 1,100 volts, thus providing brilliant, well-defined traces. Both amplifiers have uniform frequency response over their operating range: the single-stage vertical

amplifier has a voltage gain of approximately 43; the horizontal amplifier, which serves to amplify either sweep or externally applied signals, has a voltage gain of approximately 55. For added convenience, deflection signals may be applied directly to the cathode-ray tube without removing the cabinet.



DU MONT TYPE 208-B 5" CATHODE-RAY OSCILLOGRAPH



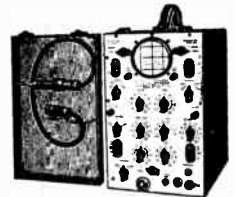
★ A moderately priced 5" instrument embodying many recent improvements that facilitate its application to the great majority of laboratory and production requirements. The Type 208-B is furnished with a 5" intensifier-type, high vacuum tube which operates at an accelerating potential of 1,400 volts, thus insuring trace brilliance. Freedom from

origin distortion, sharp focus at all deflecting frequencies, and a high deflection sensitivity that permits the viewing of moderately low-potential signals without the use of amplifiers, are additional features. The wide-band amplifiers provide symmetric deflection, and are direct-coupled to eliminate "electrical backlash" in the position-control circuits.

DU MONT TYPE 224-A 3" CATHODE-RAY OSCILLOGRAPH

★ The wide-range response of this instrument provides faithful reproduction of all wave-forms with steep fronts and resultant large-harmonic content, thereby permitting the study of signals such as pulses and square waves involving

frequency components as high as 5 megacycles. Numerous combinations of signal-input connections at the front panel provide added flexibility and convenience of operation. A special feature is the provision for intensity modulation of the grid of the cathode-ray tube. Included is a test probe with cable shielded to eliminate stray pickup for high-frequency work.



DU MONT TYPE 274-A 5" CATHODE-RAY OSCILLOGRAPH

★ The Du Mont Type 274-A Cathode-ray Oscillograph was developed as an inexpensive, general-purpose instrument for laboratory, radio service, and educational applications. The Type 274-A serves as an excellent null-indicator on inductance-

capacitance bridges, as a means of viewing voltage waveforms, as an output meter, as a means for measuring time and amplitude of pulses, as an indicator in studies of sound, light, electricity, and electronics, and many for other general applications.

DU MONT OSCILLOGRAPH SPECIFICATIONS

Instrument Type Number	Input Impedance					Frequency Range		Deflection Factor (RMS) V in.					Linear Time Base		Dimensions in Inches		
	Amplifier		Y-Direct			Y-Amp	X-Amp	Y-Amp		X-Dir		Probe	Continuous	H	W	D	
	Y	X	Bal	Unbal	Probe			Y-Amp	X-Amp	Y-Dir	X-Dir						
164-E	1.0 meg.	0.8 meg.				5 cps-100 kc	5 cps-100 kc	0.70	0.55	30	30		15-30,000 cps	11 $\frac{1}{2}$ "	7 $\frac{3}{4}$ "	14"	
208B	2.0 meg.; 30 uuf	5.0 meg.; 25 uuf				2 cps-100 kc	2 cps-100 kc	0.01	0.5	21	22		2-50,000 cps	15 $\frac{3}{4}$ "	8 $\frac{3}{4}$ "	20 $\frac{1}{4}$ "	
224-A	2.0 meg.; 30 uuf	2.0 meg.; 20 uuf	10.0 meg.; 20 uuf	5.0 meg.; 25 uuf	1.0 meg.; 20 uuf	20 cps-2 mc	10 cps-100 kc	0.1	0.7	25	25	0.4	15-30,000 cps	14 $\frac{1}{2}$ "	8 $\frac{3}{4}$ "	15 $\frac{1}{4}$ "	
274 A	1.0 meg.; 40 uuf	1 meg.; 40 uuf	4.7 meg.; 50 uuf			20 cps-100 kc	20 cps-100 kc	0.2	0.25	16	18		8-30k cps	14"	8 $\frac{3}{4}$ "	19 $\frac{3}{8}$ "	

ORDERING DATA FOR DU MONT OSCILLOGRAPHS

Type	Description	Cat.	Price	Type	Description	Cat.	Price
164-E	115 v, 40-60 cps, 3AP1A	1064-A	\$127.20	208-B	230 v, 40-60 cps, 5LP7	1151-A	\$292.50
164-E	230 v, 40-60 cps, 3AP1A	1065-A	127.20	224-A	115 v, 40-60 cps, 3GP1A and test probe	1191-A	290.00
164-E	115 v, 40-60 cps, 3AP11A	1066-A	128.85				
164-E	230 v, 40-60 cps, 3AP11A	1067-A	128.85	224-A	115 v, 40-60 cps, 3GP11A and test probe	1203-A	291.65
208-B	115 v, 40-60 cps, 5LP1A	1146-A	285.00				
208-B	230 v, 40-60 cps, 5LP1A	1147-A	285.00	274-A	115 v, 50-60 cps, 5BP1A	1420-A	136.50
208-B	115 v, 40-60 cps, 5LP11A	1148-A	287.75	274-A	115 v, 50-60 cps, 5BP11A	1422-A	139.25
208-B	230 v, 40-60 cps, 5LP11A	1149-A	287.75	274-A	230 v, 50-60 cps, 5BP1A	1423-A	136.50
208-B	115 v, 40-60 cps, 5LP7	1150-A	292.50	274-A	230 v, 50-60 cps, 5BP11A	1425-A	139.25



Cathode-Ray TUBES ★ OSCILLOGRAPHS ★ EQUIPMENT



DU MONT OSCILLOGRAPH ACCESSORIES

DU MONT TYPE 185-A ELECTRONIC SWITCH



★ The Du Mont Type 185-A Electronic Switch may be used in conjunction with any oscillograph to observe two related or unrelated signals simultaneously on the screen of the cathode-ray tube. The zero axes of the two signals may be displaced for individual study of either pattern. The two patterns may also be superimposed for comparative studies. A typical application is the use of one channel for the signal to be studied while using the second channel for a timing signal.

SPECIFICATIONS

Switching rate: 10 to 2000 times/sec.
Frequency response: d-c to 5 kc.
Voltage gain: 10.
Input resistance: 0.1 meg.
Output resistance: 50,000 ohms.
Maximum input voltage: 150 v.

Maximum signal output: 75 v. peak-to-peak.

Dimensions: 11 $\frac{1}{4}$ " h., 7 $\frac{3}{4}$ " w., 13" d.

PRICE: Cat. #1072-A, 115 v, 40-60 cps.....\$105.00

PRICE: Cat. #1073-A, 230 v, 40-60 cps.....\$105.00

DU MONT TYPE 215 LINEAR TIME-BASE GENERATOR



★ The Du Mont Type 215 Linear Time-base Generator is used to extend the low-frequency time base of most five-inch, balanced-deflection, Du Mont oscillographs for the study of continuous low-frequency phenomena or transients. Its balanced-output signal voltage is adjustable to a maximum undistorted output of approximately 400 volts peak-to-peak, and supplies sweep frequencies from 0.2 to 125 cycles per second with a return-trace blanking signal of either positive or negative polarity. The single sweep may be initiated either manually or by the observed signal. The excellent linearity of the sweep is assured by a compensating circuit.

SPECIFICATIONS

Frequency: 0.2 to 125 cps, recurrent or single.

Output: Balanced, 400 x d-c max.

Positioning voltage: 300 v d-c.

Blanking output: Positive or negative.

Synchronization: External. Dimensions: 14 $\frac{1}{2}$ " h., 8 $\frac{13}{16}$ " w., 19 $\frac{1}{2}$ " d.

PRICE: Cat. #1189-A, 115 or 230 v, 40-60 cps. \$215.00

DU MONT TYPE 264-A VOLTAGE CALIBRATOR



★ The Du Mont Type 264-A Voltage Calibrator is designed to measure the peak-to-peak voltage of any signal viewed on a cathode-ray oscillograph. It may be used with any commercial cathode-ray oscillograph. Its square-wave output is continuously variable from 0 to 100 volts in 4 ranges. By throwing a selector switch, the signal to be measured or any of 4 ranges of calibrating voltage is applied to the input of the oscillograph, eliminating the need to switch leads between signal and

calibrating voltage. Amplitude measurements of any part of a complex, composite waveform may be made with the Type 264-A.

Range: 0-0.1; 0-1.0; 0-10; 0-100 volts.

Accuracy: $\pm 5\%$ of full scale on each range.

Input impedance: 20 uuf (signal connected through calibrator).

Size: 4 $\frac{1}{2}$ " x 8" x 5 $\frac{3}{4}$ "; wt. 5 lbs.

PRICE: Catalog #1240-A.....\$39.50

DU MONT TYPE 276 RUBBER VIEWING HOOD

★ The Type 276 Rubber Viewing Hood offers a practical method for shielding the eyes and the tube screen when observation of oscillographic patterns is to be made under unfavorable ambient-light conditions. Since it is made of durable soft rubber, it is readily adaptable to any oscillograph equipped with a 5" cathode-ray tube. Its overall length is 10 $\frac{1}{2}$ inches.

PRICE: Cat. #1210-A.....\$2.00

DU MONT TYPE 277 MICROPHONE

★ The Du Mont Type 277 Microphone is a bullet-shaped crystal microphone of unusually high output impedance, which makes it readily adaptable for direct connection to cathode-ray oscillographic input circuits. Its directional response is practically circular at all audio frequencies.

SPECIFICATIONS

Frequency response: Uniform to 10,000 cps.

Output impedance: Greater than 0.5 meg.

Output level: At 1000 cps: 50 db below 1 v/bar effective sound pressure, or 31.6 mv for 10-bar sound pressure.

PRICE: Cat. #1212-A.....\$23.95

DU MONT CATHODE-RAY TUBES

Type	Cat.	Price	Type	Cat.	Price
3AP1A	2201-A	\$14.85	5CP2A	2232-A	\$40.40
3AP11A	2206-A	16.50	5CP7A	2235-A	42.40
3GP1A	2211-A	22.00	5CP11A	2236-A	37.65
3GP11A	2216-A	23.65	5JP1A	2251-A	67.50
3JP1	2025-A	24.00	5JP2A	2252-A	73.00
3JP2	2026-A	27.50	5JP7A	2255-A	75.00
3JP7	2029-A	28.75	5JP11A	2256-A	70.25
3JP11	2030-A	25.65	5LP1A	2261-A	39.50
5BP1A	2221-A	24.75	5LP2A	2262-A	45.00
5BP11A	2226-A	27.50	5LP7A	2265-A	47.00
5CP1A	2231-A	34.90	5LP11A	2266-A	42.25

DU MONT TYPE 216 SCALES AND FILTERS

★ The Type 216 Calibrated Scales provide a convenient means for making relative and quantitative measurements with the cathode-ray oscillograph. They are mounted on the cathode-ray screen by the celluloid clips.

Type No.	Description	Cat. No.	Price
216-A	3" Cal. Scale	1129-A	0.85
216-C	5" Cal. Scale	1128-A	1.20
216-D	5" Log. Decrement Scale	1130-A	2.25
216-E	5" O Scale	1131-A	2.25
216-F	5" Polar Coordinate Scale	1132-A	2.50
216-G	5" Green Filter	1133-A	2.10
216-H	5" Blue Filter	1134-A	2.10
216-J	5" Amber Filter	1135-A	2.10

HICKOK

TEST EQUIPMENT

NEW DYNAMIC MUTUAL CONDUCTANCE DISPLAY TUBE MERCHANDISER . . . WITH 9-Inch Illuminated Meter

**Most Outstanding
and Customer Convincing
Display Tube Tester
Ever Designed**

ROLL CHART COVERS MANY HUNDREDS OF TUBE TESTS—INCLUDING NEW NINE PIN TYPES. EMPLOYS THE FAMOUS HICKOK PATENTED DYNAMIC MUTUAL CONDUCTANCE METHOD. LARGE ENGLISH READING DIAL—AND MICROMHO RANGES ARE THERE—WHERE YOU NEED THEM.

Let your customers see for themselves the condition of their tubes. The DM532 builds customer confidence—helps you sell—makes more profit for you on over-the-counter sales. It is a quality built, accurate testing unit—and looks it. It's a sure-fire sales booster. Panel is modern, legible and lasting, with satin chrome finish.

Easy to read scales have MICROMHO ranges of 0-3,000, 0-5,000, 0-15,000 and English legends reading "Replace," "Doubtful" and "Good."

In selector switches complete flexibility has been provided to take care of all base pin connections; but in routine testing seldom more than one or two manipulations are necessary. It is easy to use.

Roll chart in the panel makes tube data easy to find.

Gas test provision quickly detects gassy tubes (which ruin AVC and IF stages).

Tests diodes separately with low voltage to prevent paralysis of the tube elements.

Tests all present-day tubes including Octal, Loktal, Miniature, Ballast, Magic Eye Tubes, and Nine Pin Tubes.

Will remain up-to-date for years and years. Provision for new tube designs is made.

Pure rectified D.C. current is used to energize plates and grids using two rectifiers.

Has all latest filament voltages. Dial is marked in voltage.

Tested and approved by the leading tube users in the country. Choice of high grade engineers.

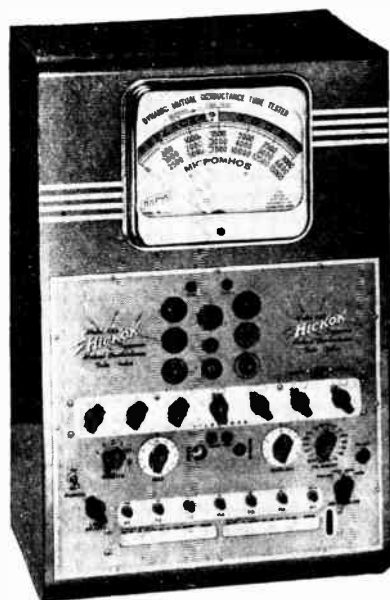
Tests grid controlled rectifier tubes.

Size—26 $\frac{3}{4}$ " high, 17" wide, 11" deep.

Shipping Weight—50 lbs.; net, 32 lbs.

Power Supply—100-130 Volts, 50-60 Cycles.

Tube Complement—1 No. 83, 1 No. 5Y3GT.



**Model 532DM
Net Price \$139.00**

SPECIAL "D" SERIES DISPLAY EQUIPMENT

**To Sell and Safeguard
Your Service**

**Start to build your business
this sure-fire way NOW!**

**Separate Display Cases Available for Any
of These Hickok Testers You Already Have!**

Most Convenient "Fit All Space" panels that are possible to design.

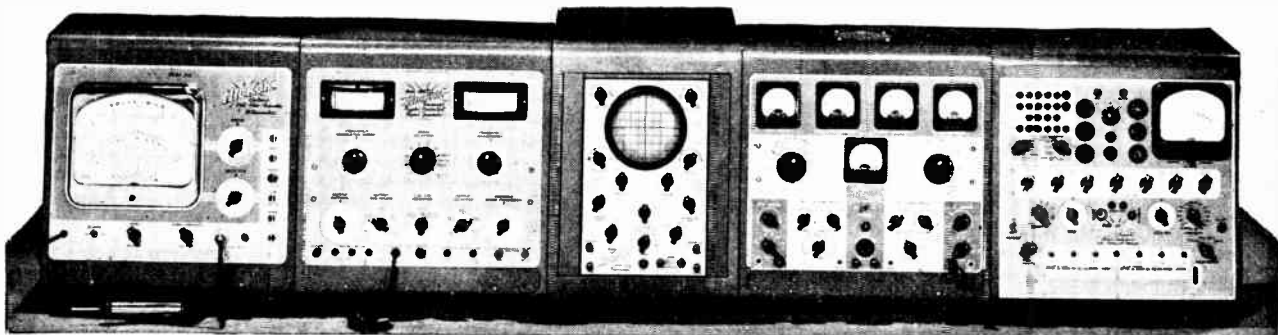
Makes a Most Magnificent, Solid and "Stay Put" Layout.

Can be arranged in Sections or Multiples of Associated Units for Specialized Service. Rearrangement may be made as desired. Show Your Service "Know-How." Put it out where your customers can see it.

"D" SERIES WILL SELL IT—OWN IT—SAFEGUARD IT. The following instruments are available in display cases—Models 290—288X—195—156—534—191X—505—532.

Size, each case: 18 $\frac{1}{2}$ " high, 17" wide, 11" deep. (Oscilloscope cases: 18 $\frac{1}{2}$ " deep.)

Weights: Approximately same as regular models.

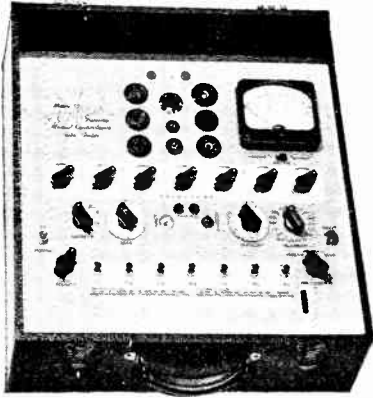


HICKOK

TEST EQUIPMENT

DYNAMIC MUTUAL CONDUCTANCE (TRANSCONDUCTANCE)* TUBE TESTERS

MODELS 532-P AND 532-C



Model 532-P

finish. In our selector switches complete flexibility has been provided to take care of unusual base pin connections; but in routine testing seldom more than one or two manipulations are necessary. Roll chart in the panel makes tube data easily and quickly available. Tests grid controlled rectifier tubes. Continuity checks can be made by a special new feature of design. Wide range of voltage checks can be made.

*Mutual conductance and transconductance mean the same thing.

Specify "P" for Portable, "C" for Counter Type
When Ordering.

Net Price, either Model, \$128.00

SPECIFICATIONS

Size—17" x 18" x 8½". Weight 27 lbs.
Shipping Weight—34 lbs.
Power Supply—110-130 Volts 50-60 Cycles.
Tube Complement—1 No. 83—1 No. 5Y3 GT.
Other voltage or cycles available.

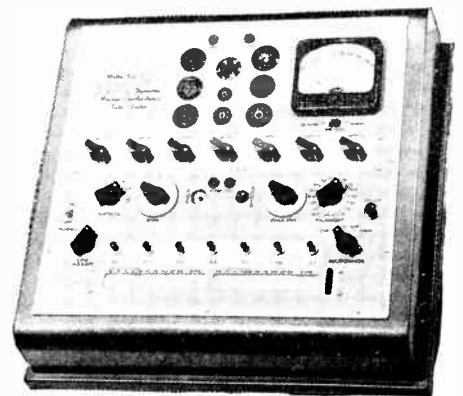
NEW DESIGN ALL-PURPOSE TUBE AND SET TESTER — Model 534

In addition to the many tube tester features of the 532, the Model 534 tube and set tester measures volts, ohms, milliamperes, capacitance, inductance, leakage and decibels. Specific features are as follows: Voltage Ranges: 0-20-200-500-1,000-5,000V A.C. and D.C. Resistance—0.1 ohm to 100 megohms in three overlapping ranges. No batteries needed. Capacitance—0.0001 to 100 microfarads in overlapping ranges. Checks leakage of electrolytic or paper condensers. Inductance up to 100 henries (or higher by simple calculation) with or without D.C. component. Decibel ranges —10 to ± 50 D.B. (or higher by simple calculation). Checks hum in any stage of the receiver. Meter scale 4½" long clearly marked for easy reading. Portable carrying case, black imitation leather covered hardwood with detachable cover.

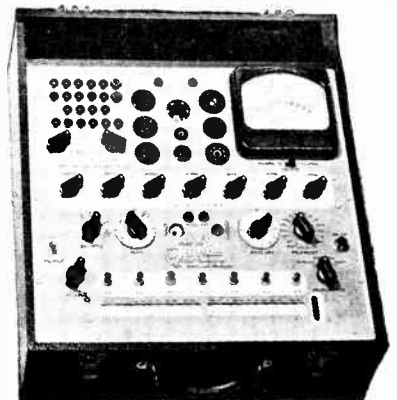
SPECIFICATIONS

Size 17" x 18" x 8½"
Weight—28 lbs.
Shipping Weight—35 lbs.
Power Supply—110-130 Volts, 50-60 Cycles
Tube Complement—1 No. 83, 1 No. 5Y3GT
2 No. 6H6, supplied and installed.
Panel—Two-tone Satin Chrome finish

Net Price
\$149.00



Model 532-C



Model 534

Made only in portable type.

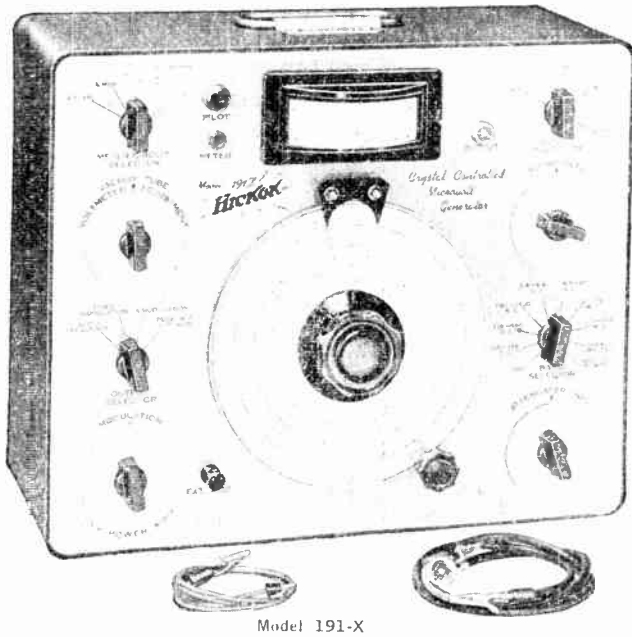
HICKOK

TEST EQUIPMENT

Crystal Controlled

Microvolt Signal Generator

Model 191X



Model 191-X

Net Price, \$160.00

Model 191X is an accurate and dependable source of calibrated, modulated or unmodulated, radio frequency test voltages ranging in frequency from .25 kc to 120 mc, on fundamentals. Precision tests such as receiver sensitivity and selectivity tests are possible, as a vacuum tube voltmeter has been incorporated to accurately control the calibrated output voltages. Rapid and exact calibration and alignment of IF tanks of a receiver can be made by using the crystal controlled output at 100 kc, or 1000 kc, and its harmonics. Alignment and resonance may be very conveniently checked with a standard meter. Permits direct calibration of radio frequency output from .2 microvolts to 100,000 microvolts at all ranges.

SPECIAL FEATURES

Internal vacuum tube vacuum permits direct calibration of radio frequency output to 100,000 microvolts on all ranges. All output available from 0 to 2 volts. Minimum signal leakage as a result of complete shielding and newly developed cast aluminum attenuator housing, .01% accurate crystal controlled outputs. Both fixed and variable percent of amplitude modulation. Provision for external amplitude modulation from 10 to 10,000 cycles. Silicon-tuned double output meter, calibrated from 10 to 238.142, 5" and with over 100" of scale.

SPECIFICATIONS

- Dimensions—11" x 16 1/2" x 8"
- Weight—20 lbs.
- Meters—Model 51
- Scale—Over 100"
- Stainless-steel finish panel
- Blue bakel crackle lacquer finished case.
- Power—105-125V, 50-70 cycles, A-C
- Power Consumption: 20 watts at 115 volts

INDICATING TRACEOMETER

MODEL 156

The Model 156 rapidly locates troubles in radio and television receivers and facilitates the alignment and provides a means of checking the overall or individual stage performance of such electronic equipments. Five precision meters make possible seven simultaneous measurements with no interfering with the normal operation of the receiver. The RF signal can be traced and measured as well as local oscillator frequency and voltage, A-V-C and A-E-C voltages, etc., so that with this instrument any possible trouble in radio receivers can immediately be located and isolated.

SPECIAL FEATURES

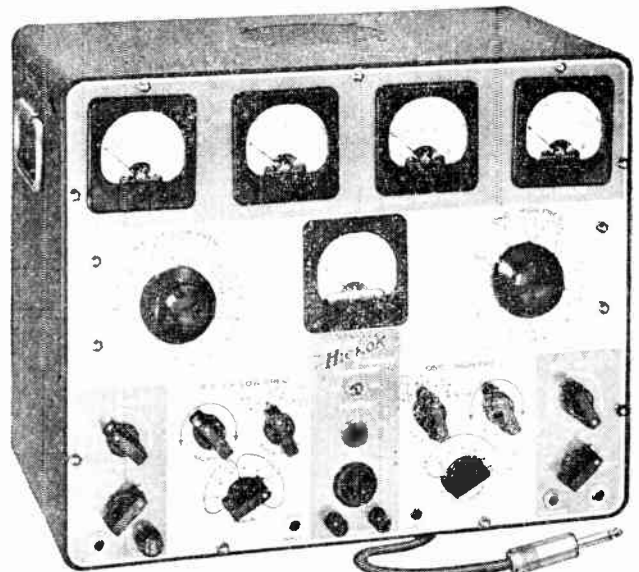
Built-in speaker for monitoring either i-f, rf or af channels. Vacuum tube voltmeters cannot be damaged by overload. Four 12" low capacity shielded cables are supplied. DC voltmeter with zero center to permit measurement of voltages positive or negative with respect to ground.

SPECIFICATIONS

- Dimensions—11" x 16 1/2" x 11"
- Weight—22 lbs.
- Meters—Four Model S16
- One—Model S17
- Stainless-steel finish panel
- Blue bakel crackle lacquer finished case.

Power Supply Required: 105-125V, 50-70 cycles, A-C. Power Consumption: 25 watts at 115 volts. Frequency Range: RF-IF—Low Freq.—25-210 kc., 210,000 kc., 600-1,700 kc., OSC—High Freq.—250-1500 kc., 1.5-1.5 mc., 1.5-1.5 mc. AF Voltmeter—20-20,000 cycles, ± 20%. Voltage Ranges: DC Volts: 0 to 2.5, 5, 25, 50, 250, 500. RF-IF Volts—Microvolts: 0.5K-25K 100K. Volts: 0.5-2.5-10-25. OSC High Freq.—0.5-1.5-7.5-50-150-750. AF Volts: 0.1-10-100-1,000. Wattage Range: 0-150 watts. Input Impedance: DC Volts—18 megohms, RF-IF Volts—Microvolts—0.85 mmf, OSC High Freq. 1.2 mmf, AF Volts—2.0 megohms. Tube Complement: 3 6SK7—rf amplifiers, 3 6SQ7—af detectors and voltmeter tubes, 1 6SQ7—af amplifier, 1 6V67—audio amplifier and oscillator input amplifier, 1 6J5—dc voltmeter, 1 5Y3—power rectifier, 1 OD3 VR150—voltage regulator.

Net Price, \$195.00



Model 156-A

HICKOK

TEST EQUIPMENT

UNIVERSAL CRYSTAL CONTROLLED SIGNAL GENERATOR Models 277, 277X and 288X

The Universal Crystal Controlled Signal Generators, Models 277, 277X and 288X, are specifically designed to meet the many and varied needs of the radio engineer and service man working with frequency and amplitude modulated receivers and with television equipment. The wide range in radio-frequencies and audio-frequencies available, with the many choices of type of modulation, makes these Models most versatile and practical instruments.

All three models are the same except for the following features: 0.01% accurate crystal controlled outputs, both amplitude modulated at 400 cycles and unmodulated, offered in Models 288X and 277X only. Self-contained decibel meter with 42" cable. Model 288X only.

SPECIAL FEATURES

Complete frequency modulation coverage with three variable bandwidths of sweep: 0-30 kc, 0-150 kc, 0-450 kc. Frequency modulation at two self-contained modulating frequencies: 60 cycles and 400 cycles. Provisions for external amplitude and frequency modulation to 15,000 cycles. Self-contained amplitude modulation at 400 cycles. Continuously variable audio frequency from 0-15,000 cycles. Audio frequency and radio frequency outputs are continuously variable from zero to maximum. 60 cycle synchronized sweep voltage is available for use with an oscillograph.



Model 288-X

Net Price, \$169.20

Dimensions—14" x 16½" x 8"

Weight—28 lbs.

Meter—Model 51X, Model 288X only

SPECIFICATIONS

Scale—over 100"

Satin-chrome finish panel

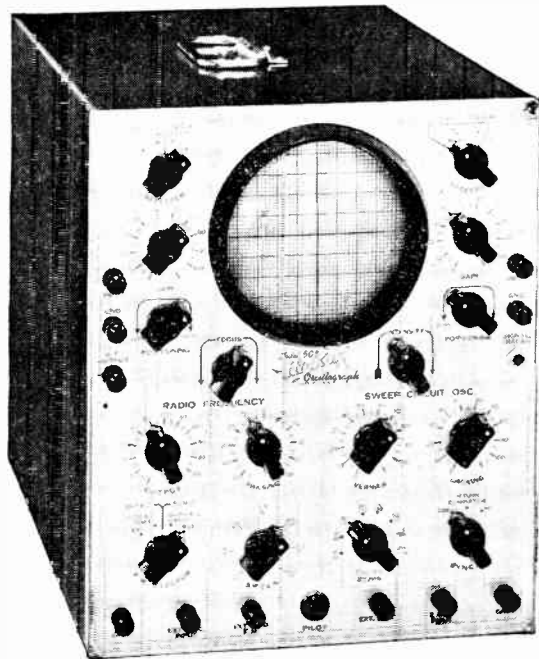
Blue baked Hammertex finished case.

POWER SUPPLY: 105-125 V. 50-70 cycles, A-C. Power Consumption: 20 watts at 115 volts. Amplitude Modulated, Pure R-F Frequency Range: 100 kc-110 mc. Frequency Modulated R-F Frequency Ranges: Narrow Band (0-30 kc Sweep): 100 kc to 110 mc in 7 ranges; Wide Band (0-150-450 kc Sweep) 1 mc to 160 mc in 7 ranges. Modulation: Amplitude Modulation—400 cycles; Frequency Modulation—0-450 kc variable sweep, 50 mc. modulating frequency 60 cycles; 0-150 kc variable sweep, 50 mc. modulating frequency 400 cycles; 0-30 kc variable sweep, 1000 kc. modulating frequency 60 cycles; External Modulation—Amplitude or frequency modulation, variable 0-15,000 cycles A-F Range: Fixed at 400 cycles, variable from 0-15,000 cycles. Crystal Controlled Output (Models 277X and 288X only)—100 kc. Unmodulated: 100 kc-15 mc. utilizing harmonics; 100 kc. 400 cycle amplitude modulated; 100 kc-15 mc. utilizing harmonics; 1000 kc. Unmodulated; 1000 kc-125 mc. utilizing harmonics; 1000 kc. 400 cycle amplitude modulated; 1000 kc-125 mc. utilizing harmonics. Output: R-F, continuously variable from 0 to maximum (with multipliers X1, X10 and X100); A-F, continuously variable from 0 to maximum, linear control, for both 400 cycle and variable frequency outputs. Synchronized Sweep Voltage: for horizontal deflection of oscillograph (60 cycles.) DB Meter Range (Model 288X only): -10 to +6, +6 to +22, +22 to +38. Tube Complement—1 6C4, 2 6SN7, 1 6SJ7, 1 6X5G.

HICKOK

TEST EQUIPMENT

NEW F.M. OSCILLOGRAPH Model 505



Model 505

Net Price: \$179.00

Power Supply: 105-125 V., 50-70 cycles, A.C. Deflection Sensitivity: Vertical—0.09 volts (rms)/inch. Horizontal—0.3" in. (rms)/inch. Horizontal, Direct—45 volts (rms)/inch. Input Impedance: Vertical—1 megohm, 25 mm. (H.F. Direct)—3 megohm. Tube Complement: 1 5UP1—cathode ray tube, 1 6SN7—r-f oscillator and mixer, 1 6J5, 1 6AG7—vertical amplifier, 1 6J7—horizontal amplifier, 1 6X5—rectance tube, 1 5Y3—high voltage rectifier, 1 5Y3—low voltage rectifier, 1 8S4—sweep circuit oscillator.

Specifically designed for use with frequency modulated, amplitude modulated and television equipment. Permits a complete visual analysis of the electrical and electronic circuits of the i-f and r-f bands as well as the audio frequency stages. The effectiveness of a tube or circuit as an amplifier, rectifier, or source of special wave shapes may be readily determined.

Interprets modulation, phase relations, voltage amplitudes, distortion, etc. Responds accurately to voltages in wide ranges of both frequencies and amplitudes.

SPECIAL FEATURES

Wide band, high gain vertical amplifier, 30 cycles to 1 megacycle. Self-contained wide-band frequency modulated oscillator with variable sweep width, 0-450 kc. Self-contained narrow-band frequency modulated oscillator with variable sweep width, 0-30 kc. Signal tracer jack is incorporated so that, when used in conjunction with a speaker or ear phones, the signal may be simultaneously seen and heard. Provisions for modulation by an external audio frequency source to provide the equivalent of a frequency modulated transmitter for receiver checks. Self-contained mixer circuit provided so that when used in conjunction with any good external oscillator, wide band or narrow band frequency modulated outputs may be produced within the frequency limits of the external oscillator. High sensitivity amplifiers. Calibrated screen. Has self-contained frequency modulated oscillator. Can be used with any signal generator for servicing FM or AM sets.

SPECIFICATIONS

Dimensions—14" x 11½" x 15½"
Weight—32 lbs.
Cathode Ray Tube—5"
Satin-chrome finish panel
Blue baked Hammertex finished case

NEW 5" HIGH SENSITIVITY OSCILLOGRAPH

Model 195

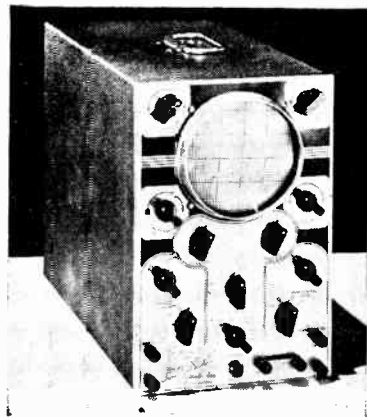
With this oscilloscope you can align I. F. transformers, trace trouble, analyze wave shape of signal, determine unknown frequencies, amplify and view very weak signals. Has big 5" screen, extra high gain vertical amplifiers, sinusoidal sweep circuit and phasing control for proper I. F., R. F. and discriminator alignment.

TECHNICAL CHARACTERISTICS

- Power supply required: 105-125 V., 50-70 cycles A.C.
- Power Consumption: 50 Watts at 115 Volts
- Deflection Sensitivity:
 - Vertical—0.3 Volt (rms) per inch
 - Vertical, Direct—15 V (rms) per inch
 - Horizontal—0.15 Volt (rms) per inch
 - Horizontal, Direct—20 Volts (rms) per inch
- Input Impedance:
 - Vertical—1 meg, 25 mmf
 - Vertical, Direct—2.2 meg
 - Horizontal—4 meg, 35 mmf
 - Horizontal, Direct—2.2 meg
- Frequency Range:

Amplifier, Vertical—30 cycles to 50 kc
Amplifier, Horizontal—10 cycles to 50 kc
- Tube Complement:

Tube	Function
1 6J7	Horizontal Amplifier
1 8S4	Sweep Circuit Oscillator
1 6AG7	Vertical Amplifier
1 6X5	Low Voltage Rectifier
1 5Y3	High Voltage Rectifier
1 5UP1	Cathode Ray Tube
- Size: 8½" wide x 18½" deep x 13" high
Weight: Approximately 25 lbs.



Model 195

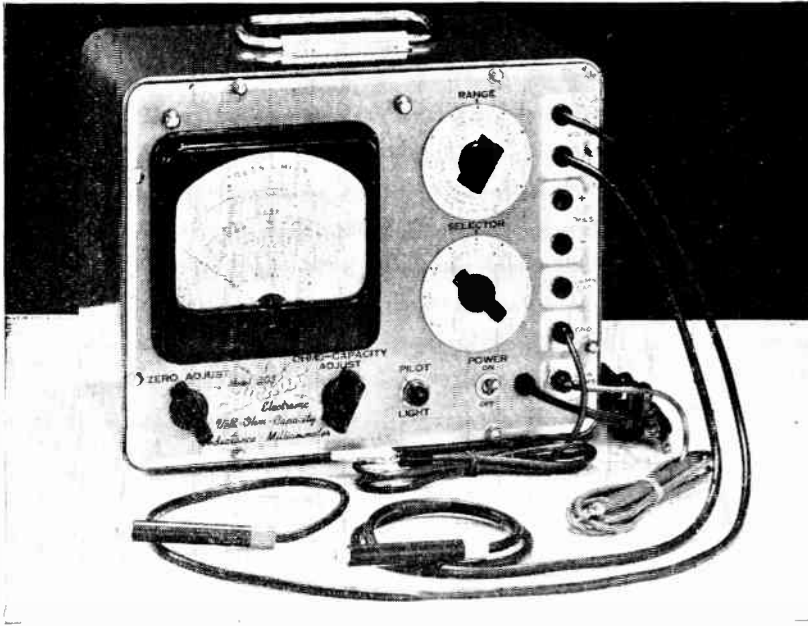
Net Price: \$132.00

HICKOK

TEST EQUIPMENT

ELECTRONIC VOLT-OHM-CAPACITY MILLIAMMETER

Model 203



Model 203

A universal test instrument for all radio and electronic service work. Accurately and easily measures wide ranges of inductances, capacitances, resistances, currents and voltages, both A.C. and D.C.

Net Price
\$84.60

Model PR-203 — Same as above except with probe as shown below on Model 209.

Net Price \$94.20

High input impedance prevents loading when making voltage tests. Measurement of inductances are possible with the use of a conversion chart supplied in the instruction book. Damage due to overload is

impossible in all except current measurements. Regulated power supply incorporated permits normal operation and accuracy with wide line voltage fluctuation.

SPECIFICATIONS

Dimensions—9" x 11½" x 7"
Weight—13 lbs.
Meter—Model S11A
Satin-chrome finish panel
Blue-lake Hammer-tex
finished case

POWER SUPPLY: 105-125 V, 50-70 cycles. Ranges: Volts, A-C and D-C 0-3, 12, 30, 120, 300, 1200 (with probe, 1200 range in D-C only), Mills (D-C): 0-3, 12, 30, 120, 300, 1200. Cap.: 0-10,000 mmf in 2 ranges, 0-1000 mf in 5 ranges, Ind.: 50 mh-100 henries, Ohms: 0.1 ohm to 10,000 megohms in 7 ranges. Frequency: A-C up to approximately 5 megacycles may be measured. Input Impedance: Volts D-C: 14 megohms, Volts A-C: 12 megohms. Tube Complement: 6X5GT A-C rectifiers, 6SJ7 cathode follower, 6SN7GT vacuum tube voltmeter, OD3-VR150 voltage regulator.

ELECTRONIC VOLT-OHM-CAPACITY MILLIAMMETER

LARGE LABORATORY SIZE GIANT 9-INCH METER

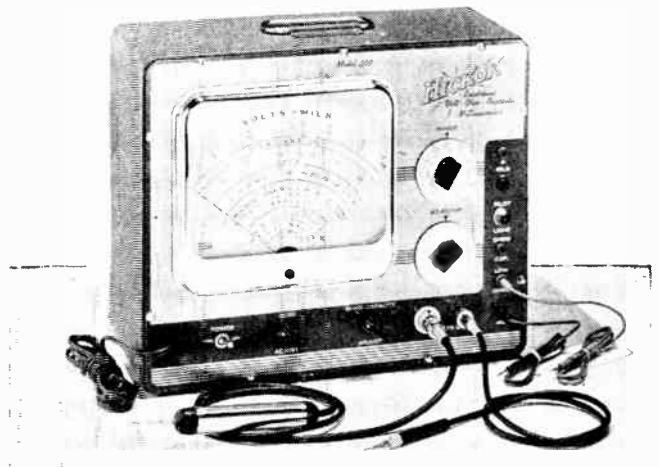
Model 209

Model 209 has the same technical characteristics as Model 203, but it is giant size for greater ease of operation. Long scale, 9" meter gives maximum visibility. There is over 250 inches of scale length for combined ranges. This is a real professional model.

SPECIFICATIONS

Dimensions—14" x 16½" x 8"
Meter—Hickok Model S22
Weight—48 lbs. Net
Shipping Weight—25 lbs.
Blue-lake Hammer-tex
finished case

Net Price: \$99.60
Including probe.



HICKOK

TEST EQUIPMENT

VOLT OHM MILLIAMMETER

Model 435

The Model 435 is built to the highest Hickok standards of engineering design, workmanship and material. The meters used in these Volt-Ohm-Milliammeters are especially built by Hickok for this service. The movement is large and rugged and the very high torque weight ratio gives lively, instantaneous pointer action. The movement is curve-corrected by an exclusive Hickok process which gives a higher accuracy at all points on the scale.

SPECIAL FEATURES

20,000 ohms per volt sensitivity on A.C. and D.C.
A-c power is not required for operation—especially convenient in many areas. Microampere, milliampere and ampere measurements provide an extremely wide range in current measurements. A.C. voltage output with D.C. components may be measured. Decibel power output measurements from -20 to +29 db may be made. Wide ranges in A.C. and D.C. voltage and resistance values may be measured.



Mod-1 435

Net Price, \$37.50

SPECIFICATIONS

Dimensions—6" x 8¼" x 4"
Weight—5 lbs.
Meter—Model S48
Satin-chrome finished panel
Blue baked Hammertex finished case.

Ranges—AC Volts and DC Volts: 0-2.5, 10, 50, 250, 1000, 5000; Ohms 0-10 megohms (4 ranges); Microamperes: 0-50; Milliampere: 0-2.5, 10, 50, 250, 1000; Amperes: 0-10; Decibels: -20 - +3, -8 - +15, +6 - +29; Output Volts: 0-2.5, 10, 50, 250, 1000, 5000. Sensitivity: AC Volts: 20,000 ohms/volt; DC Volts: 20,000 ohms/volt; Meter: 40 microamperes. Battery Complement: 1 Dry Battery, Radio C, 4.5 volts.

VOLT-AMPERE WATTMETER

Model 900A

Electrical Appliance Tester and Circuit Analyzer.
True to the Finest Hickok Tradition

For Measuring Actual Values of Volts, Amperes and Watts.
Ranges: A.C. Watts: 0-100-500-1000-2000. A.C. Amperes: 0-1.3-6.5-13-26. A.C. Volts: 0-130-260. A.C. Milliampere: 0-260.

Scale is 3¾" long, clear and legible. The Model 900A Volt-Amp-Wattmeter has been designed for all A.C. appliance-testing, from bell transformers and clocks to electric ranges operating on the 220-volt three-wire Edison system. The extremely low range of 0-20 watts will measure the power consumed by the smallest of appliances and is protected from accidental overload by a fuse. For measuring electric ranges the Number 9A and 9B special leads are available with standard three-wire range connectors. It tests appliances while in actual operation, indicating wattage consumption, amperes, and line voltage.

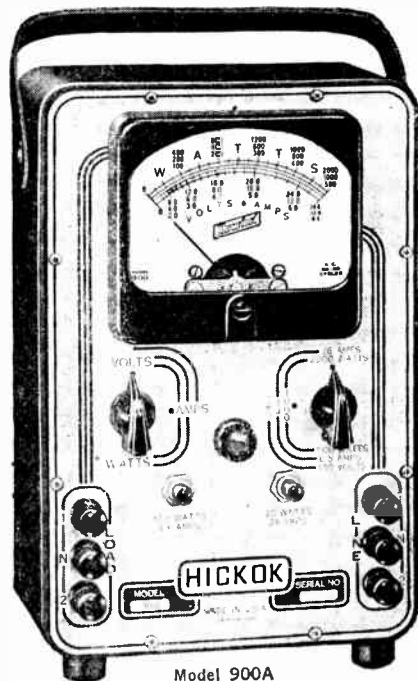
Mounted in a durable welded steel case with strap handle and rubber bumpers. Detachable leads, for small appliances, are furnished. Test leads with prods also included.

Service men will find a wattmeter especially handy for checking all A.C. sets.

Part No. C-105—This external current transformer is designed to give ranges of 5,000 and 10,000 watts and 65 and 130 amperes when used with Model 900A. Part No. C-105 transformer may be installed in lead compartment of carrying case. When transformer and carrying case are ordered together, transformer will be installed before shipping.

Model 900A—Size: 9½" high, 6¼" wide, 3" deep.
Shipping Weight: 8½ lbs.

Net Price, \$59.07



Model 900A



ELECTRIC INDICATING INSTRUMENTS

For Panel Mounting

Internal-pivot Direct-current and Radio-frequency Types



Type DW-51 voltmeter in a metal (brass) case



Type DW-52 ammeter in a molded Textolite case

These small panel instruments are particularly suitable for use in radio and other communications equipment where compactness, especially minimum depth behind the panel, is essential. Thinness is obtained by the use of a unique single-unit, high-torque element of the permanent-magnet, moving-coil type. In this element, the pivots, instead of being secured to the outside of the armature winding, are solidly mounted on the inside of the armature shell.

G-E internal-pivot instruments are available in a variety of standard ratings to measure direct current and voltage (Type DW-51), and radio-frequency current (Type DW-52). They are of the 2½-inch classification. The depth behind the panel is 0.89 inch for the molded Textolite case; 1.03 inches for the metal case.

OTHER TYPES

Many other types of G-E indicating instruments are available for panel mounting. They include 3½ inch a-c, d-c, r-f, and rectifier types in standard round cases as well as in rectangular cases, such as the one shown below. Also 2½-inch alternating-current instruments. Still other types can be supplied to meet unusual requirements.

LISTINGS

Range	Approx. Resistance in Ohms	Cat. No.	List Price
1 } 5 } 20 } volts (d-c) 50 } 100 } 150 }	1,000	258X65	\$12.00
	5,000	258X68	12.00
	20,000	258X72	12.00
	50,000	258X74	12.00
	100,000	258X76	12.50
150,000	258X77	13.00	
1 } 5 } 25 } milliammeters (d-c) 100 } 200 } 500 }	.25	258X90	10.50
	7.4	258X93	10.50
	2.16	258X96	10.50
	.50	258X98	10.50
	.252	259X1	10.50
	.100	259X4	10.50
50 } 100 } microammeters (d-c) 200 } 500 }	2,030	259X5	19.00
	693	259X7	18.00
	302	259X9	14.00
	68.5	259X11	12.50
1 } 5 } amperes (r-f) 10 }	.29	259X13	16.50
	.034	259X16	16.50
	.017	259X19	16.50
100 } 200 } milliammeters (r-f) 500 }	6.8	259X22	15.50
	4.0	259X25	15.50
	.62	259X28	15.50

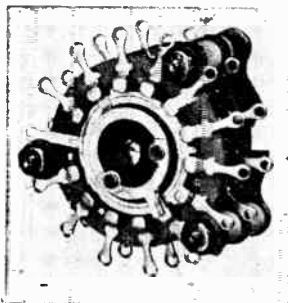


Type DO-54 3½-inch instrument for panel mounting

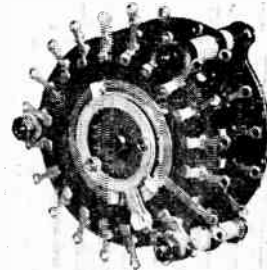
INSTRUMENT AND TESTER SWITCHES

Rotary Selector — Single and Multi-Gang — Non-Shorting and Shorting*

The switch that's IN LAST PLACE on the trouble-shooter's check list . . . AND PROUD OF IT!



SS-14-2



SS-20-2

J-B-T Instrument Type Rotary Selector Switches were designed and developed to meet the need for trouble-free, dependable performance in hard service. These superior switches are used extensively in high quality test equipment, portable instruments, inspection setups and experimental circuits. Available in two basic types—14 and 20 position—the design gives extra contacts in minimum space. One to six decks.

FEATURES:

Reliability—Rigid, 3-post deck suspension, instead of the usual 2; all parts heavily coin silver plated to meet 200 hour salt spray test; ball bearing action, beryllium-copper spring, and special design detent wheel assure positive indexing. Laminated plastic decks and rotors selected for maximum mechanical and dielectric strength.

Exceptional Compactness—14-position switch takes 13 circuits and "off" in 2" circle, 20-position switch handles 19 circuits and "off" in 2-23/32" circle. Additional decks require only 5/16" spacing per section.

Low Contact Loss—Double-grip collector arms, and large-area contacts, silver to silver, result in on average contact resistance of .007 ohms or less during the useful life of the switch.

Ample Dielectric—Normal make-and-break with resistance load, 25 Ma. at 300 volts AC or DC; normal carrying capacity (not

make-and-break), 1 amp.; maximum momentary capacity (not make-and-break), 5 amp.; maximum voltage between contacts and ground, 1000 volts R.M.S.; between decks and ground, 2000 volts R.M.S.

* Standard items, but not regularly stocked; check with your distributor.

BASIC 14-POSITION: Knob supplied only on individually packed units—not on bulk orders unless specified. Collector arm placed directly opposite to flut of shaft, unless otherwise specified. Contact lugs and common lugs positioned as shown, 13 contacts per deck. One to six decks; for each additional deck (or gang) add 5/16" to depth. Continuous rotation type supplied unless otherwise specified. Adjustable Stop supplied when requested. Panel Locator available on special order. Special stabilizing end ring used on switches with three or more decks.

BASIC 20-POSITION: Knob supplied only on individually packed units—not on bulk orders unless specified. Collector arm placed directly opposite to flat on shaft, unless otherwise specified. Contact lugs and common lug positioned as shown, 19 contacts per deck, continuous rotation types. One to six decks; for each additional deck, add 5/16" to depth. Continuous rotation type supplied unless otherwise specified. Panel locator positioned as shown unless otherwise specified on bulk orders.

STANDARD SWITCHES, SS-14 TYPE

(14 positions; angular indexing 25° 43')

Model	Positions Per Circuit	Circuits Per Deck	Decks or Gangs	Shorting, Non-Shorting	Net Price, Individually Boxed, Including Knob
SS-14-1	14	1	1	N-S	\$1.35
SS-14-1A*	5†	2	1	N-S	1.40
SS-14-1S*	14	1	1	S	1.35
SS-14-2	14	1	2	N-S	1.65
SS-14-2A*	5†	2	2	N-S	1.75
SS-14-2S	14	1	2	S	1.65
SS-14-3	14	1	3	N-S	2.05
SS-14-3S*	14	1	3	S	2.05
SS-14-4	14	1	4	N-S	2.65
SS-14-6	14	1	6	N-S	3.85

*Standard items, but not regularly stocked; check with your distributor.

†Denotes correction in former catalogs; 5 positions include 4 "live" and 1 "off".

STANDARD SWITCHES, SS-20 TYPE

(20-positions; angular indexing, 18°)

SS-20-1	20	1	1	N-S	\$1.75
SS-20-1A*	6‡	2	1	N-S	1.80
SS-20-1S*	20	1	1	S	1.75
SS-20-2	20	1	2	N-S	2.20
SS-20-2S*	20	1	2	S	2.20
SS-20-3	20	1	3	N-S	2.95
SS-20-4	20	1	4	N-S	3.60
SS-20-6	20	1	6	N-S	5.10

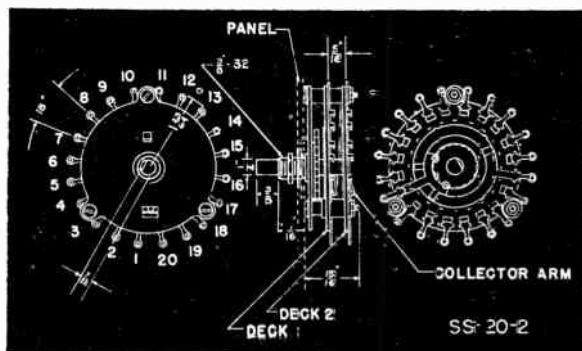
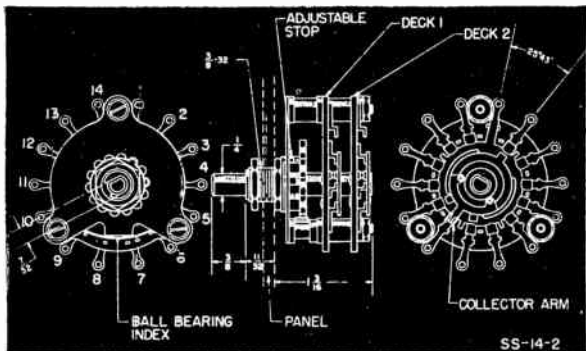
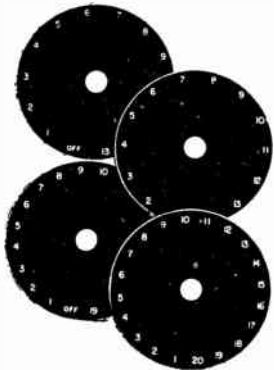
*Standard items, but not regularly stocked; check with your distributor.

‡Denotes correction in former catalog; 6 positions include 5 "live" and 1 "off".

ETCHED DIAL PLATES

SS-14 Series
SS-20 Series

EP-13	off thru 13	\$0.19
EP-14	1 thru 14	\$0.19
EP-19	off thru 19	\$0.19
EP-20	1 thru 20	\$0.19



Special stabilizing end ring used in 14-position switches with three or more decks.

APPLIANCE TEMPERATURE TESTERS

A NEW IDEA IN TESTERS — The need for scientific but sturdy portable test equipment in the appliance service field is met by this exclusive line. Here the user profits from J-B-T's wide experience in building field test sets for many well-known manufacturers of ranges, irons, refrigerators, deep freeze units, and similar equipment. All J-B-T testers include the principle of remote reading of temperature,—and temperature measures the real usefulness of the appliance.

OVEN TEMPERATURE TESTERS



MODEL 32-JP-3. Checks oven temperature of gas and electric ranges and other appliances. Ideal for testing and setting thermostats. Has 5½' thermocouple, clip for attaching to grill, and convection shield for steady readings. Exceptionally fast, continuous response; automatically compensates for ambient temperature. Range 0—650° F; black leatherette case 6" x 3¾" x 3¾", including SA-116 5½' calibrated thermocouple, clip and shield.....\$22.75

MODEL 32-JP-4. An oven temperature tester same as Model 32-JP-3, plus binding posts and leather carrying strap. Permits quick attachment of

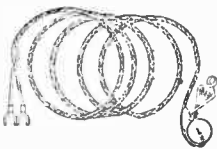
other thermocouples to check irons, toasters, waffle-bakers, roasters, etc. Complete with SA-116 5½' calibrated thermocouple, clip, and shield.....\$23.75

ALL-PURPOSE TESTER

MODEL 61-JRT. This 9-in-1 tester is the very latest for accurate temperature adjustment and precise electrical circuit analysis. For ranges, refrigerators and many other appliances. Rapidly reads four cold zones, —100° to +80° F, up to 14' distant; two heat zones, 0—600° F, up to 5½' distant; one voltage range, 0—300 A.C.; and, with transformer, two current ranges, 0—30 and 0—60 amps., A.C. Sturdy, polished walnut case 15½" x 10-3/16" x 4¾" with handle and slip hinges. Two-color etched metal panel. Separate switches protect bulb and ammeter circuits. Requires one standard flash-light cell, easily replaceable in the field. Temperature scale accuracy ±2% of full scale. A.C. readings ±5% (±3% for rectifier). Space for four SA-162 Resistance Bulbs with 14' polyethylene lead, two SA-116 thermocouples with clip and shield, one pair of 4' electrical leads with prods and plugs, and enclosed transformer. Other accessories, listed below, may be

ATTACHMENTS AND SPARE PARTS

THERMOCOUPLES



SA-116 with SHIELD and CLIP. Flexible No. 22 gauge iron constantan, asbestos insulated, 5½', with attachment clip and convection shield; for use with Models 32-JP-1, 32-JP-2, 32-JP-3 and 32-JP-4 oven testers; also 60-JRT and 61-JRT all-purpose testers.\$1.65

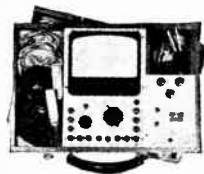
SA-170 (REPLACEMENT THERMOCOUPLE for IRON TESTERS 32-JIT and IT-1). Thermocouple and lead, including aluminum plate and special tip, quickly installed in the field.....\$1.90

SA-175 (PLAIN TIP). For roasters, waffle irons, etc., 5½' iron constantan flexible No. 22 gauge, asbestos insulated, with small ball tip; used where clip and shield of SA-116 not suitable; for Models 32-JP-2, 32-JP-4, 60-JRT, and 61-JRT.....\$1.30

SA-176 (for TOASTERS, etc.) 5½' iron constantan No. 22 gauge, asbestos insulated, with special disc to collect heat; easily attached to 32-JP-2 and 32-JP-4 oven testers, also 60-JRT and 61-JRT.\$2.25

added for testing irons, grills, roasters, toasters, etc. As described, except including two SA-162 resistance bulbs, two SA-116 thermocouples, one pair electrical leads, and AS-TR-2 built-in transformer.\$97.50

MODEL 61-JRT (less transformer). Same unit, same scales, except does not read in amperes; AS-TR-2 transformer assembly omitted.....\$85.00

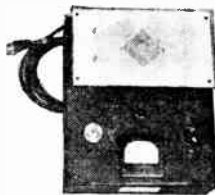


COLD ZONE TESTER



MODEL 50-50. Designed for cold testing in refrigerators, deep-freeze units, locker plants, dairies, etc. Temperature range of —50° to +50° F., 2° divisions, also —45° to +10° C., 1° divisions (for laboratory and export purposes). Black metal case 8" x 5¾" x 3½". To test, simply put the bulb wherever desired, close the door, make one adjustment, and read temperatures continuously. Requires no pressure measurement nor spraying of refrigerant and does not have to be connected into refrigerant lines or other mechanisms. Complete with one SA-162 resistance bulb and 14' polyethylene lead.\$42.95

IRON TESTER

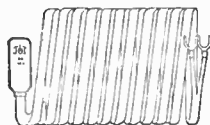


MODEL 32-JIT. Checks all makes; measures thermostat temperatures; and shows open or short circuits. Sturdily constructed, no thermocouple springs, no glass thermometers; automatically compensated for room temperature. Bench type basic tester, companion to the oven and cold zone testers. Also indicates operating temperature of the sole plate (working surface) on non-electric or cordless irons. 10" x 12" x 5½", scale 0—650° F, 15 amp. fuse, 6' cord, 110 volt, 50-60 cycles.....\$28.75



IRON TESTER THERMOCOUPLE, MODEL IT-1. This attachment is identical with the 32-JIT, except there is no meter. It is easily connected to Models 32-JP-2, 32-JP-4, 60-JRT and 61-JRT. Shows open circuits and shorts, checks sole plate temperatures and thermostats on all types of irons.\$14.75

RESISTANCE BULBS (FOR COLD TESTING)



SA-162. For use only with Models 50-50 and 61-JRT; identified by embossed part number.....\$5.00

SA-142. For use only with Model 60-JRT; calibration is not interchangeable with SA-162; has no embossed number.....\$5.00

TRANSFORMERS

AS-TR-2. Attachment for compartment of 61-JRT all-purpose tester, completely housed, with jumper lead and panel; reads 30 and 60 AC amp. scales on tester.....\$15.00

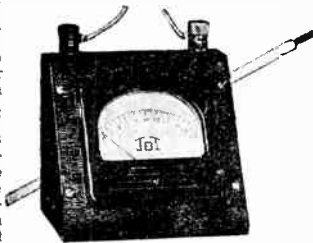
AS-TR-3. Attachment for increasing usefulness of 60-JRT all-purpose tester. Includes side rails for attaching inside compartment; fully housed. Reads 30 and 60 AC amp. by dividing volt scale by 10 or 5.....\$16.50

TEMPERATURE INDICATORS

WHERE TO USE: To check heat rise of motors, transformers and coils; for laboratory furnaces, inspection set-ups, for remote indication of infra-red and other oven temperatures; and to maintain controlled industrial processes such as heat treating and annealing. When used with selector switch, permits centralized reading of one to ten thermocouples, as in Diesel exhaust manifold applications.

MODEL 32-J

MODEL 32-J PYROMETER IN SN-3 STAND. Mounted in sloping front black metal stand, 4 1/4" high x 4 1/8" deep x 4 1/8" wide. Compensated for ambient temperature. Medium resistance system, damped for quick reading on 2 3/8" scale, assures ruggedness and pointer stability. To retain the accuracy of the installation: use only the type and resistance of thermocouple and lead which are provided, do not cut extra lead—coil it—change in length changes calibration. A protection tube is not generally required. Many users find it convenient to keep an extra couple and lead on hand.



MODEL 32-J IN SN-3 STAND

0°—650° F—350° C, includes SA-81 thermocouple, SA-84 lead, and CB-1 connector block **\$27.50**
 0°—1200° F—650° C, includes SA-87, SA-82, and CB-1 **\$27.50**
 0°—2000° F—1100° C, includes SA-87, SA-82, and CB-1 **\$27.50**

MODEL 32-J IN SN-5 STAND (not illustrated). With 3 binding posts to accommodate flexible extra lead and thermocouple for hard-to-reach locations.

0°—650° F with SA-91 thermocouple, SA-84 lead, CB-1 connector block, and SA-96 flexible lead and thermocouple **\$31.00**

TEMPERATURE

LEAD WIRES. To bring the reference junction within the pyrometer, compensating or extension lead wires should always be used. See the instrument dial for (1) the kind of lead and (2) combined resistance of lead and thermocouple. Standard leads include:

SA-82 6' compensating lead for chromel-alumel couples; duplex, stranded; asbestos-insulated, cotton-braid impregnated with moisture-proof and flame-proof compound; terminals at instrument end; other end tinned for connector block **\$1.40**

SA-83 26' compensating lead for chromel-alumel as above **\$4.40**

SA-84 6' extension lead for iron-constantan, 1938 calibration; duplex; moisture-proof and flame-proof; prepared as above **\$1.40**

SA-85 26' extension lead for iron-constantan, 1938 calibration; similar to above **\$4.40**

SA-86 7' iron-constantan thermocouple and lead combined; twisted pair No. 20 Ga., asbestos-insulated—for intermittent use on 600° F scales; terminals at instrument end; other end welded; (resistance is not interchangeable with SA-84 nor with SA-85) **\$1.70**



THERMOCOUPLES. For pyrometers and leads above, J-B-T thermocouples are carefully selected, standardized, and tested.

SA-87 12" No. 14 Ga. chromel-alumel, 2-hole ceramic beads, fits 5/16" hole; welded tip **\$2.80**

SA-88 same except 24" No. 14 Ga. **\$3.50**

SA-89 12" No. 8 Ga. chromel-alumel, 2-hole ceramic beads, fits 7/16" hole; welded tip **\$2.80**

SA-90 same except 24" No. 8 Ga. **\$3.50**

SA-91 12" No. 14 Ga. iron-constantan, 1938 calibration; 2-hole ceramic beads, fits 5/16" hole; welded tip **\$2.35**

Flexible Thermocouple, 7' length, see SA-86 lead wire.

MODEL 60-JPS

MODEL 60-JPS. This portable makes it easy to know temperatures at one to ten locations. Excellent for study of heat in various parts of the same equipment, or in a battery of units. Knife-edge pointer, 5.6" scale. Heavily-duty thermocouple switch has average contact resistance of .00075 ohms or less. Automatically compensated for ambient temperature, indoors or outdoors. To retain accuracy of 1% full scale, use leads and thermocouples equal to resistance and e.m.f.s-temperature characteristics for which instrument is calibrated. Medium resistance system assures portability. Housed in natural-finish wood case 1 13/16" x 8 5/8" x 4 5/8" over rubber feet. A "must" for inspection, maintenance, and engineering.



60-JPS—0°—600° F with SA-86, 7' thermocouple and lead for small apertures **\$92.60**

60-JPS—0°—1200° F with SA-88, SA-82, and CB-1 **\$5.00**

60-JPS—0°—2000° F with SA-38, SA-82, and CB-1 **\$5.00**

60-JP—For one thermocouple only, furnished with thermocouple and lead same as 60-JPS but without selector switch **\$67.60**

0°—600° F, with SA-86 **\$70.00**

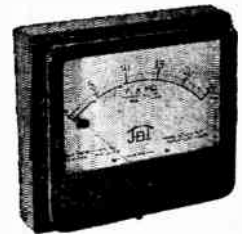
60-JP—0°—1200° F, with SA-88, SA-82, and CB-1 **\$70.00**

60-JP—0°—2000° F, with SA-88, SA-82, and CB-1 **\$70.00**

Note: When ordering additional thermocouples, specify couples and leads as above. Centigrade equivalent scales available on order.

Model 70-J

MODEL 70-J PYROMETER, for accurate reading at a distance, has full 6" scale and spade pointer, with accuracy of 1% of total scale deflection. Automatically compensated for ambient temperature. Molded case mounted in metal protecting shell 7 7/8" x 8 1/8" x 1 1/2". Connections through bottom of case for wall or front-of-board mounting. When ordering, specify which standard scale range: 0°—600° F for 1938 std. I-C; 0°—1200° F for C-A; 0°—2000° F for C-A thermocouples.

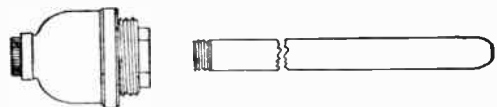
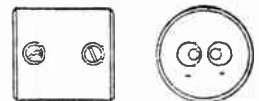


PRICE, including 24" thermocouple and 26' lead **\$60.00**

Note: Centigrade equivalent scales available on order.

ACCESSORIES

CONNECTOR BLOCK Model CB-1. Lava connector block, withstands high temperatures, accommodates all thermocouples up to No. 6 Ga. Heavy brass connectors keep contact resistance low. Can be used independent of connector head. **\$1.50**



CONNECTOR HEAD Model CH-6. Connector head encloses connector block and rigidly supports protection tube around thermocouple. Opens for thermocouple inspection without disconnecting circuit. Normally supplied with reducing bushing for 1/2" i.p.s. Composition bushing at top can be removed for permanent 1/2" conduit installation. Including block **\$2.50**

PROTECTION TUBES protect and support "base-metal" thermocouples such as above. Used in permanent installations at higher temperatures, or in damaging atmospheres. One end is closed, other end normally threaded for 1/2" i.p.s. Proper quality of tubing is very important.

No. 1 Wrought Iron—For temperatures to 1200° F in oil baths, brazing, and general intermittent duty.

TU-11 No. 1—12 inches **\$1.50** **TU-12** No. 1—24 inches **\$2.00**

No. 7 Alloy—27% chromium, iron; drilled tube; for cyanide pots, salt baths with cyanide, open fire with sulphurous content; to 2300° F.

TU-5 No. 7—12 inches **\$9.00** **TU-6** No. 7—24 inches **\$13.50**

No. 9 Alloy—62% nickel, 13% chromium, seamless drawn; for salt baths without cyanide; for gas and oil open fire furnaces and general use, except sulphurous atmospheres; to 2300° F.

TU-2 No. 9—12 inches **\$5.00** **TU-3** No. 9—24 inches **\$8.50**

Note: For temperatures above 2300° F, platinum, platinum-rhodium thermocouples are available.

VIBRATING REED FREQUENCY METERS (PATENTED)

J-B-T Vibrating Reed Frequency Meters are used extensively in radio, telephone, and television service, on engine generator sets, in laboratories, in many types of electronic equipment, on panel and control boards in central stations and industrial plants—wherever constant or known frequency is important to efficient operation of equipment.

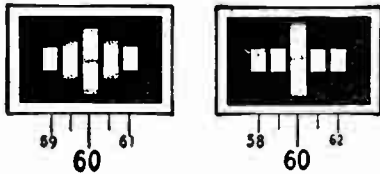
PRINCIPLE OF OPERATION:

Simple in design, the J-B-T Meter consists of a case, base, dial and central mounting frame, with a series of spring steel reeds screwed to a reed mounting bar, individual driving coil surrounding each bank of reeds, permanent magnet, series resistor and terminal studs.

Each reed is adjusted to respond by resonance to but one frequency. As the alternating current (or interrupted direct current) excites the driving coil, the one reed "in tune" with the frequency in the coils will respond by vibrating rapidly because of permanent magnet polarization and induced magnetism from the coil. The instrument is adapted to specified operating voltage by a series resistor. Frequency of the current is read on the graduated face of the instrument.

ADVANTAGES:

Some standard models are available in either half cycle or full cycle steps, as shown below on two meters indicating a frequency of 60 cycles.



Both response patterns are extremely easy to read. In the half cycle instrument the response is broad; in the full cycle instrument, the response is sharp.

Guaranteed accuracy of $\pm 0.3\%$ or better, depending on the model—not an overall percentage based on the maximum scale reading, but applied to each frequency being measured.

High fatigue safety factor for continuous operation, and outstanding temperature stability. Temperature compensators are not required.

All meters are permanently calibrated at the factory and do not require subsequent adjustment. Accuracy is not affected by wave form or external magnetic fields.

These meters are rugged. Built with no pivoted parts and with lock washers at every critical point, they can take rougher treatment than many instruments.

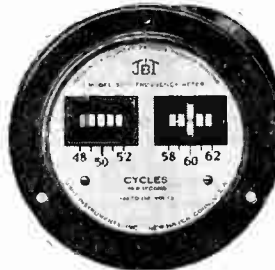
CAUTION:

If a meter plugged in on a 60 cycle AC power line does not indicate a frequency of exactly 60 cycles, trust the meter! Power supply may momentarily be off-frequency due to changing load conditions beyond the control of Utility. All J-B-T Vibrating Reed Frequency Meters are accurately calibrated at the factory, entirely independent of frequency of power supply.

MODEL 30-F

Range: 48-52 and 58-62 cycles.
Double window for ease of reading frequency in either range. Often specified for export. 100-130 volts; 130 ohms per volt; 1 watt power consumption. Accuracy $\pm 0.3\%$. Flush panel mounting.

30-F, 48-52 and 58-62 cy., $3/4$ " Metal Case \$25.00
30-FX, 48-52 and 58-62 cy., $3/2$ " Molded Case, AWS mtg. \$25.00

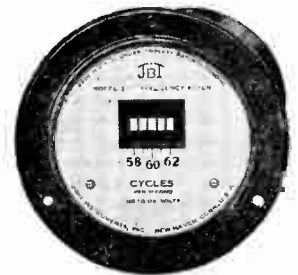


MODEL 30-F

MODEL 31-F

Used in standby power equipment. Handy for accurately measuring frequency of power source. Five reeds, 58-62 cycles. Other characteristics same as Model 30-F.

31-F, 58-62 cy., $3/4$ " Metal Case \$21.50
31-FX, 58-62 cy., $3/2$ " Molded Case, AWS mtg. \$21.50



MODEL 31-F

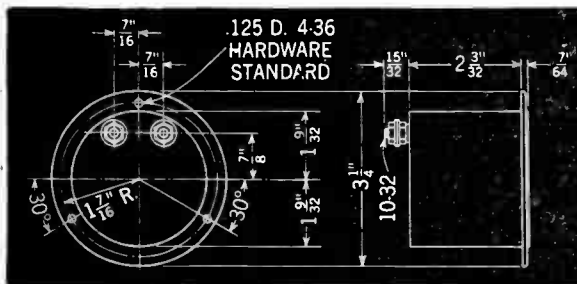
MODEL 34-FX

Used where a broader frequency band is desirable. Nine reeds, 56-64 cycles, or in half-cycle steps (accuracy $\pm 0.2\%$) 58-62 cycles. 100-130 volts; 130 ohms per volt; 1 watt power consumption. Flush panel mounting.

34-F, 56-64 cy., $3/4$ " Metal Case \$24.75
34-FX, 56-64 cy., $3/2$ " Molded Case \$24.75
34-F, 58-62 cy., $3/4$ " Metal Case \$26.25
34-FX, 58-62 cy., $3/2$ " Molded Case, AWS mtg. \$26.25

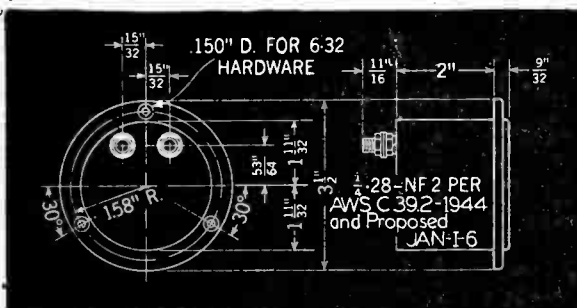


MODEL 34-FX



Above: Models 30-F, 31-F, 33-F, 34-F; Metal Case

Below: Models 30-FX, 31-FX, 33-FX, 34-FX; Molded Case

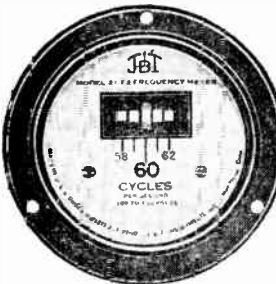




MODEL 33-F

400-cycle. Used for measuring frequency of high-cycle power sources, including new heavy aircraft. Accuracy $\pm 0.3\%$. Nine reed, 380 to 420-cycle range. 100-300 volts; 70 ohms per volt; 1.75 watts power consumption. Flush panel mounting.

33-F, 380-420 cy., $3\frac{1}{4}$ " Metal Case \$31.00
 33-FX, 380-420 cy., $3\frac{1}{2}$ " Molded Case, AWS mtg. \$31.00



MODEL 21-FX

Smallest frequency meter manufactured. Meets ASA (AWS) C39.2-1944 in depth of case as well as in mounting dimensions and mounting hardware. Matches other $2\frac{1}{2}$ " panel instruments. Weighs only $4\frac{1}{2}$ oz. 100-130 volts; 5 reeds; 58-62 cycles; 190 ohms per volt; 0.6 watt power consumption. Also 116 to 124 cy.; 160 ohms per volt; 0.7 watt power consumption. 390 to 410 cy.; 85 ohms per volt; 1.3 watt power consumption. Flush panel mounting.

21-FX, 58-62 cy., 2-11/16" Molded Case \$20.50
 21-FX, 116-124 cy., 2-11/16" Molded Case, AWS mtg. \$23.00
 21-FX, 390-410 cy., 2-11/16" Molded Case \$25.00

PORTABLE FREQUENCY TESTERS



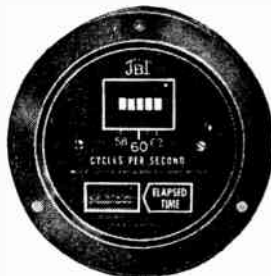
MODEL 33-FP-9. Handy, compact, portable instrument of exceptional accuracy even under poor wave-form conditions, fluctuating voltage or external magnetic disturbances. Meets exacting test requirements of aviation, signal and communication equipment. Treated against fungus and moisture. Housed in sturdy metal case $6'' \times 3\frac{3}{4}'' \times 3\frac{3}{8}''$. Hinged top compartment provided for the 4' leads which are supplied complete with sharp 5" insulated test picks and banana plugs. Electrical characteristics identical with 400 cycle 33-F. Model 34-FP-9 electrical characteristics identical with 60 cycle 34-FX.

33-FP-9, 380-420 cy., \$38.00
 34-FP-9, 58-64 cy., \$31.75

ELAPSED TIME COMBINATION

MODEL 31-FE. A unique panel instrument which combines the elapsed time meter or running time meter with frequency reeds. It is especially useful on motor generator sets and on electrical equipment where maintenance routine calls for periodic servicing. Reads 9,999.9 hours; 58-62 cycles at 100-130 volts.

31-FE \$30.00



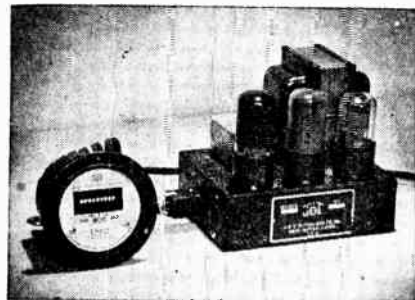
VACUUM TUBE FREQUENCY METERS

(PATENTS PENDING)

PRINCIPLES OF OPERATION: J-B-T Models 33-VTF and 39-VTF Vacuum Tube Frequency Meters are designed to provide the maximum degree of accuracy in measuring frequencies located within definite bands. A special multi-vibrator circuit in the electronic unit divides the incoming frequency by two or three or even higher integers, then permits the use of a vibrating reed frequency meter in measuring the resultant frequency.

WHERE USED: J-B-T Models 33-VTF and 39-VTF are especially useful for checking audio oscillators, frequency converters, radar equipment, and for standardizing less accurate frequency measuring units.

ADVANTAGES: **Extreme Accuracy:** Measurement within $\pm 0.25\%$ for any indicated frequency. **Permanent Accuracy:** Calibrated at factory—no subsequent calibration or standardization required at any time. **Temperature Drift Eliminated:** No initial stabilization period required. **Burn-Out Proof:** No protection needed against accidental frequencies above the range being measured. **Few Controls:** Requires no complicated controls for operation. **Stability of Circuit:** Accuracy of reading is independent of line voltage variation. No voltage regulator, external or internal, is required.



Model 33-VTF with cover removed. Vacuum tube unit attaches to rear of panel, meter is flush.

MODEL 33-VTF, FIELD TYPE

Frequency ranges: 380-420 cycles; 760-840 cycles; 1140-1260 cycles; available singly or in combination. (See Model 33-F for single range 380-420 cycle meters). Voltage range: 100-130 volts. Power to operate

the units is obtained from an inverter or other source of frequency being measured. Power consumption: approximately 20 watts. This model requires no power supply other than the source whose frequency is being checked. Input impedance: approximately 650 ohms. Tubes used: 1—6N7-GT/G multi-vibrator; 1—6V6-GT/G amplifier; 1—6X4-GT/G rectifier. Size $4\frac{5}{8}'' \times 5\frac{1}{2}'' \times 6''$; weight: approximately 6 lb. Black wrinkle finish. Frequency meter is $3\frac{1}{2}''$ standard flush panel mounting. Connecting leads included.

MODEL 33-VTF

Single range 760-840 cy. \$110.00
 Single range 1140-1260 cy. 117.50
 Double range 760-840; 1140-1260 cy. 125.00

MODEL 39-VTF, LABORATORY TYPE

Frequency ranges: Basic range, 380-420 cycles. Multiplier switch permits use in ranges of 2, 3, 4, 6 and 9 times the fundamental range. (400, 800, 1200, 1600, 2400 and 3600 cycle bands). Voltage range: 100-350 volts. Power consumption: Approximately 25 watts at 115 volts, 60 cycles. Input sensitivity: 500,000 ohms. Size: housed in metal cabinet $8'' \times 10'' \times 8''$ with sloping panel.

Model 39-VTF, Series A— \$257.00



Model 39-VTF, Series A, showing portability

Shurite PANEL METERS



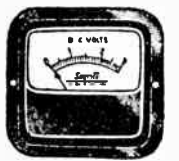
Model 550-AC



Model 550-DC with Zero Adjuster



Model 650-AC



Model 950-DC(or AC)



Model 450

Shurite panel meters are attractive, rugged, dependable instruments with accuracy well within 5%. All models are black enameled brass, all require 2 3/32" hole. DC meters are polarized vane solenoid type, AC meters are double vane repulsion type.

Advantages of this new and complete line:

All-metal dials, age and moisture resistant, lithographed in black on white for high visibility.

Improved design, with new coil frames and attached insulators for greater rigidity, yet interchangeable in other respects with similar type of instrument formerly available.

Improved appearance, with concealed coils, full view scales, and attractive styling and finish.

Guarantee: All Shurite meters are guaranteed to users against defective workmanship and material, and will be repaired or replaced if sent to the factory postpaid with 25¢ handling charge within one year after date of purchase.

Model 550-DC, flush case, narrow ring, round, has long U-bracket.

Model 550-AC, flush case, narrow ring, round, has ring clamp.

Models 650-DC and 650-AC, flush case, wide round flange, have screw holes for mounting, hardware included.

Models 950-DC and 950-AC, flush case, square flange, have screw holes for mounting, hardware included.

IMPORTANT—How To Order:

For all standard models, give: (1) Model Number, (2) Range, (3) Stock Number. If Model number and stock number are not stated, Model 550 will be supplied.

ZERO ADJUSTERS(Z)

Zero Adjusters are available only on Models 550-DC and 650-DC. No zero adjuster on Model 950. When ordering, add Z to stock number. Example: Stock number for Model 550-DC voltmeter, 0-1 volt range—without zero adjuster is 5101. With zero adjuster, it is 5101-Z.

PANEL CALIBRATION(S)

Meters are calibrated for non-magnetic panels. If for magnetic (steel) panel mounting, specify thickness and overall size of panel, and add-S to stock number when ordering, as 5101-S. If thickness of panel is not specified, meter will be supplied for .040 panel.

(Prices shown are net for individually boxed meters)

DC AMMETERS

RANGE	MODEL 550*		MODEL 650*		MODEL 950	
	Stock No.	Net Each	Stock No.	Net Each	Stock No.	Net Each
0-1	5201	\$1.30	6201	\$1.40	9201	\$1.45
0-3	5202	1.30	6202	1.40	9202	1.45
0-5	5203	1.30	6203	1.40	9203	1.45
0-8	5204	1.30	6204	1.40	9204	1.45
0-10	5205	1.30	6205	1.40	9205	1.45
0-15	5206	1.30	6206	1.40	9206	1.45
0-25	5207	1.30	6207	1.70	9207	1.75
0-50	5208	2.00	6208	2.30	9208	2.35
1-0-1	6209	1.30	6209	1.40	9209	1.45
3-0-3	5210	1.30	6210	1.40	9210	1.45
5-0-5	5211	1.30	6211	1.40	9211	1.45
6-0-6	5212	1.30	6212	1.40	9212	1.45
10-0-10	5213	1.30	6213	1.40	9213	1.45
20-0-20	5214	1.40	6214	1.50	9214	1.55
30-0-30	5215	1.80	6215	1.90	9215	1.95
50-0-50	5216	2.00	6216	2.10	9216	2.15

*For zero adjuster, add 30¢ to price and Z to stock number. No zero adjuster on Model 950.

AC AMMETERS

RANGE	MODEL 550		MODEL 650		MODEL 950	
	Stock No.	Net Each	Stock No.	Net Each	Stock No.	Net Each
0-1	5501	\$2.35	6501	\$2.45	9501	\$2.50
0-3	5502	2.35	6502	2.45	9502	2.50
0-5	5503	2.35	6503	2.45	9503	2.50
0-10	5504	2.50	6504	2.60	9504	2.65
0-30	5505	2.50	6505	2.60	9505	2.65
0-60	5506	3.00	6506	3.10	9506	3.15

Prices Valid Only to July 1, 1948. Thereafter Consult Your Distributor.

DC MILLIAMMETERS

RANGE	MODEL 550*		MODEL 650*		MODEL 950	
	Stock No.	Net Each	Stock No.	Net Each	Stock No.	Net Each
0-3	5301	\$2.00	6301	\$2.10	9301	\$2.15
0-5	5302	1.85	6302	1.95	9302	2.00
0-10	5303	1.75	6303	1.85	9303	1.90
0-15	5304	1.30	6304	1.40	9304	1.50
0-25	5305	1.30	6305	1.40	9305	1.45
0-50	5306	1.30	6306	1.40	9306	1.45
0-100	5307	1.30	6307	1.40	9307	1.45
0-150	5308	1.30	6308	1.40	9308	1.45
0-200	5309	1.30	6309	1.40	9309	1.45
0-300	5310	1.30	6310	1.40	9310	1.45
0-400	5311	1.25	6311	1.35	9311	1.40
0-500	5312	1.25	6312	1.35	9312	1.40

*For zero adjusters add 30¢ to price and Z to stock number. No zero adjuster on Model 950.

AC MILLIAMMETERS

RANGE	MODEL 550		MODEL 650		MODEL 950	
	Stock No.	Net Each	Stock No.	Net Each	Stock No.	Net Each
0-25	5601	\$2.35	6601	\$2.45	9601	\$2.50
0-50	5602	2.35	6602	2.45	9602	2.50
0-100	5603	2.35	6603	2.45	9603	2.50
0-250	5604	2.35	6604	2.45	9604	2.50
0-500	5605	2.35	6605	2.45	9605	2.50

DC VOLTMETERS

RANGE	MODEL 550*		MODEL 650*		MODEL 950	
	Stock No.	Net Each	Stock No.	Net Each	Stock No.	Net Each
0-1	5101	\$1.25	6101	\$1.35	9101	\$1.40
0-3	5102	1.30	6102	1.40	9102	1.45
3-0-3	5103	1.30	6103	1.40	9103	1.45
0-5	5104	1.30	6104	1.40	9104	1.45
0-6	5105	1.30	6105	1.40	9105	1.45
0-8	5106	1.30	6106	1.40	9106	1.45
0-10	5107	1.35	6107	1.45	9107	1.50
0-15	5108	1.40	6108	1.50	9108	1.55
0-20	5109	1.40	6109	1.50	9109	1.55
0-25	5109	1.30	6109	1.40	9109	1.45
0-25H**	5110	2.40	6110	2.50	9110	2.55
0-50	5122	1.35	6122	1.45	9122	1.50
0-50H**	5111	2.80	6111	2.90	9111	2.95
0-75	5112	1.40	6112	1.50	9112	1.55
0-100	5113	1.50	6113	1.60	9113	1.65
0-100H**	5114	3.00	6114	3.10	9114	3.15
0-150	5115	1.70	6115	1.80	9115	1.85
0-150H**	5116	3.00	6116	3.10	9116	3.15
0-300H**	5117	3.25	6117	3.35	9117	3.40
0-500H**	5118	3.75	6118	3.85	9118	3.90
0-750H**	5119	4.30	6119	4.40	9119	4.45
0-8-160	5120	2.25	6120	2.35	9120	2.40

*For zero adjuster, add 30¢ to price and Z to stock number. **H denotes high resistance. No zero adjuster on Model 950.

AC VOLTMETERS

RANGE	MODEL 550		MODEL 650		MODEL 950	
	Stock No.	Net Each	Stock No.	Net Each	Stock No.	Net Each
0-4	5401	\$2.35	6401	\$2.45	9401	\$2.50
0-6	5402	2.35	6402	2.45	9402	2.50
0-10	5403	2.35	6403	2.45	9403	2.50
0-15	5404	2.35	6404	2.45	9404	2.50
0-50	5405	3.00	6405	3.10	9405	3.15
0-150	5408	3.50	6408	3.60	9408	3.65
0-300	5407	4.15	6407	4.25	9407	4.30
0-600	5408	4.65	6408	4.75	9408	4.80
0-750	5409	5.15	6409	5.25	9409	5.30

RESISTANCE METERS

RANGE	MODEL 550		MODEL 650		MODEL 950	
	Stock No.	Net Each	Stock No.	Net Each	Stock No.	Net Each
Ohms. Volts	57C*	\$1.80	6701	\$1.90	9701	\$1.95

*Requires 3 flashlight cells for resistance readings but does not require resistor for voltage readings.

FLANGE ADAPTER RING

A sturdy flange ring for use with any Model 550 (round) Shurite meter where a flange mount is preferred. Makes appearance similar to Model 650. Wide flange, 2 3/8" dia. Telephone black finish. Screws, lockwashers and nuts included.

Model 5-A, NET.....\$0.18

POCKET TYPE METERS

As this catalog goes to press, a series of Shurite pocket meters is being put into production. They will be made in ranges suitable for pre-war and post-war dry batteries, portable radio batteries, and many other low-voltage electrical applications, including polarity indication types.

Special attention is being given to test load requirements.

The Model 450 designates the pocket meter case. For example, a 0-3 D.C. ammeter, as illustrated, becomes Stock Number 4202 when in the pocket meter case.

For details, request Bulletin "Shurite Pocket Types".



TYPE NF-2C

EMICO PRECISION INSTRUMENTS

FOR
PANELS AND TEST SETS

Electro Mechanical Instrument Co.
813 Chestnut Street, Perkasie, Pa.



TYPE RF-2C

EMICO panel and test meters are rugged and reliable instruments. Cases are of steel and finished in durable black. DC meters have the new HI-TORQ magnetic movements and are accurate to well within 5%. AC meters are of the moving iron type and are also accurate to within 5%.

MOUNTING—All model NF-2C and RF-2C meters will fit into a 2 1/4" diameter hole and are mounted by means of a U. clamp.

DESIGN—EMICO meters are designed to give satisfactory service under the most severe conditions. They are styled to add to the prestige and appearance of electrical equipment.

CALIBRATION—Since the instruments are calibrated in steel cases, their accuracy is not affected by panels made of magnetic materials of nominal thickness.

GUARANTEED—All EMICO instruments are guaranteed against defective material and workmanship for a period of one year after date of purchase, and will be repaired or replaced if sent to the factory postpaid with a 50c handling charge.

EMICO instruments are available in quantities to jobbers or manufacturers in the following sizes: NF-2", RF-2", RF-2 1/2", and RF-4 1/2" at 3% accuracy. We invite your inquiries on instruments for special application.

PRICES—Prices listed are net and include all hardware and individual boxing.

DEALERS' PRICE LIST

DC AMMETERS

Range	MODEL NF-2C Catalog Number	Dealers' Net Price	MODEL RF-2C Catalog Number	Dealers' Net Price
0-1	2101	\$1.30	2201	\$1.40
0-5	2102	1.30	2202	1.40
0-10	2103	1.30	2203	1.40
0-20	2104	1.30	2204	1.40
0-30	2105	1.30	2205	1.40
1-0-1	2109	1.30	2209	1.40
3-0-3	2110	1.30	2210	1.40
6-0-6	2111	1.30	2211	1.40
10-0-10	2112	1.30	2212	1.40
15-0-15	2113	1.30	2213	1.40
20-0-20	2114	1.30	2214	1.40
30-0-30	2115	1.30	2215	1.40

DC MILLIAMMETERS

0-3	2121	\$1.90	2221	\$2.00
0-5	2125	1.85	2225	1.95
0-10	2126	1.75	2226	1.85
0-20	2127	1.30	2227	1.40
0-30	2128	1.30	2228	1.40
0-50	2129	1.30	2229	1.40
0-100	2130	1.30	2230	1.40
0-150	2130 A	1.30	2230-A	1.40
0-200	2130-B	1.30	2230-B	1.40
0-300	2131	1.30	2231	1.40
0-500	2132	1.30	2232	1.40

DC VOLTMETERS (LOW RESISTANCE)

0-1	2134	\$1.30	2234	\$1.40
0-5	2135	1.30	2235	1.40
0-10	2136	1.30	2236	1.40
0-20	2136-A	1.30	2236-A	1.40
0-30	2136-B	1.30	2236-B	1.40
0-50	2137	1.30	2237	1.40
0-100	2138	1.40	2238	1.50

DC VOLTMETERS (HIGH RESISTANCE)

(10C ohms/volt except 150 and 300 volt ranges are 200 ohms per volt)				
0-10	2140	\$2.00	2240	\$2.10
0-30	2141	2.25	2241	2.35
0-50	2142	2.60	2242	2.70
0-150	2143	2.70	2243	2.80
0-300	2144	2.70	2244	2.80

AC AMMETERS

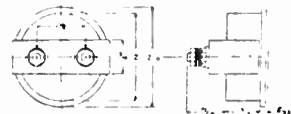
0-1	6101	\$2.25	6201	\$2.35
0-3	6102	2.25	6202	2.35
0-5	6103	2.25	6203	2.35
0-10	6104	2.25	6204	2.35
0-25	6105	2.50	6205	2.60
0-50	6106	2.75	6206	2.85

AC MILLIAMMETERS

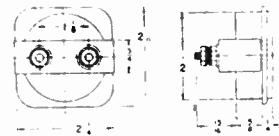
0-25	6125	\$2.25	6225	\$2.35
0-50	6126	2.25	6226	2.35
0-100	6127	2.25	6227	2.35
0-250	6128	2.25	6228	2.35
0-500	6129	2.25	6229	2.35

AC VOLTMETERS

0-5	6135	\$2.25	6235	\$2.35
0-10	6136	2.25	6236	2.35
0-15	6137	2.25	6237	2.35
0-25	6137-A	2.25	6237-A	2.35
0-50	6138	2.25	6238	2.35
0-150	6139	3.30	6239	3.40
0-300	6140	3.90	6240	3.95



TYPE NF-2C



TYPE RF-2C

EMICO HEARING AID BATTERY TESTER

MODEL 103A

Note These Features:

- Unbreakable Metal Case
- Beautifully Finished Case
- Powerful Mechanism
- Color-Fast Metal Dial
- Easily Read Dial
- Reliably Accurate
- Will Not Drain Batteries

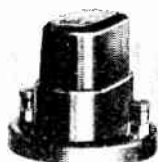
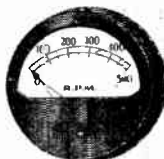


Designed to Test
All Types of
2 Volt "A" Batteries
and 22 1/2, 30 and 45 Volt "B" Batteries

Available also in
0-9 and 0-90 Volt Range —
Specify Model 103B

Write to Factory for Prices

WESTON INSTRUMENTS



THROUGHOUT the radio and electronic industry—as well as all other industries where precise measurements are essential—maintenance men and engineers have long associated WESTON instruments with accuracy and dependability through experience with them. The following list indicates the broad scope of the WESTON line—all units of which are giving long service in a far-reaching variety of installations.

Portable Indicating Instruments. Ammeters, Voltmeters, Wattmeters, Galvanometers, Microammeters, Ohmmeters, Microfarad meters.

Panel Mounting Instruments. Ammeters, Voltmeters, Wattmeters, Galvanometers, Microammeters, Ohmmeters, Microfarad meters.

Instrument Transformers. Potential and Current.

Relays. Sensitive and Power Uses—Current and Voltage Types.

Aircraft Instruments. Tachometers, Temperature Indicators, Radio Compass Indicators, Ammeters, Voltmeters, etc.

Electric Tachometers. A.C. and D.C. Types Remote Indicating.

Standard Cells.

Laboratory Standards. Voltmeters, Ammeters, Wattmeters.

Specialized Testing Equipment. Power Analyzer, Photoelectric Potentiometer, Industrial Analyzer, Clamp Ammeter, Battery Testing Instruments.

Service Equipment. Tubecheckers, Analyzers, Ohmmeters.

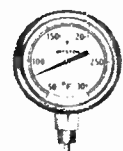
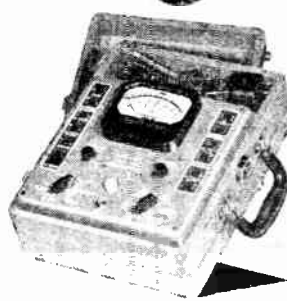
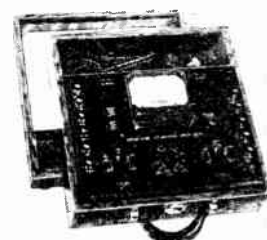
Photoelectric Cells. "Photronic" Cells—Dry Disc Type.

Photoelectric Control Devices. "Photronic" Cell Controls, Illumination Controls, Industrial Controls.

Light Measuring Devices. Illumination Meter, Foot Candle Meters, Sight Meter, Exposure Meters, Densitometers, Light Integrators.

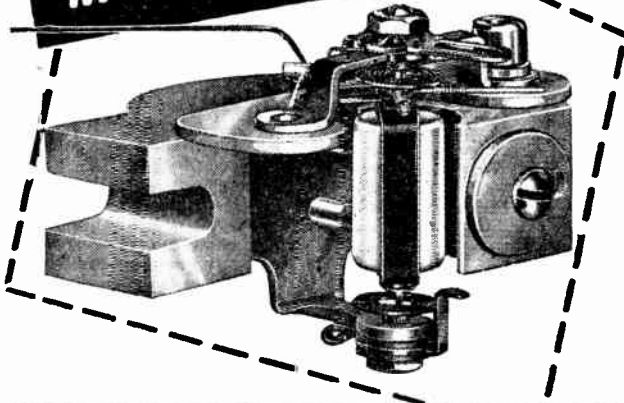
Temperature Indicating Instruments. ELECTRICAL TYPE—Remote Indicating. BIMETALLIC DIAL TYPE—Industrial Temperature Gauges.

Instrument Accessories and Parts. Shunts, Cables, Resistors, Switches, Binding Posts, Leads, Multipliers, Adapters, Radio Plugs, etc.



WESTON ELECTRICAL INSTRUMENT CORPORATION
617 Frelinghuysen Avenue, Newark 5, New Jersey

PRECISION MOVEMENTS



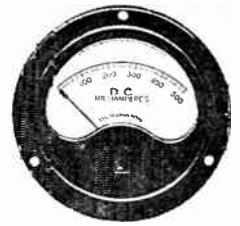
Burlington PANEL INSTRUMENTS

AC and DC types are accurate to within 2% of full scale value at any point on the scale.

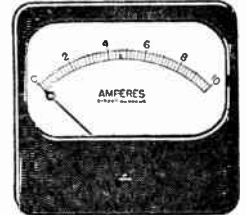
DC instruments combine extremely light weight moving elements and powerful alnico magnets to produce a torque to weight ratio which reduces frictional error to a minimum. This high torque to weight ratio permits use of pivots with ample pivot bearing surface to overcome effects of rough handling, shock, and vibration.

AC instruments are accurate over entire range of commercial power frequencies (25 to 125 cycles). These instruments are of repulsion vane type using carefully aged and impregnated field coils and multipliers which are wound with conductors of ample size so that temperature rise of the windings may be maintained at a minimum, even though instrument is subjected to continuous use in the circuit.

MODELS
Direct Current
421, 431, 441
Alternating Current
422, 432, 442



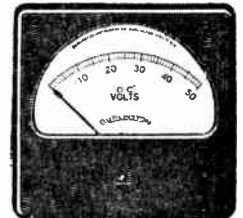
MODELS
Direct Current
731, 741
Alternating Current
732, 742



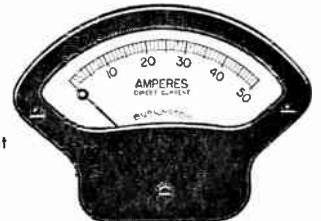
MODELS
Direct Current
141
Alternating Current
142



MODELS
Direct Current
521, 531
Alternating Current
522, 532



MODELS
Direct Current
841
Alternating Current
842



CASE DIMENSIONS

Model No.		Body	Flange	Body Depth	Stud Length		Case
DC	AC				DC	AC	
141	142	.....	4" x 4 3/4"	2"	3/4"	1"	Rectangular front-of-board, Bakelite
421	422	2.156" Diam.	2.590" Diam.	1.4062"	5/8"	25/32"	Round, flush, Bakelite
431	432	2.796" Diam.	3 1/2" Diam.	1 1/2"	3/4"	3/4"	Round, flush, Bakelite
441	442	3.5625" Diam.	4 3/8" Diam.	1.4531"	3/4"	3/4"	Round, flush, Bakelite
521	522	2.156" Diam.	2 3/8" x 2 3/8"	1 3/8"	5/8"	25/32"	Square, flush, Bakelite
531	532	2.796" Diam.	3" x 3"	1 1/2"	3/4"	3/4"	Square, flush, Bakelite
731	732	2 1/4" Diam.	3 1/16" x 3 5/16"	1.0156"	3/4"	5/8"	Rectangular, semi-flush, Bakelite
741	742	2 3/4" Diam.	4" x 4 1/4"	1"	3/4"	3/4"	Rectangular, semi-flush, Bakelite
841	842	2 3/4" Diam.	.....	1.2187"	3/4"	3/4"	Fan-shaped, semi-flush, Bakelite

See following page for prices and specifications.

Burlington

PANEL INSTRUMENTS

D. C. MILLIAMMETERS

Range	Scale Div.	Approx. Res.	MODELS				
			421 521	431 531	731	441 841	141 741
0-1	50	47 ohms	\$6.60	\$7.05	\$7.20	\$7.80	\$7.95
0-5	50	10 ohms	5.70	6.45	6.60	7.20	7.65
0-10	50	5 ohms	5.70	6.45	6.60	7.20	7.65
0-15	30	9.34 ohms	5.70	6.45	6.60	7.20	7.65
0-25	50	5.6 ohms	5.70	6.45	6.60	7.20	7.65
0-50	50	2.8 ohms	5.70	6.45	6.60	7.20	7.65
0-100	50	1.4 ohms	5.70	6.45	6.60	7.20	7.65
0-150	30	.94 ohms	5.70	6.45	6.66	7.20	7.65
0-200	40	.7 ohms	5.70	6.45	6.60	7.20	7.65
0-250	50	.56 ohms	5.70	6.45	6.60	7.20	7.65
0-300	30	.466 ohms	5.70	6.45	6.60	7.20	7.65
0-500	50	.28 ohms	5.70	6.45	6.60	7.20	7.65
0-750	75	.186 ohms	5.70	6.45	6.60	7.20	7.65
0-1000	50	.140 ohms	5.70	6.45	6.60	7.20	7.65

D. C. AMMETERS

Range	Scale Div.	Terminal Voltage Drop	MODELS				
			421 521	431 531	731	441 841	141 741
0-1	50	50MV	\$5.85	\$6.60	\$6.75	\$7.35	\$7.80
0-3	30	50MV	5.85	6.60	6.75	7.35	7.80
0-5	50	50MV	5.85	6.60	6.75	7.35	7.80
0-10	50	50MV	5.85	6.60	6.75	7.35	7.80
0-15	30	50MV	5.85	6.60	6.75	7.35	7.80
0-25	50	50MV	5.85	6.60	6.75	7.35	7.80
0-30	30	50MV	5.85	6.60	6.75	7.35	7.80
0-50	50	50MV	5.85	6.60	6.75	7.35	7.80
0-60	30	50MV	5.85	6.60	6.75	7.35	7.80
*0-75	75	50MV	5.85	6.60	6.75	7.35	7.80
*0-100	50	50MV	5.85	6.60	6.75	7.35	7.80
*0-150	30	50MV	5.85	6.60	6.75	7.35	7.80
*0-200	40	50MV	5.85	6.60	6.75	7.35	7.80
*0-300	30	50MV	5.85	6.60	6.75	7.35	7.80
*0-400	40	50MV	5.85	6.60	6.75	7.35	7.80
*0-500	50	50MV	5.85	6.60	6.75	7.35	7.80
*0-600	30	50MV	5.85	6.60	6.75	7.35	7.80
*0-1000	50	50MV	5.85	6.60	6.75	7.35	7.80

* Ranges above 60 amperes are supplied as 50MV movements to be used with external 50MV shunts.

D. C. MICROAMMETERS

Range	Scale Div.	Approx. Res.	MODELS				
			421 521	431 531	731	441 841	141 741
0-50	50	1150 ohms	\$14.55	\$15.00	\$15.15	\$15.45	\$15.90
0-100	50	1150 ohms	12.00	12.45	12.60	12.90	13.35
0-200	40	330 ohms	9.75	10.20	10.35	10.65	11.10
0-500	50	225 ohms	7.95	8.85	9.00	9.75	10.65

D. C. VOLTMETERS—200 Ohms Per Volt

Range	Scale Div.	MODELS				
		421 521	431 531	731	441 841	141 741
0-3	30	\$5.85	\$6.60	\$6.75	\$7.35	\$7.80
0-5	50	5.85	6.60	6.75	7.35	7.80
0-10	50	5.85	6.60	6.75	7.35	7.80
0-15	30	5.85	6.60	6.75	7.35	7.80
0-25	50	5.85	6.60	6.75	7.35	7.80
0-50	50	5.85	6.60	6.75	7.35	7.80
0-100	50	5.85	6.60	6.75	7.35	7.80
0-150	30	7.35	7.80	7.95	8.25	8.55
0-300	30	8.55	9.00	9.00	9.00	9.30

D. C. VOLTMETERS—1000 Ohms Per Volt

Range	Scale Div.	MODELS				
		421 521	431 531	731	441 841	141 741
0-50	50	\$7.95	\$ 8.25	\$ 8.40	\$ 8.55	\$ 8.85
0-100	50	8.25	8.55	8.70	8.85	9.15
0-150	30	8.55	8.85	9.00	9.15	9.45
0-300	30	8.85	9.15	9.30	9.45	9.75
0-500	50	9.75	10.35	10.50	10.95	11.55
0-1000	50	.....	14.10	.....	14.70	15.30

Voltmeter ranges above those shown can be supplied as either 200 or 1000 ohm per volt instruments for use with external resistors. Prices on application.

A. C. MILLIAMMETERS

Range	Scale Div.	Approx. Res.	MODELS				
			422 522	432 532	732	442 842	142 742
0-10	50	2020 ohms	\$5.70	\$6.30	\$6.45	\$7.20	\$7.50
0-15	30	1120 ohms	5.70	6.30	6.45	7.20	7.50
0-25	50	376 ohms	5.70	6.30	6.45	7.20	7.50
0-50	50	83 ohms	5.70	6.30	6.45	7.20	7.50
0-100	50	20 ohms	5.70	6.30	6.45	7.20	7.50
0-250	50	4 ohms	5.70	6.30	6.45	7.20	7.50
0-500	50	.8 ohms	5.70	6.30	6.45	7.20	7.50

A. C. AMMETERS

Range	Scale Div.	Approx. Res.	MODELS				
			422 522	432 532	732	442 842	142 742
0-1.5	30	.072 ohms	\$5.70	\$6.30	\$6.45	\$7.20	\$7.50
0-5	50	.0108 ohms	5.70	6.30	6.45	7.20	7.50
0-10	50	.0038 ohms	5.70	6.30	6.45	7.20	7.50
0-15	30	.0018 ohms	5.70	6.30	6.45	7.20	7.50
0-25	50	.0008 ohms	5.70	6.30	6.45	7.20	7.50
0-30	50	.00079 ohms	5.70	6.30	6.45	7.20	7.50
0-50	50	.00048 ohms	5.70	6.30	6.45	7.20	7.50
*0-75	75	.00035 ohms	5.70	7.95	6.45	9.30	9.60
*0-100	50	.....	5.70	6.30	6.45	7.20	7.50
*0-150	30	.....	5.70	6.30	6.45	7.20	7.50
*0-200	40	.....	5.70	6.30	6.45	7.20	7.50
*0-250	50	.....	5.70	6.30	6.45	7.20	7.50
*0-300	30	.....	5.70	6.30	6.45	7.20	7.50
*0-400	40	.....	5.70	6.30	6.45	7.20	7.50

* Models 422, 522, 732 ranges above 50 AMPS are supplied as 5 AMP movements for use with current transformers.

** Models 432, 532, 442, 842, 142, 742 ranges above 75 AMPS are supplied as 5 AMP movements for use with current transformers

A. C. VOLTMETERS

Range	Scale Div.	Ohms per Volt	MODELS				
			422 522	432 532	732	442 842	142 742
0-1.5	30	3.3	\$6.30	\$6.75	\$6.90	\$7.20	\$7.65
0-3	30	10	6.30	6.75	6.90	7.20	7.65
0-5	50	10	6.30	6.75	6.90	7.20	7.65
0-10	50	13	6.30	6.75	6.90	7.20	7.65
0-15	30	13	6.30	6.75	6.90	7.20	7.65
0-25	50	26	6.30	6.75	6.90	7.20	7.65
0-50	50	50	6.30	6.75	6.90	7.20	7.65
0-100	50	110	6.30	6.75	6.90	7.20	7.65
0-150	30	110	7.35	7.80	7.95	8.10	8.40
0-300	30	165	7.95	8.55	8.70	8.70	9.00
0-500	50	165	.....	8.85	.....	10.20	10.50

Ranges above 300 VOLTS in Models 422, 522, 732, and above 500 VOLTS in Models 432, 532, 442, 842, 142, 742 require external resistors or potential transformers. Prices on application.

BURLINGTON INSTRUMENT COMPANY

THE NAME MARION MEANS
THE MOST IN METERS



MARION ELECTRICAL INSTRUMENT COMPANY

Manchester, New Hampshire

EXPORT DIVISION 458 BROADWAY NEW YORK 13, U. S. A. CABLES MORANEX

IN CANADA: THE ASTRAL ELECTRIC COMPANY, SCARBORO BLUFFS, ONTARIO

MARION TRULY HERMETICALLY SEALED 2 1/2" AND 3 1/2" ELECTRICAL INDICATING INSTRUMENTS... 100% GUARANTEED!

Sealed like a vacuum tube

Marion Glass-To-Metal Truly Hermetically Sealed Electrical Indicating Instruments are guaranteed for six months. You get top performance . . . critical accuracy . . . at a price no higher than that of most competitive unsealed instruments.

Additional economy is offered in Marion's special replacement offer. After the initial six-month guarantee expires, any 2 1/2" and 3 1/2" type, ranging from 200 microamperes upward, will be replaced, regardless of whether the instrument has been overloaded, burned out, or mistreated . . . provided the seal has not been broken, for a flat fee of \$1.50. Instruments with sensitivity greater than 200 microamperes will be replaced for \$2.50.



SPECIFICATIONS

Model HM2 — 2 1/2" Model HM3 — 3 1/2"

- There are no rubber gaskets, and no cement seals.
- Can withstand all extremes of temperature and humidity, required by any service, or test specification, without deterioration to the seals, or harm to the efficiency of the moving system.
- Windows are of double thickness tempered glass processed for solder sealing, and are highly resistant to shock.
- Instruments are completely dehydrated and are filled with dry air at sea level pressure.
- A newly designed crowned crystal permits greater scale length, reduces shadows, and makes for better visibility.
- Magnetic shielding permits interchangeability on any type of panel without affecting calibration; can be supplied silver plated for extra R.F. shielding.
- Silver clad beryllium copper hair springs reduce zero shift at all temperatures.
- Standard Kovar glass bead type terminals with solder lugs.

MARION "4 FOR 1" FEATURE

Interchangeable Round and Square Colored Flanges . . . one instrument can thus fill four different needs:

1. ROUND



2. ROUND FOR STEEL PANEL



3. RECTANGULAR



4. RECTANGULAR FOR STEEL PANEL



- Instruments manufactured in accordance with AWS Spec. C.39.2 1944 and JAN 1-6 plus hermetic sealing.
- They are positively interchangeable—Type HM2 with AWS Types MR24 and 25; Type HM3 with AWS Types MR 34 and 35.

RANGES DC INSTRUMENTS

DC MICROAMPERES

0-30
0-50
0-100
0-200
0-500
0-800

DC MILLIAMPERES

0-1 0-50
0-1.5 0-100
0-3 0-200
0-5 0-250
0-10 0-500
0-15 0-800
0-25

DC MILLIVOLTS

0-15
0-25
0-50
0-100

DC VOLTS

0-1.5 0-25
0-3 0-10
0-5 0-150
0-10 0-250
0-15 0-500

AC INSTRUMENTS

0-5 Volts AC
0-15 Volts AC
0-50 Volts AC

0-150 Volts AC
0-250 Volts AC
0-500 Volts AC

THE NAME MARION MEANS
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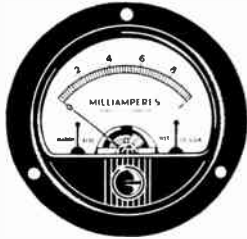


MARION ELECTRICAL INSTRUMENT COMPANY

Manchester, New Hampshire

EXPORT DIVISION 458 BROADWAY NEW YORK 13 U. S. A. CABLES MORHANEX

IN CANADA: THE ASTRAL ELECTRIC COMPANY, SCARBORO BLUFFS, ONTARIO



Model 52N

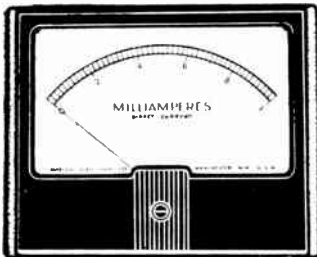
Models 52N and 52S are standard 2 1/2" class instruments, the 52N meeting JAN 1-6 physical dimensions for MR 25 round series and the 52S meeting commercial standards for the 2 1/2" rectangular types. These instruments have gained popularity in portable radio equipment, pocket test equipment and general electrical service where space is at a premium.



Model 52S



Model 53RN



Model 57S

Model 57S is an 8 1/2" x 7" instrument with a large open face and an extra long scale. It is constructed with enlarged pole shoes, and with a higher torque movement than other Marion types in order to give maximum performance in an instrument of its size. This instrument is supplied with a very high damping factor and is not just an overgrown 3" meter. Overall accuracy of 1%, and can be supplied with mirror scales. The 57S finds wide application in large vacuum tube voltmeters, in multimeters, and as an easily read production instrument in many of the measuring and testing operations that are performed in any electrical or electronic manufacturing plant. It is commonly used, too, as a production ohm-meter, limit bridge indicator, and in such varied applications as vibration amplitude measurements and automotive tire balancing.

MARION ILLUMINATED DIALS . . . EASILY SEEN! QUICKLY READ!

Marion's new design of instrument-dial illumination insures brilliance without glare. The technique employs a transparent lucite cavity and an especially developed alnico magnet with a reflector shaped front face that concentrates the rays on the warp-free, permanent translucent dial.

This dial illumination feature is available on all, except Marion Glass-To-Metal Truly Hermetically Sealed Meters.

MARION STANDARD INSTRUMENTS

The most important ingredient of Marion design, engineering and construction is simplicity. Our instruments, in special and unusual types as well as conventional models, employ a minimum of parts, each selected for quality and durability. Combined with simplicity of design and engineering, this makes for better performance, under severe conditions, over longer periods of time. Whether your requirements demand custom-built or standard instruments, you can depend upon the functional simplicity of Marion designs to provide the most in service and value.



MARION MULTI-RANGE METERTESTER

With self-contained power supply and control equipment for operation on 110 volts, AC, 60 cycles . . . for production testing, and calibration of DC instruments.

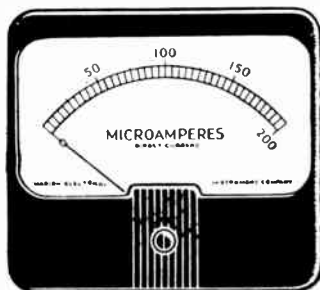
The MARION METERTESTER is designed with many operational features which will definitely improve the production rates of any meter inspection department. Moreover, its accuracy is such that it may be used for checking purposes in any department and all laboratories employing instruments. It may also be used as a precise source of DC current and voltage. Overall accuracy is better than 1/2 of 1%. Basic sensitivity of the Mirror Scale Standard Instrument is 10 milliamperes. The complete unit is housed in a hand-rubbed, solid walnut carrying case.

For use in any department and all laboratories where instruments are employed and their performance must be carefully checked.

With self-contained power supply and control equipment for operation on 110 volts, AC, 60 cycles . . . for production testing and calibration of DC instruments. No additional accessories are required. Merely connect the two clips to the instrument under test, and proceed to analyze its accuracy and general performance.

INCLUDES . . .

- Regulated Power Supply.
- Stepless Vacuum Tube Voltage Control.
- Large 8 1/2" Mirror Scale Standard Instrument, Hand Calibrated.
- Decade of .1% Accurate Manganin Wire Wound Resistors.



Model 55

Model 55 is a popular test equipment item, having a large case—4 1/2" x 4 1/2"—and long 100% scale. It is well suited for use in vacuum tube voltmeters, bridges and volt-ohm-milliameters. The internal construction is identical with that of the 53RN. Can be supplied with mirror scales for special applications.

Ranges of MeterTester

0-25 UA	0-800 UA
0-50 UA	0-1 MA
0-100 UA	0-5 MA
0-200 UA	0-10 MA
0-400 UA	0-100 Volts
0-500 UA	



MARION ELECTRICAL INSTRUMENT COMPANY

Manchester, New Hampshire

THE NAME MARION MEANS
THE MOST IN METERS

EXPORT DIVISION 458 BROADWAY NEW YORK 13, U. S. A. CABLES: MORMANEX

IN CANADA: THE ASTRAL ELECTRIC COMPANY, SCARBORO BLUFFS, ONTARIO

A SPECIAL SERVICE FOR YOUR INDUSTRIAL CUSTOMERS

Marion has opened a Short Run Shop for the production of "special" instruments to meet your specifications . . . precision-built units that you can buy in *sample* lots.

You'll appreciate the savings in time, money and materials that this modern, completely equipped Short Run Shop can achieve for you. The high degree of functional simplicity and critical accuracy Marion "Special" offer, improve product performance . . . make it unnecessary for users to develop their own makeshift instruments with Special characteristics.

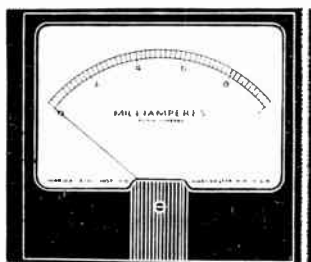
Your Marion specials will give the utmost in satisfaction, service and value . . . the same high standard of performance that has identified the regular line of Marion instruments for years.

Send us your specifications, we will send you a quotation.

RANGES—For The Twelve Models Illustrated Here

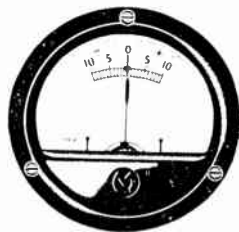
DC MICROAMPERES	DC MILLIAMPERES	DC AMPERES	DC MILLIVOLTS	DC VOLTS	AC VOLTS
0-20	0-1	0-250	0-1	0-15	0-1.5
0-30	0-1.5	0-250	0-1.5	0-25	0-3
0-50	0-3	0-800	0-3	0-50	0-5
0-100	0-5	0-5	0-100	0-10	0-150
0-200	0-10	0-10	0-10	0-15	0-250
0-500	0-15	0-15	0-15	0-25	0-500
0-800	0-25	0-25	0-25	0-50	
	0-50	Self-		0-150	
	0-100	contained		0-250	
	0-200	Shunts		0-500	

AVAILABLE IN ZERO CENTER AND OTHER RANGES ON SPECIAL ORDER



Model 56—6 1/2"

Model 56 is a 6 1/2" x 5 1/4" bakelite cased instrument of entirely new design with heavy cross sections to stand the most rugged use. It fills the need for an instrument between Models 55 and 57S which are 5 and 8 inch meters. It has a 100°, 5 1/2 inch arc and a large open face readily adaptable to multi arc dials. Supplied with large Alnico II magnets in milliammeter ranges and Alnico V in the more sensitive microammeter ranges. Employs a Marion Bulldozer bracket which assures rugged construction and long, dependable service. Ideal for equipment which needs a large dial easily read from a distance or with plenty of space for a multi-range scale.



NULL INDICATORS

Marion Null Indicators are extremely sensitive shaded pole piece D'Arsonval type galvanometers. They are used primarily as bridge and potentiometer balance indicators and in any application where an instrument with very high sensitivity about the zero or balance point is desired. We particularly recommend Types HM2 and HM3 because they are hermetically sealed instruments which completely shield the galvanometers from the effects of moisture and dirt, and external factors. Ideal for use in discriminator alignment of FM receivers and as general laboratory balance indicators.



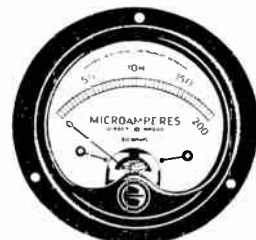
Model 53SN

Models 53RN and 53SN are standard 3/4" class instruments, the 53RN meeting JAN I-6 physical dimensions for MR 35 round series and the 53SN meeting commercial standards for the 3 1/2" rectangular types. Applications include radio and electrical test equipment, radio, radar, telegraph and telephone switchboards and general laboratory usage.



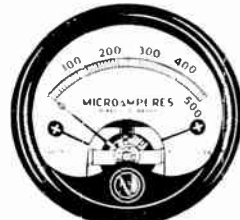
Model MC1—4"

Model MC1 features the rugged Alnico construction of the Types 53RN, 54S, 54S, etc., plus the magnetic shielding which a steel case affords. Has a much longer scale than the standard 3 1/2" type. Normal accuracy is 1%, may be ordered to an accuracy of 1/2%, with hand-marked mirror scales. Every type MC1 includes a shatterproof glass window. Applications include finer type of test equipment, switchboards and marine use where great precision and extreme ruggedness are required. Available at prices that are unusually economical for an instrument of this quality.



Model 53R

Model 53R features the sintered soft iron pole shoes, heavy Alnico magnet, and excellent overall accuracy. An enlarged face opening permits inclusion of more information on the scale when used for special applications. Applications include radio and electrical test equipment, radio, radar, telegraph and telephone switchboards, and general laboratory assignments.



Model 52RM

Model 52RM is a narrow flange, brass cased instrument. (The brass case offers R. F. shielding for many applications.) It contains the same rugged Alnico movement and the same scale length that are common to the 52S and the 52N.

THE NAME MARION MEANS
THE MOST IN METERS



MARION ELECTRICAL INSTRUMENT COMPANY

Manchester, New Hampshire

EXPORT DIVISION 458 BROADWAY NEW YORK 13, U. S. A. CABLES MORHANEX

IN CANADA: THE ASTRAL ELECTRIC COMPANY, SCARBORO BLUFFS, ONTARIO

BUILD YOUR OWN TEST

EQUIPMENT

with the
**MARION
MULTI-RANGER
METER**

- ACCURATE!
- DURABLE!
- DEPENDABLE!
- A GREAT VARIETY OF SIZES!

When it comes to TEST EQUIPMENT build your own with Marion Multi-Ranger Meters. They will solve your problem of finding reasonably priced instruments with the critical accuracy you demand for test equipment or other auxiliary equipment with multiple functions.

These Multi-Ranger Meters permit you to assemble a highly accurate instrument for use as a voltmeter, milliammeter, high and low resistance ohmmeter, AC voltmeter and decibel meter. — Build As Many Ranges As You Desire.

All instruments use Alnico Magnets, have full 100° three-color scales, feature the new, tough Marion "Bulldozer" moving system that insures long life under severe operating conditions plus the highest degree of accuracy.

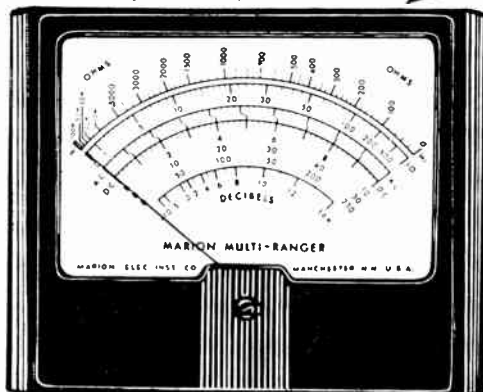
**MARION RESISTOR KIT
NEW! LOW-PRICED! VERSATILE!**

Contains: 18 Resistors Ranging from .4 Ohms to 750,000 Ohms. A Schematic Diagram for Constructing Your Own Test Equipment.

It's easy to construct accurate, useful, versatile test equipment with the Marion Resistor Kit, used in conjunction with Marion Multi-Ranger Instruments. List \$12.50

ASK YOUR DEALER . . . OR WRITE DIRECT

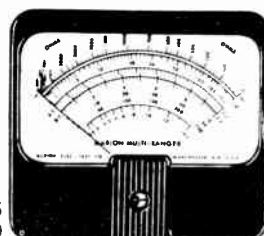
Model 575 List \$20.00



Model 535N
List \$12.00



Model 55
List \$15.00



**SCALE RANGES POSSIBLE
WITH STANDARD RESISTOR KIT**

VOLTS AC-DC

0-10 Volts 0-250 Volts
0-50 Volts 0-1000 Volts

MILLIAMPERES

0-1 MA 0-50 MA
0-10 MA 0-500 MA

OHMS

0-500 Ohms 0-1 MEG
0-100 M 0-10 MEG

DECIBELS

-10 — +14 decibels
+ 4 — +28 decibels
+18 — +42 decibels
+30 — +54 decibels

ALSO AVAILABLE
WITH VTVM SCALES

THE NAME "MARION" MEANS THE "MOST" IN METERS

Export Division
458 Broadway
New York 13, U. S. A.
Cables MORHANEX

In Canada:
The Astral Electric Company
Scarboro Bluffs, Ontario



**MARION ELECTRICAL
INSTRUMENT COMPANY**
Manchester, New Hampshire

STERLING PANEL METERS

AMMETERS, VOLTMETERS, MILLIAMMETERS

FOR USE ON DIRECT AND ALTERNATING CURRENT

A COMPLETE MODERN LINE

These improved STERLING Panel Meters while retaining the accuracy, beauty and ruggedness which have always characterized STERLING instruments, show a modern trend in the gracefully unique arrangement of the broader and more clearly defined scales. The meters for alternating current and direct current are perfectly matched and therefore suitable for mounting on the same panel. Both the A.C. and D.C. meters are of the permanent magnet, iron vane, solenoid type. This affords positiveness of action and breadth of movement suggestive of those of the D'Arsonval type. The large needle-tipped pointers and wide clearly marked scale divisions of these panel meters make them easily read.

STERLING Panel Meters may be had in any of the types illustrated.

SPECIAL COMBINATION A.C.-D.C. METERS WITH HAIR-SPRING REPULSION TYPE MOVEMENT FITTING SAME CASES, ARE ALSO AVAILABLE.

Standard package, 100 meters, Shipping weight 30 lbs.

ALL STERLING Panel Meters are guaranteed accurate within 5%.

Alternating Current Meters

A. C. VOLTMETERS

Number	Range	List Price
870	0-4 Volts	\$3.00
871	0-6 Volts	3.00
872	0-10 Volts	3.00
873	0-15 Volts	3.00
874	0-150 Volts High Res.	4.75
875	0-300 Volts	5.75
876	0-600 Volts	6.60
877	0-750 Volts	8.50
878	0-10-140 Volts	4.75
879	0-50 Volts	3.60
910	0-30 Volts	3.00
911	0-75 Volts	3.60
912	0-250 Volts	5.25
913	0-500 Volts	6.60

A. C. MILLIAMMETERS

880	0-25 Milliampers	\$3.00
881	0-50 Milliampers	3.00
882	0-100 Milliampers	3.00
883	0-250 Milliampers	3.00
884	0-500 Milliampers	3.00
914	0-300 Milliampers	3.00

A. C. AMMETERS

886	0-1 Amperes	\$3.00
887	0-3 Amperes	3.00
888	0-5 Amperes	3.00
889	0-10 Amperes	3.00
890	0-20 Amperes	3.30
891	0-50 Amperes	3.60
892	0-30 Amperes	3.30
893	0-60 Amperes	3.75
894	0-75 Amperes	3.75
895	0-100 Amperes	3.75
915	0-2 Amperes	3.00
916	0-7½ Amperes	3.00
917	0-15 Amperes	3.30
918	0-25 Amperes	3.30
919	0-125 Amperes	3.30

*Special—Price on Application

RESISTANCE METERS

Direct Reading

901	4.5 Volts, 10,000 Ohms	\$3.00
	3 Flashlight cells required.	
902	2 M. A., 9 Volts, 100,000 Ohms	4.40
	6 Flashlight cells required.	

Direct Current Meters

D. C. VOLTMETERS

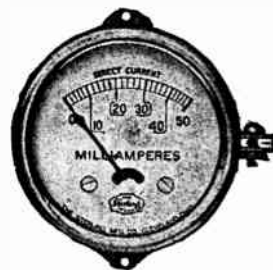
Number	Range	List Price
801	0-1 Volts	\$1.65
802	0-3 Volts	1.65
803	3-0-3 Volts	1.65
804	0-5 Volts	1.65
805	0-6 Volts	1.65
806	0-8 Volts	1.65
807	0-10 Volts	1.65
808	0-15 Volts	1.65
809	0-25 Volts	1.65
810	0-25 Volts High Res.	3.00
811	0-50 Volts	1.65
812	0-50 Volts High Res.	3.60
823	0-75 Volts	1.75
813	0-100 Volts	1.85
814	0-100 Volts High Res.	3.60
815	0-150 Volts	2.25
816	0-150 Volts High Res.	3.50
817	0-300 Volts	3.50
818	0-500 Volts	5.00
819	0-750 Volts	6.00
820	0-8-160 Volts	3.00

D. C. MILLIAMMETERS

835	0-2 Milliampers	\$4.00
836	0-5 Milliampers	2.50
837	0-10 Milliampers	2.20
838	0-15 Milliampers	1.65
839	0-25 Milliampers	1.65
840	0-50 Milliampers	1.65
841	0-100 Milliampers	1.65
842	0-150 Milliampers	1.65
843	0-200 Milliampers	1.65
844	0-300 Milliampers	1.65
845	0-400 Milliampers	1.65
846	0-20-100 Milliampers	2.50
847	0-15-150 Milliampers	2.50
848	0-500 Milliampers	1.65

D. C. AMMETERS

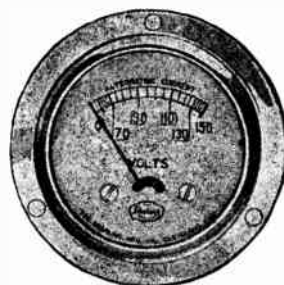
855	0-1 Amperes	\$1.65
856	0-3 Amperes	1.65
857	0-5 Amperes	1.65
858	0-10 Amperes	1.65
859	1-0-1 Amperes	1.65
860	3-0-3 Amperes	1.65
861	6-0-6 Amperes	1.65
862	10-0-10 Amperes	1.65
863	20-0-20 Amperes	1.65
864	0-15 Amperes	1.75
865	0-30 Amperes	2.20
866	0-50 Amperes	2.75
867	30-0-30 Amperes	2.20
868	0-20 Amperes	1.85
869	0-40 Amperes	2.75



TYPE 80

Flush case, narrow flange, standard finish black enamel. Circular adjustable back clamp for mounting.

Diameter flange 2 3/8"
Diam. case 2". Depth case 1 1/4".
Requires hole 2 3/8" in Diameter
Length terminals 1 1/4"



TYPE 70

Flush case, wide flange, standard finish black enamel. Screw holes in flange for mounting.

Diameter flange 2 5/8"
Diam. case 2". Depth case 7/8"
Requires hole 2 3/8" in Diameter



TYPE 68

Flush case, square flange, standard finish black enamel. Screw holes in flange for mounting. Width flange 2 5/8".

Dia. case 2 3/8". Depth case 3/8".

Type 68 square flange case furnished for any range of meter at an additional list price of 40 cents each.

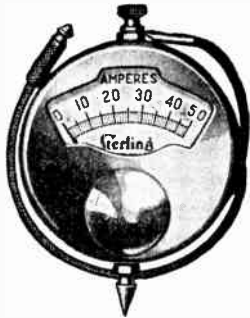
Sterling

STERLING POCKET METERS

STANDARD LINE

Direct Current Pocket Ammeters, Voltmeters and Voltammeters for all Purposes

STERLING Pocket Meters are useful in all kinds of battery testing, in railroad signal work, and in telephone and low-voltage electrical work generally. They are polarity indicators.



No. 24A Ammeter



No. 45 Voltammeter

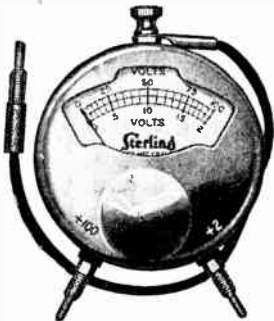
- No. 24 Ammeter, for testing No. 6 dry cells. 0-35 ampere scale, 1 ampere divisions. List Price\$1.85
- No. 24A Ammeter for testing dry cells including the heavy-duty Ignition type of cell. 0-50 ampere scale, 1 ampere divisions. List Price, \$2.10

- No. 23 Ammeter, for photo-flash dry batteries. 0-20 amp. scale, 1/2 amp. div. List Price, \$2.25
- No. 33 Voltmeter for ordinary single cells and "Flashlight" cells, 0-3 v. scale, 1/10 v. div. List Pr., \$2.10
- No. 34 Voltmeter for "Hot Shot" and Radio batteries. 0-10 volt scale, 1/5 volt div. List Price, \$2.10
- No. 34A Voltmeter for 12 volt batteries. 0-16 volt scale, 1/2 volt divisions. List Price, \$2.30
- No. 34B Voltmeter for ordinary 22½ v. radio "B" batteries. 0-30 v. scale, 1 v. divisions. List Price, \$2.30
- No. 34C Voltmeter for testing ordinary 45 v. radio "B" batteries. 0-50 v. scale, 1 v. div. List Price, \$2.60
- No. 44 Voltammeter for "Hot Shot" and Radio batteries and No. 6 dry cells, 0-35 ampere scale, 1 ampere divisions; 0-10 volt scale, 1/5 volt divisions List Price, \$2.50
- No. 44A Voltammeter for 12 volt batteries and No. 6 dry cells. 0-35 ampere scale, 1 ampere divisions; 0-16 volt scale, 1/2 volt divisions. List Price, \$2.75
- No. 45 Voltammeter for testing No. 6 dry cells and ordinary 45 volt radio "B" batteries. 0-35 ampere scale, 1 ampere divisions; 0-50 volt scale, 1 volt divisions. List Price, \$3.60
- No. 45A Voltammeter for testing dry cells including the heavy-duty Ignition type and ordinary 45 v. radio "B" batteries. 0-50 amp. scale, 1 amp. div.; 0-50 v. scale, 1 v. div. List Price, \$3.85
- Meters 2¼" in diameter and 5/8" thick. Nickel finish. Standard package, ten instruments, ship. wt. 4 lbs.

STERLING SPECIAL-PURPOSE POCKET METERS—NEW SERIES

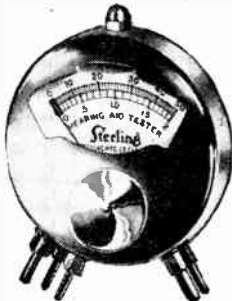
Testers for Portable Radio Batteries

The special "A" and "B" dry batteries built for the operation of Portable Radio sets cannot be satisfactorily tested with ordinary battery testers. The new STERLING double voltmeters are designed for testing with correct loads the special "A" and "B" dry batteries used on Portable Radio sets. The new STERLING flexible plugs of these meters fit easily into the small closely spaced socket holes.



No. 38A Voltmeter

- No. 37A Voltmeter for 45 v. "B" batteries and 1.5 v. "A" batteries. Scale 0-50 v., 1 v. div. Scale 0-2 v., 1/10 v. div. Tests 45 v. "B" and 1½ v. "A" batteries List Price, \$3.00
- No. 38A Voltmeter for 90 v. "B" batteries and 1.5 v. "A" batteries. Scale 0-100 v., 5 v. div. Scale 0-2 v., 1/10 v. div. Tests 45 v. and 90 v. "B" batteries and 1½ v. "A" batteries. List Price, \$3.25
- No. 39A Voltmeter for 90 v. and 135 v. "B" batteries and 1.5 v. "A" batteries. Scale 0-150 v., 5 v. div. Scale 0-2 v., 1/10 v. div. Tests 90 v. and 135 v. "B" batteries and 1½ v. "A" batteries. List Price, \$3.25
- No. 40A Voltmeter for 90 v. and 135 v. "B" batteries and 4.5 v., 6 v. and 7.5 v. "A" batteries. Scale 0-150 v., 5 v. div. Scale 0-10 v., 1/5 v. div. Tests 90 v. and 135 v. "B" batteries and 4½ v., 6 v. and 7½ v. "A" batteries List Price, \$3.50
- No. 42A Graphic General Tester. Red and Green color chart for all standard batteries including 45 v. and 90 v. "B" batteries and 1.5 v., 4.5 v., and 7.5 v. "A" batteries. 0-100 v. scale for special sizes of "B" batteries, 5 v. div. Tests all Portable Radio batteries. List Price, \$6.00



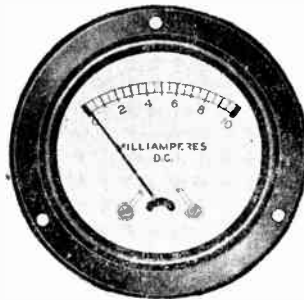
No. 531 Plug-In Safety Type Double Voltmeter

Testers for Hearing Aid Batteries

- No. 31A Double voltmeter for special 30 or 45 v. "B" batteries and 1½ v. "A" batteries, scale 0-50 v., 1 v. div., scale 0-2 v., 1/10 v. divisions. Carefully engineered to impose the correct loads on the small delicate batteries used to operate vacuum tube hearing aids. Equipped with new STERLING flexible plugs List Price, \$3.50
- No. 531 Plug-in—Safety type double voltmeter for testing hearing aid batteries. This new tester has the same capacity and scales as the No. 31A. No cord is necessary because the rigid plug-in type terminals are designed to fit hearing aid batteries having accessible keyed sockets. This arrangement makes it impossible to overload the No. 531 instrument or reverse the polarity while it is being used for testing hearing aid batteries List Price, \$3.50
- No. 35A Voltmeter for batteries used on carbon type hearing aids, also "C" batteries, scale 0-5 v., 1/10 v. divisions List Price, \$2.25
- Meters 2¼" in diameter and 5/8" thick. Nickel finish. Standard package, ten instruments, ship. wt. 4 lbs.

STERLING PANEL METERS

TYPE 50 METERS



TYPE 50

THE Type 50 meters were designed for use on installations where a somewhat larger instrument in the small-panel-meter class is required. **Furnished in all of the Sterling standard scales**, they are housed in Bakelite cases and may be had for measuring either alternating or direct current. The A.C. movements are of the hair-spring repulsion type and the D.C. movements of the permanent magnet iron vane type.

DIMENSIONS OF THE TYPE 50 METER

Diameter of Flange.....	3 $\frac{1}{4}$ Inches
Diameter of Case.....	2 $\frac{5}{8}$ Inches
Depth of Case.....	1-13/32 Inches

Metal Dial—Bakelite Case

The Sterling Type 50 Meters are guaranteed accurate within 5%.

THE STERLING MANUFACTURING COMPANY

BRADSHAW TEST EQUIPMENT

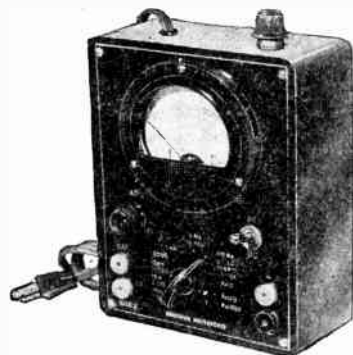
INSTRUMENTS GO

Every Radioman needs "RANGE MASTER" MODEL 10 The 8-in-1 Service Instrument

Radiomen need—and prefer—"Range Master" because it offers a greatly simplified system of range selection. "Range Master" reduces to a minimum the cumbersome test lead changes required by other wide range analyzers, and PROVIDES RANGES NOT FOUND IN ANY OTHER COMPARABLE INSTRUMENT.

"Range Master" is the ideal instrument for RADIO TESTING, Appliance Repairing, Service Calls, Amateur and Experimental Work

TELEVISION SERVICEMEN . . . why guess, measure! "Range Master" is the only instrument in its class that can be used as an OSCILLOSCOPE CALIBRATOR. A standard bleeder will deliver 1-10-100 accurate RMS volts from A.C. line.



RANGE MASTER MODEL 10

"Range Master" Combines Sensitivity with Accuracy

- A high order of accuracy is maintained for each of the 25 RANGES, thus permitting precise measurements of Voltages, Currents, Resistances, and Capacitors.
- Alternating Current ranges are ideal for dynamic performance testing of Radios, Electrical Appliances, Motors, Electric Refrigerators, etc.
- The one volt A.C. range serves as a sensitive output indicator, which permits broad or narrow band receiver alignment.
- The Ohmmeter is powered by a 4½ volt self-contained battery.
- Condenser ranges operate from the standard 60 cycle 110-120 volt power lines.
- Accuracy 3% D.C., 6% A.C.
- Sensitivity 1000 ohms per volt.



Portable Model RANGE MASTER has polished oak case with handy tool compartment \$26.95 net

An 8-in-1 INSTRUMENT, "Range Master" covers these 25 ranges:

1. CAPACITY—0.001-.1, .01-1, .1-10 Mfd.
2. A.C. CURRENT—0-.15, 0-.15, 0-15 amps.
3. A.C. VOLTAGE—1 10 100 500 1000 volts
4. D.C. VOLTAGE—10 100 500 1000 volts
5. D.C. CURRENT—1 10 100 1000 milliamps.
6. RESISTANCE—0 to 10,000 100,000 1 meg-ohm.
7. Special High range ohmmeter to 2 megs and 20 megs without external battery.
8. Sensitive A.C. microammeter to 1100 microamps.

The "Range Master" Model 10 — Fused, was designed for schools and industrial organization, interested in keeping repair bills low. A standard "Littelfuse" protects the rectifier, meter movement, and shunt against overload on all ranges.

VALUABLE FEATURES:

- Carefully engineered and **sturdily constructed**.
- Attractively designed with a two-color engraved bakelite panel.
- Three-inch clear view meter with specially designed scales give **maximum readability**.
- Compact, light, and rugged.
- Size: 5¼" x 6¾" x 2¼".
- Shipping Weight: Approx. 4½ lbs.
- Housed in an attractive bakelite case complete with internal battery and operating instructions.

BUILD YOUR OWN PRECISION INSTRUMENT . . .

- Range Master Model 10K available in Kit form.

KIT (includes case, panel, and complete instructions).....	\$17.95 net
Bench Model (assembled)	23.50 net
Fused Model	24.70 net
Foundation Meter with 3-color scale, schematic and operating instructions	7.85 net
Test leads .....	.85 net

GUARANTEE: Every BRADSHAW instrument is FULLY GUARANTEED against defective parts or workmanship for THREE MONTHS after date of purchase.

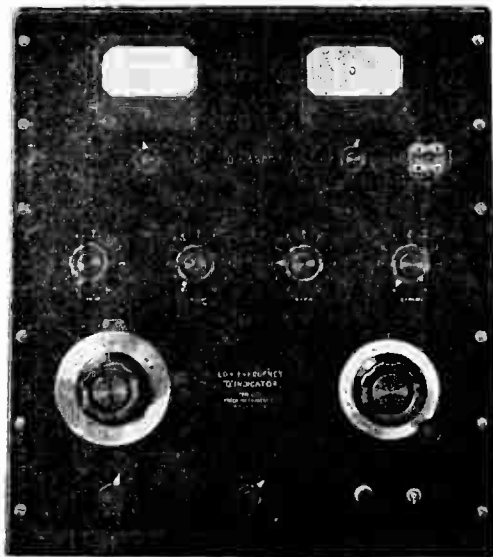
FREED

Precision

LABORATORY TEST EQUIPMENT

← No. 1030 LOW FREQUENCY "Q" INDICATOR

Direct reading "Q" indicator for frequencies from 50 cycles to 50,000 cycles. "Q" range from 0.5 to 500 with up to 50 volts across the coil.



No. 1010 COMPARISON BRIDGE

An invaluable instrument for precision laboratory adjustment and incoming inspection of resistors, capacitors and inductors. . . . Entirely self-contained, A.C. operated and includes a three frequency oscillator, an A.C. bridge and a null detector.



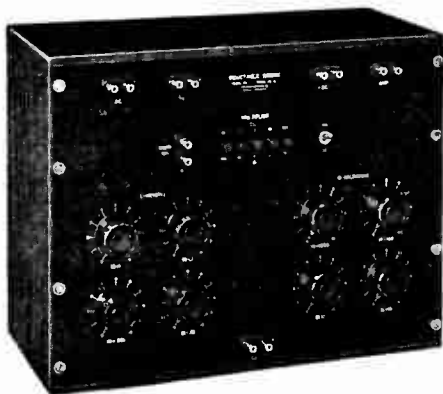
No. 1020 DIRECT READING MEGOHMMETER

Measures insulation resistances up to 2,000,000 megohms . . . 500 volt D.C. potential included in the instrument. . . . Entirely self-contained and A.C. operated.



No. 1110 INCREMENTAL INDUCTANCE BRIDGE →

Inductance range from 1 Mhy to 1000H. . . . Frequency Range from 60 to 400 cycles. . . . D.C. range from .5 Ma to 1 Amp.



No. 1040 VACUUM TUBE TYPE VOLTMETER →

Voltage range from .001 volt to 100 volts .25 db from 10 cycles to 200,000 cycles. Logarithmic voltage scale giving 2% accuracy at any point on the scale.



← No. 1060 VACUUM TUBE VOLTMETER

The 1060 wide range voltmeter can be used at audio, supersonic and radio frequencies. Frequency range from 10 cycles to 1.6 megacycles. Input impedance 50 megohms. Input capacity 15 mmf. Range from .001 to 100 volts in five steps. Logarithmic voltage scale giving 2% accuracy at any point on the scale.

FREED TRANSFORMER CO., Inc.—INSTRUMENTS DIVISION

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Send for Descriptive Literature

F-71



Industrial Instruments

Electrical Test Equipment



WHEATSTONE BRIDGE

● Sturdy, carefully engineered instrument for use in lab, plant or field. Both models self-contained with 4½ v. battery and galvanometer. Provision for external galvanometer and batteries if desired. Both models have ratio dial settings of .001, .01, .1, 1, 10, 100 and 1000, as well as built-in resistance standards of 1, 10, 100 and 1000 ohm decades. Ratios guaranteed to .05% tolerance. Resistance dial resistors to .1%. Self-cleaning, four-leaf phosphor-bronze wiper switches with detent mechanism mounted below panel. Galvanometer of well-known moving-coil type. Separate binding posts for external galvanometer if desired, and for use of bridge as resistance decade. Hardwood case with removable cover. 9¼ x 7½ x 6¼" h. Wt. 9¼ lbs. net; 12¼ lbs. shipping.

Model RN-1. Standard Portable Wheatstone Bridge complete with batteries. Net Price \$100.00

Model RN-2. Standard Portable Wheatstone Bridge with Murray & Varley Loops. Net Price \$125.00



RESISTANCE DECADES

● In standard models with resistance ranges of 0 to 999,999 ohms total. ±1% of nominal. Self-cleaning, four leaf phosphor-bronze wiper switches with detent mechanism mounted below panel. Hardwood case. Models DR-1 to DR-4, 5¼ x 8 x 4" h.; wt. 4 lbs. net, 6 lbs. shipping. Models DR-10 to DR-14, 4¼ x 6 x 4" h.; wt. 3 lbs. net, 5 lbs. shipping. Models DR-50 to DR-52, 6¼ x 9 x 4¼" h.; wt. 5 lbs. net, 7 lbs. shipping.

Model No.	Total Resistance Ohms	Decade Steps	Accuracy	Price
DR-1	999,000	9x(1,000 - 10,000 - 100,000)	±1%	\$ 50.00
DR-2	99,900	9x(100 - 1,000 - 10,000)	±1%	50.00
DR-3	9,990	9x(10 - 100 - 1,000)	±1%	45.00
DR-4	999	9x(1 - 10 - 100)	±1%	44.00
DR-10	9	9x1	±1%	20.00
DR-11	9	9x1	±1%	20.00
DR-12	90	9x10	±1%	20.00
DR-13	900	9x100	±1%	20.00
DR-4	9,000	9x1,000	±1%	22.00
DR-50	9,999.9	9x(.1+1+10+100+1,000)	±1%	65.00
DR-51	99,999	9x(1+10+100+1,000)	±1%	70.00
DR-52	999,990	9x(10+100+1,000+10,000+100,000)	±1%	100.00

CAPACITANCE DECADES

● Calibrated directly in capacitance readings from left to right. Progressive adjustment in .01 or .001 mfd. steps depending on model. .001 to 11.1 mfd. can be obtained by group as-sembly. All units employ paper or mica capacitors of highest quality and stability. Hardwood case with hinged cover and snap lock. DK-3, DK-1 and DK-2A, 7 x 8 x 5½" h.; wt. 8 lbs. net, 12 lbs. shipping. DK-10 and DK-11, 11 x 8¼ x 7" h.; wt. 10 lbs. net, 12 lbs. shipping.

Model	Mfd. Steps	Accuracy	Dielectric	P.F.	Peak Volts	Price
DK-3	11.1 in .01	1%	paper	1%	150 D.C.	50.00
			paper	1%	150 D.C.	
			mica	.2%	150 D.C.	
DK-4	1.11 in .001	1%	mica throughout	.2%	400 D.C.	50.00
DK-2A	1.11 in .001	1%	700 D.C.		500 D.C.	100.00
			60 cycle		700 D.C.	
DK-10	.111 in .0001	.5%	500 A.C.	.2%	500 A.C.	100.00
			or 10 mmfd.		60 cycle	
			paper		150 D.C.	
			1% mica	.2%	700 D.C.	
DK-11	11.1 in .01	.5%	500 A.C.		500 A.C.	125.00
					60 cycle	

MEGOHM METER

● For high-speed testing of capacitor leakage resistance, insulation resistance and insulation measurements. Extra charging terminals charge capacitors prior to test. Broad scale meter. Self-contained source applies 200 volts. External battery voltage up to 1000 volts if desired. Internal checking standard to check and adjust calibration. Stable operation. Accuracy within ±2% of full scale. Range of 1 megohm to 100,000 megohms on four multiplier ranges of 1, 10, 100 and 1,000. Highest range can be extended to 500,000 megohms with external 1,000 v. supply. Hardwood case. Sloping bakelite panel. 15 x 8 x 10" h. Wt. 19 lbs. net, 23 lbs. shipping.

Model L-2A Megohm Meter with tubes. Net Price \$145.00

Model L-2AU Universal Model for use on 110-220 v. A.C. power line, available on special order. Net Price \$160.00



MEGOHM BRIDGE

● Wheatstone Bridge but with "magic eye" indicator in place of costly and delicate galvanometer. Operates entirely from A.C. power line. Self-contained D.C. supply. Accuracy within 5% from 1 to 15 on scale; as close as readable on remainder of scale. Hardwood case with slipping removable cover. Wt. 6¼ lbs. net, 8¼ lbs. shipping.

Model MB-4. 100 to 100,000 megohms. 500 v. D.C. Bridge source. Net Price \$60.00

Model MB-6. 100,000 ohms to 100 megohms; 10 megohms to 10,000 megohms. Net Price \$60.00

Model MB-8. 1 megohm to 1,000 megohms; 100 megohms to 100,000 megohms. Net Price \$75.00

Model MB-11. 1 megohm to 1,000 megohms; 10 megohms to 10,000 megohms; 100 megohms to 100,000 megohms. Net Price \$120.00

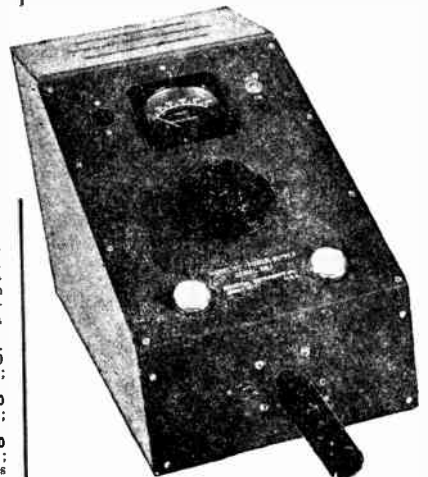
VOLTAGE BREAKDOWN TESTER

● Simple, positive, safe and quick means of testing voltage breakdown of materials or components. Stepup transformer accurately controlled by Variac. Load limited to 5 milli-amperes over full range for safety. Also safety switch if chassis is removed from case. Operates on A.C. line. Green light flashes when instrument is operative. Red light indicates voltage breakdown. Direct reading from meter.

Model P-1 Voltage Breakdown Tester, with tubes. 15 x 8 x 10". Wt. 29 lbs. net, 32 lbs. shipping. Net Price \$150.00

Model P-2 Voltage Breakdown Tester with tubes, and with added 0-3000 v. A.C. outlet. 15 x 8 x 10". Wt. 29 lbs. net, 32 lbs. shipping. Net Price \$200.00

Model P-3 Voltage Breakdown Tester (not illustrated) with tubes. Upright metal cabinet. 15 x 21 x 28" h. Wt. 150 lbs. net, 195 lbs. shipping. Net Price \$350.00





BROWNING WWV STANDARD FREQUENCY CALIBRATOR — MODEL RH-10

Specifically designed for receiving transmissions from radio station WWV on either 5 or 10 megacycles and employing these as primary frequency standards. Provisions are made so that secondary standards which are in subharmonic relation with WWV transmissions may be accurately compared. Filters are employed so that the 440 or 4000 cycle modulation may also be used as primary standards.

ELECTRICAL FEATURES

- Pre-tuned for 5 and 10 megacycles per second reception of radio station WWV. Either frequency may be selected by switch. On special order, pre-tuned frequencies of 2.5 and 5 or 10 and 15 megacycles per second may be substituted.
- Sensitivity better than 1/2 microvolt on any band. Antenna input impedance is high to permit use of single wire antenna. Tuned coupler may be used if desired.
- Selectivity 10 db down at 5 KC off resonance.
- Excellent image rejection minimizes interference. Rejection ratio is more than 50 db.
- Front panel provisions are made for coupling secondary standard or other RF sources and comparing their fundamentals or harmonics with WWV transmission.
- Cathode ray audio indicator permits comparison between RF source and WWV transmission within 1/10 cycle per second using zero beat method.
- A dual inverter system allows the selection at will of either the 440 or 4000 cycle modulation of WWV. Either may be employed as a primary frequency standard. Output voltage adjustable from 0 to 5 volts.
- Voltage supplied to stable local oscillator is regulated to reduce to a minimum frequency drift.
- Panel speaker has a separate control which allows the output to be varied at will.
- 100-125 volts AC operation. 85 volt-amperes input.
- Tube complement: one Type 6SJ7, three 6SK7, one 6SA7, one 6SN7, one 6J5, one 6SQ7, one OD3 VR-150, one 5Y3, one 6U5.

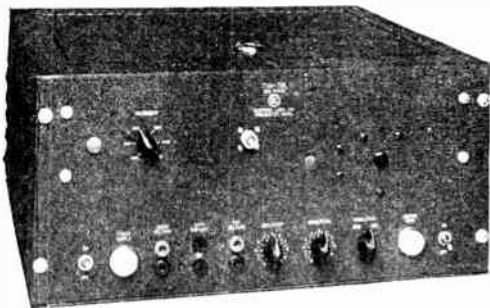
Net Price \$250.00 F.O.B. Winchester, Mass.



MECHANICAL FEATURES

- Supplied in either standard rack panel with dust cover or in a steel cabinet.
- Aluminum panel finished in black leatherette with engraved labels.
- Large fluted knobs are provided.
- Panel connectors are standard universal band type posts which will also accommodate banana-type plugs.
- Dimensions: Cabinet Mounting Height 9", Width 19", Depth 11". Rack Mounting Height 8 3/4", Width 19", Depth 10 1/2".
- Weight: Cabinet Mounting 30 lbs., Shipping Weight 35 lbs. Rack Mounting 25 lbs., Shipping Weight 40 lbs.

BROWNING POWER SUPPLY AND SQUARE WAVE MODULATOR — MODEL TVN-7



MECHANICAL FEATURES

- Unit designed for rack mounting.
- Heavy steel panel with black wrinkle finish.
- All labels engraved into panel surface.
- Dimensions: Height 9 3/4", Width 19", Depth 11".
- Weight: 33 lbs. Shipping weight: 50 lbs.

Designed as the basic unit of a signal generator in the super high frequency range, the TVN7 consists of a regulated power supply and square wave modulator for low powered velocity modulated tubes such as the 417A, 2K28 (formerly 707A and 707B), 2K25 (formerly 723A and 723B).

ELECTRICAL FEATURES

- Range of cathode voltage is 28 volts to 480 volts continuously variable. Provision is made for reduction to 180 to 300 volt range.
- Range of reflector voltage is 15 volts to 160 volts. Controlled from panel.
- Provision is made for grid pulse modulation or reflector pulse modulation. Amplitude of grid pulse is 60 volts while the reflector pulse voltage is 100 volts maximum.
- Square wave modulation frequency is variable from 100 to 100,000 cycles.
- Provision is made for external modulation.
- Electronically tube regulated.
- 110-115 volts, 60 cycles AC operation. 170 volt-ampere input.
- Tube complement: one Type 80, two OD3 VR-150, one 6SN7, one 6Y5, one 6A3, one 5R4GY, one 6SJ7.

Net Price \$210.00 F.O.B. Winchester, Mass.

BROWNING CAPACITANCE RELAY MODEL DD-20

Designed to detect and translate small capacitance changes into action. Has direct application as intrusion alarm or as indicator of small changes in capacitance.

ELECTRICAL FEATURES

- Operates alarm circuit on changes in capacitance of the order of 0.25 mmfd.
- Panel meter will indicate changes in capacitance as small as .005 mmfd.
- Mechanical movements as small as .00001 of an inch can be readily indicated on the meter.
- As indoor intrusion alarm, boundaries up to 200 feet may be protected.
- Output provisions are flexible, relay operation will provide: closed circuit, open circuit, or 115 volts AC at 10 amperes.
- Electronically regulated power supply for maximum stability.
- Operation frequencies variable from 50 kilocycles to 150 kilocycles.
- 105-125 volt, 60 cycle AC operation. 80 volt-amperes input.
- Tube complement: three Type 6V6GT, one 6SA7, three 6SJ7, one 6H6, one 6N7, one VR-90, one 80.

Net Price \$225.00 F.O.B. Winchester, Mass.

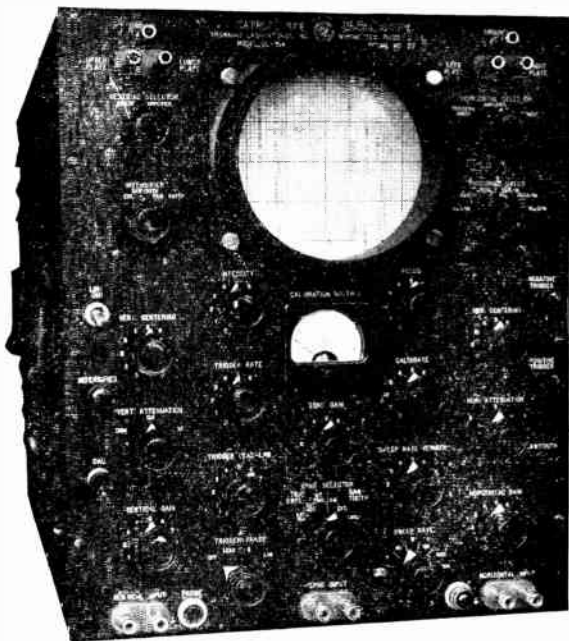


MECHANICAL FEATURES

- Supplied in 8 3/4" rack panel mounted in a steel cabinet finished in black wrinkle.
- Aluminum panel finished in black leatherette.
- All labels engraved into panel surface.
- Antennae or capacitance leads enter through top of chassis.



BROWNING OSCILLOSYNCHROSCOPE — MODEL OL-15B



MECHANICAL FEATURES

- Steel cabinet finished in black wrinkle with 1/8" aluminum panel.
- Panel finished in black leatherette with all labels engraved directly on panel.
- Copper-plated steel chassis with lacquer finish.
- Controls grouped according to function for convenience of operation.
- Components arranged for electrical efficiency and ease of servicing.
- Dimensions: Height 15 3/4", Width 12 3/4", Depth 19 3/4".
- Weight: 95 lbs. Shipping weight: 150 lbs.

A laboratory instrument designed for the observation of wave forms and transient phenomena requiring a variety of time bases, triggers, phasing and delay circuits, and extended range amplifiers. It may be used for work on laboratory applications where extremely short pulses or phenomena of irregular occurrence rate must be studied. It is also designed for television, communication, radar, and facsimile work. The special features are combined with the functions of a standard oscilloscope with greater ease and convenience of operation as a result of improved design.

ELECTRICAL FEATURES

- Five-inch 5JP1 cathode-ray tube with 4000V accelerating potential for improved intensity and definition of images.
- Sawtooth sweep with range of 5 cycles per second to 500 kilocycles per second permitting observation of radio frequency wave forms.
- Single sweep triggered time base for observation of transient phenomena or phenomena of varying repetition rates.
- Internal trigger generator and built-in phasing circuit for use with single sweep time base.
- Extended range amplifiers. The vertical amplifier is flat within 3 db. from 10 cycles per second to 6 megacycles per second. The horizontal amplifier is flat within 1 db. from 5 cycles per second to 1 megacycle per second. Maximum vertical deflection sensitivity is .05 R.M.S. volts per inch.
- The response curve of the vertical amplifier which is linear and without positive slope from 10 cycles to 4 megacycles has transient response such that a 100 kilocycle square wave with rates of rise and fall in the order of 500 volts per microsecond is faithfully reproduced.
- Low-capacitance, high-impedance probe for use with vertical amplifier. Voltage attenuation of probe is 10:1.
- Provisions for direct connection to all deflection plates.
- Internal or external blanking of beam for timing purposes and for elimination of retrace.
- Voltage regulation of all low-level stages for stability of operation under varying line voltage conditions.
- Built-in voltmeter and calibrating circuit for determining deflection sensitivity at any setting of the gain controls.
- Tub complement: three 6C4, one 6AC7, one 6AG5, five 6AG7, two 807, five 6SN7, two 6SJ7, three 6SH7, three 6V6GT, one 864, two 6X4 or 5R4GY, one 6X5GT, one VR-105.

Net Price \$1275.00 F.O.B. Winchester, Mass.

BROWNING SWEEP CALIBRATOR — MODEL GL-22

Designed for use with oscilloscopes and synchroscopes as a source of timing markers for the measurement of sweep intervals.

ELECTRICAL FEATURES

- Provides markers of 0.1, 0.5, 1.0, 10, 100 microseconds either positive or negative with variable amplitude to 50 volts.
- Generates variable width, variable amplitude gate for blanking or timing purposes.
- Contains own trigger generator with positive and negative triggered outputs.
- Markers may be initiated from external trigger or from internal generator. May be synchronized with triggers up to 100 KC. repetition rate.
- Voltage regulation to timing circuits.
- 115 volt, 50 cycle operation. 1.0 volt-ampere input.
- Tube complement: one Type 6BE6, one 2D21, one 6JF, one 6V6GT, two 6SN7, one 5Y3GT, one VR-105, one 6AL5, one 6AQ5, one 6X5GT.

Net Price \$290.00 F.O.B. Winchester, Mass.



MECHANICAL FEATURES

- Provided with steel cabinet finished in black wrinkle.
- Panel finished in black leatherette with labels engraved into surface.
- All output connections on front panel.
- Insulated universal binding posts used for output connections.
- Dimensions: Height 7", Width 14", Depth 8".
- Weight: 20 lbs. Shipping weight: 28 lbs.

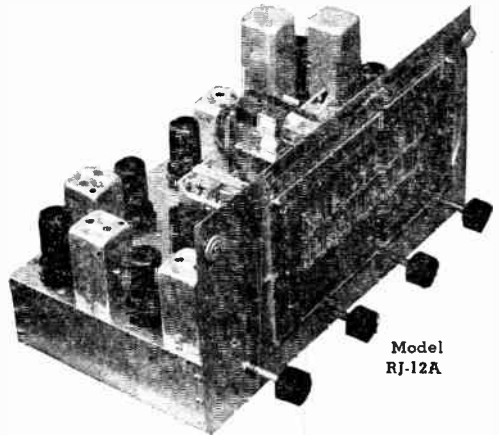


BROWNING FM-AM TUNER — MODEL RJ-12A

Engineered for high fidelity reception in the FM band. The AM section provides high sensitivity and selectivity as well as quality reception in the broadcast band.

ELECTRICAL FEATURES

- Receives both the new FM band (88 MC to 108 MC) and the standard broadcast band (530 KC to 1650 KC).
- Less than 10 microvolts needed to produce 30 db. noise reduction in the FM band. Sensitivity of 5 microvolts in the AM broadcast band.
- Separate RF and IF systems on both bands for maximum performance. No coil switching.
- Drift compensated. No drift on FM after 2 minutes warm-up.
- FM audio response flat from 20 cycles to 15,000 cycles within $\pm 1\frac{1}{2}$ db.
- AM audio response flat from 20 cycles to 6,600 cycles within ± 3 db.
- TRIPLE TUNED IF'S.
- Miniature tubes used as FM RF and IF amplifiers assure maximum gain.
- FM utilizes 2-stage cascade limiting to insure maximum noise rejection.
- RF stage employed on both bands.
- High impedance output for connection to any high quality audio amplifier.
- PHONO position is included in the channel selector switch so as to provide volume control directly on the tuner. Phono input connector is provided in back of the tuner.
- FM antenna input is 300 ohms for use with new twin lead cables. FM antenna also serves AM. No separate antennas required.
- Available with or without power supply. Requirements are for 250 volts DC at 65 MA and 6.3 volts AC at 4 amperes.
- Employs Major Armstrong's circuit on FM.
- Tuning eye indicates correct tuning on either band.
- 115 volt, 60 cycle operation. 80 volt-amperes input, when used in conjunction with Browning model PF-12 power supply.
- Tube complement: three 6AU6, one 7F8, one 6SK7, one 6SG7, two 6SJ7, one 6H6, one 6SA7.
- One 3J5 (tuning eye), one 1N34 crystal detector.



Model RJ-12A

MECHANICAL FEATURES

- Proportioned for easy mounting in book-cases, drawers, shelves and cabinets.
- Dial escutcheon supplied with unit.
- Formal edged dial - easily read—slide-rule type.
- Can be supplied with engraved black leatherette finished aluminum panel for rack mounting (Model RJ-14).
- Rugged construction, all components of highest quality.
- Power supply is a small separate unit facilitating mounting in confined quarters. Uses one 6YGT.
- Dimensions: Height 7 $\frac{3}{4}$ ", Width 12 $\frac{1}{2}$ ", Depth 8". Power Supply: Height 6", Width 3 $\frac{1}{2}$ ", Length 6". Rack type Tuner: Height 8 $\frac{3}{4}$ ", Width 19", Depth 3".

Model	Weight	Shipping Weight	Net Price
RJ-12A	12 lbs.	16 lbs.	\$123.65
RJ-14A	24 lbs.	30 lbs.	164.45
PF-12	8 lbs.	9 lbs.	15.78

BROWNING FM TUNER — MODEL RV-10

Designed for high-fidelity reception in the new high-frequency FM band.

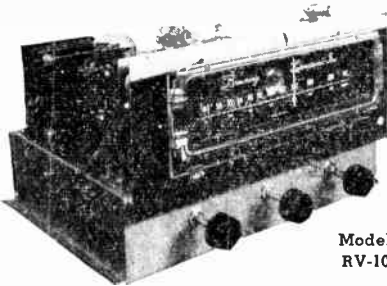
ELECTRICAL FEATURES

- Receives signals in the FM band extending from 88 to 108 megacycles.
- Less than 10 microvolts needed to produce complete limiting.
- Newly developed miniature tubes used for RF section and IF amplifier.
- Two-stage cascade limiting used to ensure freedom from noise.
- Tuned RF stage used to increase gain and reduce image interference.
- High impedance output to feed any high-fidelity amplifier.
- PHONO-FM switch permits instant transfer of input signals.
- Power supply self contained.
- Employs Armstrong FM circuit.
- Tuning eye indicates correct tuning.
- 115 volt, 60 cycle AC operation. 65 volt-amperes input.

- Tube complement: three Type 6AU6, one 7F8, two 6BY, one 6H6.
- Tuning eye indicator (6U5 or 6E5). Type 3A rectifier tube.

MECHANICAL FEATURES

- Physically small. Can be easily mounted on shelves, shelves, bookcases, drawers, and the like.
- Dial escutcheon knobs, shielded interconnecting wire and connectors supplied with each unit.
- Attractive edged dial calibrated in megacycles and channel numbers.
- Rugged construction, all components of the highest quality.
- Also available with standard rack panel (Designation Model RV-11).
- Dimensions: RV-10 -Height 6 $\frac{1}{2}$ ", Width 11", Depth 3 $\frac{1}{4}$ ". RV-11 -Height 8 $\frac{3}{4}$ ", Width 19", Depth 3 $\frac{1}{4}$ ".



Model RV-10

Model	Weight	Shipping Wgt.	Net Price
RV-10	10 $\frac{1}{2}$ lbs.	14 lbs.	\$89.50
RV-11	15 lbs.	21 lbs.	110.50

BROWNING AMATEUR FREQUENCY METER — MODEL MJ-9

Designed for checking the frequencies of amateur transmitters operating in any amateur band from 3.5 to 148 megacycles on either FM or AM. Furnishes RF of known frequency to replace crystal oscillator in transmitters.

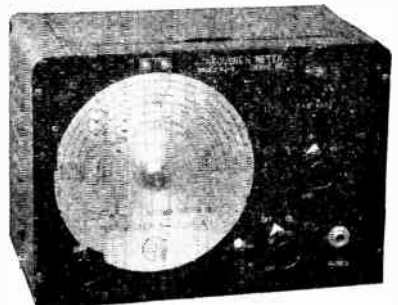
ELECTRICAL FEATURES

- Dial reads directly in frequency on seven amateur bands.
- May be used in place of a crystal to furnish RF voltage to exciter or transmitter.
- Accuracy of .05% at all frequencies.
- Secondary standard is 500 kilocycle crystal whose frequency may easily be checked with WWV of the National Bureau of Standards.
- Stable electron-coupled oscillator used, covering the 3.5 to 4.0, 7.0 to 7.3, 14.0 to 14.4, 20.5 to 21.5, 28.0 to 29.7, and 50.0 to 54.0 megacycle bands with separate coils. The 144 to 148 megacycle band is covered by harmonics of 20.5 to 21.5 megacycle band.
- Audio detection of zero beat.

- Low power consumption. 40 volt-amperes. 110-120 volt, 25 to 60 cycle AC-DC operation.
- Tube complement: one Type 63K7GT, one 6SL7GT, one 25Z6GT.

MECHANICAL FEATURES

- Steel cabinet with 1 $\frac{1}{2}$ " aluminum panel.
- Black leatherette panel finish with black wrinkle cabinet.
- 5 $\frac{1}{2}$ inch dial for ease of reading.
- Labels engraved into panel.
- All operating controls on front panel.
- Crystal check points are marked on dial for all bands.
- Dimensions: Height 7", Width 10", Depth 6 $\frac{1}{2}$ ".
- Weight: 7 lbs. Shipping weight: 11 lbs.



Net Price \$89.50



BROWNING FREQUENCY METER — MODEL S-4

Specifically designed for checking the frequencies (as required by the Federal Communications Commission) of police and fire department, marine, and other special-service transmitters for either AM or FM, operating in the 1.5 to 100 megacycle range.

ELECTRICAL FEATURES

- Custom-built and hand-calibrated for up to five specified frequencies in the range from 1.5 to 100 megacycles.
- Accuracy: $\pm .0025\%$ of the specified frequency.
- Stable electron-coupled oscillator used in special circuit.
- Extreme accuracy in frequency adjustment with 100 kilocycle crystal as secondary standard, using WWV as primary standard.
- Visual determination of zero beat with cathode ray indicator.
- Audio detection of zero beat.
- Voltage regulation employed in crystal and electron-coupled oscillators.
- 110-115 AC-DC operation, 40 volt-amperes input.
- Telescoping antenna at side of cabinet for easy coupling to transmitter.
- Tube complement: one Type 6SC7, one 6SA7, one

- 6J5, one 6SK7, one 6U5, one 25Z6. One special voltage regulator.

MECHANICAL FEATURES

- Rugged steel cabinet and $\frac{1}{8}$ " aluminum panel
- Accurate reading assured by machined and engraved main dial, graduated to 100 divisions over 180 degrees. Vernier allows readings to 1/10 of dial division, or readability of one part in one thousand.
- Panel finished in black leatherette.
- Dial in instrument black for ease of reading.
- New, non-jamming vernier dial drive for fine adjustment.
- All labels engraved into panel surface.
- Telescoping antenna forms convenient carrying handle.
- Dimensions: exclusive of telescoping antenna—Height 13 $\frac{1}{2}$ ", Width 7 $\frac{3}{8}$ ", Depth 6 $\frac{1}{8}$ ".
- Weight: 15 lbs. Shipping weight: 18 $\frac{1}{2}$ lbs.



MODEL S-4

BROWNING FREQUENCY METER — MODEL S-6

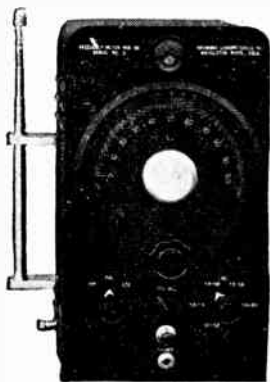
Designed as a general coverage frequency meter for measuring any radio frequency signal in the range between 100 kilocycles and 50 megacycles.

ELECTRICAL FEATURES

- Covers fundamental range of 1.0 to 2.0 megacycles in five bands.
- Accuracy: $\pm .025\%$ of the frequency measured.
- 100 kilocycle crystal used as secondary standard. Provision is made to accurately set the oscillator using WWV as a primary standard.
- Both crystal and electron-coupled oscillators are voltage regulated.
- Harmonic amplifiers permit use of harmonics up to 50 megacycles.
- Visual determination of zero beat with cathode ray indicator.
- Audio detection of zero beat.
- 110-115 AC operation. 40 volt-amperes input.
- Hand calibrated to ensure greatest accuracy.
- Telescoping antenna at side of cabinet for easy coupling to transmitter.
- Tube complement: one Type 6SK7, one 6SL7, one 6SF5, one 6U5, one 5Y3GT, and one VR-90.

MECHANICAL FEATURES

- Rugged steel cabinet and $\frac{1}{8}$ " aluminum panel.
- Accurate reading assured by machined and engraved main dial, graduated to 100 divisions over 180 degrees. Vernier allows readings of 1/10 of a dial division or readability of one part in one thousand.
- Panel finished in black leatherette.
- All labels engraved into surface of the panel.
- Non-jamming vernier dial drive for fine adjustment.
- Telescoping antenna forms convenient carrying handle.
- Dimensions: exclusive of telescoping antenna—Height 13 $\frac{1}{2}$ ", Width 7 $\frac{3}{8}$ ", Depth 6 $\frac{1}{8}$ ".
- Weight: 15 lbs. Shipping weight: 18 $\frac{1}{2}$ lbs.



MODEL S-6

Net Price (Complete with tubes)
F.O.B. Winchester, Mass.
\$195.00

Prices Net (Complete with tubes) F.O.B. Winchester, Mass.

1 Band	\$170.00
2 Bands	190.00
3 Bands	210.00
4 Bands	230.00
5 Bands	250.00

BROWNING FREQUENCY METER — MODEL S-7

Specifically designed for checking the frequencies of police, fire department, truck and taxi fleet, marine and other special service transmitters operating in the 72-76 and 152-162 megacycle bands.

ELECTRICAL FEATURES

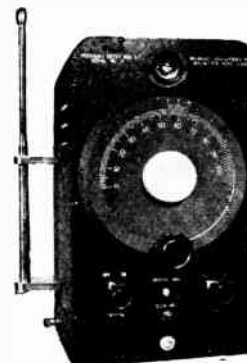
- Custom built and hand calibrated for one or two frequencies in the 72-76 and/or 152-162 megacycle bands permitting a single instrument to be used to check central transmitter and satellite mobile units operating on different frequencies.
- Accuracy: .005% of the specified frequency; .0025% by observing certain operating precautions.
- Deviation chart supplied for instant determination of deviation from assigned frequency.
- 100 KC crystal used as secondary standard which is easily compared with WWV radiations

for extreme accuracy.

- Cathode ray indicator permits highly accurate setting of E.C.O. calibration against crystal standard.
- Aural indication of zero beat.
- Voltage regulation employed in crystal and electron-coupled oscillators.
- 105-115 volt, AC-DC operation. 40 volt-amperes input.
- Telescoping antenna at side of cabinet for easy coupling to transmitter.
- Tube complement: one Type 6SL7, one 6SA7, one 6J5, one 6SK7, one 25Z6, one VR-90, and one tuning indicator 6U5.

MECHANICAL FEATURES

- Same as Browning Frequency Meter — Model S-6 (see above).



MODEL S-7

Prices Net (Complete with tubes) F.O.B. Winchester, Mass.

1 Band	\$195.00
2 Bands	220.00

BROWNING FREQUENCY METER — MODEL S-5

Designed for checking the frequencies of police, fire department, railroad, marine and other special-service transmitters operating between 30 and 500 megacycles.

ELECTRICAL FEATURES

- Custom-built and hand-calibrated for one, two, or three frequencies between 30 and 500 megacycles.
- Accuracy: .0025% of the specified frequency.
- Deviation chart supplied for determination of deviation from assigned frequency.
- 100 KC crystal in temperature regulated oven is used as secondary standard with long time frequency stability.
- Temperature compensated electron-coupled oscillator uses precision split-stator variable condenser with no moving contacts.
- Voltage regulated supply for crystal and electron-coupled oscillators.
- 105-115 volt, 60 cycle AC operation. 65 volt-amperes input.
- Telescoping antenna for easy coupling to transmitter.
- Tube complement: one Type 6C4, two 9001, two 6SJ7, three 6J5, one 5Y3GT, one VR-90.

MECHANICAL FEATURES

- Rugged steel cabinet and $\frac{1}{8}$ " steel panel.
- Electron-coupled oscillator built on 3.16" aluminum sub-chassis.
- Worm drive to tuning condenser with dual indicators provides 5000 dial divisions for tuning range.
- Panel finished in black leatherette.
- Labels engraved into panel surface.
- Standard rack panel used. Unit may be incorporated in a rack with other equipment if desired.
- Dimensions: Height 8 $\frac{3}{4}$ ", Width 19", Depth 9".
- Weight: 35 lbs. Shipping weight: 50 lbs.

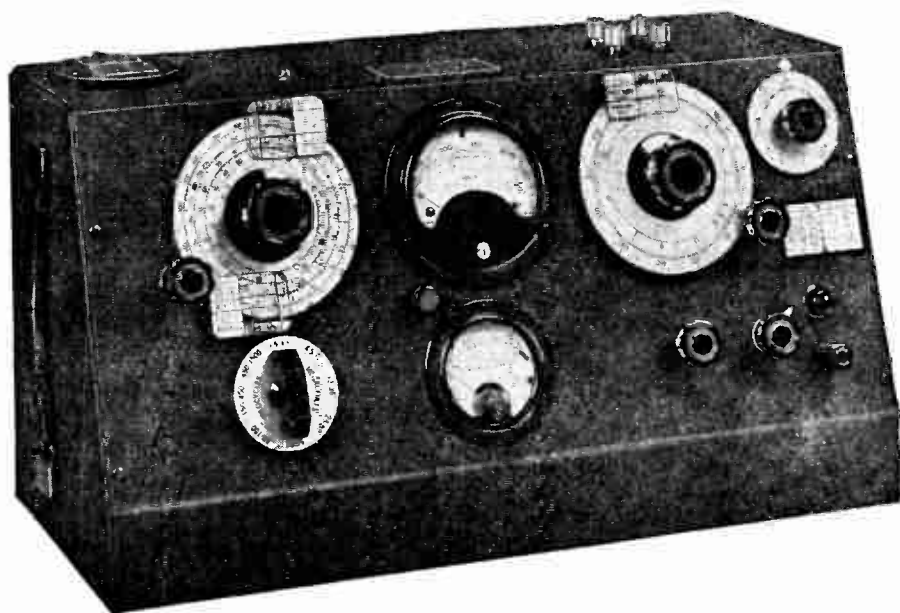


Prices Net (Complete with tubes) F.O.B. Winchester, Mass.
1 Band . \$340.00 2 Bands . \$380.00 3 Bands . \$420.00

PRECISION
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Q-METER

TYPE 160-A

Radio frequency circuit design often requires the accurate measurement of Q , inductance, and capacitance values. For this application, the 160-A Q-Meter has become the universal choice of radio and electronic engineers throughout the country.

Each component part and assembly used in the manufacture of this instrument is designed with the utmost care and exactness. Circuit tolerances are held to values attainable only in custom built instruments.

The 160-A Q-Meter is designed specifically for the accurate and rapid measurement of Q , inductance, and capacitance. The basic method of measurement consists of measuring the voltage developed across a variable air capacitor connected as an element in a series resonant circuit. Essentially the Q-Meter is comprised of an 8 range RF oscillator, a Q measuring circuit with a main and vernier section tuning condenser, a vacuum tube voltmeter of special design which reads the voltage across the tuning condenser, and a voltage injection circuit which applies an accurately known voltage to the terminals of the series resonant circuit. In operation the Q circuit is resonated by means of the variable Q tuning capacitor and the voltage developed across this capacitor is indicated by means of the vacuum tube voltmeter which is calibrated directly in terms of Q . This method of measuring Q is simple, accurate, and requires only a single operation—resonating the circuit—to measure Q . Variations of this basic method of measurement are employed to determine effective inductance and capacitance as well as the dielectric properties of insulating materials

SPECIFICATIONS

Oscillator Frequency Range: Continuously variable from 50 kc. to 75 mc. in eight self-contained ranges. (In conjunction with an external oscillator the frequency range of the Type 160-A Q-Meter may be extended from 50 kc. to 1 kc. for coil measurements).

Oscillator Frequency Accuracy: Generally better than $\pm 1\%$, except the 50-75 mc. range which is approximately $\pm 3\%$.
Range of Q Measurements: The Q voltmeter is calibrated directly

in Q , 20-250. The "Multiply- Q -By" meter, which measures the oscillator voltage injected in the Q measuring circuit, is calibrated from $\times 1$ to $\times 2$ and also at $\times 2.5$. The reading of the Q voltmeter scale is multiplied by the setting of the "Multiply- Q -By" meter. Hence, the total range of circuit Q measurements is from 20 to 625. Condensers, dielectrics, etc., which are measured by placing these in parallel with the measuring circuit, may have Q 's as high as 5000.

Accuracy of Q Measurements: The accuracy of the direct reading measurement of circuit Q (for Q voltmeter readings between $Q=50$ and $Q=250$) is approximately 5% for all frequencies up to the region of 30 mc. and decreases with increasing frequency. Correction may be made for the error above 30 mc. as it is principally a frequency effect. The accuracy of the measurement of condensers, dielectrics, etc. is generally better than 10% for Q 's below 5,000 and up to 30 mc.

Capacitance Calibration Range: Main tuning condenser 30-450 mmf. calibrated in 1 mmf. divisions from 30 to 100 mmf. and in 5 mmf. divisions from 100 to 450 mmf. Vernier condenser, plus 3 mmf., zero, minus 3 mmf., calibrated in 0.1 mmf. divisions.

Accuracy of Capacitance Calibration: Main tuning condenser, generally better than 1% or 1 mmf., whichever is the greater. Vernier tuning condenser, ± 0.1 mmf. The internal inductance of the tuning condenser at the binding posts is approximately .015 microhenry.

Voltmeter: The Q voltmeter is also calibrated in volts. A specially calibrated tube, Type BRC 105-A tube, is used. Replacements may be made without recalibration.

Power Supply: 105-120 volts, 50-60 cycles. Also 210-240 volts, 50-60 cycles. Power consumption 50 watts.

Dimensions: Height 12.5", length 20", depth 8.5".

Weight: 25 lbs.

Price: \$625.00 F.O.B. Boonton, N. J., U.S.A.

BOONTON RADIO

BOONTON · N · J · U · S · A ·

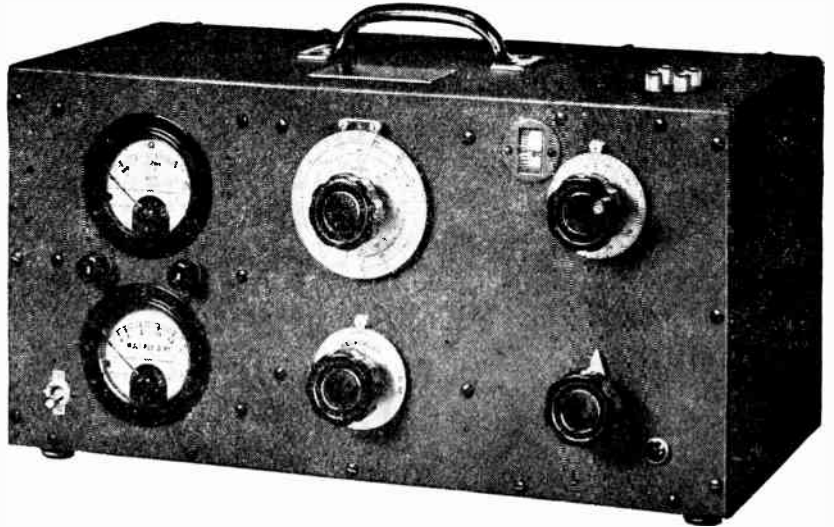
Corporation



Q-METER

TYPE 170-A

The Type 170-A Q-Meter utilizes the same general operating principles and characteristics as the Type 160-A Q-Meter, but incorporates such structural modifications and design refinements as are required for accurate performance at the higher frequencies. This instrument is intended to supplement the low frequency Q-Meter by extending the range of measurement up to 200 mc.



SPECIFICATIONS

Oscillator Frequency Range: Continuously variable from 30 mc. to 200 mc. in three ranges—Calibration accuracy $\pm 1\%$.

Range of Q Measurements: The Q voltmeter is calibrated directly in circuit Q, from 80 to 300. The "Multiply-Q-by" meter is calibrated from x1 to x4, hence the range of circuit Q measurements is from 80 to 1200.

Accuracy of Q Measurements: The accuracy of the direct reading measurement of circuit Q is $\pm 10\%$ up to 100 megacycles and decreases with increasing frequency.

Capacitance Calibration of Q Capacitor: Range 11-50 mmfd. calibrated in unit mmfd. divisions. Accuracy: 1% or 0.5 mmfd., whichever is greater. Micrometer dial divided into 100 divisions.

Power Supply: 110-120 volts, 50-60 cycles. Also 220-240 volts, 50-60 cycles. Power consumption 50 watts. Dimensions: 17" x 10 1/2" x 8 3/4".

Weight: 21 lbs.

Price: \$550.00, F.O.B. Boonton, N. J., U.S.A.

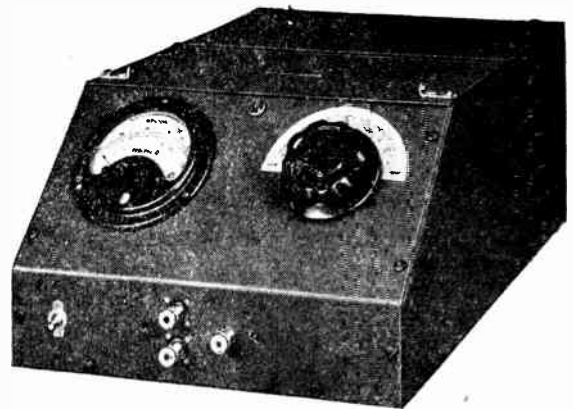
QX CHECKER TYPE 110-A

The QX-Checker is a production type test instrument specifically designed to compare reactance and relative Q of RF components with approved standards. The two factors, reactance and relative Q, are separately indicated, one on a meter and the other on a condenser dial, so that the deviation of either from established tolerances is immediately shown. Built to laboratory standards, the QX-Checker is a sturdy, fool-proof instrument for use in production work by factory personnel.

SPECIFICATIONS

Oscillator Frequency Range: 100 kc. to 25 mc. in 6 ranges using accessory plug-in coils (two coils furnished with each instrument).

Accuracy of Coil Checks: Coils may be checked against a standard to within about 0.2% with inductance values of 10 microhenries to 10 millihenries and Q of 100 or greater.



Capacitance Range: Capacitance values ranging between approximately 2-1000 mmf. may be checked against a standard to an accuracy of a few tenths of one mmf. if the Q of the capacitor is high.

Power Supply: 110-125 volts, 50-60 cycles, also 200-250 volts, 50 cycles.

Dimensions: Width 12 1/4", Depth 18", Height 8".

Weight: 26 lbs.

Price: \$340.00, F.O.B. Boonton, N. J., U.S.A.

BOONTON RADIO
BOONTON · N · J · U · S · A · Corporation

PRECISION
FOR THE RADIO AND



INSTRUMENTS
ELECTRONIC INDUSTRY

FM SIGNAL GENERATOR

TYPE 202-B

The type 202-B FM Signal Generator has been developed to meet the needs of engineers engaged in the design of FM and television receivers for operation within the frequency range of from 54 megacycles to 216 megacycles.

This instrument has been proportioned for maximum conservation of laboratory bench space, with frequency dial, modulation and output meters positioned at eyelevel for maximum readability. The unit is finished in grey wrinkle enamel with engraved panel and is supplied complete with tubes and standard output cable.

SPECIFICATIONS

RF Range: Frequencies from 54 mc. to 216 mc. are covered in two ranges, 54-108 mc. and 108-216 mc.

Main Frequency Dial: The two RF ranges are calibrated directly in megacycles to an accuracy of within $\pm 0.5\%$. The dial is also divided in 24 equal divisions for use with the vernier frequency dial.

Vernier Frequency Dial: The vernier frequency dial is divided in 100 divisions and is geared to the main dial through a gear train having a 24:1 ratio. The approximate frequency change per vernier division is 26 kc. on the low range and 52 kc. on the high range.

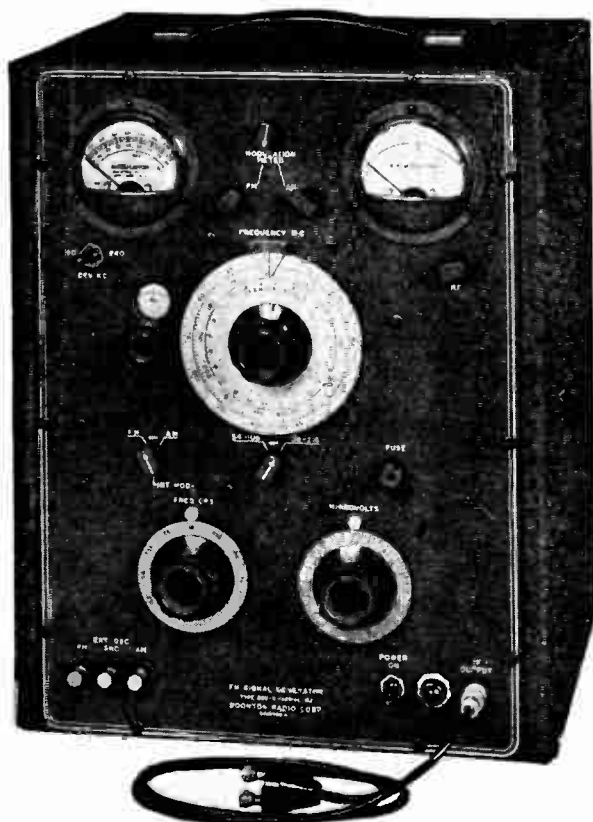
Frequency Modulation (Deviation): The FM deviation is continuously variable from zero to 240 kc. The modulation meter is calibrated in two FM ranges (1) zero to 80 kc. and (2) zero to 240 kc. deviation.

Amplitude Modulation: The modulation meter is calibrated at 30% and 50% amplitude modulation. AM is continuously variable from zero to 50%.

Modulation Controls: Separate potentiometers are provided for continuous control of FM and AM levels.

Modulating Oscillator: The internal AF oscillator may be switched to provide either frequency or amplitude modulation; it may also be switched off. External binding posts permit the use of an external AF oscillator for either FM or AM. Both internal and external AF oscillators may be used simultaneously, thus providing either FM or AM at two modulation frequencies simultaneously or simultaneous FM and AM. The internal AF oscillator provides eight fixed frequencies which may be selected by a rotary type switch—50, 100, 400 cycles and 1, 5, 7.5, 10 and 15 kilocycles, accurate to within 5%. The output voltage of the internal AF oscillator is available at the external binding posts for synchronizing or other purposes.

RF Output Voltage: The RF output voltage is continuously variable over a range from 0.1 microvolt to 0.2 volts at the terminals of the output cable. The impedance at the RF output jack, looking into the instrument, is 53 ohms resistive. The output cable has a 53 ohm resistance termination at the terminal end hence the output impedance of the unit with cable attached is 26.5 ohms.



Distortion: FM distortion at 75 kc. deviation is less than 2% when modulated with the internal AF oscillator or an external AF oscillator having 0.5% distortion or less. At 50% amplitude modulation the distortion is less than 5% using the internal AF oscillator and decreases as the modulation percentage is reduced. An external AF oscillator may be employed for amplitude modulation if desired.

Spurious RF Output: All spurious RF output voltages are at least 30 db. below the desired fundamental. The RF leakage is very low.

Fidelity Characteristics: The deviation sensitivity of the FM modulation system as a function of frequency is constant from dc. to over 10 kc. At 15 kc. the deviation as indicated on the modulation meter is 0.5 db. higher than the true value. The amplitude modulation system is also flat from dc. to 10 kc., and departs from nominal by 1.0 db. at 15 kilocycles.

Power Supply: The power supply is self-contained in the instrument for use on 60 cycles, 110 volts.

Accessories: 203-A Frequency Converter (frequency range 0.4 mc. to 25 mc.).

Dimensions: H: 17" W: 13½" D: 11½".

Weight: 35 lbs.

Price: \$975.00, F.O.B. Boonton, N. J., U.S.A.

BOONTON RADIO

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Corporation



UNIVERTER TYPE 203-B

The Type 203-B Univerter, a frequency converter accessory having unity gain, is designed for use with the Type 202-B FM Signal Generator to provide additional frequency coverage of from 0.4 mc. to 25 mc. Since the 202-B FM Signal Generator covers a frequency range from 54 to 216 megacycles, the 203-B Univerter offers a simple means whereby the additional coverage of commonly used Intermediate and radio frequencies may be obtained. This instrument also enables the frequency and amplitude modulation features of the 202-B instrument, as well as the attenuator calibration, to be utilized at these lower frequencies without causing any appreciable distortion.

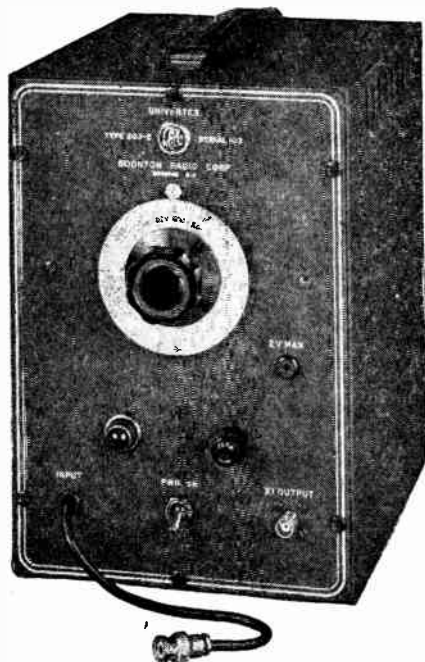
The 203-B Univerter matches the 202-B FM Signal Generator in styling and finish, and is supplied complete with tubes and instruction book.

SPECIFICATIONS

RF Range: The Univerter, in combination with the 202-B FM Signal Generator, covers from 0.4 mc. to 25 mc. (0.1 mc. to 25 mc. with no carrier deviation). The RF voltage at the X1 OUTPUT jack is uniform within ± 1 db. over the frequency range of the instrument.

Frequency Increment Dial: This dial is calibrated in increments of 10 kc. from plus 250 kc. through zero to minus 250 kc.

RF Output: The RF output voltage at the X1 panel jack is continuously variable from 0.1 microvolt to 0.1 volt by means of the 202-B Signal Generator attenuator. For 0.2 volt input to the Univerter, the output is approximately 0.18 volt. The impedance at the RF output jack, looking into the instrument is approximately 60 ohms resistive. The RF output voltage at the 2 VOLT MAX. pin jack is uncalibrated but may be controlled from the attenuator of the 202-B FM Signal Generator. At this pin jack the internal impedance is approximately 470 ohms.



Power Supply: The 203-B Univerter is designed for use on 50-60 cycles, 115 volts.

Dimensions: H: 11 1/2" W: 7 3/8" D: 10 1/2"

Weight: 11 lbs.

Price: \$300.00, F.O.B. Boonton, N. J., U.S.A.

BEAT FREQUENCY GENERATOR TYPE 140-A

This instrument has found universal acceptance because of its wide frequency coverage from 20 cycles to 5 megacycles. A five step decade attenuator provides a means by which extremely small output voltages can be accurately set and a six position switch enables any one of a variety of output impedances to be quickly selected.

SPECIFICATIONS

Frequency Range: 20 cycles to 5 megacycles in two ranges.

Low Range: 20 to 30,000 cycles.

High Range: 30 kc. to 5 mc.

Frequency Calibration: Accuracy ± 2 cycles up to 100 cycles, $\pm 2\%$ above 100 cycles.

Stability: About 5 cycles drift below 1000 cycles. On low range, drift becomes negligible percentage with increasing frequency. On high range, drift is 3% or less.

Adjustment: High and low ranges have individual zero beat adjustments. Low range may be checked against power line frequency with front panel 1 inch cathode ray tube.

Output Power and Impedances: Rated power output: One watt, available over the low frequency range from output impedances of 20, 50, 200, 500, 1000 ohms, and over both high and low frequency ranges from an output impedance of 1000 ohms.



Distortion: 5% or less at 1 watt output, 2% or less for 1/2 voltage output.

Voltmeter Accuracy: $\pm 3\%$ of full scale reading.

Power Supply: 110-120 volts, 50-60 cycles, also 220-240 volts, 50-60 cycles.

Power Consumption: About 120 watts.

Dimensions: Width: 21 1/2", Depth: 15", Height: 19 1/2".

Weight: 86 lbs.

Price: \$1,050.00, F.O.B. Boonton, N. J., U.S.A.

BOONTON RADIO

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GENERAL ELECTRIC

SIGNAL GENERATOR TYPE YGS-3

POWER SUPPLY:

105-125 volts, 50-60 cycles power source, 65 watts

RF OSCILLATOR:

RANGE: Fundamental: 100 kc to 150 mc in 7 bands, continuously variable

MODULATION (Internal): Amplitude: continuously variable from 0 to 100%, calibrated at 30%. Modulating frequencies available: power line, 400 cycles and 100 to 12,000 cycles continuously variable

MODULATION (External): 50 to 12,000 cycles

FM OSCILLATOR:

RANGE: 100 kc to 200 mcs

FIXED FREQUENCIES:

1 mc; deviation 0 to ± 20 kc.

50 mc; deviation 0 to ± 300 kc.

50 mc; deviation 0 to ± 750 kc.

FREQUENCY MODULATED OUTPUT:

Any combination possible by mixing RF and FM oscillators internally.

MODULATION: Same as RF oscillator

CRYSTAL CALIBRATOR:

FREQUENCY: 1 mc, fundamental. Harmonics available to 150 mcs.

ACCURACY: $\pm 0.5\%$ (0 to 50° C)

MODULATION: Same as RF oscillator except not calibrated in percentage amplitude

AUDIO OSCILLATOR:

RANGE: 100-12,000 cycles continuously variable in one band.

Fixed frequencies: power line, 400 cycles

TYPE: Wein Bridge, resistance tuned

DISTORTION: Less than 7% (into 20K ohm load or higher)

ATTENUATOR: Calibrated, 0 to -60 DB

OUTPUT VOLTAGE: 4.5 volts in 20K ohm load ± 2 DB variation throughout frequency range

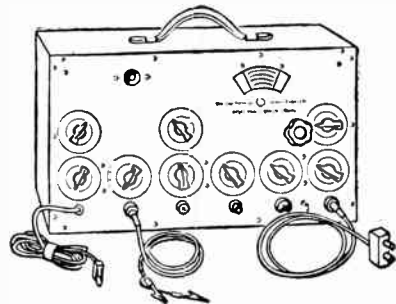
OUTPUT IMPEDANCE:

RF High: 100 ohms

RF Low: 50 ohms

LIST PRICE

\$195.00*



AUDIO OUTPUT: Optimum load 20K ohms. Lower resistance loads at reduced output.

OUTPUT LEVEL INDICATOR:

TYPE: Dual electron-ray tube

FUNCTION:

Shadow No. 1 (RF)—shadow angle 0° at 25,000 microvolts on low output jack

Shadow No. 2 (AF)—shadow angle 0° at 30% amplitude modulation or at indicated FM deviation

RF ATTENUATOR:

DECADE: Five step resistor network

VERNIER: Continuously variable 50 ohm "L" pad

AMBIENT TEMPERATURE RANGE:

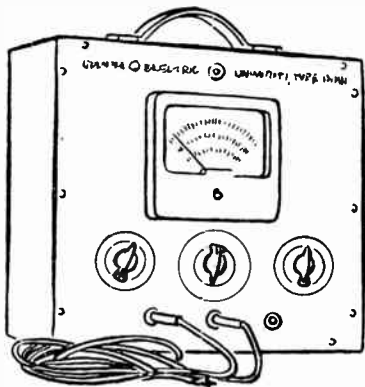
10° C to 40° C

CASE:

Fabricated steel copper-plated, outside gray wrinkle finish. Removable cover with compartment for output cables. Leather carrying handle. Dimensions: 17 1/8 in. long x 9 3/4 in. high x 9 1/4 in. deep including cover.

WEIGHT: 33 pounds

UNIMETER TYPE YMW-1A



A-C and D-C Volts: 0-2.5, 10, 50, 250, 1000.

Sensitivity: D-C volts, 20 K ohms per volt. A-C volts, 1 K ohm per volt.

Output Meter: Same as A-C volts through .5 mfd 600 volt capacitor.

Decibels: -4 to +10, 8 to 22, 22 to 36, 36 to 50, 48 to 62.0 level is 1 mw in 600 ohms.

Resistance: 3 ranges, total coverage 1 ohm to 20 megohms.

R x 1, 20 ohms center, 2 K ohms maximum.

R x 100, 2 K ohms center, 200 K ohms maximum.

R x 10 K, 200 K ohms center, 20 megohms maximum.

Current: DC only. 0-.5, 5, 50, 500 ma.

0-50 microamps.

Controls: Three. Range and function switch selects range of volts, ohms, milliamperes. A-C/D-C switch selects type of voltage measurement. Ohms adjust sets ohmmeter zero on each range.

Meter: 50 microamps $\pm 2\%$, 2500 ohms terminal resistance $\pm 2\%$, 4 in. x 4 1/2 in. case.

Batteries: 1—No. 2 flashlight cell. 2—7.5 volt C batteries.

Test Leads: One pair, 48 in. long. Two slip-on alligator clips supplied for prods.

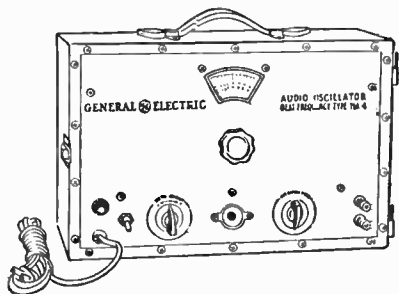
Portable Carrying Case: Fabricated steel, finished in grey wrinkle. Size, 10 1/4 in. x 9 3/4 in. x 4 in.

Weight: 9 pounds.

LIST PRICE

\$39.50*

AUDIO OSCILLATOR BEAT FREQUENCY TYPE YGA-4



Output, 50 milliwatts across a load of 500 ohms.

Frequency range of 25 to 16,000 cycles per second.

Distortion less than 3% over the range 50 to 15,000 cycles per second.

Extraneous noise and hum less than 20 millivolts at zero beat.

Less than 1.5 db variation in output from 50 to 15,000 cycles.

Employs electron ray tube as zero beat indicator.

Extremely stable and independent of small line variations.

Main tuning dial is indirectly illuminated and directly calibrated in cycles per second.

Attractive Housing in blue wrinkle finish and brushed aluminum panel, complete with cover and carrying handle.

LIST PRICE

\$49.50*

* PRICES SLIGHTLY HIGHER WEST OF ROCKIES

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

GENERAL ELECTRIC

OSCILLOSCOPE TYPE CRO-3A

POWER SUPPLY: 105-125 volts, 50-60 cycle power source, 55 watts. Parts are located to prevent hum pick-up.

WIDE SWEEP CIRCUIT: Sweep rates from 20 to 30,000 per second, adjustable by 7 point switch, with vernier for fine adjustment.

HIGH DEFLECTION SENSITIVITY: Vertical plates through amplifier 0.3 rms volts per inch. Horizontal plates through amplifier 0.3 rms volts per inch.

MAXIMUM INPUT POTENTIAL: 500 volts rms either amplifier.

INPUT IMPEDANCE: Vertical amplifier, 1 megohm in parallel with 45 mmf. Horizontal amplifier, 1 megohm in parallel with 50 mmf.

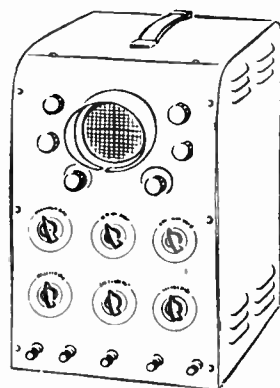
VIEWING SCREEN: This model is equipped with a 3AP1 cathode-ray tube which has a green screen.

CONVENIENTLY LOCATED CONTROLS: All controls are located on the front panel, making it unnecessary to reach to the side or rear of the case for any circuit adjustments.

FREQUENCY RESPONSE: Vertical Amplifier: 20 to 100 KC sinusoidal cycles $\pm 10\%$.
Horizontal Amplifier: 20 to 70 KC sinusoidal cycles $\pm 10\%$.

TUBES: (Supplied) 3AP1 cathode-ray tube; 884 linear sweep oscillator; 6AC7 horizontal amplifier; 6AC7 vertical amplifier and two 5Y3GT rectifiers.

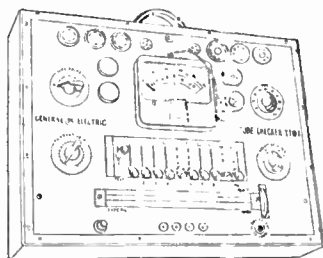
CASE AND FINISH: Welded steel case in gray wrinkle finish. Etched aluminum front panel. Size 8 in. x 12½ in. x 13 in. Weight 25 lbs.



LIST PRICE

\$98.50*

TUBE CHECKER TYPE YTW-1



LIST PRICE **\$49.50***

TEST RECEIVING TUBES FOR ALL FIVE

1. Filament Continuity
2. Heater Cathode Leakage
3. Open Elements
4. Shorted Elements
5. Quality of Emission

POWER SUPPLY—105-130 volts, 50-60 cycles power source

INSTRUMENT—4½" rectangular face, 500 ua, movement

TYPE OF TEST—Emission

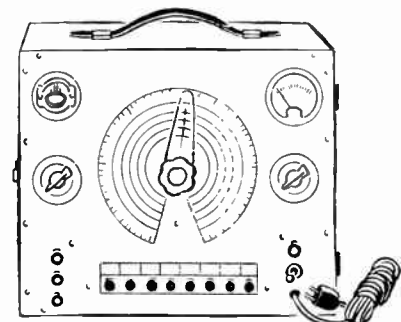
SHORT TEST SENSITIVITY—approximately 240,000 ohms (in accordance with RMA standards)

D. C. VOLTMETER SENSITIVITY—1000 ohms volt

VOLTMETER RANGES—0-10, 0-100, 0-1000 volts

SIZE—weighs only 15 lbs., steel case 17½" x 12½"

CAPACITANCE RESISTANCE BRIDGE TYPE YCW-1



LIST PRICE **\$59.50***

WILL MEASURE

- Power factor
- Insulation resistance from 0 to 2500 megohms
- Electrolytic leakage
- Turns ratio of transformers
- Capacity from .000005 mfd to 200 mfd in 3 ranges
- Resistance from 5 ohms to 20 megohms in 2 ranges

POWER SUPPLY: 105-125 volts, 50-60 cycles power source, 15 watts

CAPACITY RANGE: (3 steps) .000005 to 200 mfd, Accuracy, 5% or 2 mmfd, whichever is greater

RESISTANCE RANGE: (2 steps) 5 ohms to 20 megohms, Accuracy, 5%

TURNS RATIO RANGE: 200 to 1, 1 to 40 or 1 to 1,40

POWER FACTOR: 0 to 50% on high capacity range only

INSULATION RESISTANCE BRIDGE: 0 to 2500 megohms

POLARIZING VOLTAGE: Up to 500 volts d-c tests capacitors under working conditions

AMBIENT TEMPERATURE: 10° C to 40° C

DIMENSIONS: 9¾" x 12" x 7"

WEIGHT: 10 lbs.

* PRICES SLIGHTLY HIGHER WEST OF ROCKIES

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

FERRET TEST EQUIPMENT



COASTWISE ELECTRONICS COMPANY, Inc.

SIGNAL TRACER ELECTRONIC VOLT OHM METER

with SUB-MINIATURE 6K4 DIODE PROBE
MODEL 730



\$99⁹⁵

DEALER PRICE
Slightly Higher
Eastern States

The FERRET Model 730 is the ultimate in a combined Signal Tracer and Vacuum Tube Volt Ohm Meter that incorporates features not found in competitor's lines at any price.



Proximity Fuse Type
Lightweight Probe.

A Germanium Crystal probe, developed during the war and recently released for commercial use, is provided with the instrument. This probe is light in weight and because no tube is required, only measures $\frac{1}{4}$ " in diameter, and can therefore reach spots that are inaccessible to the ordinary probe.

Accurate direct R. F. measurements up to 300 Megacycles for F. M. and television receivers are easily obtained. The same probe is used for the Signal Tracer and operates a hum-free rectifier.

In addition to the advanced type probe, the Model 730 offers improved features that make this combination instrument the most important single unit on the service bench.

SPECIFICATIONS:

- Power: 110-120 volts, 50-60 cycles.
- Range: AC-DC 0-1, 3, 30, 100, 300, 1000, 3000.
- Ohms: Mid-scale 10 x 1 x 10 x 100 x 1000 x 100,000 x 1 megohm.
- Frequency: Audio to 300 megacycles.
- Tubes: 6X4, 2-12AU7, 6AQ5, 5AQ6, 6AL5, 6K4.
- Input Impedance: DC 10 megohms; AC 10 megohms.
- Probe: 6K4 Diode.
- Case: Aluminum, blue-gray Hammertone finish with leather handle.
- Size: 10 $\frac{1}{4}$ " high, 10 $\frac{1}{4}$ " wide, 5 $\frac{1}{2}$ " deep. Weight 13 $\frac{1}{2}$ lbs. packed.

FEATURES:

- AC-DC volt scale 0-1, 3, 30, 100, 300, 1000 and 3,000.
- Ohm scale 10, 100, 1000, 10,000, 100,000, 1 megohm and 10 megohm center scale.
- High impedance input 10 megohms DC, 10 megohms AC.
- Extremely accurate for all AC measurements to 300 megacycles.
- 3000 volt scale (sufficient for television receivers).
- Four stage amplification for signal tracing. Sufficient gain for tracing signal from antenna without using receiver as amplifier with good tone and with enclosed Speaker.
- All resistors calibrated to $\pm 1\%$.
- Accuracy within 3% to 250 megacycles; 5% above 350 megacycles.
- All miniature tubes.
- 8" illuminated meter with multi-colored, easy to read scale.
- Special 1 volt R. F. scale.



\$89⁹⁵

DEALER PRICE
Slightly Higher
Eastern States

AUDIO OSCILLATOR SINE WAVE — SQUARE WAVE MODEL 710

The FERRET Model 710 audio oscillator incorporates recently developed features that make this precision-engineered instrument outstanding in its field. This unit incorporates two units in one; a Sine Wave R.C. type oscillator with low distortion on all bands and a Square Wave generator with the same frequency range. Provides a laboratory standard for all audio application and frequency response measurements in both designing and practical applications.

Three-colored dial, glass enclosed for protection against damage and dirt, encased in a molded bakelite escutcheon. Front panel of 3-color iridescent blue-gray finish. Housed in an attractive blue-gray Hammertone finished aluminum case with leather carrying handle. Light in weight, durably constructed.

FERRET—The Feature Line.

SPECIFICATIONS:

- Power: 110-120 volts, 50-60 cycles.
- Range: 20 to 24,000 cycles, 3 bands.
- Tubes: 6X1, 6AQ5, 6AU6, 12AU7.
- Output: High impedance 15 volt sine wave or square wave.
- Dial: 3 to 1 Vernier, red and black scale on white background, hairline pointer.
- Panel: 3-color iridescent blue-gray finish.
- Test Leads: Coaxial cable, RG/59U.
- Size: 10 $\frac{1}{4}$ " x 10 $\frac{1}{4}$ " x 5 $\frac{1}{2}$ "
- Weight: 12 lbs. packed.

FEATURES:

- R. C. type oscillator—does not use beat frequency circuit.
- Range 20 to 24,000 cycles—3 bands.
- All new type miniature tubes.
- Accuracy within 2% on all bands.
- True sine wave throughout range, with special feed-back circuit for each band.
- Sine or square wave obtained by merely rotating panel switch.
- Transformers electrostatically shielded.
- Laboratory precision construction throughout.
- Vernier Drive—3 to 1 ratio.

FERRET TEST EQUIPMENT



COASTWISE ELECTRONICS COMPANY, Inc.

SIGNAL GENERATOR WIDE RANGE F.M.-A.M.-TELEVISION

MODEL 701

ALL MINIATURE TUBES



\$74⁹⁵

DEALER PRICE
*Slightly Higher
Eastern States*

The Model 701 FERRET Signal Generator is a crystal calibrated unit for AM, FM and Television receivers operating on fundamental frequencies to 110 Megacycles. Output voltage of 1 volt, which is relatively constant from 170 K.C. to 110 M.C.

This generator is so universal in scope, it serves the needs of modern radio servicing in both low and high frequency receivers. 9" dial—each band has the equivalent of 41" of calibrated dial.

The Model 701 Signal Generator is housed in an attractive, blue-gray Hammertone finished aluminum case with leather handle. 10 $\frac{1}{4}$ " high, 10 $\frac{1}{4}$ " wide, 5 $\frac{1}{2}$ " deep. Weight 11 lbs. packed.

FEATURES:

- Range 170 K. C. to 220 M. C.—Fundamentals to 110 M. C.
- Completely shielded for minimum radiation.
- Crystal calibrated, low loss, permeability tuned R. F. coils.
- Internal 400 cycle sine wave modulation—0 to 100%. Calibrated directly on dial.
- 20 to 10,000 cycle external modulation for frequency response measurements.
- Turret coil construction with shortest possible leads for minimum leakage and maximum R. F. stability. Follow-up shorting type switch—no dead spots.
- Electron coupled combination Hartley and Colpitts oscillator for high I.C. ratio, low drift and maximum stability to line voltage fluctuations.
- Low loss, low impedance, coaxial cable output.
- Ladder attenuator.
- Vernier drive—3 to 1 ratio.
- Accuracy: 1% on all bands.

SPECIFICATIONS:

- Range: 170 K. C. to 220 M. C.
- Fundamentals to 110 M. C.
- Power: 110-120 volts, 50-60 cycles.
- Tubes: 6C4, 6AU6, 6X4.
- Dial: Large 9" 3-colored scale, glass covered with molded escutcheon.
- Output: 1. volt R. F., low impedance. Coaxial cable, 15 volt. Audio high impedance.

DE LUXE TEST SPEAKER and UNIVERSAL SUBSTITUTOR MODEL 721



\$29⁹⁵

DEALER PRICE
*Slightly Higher
Eastern States*

The FERRET Model 721 De Luxe Test Speaker was designed primarily to eliminate the necessity of removing set speaker from midget radios, consoles or auto radios for servicing.

A compact, portable, light weight unit, housing a specially constructed 6" P. M. speaker with exceptional tone quality and sufficient current rating to test any radio.

Attractive 3-color iridescent easy to read front panel. Housed in an attractive blue-gray Hammertone finished aluminum case with leather handle.

In addition, this ingeniously designed unit incorporates the following outstanding features:

FEATURES:

- Provides a substitution for choke, electrolytic condensers, coupling, by-pass condensers and a wide range of resistors.
- Speeds servicing—eliminates soldering until all defective parts are located and substituted.
- Voice coil connection permits substitution of any output transformer.
- Rotating input and field switches on front panel permits matching to any single or push-pull output tubes.

SPECIFICATIONS:

- Field Impedance: 500, 1000, 1500 and 2500 Ohms.
- Current: 175 Milliampers Maximum.
- Input: Universal, for single ended or tubes in push-pull.
- Speaker: 6" P. M. Dustproof, of special construction; low resonant point.
- Size: 10 $\frac{1}{4}$ " x 10 $\frac{1}{4}$ " x 5 $\frac{1}{2}$ ".
- Weight: 8 $\frac{1}{2}$ lbs. packed.

Electronic Measurements Corporation

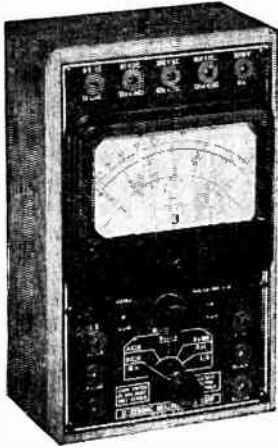
* VOLOMETER

*Trade Name for Volt-Ohm-Milliammeter

Here is an unusually attractive, EXCEPTIONALLY LOW-PRICED volt-ohm-milliammeter. It is a rugged, flexible instrument, combining features which are not available in competitive models selling for more than double this price.

You will be convinced when you read the "Specifications" and "Special Features" that MODEL 101 VOLOMETER is just the instrument to have around the shop or lab whenever the type of measurement does not justify the use of expensive, complicated, highly sensitive equipment.

The fact that resistances between 1/20 OHM and 20 MEGS and AC voltages between 25 CYCLES and 1 MEGACYCLE in frequency can be measured with this unit, makes it a handy and very valuable instrument. In short, when it comes to value and versatility, MODEL 101 really sets the pace.



MODEL 101B

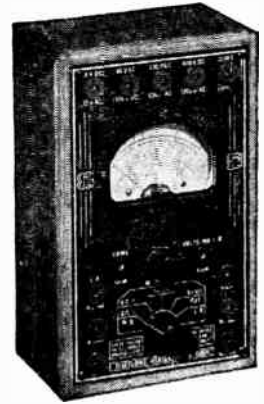
Open face as shown.

Price \$20.95

Size: 5 5/8" x 8 5/8" x 2 3/4".
In portable case.

Price \$24.95

Size: 7 1/4" x 8 5/8" x 3 1/4".
Complete with test leads.



MODEL 101A

Open face as shown.

Price \$17.50
Size: 4 1/2" x 7 1/2" x 3 1/4".

In portable case.

Price \$21.50
Size: 6 1/4" x 7 1/2" x 3 1/4".
Complete with test leads.

SPECIFICATIONS

- 5 DC VOLTAGE RANGES (approx. 1000 ohms per v.): 0 to 6-60-300-600-3000 volts.
- 4 AC VOLTAGE RANGES: 0 to 12-120-600-1200 volts.
- 3 DC CURRENT RANGES: 0 to 6-60-600 milliamperes.
- 4 RESISTANCE RANGES: 0 to 200-2000-200,000 20 megohms.

SPECIAL FEATURES

Resistances from 1/20 ohm to 20 megohms. Low ohm scale is low drain back-up type. First 10 divisions are 1/20 ohm each.

AC volts from 25 cycles to 1 megacycle with no temperature error. No external source of power

required.

Battery and rectifier replaceable without use of soldering iron.

Matched-pair multiplier resistors accurate within 1%. Meter accurate within 2%.

* VOLOMETER MODEL 100

*Trade Name for Volt-Ohm-Milliammeter

A new pocket size volt-ohm-milliammeter with features never before available in an instrument of this size and price. Quality engineered both electrically and mechanically this instrument will satisfy the exacting requirements of the electronics engineer, laboratory worker or service man. Employing a special rectifier circuit, this unit will accurately measure AC voltages from 25 CYCLES to 1 MEGACYCLE with no temperature errors and without the necessity of plugging into any external source of power. For this reason it is invaluable for Audio, I. F. or low R. F. voltage measurements. In addition, the instrument can be used to measure resistances from 1/2 ohm to 30 megohms.

Bakelite panel and wooden case prevent any voltage breakdowns to either the panel or case when measuring high voltages.

SPECIFICATIONS:

- 6 D. C. VOLTAGE RANGES (1000 ohms per volt) 0 to 2-12-60-300-1200-6000 volts.

Open face model, Size: 6 3/8" x 3 1/2" x 3". Price **\$21.95**

Portable Model. Complete with set of test leads. Size: 6 3/8" x 4 1/2" x 4 1/4". Price **\$25.95**

- 6 A. C. VOLTAGE RANGES (1000 ohms per volt) 0 to 3-12-60-300-1200-6000 volts.
- 4 D. C. CURRENT RANGES 0 to .6-6-60-600 milliamperes.
- 3 RESISTANCE RANGES 0 to 3000-300,000 ohms; 0 to 30 megohms.
- 4 DB RANGES —10 to plus 8-20-34-48.

SPECIAL FEATURES:

A. C. volts from 25 cycles to 1 megacycle with no temperature errors. No external source of power required.

Bakelite panel.

Battery and rectifier replaceable without soldering iron.

Resistances from 1/4 ohm to 30 megohms.

Voltages to 6000 volts.

0-400 Microampere Meter.

All multipliers are matched within 1%.



MODEL 100

MODEL 400 ELECTRONIC LIMIT BRIDGE



MODEL 400

Here is an Electronic Limit Bridge that has ALL the features you've been looking for:

SIMPLICITY OF OPERATION—No adjustments to be made. Just plug into any 115 Volt A. C. line.

NO BATTERIES TO BE REPLACED—Model 400 is completely A. C. operated and contains no batteries.

WIDE RANGE—Resistance from 1 ohm to 3 megohms can be measured.

STABILITY—Zero does not shift every time the unit is turned on. Special push-pull circuit as-

ures constancy of readings in spite of changing tube characteristics.

ACCURACY—Standard internal resistors are accurate to ±0.1%.

PROTECTION AGAINST OVERLOAD—Meter can't be damaged even if resistor to be measured is open or shorted.

DIRECT READING IN % DEVIATION—Available with either 5% or 10% full scale deflection. Specify which is desired.

INDICATES WHETHER PLUS OR MINUS DEVIATION—Each division represents 0.2%.

QUALITY WORKMANSHIP—Bus bar wiring used.

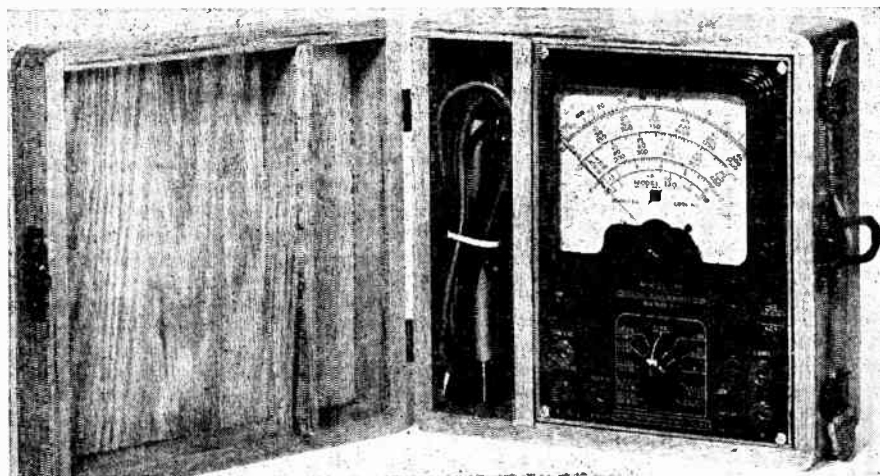
Model 400A with 3" meter as illustrated Low Price **\$75.00**

Model 400B with 4 1/4" square meter Low Price **\$85.00**

Model 400C with 7 1/2" square meter Low Price **\$99.50**

ELECTRONIC MEASUREMENTS CORPORATION ANNOUNCES THE

E.M.C. Model 120 VOLOMETER*



Compare

Model 120 is the ONLY 20,000 ohms per volt instrument that gives you:

1. **WIDEST** resistance range (.2 ohm to 300 megs.)
2. **HIGHEST AC** voltage sensitivity (10,000 ohms per volt)
3. **LOWEST PRICE** — \$29.95, open face model; \$34.95 for Model 120-P (portable)

Other Features Include:

1. AC voltage frequency range 30 cycles to 1 megacycle.
2. Rectifier and battery replaceable without soldering iron.
3. No external source of power needed for AC voltage measurements.
4. Special precision voltage multipliers accurate to 1%.

Specifications:

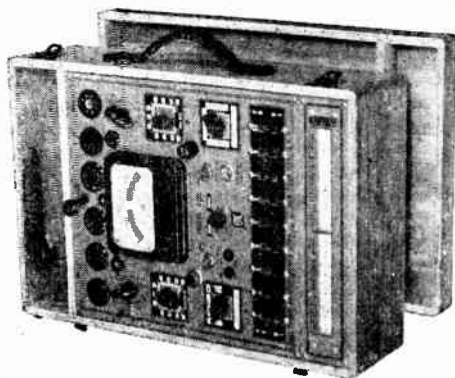
- DC volts at 20,000 ohms per volt: 0-3v, 0-15v, 0-60v, 0-300v, 0-1500v, 0-6000v.
- AC volts at 10,000 ohms per volt: 0-6v, 0-30v, 0-120v, 0-6000v, 0-3000v, 0-6000v.
- DC current: 0-60 microamps, 0-6ma, 0-60ma, 0-600ma, 0-6 amps.
- Resistance: 0-3000, 0-300,000, 0-3 megs, 0-300 megs.
- Decibels: -4 to +11, +10 to +25, +22 to +37, +36 to +51, +50 to +65, +62 to +77.

*Reg. Pend. U. S. Patent Office

. . . AND the E.M.C. 200 Mutual Conductance TUBE TESTER

Check These Features

- ✓ Checks mutual conductance on a calibrated micromho scale, as well as an a "Reject-Good" scale.
- ✓ Checks 5 element tubes as pentodes.
- ✓ Checks tubes for gas content.
- ✓ Sufficient plate current to check both emission and mutual conductance.
- ✓ Detects both shorted and open elements.
- ✓ Complete switching flexibility allows all present and future tubes to be tested regardless of location of elements on tube base.
- ✓ Tests tubes for radio frequency and other noise.
- ✓ Tests all tubes from .75 volts to 117 filament volts.
- ✓ Tests all loctal, octal, and miniature tubes.
- ✓ Tests cold cathode, magic-eye, voltage regulator tubes, ballast resistors.
- ✓ Instrument is fused, and fuse is easily replaceable from front of panel.
- ✓ Individual sockets for each tube base type eliminates possible errors.
- ✓ Checks individual sections of multi-purpose tubes.
- ✓ Attractive four-color panel with plenty of eye-appeal. Hard wrinkle finish for durability.



E.M.C. Series 200 Mutual Conductance TUBE TESTERS

	Net Prices
Model 200 BC . . . 4½" meter in sloping counter case	\$52.85
Model 200 BP . . . 4½" meter in hand-rubbed carrying case	56.85
Model R200 BC . . . Same as Model 200 BC plus built-in Roll Chart	58.85
Model R200 BP . . . Same as Model 200 BP plus built-in Roll Chart	62.85
Roll Chart unit in individual case	6.00
(For 220 v. operation add \$5.00 to above prices)	

CLARKSTAN

CORPORATION
11927 W. Pico Blvd.
Los Angeles 34, Cal.

Manufacturing Engineers

SWEEP FREQUENCY GENERATOR

Model 125

The Clarkstan Sweep Frequency Generator is an electronic device used to determine quickly the behavior of audio and other alternating electrical apparatus with respect to frequency and associated phenomena.

The complex signal is produced by scanning photo-electrically a synchronously rotating disc. The modulation on the disc is the photographic reduction of a precision pattern.

The accuracy of the original disc assures a positive signal which limits anomalous distortion, frequency and other discriminations which could be introduced by non-stable reactive components of more complex circuits.

The Model 125 Sweep Frequency Generator is recommended for use in production testing, development laboratories, schools and colleges, motion picture sound equipment, magnetic recorder development, radio stations and maintenance and service technicians.

SPECIFICATIONS — Model 125 S.F. Generator

OUTPUT — 7 volts, open circuit; 50 milliwatts or 5 volts into 500 ohms. **IMPEDANCE** — Internal impedance 200 ohms. **POWER CONSUMPTION** — 25 watts, 115 v., 50 & 60 cycles. **CABINET MOUNTED** — 15³/₁₆" x 8" x 8³/₁₆" deep. **WEIGHT** — 18½ lbs. **FINISH** — Dark Maroon Burlene baked enamel. All tubes supplied. 2 - 7C7; 1 - 7C5; 1 - 5AZ4; 1 - 927. Will operate with any standard oscilloscope.



FREQUENCY RANGE — 40 cps. to 10 KC with 60 cycle AC. **MARKER PULSES** — at 1, 3, 5, 7, and 10 KC. **SWEEP FREQUENCY** governed by 20 synchronizing pulses per second. (With 50 cycle AC current, the range is 23 cps. to 8333 cps. with frequency markers at 833, 2500, 4170, 5840, and 8333 cps.)

Model 125 Clarkstan Sweep Frequency Generator complete with scanning disc. Net Price \$195.00

Model 130.1 Scanning disc, 40 cps. to 10 KC, disc only. Net Price \$12.20

SWEEP FREQUENCY TRANSCRIPTIONS (20 SPS) RECORDS AND FILM

— By Wayne R. Johnson

No. 1000A—12" Vinylite record, 78 RPM, 70 to 10,000 cps., recorded flat plus or minus 1 db. Net Price	\$6.60
No. 1000D—12" Vinylite record, 78 RPM, 5 KC to 15 KC, recorded flat plus or minus 1 db. Net Price	\$6.60
No. 100A—16" Vinylite record, 33½ RPM, 60 to 10,000 cps., recorded with NAB curve. Net Price	\$15.00
No. 115—35 mm film, variable density in 10 ft. loops. Net Price	\$10.00
No. 117—16 mm film, variable density in 10 ft. loops. Net Price	\$10.00



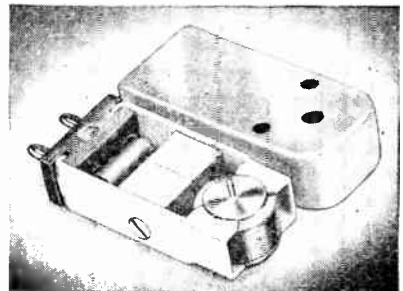
WIDE RANGE RV PICKUP

The Clarkstan RV Wide Range Pickup is a variable reluctance reproducer featuring a removable stylus, and offering Flat Response, Low Distortion, in addition to featherweight needle force.

SPECIFICATIONS: TYPE—Magnetic, variable reluctance with removable stylus. **ARMATURE**—Stylus is the armature; weight 31 mg. (.031 g.) **RESPONSE** — Exactly velocity responsive to 15,000 cps. **STYLUS** — Sapphire with standard .003" radius ball point, 50° cone angle. Other sizes available. **NEEDLE FORCE** — 20 grams optimum for commercial pressings. **OUTPUT** — 60 millivolts at 1000 cps with lateral displacement of .001". **IMPEDANCE** — Standard cartridge, high impedance. May also be had in impedances of 5, 50, 250 and 500 ohms. **RECOMMENDED TERMINATION** — High impedance.

ELECTRICAL CHARACTERISTICS — Inductance 350 millihenries at 1000 cps.; "Q" 1.05; DC Resistance 1450 ohms. **MOUNTING** — Standard mounting holes, ½" between centers 3-48 screws. **WEIGHT** — 30 grams.

No. 211 RV Wide Range Pickup & Transcription Tone Arm complete with standard sapphire stylus. Net Price \$31.50	
No. 201 RV Wide Range cartridge only (with standard sapphire stylus). Net Price \$15.00	
Extra sapphire styli (tubular shank) for Clarkstan RV Pickup: Sapphire Ball Point	
No.	Radius
251.10	.0010"
251.15	.0015"
251.2	.0022"
251.5	.0025"
251.3	.003"



Net Price \$2.40 each (All prices subject to change without notice.)



TEST EQUIPMENT

EICO MODEL 113A—MULTI-ANALYST

EXCLUSIVE! NO OTHER INSTRUMENT HAS ALL THESE FEATURES

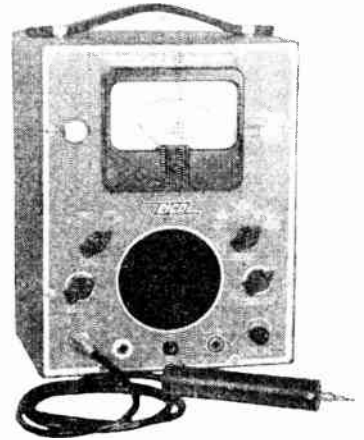
A compact, multi-purpose utility instrument that stands alone as a unique, dependable test instrument. This one unit can outperform a panelful of expensive separate instruments. Each function carefully designed for maximum performance and dependability with exceptional accuracy. Includes a complete vacuum tube voltmeter, a broad range audible signal tracer, a very high resistance D.C. VTVM, a wide range electronic ohmmeter, a high impedance, accurate and linear A.C. VTVM, and a wide range DB scale for gain measurements.

Degenerative cathode follower bridge type circuit assures greater linearity, accuracy and stability than heretofore possible. Set the meter once and it's stable on all scales. No danger of meter burn out with automatic overload circuit. Extra high gain signal tracer amplifier so sensitive it can pick up signals at the antenna. Broad band signal tracing probe follows signals throughout the receiver without adjustments. Perfect reproduction with a 4" speaker monitor. Perfect for accurate and rapid checking of fading, phono crystals, microphones, etc. Fastest method of trouble shooting.

Electronic AC ranges 0-5, 10, 100, 500, and 1000 volts with 3 megohms input impedance. Electronic ohms range measurements from .2 ohms to 1000 megohms in 5 convenient ranges. Accuracy of 2% on all ranges. Acclaimed by all who use it.

Dealer Net Price

\$89.50



MODEL 221-VACUUM TUBE VOLTMETER

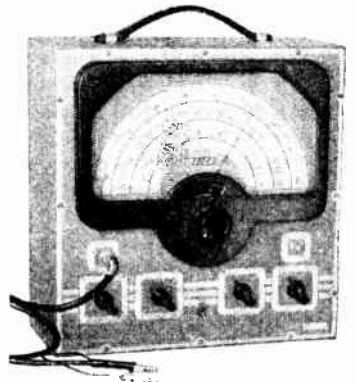
A feat of engineering design was accomplished in this compact 4 1/2" meter VTVM at this unusually low price. A masterpiece in overall usefulness. It includes a very high resistance D.C. VTVM, a wide range electronic ohmmeter, a high impedance, accurate and linear electronic A.C. VTVM and a wide range DB scale.

Has exceptional stability, accuracy, and linearity. Stable on all ranges. No outmoded inaccurate copper oxide rectifier. No danger of meter burn out. 2% accuracy on all ranges. Each instrument individually calibrated. 26 megohms input resistance. Electronic AC and DC ranges 0-5, 10, 100, 500, 1000 volts. Electronic ohmmeter measures from .2 ohms to 1000 megohms in 5 ranges. Just the instrument for laboratories, schools and service shops. Dealer Net Price

\$49.95

MODEL 406 TRANS-CONDUCTANCE TUBE TESTER

The most modern method of testing tubes. Measures the actual trans-conductance of the tube as well as shows it on a good or bad scale. A speed roll chart has all the latest tubes listed. A speed roll chart has all the latest tubes listed. Can check all modern tubes including the new 9" prog television and FM tubes. Resists obsolescence because of its point to point switching system. Easy to operate. Tops in the field. In a handsome wood cabinet that will be the pride of any shop.



EICO MODEL 315 SIGNAL GENERATOR

Has Micro-Cycle Band Spread Vernier Tuning. Vitally important for tuning and aligning FM and Television receivers where tuning is very sharp and critical. The extreme wide range and accuracy afforded by the micro-cycle vernier band spread dial assures accurate frequency adjustment for test or alignment of broadcast FM or Television receivers. Vernier dial divided into 100 divisions. Any frequency can be tuned and repeated within .02% accuracy. Extremely accurate and stable throughout its range. Window casing encloses dial and fine pointer, protecting the pointer against being accidentally bent or jarred out of calibration. Range 75kc to 150mc. Complete broadcast band from 550kc to 1700kc is covered on one range without switching. Unused coils are automatically shorted out to eliminate dead spots and absorption. Linear dial calibration. DOES NOT CROWD UP on the high frequency end of the dial. Accuracy better than .5% throughout the broadcast band and 1% on the higher frequencies. Just as accurate at high end of dial as the low end. Dealer Net Price

\$64.50



EICO MODEL 210—DELUXE VACUUM TUBE VOLTMETER

Another unique instrument in the amazing EICO line is this giant VTVM with a huge 8 1/2" meter. A knife edge pointer gives this meter laboratory accuracy. Careful engineering gives it maximum flexibility with maximum stability. Measures 5000 volts DC, and can be extended to 10,000 volts. Perfect for Television receivers. The AC-RF probe contains a UHF tube that measures RF voltages from 0.3 cycles to 300 megacycles. Giant meter can be easily seen from a distance. Has shift compensating circuit for stability on all ranges. Cathode follower, bridge type circuit gives the instrument exceptional stability and accuracy. Only one scale for the DC, AC and RF readings. A DB scale is included for gain measurements. DC ranges are 0-5, 10, 100, 500, 1000, 5000 volts; AC-RF ranges are 0-5, 10, 100, 500, 1000 volts. Electronic ohmmeter reads from .2 ohms to 1000 megohms in 6 ranges. Outstanding value. Dealer Net Price

\$69.50

ELECTRONIC INSTRUMENT CO., INC. • 926 CLARKSON AVENUE, BROOKLYN 3, N. Y.

SUPERIOR TEST EQUIPMENT



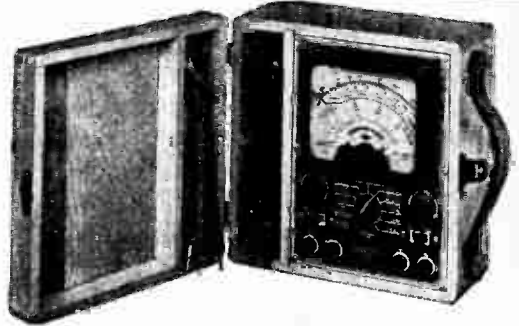
The New Model 670 SUPER METER

A Combination VOLT-CHM-MILLIAMMETER plus CAPACITY REACTANCE, INDUCTANCE and DECIBEL MEASUREMENTS
 D.C. VOLTS: 0 to 7.5/15/75/150/750/1500/7500. A.C. VOLTS: 0 to 15/30/150/300/1500/3000 Volts. OUTPUT VOLTS: 0 to 15/30/150/300/1500/3000. D.C. CURRENT: 0 to 1.5/15/150 Ma.; 0 to 1.5 Amps. RESISTANCE: 0 to 500/100,000 ohms, 0 to 10 Megohms. CAPACITY: .001 to .2 Mfd., 1 to 4 Mfd. (Quality test for electrolytics). REACTANCE: 700 to 27,000 Ohms; 13,000 Ohms to 3 Megohms.

INDUCTANCE: 1.75 to 70 Henries; 35 to 8,008 Henries.
 DECIBELS: -10 to +18, +10 to +38, +30 to +58.

THE MODEL 670 COMES HOUSED IN A RUGGED, CRACKLE-FINISHED STEEL CABINET COMPLETE WITH TEST LEADS AND OPERATING INSTRUCTIONS. SIZE 5 1/2" x 7 1/4" x 3 1/2".

\$2840 NET

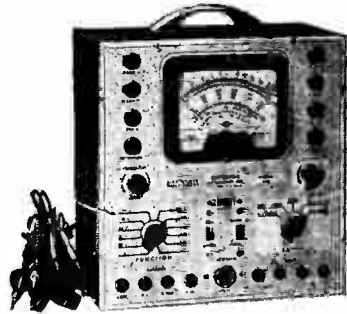


Model 670P

Identically the same as the Model 670 except housed in a portable, oak cabinet complete with cover. Dimensions: 8 1/4" x 8 1/4" x 4 3/8". Supplied with test leads and all operating instructions.

\$3575

Net Price



The New Model 400 Electronic Multi-Meter

A combination vacuum-tube voltmeter and volt-ohm milliammeter plus capacity, inductance, reactance, and decibel measurements.

SPECIFICATIONS:

D.C. V.T.V.M. VOLTS: (At 11 Megohms Input Resistance.) 0 to 3/15/30/75/150/300/750/1500/3000 Volts.
 A.C. VOLTS: (At 1,000 Ohms Per Volt.) 0 to 3/15/30/75/150/300/750/1500/3000 Volts.

3000 Volts. D.C. CURRENT: 0 to 3/15/30/75/150/300/750 Ma., 0 to 3/15 Amperes.
 RESISTANCE: 0 to 1,300/10,000/100,000 Ohms; 0 to 1/10/1,000 Megohms.
 CAPACITY: (In MFD.) .0005—.2, .05—.20, .5—.200.
 REACTANCE: 10 to 5M (Ohms), 100—50M (Ohms), .01—5 (Megohms).
 INDUCTANCE: (In Henries.) .035-14, .35-140, 35-14,000.
 DECIBELS: -10 to +13, +10 to +33, +30 to +59.

\$5250 NET

The New Model 680 5,000 Ohms per Volt VOLT - OHM MILLIAMMETER

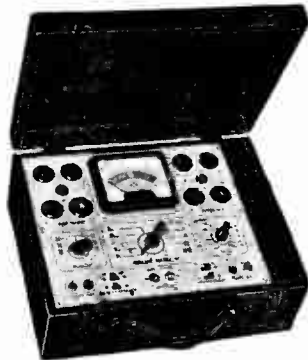
The Model 680 measures:
 D.C. VOLTAGES TO—1,500 Volts
 A.C. VOLTAGES TO—1,500 Volts
 RESISTANCE TO—2 Megohms
 OUTPUT VOLTS TO—1,500 Volts
 D.C. CURRENT TO—150 Ma.
 DECIBELS TO—+58 D.B.

SPECIFICATIONS:

4 D.C. Voltage Ranges: 0 to 15/75/300/1,500 Volts; 4 A.C. Voltage Ranges: 0 to 15/75/300/1,500 Volts; 4 Output Meter Ranges: 0 to 15/75/300/1,500 Volts; 4 D.C. Current Ranges: 0 to 150 Microamperes—0 to 15/75/150 Ma.; 4 Resistance Ranges 0 to 2,000/20,000/200,000 Ohms—0 to 2 Megohms; 4 Decibel Ranges: -10 to +18 D.B. +4 to +32 D.C. +16 to +44 D.B. +30 to +58 D.B.

Model 680 comes housed in a hand-rubbed oak portable cabinet complete with cover, self-contained battery, test leads and instructions. Measures 4" x 6 1/2" x 7". Net Price

\$1950



The New Model 450 TUBE TESTER

Speedy operation — assured by the newly designed rotary selector switch which replaces the usual snap, toggle, or lever action switches.

SPECIFICATIONS

- Tests all tubes up to 117 volts.
- Tests shorts and leakages up to 3 Megohms in all tubes.
- Tests both plates in rectifiers.
- New type line voltage adjuster.
- Tests individual sections such as diodes, triodes, pentodes, etc., in multi-purpose tubes.
- Noise Test detects microphonic tubes or noise due to faulty elements and loose internal connections.
- Uses a 4 1/2" square rugged meter.
- Works on 90 to 125 volts 60 cycles A.C.

EXTRA SERVICE—May be used as an extremely sensitive condenser Leakage Checker. A relaxation type oscillator incorporated in this model will detect leakages even when the frequency is one per minute.

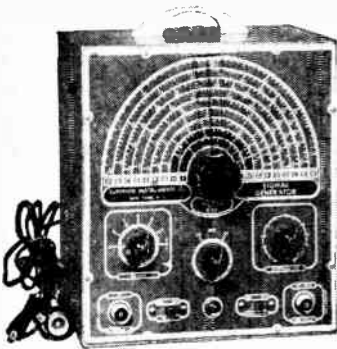
\$3950 NET

Manufactured by

SUPERIOR INSTRUMENTS CO.



SUPERIOR TEST EQUIPMENT



The New Model 650 Signal Generator

Ranges: 100 Kilocycles to 35 Megacycles on Fundamentals; 25 Megacycles to 105 Megacycles on Harmonics.
 • RF obtainable separately or modulated by the Audio Frequency.
 • Audio Modulating Frequency—400 cycles pure sine wave—less than 2% distortion.

- Attenuation—3-step ladder type of attenuator (T pad).
 - Uses a Hartley Excited Oscillator with a Buffer Amplifier.
 - Tubes: 6J5 as R.F. Oscillator; 6SA7 as modulated Buffer and Mixer; 6SL7 as audio oscillator and rectifier.
- Complete with coaxial cable, leads, instructions.

\$39⁹⁵

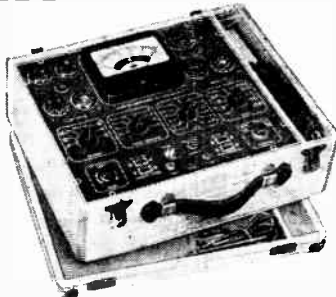
The New Model CA-11 SIGNAL TRACER

Simple to operate . . . because signal intensity readings are indicated directly on the meter!

- Simple to operate—only 1 connecting cable—no tuning controls.
 - Highly sensitive—uses an improved Vacuum Tube Voltmeter circuit.
 - Tube and resistor-capacity network are built into the Detector Probe.
 - Completely portable—weighs 5 lbs. and measures 5" x 6" x 7".
 - Comparative signal intensity readings are indicated directly on the meter as the Detector Probe is moved to follow the Signal from Antenna to Speaker.
 - Provision is made for insertion of phones.
- The Model CA-11 comes housed in a beautiful hand-rubbed wooden cabinet. Complete with probe, test leads and instructions.



\$18⁷⁵ NET



The New Model 600 Tube and Set Tester

A New Combination Tube Tester and Multimeter. A complete testing laboratory all in one unit. Test tubes. Reads A.C. Volts, D.C. Volts, D.C. Currents, Resistances and Decibels.

- Tube Tester Specifications:**
- Speedy operation—assured by newly designed rotary selector switch.
 - Tests all tubes up to 117 Volts.
 - Tests shorts and leakages up to 3 Megohms in all tubes.
 - Tests leakages and shorts of any one element against all elements in all tubes.
 - Tests both plates in rectifiers.
 - Tests individual sections such as diodes, triodes, pentodes, etc., in multi-purpose tubes.
 - New type line voltage adjuster.

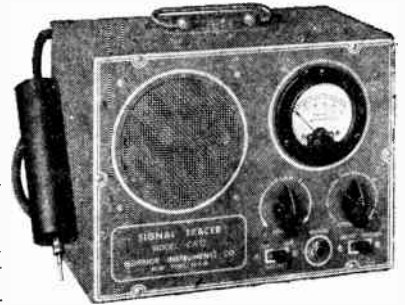
Multi-Meter Specifications:

- D.C. VOLTS: (At 1,000 Ohms Per Volt) 0 to 7.5/15/75/150/750/1,500 Volts.
- A.C. VOLTS: 0 to 15/30/150/300/1,500/3,000 Volts.
- D.C. CURRENT: 0 to 1.5/15/150 Ma., 0 to 1.5 Amperes.
- RESISTANCE: 0 to 2,000/20,000/200,000 Ohms, 0 to 20 Megohms.
- DECIBELS: (Based on zero decibels equals .006 Watts into a 500-Ohm line.) —10 to +18 D.B., +10 to +38 D.B., +30 to +58 D.B.

\$52⁶⁰

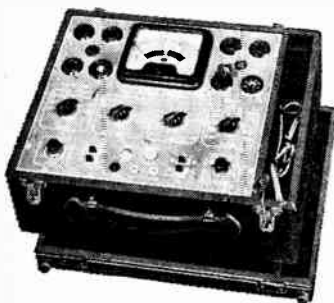
Now you can SEE and HEAR The Signal SIGNAL TRACER

Always ready for instant use it takes less than five seconds to begin using this versatile unit. No maze of special cables—the Model CA-12 use only one connecting cable. No line cord on self-contained batteries. No tuning controls of any kind are needed—no tuning cable—no tuning.



- FEATURES:**
- Comparative intensity of the signal is read directly on the meter—Quality of the signal is heard in the speaker.
 - Simple to operate—only one connecting cable—no tuning controls.
 - Highly sensitive—uses an improved vacuum-tube voltmeter circuit.
 - Tube and resistor capacity network are built into the detector probe.
 - Built-in high gain amplifier—Alnico V. speaker.
 - Completely portable—weight 8 pounds—measures 5 1/2" x 6 1/2" x 9".
 - The Model CA-12 comes complete with Detector Probe, test leads, self-contained batteries and instructions. Comes housed in heavy gauge crystalline cabinet with beautiful two tone etched front panel. Net Price...

\$29⁹⁵



The New Model 777 20,000 Ohms Per Volt!! TUBE and SET TESTER

Tube Tester Specifications:

- Tests all tubes including 4, 5, 6, 7, 7L, Octals, Octals, Television, Magic Eye, Thyratrons, Single Ended, Floating Filament, Mercury Vapor Rectifiers, New Miniatures, etc. Also Pilot Lights.
- Tests by the well-established emission method for tube quality, directly read on the scale of the meter.
- Tests leakages and shorts of any one element against all elements in all tubes.
- Tests both plates in rectifiers.
- Tests in individual sections such as diodes, triodes, pentodes, etc., in multi-purpose tubes.
- New type line voltage adjuster.

Model 777 operates on 90-120 Volts 60 cycles A.C. Housed in beautiful hand-rubbed cabinet. Complete with test leads, tubes, charts and detailed operating instructions. Size 13" x 12 1/2" x 6".

V.O.M. Specifications:

- D.C. VOLTS: (at 20,000 Ohms Per Volt) 0 to 7.5/15/75/150/750/1,500 Volts.
- A.C. VOLTS: (At 10,000 Ohms Per Volt) 0 to 15/30/150/300/1,500/3,000 Volts.
- D.C. CURRENT: 0 to 1.5/15/150 Ma.
- RESISTANCE: 0 to 5,000/50,000/500,000 Ohms 0 to 50 Megohms.
- DECIBELS: (Based on zero decibels equals .006 Watts into a 500-Ohm line.)
- 10 to +18 db., +10 to +38 db., +30 to +58 db.

\$59⁹⁵ NET PRICE

Manufactured by

SUPERIOR INSTRUMENTS CO.



SHUNTS - SWITCHBOARD TYPE

111547

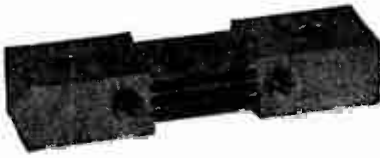
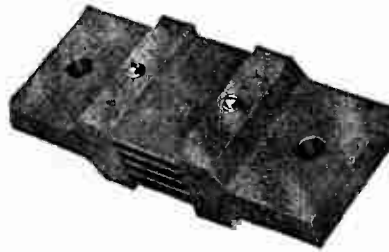
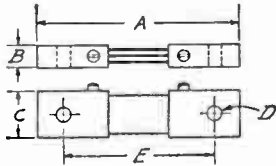


FIG. 1



FIGS. 2 & 3

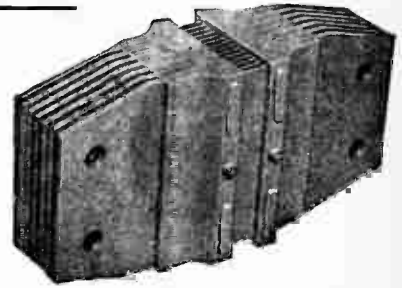
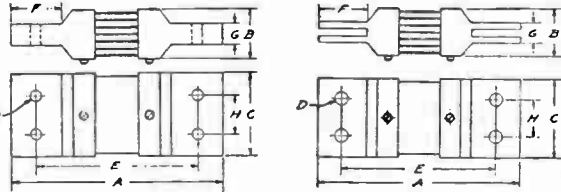
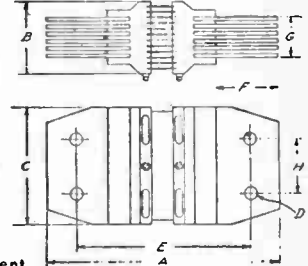


FIG. 4



All lug blades are 1/4" thick and spaced 1/4" apart to receive 1/4" bus bar.
 Switchboard shunts consist of special alloy strips, the ends of which are fitted into terminal blocks provided with means for connecting the shunt in circuit with the main conductor and with the instrument.

IMPORTANT: Shunts below 25 amperes must be adjusted to the instrument with which they are to be used.

AMPERES	PART NUMBER	FIG. NO.	A	B	C	D	E	F	G	H	NO. OF BLADES	NET PRICE
10	26-2-30	1	3-3/4	1/8	1/2	10-32	3-3/16	---	---	---	---	\$ 5.95
15	26-2-3	1	3-3/4	1/8	1/2	10-32	3-3/16	---	---	---	---	5.95
20	26-2-4	1	3-3/4	1/8	1/2	10-32	3-3/16	---	---	---	---	5.95
25	26-2-25	1	3-3/4	1/8	1/2	10-32	3-3/16	---	---	---	---	5.95
30	26-2-49	1	3-3/4	3/16	1/2	10-32	3-3/16	---	---	---	---	5.95
50	26-2-8	1	4-1/4	1/4	7/8	17/64	3-3/8	---	---	---	---	5.95
60	26-2-50	1	4-1/4	1/4	7/8	17/64	3-3/8	---	---	---	---	5.95
75	26-2-12	1	4-1/4	3/8	1	21/64	3-1/8	---	---	---	---	5.95
100	26-2-11	1	4-1/4	3/8	1	21/64	3-1/8	---	---	---	---	5.95
150	26-2-13	1	4-1/4	5/8	1	21/64	3	---	---	---	---	5.95
200	26-2-14	1	4-1/4	5/8	1	21/64	3	---	---	---	---	5.95
250	26-2-15	1	4-1/4	5/8	1-1/4	25/64	3	---	---	---	---	6.85
300	26-2-16	1	4-1/4	5/8	1-1/4	25/64	3	---	---	---	---	6.85
350	26-2-17	1	4-1/4	5/8	1-1/4	25/64	3	---	---	---	---	8.60
400	26-2-18	1	4-1/4	3/4	1-1/4	25/64	3	---	---	---	---	8.60
500	26-2-19	1	4-1/2	3/4	1-1/2	25/64	3	---	---	---	---	10.40
600	26-2-20	1	4-1/2	3/4	1-1/2	25/64	3	---	---	---	---	12.30
750	26-2-21	1	7-1/4	1	2-1/4	17/32	4-1/2	---	---	---	---	16.10
800	26-2-22	1	7-1/4	1	2-1/4	17/32	4-1/2	---	---	---	---	16.10
1000	26-2-23	1	7-1/4	1	2-1/4	17/32	4-1/2	---	---	---	---	21.40
1200	26-2-25	2	7-1/4	1-3/4	2-7/8	17/32	5-1/2	1-3/4	3/4	1-3/8	---	42.80
1500	26-2-10	2	7-1/4	1-3/4	2-7/8	17/32	5-1/2	1-3/4	3/4	1-3/8	---	42.80
2000	26-2-24	2	7-1/4	1-3/4	2-7/8	17/32	5-1/2	1-3/4	3/4	1-7/16	---	42.80
2500	26-2-27	2	7-1/4	1-3/4	2-7/8	17/32	5-1/2	1-3/4	3/4	1-7/16	---	64.20
3000	26-2-37	3	9-1/4	2-1/2	3-7/8	17/32	7	2-1/4	3/4	2	2	64.20
3500	26-2-38	3	9-1/4	2-1/2	3-7/8	17/32	7	2-1/4	3/4	2	2	85.60
4000	26-2-39	3	9-1/4	2-1/2	3-7/8	17/32	7	2-1/4	3/4	2	2	85.60
4500	26-2-40	3	9-1/2	4	5-1/8	13/16	7-1/2	2	1-1/4	2-1/2	3	107.00
5000	26-2-41	3	9-1/2	4	5-1/8	13/16	7-1/2	2	1-1/4	2-1/2	3	107.00
6000	26-2-36	3	9-1/2	4	5-1/8	13/16	7-1/2	2	1-1/4	2-1/2	3	128.40
7500	26-2-42	3	9-1/2	4	5-1/8	13/16	7-1/2	2	1-1/4	2-1/2	3	171.20
8000	26-2-43	3	9-1/2	4	5-1/8	13/16	7-1/2	2	1-1/4	2-1/2	3	171.20
10000	26-2-44	4	16-1/4	5	8	13/16	12-3/4	4-1/2	2-3/4	3-1/2	6	214.00
12000	26-2-45	4	16-1/4	5	8	13/16	12-3/4	4-1/2	3-1/4	3-1/2	7	256.80
15000	26-2-46	4	16-1/4	7	8	1-1/16	12	4-1/2	4-1/4	3-1/2	9	321.00
16000	26-2-52	4	16-1/4	7	8	1-1/16	12	4-1/2	4-1/4	3-1/2	9	342.40
18000	26-2-47	4	16-3/8	8	10	1-1/16	12-7/8	4-1/2	4-1/4	4-1/2	9	385.20
20000	26-2-48	4	16-3/8	8	10	1-1/16	12-7/8	4-1/2	4-1/4	4-1/2	9	428.00

Prices are F.O.B. Los Angeles and subject to change without notice, and will be billed at prices prevailing at time of shipment.

All shunts listed are adjusted to 50 millivolt drop. 75 millivolt shunts are one and one-half times the above prices. 100 millivolt shunts are two times the above prices.

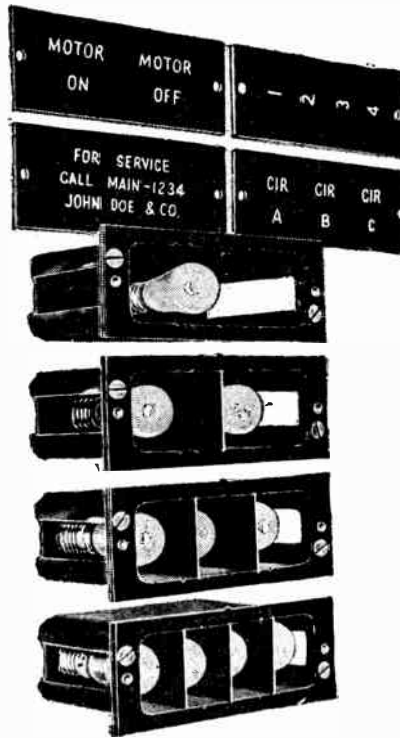
Ring or multiple range shunts can be supplied in any range combination. Prices can be determined by totalling the price of each individual shunt plus a calibration charge of \$7.50.

Shunt leads are normally included with the ammeters for use with external shunts. If leads are required, standard 5-foot leads are \$1.75 each, and for additional lengths add 35¢ per foot.

MULTIPLE LAMP INDICATORS

11547

**BE UP TO DATE!
SPELL OUT
WITH LIGHTS
ANY
MESSAGE
YOU REQUIRE**



SOME SUGGESTED DESIGNATIONS

- AMATEUR CALL LETTERS
- HIGH VOLTAGE
- ON THE AIR
- DANGER
- FILAMENT ON
- HV ON
- PLATE ON
- TURN→
- FASTEN SAFETY BELT
- NO SMOKING
- QUIET

Up to four separate designations or messages may be placed on a single lamp assembly. Prices include any messages up to a total of 12 letters (not to exceed two lines) engraved on the front plate and are quoted less standard S-6 light bulbs. Additional letters or lines take special quotation.

STOCK NUMBER	ITEM	NET PRICE *
4001	Single light unit and front plate	\$4.10
4002	Double light unit and front plate	4.40
4003	Three light unit and front plate	4.70
4004	Four light unit and front plate	5.00

*Prices subject to change without notice, and will be billed at prices prevailing at time of shipment.

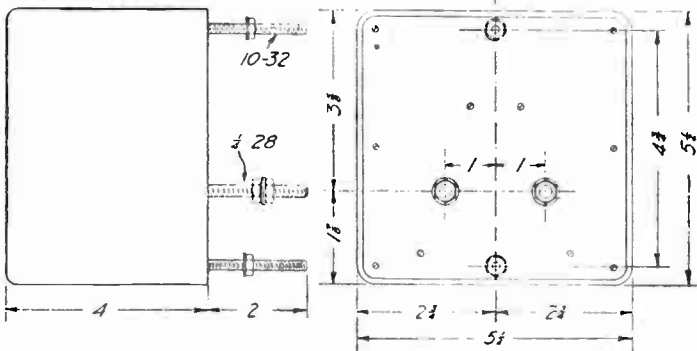
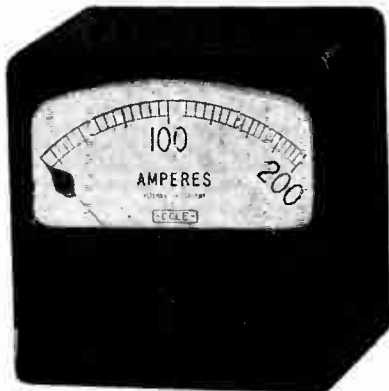
The multiple lamp unit housing is molded bakelite and each is slotted to hold the light isolation barriers. If a lamp annunciator requiring more than 4 messages is desired the holders may be mounted one above the other, alignment being accomplished by a slot and a tip on the bottom and top edges of the units respectively. Terminals are provided on the rear of the case for pilot light connections. The housing measures 3-1/8" wide x 2-5/16" deep and 1-1/4" high; the mounting flange being 3-3/4" x 1-1/2".

Front plates are 3-3/4" x 1-1/2" and the overall light area is 3" x 1-1/16". These plates are laminated black-faced plastic with engraving in white; other colors can be furnished at additional cost.

SWITCHBOARD INSTRUMENTS

MODEL 8A6 GROUP (5 1/2" x 5 1/2")

12547



Scale length: 5.12 inches. Accuracy: 1%. These instruments can be supplied at 1/2% accuracy at additional cost. Sqaure, surface type, back connected with cast aluminum cases, dull black finish. 5-foot leads are furnished for use with external shunts. High torque to weight ratios are maintained throughout the series. DC instruments are of permanent magnet moving coil type. AC instruments are moving iron type for use on frequencies from 25 to 135 cycles and can be supplied for use on higher frequencies, including 400 and 800 cycles at additional cost. Extremely low range millivolt meters are extra heavily damped. PRICES SHOWN BELOW ARE NET.

Range	Scale Divisions	VOLTMETERS		MILLIVOLT METERS		AMMETERS				MILLIAMMETERS			MICRO-AMMETERS
		DC Model 8D6 100 Ohms Per Volt	DC Model 8D6 1000 Ohms Per Volt	AC Model 8A6	DC Model 8D6	DC Model 8D6	AC Model 8A6	RF Model 8T6	DC Model 8D6	AC Model 8A6	RF Model 8T6	DC Model 8D6	
1	50	\$ 43.10	\$ 50.72	\$ 40.89	\$235.00	\$ 49.17	\$ 38.68	\$ 51.94	\$ 45.31	---	---	---	
1.5	30	43.10	50.72	40.89	160.00	49.17	38.68	51.94	45.31	---	---	---	
2	40	43.10	50.72	40.89	125.00	49.17	38.68	51.94	45.31	---	---	---	
3	30	43.10	50.72	40.89	90.00	49.17	38.68	51.94	45.31	---	---	---	
4	40	43.10	50.72	40.89	90.00	49.17	38.68	51.94	45.31	---	---	---	
5	50	43.10	50.72	40.89	78.00	49.17	38.68	51.94	43.10	---	---	---	
6	30	43.10	50.72	40.89	78.00	49.17	38.68	51.94	43.10	---	---	---	
7.5	75	43.10	50.72	40.89	62.70	49.17	38.68	51.94	43.10	---	---	---	
8	40	43.10	50.72	40.89	62.70	49.17	38.68	51.94	43.10	---	---	---	
10	50	43.10	50.72	40.89	62.70	49.17	38.68	51.94	43.10	---	---	---	
12	60	43.10	50.72	40.89	56.80	49.17	43.10	51.94	43.10	43.10	---	220.00	
15	30	43.10	50.72	40.89	48.60	49.17	43.10	51.94	43.10	38.68	---	160.00	
20	40	43.10	50.72	40.89	48.60	49.17	48.60	51.94	43.10	38.68	---	120.50	
25	50	43.10	50.72	40.89	48.60	49.17	48.60	51.94	43.10	38.68	---	101.95	
30	30	43.10	50.72	40.89	43.10	49.17	48.60	51.94	43.10	38.68	---	101.95	
40	40	43.10	50.72	40.89	43.10	49.17	48.60	51.94	43.10	38.68	---	95.71	
50	50	43.10	50.72	40.89	43.10	49.17	48.60	51.94	43.10	38.68	---	90.62	
60	30	43.10	50.72	40.89	43.10	49.17	48.60	51.94	43.10	38.68	---	90.62	
75	75	43.10	50.72	40.89	43.10	49.17	48.60	51.94	43.10	38.68	---	90.62	
80	40	43.10	50.72	40.89	43.10	49.17	48.60	51.94	43.10	38.68	---	90.62	
100	50	43.10	50.72	40.89	43.10	49.17	48.60	51.94	43.10	38.68	---	79.29	
120	60	43.10	50.72	40.89	43.10	49.17	48.60	51.94	43.10	38.68	---	79.29	
150	30	43.10	50.72	40.89	43.10	49.17	48.60	51.94	43.10	38.68	---	67.97	
200	40	47.52	54.65	44.20	43.10	---	---	---	43.10	38.68	---	56.64	
250	50	47.52	54.65	44.20	43.10	---	---	---	43.10	38.68	---	56.64	
300	30	47.52	54.65	45.31	43.10	---	---	---	43.10	38.68	---	56.64	
400	40	51.94	59.07	49.73	43.10	---	---	---	43.10	38.68	---	56.64	
500	50	57.47*	66.09*	55.26*	43.10	---	---	---	43.10	38.68	---	54.15	
600	30	58.57*	67.36*	56.36*	43.10	---	---	---	43.10	38.68	---	50.97	
750	75	64.33*	70.53*	59.12*	43.10	---	---	---	43.10	38.68	---	50.97	
800	40	62.84*	72.04*	60.63*	43.10	---	---	---	43.10	38.68	---	50.97	
1000	30	66.86*	76.89*	64.64*	43.10	---	---	---	43.10	38.68	---	45.31	
1200	50	70.17*	80.70*	67.97*	---	---	---	---	---	---	---	---	
1500	30	75.70*	87.06*	73.59*	---	---	---	---	---	---	---	---	
2000	40	85.09*	97.85*	83.88*	---	---	---	---	---	---	---	---	
2500	50	93.93*	106.69*	91.71*	---	---	---	---	---	---	---	---	
3000	30	102.77*	115.53*	100.56*	---	---	---	---	---	---	---	---	
4000	40	172.55*	183.43*	170.33*	---	---	---	---	---	---	---	---	
5000	50	208.85*	217.85*	206.64*	---	---	---	---	---	---	---	---	
6000	30	230.95*	239.40*	228.74*	---	---	---	---	---	---	---	---	
7500	75	264.00*	272.40*	261.79*	---	---	---	---	---	---	---	---	
8000	40	275.05*	284.20*	272.84*	---	---	---	---	---	---	---	---	
10000	50	319.35*	329.65*	317.14*	---	---	---	---	---	---	---	---	
5.0-5	50	43.10	50.72	---	235.00	49.17	---	---	45.31	---	---	---	
1-G-1	40	43.10	50.72	---	125.00	49.17	---	---	45.31	---	---	---	
3-C-3	30	43.10	50.72	---	78.00	49.17	---	---	43.10	---	---	---	
5-C-5	50	43.10	50.72	---	62.70	49.17	---	---	43.10	---	---	275.00	
10.0-10	40	43.10	50.72	---	48.60	49.17	---	---	43.10	---	---	120.50	
15.0-15	30	43.10	50.72	---	43.10	49.17	---	---	43.10	---	---	101.95	
25.0-25	50	43.10	50.72	---	43.10	49.17	---	---	43.10	---	---	90.62	
30.0-30	30	43.10	50.72	---	43.10	49.17	---	---	43.10	---	---	90.62	
50.0-50	50	43.10	50.72	---	43.10	49.17	---	---	43.10	---	---	90.62	
100.0-100	40	43.10	50.72	---	43.10	49.17	---	---	43.10	---	---	90.62	
150.0-150	30	43.10	50.72	---	43.10	49.17	---	---	43.10	---	---	90.62	
300.0-300	30	47.52	54.65	---	43.10	---	---	---	43.10	---	---	50.97	

*500 volts and higher ranges are supplied complete with external resistor boxes. The prices shown for 750 to 10,000 AC volts include resistor multipliers. However, above 750 volts potential transformers are recommended. For prices with potential transformers add to the AC instrument base price of \$40.89 the price of the potential transformer required.

For internal illumination add \$10.00 to the above net prices. All instruments can be supplied in other ranges than those listed. All ranges of zero center meters can be furnished as ground detector meters. Suppressed scale instruments can be supplied to order in any range desired. Multiple range instruments can be supplied in any range combination. Black scales with white divisions and figures can be supplied. Prices upon application. High range voltmeters can be furnished with scales reading in kilovolts rather than volts.

Prices are F.O.B. Los Angeles and subject to change without notice, and will be billed at prices prevailing at time of shipment.

AIRCRAFT ELECTRICAL SYSTEM TESTER

MODEL 520

14814

RANGES:

Volts: DC 0-50. AC 0-50, 0-125.
 Ohms: 0-500 (33 ohms center scale).
 Continuity test light (utilizing internal battery).
 28-volt test light (for quick check of live circuits).

SENSITIVITY:

DC range 200 ohms per volt.
 AC ranges 110 ohms per volt.

SCALE LENGTH: 2.6"

ACCURACY:

DC volts 2% of full scale.

AC volts 3% of full scale.

Ohms within 3% of indicated value.

AC voltage ranges are calibrated for use on any frequency between 25 and 1000 cycles.

ADDITIONAL FEATURES: A light continuity test utilizing the internal battery is provided for quick circuit tests, which is extremely useful at night or in dark portions of the aircraft. Also a 28-volt test light is provided to check for hot circuits and the continuity of the ship's electrical systems.



APPLICATION: The Model 520 Tester is designed especially to meet the requirements of the aircraft industry and to specifications of leading aircraft manufacturers. It is used by the aircraft industry in installation, assembly and testing of electrical systems and equipment in air frames, and all types of aircraft assemblies and is normally included as standard aircraft equipment. It is utilized by field service personnel in repair and routine check of aircraft electrical systems. It is used by aircraft component manufacturers on their production lines for production testing.

HEAVY DUTY CONSTRUCTION: This unit is designed throughout for heavy duty commercial use and is equipped with a high torque instrument of our own manufacture designed especially for this application. However, the overall weight has been kept to a minimum for its use as aircraft equipment.

NO SWITCHING NECESSARY: A special circuit was developed for the Model 520 which eliminates all switching, thus simplifying its use and operation and allowing the most inexperienced workman to use the instrument without errors.

OPERATION: The operation is very simple. It is only necessary to insert the test leads into the jacks above and below the range desired, as shown on the instrument panel. On the DC voltage range the red jack is positive. To accurately read ohms it is only necessary to insert the test leads above and below the designation "ohms," and by shorting the test leads together, adjust the instrument pointer to zero on the ohms scale by the "adj. ohms" knob which compensates for any variations that occur in the internal battery voltage. The instrument is then ready to read directly in ohms as indicated on the scale.

DESCRIPTION: Instrument is mounted in a sturdily designed molded black bakelite case and is provided with a polished black bakelite panel permanently engraved in white with all necessary ranges and designations. On the panel is mounted the indicating instrument, ohm adjustment knob, test lights and heavy duty jacks. All internal components are mounted on a sub-panel which is a part of the panel assembly, thus allowing the unit to be withdrawn from its case in one assembly for servicing or the replacement of batteries.

ACCESSORIES: Extra flexible rubber covered 4 ft. test leads provided with heavy duty test prods and insulated right angle pin plugs are available at an additional net cost per pair of \$1.20.

DIMENSIONS: 5 7/8" long, 3 1/8" wide, 2 7/8" overall height including knob.

WEIGHT: 1.3 pounds.

NET PRICE: \$38.00.

Prices are F.O.B. Los Angeles and subject to change without notice, and will be billed at prices prevailing at time of shipment.

PHASE SEQUENCE INDICATOR

MODEL 540

12847

APPLICATION: The Phase Sequence Indicator has been designed into a small, compact, extremely light weight, readily portable unit which will save many man hours and eliminate costly repairs due to wrong connections. It is used by construction and maintenance men, meter men, trouble-shooters, testers and engineers in industrial, generating and distribution plants to predetermine the direction of rotation of polyphase motors and the proper connections for paralleling generators, transformer banks, power bus circuits, watt hour meters, instruments and relays, etc. These are only a few of the many uses of the instrument.

RATING: The Phase Sequence Indicator is designed to be used on 110, 220 or 440 volt polyphase circuits of frequencies from 25 to 60 cycles.

SELF-CONTAINED: No moving parts — all equipment is contained within the one compact portable unit which is provided with suitable insulated binding posts for connections to various ratings. No damage is done to indicator if over-voltage is applied, as any range will withstand 2 times normal voltage for short periods of time, since indicator lamps are of the Neon type and there are no filaments to burn out. Also a special test switch is provided to check for open circuits and correctness of connections to the indicator.

OPERATION: Binding posts are provided at each end of the panel plainly marked in voltage ratings and also single binding posts in the center. Connect polyphase circuit to be tested to the binding post with proper voltage rating at each end and to the center binding post which is common to all voltage ratings. Above these rows of binding posts and middle post will be noted "1-2-3" which refers to phase 1-2-3. After the proper connections are made, press push-button test switch and if connections are proper and no phases are open, both lights will glow. If light marked 1-2-3 does not glow, phase 1 is open. If light marked 3-2-1 does not glow, phase 3 is open. Release push-button and if both lights continue to glow, phase 2 is open or connection has been made to a lower voltage range than the voltage of the circuit under test. If all connections are good and all phases are



functioning, upon release of the test push-button one light will glow and the phase sequence as indicated by the numbers below it will be the phase sequence of the circuit under test as connected to phases 1-2-3.

DESCRIPTION: Instrument is mounted in a sturdily designed molded black bakelite case and is provided with a polished black bakelite panel permanently engraved in white with all necessary ratings and designations. Upon the panel is mounted fully enclosed and protected Neon indicating lamps, a heavy duty push-button test switch and insulated binding posts to which the circuit under test is connected.

DIMENSIONS: 5 7/8" long by 3" wide, 3" overall height including binding posts.

WEIGHT: Net .93 pound.

NET PRICE: \$25.00.

Prices are F.O.B. Los Angeles and subject to change without notice, and will be billed at prices prevailing at time of shipment.

APPLIANCE TESTING PYROMETER

MODEL 101

14815

RANGE: 0-1000° Fahrenheit.

COLD END COMPENSATION:
Manual.

SCALE LENGTH: 2.6"

ACCURACY: 2% of full scale value.

DIMENSIONS: 3½" long, 3⅜" wide, 2½" high. Thermocouple length: 20".

WEIGHT: 1.08 lbs.

DESCRIPTION: This instrument is mounted in a sturdy, cast aluminum case with durable black finish. The thermocouple is permanently attached within the instrument and may be readily replaced if necessary; thus the instrument may be carried with other servicing equipment and is always ready for immediate use.

APPLICATION: The Model 101 Appliance Testing Pyrometer is designed to meet the requirements of all branches of the appliance industry. It is used by manufacturers for production testing, by dealers and distributors for demonstration purposes to customers, and by repair and service organizations in repair and maintenance, by accurately measuring the temperatures of such products as electric irons, mangles, toasters, broilers, waffle irons, hot plates, ovens, grills and other appliances heated by either electricity or gas.

HEAVY DUTY CONSTRUCTION: The instrument is equipped with a high torque pyrometer movement of our own manufacture, designed especially for this application, utilizing rugged construction throughout to withstand the rough usage in production or service operations.

SPECIAL THERMOCOUPLE: The instrument is equipped with a special iron constantan thermocouple with woven glass insulation which is extremely durable, maintaining very small physical dimensions of .095" x .060" which allows the insertion of the thermocouple into appliances that require temperatures to be read while closed, such as grills, ovens, waffle irons, mangles, etc. The thermocouple can be easily kept clean.

OPERATION: For accurate measurements, the instrument pointer should be first adjusted to correspond to the room temperature by means of the adjustment screw provided in the center of the lower portion of the instrument. Operation of the instrument is extremely simple. It merely requires the insertion of the thermocouple into the appliance to be tested or the application of the thermocouple directly to the surface of the appliance, as in the case of an electric iron or hot plate. The temperature of the appliance is directly indicated on the scale of the instrument which responds very rapidly to the temperature under test.

NET PRICE: \$33.00.

Prices are F.O.B. Los Angeles and subject to change without notice, and will be billed at prices prevailing at time of shipment.



PISTOL GRIP PROD TYPE PYROMETER

MODEL 103

14817

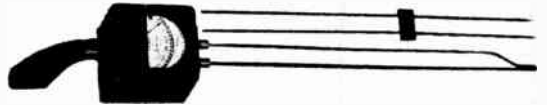
APPLICATION: The Model 103 Pyrometer has been designed as an extremely rugged and portable instrument for quick and accurate measurement of surface and sub-surface temperatures. The instrument has numerous commercial applications, such as measurement of temperatures of ovens, kilns, molten metals, type metal and linotype mouthpieces, die cast metal and die cast molds, plastic molds, processing plates, compounds, tire molds, phonograph record presses, engine temperatures, bearing temperatures and metallic surface temperature readings. It is also used for measuring the temperature of steel rails, non-ferrous and ferrous bars, billets, sheets, etc.

ADDITIONAL FEATURES: The Model 103 Pyrometer may be used to check the accuracy of other pyrometers of similar range and using thermocouples of the same metal combinations. This is done by using a Model 103 with open prod type thermocouples and applying the prods to the exposed thermocouple terminals of the pyrometer under test from which one of the connecting leads has been disconnected, and comparing the reading obtained with the reading of the pyrometer under test when connected to its thermocouple.

HEAVY DUTY CONSTRUCTION: The instrument is equipped with a high torque pyrometer movement of our own manufacture designed especially for this application, utilizing rugged construction throughout to withstand the jar and vibration of industrial usage.

OPERATION: The Model 103 Pyrometer is completely self-contained and is extremely simple to operate. When equipped with the open prod type thermocouple it is only necessary to press the prod points firmly against the surface of the metallic object to be measured; the moment a good contact is made the indicator will show the correct temperature instantaneously, and in this manner the unit is used to measure the temperature of all metallic surfaces including dies, plates, molds, bearings, rods, bars, etc.

The Model 103 equipped with closed welded type thermocouple is used for the measurement of kiln and furnace temperatures and the temperatures of molten metals at the surface and below surface by direct insertion into the area or materials to be measured. Diesel engine exhaust temperatures are measured by inserting the thermocouple through the open ports in the exhaust manifold; hardening and



heat treating baths and other general temperature measurements in non-conducting media which require the use of a closed circuit thermocouple are measured by direct insertion into the material.

DESCRIPTION: The handle and case of the instrument are sturdily designed of cast aluminum which provides the necessary light weight for ease of handling in continuous use. The instrument is provided with an extremely long and easily read scale indicating directly in degrees of temperature. It is equipped with a thermocouple connector which is so designed that the thermocouple can be readily removed for replacement or changed from one type to another, and provision is made so that the thermocouple cannot be inserted incorrectly. Set screws are provided to securely hold the thermocouple in place to eliminate any errors caused from poor connection. Although the instrument is pictured with both types of thermocouples, it is supplied with only one thermocouple of either type.

SPECIAL FEATURE: The instrument is provided with a pistol grip handle which allows it to be held with ease and in the proper position for taking measurements and at the same time reading its temperature indication. This handle is provided with an open section which can be utilized to hang the instrument on a convenient hook when not in use.

DIMENSIONS: The instrument proper, from thermocouple mount to end of pistol grip handle, is 7¾" long, 3⅜" wide, with an overall height including pistol grip handle of 4½". The thermocouple length is 15".

WEIGHT: 1.55 pounds. **SCALE LENGTH:** 2.6".

ACCURACY: 2% of full scale value.

COLD END COMPENSATION: The Model 103 is furnished with automatic cold end compensation in the lower ranges and in the higher ranges manual compensation is normally provided. If automatic compensation is required in the higher ranges, it will be supplied at an additional net cost of \$7.50.

RANGES AND PRICE:

Ranges in Degrees Fahrenheit*	Degrees per Division	Manual Compensation	Automatic Compensation
0-300°	5		\$67.50
0-400°	10		57.50
0-500°	10		57.50
0-600°	10		57.50
0-750°	10	\$52.50	
0-800°	20	47.50	
0-1000°	20	47.50	
0-1200°	20	47.50	
0-1500°	20	47.50	
0-2000°	50	48.50	
0-2500°	50	48.50	

* Furnished in equivalent Centigrade calibration upon request without extra charge.

EXTRA THERMOCOUPLES:

Open prod type, iron-constantan, for ranges including 1500 degrees	\$4.50
Closed welded type, iron-constantan, for ranges including 1500 degrees	4.50
Open prod type, chromel-alumel, for ranges 2000 and 2500	5.50
Closed welded type, chromel-alumel, for ranges 2000 and 2500	5.50

Prices are F.O.B. Los Angeles and subject to change without notice, and will be billed at prices prevailing at time of shipment.

Chicago INSTRUMENTS

**DEPENDABLE — ACCURATE
RADIO, ELECTRICAL AND
INDUSTRIAL TEST EQUIPMENT**

PORTABLE BENCH-TYPE VOLT-OHM-MILLIAMMETER

Multiplex Model 458, Volt-Ohm-Milliammeter. 1000 Ohms per volt. Net \$26.00
 Volts DC: 0-5/10/50/100/500/2000 Ohms Full Scale: 1000/200,000/2,000,000
 Volts AC: 0-12.5/25/125/250/1250 Ohms Center Scale: 50/2250/22,500
 Milliamperes DC: 0-1/10/100 Output: —5 to + 55 Decibels
 Milliamperes AC: 0-2.5/25/250 Size: 10 1/8" x 6 3/4" x 5 1/2"



MODEL 458

PORTAPLEX PORTABLE INSTRUMENTS

Model 431 AC-DC Volt-Ohm-Milliammeter. Net \$16.60
 Volts DC: 0-30/300/1500 (2000 Ohms per volt) Ohms Full Scale: 3000/300,000
 Volts AC: 0-15/150 (1000 Ohms per volt) Ohms Center Scale: 35/3500
 Milliamperes DC: 0-150 Size: 5 7/16" x 2 15/16" x 2 1/2"

Model 421 AC-DC Volt-Ohm-Milliammeter. 1000 Ohms per volt. Net \$21.45
 Volts DC: 0-7.5/15/150/750/1500 Ohms Full Scale: 5000/500,000
 Volts AC and Output: 0-7.5/15/150/750/1500 Ohms Center Scale: 35/3500
 Milliamperes DC: 0-7.5/75 Size: 5 7/16" x 3 3/16" x 3"

Model 432 High Sensitivity Volt-Ohmmeter. 10,000 Ohms per volt. Net \$21.45
 Volts DC: 0-3/30/300/600 Ohms Full Scale: 35/350/3500/35,000
 Ohms Center Scale: 35/350/3500/35,000 Size: 5 7/16" x 3 3/16" x 3"

Model 433 Super High Sensitivity Volt-Ohmmeter. 20,000 Ohms per volt. Net \$23.40
 Volts DC: 0-3/30/300/600 Ohms Full Scale: 70/700/7000/70,000
 Ohms Center Scale: 70/700/7000/70,000 Size: 5 7/16" x 3 3/16" x 3"

FEATHERWEIGHT MINIATURE MODELS (All models 3 15/16" x 2 7/8" x 2")

Model 450A Volt-Ohm-Milliammeter. 1000 Ohms per volt. Net \$10.90
 Volts DC: 0-5/10/50/500/1000 Ohms Full Scale: 5000/50,000/500,000
 Milliamperes: 0-1 Ohms Center Scale: 30/300/3000

Model 451A AC-DC Volt-Ohmmeter with Output Ranges. Net \$14.90
 Volts DC: 0-10/50/100/500/1000 (1000 Ohms per volt) Ohms Full Scale: 500,000
 Volts AC and Output: 0-10/50/100/500/1000 Ohms Center Scale: 7200

Model 451B Same as Model 451A but with 2500 Ohms per volt. Net \$16.60

Model 452A High Sensitivity Volt-Ohmmeter. 10,000 Ohms per volt. Net \$14.90
 Volts DC: 0-10/50/100/500/1000 Ohms Full Scale: 30/300/3000/30,000
 Ohms Center Scale: 30/300/3000/30,000



MODEL 451A

SIMPLEX VOLT-OHM-MILLIAMMETERS

Model 371 Volt-Ohm-Milliammeter. Iron Vane Type. Net \$5.25
 Volts DC: 0-3/15/30/300 Ohms Full Scale: 10,000
 Milliamperes: 0-25 Size: 1 7/8" x 2 3/4" x 3 7/8"

Model 312 AC-DC Volt-Ohm-Milliammeter. Repulsion Type Movement. Net \$6.75
 Volts AC and DC: 0-25/50/125/250 Ohms Center Scale: 2400
 Milliamperes AC and DC: 0-50 MFD: .05 to 15.
 Ohms Full Scale: 100,000 Size: 1 7/8" x 2 3/4" x 3 7/8"



BATTERY TESTER
MODEL 471

POLARIZED TEST LEADS FOR ALL CHICAGO INSTRUMENTS

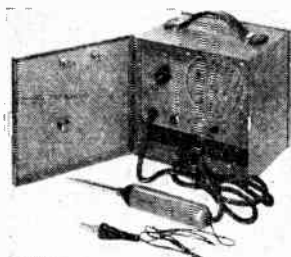
No. 1048 Low Resistance Test Leads, 48" Long. Tenite insulated prods. Net \$0.66

DRY BATTERY TESTER

Model 471 Dry Battery Tester. Net \$16.50
 Tests 1 1/2 volt — 10 volt and 10 volt — 150 volt batteries under specified load. Easy-reading. 5 1/2" rectangular meter makes battery sales easy.

CHICAGO INDUSTRIAL INSTRUMENT CO.,

SPECO SIGNAL TRACERS AND KITS



BATTERY OPERATED SIGNAL TRACER

(MODEL STAB)

*Light - Compact - Sturdy
Scientifically Engineered*

- Excellent Tone Quality!
- Noiseless Gain Control!
- Weight: 4 lbs. 10 oz.
- Extremely Sensitive!
- No Hum! No Distortion!
- Size: 6 1/4" x 6" x 6 1/4"
- Batteries: 1—67 1/2 v. B;
2—Flashlight cells
- Tubes: 1—3S4; 2—1S5

\$29.95 net, Less Batteries



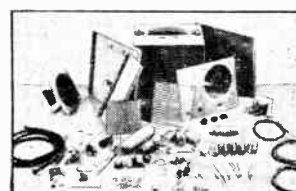
AC OPERATED SIGNAL TRACER

(MODEL STAC)

- EXCELLENT TONE
- AUDIBLE or VISUAL INDICATION
- SCIENTIFICALLY ENGINEERED
- MAX. POWER OUTPUT: 5 WATTS
- SIZE: 8" x 10" x 8"
- PROBE: 8 1/2"
- TUBES: 1—6SQ7GT/G; 1—6V6GT/G;
1—5Y3 1—6E5; 1—6J5GT
- HIGHLY SENSITIVE
- EASY TO USE
- WEIGHT: 11 POUNDS

\$44.95 net

Tracer Probe Only, \$15.95



SIGNAL TRACERS IN KIT FORM

(MODELS STAB - KIT AND
STAC - KIT)

For the man who likes to build his own test equipment Speco offers both battery operated and AC operated signal tracers in kit form. Some high quality components are used in complete models illustrated at left. Kits come complete with detailed instructions for assembly. Battery operated signal tracer kit model STAB-KIT illustrated above.

STAB - KIT \$17.95 net

STAC - KIT \$29.95 net

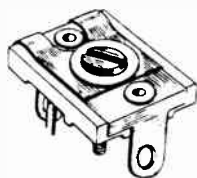
PORTABLE METAL CABINET FOR THOSE WHO BUILD EQUIPMENT

A handsome sturdy steel cabinet finished in dark gray crackle finish. SIZE: 6 1/4" wide, 5" deep, 6" high, HANDLE ON TOP: Black Leather, DOOR: Slip hinged with strong snap catch to hold it shut, FACE PANEL: Steel, smooth gray finish, NAMEPLATE: Aluminum for etching or engraving information.

\$2.90 net

TRIMMER - PADDER CONDENSERS

They balance, trim, neutralize, couple. Mico dielectric. Isolantite base. Phosphor bronze plates. Low loss, Screwdriver adjustment. Color coded. Lug Terminals. Individually tested for RF-IF-OSC circuits. Size 5/8" x 3/4".



MMFD	List* Each	MMFD	List* Each
25—Blue	\$0.35	200—Red	\$0.45
50—Purple	.35	300—Orange	.45
100—Brown	.40	400—Yellow	.50
150—Black	.40	500—Green	.50

Envelope with 8 assorted \$2.75 list

THE CAPOHMIST

(MODEL CAP)



CAPACITOR AND RESISTOR

SUBSTITUTION UNIT

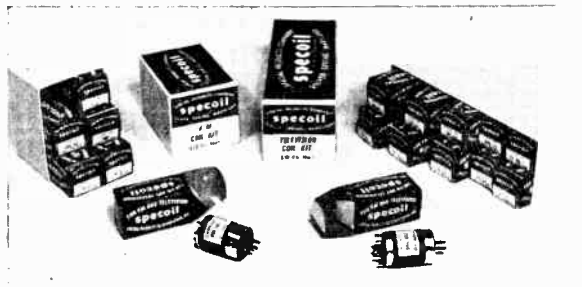
Astonishingly simple to operate. No need to replace each individual Resistor or Capacitor in diagnosing radio trouble. The Capohmist provides substitution of 22 principal values. The operator merely locates the proper values on the dial . . . then clamps ends of lead wires from Capohmist to the proper points in the circuit to see if the indicated part is operating or defective. Additional jobs can be handled easily, more satisfactorily. Sturdily built of metal, lightweight, attractive and with a handle for more comfortable carrying.

\$16.95 net

SPECOILS STANDARDIZED SMALL SIZE FOR FM AND TELEVISION

NEW ELECTRONIC DEVELOPMENT

The SPECOIL double-tuned miniature IF transformer marks a new development in the field of electronics. This new feature is introduced in the design of Television and FM transformers for high frequencies which results in a high degree of performance with uniform band-pass characteristics and simultaneously allows for a great reduction in the size of the component.



SMALL SIZE — SHORT LEADS

The small size SPECOIL allows for substantial savings in space and provides superior performance as compared with transformers of larger size. The fact that SPECOILS are small enables the builder to place related components much closer together so that leads are short and thus the tendency toward regeneration is eliminated when three or more successive IF tuned stages are employed.

CONSTRUCTION

The 'rugged' construction of SPECOIL transformers insures dependable and stabilized performance under adverse conditions of temperature, humidity and vibration. Soldering terminals are securely riveted to a moulded

base of high dielectric material with consistent mechanical strength and heat resisting qualities to remove any danger of terminals becoming loose at soldering iron temperatures

TUNING FEATURES

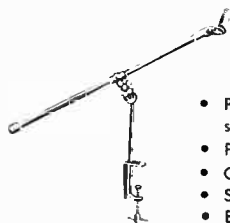
SPECOILS are substantially dustproof. They are designed so that aligning can be accomplished from the top side of the transformer. This feature permits complete shielding of the equipment and obviates the necessity of getting on the underside of the chassis for any tuning adjustments. Iron core slugs as they are employed for tuning are 'stone cold' for RF thereby eliminating capacity effects, radiation and all foreign noise during any period of alignment or vibration.

Type No.	List
FM-107	\$5.95
FMD-107	5.95
FMBP	5.95
RFFM	1.50
TVA-264	5.95
TVD-264	5.95
TVI-264-1	5.95
TFM-219	5.95
TFMD-219	5.95
TAT-279	1.50
TVS-219-2	1.50
TST-219	1.50

SPECIAL NET PRICES ON KITS

COMPLETE KITS: 6 FM COILS . . . \$12.95
11 TELEVISION COILS \$19.95

PORTABLE ADJUSTABLE PULPIT MIKE STAND (MODEL PMS)



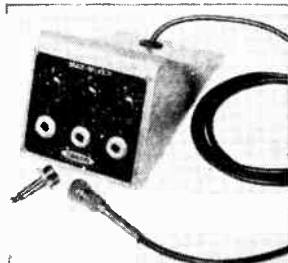
- For church pulpit
- Speaker's rostrum
- Public address system
- PBX phone board
- Outdoor speaking
- Sound trucks
- Banquets

Adjustable for height, boom extension and angle of boom. Upright can be raised up to 10", held by thumb screw in table clamp. Boom can be extended 27 1/2". Rotates 180 degrees. Boom and universal joint removable for use on floor stand. Knob adjustment on boom universal joint. Threaded to fit all standard mikes. Swivel bracket for other end of boom to hold extra mike available at \$2.50 LIST. Felt on table clamp to prevent marring table tops.

\$13.95 list

MAX MIXER

— Adds Microphone Input to any Amplifier (MODEL MIX)



FOR HILL-BILLY BANDS, ORCHESTRAS, INSTRUMENTALISTS, VOCALISTS, ENTERTAINERS, DRAMATIC CLUBS, NIGHT CLUBS, CONCEPTIONS, SOUND MEN.

The "MAX-MIXER" provides a low-cost method of adding to and mixing up to two or more microphones than provided for by regular input of any amplifier. By plugging the "MAX-MIXER" cable into the microphone input of an amplifier and then plugging one, two or three high impedance microphones into the "MAX-MIXER", the user can regulate each by a separate volume control. "MAX-MIXER" eliminates necessity for using contact microphones which incorporate a volume control. The controls on the "MAX-MIXER", itself, serve the purpose.

\$18.95 list

SHOCK PROOF PLASTIC PLIERS (MODEL PRP-A)



Not a substitute for metal pliers but a necessity for specialized jobs on radios, electrical appliances, etc. to avoid shocks. Weight only 1 1/2 ounces. Absolutely shock-proof. Non-magnetic. Heat resistance 240 degrees to 300 degrees. 6,000 volt breakdown. Pick up nuts, screws and washers without danger of shorting. For relocation of wiring without introducing a magnetic field while equipment is in operation.

\$1.50 list



ELECTRICAL INDICATING INSTRUMENTS

- DC VOLTMETERS
- DC AMMETERS
- DC MICROAMMETERS
- DC MILLIVOLTMETERS
- DC MILLIAMMETERS

MANUFACTURERS OF PRECISION INSTRUMENTS FOR OVER A QUARTER OF A CENTURY

1 1/2" MINIATURE—External pivots for greater accuracy. Highest-grade Alnico magnets. Waterproof sealing. Metal (round) or plastic (square) case.

2 1/2" Model S-210 in the 2 1/2" size and Model S-310 in the 3 1/2" size are built to comply with American Standards Association specifications.



Model S-112 Square



Model 120 Round



Model S-210 Round



Model S-212 Square

Superior magnetic materials—Alnico and Cobalt, used in conjunction with soft iron pole pieces, assure high torque, fast response, improved performance.

Large pivot axis permits more accurate adjustment of jewels and pivot assembly and greater accessibility for servicing.

Better balancing and uniform magnetic flux around moving coil eliminate possibility of calibration error.

Highest-grade Alnico magnets. Laminated magnets are protected by Cadmium and tin platings. Movement supported by aircraft-type bracket. Beryllium copper balance weights and anodized coil frame. Every meter rigidly inspected, electrically and mechanically, in air-conditioned rooms.

Knife-edge or pear shaped pointers, shatter-proof glass, rear-illumination and special scales supplied on order.

3 1/2" Similar in construction to the 4" Model. Easy legibility at a distance. Multi-scales in combination up to 3 colors supplied on order.

4" Maximum scale areas permit multi-scale combinations in 2, 3 or 4 colors, with no crowding of graduations. Lance pointer standard; others to order.



Model S-310 Round



Model S-322 Square



Model S-422 Rectangular

CHART

MODEL NO.	SIZE	BODY SIZE	CASE	SCALE LENGTH	DEPTH BEHIND PANEL	STD. POINTER
S-210	2 1/2"	2 13/64"	Round Flush Bakelite	1 23/32"	1 9/32"	Spade
S-212	2 3/8"	2 13/64"	Square Flush Bakelite	1 23/32"	1 5/16"	Spade
S-310	3 1/2"	2 3/4"	Round Flush Bakelite	2 5/16"	1 9/32"	Spade
S-312	3"	2 3/4"	Square Flush Bakelite	2 5/16"	1 5/16"	Spade
S-422	4 1/2"	2 3/4"	Rectangular Semiflush Bakelite	3 11/16"	7/8"	Lance
S-112	1 3/4"	1 1/2"	Square Flush Bakelite	1 1/64"	13/16"	Spade
120	1 3/4"	1 1/2"	Round Semiflush Metal	1 1/64"	25/32"	Spade

DeJUR METERS

are manufactured to a guaranteed accuracy of 2% of full-scale value.



DeJUR-AMSCO CORPORATION

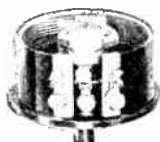


RHEOSTATS • • • POTENTIOMETERS

for ELECTRONIC DEVICES • RADIO TRANSMITTERS
DYNAMIC VOLTAGE CONTROL • PORTABLE POWER AMPLIFIERS
MOTOR CONTROL • MIXING PANELS • SPOT WELDING

MANUFACTURERS OF PRECISION INSTRUMENTS FOR OVER A QUARTER OF A CENTURY

6 WATT — Model 260



MECH. ROTATION—324°	Range in Ohms
ELEC. ROTATION—300°	0 — 100
BODY DIAMETER—3"	0 — 500
BODY DEPTH—1-7/16"	0 — 1,000
WEIGHT—5 OZ.	0 — 5,000
	0 — 10,000
	0 — 25,000
	0 — 50,000
	0 — 100,000

MODEL 260T — 6 Watts — With Tapped Winding.
Dimensions as Model 260 — Ranges 100 - 20,000
Ohms.

Available with Dust Cover

11 WATT — Model 275

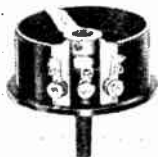


MECH. ROTATION—324°	Range in Ohms
ELEC. ROTATION—300°	0 — 100
BODY DIAMETER—3"	0 — 1,000
BODY DEPTH—2 5/8"	0 — 5,000
WEIGHT—7 OZ.	0 — 10,000
	0 — 50,000
	0 — 100,000
	0 — 150,000
	0 — 200,000

MODEL 275T — 11 Watts — With Tapped Winding.
Dimensions as Model 275 — Ranges 100 - 20,000
Ohms.

Available with Dust Cover

6 WATT — Model 261



MECH. ROTATION—320°	Range in Ohms
ELEC. ROTATION—300°	0 — 100
BODY DIAMETER—3"	0 — 500
BODY DEPTH—1-7/16"	0 — 1,000
WEIGHT—5 OZ.	0 — 5,000
	0 — 10,000
	0 — 25,000
	0 — 50,000
	0 — 100,000

11 WATT — Model 276



MECH. ROTATION—324°	Range in Ohms
ELEC. ROTATION—300°	0 — 100
BODY DIAMETER—3"	0 — 500
BODY DEPTH—2 5/8"	0 — 1,000
WEIGHT—7 OZ.	0 — 5,000
	0 — 10,000
	0 — 25,000
	0 — 50,000
	0 — 100,000

DeJUR FEATURES: Designed for maximum ruggedness, durability, dependable accuracy. Tested for resistance to vibration, heat, humidity. Every DeJUR Potentiometer undergoes a severe 24-hour test. Units with special resistance values and tolerance can be supplied. Also tapered units, of both straight and logarithmic types. Available with side or edge contacts.

Types 260 and 275 are ideally suited in high impedance vacuum tube circuits where high resistance values and a minimum noise level are required. Five wiping fingers, self-aligning, assure continuous contact and low noise level for any position. Shaft may be extended through either or both ends.

Other resistance ranges are available. "Off" position, tapered resistance, center-tapped, dual and multiple tandem units can also be supplied. Shaft lengths, slotted metal 1/4" insulated shaft and other mechanical changes are available.

4 WATT — Model 281



MECH. ROTATION—320°	Range in Ohms
ELEC. ROTATION—300°	0 — 50
BODY DIAMETER—3"	0 — 100
BODY DEPTH—1-3/16"	0 — 500
WEIGHT—5 OZ.	0 — 1,000
	0 — 5,000
	0 — 10,000
	0 — 25,000
	0 — 50,000

6 WATT — Model 291



MECH. ROTATION—258°	Range in Ohms
ELEC. ROTATION—258°	0 — 5
BODY DIAMETER—1-13/16"	0 — 10
BODY DEPTH—1-3/16"	0 — 100
WEIGHT—3.5 OZ.	0 — 500
	0 — 1,000
	0 — 5,000
	0 — 10,000
	0 — 20,000

8 WATT — Model 296



MECH. ROTATION—284°	Range in Ohms
ELEC. ROTATION—248°	0 — 5
BODY DIAMETER—1-13/16"	0 — 10
BODY DEPTH—1 1/2"	0 — 100
WEIGHT—3.5 OZ.	0 — 500
	0 — 1,000
	0 — 5,000
	0 — 10,000
	0 — 25,000



Special Gang Mounting



Special Bracket for Dual Mounting

DeJUR Rheostat-Potentiometers can be furnished mounted two or more in gang assembly for simultaneous operation of several circuits or circuit components, by means of one control. Two of these applications are illustrated above and many other arrangements are feasible. Our engineers will be glad to examine your requirements.

DeJUR-AMSCO CORPORATION

ROLLER-SMITH



INSTRUMENTS

BETHLEHEM, PENNA.

This line of panel instruments is ideally suited to the many varied uses in test units, analyzers, battery testers and chargers, radio tube testers, control panels, communication equipment, general testing panels and hundreds of other uses where **quality, accuracy, stability and economy** are important. Only the most common ranges are listed. Instruments are available in all practical ranges in a wide variety of case styles from 1 1/2" to 7" sizes. Contact the Representatives listed in the Representative Directory or write the factory for complete data.

Prices shown are list prices subject to trade discounts.



ROUND-FLUSH MOUNTING



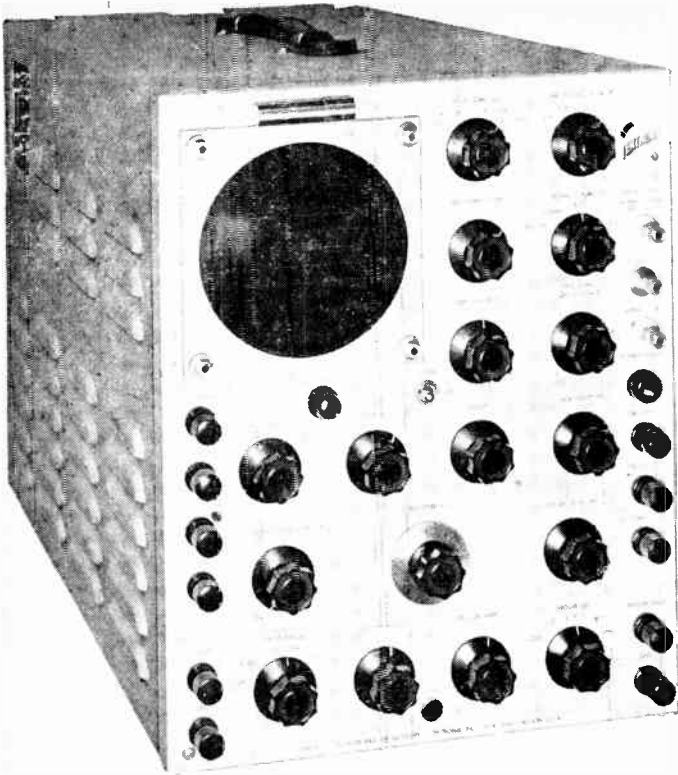
SQUARE-FLUSH MOUNTING

		DC MILLIAMMETERS							
		2 1/2"				3 1/2"			
Range	1 1/2"	List	2 1/2"	List	3 1/2"	List	4 1/2"	List	
0-1	152601	\$15.50	251601	\$10.50	351601	\$11.00	452601	\$13.50	
0-10	152607	15.50	251607	10.50	351607	11.00	452607	13.50	
0-100	152614	15.50	251613	10.50	351614	11.00	452614	13.50	
0-500	152620	15.50	251617	10.50	351620	11.00	452619	13.50	
		DC AMMETERS							
0-1	152501	16.50	251501	11.50	351501	12.00	452501	14.50	
0-10	152507	16.50	251507	11.50	351507	12.00	452507	14.50	
0-30	—	—	251510	11.50	351511	12.00	452511	14.50	
		DC MICROAMMETERS							
0-20	—	—	—	—	351640	29.50	452640	31.50	
0-50	—	—	251641	19.00	351641	19.50	452641	22.00	
0-100	—	—	251643	18.00	351643	18.50	452643	21.00	
0-200	—	—	251645	14.50	351645	14.50	452645	17.00	
0-500	152701	17.50	251647	12.50	351647	13.00	452647	15.50	
		DC VOLTMETERS 1000 ohms per volt							
0-1.5	152802	16.50	251801	12.00	351802	12.50	452802	15.00	
0-10	152807	16.50	251806	12.00	351807	12.50	452807	15.00	
0-150	—	—	251813	12.00	351817	13.50	452816	16.00	
0-250	—	—	—	—	351819	14.50	452818	17.00	
0-500	—	—	—	—	351821	17.25	452820	19.50	
		"VU" METERS — 20/0/+3 VU A and B scales per JAN — 1 — 6							
Scale A					351951	30.00	452951	32.50	
Scale B					351952	30.00	452952	32.50	
		AC VOLTMETERS							
0-1.5			251201	11.50	351201	12.00	452201	14.50	
0-10			251206	11.50	351206	12.00	452206	14.50	
0-30			251209	11.50	351210	12.00	452210	14.50	
0-150			251213	12.50	351215	13.00	452215	15.50	
0-300			—	—	351218	14.00	452218	17.00	
		AC AMMETERS							
0-1			251001	11.50	351001	12.00	452001	14.50	
0-3			251004	11.50	351005	12.00	452005	14.50	
0-5			251005	11.50	351006	12.00	452006	14.50	
0-10			251007	11.50	351008	12.00	452008	14.50	
0-30			251010	11.50	351012	12.00	452012	14.50	
		RF AMMETERS Self Contained							
0-5 MA*			—	—	351671	50.00			
0-100 MA*			—	—	351677	50.00			
0-800 MA			251694	16.50	351694	17.00			
0-1 Amp.			251695	16.50	351695	17.00			
0-3 Amp.			251698	16.50	351698	17.00			
0-5 Amp.			251699	16.50	351699	17.00			
0-10 Amp.			251701	16.50	351701	17.00			
0-20 Amp.			251703	16.50	351703	17.00			

* Available in vacuum type couples only.
3 1/2" available with expanded scale at \$5.00 list extra.
Center zero ranges available at no extra cost.
Most types available with internal illumination.

ROLLER-SMITH, Bethlehem, Penna.

Electrical Indicating Instruments - Aircraft Instruments - Switchgear - Air and Oil Circuit Breakers
Rotary Switches - Relays - Precision Balances



TEKTRONIX TYPE 511 Cathode-Ray Oscilloscope

GENERAL DESCRIPTION

The Tektronix Type 511 is a portable, wide band oscilloscope, providing features formerly found only in very expensive, cumbersome "tea wagon" instruments.

SWEEP CIRCUIT

Hard tube, radar type, provides either sawtooth or triggered sweeps continuously variable from .1 second to 1 microsecond (10 cm deflection).

A trigger selector switch enables the sweep to be initiated by the observed signal as well as externally generated impulses of either polarity.

Thus use of the triggered sweep is not confined to aperiodic or transient signals, but may be used to observe any signal in the frequency range of 10 cycles to 10 mc. Since each triggered sweep is started independently of the preceding one a stationary pattern is obtained regardless of the relationship between the sweep speed and signal frequency.

Single sweeps may be initiated by pulses as short as .05 microsecond.

Calibrated controls indicate the time for 10 cm sweep within $\pm 10\%$.

Sweep magnifier control permits any selected 20% of trace to be expanded five times.

FEATURES

The instrument operates with a 3 kv accelerating potential and is normally supplied with the 5CP1A cathode ray tube. For special applications the Type 511 will be supplied with either the 5CP7A or the 5CP11A at no extra cost.

An edge-lighted plastic scale provides reference lines of controllable brightness which aids in making quantitative measurements. A green filter is provided which effectively increases the contrast under high ambient light conditions.

A terminal plate accessible through the side of the cabinet allows direct connection to all four deflection plates.

As a result of extensive use of lightweight, strong, electrically welded alloys, the total weight of the instrument has been reduced to 65 pounds. The overall dimensions are: 15 $\frac{1}{2}$ " H, 12 $\frac{1}{2}$ " W, 21 $\frac{1}{2}$ " D.

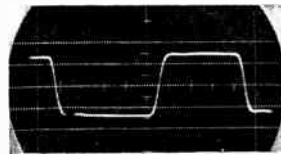
SIGNAL CHANNEL

A unique feature of the Type 511 is the Input Channel Selector switch connecting the signal input binding post to the deflection plates in four ways: directly, via condenser, via 1 or 2 stage wide band amplifier. This gives three basic sensitivities; .25, 2.5, and 25 peak to peak volts per centimeter.

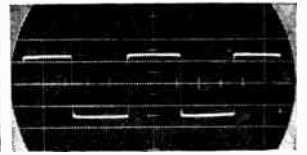
An RC compensated attenuator having ratios of 1, 2, 4, and 8 can be used with any of the Input Channel Selector positions, thus providing deflection sensitivities as low as 200 volts per cm.

The input impedance of the instrument varies less than 1% for any position of the Attenuator or Input Channel Selector.

The signal amplifiers of the Type 511 are individually adjusted to provide optimum transient response as shown in the actual photographs.



1 mc. square wave response
of two stage amplifier



60 cycle square wave response
of two stage amplifier

The bandwidth for one stage is 10 mc and 8 mc for two stages (3DB down from 1 mc).

A calibrated potentiometer provides 60 cycle sine wave calibration voltages in three ranges: 0-1, 0-10, and 0-100 volts peak to peak, with an accuracy of $\pm 5\%$ of full scale.

NET \$795.00

f.o.b. Portland



TEKTRONIX, INC.

Manufacturers of CATHODE-RAY OSCILLOSCOPES & VIDEO TEST EQUIPMENT

1516 S.E. SEVENTH AVENUE, PORTLAND 14, OREGON

INSTRUMENTS by KAY



• DISPLAYS PASS BAND

Continuous frequency coverage up through the color television bands.

• THE MEGA-SWEEP ...

WIDE RANGE

SWEEPING

OSCILLATOR

Shows at a glance the response of any network or amplifier. Eliminates the tedious point to point analysis. Saves engineering time and stimulates research. Valuable for television production alignment.

USES:

- Testing Television Systems and Components.
- Testing Radar Systems and Components.
- Instructional Purposes in Schools and Universities.
- Designing Wide-Band i.f. Amplifiers.
- Designing Filter Networks.
- Production Testing of FM and Television Equipments.
- As a Signal Source of Extraordinary Range (Unmatched by any existing commercial signal generator).
- As a cw high frequency oscillator.
- Self-contained, Regulated, Power Supply — 117 Volt, 60 Cycle.
- Operation — Size 10" x 17" x 12"
- Weight 45 Pounds.
- Price \$395 F.O.B. Factory

The Mega-Marker Sr. is a newly-developed electronic instrument for the generation of marker frequencies. Provides a precise source of frequencies throughout the television spectrum for all thirteen television channels. Each of these frequencies is controlled by a crystal whose accuracy is 0.01%. Such accuracy is more than adequate for all needs of television.

Mega-Marker Sr. may be used for the alignment of the local oscillator for all thirteen channels. This is accomplished by using the sound channel to furnish an indication of discriminator output.

The single-dial control gives a rapid and efficient means of frequency selection without the necessity of consulting charts or calibration curves.

The Mega-Marker Sr. facilitates the alignment of the r.f. channels in the same manner that the Mega-Pipper and Mega-Marker facilitate easy i.f. alignment.

MISC.: 117 Volt, 60 Cycle — Size 8" x 16" x 8". Weight 15 Pounds.
Price \$195.00 F.O.B. Pine Brook, N. J.

THE MEGA-MARKER SR.

The ONLY 13-CHANNEL CRYSTAL-CONTROLLED MARKER OSCILLATOR. For Rapid and Accurate Alignment of Television Receivers.

- CRYSTAL Accuracy 0.01%.
- Single Dial Operation.
- Provides Sound Carrier Frequencies.



THE MEGA-MARKER

Precision variable marker oscillator having a range of 19 to 29 megacycles for the television i.f. band.

Crystal oscillator for the FM i.f. band (10.7 mc.).

A large, easily read dial provides over 12 inches of calibrated scale length. Thus it may be read to accuracies of 0.02 megacycles.

Included in the Mega-Marker is a crystal controlled oscillator which provides accurate check points.

The Mega-Marker is a valuable accessory for FM and television applications of the Mega-Sweep and Mega-Match. For absolute stability the regulated power supply of the Mega-Sweep or the Mega-Match is used.

Weight 5 Pounds. Size 7" x 10" x 6".
Price \$60.00 F.O.B. Pine Brook, N. J.

• THE MEGA-PIPPER

The Mega-Pipper is a new production and service alignment instrument. By the use of this unit in conjunction with the Mega-Sweep or Mega-Match it is possible to quickly and accurately align television receivers.

The Mega-Pipper gives four precise crystal controlled pips which are independent of the circuit under test. These pips establish the picture, sound carrier, and also the adjacent

channel points. Thus the Mega-Pipper is an instrument which will save many hours of time spent in alignment. No switching or adjustment is necessary for frequency control.

Inasmuch as the pips are fed directly into an oscilloscope the pips are visible at all times, even in the traps where the highest precision is desired.

Self-contained power supply.



Weight 15 Pounds. Size 8" x 16" x 8".
Price \$150 F.O.B. Pine Brook, N. J.

KAY ELECTRIC CO.

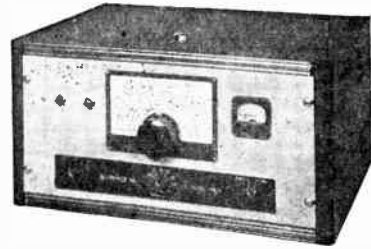
23 MAPLE AVENUE

PINE BROOK

NEW JERSEY

Telephone: CALdwell 6-3710

Manufacturers OF SPECIALIZED ELECTRONIC APPARATUS



Finest in Transmitting Equipment

When you buy—AE-30, El-Tronics transmitting set—you're not getting just another "ECO", but the finest—the most complete equipment. It has 30 watts output on five bands—and is single dial tuned and band switching. Simple in operation:—

1. Set band switch
 2. Set dial to frequency
 3. Turn on power—and YOU'RE ON THE AIR
- Send for descriptive Bulletin No. 481.



GEIGER-MÜLLER Laboratory Counting Rate Meter

MODEL RM 4

Direct reading counting rate meter with FOUR full scale ranges of 5, 50, 500 and 5000 pulses per second. Provision for connection of external 5 m. a. recording milliammeter. Recorder circuit for operation of impulse register (recording clock). Regulated high voltage power supply for counter tube. Built-in loudspeaker for aural monitoring. Pulse equalizing and sharpening stages. Operates with self-quenching OR non-self-quenching counter tubes. Provision for connecting scaling circuit, impulse register, oscilloscope, recording milliammeter and calibrating input signal. Price only \$350 less counter tubes and recording clock. For complete description send for Bulletin No. 471.

Portable GEIGER-MÜLLER Radiation Survey Instrument MODEL RS 3

A complete portable battery operated instrument for the measurement of radiation intensities—incorporating precise reliable circuits such as usually found only in elaborate laboratory apparatus.

Direct reading—three full scale ranges of .25, 2.5 and 25 milliroentgens per hour.

4" indicating meter conveniently located on top of case for ease in taking reading.

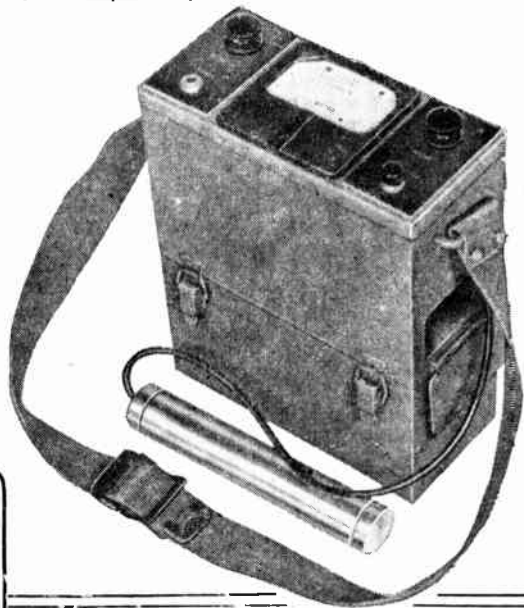
Only the correct meter scale can be seen—correct scale moves into position as range switch is rotated.

Highly stable electronic high voltage power supply for counter tube, adjustable from approx. 500 to 1500 volts—eliminates necessity of special counter tubes.

Detects and measures both beta and gamma radiation.

Meter indicates exact voltage applied to counter tube—also checks battery voltages.

Send for complete descriptive Bulletin No. 482.



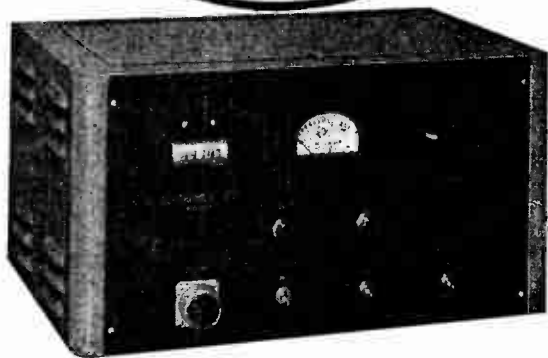
El-Tronics
INC.

2647 N. HOWARD STREET
PHILADELPHIA 33, PENNA.

Finest

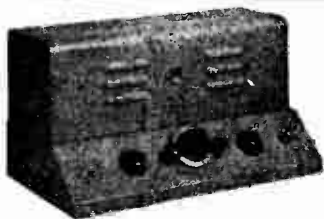
IN

ELECTRONIC EQUIPMENT



Precision Laboratory Set
GEIGER-MÜLLER
MODEL LS 1
Completely Self-Contained
ONLY \$245.00

Particularly recommended for all applications where source of radiation is not sufficiently intense as to necessitate the use of scaling circuits. Especially suitable for many applications of radio-active tracers, cosmic ray measurement work, etc. Send for Descriptive Bulletin No. 483.

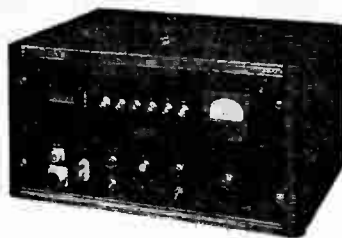


**ELECTRONIC
RADIO ALARM**
MODEL HS-5

Protects—Your Home, Factory, Warehouse, Barn, Fur Vault, Jewelry Displays, Filing Cabinets, Safes, Valuable Papers. Successful over 15 years. Detects fire, intrusion, trespassing. Works on capacity principle—activated when area is approached. Can be installed by any electrician or radio service man. Used by Government Agencies, Service Stations, Offices, Industrial Plants. Adequate, economical protection. Send for Descriptive Bulletin for details.

El-Tronics
INC.

2647 N. HOWARD STREET
PHILADELPHIA 33, PENNA.



High Speed
GEIGER-MÜLLER
LABORATORY SET
MODEL LS 64
CONSIDER THESE SPECIFICATIONS

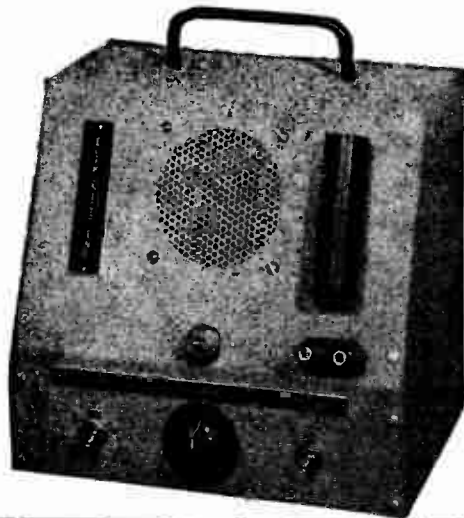
All of the newest circuits—simplified and modernized—reliable and foolproof. Uses the famous Higinbotham Scaling circuit.—SCALE OF 64 (Used under license agreement with U. S. Atomic Energy Commission). Built-in recorder clock of zero reset—counts up to 9999 before recycling. Regulated high voltage power supply for counter tube, with front panel voltmeter. Suitable for use with self-quenching or non-self-quenching counter tube. Bank of neon indicator lamps for interpolation of count and indication of proper scaler operation. Small, compact, light in weight—constructed completely on one 13"x17" chassis with 8-3/4" rack type front panel. **PRICE ONLY \$360.00** complete with tubes and built-in recording clock. Send for descriptive Bulletin No. 472.

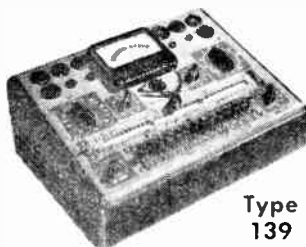
A GEIGER-MÜLLER COUNTER SET

Designed for the Class Room
Lecture Demonstrations
Inexpensively Priced at **ONLY \$69.50**

Our DS-7 Model illustrates the use of the Geiger-Müller Counter in detecting and measuring radiation from radioactive materials.

Indicates the presence of and relative intensity of radioactive materials. Each ionization event taking place in counter tube causes loud clicks in built-in loudspeaker and flashes light on front panel. Will operate with any self-quenching counter tube not requiring over 1000 volts. Completely A. C. operated. Send for Descriptive Bulletin No. 473.





THE COUNTER TUBE TESTER

Here's the last word in tube testers made for discriminating distributors, retailers and radio servicemen. Besides the special features noted below, they have been provided with extra sockets and switch contacts for newly-developed tube types. Size: 5³/₈" x 14³/₈" x 14³/₄"; weight: 17 lbs.

Type 139

Dynamic Conditions

All tube elements tested under dynamic conditions.

Fingertip Controls

make settings easy.

DeLuxe Design

builds prestige for serviceman or retailer.

Shorts Test

at voltage low enough to prevent tube damage or faulty indications — high enough for full brilliancy on Shorts indicator.

Tests Standard, Lock-In, Acorn Tubes.

Large Meter

4¹/₂" size for high legibility. Sensitive but rugged.

Legible Dial

Markings—

lines and numerals in white against green panel.

8-Ft. Line Cord—

extra long for extra convenience.

Provision for

Noise Test.

PORTABLE TUBE TESTER



Type 140

Retains the same electrical characteristics and special features as the Counter Model above left, plus steel carrying case, strong leather handle. Size: 5¹/₂" x 12" x 16¹/₄"; weight: 17 lbs.

THE POLY (MULTI-PURPOSE) METER (Type 134Z)

Just the answer for AM-FM-TV servicing. Tests receivers, transmitters. Highly accurate. New circuit provides superior stability. New easy to understand operating manual free with each Polymeter. All essential accessories no extra charge.

SPECIAL FEATURES

Tests audio, A.C. and R.F. voltages from 20 cps to 300 mc. Uses proximity fuze-type tube built into handy probe. Full scale range of 3, 10, 30, 100, 300.

Measures D.C. from .1 to 1,000 volts in full scale ranges of 3, 10, 30, 100, 300, 1,000.

Measures D.C. current from .1 milli-ampere to 10 amperes in full scale ranges of 3, 10, 30, 100, 300, 1,000 milliamperes and 10 amperes.

Measures resistance from 1/2 ohm to

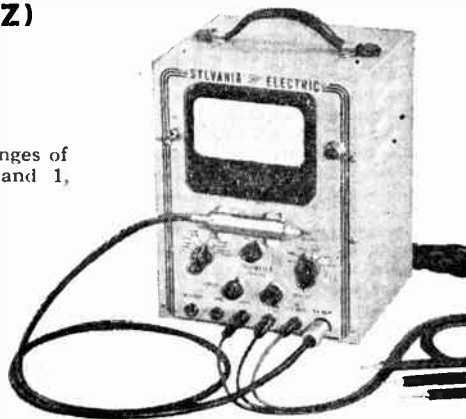
1,000 megohms in full scale ranges of 1,000, 10,000, 100,000 ohms and 1, 10, 1,000 megohms.

INPUT IMPEDANCES

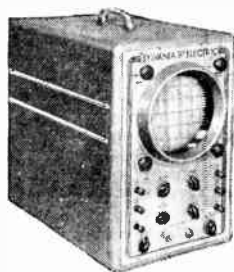
R.F. ranges — 2.3 megohms resistance shunted to approximately 3 mmf. capacity.

A.C. ranges — 2.7 megohms resistance shunted to approximately 40 mmf. capacity.

D.C. ranges — 16 megohms resistance.



OSCILLOSCOPE (Types 131 and 132)

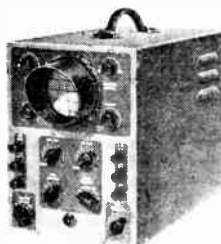


OSCILLOSCOPE TYPE 131

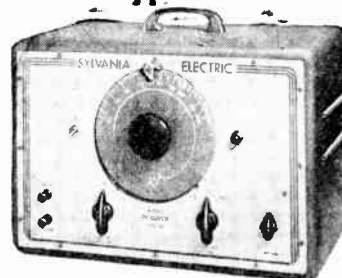
Flexible in its many applications and priced within reach of every pocketbook. High input impedances, excellent sensitivity and amplifier response.

OSCILLOSCOPE TYPE 132

Giant 7" tube and special push-pull amplifiers place this sensational instrument in a class by itself. Check wide response, high input impedances, low amplifier distortions. Priced as low as many smaller oscilloscopes. Provides for intensity modulation. Widely used by service dealers and industrials for AM-FM-TV testing.



AUDIO OSCILLATOR (Type 145)



Wide range—20-20,000 cycles, flexible, accurate. Large amount feedback prevents output distortion. Ideal for receivers, transmitters, PA servicing. High output permits testing speakers direct. Stabilized R-C circuit.

RADIO CITY PRODUCTS CO., Inc.

NEW YORK 1, N. Y.

TEST EQUIPMENT



POCKET SIGNAL GENERATORS MODEL 710 AM — MODEL 720 FM



For "On The Job" service work both of these popular generators are a "must," and is an answer to the needs of thousands of servicemen, experimenters, and is ideal for production testing.

Model 710AM generator provides broadcast band alignment by fixed frequencies of 550 Kc and 1500 Kc. Intermediate frequency alignment is provided for by fixed frequencies of 456 Kc and 465 Kc. Trimmers are provided for the purpose of recalibrating. Safe AC or DC operation. Isolation of case and chassis prevents any chance of shock, short circuit or burn-out.

Complete with tubes. Shielded output, cable and plug ready to operate. Housed in attractively designed case. Size 3" x 6" x 2 3/4".

Weight 2 lbs.
Dealer Net Price **\$17.95**

Model 720FM generator is a companion unit and is actually FREQUENCY modulated sufficient for radio detectors and covers the entire FM band. All needed frequencies for FM servicing are instantly available at accurate calibration. Switch provides fixed frequencies of 9.1 megacycles and 10.7 megacycles for IF and 88 and 108 megacycles for the low and high ends of the band. Continuously variable attenuation is provided to prevent overloading.

Complete with tubes, shielded output, cable line cord and plug ready to operate. Housed in attractively designed case. Size 3" x 6" x 2 3/4". Weight 2 lbs.

Dealer Net Price **\$19.95**

NEW 450 SERIES HI-MEG MULTITESTERS



Accurate HIGH MEGOHM RANGE requires NO batteries and NO tubes. Uses germanium crystal rectifier for AC measurements.

Rectangular 4 1/2" meters provide excellent readability and are accurate within 2%. Output ranges correspond to the AC voltage ranges. Hi-megohm ranges are accomplished with an external AC cord.

All bench type or open face models have dimensions 8 7/8" x 5 1/2" x 3 3/4". Weight 3 lbs. All portable models are designated by letter "P" and are furnished in attractive natural finish oak cases with leath.

and leather handle. Dimensions, 8 7/8" x 7 1/2" x 4 3/4". Weight 1 1/2 lbs.

MODEL 450A — 1000 Ohms per volt

Ohmmeter: 0-5000-500,000-50 Meg.
DC Volts: 0-5-50-125-500-2500.
AC Volts: 0-10-100-250-1000.
DC Milliamps: 0-0.1-10-100-1000.
Decibels: —9 to +55 DB.

Dealer Net Price **\$20.95**

Model 450AP—Same as Model 450A except in portable case with leads.

Dealer Net Price **\$24.95**

MODEL 450C — 20,000 Ohms per volt

Ohmmeter: 0-5000-5 Meg.-1000 Meg.
DC Volts: 0-5-50-125-500-2500.
AC Volts: 0-10-100-250-1000.
DC Milliamps: 0-0.1-10-100-1000.
Decibels: —9 to +55 DB.

Dealer Net Price **\$28.50**

Model 450CP—Same as Model 450C except in portable case with leads.

Dealer Net Price **\$32.50**

Here are fine instruments that provide immediate measurements of high resistance values without the use of expensive bridges.

SIGNAL GENERATOR MODEL 705A

BOTH 30% AND 80% MODULATION

R. C. P. Model 705A Test Oscillator brings you a feature ordinarily found only in high-priced instruments—high and low percent modulation. Low harmonic output on low frequency bands. High percentage harmonics on high frequency band only. IDEAL FOR ALIGNMENT OF FM RECEIVER IF'S BY THE ZERO DISCRIMINATOR CURRENT METHOD.

Dial calibration provides fundamental frequencies from 100 Kc to 25 Mc. Band "F" has been included to provide calibrated output using third harmonic of Band "E" to give direct frequency readings from 25 to 75 Mc. Band "F" harmonic output is sufficient for alignment of all present day FM receivers. Calibration is accurate within 2% per band for broadcast bands and within 3% for high frequency and FM bands. Ideal for direct-reading calibration of receivers.

Automatic shorting of coils not in use. Individual shielding of RF circuits, coil assembly and attenuator. Overall steel case, chassis and panel. Pused line supply.

Planetary drive condenser, double-ended indicator—Output can be modulated or unmodulated. Sinusoidal modulation frequency of 100 cycles also available for external application. Five step-ladder attenuator with vernier.

Model 705A—Complete, ready to operate. Size 8" x 11 3/4" x 3". Weight 11 lbs.

Dealer Net Price **\$49.50**



DYNATRACER MODEL 777

A new signal tracer that establishes a new high in performance records — covers all AM - FM - TELEVISION receivers

Astonishing new design at economical cost that gives high amplification available only in the expensive tuned channel types. Operation is most simple.

TESTS MICROPHONES AND PHONOGRAPH PICKUPS directly through terminals provided

Negligible outside pickup of noise or hum. Extremely high sensitivity enables this instrument to pick up broadcast signals when connected to a short lead.

Checks noise pickup at antenna—checks operation of AVC MEG link and filter circuits. Detailed instructions give full information for checking all types of receivers and their components.

With this revolutionary signal tracer really near the signal and any variation directly from antenna through each stage of r.f.-i.f.-a.f. step by step without operating any switch or changing to different channels in the instrument. You get readings of signal strength and directly measure gain per stage. Gain measurements made by accurate meter not possible with magic eye indicators.

Negligible Disturbance to circuit under test as input capacity is only 5 mmfd.

Attenuation of 10,000 to 1 by a ladder type of step attenuator with vernier control.

Sensitivity extremely high—10,000 microvolts full scale.

Traveling Detector—Convenient, insulated probe housing detector and amplifier at end of 50" lead.

Frequency coverage up through 150 megacycles.

Model 777—Beautiful hammertone grey finish — 4" Alnico V speaker, sensitivity control, microphone-phonograph input jack — traveling detector probe, sensitive milliammeter with associated switching control — ladder type step attenuator, vernier control — automatic control switch for speaker or meter or both or standby. Includes 6AT6, 7A7, 7R5, and 6X5 tubes. Complete, ready to operate, 105-135 volts. Weight 9 1/2 lbs. Size 6 5/8" x 5 1/8" x 1 1/2".

Dealer Net Price **\$41.50**

Model 776—Same signal tracer performance as 777 except that meter and attenuator with associated controls are omitted. Same tube complement. Weight 7 3/4 lbs. Size 5 3/4" x 7 1/4" x 9 1/2".

Dealer Net Price **\$29.95**



RADIO CITY PRODUCTS CO., Inc.

NEW YORK 1, N. Y.

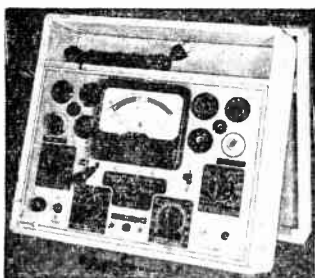
TEST EQUIPMENT



COMBINATION DYNOPTIMUM TUBE AND SET TESTER MODEL 802N

— EASY OPERATION — UP TO DATE —

— Only 5 simple switches to operate both Tube and Set Tester —



tests new and old types of tubes as well as all ballast tubes.

Tube Tester gives speedy leakage short tests between all elements. Separate noise test for tubes that otherwise test "good." Large scale 4 1/2" rectangular meter protected against burn-out by special meter fuse for both multitester and tube tester. Complete instrument is also protected against burn-out by line fuse immediately replaceable at extractor post on panel. AC voltage measurements are free from temperature and frequency errors with the use of a germanium crystal rectifier. Tube Tester

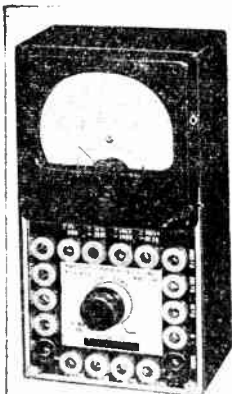
RANGES

DC Voltmeter: 0-10-50-500-1000 at 1000 Ohms per Volt.
 AC Voltmeter: 0-10-50-500-1000.
 DC Milliammeter: 0-1-10-100-1000.
 DC Ammeter: 0-10 Amperes.
 Ohmmeter: 0-500-5000-1 Meg.-10 Meg. low center scale.
 DB Meter: —8 to +55 decibels in four ranges.
 Four range output meter: Same as AC volts.

Model 802N—supplied in handsome hardwood case, with special compartment for small tools, test leads (included), etc. Size: 12 3/4" x 12" x 5 1/4". Weight: 11 1/2 lbs. Complete with self-contained batteries, ready to operate.

Dealer Net Price **\$59.50**

POCKET MULTITESTER MODEL 449A



Versatile multi-tester remarkably accurate. It's tops for general circuit testing and for speed in troubleshooting. Uses a 3" square meter at 5,000 ohms per volt with a basic movement of 200 microamperes. Batteries are mounted in special spring clips readily accessible for replacement—no wires to solder. Combines 6 instruments in one small unit.

RANGES

DC Volts: 0-5-50-250-1000 Volts.
 AC Volts: 0-5-50-250-1000 Volts.
 DC MA: 5-10-100-1000 MA.
 Ohms: 0-2000-20,000-200,000-2 Meg-ohms.
 Decibels: —6 to +52 DB in four ranges.
 Output Meter: 0-5-50-250-1000.

Model 449A—Pocket Multitester supplied in black metal case complete with self-contained batteries. Ready to operate. Size 5 7/8" x 3 1/2" x 2 1/4". Weight 1 3/4 lbs.

Dealer Net Price **\$24.50**

Model 449AP—Same as 449A but supplied in portable oak case with leads.

Dealer Net Price **\$28.50**

ROLLINDEX



Model 105 Roll chart unit to be used in conjunction with Tube Tester Models 322, 322P and 802N. The unit is in a grey hamametic finish metal case with plastic window, designed to fit the test lead compartment.

Model 105—Dealer Net Price..... **\$7.50**

DYNOPTIMUM TUBE TESTER MODELS 322 AND 322P

— Simple operation — only 4 switches used —

R. C. P. again demonstrates leadership in the design of this Tube Tester. Special noise test for tubes that otherwise test "good," gives a speedy leakage short test between all elements, tests new and old types of tubes, individual sections of multi-purpose tubes, and has provisions to check all miniature and sub-miniature tubes.

Complete instrument is protected against burn-out by line fuse immediately replaceable at front of panel.

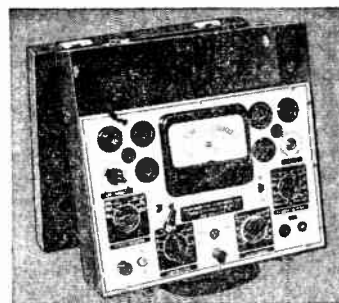
This Model Features simplicity, speed of operation and compactness, in addition to its economical price.

Counter Model 322 (steel case—sloping panel). Size 5 1/4" x 12 1/2" x 8". Weight 8 1/2 lbs.

Dealer Net Price **\$37.95**

Portable Model 322P. Size 4 7/8" x 12 1/8" x 11 3/8". Weight 14 1/2 lbs.

Dealer Net Price **\$41.95**

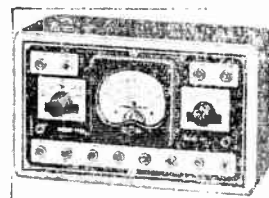


Model 322P

AC-DC MULTITESTER MODELS 447 AND 447P

The exceptional value in the 447 Model is made possible by the tremendous quantities produced. The resulting very low price is responsible for its great popularity. These units are in a class with other makes of testers that sell for considerably more.

A 3" square D'Arsonval meter is used, having an accuracy of 2%. Ring type shunt circuits are employed. Germanium crystal rectifier is used eliminating frequency and temperature errors.



Model 447

RANGES

DC Voltmeter: 0-5-50-500-2500 Volts at 1000 Ohm per Volt.
 AC Voltmeter: 0-10-100-500-1000 Volts.
 Output Voltmeter: 0-10-100-500-1000 Volts.
 DC Milliammeter: 0-1-10-100-1000 MA.
 Ohmmeter: 0-500-100,000 Ohms 1 Megohm.
 Decibel Meter: —8 to +55 decibels.

Model 447—Open face instrument supplied in hardwood case. Size 7" x 8 1/2" x 3". Weight 21 oz. Complete with batteries, ready to operate.

Dealer Net Price..... **\$17.95**

Model 447P—Portable type supplied in hardwood case with carrying handle, cover and test leads. Size 6 1/2" x 8 1/2" x 4 1/2". Weight 24 oz. Complete with batteries, ready to operate.

Dealer Net Price **\$21.95**

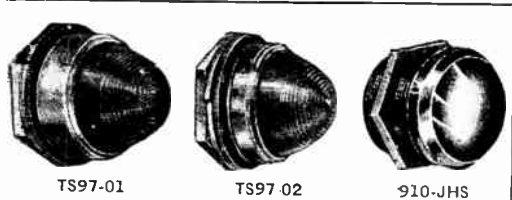
DIALCO

WARNING & SIGNAL PILOT LIGHT ASSEMBLIES

MANUFACTURERS OF THE MOST EXTENSIVE LINE OF WARNING & SIGNAL PILOT LIGHT ASSEMBLIES

DIALCO JEWELS: Complete with Turned Brass Holders for Mounting in Panels

Jewels presented here are merely representative of our general line. We manufacture the most extensive line. For additional information on other types, or special jewels, send specifications.



TS97-01

TS97-02

910-JHS

1" Jewel with Bushing & Mounting Nut

Single 1" hole for mounting . . . Allows removal of lamp from front of panel through use of panel bushing with Jewel Holder . . . Highly polished chrome plated brass Jewel Holder . . . Faceted or Smooth-Faced Jewels . . . Colors optional: Red, Green, Amber, Blue, Opal, White and Clear Jewels . . . Frosted White Jewels can be furnished with removable colored discs, color showing only when lamp is on.

910-JHF—Jewel Holder with Panel Bushing and Mounting Nut, Faceted Jewel	List Price	\$1.00
910-JHS—Jewel Holder with Panel Bushing and Mounting Nut, Smooth Jewel		1.00
910-JHD—Jewel Holder with Panel Bushing and Mounting Nut, Frosted White Jewel with Removable Colored Disc		1.00

1" Torpedo Jewel Screw Type Assembly — Series TS97-01

Features: Water Tight . . . 1" Hole Mounting . . . Length of thread behind Jewel Holder $\frac{1}{2}$ " . . . Furnished with washer, lockwasher, and nut . . . Material: Brass or 17 S.T. Aluminum Finishes: Dull White Nickel, Black Nickel, Satin Chrome, Polished Chrome, Anodized, or Ebonol. Lens Colors: Red, Green, Amber, Blue, Yellow, Opal, White, Clear.

1" Jewel Assembly Series TS97-01 . . . List Price \$1.00

1" Torpedo Jewel Friction Type Assembly — Series TS97-02

This model has the same features as the TS97-01 except that it is of the Friction Type, which makes possible the removal of lamp from front of panel . . . Panel bushing is available in any length from $\frac{1}{4}$ " to 2" depending on the thickness of the panel. 1" Jewel Assembly Series TS97-02 . . . List Price \$1.00

Jewel holders can be furnished with special finishes other than listed. NOTE: Specify color of Jewel or Disc when ordering.

1" Screw Type Jewel Assembly — Series S97-03

This unit has the same features as Model TS97-01 illustrated above, except for the difference in the lens which is as shown. May be had in either Smooth or Diamond-faceted jewel. Specify when ordering. 1" Jewel Assembly Series S97-03 . . . List Price \$1.00

$\frac{3}{4}$ " Jewel with Mounting Nut

Used where low priced large Jewel is needed . . . Single $\frac{1}{2}$ " hole for mounting . . . Highly polished chrome plated brass Jewel Holder . . .

Faceted or Smooth-Faced Jewels. Colors optional: Red, Green, Amber, Blue, Opal and Clear Jewels. 25-F—Jewel Holder and Mounting Nut, Faceted Jewel . . . List Price \$2.40
25-S—Jewel Holder and Mounting Nut, Smooth Jewel . . . List Price .40

NOTE: Specify color of Jewel when ordering.

$\frac{1}{2}$ " Jewel and Mounting Nut

Low Cost—All Purpose . . . Single $\frac{1}{4}$ " hole for mounting. Nickel plated brass Jewel Holder. Faceted or Smooth-Faced Jewels. Colors optional: Red, Green, Amber, Blue, Opal and Clear Jewels.

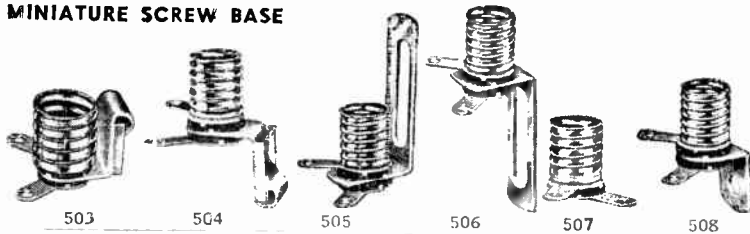
List Price

10-F—Jewel Holder & Mounting Nut, Faceted Jewel . \$0.21

10-S—Jewel Holder & Mounting Nut, Smooth Jewel .21

NOTE: Specify color of Jewel when ordering.

MINIATURE SCREW BASE



503

504

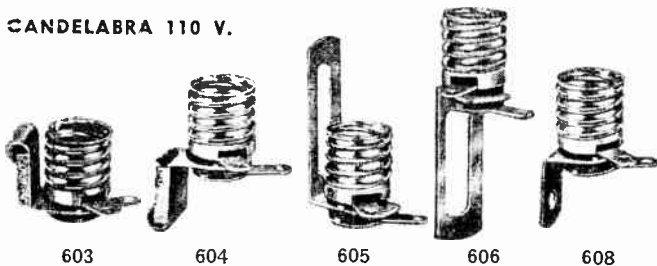
505

506

507

508

CANDELABRA 110 V.



603

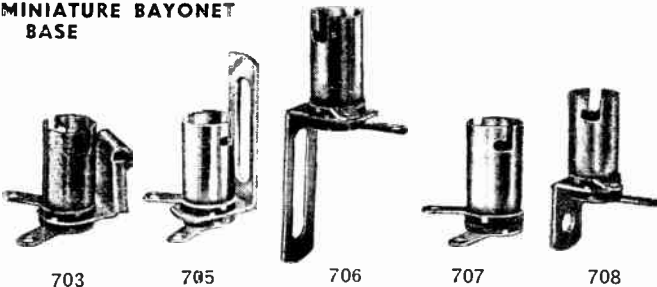
604

605

606

608

MINIATURE BAYONET BASE



703

705

706

707

708

DIALCO SOCKET ASSEMBLIES

Have Exclusive Anchoring Feature

Units shown here are only representative of our extensive line. For additional information, send specifications.

All units are fool-proof and "short-proof" . . . The exclusive Dialco Anchoring Feature permanently locks the lugs, washers, socket, and bracket. The result is a rugged, immovable, shake-proof, fool-proof assembly in which the danger of a short-circuit is eliminated.

Cadmium Plating on all brackets . . . Terminal lugs of tinned brass facilitate rapid soldering . . . Assemblies also available with single lug terminal, or connection effected through grounded bracket . . . Terminals can be supplied in any desired position . . . To assure positive contact, bayonet type sockets are furnished with approved coil spring construction . . . Highest grade insulating washers furnished with all assemblies.

Series	List Price
500—Miniature Screw Base Socket Assemblies . . .	\$0.09
600—110 Volt Candelabra Socket Assemblies . . .	.17
700—Miniature Bayonet Socket Assemblies . . .	.12

We are equipped to manufacture any type of bracket to specifications, and supply any type of finish and insulation.

For Lamp Specifications see page G-8

DIALCO LAMP INSTALLER

For All Lamps

made of rubber; takes all types of miniature, neon and candelabra lamps . . . Designed to expedite mass production, this device makes lamp installation extremely simple and rapid. Especially effective in places that are hard to reach or constricted.



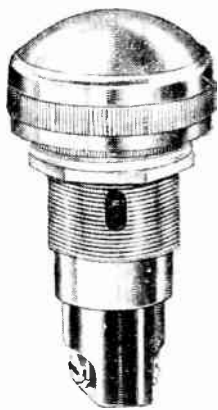
Manufacturers who use Dialco assemblies will receive, on request, a sufficient quantity of Dialco Lamp Installers to meet their production requirements. Dialco Lamp Installer No. L-73 . . . List Price \$0.40

DIALCO

WARNING & SIGNAL PILOT LIGHT ASSEMBLIES

MANUFACTURERS OF THE MOST EXTENSIVE LINE OF WARNING & SIGNAL PILOT LIGHT ASSEMBLIES

SERIES "A"



61901

The Pilot Lights presented on this and the adjoining page are only representative of the extensive Dialco line of 1" and 1½" Pilot Lights. These units are in service in every conceivable Aircraft, Marine, Electronic, Radio, Electrical and Industrial application. Should you require a special unit, we can rapidly submit suggestions and samples to meet your specific requirements.

GENERAL DATA

SERIES "A"—1½" Marine Cap Screw Pilot Lights.

SERIES "B"—1" Marine Cap Screw Pilot Lights.

SERIES "C"—1" Marine Cap Screw Full View Torpedo Pilot Lights.

SERIES "D"—1" Marine Cap Screw "Vari-Dim" Pilot Lights.

The following general features and specifications apply to all units in the Series presented on this page:

All units are water-tight, tested under 15 lbs. pressure per square inch. The Jewel Holder Cap screws on from front of panel. **All lamps are removable from front of panel. Require 1" panel hole for mounting.**

SERIES "B"



51901



51410

Navy Specifications 17-P-4-CFG Moulded Bakelite Housing.

● Heavy terminals for soldering or terminal screw connection. Terminals are perfectly secured—so that they do not turn or become loose regardless of the severity of the tests to which they may be subjected.

● Material: Brass or Aluminum 17 S.T.

● Finishes: Dull White Nickel, Black Nickel, Satin Chrome, Polished Chrome, Anodized, Ebinol, and Olive Drab Anodized Lusterless U.S.A. Signal Corps Specifications.

● Lenses: Series "A-B-D"—Smooth- or Diamond-faced. If smooth, specify clear color, Sandblasted-on-back or Sandblasted-over-all.

Series "C"—Torpedo lens.

● Lens Colors: Red, Green, Amber, Blue, Yellow, Opal, White, Clear.

● Lamp Specifications: See page G-8 for 9 standard lamps applicable to these series of Pilot Lights.

SERIES "C"



51901-5



51206-5

SERIES "D"



71901

Plus LAMPS...
To help speed production, Dialco offers Pilot Lights completely assembled with G.E. or Westinghouse Lamps—any type or voltage. Samples submitted on request.

HOW TO ORDER

The choice of a Pilot Light is determined partly by the type and size of bulb to be used. On page G-8 are listed 9 standard bulbs. Select your Pilot Light from any Series in conjunction with the required bulb. **Note:** Prices quoted do not include the bulbs. Prices will be quoted on application. We are in a position to supply any standard or special General Electric or Westinghouse Bulb for any Dialco Pilot Light which you select.

ALL DIALCO PRICES SUBJECT TO CHANGE WITHOUT NOTICE.

DIALCO

WARNING & SIGNAL PILOT LIGHT ASSEMBLIES

MANUFACTURERS OF THE MOST EXTENSIVE LINE OF WARNING & SIGNAL PILOT LIGHT ASSEMBLIES

The units presented on this page are recommended for general applications other than marine. Precision engineered and ruggedly constructed, these Pilot Lights will give dependable and lasting service.

GENERAL DATA

SERIES "E"—1" Lock-Tite Friction Bayonet-Lock Pilot Lights.

SERIES "F"—1" Lock-Tite Friction Bayonet-Lock, Full-View Torpedo Pilot Lights.

SERIES "G"—1" Standard Friction Fit Pilot Lights.

SERIES "H"—1" Standard Friction Fit Full-View Torpedo Pilot Lights.

SERIES "R"—1" Standard Friction Fit Pilot Light, Porcelain Base.

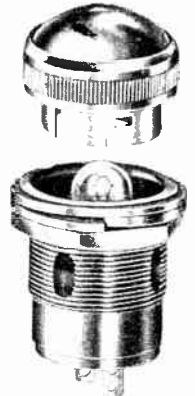
SERIES "E"



41901



41206



41410

The following general features and specifications apply to all units in the Series presented on this page:

All "Lock-Tite" units are designed for service on vibrating panels. The positive "friction-lock" construction of the jewel holder prevents impairment of the unit even when subjected to severe vibration.

The "Friction Fit" units are designed for installation in which the vibration factor is of minor importance. The "Friction-fit" Jewel Holder is inserted firmly and securely, assuring efficient, dependable service of the assembly.

All lamps are removable from front of panel. A 1" panel hole is required for mounting.

Navy Specifications: 17-P-5 FBG Bakelite Housing.

17-P-4 CFG Moulded Bakelite Housing.

• Heavy terminals for soldering or terminal screw connection. Terminals are perfectly secured—so that they do not turn or become loose regardless of the severity of the tests that they may be put through.

• Dialco anchoring features of the lamp housing permanently seals the position of the bayonet shell so that the lamp is easily removed from front of panel.

• **Material:** Brass or Aluminum S.T.

• **Finishes:** Dull White Nickel, Black Nickel, Satin Chrome, Polished Chrome, Anodized, Ebonol, and Olive Drab Anodized (asterless U.S.A. Signal Corps Specifications).

• **Lenses:** Series "E", "G", "R": — Smooth or Diamond-faced. If smooth, specify clear color, Sandblasted-on-back or Sandblasted-over-all. Series "F", "H": — Torpedo lens.

• **Lens Colors:** Red, Green, Amber, Blue, Yellow, Opal, White, Clear.

• **LAMP SPECIFICATIONS:** See page G-8.

SERIES "F"



41206-5



41901-5



UNDERWRITERS' LABORATORIES LISTED Pilot Light Assemblies and Warning & Signal Lights are a major feature of the extensive Dialco line.

SERIES "G"



31901



31410

SERIES "H"



31901-5

SERIES "R"



31601

When ordering, please be sure to give the following information in regard to the Jewel: Color, whether Smooth-Faced or Faceted; if Smooth-faced, whether Clear, Sandblasted-on-back, or Sandblasted-overall. Also specify type of Socket and Lamp. See page G-8 for lamp chart and price list.

All DIALCO Prices Subject to Change Without Notice.

DIALCO

WARNING & SIGNAL

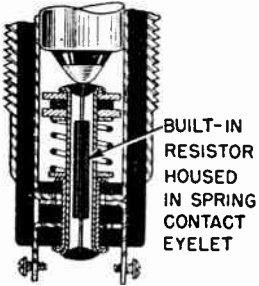
PILOT LIGHT ASSEMBLIES

MANUFACTURERS OF THE MOST EXTENSIVE LINE OF WARNING & SIGNAL PILOT LIGHT ASSEMBLIES

SERIES PLN PILOT LIGHT ASSEMBLIES . . . designed for Ne-51 NEON LAMP . . . Features BUILT-IN RESISTOR for 110 and 220 VOLT CIRCUITS. Has these design features:

In the PLN-849 series Dialco introduces an important advance in the functional design of indicator light assemblies. These new pilot lights are the product of intensive development work and the cooperation of a number of leading manufacturers. In one compact unit are combined these features:

1. Integral housing of the resistor necessary for operating the NE-51 lamp. (See sketch at left for detail.)
2. The safety afforded by heavy molded bakelite socket and adequate electrical clearances.
3. Rugged construction to match the shock and vibration resistance of the neon lamp.
4. Full view jewel plastic cap giving wide angle visibility and brilliant color.
5. Simple one hole mounting, easy wiring to screw or solder terminals.



BUILT-IN RESISTOR HOUSED IN SPRING CONTACT EYELET

Patent Pending

SPECIFIC DATA: MODELS 951308-851308 INCLUSIVE

No. 951308—A compact, versatile unit fitted with a Jewel Plastic Cap which may be had in a choice of 5 colors: Red, Amber, Opal, White, and Clear. Jewel Cap is male-threaded and is readily unscrewed from front of panel, facilitating replacement of bulb. Terminals may be screw type, or permanent soldering type. Specify terminals desired when ordering.

*No. 911308—This unit is the same as the above except that the Plastic Jewel Cap is longer. This unit is recommended for installations where space behind the panel is limited; also where greater visibility of the light is desired.

No. 811308—Has metal Jewel Head with screw-type (male threaded) collar. Fitted with 1/2" smooth or faceted lens. If smooth, the lens may be had in clear color, sand-blasted-on-back, or sand-blasted over-all. Recommended for frontal "on-off" signal indication.

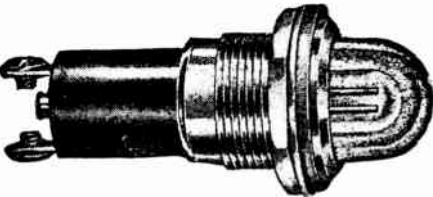
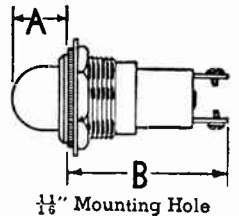
**No. 881308—This unit is the same as the above, except that the Jewel Head is longer. This unit is recommended where a more forward on-off signal is desired; also where space behind the panel is limited.

No. 871308—This unit is the same as the No. 811308 shown above, except that the collar of the Jewel Head is of the push-in snap-fit type. When snapped into position, Jewel Head and body of assembly form one vibration-proof friction-tight unit.

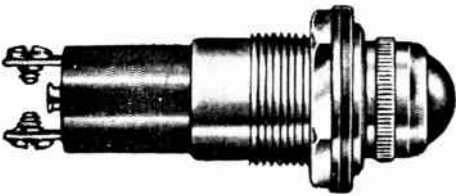
No. 821308—This unit features a Jewel Head assembly 1 1/8" in diameter with 1/2" lens. The collar of the Jewel Head is female-threaded, easily unscrews from front of panel, facilitating replacement of bulb. The lens may be smooth or faceted; if smooth, it may be clear color, sandblasted-on-back, or sandblasted over-all.

No. 851308—This unit features a 1 1/8" Jewel Head with 3/4" lens. The collar of the Jewel Head is female-threaded. Lens may be smooth or faceted; if smooth, it may be clear color, sandblasted-on-back, or sandblasted over-all. This unit is recommended where a large lens is desired on a unit mounting into an 1 1/8" panel hole.

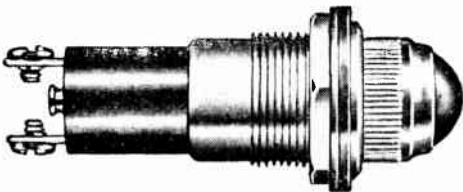
TERMINALS: In all cases be sure to specify Binding Screw Type, or Soldering Type Terminals.



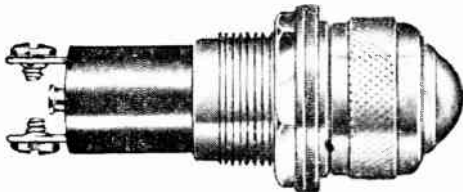
PLN-849—951308 (binding screw)
—95408 (solder terminals)
*PLN 911308 (binding screw)
PLN 91408 (solder terminals)



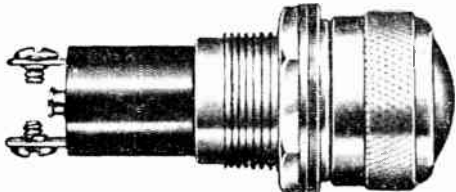
811308 (binding screw)
81408 (solder terminals)
**881308 (binding screw)
88408 (solder terminals)



871308 (binding screw)
7408 (solder terminals)



821308 (binding screw)
82408 (solder terminals)



851308 (binding screw)
85408 (solder terminals)

Model No.	A	B	List Price
951308	1 1/8"	1 1/8"	\$1.50
911308	1 1/8"	1 1/8"	1.50
811308	1 1/8"	1 1/8"	1.50
881308	1 1/8"	1 1/8"	1.75
871308	1 1/8"	1 1/8"	1.75
821308	1 1/8"	1 1/8"	1.75
851308	1 1/8"	1 1/8"	1.75
12408	1 1/8"	1 1/8"	1.75
201308	1 1/8"	1 1/8"	1.75
21408	1 1/8"	1 1/8"	1.75
89408	1 1/8"	1 1/8"	1.75
90408	1 1/8"	1 1/8"	1.75
22408	1 1/8"	1 1/8"	1.75

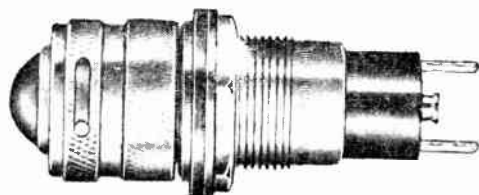
DIALCO

WARNING & SIGNAL PILOT LIGHT ASSEMBLIES

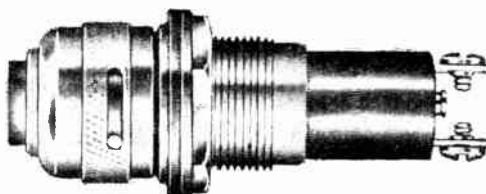
MANUFACTURERS OF THE MOST EXTENSIVE LINE OF WARNING & SIGNAL PILOT LIGHT ASSEMBLIES

GENERAL CHARACTERISTICS applying to ALL UNITS IN THIS SERIES

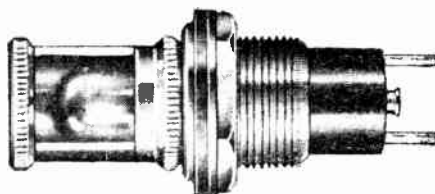
- **LAMPS:** Removable from front of panel. (All Dialco assemblies can be supplied complete with lamps.)
- **MATERIAL:** Body is machined of Brass or Aluminum and may be plated with any one of these finishes: White Nickel, Black Nickel, Satin Chrome, Polished Chrome, Anodized, Ebinol, Black Alumalite on Aluminum.
- **SOCKET:** Moulded bakelite housing.
- **LENSES:** Plastic or glass. Smooth or faceted. If smooth, specify clear color, sandblasted-on-back, or sandblasted over-all.
- **FLAT LENSES** may be had with or without Etched Numbers, Letter or Words.
- **LENS COLORS:** Red, Amber, Yellow, Opal, White, Clear, Also Green, Blue and Yellow for use with incandescent lamps.
- **MOUNTING:** All units mount in $\frac{1}{4}$ " hole on panels of any standard thickness. Mounting hardware (lock washers, space washer, and nut) supplied.
- **TERMINALS:** Binding Screw Type, or permanent soldering type. Plated or unplated brass. Specify type when ordering. . . . All terminals are permanently secured and cannot turn or loosen under severe stress or vibration.



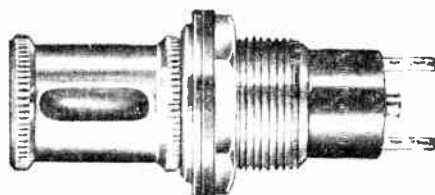
12408



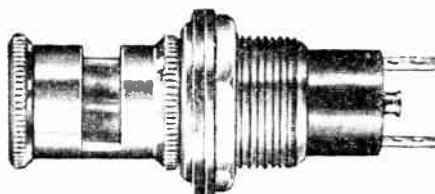
201308



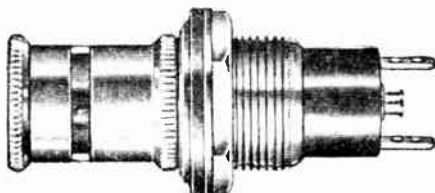
21408



89408



90408



22408

SPECIFIC DATA: MODELS 12408-20138

No. 12408—A "Vari-Dim" unit containing a built-in Mechanical Shutter. A 60° turn to the right reduces the light from a full glow to a complete blackout. Collar of head is female-threaded, readily unscrews from body of assembly. Terminals may be either screw type or permanent soldering type.

No. 201308—Another "Vari-Dim" unit. Similar in function to the units shown above. In this case, however, the head of the unit has a male-threaded collar and a flat lens. This type lens may be had with or without etched Numbers, Letters, or Words.

SPECIFY COMPLETE or SEMI-BLACKOUT

"LIGHT-SHIELD" PILOT LIGHT ASSEMBLIES

The following units are designed on the "light-shield" principle—to direct a beam of light within a rotation of 360 degrees. A turn of the knurled head directs the light on to any localized spot, at any desired angle. Housing and shield are made of brass. The head is a friction fit to the body permitting full rotation. It is secured by a snap lock and will not loosen under vibration but is easily removed. Units with different sizes of openings in the shields are provided as follows:

No. 21408—Has opening $\frac{1}{2}$ " wide x $\frac{1}{2}$ " long; provides maximum illumination.

No. 89408—Has opening $\frac{3}{16}$ " wide x $\frac{3}{16}$ " long.

No. 90408—Has opening $\frac{1}{2}$ " wide x $\frac{3}{16}$ " long.

No. 22408—Has opening $\frac{1}{2}$ " wide x $\frac{3}{32}$ " long.

PLUS LAMPS: DIALCO PILOT LIGHTS will serve you best if they are equipped with correct lamps. For your convenience we carry large stocks of genuine General Electric Neon Glow and Miniature Incandescent Lamps of all voltages. Prompt delivery can be made in large or small quantities.

All Units Shown Herein Are Also Available Without Resistors

This series of Pilot Lights may be ordered without resistors for use on low voltage circuits with the following T-3/4 Incandescent Lamps: 44, 47, 313, 1488, 1815 and all other available voltages. The model numbers of the resistor-less units end with 10 instead of 08. For example:

No. 951308, with resistor No. 951310, without resistor



UNDERWRITERS' LABORATORIES LISTED Pilot Light Assemblies and Warning & Signal Lights are a major feature of the extensive Dialco line.

DIALCO

WARNING & SIGNAL PILOT LIGHT ASSEMBLIES

MANUFACTURERS OF THE MOST EXTENSIVE LINE OF WARNING & SIGNAL PILOT LIGHT ASSEMBLIES

Half-Inch Pilot Light Assemblies — Series 510-610-610U-710-710U

Have Exclusive Anchoring Feature

Units shown here are only representative of our extensive line. For additional information, send specifications.

Fool-proof, "short-proof" construction. All units shown here have the exclusive Dialco anchoring feature.



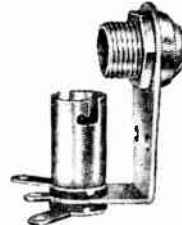
510



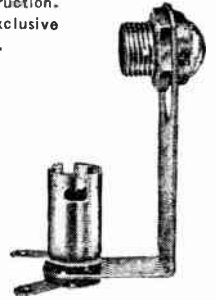
610



610 Universal



710



710 Universal

Low cost space saver . . . Mounts in single $\frac{1}{8}$ " hole . . . Nickel plated brass Jewel Holder . . . Equipped with Candelabra 110 V. Miniature Bayonet or Miniature Screw Base Sockets . . . Choice of smooth or facet-faced jewels.

Jewel Color Choice: Red, Green, Amber, Yellow, Blue, Opal and Clear . . . Has an extra center grounding lug . . . 610 Universal is a longer, adjustable bracket for use where more accurate focus of jewel to lamp filament is required. Lamps: See page G-8.

		List Price
{	510-F Miniature Screw Socket Assembly with Faceted Jewel	\$0.32
	510-S Miniature Screw Socket Assembly with Smooth Jewel	.32
{	610-F Candelabra 110 Volt Socket Assembly with Faceted Jewel	.35
	610-S Candelabra 110 Volt Socket Assembly with Smooth Jewel	.35
{	610-UF Candelabra 110 Volt Adjustable Bracket Assembly with Faceted Jewel	.35
	610-US Candelabra 110 Volt Adjustable Bracket Assembly with Smooth Jewel	.35

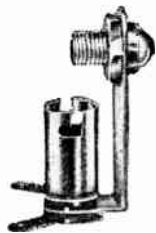
		List Price
{	710-F Miniature Bayonet Socket Assembly with Faceted Jewel	\$0.33
	710-S Miniature Bayonet Socket Assembly with Smooth Jewel	.33
{	710-UF Adjustable Miniature Bayonet Socket Assembly with Faceted Jewel	.35
	710-US Adjustable Miniature Bayonet Socket Assembly with Smooth Jewel	.35

When ordering, please specify Color of Jewel

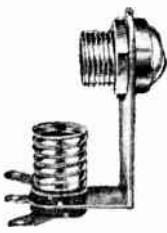
$\frac{3}{8}$ " PILOT LIGHT ASSEMBLY — Series 555-755

Have Exclusive Anchoring Feature

Mounts in $\frac{1}{8}$ " hole . . . Nickel-plated brass jewel holder. Equipped with miniature screw base and miniature bayonet base sockets . . . Jewels are smooth or faceted . . . Jewel Colors: Red, Green, Amber, Yellow, Blue, Opal, Clear. Lamps: See page G-8.



555



755

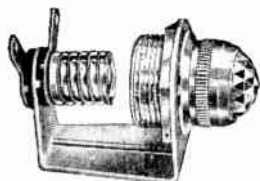
		List Price
{	555F Miniature Screw Socket Assembly with Faceted Jewel	\$0.32
	555S Miniature Screw Socket Assembly with Smooth Jewel	.32
{	755F Miniature Bayonet Socket Assembly with Faceted Jewel	.33
	755S Miniature Bayonet Socket Assembly with Smooth Jewel	.33

When ordering, please specify Color of Jewel

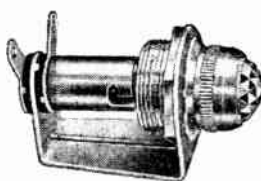
REMOVABLE $\frac{1}{2}$ " JEWEL PILOT LIGHT ASSEMBLY—Series 810

Have Exclusive Anchoring Feature

Mounts in single $\frac{1}{8}$ " hole . . . Designed for standard Mazda Miniature Bayonet or Miniature Screw Base lamps . . . Lamps are instantly removable from front of panel . . . Embossed Rib gives bracket added strength and assures perfect alignment . . . Screw-in type Jewel Holder, nickel-plated brass . . . Lenses: Smooth or facet-faced . . . Lens Colors: Red, Green, Amber, Yellow, Blue, Opal and Clear. Lamps: See page G-8.



810M



810B

		List Price
{	810-MF Miniature Screw Socket Assembly with Faceted Jewel	\$0.50
	810-MS Miniature Screw Socket Assembly with Smooth Jewel	.50
{	810-BF Miniature Bayonet Socket Assembly with Faceted Jewel	.50
	810-BS Miniature Bayonet Socket Assembly with Smooth Jewel	.50

When ordering, please specify Color of Jewel

DIALCO

WARNING & SIGNAL PILOT LIGHT ASSEMBLIES

MANUFACTURERS OF THE MOST EXTENSIVE LINE OF WARNING & SIGNAL PILOT LIGHT ASSEMBLIES

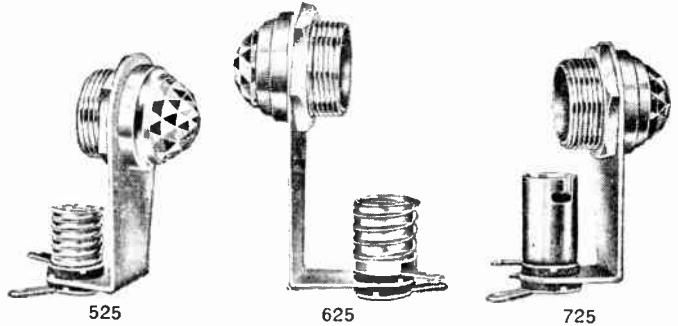
THREE-QUARTER INCH PILOT LIGHT ASSEMBLIES — Series 525-625-725

Exclusive Anchoring Feature

All units shown on this page are absolutely fool-proof and "short-proof," thanks to the anchoring feature. Lugs, washers, bracket, and socket are permanently locked together, making a shake-proof, foolproof unit.

- Fills need for a low priced large jewel pilot light assembly.
- Requires single 1/4" hole for mounting.
- Available with Candelabra 110V, Miniature Bayonet and Miniature screw base sockets.
- Faceted or Smooth Faced Jewels.
- Jewel Colors: Red, Green, Amber, Blue, Opal and Clear.

Note: Specify Color of Jewel When Ordering.

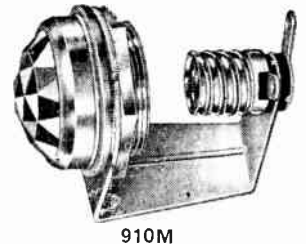


	List Price
{ 525-F Miniature Screw Socket Assembly with Faceted Jewel	\$0.60
{ 525-S Miniature Screw Socket Assembly with Smooth Jewel	.60
{ 625-F Candelabra 110 Volt Socket Assembly with Faceted Jewel	\$0.60
{ 625-S Candelabra 110 Volt Socket Assembly with Smooth Jewel	.60
{ 725-F Miniature Bayonet Socket Assembly with Faceted Jewel	\$0.60
{ 725-S Miniature Bayonet Socket Assembly with Smooth Jewel	.60

ONE INCH OPEN TYPE PILOT LIGHT ASSEMBLY—Series 910

Have Exclusive Anchoring Feature

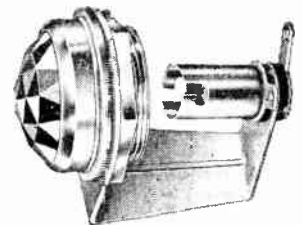
A low priced unit for most applications . . . Requires single one inch hole for mounting . . . Embossed rib in center of bracket gives added rigidity and strength; assures perfect alignment . . . Uses standard Mazda lamps, removable from front of panel through use of Panel Bushing with Jewel holder . . . Jewel holder of highly polished chrome plated brass . . . Available with Candelabra 110 Volt, Miniature Bayonet or Miniature screw base sockets . . . Faceted or Smooth Faced Jewels . . . Colors optional, Red, Green, Amber, Blue, Opal, White, and Clear Jewels . . . Frosted White Jewels can be furnished with removable colored discs color showing only when lamp is on.



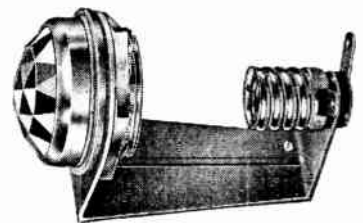
910M

List Price

{ 910-MF Miniature Screw Socket Assembly with Faceted Jewel	\$1.30
{ 910-MS Miniature Screw Socket Assembly with Smooth Jewel	1.30
{ 910-MD Miniature Screw Socket Assembly, Frosted White Jewel with Removable Colored Disc	1.30
{ 910-BF Miniature Bayonet Socket Assembly with Faceted Jewel	1.30
{ 910-BS Miniature Bayonet Socket Assembly with Smooth Jewel	1.30
{ 910-BD Miniature Bayonet Socket Assembly, Frosted White Jewel with Removable Colored Disc	1.30
{ 910-CF Candelabra 110 Volt Socket Assembly with Faceted Jewel	\$1.30
{ 910-CS Candelabra 110 Volt Socket Assembly with Smooth Jewel	1.30
{ 910-CD Candelabra 110 Volt Socket Assembly, Frosted White Jewel with Removable Colored Disc	1.30



910B



910C

ALL DIALCO PRICES SUBJECT TO CHANGE WITHOUT NOTICE.

Plus LAMPS...
To help speed production, Dialco offers Pilot Lights completely assembled with G.E. or Westinghouse Lamps—any type or voltage. Samples submitted on request.

LAMPS: We can supply any of the standard lamps shown on page G-8, or any special lamp, in conjunction with the required Pilot Light Assembly. Send specifications for immediate solution of your problem.

DIALCO

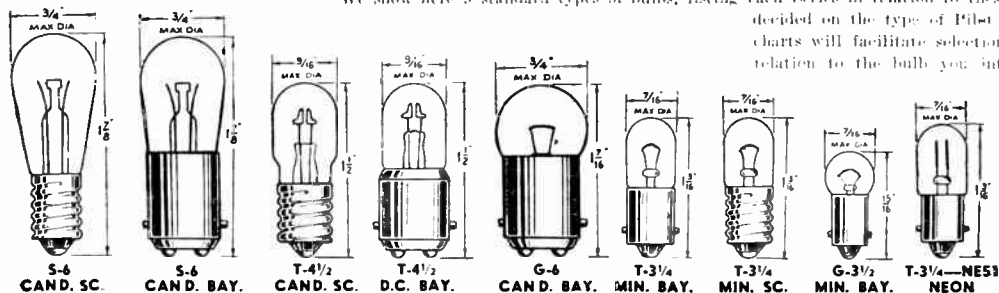
WARNING & SIGNAL PILOT LIGHT ASSEMBLIES

MANUFACTURERS OF THE MOST EXTENSIVE LINE OF WARNING & SIGNAL PILOT LIGHT ASSEMBLIES

PRICE LIST: DIALCO PILOT LIGHT ASSEMBLIES

SERIES A-B-C-D-E-F-G-H-R
Illustrated on pages G-2 and G-3

In selecting a Pilot Light, a deciding factor is the type and size of bulb to be housed within the unit. We show here 9 standard types of bulbs, listing each Series in relation to these bulbs. After you have decided on the type of Pilot Light, the use of these charts will facilitate selection of the correct unit in relation to the bulb you intend to use.



NOTE:
PRICES DO NOT INCLUDE BULBS.

Prices on bulbs on application.

ALL DIALCO PRICES SUBJECT TO CHANGE WITHOUT NOTICE!

Series "A" 1 1/2" MARINE CAP SCREW PILOT LIGHTS			Series "B" 1" MARINE CAP SCREW PILOT LIGHTS			Series "C" 1" MARINE CAP SCREW FULL VIEW TORPEDO PILOT LIGHTS		
Assembly Cat. No.	For Bulb Type	List	Assembly Cat. No.	For Bulb Type	List	Assembly Cat. No.	For Bulb Type	List
61901	S6 Cand. Sc.	\$3.50*	51901	S6 Cand. Sc.	\$1.75*	51901-5	S6 Cand. Sc.	\$1.75*
61202	S6 Cand. Bay.	3.50	51202	S6 Cand. Bay.	1.75	51202-5	S6 Cand. Bay.	1.75
61914	T4 1/2 Neon Cand. Sc.	3.50	51914	T4 1/2 Neon Cand. Sc.	1.75	51914-5	T4 1/2 Neon Cand. Sc.	1.75
61206	T4 1/2 Neon Cand. Bay.	3.50	51206	T4 1/2 Neon Cand. Bay.	1.75	51206-5	T4 1/2 Neon Cand. Bay.	1.75*
61204	G6 Cand. Bay.	3.50	51204	G6 Cand. Bay.	1.75	51204-5	G6 Cand. Bay.	1.75
61410	T3 1/4 Min. Bay.	3.50	51410	T3 1/4 Min. Bay.	1.75*	51410-5	T3 1/4 Min. Bay.	1.75
61511	T3 1/4 Min. Sc.	3.50	51511	T3 1/4 Min. Sc.	1.75	51511-5	T3 1/4 Min. Sc.	1.75
61412	G3 1/2 Min. Bay.	3.50	51412	G3 1/2 Min. Bay.	1.75	51412-5	G3 1/2 Min. Bay.	1.75
61408	T3 1/4 Neon NE51	3.50	51408	T3 1/4 Neon NE51	1.75	51408-5	T3 1/4 Neon NE51	1.75

Series "D" 1" MARINE CAP SCREW "VARI-DIM" PILOT LIGHTS			Series "E" 1" LOCK-TITE FRICTION BAYONET LOCK PILOT LIGHTS			Series "F" 1" LOCK-TITE FRICTION BAYONET LOCK, FULL-VIEW TORPEDO PILOT LIGHTS		
Assembly Cat. No.	For Bulb Type	List	Assembly Cat. No.	For Bulb Type	List	Assembly Cat. No.	For Bulb Type	List
71901	S6 Cand. Sc.	\$3.50*	41901	S6 Cand. Sc.	\$1.60*	41901-5	S6 Cand. Sc.	\$1.60*
71202	S6 Cand. Bay.	3.50	41202	S6 Cand. Bay.	1.60	41202-5	S6 Cand. Bay.	1.60
71914	T4 1/2 Neon Cand. Sc.	3.50	41914	T4 1/2 Neon Cand. Sc.	1.60	41914-5	T4 1/2 Neon Cand. Sc.	1.60
71206	T4 1/2 Neon Cand. Bay.	3.50	41206	T4 1/2 Neon Cand. Bay.	1.60*	41206-5	T4 1/2 Neon Cand. Bay.	1.60*
71204	G6 Cand. Bay.	3.50	41204	G6 Cand. Bay.	1.60	41204-5	G6 Cand. Bay.	1.60
71410	T3 1/4 Min. Bay.	3.50	41410	T3 1/4 Min. Bay.	1.60*	41410-5	T3 1/4 Min. Bay.	1.60
71511	T3 1/4 Min. Sc.	3.50	41511	T3 1/4 Min. Sc.	1.60	41511-5	T3 1/4 Min. Sc.	1.60
71412	G3 1/2 Min. Bay.	3.50	41412	G3 1/2 Min. Bay.	1.60	41412-5	G3 1/2 Min. Bay.	1.60
71408	T3 1/4 Neon NE51	3.50	41408	T3 1/4 Neon NE51	1.60	41408-5	T3 1/4 Neon NE51	1.60

Series "G" 1" STANDARD FRICTION-FIT PILOT LIGHTS			Series "H" 1" STANDARD FRICTION-FIT FULL-VIEW TORPEDO PILOT LIGHTS			Series "R" 1" STANDARD FRICTION-FIT PILOT LIGHT with PORCELAIN BASE		
Assembly Cat. No.	For Bulb Type	List	Assembly Cat. No.	For Bulb Type	List	Assembly Cat. No.	For Bulb Type	List
31901	S6 Cand. Sc.	\$1.60*	31901-5	S6 Cand. Sc.	\$1.60*	31601	S6 Cand. Sc.	\$1.60*
31202	S6 Cand. Bay.	1.60	31202-5	S6 Cand. Bay.	1.60	31614	T4 1/2 Neon Cand. Sc.	1.60
31914	T4 1/2 Neon Cand. Sc.	1.60	31914-5	T4 1/2 Neon Cand. Sc.	1.60			
31206	T4 1/2 Neon Cand. Bay.	1.60	31206-5	T4 1/2 Neon Cand. Bay.	1.60			
31204	G6 Cand. Bay.	1.60	31204-5	G6 Cand. Bay.	1.60			
31410	T3 1/4 Min. Bay.	1.60*	31410-5	T3 1/4 Min. Bay.	1.60			
31511	T3 1/4 Min. Sc.	1.60	31511-5	T3 1/4 Min. Sc.	1.60			
31412	G3 1/2 Min. Bay.	1.60	31412-5	G3 1/2 Min. Bay.	1.60			
31408	T3 1/4 Neon NE51	1.60	31408-5	T3 1/4 Neon NE51	1.60			

*UNITS LISTED IN BOLD FACE are illustrated on pages G-2 and G-3.

BASE ABBREVIATIONS: Cand. Sc.—Candelabra Screw; Cand. Bay.—Candelabra Bayonet; D. C. Bay.—Double Contact Bayonet; Min. Bay.—Miniature Bayonet; Min. Sc.—Miniature Screw.

GENERAL ELECTRIC

RADIO DIAL LAMPS

Designed and engineered for the job

BECAUSE of the vibration conditions under which G-E radio dial lights must operate, General Electric devotes special care to their design and manufacture. Filaments are designed to vibrate without damage and are secured by a shake-proof joint.

General Electric research is constantly at work to assure the quality and serviceability of G-E radio dial lamps. Shock tests, vibration tests and base torsion tests are used in the laboratory to make certain your customers will get good service from the G-E bulbs you install.

Features like these make it worthwhile for you to sell and install G-E miniature lamps:

1. Dependable, trouble-free performance.
2. High level of maintained light output.
3. Low current consumption.
4. Long life.
5. Profitable to handle.
6. Preferred by both dealers and customers.



T-3/4
Miniature
Bayonet



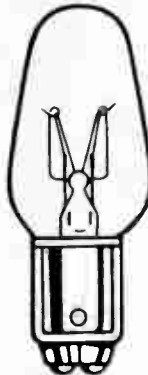
T-3/4
Miniature
Screw



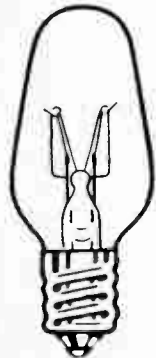
G-3/4
Miniature
Bayonet



G-4 1/2
Miniature
Bayonet



C-7
Double-Contact
Bayonet



C-7
Candelabra
Screw

SPECIFICATIONS AND PRICES

Lamp Number	40	41	42	43	*44	45	*46	*47	48	49	51	55	*1490	10C7	10C7DC
Volts	6-8	2.5	3.2	2.5	6-8	3.2	6-8	6-8	2	2	6-8	6-8	3.2	115-25	115-25
Amps	0.15	0.50	0.35	0.50	0.25	0.35	0.25	0.15	0.06	0.06	Max.0.25	Max.0.45	0.16	10 watts	10 watts
#Bulb	T-3/4	T-3/4	T-3/4	T-3/4	T-3/4	T-3/4	T-3/4	T-3/4	T-3/4	T-3/4	G-3/4	G-4 1/2	T-3/4	C-7	C-7
Base	Min. Screw	Min. Screw	Min. Screw	Min. Bay.	Min. Bay.	Min. Bay.	Min. Screw	Min. Bay.	Min. Screw	Min. Bay.	Min. Bay.	Min. Bay.	Min. Bay.	Cand. Screw	D.C. Bay.
Bead Color	Brown	White		White	Blue		Blue	Brown	Pink						
Price	\$0.10T	\$0.10T	\$0.12T	\$0.10T	\$0.10T	\$0.12T	\$0.10T	\$0.10T	\$0.15T	\$0.15T	\$0.09V	\$0.09V	\$0.11T	\$0.15T	\$0.22T

Bulbs are designated by a letter to indicate shape and a figure to indicate the approximate diameter in eighths of an inch.

* Most popular types.

T After price indicates Federal Excise Tax will be billed as a separate item at 6.3% of list price.

V After price indicates Federal Excise Tax will be billed as a separate item at 1.6% of list price.

GENERAL ELECTRIC

LAMP DEPARTMENT DISTRICT OFFICES

Atlanta 3, Ga. 187 Spring St., N.W.
 Boston 10, Mass. 50 High St.
 Buffalo 2, N. Y. 901 Genesee Bldg.
 Charlotte 2, N. C. 514-516 Johnston Bldg.
 Chicago 4, Illinois 231 S. LaSalle St.
 Cincinnati 2, Ohio 738-9 Union Trust Bldg.
 Cleveland 14, Ohio 1320 Williamson Bldg.
 Dallas 2, Texas 1801 N. Lamar St.
 Denver 2, Colorado 1863 Wazee St.
 Detroit 26, Michigan 1400 Book Tower

WAlnut 9767
 HANcock 1680
 Cleveland 3400
 2-3530
 DEArborn 4712
 DUNbor 2460
 CHerry 1010
 CENTral 7711
 MAIn 6141
 CHerry 6910

N. Kansas City 16, Mo. 200-210 E. 16th Ave.
 Los Angeles 13, Cal. 601 W. Fifth St.
 Minneapolis 13, Minn. 500 Stinson Blvd.
 New York 22, N. Y. 570 Lexington Ave.
 Oakland 7, Cal. 1614 Campbell St.
 Philadelphia 2, Pa. 1405 Locust Street
 Pittsburgh 22, Pa. 535 Smithfield St.
 Portland 9, Oregon 1238 N.W. Glisan St.
 St. Louis 1, Mo. 710 N. Twelfth Blvd.

601 W. Fifth St.
 500 Stinson Blvd.
 570 Lexington Ave.
 1614 Campbell St.
 1405 Locust Street
 535 Smithfield St.
 1238 N.W. Glisan St.
 710 N. Twelfth Blvd.

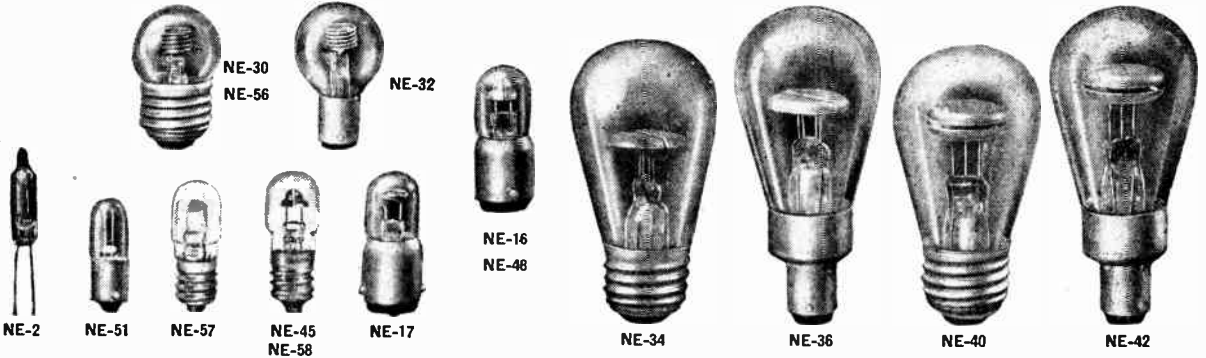
NOrcley 3568
 Michigan 8851
 GRanville 7286
 Wickersham 2-6300
 Highgate 7340
 Kingsley 5-3336
 GRant 3272
 BEacon 2101
 CHestnut 8920
 General Office: Nela Park, Cleveland 12, Ohio, GLEnvilla 6600

NEON GLOW LAMPS

THE unique characteristics of General Electric Neon Glow Lamps recommend them for a variety of uses in radio and electronic devices . . . as indicators, voltage regulators, pilot lights and test lamps.

1. Distinctive orange-red glow—no colored cover glass needed.
2. Dependable performance and long life—rated at 3,000 hours. (In excess of 25,000 hours for NE-2.)
3. Very low current consumption—less than 1/2 milliamperes for smallest lamp.

4. Variety of sizes and wattages.
5. High resistance to vibration, shock.
6. Normally usable on a-c or d-c.
7. Screw base lamps with internal resistors; bayonet base lamps available without internal resistors.
8. Produce practically no heat.
9. Nearly flat volt-ampere characteristics.
10. Lamp life not seriously effected by voltage variations.



Screw Base Lamps

Required series resistor mounted within base. See values marked "IN" in column "Series Resistance." Lamps may be applied to higher circuit voltages by use of suitable external resistors.

Bayonet Base Lamps

External means must be provided to limit current to normal amount. External resistors, to be supplied by user, should be of the values marked "EX" in column "Series Resistance" for rated volts.

CLEAR NEON LAMPS															
Lamp Number	NE-2	NE-51	NE-48	NE-16 ⁽³⁾	NE-45	NE-17	NE-57	NE-30	NE-32	NE-56	NE-34	NE-36	NE-40	NE-42	NE-58
Watts, Nominal	1/25	1/25	1/4	1/4	1/4	1/4	1/4	1	1	1	2	2	3	3	1/2
Volts (Circuit)	105-125	105-125	105-125	105-125	105-125	105-125	105-125	105-125	105-125	210-250	105-125	105-125	105-125	105-125	210-250
★ Bulb	T-2	T-3 1/4	T-4 1/2	T-4 1/2	T-4 1/2	T-4 1/2	T-4 1/2	G-10	G-10	G-10	S-14	S-14	S-14	S-14	T-4 1/2
Base	Unbased (Wire Term.)	S. C. Bay. Min.	D. C. Bay. Cand.	D. C. Bay. Cand.	Cand. Screw	D. C. Bay. Cand.	Cand. Screw	Med. Screw	D. C. Bay. Cand.	Med. Screw	Med. Screw	Sk. D. C. Bay. Cand.	Med. Screw	Sk. D. C. Bay. Cand.	Cand. Screw
Max. Over-all Length, Inches	1 1/8 ⁽²⁾	1 1/8	1 1/2	1 1/2	1 1/8	1 1/2	1 1/8	2 1/8	2 1/8	2 1/8	3 1/8	3 1/8	3 1/8	3 1/8	1 1/8
Electrode Shape	W-11	W-11	P-3	P-3	P-3	PW-27	PW-27	PW-5	PW-5	PW-5	P-2	P-2	P-4	P-4	P-3
Approx. Starting Voltage ⁽¹⁾	A.C.	65	65	65	—	85	55	55	60	60	60	60	60	60	65
	D.C.	90	90	90	90	90	70 ⁽²⁾	70 ⁽²⁾	85	85	85	85	85	85	90
Series Resistance	Ohms	200000	200000	30000	30000	30000	30000	4800	4800	40500	3500	3500	2200	2200	100000
		EX	EX	EX	EX	IN	EX	IN	EX	EX	IN	EX	IN	EX	IN
Package Quantities	Unit	100	10	10	10	10	10	10	10	10	10	10	10	10	10
	Standard	1000	100	100	100	100	100	100	100	100	100	100	100	100	100
List Price and Tax Symbol	\$0.08 T	\$0.10 T	\$0.35 T	\$0.42 N	\$0.40 T	\$0.45 T	\$0.40 T	\$0.40 T	\$0.45 T	\$0.40 T	\$0.50 T	\$0.55 T	\$0.60 T	\$0.65 T	\$0.40 T

★ Bulbs are designated by a letter to indicate shape and o figure to indicate the approximate diameter in eighths of an inch.

① Applies to a new lamp.

② The 1 1/8" dimension is for glass parts only, the lamp has wire terminals which extend 1 3/4".

③ Meets JAN-1A specifications for 991. Special marking JCG-991 supplied at small extra charge.

④ Designed for 67-87 volts, D.C. (D.C. operating voltage at 1.5 milliamperes, 53-65 volts.)

⑤ Center electrode connected to base shell.

⑥ NE-34 and NE-40 are supplied with red sprayed finish at additional charge of 5¢ each, list.

⑦ D.C. starting voltage is for lamp connected so that center electrode is negative.

NOTE—T—Following List Price indicates subject to Federal Tax N—Nontoxic

ELECTRODE SHAPES	BASE DESIGNATIONS
<p>W-11 P-3 PW-27 PW-5 P-2 P-4</p>	<p>S. C. Bay. Min. S. C. Bay. Cand. D. C. Bay. Cand. Cand. Screw Medium Screw Sk. D. C. Bay. Cand.</p>
NOTE—Electrodes not to scale	

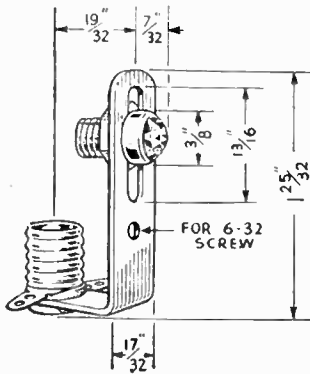


Dial and Jewel PILOT LIGHT ASSEMBLIES

JEWEL LIGHT ASSEMBLIES

11/32" Jewel... Vertical Mounting

No. 5 TYPE



The No. 5 type is unique in its field because it can be adapted to the focal lengths of any miniature screw or bayonet lamp. The opening in the shank of this jewel is so small, it is necessary to have the filament of the lamp directly behind the jewel. The slotted jewel mounting on the No. 5 makes this feature possible. This is an inexpensive unit, and it presents a neat appearance on small instrument panels.

STANDARD TYPES

Type Number	Style Socket
5	Miniature Screw
5B	Miniature Bayonet

SPECIFICATIONS

MOUNTING: Mounts in 9/32" diameter hole on panels up to 1/4" thick.

RATING: Tested on 110 volts. Can be supplied to withstand 1000 volts AC for a period of one minute.

LAMPS: Designed to house any filament type miniature screw or miniature bayonet lamp.

COLORS: Amber, blue, colorless, green, ruby, white or yellow.

FINISHES OF GLASS: Standard unit is equipped with faceted glass. Smooth glass may be obtained upon request.

PLATING: Panel hardware is bright nickel, other parts cadmium.

SPECIAL PLATING: Panel hardware can be supplied with statuary bronze or chrome plating for small extra charge.

PACKING: Packed in bulk unassembled.

PARTS

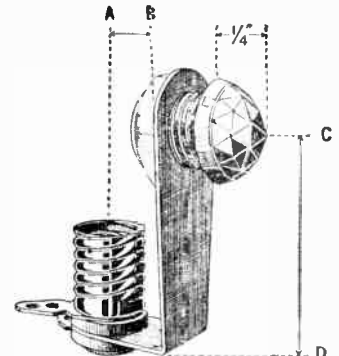
Part No.	Description
14	Jewel Assembly with Nut
15	Nut
123H	Socket Assembly for No. 5
223H	Socket Assembly for No. 5B

1/2" Jewel... Vertical Mounting

No. 10 TYPE

NOTE:

Dimension A to B is from center of socket to outside of bracket. C to D from center of jewel to bottom of bracket. The No. 10B and 10H have brackets with oblong hole permitting adjustment to obtain best position for lamp filament back of jewel.



STANDARD TYPES

Type Number	Style Socket	A to B	C to D
10	Min. Screw	1/2"	1 1/4"
10B	Min. Bayonet	3/4" }	Adj. from 1 1/8" to 1 5/8"
10H	SC Cand. Bay.	3/4" }	
10G	Min. Bayonet	1/2"	1 1/4"

SPECIFICATIONS

LAMPS REQUIRED. For No. 10 and 10B, miniature screw or bayonet base of any voltage (tubular preferred). For No. 10G, miniature bayonet, type G3 1/2 bulb. For No. 10H any SC candelabra bayonet base lamp may be used. Mounts in 7/16" hole on panels up to 1/4" thick. • **JEWEL:** Diamond cut (faceted); Amber, Blue, Crystal, Green, Ruby, White (Milk White), and Yellow. • **SPECIAL FINISHES:** Chrome, Black Nickel, Statuary Bronze. • **PACKED** in bulk with jewels and nuts in bags. • **SPECIAL JEWELS:** SP—Smooth, plain; SFA—Smooth, frosted all over; SFB—Smooth, frosted on back.

PARTS

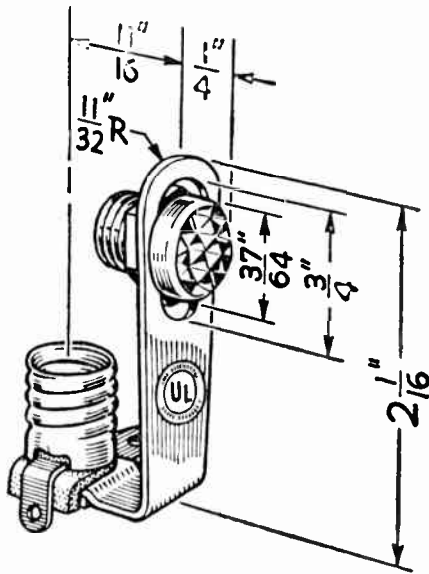
Part No.	Description
115	Socket Assembly for No. 10
215BC	Socket Assembly for No. 10B
215	Socket Assembly for No. 10G
615BC	Socket Assembly for No. 10H
16	Jewel and Nut
17	Nut



Dial and Jewel PILOT LIGHT ASSEMBLIES

JEWEL LIGHT ASSEMBLIES

1/2" Jewel... Vertical Mounting
No. 10C TYPE
UNDERWRITERS' APPROVED



The No. 10C is an inexpensive candelabra screw base jewel light assembly that is Underwriters' Approved for 75 watt-125 volt service. It is particularly suited to applications where there is a minimum of depth behind the panel, and lamp replacement from the front of the panel is not necessary. The mounting bracket has a slotted hole to facilitate adjustment for placing the lamp filament directly behind the jewel giving maximum illumination of the jewel.

SPECIFICATIONS

MOUNTING: Mounts in 7/16" hole on panels up to 1/4" thick. For panels between 1/4" and 3/8" specify No. 16L jewel.

RATING: 75 watts, 125 volts.

LAMPS: Will house any candelabra screw base lamp.

COLORS: Amber, blue, colorless, green, ruby, white and yellow.

FINISHES OF CLASS

Faceted (Diamond Cut)
Smooth Plain (Smooth face no frosting)
Smooth, Frosted All Over
Smooth, Frosted on Back Only

SYMBOL

Standard Finish
SP
SFA
SFB

PLATING: Jewel assembly is burnished nickel. All other parts are cadmium. Statuary bronze, chrome, and black nickel plating can be applied to jewels for a small extra charge.

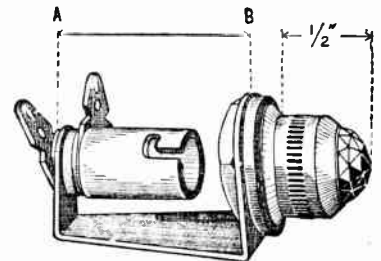
PACKED: Packed in bulk unassembled.

PARTS

Part No.	Description
13	Jewel Assembly and Nut
17	Nut
425BC	Socket Assembly

1/2" Jewel... Horizontal Mounting
No. 20 TYPE

The original Drake Horizontal Mounting Lamp Assembly, and still a fast seller. When ordering, please be sure to select the correct part number for the thickness of panel on which to be installed; otherwise lamp may not extend far enough forward for easy removal, or if too far, prevent bezel screwing all the way on collar.



PATENT NO. 2220515
Net Wt. 0.036 lb.

STANDARD TYPES

Type Number	Style Socket	Length A to B	Panel Thickness
20	Min. Bayonet	1-13/32"	0" to 7/64"
30	Min. Bayonet	1- 7/32"	1/4"
40	Min. Bayonet	1-11/32"	1/8 to 15/64"
20S	Min. Screw	1- 1/16"	0" to 15/64"
30S	Min. Screw	15/16"	1/4"

NOTE: Dimension A to B is overall length of socket assembly with lamp installed. Can be furnished with same plastic caps as No. 51 and 51N. Specify by using Nos. 31C or 31SC.

SPECIFICATIONS

LAMPS REQUIRED: Miniature T3/4 tubular, G3 1/2 globular or other lamps of same over-all length. Lamp removable from front of panel. • Mounts in 11/16" hole. • **JEWEL:** Diamond cut (faceted); Amber, Blue, Crystal, Green, Ruby, White (Milk White) and Yellow. • **SPECIAL FINISHES:** Chrome, Black Nickel, Statuary Bronze. • **PACKED** in bulk with jewel, collar and nuts in bag. • **SPECIAL JEWELS:** SP—Smooth, plain; SFA—Smooth, frosted all over; SFB—Smooth, frosted back.

PARTS

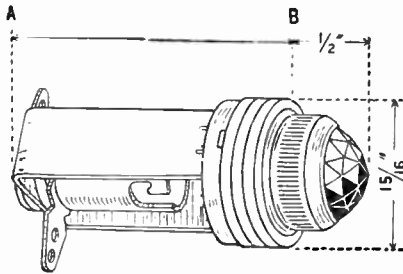
Part No.	Description
220A	Socket Assembly for No. 20
221F	Socket Assembly for No. 30
221V	Socket Assembly for No. 40
122V	Socket Assembly for No. 20-S
122G	Socket Assembly for No. 30-S
25	Jewel
27	Nut
28	Collar for 0"-1/4" panels, 3/8" long
30	Collar for 3/8" panel, 1/2" long



Dial and Jewel PILOT LIGHT ASSEMBLIES

JEWEL LIGHT ASSEMBLIES

1/2" Jewel... Horizontal Mounting
No. 50 TYPE



Net Wt. 0.056 lb.
PATENT NO. 2220516

This patented Drake Assembly is ideal for various applications. Specially designed for use on more than one thickness of panel. Supplied with two fibre washers which compensate for panel thicknesses. It is of sturdy construction, easy to mount, and requires little space.

STANDARD TYPES

Type Number	Style Socket	Length A to B	Panel Thickness
50	Min. Bayonet	1-9/16"	0" to 1/4"
50.5	Min. Bayonet	1 1/2"	17/64" to 3/8"
50S	Min. Screw	1 1/8"	0" to 1/4"
50.5S	Min. Screw	1 1/8" to 1 1/4"	17/64" to 3/8"

NOTE: Dimension A to B is overall length from front of panel with lamp installed.

No spacing washers are furnished with part No. 50.5S.

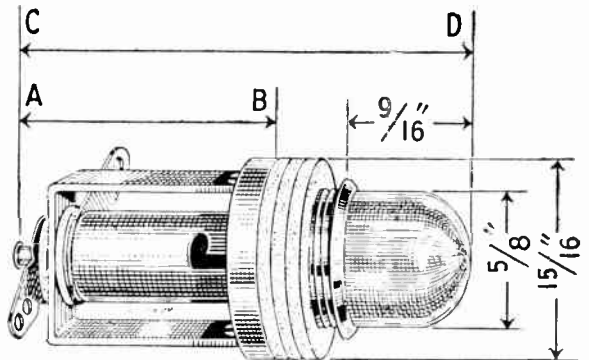
SPECIFICATIONS

LAMPS REQUIRED: Miniature T3 1/4 tubular, G3 1/2 globular or other lamps of same over-all length. • Lamp removable from front of panel. • Mounts in 1 1/16" hole. • JEWEL: (Diamond cut faceted); Amber, Blue, Crystal, Green, Ruby, White, (Milk White) and Yellow. • SPECIAL FINISHES: Chrome, Black Nickel, Statuary Bronze. • PACKED in individual boxes for jobbing trade; in bulk and fully assembled for manufacturing trade. • SPECIAL JEWELS: SP—Smooth, plain; SFA—Smooth, frosted all over; SFB—Smooth, frosted on back.

PARTS

Part No.	Description
25	Jewel
28	Collar 3/8" long for No. 50 & 50S
30	Collar 1/2" long for No. 50.5 & 50.5S
50A	Round Nut
50B	Fibre Washer, 11/16" I.D. x 15/16" O.D. x 1/16" thick
225A	Min. Bay. Socket Assembly for No. 50
225C	Min. Bay. Socket Assembly for No. 50.5
125B	Min. Screw Socket Assembly for Nos. 50S & 50.5S

Plastic Dome... Horizontal Mounting
Lamp Replaceable from Front of Panel
No. 51 TYPE



NET WEIGHT 0.045 lbs.

PATENT NO. 2220516

The No. 51 is a patented Drake assembly featuring a plastic dome indicator which fosters wide angle observation. The whole dome is illuminated, therefore it can be easily seen from the side. It is a good eye-catcher because of its brilliant glow, and for this reason, it makes a wonderful warning light. The unit is supplied with three 1/16" thick fibre spacing washers, so that when the unit is mounted on a thick panel, these washers can be removed making the lamps as accessible for replacement as when mounted on a thin panel.

Part No.	Length			Style Socket	Number of Spacing Washers Required			
	A to B	C to D			Panel thickness	Washers		
51	1 3/8"	1 1/2"	Min. Bay.	Panel thickness	1/16"	1/8"	3/8"	1/4"
				Washers	3	2	1	0
51.5	1"	1 1/4"	Min. Bay.	Panel thickness	1/4"	5/16"	3/8"	
				Washers	2	1	0	
51S	1 1/8"	1 1/4"	Min. Screw	Panel thickness	1/16"	1/8"	3/8"	1/4"
				Washers	2	1	0	0

Length A to B is overall length of socket assembly with lamp installed.

SPECIFICATIONS

MOUNTING: Mounts in 1 1/16" diameter hole. RATING: Tested on 110 volts. Can be supplied to withstand 1,000 volts AC for a period of one minute. LAMPS: Designed to house the miniature bayonet or miniature screw base T3 1/4 lamp. Will also house G3 1/2 bulb, but lamp is not quite as accessible for replacement. COLORS: Amber, colorless, green and red. PLATING: Regularly supplied with nickel plated panel hardware, all other parts cadmium plated. SPECIAL PLATING: Panel hardware can be supplied with chromium, statuary bronze, or black nickel plating. Extra charge for these finishes. PACKING: The units are packed in bulk and fully assembled.

PARTS

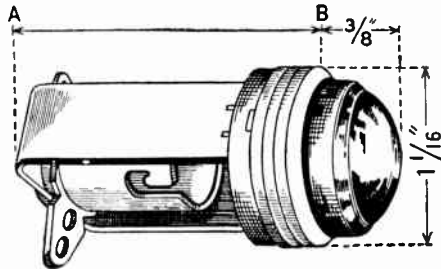
Part No.	Description
25P	Plastic Dome
28	Collar 3/8" long for 51 and 51S
30	Collar 1/2" long for 51.5
50A	Round Nut
50B	Fibre Spacing Washer
125B	Socket Assembly for 51S
225C	Socket Assembly for 51
225B	Socket Assembly for 51.5



Dial and Jewel PILOT LIGHT ASSEMBLIES

MECHANICALLY SECURE TERMINALS USED ON 110 VOLT CANDELABRA ASSEMBLIES

3/4" Jewel... Horizontal Mounting **No. 60 TYPE**



PATENT NO. 2220516
Net Wt. 0.068 lb.

This patented item is similar to the No. 50, but has a 3/4" jewel in a polished chrome "slip-fit" bezel. Supplied with three fibre washers which compensate for panel thickness. Its sturdy construction, ease of mounting, and small size make it an ideal assembly.

Part Number	Style Socket	Length A to B
60	Min. Bayonet	1-9 16"
60N	Cand. Screw for NE45 lamp	1-13 16"
60S	Min. Screw	1-5 16"
60T	Cand. Screw for 115v, 6W, T4 1/2 lamp	2"

NOTE: Dimension A to B is overall length from front of panel with lamp installed.

SPECIFICATIONS

MOUNTING: Mounts in 13/16" diameter hole on panels 0" to 1 1/4" thick. For panels 17/64" to 5/8" thick use parts 60.75, 60.75N, 60.75S, or 60.75T.

RATING: Miniature bayonet and screw types are tested on 110 volts. Candelabra screw types will withstand a voltage breakdown of 1,000 volts.

COLORED DISCS: The No. 60 types are regularly supplied with colorless, smooth glass frosted on back behind which is placed a colored disc. The advantage of this method is that the glass appears white until the lamp is lighted.

COLORS: Amber, blue, colorless, green, red, white, or yellow.

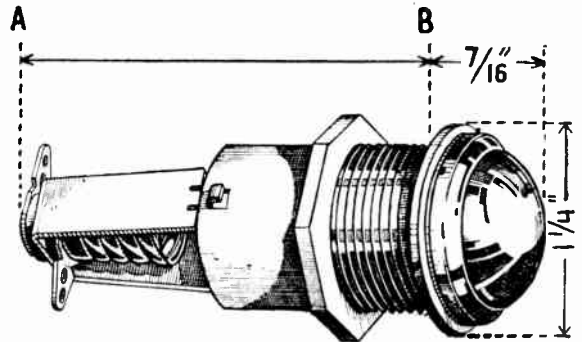
OTHER FINISHES OF GLASS	SYMBOL
Faceted (Diamond Cut)	FAC
Smooth Plain (Smooth face and no frosting)	SP
Smooth, frosted on back (Smooth face frosted on back only)	SFB

Colored glass is furnished when any of the above types are specified. We recommend smooth plain glass for use with neon glow lamps.

PARTS

Part Number	Description
60A	Jewel
60B	Collar 25 32" long for Nos. 60.75, N, S, and T
60C	Collar 13 32" long for Nos. 60, N, S, and T
60D	Round Nut
60E	Color Disc
60G	Retaining Ring for Color Disc
60I	Fibre Washers, 13/16" I.D. x 1 1/16" O.D. x 1/16" thick
128V	Min. Screw Socket Assembly for Nos. 60S & 60.75S
228U	Min. Bay. Socket Assembly for No. 60
228V	Min. Bay. Socket Assembly for No. 60.75
428U	Cand. Screw Socket Assembly for No. 60.75N
428W	Cand. Screw Socket Assembly for Nos. 60N and 60.75T
437P	Cand. Screw Socket Assembly for No. 60T

1" Jewel... Horizontal Mounting **No. 75 TYPE**



Net Wt. 0.107 lb.

PATENT NO. 2192345

The patented No. 75 type has a "slip-fit" bezel. It is exceedingly neat in appearance. Very substantial and easy to install. All parts are burnished cadmium plated except the bezel which has a highly polished chrome finish.

Type Number	Style Socket	Length A to B
75	Candelabra	2 1/8"
175	Min. Screw	1 3/4"
275	Min. Bayonet	1 7/8"
375	S.C. Cand. Bayonet or Bay.	2-1 32"

NOTE: Dimension A to B is over-all length. Overall diameter of mounting nut 1 3/8".

SPECIFICATIONS

MOUNTING: Mounts in 1" diameter hole on panels up to 1/2" thick.

RATING: Nos. 175 and 275 are tested on 110 volts.

Nos. 75 and 375 will withstand a voltage breakdown of 1,000 volts.

LAMPS: The No. 75 is designed to house Mazda 115 volt 6 watt. S6 or C7 candelabra screw base lamps. Will house any other candelabra screw base lamp up to 1 7/8" long and 7/8" diameter. The Nos. 175 and 275 are designed to house any miniature lamp up to 1-3 16" long and 7/8" diameter.

The No. 375 is designed to house any single contact candelabra bayonet base lamp up to 1 1/2" long and 7/8" diameter.

COLORS: Amber, Blue, Colorless, Green, Red, White, or Yellow.

COLORED DISCS: The No. 75 types are regularly supplied with colorless, smooth glass frosted on back behind which is placed a colored disc. The advantage of this method is that the glass appears white until the lamp is lighted.

OTHER FINISHES OF GLASS	SYMBOL
Faceted (Diamond Cut)	FAC
Smooth Plain (Smooth face and no frosting)	SP
Smooth, frosted on back (Smooth face frosted on back only)	SFB

Colored glass is furnished when any of the above types are specified. We recommend smooth plain glass for use with neon glow lamps.

PARTS

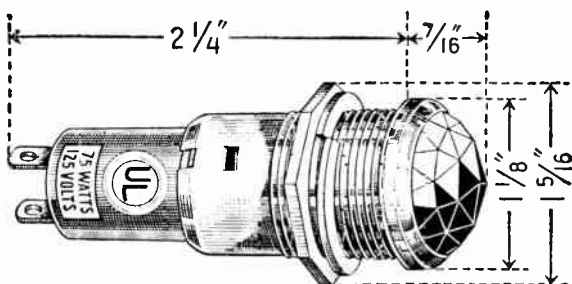
Part Number	Description
419V	Socket Assembly for No. 75
224H	Socket Assembly for No. 275
124I	Socket Assembly for No. 175
624J	Socket Assembly for No. 375
75A	Jewel
75B	Tube
75C	Nut
75E	Color Disc
75F	Retaining ring for Color Disc
75G	Fibre washer—1 1/4" O.D.
75L	Lock washer
75N	Spring clip to lock socket in place



Dial and Jewel PILOT LIGHT ASSEMBLIES

1" JEWEL LIGHT ASSEMBLIES LAMPS REPLACEABLE FROM FRONT OF PANEL

No. 75AP TYPE UNDERWRITERS' APPROVED



Net Weight 0.110 lbs.

The No. 75AP is a heavy duty candelabra screw base assembly designed to be used on rugged equipment. The panel hardware (jewel holder) is attractively finished with a highly polished chrome plate. All other parts are cadmium plated. The No. 75AP is Underwriters' approved for 125 volt, 75 watt service. The socket assembly and mounting tube are one piece and so constructed that they need never be replaced. Electrical connections are made to solder terminals. No danger of vibration loosening the connections as with screw terminals.

SPECIFICATIONS

MOUNTING: Mounts in 1" diameter holes on panels up to 1/2" thick.

RATING: 125 volts, 75 watts. Can be operated on 220 volt circuits if connected in series with a 2000 ohm, 10 watt wire wound resistor. In this case a 115 volt, 6 watt lamp must be used.

LAMPS: Designed to house the Mazda 115 volt, 6 watt, S6, candelabra screw base lamp.

Will house any other candelabra screw base lamp which has an overall length of less than 1 3/8" and a diameter of less than 7/8".

NOTE: Will not house a C7 bulb.

COLORS: Amber, blue, colorless, green, ruby, white or yellow.

FINISHES OF GLASS	SYMBOL
Faceted (Diamond Cut)	FAC
Smooth Plain (Smooth face and no frosting)	SP
Smooth, frosted on back (Smooth face frosted on back only)	SFB

For Mazda lamps we recommend faceted or smooth glass frosted on back. For neon glow lamps, we recommend smooth plain glass.

NOTE: If no other finish is specified, faceted glass will be furnished.

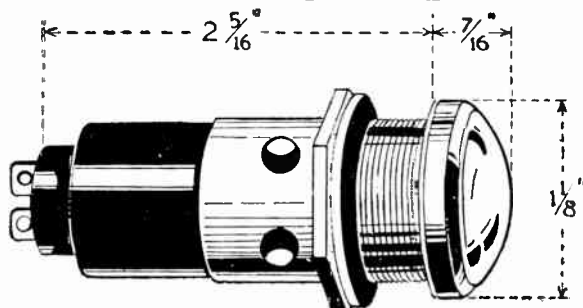
PACKING: The units are packed in individual boxes for the jobbing trade; in bulk, and fully assembled for the manufacturing trade.

PARTS

Part No.	Description
475M	Socket Assembly
75A	Jewel & Jewel Holder
75C	Nut
75L	Lock Washer

1" Jewel . . . Horizontal Mounting Double Contact Candelabra Bayonet Socket

No. 675 TYPE



Net Wt. 0.137 lb.

The No. 675 has a "slip fit" bezel. It is exceedingly neat in appearance. Very substantial and easy to install. All parts are burnished cadmium plated except the bezel (jewel holder) which has a highly polished chrome finish.

Type Number	Style Socket
575	Set Screw Terminals (Will not house S6 lamp)
575S	Set Screw Terminals for S6 D. C. Bay. Lamps
675	Solder Terminals (Will not house S6 lamp)
675S	Solder Terminals for S6 D. C. Bay. lamps

SPECIFICATIONS

MOUNTING: Mounts in 1" diameter hole on panels up to 1/2" thick. **RATING:** Will operate on circuits up to 125 volts. **LAMPS:** Nos. 575 and 675 are designed for use with any double contact candelabra base lamp up to 1 1/2" long and 7/8" diameter. Nos. 575S and 675S are designed for use with Mazda, 115 volt, 6 watt, S6, double contact candelabra bayonet base lamps. Will house any other D. C. candelabra lamp up to 1 7/8" long and 7/8" diameter. **COLORS:** Amber, blue, colorless, green, red, white, or yellow. **COLORS MISCS:** The Nos. 575 and 675 are regularly supplied with colorless, smooth glass frosted on back behind which is placed a colored disc. The advantage of this method is that the glass appears white until lighted.

OTHER FINISHES OF GLASS	SYMBOL
Faceted (Diamond Cut)	FAC
Smooth Plain (Smooth face and no frosting)	SP
Smooth, frosted on back (Smooth face frosted on back only)	SFB

Colored glass is furnished when any of the above symbols are specified. For neon glow lamps, we recommend smooth plain glass.

NOTE: The Nos. 575S and 675S are regularly supplied with faceted glass.

PACKING: The units are packed in bulk fully assembled.

PARTS

Part No.	Description
75A	Jewel
75C	Nut
75E	Color Disc
75F	Retaining Ring for Color Disc
75G	Fibre Washer, 1" I.D. x 1 1/4" O.D. x 1/16" thick.
75L	Lock Washer (May be furnished upon request)
314CSP	Socket Assembly and mounting tube for No. 575
314S-CSP	Socket Assembly and mounting tube for No. 575S
317CSP	Socket Assembly and mounting tube for No. 675
317S-CSP	Socket Assembly and mounting tube for No. 675S



Dial and Jewel PILOT LIGHT ASSEMBLIES

JEWEL LIGHTS WITH WIRED LEADS

MINIATURE BAYONET

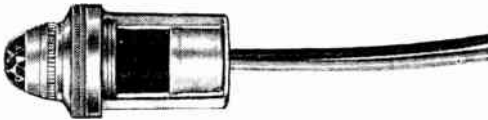
These units are designed for use on high quality equipment where it is essential that the signal lights be infallible. There can be no shorting of terminals, and also eliminates two electrical connections at the terminals of the pilot light which might become loosened.

No. 520



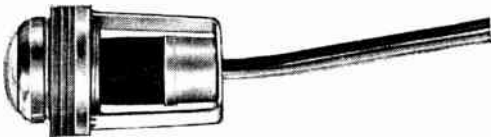
See No. 20 Type for dimensions

No. 550



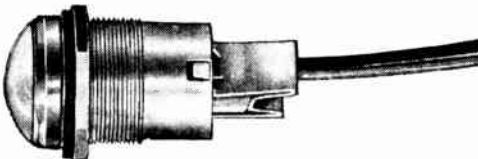
See No. 50 Type for dimensions

No. 560



See No. 60 Type for dimensions

No. 5275



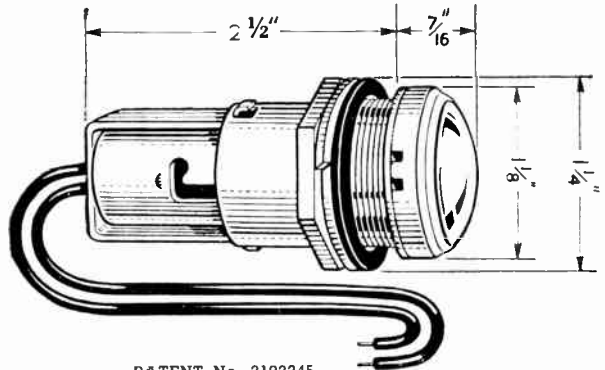
See No. 275 under 75 Type for dimensions

Standard unit is equipped with 10" of No. 22 stranded wire insulated with .025" of 80°C plastic, black to center contact and white to the shell.

On orders for more than 500 units other lengths and types of wire can be furnished. See wire table.

Terminals can be furnished upon request.

Double Contact Candelabra Bayonet UNDERWRITERS' APPROVED No. 975 TYPE



PATENT No. 2192345

The No. 975 is a heavy duty double contact, candelabra, bayonet base assembly designed to be used in rugged equipment. The panel hardware (jewel holder) is attractively finished with a highly polished chrome plate. All other parts are cadmium plated. The No. 975 is Underwriters' approved for 125 volt, 75 watt service. The mounting tube and socket are detachable; therefore the wire leads of the socket assembly can be connected to the terminal block before the socket assembly is clipped into the mounting tube which is already installed in the panel. This feature facilitates quicker assembly of panels. The built in lead wires can be attached directly to screw or solder terminal blocks; thereby eliminating two soldering operations. Units are carried in stock with both 10 inch and 20 inch leads. On orders of 500 or more units the wires can be cut to your specifications. See wire table.

Part Numbers	Length of Leads
975-10	10 inches
975-20	20 inches

SPECIFICATIONS

MOUNTING: Mounts in 1" diameter holes on panels up to 1/8" thick.

RATING: 125 volts, 75 watts.

LAMPS: Designed to house the double contact, candelabra, bayonet base, C7, S6 or T6 1/2, 110 volt lamp. Will house any other D C, candelabra based lamp which is no larger than 3/8" in diameter and no longer than 2 3/8". Lamps can be purchased from Drake Manufacturing Co.

LEADS: No. 18 gauge (16 strands No. 30) with 1/32" of black Synthol plastic insulation.

COLORS: Amber, blue, colorless, green, red, white or yellow.

COLOR DISCS: The No. 975 is regularly supplied with colorless, smooth glass frosted on back behind which is placed a colored disc. The advantage of this method is that the glass appears white until the lamp is lighted.

OTHER FINISHES OF GLASS	SYMBOL
Faceted (Diamond Cut)	FAC
Smooth Plain (Smooth face and no frosting)	SP
Smooth, frosted on back (Smooth face frosted on back only)	SFB

Colored glass is furnished when any of the above types is specified. We recommend smooth plain glass for use with neon glow lamps.

PACKING: Packed in bulk fully assembled.

PARTS

Part Numbers	Description
75A	Jewel
75B	Tube
75C	Nut
75E	Color Disc
75F	Retaining ring for Color Disc
75G	Fiber washer 1/16" thick
75L	Lock Washer
950E-10	Socket Assembly for No. 975-10
950E-20	Socket Assembly for No. 975-20



Dial and Jewel PILOT LIGHT ASSEMBLIES

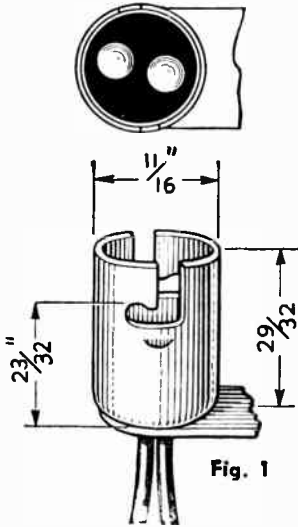
DOUBLE CONTACT CANDELABRA BAYONET

Underwriters' Approved for General Purpose

No. A900 SERIES

UL File No. E17786

MOUNTING BRACKETS FOR 900, A900, 1000 SERIES ASSEMBLIES



This socket assembly is a 110 volt unit designed specifically for use in Underwriters' approved equipment. It has built in lead wires and is sturdily constructed befitting 110 volt application. In spite of its ruggedness it requires less space with lamp installed than does the candelabra screw type. In addition the bayonet type lamps will not loosen from vibration.

This socket can be supplied mounted to any one of the brackets shown on this page and the next. If they do not meet your requirements, we have the facilities to build them to your specifications.

The A900 type assembly is equipped with No. 18 (16 strands No. 30) tinned copper wire insulated with 1/32" of plastic insulation. See wire table. Units can be wired in series.

The Underwriter's Laboratories have approved the use of this socket with No. 22 gauge wire leads for application in radio only. With the lighter gauge wire the assembly is designated as the No. 900 Series. It can be wired in series or parallel. See wire table.

NOTE: On orders for less than 500 assemblies, no choice of leads is given. Assemblies will be supplied with 10" of black wire stripped 1/2".

LAMPS: 110 volt, 10 watt can be purchased from Drake Manufacturing Co.

FORMULATION OF PART NUMBERS

The part number is composed of three parts, the series number, the bracket number, and the bracket position. The series number is expressed in hundreds plus the letter prefix if there is one. For example: The part number of an A900 Series Socket (fig. 1) with a No. 50H bracket (fig. 4) in the "A" position (fig. 2) would be No. A950H-A. Similarly a unit with No. 22 wire (900 series) and a No. 50J bracket (fig. 5) in the "C" position (fig. 3) would be 950J-C. Part numbers of sockets without brackets are designated as 917, A917, and 1017 respectively.

NOTE: Please do not fail to specify length of lead wire and stripping when ordering more than 500 units.

"A" BRACKET POSITION

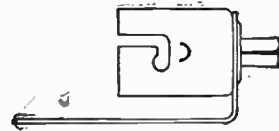


Fig. 2

"C" BRACKET POSITION

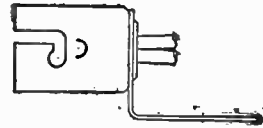


Fig. 3

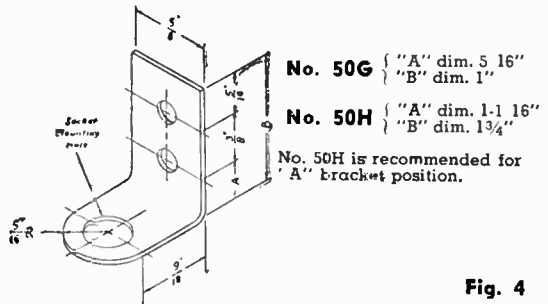


Fig. 4

No. 50J

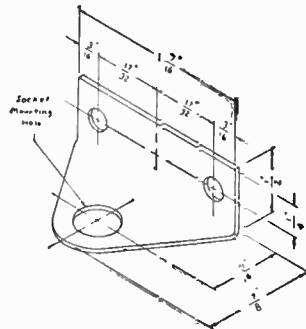


Fig. 5



Dial and Jewel
PILOT LIGHT ASSEMBLIES

DIAL LIGHT ASSEMBLIES
FOR ALL STANDARD OR SPECIAL NEEDS

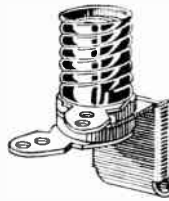
Clip Bracket Types With FLANGE Brackets



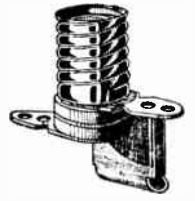
103 AE



103 AH

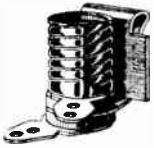


103 CE

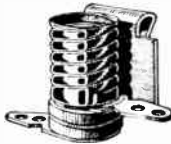


103 CH

Clip Bracket Types With FLAT Brackets



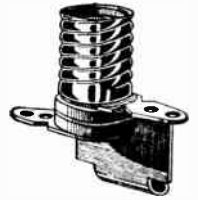
104 AE



104 AH



104 CE



104 CH

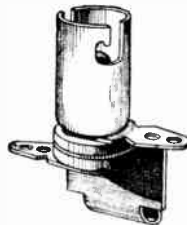
Bayonet Type Socket Assemblies



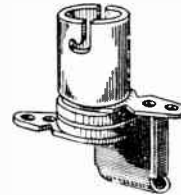
203 AH



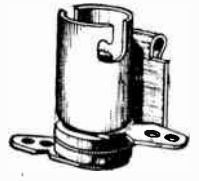
217 H



204 CH



203 CH



204 AH

Miscellaneous Types . . . Special Sizes



117 H



108 AH



108 CH



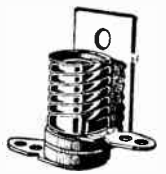
109 CH



106 AE



106 CE



109 AH

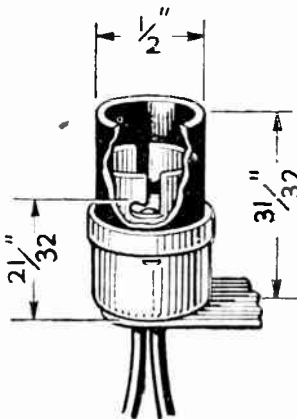


Dial and Jewel PILOT LIGHT ASSEMBLIES

MINIATURE BAYONET LIGHT SOCKET ASSEMBLIES

No. 500 SERIES

For Underwriters' Approved AC-DC
Radio Receivers



In this socket assembly the bayonet shell is protected from outside contact by a sturdy fishpaper insulating shield. The lead wires are an integral part of the unit and both are secured within the socket so that they will withstand a tension over 25 pounds.

Rounded edges on the opening at the base prevent cut and frayed lead wire insulation.

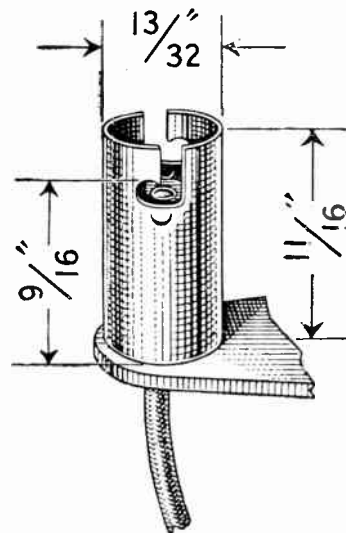
The assembly will withstand a minimum breakdown voltage of 1000 volts between contacts and to ground.

All parts are fitted so that there can be no rotation of one part with respect to another. This means that there is absolute rigidity from the mounting bracket to the bayonet shell which supports the lamp. The center contact cannot protrude from the socket when the lamp is removed.

The standard assembly is equipped with No. 22 gauge wire, however No. 20 wire can be used.

No. 700 SERIES

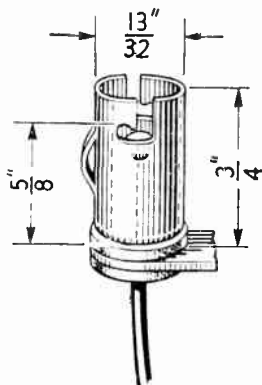
For Underwriters' Approved AC
Radio Receivers



In this socket assembly the bayonet shell is electrically connected to the mounting bracket. It is secured in such a way that it cannot rotate. The lead wire is an integral part of the unit and is secured tightly enough to withstand a tension of over 25 pounds. The center contact cannot protrude when the lamp is removed.

The assembly will withstand a minimum breakdown voltage of 1,000 volts between the center contact and ground.

The assembly is customarily built with No. 22 gauge wire; however any other gauge up to and including No. 16 wire can be used.



No. 800 Series

In this socket assembly the bayonet shell is insulated from the bracket. The shell is bridged to provide a good solder connection for one lead wire. The center lead wire is built-in, and the center contact cannot protrude when the lamp is removed. Upon request the assembly can be furnished with two lead wires or no lead wires.

COMMENTS ON ALL ASSEMBLIES ILLUSTRATED HERE

The 500 and 700 types can be wired in series or parallel, but the 800 type can only be wired in series. See wire table for various lengths, color and insulation of lead wires.

NOTE: On orders for less than 500 assemblies, no choice of leads is given. All assemblies will be supplied with 10" of No. 22 plastic insulated wire stripped 1/2" long.

The assemblies can be attached to any of the mounting brackets shown in the listing of dial light assemblies. We also have approximately 900 other mounting brackets that are not listed. If you will submit your lighting problem to us, we are certain that we can offer you a satisfactory solution.

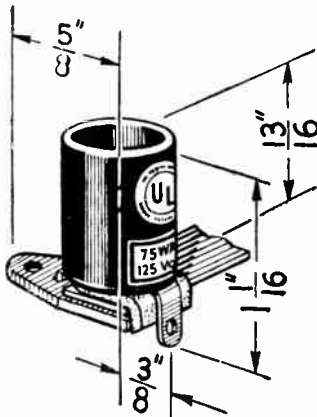


Dial and Jewel PILOT LIGHT ASSEMBLIES

SOCKET ASSEMBLIES AND JEWELS

No. 300 SERIES

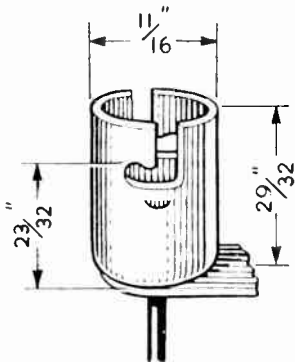
Candelabra Screw Base
Underwriters' Approved for General Use



The No. 300 socket assembly is a candelabra screw socket, Underwriters' approved for 75 watt, 125 volt service. It can be attached to any of the brackets shown in the listing of dial light assemblies. We also have approximately 900 other mounting brackets that are not listed. If you will submit your lighting problem to us, we are certain that we can offer you a satisfactory solution.

No. 1000 Series

Single Contact Candelabra Bayonet
Automotive Type



This unit is an inexpensive assembly suitably adapted for use in 6 to 115 volt circuits. It has a built in center lead wire and the socket and bracket form the ground connection. The unit is sturdily constructed and designed so that the center contact cannot protrude when the lamp is removed.

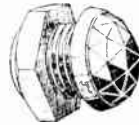
This socket can be supplied mounted to any one of the brackets illustrated with the 900 and A900 socket assemblies. If they do not meet your requirements, we have the facilities to build them to your specifications.

The standard Number 1000 type Assembly is equipped with 10 inches of No. 18 (16 strands No. 30) tinned copper wire insulated with 1/32" of plastic insulation. See wire table. Assemblies can be wired in parallel.

On orders of more than 500 units No. 22 to No. 16 gauge wire is available.

NOTE: Can be sold knocked down into extruded shell, spring, and pigtail with center contact and washer attached.

1/2" Jewels



THREADED TYPE



SLOTTED TYPE

THREAD TYPE WITH NUTS

- | | |
|------------|------------------------------|
| 16CSP | Shank 3/8" long, 1 1/8" O.D. |
| 16 1/2 CSP | Shank 1/2" long, 1 1/4" O.D. |

SLOTTED TYPES

- | | |
|-------|-----------------------------|
| 22CSP | Shank 1/8" long, 3/8" O.D. |
| 23CSP | Shank 3/16" long, 3/8" O.D. |
| 31CSP | Shank .085" long, 3/8" O.D. |

JEWELS: Diamond cut (faceted), Amber, Blue, Crystal, Green Ruby, White (Milk White) and Yellow.

SPECIAL JEWELS: SP—Smooth, plain; SFA—Smooth, frosted all over; SFB—Smooth, frosted back

SPECIAL FINISHES: Chrome, Black Nickel, Statuary Bronze.

1 1/32" Jewels . . . Slotted Types Only

JEWELS: Diamond cut (faceted), Amber, Crystal, Green, Ruby, White (Milk White). Also supplied with smooth plain glass (specify "SP") at same price.



FINISHES: Regular finish Statuary Bronze. Also supplied in nickel finish if so ordered at same price.

- | | |
|----------------------|------------------------------|
| 21CSP, slotted type, | Shank 1/8" long, 1 1/8" O.D. |
| 24CSP, slotted type, | Shank 1/4" long, 1 1/4" O.D. |

1" Threaded Jewel Assembly

No. 75A3



Mounts in 1" diameter hole on panels up to 1/4" thick by removing washers. The assembly is supplied complete with fibre washer, lock washer, and hex nut. The unit is water tight when mounted to the panel with a rubber gasket.



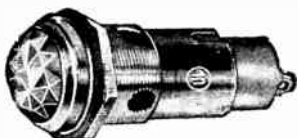
Gothard INDICATOR LIGHT ASSEMBLIES

Gothard Indicator Light Assemblies were for many years made by the Gothard Manufacturing Co. of Springfield, Illinois, who established a reputation for sound engineering design, excellent material and workmanship, a well rounded line, and fair aggressive merchandising. With its purchase by Johnson, continuance and improvement on these factors at every possible point are assured.

This listing includes most of the standard units in greatest demand, but many other types are readily available. Inquiries are solicited for any not shown. Special assemblies can be furnished in production quantities.

Think of Johnson-Gothard first for Pilot Lights.

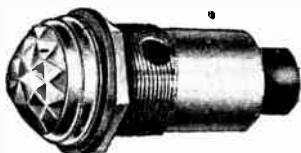
1 INCH—CAND. SCREW BASE



Underwriters' approved. Porcelain insulation. Solder terminals. Fits 1 inch hole. 1 inch jewel in friction type holder with polished chrome bezel. Specify color desired: Red, Green, Amber, Blue, Opal, Clear.

Cat. No.	List Price
For S6 bulb, candelabra screw base	
147-1000 Faceted Jewel	\$1.40
147-1001 Smooth Jewel	1.40
147-1002 Colored Disc*	1.50
For NE-45 Neon (T 4 1/2) bulb. No resistor required for 110 volts.	
147-1003 Faceted Jewel	1.40
147-1004 Smooth Jewel	1.40
147-1005 Colored Disc*	1.50

1 INCH—CAND. BAYONET BASE

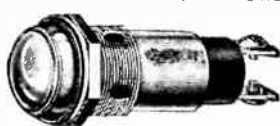


Hard rubber and fiber insulation. Set screw type terminals. Fits 1 inch hole. 1 inch jewel in friction type holder with polished chrome bezel. Specify color desired: Red, Green, Amber, Blue, Opal, Clear.

Cat. No.	List Price
Single contact, for G6 bulb, bayonet base.	
147-1006 Faceted Jewel	\$1.60
147-1007 Smooth Jewel	1.60
147-1008 Colored Disc*	1.70
Double contact, for G6 bulb, bayonet base.	
147-1009 Faceted Jewel	1.60
147-1010 Smooth Jewel	1.60
147-1011 Colored Disc*	1.70
Double contact, for NE-48 Neon (G6) bulb, requires 30,000 ohm external resistor for 110-115 volts.	
147-1012 Faceted Jewel	1.60
147-1013 Smooth Jewel	1.60
147-1014 Colored Disc*	1.70

Jewel Holders all on this page have slotted sleeves which snap in place and hold by friction. All have polished chrome bezels. See next pages for similar units with threaded jewel holders.

1 INCH—CAND. SCREW BASE



Underwriters' approved. Molded phenolic insulation. Binding screw terminals. Fits 1 inch hole. 1 inch jewel in friction type holder with polished chrome bezel. Specify color desired: Red, Green, Amber, Blue, Opal, Clear.

Cat. No.	List Price
For S6 bulb, candelabra screw base.	
147-1032 Faceted Jewel	\$1.65
147-1033 Smooth Jewel	1.65
147-1034 Colored Disc*	1.75
For NE-45 Neon (T 4 1/2) bulb. No resistor required for 110-115 volts.	
147-1035 Faceted Jewel	1.65
147-1036 Smooth Jewel	1.65
147-1037 Colored Disc*	1.75

1 INCH—CAND. BAYONET BASE



Underwriters' approved (except single contact styles). Molded phenolic insulation. Binding screw terminals. Fits 1 inch hole. 1 inch jewel in friction type holder with polished chrome bezel. Specify color desired: Red, Green, Amber, Blue, Opal, Clear.

Cat. No.	List Price
Single contact, for G6 bulb, bayonet base.	
147-1050 Faceted Jewel	\$1.75
147-1051 Smooth Jewel	1.75
147-1052 Colored Disc*	1.85
Double contact, for G6 bulb, bayonet base.	
147-1053 Faceted Jewel	1.75
147-1054 Smooth Jewel	1.75
147-1055 Colored Disc*	1.85
Double contact, for NE-48 Neon (G6) bulb, requires 30,000 ohm external resistor for 110-115 volts.	
147-1056 Faceted Jewel	1.75
147-1057 Smooth Jewel	1.75
147-1058 Colored Disc*	1.85
Double contact, for NE-48 Neon (G6) bulb, with built-in 30,000 ohm resistor for 110-115 volts.	
147-1076 Faceted Jewel	2.00
147-1077 Smooth Jewel	2.00
147-1078 Colored Disc*	2.10

1 INCH—DETACHABLE SOCKETS



This series permits installing bulbs from rear, by detaching the spring bracket, as well as from the front. Fits 1 inch hole. 1 inch jewel in friction type holder with polished chrome bezel. Specify color desired: Red, Green, Amber, Blue, Opal, Clear.

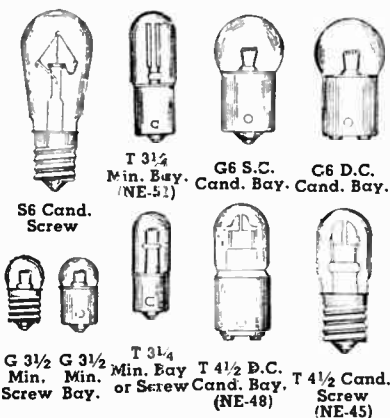
Cat. No.	List Price
Min. screw socket, for G3 1/2 and T3 1/4 bulbs.	
147-800 Faceted Jewel	\$1.05
147-801 Smooth Jewel	1.05
Candelabra screw socket, for S6 bulbs.	
147-802 Faceted Jewel	1.10
147-803 Smooth Jewel	1.10
Min. bayonet socket, for G3 1/2 & T3 1/4 bulbs.	
147-804 Faceted Jewel	1.10
147-805 Smooth Jewel	1.10

* COLORED DISCS

Where this designation appears, a colored plastic disc is placed behind a clear sandblasted (frosted) smooth jewel, to conceal color until lit. Also prevents external light from giving appearance of bulb being lit.

In addition, lettering, numerals, or insignia may be printed on a plastic disc back of the jewel, and arranged to be invisible either continuously or only after lamp is lit.

Bulbs used on all pilot lights may be identified from these illustrations, but are not included in a prices.

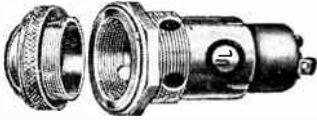


DO NOT FAIL TO SPECIFY COLOR OF JEWELS. PRICES DO NOT INCLUDE BULBS.



JOHNSON-GOTHARD PILOT LIGHTS

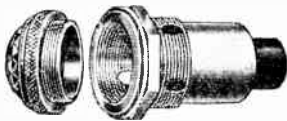
1 INCH—CAND. SCREW BASE



Underwriters' approved. Threaded jewel holder, otherwise similar to Nos. 147-1000, etc., on previous page. Specify color desired: Red, Green, Amber, Blue, Opal, Clear.

Cat. No.	List Price
147-1200 Faceted Jewel	\$1.85
147-1201 Smooth Jewel	1.85
147-1202 Colored Disc*	1.75

1 INCH—CAND. BAYONET BASE

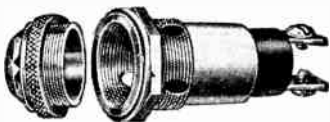


Underwriters' approved. Threaded jewel holders, otherwise similar to Nos. 147-1032, etc., on previous page.

Cat. No.	List Price
Single contact, for G6 bulb, bayonet base.	
147-1203 Faceted Jewel	\$1.85
147-1204 Smooth Jewel	1.85
147-1205 Colored Disc*	1.95
Double contact, for G6 bulb, bayonet base.	
147-1206 Faceted Jewel	1.85
147-1207 Smooth Jewel	1.85
147-1208 Colored Disc*	1.95

Variable light intensity, controlled either by shutters or polarized discs, can be obtained in most styles of Johnson-Gothard pilot lights.

1 INCH—CAND. SCREW BASE



Threaded jewel holders, otherwise similar to Nos. 147-1006, etc., on previous page. Specify color desired: Red, Green, Amber, Blue, Opal, Clear.

Cat. No.	List Price
For S6 bulb, candelabra screw base.	
147-1209 Faceted Jewel	\$1.90
147-1210 Smooth Jewel	1.90
147-1211 Colored Disc*	2.00
For NE-45 Neon (1 1/2) bulb. No resistor required for 110-115 volts.	
147-1212 Faceted Jewel	1.90
147-1213 Smooth Jewel	1.90
147-1214 Colored Disc*	2.00

1 INCH—LUCITE CAP



Underwriters' approved. Transparent Lucite caps providing forward mounting of bulb for maximum light visibility, especially suitable for neon glow lamps. Fits 1 inch hole. Polished chrome bezel. -1218 has solder terminals, others binding screw terminals. Specify color desired: Red, Green, Amber, Blue, Opal, Clear. Do not use blue or green with neon glow lamps.

Cat. No.	List Price
147-1217 For NE-45 Neon. No resistor required.	\$1.90
147-1218 For miniature bayonet (T3 1/4) bulbs, filament or neon. NE-51 requires external 200,000 ohm resistor.	1.60
147-1219 Double contact cand. bayonet base NE-48 bulb requires external 30,000 ohm resistor.	2.10
147-1220 Same as 147-1219 but with built-in 30,000 ohm resistor.	2.25

1 1/4 INCH "BEEHIVE" LENS



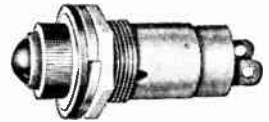
Underwriters' approved (except single contact style). High visibility is obtained by the beehive shape placing light source in front of panel. Molded phenolic insulation, Navy Spec. 17P5-FBG. Fits 1 inch hole. Polished chrome bezel. Specify color desired: Red, Green, Amber, Blue, Opal, Clear.

Cat. No.	List Price
147-1600 Candelabra base, S6 bulb	\$2.00
147-1604 S.C. bay. base, G6 bulb	2.00
147-1605 D.C. bay. base, G6 bulb	2.00

For neon glow lamps use red, amber or clear lenses only. No blue or green light is emitted from these lamps.

*See previous page, column 3, for description of items designated with *

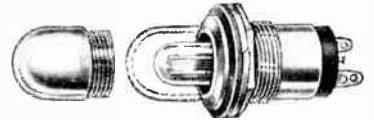
1/2 INCH JEWEL



Fits 1/2 inch mounting hole. Removable (threaded) jewel holder for installing bulb from front. Solder terminals. Specify color desired: Red, Green, Amber, Blue, Opal, Clear.

Cat. No.	List Price
For T3 1/4 miniature bayonet bulbs.	
147-1110 Faceted Jewel	\$1.15
147-1111 Smooth Jewel	1.15
For G3 1/2 miniature bayonet bulbs.	
147-1112 Faceted Jewel	1.15
147-1113 Smooth Jewel	1.15

LUCITE CAP



Underwriters' approved. Fits 1/2 inch hole. Transparent Lucite cap permits bulb to extend far forward for maximum light visibility. Especially suitable for NE-51 neon glow lamp. Solder terminals. Specify color desired: Red, Green, Amber, Opal, Clear (Green is not recommended for neon lamps.)

Cat. No.	List Price
147-1142 For T3 1/4 bulbs (filament)	\$1.10
147-1143 For NE-51 neon (T3 1/4) bulb, with built-in 20,000 ohm resistor.	1.25
147-1144 Same as -1143 but 100,000 ohm resistor for brighter glow but decreased life.	1.25

PANEL LIGHT



For front panel illumination. Has polished nickel hood, easily removable for lamp replacement; can be rotated to any position. Fits 1/2 inch mounting hole. Made for miniature bayonet or screw base, T3 1/4 or G3 1/2, bulbs.

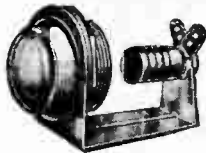
Cat. No.	List Price
147-330 Miniature Screw Base	\$0.80
147-329 Miniature Bayonet Base	.90

DO NOT FAIL TO SPECIFY COLOR OF JEWELS. PRICES DO NOT INCLUDE BULBS.



JOHNSON-GOTHARD PILOT LIGHTS—BRACKET TYPE

1 INCH REMOVABLE JEWEL



Fits 1 inch hole. Polished chrome bezel. Colors: Red, Green, Amber, Blue, Opal, Clear.

Cat. No.	List Price
Min. screw socket, for G3 1/2 and T3 1/4 bulbs.	
147-100 Faceted Jewel	\$0.80
147-101 Smooth Jewel	.80
Min. bay. socket, for G3 1/2 and TA 1/4 bulbs.	
147-106 Faceted Jewel	.85
147-107 Smooth Jewel	.85
Candelabra screw for S3 bulb.	
147-103 Faceted Jewel	.85
147-104 Smooth Jewel	.85

3/4 INCH JEWEL—HORIZONTAL

Fits 3/8 inch hole. For G3 1/2 bulbs. Colors: Red, Green, Amber, Blue, Opal, Clear.



Fits 3/8 inch hole. For G3 1/2 bulbs. Colors: Red, Green, Amber, Blue, Opal, Clear.

Cat. No.	List Price
Min. screw socket.	
147-700 Faceted Jewel	\$0.60
147-701 Smooth Jewel	.60
Min. bayonet socket.	
147-703 Faceted Jewel	.65
147-704 Smooth Jewel	.65

3/4 INCH JEWEL—VERTICAL

Fits 3/8 inch hole. Colors: Red, Green, Amber, Blue, Opal, Clear.



Fits 3/8 inch hole. Colors: Red, Green, Amber, Blue, Opal, Clear.

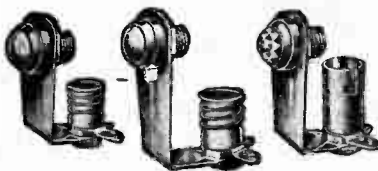
Cat. No.	List Price
Min. screw socket for G3 1/2 bulb.	
147-200 Faceted Jewel	\$0.60
147-201 Smooth Jewel	.60
Min. bay. socket for G3 1/2 bulb.	
147-203 Faceted Jewel	.65
147-204 Smooth Jewel	.65
Candelabra screw for S3 bulb.	
147-206 Faceted Jewel	.65
147-207 Smooth Jewel	.65

VARIABLE LIGHT INTENSITY

Pilot lights similar to 147-400 thru 147-404 can be furnished with either polarized or shutter type variable light intensity jewel holders. Information on request.

See Pages J-64 to J-70 for additional listings of the Johnson line of Variable Condensers, Inductors, Chokes, Tube Sockets, Insulators, Antenna Equipment, and miscellaneous hardware.

1/2 INCH JEWEL—VERTICAL



Fits 7/8 inch mounting hole. Colors: Red, Green, Amber, Blue, Opal, Clear.

Cat. No.	List Price
Min. screw socket for G3 1/2 bulb.	
147-300 Faceted Jewel	\$0.40
147-301 Smooth Jewel	.40
Min. bay. socket for G3 1/2 bulb.	
147-306 Faceted Jewel	.45
147-307 Smooth Jewel	.45
Candelabra screw for S6 bulb.	
147-303 Faceted Jewel	.45
147-304 Smooth Jewel	.45

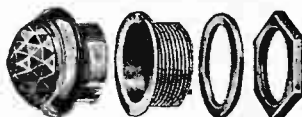
3/8 INCH JEWEL—VERTICAL

Fits 3/8 inch mounting hole, otherwise similar to 1/2 inch vertical types listed above. Colors: Red, Green, Amber, Blue, Opal, Clear.

Fits 3/8 inch mounting hole, otherwise similar to 1/2 inch vertical types listed above. Colors: Red, Green, Amber, Blue, Opal, Clear.

Cat. No.	List Price
Min. screw socket for G3 1/2 bulb.	
147-500 Faceted Jewel	\$0.33
147-501 Smooth Jewel	.33
Min. bay. socket for G3 1/2 bulb.	
147-503 Faceted Jewel	.37
147-504 Smooth Jewel	.37

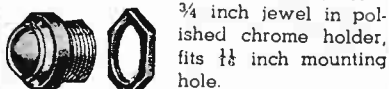
JEWEL ASSEMBLIES



Colors, all types: Red, Green, Amber, Blue, Opal, Clear.

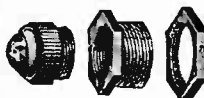
1 inch jewel, polished chrome bezel, with mounting sleeve to fit 1 inch hole, fiber washer and nut.

Cat. No.	List Price
147-110 Faceted Jewel	\$0.70
147-111 Smooth Jewel	.70
147-112 Colored Disc*	.80



3/4 inch jewel in polished chrome holder, fits 1/2 inch mounting hole.

147-210 Faceted Jewel	.40
147-211 Smooth Jewel	.40



1/2 inch jewel, nickel plated, threaded holder and mounting sleeve to fit 1/2 hole.

147-410 Faceted Jewel	.40
147-411 Smooth Jewel	.40



1/2 inch jewel, nickel plated holder and nut, fits 1/8 inch mounting hole.

147-310 Faceted Jewel	.25
147-311 Smooth Jewel	.25

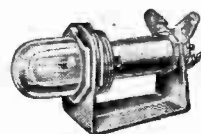
1/2 INCH—REMOVABLE JEWEL



Horizontal type. Fits 1/2 inch mounting hole. For G3 1/2 and T3 1/4 bulbs. Colors: Red, Green, Amber, Blue, Opal, Clear.

Cat. No.	List Price
Min. screw socket.	
147-400 Faceted Jewel	\$0.55
147-401 Smooth Jewel	.55
Min. bayonet socket.	
147-403 Faceted Jewel	.60
147-404 Smooth Jewel	.60

LUCITE CAP—REMOVABLE



Fits 1/2 inch mounting hole. Bulb sets well forward in Lucite cap for maximum visibility. Colors: Red, Green, Amber, Opal, Clear.

(Avoid green with neon glow lamps.)

Cat. No.	List Price
147-406 Min. bayonet T3 1/4 bulb	\$0.55
147-407 Same as 147-406 but with 200,000 ohm built-in resistor for NE-5 neon bulb	.70
147-408 Same as 147-407 but 100,000 ohms. Brighter glow with reduced lamp life	.70

BULB REMOVER



Rubber tool makes easy removal or insertion of bulbs. Double ended, for both miniature and candelabra sizes.

147-999	List \$0.50
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DIAL LIGHT BRACKETS

Brackets insulated on all types. Many other styles and combinations can be furnished from available tools, also with wire leads.



147-610	147-611	147-600	147-601
		147-620	147-621



147-640	147-641	147-630	147-631
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Cat. No.	Socket	List Price
147-600	Miniature Screw	\$0.13
147-601	Miniature Screw	.13
147-610	Miniature Bayonet	.16
147-611	Miniature Bayonet	.16
147-620	Candelabra Screw	.15
147-621	Candelabra Screw	.15
147-630	Miniature Bayonet	.17
147-631	Miniature Bayonet	.17
147-640	Miniature Screw	.14
147-641	Miniature Screw	.14

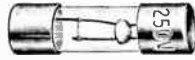
DO NOT FAIL TO SPECIFY COLOR OF JEWELS. PRICES DO NOT INCLUDE BULBS.

LITTELFUSE

"Quicker than a Short Circuit"

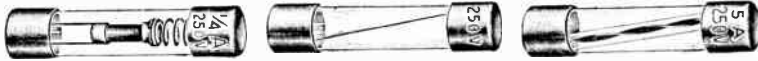
8AG INSTRUMENT high speed LITTELFUSES

Locked Cap Assembly and other exclusive Littelfuse features for protection of delicate test equipment, galvanometers, microammeters, milliammeters, voltmeters, etc. Glass-enclosed; 1 x 1/4" dia., accurately rated, high speed action, short time lag. Voltage ratings up to 250 V., AC or DC. For higher voltages use fuses in series.



Catalog No.	Former No.	Amp. Rating	Max. Volt.	Ohms Res. @ 5 m.a.	APPLICATIONS			List Price Ea.
					Volt-meters Ohms P.V.	All Magnetic Movement Milliammeters	Thermocouples	
361.005	1000	1/200	250	480.	Over 1000	Galvanometers	Up to 0-5	\$0.30
361.010	1001	1/100	250	160.0	1000	Up to 0-1	0-5 to 0-10	.20
361.031	1002	1/2	250	40.0	500-100	0-1 to 0-10	0-10 to 0-25	.20
361.062	1003	3/2	250	5.0	100-500	0-10 to 0-25	0-25 to 0-60	.15
361.125	1004	3/2	250	2.0	20-100	0-25 to 0-75	0-75 to 0-150	.15
361.250	1005	3/2	250	3.5	10-20	0-75 to 0-150	0-115 to 0-200	.15
361.375	1006	3/2	250	3.0	5-10	0-150 to 0-250	0-200 to 0-300	.15
361.500	1007	3/2	250	2.0	3-5	0-250 to 0-350	0-300 to 0-400	.15
361.500	1007-A	3/2	250	2.0		0-350 to 0-500	0-400 to 0-600	.15
361001.	1008	1	250	.24		0-500 to 0-750	0-600 to 0-1000	.10
36101.5	1008-A	1 1/2	250	.13		0-750 to 0-1000	0-1000 to 0-1500	.10
361*02.	1009	2	250	.10		0-1000 to 0-1500	0-1500 to 0-2000	.10
361003.		3	32	.043		0-1500 to 0-2000	0-2000 to 0-3000	.10
361005.		5	32	0.30		0-2000 to 0-4000	0-3000 to 0-5000	.10

UNDERWRITERS' APPROVED 3 AG "LITTELFUSES"—250 Volts



"SLO-BLO"—thru 1/4 Amp. STANDARD—1/2 to 3 Amp. SLEEVE TYPE—4 to 8 Amp.

Littelfuse is the first manufacturer to receive Underwriters' approval of 3 AG fuses (1/4" x 1/4" dia.) in current ratings over 3 amps. at 250 volts. Following list gives standard approved ratings carried in stock. However, the Underwriters' approval to Littelfuse is a blanket approval from 1/4 to 6 amps. Intermediate ratings can be furnished without separate approval, at a small extra charge. Littelfuse name, the amperage and

voltage rating must appear on the fuse caps of approved-fuses. Many new fields are opened up by the extension of approval from 3 to 6 amps., where formerly bulky cartridges or plug fuses and their mountings were used. This applies specially to electrical appliances, heavy duty power supplies, amplifiers, radios, communication equipment, electronic devices, motors, etc.

Cat. No.	Former No.	Amp. Rating	Ohms Res.	List Price, Each
313.010*	1259	1/100	33.50	\$0.25
313.032*	1261	1/2	3.90	.25
313.062	1262	1 1/2	90	.25
313.125	1263	1 1/2	29	.25
313.187	1263-A	1 1/2	20	.25
313.250	1264	1 1/2	9.6	.25

Ratings thru 1/4 Ampere—250 Volts

"Slo-Blo" fuses with high time lag—for circuits with equipment having high inductive or capacitative surges, heavy starting currents and intermittent-duty circuits. Anti-fatigue construction—compound element with spring and resistor.

Cat. No.	Former No.	Amp. Rating	Ohms Res.	List Price, Each
312.500	1046	1/2	3.1	\$3.15
312.750	1047	3/2	1.9	.15
312001.	1040	1	.24	.07
31201.5	1041	1 1/2	.15	.07
312002.	1042	2	.10	.07
312003.	1043	3	.06	.07

Ratings 1/2 thru 3 Amp.—250 Volts

Quick-acting Standard Littelfuses with low time lag. Protective-coated elements prevent oxidation, promote clean fusion break. Diagonal element for accurate alignment, calibration.

Cat. No.	Former No.	Amp. Rating	Ohms Res.	List Price, Each
312004.	1357	4	.046	\$0.10
312005.	1358	5	.034	.10
312006.	1359	6	0.30	.10
312008.	1360	8	.025	.15

Ratings 4 thru 8 Amp.—250 Volts

Standard, quick-acting Littelfuses with diagonal elements. Low time lag—quick-acting.

Std. Pkg. 100—wt., 1 1/2 lbs.

*Not Und. Approved.

Std. Pkg. 100, wt., 1 1/2 lbs.

3 AB "LITTELFUSES"—250 Volts



Smallest, highest rated Underwriters' Laboratory approved fuses made. Bakelite-enclosed, are-quenching, powder-filled fuses. Medium time lag.

Catalog No.	Former No.	Amp. Rating	List Price, Each
314010	32155	10	\$0.15
314012	32156	12	.15
314015	32159	15	.15

METER BACK MOUNTING



Cat. No. 383002 (1059)—Mounts directly on meter binding post. Will not touch other posts on smallest standard meter. Linen bakelite base, 1" x 1 1/4". Length over screw terminal, 1 1/2". Std. Pkg. 20. Wgt. 1/2 lb. List Price Each.....\$0.20

FUSE MOUNTINGS (3AG)

Hinged Cover Type (Meets Underwriters' Requirements)

Cover fibre-lined. Metal shielded cover hinged to bakelite base. Terminal mounting extends through insulated base. Nut lightly staked to cover to prevent loss. Requires 1 1/2" x 1 1/4" knockout hole in panel.



Two 6-32" x 5/16" mounting studs at 2 1/2" centers. Base 2 1/2" x 1 1/4". 3/4" high above panel. Std. Pkg. 20.

Cat. No. List Price Each
35 008 (1237A)—Double Pole.....\$0.75
351005 (1379)—Single Pole......50

NEON TESTERS



Low Voltage tester (illustrated) for 5 to 50 V AC or DC. For automotive, heating and vent., telephone, aircraft, battery service, radio service (low volt. filament circuits, "A" batteries), for testing polarity. Test-lead leads with alligator clips. Full directions. No. 202002 Low Volt. Tattelite tester (5-120)

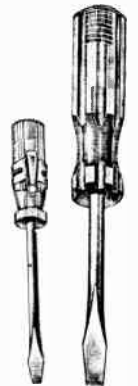
List Price, Each \$1.50

High Voltage "Tattelite" tester (not shown) 60-500V AC, 90-500V DC. Molded casings, insulated test probes—unusually sensitive. For testing live lines, polarity, for detecting blown fuses, open circuits, grounded wires, approximate voltage (110, 220, 440, etc.). Detailed instructions. No. 201002 High Volt. Tattelite tester (5076)

List Price, Each \$1.00

"FIRE DEVIL" NEONIZED SCREW DRIVERS

Dual-purpose screw drivers for mechanics, electricians, radio repair men, etc. Sensitive long-life neon tube in handle, glows when blade contacts voltage of 1000V or more. Tests spark plugs, ignition cables, high voltage lines—indicates RF fields, static electricity. Amber-colored plastic handle, hardened tool steel blades, chromium finish.



203001 (Former 5210) Baby "Fire Devil." Overall length, 4 1/4 in. Range 1000V-5000V. Std. pkg. 12.

List Price, Each \$0.40

203002 (Former 5220) Mama "Fire Devil." Overall length, 7 in. Range to 15,000V. Std. pkg. 12.

List Price, each \$0.80



"POST-LITE"

Neon indicating light for radio, television, radar control panels and other electrical equipment. For 65-130V AC, 90-130V DC. For 230V, 100,000 Ohm resistor may be added. Molded, clear plastic—head, 5/8" square, overall length 2 1/4". Under panel length 1 1/2"—1/2" clearance hole. Wt. 11 gms. Std. pkg.—100.

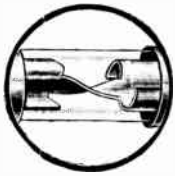
No. 201005 Post-Lite—

List Price, Each \$0.80

LITTELFUSE "Quicker than a Short Circuit"

AIRCRAFT LITTELFUSES—ANTI-VIBRATION TYPE

Especially designed for Aircraft Service. Characteristics: High Mechanical Strength—Resistance to Fatigue—Long Vibration Life



4 AG Aircraft Fuse showing reinforced twisted element



Bakelite-enclosed 4 AB Fuse

CONSTRUCTION: Glass-enclosed, Littelfuse Locked Cap Assembly (no cements) prevents loosening of caps. High visibility transparent label for amperage. Elements mechanically depolarized by twisting at 90° (see illustrations) are braced against extreme vibration. "Gooseneck" non-crystallizing fuse element takes up expansion and contraction. Ratings 5 amps, or less use Spring and Link. Service life six times simple wire. The 4 AG and 5 AG sizes are supplied for Aircraft Services or their strength and greater carrying capacity than 3 AG fuses.

BAKELITE-ENCLOSED: 4 AB and 5 AB fuses recommended where severe overloads might shatter glass.

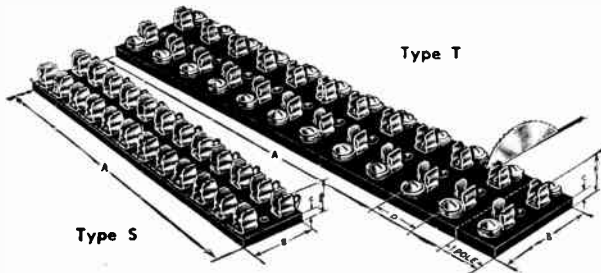
CURRENT RATING: Rated to NEC specifications to carry 10% overload indefinitely, to blow on 35% overload within 1 hr., and 100% overload within 2 min.

VOLTAGE RATING: Voltage at which fuses will break without arcing over, or bursting under short circuit conditions.

VIBRATION FACTOR: Minimum hours these fuses endure our Magnetic Vibrator operating 120 cycles a second, while carrying the rated current. Acceleration is 10 times the worst field conditions.

Vibration Factor	4AG "LITTELFUSES" 1 1/8" x 3/8" Dia. Unit Wt.—3.5 Gms.						4AB "LITTELFUSES" 1 1/8" x 3/8" Dia. Unit Wt.—3.75 Gms.						5AG "LITTELFUSES" 1 1/8" x 3/8" Dia. Unit Wt.—8.5 Gms.						
	Cat. No.	Former No.	Amp. Rating	Max. Volt.	Ohms Res.	Price, Each	Cat. No.	Former No.	Amp. Rating	Max. Volt.	Ohms Res.	Price, Each	Cat. No.	Former No.	Amp. Rating	Max. Volt.	Ohms Res.	Price, Each	
100+	"Slo-Blo"						414001.	1091B	1	250	.39	\$0.25	"Slo-Blo"	513001.	1160C	1	250	.88	\$0.25
160+	413001.	1091C	1	250	.71	\$0.25	414002.	1092B	2	250	.16	.25	513002.	1161C	2	250	.24	.25	
160+	413002.	1092C	2	250	.094	.25	414003.	1093B	3	250	.055	.25	513003.	1162C	3	250	.18	.25	
500+	413003.	1093C	3	250	.059	.25	414005.	1094B	5	115	.041	.25	513005.	1163C	5	32	.05	.25	
500+	413005.	1094C	5	32	.023	.25	414010.	1095B	10	115	.016	.25	Aircraft						
500+	Aircraft						414015.	1096B	15	115	.012	.25	511010.	1164	10	32	.039	.15	
500+	411010.	1095	10	32	.016	.13	414020.	1097B	20	32	.008	.25	511015.	1165	15	32	.013	.15	
500+	411015.	1096	15	32	.010	.13	414025.	1098B	25	32	.007	.25	511020.	1166	20	32	.013	.15	
500+	411020.	1097	20	32	.008	.13	414030.	1099B	30	32	.007	.25	511025.	1167	25	32	.030	.15	
500+	411025.	1098	25	32	.007	.13	414035.	1100B	35	32	.006	.25	511030.	1168	30	32	.013	.15	
500+	411030.	1099	30	32	.007	.13	414040.	—	40	32	.003	.25	511035.	1172	35	32	.008	.15	
500+	411035.	—	35	32	.006	.18						511040.	1168	40	32	.010	.15		
500+	411035.	—	35	32	.006	.18						511050.	1169	50	32	.009	.18		
500+	411040.	1100	40	32	.004	.20						511060.	1222	60	32	.010	.18		

* Good for power supplies up to 25 KVA at 115V—100 cycles.



NEW FUSE MOUNTING PANELS

Open type fuse panels, stocked in 12-pole units as shown—we cut them to 1, 2, 3, 4 or more poles as ordered, or you may cut them in your plant (1/8" allowance for saw cut).

Fuse Type	Mtg. Type	Dim. "B"	Dim. "C"	Dim. "D"	Dim. "E"
8AG	S	1 1/8"	3 1/8"	5 3/8"	21 3/8"
3AG	S	1 1/8"	3 1/8"	5 3/8"	21 3/8"
3AG	T	2 5/8"	3 3/8"	5 3/8"	11 1/8"
4AG	T	2 5/8"	3 3/8"	5 3/8"	13 1/8"
5AG	T	2 5/8"	3 3/8"	5 3/8"	15 3/8"

FOR 4AG FUSES—TYPE "T"

Catalog No.	No. Poles	Dim. "A"	List Price, Each
456001	1	2 1/2"	\$3.40
456002	2	1 1/2"	.75
456003	3	2 1/2"	1.10
456004	4	3 1/2"	1.45
456005	5	4 1/2"	1.80
456006	6	5 1/2"	2.15
456007	7	6 1/2"	2.50
456008	8	7 1/8"	2.85
456009	9	8 1/8"	3.20
456010	10	8 1/2"	3.55
456011	11	9 1/2"	3.90
456012	12	10 3/4"	4.25

FOR 3AG FUSES—TYPE "S"

Catalog No.	No. Poles	Dim. "A"	List Price, Each
357001	1	1 1/2"	\$0.15
357002	2	1 1/8"	.30
357003	3	1 3/4"	.45
357004	4	2 3/8"	.60
357005	5	3 1/8"	.75
357006	6	3 3/8"	.90
357007	7	4 1/8"	1.05
357008	8	4 7/8"	1.20
357009	9	5 1/2"	1.35
357010	10	6 1/8"	1.50
357011	11	6 3/4"	1.65
357012	12	7 3/8"	1.80

FOR 3AG FUSES—TYPE "T"

Catalog No.	No. Poles	Dim. "A"	List Price, Each
356001	1	2 1/2"	\$0.35
356002	2	1 1/2"	0.70
356003	3	2 1/2"	1.05
356004	4	3 1/2"	1.40
356005	5	4 1/2"	1.75
356006	6	5 1/2"	2.10
356007	7	6 1/2"	2.45
356008	8	7 1/8"	2.80
356009	9	8 1/8"	3.15
356010	10	8 1/2"	3.50
356011	11	9 1/2"	3.85
356012	12	10 3/4"	4.20

FOR 5AG FUSES—TYPE "T"

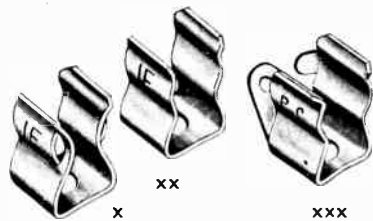
Catalog No.	No. Poles	Dim. "A"	List Price, Each
556001	1	2 1/2"	\$0.50
556002	2	1 1/2"	.95
556003	3	2 1/2"	1.40
556004	4	3 1/2"	1.85
556005	5	4 1/2"	2.30
556006	6	5 1/2"	2.75
556007	7	6 1/2"	3.20
556008	8	7 1/8"	3.65
556009	9	8 1/8"	4.10
556010	10	9 1/2"	4.55
556011	11	10 1/2"	5.00
556012	12	11 1/2"	5.45

FOR 8AG FUSES—TYPE "S"

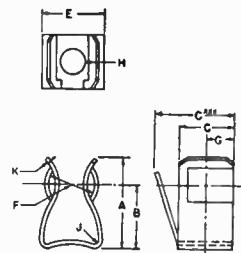
Catalog No.	No. Poles	Dim. "A"	List Price, Each
387001	1	1 1/2"	\$0.15
387002	2	1 1/8"	.30
387003	3	1 3/4"	.45
387004	4	2 3/8"	.60
387005	5	3 1/8"	.75
387006	6	3 3/8"	.90
387007	7	4 1/8"	1.05
387008	8	4 7/8"	1.20
387009	9	5 1/2"	1.35
387010	10	6 1/8"	1.50
387011	11	6 3/4"	1.65
387012	12	7 3/8"	1.80

LITTELFUSE "Quicker than a Short Circuit"

LITTELFUSE BERYLLIUM COPPER AND PHOSPHOR BRONZE FUSE CLIPS



Littelfuse fuse clips are available in three standard styles: "X," with "ears" or fuse stops; "XX," earless; and "XXX," "Lug-Clips," a new Littelfuse clip having a lug or solder terminal made as an integral part of the clip. All styles are furnished in either Phosphor-Bronze or Beryllium Copper.



Catalog Number	Former Number	Fuse Adaptation	Type	DIMENSIONS								Unit Wt. grams	Std. Pkg. 100 Wt.—lbs.	List Price Each
				A	B	C	E	F	G	H				

BERYLLIUM COPPER CLIPS SILVER PLATED—WITH FUSE STOP "EARS"

121001	1216B	SFE, 3AG & 8AG Fuses	X	$\frac{29}{64}$	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{11}{32}$	$\frac{1}{4}$	$\frac{5}{32}$	.131	1	1	\$0.05
123001	1217B	4AG & 4AB Fuses	X	$\frac{9}{16}$	$\frac{3}{8}$	$\frac{13}{32}$	.385	$\frac{13}{32}$	$\frac{5}{16}$	.171	1.6	1	.08
125001	1218B	5AG, Hi-Voltage-Midget	X	$\frac{3}{4}$	$\frac{1}{2}$	$\frac{19}{32}$	$\frac{15}{32}$	$\frac{13}{32}$	$\frac{7}{32}$	.196	3	2	.15
127001	1219	N.E.C.-30 Fuses	X	$\frac{13}{16}$	$\frac{9}{16}$	$\frac{19}{32}$	$\frac{5}{8}$	$\frac{13}{16}$	$\frac{1}{4}$	.203	5.5	2	.18
129001	1221	Standard Hi-Voltage	X	$\frac{17}{32}$	$\frac{15}{16}$	.750	$\frac{7}{8}$	$\frac{13}{16}$	$\frac{5}{16}$	.265	14.5	4	.40

SILVER PLATED—EARLESS TYPE

121002	1417	SFE, 3AG & AB, & 8AG	XX	$\frac{29}{64}$	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{11}{32}$	$\frac{1}{4}$	$\frac{5}{32}$	.131	1	1	.05
123002	1437	4AG & 4AB	XX	$\frac{9}{16}$	$\frac{3}{8}$	$\frac{13}{32}$	.385	$\frac{13}{32}$	$\frac{5}{16}$	.171	1.6	1	.08
125002	1218B	5AG, Hi-Voltage-Midget	XX	$\frac{3}{4}$	$\frac{1}{2}$	$\frac{19}{32}$	$\frac{15}{32}$	$\frac{13}{32}$	$\frac{7}{32}$	.196	3	2	.15
127002	1475	N.E.C.-30 Fuses	XX	$\frac{13}{16}$	$\frac{9}{16}$	$\frac{19}{32}$	$\frac{5}{8}$	$\frac{13}{16}$	$\frac{1}{4}$	.203	5.5	2	.18
129002	1476	Standard Hi-Voltage	XX	$\frac{17}{32}$	$\frac{15}{16}$	.750	$\frac{7}{8}$	$\frac{13}{16}$	$\frac{5}{16}$	.265	14.5	4	.40

SILVER PLATED—"LUG-CLIP"—SOLDER TERMINAL ATTACHED

121004	New	SFE, 3AG, AB, & 8AG	XXX	$\frac{29}{64}$	$\frac{1}{4}$	$\frac{37}{64}$	$\frac{11}{32}$	$\frac{1}{4}$	$\frac{5}{32}$	.131	1.2	1	.08
123004	New	4AG Fuses	XXX	$\frac{9}{16}$	$\frac{3}{8}$	$\frac{19}{32}$	.385	$\frac{13}{32}$	$\frac{5}{16}$	.171	1.7	1	.12
125004	New	5AG & Midget Fuse	XXX	$\frac{3}{4}$	$\frac{1}{2}$	$\frac{19}{32}$	$\frac{15}{32}$	$\frac{13}{32}$	$\frac{7}{32}$	.196	3.5	2	.20

PHOSPHOR BRONZE CLIPS BURNISHED NICKEL PLATE—WITH FUSE STOP "EARS"

10*001	1011B	SFE, 3AG & AB, & 8AG	X	$\frac{29}{64}$	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{11}{32}$	$\frac{1}{4}$	$\frac{5}{32}$	.131	1	1	.02
103001	1319	4AG & 4AB	X	$\frac{9}{16}$	$\frac{3}{8}$	$\frac{13}{32}$	.385	$\frac{13}{32}$	$\frac{5}{16}$	.173	1.7	1	.04
105001	2048	5AG, Hi-Voltage-Midget	X	$\frac{3}{4}$	$\frac{1}{2}$	$\frac{19}{32}$	$\frac{15}{32}$	$\frac{13}{32}$	$\frac{7}{32}$	.196	3.2	2	.05
107001	5048	N.E.C.-30 Fuses	X	$\frac{13}{16}$	$\frac{9}{16}$	$\frac{19}{32}$	$\frac{5}{8}$	$\frac{13}{16}$	$\frac{1}{4}$	.203	5.8	2	.06
109001	1463	Standard Hi-Voltage	X	$\frac{17}{32}$	$\frac{15}{16}$	.750	$\frac{7}{8}$	$\frac{13}{16}$	$\frac{5}{16}$	.265	15.6	4	.16

BURNISHED NICKEL PLATE—EARLESS TYPE

101002	125-2	1AG, 3AG & AB, 7AG & 8AG	XX	$\frac{29}{64}$	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{11}{32}$	$\frac{1}{4}$	$\frac{5}{32}$	.131	1	1	.02
104002	1319	4AG & 4AB	XX	$\frac{9}{16}$	$\frac{3}{8}$	$\frac{13}{32}$	.385	$\frac{13}{32}$	$\frac{5}{16}$	.173	1.7	1	.04
105002	2049B	5AG, Hi-Voltage-Midget	XX	$\frac{3}{4}$	$\frac{1}{2}$	$\frac{19}{32}$	$\frac{15}{32}$	$\frac{13}{32}$	$\frac{7}{32}$	.196	3.2	2	.05
107002	SP-178	N.E.C. Bantam Fuses	XX	$\frac{13}{16}$	$\frac{9}{16}$	$\frac{19}{32}$	$\frac{5}{8}$	$\frac{13}{16}$	$\frac{1}{4}$	.203	5.8	2	.06

BRIGHT-DIP PHOSPHOR BRONZE—"LUG CLIP" SOLDER TERMINAL ATTACHED

101003		1AG, 3AG & AB, 7AG & 8AG	XXX	$\frac{29}{64}$	$\frac{1}{4}$	$\frac{37}{64}$	$\frac{11}{32}$	$\frac{1}{4}$	$\frac{5}{32}$	.131	1.2	1	.03
103003		4AG & 4AB	XXX	$\frac{9}{16}$	$\frac{3}{8}$	$\frac{19}{32}$	.385	$\frac{13}{32}$	$\frac{5}{16}$	.171	1.7	1	.05
105003		5AG, Hi-Voltage-Midget	XXX	$\frac{3}{4}$	$\frac{1}{2}$	$\frac{19}{32}$	$\frac{15}{32}$	$\frac{13}{32}$	$\frac{7}{32}$	.196	3.5	2	.08

"LITTELFUSE" FUSE EXTRACTOR POSTS

Quicker, safer method for mounting and changing fuses. Held in end of removable knob, fuse is easily replaced by unscrewing knob. Available with finger-operated knob, screw driver slot knob, and finger operated with keep chain.



Finger Operated Knob



341001

41002

Catalog No.	Former No.	Deser. — Knob, How Operated	Mtg. Hole	Length Under Panel	Wt. Grams	List Price Each
341001	1075S	3AG—Screw Driver	.495" dia.*	$\frac{27}{32}$	15.0	\$0.45
342001	1075F	3AG—Finger	.495" dia.*	$\frac{27}{32}$	14.3	.45
340013	1075FZ	3AG—Finger, with Keep Chain	.495" dia.*	$\frac{27}{32}$	15.7	.75
340014		3AG—Screw Driver—Anti-Fungus treated	.495" dia.*	$\frac{27}{32}$	15.0	.75
371001	1087S	8AG—Screw Driver	.495" dia.*	$\frac{27}{32}$	15.3	.45
372001	1087F	8AG—Finger	.495" dia.*	$\frac{27}{32}$	14.3	.45
441002	1212C	4AG—Back of Panel Mtg.	$\frac{5}{8}$ " dia.—Rd.	$\frac{27}{16}$	25	.75
442002	1212D	4AG—Finger, Pressurized	$\frac{5}{8}$ " dia.—Rd.	$\frac{27}{8}$	45.3	3.00
442001	1212B	4AG—Finger	.623" dia.†	$\frac{213}{16}$	24	.70

*With flat .224" from C.L.

†With flat .250" from C.L.

BUSS Fuses • Fusetrons • Holders

for Protection of Radios, Instruments and Electronic Equipment

FAST ACTING FUSES for PROTECTION OF INSTRUMENTS, Etc.



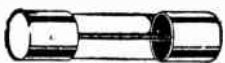
Formerly called 8AG
Dimension $\frac{1}{4}$ x 1 inch, Glass tube.

Provide high speed action necessary to protect sensitive instruments.

Test specification—carry 100%, open at 200% in 5 seconds.

Listed as approved by Underwriters' Laboratories.

Voltage	Type	Amperes
250 or less	MJB	$\frac{1}{200}$, $\frac{1}{100}$, $\frac{1}{32}$ or $\frac{1}{16}$



Formerly called 8AG
Dimension $\frac{1}{4}$ x 1 inch, Glass tube.

Provide high speed action necessary to protect instruments.

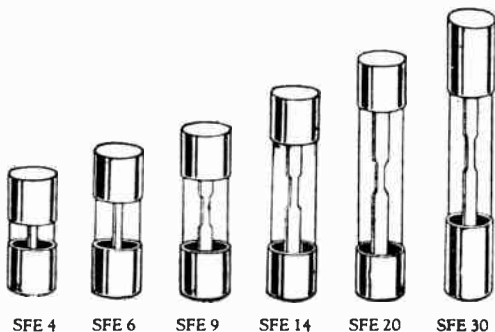
Test specification—carry 100%, open at 200% in 5 seconds.

Listed as approved by Underwriters' Laboratories.

Voltage	Type	Amperes
250 or less	AGX	$\frac{1}{8}$, $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{3}{4}$, 1, $1\frac{1}{2}$ or 2

BUSS FUSES — SFE STANDARD

All cuts actual size. Fuses of different amperages are of different lengths — to make it impossible to insert too large a size — thereby preventing over-fusing.



Glass tube — diameter $\frac{1}{4}$ inch. Length as per table below.

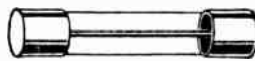
Test specification—carry 100%, open at 125% in $\frac{1}{2}$ hour.

Listed as approved by Underwriters' Laboratories.

Made according to specifications of Society of Automotive Engineers.

Voltage	Type and Amperes	Length Inches	Pounds per 100
32 or less	SFE 4	$\frac{5}{8}$	.70
"	SFE 6	$\frac{3}{4}$	.71
"	SFE 9	$\frac{7}{8}$	.72
"	SFE 14	$1\frac{1}{16}$	.77
"	SFE 20	$1\frac{1}{8}$	.83
"	SFE 30	$1\frac{1}{16}$	1.05

BUSS GLASS TUBE FUSES, $\frac{1}{4}$ x $1\frac{1}{4}$ Inch



Type AGC and MTH 4, 5 and 6



Type MTH 8

Formerly called 3AG

Test specification—carry 110%, open at 135% in 1 hour.

Listed as approved by Underwriters' Laboratories.

Shipping weight 0.8 lbs. per 100.

Voltage	Type	Amperes
250 or less	AGC	$\frac{1}{8}$, $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{3}{4}$, 1, $1\frac{1}{2}$, 2 or 3
"	MTH	4, 5, 6 or 8



Formerly called 3AG

Test specification—carry 110%, open at 135% in 1 hour.

Shipping weight 0.8 lbs. per 100.

Voltage	Type	Amperes
32 or less	AGC	5, 6, $7\frac{1}{2}$, 10, 15, 25 or 30

20 ampere size is an SFE 20 fuse.

Sizes larger than 30 ampere are not recommended as clips or fuse holders would not permit fuse to carry such high currents. If surges or starting currents make heavier fuse necessary, use type MDL Fusetrons.

BUSS BAKELITE TUBE FUSES, $\frac{1}{4}$ x $1\frac{1}{4}$ Inch



Formerly called 3AB

Test specification—carry 110%, open at 135% in 1 hour.

Shipping weight 1 lb. per 100.

Voltage	Type	Amperes
250 or less	ABC	10, 12 or 15

BUSS FUSETRONS, $\frac{1}{4}$ x $1\frac{1}{4}$ Inch



$\frac{1}{100}$ and $\frac{1}{32}$ amp.



$\frac{1}{16}$ to 2 amp.



$2\frac{1}{2}$ to 30 amp.

Glass tube

A FUSE WITH A LONG TIME-LAG

Fusetrons avoid needless blows from starting currents or surges. They have a fuse link which operates only on very high overloads or short-circuits — they have a thermal cutout which functions on low overloads — the thermal cutout cannot operate quickly at any load, hence long time-lag is obtained. Yet protection is afforded against short-circuits or continued overloads.

Test specification—carry 110%, open at 135% in 1 hour.

Approximate blowing time: at 200% load 25 seconds

at 300% " 8 "

at 500% " 3 "

125 and 250 volt sizes listed as approved by Underwriters' Laboratories.

Shipping weight 0.9 lbs. per 100.

Voltage	Type	Amperes
250 or less	MDL	$\frac{1}{100}$, $\frac{1}{32}$, $\frac{1}{16}$, $\frac{1}{10}$, $1\frac{1}{100}$, $\frac{3}{10}$, $\frac{3}{10}$, $\frac{1}{10}$, $\frac{1}{2}$, $\frac{3}{10}$ or $\frac{3}{10}$

125 or less MDL 1, $1\frac{1}{4}$, $1\frac{1}{10}$, 2, $2\frac{1}{2}$,

32 or less MDL $3\frac{1}{10}$, 4, 5, $6\frac{1}{4}$, 8, 10, 15, 20, 25 or 30

BUSS Fuses • Fusetrons • Holders

for Protection of Radios, Instruments and Electronic Equipment

BUSS FUSE CLIPS for 1/4 inch Fuses

(SFE4, 6, 9, 14, 20, AGX, AGC, ABC, MDL, MJB, MTH fuses)



Spring bronze clips are made of Herculoy — a bronze of distinctly superior quality for spring clips. This metal gives clips great gripping strength and ability to retain spring under adverse conditions.

Beryllium copper clips combine low electrical resistance with great gripping strength. This means maximum electrical conductivity and results in cooler operation of clips and fuse.

Size of mounting hole; .130 to .135 inch.
Center of hole to back-stop; .125 to .135 inch.
Min. length of contact surface; 3/32 inch
Maximum height; 1 1/32 inch
Maximum width; 1 1/32 inch
Shipping weight; 3 lbs. per 100

4548 Spring bronze clip, Nickel plated.
4592 Beryllium copper clip, Silver plated.

BUSS CLIP ASSEMBLIES for 1/4 inch Fuses

(SFE4, 6, 9, 14, 20, AGX, AGC, ABC, MDL, MJB, MTH fuses)

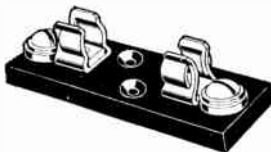


Clips as described above. Brass terminal. 3/16 inch 6-32 washer head terminal screw. 1/4 inch 4-40 flat head iron mounting screw.
Shipping weight; 1 lb. per 100

4431 includes No. 4548 spring bronze clip, terminal screw, terminal and mounting screw.
4432 includes No. 4592 beryllium copper clip, terminal screw, terminal and mounting screw.

BUSS FUSE BLOCKS

Bakelite base blocks 3/16 inch thick. Countersunk mounting holes for No. 6 flat head screws. Brass No. 6 terminal screws. No. 4548 spring bronze clips.



Full base, Screw terminal Blocks

For Fuses	One Pole	Two Pole	Three Pole
SFE4	4511	4521	4531
SFE6	4516	4526	4536
SFE9	4517	4527	4537
SFE14, AGX, MJB	4514	4524	4534
SFE20, ABC, AGC, MDL, MTH	4512	4522	4532



Small base, Solder Terminal Blocks

For Fuses	One Pole	Two Pole	Three Pole
SFE14, AGX, MJB	4520	4485	4403
SFE20, ABC, AGC, MDL, MTH	4405	4408	4411

Other standard fuse blocks and special fuse blocks

If blocks shown do not fit your requirements ask for information on other standard types and sizes.

If special fuse block is required, send description or sketch, showing type of fuse to be used, number of circuits, type of terminals, etc. We welcome such inquiries.

BUSS FUSE HOLDERS

Make it convenient to mount fuse on any equipment. Changing or inspection of fuse is easy and quick.

Holder has removable knob. Fuse projects beyond body of holder and is not held tight on other end when knob is removed.

Fuse and contacts are protected from dirt and fumes.

Good contact on fuse is made certain by strong coil spring pressure. Poor contact heating that often causes fuse to blow needlessly is eliminated.

Holder bodies are made of black bakelite. All current carrying parts are of brass or copper. Terminals and all contact parts are bright alloy plated.



Panel Mounted Holders for 1/4 inch Fuses

Holder is inserted through hole in panel and are locked in place by nut on holder. They can be used on panels up to 5/16 inch thick.

Bayonet type knob requires only quarter turn to remove fuse. No screw driver is needed.

Side terminal is held mechanically as well as by solder. Heat of soldering wire to it will not cause it to loosen or come off.

Vibration will not cause failure of terminals as they are designed to stand severe service.

Neoprene washer and steel locking nut (zinc plated, chromate dipped) furnished with each holder.

Wire hole in terminals; .115 inch.

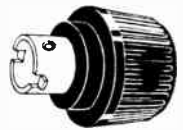
Normal current carrying capacity; 15 amperes.

Listed as Approved by Underwriters' Laboratories.

Shipping weight; 4 lbs. per 100

HJM for 1/4 x 1 inch fuses (AGX, MJB, SFE 14)

HKP for 1/4 x 1 1/4 inch fuses (ABC, AGC, SFE20, MDL, MTH)



IN-THE-LINE HOLDERS for 1/4 inch fuses

These holders are for mounting fuse in wire. Holders consist of body and bayonet type knob — two terminal contacts ready to be crimped on ends of wire — a pressure spring that is used under contact in base of holder.

Holder can also be mounted in panel up to 3/8 inch thick by means of a No. C-1437-018-27 Tinnerman nut (Nut not furnished). Flat spot on holder permits it to be locked against rotation.

Normal current carrying capacity; 15 amperes.

Shipping weight, holders: 4 lbs. per 100.

Type

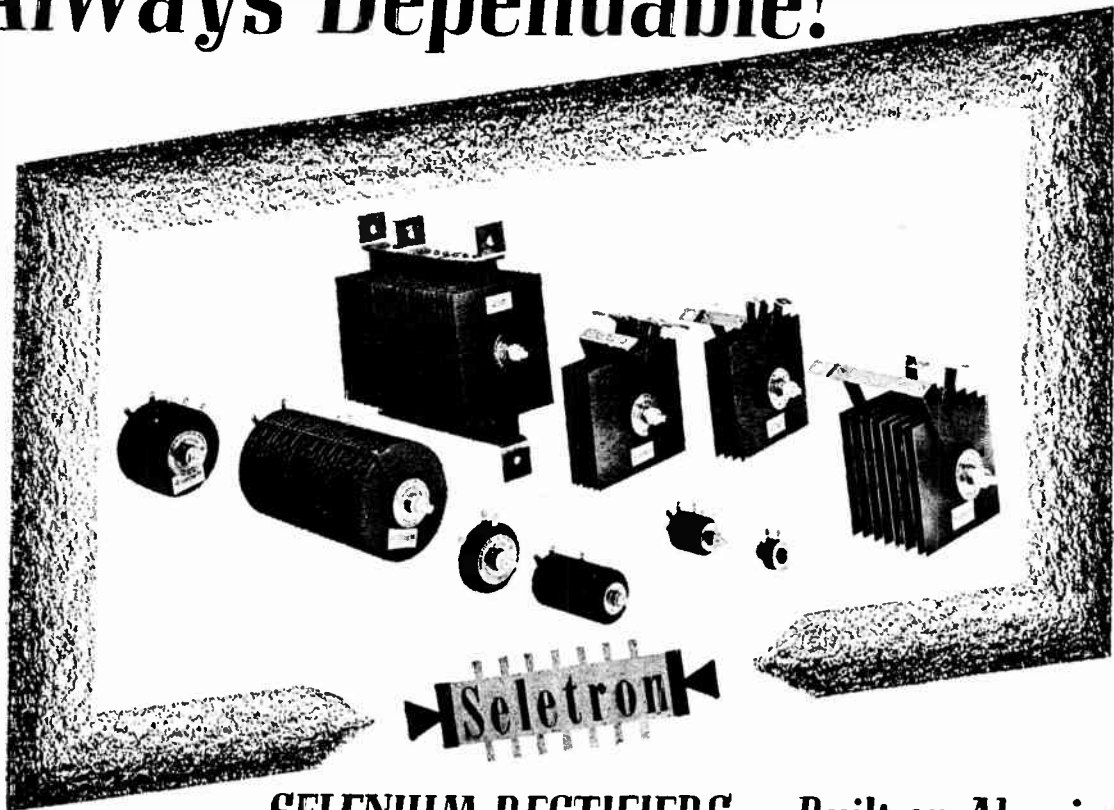
HDI for 1/4 x 1 inch fuses (AGX, MJB, SFE 14)
Takes No. 18 or smaller wires.

HDI-A for 1/4 x 1 1/4 inch fuses (ABC, AGC, MDL, MTH, SFE 20)

Takes No. 18 or smaller wires.

HDI-B for 1/4 x 1 1/4 inch fuses (as above)
Takes No. 14 or 16 wires.

Always Dependable!



SELENIUM RECTIFIERS... Built on Aluminum

D.C. OUTPUT @ 35°C.		MAX. INPUT		SELETRON	D.C. OUTPUT @ 35°C.		MAX. INPUT		SELETRON
Max. Amps.	Approx. Volts	R.M.S. Volts		Code Number	Max. Amps.	Approx. Volts	R.M.S. Volts		Code Number
1.6	18	24		D1B1S1B	10.0	34	48		WH2B1S1B
3.1	17	24		E1B1S1B	16.0	35	48		H2B2S1B
5.2	17	24		F1B1S1B	24.0	35	48		H2B3S1B
10.0	17	24		H1B1S1B	1.2	108	144		D6B1S1B
16.0	18	24		H1B2S1B	2.4	106	144		E6B1S1B
24.0	18	24		H1B3S1B	5.2	103	144		WF6B1S1B
1.2	36	48		D2B1S1B	1.2	126	168		D7B1S1B
3.1	35	48		WE2B1S1B	2.4	123	168		E7B1S1B
5.2	34	48		WF2B1S1B	5.2	120	168		WF7B1S1B

The above ratings for 35°C ambient continuous duty resistive inductive load. Other combinations manufactured to meet your requirements.

For AC-DC conversion where minimum maintenance costs and maximum efficiency are required, circuit designers write SELETRON into their specifications . . . right at the start!

These advanced type selenium rectifiers built on aluminum are engineered for long life, minimum weight, compactness and maximum heat dissipation. Ten standard sizes of discs provide outputs ranging from 50 milliamps to thousands of amperes. Arrangement of discs in infinite series and parallel combinations makes possible stacks to meet specific requirements for voltage and current.

Consultation with our engineers on any problem is invited. Their services and advice are yours without any obligation. Write TODAY for our informative bulletin on SELETRON Selenium Rectifiers and for the SELETRON application data sheet. Address Dept. T-

FOR RADIO APPLICATIONS...

Specify SELETRON
Miniature Selenium Rectifiers



- STARTS INSTANTLY
- RUNS COOL
- WILL NOT BREAK
- BOOSTS PERFORMANCE
- LASTS LIFE OF SET
- EASILY INSTALLED

Code No.	Plate Height	Plate Width
5LI	1"	7/8"
5MI	1"	1"
5PI	1 3/16"	1 3/16"
5RI	1 1/2"	1 1/4"
5QI	1 1/2"	1 1/2"



SELETRON DIVISION
RADIO RECEPTOR CO., Inc.

Since 1922 in Radio and Electronics

251 WEST 19th STREET

NEW YORK 11, N. Y.

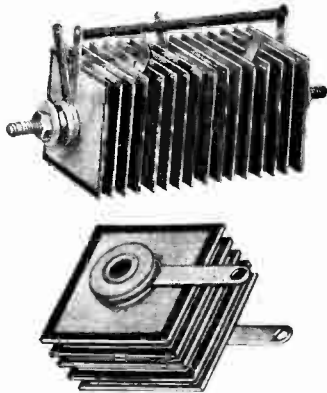


THE

BRADLEY

LINE

SELENIUM RECTIFIERS



Bradley selenium rectifiers for medium voltage power applications are processed to allow good efficiency and stability at D. C. ratings up to 24 volts per plate. For continuous operation in Full Wave Circuit cooled by naturally circulating air at 35°C ambient, current density is conservatively fixed at 0.333 amperes per square inch of plate.

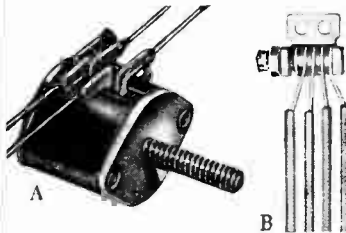
For power applications, square plates allow a maximum ratio of rating to space factor.

For high voltage electronics applications, Bradley selenium rectifiers are rated up to 70 volts peak inverse per plate. Current ratings are available as low as 500 microamperes with special designs available with even lower current ratings for high frequency applications.

Rectification problems in instruments, electronic devices, control devices, and power applications have been readily met by Bradley engineers, who can quickly specify the proper selenium or copper oxide rectifier for your application.

• Above, SE-11 series. Power rectifier stacks rated from 0.100 amperes up. Plate size starts at 1" x 1".

COPPER OXIDE RECTIFIERS



BRADLEY "COPROX" INSTRUMENT RECTIFIERS have vacuum processed pellets with gold contacts.

Exhaustive laboratory and field tests have proved our process produces rectifiers with maximum efficiency and minimum temperature errors. Even under severe conditions of use, aging is practically eliminated.

Electrical instruments with better accuracy are being built with "Caprox" rectifiers.

BRADLEY "COPROX" POWER RECTIFIERS, designed for low voltage applications, are rugged, compact and conservatively rated. Long service life is combined with low operating cost.

All lead wires on Bradley "Caprox" rectifiers are pre-soldered and other types of terminals are specially designed to prevent overheating during assembly. Perfect sealing is achieved by wax potting or plastic impregnating. Mountings are exceptionally adaptable. All "Caprox" rectifiers have conservative ratings.

Bradley's applications experience can help you use rectifiers to advantage and can be called upon for the development and production of special designs for special jobs. Use of Bradley "Caprox" rectifiers will result in more efficient equipment that will stand up longer in service.

• Above (A) CX-4D series. High conversion ratio rectifier for electronic control and instrument work, rated from 25 milliamperes to 100 milliamperes, and up to 12 volts, A. C. Supplied with 3" flexible leads. Completely enclosed housing-size 7/8" x 3/4", from 1/2" long to 2" long. Mounts on a single 6/32" screw, 1/2" long.

• Above (B) CX-2E series. Instrument rectifiers rated up to 4.5 volts A. C., 3 volts D. C., 5 milliamperes D. C. Available for all conventional circuits and for special current control applications. Size 7/16" x 1/4" x 3/8", 3" flexible leads. Two 3/32" diameter mounting holes.

PHOTO ELECTRIC CELLS



Bradley's Luxtron[®] photocells efficiently convert light into electric energy sufficient to operate meters and sensitive relays without any external power source. Lightweight, rugged and true to rating, they give long life under the most strenuous operating conditions.

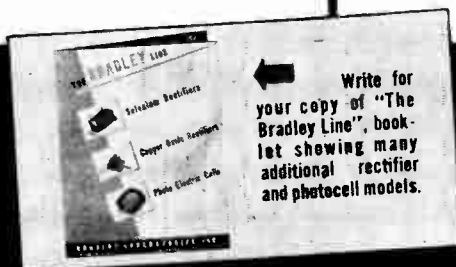
Luxtron photocells are, so far as we have been able to determine, the very finest on the market although priced with inferior grades.

Shapes of Luxtron photocells vary from circles to squares, with every in-between shape desired. In size they range from the diminutive to the largest sizes required.

For precision control of light into electric energy, specify Luxtron photocells. Write Bradley today for samples and engineering assistance on any photocell problem you have in mind.

• Above, the pigtail contact model shown here is only one of a series of standard mountings. Others include housed models with plug-in contacts, tube socket and nut-and-bolt types.

*T.M. Reg. U.S. Pat. Off.



Write for your copy of "The Bradley Line", booklet showing many additional rectifier and photocell models.

BRADLEY LABORATORIES, INC.

82 MEADOW STREET, NEW HAVEN 10, CONN.

● ELECTROX[®]

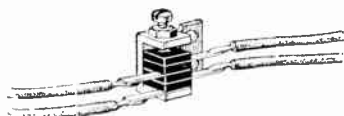
Low-Capacity

RECTIFIER UNITS

Used by most leading test set manufacturers as original components in their equipment.

*Trade Mark Reg. U. S. Pat. Off.

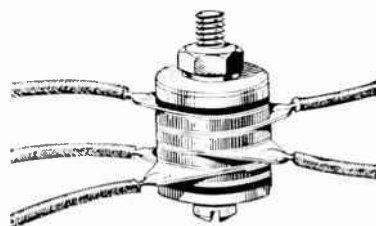
Full and half wave, low-capacity copper oxide rectifiers for instruments, test sets and similar applications. ElectroX Rectifiers are made by a pioneer manufacturer of high-quality, dry disc rectifiers. Each type is specially adapted to meet the individual requirements of the user; each unit is individually inspected, tested, and guaranteed right. For dependability, get genuine ElectroX Rectifiers!



TYPE A-4
CAT. No. 5020



TYPE B-2
CAT. No. 5047
CAT. No. 5049

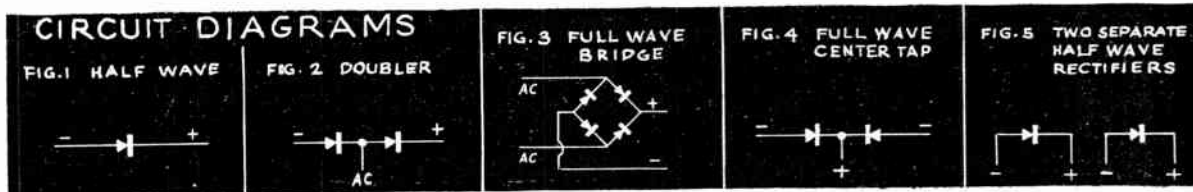


TYPE C-4
CAT. No. 5017

Max. Continuous Rating			Circuit Diagram Fig.	Element Diam. Inches	No. of Elements	Connections	Lead Length Inches	Type	Cat. No.
D.C. M.A.	D.C. Volts	A.C. Rms. Volts							
1	1	1.5	3	1/8	1	1 leads	1	AA-4	5061
5	3	4	3	1/8	1	1 leads	3	A-4	5020
13		3	1	1/8	1	2 leads	3	B-1	5048
13		4	1	1/8	2	3 leads	3	B-2	5047
13		3	2	1/8	2	3 leads	3	B-2	5049
20	3	4	3	1/8	1	5 leads	3	B-4	5016
32		3	1	1/4	1	2 lugs		C-1	5011
32		3	2	1/4	2	3 leads		C-2	5057
32		3	5	1/4	2	4 lugs		C-2	5010
61	3	11	3	1/4	1	5 lugs		C-1	5011
61	3	11	3	1/4	1	5 leads	3	C-1	5017

33 volts A.C. per element

1 1/2" square



RECTIFIER DIVISION
THE SCHAUER MACHINE CO. • Cincinnati, Ohio
Makers, since 1930, of high-quality, dry disc rectifiers.

ELECTROX "Master" BATTERY ELIMINATOR

Today's Outstanding D.C. Power Supply Unit, the ELECTROX, Model AR-2, provides the ultimate in humless Direct Current for all-around servicing and demonstrating automobile radios and for all similar applications.

It will operate practically any type or size of automobile radio—whether push button or manually tuned.

It delivers 6 volts of Direct Current free of hum; (less than 3% ripple).

Its D.C. output is adjustable—smooth, humless Direct Current, at the correct voltage is delivered to the individual radio being operated.

Turning the rheostat adjusts the output to 6 volts for any load current between 3 and 15 amperes. This is indicated by the easily read voltmeter located on top of the case. Made by instrument craftsmen to give dependable, trouble-free service.



Model AR-2

Overall Dimensions—11½" long, 7¼" wide, 6⅝" high.

Weight—20 pounds.

A.C. Input—115 volts, 1 phase, 60 cycle.

D.C. Output—6 volts, at from 3 to 10 amperes, continuous rating; and from 10 to 15 amperes, intermittent; selectively determined. Negligible hum level, (less than 3% ripple).

Voltmeter—accurate; mounted on top of case for visibility.

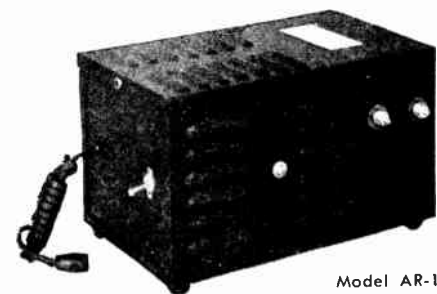
Cartridge-type Fuse—easily accessible from outside of case.

Toggle Switch—for A.C. current supply.

Long-life Selenium Rectifier; Condenser; Transformer; Filter Choke.

6 ft. A.C. cord one plug. Wing nut binding posts for connecting D.C. leads. Rubber feet.

Steel case—attractive, metallic-brown finish.



Model AR-1

ELECTROX "Standard" BATTERY ELIMINATOR

ELECTROX, Model AR-1, is a practical, low-cost D.C. power-supply unit for servicing and demonstrating automobile radios. It is an exceptionally high-grade battery eliminator—compact, rugged, dependable. It delivers Direct Current with very low ripple component, but does not have the adjustable output features embodied in the ELECTROX "Master", Model AR-2.

Overall dimensions—11½" long by 7¼" wide by 6⅝" high.
Weight—20 pounds.

A.C. input—115 volts, 1 phase, 60 cycle.

D.C. output—6 volts at approximately 15 amps, low ripple component.

Equipped with six foot A.C. cord and plug. Heavy binding posts are provided for connecting D.C. leads.

Toggle switch for "ON and OFF."

Cartridge type fuse—easily accessible from outside of case.

Equipment—Condenser, transformer, filter choke, Selenium rectifiers, rubber feet.

Finish—Attractive, well ventilated steel case.

ELECTROX BATTERY BOOSTERS

Designed for safely recharging single storage batteries—small, compact, light in weight but strong. Can be set on floor, shelf or counter or hung on wall. Under ordinary conditions, will recharge battery overnight.

Rectifiers are rugged, long-life Selenium. Ammeter is located in front of case and is easily read. A circuit breaker is supplied to protect against shorts and overloads, having a reset button conveniently located in the front of the case. Complete with 6 ft. A.C. cord and plug, and 5 ft. cord with battery clips for easy connection to batteries. Size: 6¼" x 6" x 7¼".

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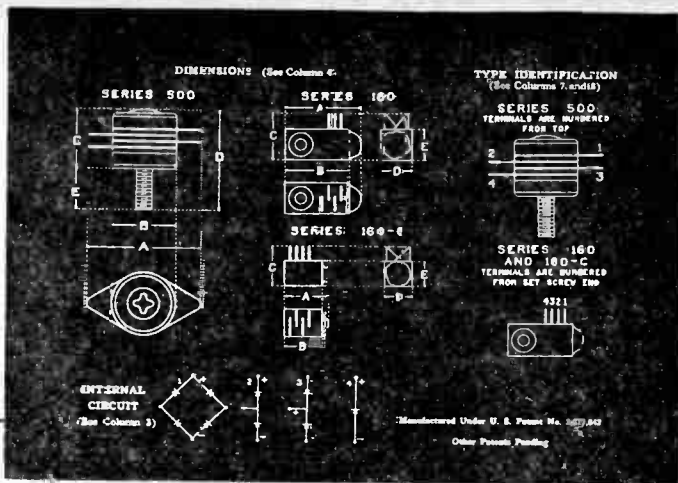


Model BX

RECTIFIER DIVISION

THE SCHAUER MACHINE CO. • Cincinnati, Ohio

Conant Instrument Rectifiers



SPECIFICATIONS (STANDARD TYPES)

Column 1	2	3	4	5	6	7	8	9	10												
Type	Series	Internal Circuit	Dimensions (Inches)					Mounting Screw Size	Weight (Grams)	Number of Terminals	Color, Terminal Number				PEAK ELECTRICAL RATINGS				*List Price		
			A	B	C	D	E				1	2	3	4	Instantaneous Volts	Intermittent Mils	Continuous Volts	Continuous Mils	Volts	Mils	Price
M	500	1	.890	.500	.485	.800	.328	6-32	13,912	4	RED	no	BLK	no	30	100	20	60	10	30	\$3.50
HS	500	2	.890	.500	.445	.800	.360	6-32	9,158	3	RED	no	BLK	—	15	100	10	60	5	30	2.70
T	500	3	.890	.500	.445	.800	.360	6-32	9,158	3	no	RED	no	—	30	100	20	60	10	30	2.70
H	500	4	.890	.500	.400	.800	.392	6-32	7,730	2	RED	no	—	—	75	100	10	60	5	30	1.50
D	160	1	.595	.485	.375	.250	.250	2-56	3,400	4	RED	no	BLK	no	10	15	20	10	10	5	3.50
DHS	160	2	.625	.550	.375	.250	.250	2-56	2,880	3	RED	no	BLK	—	15	15	10	10	5	5	2.70
BT	160	3	.625	.550	.375	.250	.250	2-56	2,880	3	no	RED	BD	—	30	15	20	10	10	5	2.70
BH	160	4	.625	.550	.375	.250	.250	2-56	2,705	2	RED	no	—	—	15	15	10	10	5	5	1.50
B-C	160-C	1	.345	.297	.310	.220	.200	none	1,743	4	RED	no	BLK	no	30	15	20	10	10	5	3.50
BHS-C	160-C	2	.345	.297	.310	.220	.200	none	1,385	3	RED	no	BLK	—	15	15	10	10	5	5	2.70
BT-C	160-C	3	.345	.297	.310	.220	.200	none	1,385	3	no	RED	BD	—	30	15	20	10	10	5	2.70
BH-C	160-C	4	.345	.297	.310	.220	.200	none	1,292	2	RED	no	—	—	15	15	10	10	5	5	1.50

Over ninety per cent of all rectifier requirements are served by 12 types—4 basic assemblies in 3 series. These 3 series are the three primary units of Conant rectifiers. Special types, however, can be developed as needed, and you'll find Conant ready to cooperate.

SERIES 500 UNITS are for general applications requiring greater output current for meters, relays or other apparatus requiring more than 1 milliamperes. Recommended for all such applications at commercial and the lower audio frequencies. Will also operate up to 30,000 c.p.s. in special applications wherein accuracy of readings is not essential.

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SPECIAL TYPES are available in both series 500 and 160-C. When requesting a quotation on a special type include a sketch of the rectifier required or a circuit diagram showing source and frequency of the input voltage, resistance

and kind of load, required load current and the ambient temperatures.

SERIES 500 Disc diameter .500 inch. Area each disc .15 square inch. Furnished with 3" braided, tinned copper leads. Finished in clear lacquer. Nickel plated end plates.

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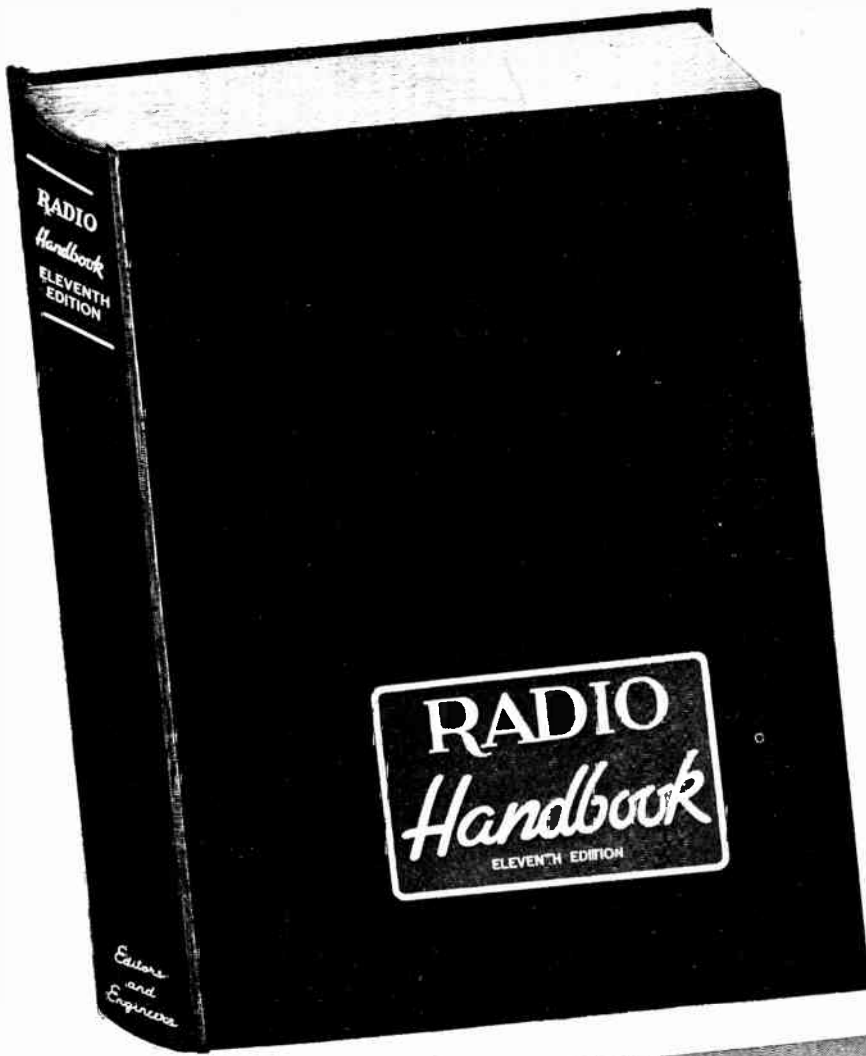
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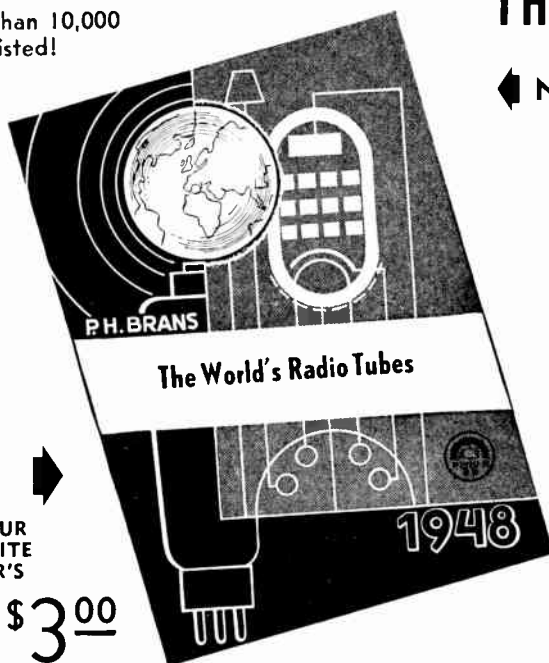
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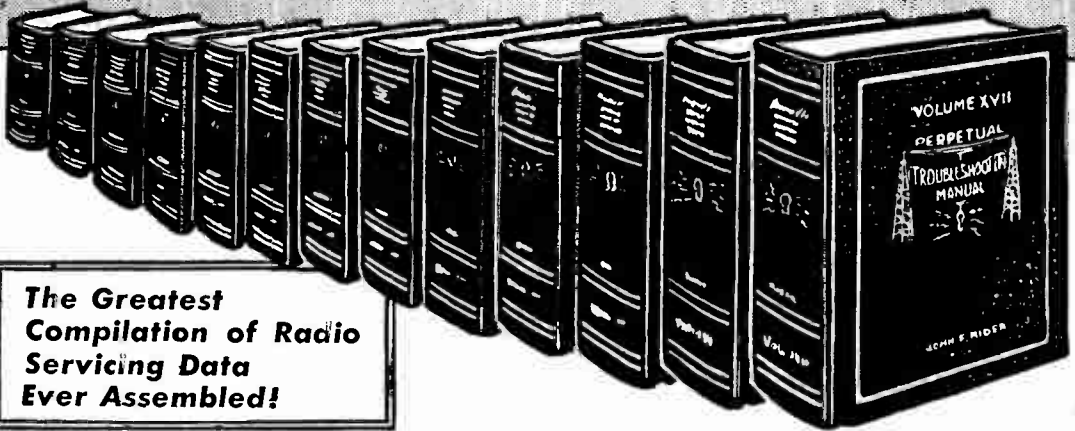
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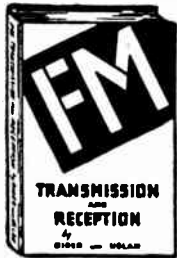
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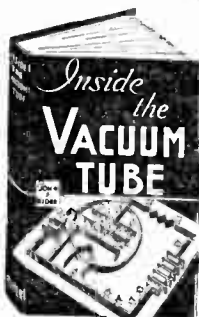
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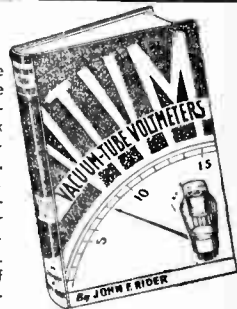
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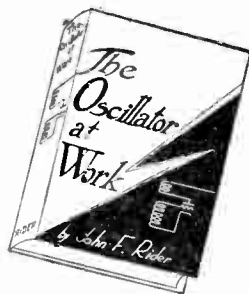
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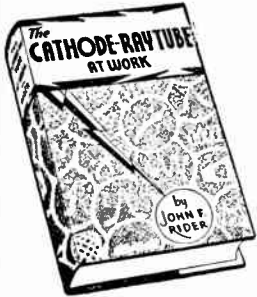
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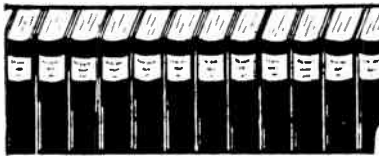


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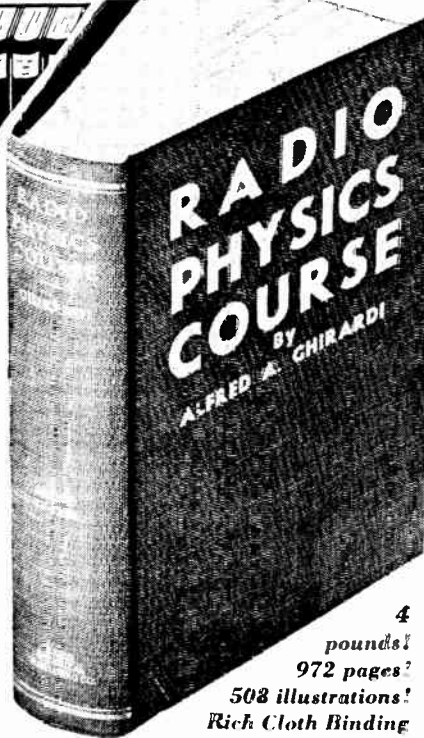


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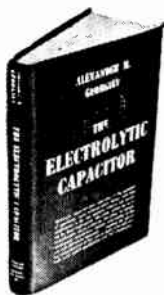


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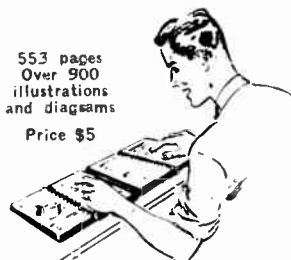
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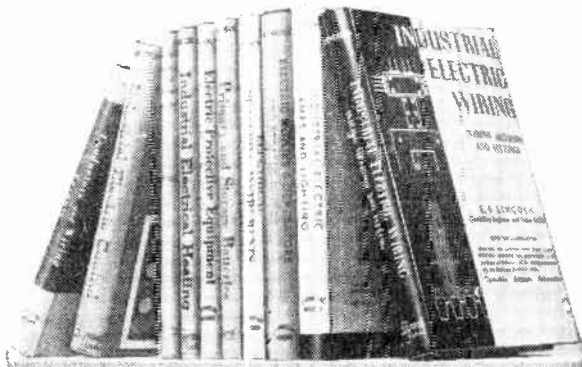
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of the actual
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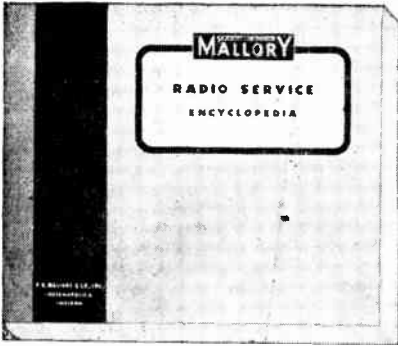
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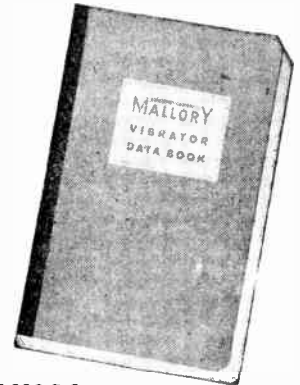


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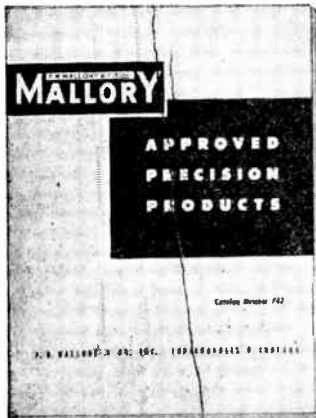
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Gives characteristics and socket connection diagrams for all RCA receiving tubes—Rectifiers, Detectors, Oscillators, Converters, Mixers, Voltage and Power Amplifiers and Kinescopes. Also includes identification of miniature and metal types; discontinued types are keyed for the benefit of radio servicemen. 24 pages. Price: 10 cents each.



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16 colorful pages of tabulated technical data, base diagrams, photographs, and "thumb-nail" sketches of the current RCA line of power and gas tubes for communication and industrial use. Includes more than 150 RCA Vacuum Power Tubes, Voltage Regulators, Rectifiers, Thyratrons, and Ignitrons in easy-to-read, tabular form. Price: 10 cents each.

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RADIO'S MASTER

NATIONAL TELEVISION



MODEL TV-7M

\$189⁵⁰

COMPLETE

designed and built to **OUTPERFORM**

Just out of the testing laboratories this television receiver, National's latest engineering triumph, incorporates 11 outstanding design features. Pictures are brighter, steadier, clearer — Dual-speaker FM sound is amazingly realistic. Built with world-renowned National craftsmanship and quality components, National Television operates perfectly, dependably — every time you turn it on! Automatic station selector makes accurate tuning easy. Covers all 13 channels. 21 tubes (including 3 rectifier tubes) plus 7" picture tube.



Also available in handsome mahogany cabinet. Model TV-7W

\$199.50 complete

BRIGHTER

- Full 4,000 volts on the picture tube.
- Coil switching assures equivalent of separate, high Q tuned circuits for each channel to improve sensitivity, stability.
- Automatic Gain Control — like AVC in your radio — corrects for variations in signal strength.

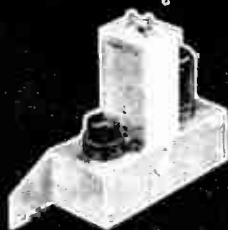
STEADIER

- Extra-stable synchronizing circuit locks picture in place. No need for constant re-tuning. Just set controls once and relax!

CLEARER

- Uses 37 mc IF instead of conventional 21 mc — minimizing picture interference caused by other radio services.
- Specially designed, double-tuned RF bandpass circuits improve selectivity and image ratio.
- Fine tuning adjustment provided.
- Two speakers and hum-free power supply provide clearer, life-like binaural sound.

**SEE AND HEAR
THE DIFFERENCE!**



NFM-07 Adapter

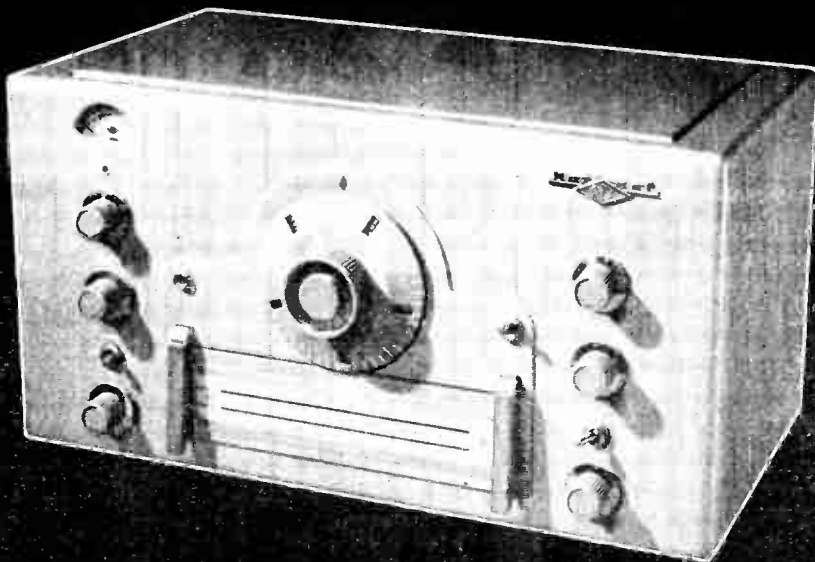
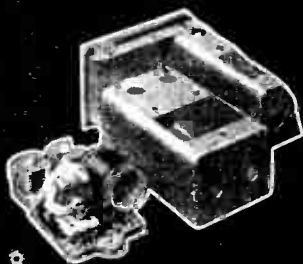


Table Model HRO-7



MCR 8" Speaker



Detail of Coil Set

Tuning Range — 50-430 Kcs. and 480-30,000 Kcs.

HRO-7

The first HRO was built by National in 1934; it was a product unique in commercial receiver design. Fourteen years of severe use in government, commercial and amateur services have proved that many of the original features of that first HRO are essential to dependability in communications. Modern circuitry and cabinet design have been added to produce the HFO-7, a custom-built receiver using components of our own design and manufacture. Above all, the HRO-7 has that downright stability which has been characteristic of the entire HRO series.

The required complement of operating controls is on the panel, plus a head-phone jack and an S-meter. New features include automatic adjustable-threshold noise limiting — improved high frequency oscillator with regulated plate voltage — lever handles for coil-set changing — slide rule calibration on all coil sets — bandspread at 11 meters — accessory connector socket and phono-graph switch on rear apron — tone switch on panel.

The circuit of the HRO-7 comprises two tuned r.f. stages, separate miniature tube h.f. oscillator, two stages of i.f. at 456 kc., combined 2nd detector — a.v.c., series valve a.n.l., 1st audio amplifier and audio output stage designed essentially for communications service, b.f.o. coupled to the 2nd detector, crystal filter network between 1st detector and 1st i.f. and voltage regulator for the high frequency oscillator.

The tuning system retains the time-proven micrometer-type dial with linear calibration from zero to 500 and an

effective scale length of approximately twelve feet. A National PV type gear drive unit drives the four gang precision tuning condenser to eliminate backlash (see page 31).

The HRO-7 is supplied with four coil sets covering 1.7 to 30.0 Mc. while six additional coil sets are available to cover frequencies from 50 to 430 kc., 480 to 2050 kc. and 30.0 to 35.0 Mc. Each of the four coil sets normally supplied covers two amateur bands and the spectrum between. By a simple change-over operation the amateur band at the high frequency end of each coil set can be expanded for bandspread operation to cover approximately 400 divisions of the dial. The limiter clips noise on both positive and negative peaks and provides a.v.c. for code reception as well as noise pulse limiting.

Two miniature tubes are employed in the HRO-7, a 6C4 high-frequency oscillator and an 0A2 voltage regulator, to give a high order of oscillator stability. An accessory connector socket is mounted at the rear of the receiver to permit connection of various accessories such as the NFM-07 narrow band F.M. adaptor, crystal calibrator or high-frequency converter. A 5 position switch provides a means of adjusting selectivity from broadcast to single-signal requirements. The new calibration charts on each coil set make correlation between dial reading and frequency accurate and speedy.

The HRO-7 is far more than a fine receiver: it is the best HRO type receiver ever built.

Net



SPECIFICATIONS OF HRO-7

SELECTIVITY:

Voltage Ratio

6 db.
60 db.

20 db., Selectivity at "5"
20 db., Selectivity at "1"

Nominal Bandwidth

3.0 kc.
21.5 kc.

Crystal Filter Out

Crystal Filter In

200 cycles
6.0 kc.

SENSITIVITY: 1.0 microvolt or better throughout the normal frequency range.

AVC CHARACTERISTIC:

To ± 10 db. between 1.0 and 100,000 microvolts input.

IMAGE REJECTION: Better than 30 db. at 30 Mc.

SIGNAL-TO-NOISE RATIO: Exceeds 16 db. (ratio of output with 30% modulation ON/OFF) with 5 microvolts input.

INPUT IMPEDANCE: At antenna terminals — 500 ohms (average).

POWER INPUT: Using Type 697 Power Pack — 75 watts at 115 volts, 50/60 cycles, 1 phase a.c. Switch for 230-volt operation included.

POWER OUTPUT: Max. 3 watts. Output with negligible distortion 1.5 watts.

ACCESSORY CONNECTOR SOCKET: Makes available voltages and circuits as follows: — 6.3 v. a.c., 150 v. d.c. regulated, 240 v. d.c. unregulated, AVC voltage, phono/NFM-07 Adapter input and i.f. output voltage.

PHYSICAL DATA:

Table Model 19 $\frac{3}{4}$ " x 10 $\frac{3}{8}$ " x 12 $\frac{1}{8}$ ", 34 lbs., Gray Enamel finish (also on Speaker and table model Power Packs). Rack Model panel height 10 $\frac{1}{2}$ ", 35 lbs., depth behind panel 13 $\frac{3}{16}$ " overall, Black Wrinkle finish.

PRICES:

HRO-7T Table Model (with A, B, C D coils, 697 & MCR)Net \$311.36

HRO-7R Rack Model (with A, B, C, D coils SPU-697 & RFSH-1) ..Net \$338.65

(Prices include applicable Power Pack and Speaker.)

ADDITIONAL COIL SETS

HRO-7E 900—2050 kc.....Net \$15.25

HRO-7J 50— 100 kc.....Net \$27.91

HRO-7F 480— 960 kc.....Net \$15.35

HRO-7AA 27.0-30.0 Mc., Net \$15.35

HRO-7G 180— 430 kc.....Net \$20.93

HRO-7AB 30.0-35.0 Mc., Net \$22.50

HRO-7H 100— 200 kc.....Net \$23.03

HRO-7AC 21.0-21.5 Mc., Net \$15.35

(If special frequency ranges are required, write for information.)

MATCHING UNITS

Type 697 115/230 v. a.c. Power PackNet \$20.36

Type 686S 6 v. d.c. Vibrator Power PackNet \$34.16

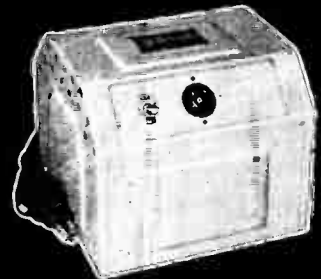
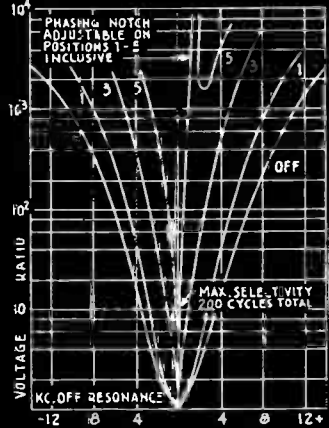
Type MCR 8" Speaker with matching transformerNet \$12.00

Type NFM-07 Narrow Band FM AdapterNet \$16.95

Type TB-4 Tilt BaseNet \$3.95

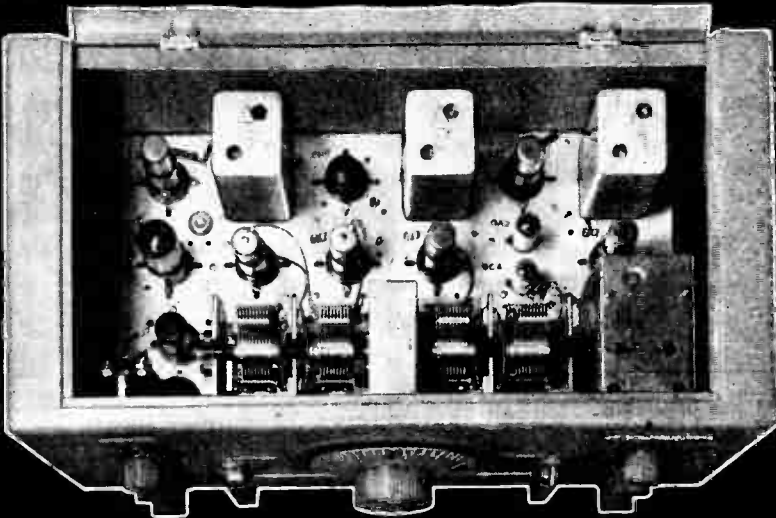
HRO-7

Crystal Filter Selectivity Curves



Power Pack

Top-of-Chassis View



Net





HRO-7C DELUXE RECEIVER INSTALLATION

The HRO-7C is a Deluxe Receiving Installation consisting of an HRO-7R Receiver combined with the SPC-1 Unit (speaker, power supply and coil compartment) in an MRR-1 Table Rack. Chrome panel joint cover strips and side trim strips are included as shown. The receiver we have used in this assembly is the rack model of the latest and finest of a long line of National HRO receivers. Thus, the HRO-7C incorporates all the refinements covered in the complete specifications on pages 2 and 3 of this catalog.

HRO-7R Receiver with tubes and A, B, C, D Coil Sets **Net \$279.00**

SPC-1 Unit Combination **Net \$65.10**

MRR-1 Table Rack, 26½" panel capacity, 29" high **Net \$14.85**

HRO-7C Receiver Installation complete as shown **Net \$358.95**

*Units are black wrinkle.

Net

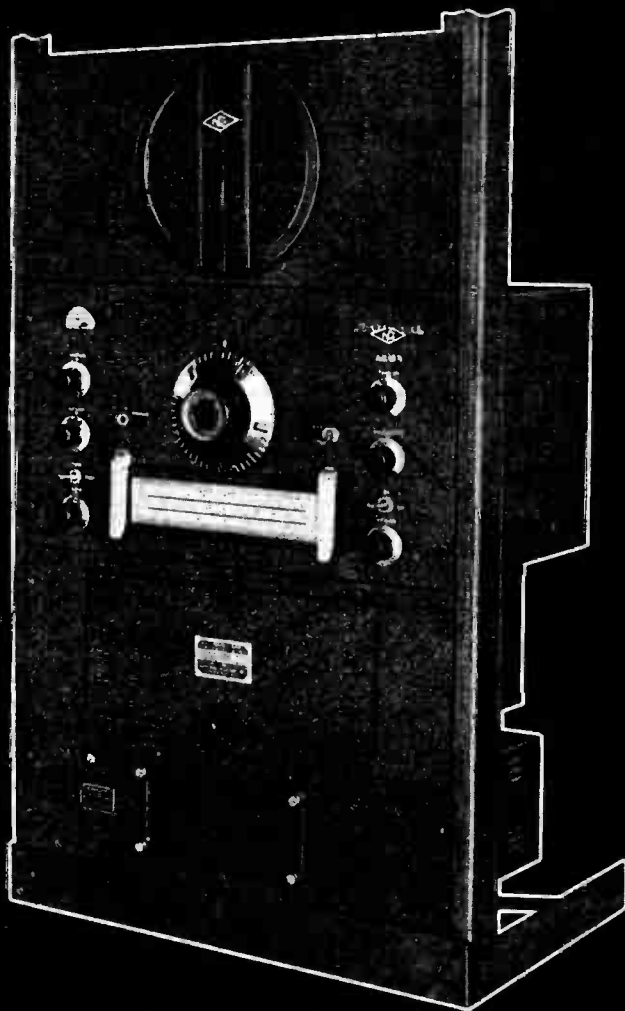


RFSH-1 —

HRO-7R —

HCRP —

SPU-697 —



HRO TYPE RACK UNITS

The HRO series of Rack Units is shown above mounted in a typical relay rack installation: the rack is not a part of this listing. Starting at the top in the arrangement shown, the speaker is Type RFSH-1 8" with matching transformer included, the receiver is the same fine HRO-7R unit used in the HRO-7C Installation (page 4) and described in full on pages 2 and 3, the Type HCRP Coil Container holds five Coil Sets and the Type SPU-697 Power Supply furnishes 240 V., 85 Ma. and 6.2V., 3.3 A. from 115, 230 Volts, 50/60 cps. A-C A vibrator supply is also available for operation from 6 volts D. C.

HRO-7R Receiver with tubes and A, B, C, D Coil Sets Net \$279.00

RFSH-1 Speaker Net \$21.70

HCRP Coil Container Net \$18.00

SPU-697 Power Supply Net \$37.95

SPU-686S Vibrator Power Supply Net \$45.00

*Panels are black wrinkle finish.

Net

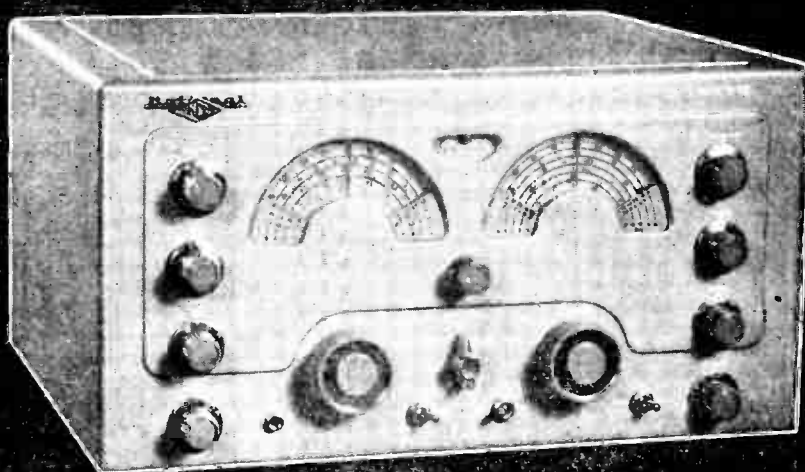




NFM-83 Adapter



10" PM Speaker



Accessory socket for NFM-83 Adapter inside on chassis.

Frequency Range 540 kc. to 31 mc. plus 48 to 56 mc. — calibrated electrical bandspread for 6, 10-11, 20, 40 and 80 meter amateur bands.

Two RF stages on all bands; Image rejection 40 db at 28 mc.

NC-183

Designed particularly for the discriminating radio amateur, the brilliant new National NC-183 is also ideal for the short wave listener who appreciates top-notch performance and skillful engineering. Sixteen tubes (including rectifier and voltage regulator) are employed in a modern high-gain superheterodyne circuit. The main tuning and bandspread dials are calibrated directly in frequency and both have auxiliary logging scales. Two stages of signal frequency amplification provide that extra measure of sensitivity and image rejection so often needed when receiving conditions are unfavorable and a panel controlled trimmer allows the operator to compensate for variations in antenna loading at any frequency.

The push-pull audio stage delivers 8 watts of undistorted audio power to an efficient ten-inch PM speaker. The wide range crystal filter with prasing control, adjustable-threshold automatic noise limiter, tone control and C.W. oscillator pitch control affords exceptional flexibility of performance characteristics, enabling the operator to cope with a wide variety of receiving conditions. Other features include: i.f. oscillator temperature-compensated on all bands; phonograph pick-up jack; accessory connector socket; illuminated signal strength meter with adjustable sensitivity; self-contained output transformer with 500 ohm and 8 ohm terminals; operates from 115 or 230 volts 50/60 cycles or, in emergency, from batteries or vibrator power supply; narrow band FM adaptor available (plugs into accessory socket inside the cabinet). Frequency coverage: 540 kc. to 31 Mc. and 48 to 56 Mc.

TUNING SYSTEM: The main tuning and bandspread capacitors are connected in parallel on all bands. This

permits bandspread tuning at any frequency within the tuning range. Two r.f. stages are used on all bands and the trimmer for the 1st r.f. stage is controlled from the front panel. Dial calibration is as follows:

Band	General Coverage	Bandspread
A		48 — 56 Mc.
B	12 — 31 Mc.	14.0 — 14.4 Mc. 27 — 30 Mc.
C	4.3 — 12 Mc.	7.0 — 7.3 Mc.
D	1.6 — 4.3 Mc.	3.5 — 4.0 Mc.
E	0.54 — 1.6 Mc.	

CRYSTAL FILTER: A new highly flexible crystal filter provides an adjustable selectivity characteristic with a wide range from broad-band broadcast requirements to sharp single-signal code reception. A phasing control permits attenuation of interfering signals.

NOISE LIMITER: A new concept in noise limiter design is included in the NC-183 Receiver. This new limiter could be termed "double action plus" and the noise limiting action is equally effective on either phone or code reception. A panel-mounted threshold control permits adjustment of the level at which limiting action starts.

NARROW BAND FM ADAPTER: The NFM-83 Adaptor pictured above makes the NC-183 an excellent receiver for narrow band FM. A 6H6 tube is employed as a noise suppressing ratio-type discriminator and a 6SK7 i.f. coupling stage eliminates undesirable loading of receiver circuits. Instant selection of AM or NFM by phono-radio switch.

CONTROLS: Main tuning; bandspread tuning; band switch; RF gain — AC on/off; AF gain; send/receive switch; AVC/MVC switch; tone; CWO switch; CWO pitch; limiter; selectivity; phasing; RF trimmer; radio/phono switch.

Net



©

EST.

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SPECIFICATIONS OF NC-183

SELECTIVITY: The selectivity switch of the wide range crystal filter permits a choice of six progressively narrower i.f. pass-bands. Maximum and minimum selectivity characteristics are as follows:

	BANDWIDTH	
	6 db. down	20 db. down
Selectivity Switch "OFF"	3.9 kc.	8. kc.
Selectivity Switch "5"	80 cycles	400 cycles

SENSITIVITY: Measured with a standard 300 ohm dummy antenna, sensitivity of the NC-183 is better than 1.5 microvolts for a 6 db. signal/noise ratio throughout the entire frequency range.

IMAGE REJECTION: Signal/image better than 40 db. at 30 megacycles.

TUBE COMPLEMENT: 4-6SG7 1st and 2nd r.f. Amplifiers, 1st and 2nd i.f. Amplifiers; 6SA7 1st Detector; 2-6J5 h.f. Oscillator and Phase Inverter; 2-6H6 2nd Detector-A.V.C. and Noise Limiter; 6AC7 A.V.C. Amplifier; 2-6SJ7 B.F.O. and 1st Audio; 2-6V6GT/G Audio Output; OD3/VR-150 Voltage Regulator and 5U4G Rectifier.

POWER INPUT: Approximately 125 watts at 115 v., 50/60 cycles, 1 phase a.c. (easily adaptable to 230 v. service as well as emergency operation from batteries).

AUDIO SYSTEM:

Undistorted Power Output — 8 watts.

Frequency Response;

Tone Control at 10 — 60 to 12,000 C.P.S.

Tone Control at 0 — 60 to 1,000 C.P.S.

Output Impedance;

Speaker Socket — 8 or 500 Ohms

Phone Jack — Not Critical

A high impedance phono input jack is provided at the rear of the receiver and the phono-radio switch and phone jack are on the front panel.

PHYSICAL DATA:

Table Model, 19³/₄" x 10¹/₈" x 15", 56 lbs., Gray Enamel finish.

Rack Model, 10¹/₂" panel height, 56 lbs., depth behind panel 17¹/₂" overall, Black Wrinkle finish.

PRICES:

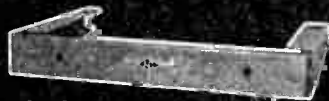
NC-183T Table Model (with speaker)	Net \$269.00
NC-183R Rack Model (with speaker)	Net \$269.00
NFM-83 Narrow Band FM Adapter	Net \$ 16.95
TB-5 Tilt Base	Net \$ 3.95
NC-183TS (Table) or NC-183RS (Rack) Speakers	Net \$ 14.00

NC-183

16 tubes (including rectifier and regulator).

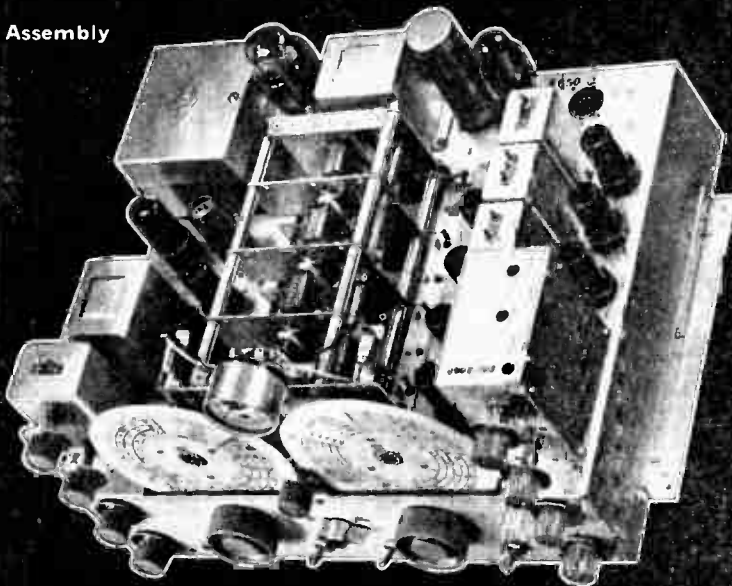
Full 8 watts push-pull audio output.

Adjustable threshold ANL — effective on both phone and CW.



Tilt Base for NC-183

Chassis Assembly



Net



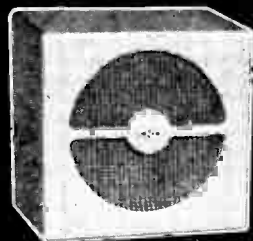
Copyright by U. C. P., Inc.

J-7

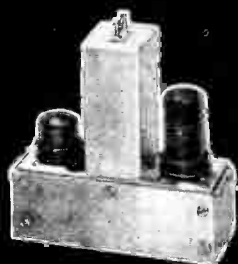
NC-173

Frequency Range 540 kc. to 31 mc. plus 48 to 56 mc. — calibrated electrical bandspread for 6, 10-11, 20, 40 and 80 meter amateur bands.

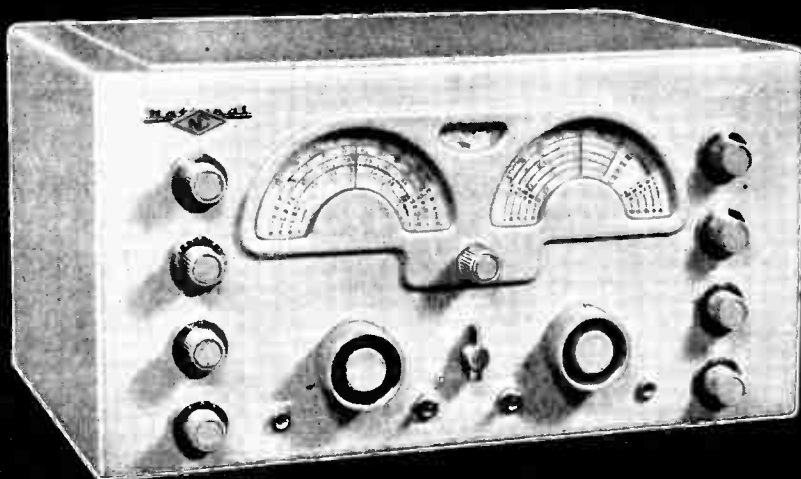
Instant selection of AM or NFM from front panel when using the NFM-73 Adapter.



PM Speaker



NFM-73 Adapter



The National NC-173 is the best all-around receiver in the moderate price field. It is engineered for the host of applications for which one stage of high gain r.f. amplification and 3.5 watts of audio output power are adequate. The Amateur will find this receiver chock-full of features to widen his scope of activity. The NC-173 has proved itself thoroughly dependable in a great many applications. Short wave listeners can now enjoy true world wide reception; all users can be proud of owning a mighty attractive piece of equipment, an excellent example of modern product design.

The frequency range of the NC-173 is exceptional in that it includes the conventional 540 kc. to 31 Mc. range plus the 48 to 56 Mc. portion of the spectrum which covers the Amateur six meter band. The tuning system employs separate directly-calibrated dial scales with associated control knobs for General Coverage and Bandspread tuning. Both dials are well-illuminated and have auxiliary linear scales for logging purposes. Calibrated bandspread tuning is provided for the main Amateur bands, i.e., 6, 10-11, 20, 40 and 80 meters. Band changing is accomplished by means of a highly efficient band-switch system.

Essentially, the circuit consists of one stage of radio frequency amplification, a first detector and a separate stabilized high frequency oscillator, two intermediate frequency amplifier stages, a diode type second detector, an audio limiter, a high gain type audio stage and an audio output stage plus a separate AVC amplifier, a stabilized beat frequency oscillator plus voltage regulator and rectifier stages. A crystal filter is connected between the first detector and first i.f. stage. Highlighted

in the above line-up are:

CRYSTAL FILTER: A new highly flexible crystal filter provides an adjustable selectivity characteristic with a wide range from broad-band broadcast requirements to sharp Amateur single-signal CW reception.

NOISE LIMITER: A new concept in noise limiter design is introduced in the NC-173 Receiver. This new limiter could be termed "double action plus" and the noise limiting action is equally effective on either phone or CW reception. A panel-mounted threshold control permits adjustment of the level at which limiting action starts.

VOLTAGE REGULATOR: A voltage regulator tube efficiently minimizes frequency drift in the high frequency oscillator and also in the beat frequency oscillator. This voltage control, plus temperature compensation, assures frequency stability for both phone and CW reception.

NARROW BAND FM ADAPTER: The NFM-73 Adapter shown below utilizes the same circuit as the NFM-83 described on page 6. This matching unit plugs into the accessory socket at the rear of the receiver.

CONTROLS: Main Tuning; Bandspread Tuning; Bandswitch; RF Gain — AC ON/OFF; AF Gain; Send-Receive; AVC-MVC; Tone; CWO; CWO Switch; Limiter; Phasing; Selectivity; RF Trimmer.

Additional refinements include an S-Meter with adjustable sensitivity, a continuously variable tone control and a phono input jack for connection to external apparatus such as a turntable pickup and the NFM-73 narrow band FM Adapter

Net



SPECIFICATIONS OF NC-173

The AVC system, crystal filter network, noise limiter and tuning system are identical to those used so satisfactorily in the NC-183 (see pages 6 and 7). The panel of the NC-173 contains an illuminated S-meter calibrated in S units from 1 to 9 at approximately 5 db. per unit and above S9 from 0 to 40 db. There is also a pick-up jack on the panel which feeds into the high gain 6SJ7 1st audio stage; audio gain and tone controls are operative with this connection through the audio system which is essentially flat from 75 to 6000 c.p.s. Power output is about 3.5 watts with terminals for 8 and 500 ohm impedance loads on the rear apron. Inverse feedback is used to reduce audio hum to an exceptionally low level. The antenna input circuit of the NC-173 is arranged for single wire, balance feed or low impedance concentric line; average input impedance being roughly 500 ohms. The panel TRIMMER control readily compensates a wide range of antenna loading. The panel also contains a full complement of operating controls.

SELECTIVITY: The selectivity switch and characteristics of the NC-173 are identical to the NC-183 (see page 7 for complete details).

SENSITIVITY: 2.0 microvolts or better for a 6 db. signal/noise ratio throughout the frequency range.

IMAGE REJECTION: Signal/image 25 db. or better at 30 megacycles.

TUBE COMPLEMENT: 3-6SG7 r.f. Amplifier, 1st and 2nd i.f. Amplifiers; 6SA7 1st Detector; 6J5 h.f. Oscillator; 2 — 6H6 2nd Detector — A.V.C. and Noise Limiter; 6AC7 A.V.C. Amplifier; 2 — 6SJ7 B.F.O. and 1st Audio; 6V6GT/G Audio Output; OD3/VR150 Voltage Regulator and 5Y3GT/G Rectifier.

POWER INPUT: Approx. 80 watts at 115 v., 50/60 cycles, 1 phase a.c. (easily adaptable to 220/240 volt service as well as emergency operation from batteries).

PHYSICAL DATA: Table Model, 19 $\frac{3}{4}$ " x 10 $\frac{1}{8}$ " x 12 $\frac{1}{2}$ ", 46 lbs., Gray Enamel Finish.
Rack Model, 10 $\frac{1}{2}$ " panel height, 46 lbs., depth behind panel 14 $\frac{3}{4}$ " overall, Black Wrinkle Finish.

PRICES:

NC-173T Table Model (with speaker)	Net \$189.50
NC-173R Rack Model (with speaker)	Net \$189.50
NFM-73 Narrow Band FM Adapter	Net \$ 17.95
TB-3 Tilt Base (see illustration on page 3)	Net \$ 3.95
NC-173TS (Table) or NC-173RS (Rack) Speaker	Net \$ 10.00

NC-173

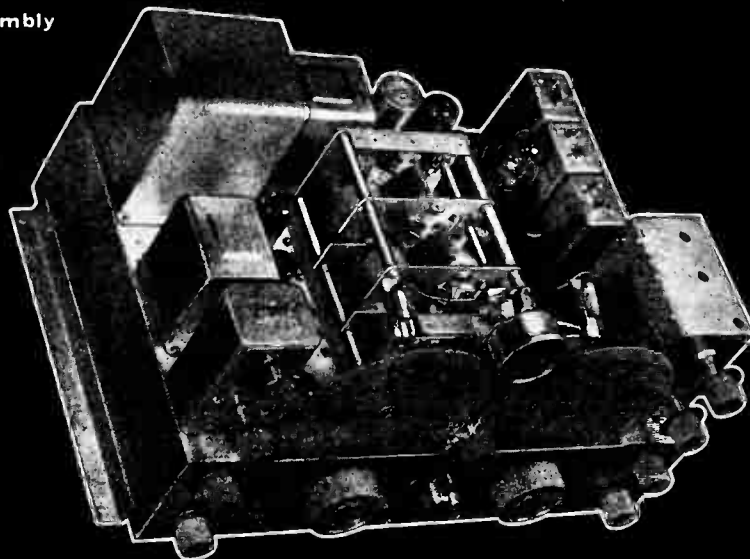
13 tubes (including rectifier and regulator).

S-meter for both phone and CW.

Regulated voltage used on HF oscillator and BFO.

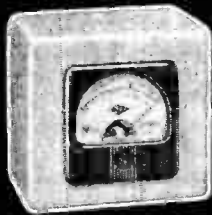
Antenna trimmer on front of panel.

Chassis Assembly

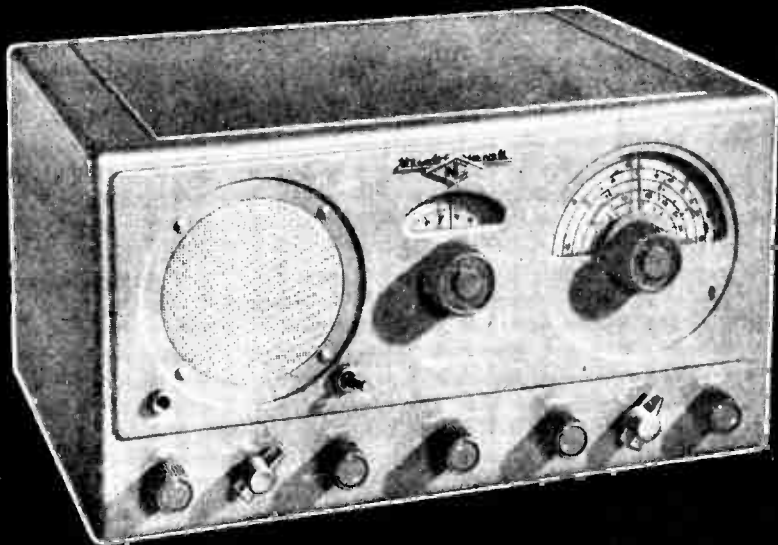


Net





SM-57 Signal Strength Meter.



The NC-57 is a compact superheterodyne receiver with self-contained speaker and power supply. This recent addition to the National line sets a new high for performance-per-dollar in the moderate price field. The frequency range is continuous from 540 kc. to 55 Mc. with bandspread tuning available throughout the entire range, a feature which is indispensable in the crowded high frequency bands. Front panel controls are held to a minimum consistent with ease of operation and full utilization of the circuit features of the NC-57.

Details of the NC-57 found only in larger and more expensive communications receivers:

1. Ample power output for the average room (3 watts into a 5" P.M. type speaker) with three position control for tone adjustment.
2. A separate RF GAIN control for adjustment of receiver sensitivity.
3. PITCH control to adjust beat note on CW (code) signals.
4. Voltage stabilized oscillator circuit which makes it possible to hold a short wave signal without regard to line voltage changes.
5. Automatic threshold noise limiter to minimize interference due to ignition noise, lighting, static, etc.
6. Band switching made easy by means of simple 5 position switch.
7. Receiver includes all necessary wiring to the accessory socket for plugging in the SM-57 Signal Strength Meter.
8. R.F. TRIMMER control on front panel provides means of matching receiver to various types of antennas for most efficient operation.

TUNING SYSTEM: The frequency range .54 to 55.0 Mc. is covered in five bands: A Band 35.0 — 55.0 Mc., B Band 13.5 — 35.0 Mc., C Band 4.65 — 13.5 Mc., D Band 1.6 — 4.65 Mc., and E Band 0.54 — 1.6 Mc. (standard A.M. broadcast band).

The main dial has five scales calibrated directly in megacycles. Amateur, Police and Foreign Broadcast Bands are identified by let-

ters A.M., P. and F., respectively. The amateur bands covered by the NC-57 are listed below with their respective receiver band locations and are spread on the 360°, 0-100 bandspread dial by means of the band-spread capacitor approximately as follows:

Amateur Band	Frequency	Divisions
A	6	50.0 — 54.0 Mc.
B	10, 11	27.16 — 29.7 Mc.
	15	21.0 — 21.5 Mc.
	20	14.0 — 14.4 Mc.
C	40	7.0 — 7.3 Mc.
	D	80	3.5 — 4.0 Mc.

TUBE COMPLEMENT: 3 — 6SG7 r.f. Amplifier, 1st and 2nd i.f. Amplifiers; 6SB7-Y Converter; 6H6 2nd Det. — a.v.c. — a.n.l.; 6SN7GT/G 1st Audio — C.W.O.; 6V6GT/G Audio Output; OD3 Voltage regulator and 5Y3GT/G Rectifier.

ACCESSORY CONNECTOR SOCKET: An octal type socket is mounted at the rear of the NC-57 to permit convenient connection of external accessories. The following connections are available at this socket: B+ 250 v. unregulated, B+ 150 v. regulated, 6.3 v. a.c., audio input and ground.

POWER REQUIREMENTS: Approximately 70 watts, 105/130 v., 50/60 cycles a.c. The NC-57 is adapted for battery operation by means of a socket on rear apron, and from 6 volt storage battery when used with National 686S vibrator power supply.

The NC-57 measures 16 9/16" x 8 3/4" x 10 1/2" deep and weighs 25 lbs. (31 lbs. packed for shipment). The finish is an attractive and durable light gray enamel.

The SM-57 Signal Strength Meter has been designed as an accessory to be used in conjunction with the NC-57 in amateur stations or as a tuning indicator for short wave listeners.

NC-57 ReceiverNet \$89.50
 SM-57 Tuning MeterNet \$14.95
 TB-2 Tilt Base (see illustration on page 3)Net \$ 3.95

Frequency range continuous from 550 kc. to 55 mc. — Bandspread at any point within this coverage.

For Amateurs — For SWLs — a neat 7 tube superheterodyne with BFO and ANL.

NC-57

Net





The NC-33 is a reel communications receiver covering all frequencies from 500 kc. to 35 Mc. It comes complete with speaker and AC/DC power supply in an attractive light-weight metal cabinet — carefully produced from components of good quality. It is simple to install and a pleasure to operate. This economical superheterodyne will serve well and reliably. The NC-33 is the perfect choice for your living room, playroom or den.

Here are some of the features of the NC-33 — details common to the larger communications receivers:

1. Choice of two audio output circuits, the efficient 5" PM speaker mounted behind the metal grille at the left of the panel and the PHONES jack. The latter is wired to silence the speaker when the plug is inserted, thus enabling the listener to enjoy reception without disturbing others in the same room.
2. Automatic noise limiter which can be switched in from the front panel to minimize objectionable interference originating from auto ignition systems, household appliances, static and the like.
3. Bandswitching from panel by means of a positive four-position lever-type switch knob.
4. Send/Receive switch — removes plate voltage when in SEND position thus silencing the receiver without allowing the tube heaters to cool.
5. CW oscillator built in for reception of code signals with PITCH control for adjustment of the beat note.
6. Ample selectivity for separating stations.
7. Calibrated electrical bandspread on all bands thus affording bandspread operation at any point within the frequency range of the receiver (see following paragraphs).

TUNING SYSTEM: The tuning range of the NC-33 is continuous from 500 kc. to 35 Mc. and is covered in four bands as follows:

Band	Frequency Coverage
A	12.0 — 35.0 Mc.
B	4.0 — 12.0 Mc.
C	1.42 — 4.2 Mc.
D	0.5 — 1.42 Mc.

The main dial has its four scales calibrated directly in megacycles with amateur, police and foreign broadcast bands clearly identified. Main tuning and bandspread tuning capacitors are connected in parallel on all bands. By this means, the 360°, 0-100 bandspread dial can be used to tune any portion of the frequency spectrum to which the main dial is set and stations can be separated and logged quite readily.

TUBE COMPLEMENT: A stage outline of the circuit employed in the Receiver is given below, together with the tube type associated with each stage.

Converter	12SA7
I.F. Amplifier (455 kc.)	12SG7
Second Det. A.V.C.-A.N.L.	12H6
First Audio-C.W.O.	12SL7GT/G
Audio Output	35L6GT/G
Rectifier	35Z5GT/G

POWER REQUIREMENTS: Approximately 24 watts, 105/130 v., 50/60 cycles a.c. or 105/130 volts d.c.

The NC-33 measures 16 9/16" x 8 3/4" x 8 1/2" and weighs 17 lbs. (23 lbs. packed for shipment). The finish is durable gunmetal gray enamel.

PRICES:

NC-33 Receiver	Net \$65.95
TB-1 Tilt Base (see illustration on page 3)	Net \$ 3.95

Net

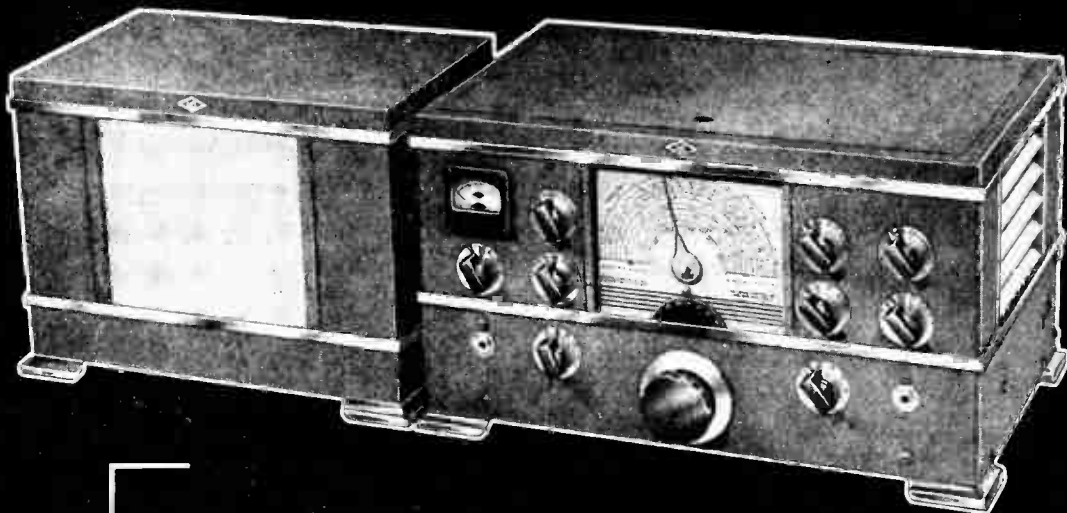
Operates from 110-120 volts AC or DC.

Frequency range continuous from 500 kc. to 35 mc. Bandspread on all bands — BC, amateur, police and foreign are plainly marked.

A compact five tube superhet with built-in 5" PM Speaker — in trim metal cabinet.

NC-33





The NC-2-40D is a professional communications receiver in every sense. Sturdy and dependable, it uses a cast aluminum coil set carriage for all tuned stages and a positive drive mechanism. All coils are on polystyrene forms with air trimmers used throughout. It is truly stable and selective.

NC-2-40D

Designed for the radio amateur, the NC-2-40D receiver is also suitable for general communications service in the 490 to 30,000 kc. range. Calibrated electrical bandspread tuning is provided for the 80, 40, 20, 11-10 meter Amateur bands. Features included are a full vision, easy to read, calibrated dial with 6 general coverage and 4 bandspread scales, a single tuning and band switching control knob, a stable high frequency oscillator circuit, a flexible crystal filter, a series valve noise limiter and an auxiliary numerical logging dial. These outstanding features plus conventional items such as a signal strength meter, phonojack or high level microphone pick-up jack, an automatic volume control circuit, a beat frequency oscillator for CW reception, a tone control, a phono jack, and a 115-230 volt a.c. change-over switch provide the operator with a means for coping with a wide variety of receiving conditions and requirements.

CONTROLS: Band Tuning and Band Switching; RF Gain Control; and Signal Strength Meter Switch; Audio Gain; B+ ON/OFF; Selectivity; Limiter; Tone; CW Oscillator; Phasing.

TUBE COMPLEMENT: 6SK7 r.f. Amplifier; 6K8 1st Det.; 6J5 h.f. Oscillator; 6SK7 and 6K7 i.f. Amplifiers; 6SN7 C.W. Osc.; 3-6V6, AVC and push-pull Audio Output; 5Y3G Rectifier.

FREQUENCY RANGE:

General Coverage:
490 kc. — 30 Mc.
Band Spread:
27 — 30 Mc.
14 — 14.4 Mc.
7 — 7.3 Mc.
3.5 — 4 Mc.

SENSITIVITY: Less than 1 microvolt input produces a 6 db. signal/noise ratio.

SELECTIVITY:

Crystal Filter OFF
Voltage Ratio Nominal Bandwidth
6 db. 4.0 kc.
60 db. 22.0 kc.
Crystal Filter In — 20 db. Voltage Ratio
Position 1. 6.0 kc.
2. 4.0 kc.
3. 2.0 kc.
4. 1.0 kc.
5. Max. Selectivity. 200 cycles.

AVC CHARACTERISTIC: Constant within \pm 3 db. from 10. to 100,000 microvolts input.

IMAGE REJECTION:

Above 50 db. up to 10 Mc.
Above 40 db. up to 15 Mc.
Above 30 db. up to 30 Mc.

AUDIO FIDELITY: The frequency response of the audio system is flat within \pm 2 db. from 50 cycles to 10,000 cycles.

POWER INPUT: Approximately 70 watts; either 110-120 or 220-240 volts 50/60 cycle, Phase a.c. A plug and socket is provided for convenient external connection for battery operation.

POWER OUTPUT: A 10,000 ohm output circuit delivers 8 watts with negligible distortion.

PHYSICAL DATA:

Table Model:
NC-2-40DT: 19 $\frac{1}{4}$ " x 10 $\frac{5}{8}$ " x 15 $\frac{1}{2}$ "; Weight — 60 Lbs., Finish — Gray Wrinkle; Enclosure — Cabinet.

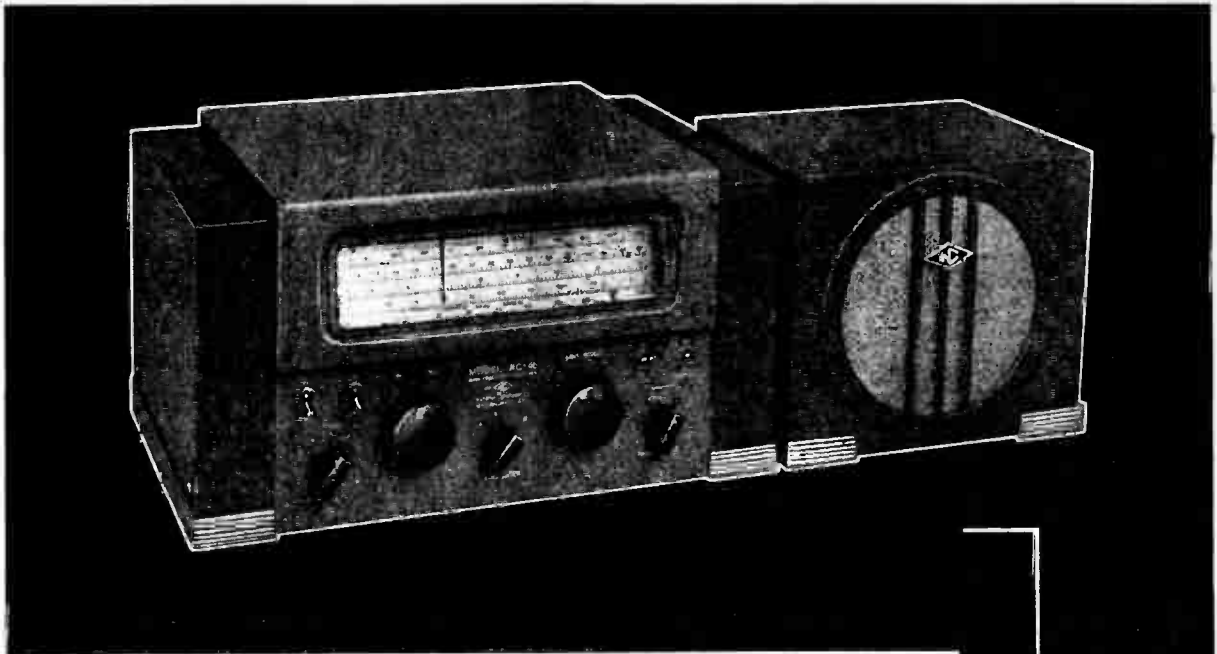
Rack Model:
NC-2-40DR: 19" x 10 $\frac{1}{2}$ " x 17 $\frac{1}{2}$ "; Weight — 65 Lbs.; depth behind panel 14 $\frac{7}{8}$ " overall; Finish — Gray Wrinkle; Enclosure — Dust Cover.

PRICES:

Rack or Table Model (with tubes) Net \$225.00
NC-2RS (Rack) or NC-2TS (Table) Speaker Net \$16.44

Net





The NC-46 is a reliable radio receiver covering all frequencies from 540 to 30,000 kc., especially suitable for use in D.C. districts and on ships where 115 volts is available. This is an excellent quality AC-DC set employing 9 tubes plus rectifier. Electrical bandspread is provided for vernier tuning. The circuit consists of a 6K8 converter-oscillator stage, two 6SG7 IF stages, 6H6 detector limiter stage, 6SF7 AVC amplifier, 6SJ7 CW Oscillator, 6SC7 Audio-Inverter, push-pull audio output stage with two 25L6GT tubes, and a 25Z5 Rectifier.

CONTROLS:

Main Tuning Dial; Bandspread Tuning Dial; Sensitivity Control; Volume Control; Tone Switch; C.W. Oscillator Switch; AVC Switch; Limiter Switch; Band Selector Switch; B+ Switch and Power Switch.

TERMINALS:

On Rear Panel; Phone Jack; B+ Terminals; 8 Ohm Spkr. Terminals; Ant. Terminal; Fuse extractor post.

FREQUENCY RANGE:

The Frequency Range of the NC-46 Receiver is 540. Kc. to 30. Mc. covered in four bands.

Band	General Coverage	Band Spread
A	11.5 -30.0 Mc.	3.5- 4.0 Mc; 70 dial div.
B	4.4 -12.0 Mc.	7.0- 7.3 Mc; 50 dial div.
C	1.55 - 4.6 Mc.	14.0-14.4 Mc; 55 dial div.
D	0.540- 1.6 Mc.	27.0-30.0 Mc; 60 dial div.

SENSITIVITY:

Approximately 5 microvolts input provides a 50 Milliwatt output over the entire range.

SELECTIVITY:

The total bandwidth is approximately 4.5 Kc. at 6 db. down and approximately 70 db. attenuation 10 Kc. off resonance is obtained.

POWER INPUT:

Operation from 110/130 volts A.C. or D.C. Normal power consumption 65 watts.

POWER OUTPUT:

Approximately 4 watts undistorted.

PHYSICAL DATA:

NC-46 Receiver: 9 7/16" high by 17 3/8" wide by 12 1/8" deep, Weight 32 lbs., Gray Wrinkle Finish.

NC-46TS 6" PM Speaker: 8 7/8" high x 10-7/16" wide x 7 1/2" deep, Weight 8 lbs., finish matches receiver.

PRICES:

NC-46 Table Model Complete with Tubes Net \$97.50
 NC-46TS Table Model SpeakerNet \$ 9.90

ANTENNA SUGGESTIONS: When contemplating the purchase of a communications receiver such as the NC-46 it is well to keep in mind that a suitable antenna can help considerably in getting the most out of the reception of foreign stations. In general, the most practical antenna for use where the receiver is to be used over its entire frequency range is a single wire from 50 to 75 feet in length. If reception on one frequency or a narrow band of frequencies is contemplated, best results will be obtained by the use of a folded doublet or half-wave dipole type designed for the operating frequency.

The NC-46 is a reliable radio receiver which will operate on either AC or DC. Its wide frequency range, 540 kc. to 30 mc., and full 4 watts of audio output from nine tubes makes this an exceptional general purpose receiver and a favorite on ship-board.

NC-46





Power Pack



HFS Frequency Range - 27-250 Mc.

A worthy successor to the famous National 1-10, the new model HFS Receiver/Converter is a unique and extremely versatile instrument. The unusual frequency range of 27 to 250 megacycles, selectivity characteristics particularly suited to the constantly increasing occupancy of these frequencies, and high usable sensitivity are but a few of the features which make model HFS the logical choice for amateurs, laboratories, news services, public utility and airline personnel, or any application requiring compact, dependable VHF receiving equipment.

The circuit of this new receiver/converter is basically superheterodyne-superregenerative with its i.f./converter output channel at 10.7 megacycles. Thus, it is equally adaptable for use as a complete VHF receiver for AM, FM (by slope detection) and CW signals or as a converter in conjunction with any conventional superhet receiver capable of tuning 10.7 mc. When used in the latter manner, the result is dual conversion type operation with excellent image rejection at all frequencies from 27-250 megacycles; all features of the receiver to which the HFS is connected become operative for VHF reception. The HFS will also serve as the front end of a high fidelity FM broadcast

(wide-band) installation simply by connecting the converter output to a 10.7 mc. FM i.f. channel and suitable amplifier-speaker system.

For maximum stability and flexibility, power for the HFS is furnished by a separate unit and where a 115/230 volt 50/60 cycle source is available, the National 5886 Power Supply is employed. The HFS may also be powered by the National 686S Vibrator Power Supply and a storage battery or a combination of "B" batteries and storage battery. The 686S operates from 6 volts D.C. and provides all voltages required.

A storage rack for the complete complement of coils is provided inside the receiver cabinet.

The HFS can be used for AM, FM and CW reception. It can also be used as a VHF converter with receivers tuning to 10.7 Mc. The HFS is a quality VHF receiver for fixed-station AC use — or from a 6 volt battery in portable or mobile service.

HFS

SPECIFICATIONS OF THE MODEL HFS

TUNING SYSTEM:

A two-gang main TUNING capacitor, a panel-controlled TRIMMER capacitor and six sets of plug-in coils are used to tune the Receiver in six bands as follows:

Band	Frequency Coverage
A	178 — 250 Mc.
B	120 — 178 Mc.
C	80 — 120 Mc.
D	56 — 80 Mc.
E	41 — 60 Mc.
F	27 — 42 Mc.

(See pages 31 and 33 for details of the type PW-O drive and HFS front end assembly.)

CONTROLS:

TUNING Dial, TRIMMER Control, REGEN Control, AUDIO GAIN Control, INT-EXT (external position connects the i.f. output to the output receptacle and disconnects the second

detector and audio stages) Switch, Converter-Output Control (on rear apron) and B+/OFF Switch.

TUBE COMPLEMENT:

6AK5 1st Det.; 9002 h.f. Osc.; 6SG7 i.f. Amp.; 6SK7 2nd Det.; 6J5 1st Audio; 6V6GT/G Audio Output and 6J5 Converter Output.

PHYSICAL DATA:

The HFS measures 16-9/16" x 8 3/4" x 8 1/2", weighs 19 lbs. (25 lbs. packed for shipment) and the finish is smooth gray enamel.

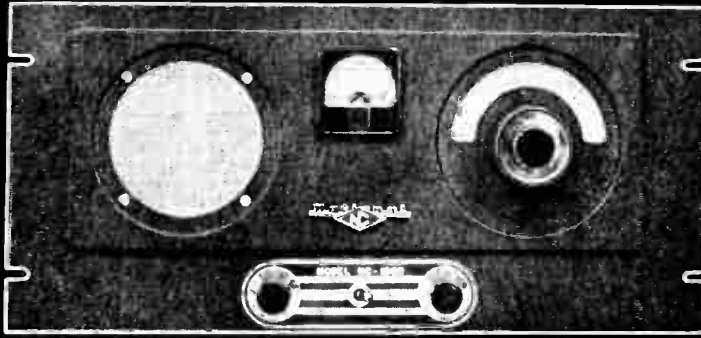
PRICES:

- Model HFS Receiver (including complete set of coils) Net \$125.00
- Type 5886 Power Supply 115/230 v. 50/60 cycle a.c. ... Net \$ 22.43
- Type 686S Vibrator Power Supply 6 v. d.c. Net \$ 34.16
- TB-1 Tilt Base (see page 3) Net \$ 3.95

Net



NC 108R



The new National NC 108 FM Receiver/Tuner is a nine-tube plus rectifier and tuning indicator (the rack model employs a tuning meter) superheterodyne with ratio type FM detector. The frequency range is 87-109 mc. and the dial is calibrated in both megacycles and channels. There is a built-in 5" PM speaker for monitoring and VOLUME and TONE controls are operative on both self-contained and external audio systems. The NC-108 is designed primarily to serve

as the nucleus of a high fidelity installation for the reception and reproduction of FM broadcast entertainment. It can be used in conjunction with any public address or other audio amplifier-loud speaker system or with any conventional broadcast or short wave receiver. The built-in speaker can be switched on or off from the front panel as desired. The NC-108 may also be used as an FM receiver complete in itself—the monitoring speaker affords thoroughly enjoyable listening.

SPECIFICATIONS OF NC-108

TUBE COMPLEMENT:

6BA6 r.f. Amplifier; 6AG5 Mixer; 6C4 Heterodyne Osc.; 3-6SG7 1st, 2nd and 3rd i.f. Amplifiers; 5H6 Ratio discriminator; 6SJ7 1st Audio; 6VEGT/G Monitor power amplifier; 6U5/6G5 Tuning indicator (on table model only) and 5Y3GT Rectifier.

SENSITIVITY:

With 22.5 kc. deviation, a 7 microvolt signal gives 8 volts of audio at output terminals with less than 2% distortion.

SELECTIVITY:

I.F. bandwidth 150 kc. at 3 db. down and 600 kc. at 60 db. down.

IMAGE REJECTION:

Approximately 40 db.

FIDELITY:

Overall response flat within ± 2 db. from 50

to 18,000 cycles. Standard RMA de-emphasis can be cut in or out as desired.

AUDIO OUTPUT:

Maximum audio voltage delivered to output terminals is approximately 10 volts. Input circuit of the following amplifier should be high impedance.

POWER REQUIREMENTS & PHYSICAL DATA:

Both the NC-108R and NC-108T operate from 110/125 V. 50/60 cycles A.C.

NC-108R panel height 8 $\frac{3}{4}$ ", 25 lbs. net (31 lbs. packed for shipment), depth behind panel 8 $\frac{3}{4}$ " overall, Black Wrinkle finish.

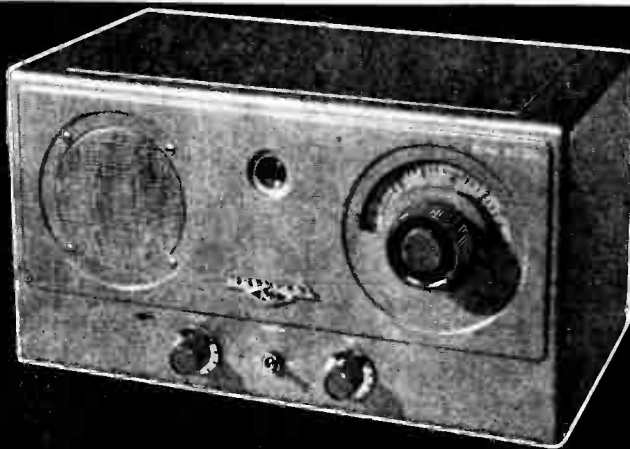
NC-108T 16-9/16" x 8 $\frac{3}{4}$ " x 8 $\frac{1}{2}$ ", 24 lbs. net (30 lbs. packed for shipment), smooth Gray Enamel finish.

NC-108R Rack ModelNet \$115.00

NC-108T Table ModelNet \$ 99.50

TB-1 Tat Base for the Table Model Net \$ 3.95

The NC-108 FM Receiver-Tuner is skillfully engineered and is a quality product in every detail: read the specifications. It is ideal for use with any high fidelity audio amplifier and has built-in speaker for monitoring.



NC 108T

Net



CONTROL KNOBS

HRT (gray or black) Net \$.75
 HRT Knobs — in light gray plastic with chrome appearance circle — also available in black. This new knob combines with the HRS series shown below to produce a modern panel layout. The HRT is 2 1/8" in dia. and fits 1/4" shafts.

R Net \$.60
 This small dial has a 1 5/8" dia. German silver scale calibrated 0-10 in 180° for increased reading with clockwise rotation. These little dials have been seen on National receivers in every corner of the world. Black bakelite knob. Fits 1/4" shaft.

HRS-1 Knob ON-OFF through 30° rotation Net \$.50

HRP-P Net \$.24

HRS-2 Knob 5-0-5 through 180° rotation Net \$.50

Black bakelite knob 1 1/4" long and 1/2" wide. Equipped with pointer. Especially suitable for use on wafers and other rotary switches on laboratory equipment and the like. (Fits 1/4" shaft).

HRS-3 Knob 0-10 through 300° rotation Net \$.50

HRP Net \$.18

The HRS series knobs are essentially military type with just the right feel for operational controls on electronic equipment. They are molded of high quality plastic and have 1 3/8" dia. chrome plated bevel skirts. HRS Knobs fit 1/4" dia. shafts, black or gray—specify when ordering.

The Type HRP knob has no pointer, but is otherwise the same as the knob above. Recommended for uncalibrated or hard-turning controls. Fits 1/4" shaft.

HR (gray or black) Net \$.30

HRK Net \$.57

An HRS type knob without the chrome plated skirt but with a white dot for spotting relative control settings.

Black bakelite knob 2 3/8" dia.—extremely rugged. This is the knob used on National type O and type L dials. Also useful as a replacement band changing knob for NC-100 series receivers. Fits 1/4" shaft.

HRB Net \$.45

HRT-M Net \$.50

Ideal for bandswitching or other applications where a switch is turned to several index positions, the new HRB lever knob has just the right feel — a bright zinc alloy die casting. This first appeared on the NC-173 Receiver.

This is a smaller version of the HRT and was designed originally for use on the NC-57 Receiver — now available in choice of gray or black — is 1-7/16" in diameter

ACCESSORIES

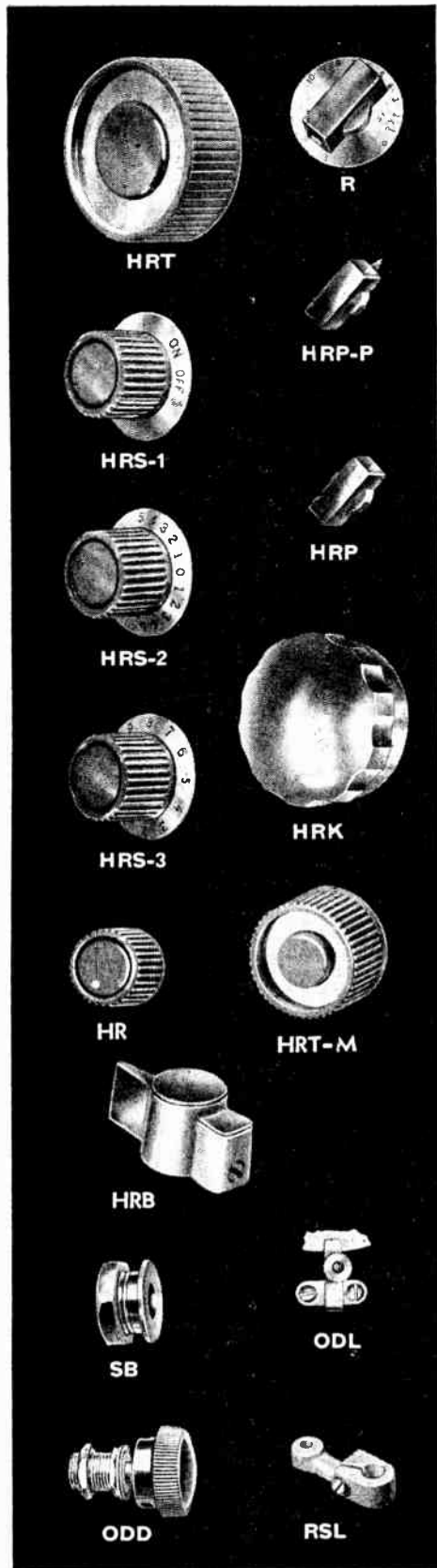
SB Net \$.18
 A nickel plated brass bushing 1/2" dia. (Fits 1/4" shaft).

RSL Net \$.57
 Rotor Shaft Lock for AMT, TMA, TMC and similar condensers. (Fits 1/4" shaft).

ODL Net \$.33
 A locking device which clamps the rim of O, K, L and M Dials. Brass, nickel plated.

ODD Net \$.42
 Vernier pinch drive for O, L, or other plain dials.

Net



N Dial Net \$4.50

AD Dial Net \$3.00

The four-inch N and AD Dials have engine divided and die stamped scales respectively. The N Dial has a decimal vernier; the AD Dial employs a pointer. The planetary drive has a ratio of 5 to 1, and is contained within the body of the dial. 2, 3, 4 or 5 scale. Fits 1/4" shaft. Specify scale.

B Dial Net \$2.70

"Velvet Vernier" Dial, Type B, has a compact variable ratio 6 to 1 min., 20 to 1 max. drive that is smooth and trouble free. The case is black bakelite. 1 or 5 scale. 4" dia. Fits 1/4" shaft. Specify scale.

BM Dial Net \$2.10

The BM Dial is a smaller version of the B for use where space is limited. The drive ratio is fixed. Although small in size, the BM Dial has the same smooth action as the larger units. 1 or 5 scale. 3" dia. Fits 1/4" shaft. Specify scale.

AM Dial Net \$2.25

The original "Velvet Vernier" mechanism in a metal skirted dial 3" in dia. ratio 5 to 1. It is available with 2, 3, 4, 5 or 6 scale and fits 1/4" shaft.

P Dial Net \$1.00

The new P dial is the same as the AM except direct drive.

Type O, 3 1/2" dia., scale 2, with HRK knob, fits 1/4" shafts. Net \$1.00

Type L, same as O except 5" dia., scale 2 only. Net \$1.95

Type K, same as O except less knob, complete with ODD vernier drive, scale 2 only. Net \$1.50

Type M, same as K except 5" dia., scale 2 only. Net \$2.25

The dials at the right are for individual calibration: all four employ the noted 5:1 drive ratio Velvet Vernier mechanism and are of excellent quality.

MCN Dial Net \$2.70

The MCN dial has been scaled down to lend itself ideally to mobile installations and small converters and tuners. It may also be mounted on the standard 3 1/2" rack panel where such mounting may be desirable. The dial provides three calibrating scales and a 0-100 logging scale. On the rear side of the dial, the mechanism extends 1/4" below the dial frame. 2 3/4" H. x 3 7/8" W.

SCN Dial Net \$3.00

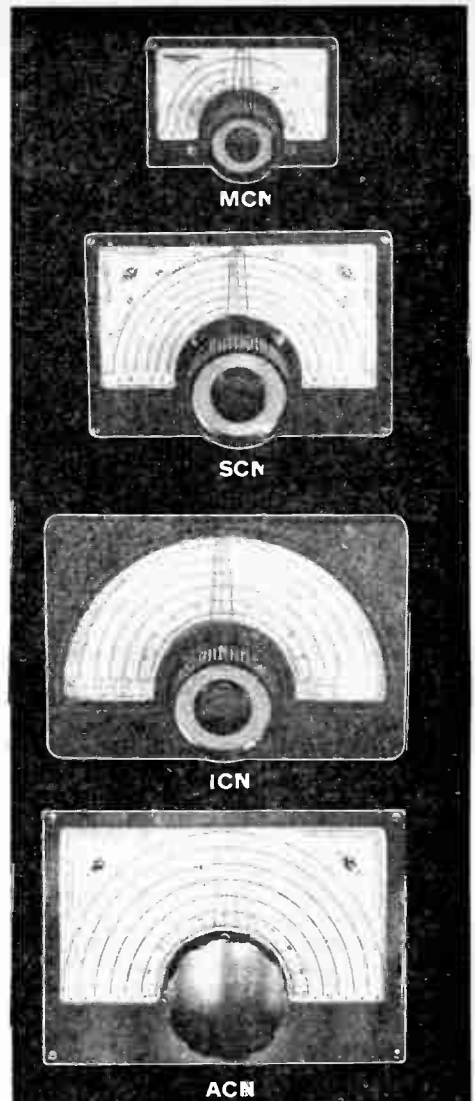
The SCN dial provides the same dial scales as the ACN dial but in a reduced size. It is used where economy of panel-mounting space is desirable and where a smaller dial would be out of proportion with the size of the panel. 4-7/16" H. x 6 1/4" W.

ICN Dial Net \$6.00

The ICN dial meets those hundreds of requests from amateurs the world over for an illuminated ACN dial. Two dial lights mounted on the top corners of the dial provide efficient and even illumination on all bands. The dial window has been blanked out in semi-circular shape to prevent shadow casting. Dial scales are the same as those used on the ACN dial. 5 1/8" H. x 7 1/4" W.

ACN Dial Net \$3.30

The ACN is the original of this type dial, a National design for the benefit of experimenters who "build their own" and desire direct calibration 5" H. x 7 1/4" W.



DIAL SCALES			
Scale	Divisions	Rotation	Direction of Condenser Rotation for increase of dial reading
1	0-100-0	180°	Either
2	0-100	180°	Counter Clockwise
3	100-0	180°	Clockwise
4	150-0	270°	Clockwise
5	200-0	360°	Clockwise
6	0-150	270°	Counter Clockwise

Net





R-100



R-100U



R-100S



R-100ST



R-33



R-50



R-50-1



R-33G



R-60

- R-100Net \$.35
- R-100UNet \$.42
- R-100SNet \$.42
- R-100STNet \$.40

These RF chokes are identical electrically, but differ in mounting provisions. The R-100 employs pigtail leads; the R-100U has pigtail leads and a removable stand-off insulator; the R-100S has cotter-pin lug terminals and a non-removable stand-off insulator; the R-100ST has a 6-32 threaded stud at each end. These chokes are available in 2.5, 5 and 10 millihenry sizes and are rated at 125 milliamperes.

R-33 Net \$.35
The R-33 series chokes are 2-section RF chokes available in 10, 50, 100 and 750 microhenry sizes. Also available in this series is a single layer solenoid choke of 1 microhenry inductance. All are rated at 33 milliamperes. The chokes are wound on a 5" long form and range in diameter up to 5/16" maximum.

R-50 Net \$.35
R-50-1 Net \$.53
The R-50 series chokes are 3 and 4-section RF chokes and available in 0.5, 1, 2.5, and 10 millihenry sizes. They are rated at 50 milliamperes. The chokes are wound on a 1" long form and have a maximum diameter of 15/32". The 10 millihenry R-50-1 choke is wound on an iron core.

R-33G Net \$3.60
The R-33G choke is a 2-section 750 microhenry RF choke hermetically sealed in glass with a current rating of 33 milliamperes. The choke body is 1" long by 5/8" diameter.

R-60 Net \$.35
The R-60 choke is a high current RF choke (500 milliamperes) available in 2 and 4 microhenry sizes. The choke is 1 1/8" long by 5/16" diameter.

- R-300Net \$.38
- R-300UNet \$.42
- R-300SNet \$.42
- R-300STNet \$.40

These RF chokes are similar in size to R-100 series but have higher current capacity. The R-300U is provided with a removable stand-off insulator at one end. The R-300S has a non-removable stand-off insulator and cotter-pin lug terminals. The R-300ST has a 6-32 threaded stud at each end. Inductance values of 0.5, 1.0, 2.5 and 5.0 millihenries are available with a current rating of 300 milliamperes. R-300, R-300U, R-300S and R-300ST are identical electrically.

R-152 Net \$1.75
For use in the range between 2 and 4 Mc. Ideal for high power transmitter stages operated in the 80 meter amateur band. Inductance 4 m.h., DC resistance 10 ohms, DC current 600 ma. Coils honeycomb wound on steatite core.

R-154 Net \$1.75
R-154U Net \$1.40
For the 20, 40 and 80 meter bands, Inductance 1 m.h., DC resistance 6 ohms, DC current 600 ma. Coils honeycomb wound on steatite core. The R-154U does not have the third mounting foot and the small insulator, but is otherwise the same as R-154. See illustration.

R-175 Net \$2.25
The R-175 Choke is suitable for parallel-feed as well as series-feed in transmitters with plate supply up to 3000 volts modulated or 4000 volts unmodulated. Unlike conventional chokes, the reactance of the R-175 is high throughout the 10 and 20 meter bands as well as the 40 and 80 meter bands. Inductance 225 μh, distributed capacity 0.6 mmf., DC resistance 6 ohms, DC current 800 ma., voltage breakdown to base 12,500 volts.



R-300



R-300U



R-300S



R-300ST



R-152



R-154



R-154U

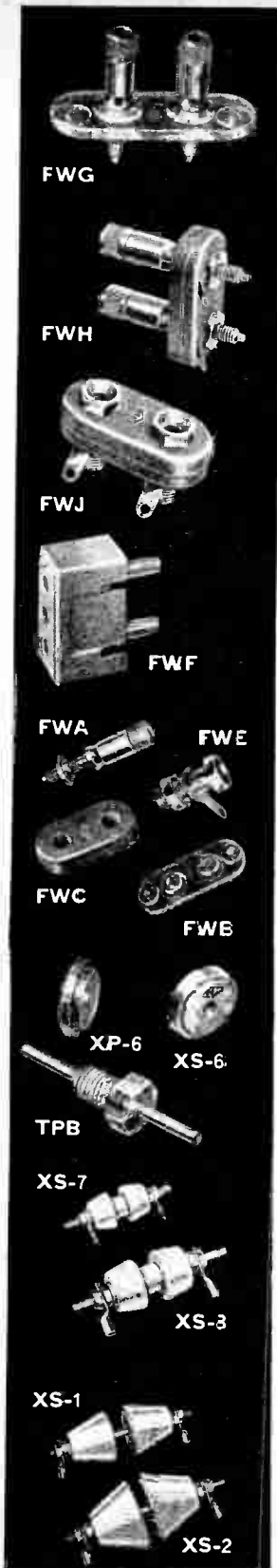


R-175

Manufacturers: We have facilities for quantity production of RF chokes of practically any type. Send us your specifications.

Net





FWG Net \$.60
A Victron terminal strip for high frequency use. The binding posts take banana plugs at the top, and grip wires through hole at the bottom, simultaneously, if desired.

FWH Net \$.66
The insulators of this terminal assembly are molded R-39 and have serrated bosses that allow the thinnest panel to be gripped firmly, and yet have ample shoulders. Binding posts same as FWG above.

FWJ Net \$.54
This assembly uses the same insulators as the FWH above, but has jacks. When used with the FWF plug (below), there is no exposed metal when the plug is in place.

FWF Net \$.70
This molded R-39 plug has two banana plugs on 3/4" centers and fits FWG, FWH or FWJ above. Leads may be brought out through the top or side.

FWA, Post Net, each \$.20
Brass Nickel Plated

FWE, Jack Net, each \$.15
Brass Nickel Plated

BWA (not illustrated) Net \$.10
Standard banana plug, silver plated to reduce contact resistance in r.f. circuits.

BWE (not illustrated) Net \$.15
Matching jack for BWA, silver plated.

FWC, Insulator Net, per pair \$.24
R-39 Insulation.

FWB, Insulator Net, each \$.15
Polystyrene insulation.

XS-6 Net, each \$.12
A low-loss steatite bushing for 1/2" holes. Passes 6-32 screw.

XP-6 Net, box of ten \$.51
Same as above but polystyrene.

TPB Net, per dozen \$.75
A threaded polystyrene bushing with removable .093 conductor moulded in, 1/4" diam., 32 thread.

XS-7, (3/8" Hole) Net \$.36
XS-8, (1/2" Hole) Net \$.48
Steatite bushings. Prices include male and female bushings with metal fittings.

XS-1, (1" Hole) Net \$.72
XS-2, (1 1/2" Hole) Net \$.81
Prices listed are per pair, including metal fittings. Insulation steatite.

AA-3 Net \$.36
A low-loss steatite spreader for 6 inch line spacing. (600 ohms impedance with No. 12 wire.)

AA-5 Net \$.30
A low-loss steatite aircraft-type strain insulator.

AA-6 Net \$.54
A general purpose strain insulator of low-loss steatite.

GS-1, 1/2" x 1 3/8" Net \$.24
GS-2, 1/2" x 2 7/8" Net \$.30
GS-3, 3/4" x 2 7/8" Net \$.60
GS-4, 3/4" x 4 7/8" Net \$.75
GS-4A, 3/4" x 6 7/8" Net \$ 1.05

Cylindrical low-loss steatite standoff insulators with nickel plated caps and bases.

GSJ, (not illustrated) Net \$.10
A special nickel plated jack top threaded to fit the 3/4" diameter insulators GS-3, GS-4 & GS-4A.

GS-10, 3/4" high Net, box of ten \$.90
GS-10S (not illustrated) but same as GS-10 except includes threaded stud in top end. Net, box of ten \$ 1.00

GS-5, 1 1/4" high Net \$.30
GS-6, 2" high Net \$.42
GS-7, 3" high Net \$.75

These cone type standoff insulators are of low loss steatite. They are molded with a tapped hole in each end for mounting as follows:

GS-5, 8-32 tap 7/16" deep;
GS-6 & GS-7, 10-24 tap 11/16" deep; **GS-10**, 6-32 tap 1/4" deep and **GS-10S** as noted above.

GS-8, with terminal Net \$.54
GS-9, with jack Net \$.75

These low-loss steatite stand-off insulators are also useful as lead-through bushings.

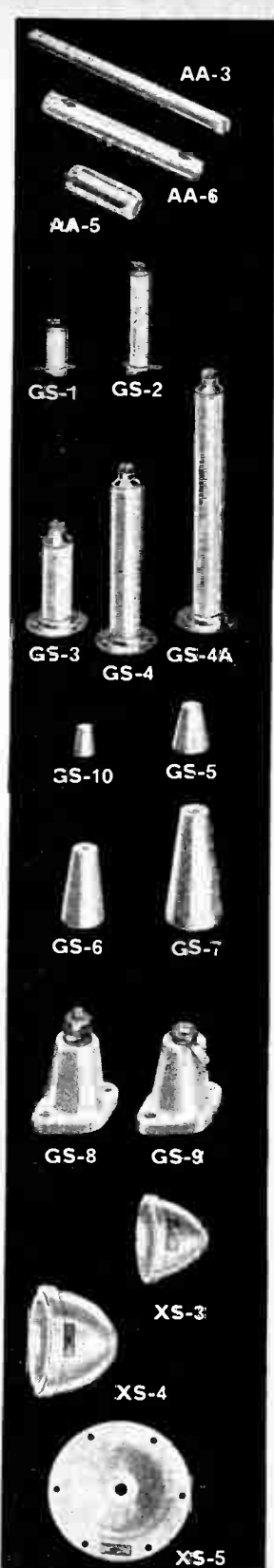
XS-3, (2 3/4" hole) Net \$ 3.60
XS-4, (3 3/4" hole) Net \$ 4.35

Prices are per pair and include nickel plated spindles, lugs and hardware. These low-loss steatite bowls are ideal for lead-in purposes at high voltages.

XS-5, Without Fittings Net, each \$ 4.95

XS-5F, With Fittings Net, per pair \$ 10.20

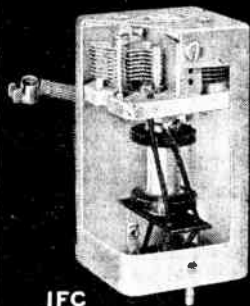
These big low-loss bowls have an extremely long leakage path and a 5/4" flange for bolting in place. Insulation steatite. Fittings include nickel plated brass spindles, lugs, nuts and washers.



Net



I. F. TRANSFORMERS



IFC
IFCO



IFL
IFM
IFN
IFO



OSR



XR-50



AR-5



AR-2

IFC, Transformer, Net \$4.25
IFCO, Oscillator, Net \$4.25
Litz coils wound on a polystyrene form and ceramic insulated air-dielectric trimming condensers make these transformers inherently stable and exceptionally retentive of tuning. The 4 1/2" x 2 3/8" x 2" shield can has two 6-32 spade bolts for mounting. Available for either 175 KC or 450-550 KC. Specify frequency.
IFL FM Discriminator

Net \$6.90

IFM IF Transformer Net \$6.45

IFN IF Transformer Net \$6.45

IFO FM Ratio Discriminator

Net \$6.98

IFL, IFM, IFN and IFO transformers operate at 10.7 Mc. and are designed for use in FM Superheterodyne receivers. Coils are precision wound on grooved polystyrene forms and tuning is accomplished by movable iron cores. Bandwidth is not affected by tuning slug position. The transformer cans are 1 3/8" square and stand 3 1/2" above the chassis. Two 6-32 spade bolts are provided for mounting. The IFL transformer is a 10.7 Mc. FM discriminator transformer suitable for use in conventional FM receiver discriminator circuit and is linear over a band of ±100 Kc. The IFM transformer is a 10.7 Mc. IF transformer with a 150 Kc. bandwidth at 1.5 db attenuation. Approximate stage gain of 30 is obtained with IFM Transformer and 6SG7 tube.

COILS AND COIL FORMS

AR-2 High Frequency Coil

Net \$1.13

AR-5 High Frequency Coil

Net \$.97

The AR-2 and AR-5 coils are high Q permeability tuned RF coils on low loss mica-filled bakelite forms. The AR-2 coil tunes from 75 Mc. to 220 Mc. with capacities from 100 to 10 mmfd. The AR-5 coil tunes from 37 Mc. to 110 Mc. with capacities from 100 to 10 mmfd. The inductive windings supplied may be replaced by other windings as desired to modify the tuning range.

XR-50 Net \$.60

These mica-filled bakelite coil forms may be wound as desired to provide a permeability tuned coil. The form winding length is 11/16" and the form winding diameter is 1/2 inch. The iron slug is 3/8" dia. by 1/2" long.

The IFN transformer is a 10.7 Mc. IF transformer with a 100 Kc. pass band at 1.5 db attenuation. Approximate stage gain of 30 is obtained with IFN Transformer and 6SG7 tube.

The IFO transformer is a 10.7 Mc. FM discriminator transformer of the ratio type and is linear over a band of ±100 Kc.

IFJ, with variable coupling Net \$8.25

IFK, with fixed coupling

Net \$7.25

15 Mc. IF transformers suitable for ultra high frequency superheterodynes. They are made in two models with and without variable coupling. Approximate stage gain of 10 is obtained with IFJ or IFK Transformer and 6AB7 tube.

SA-4842

Net \$4.50

A 456 kc. discriminator transformer for narrow band frequency modulation. This unit is the nucleus of the NFM adapter described by Harrington and Bartell in November 1947 QST. Two slug-tuned secondaries are employed and discrimination is accomplished by resonating one at approximately 10 kc. above, the other at approximately 10 kc. below the center frequency of the i.f. channel.

CD-1, 1/4 pint can Net \$.95
Liquid Polystyrene Cement — is ideal for windings as it will not spoil the properties of the best coil form.

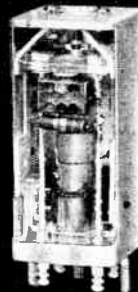
OSR

Net \$1.80

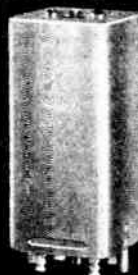
A shielded oscillator coil which tunes to 100 kc. with .00041 mfd. Two separate inductances, closely coupled. Excellent for interruption-frequency oscillator in super-regenerative receivers.

Symbol	Outside Diameter	Length	Net
PRC-1	3/8"	3/4"	.15
PRC-2	3/8"	1/2"	.15
PRC-3	3/8"	3/4"	.15
PRD-1	1/2"	1/2"	.15
PRD-2	1/2"	1"	.15
PRE-1	9/16"	3/4"	.18
PRE-2	9/16"	1"	.18
PRE-3	9/16"	2"	.24
PRF-1	3/4"	3/4"	.24
PRF-2	3/4"	1 1/4"	.30

These small coil forms are of molded polystyrene, open at one end and closed at the other except for a hole which permits mounting by a single 6-32 screw. A size for every application.



IFJ
IFK



SA-4842



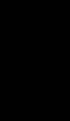
CD-1



PRC



PRD



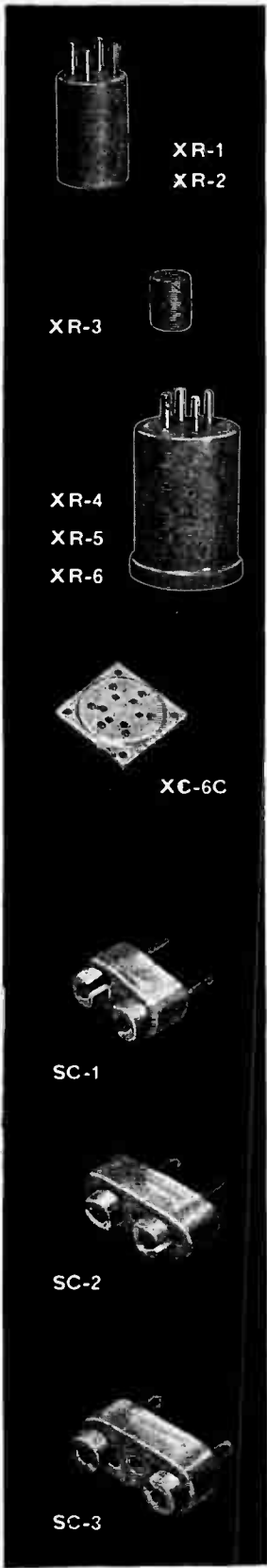
PRE



PRF

Net





XR-1
XR-2

XR-3

XR-4
XR-5
XR-6

XC-6C

SC-1

SC-2

SC-3

COIL FORMS

- XR-1, Four prong, Net \$.35
- XR-2, without prongs
Net \$.25

Molded of R-39 mica-filled bakelite, permitting them to be grooved and drilled. Coil form diameter 1", length 1 1/2".

- XR-3 Net \$.20

Molded of R-39. Diameter 9/16", length 3/4". Without prongs.

- XR-4, Four prong, Net \$.51
- XR-5, Five prong, Net \$.51
- XR-6, Six prong, Net \$.60

Molded of R-39, permitting them to be grooved and drilled. Coil form diameter 1 1/2", length 2 1/4". A special socket, XC-6C, is required for the six-prong form.

COIL SOCKET

- XC-6C Net \$.51

Special six-prong steatite socket for XR-6 Coil Form.

CRYSTAL SOCKETS

- SC-1 Net \$.32
- SC-2 Net \$.32
- SC-3 Net \$.32

The SC-1, SC-2 and SC-3 are crystal mounting sockets for crystal holders with mounting pins spaced 0.500", 0.486" and .750" respectively and pin diameters of 1/8", 3/32" and 1/8" respectively. Steatite Insulation. Single 4-36 or 4-40 screw mounting for SC-1 and SC-2; single 6-32 screw mounting for SC-3.

COIL SHIELDS

- RZ, coil shield Net \$.35
1 3/8" square x 4" high.
- RS, coil shield Net \$.35
1-7/16" x 1 7/8" x 3 1/2" high.
- RO, coil shield Net \$.35
2" x 2 3/8" x 4 1/8" high.

National coil shields are formed from a single piece of pure aluminum. They are mechanically strong and have ample thickness to mount small parts on the walls.

The RZ, RS and RO coil shields are supplied with two threaded studs extending downward from the open end for attaching to the chassis.

- T-78, tube shield complete
Net \$.27

National tube shield type T-78 is a three-piece pure aluminum shield suitable for shielding glass tubes with ST-12 bulb, such as the 6C6 and 6D6 tubes.

JACK SHIELD

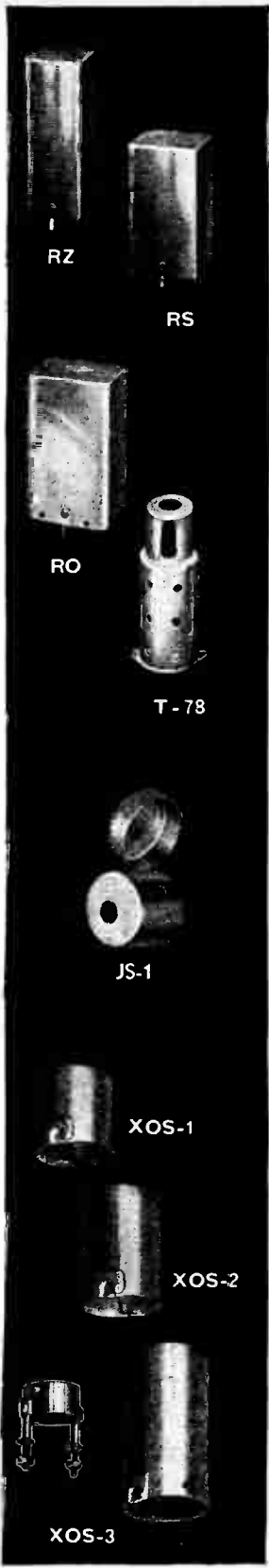
- JS-1, Net \$.30

For shielding small standard jacks mounted behind a panel, or on the ends of extension cords. Indispensable for reducing hum pickup.

TUBE SHIELDS

- XOS-1 For 1-3/16" high tube body, Net \$.48
- XOS-2 For 1 1/2" high tube body, Net \$.48
- XOS-3 For 2" high body, Net \$.48

The XOS tube shield is a two piece shield for the Miniature Button 7 Pin base tubes. The shield is available in three sizes corresponding to the 1-3/16", 1 1/2" and 2" tube body heights. The shield contains a spring which centers tube in shield and holds tube and shield firmly in place. The two 4-40 spade bolts serve to mount the XOA or XOR Socket and the XOS tube shield. See page 22 for listing of National miniature sockets.



RZ

RS

RO

T-78

JS-1

XOS-1

XOS-2

XOS-3

Net





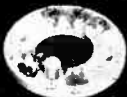
XL A



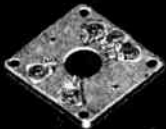
XL A-S



XL A-C



XC A



XC A



**XC A-7 (Axial)
XC A-C-7**



**XC A-7 (Radial)
XC A-C-7**



XC A-C-9

XL A Net \$**.99**
A low-loss socket for the 6F4 and 950 series acorn tubes for frequencies as high as 600 Mc. Conventional by-pass condensers may be compactly mounted between the contact terminals and the chassis. Low contact resistance, short and direct leads and low and constant inductance are features.

XL A-S Net \$**.36**
An internal shield fitting the XL A socket and suitable for tubes such as the 956.

XL A-C Net \$**.36**
This miniature by-pass condenser may be mounted inside the socket, directly below the contact. Capacities of 50 or 100 mmf. available.

XC A Net \$**.99**
A low-loss steatite socket for acorn triodes. Pin grips are designed to accept tube prongs with minimum strain but exert maximum pressure when seated.

XC A Net \$**1.32**
For pentode acorn tubes. This socket has built-in by-pass condensers. The base is a copper plate.

XO A-7 (mica-filled bakelite) Net \$**.50**

XO A-C-7 (ceramic) Net \$**.50**

XO R-7 (mica-filled bakelite) Net \$**.50**

XO R-C-7 (ceramic) Net \$**.50**
These high quality sockets for the 7 pin miniature tubes have silver plated beryllium copper contacts that correctly grip the tube pins close to the base of the tube to provide the short leads and low inductance so necessary in ultra-high frequency design.

A novel feature of these new sockets is the interchangeability of the contacts, which are easily removed for replacement. This permits the use of a mixture of axial (XO A) and radial (XO R) type contacts in the same socket to obtain the shortest possible leads, or minimum size in tight places. The above sockets all mount with two 4-40 screws on .875" centers. Chassis cutout should be 3/4" dia. Shields for use with these sockets are on page 21.

XO A-C-9 (ceramic) Net \$**.57**

XO R-C-9 (ceramic) Net \$**.57**
These sockets are for the new 9-pin miniature tubes. The XO R-C-9 (not illustrated) has radial contacts. Both have all of the features described above for the 7-pin types

and they also mount with 4-40 screws. Mounting center dimension is 1/8", the chassis cutout should be 13/16" dia.

CIR SERIES SOCKETS

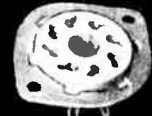
Any Type Net \$**.30**

Always a popular National component, type CIR Sockets feature low-loss steatite insulation, a contact that grips the tube prong for its entire length, and a metal ring for six position mounting.

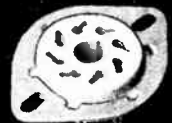
XC-4, 5, 6, 7S, 7L and CIR-4, 5, 6, 7S and 7L all have 1-27/32" mounting centers. CIR-8E has slotted holes in plate but will mount on 1-27/32" center. CIR-8 and XC-8 have 1/2" mounting centers.



CIR-5



CIR-8



CIR-8E



XC-5



XC-8



HX-29



XM-10



HX-100S

XC SERIES SOCKETS

XC-4 Net \$**.36**

XC-5 Net \$**.39**

XC-6 Net \$**.42**

XC-7S Net \$**.45**

XC-7L Net \$**.45**

XC-8 Net \$**.39**

National wafer sockets have exceptionally good contacts with high current capacity together with low loss steatite insulation. All types have a locating groove to make tube insertion easy. The XC-6 is ideal for use with AR-17 coils shown on page 24.

HX-29 Net \$**.81**

A low-loss wafer socket with steatite insulation for the popular 829 and 832 tubes.

JX-51 Net \$**.81**

A low loss steatite wafer socket for the 813 and other tubes having the Giant 7-pin base. (not illustrated)

XM-10 Net \$**.90**

A heavy duty metal shell socket for tubes having the XU 4-pin base.

XM-50 Net \$**1.20**
(see XM-10 for style)

A heavy duty metal shell socket for tubes having the Jumbo 4-pin base ("fifty watters").

HX-100S Net \$**1.65**

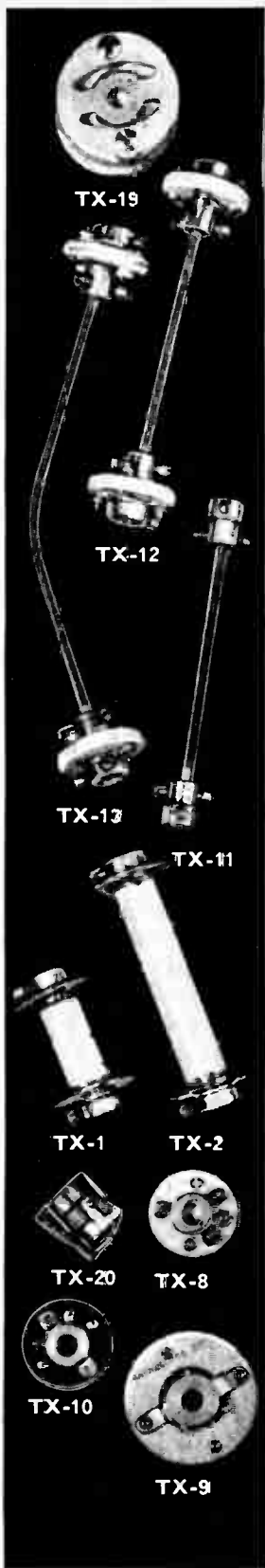
With Standoff Insulators
A low loss wafer socket suitable for the type 4-125-A, 4-250-A and other tubes using the Giant 5-pin base. Shield grounding clips are supplied which mount on the chassis with the socket mounting screws to ground the tube shield at three points. Air holes are provided in the socket to permit forced air cooling.

HX-100 Net \$**.99**

Same as above less standoff insulators.

Net





SHAFT COUPLINGS

TX-19 Net \$1.25

A steatite insulated flexible coupling for 1/4" shafts. Conservatively rated at 5000 volts peak. Diameter 1 3/8", length 1". Length and flashover voltage can be increased by turning collars outward.

TX-11 Net \$4.42

The flexible shaft of this coupling connects shafts at angles up to 90 degrees, and eliminates misalignment problems. Fits 1/4" shafts. Length 4 1/4".

TX-12, Length 4 5/8" Net \$.90

TX-13, Length 7 1/8" Net \$1.05

These couplings use flexible shafting like the TX-11 above, but are also provided with steatite insulators at each end.

TX-1, Leakage path 1" Net \$.65

TX-2, Leakage path 2 1/2" Net \$.75

Flexible couplings with glazed steatite insulation which fit 1/4" shafts.

TX-20 Net \$1.25

A small bakelite insulated flexible coupling of the "Hooke's joint" type. Accommodates up to five degrees angular misalignment as well as 1/64" offset of centers. For 1/4" shafts.

TX-8 Net \$.60

A non-flexible rigid coupling with steatite insulation. 1" diam. Fits 1/4" shaft.

TX-10 Net \$.40

A very compact insulated coupling free from backlash. Insulation is canvas bakelite. 1-1/16" diam. Fits 1/4" shaft.

TX-10F (Not illustrated) Net \$.45

A new version of the TX-10 which employs thin canvas bakelite strips for flexibility.

TX-22 (not illustrated) Net \$.40

A non-insulated coupling identical to TX-10 except of all metal construction. Makes good electrical connection between coupled shafts.

TX-9 Net \$.75

This small insulated flexible coupling provides high electrical efficiency when used to isolate circuits. Insulation is steatite. 1 3/8" diam. Fits 1/4" shaft.

TX-21 (not illustrated) Net \$.40

Similar to TX-10 except 13/16" long and couples 1/4" shaft to 5/32" shaft.

SAFETY GRID AND PLATE CAPS

SPP-9 Net \$.21

Ceramic insulation. Fits 9/16" diameter.

SPP-3 Net \$.21

Ceramic insulation. Fits 3/8" diameter.

National Safety Grid and Plate Caps have a ceramic body which offers protection against accidental contact with high voltage caps on tubes.

GRID AND PLATE GRIPS

Type 12, for 9/16" Caps Net \$.06

Type 24, for 3/8" Caps Net \$.03

Type 8, for 1/4" Caps Net \$.03

National Grid and Plate Grips provide a secure and positive contact with the tube cap and yet are released easily by a slight pressure on the ear.

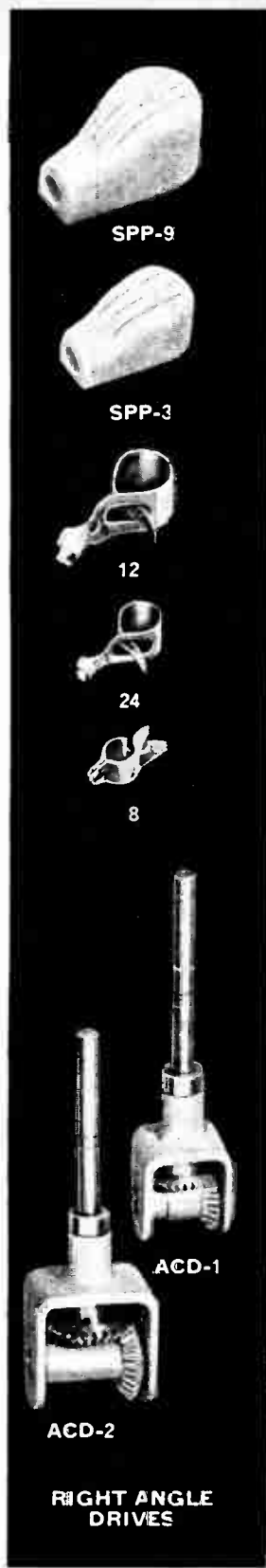
RIGHT ANGLE DRIVES

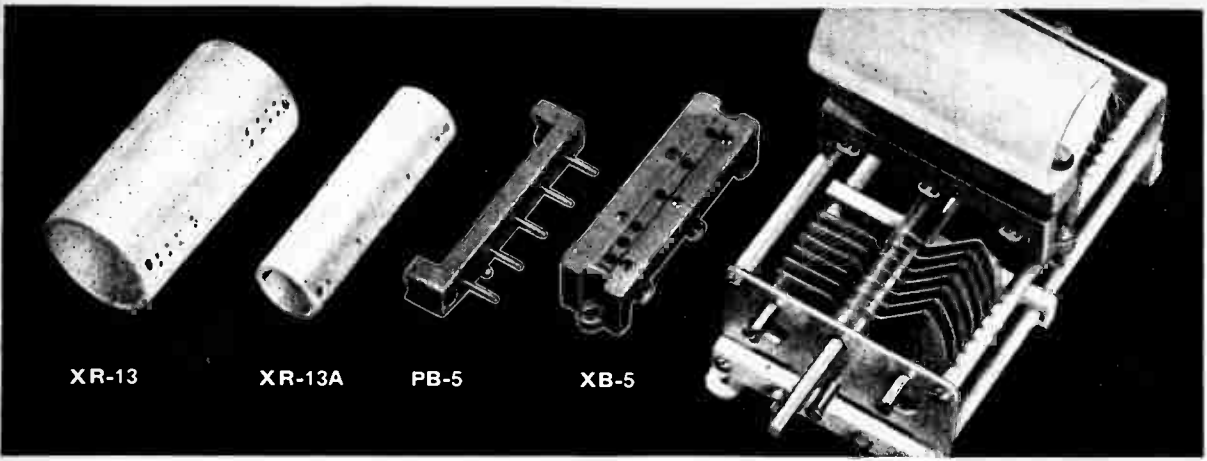
ACD-1Net \$3.75

ACD-2Net \$3.90

ACD-3Net \$3.90

These sturdy drives were developed for use with the new National AMT condensers (see page 26). They are as compact as the torque requirements will allow and have nickel plated cast frames and bronze gears which operate smoothly without chatter or binding. The ACD-1 has 32 pitch gears and a 1/4" dia. dial shaft and drives 1/4" shafts. ACD-2 has 24 pitch gears (for heavier service) and 1/4" dia. shaft driving 1/4" shafts. ACD-3 is the same as ACD-2 except that it drives 3/8" diameter shafts.





XR-13

XR-13A

PB-5

XB-5

BUFFER COIL FORMS

National Buffer Coil Forms are designed to mount directly on the tie bars of a TMC condenser using the PB-5 Plug and XB-5 Socket. Plug and Socket are of molded R-39.

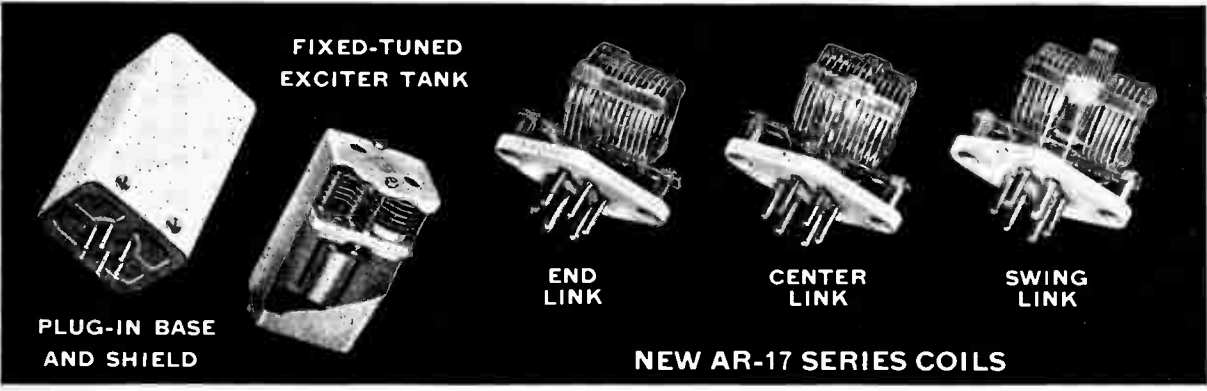
The two coil forms are of steatite, left unglazed to provide a tooth for coil dope. The larger form, Type XR-13, is 1 3/4" in diameter and has a winding length of 2 3/4". The smaller form, Type XR-13A, is 1" in diameter and provides a winding length of 2 1/4". Both forms have holes for mounting and for leads.

SINGLE UNITS

XR-13, Coil Form only	Net \$.75
XR-13A, Coil Form only	Net \$.60
PB-5, Plug only	Net \$.51
XB-5, Socket only	Net \$.51

ASSEMBLIES

UR-13A, Assembly (including small Coil Form, Plug and Socket)	Net \$ 1.65
UR-13, Assembly (including large Coil Form, Plug and Socket)	Net \$ 1.65



FIXED-TUNED EXCITER TANK

PLUG-IN BASE AND SHIELD

END LINK

CENTER LINK

SWING LINK

NEW AR-17 SERIES COILS

PLUG-IN BASE AND SHIELD

The low-loss R-39 base is ideal for mounting condensers and coils when it is desirable to have them shielded and easily removable. Shield can is 2" x 2 3/8" x 4/8".

PB-10-5, (5 Prong Base & Shield)	Net \$.75
PB-10-6, (6 Prong Base & Shield)	Net \$.75
PB-10A-5, (5 Prong Base only)	Net \$.51
PB-10A-6, (6 Prong Base only)	Net \$.51

FIXED TUNED EXCITER TANK

Similar in general construction to National I.F. transformers, this unit has two 25 mmf., 2000 volt air condensers and an unwound XR-2 coil form.

FXT, without plug-in base	Net \$ 3.45
FXTB-5, with 5 prong base	Net \$ 3.90
FXTB-6, with 6 prong base	Net \$ 3.90

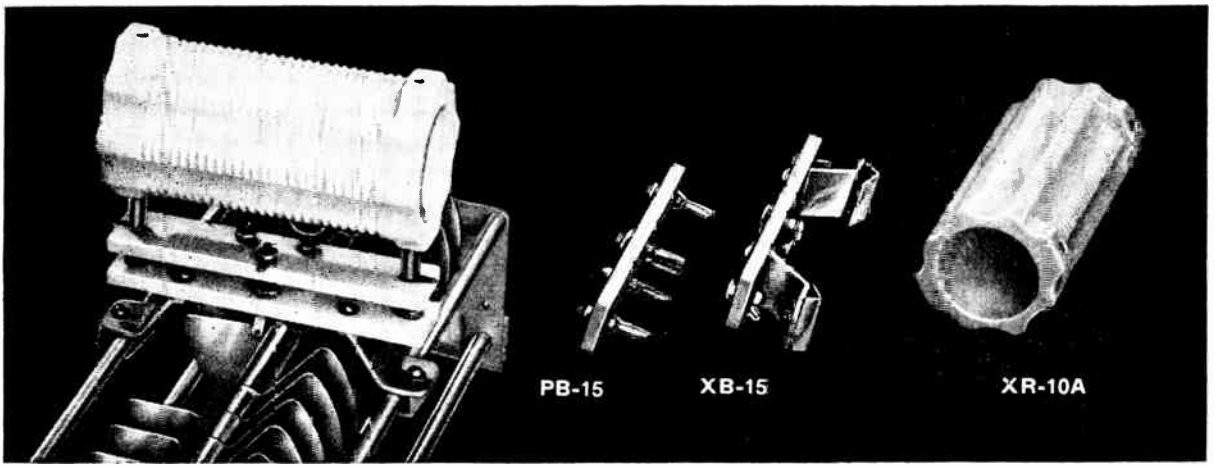
AIR WOUND EXCITER COILS

The small coils illustrated above and tabulated with the original AR-16 exciter coils (on page 25 facing) make the AR line complete in that these new units are ideal for use where the r.f. wiring goes below chassis. The new AR-17s plug into standard 6 contact sockets such as National CIR-6 or XC-6 (see page 22). Both types, ruggedly constructed, have steatite and polystyrene insulation and are for use in stages where the plate power input does not exceed 90 watts. All have center tapped link coupling coils which may be grounded for harmonic reduction.

PB-10-6, PB-10A-6 and FXTB-6 require National XC-6C socket (see page 21).

Net





TRANSMITTER COIL FORMS

The Transmitter Coil Forms and Mounting are designed as a group, and mount conveniently on the bars of a TMA condenser. The larger coil form, Type XR-14A, (not illustrated) has a winding diameter of 5", a winding length of 3 3/4" (30 turns total) and is intended for the 80 meter band. The smaller form, Type XR-10A, has a winding length of 3 1/4" and a winding diameter of 2 1/2" (26 turns total). It is intended for the 20 and 40 meter bands.

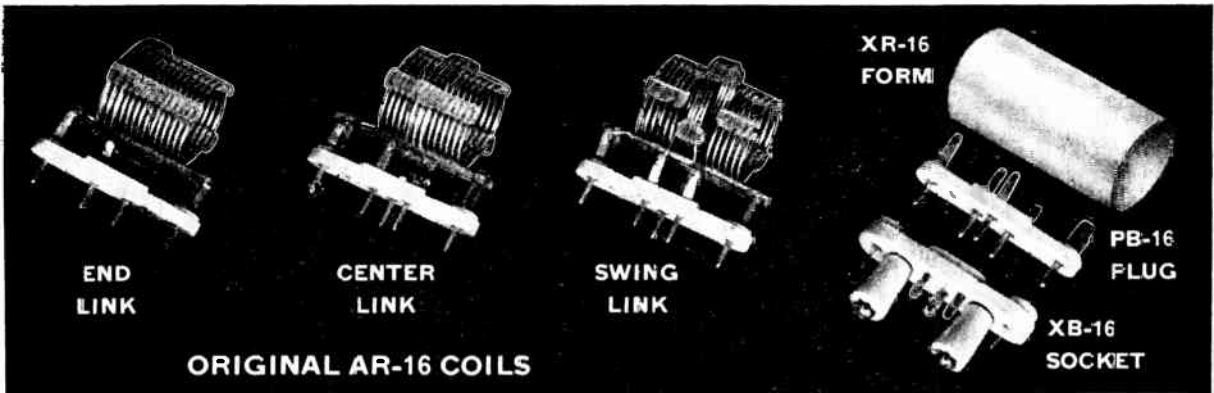
Either coil form fits the PB-15 plug. For higher frequencies, this plug may be used with a self-supporting coil of copper tubing. The XB-15 Socket may be mounted on breadboards or chassis, as well as on the TMA Condenser.

SINGLE UNITS

XR-10A, Coil Form only Net \$.99
 XR-14A, Coil Form only Net \$ 2.40
 PB-15, Plug only Net \$ 1.05
 XB-15, Socket only Net \$ 1.20

ASSEMBLIES

UR-10A, Assembly (including small Coil Form, Plug and Socket) Net \$ 3.24
 UR-14A, Assembly (including large Coil Form, Plug and Socket) Net \$ 3.60



EXCITER COILS AND FORMS

The coils, form and mounting socket shown above are the original AR-16 type. The table below includes the new AR-7 coils described on page 24. Tuning capacities listed in the table below will resonate the tank at the low frequency end of the band and include all stray circuit capacity. For the experimenter who desires a solid form, with suitable tap holes, the XR-16 Coil Form also fits the PB-16 Plug and diameter of 1 1/4" and a winding length of 1 3/4".

AR-16 and AR-17 Coils, any type Net \$ 1.25 PB-16, Plug or Base Net \$.45
 XR-16, Coil Form Net \$.42 XB-16, Special Socket Net \$.45

Note: Swinging link models are supplied with link winding at center unless otherwise specified; for swinging link at end of coil add suffix "E" to swinging link designations (AR16-10SE, AR17-80SE, etc.).

Band	End Link	Cap. Mmf.	Center Link	Cap. Mmf.	Swinging Link	Cap. Mmf.
6 meter	AR16-6E, AR17-6E	25	AR16-6C, AR17-6C	25		
10 meter	AR16-10E, AR17-10E	20	AR16-10C, AR17-10C	20	AR16-10S, AR17-10S	25
15 meter	AR16-15E, AR17-15E	25	AR16-15C, AR17-15C	25	AR16-15S, AR17-15S	30
20 meter	AR16-20E, AR17-20E	26	AR16-20C, AR17-20C	26	AR16-20S, AR17-20S	40
40 meter	AR16-40E, AR17-40E	33	AR16-40C, AR17-40C	33	AR16-40S, AR17-40S	55
80 meter	AR16-80E, AR17-80E	37	AR16-80C, AR17-80C	37	AR16-80S, AR17-80S	60



NEW CONDENSERS — AMT

Introducing a new line of condensers designed for modern tubes and modern circuits, National announces the AMT series. The AMT is a larger and sturdier model of the TMK condenser. The frame is extremely rigid, with mounting feet a part of the end plates. Heavy steatite insulation is used throughout.

A solid aluminum tie bar runs across the top of the condenser for added rigidity and acts as a mounting for AR-18 series coils in the double stator models. Carefully rounded and polished .064" thick aluminum plates are used throughout.

The double stator models are available in either standard end drive (D series) or center-drive (DG series) with 1/4" dia. shaft extension. The center drive condenser allows maximum flexibility in circuit layout and makes an ideal drive for rack panel mount and "dish" type construction.

NEW COILS — AR-18

Air-wound 500 watt coils designed to mount on the split stator models of the new National AMT condensers. The AR18-C coils have fixed center links and require the XB18-C socket. The AR18-S coils are designed to accommodate the swinging link furnished with the XB18-S socket. Link windings of both models have a center tap which may be grounded for harmonic reduction. Plugs and jacks are silver plated to insure low contact resistance. Insulation, steatite. The sockets are 7/4" in length.

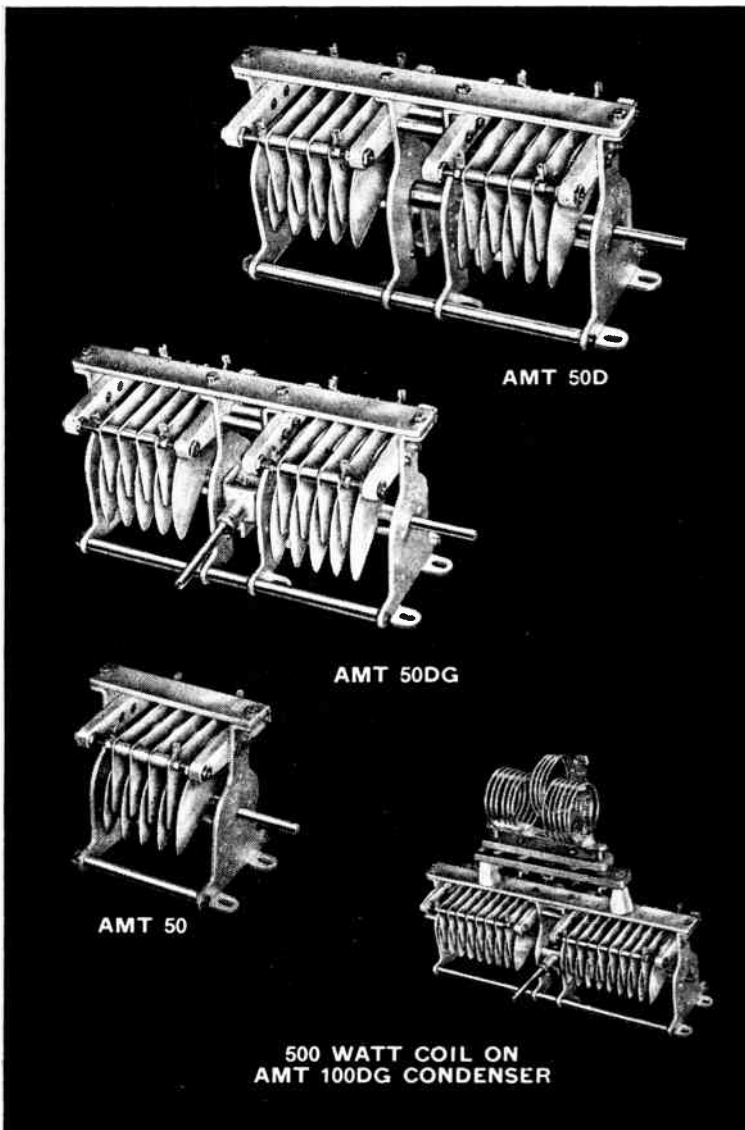
AR18-C Coil (fixed center link) any type **Net \$**

XB18-C Socket with 2 GS-5 insulators **Net \$**

AR18-S Coil (for swinging center link) **Net \$**

XB18-S Socket with swinging link and 2 GS-5 insulators **Net \$**

(See your National distributors for prices)



500 WATT COIL ON AMT 100DG CONDENSER

Band	Fixed Center Link AR-18 Type	Max. Cap. of Tuning Condenser Mmfd.	Swinging Center Link AR-18 Type
6 meter	AR18-6C	50-50	AR18-6S
10 meter	AR18-10C	50-50	AR18-10S
15 meter	AR18-15C	50-50	AR18-15S
20 meter	AR18-20C	50-50 or 100-100	AR18-20S
40 meter	AR18-40C	50-50 or 100-100	AR18-40S
80 meter	AR18-80C	100-100	AR18-80S
	Use XB 18-C socket		Use XB 18-S Socket

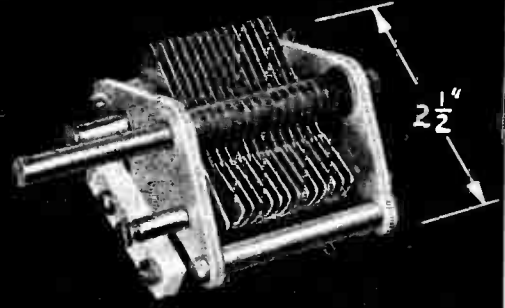
Maximum Capacity	Minimum Capacity	Length	Air Gap	Peak Voltage	No. of Plates	Catalog Symbol	Net
SINGLE STATOR MODELS							
50	13	4 3/4"	.177"	6000	9	AMT-50	\$5.20
100	20	6 3/4"	.177"	6000	17	AMT-100	6:10
DOUBLE STATOR MODELS							
				D—End drive		DG—Center drive	
50-50	13-13	9 3/4"	.177"	6000	18	AMT-50D	7.00
100-100	20-20	13 3/4"	.177"	6000	34	AMT-100D	9.00
50-50	13-13	9 3/4"	.177"	6000	18	AMT-50DG	10.75
100-100	20-20	13 3/4"	.177"	6000	34	AMT-100DG	12.75

Net



TYPE TMS

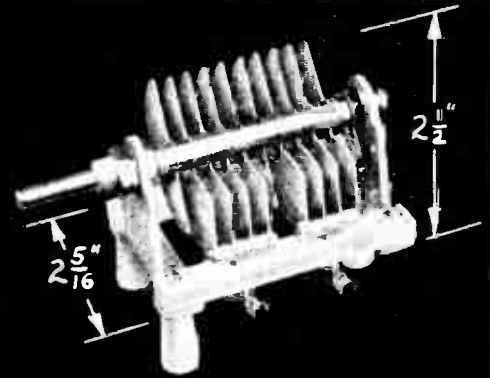
is a condenser designed for transmitter use in low power stages. It is compact, rigid, and dependable. Provision has been made for mounting either on the panel, on the chassis, or on two stand-off insulators. Insulation is steatite. Voltage ratings listed are conservative.



Capacity	Minimum Capacity	Length	Air Gap	Peak Voltage	No. of Plates	Catalog Symbol	Net
SINGLE STATOR MODELS							
100 Mmf.	9.5	3"	.026"	1000v.	9	TMS-100	\$2.60
150	11	3"	.026"	1000v.	14	TMS-150	2.80
250	13.5	3"	.025"	1000v.	22	TMS-250	3.30
300	15	3"	.025"	1000v.	27	TMS-300	3.80
35	8	3"	.065"	2000v.	7	TMSA-35	3.90
50	11	3"	.065"	2000v.	11	TMSA-50	4.40
DOUBLE STATOR MODELS							
50-50 Mmf.	6-6	3"	.026"	1000v.	5-5	TMS-50D	\$3.00
100-100	7-7	3"	.026"	1000v.	9-9	TMS-100D	3.20
50-50	10.5-10.5	3"	.065"	2000v.	11-11	TMSA-50D	4.40

TYPE TMH

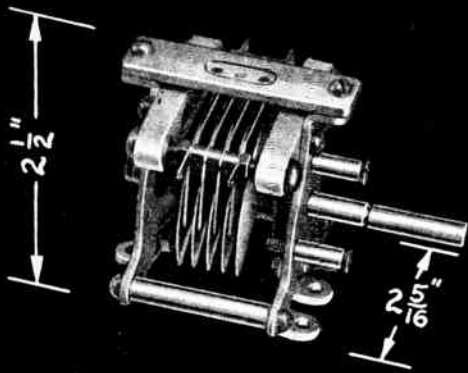
features very compact construction, excellent power factor, and aluminum plates .040" thick with polished edges. It mounts on the panel or on removable stand-off insulators. Steatite insulators have long leakage path. Stand-offs included in listed price.



Capacity	Minimum Capacity	Length	Air Gap	Peak Voltage	No. of Plates	Catalog Symbol	Net
SINGLE STATOR MODELS							
50 Mmf.	9	3 3/4"	.085"	3500v.	15	TMH-50	\$2.95
75	11	3 3/4"	.085"	3500v.	19	TMH-75	4.15
100	12.5	5 1/8"	.085"	3500v.	25	TMH-100	4.35
150	18	6 1/2"	.085"	3500v.	37	TMH-150	4.95
35	11	5 1/8"	.180"	6500v.	17	TMH-35A	4.25
DOUBLE STATOR MODELS							
35-35 Mmf.	6-6	3 3/4"	.085"	3500v.	9-9	TMH-35D	\$4.15
50-50	8-8	5 1/8"	.085"	3500v.	13-13	TMH-50D	4.35
75-75	11-11	6 1/2"	.085"	3500v.	19-19	TMH-75D	4.95

Net

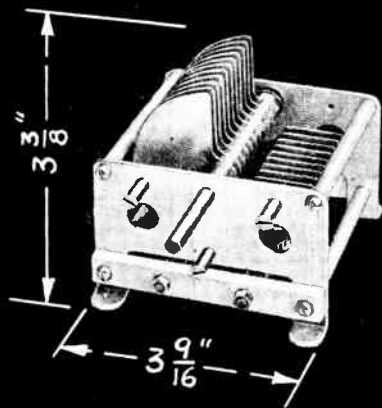




TYPE TMK

is a new condenser for exciters and low power transmitters. Special provision has been made for mounting AR-16 coils in a swivel plug-in mount on either the top or rear of the condenser. For stand-off or panel mounting—steatite insulation.

Capacity	Minimum Capacity	Length	Air Gap	Peak Voltage	No. of Plates	Catalog Symbol	Net
SINGLE STATOR MODELS							
35 Mmf.	7.5	2 ⁷ / ₃₂ "	.047"	1500v.	7	TMK-35	\$3.45
50	8	2 ³ / ₈ "	.047"	1500v.	9	TMK-50	3.55
75	9	2 ¹¹ / ₁₆ "	.047"	1500v.	13	TMK-75	3.80
100	10	3"	.047"	1500v.	17	TMK-100	3.95
150	10.5	3 ⁵ / ₈ "	.047"	1500v.	25	TMK-150	4.65
200	11	4 ¹ / ₄ "	.047"	1500v.	33	TMK-200	5.25
250	11.5	4 ⁷ / ₈ "	.047"	1500v.	41	TMK-250	5.75
DOUBLE STATOR MODELS							
35-35 Mmf.	7.5-7.5	3"	.047"	1500v.	7-7	TMK-35D	\$3.80
50-50	8-8	3 ⁵ / ₈ "	.047"	1500v.	9-9	TMK-50D	3.95
100-100	10-10	4 ¹ / ₄ "	.047"	1500v.	17-17	TMK-100D	5.25
Swivel Mounting Hardware for AR 16 Coils						SMH	\$.10



TYPE TMC

is designed for use in the power stages of transmitters where peak voltages do not exceed 3000. The frame is extremely rigid and arranged for mounting on panel, chassis or standoff insulators. The plates are aluminum with buffed edges. Insulation is steatite. The stator in the split stator models is supported at both ends.

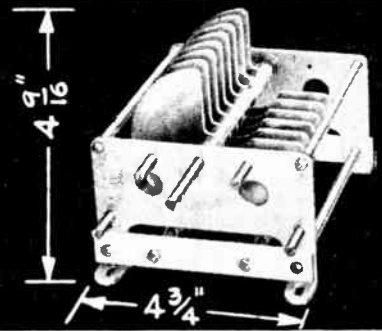
Capacity	Minimum Capacity	Length	Air Gap	Peak Voltage	No. of Plates	Catalog Symbol	Net
SINGLE STATOR MODELS							
50 Mmf.	10	3"	.077"	3000v.	7	TMC-50	\$3.60
100	13	3 ¹ / ₂ "	.077"	3000v.	13	TMC-100	4.25
150	17	4 ⁵ / ₈ "	.077"	3000v.	21	TMC-150	5.25
250	23	6"	.077"	3000v.	32	TMC-250	5.70
300	25	6 ³ / ₄ "	.077"	3000v.	39	TMC-300	6.10
DOUBLE STATOR MODELS							
50-50 Mmf.	9-9	4 ⁵ / ₈ "	.077"	3000v.	7-7	TMC-50D	\$4.35
100-100	11-11	6 ³ / ₄ "	.077"	3000v.	13-13	TMC-100D	5.95
200-200	18.5-18.5	9 ¹ / ₄ "	.077"	3000v.	25-25	TMC-200D	7.25

Net



TYPE TMA

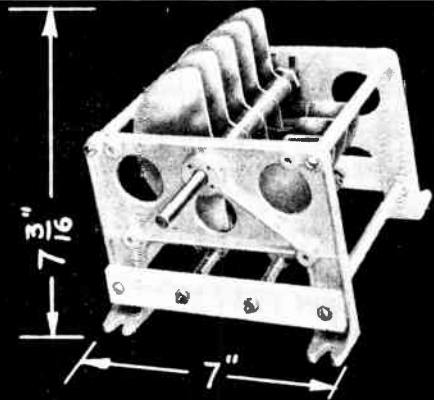
is a larger model of the popular TMC. The frame is extremely rigid and arranged for mounting on panel, chassis or stand-off insulators. The plates are of heavy aluminum with rounded and buffed edges. Insulation is steatite located outside of the concentrated field.



Capacity	Minimum Capacity	Length	Air Gap	Peak Voltage	No. of Plates	Catalog Symbol	Net
SINGLE STATOR MODELS							
100 Mmf.	19.5	4 1/16"	.077"	3000v.	23	TMA-300	\$7.60
50	15	4 3/16"	.171"	6000v.	7	TMA-50A	4.95
100	19.5	6 1/16"	.171"	6000v.	15	TMA-100A	5.85
150	22.5	6 1/16"	.171"	6000v.	91	TMA-150A	6.45
230	33	9 1/16"	.171"	6000v.	33	TMA-230A	7.95
100	30	9 1/16"	.245"	9000v.	23	TMA-100B	8.50
150	40.5	12 1/16"	.245"	9000v.	33	TMA-150B	9.95
50	21	7 1/16"	.359"	12000v.	13	TMA-50C	5.55
100	37.5	12 1/16"	.359"	12000v.	25	TMA-100C	8.95
DOUBLE STATOR MODELS							
200-200 Mmf.	15-15	6 1/16"	.077"	3000v.	16-16	TMA-200D	\$9.40
180-180	10-10	12 1/16"	.140"	4000v.	24-24	TMA-180D	12.90
50-50	12.5-12.5	6 1/16"	.155"	6000v.	8-8	TMA-50DA	6.75
100-100	17-17	9 1/16"	.155"	6000v.	14-14	TMA-100DA	8.75
60-60	19.5-19.5	12 1/16"	.249"	9000v.	15-15	TMA-60DB	8.95
40-40	18-18	12 1/16"	.343"	12000v.	11-11	TMA-40DC	8.50

TYPE TML

is a heavy duty job throughout. The frame structure (rugged aluminum castings with dural tie bars) and precision bearings assure permanent rotor alignment. All plates are extra thick with rounded and polished edges. This, plus specially treated steatite insulators and a husky self-cleaning rotor contact, provides high flasover, current and voltage ratings.



Capacity	Minimum Capacity	Length	Air Gap	Peak Voltage	No. of Plates	Catalog Symbol	Net
SINGLE STATOR MODELS							
75 Mmf.	55	18 1/16"	.719"	20,000v.	17	TML-75E	\$18.35
150	60	18 1/16"	.462"	15,000v.	27	TML-150D	18.50
100	45	13 1/16"	.462"	15,000v.	17	TML-100D	16.60
50	22	8 1/16"	.462"	15,000v.	9	TML-50D	11.50
245	14	18 1/16"	.344"	10,000v.	35	TML-245B	20.15
150	45	13 1/16"	.344"	10,000v.	21	TML-150B	18.35
100	32	10 1/16"	.344"	10,000v.	15	TML-100B	17.55
75	23.5	8 1/16"	.344"	10,000v.	11	TML-75B	12.80
500	55	18 1/16"	.219"	7,500v.	42	TML-500A	24.60
350	45	13 1/16"	.219"	7,500v.	33	TML-350A	19.65
250	35	10 1/16"	.219"	7,500v.	25	TML-250A	18.35
DOUBLE STATOR MODELS							
30-30 Mmf.	12-12	18 1/16"	.719"	20,000v.	7-7	TML-30DE	\$18.55
60-60	26-26	18 1/16"	.462"	15,000v.	11-11	TML-60DD	20.15
100-100	27-27	18 1/16"	.344"	10,000v.	15-15	TML-100DB	12.35
60-60	20-20	13 1/16"	.344"	10,000v.	9-9	TML-60DB	19.15
200-200	30-30	18 1/16"	.219"	7,500v.	21-21	TML-200DA	24.60
100-100	17-17	10 1/16"	.219"	7,500v.	11-11	TML-100DA	20.15

Net





PSR



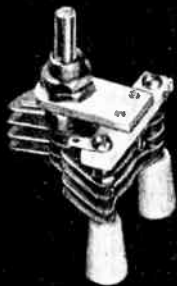
M30



W100



NC-600U



STN

MINIATURE CONDENSERS:

Type PS variable condensers are compact silver plated units of soldered construction for use as semi-fixed bandsets or padders. Base is steatite — bearing is "snug" but smooth. PSR models are screwdriver adjust type; PSE have 1/4" diameter shafts both ends; PSL are similar to PSR but include rotor shaft lock.

Type M-30 Net \$2.22

The M-30 is a tiny (13/16" x 9/16" x 1/2") mica trimmer — 30 mmf. max. — steatite base.

Type W-75, 75 mmf. Net \$1.60

Type W-100, 100 mmf. Net \$1.76

Small air-dielectric padding condensers having a very low temperature coefficient. They are mounted in 1/4" diameter aluminum shields and have 1/4" hex heads for socket-wrench adjustment.

Capacity	Catalog Symbol			Net
25 mmf.	PSR-25	PSE-25	PSL-25	\$1.70
50	PSR-50	PSE-50	PSL-50	1.85
75	PSR-75	PSE-75	PSL-75	2.00
100	PSR-100	PSE-100	PSL-100	2.15

Capacity	Minimum Capacity	No. of Plates	Air Gap	Catalog Symbol	Net
15 mmf.	1.5	6	.017"	UM-15	\$1.02
35	2.5	12	.017"	UM-35	1.15
50	3	16	.017"	UM-50	1.25
75	3.5	22	.017"	UM-75	1.45
100	4.5	28	.017"	UM-100	1.60
10	1	8	.042"	UM-10D	1.40
25	3.4	14	.042"	UMA-25	1.75

BALANCED STATOR MODEL

25	2	4-4-4	.017"	UMB-25	\$2.40
50	5	8-8-8	.017"	UMB-50	2.70

NEUTRALIZING CONDENSERS:

NC-600U Net \$3.38

With standoff insulator

NC-600 Net \$3.32

Without insulator

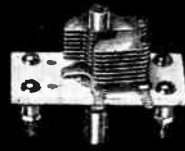
For neutralizing low power beam tubes requiring from .5 to 4 mmf., and 1500 max. total volts such as the 6L6. The NC-600U is supplied with a GS-10 standoff insulator screwed on one end, which may be removed for pigtail mounting.

STN Net \$2.07

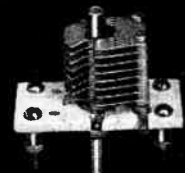
The Type STN has a maximum capacity of 18 mmf. (3000 V), making it suitable for such tubes as the 809. It is supplied with two standoff insulators.

The UM condensers are low-loss, aluminum plate staked construction miniature variables designed for UHF converters, VFOs and the like — minimum capacity is exceptionally low. The UMs can be mounted in PB-10 or RO shield cans and have 1/4" dia. shafts front and rear for ganging (see pages 21, 23 and 24 for shield cans and couplings). Plates: straight-line-cap., 180° rotation. Dimensions: Base 1" x 2 1/4", mtg. holes on 5/8" x 1-23/32" centers, 2-5/16" max. length.

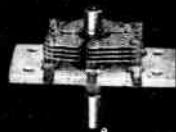
The UMB-25 and UMB-50 are differential (balanced stator) models. UM-10D and UMA-25 are double-spaced and the latter is bolted construction for experimental capacity reduction. Hardware for panel or chassis mounting is supplied with all UM condensers.



UM



UMA-25



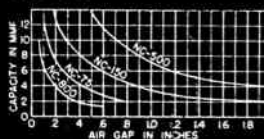
UMB-25



NC-800A



NC-75
NC-150
NC-500



Net



EST.

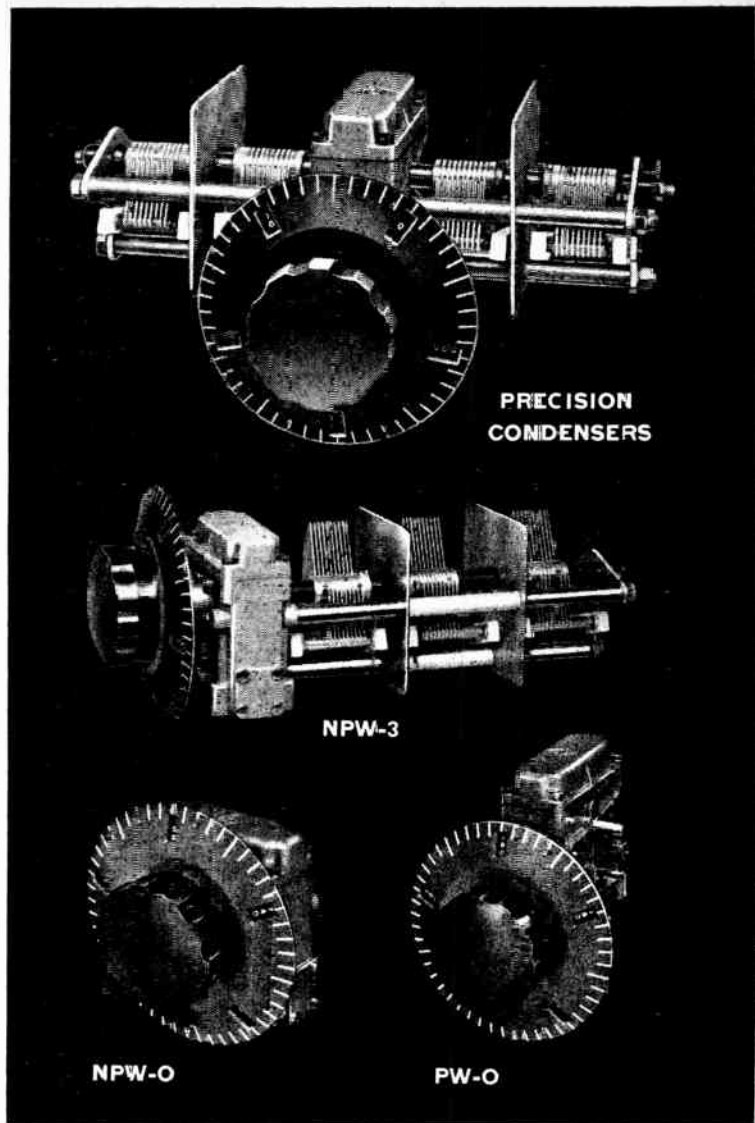
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Originally developed for the famous HRO and NC-100 receivers, National PW and NPW condensers and drive units are well known to professional and amateur radio men throughout the world. Sturdily constructed of the finest materials and carefully adjusted by skilled hands, they have become "standard specifications" for applications requiring smooth, precise control and high re-set accuracy.

The Micrometer Dial reads direct to one part in 500. Division lines are approximately 1/4" apart. The dial revolves ten times in covering the tuning range, and the numbers visible through the small windows change every revolution to give consecutive numbering by tens from 0 to 500. The condenser is of extremely rigid construction, with four bearings on the rotor shaft. The drive, at the mid-point of the rotor, is through an enclosed preloaded worm gear with 20 to 1 ratio. Each rotor is individually insulated from the frame, and each has its own individual rotor contact. Stator insulation is steatite. Plate shape is straight-line frequency when the frequency range is 2:1.

PW Condensers are available in 1, 2, 3 or 4 sections, in either 160 or 225 mmf per section. Larger capacities cannot be supplied.



PW-1R	Single section right	Net \$13.50
PW-1L	Single section left	Net \$13.50
PW-2R	Double section right	Net \$18.00
PW-2L	Double section left	Net \$18.00
PW-2S	Single section each side	Net \$18.00
PW-3R	Double section right; single left	Net \$24.00
PW-3L	Double section left; single right	Net \$24.00
PW-4	Double section each side	Net \$27.00

NPW-3 Three sections, each 225 mmf.Net \$24.00
 Similar to PW models, except that rotor shaft is perpendicular to panel. Three sections, each 225 mmf.

NPW-O Net \$9.00
 Uses parts similar to the NPW condenser. Drive shaft perpendicular to panel. One TX-9 coupling supplied.

PW-O Net \$9.90
 Uses parts similar to the PW condenser. Drive shaft parallel to panel. Two TX-9 couplings supplied.

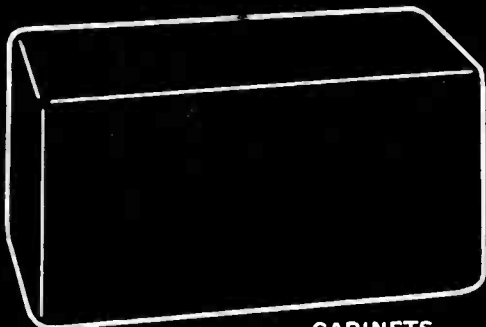
PW-D Net \$5.25
 The Micrometer Dial used on the condensers and drives above is available separately. It revolves ten times in covering the complete range and as there is no gear reduction unit furnished, the driven shaft will revolve ten times, also. The PW-D dial fits a shaft 5/16" in diameter.

Net



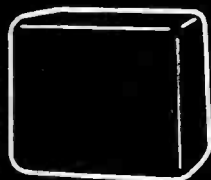
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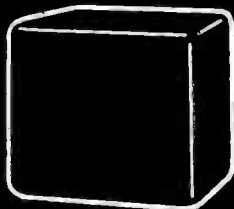


CABINETS

	Width	Height	Depth
Type C-HRO-7	19 $\frac{3}{4}$ "	10"	10"
Type C-NC-183	19 $\frac{3}{4}$ "	10 $\frac{1}{8}$ "	15"
Type C-NC-173	19 $\frac{3}{4}$ "	10 $\frac{1}{8}$ "	12"
Type C-NC-57	16 $\frac{1}{2}$ "	8 $\frac{3}{4}$ "	10 $\frac{1}{2}$ "
Type C-NC-33	16 $\frac{1}{2}$ "	8 $\frac{3}{4}$ "	8 $\frac{1}{2}$ "



NDC-07



NDC-83

These metal cases are the same as those used to house the latest National receivers. They are supplied in blank form, are made of heavy gauge steel with rounded corners and the light gray enamel finish is sprayed and baked; see table for sizes and National distributor for prices.

SPEAKER CABINETS

NDC-07 Net \$6.60
NDC-83 Net \$7.50

These speaker cabinets were designed to match the cases described above: corner contour and baked enamel finish are the same. NDC-07 takes 8" speakers and NDC-83 takes the 10" size. Both are of welded construction, are lined with acoustic material complete with attractive grille over the speaker opening.

OSCILLOSCOPES

CRU — Table Model Oscilloscope, with tubes. Net \$39.90
CRU-P — Rack Panel and Control Plate (to rack mount CRU Scope). Net \$ 2.85

The National CRU Oscilloscope is a compact inexpensive instrument for the progressive amateur or experimenter. It uses a 2" screen tube and has INTENSITY, FOCUS and SWEEP controls in addition to the A.C. ON/OFF and 60 cycle/external sweep switches. See your distributor for further details.

PSG (including mounting hardware) Net \$1.05

This metal grille measures 7 $\frac{1}{2}$ " x 3 $\frac{1}{2}$ " and is ideal for use over a large panel cut-out in all type power supplies.

CFA Net \$0.35

The National chart frame is blanked from one piece of metal, and includes a celluloid sheet to cover the chart. Size 2 $\frac{1}{4}$ " x 3 $\frac{1}{4}$ ", with sides $\frac{1}{4}$ " wide. Durable finish.

PH-1 (chrome plated handle) Net \$0.45

An attractive and rugged pull handle of cast zinc alloy with 10-32 tapped holes on 3 $\frac{3}{4}$ " mounting centers. Right size and finish for dressing up equipment around the station.

PH-2 (telephone black handle) Net \$0.25

Same as PH-1 but with black finish.

CP-1, dark gray Net \$0.40

CP-2, black Net \$0.40

A high quality air-drying paint that may be applied with a brush.

CP-3, light gray, matches newest National receivers — for spraying and baking. Net \$0.50



PSG



CFA



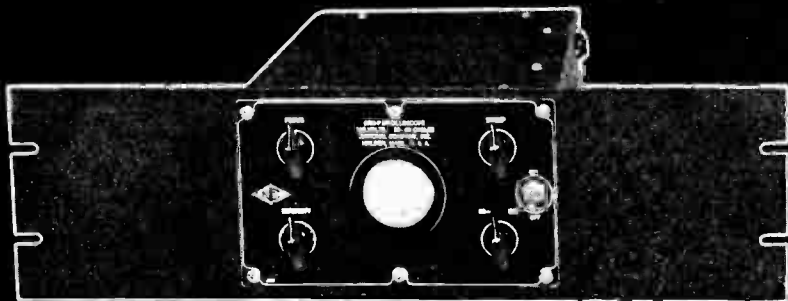
PH-1



CP-1



CRU

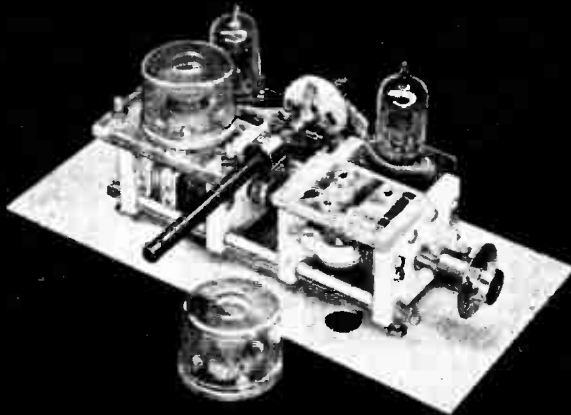


CRU WITH CRU-P PANEL

Net



**HFT-1
FRONT END
ASSEMBLY**



FRONT END ASSEMBLY

For the experimenter who likes to build his own receivers, HFT-1 is the complete "front end" for a VHF super-heterodyne. This is the tuning assembly used in the National HFS Receiver-Converter described on Page 14—frequency coverage and coil sets available are the same. Cutout of the HFT-1 is at 10.7 megacycles and National IFM or IFN transformers are recommended for the i.f. channel.

The ideal oscillator-mixer unit for the FM broadcast receiver. Build your next VHF receiver around the HFT-1 and save tedious hours of coil pruning and tracking adjustments.

HFT-1 (with one set of coils—specify range)
Net \$39.50

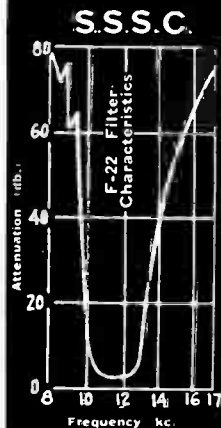
Additional coils (per pair—specify range)
Net \$3.24

MULTI-BAND TANK ASSEMBLY

Designed to meet amateur requirements for greater simplicity in multi-band transmitters, the unique MB-150 Multi-Band Tank illustrated below tunes all amateur bands from 80 through 10 meters with 180° rotation of the shaft; the coils are never changed. The unit is built around an essentially "multiple-tuned" circuit, i.e. a circuit which tunes to two harmonically unrelated frequencies at the same time. Thus, it becomes possible to cover a wide frequency range and yet maintain a reasonably constant L/C ratio. Three coils, four capacitors and an RF choke are combined to make up a compact tank 3" wide x 8 1/4" high (including the GS-10 standoffs) x 9" long overall including the 1/4" dia. shaft and output terminals. Features of the MB-150 are as follows:

- (1) For use as the all-band plate tank in push-pull or balanced single-ended stages running up to 150-watts input (1500 volts peak). It is ideal for a pair of 8Q7s or 8Q9s or a single 829B.
- (2) Separate link coupling coil has special clips which adjust to match impedances up to 600 ohms directly. Output couples into a higher powered amplifier, an antenna or an antenna tuning network.
- (3) Fast band changing is accomplished without handling coils, thus removing one of the danger points in the amateur station.

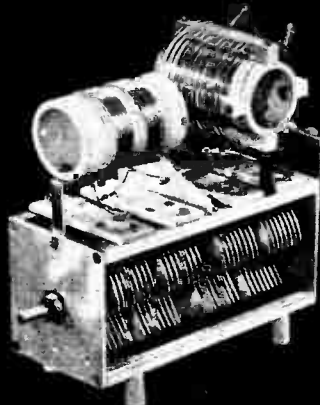
MB-150 Multi-Band Tank Assembly
Net \$18.75



**THE F-22
SIDE BAND
FILTER**

The heart of a single sidetand transmitter — a sharply attenuated filter — has built-in balanced input and output transformers —

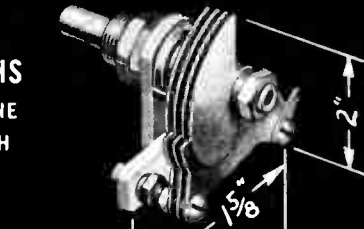
**MB-150
MULTI-BAND
TANK CIRCUIT**



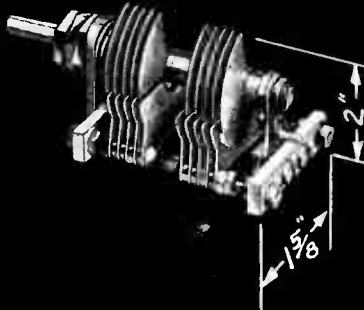
Net



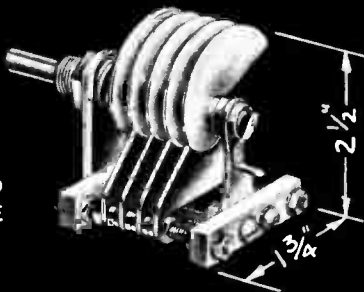
TYPE STHS
STRAIGHT-LINE
WAVELENGTH
180° Rotation



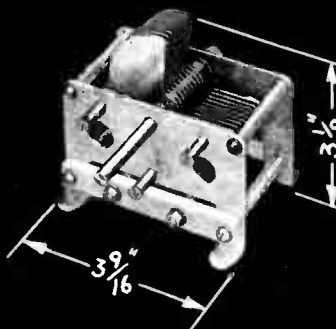
TYPE ST
(Type STD Illustrated)
STRAIGHT-LINE
WAVELENGTH
180° Rotation



TYPE SE
(Type SEU Illustrated)
STRAIGHT-LINE
FREQUENCY
270° Rotation



TYPE EMC
STRAIGHT-LINE
WAVELENGTH
180° Rotation



The ST Type condenser has Straight-Line Wavelength plates. All double-bearing models have the front bearing insulated to prevent noise. On special order a shaft extension at each end is available, for ganging. On double-bearing single shaft models, the rotor contact is through a constant impedance pigtail. Steatite insulation.

Capacity	Minimum Capacity	No. of Plates	Air Gap	Length	Catalog Symbol	Net
SINGLE BEARING MODELS						
15 Mmf.	3 Mmf.	3	.018"	1 3/16"	STHS- 15	\$1.65
25	3.25	4	.018"	1 3/16"	STHS- 25	1.90
50	3.5	7	.018"	1 3/16"	STHS- 50	2.10

NOTE — Type SS Condensers, having straight-line capacity plates but otherwise similar to the Type ST, are available. Capacities and Prices same as Type ST.

SPLIT STATOR DOUBLE BEARING MODELS						
50-50	5-5	11-11	.026"	2 3/4"	STD- 50	\$3.60
100-100	5.5-5.5	14-14	.018"	2 3/4"	STHD-100	3.90

DOUBLE BEARING MODELS						
35 Mmf.	6 Mmf.	8	.026"	2 1/4"	ST- 35	\$1.85
50	7	11	.026"	2 1/4"	ST- 50	1.90
75	8	15	.026"	2 1/4"	ST- 75	2.00
100	9	20	.026"	2 1/4"	ST-100	2.10
140	10	27	.026"	2 3/4"	ST-140	2.30
150	10.5	29	.026"	2 3/4"	ST-150	2.30
200	12.0	27	.018"	2 1/4"	STH-200	2.50
250	13.5	32	.018"	2 3/4"	STH-250	2.70
300	15.0	39	.018"	2 3/4"	STH-300	2.90
335	17.0	43	.018"	2 3/4"	STH-335	3.10

TYPE SE — All models have two rotor bearings, the front bearing being insulated to prevent noise. A shaft extension at each end, for ganging, is available on special order. On models with single shaft extension, the rotor contact is through a constant impedance pigtail. The SEU models (illustrated) are suitable for high voltages as their plates are thick polished aluminum with rounded edges. Other SE condensers do not have polished edges on the plates. Steatite insulation.

15 Mmf.	7 Mmf.	6	.055"	2 1/4"	SEU- 15	\$2.80
20	7.5	7	.055"	2 1/4"	SEU- 20	2.95
25	8	9	.055"	2 1/4"	SEU- 25	3.10
50	9	11	.026"	2 1/4"	SE- 50	2.30
75	10	15	.026"	2 1/4"	SE- 75	2.40
100	11.5	20	.026"	2 1/4"	SE-100	2.60
150	13	29	.026"	2 3/4"	SE-150	2.75
200	12	27	.018"	2 1/4"	SEH-200	2.80
250	14	32	.018"	2 3/4"	SEH-250	3.00
300	16	39	.018"	2 3/4"	SEH-300	3.25
335	17	43	.018"	2 3/4"	SEH-335	3.50

TYPE EMC — A general purpose condenser available in large sizes and having Straight-Line wavelength plates. They are similar in construction to the TMC Transmitting condenser, and have high efficiency and rugged frames. Insulation is Steatite, and Peak Voltage Rating is 1000 volts. Same sizes available with straight line capacity plates, type DXC condenser.

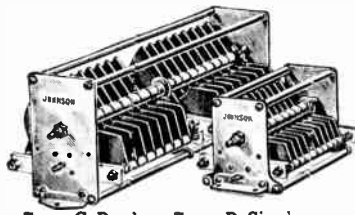
Capacity	Minimum Capacity	No. of Plates	Length	Catalog Symbol	Net
150 Mmf.	9 Mmf.	9	2 15/16"	EMC-150	\$4.50
250	11	15	2 15/16"	EMC-250	4.75
350	12	20	2 3/8"	EMC-350	6.00
500	16	29	4 3/8"	EMC-500	6.75
1000	22	56	6 3/4"	EMC-1000	10.35

Net

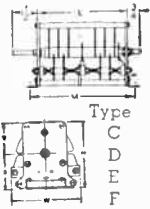




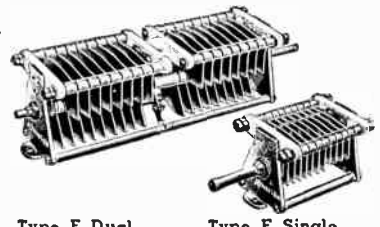
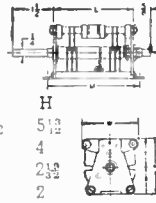
VARIABLE CONDENSERS



Type C Dual Type D Single



Type	T	S	W	H
C	2 1/2	3 1/2	5 1/2	5 1/2
D	1 3/8	2 3/8	4 1/4	4
E	1 3/8	1 3/8	2 3/8	2 3/8
F	1 1/2	1 1/2	2 1/4	2



Type E Dual Type F Single

JOHNSON C and D condensers are sturdily constructed to give trouble-free operation under the most severe service. Only the finest materials are employed yet these units are lower in price than any other quality condensers.

All dual models have center rotor connections, to insure balanced operation at ultra-high frequencies. Heavy laminated phosphor bronze contact springs insure low resistance circuits.

Important features include: Heaviest aluminum plates of any similar condenser, .051" thick—Sinterite insulation—Large laminated rotor brushes—Center rotor contacts on all dual condensers—Heavy 5/16" diameter aluminum tie rods for frame strength and rigidity—1/4" stainless steel shafts.

Supplied with single hole mounting brackets which fit either top or bottom of end plate so that stators may be mounted to top or bottom as preferred.

Designed as rugged, compact units for medium and low power transmitters, type E and F condensers are in a class by themselves. They have more capacity per cubic inch and occupy less panel space for their rating than any other condenser on the market. Their rapid adoption by manufacturers of high grade equipment and discriminating amateurs is ample proof of their excellence.

Points of superiority: Heavy aluminum plates, .032" thick with rounded edges for maximum voltage rating—Heavy aluminum tie rods 1/4" diameter for frame strength and rigidity—Sinterite insulation—Stator mounted above to reduce capacity to ground—heavy phosphor bronze contact springs, cadmium plate—Center contact on dual models—Chassis or panel mounting—Stainless steel shafts.

In addition to mounting foot shown, removable single hole brackets are furnished so that condenser may be inverted from position shown, or other components mounted above.

TYPE C CONDENSERS SINGLE SECTION

Cat. No.	Part No.	List Price	Cap. per Sect.		Number Spacing Plates	L
			Max.	Min.		
250C70	152-1	\$15.00	252	34	.175"	24
500C70	152-2	21.00	496	56	.175"	47
250C90	152-3	17.25	245	45	.250"	31
350C90	152-4	20.50	337	63	.250"	43
50C110	152-5	10.50	51	19	.350"	8
100C110	152-6	13.00	103	30	.350"	17
250C110	152-7	20.50	251	66	.350"	41
50C130	152-8	11.75	51	24	.500"	10
100C130	1529	15.25	102	42	.500"	21

TYPE C DUAL SECTION

200CD45	152-501	18.75	204	21	.125"	15
300CD45	152-502	21.50	290	26	.125"	21
200CD70	152-503	21.00	198	27	.175"	19
300CD70	152-504	28.00	305	37	.175"	29
150CD90	152-505	22.25	147	30	.250"	19
200CD90	152-506	26.00	196	38	.250"	25
50CD110	152-507	5.75	50	18	.350"	8
65CD110	152-508	17.50	66	21	.350"	11
180CD110	152-509	22.50	103	32	.350"	17
50CD130	152-510	18.25	51	24	.500"	10

TYPE D SINGLE SECTION

50D35	153-1	6.50	49	12	.080"	5
100D35	153-2	7.25	99	14	.080"	8
150D35	153-3	8.25	151	18	.080"	12
250D35	153-4	9.75	252	24	.080"	20
350D35	153-5	11.50	343	27	.080"	27
500D35	153-6	14.00	496	36	.080"	39
100D45	153-7	8.50	104	19	.125"	12
150D45	153-8	10.00	146	23	.125"	17
50D70	153-9	8.00	51	17	.175"	7
70D70	153-10	8.75	72	18	.175"	11
100D70	153-11	9.75	98	23	.175"	15
150D70	153-12	11.25	151	31	.175"	23
250D70	153-13	14.50	244	45	.175"	37
350D70	153-14	17.75	351	62	.175"	53
50D90	153-15	8.50	53	20	.250"	10
70D90	153-16	9.50	73	25	.250"	14
100D90	153-17	10.75	99	30	.250"	19
150D90	153-18	13.00	149	43	.250"	29
250D90	153-19	17.50	249	68	.250"	49

TYPE D DUAL SECTION

100DD35	153-501	10.00	95	13	.080"	8
150DD35	153-502	11.50	147	15	.080"	12
200DD35	153-503	14.00	202	19	.080"	16
300DD35	153-504	17.75	291	24	.080"	23
500DD35	153-505	24.75	496	38	.080"	39
150DD45	153-506	15.50	155	24	.125"	18
200DD45	153-507	17.50	198	27	.125"	23
50DD70	153-508	11.00	52	15	.175"	8
70DD70	153-509	12.50	72	17	.175"	11
100DD70	153-510	14.50	97	22	.175"	15
150DD70	153-511	18.00	151	31	.175"	23
200DD70	153-512	21.50	199	39	.175"	30
50DD90	153-513	13.50	52	19	.250"	10
100DD90	153-514	17.75	97	30	.250"	19

MOUNTING BRACKETS

Extra brackets for mounting other components above condenser.

Cat. No.	List Price
115-100—Single Hole Bracket for C or D condenser	\$0.10
115-101—Two Hole Bracket for C or D condenser	.10

TYPE E CONDENSERS SINGLE SECTION

Cat. No.	Part No.	List Price	Cap. per Sect.		Number Spacing Plates	L
			Max.	Min.		
250E20	154-1	\$ 6.10	244	12	.045"	23
350E20	154-2	6.80	353	15	.045"	33
500E20	154-3	7.80	488	19	.045"	45
35E30	154-4	4.70	39	8	.075"	6
50E30	154-5	4.90	52	9	.075"	8
70E30	154-6	5.10	73	9	.075"	11
100E30	154-7	5.45	100	11	.075"	15
150E30	154-8	6.00	154	14	.075"	23
250E30	154-9	7.10	251	20	.075"	37
350E30	154-10	8.30	347	25	.075"	51
35E45	154-11	5.00	38	11	.125"	12
50E45	154-12	5.30	50	9	.125"	9
70E45	154-13	5.65	74	13	.125"	17
100E45	154-14	6.25	101	16	.125"	23
150E45	154-15	7.25	145	20	.125"	33
250E45	154-16	9.25	243	32	.125"	55

TYPE E DUAL SECTION

200ED20	154-501	9.20	200	10	.045"	19
300ED20	154-502	11.00	312	13	.045"	29
50ED30	154-503	7.45	52	8	.075"	8
70ED30	154-504	7.95	72	8	.075"	11
100ED30	154-505	8.70	99	10	.075"	15
150ED30	154-506	10.00	153	13	.075"	23
200ED30	154-507	11.25	196	15	.075"	29
50ED45	154-508	7.95	52	10	.125"	12
70ED45	154-509	8.95	74	12	.125"	17
100ED45	154-510	10.30	100	15	.125"	23

TYPE F SINGLE SECTION

35F20	155-1	4.50	35	7	.045"	6
50F20	155-2	4.70	54	8	.045"	9
70F20	155-3	4.90	66	8	.045"	11
100F20	155-4	5.30	106	10	.045"	17
150F20	155-5	5.95	154	12	.045"	25
250F20	155-6	7.15	252	17	.045"	41
35F30	155-7	4.65	36	8	.075"	9
50F30	155-8	4.95	52	9	.075"	13
70F30	155-9	5.35	67	11	.075"	17
100F30	155-10	6.00	93	14	.075"	25
150F30	155-11	7.00	141	18	.075"	37

TYPE F DUAL SECTION

50FD20	155-501	7.10	53	7	.045"	9
70FD20	155-502	7.60	66	7	.045"	11
100FD20	155-503	8.35	104	9	.045"	17
150FD20	155-504	9.80	153	11	.045"	25
200FD20	155-505	11.00	202	14	.045"	33
50FD30	155-506	7.75	51	8	.075"	13
70FD30	155-507	8.80	66	10	.075"	17
100FD30	155-508	10.25	99	13	.075"	25

DEPARTURES FROM STANDARD

Special plate spacings, capacities, shaft extensions, insulation, mounting brackets, terminals, etc., can be furnished to specifications for commercial applications.

CONDENSERS FOR HIGHER VOLTAGES

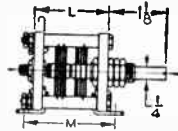
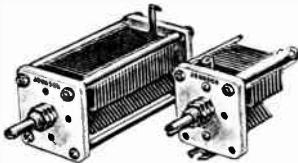
The JOHNSON line includes heavy duty pressurized or air dielectric fixed and variable condensers for high voltage commercial applications. Data sheets furnished on request.

EXPLANATION OF TYPE NUMBERS

The first part of the type number indicates the capacity per section in mmfd. The following letter indicates the frame size: type A second letter D indicates a two section type. The line number multiplied by 100 is the approximate peak breakdown voltage. Capacity measurements of the E and F types are made with the condensers in the position shown in the above illustration. The C and D types are measured in inverted position.



TYPE H CONDENSER



Two End Plates Single End Plate

The Type H condenser was designed for aircraft transmitters and combines a minimum of weight and size with simple but rugged construction. Capacities and spacings are provided for low and medium power stages. Use of steatite for end plates avoids any possibility of "short circuit loops" and permits panel mounting with both rotor and stator insulated from ground. Has aluminum plates .020" thick. End plate 1 1/2" square. Capacity measurements are taken with condenser in position shown above.

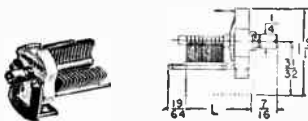
TYPE H CONDENSERS SINGLE SECTION

Cat. No.	Part No.	List Price		Cap. per Sect.		Spacing Plates	Number	L
		Max.	Min.	Max.	Min.			
Single End Plate								
25H15	156-1	\$ 2.70	25	4	.030"	6	6	1 1/2
35H15	156-2	2.80	35	4	.030"	8	8	1 1/2
50H15	156-3	2.95	49	4	.030"	11	11	1 1/2
70H15	156-4	3.20	69	6	.030"	15	15	1 1/2
100H15	156-5	3.50	97	7	.030"	21	21	1 1/2
Double End Plate								
150H15	156-6	4.70	146	9	.030"	31	31	2 1/2
250H15	156-7	5.75	242	13	.030"	51	51	3 1/2
25H30	156-8	3.80	28	7	.080"	13	13	2 1/2
35H30	156-9	4.10	37	8	.080"	17	17	2 1/2
50H30	156-10	4.55	54	11	.080"	25	25	3 1/2
70H30	156-11	5.15	74	13	.080"	35	35	4 1/2

TYPE H DUAL SECTION

Cat. No.	Part No.	List Price	Cap. per Sect.	Spacing Plates	Number	L
35HD15	156-512	4.70	31	6	.030"	7
50HD15	156-513	5.05	51	7	.030"	11
70HD15	156-514	5.55	71	8	.030"	15
100HD15	156-515	6.25	99	10	.030"	21
35HD30	156-516	6.05	38	12	.080"	17
50HD30	156-517	7.15	55	15	.080"	25

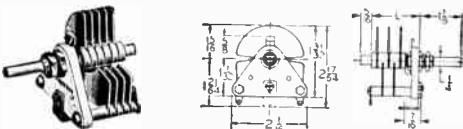
TYPE J CONDENSER



The Type J condenser is a midget with big condenser characteristics. It has wider spacing than most small types, yet occupies little more space and is ideal for oscillator and low power stages. It can be used in conjunction with JOHNSON tube socket type inductors to provide an extremely compact tank unit. The spacing is .025" and universal type mounting brackets make possible a variety of mountings including chassis, panel, or inside tube socket type inductors. Steatite end plate is 1 1/8" wide.

Cat. No.	Part No.	List Price	Cap. per Sect.	Spacing Plates	Number	L
7J12	157-1	\$ 1.75	8	2.6	.025"	3
15J12	157-2	1.90	17	3.3	.025"	6
25J12	157-3	2.10	29	3.6	.025"	10
50J12	157-4	2.55	52	4.9	.025"	19
75J12	157-5	3.05	73	6	.025"	26
100J12	157-6	3.50	102	7	.025"	36

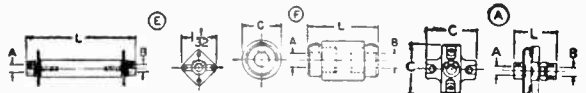
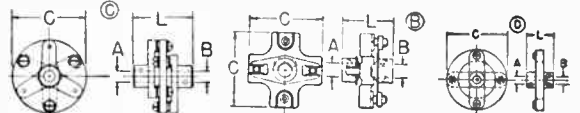
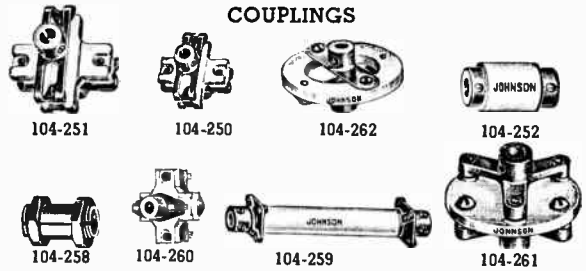
TYPE G CONDENSER



The Type G condenser is extremely popular as a neutralizing condenser for medium and low power stages. It is also widely used for grid and plate tuning at high and ultra-high frequencies. A wide range of capacities and spacing make it adaptable to many applications. It has a single end plate of steatite and low minimum capacity. .032" rounded aluminum plates, universal mounting bracket locking nut, and front and rear shaft extension are among outstanding features.

Cat. No.	Part No.	List Price	Cap. per Sect.	Spacing Plates	Number	L
25G20	165-1	\$3.30	27	4	.045"	5
50G20	165-2	3.60	52	5	.045"	9
8G45	165-3	3.15	7.7	3.6	.125"	3
13G45	165-4	3.30	13	4.7	.125"	5
23G45	165-5	3.65	23	6.4	.125"	9
6G70	165-6	3.30	5.7	3.5	.225"	3
12G70	165-7	4.15	12	6	.225"	7

COUPLINGS



All JOHNSON insulated shaft couplings are characterized by best steatite insulation properly proportioned for electrical and mechanical strength, by accurate metal parts heavily plated, by advanced design, and by skillful manufacture.

The phosphor bronze springs of the -250 and -251 series couplings provide flexibility without backlash and adjust to minor shaft misalignments.

The hub assemblies of the new -260 and -263 coupling move freely on their supporting posts, accommodating misalignment and strain without dependence upon a flexing metal, and yet are well secured to prevent accidental disassembly. Rigid types -252, -262 and -261 meet the requirements of accurate shaft alignment and high torque.

The -259 and -2593 are bar type couplings recommended for high voltages or very high frequencies.

Cat. No.	List Price	Modulated Dim.	Peak Volt.	Dim.	C	Dimension L	A	B
104-250	\$1.00	4000	A	1 1/8	1 1/8	1 1/8	1/4	1/4
104-2503	1.10	4000	A	1 1/8	1 1/8	1 1/8	1/4	1/4
104-251	1.40	5000	A	2 1/8	1 1/8	1 1/8	3/8	3/8
104-251A	1.40	5000	A	2 1/8	1 1/8	1 1/8	3/8	3/8
104-251B	1.40	5000	A	2 1/8	1 1/8	1 1/8	3/8	3/8
104-252	.90	1000	F	1 1/8	1 1/8	1 1/8	1/4	1/4
104-258	.25			1/2	1 1/8	1 1/8	1/4	1/4
104-259	1.50	8000	E	1 1/8	3 3/8	2 3/8	1/4	1/4
104-2593	1.45	5000	E	1 1/8	3 3/8	2 3/8	1/4	1/4
104-260	1.00	2500	B	1 1/8	1 1/8	1 1/8	1/4	1/4
104-261	4.25	7500	C	2 1/2	1 1/8	1 1/8	3/8	3/8
104-262	.85	5000	D	2	1 1/8	1 1/8	1/4	1/4
104-263	.90	2000	B	1	1 1/8	1 1/8	1/4	1/4

PANEL BEARINGS

Nickel plated brass for 1/4" shaft and up to 3/8" panels. Also with 3" and 6" nickel plated brass shafts

Cat. No. 115-255 Panel bearing only List Price \$0.17
 Cat. No. 115-256 Bearing and 3" shaft List Price .40
 Cat. No. 115-2562 Bearing and 6" shaft List Price .50

FLEXIBLE SHAFTS

Phosphor bronze, non-rusting with 1/4" hubs. Permit out of line or up to 90 degree angular control.

Cat. No. 115-253 3" flexible shaft List Price .45
 Cat. No. 115-254 6" flexible shaft List Price .50

TYPE N CONDENSER

Small mounting space requirements, extremely high voltage rating in proportion to size, fine adjustment with uniform voltage breakdown rating throughout the full capacity range, and low cost, make these neutralizing condensers ideal for the modern transmitter. "Plates" are aluminum cups supported on a steatite frame with cast aluminum mounting bracket. Because of the design these condensers will withstand much higher voltage than conventional flat plate condensers of the same spacing. The N375 has been improved and now features a bushing for the guide shaft for greater stability and a beaded lower cup for high voltage rating. Peak R.F. Breakdown Ratings at 2 Mc.: N125 8,500, N250 11,500, N375 14,500.

Cat. No.	Part No.	List Price	Capacity	Max. Min.	D	C	G	V	Spac. ing.
N125	159-125	\$6.00	11.0	1.1	1 1/8	3 1/8	6 1/8	1 1/2	.125"
N250	159-250	6.75	10.6	1.4	1 1/8	3 3/8	7 1/8	2 1/2	.250"
N375	159-375	8.50	10.7	1.7	2 3/8	5 3/8	8 3/8	2 1/2	.375"



ROTATING COIL "HI-Q" INDUCTORS



Cat. No.	List Price	Band (Meters)	Cap. to tune (mmf.)
231-660	\$3.75	10	26
231-661	3.95	20	33
231-662	4.10	40	40
231-663	4.25	80	75
231-664	4.40	160	150
231-670	1.95	10	26
231-671	2.10	20	33
231-672	2.20	40	40
231-673	2.30	80	75
231-674	2.40	160	150
235-666	.80	4 1/2 x 2 1/2	form only
235-667	.85	4 1/2 x 2 1/2	form only
235-668	1.00	Plug Strip for 686 & 687	
235-669	1.00	Jack Base for Mounting above inductors	
231-680	5.20	10	26
231-681	5.55	20	26
231-682	5.75	40	42
231-683	5.90	80	70
231-684	6.00	160	140
231-690	3.00	10	26
231-691	3.25	20	26
231-692	3.40	40	42
231-693	3.50	80	70
231-694	3.65	160	140
235-686	1.45	6 3/4 x 2 3/4	form only
235-687	1.55	6 3/4 x 2 3/4	form only
235-688	1.50	Plug Strip for 686 & 687	
235-689	1.50	Jack Base for Mounting above inductors	

Because of the difficulties in raw material supply the above inductors may be available in limited quantities only for the next few months.

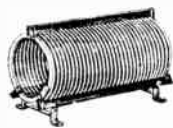
TUBE-SOCKET "HI-Q" INDUCTORS



Cat. No.	List Price	Band (Meters)	Cap. to tune (mmf.)
230-640	\$2.40	10	24
230-641	2.45	20	33
230-642	2.50	40	37
230-643	2.55	80	71
230-644	2.60	160	132
230-645	1.95	14	27
230-650	2.15	10	35
230-651	2.20	20	56
230-652	2.25	40	70
230-653	2.30	80	70
230-654	2.35	160	110
230-655	1.85	14	40
235-646	.85	Form only	4 prong
235-647	.85	Form only	5 prong

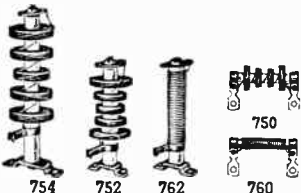
Inductors plug into 3 prong tube socket. Numbers 640 through 654 have link at center, 650 through 655 link at bottom. Those with center link are center tapped to split stator circuits. Power rating is 100 watts. All sizes use coil from 1 1/2" diameter and 3 3/4" high and have dual-terminal top.

EDGEWISE WOUND "HI-Q" INDUCTORS



Design improvements and mycalex insulation are new features in this inductor. They are widely used in commercial equipment and will safely handle more than 1000 watts in continuous service. Other sizes and types of inductors are manufactured for commercial broadcast and industrial electronic applications. More information available on request.

Cat. No.	List Price	Band (Meters)	Cap. to tune (mmf.)	Coupling	Dimensions LxD
232-610	\$8.50	33 mh impedance		matching	7 1/2" x 2 1/2"
232-611	6.50	14 mh impedance		matching	4 1/2" x 2 1/2"
232-620	9.50	160	100	None	9 1/2" x 4 1/2"
232-622	7.50	80	50	None	6 1/2" x 3 1/4"
232-624	7.00	40	25	None	6" x 3 1/4"
232-626	6.60	40	50	None	4 3/4" x 2 1/2"
232-628	6.30	20	20	None	4 1/2" x 2 1/2"
232-619	6.00	20 mh coupling inductor			3 1/4" x 4"
232-623	5.50	8.1 mh coupling inductor			2 1/2" x 3 1/4"
232-627	5.20	2.2 mh coupling inductor			1 1/2" x 2 1/2"



RADIO FREQUENCY CHOKES

Uniformly flat in response, JOHNSON R.F. chokes are equally effective over the entire range for which they are designed. Coils are of enameled silk-covered wire impregnated with high grade R.F. lacquer and are wound on steatite cores. Current ratings are of continuous service and may be increased for intermittent use.

Cat. No.	List Price	Frequency	Current Rating	Lght.
102-750	\$1.00	1.7 to 30 mc	150 ma	1 1/2"
102-752	2.00	1.7 to 30 mc	500 ma	2 1/8"
102-754	2.50	1.7 to 30 mc	750 ma	4 1/8"
101-760	.60	Ultra-high	250 ma	1 1/2"
101-762	1.10	Ultra-high	1500 ma	2 7/8"

TUBE CAP CONNECTORS



119-850
119-851



119-852
119-854



119-838
119-839
119-840
119-841



119-853
119-843
119-855

JOHNSON tube cap connectors are carefully designed, specifically for transmitting and industrial uses. Numbers 119-853 and 119-855 have steatite covers as embled with 12" and 15" high voltage insulated leads. They are particularly recommended for rectifier and high voltage service. The 119-856 and 119-857 are similar to 119-852 and 119-854, but have copper strips for low-loss R.F. uses. Col. 119-838 through 119-841 are recommended for heavy current industrial uses. The outside diameter is 7/8" and connectors may be tightened with a inner wrench listed below. The 119-843 is a part of the 124-212 socket for 833A tubes and is recommended for other tubes having 500 ohm-ohm caps and requiring resistor type inductors for high R.F. currents. The outside diameter is 5/8" long and 3/8" wide.

Cat. No.	Tube Cap List Diameter Price	Cat. No.	Tube Cap List Diameter Price
119-838	375 \$	119-852	360 \$0.06
119-839	437	119-853	360 .70
119-840	500	119-854	566 .09
119-841	676	119-855	566 .85
119-843	500	119-856	360
119-846	125	119-857	566
119-848	070	119-858	070
119-849	048	119-859	048
119-850	250 1.80 C	119-860	125
119-851	360 1.80 C		
115-838	Screw wrench for use with Nos. 119-838 through 841		

TUBE LOCKING CLAMP

Accurately formed cadmium plated steel band with integral locking device and mounting bracket. Made to hold tubes securely in place under conditions of heavy vibration and shock.

Cat. No. 133-817	Tube Dia. 1.165"	List \$0.35
Cat. No. 133-818	Tube Dia. 1.275"	List .35
Cat. No. 133-820	Tube Dia. 1.377"	List .35

TINNED COPPER SOLDERING TERMINALS



Terminals Illustrated in the Order Listed

Available in eleven sizes, JOHNSON soldering terminals meet the requirements of most applications. Composed of copper for low resistance, they are tinned to permit easy soldering.

Cat. No.	Size Hole	Length	List per C
110-880	6/32	1 1/2"	\$0.40
110-881	1/4"	1 1/2"	.65
110-882	1/4"	1 1/2"	1.25
110-883	10/32	1 1/2"	2.10
110-884	10/32	1 1/2"	2.10
110-885	1 1/8"	1 1/2"	3.25
110-886	1 1/8"	1 1/2"	1.60
110-887	1 1/8"	1 1/2"	1.65
110-888	1 1/8"	1 1/2"	1.65
110-889	1 1/8"	1 1/2"	2.95
110-890	1 1/8"	1 1/2"	2.95

INDUCTOR CLIPS



235-804



235-803



235-860



115-840

Clips are plated phosphor bronze. Nos. 235-803 and 235-804 are designed for making connections to the above edgewise wound or similar inductors. No. 235-860 will take wire from No. 20 to No. 10 without danger of tilting and shorting adjacent turns.

Cat. No.	Type	List Price
235-803	LC4E	\$0.22
235-804	LC4	.25
235-860	8P0	.12

FUSE CLIP

This cadmium plated phosphor bronze clip provides sure grip for 3/8" diameter fuse or resistor. Mounts with No. 8 screw.

Cat. No. 115-840	List Price \$0.03
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SCREW TERMINAL

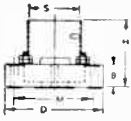
A convenient and substantial clip for use as antenna and ground connections and power terminals. Furnished complete with 2 screws.

Cat. No. 110-112	List Price \$0.05	110-112
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TUBE SOCKETS



"The World's Most Famous Tube Sockets," a title earned over years of top quality in material, workmanship, and design, cover nearly every transmitting tube requirement. "JOHNSON" sockets are specified by exacting users.

123-209
-210, -211, -216

Nos. -209, -210, -211 and -216 all have heavy phosphor bronze, side wiring type contact, aluminum shells and clear white, glazed porcelain bases.

No. -209 is similar to No. -210, but provides greater spacing between contacts and shell, for higher voltages. No. -211 the standard "50 watt" socket has double filament contacts for carrying heavy currents. Terminals are permanently and plainly marked with identifying letters molded in base both top and bottom.

No. -216 is for tubes having a GIANT 5 pin bayonet base such as the 803, RK23, etc. -210F and -211F are enclosed in lustrous black finished aluminum housing for front of panel mounting.

"S" dimension -209, -210 series 1.386" -211 series 1.886" -216 series 2.198"

Suffix letter "B" identifies sockets with beryllium copper contacts, suffix letter "S" sockets with steatite bases.

Cat. No.	List Price	D	H	M	B Base
123-209	\$1.15	2 1/8	1 7/8	2 1/2	Medium
123-209B	1.30	2 1/8	1 7/8	2 1/2	Four
123-209S	2.10	2 1/8	1 7/8	2 1/2	Pin
123-209SB	2.25	2 1/8	1 7/8	2 1/2	Bayonet
123-210	1.10	2 1/2	1 7/8	2 1/2	
123-210B	1.25	2 1/2	1 7/8	2 1/2	
123-210F	3.00	2 1/2	1 7/8	2 1/2	
123-211	1.60	3 3/8	2 1/8	2 1/2	Standard
123-211B	1.85	3 3/8	2 1/8	2 1/2	Jumbo
123-211S	2.75	3 3/8	2 1/8	2 1/2	Four
123-211SB	3.00	3 3/8	2 1/8	2 1/2	Pin
123-211F	4.20	3 3/8	2 1/8	2 1/2	
123-216	2.50	3 3/4	2 1/2	3 3/8	Giant
123-216B	2.75	3 3/4	2 1/2	3 3/8	Five
123-216S	4.25	3 3/4	2 1/2	3 3/8	Pin
123-216SB	4.50	3 3/4	2 1/2	3 3/8	Bayonet



124-213



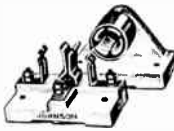
124-214

No. -213 takes Eimac 152TL and 304TL. Contacts arranged for either series or parallel filaments.

No. -214 takes Eimac 1500TH and similar tubes. Has air jet tube for cooling filament tube seals.

No. -215 is for "250 watt" tubes such as 204A, 849 etc. The plate terminal has a "safety cup" which prevents accidental dislodgement of the tube.

Cat. No.	Price	Base
124-213	\$2.00	"Eimac"
124-214	2.75	"Eimac"
124-215	4.00	250 Watt



124-215

MINIATURE SOCKETS

Cat. No.	Description	List Price
120-267	Miniature socket, all ceramic	\$0.50
120-277B	Miniature socket with shield base	.75
133-277S	Miniature socket, shield base only	.15
133-278A	1 3/8" shield for 277 B or S	.20
133-278B	1 3/4" shield for 277 B or S	.20

Sockets for 9000 series and miniature series such as 1S4, 1S5, 1T4, 1R5, etc. No. -267 all steatite type. No. -277B steatite base with metal mounting ring which extends upward to form a shield. No. -277S is shield base only as used on No. -277B and can be used with No. -267 or other similar sockets. Nos. -278A and B are shield caps to fit No. -277B or No. -277S. Available in two sizes, they include an inside coil spring to hold the tube firmly in position.

ACORN SOCKETS

Cat. No.	Price	Mtg. Cen.
121-265	\$1.25	1 1/2"
121-235	1.10	1 1/2"
121-245	2.00	1 1/2"

Nos. -235, and -265 were all designed for new "acorn" tubes. Nos. -235 and -265 are similar except for size. No. -235 is more rugged but requires slightly more mounting space. No. -245 is a plated metal base and includes built-in by-pass condensers as an integral part of each contact. Contacts insulated by mica. All contacts silver plated beryllium copper.



121-235



121-245

JOHNSON wafer sockets are insulated with grade L 4 steatite or better, top and sides glazed, underside impregnated in conformance with latest Army Navy specifications. Contacts are brass with steel spring, cadmium plated and are mounted against phenolic washers in molded recesses to prevent movement. Rivets are countersunk and mounting holes bossed to permit sub-panel mounting. Locating grooves facilitate tube insertion.

Cat. No.	List Price	Base
122-224	\$.55	4 pin
122-225	.60	5 pin
122-226	.65	6 pin
122-227	.70	7 pin med.
122-217	.70	7 pin small
122-228	.75	Octal

No. -237 is a 7 pin large steatite wafer socket for transmitting tubes having a GIANT 7 pin base such as the HK257, and RCA 813.

No. -247 is a 7 pin steatite wafer socket for transmitting tubes such as the 826. It is furnished with etched aluminum base shield.

No. -248 is the same as the No. -247 except for its small "L" dimension, is also furnished with shield and has the same mounting dimensions.

Cat. No.	List Price	Dimension L
122-237	\$1.10	2 5/8"
122-247	1.25	2 5/8"
122-248	1.25	2 3/8"

The 122-101 is a 7 pin steatite wafer socket of special design incorporating a base shield, retainer springs and provision for mounting button mica capacitors directly to the socket. Socket is specially designed for UHF use with tubes such as the 826, 829 and 832. Contacts and spring are silver plated and recessed to prevent movement. Grid terminals are designed so connecting wires may be isolated from other circuits and permit small grid coils to be mounted on the terminal ends. Four mounting holes are equally spaced 2.312 inches between centers.

Cat. No.	List Price
122-101	\$3.00

The 122-275 is a 5 pin steatite wafer socket for transmitting tubes having a GIANT 5 pin base such as the 4-125A and RK18. Contacts are of a superior construction, brass clip and steel spring, both cadmium plated and are designed for high currents. Stray capacitance, each contact to ground, 2.1 mmf. (socket mounted on metal chassis). Adequate ventilation for tubes is provided by five 1/4" holes spaced between contacts. Four mounting holes are equally spaced 2 1/4" between centers.

Cat. No.	List Price
122-275	\$1.75

The 122-244 is a 4 pin wafer socket or steatite insulation, for transmitting tubes having a SUPER JUMBO base such as the 8008. Brass clip contacts and reinforcing steel springs are cadmium plated and are designed for high currents. Stray capacity contacts to ground, 1.25 mmf. Four mounting holes spaced 1 1/8" between centers.

Cat. No.	List Price
122-244	\$1.50

The No. 212 socket for RCA833 or 833A Base of steatite. Filament clamps incorporate "springs" which minimize strains on the glass tube seals and prevent breakage. Plate leads include laminated phosphor bronze strips for flexibility. Regularly supplied with 5 1/2" plate leads. Other lengths available on special order.

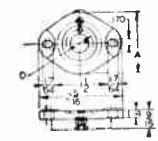
Cat. No.	List Price
124-212	\$10.00

No. -234 for Western Electric 5D21, 705A, 15A, 715B Raytheon, RKR72 and RK72 includes heavy steatite base and special locking device for retaining tube in socket.

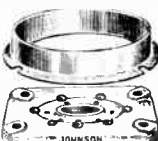
Cat. No.	List Price
122-234	\$3.00



122-228



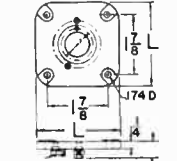
122-217, -224, -225, -226, -227



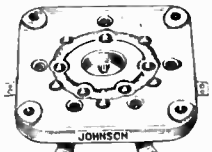
122-247, -248



122-237



122-101



122-275



122-244



124-212



124-234

THE JOHNSON TUBE SOCKET GUIDE IS AVAILABLE UPON REQUEST.



E. F. JOHNSON Company

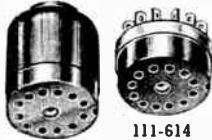
WASECA, MINNESOTA

MULTIPLE WIRE CONNECTORS

JOHNSON cable connectors provide a most efficient means of quickly connecting or disconnecting multiple electrical circuits in low-voltage control audio and instrument service. Contacts accommodate No. 16 stranded wire, or No. 14 solid. Minimum surface creepage path for 12 connector types $\frac{1}{8}$ " for 7 connector types $\frac{1}{4}$ ". Body material of molded black bakelite back shells are brass dull black unfinished, shell liners are fibre. Plug and receptacle polarized for quick accurate insertion. The cadmium plated steel mounting yokes fit standard switch boxes and cover plates and are supplied with necessary hardware.

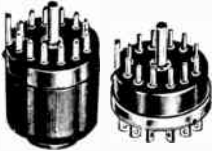
The multiple wire connectors, tip plugs and jacks appearing on this page are former Mallory-Yaxley products.

RECEPTACLES



111-614

111-615 Chassis Type
Cord Type



PLUGS

111-625

111-617

Catalog Number	List Price	No. of Contacts	Connector Type
----------------	------------	-----------------	----------------

RECEPTACLES			
111-614	\$1.80	12	Chassis
111-615	2.10	12	Cord
111-644	1.00	7	Chassis
111-645	1.25	7	Cord

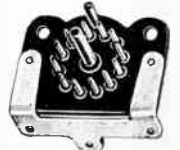
PLUGS			
111-617	1.80	12	Chassis
111-625	2.10	12	Cord
111-631	1.30	7	Chassis
111-635	1.60	7	Cord

PIN PLATE BRACKET MOUNTED			
111-680	1.10	7	
111-682	1.50	12	

MOUNTING YOKE			
111-6002	.25	for 7 wire connectors	
111-6003	.25	for 12 wire connectors	

MULTIPLE CONDUCTOR CABLE			
144-7	.30 per ft.	7 wire cable	
144-12	.60 per ft.	12 wire cable	

PIN PLATE Bracket Mounted



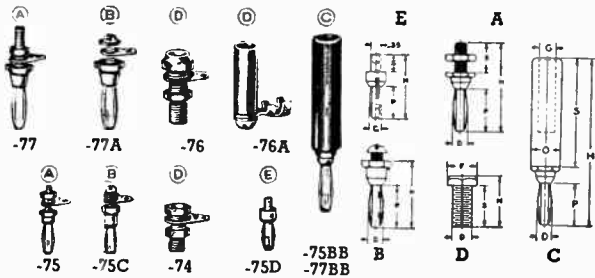
111-682

MOUNTING YOKES



111-6002, -6003

PLUGS AND JACKS



"BANANA SPRING" TYPE

Nickel-silver springs and high grade nickel plated brass screw machine parts with accurate threads and milled nuts. Studs extend full length of springs for added support.

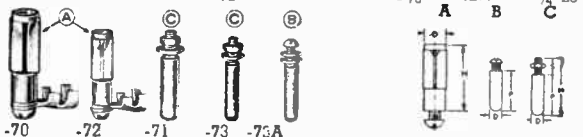
75D is designed for riveting. Spring is peryllium copper. 75BB has $\frac{1}{8}$ " black plastic handle; 75ER same but red. 77BB has $\frac{1}{4}$ " black plastic handle; 77ER same but red.

75 or 75A can be furnished with beryllium copper spring on special order, and all plugs can be furnished with nickel, cadmium or silver plating if required.

108-7451 is a red plastic insulated jack similar to the 108-74 and furnished with fibre washers. 108-7452 same but black.

If washers used for insulated mounting fits $\frac{1}{16}$ " holes, $\frac{3}{32}$ " maximum panel thickness.

Cat. No.	List Price	Illus. Dwg.	S	P	D	H	G	O	Thread
108-75	\$0.11	A	$\frac{3}{8}$	.53	.170	1.115			6-32
108-75A	.12	A	$\frac{3}{8}$	.53	.170	1.490			6-32
108-75BB	.30	C	$\frac{1}{2}$	.53	.170	2.115	.215	$\frac{7}{16}$	6-32
108-75BR	.30	C	$\frac{1}{2}$	.53	.170	2.115	.215	$\frac{1}{2}$	6-32
108-75C	.12	B	$\frac{3}{8}$	.53	.170	.94			6-32
108-75D	.08	E	$\frac{5}{8}$	.40	.155	.81			6-32
108-77	.25	A	$\frac{5}{8}$	.74	.300	1.77		$\frac{1}{4}$ -28	
108-77A	.30	B	$\frac{5}{8}$	.74	.300	1.15		10-32	
108-77BB	.45	C	$\frac{1}{2}$	.74	.300	2.90	$\frac{5}{16}$	$\frac{5}{8}$	
108-77BR	.45	C	$\frac{1}{2}$	.74	.300	2.90	$\frac{5}{16}$	$\frac{5}{8}$	
Jacks									
108-74	.09	D	$\frac{3}{8}$	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{5}{8}$	.155	$\frac{1}{4}$ -28	
108-7451	.18	D	$\frac{3}{8}$	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{5}{8}$	.166	$\frac{1}{4}$ -28	
108-7452	.18	D	$\frac{3}{8}$	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{5}{8}$	.166	$\frac{1}{4}$ -28	
108-76	.28	D	$\frac{3}{8}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	.277	$\frac{3}{8}$ -24	
108-76A	.30	D	$\frac{1}{2}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	.277	$\frac{1}{4}$ -20	



"SPRING SLEEVE" TYPE

These jacks have maximum current carrying capacity, minimum resistance, great mechanical strength, and snug fit. Wiping action of spring on insertion insures good electrical contact. Tension is maintained by phosphor bronze "spring sleeves," two sizes available. Furnished regularly nickel plated but cadmium or silver can be supplied on special order.

Cat. No.	List Price	D	S	P	H	Thread
106-71	\$0.18	.375	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{4}$ -28 screw
106-73	.11	.250	$\frac{3}{16}$	$\frac{1}{8}$	$\frac{1}{8}$	10-32 screw
106-73A	.14	.250	$\frac{3}{16}$	$\frac{1}{8}$	$\frac{1}{8}$	10-32 tapped
Jacks						
106-70	.45	$\frac{1}{2}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{2}$	$\frac{1}{4}$ -20 screw
106-72	.30	$\frac{3}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{2}$	10-32 screw

PLASTIC HEAD TIP JACKS

REMOVABLE ROUND HEAD TIP JACK



105-520

Removable plastic heads in choice of colors listed. Supplied with fibre shoulder bushing and nickel plated hex nut. Standard finish is nickel plate on body. Mounts in $\frac{3}{8}$ " hole. Maximum panel thickness $\frac{3}{32}$ " where insulating washers are used, $\frac{1}{4}$ "-32 thread.

Cat. No.	Color	List Price
105-520	Red	\$0.20
105-521	Black	.20
105-522	Dark Green	.20
105-524	Brown	.20
105-525	Light Blue	.20
105-526	Orange	.20
105-527	Yellow	.20
105-528	Light Green	.20
105-529	Dark Blue	.20
105-530	Ivory	.20

MOLDED ROUND HEAD TIP JACK

Description same as removable head type except that brass body is molded integral with head, and additional phenolic washer is furnished. $\frac{1}{4}$ "-40 thread.

No. 105-418—Red List \$.25 No. 105-419—Black List \$.25 105-418

INSULATED COMBINATION JACK



105-420

Supplied with shoulder bushing, phenolic washer and one piece contact and nut. Maximum chassis thickness $\frac{1}{8}$ ". Mounts in $\frac{3}{8}$ " diameter hole. Provides insulated jack for phonetip plugs and No. 75 series "Banana Spring" plugs.

No. 105-420—Red List \$.23 No. 105-421—Black List \$.23

METAL HEAD TIP JACKS

Large Round Head



105-16

Supplied with fibre shoulder bushing, phenolic washer and hex nut. Mounts in $\frac{1}{2}$ " hole if shoulder bushing is used, $\frac{3}{32}$ " maximum panel thickness. Contact is phosphor bronze cadmium plated.

No. 105-16 List \$0.40



105-1

Headless Tip Jack Metal parts brass. Body, nickel plated. $\frac{1}{4}$ "-32" thread.

No. 105-1 List \$0.10

Long Solderless Tip Plug



105-15

For use with tip jacks Nos. 105-16, and 105-420.

No. 105-15 List Price \$0.15

No. 105-14—Solderless Tip Plug Long Sharpened Point List Price \$0.20

Small Round Head

Mounts in $\frac{3}{8}$ " hole when using fibre shoulder bushing furnished. $\frac{1}{32}$ " maximum panel thickness.

No. 105-416

List \$0.18



105-416

Small Hex Head

Same as 105-416 except has hex head.

No. 105-417

List \$0.15



105-417

Short Solderless Tip Plug



105-415

For use with tip jacks Nos. 105-416, 105-417, 105-418, and 105-529.

No. 105-415 List Price \$0.15

TWIN TIP JACKS



105-401

Mounting holes $\frac{7}{8}$ " centers. Molded black phenolic.

Cat. No.	Marking	List Price
105-401	Blank	\$0.50
105-402	Speaker	.50
105-403	Phone	.50

SHORTING TYPE TWIN TIP JACKS

Circuit closes automatically when tips are removed.

No. 105-432—Black No. 105-433—Red

List Price \$0.50

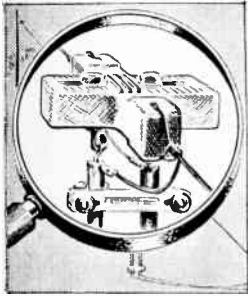


105-432



E. F. JOHNSON Company

WASECA, MINNESOTA



THE JOHNSON "Q" AND JOHNSON "Q" BEAM COMPLETE "Q" SYSTEMS

Cat. No.	Band (Meters)	List Price
137-2Q	2	\$ 7.00
137-6Q	6	10.50
137-10Q	10	9.75
137-20Q	20	16.50
137-40Q	40	28.00

The consistent results obtained by the thousands of users of the JOHNSON Q antenna system are due to the extremely high efficiency of this famous antenna. Applications include half-wave doublet, either horizontal or vertical, harmonic or "long wire" radiator, radiator-reflector, radiator director, "V" Beam, JOHNSON Q Beam and others.

The JOHNSON Q Beam is a special application of the Q system. It consists of two half-wave Q antennas spaced 1.5 wave and Q sections connected in parallel at the bottom. In ordering specify two Q antennas for the lower frequency of the two bands desired. For example if you want a Q Beam to operate on 10 and 20 meters, order two JOHNSON Qs for 20 meters.

The -2Q and -6Q use aluminum tubing for the radiating portion as well as for the matching section. They may be suspended overhead in the conventional manner or are self supporting with their end terminal plugs plugged into a 136-35 Jack Strip mounted on the transmitter. The 136-35 Jack Strip and 136-36 Plug Strip make an ideal feeder connection at the transmitter when the antenna is suspended.

Mycalex insulated fittings for use as described in "Q" antenna discussion above.

Cat. No. 136-35—Mounting Jack Strip List Price \$2.00
Cat. No. 136-36—Double Plug Strip List Price 1.00

ALUMINUM "Q" TUBING

Cat. No.	Band (Meters)	Length	List Price
136-ST10	10	2-8'6"	\$4.50
136-ST20	20	4-8'6"	9.50
136-ST40	40	8-8'6"	18.00

"Q" SUSPENSION ASSEMBLY

Includes new type insulator and all necessary hardware for connecting "Q" matching section to antenna and transmission line. Insulator may also be used to bring off "Zepp" feeders from the flat top.



136-106

Cat. No. List Price
136-39—Suspension Assembly \$2.50
136-106—Antenna Feeder Insulator only.. .60

FEEDER INSULATORS

Nos. 136-122, -124 and -125 are conventional feeder spreaders of high grade low absorption porcelain. Silicone impregnated for finest water repellent characteristics. No. 136-122 is provided with notches for 1/2" line spacing. All have 3/8x1/2" cross section. No. 136-31 is a glazed porcelain transposition insulator which permits crossing transmission lines at frequent intervals to prevent radiation and provide 2" line spacing.

Cat. No.	Lgth.	List Price
136-122	2"	\$.15
136-124	4"	.20
136-126	6"	.25
136-31		.16



136-122, -124, -126



136-31



136-33

"Q" SPACING BARS

Made of dense, highly vitrified white glazed porcelain, with aluminum tubing clamps. Used for spacing tubing in matching transformer applications. Clamps are arranged so that spacing is continuously variable from 7/8" to 35/8" center to center.

No. 136-33—Spacing Bar..... List \$0.45

ENAMELLED COPPERWELD ANTENNA WIRE

JOHNSON Enamelled Copperweld Antenna Wire is the ideal material for any system where the wire must not stretch nor sag. The steel core provides almost three times the strength of ordinary copper wire, the copper coating provides a low RF resistance and the enamel prevents corrosion. Prices are per 100 feet. Carried by most suppliers in bulk, it is available from the factory in any specified length.



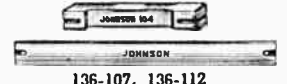
Cat. No.	B&S Gauge	Ft. per lb.	Breaking Strength	List Price per C'
144-348	10	34 1/2	1130 lbs.	\$3.62
144-350	12	54	720 lbs.	2.49
144-352	14	85	400 lbs.	1.64

ANTENNA INSULATORS

These insulators are of genuine WET PROCESS porcelain, with smooth white glazing. The all-porcelain types are 1" in diameter. Their long leakage path, low capacity, and freedom from moisture absorption result in exceptional efficiency. The Commercial Type is 1 1/2" in diameter, for uses where much greater strength is necessary. End fittings are of non-corrosive aluminum alloy. No. 136-104 is a dry process 4" antenna insulator, 3/8" square for service where the strength of the 1" types is not required.

Cat. No.	Break Strength	Lgth.	List Price
136-104	400 lbs.	4"	\$0.20
136-107	800 lbs.	7"	.80
136-112	800 lbs.	12"	.90

No.	Break Strength	Net	Overall	List
136-151	5000 lbs.	8"	15 1/2"	\$9.00
136-152	5000 lbs.	12"	19 1/2"	10.75
136-153	5000 lbs.	20"	25 1/2"	15.00



136-107, 136-112



136-151, -152, -153

PILOT LIGHTS

Brackets are cadmium plated steel, assembled with faceted jewels in your choice of colors and miniature bayonet or miniature screw bases. Pilot lights accommodate number 50 and 52 miniature screw base and numbers 51, 53 and 356 miniature bayonet base panel lamps. Screw base supplied with two lug terminals, bayonet base with one lug and one rivet terminal. Both types supplied with center grounding lug. Pilot lights with smooth jewels available on special order.

Jewel Color	Catalog Number	Screw Base	Bayonet Base	List Price
Clear	147-3101	147-3081		\$0.40
Red	147-3102	147-3082		.40
Green	147-3103	147-3083		.40
Amber	147-3104	147-3084		.40
Blue	147-3105	147-3085		.40
Opal	147-3106	147-3086		.40
Bkt. less Jewel	147-3109	147-3089		.20

JEWEL ASSEMBLIES

1/2" Jewel furnished smooth or faceted in colors listed. Jewel holder is brass nickel plated supplied with nut. 1/4" maximum panel thickness. Mounts in 3/16" hole. Jewels may be furnished with backside or both front and back frosted on special order.



JOHNSON-GOTHARD PILOT LIGHTS

See pages G-16, G-17, G-18 for partial listing of the large line formerly made by Gothard, purchased and now made by Johnson. Standard or special types available for every purpose.

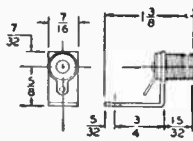
JEWEL ASSEMBLIES

Color	Faceted	Smooth	List Price
Clear	147-3111	147-3211	\$0.20
Red	147-3112	147-3212	.20
Green	147-3113	147-3213	.20
Amber	147-3114	147-3214	.20
Blue	147-3115	147-3215	.20
Opal	147-3116	147-3216	.20

Pilot, dial and panel lights on this page are former Mallory-Yaxley products.



147-3022



147-3052



147-3031



147-3052

DIAL LIGHT SOCKET ASSEMBLIES

Cat. No.	Base	Bracket	Bracket Position	List Price	
147-3031	Screw	Flanged	Up	\$0.15	Sockets are nickel plated brass. Other metal parts cadmium plated. Bracket is insulated from terminal and socket.
147-3011	Bayonet	Flanged	Up	.15	
147-3032	Screw	Flanged	Down	.15	
147-3012	Bayonet	Flanged	Down	.15	
147-3041	Screw	Open Clip	Up	.15	
147-3021	Bayonet	Open Clip	Up	.15	
147-3042	Screw	Open Clip	Down	.15	
147-3022	Bayonet	Open Clip	Down	.15	
147-3051	Screw	Flat	Up	.15	
147-3052	Screw	Flat	Down	.15	
147-3061	Bayonet	Flat	Up	.15	
147-3062	Bayonet	Flat	Down	.15	

DIAL LIGHT SOCKETS ONLY

Miniature screw and miniature bayonet sockets and terminals of plated brass. Bayonet sockets have coil spring in base to assure positive contact.

Cat. No.	Socket Type	Terminals	List Price
147-317	Screw	2 solderlugs	\$1.10
147-318	Screw	1 solderlug 1 rivet	.10
147-319	Bayonet	1 solderlug 1 rivet	.15



147-319

147-317

147-318

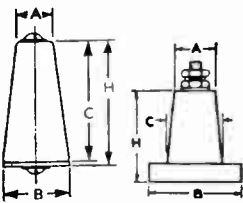


JOHNSON insulators were introduced in the early twenties, and soon established the sort of dominance that occurs occasionally when one line offers more in choice of style and size; in advanced but practical design; and in mass production economy than others. This position has been maintained through the years by careful attention to the product, the line, and the needs of the user.

JOHNSON insulators are specifically designed for high R.F. Insulating materials were selected after exhaustive laboratory tests. Superior grade, low absorption, well glazed electrical porcelain, and Grade L 4 or better steatite are used.

Of the insulators appearing under the headings "Steatite" all but the 500 series and the 135-55 are offered in this finer material for the first time. Their dielectric losses are but a fraction of those for the same parts in porcelain, and they are particularly recommended for high frequency work.

In addition to fine quality insulating materials the JOHNSON line distinguishes itself with a perfection of ceramic design; logical proportions; clean-cut accurate molding; and high grade nickel plated brass hardware, with milled (not stamped) nuts.



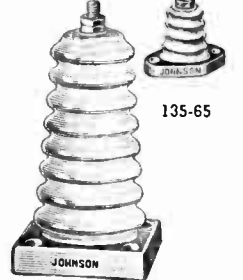
STAND-OFF AND CONE INSULATORS

The stand-off insulators feature heavy, breakage-resistant bases and adequate "glaze grooves" around mounting screw holes. Numbers 135-65, 135-66, 135-67 and 135-68 have unbreakable, cadmium plated, drawn steel bases. Brass bases are optionally available and indicated by suffix "B" behind catalog number.

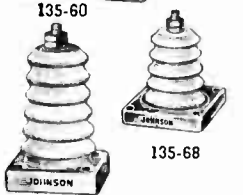
The No. 500 cone insulator series are steatite for better high frequency insulation. Threads are tapped directly into the ceramic. Furnished complete with machine screws, brass and cushion washers.



135-20 135-22J 135-22



135-65



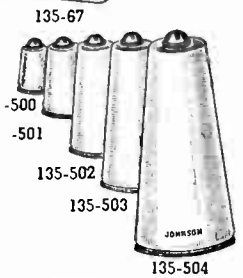
135-60

135-68



135-62

135-66



135-67

500

501

135-502

135-503

135-504

STAND-OFF INSULATORS

Cat. No.	List Price	Dimensions				Hard-ware
		A	B	M*	H	
135-20	\$0.20	3/4	1 3/4	1 1/8	1 1/8	10-32
135-20J	.25	3/4	1 3/4	1 1/8	1 1/8	74 Jack
135-22	.15	3/8	1 3/8	1 1/8	1	8-32
135-22J	.20	3/8	1 3/8	1 1/8	1	74 Jack
135-24	.12	3/8	1	1 1/8	5/8	6-32
Porcelain						
135-60	.75	1 1/8	2 1/2	1 7/8	4 1/2	1/4-20
135-62	.50	7/8	1 7/8	1 3/8	2 3/4	1/4-20

Metal Base Types

135-65	.25	5/8	1 7/8	1 1/2	1 3/8	10-32
135-65B	.30	5/8	1 7/8	1 1/2	1 3/8	10-32
135-65J	.30	5/8	1 7/8	1 1/2	1 3/8	74 Jack
135-66	.50	1 1/8	1 3/4	1 3/8	2 3/4	1/4-20
135-66B	.55	1 1/8	1 3/4	1 3/8	2 3/4	1/4-20
135-66J	.65	1 1/8	1 3/4	1 3/8	2 3/4	76 Jack
135-67	.80	1 1/8	2 1/4	1 3/4	4 1/2	1/4-20
135-67B	.85	1 1/8	2 1/4	1 3/4	4 1/2	1/4-20
135-67J	.90	1 1/8	2 1/4	1 3/4	4 1/2	76 Jack
135-68	.35	3/8	1 3/4	1 3/8	2	10-32
135-68B	.40	3/8	1 3/4	1 3/8	2	10-32
135-68J	.40	3/8	1 3/4	1 3/8	2	74 Jack

* Mounting centers.

STEATITE CONE INSULATORS

135-500	.20	1/2	5/8	5/8	6-32
135-501	.30	1/2	3/4	1	8-32
135-502	.55	1/2	1	1 1/2	8-32
135-503	.75	5/8	1 1/8	2	10-32
135-504	1.25	3/4	1 1/2	3	10-32

BRASS BASES

For outside use, particularly under corrosive conditions, lacquered brass bases are recommended, if necessary for replacement, on numbers -65, -66, -67 and -68 insulators.

Cat. No.	List Price	For Use With
135-865	\$0.09	135-65
135-866	.14	135-66-135-68
135-867	.20	135-67

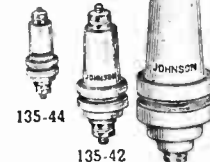
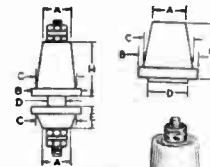
THRU-PANEL INSULATORS AND BUSHINGS

In the thru-panel and bushing series special attention has been given to obtaining high mechanical strength through heavier construction and at the same time increasing the breakdown voltage. Flat mounting surfaces with cushion washers eliminate breakage. Bottom pieces have long internal and external portions for higher breakdown voltage rating, and grooved surfaces to increase leakage path. Jack types have terminals permitting connection above as well as below the panel.

JOHNSON lead-in bushings are designed to have even greater mechanical strength and long leakage path in proportion to size. Numbers 135-53 and 135-54 are supplied as single porcelain parts including cushion washers.

Nos. 135-50 and 135-55 are steatite and have a special interlocking feature which permits mounting on thin panels without extra spacing washers.

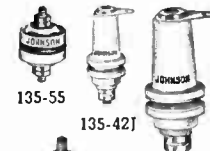
Nos. 20, 20J, 22, 22J and 24 are now also steatite with heavily plated brass hardware.



135-44

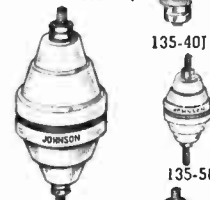
135-42

135-40



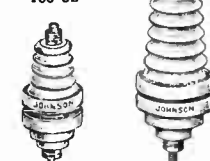
135-55

135-42J



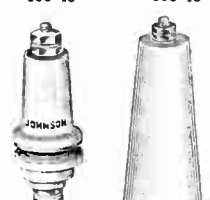
135-52

135-40J



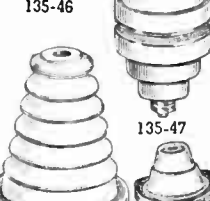
135-45

135-48



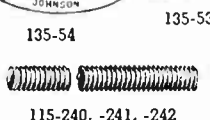
135-46

135-47



135-54

135-53



115-240, -241, -242

THRU-PANEL INSULATORS

Cat. No.	List Price	Dimensions				Hard-ware
		A	B	D	E H	
Steatite						
135-40	\$0.30	1 1/4	1 1/4	1 1/4	1/2 1 1/4	10-32
135-40J	.40	1 1/4	1 1/4	1 1/4	1/2 1 1/4	74 Jack
135-42	.28	1 1/2	3/4	400	3/8 7/8	10-32
135-42J	.35	1 1/2	3/4	400	3/8 7/8	74 Jack
135-44	.23	3/8	5/8	305	3/8 5/8	6-32
135-45	.40	5/8	1 1/4	1/2	1 1/8 1 3/8	10-32
Porcelain						
135-45J	.50	5/8	1 1/4	1/2	1 1/8 1 3/8	74 Jack
135-46	.80	1 1/8	1 5/8	1 1/8	1 2 3/4	1/4-20
135-46J	.95	1 1/8	1 5/8	1 1/8	1 2 3/4	76 Jack
135-47	1.20	1 1/4	2 1/8	3 1/8	1 1/2 4 1/2	1/4-20
135-47J	1.40	1 1/4	2 1/8	3 1/8	1 1/2 4 1/2	76 Jack
135-48	.50	3/8	1 5/8	1 1/8	1 1/2 2	10-32
135-48J	.60	3/8	1 5/8	1 1/8	1 1/2 2	74 Jack

LEAD-IN BUSHINGS

Cat. No.	List Price	Dimensions				Hard-ware
		A	B	D	E H	
Steatite						
135-50	.28	3/8	3/4	1 1/8	1/2 6-32	
135-55	.26	1/2	3/4	1 1/8	1/4 6-32	
Porcelain						
135-51	.40	5/8	1 1/4	1 1/8	1 1/2 10-32	
135-52	.65	7/8	1 3/4	1 1/8	1 1/2 1 1/4-20	
135-53	.30	1	2 1/2	1 1/8	1 3/4	
135-54	.70	1	3 1/2	2 1/8	4	

MOUNTING FLANGES

Stamped aluminum Mounting Flanges cast aluminum for Lead-in Bushings 135-53 and 135-54.

Cat. No.	For Bushing No.	List Price
135-80	135-53	\$0.35
135-91	135-54	.70

THREADED BRASS ROD

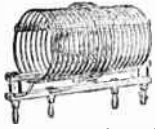
Intended primarily for use with lead-in bushings 135-53 and 135-54. Accurately cut threads, heavy nickel plating, complete with 4 washers and 4 nuts, 1/4" diameter, 1/4-20 thread. It has many other uses in radio construction.

Cat. No.	List Price	Length
115-240	\$0.40	8"
115-241	.45	10"
115-242	.55	15"



AIR INDUCTORS

BARKER & WILLIAMSON • UPPER DARBY, PA.



ANTENNA INDUCTORS TYPES TA AND HDA

Wound with tinned copper wire for ease in tapping feeders to coils. Equipped with fixed center links for coupling to either fixed or variable linked final tank circuits through a low impedance line. Two tinned clips come with each coil. TYPE TA COILS for power input up to 500 watts. TYPE HDA COILS for power inputs of one kilowatt.

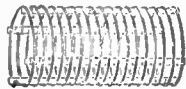
SPECIFICATIONS

Band	Stock No.	Type	Capacity to Res. L.F. End of Band mmfd.	Net Price
TA TYPES				
10	3601	10TA	20	\$2.89
15	3602	15TA	23	2.96
20	3603	20TA	23	2.96
40	3604	40TA	34	3.30
80	3605	80TA	50	3.65

Stock No. 3321 Jack Bar Assembly for TA Inductors.

Band	Stock No.	Type	Capacity to Res. L.F. End of Band mmfd.	Net Price
HDA TYPES				
10	3607	10HDA	20	5.85
15	3608	15HDA	20	6.54
20	3609	20HDA	20	6.54
40	3610	40HDA	20	6.88
80	3611	80HDA	34	7.56

Stock No. 3721 Jack Bar Assembly for HDA Inductors.

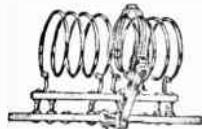


B & W MINIINDUCTORS

For use in limited space—can be cut to size. Amazingly high Q characteristic. Useful for tank circuit coils, R-F chokes, high-frequency I-F transformers, loading coils, etc.

SPECIFICATIONS

Catalog No.	Diameter	Turns per Inch	Length	Net Price
3001	1/2"	4	2"	\$0.31
3004	1/2"	32	2"	.31
3002	1/2"	8	2"	.31
3003	1/2"	16	2"	.31
3005	5/8"	4	2"	.37
3006	5/8"	8	2"	.37
3007	5/8"	16	2"	.37
3008	5/8"	32	2"	.37
3009	3/4"	4	3"	.44
3010	3/4"	8	3"	.44
3011	3/4"	16	3"	.44
3012	3/4"	32	3"	.44
3013	1"	4	3"	.50
3014	1"	8	3"	.50
3015	1"	16	3"	.50
3016	1"	32	3"	.50



TYPE TVH INDUCTORS

For Powers up to 500 Watts Input

A special group of units with eight contact plug bars which gives greater flexibility than otherwise possible.

SPECIFICATIONS

Band	Stock No.	Type	Capacity to Res. L.F. End of Band mmfd.	Net Price
10	3501	10TVH	11	\$3.93
15	3502	15TVH	23	3.93
20	3503	20TVH	23	3.93
40	3504	40TVH	28	3.93
80	3505	80TVH	49	3.93

Stock No. 3507—Jack Bar Assembly for Type TVH Inductor 5.16

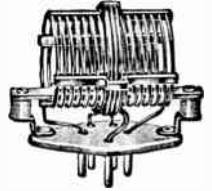
*Actual condenser capacity will be smaller by the sum of the tube output and wiring capacities, generally between 5 and 20 mmfd.

JUNIOR INDUCTORS

For Powers Up to 75 Watts Input

Fitted with standard five-prong stearite base. Small size for compact construction. May be used in the oscillator, buffer or final amplifier stage with input powers up to 75 watts and plate voltages up to 850. Three different assemblies provided, any of which may be used in capacity-coupled circuits by omitting connection to the links.

AMATEUR NET \$1.38 ea.



SPECIFICATIONS

Band	Stock No.	Type	Capacity to Res. L.F. End of Band mmfd.
End Linked Models			
5	3100	5JEL	15
10	3101	10JEL	22
15	3102	15JEL	22
20	3103	20JEL	34
40	3104	40JEL	47
80	3105	80JEL	60
Center Linked Models			
5	3107	5JCL	15
10	3108	10JCL	16
15	3109	15JCL	16
20	3110	20JCL	16
40	3111	40JCL	33
80	3112	80JCL	63
Variable Link Models			
5	3114	5JVL	15
10	3115	10JVL	22
15	3116	15JVL	27
20	3117	20JVL	21
40	3118	40JVL	31
80	3119	80JVL	46

*Actual condenser capacity will be smaller by the sum of the tube output and wiring capacities, generally between 5 and 20 mmfd.

B & W TURRET ASSEMBLIES

Makes possible fast, positive band switching. Unique switching assembly allows unused coils to be shorted, thus eliminating absorption effects. All units cover 80, 40, 20, 15 and 10 meter bands.

B & W 75 WATT 2A "BAND HOPPERS"

Uses same coil design as B & W Juniors. Unusually compact panel controlled unit. It may be used for inter-stage coupling between two beam power tubes or between beam power tubes and triodes.

Stock No. 3121 Amateur Net \$4.81

B & W 75-WATT TURRETS—provide a means for link coupling single ended or push-pull low power stages. Complete assembly is mounted on a positive action switch arranged for panel mounting through a single 3/8" hole. Turrets may be used with tubes operating at voltages up to 850.

Stock No. 3810—Type JTCL—Center linked, center tapped coils. Amateur Net \$9.38

Stock No. 3811—Type JTEL—End linked, untapped coils. Amateur Net \$9.38

B & W 150-WATT TURRETS—Supplied in both center and end link models for both single- and double-ended circuits. Operation is by a positive action switch arranged for panel mounting through a single 3/8" hole. Turrets may be used with tubes operating at voltages up to 1000 volts.

Stock No. 3812—Type BCL—Center linked, center tapped coils. Amateur Net \$11.69

Stock No. 3813—Type BEL—End linked, untapped coils. Amateur Net \$11.69



3400 SERIES INDUCTORS

FOR POWERS UP TO 500 WATTS

Give the utmost in sturdy construction and electrical flexibility. Same as those supplied by B & W to the armed forces during the war. Each coil has an individual internal center coupling, adjustable over 360°—permitting precise impedance matching up to 600 ohms, thus providing flexibility far in excess of any installation requirements.

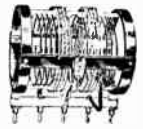
Amateur Net \$7.50 each

SPECIFICATIONS

Band	Stock No.	Capacity to Res. L.F. End of Band mmfd.
10	3401	24
15	3402	25
20	3403	30
40	3404	30
80	3405	50

Stock No. 3321—Stearite Jack Bar Assembly.

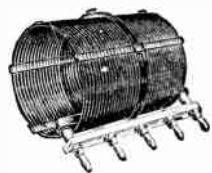
*Actual condenser capacity will be smaller by the sum of the tube output and wiring capacities, generally between 5 and 20 mmfd.





AIR INDUCTORS

BARKER & WILLIAMSON • UPPER DARBY, PA.



TYPE HD1
(Fixed Link)

- MINIMUM DIELECTRIC IN THE FIELD OF THE COIL
- EXTREMELY LOW LOSSES
- RUGGED CONSTRUCTION
- EXCELLENT APPEARANCE
- LOW COST

Each AIR INDUCTOR is a completely finished unit. All coils are equipped with banana type plugs . . . Type "B" is for use in oscillator and buffer—doubler stages developing up to 100 Watts power. Type "T" is especially suited for high powered neutralized buffer and final tank stages where powers of 500 Watts are developed. Type "HD" is for maximum power — handles a Kilowatt with ease.

SPECIFICATIONS

Band	Stock No.	Type	Net Price
TYPE B			
MODELS WITHOUT LINK—CENTER TAPPED			
5	3200	5B	\$1.38
10	3201	10B	1.38
15	3202	15B	1.45
20	3203	20B	1.45
40	3204	40B	1.79
80	3205	80B	2.14

Band	Stock No.	Type	Net Price
END LINK MODELS—WITHOUT TAP			
5	3207	5BEL	2.41
10	3208	10BEL	2.41
15	3209	15BEL	2.48
20	3210	20BEL	2.48
40	3211	40BEL	2.83
80	3212	80BEL	3.16

Band	Stock No.	Type	Net Price
CENTER LINK MODELS—CENTER TAPPED			
5	3214	5BCL	2.41
10	3215	10BCL	2.41
15	3216	15BCL	2.48
20	3217	20BCL	2.48
40	3218	40BCL	2.83
80	3219	80BCL	3.16

Band	Stock No.	Type	Net Price
VARIABLE LINK MODELS—CENTER TAPPED			
5	3221	5BVL	1.93
10	3222	10BVL	1.93
15	3223	15BVL	2.00
20	3224	20BVL	2.00
40	3225	40BVL	2.28
80	3226	80BVL	2.61

Stock No. 3228—Stearite Jack Bar Assembly for end or center link type B Inductors, old Type A56.
Stock No. 3229—Jack Bar and Swinging Link for BVL Inductors.

Band	Stock No.	Type	Net Price
TYPE T			
10	3301	10T	1.51
15	3302	15T	1.59
20	3303	20T	1.59
40	3304	40T	1.93
80	3305	80T	2.28

Band	Stock No.	Type	Net Price
CENTER LINKED MODELS—CENTER TAPPED			
10	3308	10TCL	\$2.89
15	3309	15TCL	2.96
20	3310	20TCL	2.96
40	3311	40TCL	3.30
80	3312	80TCL	3.65

Band	Stock No.	Type	Net Price
VARIABLE LINKED—CENTER TAPPED			
10	3315	10TVL	2.20
15	3316	15TVL	2.28
20	3317	20TVL	2.28
40	3318	40TVL	2.61
80	3319	80TVL	2.96

Stock No. 3321—Stearite Jack Bar Assembly for end or center link Type T Inductors, old Type A54.
Stock No. 3322—Base Assy. and Swinging Link for TVL Inductors.

Band	Stock No.	Type	Net Price
TYPE HD			
MODELS WITHOUT LINK—CENTER TAPPED			
10	3701	10HD	3.10
15	3702	15HD	3.79
20	3703	20HD	3.79
40	3704	40HD	4.13
80	3705	80HD	4.81

Band	Stock No.	Type	Net Price
CENTER LINKED MODELS—CENTER TAPPED			
10	3708	10HDCL	5.85
15	3709	15HDCL	6.54
20	3710	20HDCL	6.54
40	3711	40HDCL	6.88
80	3712	80HDCL	7.56

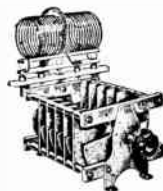
Band	Stock No.	Type	Net Price
VARIABLE LINKED MODELS—CENTER TAPPED			
10	3715	10HDVL	4.48
15	3716	15HDVL	5.16
20	3717	20HDVL	5.16
40	3718	40HDVL	5.50
80	3719	80HDVL	6.19

Stock No. 3721—Jack Bar Assembly for HD and HDCL Inductors.
Stock No. 3722—Base Assembly and SL for HDVL Inductors.

TYPE CX CONDENSER

Superior design! Only half the length of conventional units. Perfect electrical and mechanical symmetry. Designed for built-in neutralization. Integral mounting of B & W coils reduces lead lengths and resulting lead inductance to an absolute minimum.

Stock No. 3722-1—Type HD Jack Bar and SL assembly mounted on any type of condenser.
Stock No. 3721-1—Type HD or HDL Jack Bar mounted on condenser.
Stock No. 3507-1—Type TVH Jack Bar and SL mounted on condenser.
Stock No. 3930-1—Single Vacuum Condenser mount.
Stock No. 3930-2—Twin Vacuum Condenser mount.



NEUTRALIZING PLATES AVAILABLE IN FOUR TYPES, DESIGNATED N1, N2, N3, and N4.

N1—will neutralize the HY114, HK24, RK31, HK51, TW75, and similar tubes.
N2—will neutralize the 75T, 35T, 808, RK35, 852, and similar tubes.
N3—will neutralize the 801, T-7Z20, T-TZ40, RK18, HK154, 811, 812, T55, 100TH, 100TI, 806, 810, and similar tubes.
N4—will neutralize the 833, T200, 805, GL152, 838, 203A, RK52, and similar tubes.

"A" TYPE—500" AIRGAP

Type	Capacity Per Section		Capacity Sections in Series		Net Price
	Max.	Min.	Max.	Min.	
CX11A	11	8	8	6	\$12.52
CX20A	20	11	13	8	15.32
CX30A	30	14	18	10	17.59
CX40A	40	18	23	12	19.81
CX49A	49	21	28	14	22.08
CX59A	59	24	33	16	24.29
CX68A	68	27	38	18	26.50
CX77A	77	30	43	20	28.78
CX87A	87	34	48	22	30.99
CX96A	96	37	53	24	33.20
CX105A	105	40	58	26	35.47
CX115A	115	43	62	29	37.69
CX124A	124	46	68	30	39.96

"B" TYPE—375" AIRGAP

Type	Capacity Per Section		Capacity Sections in Series		Net Price
	Max.	Min.	Max.	Min.	
CX11B	11	8	9	6	12.17
CX22B	22	11	15	8	14.91
CX34B	34	14	21	10	17.18
CX45B	45	17	28	12	19.34
CX58B	58	20	33	13	21.49
CX70B	70	23	38	15	23.71
CX82B	82	26	45	17	25.80
CX94B	94	29	50	19	28.08
CX106B	106	32	56	20	30.17
CX118B	118	36	62	22	32.33
CX130B	130	39	68	24	34.60
CX141B	141	42	74	26	36.76
CX153B	153	45	80	27	38.91

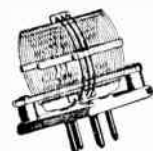
"C" TYPE—250" AIRGAP

Type	Capacity Per Section		Capacity Sections in Series		Net Price
	Max.	Min.	Max.	Min.	
CX13C	13	8	10	6	11.88
CX30C	30	11	19	8	14.56
CX45C	46	13	26	9	16.72
CX62C	62	16	34	11	18.81
CX78C	78	19	42	12	20.97
CX95C	95	22	50	14	23.13
CX111C	111	25	59	15	25.16
CX127C	127	28	67	17	27.32
CX143C	143	31	75	18	29.42
CX159C	159	33	83	20	31.46
CX175C	175	36	91	21	33.73
CX192C	192	39	100	23	35.82
CX208C	208	42	110	24	37.86

Standard plate thickness in all models, 1/16". • Available on special order, 3/32" plates at 10% additional. • Special features. • Explanation: The type of each condenser designates its capacity and plate spacing as follows: CX100 indicates 100 mmfd. per section. • Letters A, B, C, or D denotes plate spacing: A—500", B—375", C—250", D—187". Following N# denotes Neutralizing plates.

"BABY" AIR INDUCTORS

(25 WATT RATING)



Just the thing for crowded layouts, portables, field transmitters! The smallest, most efficient, most practical 25-Watt coils ever available to amateurs. "BABIES" measure only 1 1/2" x 1 1/4", are made by a special B&W process which insures perfect air-spacing, maximum strength, fine appearance and ultra-high efficiency with an absolute minimum of insulating material. Available in five types, from 10 to 160 meters. Conservatively rated. Universal 5-prong Alsimag 196 bases. Net Any Type \$1.04

Straight Coil	Center Tapped	End Linked	Center Linked	Inductance	Capacity
80M	MC	MEL	MCL	40	50
40M	MC	MEL	MCL	14	35
20M	MC	MEL	MCL	3.5	35
15M	MC	MEL	MCL	2.7	35
10M	MC	MEL	MCL	1.1	30

*Total effective capacity required to effect resonance on low frequency end of specified band.



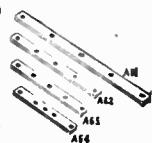
"BABY" TURRETS

35-WATT RATING

These compact 5-band switching units cover amateur bands from 10 to 80 meters. They may be tuned in all types of service with any of the 50 mmfd. midjet condensers. Their sturdy construction and unique design assure permanent coil alignment and maximum efficiency with a minimum number of tubes. Four types—BTM, straight untapped BTCL, center tapped; BTPL, and linked and BTCL, center linked—provide vastly improved band-switching efficiency in low-power transmitters and exciter stages. Net, Any Type \$8.44

B & W PLUG AND JACK BARS

Made of high quality steatite. Ample size to insure excellent strength. They provide experimenters with the same units that are used in B & W Inductors. (Can also be used as spreaders for feeders and other parts of the antenna system.)



SPECIFICATIONS

Stock No.	Type	Length	Width	Thick-ness	Mounting	Used	Net Price
3914	Plug	3 1/2"	1 1/2"	3/16"	Series	B	\$0.20
3915	Jack	4 1/2"	1 1/2"	3/16"	Series	B	.60
3916	Plug	5 1/2"	1 1/2"	3/16"	Series	T	.30
3917	Jack	7"	1 1/2"	3/16"	Series	T	1.00
3918	Plug	6 1/2"	1 1/2"	3/16"	Series	TVH	.60
3919	Jack	8 1/2"	1 1/2"	3/16"	Series	TVH	1.10
3920	Plug	8 1/2"	1 1/2"	3/16"	Series	HD	1.10
3921	Jack	10 1/2"	1 1/2"	3/16"	Series	HD	1.25

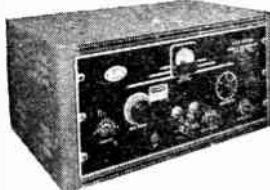


TEST EQUIPMENT

BARKER & WILLIAMSON • UPPER DARBY, PA.

B & W VFO EXCITER Model 500

Height: 10 1/2 inches.
Width: 22 inches. Depth:
17 inches. Weight: 62 lbs.



The result of two years of intensive development work! Now available to the discriminating amateur only because inherent weaknesses of variable frequency oscillators have been solved to a point of complete operating satisfaction. Output coupling reactance completely eliminated. Oscillator stability virtually unaffected by changes in line voltage of 25%. The B & W Exciter is in itself a low-powered transmitter and a deluxe exciter unit for the amateur who appreciates the highest degree of mechanical and thermal stability.

Model 502 VFO Available as Separate Unit

For the amateur who does not require the complete unit, the B & W model 502 VFO with calibrated dial is available separately and comes complete with full instructions for installation and operation. The VFO is capable of driving a 6L6 or similar tube to normal output as a straight amplifier or doubler.

FEATURES

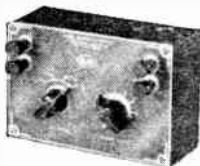
- ±50 cycle stability and re-settability on calibrated logging scale.
- Logging scale calibrated in 24 divisions over 360 degrees. 2400 degrees band spread on log scale. All amateur bands accurately calibrated.
- Perfect keying, free from chirps and thumps.
- Maximum drift 2 cycles per megacycle per degree Fahrenheit.
- Multiplier unit provides output on 80, 40, 20, 15, 11 and 10 meter amateur bands. 807 stage provides maximum of 25 watts fundamental output on all bands.
- Oscillator reset for absolute frequency track.
- Relay equipped for remote operation.
- Self-contained power supply for VFO multiplier and 807 output stage.

MODELS

- Model 500—VFO Exciter as described, complete with power supply, cabinet and full instructions.
Model 501—VFO Exciter for rack and panel mounting.
Model 502—VFO complete with dial assembly and full instructions.
Model 503—VFO voltage regulated power supply.
Model 504—All band multiplier for use either with crystal or VFO.
PRICE ON APPLICATION

B & W SINE WAVE CLIPPER Model 250

Equipped with a pair of input terminals, a pair of output terminals, an output volume control and a selector switch.



Net Price: \$10.00.

Dimensions: 2" x 4" x 5 1/2".

SPEEDS ACCURATE ANALYSIS OF AUDIO CIRCUITS. SIMPLIFIES SELECTIONS OF COMPONENTS. SAVES VALUABLE TIME. Here's an instrument that will do most of the jobs usually assigned to a square wave generator costing about 10 times as much! The B & W Sine Wave Clipper provides a test signal particularly useful in examining the transient and frequency response of audio circuits. Designed to be driven by an audio oscillator, the clipper provides a clipped sine wave—hence the name "Sine Wave Clipper." Used in engineering work, repairs, or with equipment under development, it will quickly pay for itself many times over.

B & W FREQUENCY METER Model 300

Net Price: \$96.00.
Dimensions: 13 3/4" x 7 1/4" x 9 1/2".

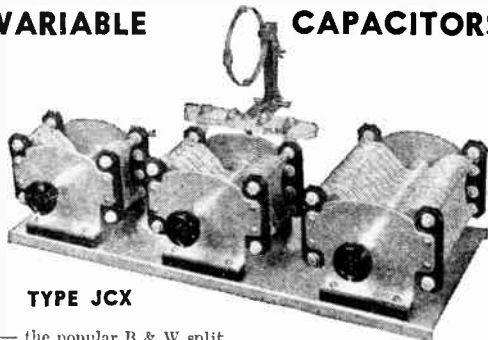
An accurate and convenient means of making direct measurements of unknown audio frequencies up to 30,000 cycles. Integral power supply. Extremely useful for routine checking of audio oscillators or tone generators. Housed in an attractive black crackle finished steel cabinet with carrying handle and rubber feet.

FEATURES

- Frequency Range: 20 to 30,000 cycles in 6 ranges.
Sensitivity: minimum .5 volts input.
Wave Form: will operate on any wave form with peak ratios of less than 8 to 1.
- Calibration: when referenced against 60 cycle line frequency, all other frequencies will fall within 2%.



B & W NEW, SMALL BUTTERFLY VARIABLE CAPACITORS



TYPE JCX

Now — the popular B & W split stator, butterfly type of variable condenser construction has been adapted to small, compact units for general ham and other uses!

Having just 25% of the frontal area of CX types, these new B & W JCX Variable Capacitors are ideal for medium powered triode or tetrode stage plate circuit applications.

Featuring stainless steel shafts, heavy rounded aluminum plates and high quality insulating materials, the B & W Midget Butterfly will be a welcome addition for the amateur who is looking for peak efficiency in low and medium power transmitter stages.

"E" TYPE .125" AIRGAP

Type	Catalog Stock No.	Capacity Section in Series Max. Min.	Capacity Per Section Max. Min.	Mounting Length	Net Price
JCX100E	100	50 15	99 23	5 1/2"	\$9.50
JCX50E	101	25 10	42 13	3 3/8"	6.75
JCX25E	102	16 8	25 10	2 3/4"	5.50

B & W AUDIO OSCILLATOR Model 200

Net Price: \$102.00.

Dimensions: 13 3/4" x 7 1/4" x 9 1/2".

Ideal for use in distortion measurements, frequency measurements or in any application where a stable, accurately calibrated source of frequencies between 30 and 30,000 cycles is required. No zero reset or line calibration is required. Self-contained power supply. Housed in an attractive black crackle finished steel cabinet with carrying handle and rubber feet. Panel is of 1/8" reverse etched aluminum.



FEATURES

- Voltage Output: 12.5 volts open circuit. 11 volts output on 500 ohm load.
Wave Form: RMS harmonics at 5 volts output on 500 ohm load, less than 1%. On open circuit (10,000 ohms up) approximately .5% on all frequencies between 50 and 15,000 cycles.
Frequency Response: better than ±1 D.B. from 30 to 30,000 cycles.
Stability: better than 1%.
Calibration: ±2.5%.

B & W DISTORTION METER Model 400

Net Price: \$127.50.
Dimensions: 13 3/4" x 7 1/4" x 9 1/2".

A sensitive instrument having a wide range of applications in the audio frequency measurements field. Ideal for measuring low level audio voltage and determining noise and harmonic content of same. Variable frequency selective filter provides a single frequency suppression circuit for the frequency range of 50 to 15,000 cycles. Small size, light weight and out-standing performance make this instrument an ideal unit for either laboratory or field work.

FEATURES

- Frequency Range: (a) Distortion meter. For fundamentals from 50 to 15,000 cycles, measuring harmonics up to 45,000 cycles. (b) As voltmeter and D.V. meter from 30 to 30,000 cycles.
- Sensitivity: (a) Noise and distortion measurements, minimum input .3 volts. (b) Voltmeter, full scale readings of .3, .1, .03, .01, .003 volts.
- Calibration: For distortion measurements: ±10%. For noise measurements: ±1 D.B. For voltage measurements: ±5%.



JAMES M MILLEN

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INSTRUMENT DIALS

The No. 10030 is an extremely sturdy instrument type indicator. Control shaft has 1 to 1 ratio. Veeder type counter is direct reading in 99 revolutions and vernier scale permits readings to 1 part in 100 of a single revolution. Has built-in dial lock and $\frac{1}{4}$ " drive shaft coupling. May be used with multi-revolution transmitter controls, etc., or through gear reduction mechanism for control of fractional revolution capacitors, etc., in receivers or laboratory instruments.

The No. 10035 illuminated panel dial has 12 to 1 ratio; size, $8\frac{1}{2}$ " x $6\frac{1}{2}$ ". Small No. 10039 has 8 to 1 ratio; size, 4" x $3\frac{1}{4}$ ". Both are of compact mechanical design, easy to mount and have totally self-contained mechanism, thus eliminating back of panel interference. Provision for mounting and marking auxiliary controls, such as switches, potentiometers, etc., provided on the No. 10035. Standard black finish, either size, flat black art metal.

No. 10039 \$ 2.70
 No. 10030 25.00
 No. 10035 6.00

PANEL MARKING TRANSFERS

The panel marking transfers have $\frac{1}{8}$ " black letters. Special solution furnished. Must not be used with water. Equally satisfactory on smooth or wrinkle finished panels or chassis. Ample supply of every conceivable word or marking required for amateur or commercial equipment.

No. 59001, white letters \$1.25
 No. 59002, black letters 1.25

R9'er MATCHING PREAMPLIFIER

The Millen 92101 is an electronic impedance matching device and a broad-band preamplifier combined into a single unit, designed primarily for operation on 6 and 10 meters. Coils for 20 meter band also available.

No. 92101, less tubes \$24.75

HIGH FREQUENCY TRANSMITTER

The No. 90810 crystal control transmitter provides 75 watt output (higher output may be obtained by the use of forced cooling) on the 10-11, 6 and 2 meter amateur bands. Provisions are made for quick band shift by means of the new 48000 series high frequency plug-in coils.

No. 90810, less tubes and crystals \$69.75

HIGH VOLTAGE POWER SUPPLY

The No. 90281 high voltage power supply has a d.c. output of 700 volts, with maximum current of 250 ma. In addition, a.c. filament power of 6.3 volts at 4 amperes is also available so that this power supply is an ideal unit for use with transmitters, such as the Millen No. 90800, as well as general laboratory purposes. The power supply uses two No. 816 rectifiers and has a two section pi filter with 10 henry General Electric chokes and a 2-2-10 mfd. bank of 1000 volt General Electric Pyralon capacitors. The panel is standard $8\frac{3}{4}$ " x 19" rack mounting.

No. 90281, less tubes \$84.50

NEUTRALIZING CAPACITOR

Designed originally for use in our own No. 90881 Power Amplifier, the No. 15011 disc neutralizing capacitor has such unique features as rigid channel frame, horizontal or vertical mounting, fine thread over-size lead screw with stop to prevent shorting and rotor lock. Heavy rounded-edged polished aluminum plates are 2" diameter. Glazed Steatite insulation.

No. 15011 \$3.15

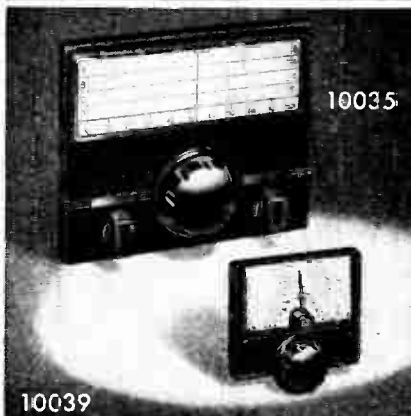
RF POWER AMPLIFIER

This 500 watt amplifier may be used as the basis of a high power amateur transmitter or as a means for increasing the power output of an existing transmitter. As shipped from the factory, the No. 90881 RF power amplifier is wired for use with the popular RCA or G.E. "812" type tubes, but adequate instructions are furnished for readjusting for operation with such other popular amateur style transmitting tubes as Taylor T240, Eimac 35T, etc. The amplifier is of unusually sturdy mechanical construction, on a $10\frac{1}{2}$ " relay rack panel. Plug-in inductors are furnished for operation on 10, 20, 40 or 80 meter amateur bands. The standard Millen No. 90800 exciter unit is an ideal driver for the new No. 90881 RF power amplifier.

No. 90881, with one set of coils, but less tubes \$89.50

Net

World Radio History



10035

10039



10030



92101



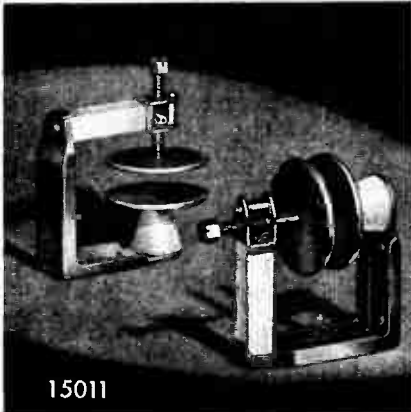
59001



90310



90281



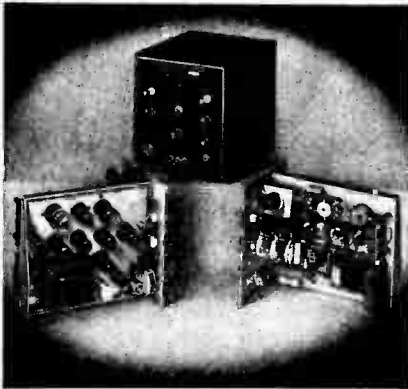
15011



90881

JAMES M MILLEN

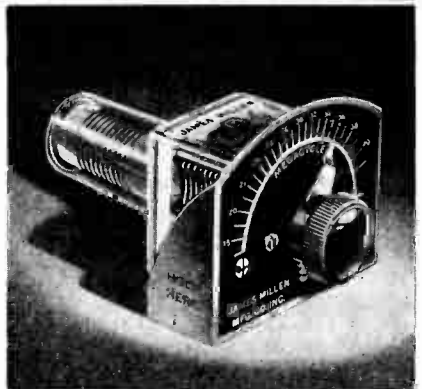
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SECONDARY FREQUENCY STANDARD

A precision frequency standard for both laboratory and production uses, adjustable output, provided at intervals of 10, 25, 100 and 1000 kc, with magnitude useful to 50 mc. Harmonic amplifier with tuned plate circuit and panel range switch, 800 cycle modulator with panel control switch. In addition to oscillators, multivibrators, modulators and amplifiers, a built-in detector with phone jack and gain control is incorporated. Self-contained power supply.

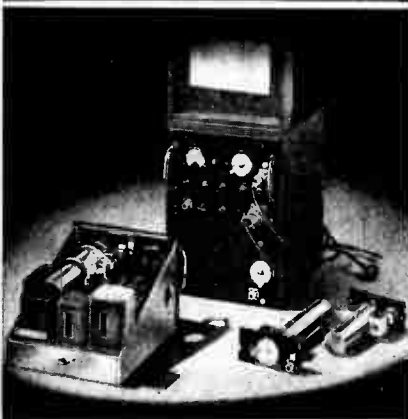
Model 90505, with tubes \$155.00



ABSORPTION WAVEMETERS

The 90600 series of absorption wavemeters are available in several styles and many different ranges. Most popular is kit of four units, covering range of 3.0 to 140 mc.

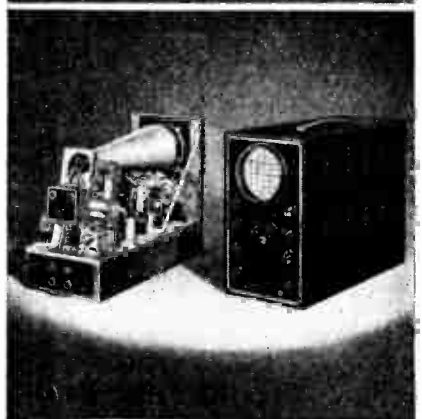
Model 90600 \$18.00



FREQUENCY CALIBRATORS

The cavity type frequency calibrator covers a range of 200 to 700 mc., with a maximum error of not over 0.25%. This range is covered by two plug-in cavity type tuning units, which may be easily interchanged. The calibrator consists of an accurately calibrated cavity-type tuning unit, a crystal detector, a two-stage video amplifier and a peak reading VT voltmeter.

Model 90630, with tubes \$375.00

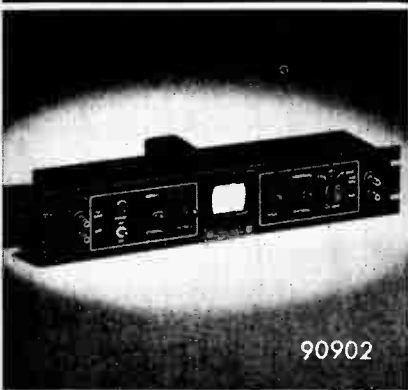


SYNCHROSCOPES

The 5" synchrosopes are available with and without detector-video strips.

Model P-4, with tubes \$300.00

Model P-4E, with tubes 395.00



OSCILLOSCOPES

The basic type 2" oscilloscope is complete with power supply, focusing and centering controls and 60 cycle sweep, for use in normal form for transmitter monitoring or as basic unit for addition of specially designed external sweeps, amplifiers, etc., for specialized applications.

Model 90902, less tubes \$42.50



REGULATED POWER SUPPLIES

A compact, uncased, regulated power supply, either for table use in the laboratory or for incorporation as an integral part of larger equipments. 50 watts, with regulated voltage from 0 to 200 volts.

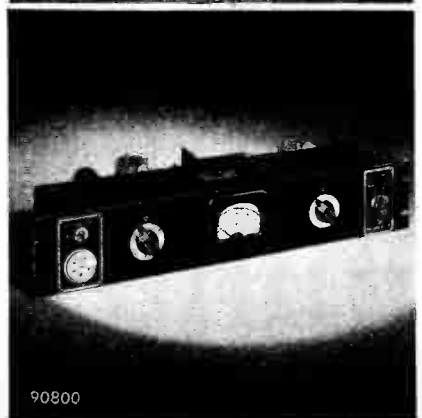
Model 90201, less tubes \$100.00



FREQUENCY SHIFTER

A favorite frequency shifter, plugs in, in place of crystal, for instant finger-tip control of carrier frequency. Low drift, chirpless keying, vibration immune, big band spread, accurate calibration.

Model 90700, with tubes \$42.50



50 WATT TRANSMITTER

Based on an original Handbook design, this flexible unit is ideal for either low power amateur band transmitter use or as an exciter for high power PA stages.

Model 90800, less tubes \$42.50

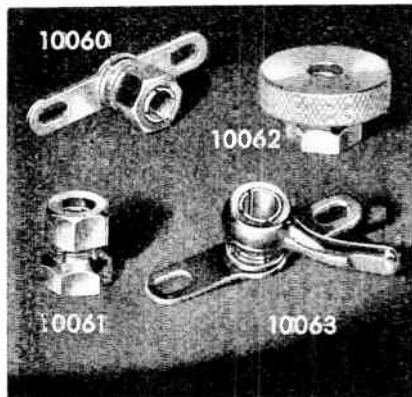
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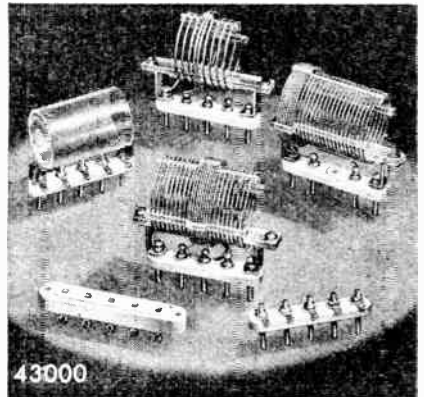
SHAFT LOCKS

In addition to the original No. 10060 and No. 10061 "DESIGNED FOR APPLICATION" shaft locks, we can also furnish such variations as the No. 10062 and No. 10063 for easy thumb operation as illustrated above. The No. 10061 instantly converts any plain $\frac{1}{4}$ shaft" volume control, condenser, etc. from "plain" to "shaft locked" type. Each to mount in place of regular mounting nut.

No. 10060	\$.36
No. 10061 .....	.36
No. 10062 .....	.45
No. 10063 .....	.45

TRANSMITTING TANK COILS

A full line—all popular wattages for all bands. Send for special catalog.



DIAL LOCK

Compact, easy to mount, positive in action, does not alter dial setting in operation. Rotation of knob "A" depresses finger "B" and "C" without imparting any rotary motion to Dial. Single hole mounted.

No. 10050	\$.45
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RIGHT ANGLE DRIVE

Extremely compact, with provisions for many methods of mounting. Ideal for operating potentiometers, switches, etc., that must be located, far short leads, in remote parts of chassis.

No. 10012	\$ 3.75
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THRU-BUSHING

Efficient, compact, easy to use and neat appearing. Fits $\frac{1}{4}$ " hole in chassis. Held in place with a drop of solder or a "nick" from a crimping tool.

No. 32150	\$.05
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FLEXIBLE COUPLINGS

The No. 39000 series of Millen "Designed for Application" flexible coupling unit includes, in addition to improved versions of the conventional types, also such exclusive original designs as the No. 39001 insulated universal joint and the No. 39006 "slide-action" coupling (in both steatite and bakelite insulation).

The No. 39006 "slide-action" coupling permits longitudinal shaft motion, eccentric shaft motion and out-of-line operation, as well as angular drive without backlash.

The No. 39005 is similar to the No. 39001, but is not insulated and is designed for applications where relatively high torque is required. The steatite insulated No. 39001 has a special anti-backlash ball and socket grip feature, which, however, limits its serviceable operation to torques of six inch-pounds, or less. All of the above illustrated units are for $\frac{1}{4}$ " shaft and are standard production type units.

No. 39001	\$.42
No. 39002 .....	.42
No. 39003 .....	.21
No. 39005 .....	.42
No. 39006 .....	.42

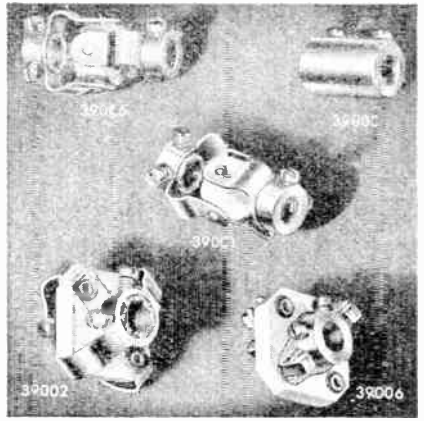
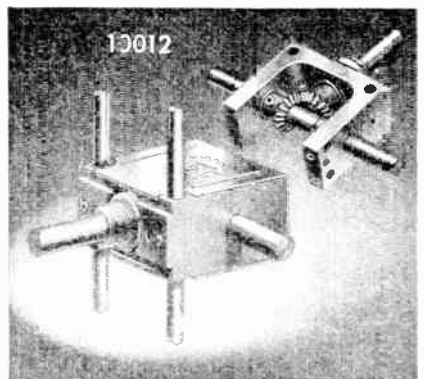
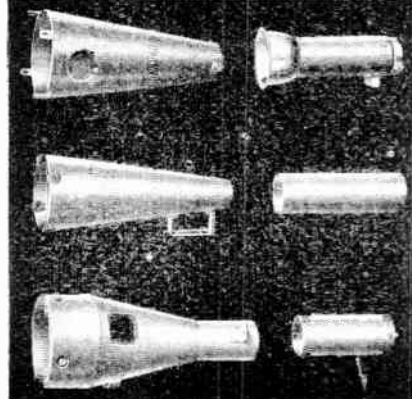
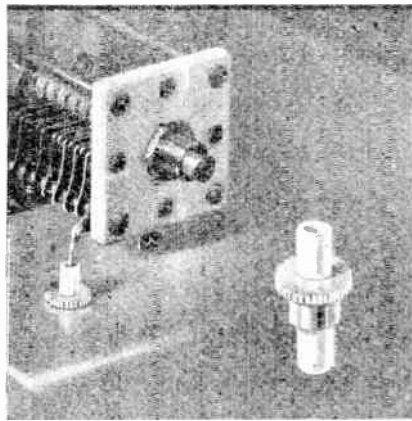
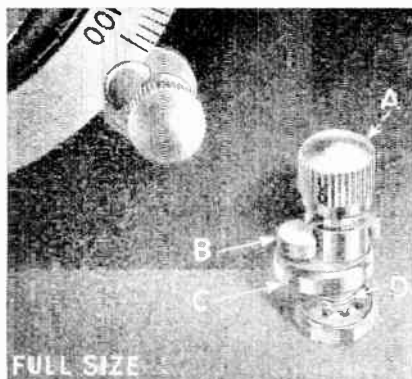
CATHODE RAY TUBE SHIELDS

For many years we have specialized in the design and manufacture of magnetic metal shields of nicoloi and mu-metal for cathode ray tubes in our own complete equipment, as well as for applications of all other principal complete equipment manufacturers. Stock types as well as special designs to customers' specifications promptly available.

BEZELS FOR CATHODE RAY TUBES

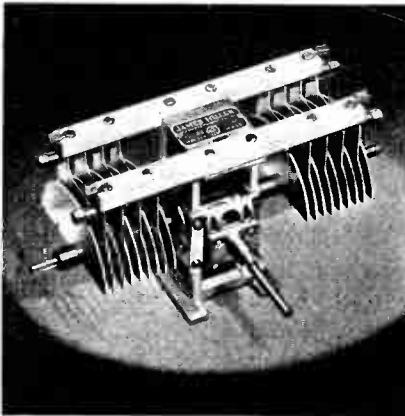
Bezel of cast aluminum with black wrinkle finish. Complete with neoprene cushion, green lucite filter scale and four "behind the panel" thumb screws for quick detachment from panel when inserting tube.

No. 80075—5"	\$ 7.50
No. 80073—3"	3.90
No. 80072—2"	1.25



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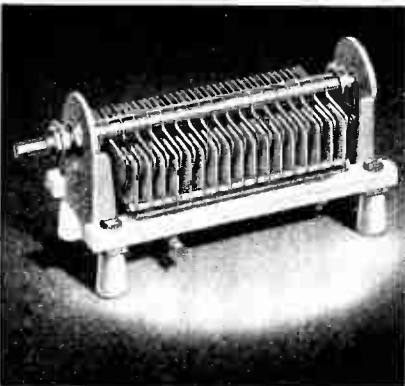
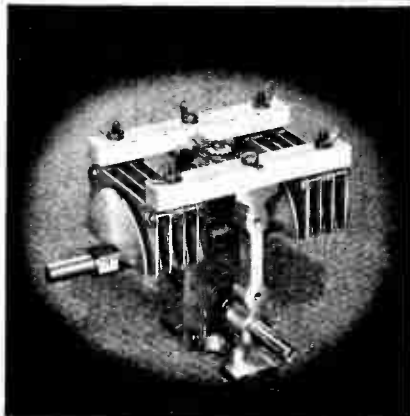


04000 and 11000 SERIES TRANSMITTING CONDENSERS

A new member of the "Designed for Application" series of transmitting variable air capacitors is the 04000 series with peak voltage ratings of 3000, 6000, and 9000 volts. Right angle drive, 1-1 ratio. Adjustable drive shaft angle for either vertical or sloping panels. Sturdy construction, thick, rounded, polished aluminum plates with 1/4" radius. Constant impedance, heavy current, multiple finger rotor contactor of new design. Available in all normal capacities.

The 11000 series has 16/1 ratio center drive and fixed angle drive shaft.

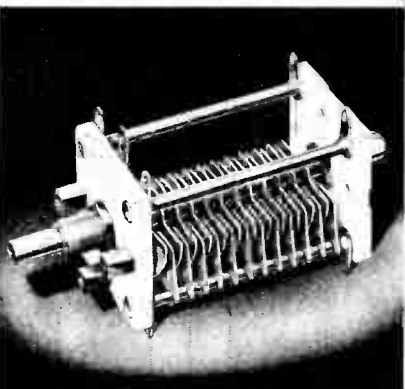
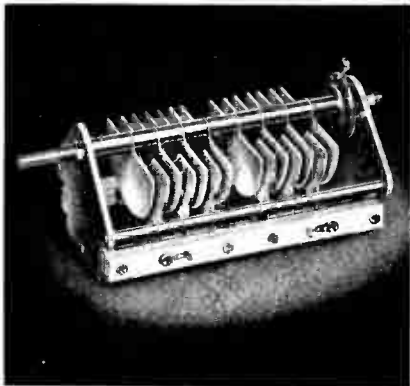
Code	Volts	Capacity	Price
11035	3000	35	\$ 6.90
11050	3000	50	7.14
11070	3000	70	7.80
04050	6000	50	16.00
04060	9000	60	18.00
04100	6000	90	18.00
04200	3000	205	20.00



12000 and 16000 SERIES TRANSMITTING CONDENSERS

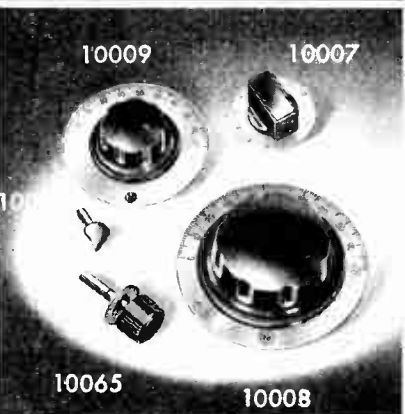
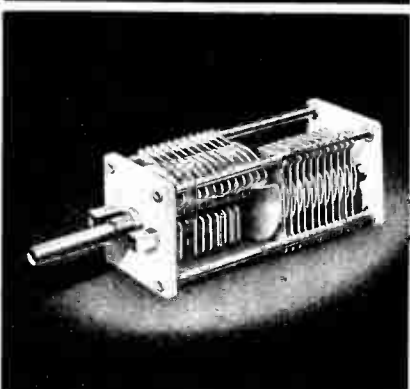
Rigid heavy channeled aluminum end plates. Isolantite insulation, polished or plain edges. One piece rotor contact spring and connection lug. Compact, easy to mount with connector lugs in convenient locations. Same plate sizes as 11000 series above.

The 16000 series has same plate sizes as 04000 series. Also has constant impedance, heavy current, multiple finger rotor contactor of new design. Both 12000 and 16000 series available in single and double sections and many capacities and plate spacing.



THE 28000-29000 SERIES VARIABLE AIR CAPACITORS

"Designed for Application," double bearings, steatite end plates, cadmium or silver plated brass plates. Single or double section .022" or .066" air gap. End plate size: 19, 16" x 11 16". Rotor plate radius: 3/4". Shaft lock, rear shaft extension, special mounting brackets, etc., to meet your requirements. The 28000 series has semi-circular rotor plate shape. The 2900 series has approximately straight frequency line rotor plate shape. Prices quoted on request. Many stock sizes.



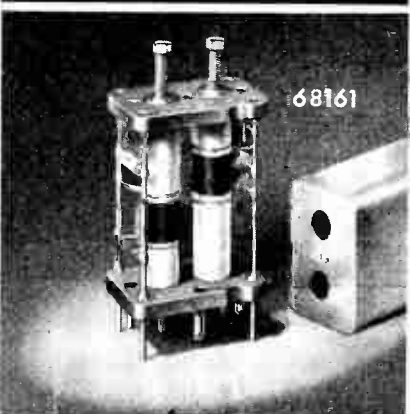
DIALS

Just a few of the many stock types of small dials and knobs are illustrated herewith. 10007 is 1 5/8" diameter, 10009 is 2 1/2" and 10008 is 3 1/2".

No. 10007	.....	\$ .60
No. 10008	.....	1.00
No. 10009	.....	.85
No. 10021	.....	.15
No. 10065	.....	.45

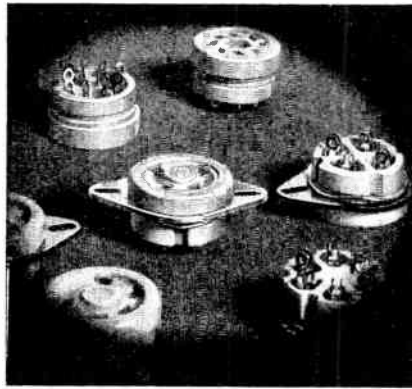
I.F. TRANSFORMERS

The Millen "Designed for Application" line of I.F. transformers includes air condenser tuned, mica condenser tuned and permeability tuned types for all applications. Standard stock units are for 465, 1600 and 5000 kc. B.F.O. and Crystal Filter units also available.



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MALDEN MASSACHUSETTS



TUBE SOCKETS DESIGNED FOR APPLICATION

MODERN SOCKETS for MODERN TUBES! Long Flashover path to chassis permits use with transmitting tubes, 866 rectifiers, etc. Long leakage path between contacts. Contacts are type proven by hundreds of millions already in government, commercial and broadcast service, to be extremely dependable. Sockets may be mounted either with or without metal flange. Mounts in standard size chassis hole. All types have barrier between contacts and chassis. All but octal and crystal sockets also have barriers between individual contacts in addition.

The No. 33888 shield is for use with the 33008 octal socket. By its use, the electrostatic isolation of the grid and plate circuits of single-ended metal tubes can be increased to secure greater stability and gain.

The 33087 tube clamp is easy to use, easy to install, effective in function. Available in special sizes for all types of tubes. Single hole mounting. Spring steel, cadmium plated.

Cavity Socket Contact Discs, 33446 are for use with the "Lighthouse" ultra high frequency tube. This set consists of three different size unhardened beryllium copper multi-finger contact discs. Heat treating instructions forwarded with each kit for hardening after spinning or forming to frequency requirements.

Voltage regulator dual contact bayonet socket, 33991 black Bakelite insulation and 33992 with low loss high leakage mica filled Bakelite insulation.

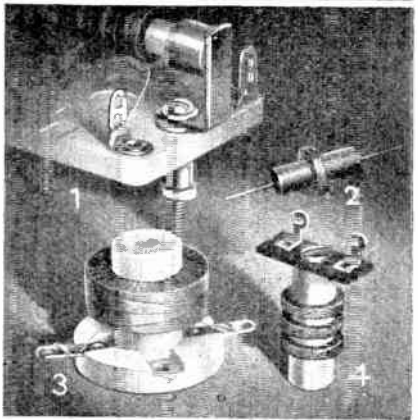
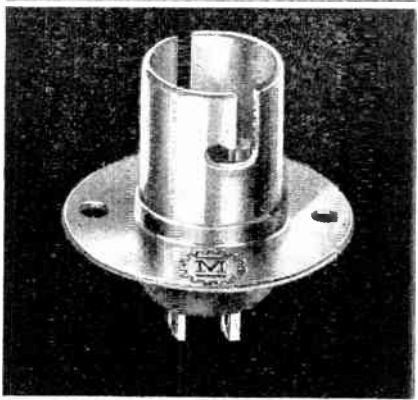
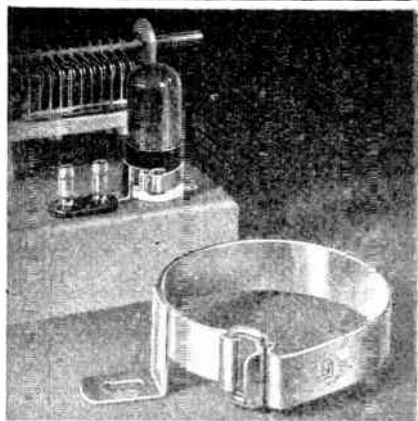
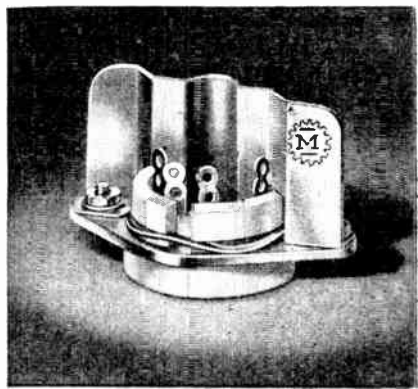
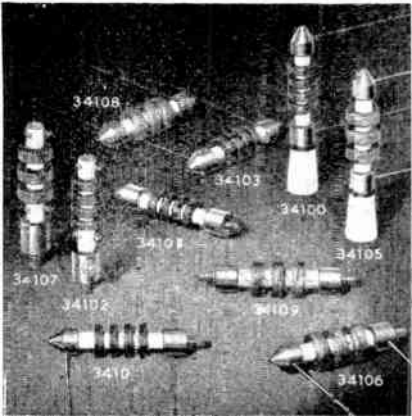
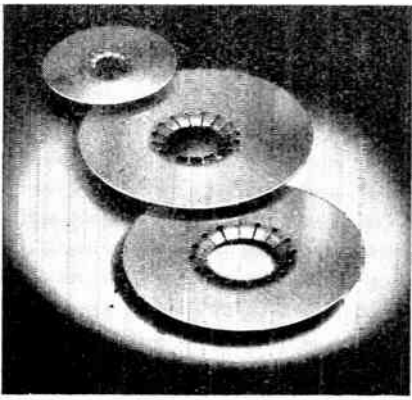
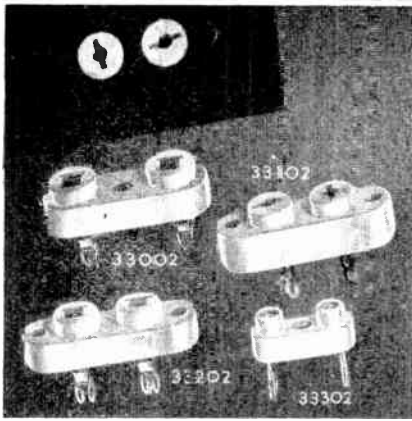
No. 33004.....	\$.30
No. 33005.....	.30
No. 33006.....	.30
No. 33007.....	.34
No. 33008.....	.30
No. 33888.....	.18
No. 33087.....	.30
No. 33002.....	.30
No. 33102.....	.30
No. 33202.....	.30
No. 33302.....	.21
No. 33446.....	5.00
No. 33991.....	.45
No. 33992.....	.55

RF CHOKES

Many have copied, few have equalled, and none have surpassed the genuine original design Millen Designed for Application series of midget RF Chokes. The more popular styles now in constant production are illustrated herewith. Special styles and variations to meet unusual requirements quickly furnished on high priority.

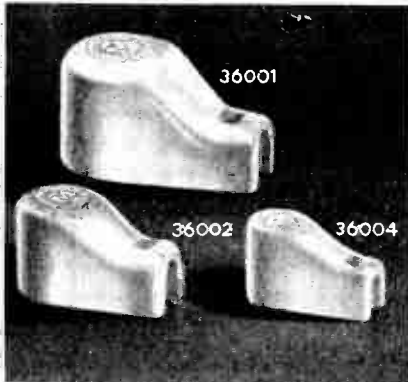
General Specifications: 2.5 mH, 250 mA for types 34100, 34101, 34102, 34103, 34104, and; 1mH, 300 mA for types 34105, 34106, 34107, 34108, 34109.

No. 34100.....	\$.42
No. 34101.....	.36
No. 34102.....	.42
No. 34103.....	.36
No. 34104.....	.42



JAMES MILLEN

MALDEN · MASSACHUSETTS



CERAMIC PLATE OR GRID CAPS

Soldering lug and contact one-piece. Lug ears annealed and solder dipped to facilitate easy combination "mechanical plus soldered" connection of cable.

No. 36001—9/16".....	\$.21
No. 36002—3/8".....	.21
No. 36004—1/4".....	.21

SNAP LOCK PLATE CAP

For Mobile, Industrial and other applications where tighter than normal grip with multiple finger 360° low resistance contact is required. Contact self-locking when cap is pressed into position. Insulated snap button at top releases contact grip for easy removal without damage to tube.

No. 36011—9/16".....	\$.60
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SAFETY TERMINAL

Combination high voltage terminal and thru-bushing. Tapered contact pin fits firmly into conical socket providing large area, low resistance connection. Pin is swivel mounted in cap to prevent twisting of lead wire.

No. 37001, Black or Red.....	\$.40
No. 37501, Low loss.....	.55

TERMINAL STRIP

A sturdy four-terminal strip of molded black Textolite. Barriers between contacts. "Non turning" studs, threaded 8-32 each end.

No. 37104.....	\$.60
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POSTS, PLATES and PLUGS

Designed for Application! Compact, easy to use. Made in black and red regular bakelite as well as low loss brown mica filled bakelite for R.F. uses. Posts have captive head.

No. 37202 Plates.....	\$.30
No. 37212 Plugs.....	.70
No. 37222 Posts.....	.40

STEATITE TERMINAL STRIPS

Terminal and ug are one piece. Lugs are Navy turret type and are free floating so as not to strain steatite during wide temperature variations. Easy to mount with series of round holes for integral chassis bushings.

No. 37302.....	\$.60
No. 37303.....	.70
No. 37304.....	.80
No. 37305.....	.90
No. 37306.....	1.00

MIDGET COIL FORMS

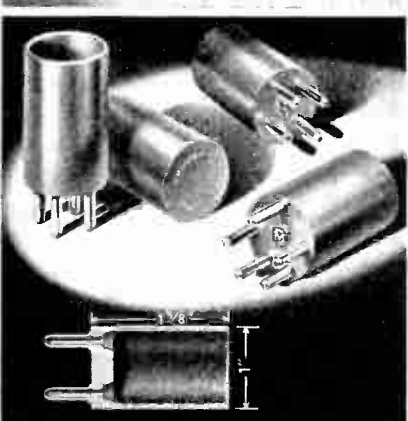
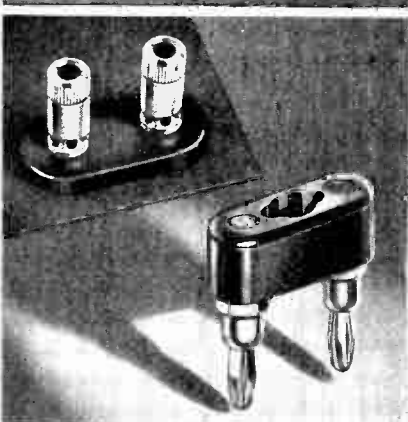
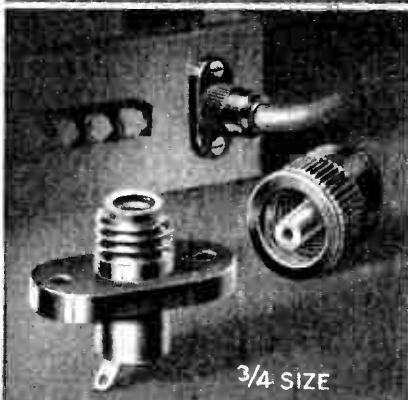
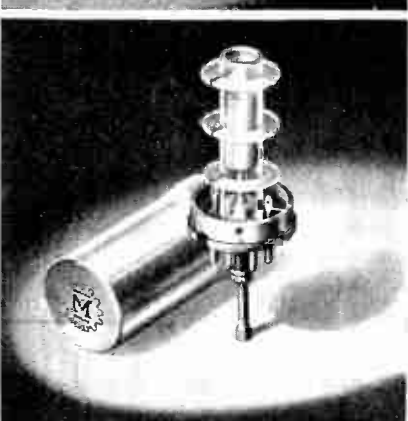
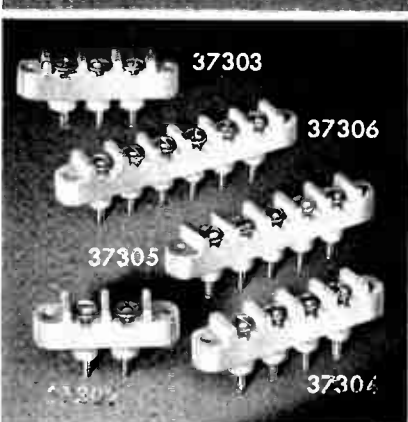
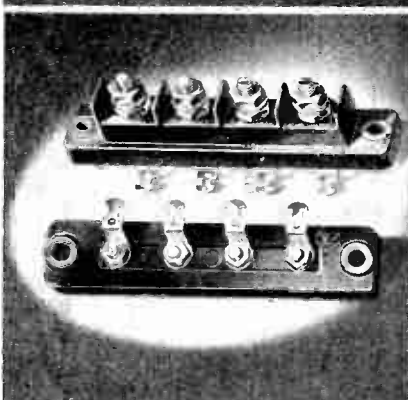
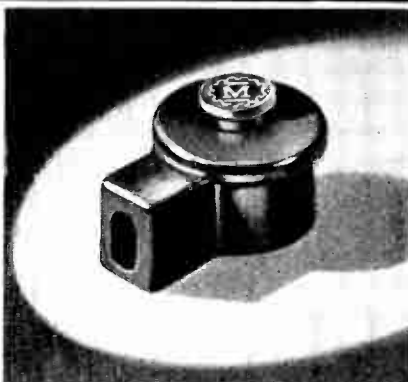
Made of low loss mica filled brown bakelite. Guide funnel makes for easy threading of leads through pins.

No. 45000.....	\$.45
No. 45004.....	.45
No. 45005.....	.35

TUNABLE COIL FORM

Standard octal base of low loss mica-filled bakelite, polystyrene 1/2" diameter coil form, heavy aluminum shield, iron tuning slug of high frequency type, suitable for use up to 35 mc. Adjusting screw protrudes through center hole of standard octal socket.

No. 74001, with iron core.....	\$ 1.85
No. 74002, less iron core.....	1.50



STANDARDS OF COMPARISON

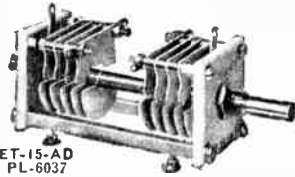
TRIM-AIR MIDGET CAPACITORS

Combine essential sturdiness with the flexibility obtained only in a spacer-built rotor and stator type of assembly.

ZR-35-AS
PL-6003



ET-15-AD
PL-6037



GENERAL SPECIFICATIONS:

CAPACITY CHARACTERISTIC: S.L.C.

FRAME: End Plates of 5/32" thick Isolantite.

SHAFT: 1/4" diameter, nickel plated brass.

PLATES: .020" thick aluminum, specially treated to remove burrs.

FINISH: Spacers, bushing nuts and screws nickel plated brass.

MOUNTING: Singles require one 3/8" hole in panel; Duals provided with four No. 4-36 screws in square brass tie rods. Trim-Air mounting posts or brackets fit both single and dual types. Singles are fitted with tapered nuts acting on split bushing for locking rotor shaft for fixed tune. Duals have rear shaft extension for coupling to other units and have a removable inter-section shield, on airgaps of .020 and .030.

Note: Single section Trim-Airs normally stocked with full length shaft for knob or dial. Stub shaft equivalents, with slot for screw driver adjustment only, available to order. "ZS" type singles have .040" thick plates with rounded buffed edges.

SINGLE TRIM-AIR CONDENSERS (Long Shaft Construction)

Parts List No.	Type	Max. Cap.	Min. Cap.	No. Plates	Air Gap	Length	List Price
PL 6016	ZU-75-AS	75	2.7	15	.020	1 3/4	\$2.50
PL 6017	ZU-100-AS	100	3	19	.020	1 1/2	2.55
PL 6018	ZU-140-AS	140	5	27	.020	1 3/4	4.60
PL 6000	ZR-10-AS	10	1.2	3	.030	3/4	1.85
PL 6001	ZR-15-AS	15	1.5	5	.030	3 1/2	1.90
PL 6002	ZR-25-AS	25	2	7	.030	1 1/16	2.10
PL 6003	ZR-35-AS	35	2.5	11	.030	1 9/32	2.20
PL 6004	ZR-50-AS	50	2.8	13	.030	1 3/8	2.30
PL 6055	ZR-100-AS	108	6.6	29	.030	2 9/16	3.30
PL 6024	ZV-5-TS*	5	1.5	3	.060	3/4	1.85
PL 6044	ZT-5-AS	5	2	3	.070	3 1/2	2.10
PL 6010	ZT-10-AS	11	3.6	6	.070	1 1/16	2.15
PL 6011	ZT-15-AS	15	3	9	.070	1 1/2	2.25
PL 6012	ZT-30-AS	30	4	17	.070	2 1/16	2.75
PL 6022	ZS-4-SS	4	1.5	5	.140	1 1/2	2.75
PL 6023	ZS-7-SS	7	4	7	.140	1 7/8	3.05

* Supplied with 2 segment stator for UHF circuits. Extra plate also supplied, making 3 plates as listed.

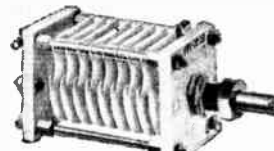
DUAL TRIM-AIR CONDENSERS

Per Section

Parts List No.	Type	Max. Cap.	Min. Cap.	No. Plates	Air Gap	Length	List Price
6011	EU-75-AD	75	2.7	15	.020	3 1/2	\$4.80
6012	EU-100-AD	100	3	19	.020	3 1/2	5.00
6013	EU-140-AD	140	5	27	.020	3 11/16	8.85
6028	ER-10-AD	10	1.2	3	.030	2 3/16	3.85
6029	ER-15-AD	15	1.5	5	.030	2 3/16	3.85
6030	ER-25-AD	25	2	7	.030	2 3/16	3.95
6031	ER-35-AD	35	2.5	11	.030	3 1/2	4.30
6032	ER-50-AD	50	2.8	13	.030	3 1/2	4.55
6065	ER-100-AD	100	6.9	25	.030	3 11/16	8.15
6037	ET-15-AD	15	3	9	.070	3 1/2	4.40
6039	ET-30-AD	30	4	17	.070	4 1/2	5.30
6033	ES-4-SD	4	1.5	5	.140	3 1/2	5.30
6035	ES-7-SD	7	4	7	.140	3 11/16	5.90
6293	ER-25-AD1*	25	2	7	.030	2 3/16	5.80

* Insulated coupling between rotor sections.

TRIM-AIR HEAVY DUTY SPECIALS



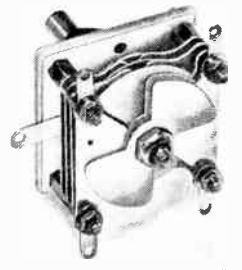
ET-30-ASP
PL-6058

Four-tie-rod frame, ball and strap rear bearing construction, augmenting the simplified Trim-Air construction, to give even greater strength and rigidity. General characteristics otherwise same as standard Trim-Airs.

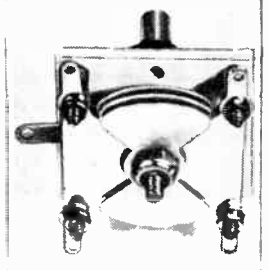
Dual section units have balanced rotor and stator sections and both single and dual section types may be single hole mounted or used with standard Trim-Air mounting accessories. Standard Trim-Air shaft locking nut may be used for fixed tune. PL-6069 and PL-6068 are duals with rear shaft extended; all others have ball and strap type rear bearing.

SINGLES	LIST	DUALS	LIST		
PL 6056	ER-50-ASP	\$4.35	PL 6057	ER-50-ADP	\$4.80
PL 6059	EU-75-ASP	3.95	PL 6069	ER-50-ADP (rear sh. ext.)	8.70
PL 6058	ET-30-ASP	4.05	PL 6068	EU-140-ADP (rear sh. ext.)	11.60

A NEW LINE OF CARDWELL MIDGET CONDENSERS FOR V.H.F.



PL-6113



PL-6076

Cardwell offers a new line of 90 degree condensers with butterfly rotor plates, fulfilling a demand created by engineers and amateurs since the publication of an article "Stabilizing The 144 Megacycle Transmitter" in April, 1946 "QST." Also see pages 351 to 353 inclusive in the 1946 ARRL Radio Amateurs Handbook. PL-6113 and PL-6076 are specified in these articles. Features of these 90 degree midget condensers are as follows:

Electrical Symmetry
Low Distributed Inductance.

Non-Moving Contacts.

Plates easily removable to change capacity range.

Isolantite Insulation.

Single Hole Mounting.

Small Size; 1 7/16" x 1 13/32" per general outline dimensions

for differential "Trim-Airs" as shown on Page 6 of Catalog No. 46.

These condensers are made to fit all standard Cardwell "Trim-Air" hardware.

Note maximum and minimum capacity values shown are measured from stator-to-stator and are effective values as used when a coil is connected stator-to-stator, with rotor floating.

CARDWELL V.H.F. 90 DEGREE TRIM-AIR MIDGETS

Part List No.	Type	Max. Cap.	Min. Cap.	No. Plates Rotor	No. Plates Stator	Air Gap	Length Overall	List Price
6075	ER-3-BF S	3	1.5	2	1	.030"	1 1/2"	\$2.60
6076	ER-6-BF S	5	1.5	3	2	.030"	1 3/8"	2.70
6077	ER-8-BF S	7	2.0	4	3	.030"	1 3/4"	2.80
6078	ER-15-BF S	13	3.0	7	6	.030"	2 1/4"	3.40
6079	EU-25-BF S	20.4	3.4	8	7	.020"	2 3/8"	3.65
6080	EU-35-BF S	27	4.0	10	9	.020"	2 3/4"	3.80
**6081	EU-50-BF S	38	6.0	14	13	.020"	2 3/4"	7.65
*6113	ER-14-BF SL	13	10.4	(3) Disc (2) 90°	(2) 180° (2) 90°	.030"	2 3/8"	4.00

* Minimum capacity loaded by circular rotor plates.

** Iso. rear end plate—ball and strap rear bearing.

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

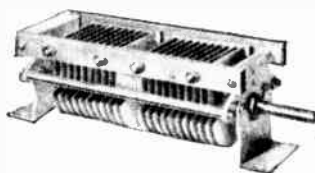
CARDWELL CONDENSERS

THE ALLEN D. CARDWELL MANUFACTURING CORPORATION

STANDARDS OF COMPARISON

MIDWAY TRANSMITTING CAPACITORS

The Midway is ideal for low and medium power transmitters for portable Mobile and aircraft equipment, due to its light weight, compact size and extremely sturdy construction. Incorporates original patented features of the larger "X" type standard transmitting condenser.



MT-100-GD PL-7030
with PL-5051 Mtg. Brackets

GENERAL SPECIFICATIONS:

CAPACITY CHARACTERISTIC: S.L.C.

FRAME: All aluminum end plates and tie rods.

SHAFT: 1/4" C.R. steel, cadmium plated.

PLATES: .025" aluminum. On sizes having airgap of .070" or over, plates have rounded edges, buffed to minimize corona loss.

BEARINGS: Brass, nickel plated shoulder type front bearing with ball thrust rear bearing.

INSULATION: Mycalex.

MOUNTING: 3 point front panel mounting by means of 3 screws and hex. posts. Two aluminum mounting feet with screws, Cardwell Part List No. 5052 for regular chassis mounting, provided instead, if so ordered. Type "M" special brackets (Part List No. 5051) permit inverted mounting.

MIDWAY SINGLE CONDENSERS

Parts List No.	Type	Max. Cap.	Min. Cap.	No. Plates	Air Gap	Length Over End Plates	List Price
PL7000	MR-25-BS	25	6	3	.030	1 3/4	\$3.95
PL7001	MR-50-BS	50	6	5	.030	1 3/4	5.00
PL7002	MR-70-BS	70	7	7	.030	1 3/4	5.15
PL7003	MR-105-BS	112	9	11	.030	1 3/4	5.35
PL7004	MR-150-BS	150	10	15	.030	1 3/4	5.80
PL7005	MR-200-BS	200	13	25	.030	2 3/4	6.40
PL7006	MR-365-BS	365	16	35	.030	2 3/4	7.00
PL7015	MT-20-GS	25	8	5	.070	1 3/4	4.80
PL7016	MT-35-GS	35	6	7	.070	1 3/4	5.15
PL7017	MT-50-GS	50	10	11	.070	1 3/4	5.75
PL7018	MT-70-GS	70	10	15	.070	2 3/4	6.55
PL7019	MT-100-GS	100	14	21	.070	2 3/4	7.20
PL7020	MT-150-GS	150	18	31	.070	3 1/4	8.85
PL7021	MG-35-NS	35	14	15	.171	3 1/4	8.85
PL7024	MO-165-BS	165	15	25	.050	2 3/4	4.90

MIDWAY DUAL CONDENSERS

Parts List No.	Type	Per Section			Air Gap	Length Over End Plates	List Price
		Max. Cap.	Min. Cap.	No. Plates			
PL7007	MR-25-BD	25	5	3	.030	1 3/4	\$6.40
PL7008	MR-50-BD	47	7	5	.030	2 3/4	6.85
PL7009	MR-70-BD	70	8	7	.030	2 3/4	7.20
PL7010	MR-100-BD	112	9	11	.030	2 3/4	7.50
PL7011	MR-150-BD	150	10	15	.030	2 3/4	7.75
PL7013	MR-260-BD	260	13	25	.030	3 1/4	8.75
PL7026	MT-20-GD	20	6	5	.070	2 3/4	8.15
PL7027	MT-35-GD	35	8	7	.070	2 3/4	8.85
PL7028	MT-50-GD	50	9	11	.070	2 3/4	9.35
PL7029	MT-70-GD	70	11	15	.070	3 1/4	10.30
PL7030	MT-100-GD	100	13	21	.070	5 1/4	11.75
PL7031	MO-180-BD	190	15	29	.050	5 1/4	11.75

"N" TYPE TRANSMITTING CAPACITORS

Designed for medium power high frequency transmitters and short wave therapy apparatus, the Cardwell "N" series maintains the customary high standard of Cardwell construction, yet eliminates closed circuit loops completely.



NP-35-DD
PL-7107

GENERAL SPECIFICATIONS:

CAPACITY CHARACTERISTIC: S.L.C.

FRAME: Improved aluminum end plates support heavy lateral ceramic insulating bars which carry the stators.

SHAFT: 1/4" diameter cadmium plated steel.

PLATES: Aluminum, .040" thick, with rounded edges. PL-7106 and 7116 have buffed and polished edges. PL-7105 has .025" thick plates, buffed and polished edges.

BEARINGS: Cordwell shoulder type front bearing, with ball thrust rear bearing.

MOUNTING: Can be single hole mounted, or by three mounting posts and screws, to front panel. Chassis mounting on feet which form part of end plates, or use Cardwell "M" brackets, Cardwell part No. 301, for inverted mounting, for lowest stator-to-ground capacity.

ULTRA-HIGH FREQUENCY SINGLE CONDENSERS

Parts List No.	Type	Max. Cap.	Min. Cap.	No. Plates	Air Gap	Length Back of Panel	List Price
PL7100	NP-50-DS	50	9	13	.084	3 3/4	\$5.15
PL7101	NP-75-DS	75	11	19	.084	4 3/4	6.05
PL7102	NP-100-DS	100	13	25	.084	5 3/4	6.85
PL7103	NP-150-DS	150	19	39	.084	6 1/4	8.95
PL7104	NG-35-DS	35	11	15	.171	5 3/4	6.75

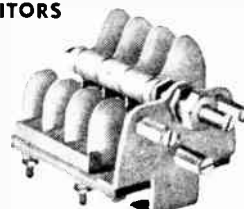
ULTRA-HIGH FREQUENCY DUAL CONDENSERS

Parts List No.	Type	Per Section			Air Gap	Length Back of Panel	List Price
		Max. Cap.	Min. Cap.	No. Plates			
PL7105	NT-50-GD	50	7	11	.070	4 3/4	\$8.85
PL7116	NP-15-ND	17	4	5	.084	4 3/4	8.40
PL7106	NP-35-ND	35	5	9	.084	4 3/4	8.85
PL7110	NP-15-DD	17	4	5	.084	4 3/4	7.50
PL7107	NP-35-DD	35	5	9	.084	4 3/4	7.90
PL7108	NP-50-DD	50	9	13	.084	5 3/4	8.85
PL7109	NP-75-DD	75	11	19	.084	6 1/4	10.60
PL7115	NA-12-NDI	13	6	7	.218	5 1/4	22.10

Note: NA-12-NDI is dual neutralizer, rotor sections insulated from each other. Capacity and nr. plates shown, is PER SECTION.

"NA" NEUTRALIZING CAPACITORS

The "NA" group offers 180° neutralizing capacitors of restricted range, for dial or screw driver adjustment. Shaft lock for permanent setting. Adjustable airgap on NA-4-NS only by adjusting threaded bushing in aluminum end plate. Single rotor bearing with beryllium tension washer and special bushing for rigidity. Plates are .040" thick aluminum, rounded and buffed edges. Three point panel mounting or foot mounting.



NA-16-NS
PL-7114

Parts List No.	Type	Max. Cap.	Min. Cap.	No. Plates	Air Gap	Length Back of Panel	List Price
PL7111	NA-4-NS	4	3.25	2	.218	1 1/4	\$5.30
PL7112	NA-6-NS	6	4	3	.218	1 1/4	5.30
PL7113	NA-10-NS	12	6	6	.218	2 1/4	6.65
PL7114	NA-16-NS	16	7	8	.218	3 3/4	7.40

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

CARDWELL CONDENSERS



THE ALLEN D. CARDWELL MANUFACTURING CORPORATION

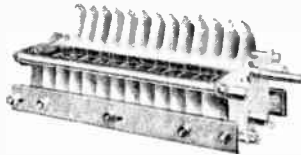
STANDARDS OF COMPARISON

"X" TYPE STANDARD TRANSMITTING CAPACITOR

The original grounded rotor, metal frame variable air capacitor.

Rounded edges, polished aluminum plates, .040" thick on all but "XT" and "XR" types.

Frames, tie rods, bearing bushings, spacers and stator blocks, nicked brass. Cadmium plated 1/4" steel shaft supports securely locked rotor assembly. Mycalex insulation. Panel spaces 4 1/8" x 3 3/8". Panel mounting. N.P. brass mounting feet provided on special order, for chassis mounting. See Accessories.



XC-100-XS
PL-8023

"T" TYPE HEAVY DUTY TRANSMITTING CAPACITORS

6 1/4" wide, 5 3/8" high, plates unmeshed. Corona shields on stators for wider airgap types. End plates 1/8" thick, heavy nickel plated. Massive bearings, 3/8" stainless steel shafts; heavy, two finger phosphor bronze rotor contactor bears on sturdy contact ring built to carry very heavy current without power loss. Rotor plates 4 1/2" diameter, .050" thick aluminum. Heavy mounting feet formed as part of end plates. Ball thrust rear bearing. Mycalex insulation.



TK-300-US
PL-9110

"X" TYPE STANDARD SINGLES

Parts List No.	Type	Max. Cap.	Min. Cap.	No. Plates	Air Gap	Length Over End Plates	List Price
PL8000	XR-50-PS	50	11	3	.030	1 1/2	\$5.05
PL8001	XR-100-PS	100	12	5	.030	1 1/2	5.15
PL8002	XR-150-PS	150	12.5	7	.030	1 1/2	5.30
PL8003	XR-250-PS	250	13	11	.030	1 1/2	5.40
PL8004	XR-375-PS	375	16	17	.030	2 1/8	6.15
PL8005	XR-500-PS	475	18	21	.030	2 1/8	7.55
PL8007	XR-1000-PS	950	30	41	.030	3 1/8	14.50
PL8013	XR-1500-PS	1500	50	65	.030	5	16.00
PL8048	XP-220-PS	220	20	21	.070	3 1/8	7.35
PL8050	XT-440-PS	440	40	43	.070	5	11.30
PL8040	XP-90-KS	90	16	11	.084	2 1/8	6.65
PL8041	XP-165-KS	165	22	19	.084	3 1/8	9.55
PL8043	XP-290-KS	290	35	33	.084	5	14.00
PL8044	XP-330-KS	330	37	37	.084	5 5/8	16.00
PL8029	XE-120-XS	120	19	17	.100	3 1/8	8.85
PL8031	XE-240-XS	240	30	33	.100	5 5/8	16.00
PL8025	XD-160-XS	160	28	27	.125	5 5/8	13.30
PL8032	XG-25-XS	25	8	5	.171	2 1/8	5.15
PL8033	XG-50-XS	50	15	11	.171	3 1/8	9.55
PL8034	XG-110-XS	110	26	23	.171	5 5/8	14.25
PL8020	XC-18-XS	19	8	5	.200	2 1/8	6.65
PL8021	XC-40-XS	40	15	11	.200	3 1/8	9.55
PL8022	XC-65-XS	65	20	17	.200	5	12.50
PL8023	XC-100-XS	100	28	25	.200	6 5/8	15.50
PL8037	XR-55-XS	55	20	15	.230	5	14.75

"X" TYPE STANDARD DOUBLES

Parts List No.	Type	Per Section Max. Cap.	Per Section Min. Cap.	Per Section No. Plates	Air Gap	Length Over End Plates	List Price
PL8018	NR-500-PD	500	18	21	.030	3 1/8	\$14.00
PL8068	NT-80-PD	80	11	9	.070	3 1/8	9.30
PL8070	NT-210-PD	210	22	21	.070	5	12.80
PL8065	NP-90-KD	95	15	11	.084	3 1/8	11.05
PL8066	NP-165-KD	165	23	19	.084	5 5/8	16.20
PL8067	NP-325-KD	325	38	37	.084	10 1/8	32.45
PL8061	NE-120-XD	120	19	17	.100	5 5/8	14.75
PL8062	NE-240-XD	240	32	33	.100	10 1/8	30.85
PL8060	ND-160-XD	160	28	27	.125	10 1/8	28.05
PL8063	XG-50-XD	50	14	11	.171	5 5/8	15.75
PL8064	XG-110-XD	110	27	21	.171	10 1/8	26.50
PL8056	XC-40-XD	40	14	11	.200	6 5/8	16.95
PL8057	XC-75-XD	75	21	19	.200	10 1/8	22.10
PL8081	NE-160-70-XQ	Multi-Band			.100	10 1/8	40.60

SINGLE HEAVY DUTY TRANSMITTING CONDENSERS

Parts List No.	Type	Max. Cap.	Min. Cap.	No. Plates	Air Gap	Length Inside End Plates	List Price
PL9009	TJ-315-US	315	36	31	.168	8 1/2	\$40.50
PL9001	TC-200-US	200	35	23	.200	7	35.40
PL9002	TC-300-US	300	42	35	.200	10	40.50
PL9036	TK-300-US	315	53	39	.230	12 1/8	47.00
PL9011	TL-50-US	45	15	7	.294	3 3/8	20.90
PL9013	TL-80-US	85	24	13	.294	5 5/8	26.55
PL9014	TL-100-US	98	26	15	.294	6 1/8	27.85
PL9016	TL-160-US	165	40	25	.294	9 3/8	37.95
PL9019	TZ-40-RS	43	18	11	.500	7	30.35
PL9020	TZ-80-RS	83	39	21	.500	12 1/2	40.50

DOUBLE HEAVY DUTY TRANSMITTING CONDENSERS

Parts List No.	Type	Per Section Max. Cap.	Per Section Min. Cap.	Per Section No. Plates	Air Gap	Length Inside End Plates	List Price
PL9026	TJ-150-UD	150	21	15	.168	8 1/2	\$40.50
PL9027	TJ-200-UD	211	30	21	.168	10 3/8	45.55
PL9021	TC-100-UD	112	20	13	.200	8 1/2	39.20
PL9022	TC-160-UD	169	30	19	.200	11	43.00
PL9023	TC-200-UD	200	35	23	.200	13	48.05
PL9024	TC-250-UD	255	40	29	.200	16	53.15
PL9030	TL-50-UD	45	15	7	.294	6 1/8	31.65
PL9031	TL-70-UD	70	19	11	.294	9	36.70
PL9033	TL-100-UD	98	26	15	.294	11 1/8	43.65
PL9034	TL-160-UD	160	40	25	.294	18 3/8	55.65
PL9029	TKD-100-UD	110	30	21	.350	18 3/8	55.65
PL9035	TZ-40-RD	43	18	11	.500	13 1/8	48.55

TYPE "J" PLUG-IN FIXED AIR CONDENSERS

For fixed capacity loading.

Plates easily removed. All "J" types have 2 1/4" square x 1/4" Alsmag No. 196 ceramic end plates. Supplied with banana plugs to fit "JB" Jack Base. On special order provided with hexagonal brass mounting pillars and mounting screws for permanent installation.



JCO-50-OS
PL-970



"JB" Jack Base
PL-5102

TYPE "J" PLUG-IN FIXED AIR CONDENSERS

Parts List No.	Type	Capacity	No. Plates	Air Gap	Length Overall	List Price
PL9705	JCO-50-OS	50 mmf.	13	.250	5 3/8	\$3.24
PL9704	JCO-25-OS	25 mmf.	7	.250	3 3/8	2.34
PL9703	JD-100-OS	100 mmf.	17	.125	4 3/8	3.82
PL9702	JD-80-OS	80 mmf.	13	.125	4	3.24
PL9701	JD-50-OS	50 mmf.	8	.125	3 1/8	2.34
PL9700	JD-25-OS	25 mmf.	4	.125	2 1/8	1.64
PL9706	JR-750-OS	750 mmf.	33	.030	4 5/8	5.20
PL9707	JKD-50-OS	50 mmf.	18	.350	8 1/8	3.80

JACK BASE FOR "J" FIXED AIR CONDENSERS

Size: 2 1/2" x 3 1/2" x 1/4".

Material: Alsmag No. 196.

Complete with mounting posts, screws and nuts.

Type "JB" (PL-5102) List Price \$1.25

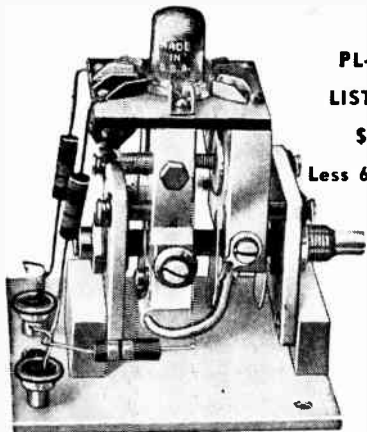
PRICES SUBJECT TO CHANGE WITHOUT NOTICE

CARDWELL CONDENSERS

THE ALLEN D. CARDWELL MANUFACTURING CORPORATION

STANDARDS OF COMPARISON

V.H.F. OSCILLATOR KIT



PL-20,024

LIST PRICE

\$18.00

Less 6-F-4 Tube



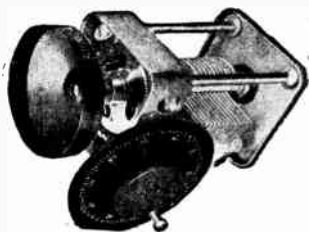
This kit includes 3 sets of coils covering 144-148 mc., 220-225 mc., 420-450 mc. bands. (The 6F4 tube is not included.) Ideally suited for local oscillator, for super-heterodyne receiver,

as plate modulated oscillator for low power transmitter or transceiver, driver unit for amplifier tube in higher powered transmitter, V.H.F. signal generator, etc., etc.

CARDWELL PRECISION CAPACITOR

Type PL-24,050

Designed for frequency meters requiring maximum mechanical and electrical precision. Type No. 4,080 gear and worm driven capacitor incorporates special design features representing years of research and usage of this component in special measurement equipment which has successfully withstood most rigorous usage our armed forces could give it.

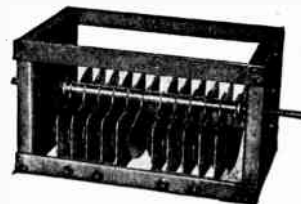


Frequency Meter Condenser
PL-24,050

CAP. RANGE: Max. Cap. 220 mmfd., Min. Cap. 21 mmfd.
PLATE SHAPE: S.L.F.
DI-ELECTRIC SUPPORTS: Steatite.
BACKLASH: Negligible.
RESETTABILITY: To 10 parts in one million.
GEAR DRIVE: Precision split worm gear, equipped with precision ball bearings. Ratio—100 : 1 over 360 degrees.
DIALS: 3" DRUM: 50 divisions over 180° condenser rotation. 3" FAST RUNNING DIAL: Graduated 100 divisions, makes 1 revolution for each drum division. VERNIER RING: Divides each division on fast running dial into 10 parts.
DIMENSIONS: 5 5/8" lg. (over drum dial) x 3 1/8" deep x 3 1/8" high.
WEIGHT: 1 3/4 lbs. (with cast aluminum frame).
ROTOR CONTACT: Silver plated phosphor bronze spring, with 2 silver contacts bearing on silver plated disc.
MOUNTING: 3 point, to bottom of main casting.
PRICE: Capacitor, PL-24,050, Type 4,080, only.....List \$95.00
Drum DialList \$ 5.95
Fast Running DialList \$12.75
Vernier RingList \$ 2.50

TYPE "P" LIGHT HEAVY WEIGHT TRANSMITTING CAPACITORS

Designed to accommodate capacitance values up to 150 mmfd. per section in a dual section type having an airgap of .500", the "P" type construction permits higher capacity for a given airgap, and therefore a shorter frame than the "T" type construction. Typical Cardwell sturdiness is built-in, and the "P" type is probably the lightest transmitting condenser built for its size, yet completely satisfactory for heavyweight use. No single section types are catalogued; parallel or series connect for double or half single section capacity listed in table.



PK-125-QD
Special

GENERAL SPECIFICATIONS:

FRAME: End plates are 1/8" thick formed aluminum, satin finish.
SHAFT: 3/8" diameter, non-magnetic stainless steel, extended both front and rear end.
PLATES: .064" thick, rounded and buffed edges. Rotor plates are 3/4" in diameter.
BEARINGS: Heavy nickel plated brass front and rear shoulder bearings.
ROTOR CONNECTION: Heavy, two finger N.P. phosphor bronze wiper bears on 1/8" thick N.P. brass contact ring, at each end.
STATOR CONSTRUCTION: Plates permanently staked into slotted, rounded edge aluminum stator blocks.
INSULATION: Mycalex (glass bonded mica).
MOUNTING: 3 clearance holes for No. 10 screws in each side of each end plate permitting mounting on any side, as well as provision for mounting associated components such as inductance coil mountings, etc.

TYPE "P" LIGHT HEAVYWEIGHT DUAL CONDENSERS

Parts List No.	Type	Max. Cap.	Min. Cap.	No. Plates	Air Gap	Length Over End Plates	List Price
PL9208	PJ-750-QD	750	50	35	.168	20 1/2	Special
PL9210	PK-200-QD	210	30	13	.230	11 1/2	Special
PL9203	PKD-70-QD	70*	15*	7	.350	9 1/2	\$75.00
PL9204	PKD-100-QD	115	22	9	.350	11 1/2	83.50
PL9205	PZ-50-QD	50*	15*	7	.500	11 3/4	82.25
PL9206	PZ-70-QD	70*	20*	9	.500	14 1/4	87.90
PL9207	PZ-100-QD	91	23	11	.500	16 1/2	100.00
PL9209	PZ-150-QD	150	40	19	.500	24 1/8	125.00

* Estimated value.
Tolerance for maximum and minimum capacity values: ±10%.

DISC TYPE NEUTRALIZER

For neutralizing low capacity transmitting triodes. Glazed steatite insulation. Polished aluminum discs. Fine screw thread adjustment in long nickel silver bearing—no wobble. Knurled thumb nut for easy locking. Heavy satin finish aluminum support and base plate.



ADN, Neut. Conds.
PL-7118

DISC TYPE NEUTRALIZING CONDENSERS

Item No.	Parts List No.	Type	Max. Cap.	Air Gap	Min. Cap.	Air Gap	List Price
1	PL7118	ADN	7 mmfd.	.100"	1 mmfd.	.700"	\$4.40
2	PL7119	BDN	15 mmfd.	.200"	3 mmfd.	1.000"	7.40

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

CARDWELL CONDENSERS



THE ALLEN D. CARDWELL MANUFACTURING CORPORATION

STANWYCK COILS

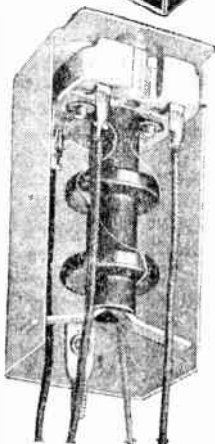
I.F. - ANT. - R.F. - F.M. - OSCILLATOR COILS

"Precisely made for Precision Performance"

Mfrd. by STANWYCK WINDING CO. •



No. S-102—This is a standard 455 kc. I.F. transformer, compression tuned for general replacement and new set construction — particularly suited for small receivers. Coils wound of 3/41 Litz wire. It is also ideal for experimental work because good design and careful engineering provide greater I.F. gain. Double tuned with low-loss steatite base trimmers. Aluminum shield can is 1 1/4" x 1 1/4" x 2 1/2". Generous leads RMA color coded. Wax impregnated.
List Price \$1.60



I.F. TRANSFORMERS

No. S-103—455 kc I.F. transformer, same as S-102 except with iron core underneath windings. This has greater gain and sensitivity than No. S-102, air core.
INPUT \$1.80

No. S-104—455 kc I.F. transformer, same as S-103.
OUTPUT \$1.80

No. S-115—Tapped regenerative I.F. transformer 455 kc. For use where the application calls for a single I.F. coil with high sensitivity and good selectivity. Sensitivity of 140 MV and band widths of 7.5 kc at 2 times in a normal operating condition. Mounted in standard aluminum cans, 1 1/4" sq. x 2 1/2" long.
List Price \$1.80

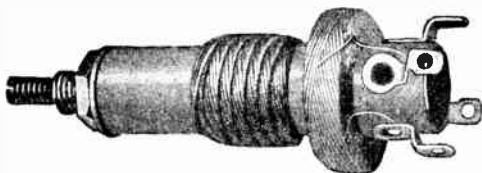
No. S-108—455 kc I.F. (solid wire). Where the requirements call for economy plus moderate gain these coils give ample performance. Wound with solid wire they are extremely stable and may be interchanged as first or second I.F. Mounted in aluminum cans 1 1/4" sq. x 2 1/2". Wax impregnated.
List Price \$1.40

IRON CORE TUNED OSCILLATOR COILS



No. S-230 Broadcast Oscillator. An unusual type of midget coil with many desirable features. Iron core tuned, it permits adjustment of any one condenser section used in commercial variables. High range of inductance variation permits use of coil in a variety of equipment. Low distributed capacity allows for excellent tracking and also for overlapping both high and low ends of the band, providing extended coverage. Mounts with either threaded bushing or bracket. Tinned lugs, thoroughly protected against humidity by wax. Coil from 1 1/2" long x 7/8" O.D. List Price \$1.00

BROADCAST R.F. COILS



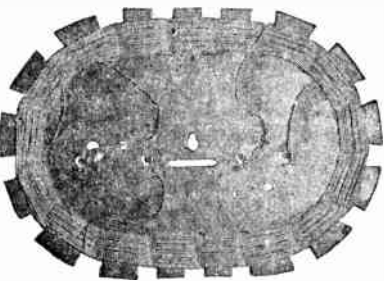
No. S-302 R.F. Coil with adjustable iron core. High impedance primary matches the plate impedance of most R.F. tubes providing maximum gain. Selectivity and sensitivity are excellent throughout the entire range. High "Q" iron core permits adjustment for most commercial variable condensers. Range of coil sufficient to allow for excellent tracking with other coils in the set. Range 535 to 1720 kc.
List Price \$1.00

BROADCAST ANTENNA



No. S-409 Broadcast Antenna with adjustable iron core. An unusual type of miniature coil both mechanically and electrically of superior construction. The heavy duty threaded bushing allows for mounting in any position where a hole is available, allowing for flexibility of set design. Bracket mounting is also available. "Q" is unusually high for a coil so small. Gain is excellent throughout entire range and may also be adjusted for any size variable condenser. Multi-Strand Litz wire is used for maximum reception 535 to 1720 kc. Coil form 1 3/4" long x 7/8" O.D. List Price \$1.00

BROADCAST LOOPS



No. S-501—A basket wound loop antenna of excellent design wherein the leads may be rearranged in various positions for adjustment and balancing of capacity. Overall dimensions 3 1/2" to 6". For 365 mmfd variable condenser.
List Price \$0.85

MIDGET LOOP

No. S-513—Size 4" x 5 1/4".
List Price \$0.75

NEW MIDGET I.F.

for SMALL RECEIVERS AND PORTABLES

No. SM-107—Standard iron core 455 kc Midget I.F. transformer, compression tuned. For general replacement and new set construction. Exceptionally high gain due to specially designed powdered iron cores. Particularly suitable for the new, very small receivers and portables. In cans 3/4" sq. x 1 7/8" long.

List Price \$1.65



F.M. COILS

FM DISCRIMINATOR. No. SFM-601—The electrically centered secondary results in perfect symmetry between positive and negative peaks.
List Price \$3.65

FM I.F. COILS. No. SFM-602—Mechanically and electrically they are the ultimate in present day FM design. List Price \$3.25

• Send for COMPLETE Catalogue •

UNIVERSAL ADJUSTABLE COILS



These Adjustable - Inductance Ferrocart (iron-core) coils will replace the Broadcast band coils in practically any receiver. It is no longer necessary to order hard-to-get "exact duplicates" when an Antenna, R.F., or Oscillator coil requires replacement.

Continuously variable in inductance over a wide range, these coils will accurately "track" with the other coils in the receiver when properly adjusted. The exact inductance of the old coil is easily matched by a simple screwdriver adjustment, regardless of the value of the tuning condenser. Ferrocart iron cores used in these coils add gain and selectivity to the receiver. The oscillator coil provides complete adjustment for intermediate frequencies between 175 and 520 kc. May be used in either "cut-plate" tuning condenser or padded circuits. Available shielded or unshielded, furnished with complete instructions. Shields are black crackle finish, 1 3/4" square by 2 1/2" high.

UNSHIELDED		
No.	Description	List
14-1026	Universal Ant. Coil	\$1.74
14-1027	Universal R.F. Coil	1.74
14-1028	Universal Osc. Coil	1.74
SHIELDED		
No.	Description	List
14-7413	Universal Ant. Coil	\$2.78
14-7558	Universal R.F. Coil	2.78
14-7560	Universal Osc. Coil	2.78

SLIP-OVER PRIMARIES

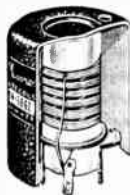


Designed to provide economical replacement of burned out primaries on all types of Antenna and R.F. coils. All windings are high impedance type for improved performance. Sizes given below are outside diameter of coil over which the replacement winding will fit. Complete instructions for repair and replacement given.

No.	Size	List
14-6850	For 1 1/4" O.D. Coil	\$0.42
14-6852	For 1" O.D. Coil	.35
14-6854	For 7/8" O.D. Coil	.35
14-6856	For 3/4" O.D. Coil	.35
14-8418	For 1/2" O.D. Coil	.28

STANDARD ANTENNA R. F. COILS

Standard type air-core coils of superior construction, designed to cover the Broadcast band from 545 to 1580 kc (190 to 550 meters) with a 365-mmfd. tuning condenser. These coils make excellent replacement units and are used as original parts by discriminating set-builders and experimenters in the design and construction of Broadcast receivers.



All coils have high-impedance primaries, wound with Litz wire, fully protected against humidity. Shielded coils are in black crackle-finished non-magnetic cans, 1 3/4" diameter by 2 1/2" high.

UNSHIELDED		
No.	Type	List
14-1010	Standard Antenna Coil	\$0.97
14-1011	Standard R.F. Coil	.97
SHIELDED		
No.	Type	List
14-1004	Standard Antenna Coil	\$1.25
14-1005	Standard R. F. Coil	1.25

DOWEL TYPE PRIMARY

Popular replacement for burned out primaries in high impedance antenna coils. Universal wound on 1/2" diam. by 1/2" long dowels moisture protected. Inductance 1700 uh.



No. 14-6865 List Price..... .42

MAJESTIC REPLACEMENT

Exact duplicate of original assembly. Coil only, without can or trimmer. Exactly replace defective burned-out units. Used in 2nd I. F. Number 10233 or 11014 of the popular Majestic model 460.

No. 20-3457 List \$1.39

STANDARD OSCILLATOR COILS

High-quality Broadcast band oscillator coils designed for use with any of the Antenna and R. F. coils listed above, using a 365-mmfd. tuning condenser. Frequency coverage is 545 to 1580 kc; units are provided for all popular intermediate frequencies.



Coils are mounted on bakelite base with tinned soldering lugs for connections. Unshielded coils have single-hole stud mounting. All coils are thoroughly impregnated to resist severe climatic conditions. Shielded coils are in cans, 1 1/2" diameter by 1 3/4" high, black crackle finish.

UNSHIELDED			
No.	I.F. Freq.	Padder Required	List
14-3732	175 kc	900 mmf	\$1.05
14-6590	262 kc	700 mmf	1.05
14-6592	370 kc	350 mmf	1.05
14-4034	456 kc	350 mmf	1.05
SHIELDED			
No.	I.F. Freq.	Padder Required	List
14-4242	175 kc	900 mmf	\$1.33
14-4243	456 kc	350 mmf	1.33
14-1033	Special Unshielded Osc. for 6SA7; 456 kc	350 mmf	\$1.05

REPLACEMENT I. F. WINDINGS

Coils are wound on wood dowels, 3/8" diameter and 1 3/4" long; coupling is adjustable by sliding primary coil. Complete instructions furnished with each coil.



No.	Freq.	Type	List
16-6600	175	Standard	\$0.83
16-6601	456	Standard	.83
16-6602	175	Center-tap	1.11
16-6603	456	Center-tap	1.11

"PLASTIC" I. F. TRANSFORMERS



Particularly suitable for use in small receivers, where space is at a premium and yet superior performance is required, these remarkable transformers are only 1 1/4" square and 2 1/2" high! Made in a complete series of frequency ranges and positions, they will provide results second to none in any type of receiver.

The one-piece molded plastic coil-form and trimmer-base eliminates many separate parts that were required with other types of construction. The assembly is, therefore, simpler and more rigid. The iron core series are highly recommended for use in compact receivers and auto sets where only one I-F stage is permitted. It is not recommended that they be used in a two-stage system because of their high-gain which would cause instability and oscillation.

No.	Freq. Range	Peak Factory Setting	Gain Factory Setting	Selectivity Band Width			Use
				2x	10x	20x	
16-6649	140-200	175	71	8.5	18.5	39.2	Input
16-6550	148-250	175	16	7.0	16.0	21.2	Interstage
16-6651	140-200	175	70	10.0	27.1	41.8	Output
16-6652	200-310	262	50	7.5	21.1	32.2	Input
16-6653	200-310	262	16	6.1	17.2	24.3	Interstage
16-6654	200-310	262	70	15.0	45.8	65.1	Output
16-6655	305-480	370	53	14.2	33.3	49.0	Input
16-6656	305-480	370	20	9.7	25.2	37.3	Interstage
16-6657	305-480	370	80	18.0	49.1	74.6	Output
16-6658	400-550	456	52	14.3	32.1	46.0	Input
16-6659	400-550	456	21	9.7	25.8	37.3	Interstage
16-6660	400-550	456	72	16.8	43.2	66.1	Output

Air-Core "PLASTIC" I-F Transformers, List Price Each \$1.39

FERROCART IRON-CORE "PLASTIC" I-F's

16-6662	380-600	456	80	10.8	26.5	38.7	Input
16-6663	380-600	456	85	11.8	36.2	51.0	Output

Iron-Core "PLASTIC" I-F Transformers, List Price Each \$2.08

CARTWHEEL I. F. TRANSFORMER



A brand new, ultra-compact, unshielded I-F Transformer, complete with dual trimmers; finds useful application in many types of compact AC-DC or Midget type receivers. Only 1 3/8" by 1 1/2" by 1 1/4" high; one-piece molded plastic trimmer base; for 456-kc only.

No. 16-6661 List Price \$1.39

STANDARD I. F. TRANSFORMERS

The Meissner series of Air-Core I. F. Transformers has been accepted as "standard" for general replacement purposes. Gain characteristics have been designed to correspond closely with average values found in the majority of commercial receivers. All transformers are double-tuned with ceramic-base, mica-dielectric trimmers. Windings of high-grade Litz wire are fully impregnated. Well-insulated RMA color-coded lead wires. Black crackle-finish shield is 1 3/8" square by 3 1/2" high.



No.	Freq. Range	Peak Factory Setting	Use
16-5700	121-235	175	Input
16-5702	121-235	175	Output
16-3731	121-235	175	Output C. T.
16-5704	220-360	262	Input
16-5706	190-325	262	Output
16-5712	425-650	456	Input
16-6133	435-1000	456	Interstage
16-5714	425-650	456	Output
16-3736	255-550	456	Output C. T.

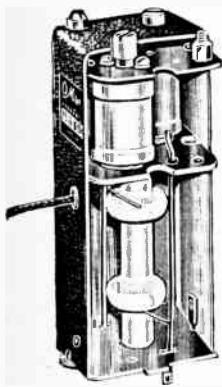
List Price Each \$2.08

FERROCART I. F. TRANSFORMERS

Designed primarily as original parts in high-gain receivers of superior quality, these transformers find consistent application in stepping up the performance of old receivers. The special powdered-iron "Ferrocart" core used in the coils permits higher "Q" with resultant increase in selectivity and gain. All units are double-tuned with ceramic-base, mica-dielectric trimmers. Windings are of high-grade Litz wire, thoroughly impregnated. Shield is black crackle finish, 1 3/8" square by 3 1/2" high.

No.	Freq. Range	Peak Factory Setting	Use
16-5728	127-206	175	Input
16-5730	127-206	175	Output
16-5740	360-600	456	Input
16-5742	360-600	456	Output

List Price Each \$2.78



The result of years of engineering experience in designing high grade transformers for the finest commercial receivers! The exacting requirements of modern high-fidelity and communications type receivers demand units that can be depended upon under any and all conditions. They must be absolutely stable under temperature and humidity variation and unaffected by vibration. These requirements are all met by

the "Align-Aire" I-F Transformer! Provides 3600 degrees of micrometer smooth trimmer adjustment instead of the usual 180 degree rotation! Accurate trimming can thus be readily accomplished. Available with special "Iron-core" design for maximum gain and selectivity. Double-tuned and offered in a complete range of frequencies for any application. Shield cans are black crackle finish, 2"x2"x1 3/4".

No.	Frequency Range (kc)	Gain		Selectivity Band Width			Use
		Factory	Setting	2X	10X	20X	
16-6643	415-540	456	77	7.0	16.0	22.0	Input
16-6123	415-510	456	29	7.0	18.0	21.4	Interstage
16-6645	415-540	456	105	9.0	25.6	36.2	Output
16-6139	415-510	456	100	9.5	23.2	33.5	Output C.T

LIST PRICE, EACH \$6.95

AIR-CORE R-F CHOKES

Accurately wound and individually tested; coils wound on specially treated forms, mounted on bakelite terminal base and thoroughly moisture proofed. Available in shields or without, both single-hole mounting. Shielded chokes have terminals thru top of can so unit may be mounted on inside wall of chassis. Shields are black crackle finish, 1 1/2" dia.



M.H. Induct.	Shielded		Unshielded	
	No.	List	No.	List
2.5	19-5582	\$0.91	19-1994	\$0.63
5.5	19-5584	.91	19-4551	.63
8.0	19-5588	.97	19-2078	.69
10.0	19-1900	1.05	19-6770	.77
16.0	19-5590	1.11	19-1995	.83
30.0	19-5592	1.19	19-2330	.91
60.0	19-5594	1.33	19-3247	1.05
80.0	19-5596	1.39	19-2709	1.11

TRANSMITTER CHOKES

Highly efficient for Amateur and Commercial use; six lateral wound sections provide efficient action over wide frequency range. Windings on ceramic form with tapped ends; mounting brackets included.



Cat. No.	Induct.	Current	Ohms	Net
19-3019	2.8 MH	1000 MA	5.0	\$1.67
19-3022	5.5 MH	500 MA	12.5	1.47
19-3025	5.9 MH	200 MA	31.9	1.47

IRON-CORE R-F CHOKES

Universal-wound on special powdered-iron cores, these chokes provide maximum efficiency—lower DC resistance per MH. Coils are wax-impregnated; laminated bakelite terminal base; single-hole mounting; without shielding.



No.	M.H.	List	No.	M.H.	List
19-6834	2.5	\$0.97	19-6844	60.0	\$1.60
19-6840	10.0	1.19	19-6846	80.0	1.81
19-6842	30.0	1.39	19-6848	125.0	2.30

PHONO-OSCILLATOR COIL

For use in building either wireless or direct-connected phonograph-oscillator units for record reproduction through the radio receiver. Knob adjustment permits selection of clear frequency in the broadcast band. Coil is in black crackle shield, 1 3/8" square by 3 1/2" high.



No. 17-9373 List \$2.78

B. F. O. COIL

For use with standard I. F.'s in superhet receivers. They supply the "beat" note necessary to reception of C. W.;

materially aid in tuning and locating weak stations. Mica trimmed. Freq. Range 290-650 KC. Peaked at 456 KC. in 1 3/8" sq. x 3 1/2" h. can with knob for pitch control.

No. 17-6753 Net Price \$1.47

F. M. COILS—I. F. TRANSFORMER

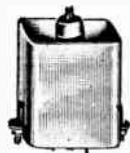
Permeability tuned; designed for use on newly assigned F. M. Frequencies. Mounted in 1-7/16" x 7/8" x 1-29/32" can. Tuned to 10.7 mc.

No. 16-6665 List Price \$3.75

DISCRIMINATOR TRANSFORMER

Mounted in same size can as I.F. Transformer listed above. Permeability tuned to 10.7 mc.

No. 17-3484 List Price \$5.00



NEW MEISSNER "ANALYST"

THE MODERN SERVICE INSTRUMENT—Undoubtedly the most modern complete servicing instrument on the present day market. Handles the re-works of yesterday, today and tomorrow — with equal efficiency and facility! Entirely fundamental in its testing procedure. Will never become obsolete. **SAVES TIME — SAVES MONEY**—The use of the new Meissner ANALYST will not only permit you to make more money by handling a greater number of service jobs in a given time but it will give you additional assurance that these jobs will "stay sold." **SERVICES BY "SIGNAL TRACING"**—The new Meissner ANALYST tests receivers and locates faults by the "Signal tracing" method — proven to be the fastest and most reliable method known at the present time. It is NOT, however, just another signal tracer! It is completely equipped with all devices that might be needed to make simultaneous checks on various parts of the receiver circuit; provide as many different functions; all controls are accurately calibrated with functions clearly indicated.



Five separate and distinct "channels" provide as many different functions; all controls are accurately calibrated with functions clearly indicated.

Complete—Ready to Go to Work

The new Meissner ANALYST is completely wired, aligned and laboratory tested. Furnished complete with a full set of 12 tubes, it is all ready to be put into service the minute it is unpacked and connected to the 110 volt line! No alignment or adjustments are necessary—just read the instructions, hook it up and go to work!

Complete Book of Instructions, supplied with the new Meissner ANALYST, gives detailed directions for use of this instrument in locating all kinds of radio troubles. No. 9-104#—New Meissner ANALYST, complete with tubes, prods, and Instruction Book; ready to operate. Net Price.....\$113.85

MANUALS

I. F. REPLACEMENT MANUAL

This manual has 254 pages listing 9,981 models made by 224 manufacturers. Every superheterodyne made on which data could be obtained is listed by name, model number, original part number and factory peak frequency, and recommended replacement. Will be a great help to any service man.

I-F Replacement Manual. Price \$0.35



"HOW TO BUILD MANUAL"

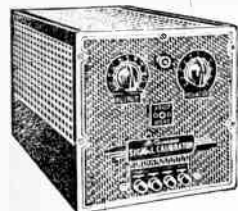
Contains 168 pages of material including Charts, formulas, Theory of coils and circuit applications, Treatise on Frequency Modulation, Schematic and Pictorial wiring diagrams of Receivers, P. A. Tuners, Test equipment, Amateur Gear.

Instruction Manual Price \$0.50

SIGNAL CALIBRATOR Precision Frequency Standard

100 KC, 50 KC and 10 KC "markers" up to 20,000 KC — Push-button control of frequency — Delivers modulated or unmodulated signal — Easily set . . . Instantly checked — Well ventilated cabinet — Precision accuracy

The Model 9-1076 Signal Calibrator is designed to operate from a 115 volt, single phase, 50/60 cycle AC power source. The power required is approximately 40 watts. The Model 9-1076 Signal Calibrator is a portable self-contained unit designed to



generate extremely accurate "marker" signals over the RF range of 10 KC to 20,000 KC. The "Signal Calibrator" is a secondary frequency standard against which unknown frequencies may be checked and accurately determined. The Signal Calibrator provides the means for checking and adjusting radio transmitters, radio receivers, laboratory equipment etc., as follows:

A. To accurately adjust the radio transmitter to a desired frequency.

B. To accurately adjust the radio receivers to a desired frequency.

C. To accurately measure and determine the unknown frequency of an incoming signal.

The Model 9-1076 Signal Calibrator may also be used as a signal source for work on the test bench in servicing radio receivers and associated equipment. Component parts are mounted on a single chassis to which the front panel is attached. Located on the front panel are all controls required in the operation of the unit. The function of each control is clearly designated on the front panel.

The Signal Calibrator is housed in a steel cabinet, 8 1/4" wide, 8 1/4" high and 12 1/4" deep. The cabinet is finished in durable black wrinkle enamel.

The instrument incorporates a precision type, quartz crystal operating on 100 KC. This crystal is easily adjusted, by front panel control, to exact frequency as determined by "beat" against the Bureau of Standards station, WWV, or against other stations of known accuracy in frequency. Two multi-vibrators provide output on 50 KC, 10 KC and multiples thereof up to 20,000 KC.

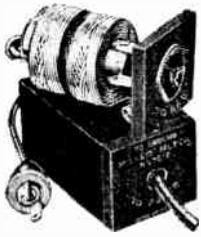
The output signal, produced by the Signal Calibrator, may be amplitude-modulated if desired. Modulation, at 60 cycles per second, is controlled by the front panel "Modulation" control.

The tube complement of the Model 9-1076 Signal Calibrator is as follows: 3 type 6XJGT, 2 Type 6N7GT, 1 Type 6BK7GT and 1 Type 6X5GT.

No. 9-1076—Signal Calibrator, Complete with tubes.....Net Price \$78.75*

Miller

ALL WAVE INTERFERENCE FILTER



These filters are designed to eliminate radio interference caused by small household appliances such as sewing machines, vacuum cleaners, food mixers and other similar devices requiring less than 150 watts. Inductive-capacitive circuit assures maximum attenuation of interference.

Dimensions: 2 1/2" square x 4" long.

Cat. No.	Volts	Watts	List Price
7818	115	150	\$7.00

APPLIANCE FILTER

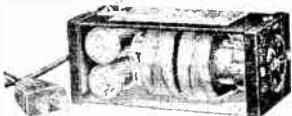


Similar to the Cat. No. 7818, except would with larger wire to be used with all types of plug-in devices with power requirements up to 550 watts.

Dimensions: 2 1/4" square x 4" long.

Cat. No.	Volts	Watts	List Price
7815	115	550	\$7.00

GENERAL PURPOSE FILTER

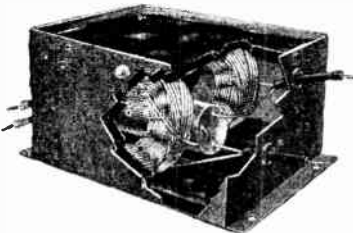


This filter is recommended for use with marine and D.C. appliances and radios. It is also for use with extremely noisy A.C. appliances. A good, permanent connection to ground should be used with this filter.

Dimensions: 2 1/2" square x 5" long.

Cat. No.	Volts	Watts	List Price
7813	115	200	\$7.50

INDUSTRIAL FILTERS



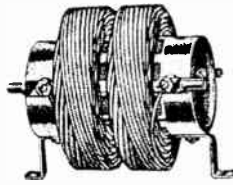
Miller industrial filters are designed for use with all types of radio interference producing devices. Duo lateral wound chokes and non-inductive condensers result in a high degree of noise attenuation. Completely sealed in metal cases having provision for standard junction boxes at each end of the case.

Dimensions: 9-3 42" x 6-1/2" x 5" high.

Weight: 16 lbs. Approx.

Cat. No.	Volts	Amps.	List Price
7841	220	5	\$30.00
7842	220	10	32.50
7843	220	20	35.00
7844	220	30	37.50
7845	220	40	40.00

LINE FILTER CHOKES



All Miller line filter chokes are duo-lateral wound on ceramic forms (except #7825 & D-7825 are on bakelite). They are for installation in noise producing equipment such as flasher signs, farm lighting plants, motor generators, etc. Also used with radio transmitters to prevent r.f. energy feed-back into the power circuits. Typical circuit diagrams are supplied with each choke. Always select chokes having a current rating at least as high as the maximum current load of the circuit to be filtered.

SINGLE LINE FILTER CHOKES

For use in filtering individual and branch circuits.

Dimensions: #7825 1-7/8" x 1-3/4"

Others: 2-1/2" x 4"

Cat. No.	Amps.	Ohms.	MH	List Price
7825	2	.75	.60	\$1.50
7826	5	.28	.57	4.00
7827	10	.15	.37	4.50
7828	20	.08	.20	5.00
7829	30	.05	.13	5.50

DUAL LINE FILTER CHOKES

For use in filtering both sides of single phase circuits.

Dimensions: #D-7825 3-1/4" x 2-1/8"

Others: 4-1/2" x 4"

Cat. No.	Amps.	Ohms.	MH	List Price
D-7825	2	.75	.60	\$3.00
D-7826	5	.28	.57	6.00
D-7827	10	.15	.37	7.00
D-7828	20	.08	.20	8.00
D-7829	30	.05	.13	9.00

Specifications are for each winding.

TOWER LIGHTING CHOKES

Similar in construction and size to the D-7825, except of 2-pi construction and recommended for use in the circuits of obstruction and warning lights of antenna towers.

Cat. No.	Amps.	Ohms.	MH	List Price
7870	5	.56	1.20	\$6.00
7871	10	.30	.75	7.00
7872	20	.17	.45	8.00

RECTIFIER HASH FILTER CHOKES



Duo-lateral wound chokes for use in series with the plate loads of mercury vapor rectifiers to prevent r.f. hash feed-back.

The single chokes are insulated for use up to 10,000 volts to ground. The dual choke is insulated for 2500 volts plate to plate. Wound on Alsimag forms with two hole mounting brackets.

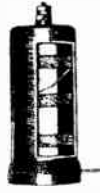
Dimensions: 2" dia. by 2-3/8" high.

Cat. No.	MH	Ohms	MA	List Price
7867	4.50	4.5	500	\$2.00
7868	2.75	2.3	1000	2.50

Dual Choke Dimensions: 1-1/4" Dia. x 1-3/4" high

7865	3.25 (per Coil)	15	250	1.50
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HIGH TENSION FILTER CHOKES



These chokes are used to prevent radio interference caused by high tension (secondary) circuit neon sign animators and lead radiation of border tubing. The chokes are sectional wound and enclosed in weatherproof bakelite cases. They are insulated for 15,000 volts and continuous current operation up to 100 milliamperes. Designed for ease of installation and trouble-free service.

Circuit diagram supplied with each choke.

Dimensions: 1-3/8" dia. x 3-1/4" high.

Cat. No.	Volts	Amps.	List Price
7875	15,000	.1	\$2.50

ELECTRIC SHAVER FILTER



Carefully designed and constructed, this filter is the inductive-capacitive type and requires no ground connection.

Shock-proof moulded rubber construction. For use with all electric shavers. Fully guaranteed.

Dimensions: 1-1/8" dia. x 3" long.

Cat. No.	Volts	Watts	Finish	List Price
7817	115	50	Black	\$2.50
7817-1	115	50	Ivory	2.50

RADIO INTERFERENCE FILTER CONDENSERS



Highest quality non-inductive wound paper dielectric condensers manufactured for use with Miller Filters and Filter chokes. These condensers are rated at 220 volts AC or DC and are designed to withstand surges up to 1000 volts. Uncased type for installation within the equipment. Wax impregnated and sealed.

Maximum operating voltage—220 AC.

Cat. No.	Capacity	Dimensions	List Price
7803	2 x 2. Mfd.	1-7/8" x 1-1/4" x 4-1/2"	\$4.50
7804	2. mfd.	1-7/8" x 3/4" x 3-1/2"	2.50

FLUORESCENT LIGHT FILTER CHOKES



Radio interference generated by fluorescent lights and tubing may be prevented from getting into the supply line by the use of these filter chokes. Chokes are installed as close to the ballast as practical. Complete instructions are supplied with each choke.

Dimensions: 1-1/4" dia. x 1-1/2" long.

Cat. No.	Volts	Watts	List Price
7876	220	20	\$1.50
7877	220	40	1.50
7878	220	80	1.50
7879	220	160	1.50

FILAMENT CHOKE



Enclosed solenoid wound chokes for use in the filament and vibrator circuits of battery operated receivers, transmitters, etc.

Dimensions: 3/4" Dia. x 1-7/8" long, plus 3" leads.

Cat. No.	uH	Ohms	Amps.	List Price
5221	10	.02	8	\$.60

For a Complete Listing of MILLER PRODUCTS ask for a copy of our Latest General Catalog.

[A]

Miller

UNSHIELDED CHOKES



These single section R.F. Chokes are ideally suited for general purpose applications in receiver and filter circuit. Solder lug terminals and single hole mounting.

AIR CORE TYPE

Dimensions: 1-1/8" dia. x 5/8" high.

Cat. No.	MH	Ohms	MA	List Price
610	.25	8	125	\$.40
620	.75	17	125	.40
630	1.50	21	125	.40
640	2.50	28	125	.50
650	5.0	41	125	.50
660	7.5	53	125	.50
670	10.0	64	125	.60
680	12.5	74	125	.60
690	15.0	83	125	.60
691	20.0	97	125	.75
692	30.0	120	100	.75
693	60.0	175	100	1.00
694	80.0	230	100	1.25

Center Tapped Chokes

670-T	10.0	64	125	.70
691-T	20.0	97	100	.85
693-T	60.0	175	100	1.10

IRON CORE TYPE

These chokes are similar in construction to the No. 600 series except that they are wound on powdered iron cores.

Cat. No.	MH	Ohms	MA	List Price
951	.5	6.8	125	\$9.90
952	1.0	10.9	125	1.00
953	2.5	19.5	125	1.05
954	5.0	23.0	125	1.20
955	7.5	37.0	125	1.25
956	10.0	45.0	125	1.30
957	25.0	78.0	100	1.60
958	50.0	130.0	100	1.75
959	75.0	172.0	100	2.00
960	100.0	210.0	100	2.25
961	150.0	268.0	100	2.50



SHIELDED CHOKES

Single section wound R.F. R.F. Chokes assembled in round aluminum shield with two spade bolts for mounting. Solder lug terminals.

Dimensions: 1-1/4" dia. x 1" high (No. 758 is 1-5/8" dia.)

Cat. No.	MH	Ohms	MA	List Price
751	.5	10	125	\$.75
752	1.0	17	125	.75
753	2.5	30	125	.85
754	5.0	49	125	.85
755	7.5	61	125	.85
756	10.0	75	125	.95
757	25.0	125	125	1.10
758	50.0	186	100	1.35

IRON CORE TYPE

Similar to the No. 700 series except wound on powdered iron cores for lower circuit loss.

Dimensions: 1-1/4" dia. x 1" high.

Cat. No.	MH	Ohms	MA	List Price
851	.5	8.6	125	\$1.25
852	1.0	11.5	125	1.35
853	2.5	22.0	125	1.40
854	5.0	31.0	125	1.55
855	7.5	42.0	125	1.60
856	10.0	47.0	125	1.65
857	25.0	100.0	125	1.95

Dimensions: 1-5/8" dia. x 1" high.

858	50.0	160.0	100	2.10
859	75.0	222.0	100	2.35
860	100.0	348.0	100	2.60
861	150.0	520.0	100	2.85

LOW POWER AND RECEIVER CHOKES



These chokes are wound on 1/4" dia. forms and feature the exclusive Miller 'Sta-on' terminal clips. Low distributed capacity and accurate inductance values.

Dimensions: (form) 1/4" dia. x 1-1/2" long.

Cat. No.	MH	Ohms	MA	List Price
4531	.5	11	200	\$.75
4532	1.5	21	200	.75
4537	2.5	26	200	.75
4538	5.0	40	125	1.00
4539	7.5	79	125	1.25
4540	10.0	95	125	1.50
4541	25.0	160	125	1.75

UHF CHOKES

Dimensions: 1/4" Dia. x 1-1/2" long.

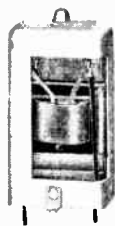
Cat. No.	uH	Ohms	MA	List Price
4528	2.5	.07	200	\$.60
4529	4.0	.25	200	.60

SINGLE STUD MOUNTING CHOKE

Dimensions: 5/8" O.D. x 1-1/4" high (plus #6-32 stud)

Cat. No.	MH	Ohms	MA	List Price
4530	2.5	23	200	\$.85

PHONO SCRATCH FILTER



The Miller Phono Scratch Filter is designed to reduce needle and surface noise and may be used with any type of high impedance phonograph pick-up. The resonant frequency of the parallel tuned circuit is adjustable between 2000 and 3000 cycles. The attenuation is approximately 22 db. Assembled in an aluminum shield with two mounting brackets.

Dimensions: 1-3/8" x 1-7/8" x 3" high.

Cat. No.	Item	List Price
EL-59	Scratch Filter	\$7.50

TV POWER TRANSFORMER (R.F.)

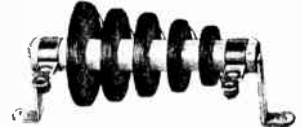


These R.F. power supply transformers for use with television receivers and cathode ray oscilloscope make it possible to construct an inexpensive source of high voltage D.C. Two types are available, the #4525 for voltages to 4000 DC and the #4526 for voltages to 10,000 DC (or 30,000 DC in a voltage rectifier tripler circuit). Type 1B3-GT tubes are used as rectifiers and the R.F. oscillator circuit uses one or more type 6V6 or 6Y6 tubes connected in parallel.

The high frequency AC source permits use of simple and inexpensive resistive capacitive filters with low ripple content in the output. Typical circuit diagrams are supplied with each coil.

Cat. No.	Item	List Price
4525	H.V. R.F. Trans. (to 4 KV)	\$7.50
Dimensions—1/4" Dia. x 3 3/4" high (illustrated)		
4526	H.V. R.F. Trans. (to 30 KV)	\$12.50
Dimensions—2 1/4" Dia. x 6" high (not illustrated)		

HEAVY DUTY TRANSMITTER CHOKES



These heavy duty Navy Type R.F. chokes are sectional wound on Alsmag forms and are provided with removable mounting brackets. Ends of form are tapped for #6-32 machine screw. For general use in amateur and commercial transmitters.

Dimensions: (form) 1/2" dia. x 3-1/2" long.

Cat. No.	MH	Ohms	MA	Meters	List Pr.
4534	1.0	2.5	1000	20	\$2.00
4535	1.5	3.6	1000	40	2.25
4533	2.5	4.5	750	80	2.50
4536	4.0	5.5	750	160	2.75

MEDIUM DUTY TRANSMITTER CHOKES



For use in medium power transmitters, these chokes are similar in construction to our Heavy Duty types. Low distributed

capacity and accurate inductance values are features.

Dimensions: (form) 1/2" dia. x 2-1/2" long.

Cat. No.	MH	Ohms	MA	List Price
4550	2.0	6.5	400	\$1.50
4551	4.0	10.0	400	1.75

10 K. C. FILTERS

This filter is used to eliminate the 10 KC heterodyne 'whistle' present in high fidelity broadcast receivers. It is used in the detector load circuit of a diode or infinite impedance detector. The 10,000 cycle attenuation is approximately 30 db. The filter consists of a parallel resonant circuit with an iron core coil and a variable condenser providing a tuning range from 7500 to 12,000 cycles.

Dimensions: 1-3/8" sq. x 2-1/4" high.

Cat. No.	Use	List Price
EL-58	10 KC Filter	\$6.00



This band elimination circuit 10,000 cycle filter has sharper cut-off characteristics than our type EL-58. It should be connected in the plate circuit of a triode audio stage. The cut-off frequencies are 9000 and 11,000 cycles. The load resistance R is 10,000 ohms. The attenuation is approximately 30 db. Recommended for general use with any high fidelity broadcast band receiver.

Dimensions: 1-3/8" x 1-7/8" x 2-7/8" high.

Cat. No.	Use	List Price
EL-60	10 KC Filter	\$12.50

PHONO-OSCILLATOR COIL



The Miller Phono-Oscillator coils are permeability tuned and are assembled in an aluminum shield, together with the grid coupling condenser and resistor. The tuning range of the coil is from 540 to 700 KC, by core adjustment. A typical circuit diagram is supplied with each coil.

Dimensions:	Use	Freq. Range	List Price
1-7 16" square	x 2-1/2" high.		
522 Phono-Oscillator	540-700 KC		\$3.00

Miller

REPLACEMENT I. F. TRANSFORMERS

(Double Tuned)



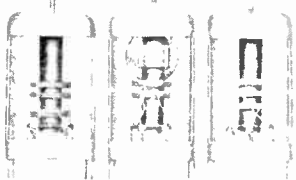
These transformers are an essential part of the stock of every serviceman and dealer. In many cases they will give better performance than the original transformer. All have been pretuned and should require only slight adjustment after installation. Leads are color coded, and the transformers are assembled in aluminum shields. These transformers may be used as replacements in most makes of receivers using transformers of the same physical size. Be sure to order a transformer of the correct frequency.

Dimensions: 1-3/8" square x 2-5/8" high.

Cat. No.	Freq.	KC Range	Use	List Price
512-K1	175	160-190	Input	\$2.25
512-K2	175	160-190	Interstage	2.25
512-K3	175	160-190	Full-Wave	2.25
512-K4	175	160-190	Half-Wave	2.25
512-H1	262	240-280	Input	2.00
512-H2	262	240-280	Interstage	2.00
512-H3	262	240-280	Full Wave	2.00
512-H4	262	240-280	Half Wave	2.00
512-C1	455	425-500	Input	2.00
512-C2	455	425-500	Interstage	2.00
512-C3	455	425-500	Full Wave	2.00
512-C4	455	425-500	Half Wave	2.00

UNIVERSAL REPLACEMENT COILS

(Permeability Tuned)



This series of variable inductance iron core coils are well suited for general replacement use and new designs. The inductance may be adjusted to cover the standard broadcast band with tuning condensers having a maximum capacity of between 250 and 450 mmfd. The oscillator coils may be used with any I.F. amplifier operating in the 100 to 550 KC range. Complete instructions are supplied.

UNSHIELDED

Dimensions: 7/8" dia. x 2" high. "L" mtg. Bracket.

Cat. No.	Use	Freq. Range	List Price
72-A	Antenna Stage	500-1800 KC	\$2.00
72-RF	R.F. Stage	500-1800 KC	2.00
72-Osc.	Oscillator Coil	100-550-KC I.F.	2.00

SHIELDED

Dimensions: 1-3/8" square x 2-1/2" high

Cat. No.	Use	Freq. Range	List Price
73-A	Antenna Stage	500-1800	\$2.50
73-RF	R.F. Stage	500-1800	2.50
73-Osc.	Oscillator Coil	100-550 KC I. F.	2.50

ANTENNA COIL PRIMARIES



High impedance duo-lateral wound replacement primary windings. Dimensions given are for outside diameter of coil secondary.

Cat. No.	Diameter	List Price
352	1/2"	\$.35
353	5/8"	.35
354	3/4"	.35
355	7/8"	.35
356	1"	.35
357	1-1/4"	.35

DE-LUXE BROADCAST COILS



These coils are used in the finest quality receivers for lasting performance and stability. All coils are wound on XXX grade bakelite tubing and the secondaries are Litz wire wound (except oscillator coils) for maximum "Q". The antenna and R.F. coils are inductive-capacitive coupled for uniform gain. For use with standard 365 mmfd tuning condensers.

SHIELDED COILS

Dimensions: 1-7/8" dia. x 3" high.

Cat. No.	Use	Freq. Range	List Pr.
242-A	Antenna	540-1750	\$1.50
242-RF	Interstage	540-1750	1.50
242-BP	Band-pass	540-1750	1.25
277-C	2-coil Oscillator	540-1750*	1.25
279-C	Tapped Oscillator	540-1750*	1.10

NOTE: *Oscillator coils are for use with 455KC intermediate frequency and require a 400 mmfd. series pad condenser.

UNSHIELDED COILS

Dimensions: 7/8" dia. (form) x 2-3/4" high.

Cat. No.	Use	Freq. Range	List Pr.
241-A	Antenna	540-1750	\$1.00
241-RF	Interstage	540-1750	1.00
241-BP	Band-pass	540-1750	.85
276-C	2-coil Oscillator	540-1750*	1.00
278-C	Tapped Oscillator	540-1750*	.85

NOTE: *Oscillator coils are for use with 455 KC intermediate frequency and require a 400 mmfd. series pad condenser.

HIGH GAIN T.R.F. COILS

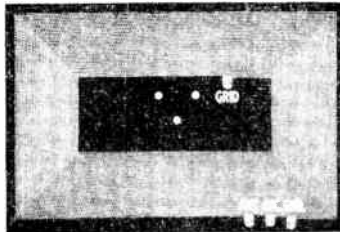


These coils are excellent for use in 2-tuned circuit TRF receivers and beginners circuits. They feature high impedance primaries and Litz wire wound secondaries wound on XXX grade Bakelite tubing. Single "L" mounting brackets. For use with standard 365 mmfd. tuning condensers.

Dimensions: 1" dia. (form) x 2" high.

Cat. No.	Use	Freq. Range	List Pr.
42-A	Antenna	540-1600 KC	\$.90
42-RF	Interstage	540-1600 KC	.90

LOOP ANTENNA



Using the patented "Air Loop" construction, the No. 705-A Loop Antenna provides high "Q" on 1 mechanical rigidity. The loop as supplied has a secondary inductance of 253 microhenries, which may be reduced as needed. Instructions are supplied. May be used in older sets to replace the antenna coil for local reception without an antenna.

Dimensions: 8-1/8" 5-3/8" x 1/8" thick.
*Mfg. under Franklin Airloop Co. Pat. = 2,401,472

Cat. No.	Use	Frequency	List Price
703-A	Loop Antenna	540-1700 KC	\$1.75

STANDARD BROADCAST COILS



High gain general purpose coils featuring high impedance coupled antenna and R.F. units with progressive wound Litz wire secondaries (except oscillator coils). For use with standard 365 mmfd. tuning condenser. All windings are thoroughly impregnated with tropicalized R.F. lacquer.

SHIELDED COILS

Dimensions: 1-3/8" square x 2-1/2" high.

Cat. No.	Use	Freq. Range	List Pr.
44-A	Antenna	540-1700	\$1.15
44-RF	Interstage	540-1700	1.15
44-BP	Band-Pass	540-1700	1.15
44-C	2-coil Oscillator	540-1700*	1.15
41-C	Tapped Oscillator	540-1700*	1.15

NOTE: *Oscillator coils are for use with 455 KC intermediate frequency amplifier and a 400 mmfd. series pad condenser.

UNSHIELDED COILS

Dimensions: 5/8" dia. (form) x 2-1/2" high.

Cat. No.	Use	Freq. Range	List Pr.
43-A	Antenna	540-1700	\$.85
43-RF	Interstage	540-1700	.85
43-BP	Band-Pass	540-1700	.85
43-C	2-coil Oscillator	540-1700*	.85
45-C	Tapped Oscillator	540-1700*	.85

NOTE: *Oscillator coils are for use with 455 KC intermediate frequency amplifier and a 400 mmfd. series pad condenser.

REPLACEMENT OSCILLATOR COILS



These solenoid wound general purpose coil may be used as general replacements in many makes of standard broadcast band receivers. For use with 365 mmfd. variable condensers to cover the band from 540 to 1700 KC. Wound on XXX grade bakelite tubing with enamelled copper wire.

UNSHIELDED

Dimensions: 3/4" dia. x 1-3/4" long. "Z" mtg. Bracket.

Cat. No.	I.F. Freq.	Series Pad	List Price
480-K	175	.001 mfd.	\$.70
480-H	262	.0006 mfd.	.70
480-C	455	.0004 mfd.	.70

ALL WAVE TEST OSCILLATOR COILS



A set of high quality coils for use in building an electron coupled test oscillator. A 2-gang 365 mmfd. condenser with sections connected in parallel is required. The fundamental frequency range, in five bands, is from 50 KC to 20 MC. The low frequency coil is unshielded, the other coils are in two shields measuring 1-3/4 square x 3" high.

Cat. No.	Use	Frequency	List Price
T-550	Test Oscillator	50-20,000 KC	\$7.50

For a Complete Listing of MILLER PRODUCTS ask for a copy of our Latest General Catalog.

[C]

Miller

LOOP ANTENNA WAVE TRAPS



These traps are designed especially for use with receivers having built-in loop antenna. Similar in construction to our Series 811, except with a separate low inductance winding which is to be connected in series with the loop antenna of the receiver. Slight readjustment of the loop tuning circuit after the trap has been installed is desirable. Trap circuit is parallel connected.

Dimensions: 1-3/8" square x 1-3/4" high.

Cat. No.	Band	KC Range	List Pr.
815-X1	I.F. & Commercial	250-500	\$1.50
815-X2	I.F. & Commercial	125-250	1.50
815-BC1	Broadcast	900-1800	1.50
815-BC2	Broadcast	500-900	1.50
815-A	Amateur	160 Meters	1.50
815-B	Amateur	80 Meters	1.50

SHIELDED WAVE TRAPS

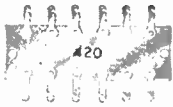


Parallel resonant wave traps assembled in aluminum shields are well suited for use in older types of radio receivers and in locations where the signal strength of the interfering station is high in relation to the signal to be received. Screw-driver frequency adjustment from top of shield. Two mounting brackets are attached to the shield.

Dimensions: 1-3/8" square x 2-1/2" high.

Cat. No.	Band	KC Range	List Pr.
812-X1	I.F. & Commercial	425-525	\$1.75
812-X2	I.F. & Commercial	225-325	1.75
812-X3	I.F. & Commercial	150-225	1.75
812-BC1	Broadcast	1200-1600	1.75
812-BC2	Broadcast	800-1200	1.75
812-BC3	Broadcast	500-800	1.75
812-A	Amateur	160 Meters	1.75
812-B	Amateur	80 Meters	1.75
812-C	Amateur	40 Meters	1.75
812-D	Amateur	20 Meters	1.75
812-E	Amateur	10 Meters	1.75

BAKELITE TERMINAL PLATES



These terminal plates, provided with securely riveted solder type terminal lugs, are particularly adaptable to the assembly of groups of resistors

and by-pass condensers. Lugs are on 1/16" thick bakelite sheet stock and the terminal spacing is 7/16".

Cat. No.	Dimensions	Lugs per Side	List Pr.
420	1" x 3"	6	\$.30
430	1-3/4" x 2-1/2"	5	.35
440	1" x 5-3/4"	14	.50
450	1-3/4" x 3-3/4"	8	.50
460	1-3/4" x 5-1/4"	11	.70
470	1-3/4" x 8-3/8"	19	1.00

BAND SELECTOR SWITCHES



Miller band switches will make positive noise-free contact through an indefinite period of operation. These switches are positive self-cleaning type with silver plated contacts. Switches have an adjustable stop to be set for your requirements. Single hole mounting through a 3/4" diameter hole. Supplied with nut and lockwasher. Switches are 1-7/8" diameter.

Cat. No.	Circuits	Positions	Length	List Price
205	2	5	3/4"	\$2.50
402	4	2	3/4"	2.50
405	4	2 to 5	2-1/4"	3.25
605	6	2 to 5	4-1/2"	4.25

DUAL WAVE TRAPS



Finest quality iron core dual wave traps having both a series and a parallel tuned circuit. Each circuit is tuned by a knob accessible at the top of the shields. Circuits may be tuned to the same frequency for maximum attenuation, or may be tuned to different stations within the range of the trap.

Dimensions: 1-3/8" x 2-3/4" x 2-1/4" high.

Cat. No.	Band	KC Range	List Pr.
813-X1	I.F. & Commercial	250-500	\$3.75
813-X2	I.F. & Commercial	125-250	3.75
813-BC1	Broadcast	900-1600	3.75
813-BC2	Broadcast	500-900	3.75
813-A	Amateur	1500-3000	3.75

UNSHIELDED WAVE TRAPS

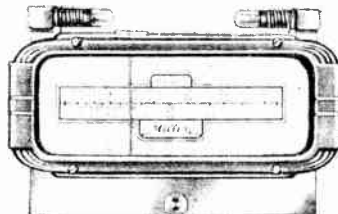


These unshielded wave traps may be installed within the cabinet or on the chassis. They are parallel resonant and provided with screw driver adjustment. Several traps may be connected in series with the antenna to provide simultaneous rejections of more than one interfering station.

Dimensions: 1-3/8" square x 1-3/4" high.

Cat. No.	Band	KC Range	List Pr.
811-X1	I.F. & Commercial	250-500	\$1.25
811-X2	I.F. & Commercial	125-250	1.25
811-BC1	Broadcast	900-1800	1.25
811-BC2	Broadcast	500-1000	1.25
811-A	Amateur	160 Meters	1.25
811-B	Amateur	80 Meters	1.25
811-C	Amateur	40 Meters	1.25
811-D	Amateur	20 Meters	1.25
811-E	Amateur	10 Meters	1.25

SLIDE RULE DIALS



Miller Series No. 152 Slide Rule dials are designed for top-of-chassis mounting. The dimension from top of chassis to center of dial shaft bushing is 1-13/16". Dials are supplied with hubs for 3/8" diameter shafts. Two screw type dial light sockets are packed with each dial. The attractive escutcheon plate is finished in antique bronze with a protective lacquer coating. The dial scales are calibrated for use with condensers having counter-clockwise rotation. The escutcheon requires a panel cut-out measuring 1-7/8" high by 5-1/4" wide.

Dimensions:
6-5/8" wide by 4-1/8" high (plus 1/2" for dial lights), 1/4" diameter shaft extends 1-1/4" beyond front of dial. The dial tuning ratio is approximately 5-1/2 to 1 and the effective scale length is 4-3/8".

Cat. No.	Calibration	List Price
152	.540-1800 KC	\$6.00
152-A	.54-1.7 MC 0-100	6.00
152-B	.54-1.7 1.7-5.5 MC	6.00
152-C	.54-1.7 5.5-18 MC	6.00
152-D	.54-1.7 1.7-5.5 5.5-18 MC	6.00
152-E	.14-.42 .54-1.7 2.5-7 MC	6.00
152-F	.14-.42 2.5-7 MC	6.00

MIDGET I.F. TRANSFORMERS



These mica compression tuned intermediate frequency transformers are well suited for use in small receivers of all types. They measure only 1-1/8" square and 2" high. In spite of their small size, only the highest quality of parts and workmanship

has been used in the construction of the Miller Midget transformers.

Dimensions: 1-1/8" square x 2" high.

Cat. No.	Use	Freq.	KC Range	List Price
AIR CORE TYPES				
112-K1	Input	175	165-185	\$2.00
112-K2	Interstage	175	165-185	2.00
112-K3	Full Wave	175	165-185	2.00
112-K4	Half Wave	175	165-185	2.00
112-C1		455	450-475	1.75
112-C2		455	450-475	1.75
112-C3		455	450-475	1.75
112-C4		455	450-475	1.75
112-W1		1500	1400-1600	1.75
112-W2		1500	1400-1600	1.75
112-W3		1500	1400-1600	1.75
112-W4		1500	1400-1600	1.75

Cat. No.	Use	Freq.	KC Range	List Price
IRON CORE TYPES				
012-K1		175	165-185	2.25
012-K2		175	165-185	2.25
012-K3		175	165-185	2.25
012-K4		175	165-185	2.25
012-H1		262	250-275	2.00
012-H2		262	250-275	2.00
012-H3		262	250-275	2.00
012-H4		262	250-275	2.00
012-C1		455	450-475	2.00
012-C2		455	450-475	2.00
012-C3		455	450-475	2.00
012-C4		455	450-475	2.00
012-W1		1500	1400-1600	2.00
012-W2		1500	1400-1600	2.00
012-W3		1500	1400-1600	2.00
012-W4		1500	1400-1600	2.00

PERMEABILITY TUNED TRANSFORMERS



Miller permeability tuned intermediate frequency transformers are recommended for all applications where a high degree of frequency stability and operation under humid conditions are used. The two iron core adjusting screws are accessible from the side of the aluminum shield. These transformers have excellent gain and selectivity characteristics. An internal spring clip prevents

vibration from affecting the adjustment.

Dimensions: 1-3/8" square x 3-1/4" high.

Cat. No.	Use	Freq.	KC Range	List Price
912-M1	Input	132	127-137	\$4.00
912-M2	Interstage	132	127-137	4.00
912-M3	Full Wave	132	127-137	4.00
912-M4	Half Wave	132	127-137	4.00
612-K1		175	165-185	4.00
912-K2		175	165-185	4.00
912-K3		175	165-185	4.00
912-K4		175	165-185	4.00
912-H1		262	250-275	3.50
912-H2		262	250-275	3.50
912-H3		262	250-275	3.50
912-H4		262	250-275	3.50
912-C1		455	450-475	3.50
912-C2		455	450-475	3.50
912-C3		455	450-475	3.50
912-C4		455	450-475	3.50
912-W1		1500	1400-1600	3.50
912-W2		1500	1400-1600	3.50
912-W3		1500	1400-1600	3.50
912-W4		1500	1400-1600	3.50
912-X1		3000	2900-3100	3.50
912-X2		3000	2900-3100	3.50
912-X3		3000	2900-3100	3.50
912-X4		3000	2900-3100	3.50

Miller

MINIATURE I.F. TRANSFORMERS*



Designed for experimental and custom receivers as well as replacements for 'personal' radios, these transformers are precision-tuned and comparable in performance to standard size components. Expressly designed for use with the new miniature tube. Place installation through-out. Screw driver adjustment of primary and secondary from top and bottom of shield. Suitable with spring clip for mounting to the chassis.

Dimensions: 3/4" square x 2" high.

*Mfg. under R-Trans. Patts. and Patts. Pend.

Cat. No.	Use	Freq.	KC Range	List Price
12-H1	Input	262	250-275 KC	\$2.25
12-H2	Output	262	250-275 KC	2.25
12-C1		455	440-480 KC	2.00
12-C2		455	440-480 KC	2.00

UNIVERSAL I.F. TRANSFORMERS

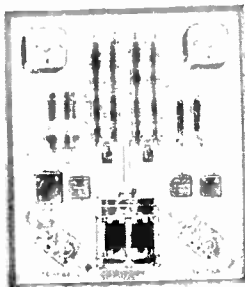


This new series of Miller transformers is used for general replacement purposes and in new designs. High gain and excellent stability are combined in a small transformer designed for use in both home and auto radio receiver. The ceramic mica compression trimmers have been heat cycled for temperature stability. All transformers are assembled in aluminum shields with screw-driver adjustment accessible at the top of the shield.

Dimensions: 1-1/4" square x 2-1/2" high.

Cat. No.	Use	Freq.	KC Range	List Price
AIR CORE TYPES				
312-H2	Input	262	250-275	\$1.50
312-H4	Output	262	250-275	1.50
312-C2		455	440-475	1.50
312-C4		455	440-475	1.50
IRON CORE TYPES				
412-H2	Input	262	250-275	\$2.00
412-H4	Output	262	250-275	2.00
412-C2		455	440-470	2.00
412-C4		455	440-470	2.00

ALL WAVE COIL KIT



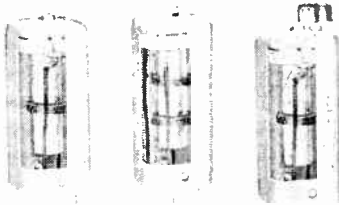
A simple inexpensive coil kit for the construction of an all wave receiver capable of out performing many commercial sets costing much more than the Miller #511. Easy to construct by following the instructions supplied with each kit. 5 Tubes, including

rectifier and 1 dual purpose tubes are used.

Frequency Range: 540-25,000 KC (in four bands)

Cat. No.	Quantity	Item	List Price
241-A	1	B. C. Ant. Coil	\$1.00
276-C	1	B. C. Osc. Coil	1.00
511-SWA	1	Short Wave Ant. Coil	2.25
511-SWC	1	Short Wave Osc. Coil	2.25
512-C2	1	455 KC Input I.F.	2.00
512-C4	1	455 KC Output I.F.	2.00
MA-2	2	H. F. Trimmers (dual)	1.00
	4	Osc. Series Pad Cond.	4.85
405	1	Band Selector Switch	3.25
511-CD	1	Circuit Diagram & Data	.50
MILLER #511		Coil Kit	List Price \$20.00

SPECIAL I.F. TRANSFORMERS



For communications receivers, converters and special applications, we maintain a stock of special purpose transformer. The following types are typical of the varieties available.

BEAT FREQUENCY OSCILLATORS

Cathode tapped transformers with adjustment knob at top of aluminum shield.

Dimensions: 1-3/8" square x 3-1/4" high.

Cat. No.	Frequency	KC Range	List Price
512-C5	455	450-475 KC	\$2.25
512-W5	1500	1400-1600 KC	2.25
512-X5	3000	2900-3100 KC	2.25
512-Y5	5000	4900-5100 KC	2.25

REGENERATIVE I.F. TRANSFORMERS

Double tuned transformers with a tapped secondary for cathode regenerative feedback.

Dimensions: 1-3/8" square x 3-1/4" high.

Cat. No.	Frequency	KC Range	List Price
AIR CORE TYPES			
512-RC	455	450-475 KC	\$2.00
512-RW	1500	1400-1600 KC	2.00
512-RX	3000	2900-3100 KC	2.00
IRON CORE TYPES			
612-RC	455	450-475	\$2.50
612-RW	1500	1400-1600	2.50

CONVERTER OUTPUT TRANSFORMERS

Used in a simple high frequency converter to existing radio receiver and using the receiver as an intermediate frequency amplifier.

Dimensions: 1-3/8" square x 3-1/4" high.

Cat. No.	Frequency	KC Range	List Price
512-QT	525	500-550 KC	\$2.00
512-WT	1500	1400-1600 KC	2.00
512-XT	3000	2900-3100 KC	2.00
512-YT	5000	4500-5500 KC	2.00

IRON CORE TRANSFORMERS



The iron core transformer provides higher gain and selectivity than the conventional air core transformers of similar size. The mica compression trimmer, adjustable from the top of the shield have been heat cycled for capacity stability. Gain and selectivity of a single stage using iron core transformer is often equal to two stages of air core transformers.

Dimensions: 1-3/8" square x 3-1/4" high.

Cat. No.	Use	Freq.	KC Range	List Price
612-H1	Input	262	250-275	\$2.50
612-H2	Interstage	262	250-275	2.50
612-H3	Full Wave	262	250-275	2.50
612-H4	Half Wave	262	250-275	2.50
612-C1		455	450-475	2.50
612-C2		455	450-475	2.50
612-C3		455	450-475	2.50
612-C4		455	450-475	2.50
612-W1		1500	1400-1600	2.50
612-W2		1500	1400-1600	2.50
612-W3		1500	1400-1600	2.50
612-W4		1500	1400-1600	2.50

HIGH FIDELITY TUNER KIT



Essential parts for the construction of a band pass T.R.F. broadcast receiver which, with a good amplifier and speaker system will enable you to really appreciate some of the fine high fidelity programs being broadcast by the better stations. Band width is 20 KC and a 10KC adjacent channel filter is included with the kit. Form #11241 gives complete details, it's yours for the asking.

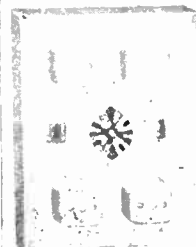
The Coil Kit consists of the following:

Cat. No.	Quantity	Item	List Price
472-UA	1	Untuned Ant. Coil	\$1.75
242-RF	2	Interstage Coil	3.00
242-BP	2	Band-Pass Coils	2.50
472-UT	1	Untuned Det. Coil	2.25
EL-56	2	Coupling Coils	2.00
EL-58	1	10 KC Filter	6.00
2104	1	4-Gang Condenser	15.00
570-CD		Circuit Diagram & Data	.25
MILLER #EL-575		Coil Kits	List Pr. \$32.75

The foundation Kit* consists of:

Cat. No.	Quantity	Item	List Price
EL-570	1	Coil Kit	\$32.75
570-T	1	Tuner Chassis	12.00
570-TB	1	Chassis Bottom	3.00
152	1	Slide Rule Dial	6.00
570-P2	1	Relay Rack Panel	6.00
440	1	Terminal Plate	.50
3093	1	Dial Knob	.75
570-EP	1 Pr.	Engraved Plates	4.00
MILLER #EL-575		Foundation Kit	List Price \$65.00

SKIP BAND COIL KIT



This new 2-Band coil kit covers the standard Broadcast band and the popular international short wave band. Shielded coils are used throughout. High frequency trimmer are incorporated in the coils. Requires a 2 gang 365 mmdf tuning condenser.

Frequency range: 540-1500 5500-18,000 KC

The kit contains the following:

Cat. No.	Quantity	Item	List Price
3997-A	1	Antenna Coil	\$3.50
3999-C	1	Oscillator Coil	3.50
612-C2	1	455 KC Input I.F.	2.75
612-C4	1	455 KC Output I.F.	2.75
402	1	Band Selector Switch	2.50
161	1	400 mmdf. Osc. Pad	.60
167	1	.01 mfd. Osc. Pad	2.25
3997-CD	1	Circuit Diagram	.50
MILLER #3997		Coil Kit	List Price \$18.35

ADJUSTABLE PADDER CONDENSERS



These adjustable oscillator padder condensers are of the finest quality mica compression type with ceramic body. Capacity adjustable from both top and bottom of condenser.

Dimensions: 7/8" x 1" x 3/32" thick.

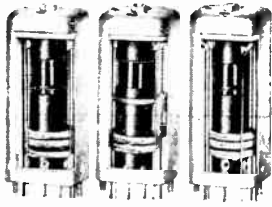
Cat. No.	Capacity Range	List Price
160-A	360-1000 mmdf.	\$7.75
160-B	50- 400 mmdf.	.75

For a Complete Listing of MILLER PRODUCTS ask for a copy of our Latest General Catalog.

[E1]

Miller

TWO BAND COILS



High quality 2-band shielded coils provided with built-in high frequency trimmers, accessible from the top of the shield. Solenoid and universal windings on XXX grade bakelite tubing, thoroughly impregnated against moisture, make these coils suitable for marine and tropical use as well as for general home receiver use. For use with standard 365 mmfd. tuning condenser.

Dimensions: 1-3/8" square x 3" high.

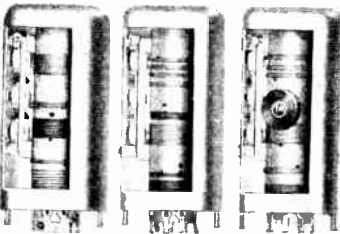
BROADCAST & MARINE 540-1600 1600-4500 KC

Cat. No.	Use	I.F. Freq.	Osc. Pad	List Price
3996-A	Antenna			\$3.50
3996-RF	Interstage			3.50
3996-C	2-coil Oscillator	455 KC	400 mmfd./ 1000 mmfd.	3.50
3998-C	Tapped Oscillator			

BROADCAST & SHORT WAVE 540-1600 5500-18,000 KC

Cat. No.	Use	I.F. Freq.	Osc. Pad	List Price
3997-A	Antenna			\$3.50
3997-RF	Interstage			3.50
3997-C	2-coil Oscillator	455 KC	400 mmfd./ 15000 mmfd.	3.50
3999-C	Tapped Oscillator			

THREE BAND COILS



Communications receiver type coils especially designed for fine quality custom built entertainment receivers and commercial marine and aircraft use. These coils are all wound on XXX grade bakelite tubing and thoroughly impregnated against moisture. Individual high frequency trimmers for

each band are adjustable from the side of the aluminum shield. All coil terminals are connected to solder lugs at the bottom of the coil form for under chassis wiring.

Dimensions: 2" square x 4-1/4" high.

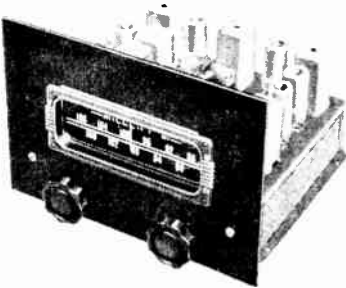
ALL WAVE COILS 540 KC to 18. MC

Cat. No.	Use	I.F. Freq.	Osc. Pad	List Price
626-A	Antenna			\$5.50
626-RF	Interstage			5.50
626-C	2-coil Oscillator	455 KC	400, 1600/ 15000 mmfd.	5.50
625-C	Tapped Oscillator			

AIRCRAFT & MARINE COILS 140-425 540-1600 2500-7000 KC

Cat. No.	Use	I.F. Freq.	Osc. Pad	List Price
628-A	Antenna			\$5.50
628-RF	Interstage			5.50
628-C	2-coil Oscillator	455 KC	120, 400/ 1600 mmfd.	5.50
629-C	Tapped Oscillator			

F. M. TUNER KIT



This Kit contains the R.F. components to construct the finest FM tuner for home and professional use. Uses 8 miniature tubes in a circuit using cascade limiters ahead of the discriminator. Requires separate power supply and audio amplifier. The copper plated chassis measures only 7-1/2" deep x 8" wide x 2" high. All Miller Parts in the Kit may be purchased separately, if desired.

Frequency Range: 88-108 MC. The Kit contains the following:

[F1] For a Complete Listing of MILLER PRODUCTS ask for a copy of our Latest General Catalog.

DOWELL TYPE COILS



Single section Litz wound secondary coils wound on 1/2" Dia. lo-loss ceramic dowels, these coils are provided with solder lugs on a bakelite terminal plate and with a #6-32 threaded stud for single hole chassis mounting. For use with standard 365 mmfd. tuning condenser.

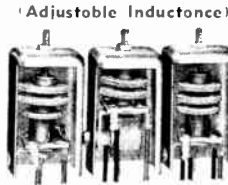
Dimensions: 3/4" square base x 1" high.

(ABP & RF types 2-1/8" high)

Cat. No.	Use	Freq. Range	List Price
5480-A	Antenna	540-1600	\$1.00
5480-RF	Interstage	540-1600	1.25
5480-BP	Bond-Pass	540-1600	1.50
5480-K	2-coil Oscillator	540-1600*	1.00
5480-H	2-coil Oscillator	540-1600**	1.00
5480-C	2-coil Oscillator	540-1600***	1.00
5481-K	Tapped Oscillator	540-1600*	1.00
5481-H	Tapped Oscillator	540-1600**	1.00
5481-C	Tapped Oscillator	540-1600***	1.00

NOTE: * For 175 KC I.F. with 1000 mmfd. series pad
** For 262 KC I.F. with 600 mmfd. series pad
*** For 455 KC I.F. with 400 mmfd. series pad

MIDGET R.F. COILS



This series of compact shielded coils is provided with an adjustable powdered iron core permitting approximately plus or minus 30% secondary inductance deviation from nominal values. Particularly recommended for aircraft, marine and mobile equipment and general custom receiver construction. Core is adjustable from top of aluminum shield. Coils are designed for use with standard 365 mmfd. tuning condenser.

Dimensions: 1-1/8" square x 2" high. (All Types)

LONG WAVE BAND 140-425 KC

Cat. No.	Use	I.F. Freq.	Osc. Pad	List Price
X-320-A	Antenna			\$2.50
X-320-RF	Interstage			2.50
X-320-M	2-coil Oscillator	132 KC	400 mmfd.	2.00
X-320-C	2-coil Oscillator	455 KC	120 mmfd.	2.00
X-321-M	Tapped Oscillator	132 KC	400 mmfd.	2.00
X-321-C	Tapped Oscillator	455 KC	120 mmfd.	2.00

BROADCAST BAND 540-1700 KC

Cat. No.	Use	I.F. Freq.	Osc. Pad	List Price
A-320-A	Antenna			\$1.75
A-320-RF	Interstage			1.75
A-320-M	2-coil Oscillator	132 KC	1600 mmfd.	1.75
A-320-C	2-coil Oscillator	455 KC	400 mmfd.	1.75
A-321-M	Tapped Oscillator	132 KC	1600 mmfd.	1.75
A-321-C	Tapped Oscillator	455 KC	400 mmfd.	1.75

MARINE & AIRCRAFT BAND 2100-6300 KC

Cat. No.	Use	I.F. Freq.	Osc. Pad	List Price
B-320-A	Antenna			\$1.75
B-320-RF	Interstage			1.75
B-320-M	2-coil Oscillator	132 KC	6000 mmfd.	1.75
B-320-C	2-coil Oscillator	455 KC	1600 mmfd.	1.75
B-321-M	Tapped Oscillator	132 KC	6000 mmfd.	1.75
B-321-C	Tapped Oscillator	455 KC	1600 mmfd.	1.75

SHORT WAVE BAND 6.0-18. MC

Cat. No.	Use	I.F. Freq.	Osc. Pad	List Price
C-320-A	Antenna			\$1.75
C-320-RF	Interstage			1.75
C-320-C	2-coil Oscillator	455 KC	5000 mmfd.	1.75
C-321-C	Tapped Oscillator	455 KC	5000 mmfd.	1.75

Cat. No.	Quantity	Item	List Price
1451	3	10.7 MC I.F.	\$6.00
1452	1	10.7 MC Disc.	3.00
1454	1	Antenna Coil	2.00
1455	1	Interstage Coil	2.00
1456	1	Oscillator Coil	2.00
1457	1	Filament Choke	.70
1458	1	Chassis & connectors	8.00
1459	1	Slide Rule Dial	7.00
1460	3	3 x 500 mmfd. cond.	4.50
1461	1	FM Tuning Condenser	5.50
420	1	Terminal Plate	.30
440	1	Terminal Plate	.50
3093	2	Tuning Knobs	1.50
Circuit Diagram Instructions & Hardware			1.00
MILLER #1450 FM. Tuner Kit			List Price \$44.00

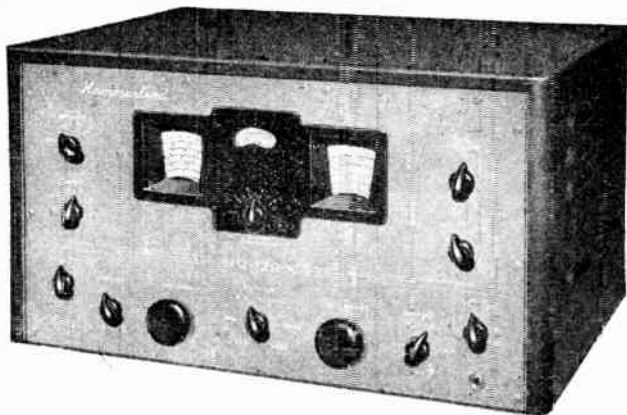


HAMMARLUND

SINCE 1910



"HQ-129-X" AMATEUR RECEIVER



The Hammarlund "HQ-129-X" amateur communications receiver is designed to meet the demands of the most critical amateurs. Its design includes every feature essential to finest performance.

The "HQ-129-X" has a continuous range from .54 to 31 megacycles in six separately calibrated bands with continuous bandspread throughout the entire range. In addition, the bandspread dial is calibrated for each of the four most important amateur bands—3.5 - 4 mc, 7 - 7.3 mc, 14 - 14.4 mc and 28 - 30 mc.

The "HQ-129-X" has the Hammarlund patented variable wide-band crystal filter which works exceptionally well on phone or short wave broadcast signals.

There are many other features: Variable antenna compensator, beat oscillator, voltage regulator, series noise limiter, send-receive switch, automatic volume control, calibrated "S" meter, audio gain control, sensitivity control—plus all that goes into a receiver built by engineers who have spent a lifetime designing commercial communication equipment.

The "HQ-129-X" is available complete in a two-tone gray finish including tubes and a 10 inch P. M. dynamic speaker.

"HQ-129-X" Less Speaker. Amateur Net Price \$177.30
SC-10—Speaker in cabinet finished to match

Amateur Net Price \$ 11.85

Send for twenty-page technical booklet

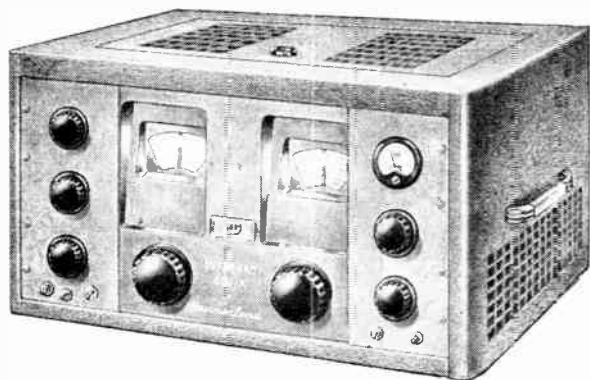
SERIES 600 "SUPER-PRO"

DESCRIPTION

Cheers from the experts — The new Series 600 SUPER-PRO is the finest communications receiver that money can buy. No "warmed over" model, the Series 600 is entirely new in electrical concept and mechanical design—truly "years ahead" of present day receivers. When you check this entirely new SUPER-PRO for such things as image rejection, stability, calibration accuracy, etc. . . . you will find performance that you would not have thought possible. You'll find that "years ahead" in design mean "years ahead" in performance.

Band changing in the new SUPER-PRO is accomplished by means of an ingeniously designed rotary turret which places the coil assemblies of the two R.F., Mixer and Oscillator stages directly adjacent to their respective sections of the four gang tuning condenser where they are electrically most efficient.

By means of the mechanical system used in the SUPER-PRO 600-X both the main and band spread dials are tuned simultaneously with one control and the need for first setting the main dial is eliminated. The dial drive mechanism is entirely gear coupled to the main tuning condenser, producing the kind of calibration accuracy usually associated only with costly laboratory standards.



**Technical Information will be
Available Late Fall of 1948**

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

PRICES SLIGHTLY HIGHER ON WEST COAST



HAMMARLUND

SINCE 1910



"MC" MIDGET CAPACITORS

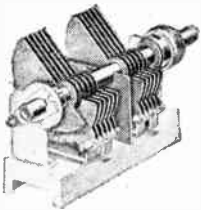
Ideal variable for high and very high frequency tuning, laboratories, etc. Isolantite Insulation. All contacts riveted or soldered. Vibration proof. New improved Hammarlund split type rear bearing, and noiseless wiping contact. Cadmium plated soldered brass plates. Shaft— $\frac{1}{4}$ ".

Code	Capacity	Net
MC-20-S	20 mmf.	\$1.80
MC-35-S	35 mmf.	1.86
MC-50-S	50 mmf.	1.92
MC-50-M	50 mmf.	1.92
MC-75-S	80 mmf.	2.04
MC-75-M	80 mmf.	2.04
MC-100-S	100 mmf.	2.16
MC-100-M	100 mmf.	2.16
MC-140-S	140 mmf.	2.34
MC-140-M	140 mmf.	2.34
MC-200-M	200 mmf.	2.58
MC-250-M	260 mmf.	2.70
MC-325-M	320 mmf.	2.94

"M"—Midline Plates.

"S"—Straight Line Cap. Plates.

"MCD" SPLIT-STATOR CAPACITORS



Like single midgets, these incorporate every requirement imperative to highest quality. Specifications identical to single types except that shield plate is located between stator sections. Also equipped with new Hammarlund noise-less wiping contact and split type rear bearing. Overall length behind panel— $3\frac{3}{4}$ ". Strong Isolantite base. Single hole panel mount.

Code	Capacity	Net
MCD-50-M	50 mmf. per sect.	\$3.60
MCD-100-S	100 mmf. per sect.	3.90
MCD-100-M	100 mmf. per sect.	3.90
MCD-140-M	140 mmf. per sect.	4.20

"M"—Midline Plates.

"S"—Straight Line Cap. Plates.

"MCDX" DOUBLE SPACED CAPACITORS



Identical to split stator capacitors except that plates are widely spaced—actual air gap between rotor and stator plates—.0715". No shield between stators. Equipped with new Hammarlund noiseless wiping contact, and split type rear bearing. This capacitor is ideal for high and very high frequency transmitters using up to 1000 volts.

Code	Capacity	Net
MCD-35-MX	31 mmf. per sect.	\$4.08
MCD-35-SX	31 mmf. per sect.	4.08

"MX"—Midline Plates.

"SX"—Straight Line Cap Plates.

"MCX" DOUBLE SPACED CAPACITORS

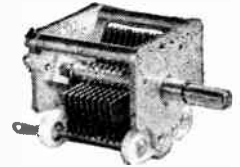


Exceptional unit for ultra-s.w. receivers and transmitters particularly compact transmitters. Plate spacing—.0715". Great for tuning crystal controlled transmitter amplifier stages or for neutralizers up to 1000 volts. In midline (MX) and straight line cap. types (SX).

Code	Capacity	Net
MC-20-SX	20 mmf.	\$2.04
MC-20-MX	20 mmf.	2.04
MC-35-SX	32 mmf.	2.22
MC-35-MX	32 mmf.	2.22
MC-50-SX	50 mmf.	2.52
MC-50-MX	50 mmf.	2.52
MC-100-SX	100 mmf.	2.94

"RMC" CAPACITOR

The new "RMC", Rugged Midget Capacitor, is particularly designed for use in applications where strength and solid construction is as important as sound electrical design. Its sturdy frame consists of $\frac{3}{8}$ " aluminum end plates reinforced by three horizontal bars or pillars which hold the assembly absolutely rigid.

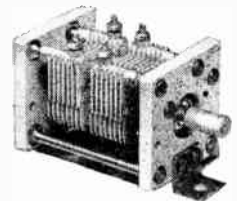


Two low loss silicone treated ceramic insulated bars are used to support the stator. Bearings are hand-fitted sleeve in the front and single ball thrust in the rear—torque is smooth and uniform. Contact to the rotor is made through a silver-plated beryllium forked spring bearing on a wide disk on the rotor shaft. Brackets are provided for mounting either side down, or to a front panel with spacing pillars—threaded mounting holes are provided for panel mounting. Voltage rating—1000 V.

Code	Capacity	Net
RMC-50-S	50. mmf.	\$2.22
RMC-100-S	105. mmf.	2.55
RMC-140-S	143.5 mmf.	2.70
RMC-325-S	327. mmf.	3.39

"VU" UHF CAPACITOR

The capacitors listed below are available for use by manufacturers, engineers and amateurs for all types of communications equipment having tuned circuits operating as high as 500 mc. The many advantages of these new capacitors are of course due to the silent electrical operation made possible through the use of pyrex glass ball bearings. These new bearings completely eliminate sliding or wiping contacts and metal sleeve, or ball type bearings, commonly used in ordinary variable capacitors.



Elimination of the rotor contact further precludes the possibility of noise and permits a more symmetrical design of the capacitor itself and consequently allows better circuit layout. Two sets of contacts are provided, so that the vacuum tube can be mounted on one side and the inductor on the other side of the capacitor. Voltage rating—700 V.

Code	Capacity	Net
VU-20	22.5 mmf.	\$6.45
VU-30	31.5 mmf.	6.90
VU-45	45.0 mmf.	7.62

PRICES SUBJECT TO CHANGE WITHOUT NOTICE



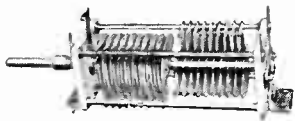
HAMMARLUND

SINCE 1910



"HFBD" TRANSMITTING CAPACITORS

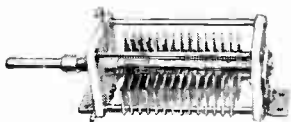
High efficiency, high frequency dual capacitors with isolated rotor. Both mounting brackets and control shafts are insulated. DC can be applied to rotor as well as stator. Isolantite end plate, soldered brass construction, cadmium plated. End plate size $1\frac{1}{2}$ ". Type "E" has rounded edge plates.



Code	Capacity	Length	Air Gap	Net
HFBD-50-C	50 mmf.	2 $\frac{7}{8}$ "	.050"	\$5.40
HFBD-100-C	100 mmf.	4 $\frac{1}{8}$ "	.050"	6.36
HFBD-35-E	35 mmf.	3 $\frac{1}{4}$ "	.070"	4.77
HFBD-65-E	65 mmf.	4 $\frac{1}{8}$ "	.070"	5.46

"HFB" CAPACITORS

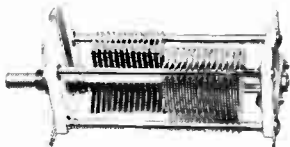
Same as above but single stator types. Stator is mounted at top to reduce capacity to chassis. The "HFB" has insulated mounting brackets and control shaft.



Code	Capacity	Length	Air Gap	Net
HFB-50-C	50 mmf.	1 $\frac{7}{8}$ "	.050"	\$4.20

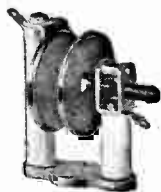
"HFA" AND "HFAD" CAPACITORS

"HFAD" has the same general construction as "HFBD" except that it is smaller in size and does not have the insulated control shaft. Ideal for high frequency operation. End panels $1\frac{3}{4}$ " square. "HFA" same construction, except end panel $1\frac{1}{2}$ " x $1\frac{1}{2}$ ". Both can be single hole panel mounted or can be mounted to the panel with stand-off bushings. Plain edge plates.



Code	Capacity	Type	Length	Air Gap	Net
HFAD-25-B	25 mmf	Dual	1 $\frac{3}{8}$ "	.030"	\$3.60
HFA-100-A	100 mmf	Single	1 $\frac{3}{8}$ "	.020"	1.98
HFA-140-A	140 mmf	Single	1 $\frac{3}{4}$ "	.020"	2.31
HFA-10-B	10 mmf	Single	$\frac{3}{16}$ "	.030"	1.53
HFA-15-B	15 mmf.	Single	$\frac{7}{16}$ "	.030"	1.62
HFA-25-B	25 mmf	Single	$\frac{1}{4}$ "	.030"	1.68
HFA-50-B	50 mmf.	Single	1 $\frac{1}{8}$ "	.030"	1.86
HFA-100-B	100 mmf.	Single	2 $\frac{1}{16}$ "	.030"	2.46
HFA-15-E	15 mmf.	Single	1 $\frac{3}{16}$ "	.070"	1.68

"NZ-10" NEUTRALIZING CAPACITOR



Rounded edges. Isolantite. Fine adjusting screw. Positive lock. Horizontal adjustment. Dimensions: 2 $\frac{1}{2}$ " high x 1 $\frac{1}{2}$ " deep.

Code	Net
NZ-10—(2.3—1.9 mmf.)	\$3.15

MIDGET "APC" CAPACITORS

This new midget variety of the well known APC condenser is designed for use where space is limited. Size of 100 mmf., $\frac{1}{16}$ " x $\frac{1}{16}$ " x $1\frac{1}{8}$ ". Mounting holes $\frac{1}{16}$ " apart. Ideal for H.F. circuits. Isolantite insulation. Nickel plated soldered brass plates.



Code	Capacity	Net
MAPC-15	15 mmf.	\$0.99
MAPC-25	25 mmf.	1.02
MAPC-35	35 mmf.	1.08
MAPC-50	49 mmf.	1.14
MAPC-75	75 mmf.	1.26
MAPC-100	99 mmf.	1.38

"APC" MICRO CAPACITORS

For H.F. and very H.F. For I.F. tuning, trimming R.F. Coils or tuning capacitors, general padding, etc. Constant capacity under any condition of temperature or vibration. Size 100 mmf., $\frac{1}{16}$ " x $\frac{1}{16}$ " x $1\frac{1}{8}$ ". Isolantite base. Cadmium plated soldered brass plates.



Code	Capacity	Net
APC-25	25 mmf.	\$1.02
APC-50	50 mmf.	1.14
APC-75	75 mmf.	1.26
APC-100	100 mmf.	1.38
APC-140	140 mmf.	1.62

FLEXIBLE COUPLINGS

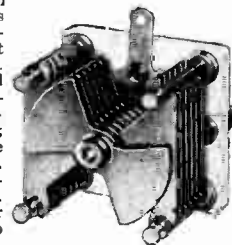
These flexible couplings are designed for both insulated and non-insulated applications. The FC-46-S is insulated for 6000 volts with silicone treated ceramic, will compensate for considerable shaft misalignment, but will not give springy action. Overall depth $\frac{1}{2}$ ", diameter $1\frac{1}{4}$ ". The FNC-46-S is a non-insulated coupling for use where insulation is unnecessary. The general design is the same as the FC-46-S but has a heavy metal body instead of ceramic. Overall depth $\frac{3}{16}$ ", diameter $1\frac{1}{4}$ ".



Code	Net
FC-46-S—Insulated	\$0.66
FNC-46-S—Non-insulated	.66

BUTTERFLY CAPACITOR

The new butterfly capacitor is designed for use in VHF and UHF applications where the butterfly design is indispensable. Can be used as a single series unit or as a split stator with grounded rotor. This new butterfly capacitor is ideal for use in transmitters as well as receivers. Has soldered rotor and stator assembly; is plated to resist corrosion; silver plated rotor contact; sleeve type bearing, low-loss ceramic end panel. Approximately $1\frac{3}{4}$ " square. Depth behind panel depends on number of plates. Insulated mounting studs prevent rotor from being grounded when mounted to metal.



Code	MMF. Cap. per Sec.		Series Cap.		Net
	Max.	Min.	Max.	Min.	
BFC-12	14.5	3.5	7.9	2.2	\$1.50
BFC-25	27.5	5.0	14.5	3.0	1.68
BFC-38	40.5	6.3	21.0	3.7	1.98

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

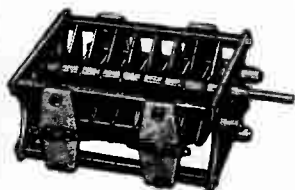


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"TC" TRANSMITTING CAPACITORS



A moderately priced, heavy duty transmitting capacitor, featuring heavy aluminum end plates. Isolantite insulation, non-inductive, self-cleaning silver plated beryllium contacts, full floating rotor bearing, non-magnetic rotor assembly, polished heavy aluminum plates accurately spaced. All, except type "L", have round edge plates of .040"

thickness. Type "L" has .025" plates with plain edges. Type "H" .171", 600 V. Type "J", .100" 4250 V. Type "K", .084" 3750 V. Type "L", .070", 2000 V. air gap. Available in a wide variety of capacities and working voltages, these capacitors are ideal for modern up-to-date transmitters with power output ranging from 200 watts to 1 kw.

Type	Capacity	Overall Length	Net
TC-440-L	465 mmf.	5 7/8"	\$6.99
TC-220-K	225 mmf.	4 5/8"	6.15
TC-240-J	250 mmf.	6 1/2"	7.80
TC-50-H	53 mmf.	4 1/2"	4.59
TC-110-H	115 mmf.	6 1/2"	6.90
TC-100-G	110 mmf.	7 1/2"	8.58

"TCD" SPLIT STATOR TYPES



These split-stator transmitting capacitors are identical to the singles shown above, except that the stator sections are individual. Ideal for push-pull power amplifiers ranging in power up to 1 kw. They are of convenient size and lend themselves to construction of

compact apparatus. Overall dimensions in back of panel are given in the accompanying table. The capacity values listed are for each section. The last letter in the code represents plate spacing and working voltage and are identical to those given above. Type "M"—plain plates, .030" air gap.

Type	Capacity	Overall Length	Net
TCD-110-H	115 mmf.	11 1/8"	\$7.92
TCD-500M	505 mmf.	4 7/8"	8.01
TCD-210-L	215 mmf.	5 7/8"	15.69
TCD-325-K	325 mmf.	11 1/2"	14.70
TCD-240-J	250 mmf.	11 1/8"	12.30

"HF" MICRO CAPACITORS

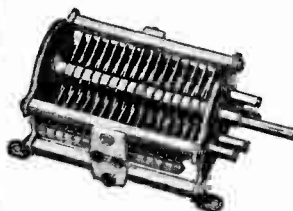
For tuning or trimming on high and very high frequencies. Cadmium plated soldered brass plates. Isolantite. Base mounting, single hole panel mount, or panel mounting with bushings, 140 mmf. size 1 1/2" high x 1 1/2" behind panel.



Code	Capacity	Net
HF-15	17.5 mmf.	\$1.02
HF-35	35 mmf.	1.17
HF-50	50 mmf.	1.23
HF-100	100 mmf.	1.53
HF-140	140 mmf.	1.74
*HF-15-X	15 mmf.	1.23
*HF-30-X	30 mmf.	1.38

*Double spaced.

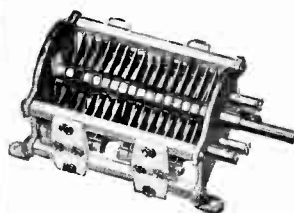
"MTC" TRANSMITTING CAPACITORS



Compact types. Isolantite insulation. Base or panel mounting. Polished aluminum plates. Stainless steel shaft. Size of 150 mmf. with .070" plate spacing only 4 5/8" behind panel. "B" models have rounded plates. "C" types have plain plate edges. Self-cleaning wiping contact.

Code	Capacity	Net
MTC-20-B	20 mmf.	\$4.05
MTC-100-B	100 mmf.	5.25
MTC-150-C	150 mmf.	5.85
MTC-250-C	260 mmf.	4.65
MTC-350-C	365 mmf.	4.80

"MTCD" SPLIT-STATOR TYPES



Same outstanding features as MTC singles except that stator sections are separate. Model 100-B with .070" plate spacing, only 5 3/8" behind panel. "B" models have rounded plates.

Code	Capacity	Net
MTCD-20-B	20 mmf. per sect.	\$5.25
MTCD-45-B	35 mmf. per sect.	6.00
MTCD-100-B	100 mmf. per sect.	7.50

"HFD" MICRO DUAL CAPACITORS



A compact dual—ideal as a high frequency tuning capacitor, for tuning and neutralizing low-powered short wave and for very high frequency transmitters, etc. Heavy Isolantite base. Equipped with new outstanding Hammarlund split rear bearing and individual noiseless wiping contact for each section. Rotor contacts variable to several positions for shortest leads. Shield between sections for grounding. The 140 mmf. size is only 1 1/2" high x 3 3/4" long behind panel. 1/4" shaft. Cadmium plated soldered brass plates.

Code	Capacity	Net
HFD-50	50 mmf. per sect.	\$2.82
HFD-100	100 mmf. per sect.	3.18
HFD-140	140 mmf. per sect.	3.60
*HFD-15-X	15 mmf. per sect.	2.76
*HFD-30-X	28.5 mmf. per sect.	3.00

*Double-spaced.

PRICES SUBJECT TO CHANGE WITHOUT NOTICE



BUD DE LUXE RELAY RACKS



These relay racks are made of 16 gauge steel with 1/8" panel supports. The panel mounting supports are recessed so that no edges of the panel will be exposed.

The front and back of the top, the two sides and the door are well louvered to provide adequate ventilation. Snap catches are positioned on the door. A stream-lined appearance is achieved by the use of rounded corners and red-lined chrome trim. The relay rack is shipped knocked-down and complete with all necessary hardware for assembly. All standard 19" panels will fit these racks.

A SPECIAL FEATURE IS THE USE OF FOUR STURDY SUPPORTS ON THE BOTTOM SO THAT CASTERS CAN BE FASTENED DIRECTLY TO THE BASE, THEREBY ACHIEVING READY MOBILITY. Bud RC-7756 casters will fit this unit. Casters are not included in price of cabinet. These relay racks are supplied in either black or grey wrinkle finish. The overall width is 22" and the depth is 17 1/4" on all sizes listed.



Catalog No.	Overall Height	Panel Space	Shipping Wt.	Dealer Cost
CR-1774	42 1/8"	36 3/4"	90 lbs.	\$30.00
CR-1771	47 1/8"	42"	100 lbs.	36.25
CR-1772	66 1/8"	61 1/4"	135 lbs.	44.50
CR-1773	82 1/8"	77"	155 lbs.	51.75

BUD DE LUXE CABINET RACKS



These cabinet racks have rounded corners and attractive red-lined chrome trim. There is a recessed, hinged door on the top with a snap catch. These cabinet racks are made of heavy gauge steel and are of sturdy construction. The three large sizes have a hinged rear door, while the small sizes have a welded panel in the rear.

Adequate ventilation is assured by means of louvered sides and a two inch opening in the bottom of the back extends the entire width.

"NO-SCRATCH" EXTENDED METAL FEET ARE EMBOSSED ON THE BOTTOM TO MINIMIZE MARRING OF A TABLE TOP. These relay racks are furnished in either black or grey wrinkle finish. Depth 14 3/4", width 22". Will fit standard 19" panels.

Catalog No.	Overall Height	Panel Space	Shipping Wt.	Dealer Cost
CR-1741	10 3/8"	8 3/4"	29 lbs.	\$10.35
CR-1742	14 1/2"	12 1/4"	32 lbs.	12.25
CR-1739	15 1/8"	14"	36 lbs.	15.20
CR-1743	19 3/8"	17 1/2"	40 lbs.	16.77
CR-1744	28 3/8"	26 1/4"	50 lbs.	19.32
CR-1745	36 1/8"	35"	60 lbs.	21.57

BUD JUNIOR CABINET RACKS



This cabinet rack is a multi-purpose unit that is inexpensive. The cabinet is constructed to accommodate two panels, one is 10 1/2" by 18 1/2", the other 8 3/4" by 18 1/2", these panels are supplied with the cabinet. The BUD Junior Cabinet Rack is spacious enough to accommodate a chassis up to 10" by 17".

The rear of the cabinet is covered by a hinged door with a locking device. The cabinet is furnished in black wrinkle finish only.

Catalog No.	Overall Height	Depth	Width	Shipping Wt.	Dealer Cost
RC-1749A	21 1/4"	10 1/2"	19 7/8"	25 lbs.	\$14.10

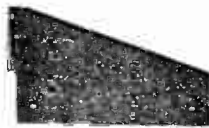
BUD DESK TYPE RELAY RACKS



Perfect for table mounting of low and medium power transmitters, public address systems, and other electronic instruments. Rack has strong chassis for mounting heavy components. Shipped knocked-down, with necessary hardware, easy to assemble. Standard notched 19" wide panels can be used, panels set in recess so that no edges are exposed. Furnished in black wrinkle finish only. Depth 12".

Catalog No.	Height	Panel Space	Shipping Wt.	Dealer Cost
RR-1248	24"	21"	15 lbs.	\$ 5.75
RR-1249	31"	28"	17 lbs.	7.20

BUD CHASSIS MOUNTING BRACKETS

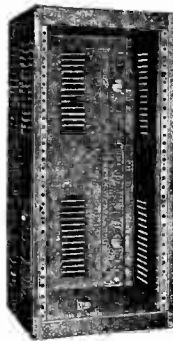


Mounting brackets are essential to insure proper support of the chassis. Formed of heavy gauge steel, cut away at the bottom to provide chassis clearance so that chassis can be mounted flush against panel. Finished in Black. Numbers MB-450 and MB-451 designed for chassis height of 4". Sold in pairs only.

Catalog No.	Height	Depth	Dealer Cost Per Pair
MB-458	6 1/2"	8"	\$0.69
MB-448	6 1/2"	10"	.93
MB-459	6 1/2"	11"	1.02
MB-449	6 1/2"	12"	1.20
MB-460	6 1/2"	13"	1.23
MB-450	8 1/2"	10"	1.45
MB-451	8 1/2"	13"	1.55

Where materials are specified Black Wrinkle Finish only, and Grey is desired, a charge of 15% additional will be made.

BUD STANDARD RELAY RACKS



A satisfactory means of housing transmitting equipment or any electronic equipment in a relay rack. The BUD STANDARD RELAY RACK is second only to the BUD DE LUXE RELAY RACK as a neat, complete and professional looking housing unit.

These relay racks are made of 16 gauge steel and have 1/8" panel mounting supports. A sturdy appearance is achieved through the use of square corners. The panels are recessed to eliminate exposed edges. A removable rear door is provided with two snap catches. These relay racks are furnished in Black Wrinkle Finish only and are shipped knocked-down with a complete set of necessary hardware. All of the racks in this series are 17" deep, 21" wide and with space for accommodating standard 19" wide panels.

Bud Standard Relay Racks and Cabinets temporarily discontinued due to steel shortage. Substitute Bud De Luxe Relay Racks and Cabinet Racks.

BUD STANDARD CABINET RACKS



If a neat looking, sturdy, economical cabinet rack that has many uses is what you are looking for, the BUD STANDARD RACK will satisfy your requirements. These cabinet racks are assured of adequate ventilation by ample side louvers and openings in the back. Hinged top door with snap catch supplied on all cabinets. The three large sizes have a hinged rear door while the small sizes are fitted with a solid back.

"NO-SCRATCH" EMBOSSED METAL FEET ARE WELDED TO THE BOTTOM TO MINIMIZE MARRING OF A TABLE TOP. These cabinets are available in Black

Wrinkle Finish only and are furnished with the necessary hardware to fasten relay rack panels to the front of the cabinet. All of these cabinet racks are 14 3/4" deep, 20 1/8" wide and will hold standard 19" panels.

Bud Standard Relay Racks and Cabinets temporarily discontinued due to steel shortage. Substitute Bud De Luxe Relay Racks and Cabinet Racks.

BUD TELEPHONE TYPE RELAY RACKS



Nos. RR-1263 and RR-1264 are made of 1/8" steel channels, three inches deep and are held together by angle cross pieces of the same material. The design of the base has been improved to incorporate a stanchion type bottom, together with the usual side angles, making the rack stronger and more stable.

RR-1265 is heavy duty and is made of heavy channel iron supported by two 3/8" thick iron angles that are bolted to the channels to provide additional support to the unit. Supplied in black wrinkle finish only. All racks accommodate standard 19" panels in accordance with standards set by RMA.

Catalog No.	Height	Depth	Panel Space	Shipping Wt.	Dealer Cost
RR-1263	35 1/2"	22"	31 1/2"	38 lbs.	\$15.00
RR-1264	70 1/2"	22"	66 1/2"	48 lbs.	18.00
RR-1265	72 1/2"	15"	66 1/2"	97 lbs.	31.50

BUD VENTILATING GRILLE PANELS



Made of 1/8" thick steel. The grille is stamped into the panel itself, and is recommended for use where additional ventilation is desirable. All panels are 19" long, furnished in either black or grey wrinkle finish.

Catalog No.	Height	Grille Size	Dealer Cost
PS-808	5 1/4"	3 3/4" x 14 3/8"	\$2.55
PS-809	7"	4 1/2" x 14 3/8"	2.73
PS-810	8 3/4"	5 1/2" x 14 3/8"	3.12
PS-811	10 1/2"	6 1/2" x 14 3/8"	3.51
PS-812	12 1/4"	7 1/2" x 14 3/8"	3.86

* Allows 3 1/4" space for chassis mounting.

BUD STANDARD RELAY RACK PANELS



Made of Steel, Masonite or Aluminum. Steel Panels are made of high grade steel 1/8" thick. Masonite Panels are made of 3/16" Tempered Masonite. Aluminum Panels are made of 1/8" thick Aluminum. All Panels are 19" wide. Furnished in either Black or Grey Wrinkle. Aluminum panels 3/16" thick may be had if desired at 60% increase in cost over 1/8".

STEEL			MASONITE			ALUMINUM		
Catalog No.	Height	Dealer Cost	Catalog No.	Height	Dealer Cost	Catalog No.	Height	Dealer Cost
PS-1250	1 3/4"	\$.60	PM-1588	1 3/4"	\$.48	PA-1101	1 3/4"	\$.66
PS-1251	3 1/2"	.69	PM-1589	3 1/2"	.60	PA-1102	3 1/2"	.87
PS-1252	5 1/4"	.84	PM-1590	5 1/4"	.75	PA-1103	5 1/4"	1.04
PS-1253	7"	.93	PM-1591	7"	.87	PA-1104	7"	1.37
PS-1254	8 3/4"	1.08	PM-1592	8 3/4"	1.05	PA-1105	8 3/4"	1.56
PS-1255	10 1/2"	1.32	PM-1593	10 1/2"	1.20	PA-1106	10 1/2"	1.85
PS-1256	12 3/4"	1.59	PM-1594	12 3/4"	1.35	PA-1107	12 3/4"	2.12
PS-1257	14"	1.80	PM-1595	14"	1.50	PA-1108	14"	2.40
PS-1258	15 3/4"	2.10	PM-1596	15 3/4"	1.65	PA-1109	15 3/4"	2.70
PS-1259	17 1/2"	2.28	PM-1597	17 1/2"	1.92	PA-1110	17 1/2"	3.00
PS-1260	19 1/4"	2.46	PM-1598	19 1/4"	2.07	PA-1111	19 1/4"	3.30
PS-1261	21"	2.76	PM-1599	21"	2.31	PA-1112	21"	3.60

BUD ENCLOSED METER PANEL

PS-439 Meter Panel is designed to give maximum protection to meters. The steel panel has a large cut-out, behind which is mounted a blank Masonite sub-panel. This sub-panel has a meter mounting area of 4 1/2" x 15 1/2" — sufficient space to mount four 3" meters. The meters are protected by a glass insert that mounts in slides. Due to danger from breakage during shipment, this glass is not supplied with the panel. The glass insert should be cut 15" long x 4 3/8" wide. Finished in either Black or Grey Wrinkle.

Cat. No.	Length	Width	Dealer Cost
PS-439	19"	5 1/4"	\$4.68

**BUD METER PANELS
STEEL AND MASONITE**

All meter panels are 5 1/4" high, 19" wide, available in either black or grey wrinkle finish. Small holes fit either 2" square or round meters, large holes fit either 3" square or round meters.

Catalog No.	Number of Holes	Diameter	Type Material	Dealer Cost
PM-509	3	2 1/8"	Masonite	\$1.20
PM-510	4	2 1/8"	Masonite	1.32
PM-511	3	2 1/8"	Masonite	1.20
PM-512	4	2 1/8"	Masonite	1.32
PS-440	3	2 3/8"	Steel	1.50
PS-441	5	2 3/8"	Steel	2.16
PS-442	3	2 1/8"	Steel	1.50
PS-443	5	2 1/8"	Steel	2.16

BUD METAL DOOR RACK PANELS

If it is desirable to have accessibility to component parts on the chassis, this panel is very useful. Door opening on No. 615—15 3/8" x 6"; door opening on No. 616—15 3/8" x 7 1/2". These panels are available in either Grey or Black Wrinkle finish. Panels are made of 1/8" high grade sheet steel.

Catalog No.	Length	Width	Dealer Cost
PS-615	19"	10 1/4"	\$3.45
PS-616	19"	12 1/4"	3.90

BUD MASONITE PANELS

This line is intended for all uses requiring an insulated panel that is easily worked. Made from 3/16" thick Tempered Masonite and finished in Black Wrinkle only.

Cat. No.	Width	Length	Dealer Cost	Cat. No.	Width	Length	Dealer Cost
PM-607	7"	10"	\$0.60	PM-610	8"	12"	\$0.78
PM-608	7"	12"	.66	PM-611	8"	14"	.87
PM-609	7"	14"	.75	PM-612	8"	16"	.99
PM-606	8"	10"	.66	PM-613	9"	15"	1.05

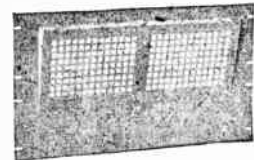
BUD METAL PANELS

For general experimental and construction applications, this line of steel panels fills all usual requirements. Finished on both sides in fine durable Black Wrinkle Enamel only.

Cat. No.	Width	Length	Dealer Cost	Cat. No.	Width	Length	Dealer Cost
PS-1200	7"	8"	\$0.48	PS-240	8"	12"	\$0.66
PS-1201	7"	10"	.48	PS-1204	8"	14"	.72
PS-1202	7"	12"	.54	PS-1205	8"	16"	.80
PS-1203	7"	14"	.63	PS-1187	8"	18"	.84
PS-238	7 3/4"	15"	.75	PS-1188	8"	19"	1.08
PS-239	8"	10"	.60	PS-700	9"	15"	.90

Where materials are specified Black Wrinkle Finish, and Grey is desired, a charge of 15% additional will be made.

**BUD VENTILATED
DOOR RACK PANEL**



These panels have a generous perforated area in the door, providing adequate ventilation for adjacent units. The panels are 19" long and available in either Black or Grey Wrinkle finish. Door opening on P. S. 814 15 3/8" x 6". Opening on P. S. 815 15 3/8" x 7 1/2".

Cat. No.	Height	Door Height	Dealer Cost
PS-814	10 1/2"	6"	\$4.65
PS-815	12 1/4"	7 1/2"	5.25

BUD RACK SHELVES



Heavy power supplies, modulator units, etc., can be mounted on these rack shelves which are supported in the cabinet by the chassis-supporting angles listed on this page. They are designed to slide in from the rear of the cabinet. Made of heavy gauge steel, finished in Black Wrinkle Enamel only.

Catalog No.	Width	Height	Depth	Dealer Cost
CB-1976	19"	1"	15"	\$2.85
CB-1977	19"	1"	12"	2.25

**BUD HEAVY DUTY CHASSIS
(Furnished with Bottom Plates)**



These chassis, made of heavy gauge steel, are intended for applications requiring unusual sturdiness and where large weights are involved. Available in either Black Wrinkle finish or Electro-Zinc Plate.

Black Wrinkle Cat. No.	Zinc Plated Cat. No.	Depth	Width	Height	Dealer Cost
CB-1757	CB-1764	8"	17"	2"	\$2.22
CB-1758	CB-1765	8"	17"	3"	2.52
CB-1759	CB-1766	11"	17"	2"	2.64
CB-1760	CB-1767	11"	17"	3"	2.91
CB-1761	CB-1768	13"	17"	2"	3.00
CB-1762	CB-1769	13"	17"	3"	3.24
CB-1763	CB-1770	13"	17"	4"	3.75

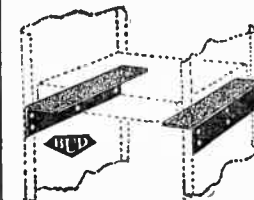
**BUD TRIANGULAR MOUNTING
BRACKETS**



For panel and chassis assemblies where large weights are involved, these Triangular Mounting Brackets make convenient supports. Constructed of heavy steel. Black finish. Sold in pairs only.

Cat. No.	Height	Depth	Dealer Cost Per Pair
MB-1266	5"	5"	\$0.66
MB-1267	7"	7"	.78
MB-1268	9"	9"	.93

BUD CHASSIS SUPPORTING ANGLES



When heavy weights are encountered in chassis construction, Bud Chassis Supporting Angles will distribute the weight on the sides of the rack and relieve the panel. Made in two sizes from Black Painted Steel, 1/8" thick. Sold in pairs only.

Cat. No.	Length	Width	Dealer Cost Per Pair
SA-1349	14 1/2"	3"	\$1.29
SA-1350	12"	3"	1.29



BUD STEEL CHASSIS BASES

These chassis are made from one piece of steel, all corners are reinforced and spot welded. The four sides are folded on bottom for additional strength — this also permits a bottom plate to be attached if desired. These Chassis Bases are furnished in either Black Wrinkle or Electro-Zinc plated.

Black Wrinkle Cat. No.	Zinc Plated Cat. No.	Depth	Width	Height	Gauge	Dealer Cost
CB-628	CB-629	5"	7"	2"	22	\$0.63
CB-644	CB-645	5"	9 1/2"	2 1/2"	22	.75
CB-788	CB-776	5"	9 1/2"	1 1/2"	22	.69
CB-604	CB-605	5"	10"	3"	22	.90
CB-789	CB-1191	7"	7"	2"	22	.75
CB-790	CB-1192	7"	9"	2"	22	.90
CB-791	CB-1193	7"	11"	2"	20	.96
CB-792	CB-793	7"	12"	3"	20	1.05
CB-646	CB-1194	7"	13"	2"	20	1.08
CB-647	CB-1198	5"	13 1/2"	2 1/2"	20	1.08
CB-649	CB-1189	7"	15"	3"	20	1.32
CB-665	CB-666	8 1/2"	15"	3"	20	1.41
CB-1068	CB-1066	4"	17"	3"	20	1.11
CB-648	CB-1199	7"	17"	2 1/2"	20	1.29
CB-701	CB-702	8"	10"	2 1/2"	20	1.17
CB-703	CB-704	8"	12"	2 1/2"	20	1.25
CB-650	CB-774	8"	17"	2"	20	1.32
CB-651	CB-775	8"	17"	3"	20	1.47
CB-652	CB-1195	10"	12"	3"	20	1.44
CB-653	CB-779	10"	14"	3"	20	1.38
CB-654	CB-769	10"	17"	2"	20	1.38
CB-636	CB-637	10"	17"	3"	20	1.38
CB-655	CB-1196	10"	17"	3"	18	1.55
CB-656	CB-1197	10"	23"	3"	18	2.00
CB-657	CB-770	11"	17"	2"	18	1.65
CB-658	CB-771	11"	17"	3"	18	1.85
CB-663	CB-661	12"	17"	2"	18	1.70
CB-664	CB-662	12"	17"	3"	18	1.90
CB-659	CB-772	13"	17"	2"	18	2.05
CB-660	CB-773	13"	17"	3"	18	2.30
CB-640	CB-641	10"	17"	4"	18	2.00
CB-642	CB-643	13"	17"	4"	18	2.65
CB-623	CB-624	10"	17"	5"	18	3.15
CB-625	CB-626	13"	17"	5"	18	3.50



BUD ALUMINUM CHASSIS

The construction and design of these chassis is exactly the same as our steel chassis. The aluminum chassis are welded on government approved spot welders that are the same as used in the welding of aluminum airplane parts. The gauges specified in table below are aluminum gauges. As a result, you can depend on BUD Aluminum Chassis to do a perfect job for you. Etched Aluminum finish.

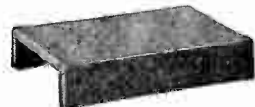
Catalog Number	Depth	Width	Height	Gauge	Dealer Cost
AC-402	5"	7"	2"	18	\$.63
AC-403	5"	9 1/2"	2"	18	.72
AC-404	5"	10"	3"	18	.90
AC-405	7"	7"	2"	18	.75
AC-406	7"	9"	2"	18	.90
AC-407	7"	11"	2"	18	.96
AC-408	7"	12"	3"	18	1.14
AC-409	7"	13"	2"	18	1.08
AC-411	7"	15"	3"	18	1.08
AC-412	7"	17"	3"	16	1.32
AC-413	10"	12"	3"	16	1.47
AC-414	10"	14"	3"	16	1.44
AC-415	10"	17"	3"	16	1.38
AC-416	10"	17"	3"	16	1.38
AC-417	11"	17"	3"	14	1.55
AC-418	12"	17"	3"	14	1.98
AC-419	13"	17"	2"	14	2.00
AC-420	13"	17"	3"	14	2.10



BUD REMOVABLE TOP CHASSIS

Amateurs and experimenters who make periodic changes can do so with a minimum of waste by just discarding the top that has been drilled and replacing it with a new top. Supplied in either Black Wrinkle Finish or Electro-Zinc Plated.

Black Wrinkle Cat. No.	Zinc Plated Cat. No.	Depth	Width	Height	Dealer Cost
CB-196	CB-193	10"	17"	3"	\$2.50
CB-197	CB-194	10"	17"	4"	2.75
CB-251	CB-210	13"	17"	3"	2.88
CB-252	CB-211	13"	17"	4"	3.54



BUD OPEN-END CHASSIS

Primarily intended to be used with the various sizes and styles of Bud metal cabinets, these chassis are ideal for any type of small built-up unit such as a record amplifier, code oscillator, etc. U-shaped construction is used with ends folded over 3/8" for additional strength. Finish is Electro-Zinc Plating.

Cat. No.	Depth	Width	Height	Fits Cab. No.	Dealer Cost
CB-38	7"	7"	2"	C-1584	\$0.54
CB-30	5"	7"	1 1/2"		.48
CB-41	7"	7"	1 1/2"	C-973	.57
CB-39	7"	8"	2"	C-1585	.69
CB-996	5 1/2"	9"	1 1/2"	C-993	.54
CB-976	7 1/2"	9"	1 1/2"	C-999, C-1746	.75
CB-40	7"	10"	2"	C-1586	.75
CB-997	7"	11"	1 1/2"	C-994, C-1747	.78
CB-998	7"	13"	1 1/2"	C-995, C-1748	.90
CB-34	10 3/4"	14"	2"	C-975A	1.25
CB-35	7 3/4"	15"	2"	C-1190A	1.15



BUD CHASSIS DECKS

These chassis are suitable for use in carrying cases and utility cabinets. Each unit is folded over 1 1/2" on the front, 1/2" on the side and made from Zinc Plated steel. These decks are also useful for interstage shielding and supports in regular panel-and-chassis layouts.

Cat. No.	Width	Depth	Fits Cab. No.	Dealer Cost
CB-522	4 1/2"	5 1/2"	CU-1098	\$0.42
CB-523	4 3/4"	4 1/2"	CU-1099	.39
CB-524	6 3/4"	6 1/2"	CU-879	.51
CB-525	5 3/4"	5 1/2"	CU-1124, CC-1096	.45
CB-526	8 3/4"	7 1/2"	CU-880	.72
CB-527	9 3/4"	7 1/2"	CU-881	.75
CB-528	7 3/4"	6 1/2"	CU-882	.60
CB-36	6 1/2"	6 1/2"	CC-1097	.54
CB-37	8 3/4"	6 1/2"	CC-1100	.69



BUD INTERSTAGE SHIELDS

These shields are useful on receiver and transmitter chassis for eliminating interstage coupling and isolating individual circuits. Formed angles on front and bottom facilitate mounting on either chassis or panel. Both angles punched with two mounting holes.

Cat. No.	Height	Depth	Dealer Cost
IS-1246	5 1/2"	7"	\$0.39
IS-1247	5 1/2"	10"	.42
IS-1245	6 1/2"	10"	.45



BUD CHASSIS BOTTOM PLATES

These bottom plates make excellent dust covers and protect all wiring and component parts under the chassis. Each plate has four formed bosses that prevent sharp edges from scratching the table top. Supplied in Black Wrinkle finish or Electro-Zinc Plated finish.

Black Wrinkle Cat. No.	Zinc Plated Cat. No.	Width	Length	Dealer Cost
BP-705	BP-706	5"	7"	\$0.36
BP-680	BP-667	5"	9 1/2"	.39
BP-536	BP-538	5"	10"	.39
BP-681	BP-668	7"	7"	.45
BP-682	BP-669	7"	9"	.48
BP-683	BP-670	7"	11"	.54
BP-537	BP-539	7"	12"	.57
BP-684	BP-671	7"	13"	.57
BP-685	BP-672	5"	13 1/2"	.45
BP-516	BP-513	7"	15"	.63
BP-541	BP-540	8 1/2"	15"	.65
BP-1069	BP-1067	4"	17"	.48
BP-686	BP-673	7"	17"	.66
BP-707	BP-708	8"	10"	.57
BP-709	BP-710	8"	12"	.66
BP-687	BP-674	8"	17"	.69
BP-688	BP-675	10"	12"	.69
BP-517	BP-514	10"	14"	.75
BP-689	BP-676	10"	17"	.84
BP-690	BP-677	11"	17"	.84
BP-691	BP-678	12"	17"	.90
BP-692	BP-679	13"	17"	1.08
BP-518	BP-515	10"	23"	1.15

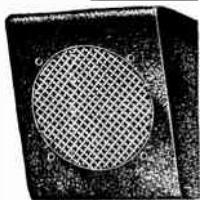


BUD INTERLOCK SWITCH-BRACKET

The Interlock Switch-Bracket is offered as a means for mounting an essential safety switch used in interlock circuit in rack cabinet. All voltage will automatically be off when the cabinet is opened.

Cat. No.	Height	Width	Depth	Dealer Cost
SB-1348	3 1/2"	1 1/2"	2"	\$0.39

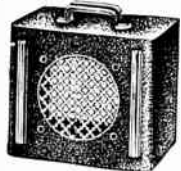
Where materials are specified Black Wrinkle Finish, and Grey is desired, a charge of 15% additional will be made.



BUD WALL OR TABLE TYPE SPEAKER CASE

A distinctive line of new metal speaker cabinets with reproduction capabilities equal to wood cabinets. All troubles with wood warping and splitting are eliminated. Keyway holes are provided for wall mounting and four embossed feet on the bottom are provided to prevent damaging table surfaces. Finished in Brown Wrinkle only.

Cat. No.	Hole Size	Speaker Size	Height	Width	Depth	Dealer Cost
CS-1948	3 1/2"	4"	7 1/2"	6 1/2"	4 1/2"	\$2.85
CS-1939	4"	5"	7 1/2"	6 1/2"	4 1/2"	3.00
CS-1940	4 3/4"	6"	9 1/2"	8"	5 3/4"	3.40
CS-1941	6 3/4"	8"	11 1/2"	9 1/2"	7"	3.90
CS-1942	8 1/2"	10"	13 1/2"	11 1/2"	8 1/2"	4.50
CS-1943	10 1/2"	12"	15 1/2"	13 1/2"	9 3/4"	5.00

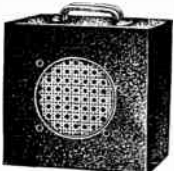


BUD STREAMLINED SPEAKER CASES

For an attractive Speaker Housing that is portable, choose these Speaker Cases. No baffle required with these Speaker Cases. Quality of reproduction is equal to that of a good wood speaker housing. Each case has the front vertical corners rounded and the speaker opening is covered with an artistic metal grille. Two strips of chrome trim are

mounted on the front. All Speaker Cases are drilled to take the size of speaker that is intended for the case. These cases are available in either Black or Grey Wrinkle finish.

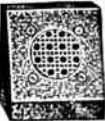
Cat. No.	Hole Size	Speaker Size	Height	Width	Depth	Dealer Cost
CS-1935	4 3/4"	6"	8"	9"	6"	\$3.35
CS-1936	6 1/2"	8"	9 3/4"	11"	7"	4.20
CS-1937	8 1/2"	10"	11 1/2"	13"	8"	5.70
CS-1938	11"	12"	13 1/2"	15"	8"	7.00



BUD GENERAL SPEAKER CABINETS

In making permanent or portable public address installations, this line of speaker cabinets will be found very useful. No baffle required with these speaker housings. Quality of reproduction is equal to that of fine wood speaker cases. Construction is of heavy, cold-rolled steel. A carrying handle is attached to each cabinet for portable purposes. Finished in Black Wrinkle Enamel only.

Cat. No.	Hole Size	Speaker Size	Height	Width	Depth	Dealer Cost
CS-471	4 3/4"	6"	9"	9"	6"	\$2.88
CS-472	6 1/2"	8"	11"	11"	7"	3.60
CS-473	8 1/2"	10"	13"	13"	8"	4.65
CS-474	11"	12"	15"	15"	8"	6.15



BUD MIDGET SPEAKER CASES

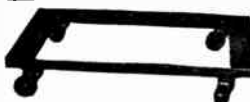
A safe, convenient housing for midget 2" and 3" speakers. Size 4" wide, 4" deep, 4 1/4" high. Finished in Black Wrinkle Finish only.

Catalog Number	Hole Diameter	Speaker Size	Dealer Cost
CS-1685	2 1/16"	2"	\$1.15
CS-1686	2 1/8"	3"	1.15

BUD STREAMLINED METER CASES

Designed for all applications requiring a modern meter case. All cases have a sloping front with top corner rounded. Meter cases CM-1241 and CM-1242 have insulators on top for leads to meter. CM-1965 and CM-1966 are furnished without insulators. Finished in Black Wrinkle.

Catalog Number	Hole Diameter	Fits Meter Size	Dealer Cost
CM-1241	2 3/16"	2"	\$1.12
CM-1242	2 13/16"	3"	1.12
CM-1965	2 3/16"	2"	.95
CM-1966	2 13/16"	3"	.95



BUD CABINET RACK DOLLIES

These dollies have been introduced to overcome the difficulty of moving heavy relay racks when repairs are necessary. They will fit cabinets having bases measuring from 14" x 18" to

17" x 21" and are especially suited for our Standard Relay Racks. No. RD-505 Dolly is furnished with light duty casters. No. RD-506 is furnished with heavy duty casters. Finished in Black Wrinkle only. Bud De Luxe Relay Racks require four RC-7756 casters only.

Cat. No.	Length Outside	Length Inside	Width Outside	Width Inside	Dealer Cost
RD-505	21 1/2"	17 3/4"	17 13/16"	13 11/16"	\$5.40
RD-506	21 1/2"	17 3/4"	17 13/16"	13 11/16"	7.75

Where materials are specified Black Wrinkle Finish, and Grey is desired, a charge of 15% additional will be made.

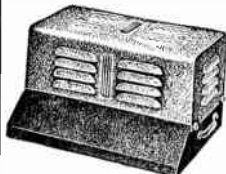


BUD STREAMLINED AMPLIFIER FOUNDATIONS

Use this unit to obtain beauty in an amplifier and similar apparatus. Each foundation consists of a standard chassis on which is mounted a removable top cover. Chromium trim is used to add additional attractiveness to the equipment. All chassis are 3" high and complete units are 9" high. Sturdy Easy Grip handles are attached to chassis, excepting No. 1750 where handle is attached to top. Finished in either

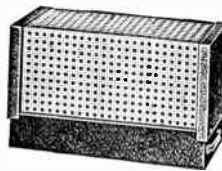
Cat. No.	Width	Depth	Dealer Cost
CA-1750	10 1/16"	5"	\$3.48
CA-1751	12 1/16"	7"	4.10
CA-1752	17 1/16"	7"	5.00
CA-1753	17 1/16"	10"	5.70

BUD SLOPING PANEL AMPLIFIER FOUNDATIONS



Each foundation consists of a 4" sloping front chassis on which is mounted a removable top cover. The top cover contains grilled cutouts and louvers for adequate ventilation. The CA-1980 has a handle mounted on top of cover. All others have handles mounted on chassis. All chassis are 3 1/2" high and all units are 9 1/2" overall height. Cover is finished in Grey Wrinkle with chrome trim and the chassis is finished in Black Wrinkle.

Cat. No.	Top Depth	Chassis Length	Chassis Depth	Dealer Cost
CA-1980	5"	10"	8"	\$4.65
CA-1981	7"	12"	10"	5.40
CA-1982	7"	17"	10"	6.24
CA-1983	10"	17"	13"	6.90



BUD AMPLIFIER FOUNDATIONS

Each unit consists of a regular chassis on which is attached a perforated metal cover which provides a lot of ventilation. Chassis have easy grip handles attached to same. Finished in Black Wrinkle only

Cat. No.	Height	Width	Depth	Chassis Height	Dealer Cost
CA-699	8 3/4"	9 5/8"	5 1/2"	2 1/2"	\$3.00
CA-1125	8 3/8"	13 3/8"	5 3/8"	2 1/2"	3.20
CA-1126	8 3/8"	17 3/8"	7 3/8"	2 1/2"	3.85
CA-1127	8 13/16"	17 1/2"	10 3/8"	3"	4.75
CA-1128	8 13/16"	12 1/2"	10 3/8"	3"	4.20



BUD IMPROVED UTILITY HANDLES

These handles are designed to provide sufficient strength and comfortable hand-grip. They are made from aluminum tubing and are given an etched aluminum finish. Made in two sizes and furnished complete with screws, washers and nuts.

Catalog Number	Overall Length	Overall Width	Mtg. Hole Center	Dealer Cost
UH-70A	5 1/8"	3 1/8"	4 3/8"	\$0.22
UH-71A	3 3/4"	3 1/8"	3 1/8"	18



BUD MOUNTING BRACKETS

These Brackets are designed to permit the mounting of M'dget Condensers, volume controls, etc., at any desired position under or on top of a chassis, at the proper distance from the chassis. Bracket is made of steel, cadmium-plated. AB-550 same as AB-549 except that slot does not have 1/2" hole in center.

Cat. No.	Height	Width	Slot	Dealer Cost
AB-549	2"	3/4"	3/8" x 1/2"	\$0.06
AB-550	2"	3/4"	3/8"	\$0.06

BUD ANGLES AND BRACKETS

A wide selection in sizes of these angles provides for numerous uses as brackets in all types of radio transmitter and receiver construction, and other electronic equipment. Made of Brass, Nickel Plated.

TYPE 2				
Cat. No.	Height	Width	Slot	Dealer Cost
AB-633	2"	5/8"	3/8"	\$4.20
AB-634	3"	3/4"	3/8"	5.00
AB-635	4"	3/4"	3/8"	6.00

TYPE 1				
Cat. No.	Height	Depth	Width	Per 100 Dealer Cost
AB-444	3/8"	1/2"	3/8"	\$2.10
AB-445	3/4"	3/8"	3/8"	2.85
AB-446	1"	1"	3/8"	3.15
AB-447	1 1/2"	1 1/2"	3/8"	4.05
AB-631	1"	1/2"	3/8"	2.40
AB-632	1 1/2"	3/8"	3/8"	3.20



BUD INSTRUMENT & RECEIVER CABINETS

Each cabinet has an evenly recessed hinged cover with convenient finger lift. The panel on front of cabinet is readily attached with self-tapping screws. Louvers provide ample ventilation. These Cabinets are finished in Black Wrinkle only. For chassis to fit these cabinets see Open End Chassis listed on other page.

Cat. No.	Height	Width	Depth	Dealer Cost
C-973	7"	8"	8"	\$3.00
C-993	7"	10"	8"	3.25
C-994	7"	12"	8"	3.50
C-995	7"	14"	8"	4.00
C-1190	7"	16"	8"	5.65
C-975	9"	15"	11"	6.15



BUD STREAMLINED CABINETS

Distinctive features of these cabinets are the rounded front corners and recessed hinged top. All parts built into this cabinet are easily accessible. Overall height, 8". Depth, 8 1/4". Finished in Black Wrinkle only. Suitable chassis may be found under listing of Open End Chassis on other page.

Catalog Number	Panel Size	Cabinet Width	Cabinet Height	Dealer Cost
C-1789	8" x 8"	10 1/2"	8"	\$3.00
C-1746	8" x 10"	12 1/2"	8"	3.60
C-1747	8" x 12"	14 1/2"	8"	3.90
C-1748	8" x 14"	16 1/2"	8"	4.50
C-1790	8" x 16"	18 1/2"	8"	5.75

BUD DELUXE STREAMLINED CABINETS

These cabinets are identical with those listed above, except that they have a 1/2" vertical chrome strip at each side of the panel, and are supplied in Gray Wrinkle Enamel only.

Catalog Number	Panel Size	Cabinet Width	Cabinet Height	Dealer Cost
C-1791	8" x 8"	10 1/2"	8"	\$3.75
C-1781	8" x 10"	12 1/2"	8"	4.20
C-1782	8" x 12"	14 1/2"	8"	4.50
C-1783	8" x 14"	16 1/2"	8"	5.10
C-1792	8" x 16"	18 1/2"	8"	6.50

BUD STREAMLINED MULTI-PURPOSE CABINETS

Handsome streamlined metal cabinet finished in Grey Wrinkle. Back of cabinet open for ventilation.



Cat. No.	Depth	Width	Height	Dealer Cost
C-1784	3 1/2"	3 3/4"	4 1/2"	\$1.35
C-1785	3 1/2"	4 1/2"	4 1/2"	1.75
C-1788	3 1/2"	5 1/2"	6 1/2"	1.75

BUD METAL CARRYING CASES

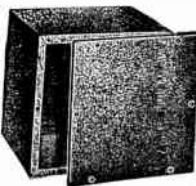
These carrying cases have many uses. An easy grip handle is fastened to the top. Front and back panels are removable. Steel welded construction assures maximum strength with minimum weight, an important requirement for portable work. Finish is Black Wrinkle only. For chassis to fit these cabinets see Chassis Decks on other page.



Cat. No.	Depth	Width	Height	Dealer Cost
CC-1095	5"	6"	9"	\$2.15
CC-1091	5"	9"	6"	2.15
CC-1096	6"	7"	12"	2.50
CC-1092	6"	12"	7"	2.95
CC-1097	7"	7 3/4"	15"	3.00
CC-1100	8"	10"	10"	2.95
CC-1093	7"	15"	9"	4.30

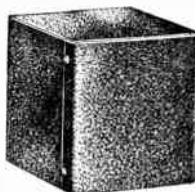
BUD METAL UTILITY CABINETS

The large number of sizes available makes this line useful for all sorts of electronic equipment, monitors, frequency meters, etc. These cabinets have two removable sides for easy accessibility and are finished in Black Wrinkle.



Cat. No.	Depth	Width	Height	Dealer Cost
CU-883	2"	4"	4"	\$0.78
CU-728	3"	5"	4"	.84
CU-729	4"	5"	6"	.95
CU-1098	6"	6"	6"	1.00
CU-1099	5"	6"	9"	1.50
CU-879	7"	8"	10"	1.90
CU-1124	6"	7"	12"	1.90
CU-880	8"	10"	10"	2.40
CU-881	8"	11"	12"	3.00
CU-882	7"	9"	15"	3.35

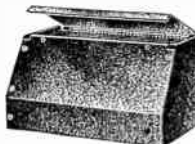
BUD STREAMLINED SCOPE AND UTILITY CABINETS



These are attractive cabinets that are adaptable to a variety of uses. All cabinets are supplied with chassis. Prices shown below include chassis. The chassis height on all except CU-1991 and CU-1992 is 1 1/2". CU-1991 is designed for 3" cathode ray tube and has a hinged cover to provide easy access to tube or other components. Chassis height is 2". CU-1992 is designed for a 5" cathode ray tube and also has a hinged cover. Chassis height, 3".

Catalog Number	Width	Depth	Height	Dealer Cost
CU-1990	5 1/2"	8 1/2"	8"	\$2.50
CU-1984	7 1/2"	8 1/2"	8"	2.90
CU-1985	9 1/2"	8 1/2"	8"	3.25
CU-1986	11 1/2"	8 1/2"	8"	3.55
CU-1987	13 1/2"	8 1/2"	8"	4.15
CU-1988	15 1/2"	8 1/2"	8"	4.60
CU-1989	17 1/2"	8 1/2"	8"	5.20
CU-1991	7 1/2"	13"	8"	4.90
CU-1992	9 1/2"	19"	12"	6.95

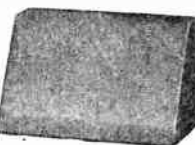
BUD SLOPING PANEL CABINETS



The entire front panel is removable if desired. This cabinet is also provided with a hinged top for easy accessibility to tubes or other parts that are mounted on chassis. All cabinets are finished in Black Wrinkle only.

Catalog Number	Height	Width	Depth	Fits Chassis	Dealer Cost
C-1584	6 1/2"	7 1/2"	7 1/4"	7" x 6" x 2"	\$2.88
C-1585	6 1/2"	9 1/2"	7 1/4"	7" x 8" x 2"	3.25
C-1586	6 1/2"	11 1/2"	7 1/4"	7" x 10" x 2"	3.60
C-1892	8"	13 1/2"	8 1/2"	8" x 12" x 2 1/2"	4.32
C-1893	10"	18 1/2"	10 1/2"	10" x 17" x 3"	5.85

BUD SLOPING PANEL UTILITY BOXES



A metal box that can be used for numerous purposes. Finished in Black Wrinkle Enamel only.

Cat. No.	Height	Width	Depth	Dealer Cost
C-1578	4 1/2"	4"	4"	\$0.90
C-1579	4 1/2"	5"	4"	1.05
C-1580	4 1/2"	6"	4"	1.20
C-1581	4 1/2"	7"	4"	1.45

BUD BOX SHIELDS



This shield has many uses: Shielding power transformers and chokes, and for covering and protecting various other components in power supplies, transmitters, receivers and other electronic units.

Top and sides are one-piece steel. No. BS-1244 has perforated steel ends for ventilation. BS-1891 has solid ends. Flanges at bottom provide for mounting. Finished in Black Wrinkle Enamel only.

Cat. No.	Ends	Length	Depth	Height	Dealer Cost
BS-1244	Ventilated	7 1/2"	4 1/2"	5"	\$1.45
BS-1891	Solid	7 1/2"	4 1/2"	5"	1.35

TRUCK CASTERS



No. RC-7756—Heavy Duty type casters, recommended for our DeLuxe Relay Eacks and where weights of 400 lbs. or less are to be distributed on 4 casters. No. RC-7757 Casters are Light Duty and are recommended for lighter weights. Wheels are high grade, hard rubber composition and ball bearing.

Catalog No.	Height	Type	Dealer Cost
RC-7756	2 3/8"	Heavy Duty	\$.90
RC-7757	2"	Light Duty	.40

RELAY RACK SCREWS AND WASHERS



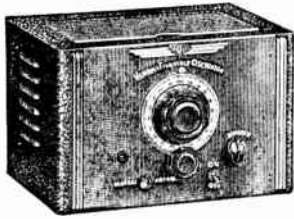
No. RS-7140 Machine Screws, 1/2" long, 13 threaded 10-32, Oval Head, finished in Nickel Plate.

No. RW-7161 Cup Washers, made to fit 10-32 Screws. Nickel plated finish.

These are available in packages of 100, 250, 500 and 1000.

Catalog No.	Description	Dealer Cost
RS-7140	Screw	\$.90 per 100
RW-7161	Washer	1.00 per 100

Where materials are specified Black Wrinkle Finish, and Grey is desired, a charge of 15% additional will be made.



BUD VARIABLE FREQUENCY OSCILLATOR

This efficient variable frequency oscillator enables you to set your transmitter at any desired amateur frequency and you can depend on it remaining "right on" until you intentionally make a change.

We list below the features that make this instrument desirable to every ham.

1. It is compact, entirely self-contained. The power supply is included in the complete unit and yet it measures only 12 1/2" by 8 1/2" by 8".
2. The stability is comparable to crystal.
3. Plug-in coils are used for highest efficiency and eliminate the fear of having an out-dated unit in the event that the bands should be changed.
4. It is a dual purpose unit, having Variable Frequency Oscillator operation and the provision for switching to crystal operation.
5. It is, in itself, a low-powered CW transmitter.
6. This unit has more than enough output to drive any of the low power or medium power beam tubes.

BUD V.F.O.-21, Complete with a set of 40 meter coils and operation instructions.....Dealer Cost **\$52.50**

Extra Coils for Other Bands are listed below.

- CK-22 — Set of three 10-meter coils Dealer Cost **\$4.00**
- CK-23 — Set of three 20-meter coils Dealer Cost **\$4.00**
- CK-24 — Set of three 40-meter coils Dealer Cost **\$4.00**
- CK-25 — Set of three 80-meter coils Dealer Cost **\$4.00**



BUD GIMIX

The Bud Gimix is a multipurpose unit requiring no batteries or power supply. It is calibrated for use on the 10, 15, 20, 40 and 80 meter amateur bands. No additional coils are needed as the one coil does the work on all bands. It can be used as a Wave-Meter, a Monitor, a Field Strength Indicator, a Carrier Shift Indicator and a sensitive Neutralizing Instrument. Operating instructions supplied with each unit.

BUD GX 79.....Dealer Cost **\$8.30**



BUD WAVE METER

This absorption type wave-meter is calibrated for the amateur bands from 5 to 160 meters. With this device the frequency to which each stage of a transmitter is tuned can be easily and quickly determined, thus eliminating the possibility of picking the wrong harmonic in a frequency multiplier or amplifier stage.

Since the Bud Wave-Meter will detect a weak R. F. field when coupled to a tank inductance, it is very useful as a neutralizing indicator. It can also be used to indicate standing waves on antenna feed lines.

Band switching is employed, thereby eliminating the need for plug-in coils.

Bud Catalog No. WM-78.....Dealer Cost **\$8.25**



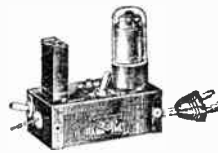
BUD WIRELESS PHONOGRAPH OSCILLATOR

This compact unit is designed to enable any standard record player to be easily and simply converted to wireless operation. Record reproduction is then possible through a regular radio receiver without the necessity of cumbersome inter-connecting wires. It is very easily installed, according to the complete instructions furnished with each unit.

The circuit incorporated in this Wireless Oscillator makes use of only one tube, but is of such design that faithful reproduction is assured. Unit comes

completely wired and tested, including tube, and is finished in Black Wrinkle Enamel. Operates from 115 volts, A. C. or D. C. Frequency range, approx. 1100 - 2150 K. C.

Catalog Number WO-6.....Dealer's Cost **\$7.85**



BUD FREQUENCY CALIBRATOR

To comply with federal regulations, some means of accurately checking transmitter frequency must be available at every "ham" station. The BUD FCC-90 consists of a 100 kc. crystal oscillator that is *Completely Self-Powered*. It will give 100 kc. check points on all bands up to 30 megacycles. This enables the operator to determine exact band edges.

No extra wiring is required to install this unit. Plug the FCC-90 into a 110 volt receptacle, connect the pick-up lead to the antenna binding post of the receiver and the unit is ready for operation. An ON-OFF switch and a STANDBY switch are provided.

Catalog Number FCC-90.....Dealer Cost **\$14.25**

BUD CODE PRACTICE OSCILLATOR AND MONITOR



The BUD CODEMASTER is a real money-saver. No longer do you have to consider your code practice oscillator useless after you have learned the code. A flip of the switch and you have a good CW monitor. This is a really versatile instrument.

It has a 4" built-in permanent magnetic dynamic speaker and will operate up to twenty ear-phones.

A volume control and pitch control permit adjustments to suit individual requirements. Any number of keys can be connected in parallel to the oscillator for group practice.

This unit will operate on 110 volts A.C. or D.C. An external speaker may be plugged in without the use of an output transformer. All controls are placed on the front of the unit and all jacks are in the rear. The unit is 6 1/2" high, 5 1/2" wide and 3 1/2" deep. It is finished in black enamel with white lettering.

Catalog Number CPO-128

Dealer Cost **\$12.50**

BUD CODE PRACTICE OSCILLATOR AND MONITOR EARPHONE MODEL



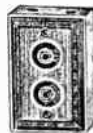
This unit is similar to the CPO-128. The difference is that the 4" speaker is not included. The monitor feature, however, is included. A phone jack is provided for the output and as many as 20 pairs of phones and keys can be operated at one time for class-room operation. This model will also operate a permanent magnetic dynamic speaker.

Plug the voice coil leads into the phone jack — no output transformer is needed. Size of case is 5 1/2" wide, 4 1/2" high and 3 1/2" deep.

Catalog Number CPO-130.

Dealer Cost **\$10.15**

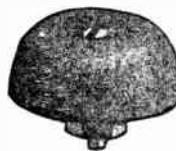
KEY AND PHONES OUTLET BOX



Here is a convenient means of terminating Key and Earphone connections in group or class-room practice. These outlet boxes can be placed at each operator's position and wired to the master oscillator. Keys and Earphones terminated in phone plugs can then be plugged into the outlet box. The entire box is made of bakelite, and is essential for a neat, fool-proof class-room installation.

Catalog No. CPO-127.....Dealer Cost **\$1.29**

RUBBER FEET



Use these rubber feet on metal cabinets, microphone stands, etc., to absorb shock and protect polished surfaces. No. F-7264A is 1" dia. x 3/8" thick and is made from high grade black rubber. It is supplied with complete mounting hardware. No. F-8038 is a sponge-rubber protection pad, 1/8" thick x 3/4" dia. To fasten it to any surface moisten the glue coating with gasoline or benzine, and press in place.

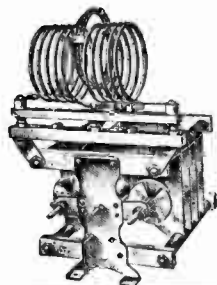
Catalog No.	Standard Package	Dealer Cost
F-7264A	100	\$5.25 per 100
F-8038	100	1.75 per 100

BUD BUTTERFLY TRANSMITTER CONDENSERS

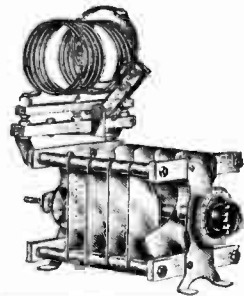
These Butterfly condensers are unequalled for mechanical and electrical balance in push-pull amplifier circuits. Where space behind the panel will not permit the use of our Giant or Master condensers, these dual condensers are ideal.

Rotor and Stator plates are made from .062" thick, highly polished aluminum with all edges rounded and surfaces highly polished to minimize corona loss and danger of peak voltage flash-over. Steatite bars are used as insulators.

These condensers are so designed that a pair of single plate neutralizing condensers can be fastened to the end plate. Brackets for mounting coil jack bars are furnished with the condensers. All condensers that have an air gap of .35" are furnished with brackets for kilowatt coils and the condensers that have .3" air gap are furnished with brackets for the mounting of 500 watt coils. The height of the condensers is 6 1/4" and the width is 7".



Catalog Number	Overall Length	Mounting Hole Dim.	Air Gap	Capacity MMFD Per Section		Capacity MMFD Sections in Series		Dealer Cost
				Max.	Min.	Max.	Min.	
GC-1825	8 3/4"	6 1/2"	.500	25	13	13	7	\$15.00
GC-1826	10 1/2"	9 1/2"	.500	38	17	18	8	18.00
GC-1827	12 1/2"	11 1/2"	.500	54	25	28	13	22.50
GC-1828	15"	13 1/2"	.500	70	32	38	17	26.00
GC-1829	17 1/2"	15 1/2"	.500	86	38	43	19	29.50
GC-1830	6 1/2"	5 1/2"	.300	31	10	12	3	14.50
GC-1831	8 1/2"	7 1/2"	.300	51	15	21	4	17.50
GC-1832	10 1/2"	8 1/2"	.300	71	19	31	6	21.80
GC-1833	11 1/2"	10"	.300	92	24	43	9	25.00
GC-1834	12 1/2"	11 1/2"	.300	114	29	51	11	29.00
GC-1835	A pair of Neut. Cond. for above condensers per pair 3.75							



BUD GIANT TRANSMITTER CONDENSERS—SINGLE SECTION



Modern design, plus precision production methods, makes BUD GIANT TRANSMITTER CONDENSERS the first choice of critical engineers for use in such applications as broadcast transmitters, high-power trans-oceanic communications equipment, and many other types of highly specialized electronic devices.

BUD GIANT TRANSMITTER CONDENSERS are built with a sturdy frame consisting of 3/16" thick aluminum end plates, connected by 5/8" diameter duraluminum rods. Formed brackets at top and bottom of end plates provide for mounting these units, and permit placing of associated inductances directly on the condenser.

Rotor and stator plates are accurately stamped from 0.064" thick highly polished aluminum with all edges rounded to minimize corona loss and danger of peak-voltage flash-over. The plates are separated by accurately machined duraluminum spacers that insure a constant air-gap throughout the entire length of the condenser.

The large two-finger rotor-contact spring, made from plated spring brass, assures positive contact with noise-free operation. Steatite bars insulate the stator, and are placed well outside the electrostatic field to keep dielectric losses at a minimum.

Catalog Number	Max. Cap. MMFD.		No. of Plates	Air Gap	Mtg. Spcg.	Over-All Length	Dealer Cost
	MMFD.	MMFD.					
GC-1800	195	24	15	.250"	8 1/2"	12 3/4"	\$21.60
GC-1801	345	32	27	.250"	12 1/4"	16 3/4"	30.25
GC-1802	530	48	41	.250"	16 3/8"	20 1/2"	41.00
GC-1803	55	19	7	.500"	7 1/2"	11 3/8"	17.25
GC-1804	95	25	15	.500"	12"	15 3/8"	25.35
GC-1805	150	33	21	.500"	15 3/8"	19 1/4"	29.00
GC-1806	255	52	35	.500"	23 1/4"	27 1/2"	40.50
GC-1807	50	22	9	.750"	10 1/2"	14 1/4"	20.00
GC-1808	75	27	13	.750"	13 1/2"	17 3/4"	24.25
GC-1809	110	40	19	.750"	18 1/4"	22 3/4"	27.00
GC-1810	160	50	29	.750"	26 1/4"	30 3/4"	38.75
GC-1811	55	30	11	1.000"	14 1/4"	18 3/4"	23.25
GC-1812	85	40	17	1.000"	21 1/4"	25"	29.80
GC-1813	105	45	23	1.000"	27 1/4"	31 3/4"	36.70

BUD GIANT TRANSMITTER CONDENSERS—DUAL SECTION



These GIANT DUAL-SECTION TRANSMITTER CONDENSERS compare in quality with the GIANT SINGLE-SECTION TUNING CONDENSERS described above, and have the same general constructional features. Insulated tie-roads in these split-stator units eliminate closed loops in the frame.

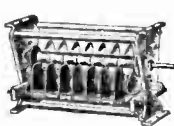
The rotor-contact consists of four fingers made from heavy-plated spring brass, placed in the center of the rotor assembly under heavy spring tension. This construction reduces series resistance and improves the efficiency of the unit at the higher frequencies.

When these dual condensers are used in split-stator circuits, the capacity is reduced to one-half the listed value and the voltage ratings are doubled.

Catalog Number	Cap. Per Sec.		No. of Plates	Air Gap	Mtg. Hole Spcg.	Overall Length	Dealer Cost
	Max.	Min.					
GC-1815	110	15	9	.250"	11 1/2"	15"	\$29.00
GC-1816	215	23	17	.250"	16 1/4"	20"	39.00
GC-1817	320	30	25	.250"	21 1/4"	25"	50.00
GC-1818	55	18	7	.500"	13 3/4"	17 1/4"	28.00
GC-1819	80	22	11	.500"	18 1/4"	22 3/4"	34.50
GC-1820	110	25	15	.500"	22 3/4"	26 1/4"	41.50
GC-1821	30	15	5	.750"	13 1/2"	17 1/4"	25.92
GC-1822	52	20	9	.750"	20 1/4"	23 1/4"	34.00
GC-1823	70	25	13	.750"	26 1/4"	30 1/4"	38.80
GC-1824	35	18	7	1.000"	19 1/4"	23 1/4"	32.40

Panel space for mounting Giant Condenser 6 3/4" wide by 8 1/4" high.

BUD MASTER TRANSMITTING CONDENSERS—SINGLE SECTION

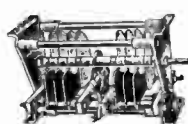


Each condenser is built in a rigid and sturdy frame consisting of two highly polished 1/8" thick aluminum end plates connected by four 5/16" diameter tie-rods. The end-plates have formed angles on top and bottom to facilitate mounting and to enable the associated inductance to be attached directly to the condenser itself.

The rotors and stators are assembled with plates made from 0.051" thick aluminum on which the edges have been rounded and highly polished. These plates are separated by accurately machined spacers. Large surface cone bearings assure proper alignment and smooth running of rotor with correct tension. Laminated, phosphor bronze wiper springs are placed at each end of the condenser bracket to assure positive rotor contact and noise-free operation. The stator assembly is insulated from the unit by large Steatite bars which are placed outside the electrostatic field. Rotor shaft is 1/4" diameter.

Catalog Number	Cap. in MMFD.		No. of Plates	Air Gap	Mtg. Hole Spcg.	Over-All Length	Dealer Cost
	Max.	Min.					
BC-1607	25	10	5	.200"	3 1/2"	4 1/4"	\$5.40
BC-1609	50	13	11	.200"	4 1/2"	6 1/4"	6.00
BC-1610	75	16	15	.200"	5 1/2"	7 1/4"	6.60
BC-1611	100	20	21	.200"	7 1/2"	8 1/4"	7.50
BC-1612	145	35	29	.200"	9 1/2"	10 1/4"	8.40
BC-1613	35	14	9	.300"	5 1/4"	6 3/4"	6.15
BC-1614	55	18	15	.300"	7 1/4"	8 1/4"	7.20
BC-1615	75	21	21	.300"	9 1/4"	10 1/4"	8.40
BC-1616	100	28	28	.300"	12 1/4"	13 3/4"	9.00

BUD MASTER TRANSMITTING CONDENSERS—DUAL SECTION



While the general style and construction is identical with the single Master units, all tie-rods in this series are insulated by glazed Steatite pillars, thus completely eliminating all closed metallic loops in the condenser frame. A special outstanding feature, developed by BUD engineers, is that of placing the positive double wiping rotor contact between the two sections at the center of the rotor. These features contribute to perfect circuit balance and eliminate the majority of difficulties encountered in ultra-high frequency equipment due to parasitics, circulating currents and poor neutralization. Use BUD condensers throughout and be trouble free.

Catalog Number	Cap. Per Sec.		No. of Plates	Air Gap	Mtg. Hole Spcg.	Over-All Length	Dealer Cost
	Max.	Min.					
BC-1635A	25	9	5	.200"	6 1/2"	8 1/4"	\$11.10
BC-1636A	35	12	7	.200"	7 3/4"	9 1/2"	12.15
BC-1637A	50	13	11	.200"	9 1/4"	11 3/4"	13.20
BC-1638A	75	16	15	.200"	11 1/4"	13 3/4"	14.30
BC-1633A	100	20	21	.300"	14 1/4"	16 3/4"	16.00
BC-1634A	50	15	13	.300"	12 1/4"	14 1/4"	14.00

Panel space for mounting Master Condensers 3 3/4" wide by 4 3/4" high.

OHM'S LAW

$$E = IR \quad R = \frac{E}{I} \quad I = \frac{E}{R} \quad P = I^2R \quad P = EI \quad P = \frac{E^2}{R}$$

where:
 R = resistance in Ohms
 I = current in Amperes
 E = electro-motive force in Volts

where:

P = power in Watts
 I = current in Amperes
 R = resistance in Ohms
 E = electro-motive force in Volts

BUD JUNIOR SINGLE SECTION CONDENSERS

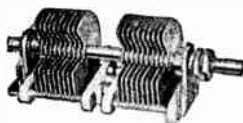


Construction of these condensers features BUD electro-soldered plate assemblies, assuring correct plate spacing, overall rigidity, and light weight. Losses are reduced to a minimum by this method of assembly. End-plates are rigidly constructed. Frame has formed angles on top and bottom for mounting the condenser in any position, allowing associated tuning inductance to be mounted in the condenser frame. The edges of the brass rotor and stator plates are rounded and the assemblies are finished in cadmium plating. Steatite insulation is used throughout. Large surface front sleeve bearing, and ball and cup rear bearings, provide consistently smooth operation. A two-finger spring brass pressure contact wiper assures noise-free and positive rotor contact at all times.

The low minimum capacities of these units make them especially suitable for multi-band applications where a high maximum-to-minimum capacity is desirable.

Catalog Number	Cap. in MMFD.		No. of Plates	Air Gap	Length Overall	Dealer Cost
	Max.	Min.				
JC-1525	50	4	7	.051"	3 1/4"	\$2.00
JC-1526	100	7	13	.051"	3 3/4"	2.25
JC-1527	145	9	19	.051"	4 1/4"	2.50
JC-1528	250	12	33	.051"	5 1/2"	3.10
JC-1529	340	15	43	.051"	5 3/4"	3.90
JC-1530	25	4	5	.078"	3 1/2"	1.95
JC-1532	55	8	11	.078"	3 3/4"	2.25
JC-1534	110	10	21	.078"	4 1/4"	2.76
JC-1535	150	11	29	.078"	5 1/4"	3.22
JC-1536	190	15	37	.078"	6 1/4"	4.00
JC-1537	245	17	47	.078"	7 1/4"	4.25
JC-1538	20	5	7	.144"	3 1/2"	2.25
JC-1540	55	10	17	.144"	5 1/4"	2.76
JC-1541	80	12	25	.144"	6 1/4"	3.15
JC-1542	105	15	33	.144"	8 1/4"	3.66
JC-1543	18	6	7	.175"	3 1/4"	2.50
JC-1544	40	11	15	.175"	5 1/4"	3.15
JC-1545	55	13	19	.175"	6 1/4"	3.54
JC-1547	100	18	37	.175"	9 1/4"	4.70

BUD DOUBLE GANG MIDGET CONDENSERS



Where space is at a premium and split-stator capacitors are specified, BUD Double Gang Midgets are desirable.

Plate construction and finish, workmanship and materials, are identical with other Midget Condensers. These condensers are designed for chassis and panel mounting.

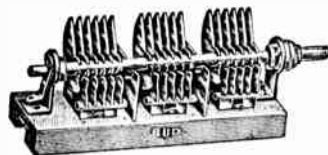
MID-LINE PLATE TYPE (STRAIGHT LINE WAVE LENGTH)

Catalog Number	Cap. Per Section		Air Gap	No. Plates Per Section	Overall Length	Dealer Cost
	Max.	Min.				
MC-929A	50	5	.024"	7	3 1/4"	\$2.45
MC-911A	100	6	.024"	14	4 1/4"	2.75
MC-912A	140	7	.024"	19	4 3/4"	3.00
MC-942A	20	4	.060"	6	4 1/2"	2.60
MC-913A	35	5	.060"	11	4 1/2"	2.80
MC-330A	50	7	.060"	15	5 1/2"	3.10
MC-331A	75	8	.060"	23	6 1/2"	3.25
MC-329A	35	9	.095"	15	6 1 1/2"	3.25

SEMI-CIRCULAR PLATE TYPE (STRAIGHT LINE CAPACITY)

Catalog Number	Cap. Per Section		Air Gap	No. Plates Per Section	Overall Length	Dealer Cost
	Max.	Min.				
MC-1883A	50	5	.024"	7	3 1/4"	\$2.35
MC-1882A	100	7	.024"	14	4 1/4"	2.65
MC-1884A	20	4	.060"	6	3 3/4"	2.50
MC-1885A	35	5	.060"	11	4 1 1/4"	2.70
MC-1887A	50	7	.060"	15	5 1/4"	3.00
MC-1888A	75	8	.060"	23	6 1/4"	3.15

BUD MIDGET CONDENSERS TRIPLE SECTION

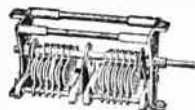


These mid-line plate type, three-gang condensers fill the need for a tuning unit suitable for short wave super-heterodyne receivers having an R.F. stage for gang-tuned exciters, and numerous other applications.

These condensers are mounted on a glazed ceramic base, assuring perfect rigidity. General construction is the same as other types of midget condensers. A shield plate is provided between each stator section. Base or panel mounting may be used.

Catalog Number	Cap. Per Section		Air Gap	No. Plates Per Section	Length Behind Panel	Dealer Cost
	Max.	Min.				
MC-886	20	4	.060"	6	5 1/4"	\$3.80
MC-887	35	6	.060"	11	5 1/2"	4.10
MC-888	100	6	.024"	14	5 1/2"	4.35
MC-889	140	7	.024"	19	5 1/4"	4.65

BUD JUNIOR DUAL SECTION CONDENSERS



Rotor contact is made by a four-finger, plated pressure spring placed at the center of the rotor shaft between the two sections, thereby providing perfect balance and improving the high frequency characteristics.

The tie-rods are insulated at both ends with Steatite insulators to prevent inductive loops in condenser frame. All other constructional features and materials are the same as used on Junior single section condenser.

Catalog Number	Capacity Per Section		No. Plates Per Section	Air Gap	Length Overall	Dealer Cost
	Max. MMFD.	Min. MMFD.				
JC-1550A	20	3	3	.051"	4 1/2"	\$3.35
JC-1551A	50	5	7	.051"	4 3/4"	3.65
JC-1552A	70	6	9	.051"	5 1/4"	3.85
JC-1553A	100	7	13	.051"	5 3/4"	4.15
JC-1554A	145	9	19	.051"	6 1/4"	4.75
JC-1556A	200	10	25	.051"	7 1/4"	5.10
JC-1556A	250	12	33	.051"	8 3/4"	6.00
JC-1570A	25	4	5	.078"	4 1 1/4"	3.80
JC-1572A	55	8	11	.078"	5 3/4"	4.45
JC-1573A	80	9	15	.078"	6 3/4"	4.70
JC-1561A	110	10	21	.078"	7 1/4"	5.10
JC-1562A	150	11	29	.078"	8 3/4"	5.80
JC-1574A	20	5	7	.144"	5 1/4"	4.40
JC-1575A	40	8	13	.144"	7 3/4"	4.90
JC-1576A	55	10	17	.144"	9 1/4"	5.10
JC-1566A	18	6	7	.175"	6 1/4"	4.75
JC-1567A	40	11	15	.175"	9 1/4"	5.25

Panel Space for mounting Junior Condensers, 2 3/4" wide by 2 1/4" high.

BUD MIDGET CONDENSERS



Small size, sturdy construction and high mechanical and electrical efficiency are the outstanding features. Insulation used is Steatite. Rotor and Stator plates are brass and are electro-soldered to their respective rods. All metal parts are cadmium plated.

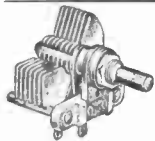
These condensers have both front and rear bearings and are furnished in either mid-line type plates (straight line wave length), or semi-circular plates (straight line capacity).

SEMI-CIRCULAR TYPE—DOUBLE BEARING

Catalog Number	Cap. in MMFD.		Air Gap	Number Plates	Dealer Cost
	Max.	Min.			
MC-1850	15	3	.024"	3	\$1.14
MC-1852	33	4	.024"	5	1.22
MC-1853	50	5	.024"	7	1.45
MC-1855	100	7	.024"	14	1.62
MC-1856	140	7	.024"	19	1.80
MC-1858	190	9	.024"	27	1.95
MC-1859	235	10	.024"	33	2.18
MC-1860	300	12	.024"	43	2.40
MC-1861	15	4	.060"	5	1.22
MC-1862	35	5	.060"	11	1.58
MC-1863	50	7	.060"	15	1.75
MC-1864	75	9	.060"	23	2.05
MC-1865	100	12	.060"	31	2.25
MC-1866	35	8	.095"	15	1.80
MC-1867	50	10	.095"	23	2.05
MC-1868	75	13	.095"	33	2.40

MID-LINE TYPE—DOUBLE BEARING

Catalog Number	Cap. in MMFD.		Air Gap	Number Plates	Dealer Cost
	Max.	Min.			
MC-900	25	4	.024"	4	\$1.28
MC-902	35	5	.024"	6	1.35
MC-903	50	6	.024"	8	1.52
MC-904	75	7	.024"	11	1.60
MC-905	100	7	.024"	15	1.70
MC-906	140	7	.024"	20	1.90
MC-908	190	9	.024"	27	2.05
MC-909	250	11	.024"	36	2.25
MC-910	300	13	.024"	43	2.50
MC-565	15	4	.060"	5	1.40
MC-897	35	6	.060"	11	1.60
MC-898	50	7	.060"	16	1.80
MC-899	75	8	.060"	23	2.10
MC-941	100	11	.060"	31	2.30
MC-965	35	8	.095"	15	1.90
MC-966	50	12	.095"	23	2.15
MC-967	75	14	.095"	33	2.50



BUD SINGLE BEARING MIDGET CONDENSERS

Construction of these condensers is identical to Midget Condensers described, with the exception that these condensers have a front bearing only.

SEMI-CIRCULAR TYPE — SINGLE BEARING

Catalog Number	Cap. in MMFD.		Air Gap	Number Plates	Dealer Cost
	Max.	Min.			
MC-1870	15	3	.024"	3	\$.75
MC-1872	33	4	.024"	5	.85
MC-1873	50	5	.024"	7	.95
MC-1875	100	7	.024"	14	1.10
MC-1876	140	8	.024"	19	1.25
MC-1877	5	2	.060"	2	.95
MC-1879	15	4	.060"	5	.90
MC-1880	35	5	.060"	11	1.10
MC-1881	50	7	.060"	15	1.25

MID-LINE TYPE — SINGLE BEARING

Catalog Number	Cap. in MMFD.		Air Gap	Number Plates	Dealer Cost
	Max.	Min.			
MC-324	10	2	.024"	2	\$.80
MC-323	25	4	.024"	4	.90
MC-148	50	5	.024"	8	1.00
MC-901	75	6	.024"	11	1.10
MC-321	100	6	.024"	15	1.20
MC-396	140	7	.024"	20	1.30
MC-327	5	2	.060"	2	.80
MC-311	15	4	.060"	5	1.00
MC-319	35	6	.060"	11	1.25
MC-312	50	7	.060"	16	1.40

BUD "CE" MIDGET CONDENSERS SINGLE SECTION DOUBLE BEARING

These Midget Condensers were designed to meet the rigid requirements in design of efficient ultra-high frequency electronic devices and precision laboratory equipment. Brass rotor and stator plate stacks are assembled into permanent units by means of electro-soldering, which assures long life and accurate plate spacing. End-plates of Steatite insulate the mounting bushings and angles from the rotor and stator assemblies. A large front sleeve bearing and rear ball thrust bearing provide for smooth rotation. Special wiper contact provides noise-free tuning. All metal parts are cadmium plated.

Rotator plates are semi-circular shaped. Provision for either panel or base mounting.

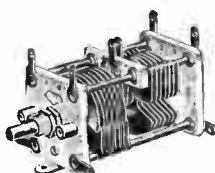
Catalog Number	Max. Cap. MMFD.	Min. Cap. MMFD.	Air Gap	No. of Plates	Over-all Length	Dealer Cost
CE-2001	35	6	.030"	7	2 3/8"	1.40
CE-2002	50	7	.030"	9	2 3/4"	1.72
CE-2003	75	8	.030"	14	3 1/2"	1.90
CE-2004	100	9	.030"	18	3 11/16"	2.10
CE-2005	150	10	.030"	27	3 13/16"	2.30
CE-2006	200	11	.030"	35	4 1/4"	2.60
CE-2007	250	12	.030"	44	4 3/4"	2.90
CE-2008	300	15	.030"	52	5 1/8"	3.10
CE-2011	15	5	.060"	5	2 3/4"	1.45
CE-2012	35	7	.060"	11	3 1/4"	1.65
CE-2013	50	8	.060"	15	3 3/8"	2.05
CE-2014	75	10	.060"	23	3 7/8"	2.45
CE-2015	100	13	.060"	31	4 1/8"	2.70
CE-2016	35	9	.095"	15	4 1/8"	1.95
CE-2017	50	10	.095"	23	5 1/8"	2.25
CE-2018	75	14	.095"	33	6 1/2"	2.65

BUD "CE" MIDGET CONDENSERS SINGLE BEARING

Locking nuts on the rotors of these single-bearing condensers assure trouble-free, portable and mobile operation. A screw-driver slot in rotor provides means of adjustment. Either insulated panel mounting or bracket mounting can be used. General construction is same as "CE" double-bearing condensers.

Catalog Number	Max. Cap. MMFD.	Min. Cap. MMFD.	Air Gap	No. of Plates	Over-all Length	Dealer Cost
CE-2021	35	6	.030"	7	1 7/8"	1.15
CE-2022	50	7	.030"	9	2 1/8"	1.25
CE-2023	75	8	.030"	14	2 3/4"	1.40
CE-2024	100	9	.030"	18	2 5/8"	1.55
CE-2025	150	10	.030"	27	3"	1.80
CE-2028	15	5	.060"	5	1 15/16"	1.20
CE-2029	35	7	.060"	11	2 1/8"	1.40
CE-2030	50	8	.060"	15	2 3/8"	1.55

BUD "CE" TYPE DUAL MIDGET CONDENSERS



These well constructed dual condensers are similar in design to the double-bearing "CE" types. They feature a rotor wiping contact placed at center of the rotor assembly to assure maximum efficiency at ultra-high frequency. Opposed rotor construction assures perfect counterbalance and provides even torque at any position of rotation. Steatite insulation eliminates closed induction loop in frame.

Catalog Number	PER SECTION		Air Gap	Distance Behind Panel	Dealer Cost
	Max. Cap.	Min. Cap.			
CE-2032	35	6	.030"	3 1/2"	\$2.10
CE-2033	50	7	.030"	3 1/4"	2.25
CE-2034	75	8	.030"	3 3/8"	2.70
CE-2035	100	9	.030"	4 1/2"	2.85
CE-2036	150	10	.030"	5 1/8"	3.40
CE-2039	15	5	.060"	3 1/8"	2.45
CE-2040	35	7	.060"	4 1/8"	2.85
CE-2041	50	8	.060"	4 3/8"	3.10

BUD TINY MITE PADDERS



For applications requiring a constant padder capacity under all temperature and humidity conditions, these units are ideal. They lend themselves readily to I. F. transformer applications, fixed tuned circuits for excitors, ganged condenser air trimmers, and plug-in-coil padding as they fit inside of standard 1 1/2" diameter coil forms.

Bud Numbers CF-125, CF-126 and CF-310. Rotor and stator assemblies are made up of brass plates (0.015" thick) and rods electrically soldered into a solid unit and then are bright cadmium plated. Insulation is Steatite. Each unit may be adjusted in capacity by either a screw-driver or a 1/4" hex. wrench.

Catalog Number	Max. Cap. MMFD.	Min. Cap. MMFD.	Air Gap	No. of Plates	Dealer Cost
LC-2077	25	2.5	.017"	7	.96
LC-2078	35	3	.017"	10	1.02
LC-2079	50	3.9	.017"	14	1.08
LC-2080	75	4.5	.017"	20	1.20
LC-2081	100	5.5	.017"	27	1.32
LC-2082	140	6.5	.017"	37	1.62

BUD TINY MITE TUNING CONDENSER SINGLE SECTION

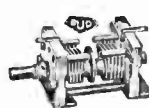


This series of condensers has been designed for applications where space or weight are limiting factors and for tuning of ultra-high frequency circuits. Rigid construction, close fitting bearing, positive rotor contact and Steatite insulation are the outstanding features. Cadmium plated, soldered, brass plates and rods insure high frequency efficiency.

Catalog Number	Max. Cap. MMFD.	Min. Cap. MMFD.	Air Gap	No. of Plates	Dealer Cost
LC-1641	15	3	.017"	5	1.00
LC-1642	25	4	.017"	9	1.05
LC-1643	35	5	.017"	13	1.15
LC-1644	50	6	.017"	19	1.25
LC-1645	75	7	.017"	29	1.40
LC-1646	100	9	.017"	37	1.50
LC-1648	10	4	.037"	7	1.02
LC-1649	15	5	.037"	11	1.11
LC-1650	25	5.5	.037"	17	1.32
LC-1651	35	6	.037"	21	1.44
LC-1652*	50	8	.037"	35	1.86
LC-1653	6	3.5	.033"	5	1.08
LC-1654	15	5.5	.033"	15	1.32
LC-1655*	25	9	.073"	27	1.80

* Denotes double bearing.

BUD TINY MITE DUAL CONDENSERS



The construction of these units is similar to the regular Tiny Mite Tuning Condensers. The two end pieces are held together firmly with two tie-rods.

A separate round plate is soldered on rotor rod to shield the two stator sections. Large surface front-sleeve bearing, and ball and cup rear bearing, provide smooth rotation.

Catalog Number	CAP. PER SECTION		Air Gap	No. Plates Per Section	Over-all Length	Dealer Cost
	Max. MMFD.	Min. MMFD.				
LC-1659	8	2.5	.017"	3	1 15/16"	\$1.89
LC-1660	15	3	.017"	5	2 1/8"	2.08
LC-1661	25	4	.017"	9	2 11/16"	2.28
LC-1662	50	6	.017"	19	3 1/8"	2.37
LC-1663	100	9	.017"	37	4 3/8"	2.70
LC-1664	10	4	.037"	7	2 15/16"	1.98
LC-1665	15	5	.037"	11	2 15/16"	2.19
LC-1666	25	5.5	.037"	17	3 1/8"	2.34
LC-1667	35	6	.037"	21	4"	2.52

NEW BUD THREE-GANG TINY MITE CONDENSERS



Hams, Radio Constructors and Experimenters can find many uses for these compact, three-gang condensers. Designed particularly for high frequency use, they are adaptable for use in converters, preselectors and receivers covering the Amateur, Television and F.M. bands. Well constructed with soldered brass plates and ceramic brackets. Rotor shaft extended 1/4" at rear. Height 1 1/8". Width 1 1/8". Length behind panel 3 3/8". Mounting holes 2 3/16" apart.

Catalog Number	Cap. Per Section		No. of Plates Per Section	Dealer Cost
	Max.	Min.		
LC-1845	11	5	3	\$2.70
LC-1846	17	5	4	2.87
LC-1847	25	6	5	3.15

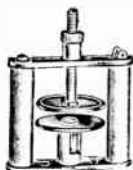
MIDGET TRIMMER CONDENSERS



Primarily intended for antenna coupling, interstage coupling, tracking applications. Base made of ceramic.

Catalog Number	Capacity MMFD.		Dealer Cost
	Max.	Min.	
MT-833	3	36	\$.15
MT-828	94	420	.30

BUD NEUTRALIZING AND HIGH FREQUENCY TUNING CONDENSERS



This line of condensers will fill every neutralizing and high frequency tuning requirement that modern circuits pose. The two-pillar construction makes this unit unusually sturdy and eliminates any possibility of capacity variation due to vibration. The movable plate is adjusted by means of the threaded shaft to which it is attached, and it is permanently locked in any position by the lock-nut provided. Any loose thread is taken up by a special nut and locked to give smooth operation. All metal parts are of aluminum. Plates have rounded edges. Steatite insulation is used.

give smooth operation. All metal parts are of aluminum. Plates have rounded edges. Steatite insulation is used.

Catalog Number	Plate Diameter	MMFD. Capacity		Dealer Cost
		Max.	Min.	
NC-1000	1 27/32"	11	1	\$2.25
NC-1001	2 13/32"	24	2	3.24
NC-1002	4 3/8"	27	6	4.55

BUD FEED-THROUGH AND BASE MOUNTED NEUTRALIZING CONDENSERS



In circuits utilizing tubes with the grid lead terminated in the base, feed-through type of neutralizing condenser is particularly suited. One hole is required for mounting of feed-through condensers. Neutralizing condenser illustrated is feed-through type. Plates are made of aluminum, rounded at edges to cut down losses. After proper tuning is attained, movable plate can be locked with the knurled nut.

No. 890 and No. 852 are ideal neutralizers for popular low power beam tubes. No. 890 condenser is base mounted only.

Catalog Number	Plate Diameter	Size Hole for Mtg.	MMFD. Capacity		Dealer Cost
			Max.	Min.	
NC-852	1"	5/16"	6	.5	\$.72
NC-853	1 1/8"	13/32"	11	1	2.25
NC-890	1"	.....	6	.5	.72

BUD STAT-AIR CONDENSERS



It is difficult to design a radio-frequency amplifier to cover any large frequency range and maintain a proper L/C ratio due to variable condenser limitations. By paralleling the proper Stat-Air condenser in this series with the tuning condenser, this difficulty is easily overcome.

The finish of these electro-soldered brass plate assemblies is cadmium plating, and Steatite insulation is used. They are furnished in either Junior or Senior types.

JUNIOR TYPE—MOUNTING DIMENSIONS—1 1/4" x 1 1/2"

Catalog Number	Cap. MMFD.	Air Gap	No. of Plates	Dealer Cost
FA-780	50	.144"	17	2.45
FA-544	75	.144"	23	2.90
FA-781	100	.144"	29	3.15
FA-782	100	.078"	19	2.70
FA-783	150	.078"	27	3.05

SENIOR TYPE—MOUNTING DIMENSIONS—2" x 2 1/4"

Catalog Number	Cap. MMFD.	Air Gap	No. of Plates	Dealer Cost
FA-784	50	.238"	11	2.90
FA-545	75	.238"	15	3.20
FA-786	100	.238"	19	3.55
FA-785	100	.100"	11	2.42
FA-787	150	.100"	15	3.00

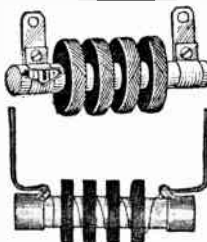
COMPACT NEUTRALIZING CONDENSERS



In applications where space is the prime factor, these units are ideal for neutralizing and high frequency tuning. Low loss Steatite is used for dielectric. These condensers feature either one hole mounting or fastening to solder lugs provided. All brass parts are nickel plated. A knurled lock-nut permits locking of movable plate.

Catalog Number	Cap. Range in MMFD.	Overall Length	Max. Diam.	Dealer Cost
NC-1928	.75 to 4	2 13/16"	5/8"	\$.55
NC-1929	1 to 6	2 7/16"	3/4"	1.20
NC-1930	2 to 12	3 7/16"	7/8"	1.55

PIE WOUND R. F. CHOKES



Each choke has a continuous winding of silk covered enameled copper wire and the pies constituting this winding are wound on a 1/4" diameter ceramic core. Chokes are made with both strap and wire leads. The CH-876 is a heavy duty choke intended for circuits, such as transmitter plate circuits, where high currents are present. All chokes in this series have an overall length of 1 1/2".

WITH STRAP LEADS

Catalog Number	Inductance mh.	D. C. Resistance	Current Rating	Dealer Cost
CH-920S	2.5	45 ohms	125 ma	\$.42
CH-922S	5.5	60 ohms	125 ma	.50
CH-923S	8.0	72 ohms	100 ma	.60
CH-924S	10.0	78 ohms	100 ma	.68
CH-876S	2.5	16 ohms	250 ma	.65

WITH WIRE LEADS

Catalog Number	Inductance mh.	D. C. Resistance	Current Rating	Dealer Cost
CH-920W	2.5	45 ohms	125 ma	\$.42
CH-922W	5.5	60 ohms	125 ma	.50
CH-923W	8.0	72 ohms	100 ma	.60
CH-924W	10.0	78 ohms	100 ma	.68
CH-876W	2.5	16 ohms	250 ma	.65

LATTICE WOUND R. F. CHOKES



For all general purpose applications requiring a high quality choke at a reasonable price, this line finds wide acceptance. Each choke is wound from silk-covered enameled copper wire on a white ceramic bobbin. Leads are terminated with two convenient soldering lugs. Chokes can be mounted with a 6-32 screw through the center of the form, and each winding is thoroughly impregnated against moisture. The wide range of sizes fills practically every choke requirement in standard radio circuits. Choke base diameter 1 1/8", distance between ends of leads 1 1/2".

Catalog Number	Inductance mh.	D. C. Res. Ohms	Current M. A.	Height	Dealer Cost
CH-1212	2.5	28	125	1 1/16"	\$.40
CH-1213	3.4	36	125	1 1/16"	.50
CH-1214	5.5	46	125	1 1/16"	.50
CH-1215	8.	60	125	1 1/16"	.60
CH-1216	10.	65	125	1 1/16"	.65
CH-1217	16.	84	125	1 1/16"	.68
CH-1218	30.	190	100	1 5/16"	.70
CH-1219	60.	279	90	1 5/16"	.80
CH-1220	80.	332	80	1 5/16"	.90

TRANSMITTING CHOKES



Here are two heavy duty R. F. Chokes that can really take it in high powered transmitter plate circuits. Each choke is wound on 9/16" dia. Steatite rod, has connection lugs and a mounting foot.

All chokes have a heavy ceramic coating which prevents moisture absorption and enables them to withstand momentary overloads without collapsing the individual pies.

Consists of five graduated pies wound in continuous winding. Care has been taken to prevent any of the pies from being resonant on an amateur band and to keep the distributed capacity at a minimum. Overall height 3 1/4".

Catalog Number	Inductance	Current Capacity	D. C. Resistance	Dealer Cost
CH-568	2.2 mh.	1 amp.	5 ohms	\$1.65
CH-569	4.3 mh.	.6 amp.	12 ohms	1.50

ULTRA HIGH FREQUENCY R. F. CHOKES



These chokes were designed to meet the requirements of builders of ultra-high frequency receivers and transmitters. Consists of ceramic rod with a single layer winding terminated with strap leads at each end. Particularly suitable for use on 2 or 6 meters. CH-570 is supplied with a mounting foot and is sometimes used as a filament choke in certain types of high frequency oscillator and amplifier circuits.

Catalog Number	Inductance mh.	Max. Current	D. C. Resistance	Lengths	Dealer Cost
CH-925	5.7 uh.	750 ma	1.4 ohms	1 1/2"	\$.28
CH-570	1.5 uh.	1.7 a	0.2 ohms	2 3/4"	.95

IRON CORE R. F. CHOKES



The efficiency of any circuit requiring an R. F. choke will be definitely improved by utilizing one of these chokes with a finely divided molded metallic core. The improved "Q" possible with this construction results from the D. C. resistance of these chokes being from 40 to 50% less for a given inductance than for regular air-core types. Thus, the D. C. voltage drop through the choke is considerably less, yet the choking action is equally as good. Windings are made with silk-covered enameled wire terminated on convenient soldering lugs, and the chokes are mounted in small square shield cans measuring 1 3/8" x 1 3/8" x 1 1/16".

good. Windings are made with silk-covered enameled wire terminated on convenient soldering lugs, and the chokes are mounted in small square shield cans measuring 1 3/8" x 1 3/8" x 1 1/16".

Catalog Number	Inductance mh.	D. C. Resistance Ohms	Current ma.	Dealer Cost
CH-1277	1.5	11.5	125	\$.72
CH-1278	2.5	16.	125	.75
CH-1279	3.4	19.5	125	.81
CH-1280	5.5	27.5	125	.81
CH-1281	8.	36.	125	.87
CH-1282	10.	42.5	125	.87
CH-1283	16.	53.	125	.96
CH-1284	30.	82.	100	1.00
CH-1285	60.	131.	100	1.15
CH-1286	80.	163.	90	1.26
CH-1287	125.	221.	90	1.56
CH-294	Shield Can Only		....	.21



SINGLE CONTACT CABLE CONNECTORS

Positive unbreakable contacts for single-conductor microphone cable are provided by these shielded connectors. Body is made of brass, bright nickel-plated. Accidental disconnections are rendered impossible by coupling ring which, when tightened, insures perfect contact between soldered connections. Cord protectors of steel spring wire will take cables up to 1/4" diameter.

Catalog Number	Description	Length	Bushing Diameter	Dealer Cost
CN-244	Single Contact, Female	2"	23/32"	\$.33
CN-245	Single Contact, Male	1 3/4"	5/8"	.27



CHASSIS UNIT CONNECTOR

Male connector CN-246 is designed for chassis mounting in connection with CB-244. Where ground to chassis desired, mount in 3/8" hole; to insulate from chassis, mount in 15/32" hole; insulating washers are furnished.

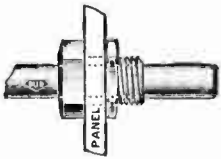
Catalog Number	Description	Dealer Cost
CN-246	Chassis Connector Unit	\$.20



PHONO PLUG AND JACK

This is a pin plug and jack combination that will fit into a multitude of applications: Receivers, auto radio, recording and reproducing equipment, experimental units, etc.

Catalog Number	Description	Dealer Cost
PL-247	Plug	\$.06
JP-248	Jack	.09



PANEL BEARING ASSEMBLIES

Nos. PB-530 and PB-531 consist of a regular 1/4" shaft bearing with 6" and 3" length of 1/4" brass rod inserted and held in place by washers to prevent shaft from shifting. These two assemblies will facilitate the panel control of condensers, potentiometers, etc., which must be mounted a distance from the panel. Bearing fits in 13/32" hole and panel. Bearing fits in 13/32" hole and panel. Bearing fits in 13/32" hole and panel.

on panels up to 5/16" thick. No. PB-532 is bearing only without shaft.

Catalog Number	Overall Length	Distance in front of panels	Dealer Cost
PB-530	6"	4 3/4"	\$.30
PB-531	3"	1 3/4"	.25
PB-532	Bearing Only	....	.12



SOLDERING IRON TIPS

This tip is made of a special copper base rod. It is 3/8" diameter x 4" long and is made particularly as a replacement for American Beauty Irons. However, it will fit many other types of irons that are designed to accommodate 3/8" diameter tips.

Catalog Number	Fits American Beauty No.	Dealer Cost
IT-372	3138	\$.42



BUD PRONE PLUGS

All metal parts on these excellent phone plugs are machined from brass, and are nickel plated. Unshielded plugs have handles of black bakelite; shielded types have attractive brass knurled handles, bright nickel plated.

No. FP-1946 is supplied *Without a Handle*, and is used as an adapter between a female microphone cable connector and a regular plug jack.

Catalog Number	Contacts	Handle	Overall Length	Bushing Diam.	Dealer Cost
FP-230	2	Bakelite	2 3/4"	3/4"	\$.30
FP-282	2	Shielded	2 3/8"	3/4"	.54
FP-1057	3	Bakelite	2 3/4"	3/4"	.66
FP-284	3	Shielded	2 3/8"	3/4"	.85
FP-1946	2	None	1 1/4"	1 1/16"	.24



BUD MIDGET JACK

The construction of this jack allows its use in applications having limited space behind the panel. The spring brass contact assures a good connection. These jacks come with insulating washers and accommodate standard phone plugs.

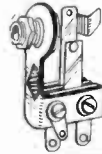
Catalog No.	Type	Distance Behind Panel	Dealer Cost
J-232 A	Open Circuit	13/16"	\$.24
J-233 A	Closed Circuit	13/16"	.30



BUD SMALL JACKS

These panel mounting jacks are desirable for control panels and similar applications where space is at a premium. Parts are accurately machined, with nickel plated finish and contacts are formed from spring brass. Each jack comes complete with insulated washers and will accommodate standard plugs. Overall length 1 1/8".

Catalog No.	Contacts	Distance Behind Panel	Dealer Cost
J-1038	2	15/16"	\$.27
J-1058	3	15/16"	.42



BUD ALL PURPOSE JACKS

Although small in size, this is one of the finest lines of jacks available. The careful design and high quality materials used in these components assure long, dependable service. Circuit opening contacts are made of pure silver and the laminated bakelite insulation prevents breakdown between springs at all ordinary voltages. Supplied with panel insulating washers. Height 1 1/4", distance behind panel 7/8".

Catalog Number	Circuit Design	Contact Arrangement	Dealer Cost
J-1324		Open Circuit	\$.30
J-1325		Closed circuit	.36
J-1326		3-Contact open circuit	.39
J-1327		Break contact on tip and ring spring	.42
J-1328		Separate make contact springs	.42
J-1329		Break contact on tip spring — separate make-contact spring	.48
J-1330		Break-make contact on tip spring	.45



BAKELITE OUTLET BOX AND COVER

This bakelite outlet box is an ideal unit for housing numerous radio and electrical specialties in compact form. The box is 2 1/4" wide x 4 3/8" long x 1 1/2" high. A solid bakelite cover is available for this item.

Catalog No.	Item	Dealer Cost
RO-400	Box	\$.54
RO-401	Cover	.15

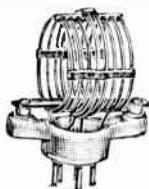


ALLIGATOR CLIPS

Accurately made; supplied with or without insulated ends. No. CL-485 Clip only. No. CL-486-R Alligator Clip with Red insulated end. No. CL-486-B Alligator Clip with Black insulated end.

Catalog No.	Type	Dealer Cost
CL-485	Regular	\$.06
CL-486	Insulated	.12

BUD 75-WATT TRANSMITTER COILS

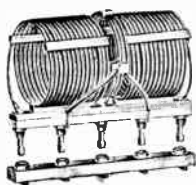


These coils are distinguished by their rigid construction, attractive appearance and conservative power rating. The ceramic mounting base keeps the coil a safe distance from the chassis—it also permits easy coil removal without disturbing the winding. All coils are air-wound and mount in 5 prong tube sockets.

OEP and OCP Coils are designed for use in circuits using Pentode tubes with high output capacity such as 6L6, 807, etc.

OEL coils have fixed link and are not tapped.
 OCL have fixed center link with main winding center tapped.
 OLS have adjustable center link, main winding center tapped.
 OES have adjustable end link and are not tapped.
 OEP have adjustable end link and are not tapped.
 OCP have adjustable center link main winding center tapped.

Catalog No.	Catalog No.	Cat. No.	Cat. No.	Band	Capacity*	Dealer Cost
Fixed End Link	Fixed Center Link	Adjustable Center Link	Adjustable End Link			
OEL-80	OCL-80	OLS-80	OES-80	80 Meter	75 MMFD	\$1.30
OEL-40	OCL-40	OLS-40	OES-40	40 Meter	52 MMFD	1.25
OEL-20	OCL-20	OLS-20	OES-20	20 Meter	40 MMFD	1.25
OEL-15	OCL-15	OLS-15	OES-15	15 Meter	30 MMFD	1.23
OEL-10	OCL-10	OLS-10	OES-10	10 Meter	25 MMFD	1.20
OEL-6	OCL-6	OLS-6	OES-6	6 Meter	17 MMFD	1.00
.....	.....	OCP-10	OEP-10	10 Meter	45 MMFD	1.20
.....	.....	OCP-20	OEP-20	20 Meter	50 MMFD	1.25
AM-1299 Coil Base only.....						.54



BUD ADJUSTABLE LINK TRANSMITTER COILS

Listed are two types of Coils. CL type of coil has an adjustable CENTER link. ES type of coil has an adjustable END link. The CL and ES can be used where fixed links are specified. No additional cost is involved and more efficient coupling is assured because of this special adjustable link, an exclusive BUD feature.

150 WATT RATING

Catalog No.	Catalog No.	Band	Capacity*	Dealer Cost
Center Link Adjustable	End Link Adjustable			
RCL-80	RES-80	80 Meters	68 MMFD	\$3.15
RCL-40	RES-40	40 Meters	36 MMFD	2.83
RCL-20	RES-20	20 Meters	27 MMFD	2.49
RCL-15	RES-15	15 Meters	27 MMFD	2.49
RCL-10	RES-10	10 Meters	25 MMFD	2.40
AM-1932 — Mounting Base for RCL and RES Coils .... .85				

500 WATT RATING

Catalog No.	Catalog No.	Band	Capacity*	Dealer Cost
Center Link Adjustable	End Link Adjustable			
VCL-80	VES-80	80 Meter	71 MMFD	\$3.65
VCL-40	VES-40	40 Meter	26 MMFD	3.30
VCL-20	VES-20	20 Meter	21 MMFD	3.00
VCL-15	VES-15	15 Meter	23 MMFD	2.97
VCL-10	VES-10	10 Meter	26 MMFD	2.88
VCL-6	VES-6	6 Meter	13 MMFD	2.64
AM-1356 — Mounting Base for VCL and VES Coils 1.05				

ONE KILOWATT RATING

Catalog No.	Catalog No.	Band	Capacity*	Dealer Cost
Center Link Adjustable	End Link Adjustable			
MCL-80	MES-80	80 Meter	67 MMFD	\$7.56
MCL-40	MES-40	40 Meter	38 MMFD	6.87
MCL-20	MES-20	20 Meter	23 MMFD	6.54
MCL-15	MES-15	15 Meter	30 MMFD	6.54
MCL-10	MES-10	10 Meter	25 MMFD	5.85
MCL-6	MES-6	6 Meter	18 MMFD	5.07
AM-1354 — Mounting Base for MCL and MES Coils..... 1.40				

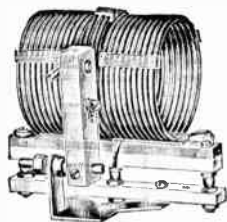
BUD 50 WATT BAND SWITCH ASSEMBLY



ONS-1 — 50 watt, 10-15-20-40-80 meter band switch assembly, ideal for all low-power oscillators, buffer or amplifier stages where the input power does not exceed 50 watts and where capacity coupling is used. A 5-position dial plate with suitable marking is furnished.

Catalog Number	Width	Height	Depth	Dealer Cost
ONS-1	5 1/2"	2 1/2"	3"	\$4.75

BUD VARIABLE LINK TRANSMITTER COILS



The most effective method of varying the loading of an R. F. Stage is by the use of a variable link to the plate tank, a feature incorporated in all Bud Variable Link Coils. The link winding is connected to the jack bar into which the coils are plugged, and this link may be used with any of the coils regardless of the band being worked. The link winding is so arranged that it may be readily controlled from the panel by means of an extension shaft if required.

150 WATT RATING

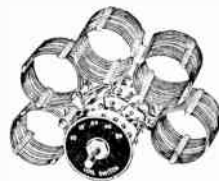
Catalog Number	Band	Capacity*	Length Mounting Strip Dim.	Mounting Hole Dim.	Dealer Cost
RLS-80	80 M	78 MMFD	3 1/2"	3 1/8"	\$2.58
RLS-40	40 M	38 MMFD	3 1/2"	3 1/8"	2.25
RLS-20	20 M	30 MMFD	3 1/2"	3 1/8"	1.98
RLS-15	15 M	30 MMFD	3 1/2"	3 1/8"	1.98
RLS-10	10 M	28 MMFD	3 1/2"	3 1/8"	1.89
AM-1339 — Base and Link Assembly for 150 Watt Coils ... 3.00					

500 WATT COILS

Catalog No.	Band	Capacity*	Length Mounting Strip Dim.	Mounting Hole Dim.	Dealer Cost
VLS-80	80 M	70 MMFD	5 1/2"	5"	\$2.91
VLS-40	40 M	36 MMFD	5 1/2"	5"	2.58
VLS-20	20 M	28 MMFD	5 1/2"	5"	2.25
VLS-15	15 M	25 MMFD	5 1/2"	5"	2.25
VLS-10	10 M	25 MMFD	5 1/2"	5"	2.19
AM-1352 — Base and Link Assembly for 500 Watt Coils ... 4.98					

ONE KILOWATT RATING

Catalog No.	Band	Capacity*	Length Mounting Strip Dim.	Mounting Hole Dim.	Dealer Cost
MLS-80	80 M	65 MMFD	8 1/2"	5 3/8"	\$6.15
MLS-40	40 M	37 MMFD	8 1/2"	5 3/8"	5.49
MLS-20	20 M	33 MMFD	8 1/2"	5 3/8"	5.16
MLS-15	15 M	30 MMFD	8 1/2"	5 3/8"	5.16
MLS-10	10 M	25 MMFD	8 1/2"	5 3/8"	4.44
AM-1340 — Base and Link Assembly for Kilowatt Coils ... 6.00					



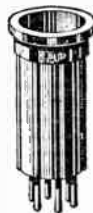
BUD 100 WATT BAND SWITCH ASSEMBLY

Made in two types, XCS-1 and XES-2. Each unit covers the 10-15-20-40 and 80 meter bands. XCS-1 is designed for use in push-pull plate or grid circuits or where plate neutralization is used. The coils in this assembly are center-tapped and center-linked. A dual section 200 mmfd. condenser is required to tune all bands. The JC-1569 condenser is especially recommended for circuit applications in order to obtain the highest possible efficiency on the high frequency bands.

XES-2 is designed for use in single-ended plate or grid circuits. The coils in this assembly are end-linked. A 100 mmfd. condenser such as Bud JC-1534 is required to tune all bands.

Catalog Number	Width	Height	Depth	Ship. Weight	Dealer Cost
XCS-1	8"	4 1/2"	5"	3 lbs.	\$10.00
XES-2	8"	4 1/2"	5"	3 lbs.	9.00

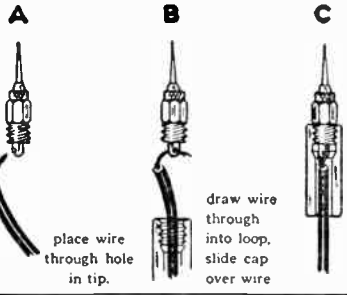
* Denotes tube plus circuit plus tank plus output coupling capacity required to resonate coil at low frequency end of band.



PLUG-IN COIL FORMS

Three sizes are available in these Plug-in Coil Forms to suit all requirements. The material used is a special bakelite having a very low loss factor. Eight ribs are molded on the walls of each form to hold the winding away from the form itself and give the coil higher efficiency. Each form has a molded flange at the top to aid in removing the coil from its socket, and the pins fit standard tube sockets.

Catalog Number	Prong	Diameter	Winding Space	Height	Dealer Cost
CF-734	4	2 1/2"	3 1/2"	3 1/2"	\$.60
CF-735	5	2 1/2"	3 1/2"	3 1/2"	.63
CF-736	6	2 1/2"	3 1/2"	3 1/2"	.66
CF-125	4	1 1/2"	2 1/2"	2 1/2"	.36
CF-126	5	1 1/2"	2 1/2"	2 1/2"	.36
CF-310	6	1 1/2"	2 1/2"	2 1/2"	.39
CF-594	4	1 1/2"	2 1/2"	2 1/2"	.30
CF-595	5	1 1/2"	2 1/2"	2 1/2"	.33
CF-596	6	1 1/2"	2 1/2"	2 1/2"	.33





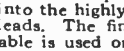



AS EASY AS A-B-C
cup shape opening holds wire firmly. no solder necessary—change as often as you need.

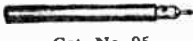
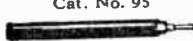
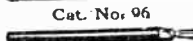
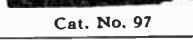

NEW SENSATIONAL!
BUD "VISE-GRIP" TEST PRODS
(Pat. applied for)

No longer is it necessary to use a soldering iron or screw-driver to replace a broken or worn lead on a test prod or plug. To install a wire in this unique, patented prod, merely insert end of wire in hole, screw down handle to finger tightness and a positive contact is assured. By far the fastest, most efficient way of doing this job.

BUD VISE-GRIP TEST PRODS WITH 1" PLASTIC HANDLE

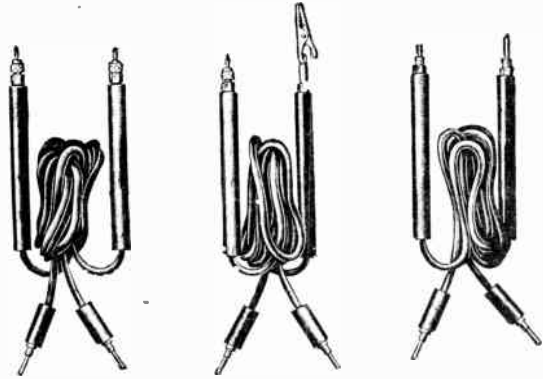
-  Prod is made of brass rod, and is nickel plated. 1" plastic handle is threaded at one end and prod screws into same. **Cat. No. 93**
-  Needle Chuck — Black or Red. **Cat. No. 94**
-  Phone Tip — Black or Red. **Cat. No. 477**
-  Banana Plug — Black or Red. **Cat. No. TP-93**.....Dealer Cost \$.15
-  Banana Plug — Black or Red. **Cat. No. TP-94**.....Dealer Cost \$.15
-  Banana Plug — Black or Red. **Cat. No. TP-477A**.....Dealer Cost \$.15

BUD VISE-GRIP TEST PRODS WITH 4" PLASTIC HANDLE

-  Prods are identical to those described on the left. Plastic handle is 4" long and made of the best material obtainable. **Cat. No. 95**
-  Needle Chuck — Black or Red. **Cat. No. 96**
-  Phone Tip — Black or Red. **Cat. No. TP-95**.....Dealer Cost \$.27
-  Banana Plug — Black or Red. **Cat. No. TP-96**.....Dealer Cost \$.25
-  Banana Plug — Black or Red. **Cat. No. TP-97**.....Dealer Cost \$.25

BUD SUPER TEST LEADS

All BUD Super Test Leads use BUD "Vise-Grip" Prods that screw into the highly polished 4" or 1" plastic handles on each end of the leads. The finest, flexible, kinkless, rubber covered wire obtainable is used on all BUD Test Leads.



- No. TL-178 is supplied with 4" handles at one end of the wires with removable needle points and on other end 1" handle with phone tips. **Cat. No. TL-178**.....Dealer Cost \$1.10
- No. TL-179—4" handles, one with removable needle point and the other with phone tip and removable alligator clip. 1" handles with phone tips. **Cat. No. TL-179**.....Dealer Cost \$1.25
- No. TL-180 have 4" plastic handles with phone tips on one end. Other end, 1" handles with phone tips as illustrated above. **Cat. No. TL-180**.....Dealer Cost \$1.00

BUD INSULATED FLEXIBLE COUPLINGS



Tandem operation of two or more units is readily accomplished through the use of these couplers. Direct shaft alignment is not essential, and all couplers are made to fit 1/4" shafts.

Catalog No.	Diameter	Height	Insulation	Dealer Cost
FC-795	1 1/16"	1 1/16"	Ceramic	\$.39
FC-845	1 1/8"	5/8"	Bakelite	.30
FC-855	1 1/2"	1 1/16"	Bakelite	.35





BUD HIGH VOLTAGE FLEXIBLE COUPLINGS







A new type spring construction in these couplings permits a wide gap between shaft connections, freedom from back-lash, and unusual flexibility. The springs are attached to glazed Steatite discs 1 1/2" in diameter and 3/16" thick, and the overall diameter of the finished coupling is 1 3/16". Coupling accommodates standard 1/4" shaft. Springs also attached to Bakelite discs 1 1/2" in diameter.

Catalog No.	Insulation	Dealer Cost
FC-614	Steatite	\$.54
FC-619	Bakelite	.39

BANANA PLUGS AND JACKS
(Brass Nickel Plated)

- Banana plug jack, threaded 1/4 - 28, supplied with nut and solder lug.** **Cat. No. PJ-949** Dealer Cost \$.09
- Banana plug Overall Length 1 1/4" Shank threaded 6-32, supplied with 6-32 nut.** **Cat. No. PL-470** Dealer Cost \$.09
-  **PJ-949**
-  **PL-470**
-  **PJ-478**
-  **PL-469**
- Insulated banana plug jack, complete with insulated washers, solder lug and nut.** **Cat. No. PJ-478** Dealer Cost \$.12
- Banana plug, Shank tapped for 6-32 screws. Nickel plated.** **Cat. No. PL-469** Dealer Cost \$.09

GIANT BANANA PLUGS AND JACKS FOR HEAVY DUTY APPLICATIONS

- Giant banana jack, complete with nut and solder lug. For mounting, drill 3/8" hole.** **Cat. No. PJ-963** Dealer Cost \$.15
- Giant plug, tapped 10-32. Positive spring action assures firm contact.** **Cat. No. PL-962** Dealer Cost \$.18
-  **PJ-963**
-  **PL-962**
-  **PJ-476A**
-  **PL-475A**
- Giant insulated banana plug jack, complete with insulated washers, solder lug and nut. To mount, drill 1/2" hole.** **Cat. No. PJ-476A** Dealer Cost \$.24
- High voltage insulated banana plug. Over all length 2 3/4". Excellent for heavy duty applications.** **Cat. No. PL-475A** Dealer Cost \$.30

BUD FLEXIBLE SHAFTS AND COUPLERS

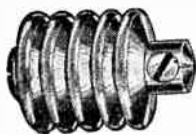


When construction necessitates the mounting of condensers or potentiometers away from the panel and at unusual angles, these Flexible Shafts simplify panel control problems. Both lengths are remarkably free from back-lash and will turn at any angle up to 90°.

Nos. FS-859 and FS-860 have 1/4" bushings sweated to each end to fit either plain or insulated couplings. Nos. FS-862 and FS-863 have Steatite insulated couplings attached to each end to fit 1/4" shafts.

Catalog Number	Overall Length	Dealer Cost
FS-859	3 1/2"	\$.33
FS-860	6 1/2"	.42
FS-862	4 1/2"	1.00
FS-863	7 1/2"	1.15

BUD HEAT RADIATING CONNECTORS



These connectors have been designed to dissipate heat generated at the grid and plate terminals of transmitting tubes, thereby preventing damage to the glass seal. Nos. TC-1923, TC-488 and TC-489 are to be used for tubes with wire leads. Nos. TC-1920 and TC-1921 are for cap type tubes. Maximum diameter of lead type is indicated in "Tube Lead Size" accommodated by each type.

Catalog No.	Tube Lead Size	Length	Diameter	Dealer Cost
TC-488	.052"	13/16"	5/8"	\$.36
TC-489	.073"	13/16"	5/8"	.36
TC-1920	.375"	15/16"	15/16"	.60
TC-1921	.578"	15/16"	15/16"	.60
TC-1923	.110"	15/16"	15/16"	.60



BUD CERAMIC INSULATORS

Apparatus requiring a rugged insulated mounting can be readily accommodated by one or more numbers in this series of white glazed ceramic insulators. All metal parts are nickel plated brass and the jack type insulators are designed to fit standard banana plugs.

Catalog Number	Base Size	Type	Height	Description	Std. Pkg.	Dealer Cost
I-234	2 1/4"	Beehive	2 1/2"	Stand-off	10	\$.22 each
I-933	2 1/4"	Beehive	2 1/2"	Jack Type	10	.28 each
I-974	1" x 1 1/2"	Senior	1 3/4"	Stand-off	20	.14 each
I-932	1" x 1 1/2"	Senior	1 3/4"	Jack Type	20	.18 each
I-930	3/4" x 1 1/2"	Junior	1 1/2"	Stand-off	25	.10 each
I-931	1/2" x 1 1/4"	Midget	15/16"	Stand-off	50	.08 each



BUD LUCITE STAND-OFF INSULATORS

The Lucite pillar-type stand-off insulators listed below are made in a convenient number of sizes to fit a variety of applications. They are intended for chassis mounting in a single mounting hole. The 1/2" diameter insulators are supplied with 6-32 mounting screws. The 3/4" diameter insulators are supplied with 10-32 mounting screws.

Catalog Number	Height	Diameter	Standard Package	Dealer Cost
I-1904	1 1/4"	1/2"	25	\$.24 each
I-1890	2"	1/2"	25	.30 each
I-1905	2 1/2"	1/2"	25	.35 each
I-1899	1 1/4"	3/4"	25	.36 each
I-1906	2 1/4"	3/4"	25	.42 each
I-1907	4 1/4"	3/4"	25	.60 each
I-1908	6 1/4"	3/4"	25	.84 each



BUD LUCITE FEED-THROUGH INSULATORS

These Lucite feed-through insulators are made in two diameters, and five convenient heights. They are ideal for bringing high-frequency leads through a chassis or shield and superior to ceramic insulators for this purpose. The 1/2" diameter insulators are furnished with 6-32 hardware. The 3/4" diameter insulators are furnished with 10-32 hardware.

Catalog No.	Rod Diam.	Bottom Height	Top Height	Mouting Hole	Std. Pkg.	Dealer Cost
I-1909	1/2"	1/4"	1 1/4"	5/16"	25	\$.24 each
I-1910	1/2"	1/4"	1 1/2"	5/16"	25	.28 each
I-1911	1/2"	1/4"	1 3/4"	5/16"	25	.32 each
I-1912	3/4"	1/2"	1 1/2"	7/16"	25	.55 each
I-1913	3/4"	1/2"	2"	7/16"	25	.65 each

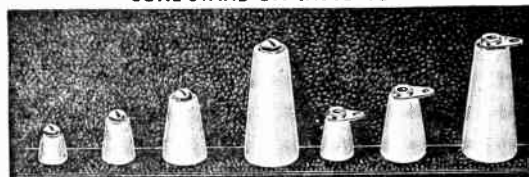
LUCITE FEEDER SPREADERS



Designed for all average feeder requirements. A 600 ohm line can be made with any size wire from No. 12 to No. 18 by using one of the spreaders listed below. The spreader used for this application depends on the wire size. Further data on this subject is available in any antenna handbook. These spreaders are furnished with locking screws to clamp the wire in place. All spreaders are 3/8" in diameter, and are drilled for No. 12 wire.

Catalog No.	Wire Spacing	Std. Package	Dealer Cost
I-1900	2"	25	\$.20 each
I-1901	4"	25	.25 each
I-1902	5"	25	.30 each
I-1903	6"	25	.33 each

CONE STAND-OFF INSULATORS



All applications requiring insulated mountings and supports are readily accommodated by these various types and sizes of ceramic insulators. Each unit is made from high grade glazed porcelain having good mechanical strength. Nos. I-300 to I-303 are tapped at each end and are supplied with necessary hardware. Nos. I-304 to I-306 are supplied with No. PJ-949 Banana Plug Jack and accommodate standard banana plugs.

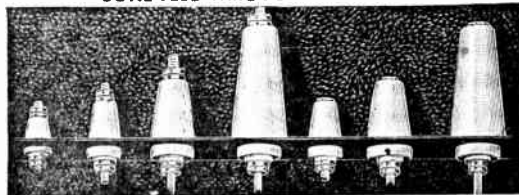
REGULAR CONE INSULATORS

Catalog Number	Height	Top Dia.	Base Dia.	Thread	Dealer Cost
I-300	5/8"	7/16"	3/8"	6-32	\$.12
I-301	1"	7/16"	3/8"	8-32	.15
I-302	1 1/2"	5/8"	1"	10-32	.21
I-303	2 3/4"	3/4"	1 1/4"	10-32	.30

JACK TYPE CONE INSULATORS

Catalog Number	Height	Top Dia.	Base Dia.	Thread	Dealer Cost
I-304	1"	1/2"	3/4"	8-32	\$.21
I-305	1 1/2"	5/8"	1"	10-32	.24
I-306	2 3/4"	3/4"	1 1/4"	10-32	.36

CONE FEED-THROUGH INSULATORS



In bringing high voltage and R. F. leads through panels and chassis, and for numerous other uses, this line of two-piece insulators will be found indispensable. Made of the same ceramic material as the Stand-Off Insulators.

Nos. I-435 to I-438 are supplied with threaded rod and necessary hardware, while Nos. I-453 to I-455 are supplied with No. PJ-949 jack top attached to appropriate threaded rod.

REGULAR CONE FEED-THROUGH INSULATORS

Catalog Number	Top Height	Bottom Height	Mounting Hole Dia.	Dealer Cost
I-435	1"	3/16"	11/32"	\$.15
I-436	1 1/4"	5/16"	15/32"	.21
I-437	1 1/2"	3/8"	9/16"	.28
I-438	2 3/4"	3/8"	9/16"	.40

JACK TYPE CONE FEED-THROUGH INSULATORS

Catalog Number	Top Height	Bottom Height	Mounting Hole Dia.	Approx. Ship. Weight - 25	Dealer Cost
I-453	1"	3/16"	13/32"	4 lbs.	\$.16
I-454	1 1/2"	3/8"	5/8"	5 1/2 lbs.	.30
I-455	2 3/4"	3/8"	5/8"	6 1/2 lbs.	.48

FEED-THROUGH INSULATOR BUSHING



This new type Bud feed-through insulator bushing made from LUCITE, has been designed in two sizes to simplify insulation problems when high voltage wires are fed through chassis or panels.

If wires are insulated, it is not necessary to remove insulation as the center holes are large enough to pass it. If larger size hole is required, material can be easily drilled. Each bushing supplied with nut for mounting on material up to 1/8" thick. Hole sizes and other data given below.

Catalog No.	Description	Dealer Cost
I-456	Diameter 1/2" with 1/8" wire hole	\$.10
I-457	Diameter 3/4" with 3/16" wire hole	.14



TUBE CLIPS

These clips may be used for various types of tubes as shown below. Made of heavy gauge spring brass, cadmium plated.

Catalog Number	Type Tube	Std. Package	Dealer Cost
TC-490	Fits Tube Caps up to 5/8" dia.	10	\$.06 each
TC-107	Glass Tube Fits 3/8" dia. Cap.	100	1.25 per 100
TC-108	Metal Tube Fits 1/4" dia. Cap.	100	1.00 per 100

BAT-HANDLE TOGGLE SWITCHES



These toggle switches and all other switches illustrated are manufactured for Bud by H. & H. They all have silver contacts with bakelite insulation and are rated at 3 amps. at 125 volts. The shank on all Bat-handle switches is 7/16" long. No. SW-1115 is supplied with a No. SW-1036 on-off name-plate. All other switches in this series are supplied without name-plate. All switches are nickel plated.

Catalog No.	Description	Dealer Cost
SW-1115	S. P. S. T.	\$.35
SW-1118	S. P. D. T.	.45
SW-1119	D. P. S. T.	.57
SW-1120	D. P. D. T.	.69

BALL HANDLE TOGGLE SWITCHES



Construction is same as Bat-handle switches. Rating 3 amps., 125 volts. Requires 1/2" hole for mounting. Nickel plated finish. Switches No. SW-1003 and SW-1004 supplied with No. SW-1036 on-off plate.

Catalog Number	Description	Shank Length	Dealer Cost
SW-1003	S. P. S. T.	15/32"	\$.33
SW-1004	S. P. S. T.	3/4"	.39
SW-1005	S. P. D. T.	15/32"	.42
SW-1006	S. P. D. T.	3/4"	.48
SW-1007	D. P. S. T.	15/32"	.57
SW-1008	D. P. S. T.	3/4"	.63
SW-1009	D. P. D. T.	15/32"	.66
SW-1010	D. P. D. T.	3/4"	.72
SW-1077	Closes 3 circuits for RCA, etc. ON-OFF Plate	1/4"	.60
SW-1036	ON-OFF Plate	.....	.04

HEAVY DUTY POWER SWITCHES



Can be had in two types. Toggle switch is Catalog No. SW-1269, or push-button type, which is Catalog No. SW-1270. These switches are double pole, single throw. Each set of contacts is rated 12 amps. at 125 volts, and can be used as a single pole, single throw switch; when contacts are tied together, switch will carry higher current. SW-1270 push-button switch is for use in Relay Racks as a Safety Switch. The switch is normally off, and when door is closed, switch is turned on. Drill 1/2" hole for mounting. Size 1 3/4" long, 3/4" high, 3/4" wide.

Catalog Number	Dealer Cost
SW-1269	\$.90
SW-1270	1.50

ROTARY SWITCHES



Used primarily where a rotary action with a knob is desired. Each switch is housed in a steel case. Bakelite insulation and silver contacts are used. All switches carry underwriters' approval and are rated 6 amps. at 125 volts. Shank diameter is 3/8".

Catalog Number	Description	Threaded Shank Length	Shaft Excluding Shank	Dealer Cost
SW-499	S. P. S. T.	3/8"	1 1/8"	\$.45
SW-1070	S. P. S. T.	1"	1 1/8"	.50
SW-1071	S. P. D. T.	3/8"	1 1/8"	.55
SW-1072	S. P. D. T.	1"	1 1/8"	.60
SW-1073	D. P. S. T.	3/8"	1 1/8"	.70
SW-1074	D. P. S. T.	1"	1 1/8"	.81
SW-1075	D. P. D. T.	3/8"	1 1/8"	.81
SW-1076	D. P. D. T.	1"	1 1/8"	.90
DP-1230	Rotary Switch Off-On Plate	.....	.....	.09

PUSH-BUTTON SWITCH



Two-circuit slow-make and quick-break momentary contact switch. One circuit is "ON" and the other is normally "OFF." Pushing the button reverses the position of the circuits. Shank is 5/8" long. Overall height 1 3/16", overall length 1 3/16".

Catalog Number	Dealer Cost
SW-743	\$.57

BUD INSULATED SCREW-DRIVERS

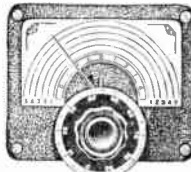


No. AT-235 is made from 1/4" bone fiber, beveled at each end to form screw-driver blades. Catalog No. AT-235. Dealer Cost \$.30.

AT-236 and 237 are combination tools, consisting of a No. 235 Screw-Driver inserted into an extra heavy fiber tube which is hex. broached the entire length. These tools can be held to any length between specified limits by set-screw provided.

Catalog No.	Length	Dealer Cost
AT-236	7" to 10"	\$.60
AT-237	11" to 17"	.72

BUD VERNIER DIAL—GEARED TYPE



This new and improved D-1729 precision-built, vernier dial of attractive appearance has been designed for industrial, laboratory and amateur radio applications. Many uses can be found for this gear-driven dial such as electron-coupled oscillators, frequency meters, receivers and any other type of instrument or laboratory equipment that requires ease of tuning and accuracy of calibration.

Freedom of backlash is obtained by the use of spring-loaded laminated steel gears with a ratio of ten to one. Each dial comes furnished with three paper dial scales on which calibration marks can be printed. These dial scales are printed with five calibration arcs for wave-band identification and each arc is divided into five equal sections over 180 degrees, which makes each section the equivalent of one rotation of the circular dial, or 100 dial divisions. This enables a calibration of 500 divisions over the entire scale. A feature of this dial is the automatic clutch and stop that prevents the pointer from being turned off scale and eliminates the possibility of damage to the gears.

The dial is furnished mounted, complete with all hardware. An attractive black crackle escutcheon outlines the dial scale, which is further protected by a "Plastacel" window. The entire dial scale assembly mounts independent of the gear unit, and may be removed when desired without disturbing the dial drive.

Mounting area of the dial 5 1/4" x 5 3/4". Depth behind panel 1 1/8".
D-1729 Dealer Cost \$3.00

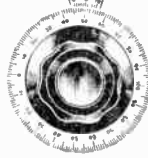
BUD FRICTION-DRIVE VERNIER DIAL



These dials are made in 2 3/4" and 4" plate sizes and are driven at the rim by a friction device which gives very smooth and positive vernier action. Dials are calibrated 0 to 100 clockwise over 360 degrees. The face and calibration marks are in glossy black enamel, white rim and numerals are polished metal. All dials fit standard 1/4" shafts. Included are a single line indicator and a black wheel knob for the vernier drive.

Catalog Number	Dial Div.	Plate Diam.	Overall Height	Mtg. Hole Centers	Dealer Cost
D-1944	0-100	2 3/4"	3 5/8"	1 3/8"	\$1.45
D-1945	0-100	4"	4 7/8"	2 1/4"	1.75
D-1919	Vernier Dial Drive	.....	.....	.....	.30

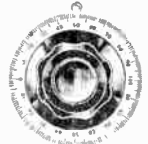
BUD PRECISION TUNING DIAL (Vernier Indicator)



The outstanding feature of these dials is that they can be used on condensers that rotate either clockwise or counter-clockwise. These dials are the perfect choice for general tuning dial requirements. The etched calibrations are graduated from zero to 100 clockwise and from zero to 100 counter-clockwise. The dial is equipped with a large finger grip flanged knob which fits 1/4" shaft and is supplied complete with vernier indicator which will enable readings of one-tenth of one division.

Catalog Number	Dial Diam.	Height, including Indicator	Calibration	Dealer Cost
D-1895	2 3/4"	3 1/16"	0-100-0	\$1.25
D-1897	4"	4 3/16"	0-100-0	1.65
IN-723	Vernier Indicator only, for 2 3/4" dial	.....	.....	.30
IN-725	Vernier Indicator only, for 4" dial	.....	.....	.30

BUD PRECISION TUNING DIAL (Single Line Indicator)



The construction of this dial is exactly the same as the one above except that a single line indicator is supplied with this dial instead of a vernier marker.

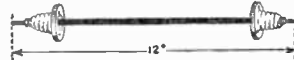
Catalog Number	Dial Diam.	Height, including Indicator	Calibration	Dealer Cost
D-1732	2 3/4"	3 1/16"	0-100-0	\$1.05
D-1734	4"	4 3/16"	0-100-0	1.40
IN-1736	Single Line Indicator only	.....	.....	.12

BUD DIAL LOCK



This dial lock is a dual purpose item, since it functions as both a dial lock and a position indicator. The problems of dial slippage and accidental movement of dials are absolutely eliminated by this inexpensive and precise lock. Made of brass, nickel plated. Catalog No. DL-1947..... Dealer Cost \$.18

WALL LEAD-IN



This Lead-In is used to facilitate bringing in antennas or feeders through a wall or window casing with ease and safety. Unit consists of a 12" threaded brass rod insulated with heavy plastic tubing, and two heavy ceramic insulators. Rod and insulation may be readily cut to any length.

Catalog Number	Dealer Cost
I-742	\$.75



DIAL PLATES

Markings on the black background of this line of plates are guaranteed on all types and the material is aluminum.

Catalog Number	Description	Dealer Cost
JL-1692F	Miniature	.18
JL-1692S	Miniature	.18
JL-1693F	Cand. 110 volt	.18
JL-1693S	Cand. 110 volt	.18
JL-1694F	Min. Bayonet	.18
JL-1694S	Min. Bayonet	.18

PURPOSE DIAL

A natural for applications where a full scale reading dial is needed. The dial has a black enamel background with markings screened on in white. The dial comes complete with an easy grip knob and a single line indicator. The dial plate only can be used as a rotary beam indicator, a protractor, etc. A dot is imprinted in white to show exact center.



Catalog Number	Diameter	Arc	Calibrated	Description	Dealer Cost
D-1738	6 1/2"	360°	0-360	Dial	\$1.50
DP-1737	6 1/2"	360°	0-360	Dial plate only	.90

BUD JACK AND SWITCH TYPE PLATES

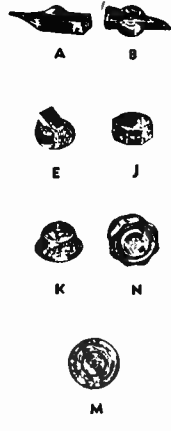
Intended for identification of input and output circuits which terminate at phone plug jacks, except Nos. DP-1262 and DP-1271, which are intended as toggle switch identification name-plates. Made of aluminum with polished letters on black enameled background. Outside diameter of all plates is 1 1/2".



Catalog Number	Marking	Hole Size	Dealer Cost
DP-1180	Microphone	13/32"	.12
DP-1181	Phono Pick-up	13/32"	.12
DP-1182	Phones	13/32"	.12
DP-1272	Key	13/32"	.12
DP-1271	On - Off	.475"	.12
DP-1262	High - Low	.475"	.12

RADIO KNOBS

This variety of popular molded knobs is useful for all types of test equipment and Radio Amateur use. All knobs fit 1/4" shaft and are supplied with set-screws. Only the most popular sizes and types are listed. Packed 10 to box.



Catalog No.	Type	Diameter	Height	Color	Dealer Cost
K-579	A	1 1/4"	5/8"	Black	.09
K-174	A	1 1/4"	5/8"	Red	.10
K-581	A	2 1/4"	5/8"	Black	.12
K-575	B	1 1/4"	5/8"	Black	.09
K-559	B	1 1/4"	5/8"	Red	.10
K-577	B	2 1/4"	5/8"	Black	.14
K-182	E	1"	5/8"	Black	.09
K-183	E	1"	5/8"	Walnut	.09
K-751	J	1 3/8"	15/32"	Walnut	.09
K-746	K	1 1/8"	19/32"	Black	.09
K-747	K	1 1/8"	25/32"	Black	.10
K-154	M	1 1/8"	5/8"	Black	.25
K-155	M	1 1/8"	3/4"	Black	.35
K-156	M	2 1/8"	7/8"	Black	.45
K-157	N	2 1/8"	7/8"	Black	.55
K-158	N	3"	1"	Black	.60

1/2 INCH JEWEL LIGHT ASSEMBLIES



Available with either miniature screw, miniature bayonet or candelabra type sockets. Facetted and Smooth faced jewels in Red, Green, Amber, Blue, Opal, and Crystal can be supplied. Specify color of jewel. Jewel holders are nickel-plated brass. Overall height is 1 1/2"; depth behind panel is 1". A 7/16" diameter mounting hole is required. Packed 5 to a box.

Catalog Number	Type Socket	Jewel	Dealer Cost
JL-1692F	Miniature	Facetted	\$.21
JL-1692S	Miniature	Smooth	.21
JL-1693F	Cand. 110 volt	Facetted	.24
JL-1693S	Cand. 110 volt	Smooth	.24
JL-1694F	Min. Bayonet	Facetted	.24
JL-1694S	Min. Bayonet	Smooth	.24

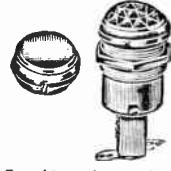
3/4 INCH JEWEL LIGHT ASSEMBLIES



Supplied only with candelabra type sockets for 110 volt bulbs. Facetted jewels in Red, Green, Amber, Blue, Opal and Crystal can be supplied. Specify color of jewel desired. Jewel holder is chrome plated. Overall height is 2"; depth behind panel is 1". 11/16" diameter mounting hole is required.

Catalog Number	Type Socket	Jewel	Dealer Cost
JL-1695F	Cand. 110 volt	Facetted	\$.48

ONE-INCH JEWEL LIGHT ASSEMBLIES



These units are ideal indicators for use on Radio and Electrical Panel Switchboards, Amplifiers, Laboratory Equipment, Signal Devices, etc. Removable jewel provides instant access to bulb from front of panel. Available with miniature screw, miniature bayonet, or candelabra type sockets. Facetted and Smooth faced jewels can be supplied in Red, Green, Amber, Blue, Opal and Crystal.

Specify color of jewel desired. The jewel holder is chrome plated. The mounting bracket depth is 2". A 1" diameter mounting hole is required.

Catalog Number	Type Socket	Jewel	Dealer Cost
JL-1698F	Candelabra, 110 volt	Facetted	\$.84
JL-1698-S	Candelabra, 110 volt	Smooth	.84
JL-1699F	Miniature Screw	Facetted	.84
JL-1699S	Miniature Screw	Smooth	.84
JL-1699FB	Miniature Bayonet	Facetted	.84
JL-1699SB	Miniature Bayonet	Smooth	.84

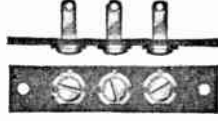
INSULATED MOUNTING STRIPS



These strips are handy for neatly supporting resistors, condensers, etc., in circuit wiring. Packed 100 to carton.

Catalog Number	Lugs	Mounting Hole Dimension	Dealer Cost Per 100
TS-367	1	...	\$1.80
TS-368	2	...	2.55
TS-369	3	3/8"	4.20
TS-370	4	1 3/8"	5.25
TS-374	5	2 3/8"	6.00
TS-375	6	2 5/8"	7.20

SCREW TYPE TERMINAL STRIPS



The screw-type terminals are made of cadmium-plated brass and are mounted on 1/16" thick bakelite strips. Ideal for either chassis or breadboard layouts. The screws are so made that they will lock in place and not drop out when open to their maximum length.

Catalog Number	No. Contacts	Mounting Hole Dimension	Dealer Cost
TS-1970	2	1 1/8"	\$.08
TS-1971	3	1 3/8"	.10
TS-1972	4	2 1/8"	.12
TS-1973	5	2 3/8"	.14
TS-1974	6	3 1/8"	.16
TS-1975	8	3 15/16"	.20

SPRING WIRE CLIP



A convenient and positive solderless connection to a wire can be made with these clips. Any size wire up to No. 10 can be securely held. Made from spring brass with plain finish. Clips are 3/8" wide and 1" long.

Catalog No.	Standard Package	Dealer Cost
WC-297	100	\$1.25 per 100

PAR-METAL RACKS · CHASSIS · CABINETS for ELECTRONIC APPARATUS

TYPE "C" CABINET RACKS—for 19" Rack Panels

These are professional type racks that have been used on many commercial installations, and make a DeLuxe job of any amateur or broadcast transmitter. The racks are of all-steel construction, welded into an integral unit, to give a lifetime of service.

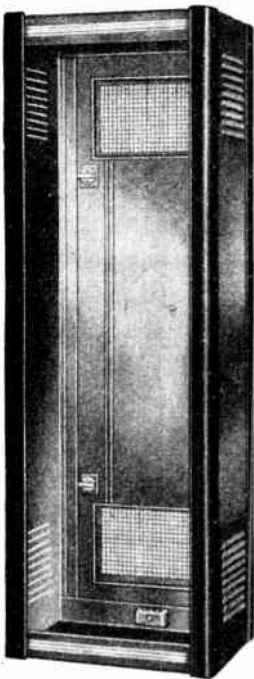
All panel mounting screws are concealed by means of a full length corner trim on each side at the front. In keeping with modern design, this front trim is rounded on the vertical corners. The rear corners are finished with regular angle trim. The front of the rack is trimmed with chrome moulding top and bottom. The door has a grille at top and bottom, and is hung on sturdy loose-joint hinges; it is held closed by two flush snap-action catches. Additional ventilation is provided

by louvres at the sides. The panel mounting angle irons are 3/16" thick, with mounting holes accurately drilled and tapped 12/24 thread on multiple 1 1/4"—1/2" spacings. The rack is made from 1/16" thick cold rolled steel, rigidly braced and reinforced throughout; the bottom is 3/4" thick steel. A rectangular opening is provided in the bottom for conduits, leads, etc. A duplex receptacle and outlet box are provided in the back under the door.

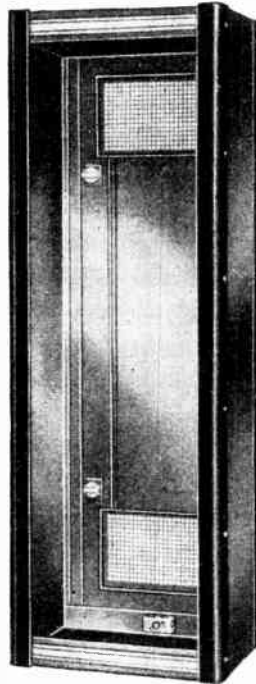
FINISHES: Either black ripple or slate grey ripple enamel. Corner trims are supplied in dull black, slate grey smooth enamel, or aluminum grey lacquer at extra cost.

RACKS WITHOUT LOUVRES: To permit racks to be set up in gangs or rows of two or more, the louvres at sides are omitted. Racks may be joined by a flat trim fastened to front of adjacent racks, overlapping both racks. Shipped with corner trim as illustrated; where specified, front joining trim will be substituted in place of corner trim at same price. Front joining Trims cannot be used on racks with front doors.

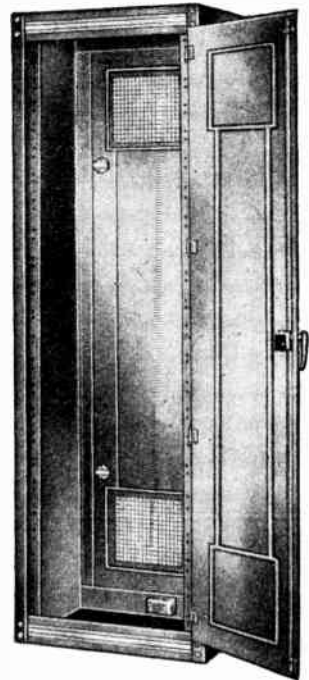
WITH LOUVRES



WITHOUT LOUVRES



WITH FRONT DOORS



*BLACK RIPPLE ENAMEL

15 1/4" Deep Racks

Cat. No.	Overall Size	Panel Space	Wt. lbs.	Net Price
R-3675	42 7/8 x 22 x 15 1/4"	36 3/4"	150	\$49.50
R-6625	67 3/8 x 22 x 15 1/4"	61 1/4"	210	66.00
R-8325	83 1/8 x 22 x 15 1/4"	77"	240	87.00

18" Deep Racks

R-3618	42 7/8 x 22 x 18"	36 3/4"	160	54.00
R-6618	67 3/8 x 22 x 18"	61 1/4"	230	72.00
R-8318	83 1/8 x 22 x 18"	77"	280	93.00

*If slate grey ripple enamel is required substitute letters "RC" instead of "R" when ordering.

*BLACK RIPPLE ENAMEL

15 1/4" Deep Racks

Cat. No.	Overall Size	Panel Space	Wt. lbs.	Net Price
P-3675	42 7/8 x 22 x 15 1/4"	36 3/4"	150	\$49.50
P-6625	67 3/8 x 22 x 15 1/4"	61 1/4"	210	66.00
P-8325	83 1/8 x 22 x 15 1/4"	77"	240	87.00

18" Deep Racks

P-3618	42 7/8 x 22 x 18"	36 3/4"	160	\$54.00
P-6618	67 3/8 x 22 x 18"	61 1/4"	230	72.00
P-8318	83 1/8 x 22 x 18"	77"	270	93.00

*If slate grey ripple enamel is required, substitute letters "PG" instead of "P" when ordering.

*BLACK RIPPLE ENAMEL

Racks are 22" wide, 18" deep. Panels mount 2" from front allowing 14" clear inside depth behind panels to rear door.

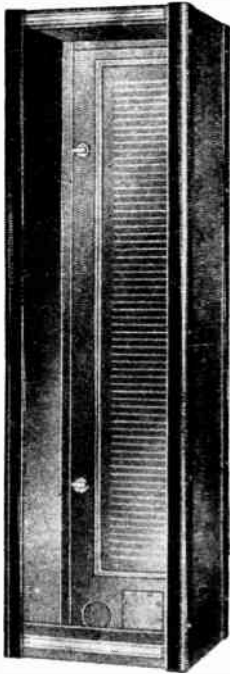
	Catalog F-6618	Number F-8318
Overall Height	67 3/8	83 1/8
Available panel space	61 1/4	77
Clear inside width (front)	19 3/8	19 3/8
Clear inside width (rear)	17 3/4	17 3/4
Net Price	\$96.00	\$120.00

*If slate grey ripple enamel is required, substitute letters "FG" instead of "F" when ordering.

PAR-METAL RACKS · CHASSIS · CABINETS for ELECTRONIC APPARATUS

TYPE "C" TRANSMITTER RACKS

STANDARD TYPE—for 19" & 30" Rack Panels



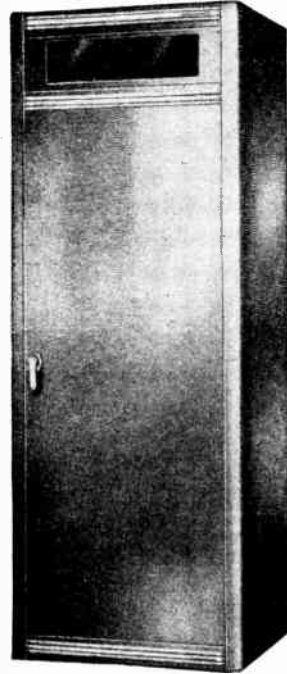
Similar to standard type "C" racks listed on page J-85 except that they have been reinforced at rear corners for use with heavier apparatus. At the rear, knockouts are provided for conduit and 4" square duct, as well as a double convenience outlet with receptacle. Knockouts are also supplied at sides for conduit, suitable for entry of cables when units are ganged. The rear door, which is removable, has ample louvres for ventilation, and is covered on the inside with mesh screening. Front trim rounded on vertical corners. Racks are regularly supplied with corner trim for use as a single unit, but will be furnished with suitable front connecting strips for ganging in rows of two or more without additional charge.

FINISH: Black ripple enamel with dull black corner trim is standard. Slate grey ripple enamel furnished without additional charge, if so specified. For aluminum grey lacquer finish, add 10% to prices.

PANELS: Type "C" panels to fit the G-2218 and G-2219 racks are listed on page J-89. For cost of 30" blank panels to fit the G-3024 rack, add 100% to prices of 19" panels on page J-89.

Catalog No.	Overall Size	Panel Space	Clear Depth	Ship. Wt. Lbs.	Net Price
G-2218	76 $\frac{1}{8}$ " x 22 x 18"	70 x 19"	16 $\frac{3}{8}$ "	270	\$96.00
G-2219	83 $\frac{1}{8}$ " x 22 x 18"	77 x 19"	15 $\frac{3}{8}$ "	290	106.50
G-3024	76 $\frac{1}{8}$ " x 33 x 24"	70 x 30	22 $\frac{3}{8}$ "	450	159.00

DELUXE TYPE—for 24" Rack Panels



This rack is undoubtedly the finest standard transmitter rack which we have ever made. It is constructed of 1/16" sheet steel, with a base of 1/8" steel, and is reinforced for use with heavy duty apparatus. The meter panel at the top is 7" high, has a glass front, and is provided with a blank bakelite sub-panel. The inner sides of the rack are reinforced with 1/8" steel channels, to which may be attached angle brackets to support the chassis. These channels may also be used as wiring ducts.

The rack will accommodate panels 24" wide; the front panel mounting angles are recessed to allow 2" clearance behind the front door for dials, knobs, etc. The front door is mounted on concealed hinges; the rear door has loose-joint hinges so that it may be removed. Both doors are equipped with handles, and the front door also has a lock. Blank panels 24" wide can be supplied at prices listed on page J-89 plus 50%.

No. G-8024

Overall dimensions: 83 $\frac{1}{8}$ " x 30 $\frac{1}{2}$ " x 27".

Available panel space: 70" x 24".

Clear inside width at front: 24"

Clear inside width at rear: 26 $\frac{1}{2}$ ".

Clear inside depth behind front panels: 23".

Shipping weight: 540 lbs.

Net Price: \$225.00.

Black ripple enamel finish is optional.

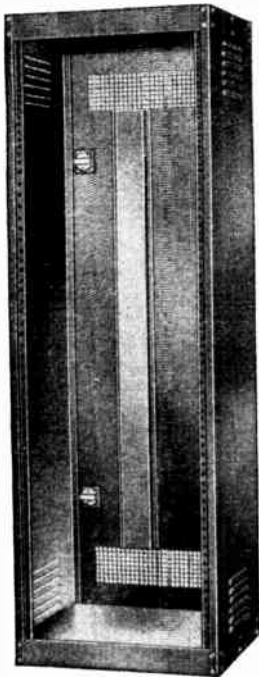
PAR-METAL RACKS · CHASSIS · CABINETS for ELECTRONIC APPARATUS

TYPE "A" ENCLOSED RELAY RACKS FOR 19" RACK PANELS

All of the racks on this page are shipped "knocked-down" for easy assembly with all necessary bolts supplied. Made for standard 19" wide panels, they are substantially constructed from 1/16" cold rolled steel; panel mounting angles are of 3/8" steel, accurately drilled on universal centers for either "Amateur" or type "C" panels, tapped for 10/32

machine screws. Panels fit into a recess, so that edges are not exposed. Louvres in sides and screen sections in rear door provide ample ventilation. Rear door is hung on sturdy loose-joint hinges, and closed by a flush snap catch. Ample panel mounting screws and washers supplied with each rack.

STANDARD TYPE



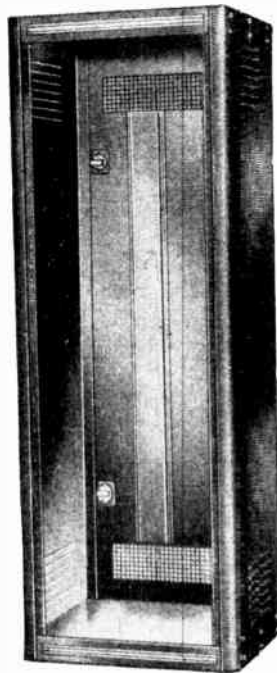
This completely enclosed rack will give your job the "professional appearance" so desirable on transmitters, test equipment, public address systems, etc. It is made in three heights in accordance with specifications below:

*BLACK RIPPLE ENAMEL

Cat. No.	Overall Size	Panel Space	Shpg.		Net Price
			Wt. lbs.	Net	
ER203	42 x 21 x 16 1/2"	36 3/4"	85	\$24.00	
ER205	66 1/2 x 21 x 16 1/2"	61 1/4"	120	36.00	
ER207	82 1/2 x 21 x 16 1/2"	77"	145	44.10	

*Slate grey ripple is optional

ROUNDED CORNER TYPE



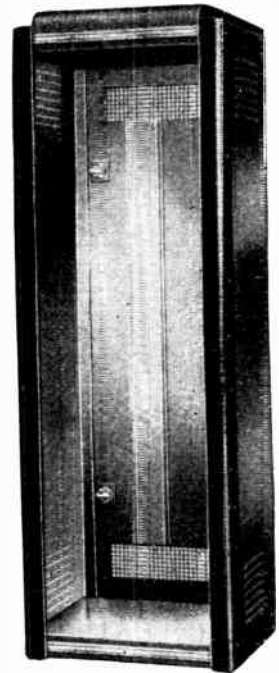
The ideal streamlined rack for your next transmitter or P.A. system. The vertical corners at the front of the rack are rounded, and the top and bottom are nicely trimmed with red striped chrome finished mouldings. The uniform slate grey ripple finish gives the assembly a superb exterior appearance. Combines modern styling and an attractive price.

*SLATE GREY RIPPLE ENAMEL

Cat. No.	Overall Size	Panel Space	Shpg.		Net Price
			Wt. lbs.	Net	
ER213	42 x 22 x 16 1/2"	36 1/4"	85	\$28.50	
ER215	66 1/2 x 22 x 16 1/2"	61 1/4"	125	42.30	
ER217	82 1/2 x 22 x 16 1/2"	77"	150	50.40	

*Black ripple is optional.

DELUXE TYPE



Produced in the new "streamlined" style, this rack is fully in keeping with modern design. The removable vertical corner mouldings are rounded and cover the panel mounting screws, the same as is used on our Type "C" commercial racks. The top, which has also been "streamlined," is perforated at the back to provide additional ventilation. The top and bottom are trimmed with red striped chrome finished mouldings.

*SLATE GREY RIPPLE ENAMEL

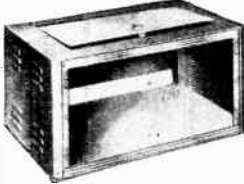
Cat. No.	Overall Size	Panel Space	Shpg.		Net Price
			Wt. lbs.	Net	
ER223	43 1/4 x 22 x 18"	36 3/4"	90	\$39.30	
ER225	67 3/4 x 22 x 18"	61 1/4"	135	50.10	
ER227	83 1/2 x 22 x 18"	77"	165	59.70	

*Black ripple is optional.

PAR-METAL RACKS · CHASSIS · CABINETS for ELECTRONIC APPARATUS

DELUXE TYPE "A" DESK PANEL CABINET RACKS

For Standard 19" Rack Panels
Black Ripple Finish



Streamlined styling. In keeping with our other Deluxe racks, the vertical front corners are rounded and the top and bottom are trimmed with chrome finished mouldings. Panels fit into a recess, so that the edges are not exposed. Panel mounting holes accurately drilled on universal centers, for either "Amateur" or type "C" panels; holes are tapped for 10/32 machine screws. May be used with any chassis up to 13" x 17" in size. All cabinets constructed of 1/8" thick sheet steel. Louvres provide ample ventilation through sides and back. Piano type hinges are used on the top doors, which are provided with snap catches. Panel mounting screws and washers are furnished. Black ripple enamel is standard. Slate grey is optional at same price.

Cat. No.	Overall Size	Panel Space	Net Price
With door in top only			
DL128	10 1/2 x 21 1/2 x 15" deep	8 3/4"	\$10.08
DL1225	14 x 21 1/2 x 15" deep	12 1/4"	12.30
DL1413	15 3/4 x 21 1/2 x 15" deep	14"	13.86
With door in top and door on rear panel			
DL1713	19 1/4 x 21 1/2 x 15" deep	17 1/2"	16.95
DL2613	28 x 21 1/2 x 15" deep	26 1/4"	19.20
DL3513	36 3/4 x 21 1/2 x 15" deep	35"	21.60

TYPE "A" CHANNEL RELAY RACKS

For Standard 19" Rack Panels

Black Ripple Finish

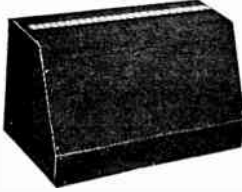


Ideal for use on all types of transmitters and public address systems. Substantially constructed of 1/8" pressed steel. Vertical members and top cross-brace securely welded together. Base is 22" deep and extends both front and rear on the RR-195 rack; it is 19" deep on the RR-193 rack. Panel mounting holes accurately drilled on universal centers for either "Amateur" or type "C" panels, tapped for 10/32 machine screws. Ample supply of panel mounting screws and finishing washers supplied.

Cat. No.	Overall Size	Panel Space	Shpg. Wt.	Net Price
RR-195	73 1/2 x 20 x 20 3/4"	71 3/8"	85 lbs.	\$17.40
RR-193	38 1/2 x 20 x 18 3/4"	36 3/8"	57 lbs.	14.55

SLOPING FRONT CABINETS

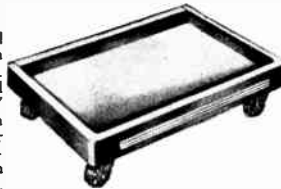
Adaptable as instrument cases for studios, laboratories, etc. Top corner rounded and trimmed with chromemoulding. Slate grey ripple finish. A chassis may be mounted to front panel and removed as a unit. Rear of case ventilated, with opening for connections. Prices do not include chassis.



Cat. No.	H. W. D.	Size of Chassis	Net Price
SF-500	8 x 8 x 8"	7 x 7 x 2"	\$3.30
SF-501	8 x 10 x 8"	7 x 9 x 2"	3.54
SF-502	8 x 14 x 8"	7 x 13 x 2"	3.93
SF-503	9 x 18 x 8"	7 x 17 x 3"	5.70
SF-504	12 x 18 x 12"	10 x 17 x 3"	7.20

ROLLER TRUCKS FOR RACKS

Designed for use on our racks. Overall size 3" wider than racks for better distribution of weight. Has rubber composition wheels. Finished in slate grey ripple, with chrome trim.



Cat. No.	Will Fit Rack No.	Price
RT-401	ER-203, ER-205, ER-207	\$7.50
RT-410	DL-2613, DL-3513	8.25
RT-411	ER-213, ER-215, ER-217	9.30
RT-412	All 18" deep racks	10.50
RT-415	All 15 1/4" deep racks	10.65

TABLE TYPE RELAY RACKS

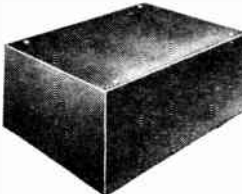
Useful where a regular floor type heavy duty rack is not required. Mounting holes accurately drilled on universal centers. Tapped for 10/32 screws. Finished in black ripple enamel and shipped "knocked-down" with all necessary screws. Shipping weight of rack is 20 pounds.



Cat. No.	Overall Size	Panel Space	Net Price
TR-2520	25 x 21 x 12"	21 x 19"	\$5.55
TR-3220	32 x 21 x 12"	28 x 19"	6.93

STEEL UTILITY CASES

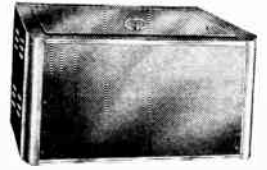
These cases have flat tops and bottoms, which are removable. Made from 20 gauge sheet steel, with flanged edges and spot-welded corners. Finished in black ripple enamel.



Cat. No.	Overall Size	Shpg. Wt. Lbs.	Net Price
MC-442	4 x 4 x 2"	2	\$0.66
MC-453	4 x 5 x 3"	3	.75
MC-596	5 x 9 x 6"	5	1.44
MC-666	6 x 6 x 6"	3	.99
MC-8101	8 x 10 x 10"	7	2.34
MC-1128	11 x 12 x 8"	9	2.55
MC-1576	15 x 7 3/4 x 6 1/2"	11	2.22
MC-1597	15 x 9 x 7"	9	2.61
MC-8107	8 x 10 x 7"	6	1.92

HINGED STEEL CABINETS DE LUXE TYPE

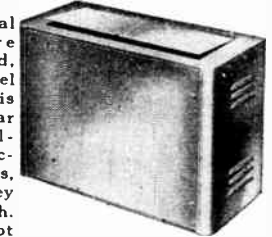
Has double roll on front vertical corners, and chrome finished mouldings. Ventilating louvres are stamped in each end, and a full width opening is provided at the rear for leads, etc. Finish is slate grey ripple enamel. Prices do not include chassis.



Cat. No.	H. L. D.	Panel Size	For Chassis	Net Price
CA-300	8 1/2 x 12 3/4 x 8"	8 1/2 x 10"	7 x 9 x 2"	\$4.80
CA-301	8 1/2 x 16 3/4 x 8"	8 1/2 x 14"	7 x 13 x 2"	5.55
CA-302	9 1/2 x 17 3/4 x 11"	9 1/2 x 15"	10 x 14 x 3"	7.95
CA-303	9 1/2 x 20 3/4 x 9"	9 1/2 x 18"	8 x 17 x 3"	7.95
CA-304	12 1/2 x 20 3/4 x 12"	12 1/2 x 18"	10 x 17 x 3"	8.70

ROUNDED CORNER TYPE

Front vertical corners are streamlined, and a panel type door is provided. Rear opening allows for necessary leads, etc. Slate grey ripple finish. Prices do not include chassis.



Cat. No.	H. L. D.	Panel Size	For Chassis	Net Price
CA-200	8 x 10 x 8"	8 x 8"	7 x 7 x 2"	\$3.15
CA-201	8 x 12 x 8"	8 x 10"	7 x 9 x 2"	3.30
CA-202	8 x 16 x 8"	8 x 14"	7 x 13 x 2"	4.26
CA-203	9 x 17 x 11"	9 x 15"	10 x 14 x 3"	6.60
CA-204	12 x 20 x 12"	12 x 18"	10 x 17 x 3"	7.89

STANDARD TYPE

Full piano hinged doors, front panels removable. Top corner at front is rounded. Finished in black ripple. Prices do not include chassis bases.



Cat. No.	H. L. D.	For Chassis	Net Price
CA-100	7 1/4 x 10 1/2 x 6"	5 1/2 x 9 1/2 x 1 1/2"	\$2.52
CA-101	7 1/4 x 8 x 8"	7 x 7 x 2"	2.52
CA-102	7 1/4 x 10 x 8"	7 x 9 x 2"	2.88
CA-103	7 1/4 x 14 x 8"	7 x 13 x 2"	3.24
CA-104	9 x 15 x 10 3/8"	10 x 14 x 3"	5.19
CA-105	12 x 18 x 12"	10 x 17 x 3"	6.00

De Luxe Speaker Cabinets

To match streamlined metal equipment. Rounded corners with chrome mouldings and handles. New modern grille. Finished in slate grey ripple enamel. Removable back cover.



Cat. No.	Hole Size	Spkr. Size	Cabinet Size	Shpg. Wt.	Net Price
SC1060	4 3/8"	6"	10 x 10 x 6"	8 lbs.	\$3.75
SC1270	6 1/2"	8"	12 x 12 x 7"	9 lbs.	4.50
SC1480	9"	10"	14 x 14 x 8"	15 lbs.	5.85
SC1680	11"	12"	16 x 16 x 8"	20 lbs.	7.50

PAR-METAL RACKS · CHASSIS · CABINETS for ELECTRONIC APPARATUS

TYPE "C" RACK PANELS—19" WIDE

Unless otherwise indicated, these panels are made from $\frac{1}{8}$ " thick steel and are uniformly slotted to fit type "C" cabinet racks and all type "A" racks. They will also fit any other rack equipment having multiple

$1\frac{1}{4}$ " - $\frac{1}{2}$ " spacings or what is commonly termed as "W.E. spacing." They may be obtained in either black ripple enamel or slate grey ripple enamel. Panels can be furnished in aluminum grey lacquer at extra charge.

BLANK PANELS $\frac{1}{8}$ " STEEL



These panels are made from $\frac{1}{8}$ " thick steel and are uniformly slotted to fit type "C" cabinet racks made for 19" panels, and all type "A" racks. They will also fit any other rack equipment having multiple $1\frac{1}{4}$ " x $\frac{1}{2}$ " spacings or what is commonly termed as "W.E. spacing." They may be obtained in either black ripple enamel or slate grey ripple enamel.

Cat. No. Black	Cat. No. Grey	Height	Net Price
6600	G-6600	1 $\frac{3}{4}$ "	\$0.60
6601	G-6601	3 $\frac{1}{2}$ "	.69
6602	G-6602	5 $\frac{1}{4}$ "	.84
6603	G-6603	7"	.93
6604	G-6604	8 $\frac{3}{4}$ "	1.08
6605	G-6605	10 $\frac{1}{2}$ "	1.32
6606	G-6606	12 $\frac{1}{4}$ "	1.59
6607	G-6607	14"	1.80
6608	G-6608	15 $\frac{3}{4}$ "	2.10
6609	G-6609	17 $\frac{1}{2}$ "	2.28
6610	G-6610	19 $\frac{1}{4}$ "	2.46
6611	G-6611	21"	2.76

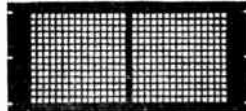
BLANK PANELS $\frac{1}{8}$ " ALUMINUM



These panels are similar to those listed above, except that they are made from $\frac{1}{8}$ " aluminum. They can also be supplied from $\frac{3}{16}$ " stock, at an additional cost of 60%.

Cat. No. Black	Cat. No. Grey	Height	Net Price
6675	G-6675	1 $\frac{3}{4}$ "	\$0.96
6676	G-6676	3 $\frac{1}{2}$ "	1.38
6677	G-6677	5 $\frac{1}{4}$ "	1.74
6678	G-6678	7"	2.04
6679	G-6679	8 $\frac{3}{4}$ "	2.49
6680	G-6680	10 $\frac{1}{2}$ "	3.18
6681	G-6681	12 $\frac{1}{4}$ "	3.75
6682	G-6682	14"	4.26
6683	G-6683	15 $\frac{3}{4}$ "	4.74
6684	G-6684	17 $\frac{1}{2}$ "	5.07
6685	G-6685	19 $\frac{1}{4}$ "	5.73
6686	G-6686	21"	6.72

GRILLE PANELS $\frac{1}{8}$ " STEEL

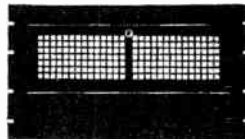


This modern type ventilating grille is stamped into the panel itself; it is not a pieced assembly.

Cat. No.	Cat. No.	Panel Size	Grille Size	Net Price
P-661	G-661	5 $\frac{1}{4}$ "	3 $\frac{1}{4}$ " x 14 $\frac{1}{2}$ "	\$2.31
P-662	G-662	7"	4 $\frac{7}{8}$ " x 14 $\frac{1}{2}$ "	2.46
P-663	G-663	8 $\frac{3}{4}$ "	6 $\frac{7}{8}$ " x 14 $\frac{1}{2}$ "	3.00
P-664	G-664	8 $\frac{3}{4}$ "	*3 $\frac{7}{8}$ " x 14 $\frac{1}{2}$ "	2.70
P-665	G-665	10 $\frac{1}{2}$ "	8 $\frac{3}{8}$ " x 14 $\frac{1}{2}$ "	3.30
P-666	G-666	10 $\frac{1}{2}$ "	*5 $\frac{7}{8}$ " x 14 $\frac{1}{2}$ "	3.00
P-667	G-667	12 $\frac{1}{4}$ "	*7 $\frac{3}{8}$ " x 14 $\frac{1}{2}$ "	3.45

*Allows 3 $\frac{1}{2}$ " space at bottom for chassis mounting.

GRILLE DOOR PANELS $\frac{1}{8}$ " STEEL



These panels have flush hinged doors with modern type ventilating grille. Doors are equipped with piano hinges, knob and concealed catch. All doors start 1" from top to allow space for chassis at bottom. Regular chassis brackets may be used.

Cat. No.	Cat. No.	Panel Size	Door Size	Net Price
P-680	G-680	8 $\frac{1}{4}$ "	4 $\frac{1}{2}$ " x 15 $\frac{3}{8}$ "	\$4.35
P-681	G-681	10 $\frac{1}{2}$ "	6" x 15 $\frac{3}{8}$ "	4.65
P-682	G-682	12 $\frac{1}{4}$ "	7 $\frac{1}{2}$ " x 15 $\frac{3}{8}$ "	5.25

SOLID DOOR PANELS $\frac{1}{8}$ " STEEL



These panels have flush hinged doors with full length piano hinges; they are equipped with a knob and concealed catch. All doors are located 1" from top to allow space for chassis at bottom. Regular chassis brackets may be used.

Cat. No.	Cat. No.	Panel Size	Door Size	Net Price
P-670	G-670	8 $\frac{3}{4}$ "	4 $\frac{1}{2}$ " x 15 $\frac{3}{8}$ "	\$3.15
P-671	G-671	10 $\frac{1}{2}$ "	6" x 15 $\frac{3}{8}$ "	3.45
P-672	G-672	12 $\frac{1}{4}$ "	7 $\frac{1}{2}$ " x 15 $\frac{3}{8}$ "	3.90

RECESSED METER PANELS $\frac{1}{8}$ " STEEL



These panels are made so that the meters may be recessed from the front of the panel. Meters are protected by a plate glass insert, allowing $\frac{1}{4}$ " clearance in back of panel. A blank bakelite sub-panel is provided. The clear sub-panel space is 4 $\frac{1}{4}$ " x 15" on the 19" wide panel which is sufficient for 4.5" meters. On the 24" and 30" wide panel the clear sub-panel space is 5 $\frac{3}{4}$ " x 20" and 5 $\frac{3}{4}$ " x 26" respectively.

Cat. No.	Cat. No.	Size	Net Price
Black	Grey		
P-690	G-690	5 $\frac{3}{4}$ " x 19"	\$4.80
P-691	G-691	7" x 24"	8.40
P-692	G-692	7" x 30"	11.40

METER PANELS $\frac{1}{8}$ " STEEL



All meter panels are 5 $\frac{1}{4}$ " x 19".

Cat. No.	Cat. No.	No. of Holes	Meter Size	Net Price
Black	Grey			
MP-632	MG-632	3	2"	\$1.14
MP-652	MG-652	5	2"	1.65
MP-633	MG-633	3	3"	1.14
MP-653	MG-653	5	3"	1.65

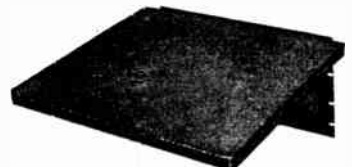
SPEAKER PANELS $\frac{1}{8}$ " STEEL



To fit either 6", 8", 10", or 12" speakers. The opening is covered with a steel grille.

Cat. No.	Cat. No.	Panel Size	Speaker Size	Net Price
Black	Grey			
SP-875	SG-875	8 $\frac{3}{4}$ " x 19"	6"	\$1.95
SP-1050	SG-1050	10 $\frac{1}{2}$ " x 19"	8"	2.40
SP-1225	SG-1225	12 $\frac{1}{4}$ " x 19"	10"	3.00
SP-1400	SG-1400	14" x 19"	12"	3.30

STANDARD DESK PANELS



Tables are rigidly made of 1/16" thick steel. Securely mounted to regular $\frac{1}{8}$ " steel panels, size 10 $\frac{1}{2}$ " x 19". Tables 22" wide give full working space across front of racks when mounted in place.

Cat. No.	Width	Depth	Finish	Net Price
BT-2270	22"	20"	Black enamel	\$12.30
BT-2216	22"	16"	Black enamel	11.70
AT-2220	22"	20"	Aluminum grey	13.80
AT-2216	22"	16"	Aluminum grey	12.90

PAR-METAL RACKS · CHASSIS · CABINETS for ELECTRONIC APPARATUS

BLANK STEEL CHASSIS BASES

STANDARD TYPE

Construction is the same as our heavy-duty chassis. Stamped from one piece of cold rolled steel, and have four solid sides with welded corners. Bottom edges are flanged in on four sides to provide additional reinforcement, and they are drilled for bottom plates. The chassis are made from #20 gauge steel, except those marked (*) which are stamped from $\frac{1}{8}$ " steel exactly like our heavy-duty type.

Black Ripple Cat. No.	Net Price	Size	Zinc Plated Cat. No.	Net Price
B-4500	\$0.60	5 $\frac{1}{2}$ x9 $\frac{1}{2}$ x1 $\frac{1}{2}$ "	C-4500	\$0.66
B-4508	.84	5x10x3"	C-4508	.96
B-4509	.99	6x14x3"	C-4509	1.11
B-4510	.69	7x 7x2"	C-4510	.72
B-4511	.81	7x 9x2"	C-4511	.87
B-4512	.90	7x11x2"	C-4512	.93
B-4513	.96	7x13x2"	C-4513	1.02
B-4514	1.23	7x15x3"	C-4514	1.32
B-4518	1.02	4x17x3"	C-4518	1.14
B-4515	1.20	7x17x3"	C-4515	1.26
B-4531	1.32	8x17x2"	C-4531	1.38
B-4532	1.38	8x17x3"	C-4532	1.44
B-4525	1.32	10x12x3"	C-4525	1.38
B-4524	1.38	10x14x3"	C-4524	1.44
B-4528	1.38	10x17x2"	C-4528	1.44
B-4529	1.74	10x17x4"	C-4529	1.89
B-4526	1.32	10x17x3"	C-4526	1.44
B-4527	1.74	10x23x3"	C-4527	1.89
B-4533*	1.74	11x17x2"	C-4533*	1.95
B-4534*	1.92	11x17x3"	C-4534*	2.28
B-4516	1.50	12x17x2"	C-4516	1.62
B-4517	1.62	12x17x3"	C-4517	1.74
B-4530	1.86	12x17x4"	C-4530	2.04
B-4535*	2.10	13x17x2"	C-4535*	2.22
B-4536*	2.22	13x17x3"	C-4536*	2.49
B-4537*	2.64	13x17x4"	C-4537*	3.03

* Made from $\frac{1}{8}$ " thick steel.

BOTTOM PLATES

Bottom plates have holes to match the chassis, and have pressed "bumpers" at the corners.

Black Ripple Cat. No.	Zinc Plated Cat. No.	Size	Net Price
BP-4500	CP-4500	5 $\frac{1}{2}$ x9 $\frac{1}{2}$ "	\$0.33
BP-4508	CP-4508	5x10"	.36
BP-4509	CP-4509	6x14"	.48
BP-4510	CP-4510	7x 7"	.36
BP-4511	CP-4511	7x 9"	.39
BP-4512	CP-4512	7x11"	.45
BP-4513	CP-4513	7x13"	.51
BP-4514	CP-4514	7x15"	.57
BP-4518	CP-4518	4x17"	.45
BP-4515	CP-4515	7x17"	.60
BP-4531	CP-4531	8x17"	.60
BP-4525	CP-4525	10x12"	.60
BP-4524	CP-4524	10x14"	.63
BP-4528	CP-4528	10x17"	.78
BP-4527	CP-4527	10x23"	1.05
BP-4533	CP-4533	11x17"	.81
BP-4516	CP-4516	12x17"	.87
BP-4535	CP-4535	13x17"	.93

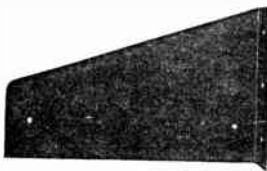
HEAVY DUTY TYPE



All of the chassis listed on this page may be used with the various Par-Metal racks and cabinets. Substantially constructed for "heavy duty" uses, being formed from one piece of $\frac{1}{8}$ " sheet steel, with all corners and bottoms reinforced. Bottom covers and mounting screws supplied. Ends drilled to fit standard brackets listed below. Finished in either uniform black ripple enamel or zinc plated.

Black Ripple Cat. No.	Net Price	Dimensions W.L.D.	Zinc Plated Cat. No.	Net Price
15280	\$2.16	8x17x2"	15208	\$2.34
15281	2.40	8x17x3"	15209	2.64
15282	2.43	11x17x2"	15218	2.76
15210	2.64	11x17x3"	15219	3.06
15212	2.85	13x17x2"	15214	3.15
15213	3.12	13x17x3"	15215	3.39
15216	3.45	13x17x4"	15217	3.93
15283	4.65	17x17x4"	15284	5.25

CHASSIS MOUNTING BRACKETS



These brackets will fit any of the chassis listed above, as the mounting holes are drilled to match. Panels must be at least 7" high. Finished in black enamel.

Cat. No.	Dimensions	Shpg. Wt.	Net Price
SB-78	For 8" Base	2 lbs.	\$0.69
SB-710	For 10" Base	2 lbs.	.93
SB-711	For 11" Base	3 lbs.	1.02
SB-713	For 13" Base	3 lbs.	1.23
SB-717	For 17" Base & larger	5 lbs.	1.86

STANDARD TYPE Amplifier Foundation Chassis



Rounded corners effectively streamline the covers on these units. Grille type ventilation gives them a modern appearance.

Chassis stamped from one piece of cold rolled steel, with corners securely spot welded. Covers finished in slate grey, chassis in black ripple enamel. Chassis are drilled for bottom plates.

Cat. No.	Size	Depth of Cover	Shpg. Wt.	Net Price
F-510	5x10x3"	6"	9 lbs.	\$2.25
F-515	6x14x3"	6"	10 lbs.	2.55
F-717	7x17x3"	6"	11 lbs.	3.15
F-1012	10x12x3"	6"	11 lbs.	3.15
F-1017	10x17x3"	6"	11 lbs.	3.81
F-1317	13x17x3"	6"	15 lbs.	4.50

DELUXE TYPE Amplifier Foundation Chassis

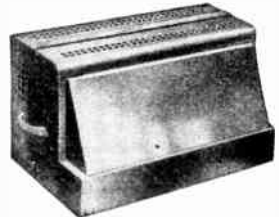


For those who prefer a deluxe unit with Recessed Panel.

Panel slopes slightly and attaches to chassis with screws. Screen cover may be raised without disturbing the panel. Cover finished in slate grey ripple. Chassis finished in black ripple and is drilled for bottom plates.

Cat. No.	Chassis Size	Depth of Cover	Panel Size	Net Price
FC-510	5 x 10 x 3"	6"	4 x 7"	\$4.50
FC-615	6 x 14 x 3"	6"	4 x 10"	5.10
FC-717	7 x 17 x 3"	6"	4 x 13"	5.70
FC-1012	10 x 12 x 3"	6"	4 x 9"	5.55
FC-1017	10 x 17 x 3"	6"	4 x 13"	6.60
FC-1317	13 x 17 x 3"	6"	4 x 13"	7.35

SLOPING FRONT TYPE Amplifier Foundation Chassis



Latest trend in amplifier design. Combination of sloping front panel and streamlined cover enables you to build up a job similar to that used on commercial deluxe type amplifiers. All parts finished in slate grey ripple enamel trimmed with chrome moulding and handles. Front panel removable and protrudes 3" from face of screen cover. Chassis supplied complete WITH bottom plates.

Cat. No.	Chassis Size	Screen Cover	Net Price
F10120	10x12x3"	6 $\frac{1}{2}$ " high	\$5.70
F10170	10x17x3"	6 $\frac{1}{2}$ " high	6.60
F13170	13x17x3"	6 $\frac{1}{2}$ " high	7.35

ROUNDED CORNER TYPE Amplifier Foundation Chassis



Modern professional type. Rounded corners on screen cover. Chrome mouldings & handles. Cover finished in slate gray, with black ripple chassis.

Cat. No.	Chassis Size	Depth of Cover	Shpg. Wt.	Net Price
DF510	5x10x3"	6"	9 lbs.	\$3.21
DF615	6x14x3"	6"	10 lbs.	3.75
DF717	7x17x3"	6"	11 lbs.	4.29
DF1012	10x12x3"	6"	11 lbs.	4.29
DF1017	10x17x3"	6"	13 lbs.	5.10
DF1317	13x17x3"	6"	15 lbs.	5.85

MIDDLETOWN MANUFACTURING CO.

METAL PRODUCTS — ELECTRONIC DIVISION

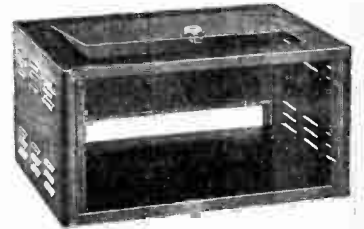
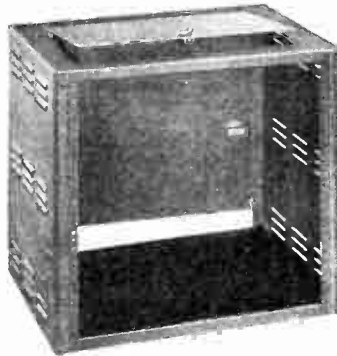
CABINETS • CHASSIS • CASES • PANELS

D.C. DELUXE CABINET RACKS—USE 19" RACK PANELS

Middletown D. C. Cabinets conform to the conventional design of streamlined cabinets used by builders of amateur and commercial equipment.

FEATURES

- ★ Constructed of heavy gauge 1/16" steel, electrically welded.
- ★ Adequate ventilation is provided by sufficient louvres in sides, and ventilation in back.
- ★ Front Vertical posts rounded.
- ★ Flush panel mounting (recessed).
- ★ Drilled and tapped for 10/32" screws on universal centers.
- ★ Flush door in top fitted with flush snap-lock and piano hinges.
- ★ Black Wrinkle finish. *Grey Wrinkle if desired.*



Cat. No.	Panel Size	List Price
D.C. 108	Panel Size 8 3/4" x 16" Size of Cabinet 10 1/2" x 21 1/2" x 15" Single Unit	\$15.50
D.C. 1412	Panel Size 12 3/4" x 19" Size of Cabinet 14" x 21 1/2" x 15" Single Unit	19.00
D.C. 1514	Panel Size 11" x 19" Size of Cabinet 13 3/4" x 21 1/2" x 15" Single Unit	21.50

Cat. No.	Panel Size	List Price
D.C. 1917	Panel Size 17 1/2" x 19" Size of Cabinet 19 1/4" x 21 1/2" x 15" Double Unit—Door Top and Back	\$26.50
D.C. 2826	Panel Size 26 3/4" x 19" Size of Cabinet 28" x 21 1/2" x 15" Triple Unit—Door Top and Back	29.75
D.C. 3635	Panel Size 35" x 19" Size of Cabinet 36 3/4" x 21 1/2" x 15" Quad. Unit—Door Top and Back	33.75

BLANK STEEL CHASSIS Heavy Duty

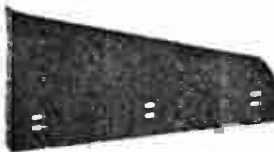
Middletown heavy duty Chassis are made from one piece of 1/16" sheet steel—Spot Welded at all four corners. Bottom edges are folded over on all four sides for additional rigidity and drilled to match bottom plates. Ends are drilled to fit standard Middletown brackets. Bottom plates are supplied with these Chassis.

Stock Sizes BLACK WRINKLE FINISH

Cat. No.	Size	Shipping Weight	List Price
H.C. 8172	8 x 17 x 2"	8 lbs.	\$3.55
H.C. 8173	8 x 17 x 3"	9 lbs.	3.95
H.C. 11172	11 x 17 x 2"	10 lbs.	4.00
H.C. 11173	11 x 17 x 3"	11 lbs.	4.40
H.C. 13172	13 x 17 x 2"	11 lbs.	4.90
H.D. 13173	13 x 17 x 3"	12 lbs.	5.15
H.D. 13174	13 x 17 x 4"	14 lbs.	5.70

CHASSIS BRACKETS Mounting

These brackets are for chassis listed above. Front end of the bracket is seven inches high. Finished in black wrinkle.



Cat. No.	Size	Shipping Weight	List Price
C.E. 8	For 8" Base	2 lbs.	\$1.20
C.E. 11	For 11" Base	3 lbs.	1.75
C.E. 13	For 13" Base	3 lbs.	2.10

BLANK STEEL CHASSIS Standard Type

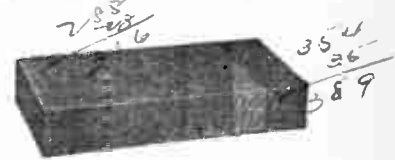
Middletown Chassis are made from one piece of No. 20 gauge steel spot-welded at all 4 corners—bottom edges are folded over on four sides for additional rigidity and drilled to match bottom plates.

Bottom plates are drilled to match holes on flange of chassis and have pressed bumpers at corners. Material No. 20 gauge steel.

Standard Stock Sizes BLACK WRINKLE FINISH

Cat. No.	Size	Shipping Weight	List Price
B.S. 591	5 1/2 x 9 1/2 x 1 1/2"	2 lbs.	\$1.00
B.S. 5103	5 x 10 x 3"	3 lbs.	1.45
B.S. 4173	4 x 17 x 3"	3 lbs.	1.65
B.S. 6143	6 x 14 x 3"	4 lbs.	1.60
B.S. 772	7 x 7 x 2"	2 lbs.	1.15
B.S. 792	7 x 9 x 2"	2 lbs.	1.40
B.S. 7112	7 x 11 x 2"	3 lbs.	1.50
B.S. 7132	7 x 13 x 2"	3 lbs.	1.60
B.S. 7153	7 x 15 x 3"	4 lbs.	2.00
B.S. 7173	7 x 17 x 3"	4 lbs.	2.10
B.S. 8172	8 x 17 x 2"	4 lbs.	2.15
B.S. 8173	8 x 17 x 3"	5 lbs.	2.25
B.S. 10123	10 x 12 x 3"	4 lbs.	2.15
B.S. 10143	10 x 14 x 3"	5 lbs.	2.25
B.S. 10172	10 x 17 x 2"	5 lbs.	2.25
B.S. 10173	10 x 17 x 3"	5 lbs.	2.30
B.S. 11172*	11 x 17 x 2"	7 lbs.	2.85
B.S. 11173*	11 x 17 x 3"	9 lbs.	3.10
B.S. 12172	12 x 17 x 2"	5 lbs.	2.50
B.S. 12173	12 x 17 x 3"	5 lbs.	2.70
B.S. 12174	12 x 17 x 4"	6 lbs.	3.00
B.S. 13172*	13 x 17 x 2"	8 lbs.	3.40
B.S. 13173*	13 x 17 x 3"	9 lbs.	3.70
B.S. 13174*	13 x 17 x 4"	10 lbs.	4.30

*Made from 1/16" Stock.



Bottom Plates

BLACK WRINKLE FINISH

Cat. No.	Size	Shipping Weight	List Price
B.P. 59	5 1/2 x 9 1/2"	1 lb.	\$.55
B.P. 510	5 x 10"	1 lb.	.60
B.P. 417	4 x 17"	2 lbs.	.80
B.P. 614	6 x 14"	1 lb.	.85
B.P. 77	7 x 7"	1 lb.	.60
B.P. 79	7 x 9"	1 lb.	.65
B.P. 711	7 x 11"	1 lb.	.75
B.P. 713	7 x 13"	2 lbs.	.85
B.P. 715	7 x 15"	2 lbs.	.95
B.P. 717	7 x 17"	2 lbs.	1.00
B.P. 817	8 x 17"	2 lbs.	1.00
B.P. 1012	10 x 12"	2 lbs.	1.00
B.P. 1014	10 x 14"	2 lbs.	1.10
B.P. 1017	10 x 17"	2 lbs.	1.35
B.P. 1117	11 x 17"	2 lbs.	1.40
B.P. 1217	12 x 17"	3 lbs.	1.45
B.P. 1317	13 x 17"	3 lbs.	1.55

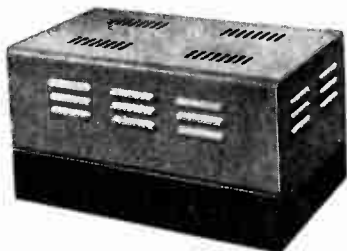
MIDDLETOWN MANUFACTURING CO.

METAL PRODUCTS — ELECTRONIC DIVISION

CABINETS • CHASSIS • CASES • PANELS

AMPLIFIER FOUNDATIONS—DeLuxe Models

This unit is designed to meet the most critical requirements. It has rounded corners, special Middletown designed louvers on all 4 sides and elongated holes on top to give maximum ventilation. Chassis are finished in Black wrinkle. Covers are finished in Grey wrinkle. Chassis are drilled for bottom plates which are listed separately. Covers all have a depth of 6".



Cat. No.	Size	List Price
A.F.-5103	5 x 10 x 3"	\$3.70
A.F.-6143	6 x 11 x 3"	4.15
A.F.-7173	7 x 17 x 3"	5.15
A.F.-10123	10 x 12 x 3"	5.35
A.F.-10173	10 x 17 x 3"	6.25
A.F.-13173	13 x 17 x 3"	7.35

SLOPING FRONT PANEL CABINETS



Sloping front panel cabinets have a wide application in the electronic field since they are adaptable for various uses. They are constructed of heavy gauge steel electrically spot-welded. Top corner is rounded, front panel is removable, and louvers on sides provide ventilation.

Back panel is ventilated on top and an opening is provided on the bottom so that connections can be made directly to the rear of the chassis. Finished in Grey wrinkle.

Cat.No.	H.W.D.	Chassis Size	List Price
S.F.-888	8 x 8 x 8"	7 x 7 x 2"	\$5.00
S.F.-8108	8 x 10 x 8"	7 x 9 x 2"	5.50
S.F.-8148	8 x 14 x 8"	7 x 13 x 2"	6.25
S.F.121812	12 x 18 x 12"	10 x 17 x 3"	11.25

STEEL UTILITY CANS



These Utility Cans are substantially made from sheet steel with spot welded reinforced corners. Tops and bottoms are removable and are flanged on all four sides. Held in place with self-tapping screws.

Cat. No.	Size	Weight	List Price
U.C. 565	5 1/2 x 6 x 5 1/2"	3 lbs.	\$1.55
U.C. 596	5 x 9 x 6"	5 lbs.	2.35
U.C. 8107	8 x 10 x 7"	6 lbs.	3.10
U.C. 81010	8 x 10 x 10"	7 lbs.	3.80
U.C. 11128	11 x 12 x 8"	9 lbs.	4.15

STEEL RACK PANELS — 19" LONG

These panels are made from 1/8" steel and are slotted for standard amateur mounting. Twelve standard sizes. Furnished in black or grey wrinkle finish. These panels are also supplied with commercial (W.E.) slotting. When ordering commercial type indicate by adding W to our catalogue number below.



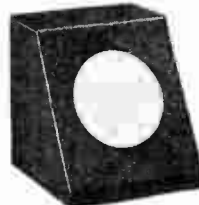
Cat. No.	Width	Weight	List Price
R.P. 1	1 3/8"	2 lbs.	\$.95
R.P. 3	3 1/2"	5 lbs.	1.10
R.P. 5	5 1/4"	7 lbs.	1.45
R.P. 7	7"	8 lbs.	1.60
R.P. 8	8 3/4"	9 lbs.	1.85
R.P. 10	10 1/2"	10 lbs.	2.25
R.P. 12	12 1/4"	12 lbs.	2.70
R.P. 14	14"	13 lbs.	3.00
R.P. 15	15 3/8"	14 lbs.	3.45
R.P. 17	17 1/2"	15 lbs.	3.80
R.P. 19	19 1/4"	16 lbs.	4.10
R.P. 21	21"	17 lbs.	4.55

When Ordering Specify Black or Grey.

METER PANELS

Middletown Meter Panels are made 5/16" high and are made to the same specifications as our Rack Panels — are available to fit 3" meters.

Cat. No.	Holes	Hole Size	List Price
R.P.M. 33	3	2 3/8"	\$2.00
R.P.M. 35	5	2 3/8"	2.75



METER CASES

These cases have sloping front panel with rounded top corner which blends with streamline equipment. They are sturdily constructed from sheet steel with welded joints.

Cat. No.	Meter	Hole Size	H.W.D.	List Price
M.C. 13	Single 3"	2 1/2"	4 1/2 x 4 x 4	\$1.70
M.C. 33	3-3" Meters	2 1/2"	4 1/2 x 1 1/4 x 4	4.00

STEEL CASES — STANDARD



These cases are similar to our standard steel utility cans except they have flat tops and bottoms which are held in place with self tapping screws and are removable. These cases are of sturdy construction and have spot welded corners. Case has flanges on all edges. Furnished in black wrinkle.

Cat. No.	Size	Weight	List Price
S.C. 442	4 x 4 x 2"	2 lbs.	\$1.10
S.C. 453	4 x 5 x 3"	3 lbs.	1.30
S.C. 666	6 x 6 x 6"	3 lbs.	1.65
S.C. 1276	12 x 7 x 6"	5 lbs.	3.10
S.C. 1597	15 x 9 x 7"	9 lbs.	4.35
S.C. 1287	12 x 7 3/4 x 6 1/2"	9 lbs.	3.15
S.C. 1576	15 x 7 3/4 x 6 1/2"	11 lbs.	3.75

PASADENA 20,



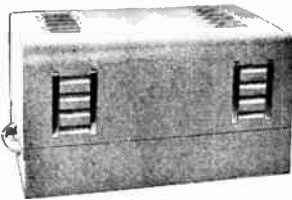
CALIFORNIA

AMARON is a metal of marked superiority, replacing steel and aluminum advantageously in all non-magnetic applications of electronics. This unique material combines ideal characteristics of strength, durability, lightness, and machinability with exceptional thermal and electrical conductivity. Its surface properties are unsurpassed for easy soldering with our newly developed Amar-Flux and Amar-Weld. Amaron is basically a special aluminum alloy, chemically processed* for enhanced usefulness. Ensign chassis and cabinets of Amaron set new standards of dependability, convenience, efficiency and freedom from unexpected "bugs" in RF and AF circuits.

Amaron should not be confused with those common aluminum alloys which have come into disfavor because of poor strength or machinability. Users becoming accustomed to Amaron prefer it over steel or inferior alloys as overwhelmingly as they prefer copper over steel for hook-up wire! Insist upon Amaron — available exclusively in Ensign products. There is a substantial difference.

*Patents Pending

ENSIGN AMPLIFIER CABINETS

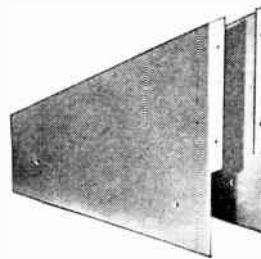


Ensign amplifier cabinets made from Amaron are neat and professional in appearance, light in weight, and rugged in construction. The effective ventilating grills are a part of their strikingly modern design.

These units are supplied complete with chassis equipped with handles. Outside surfaces are finished in gray satin wrinkle.

Over-all Size D. W. H.	Chassis Depth	Catalog Number
5x 9 1/8x7	2"	AC-2208
7x12 1/8x8	3"	AC-2242
8x17 1/8x9	3"	AC-2262
10x14 1/8x9	3"	AC-2268
10x17 1/8x9	3"	AC-2272
13x17 1/8x9	3"	AC-2292

CHASSIS MOUNTING BRACKETS



Ensign chassis brackets are made from Amaron .051" thick. The 5/8" front flange is punched with panel mounting holes and is notched away so that the chassis may be mounted flush against the front panel. The two holes for the chassis ends are positioned for maximum

bracing. The brackets are supplied in pairs. Available in either natural or satin wrinkle finishes.

Size H. W.	Catalog Number		
	Natural	Gray	Black
6 1/2 x 8	RB-2006	RB-2206	RB-2106
8 1/4 x 10	RB-2008	RB-2208	RB-2108
10 x 12	RB-2010	RB-2210	RB-2110

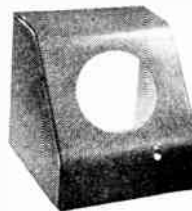
ENSIGN UTILITY CABINETS



These simple cabinets of Amaron make convenient and attractive housings for small instruments, controls, junctions, etc. Both front and rear panels are attached with self-tapping screws. The cabinets are finished on the outside in black satin wrinkle. No chassis are supplied with these units.

Size H. W. D.	Black Wrinkle
4x 5x3	UC-2105
6x 6x6	UC-2115
6x 9x5	UC-2117
8x10x7	UC-2131

ENSIGN METER CASES



For desk mounting of meters or other small indicators or controls, these rugged little sloping panel cases of Amaron are ideal. Outside dimensions are 4 1/4" deep, 4 1/4" wide, and 4 1/2" high. They are open at the back.

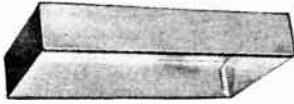
Hole Size	Meter Size	Gray Wrinkle	Black Wrinkle
None	None	MC-2200	MC-2100
2 1/4"	2"	MC-2212	MC-2112
2 13/8"	3"	MC-2213	MC-2113



PASADENA 20,

CALIFORNIA

ENSIGN BLANK CHASSIS



The remarkable characteristics of Ensign chassis made from Amaron render steel chassis all but obsolete! Their rigidity and strength is comparable with that of steel, yet their weight is but a fraction that of the ordinary chassis. The inherent toughness of Amaron is supplemented by sturdy one-piece design. Unusually strong corners are the result of precise electronically controlled resistance welding and the unique surface properties of Amaron. Bottom plate mounting flanges along the chassis length add further reinforcement.

The superior electrical and thermal conductivity of Amaron (approximately 4 times that of the ordinary chassis) opens up new possibilities for higher efficiency and "Q," better heat dissipation, and greatly reduced common coupling troubles between grounds. Hum pickup in AF circuits is further minimized by lack of stray magnetic coupling in the chassis material.

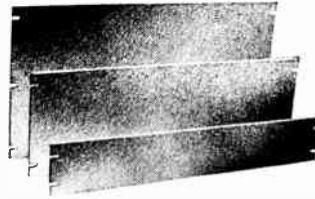
Punching and drilling an Ensign chassis is a refreshing change after working with chassis of steel or ordinary alloys. Soldering to the natural Amaron surface is easy with Amar-Flux and Amar Weld. NO SPECIAL CLEANING OR SOLDERING TECHNIQUE IS NECESSARY.

Ensign chassis are available in a wide variety of sizes in the natural rust-proof Amaron finish and in durable gray or black satin wrinkle. The inside surfaces are left in the natural finish to facilitate soldering.

ENSIGN BOTTOM PLATES in the natural finish are available for each chassis size. They have punched mounting holes and embossed feet.

Chassis Size	Metal Thickness	Chassis Catalog Number			Bottom Plate Cat. Number
		Natural	Gray	Black	
3x 5x1	.040	BC-2002	BC-2202	BC-2102	BP-2002
4x 6x1 1/2	.040	BC-2004	BC-2204	BC-2104	BP-2004
4x17x3	.040	BC-2007	BC-2207	BC-2107	BP-2007
5x 9x2	.040	BC-2008	BC-2208	BC-2108	BP-2008
5x 9x3	.040	BC-2009	BC-2209	BC-2109	BP-2009
5x13x3	.040	BC-2019	BC-2219	BC-2119	BP-2019
7x 7x2	.040	BC-2035	BC-2235	BC-2135	BP-2035
7x 9x2	.040	BC-2037	BC-2237	BC-2137	BP-2037
7x11x2	.040	BC-2041	BC-2241	BC-2141	BP-2041
7x12x3	.040	BC-2043	BC-2243	BC-2143	BP-2043
7x15x3	.040	BC-2049	BC-2249	BC-2149	BP-2049
8x12x2	.040	BC-2055	BC-2255	BC-2155	BP-2055
8x17x2	.051	BC-2059	BC-2259	BC-2159	BP-2059
8x17x3	.051	BC-2062	BC-2262	BC-2162	BP-2062
10x12x3	.051	BC-2065	BC-2265	BC-2165	BP-2065
10x14x3	.051	BC-2068	BC-2268	BC-2168	BP-2068
10x17x2	.051	BC-2069	BC-2269	BC-2169	BP-2069
10x17x3	.051	BC-2072	BC-2272	BC-2172	BP-2072
10x17x4	.051	BC-2073	BC-2273	BC-2173	BP-2073
10x23x3	.064	BC-2077	BC-2277	BC-2177	BP-2077
13x17x3	.064	BC-2092	BC-2292	BC-2192	BP-2092
13x17x4	.064	BC-2093	BC-2293	BC-2193	BP-2093

ENSIGN RACK PANELS



Ensign rack panels represent an outstanding application of the many advantages of Amaron metal. These panels are as rigid and strong as steel, yet are light in weight. With

Amaron, the machining and punching of a substantial panel need no longer be a formidable task. The superb electrical and thermal properties together with these characteristics of light weight, strength, and workability make Amaron the ideal panel material for all applications.

Ensign rack panels are made from Amaron metal in standard and heavy duty weights. The catalog numbers shown below refer to standard weight panels 1/8" thick. Heavy duty weight panels 3/16" thick may be specified by adding "H" to catalog numbers. Standard notching (1/4" or 1 1/2" from edges) is used. The beautiful satin wrinkle finish of these fine panels is not damaged by normal cutting, drilling, or punching operations.

Panel Height	Gray Wrinkle	Black Wrinkle
1 3/4	RP-2201	RP-2101
3 1/2	RP-2203	RP-2103
5 1/4	RP-2205	RP-2105
7	RP-2207	RP-2107
8 3/4	RP-2208	RP-2108
10 1/2	RP-2210	RP-2110
12 1/4	RP-2212	RP-2112
14	RP-2214	RP-2114
15 3/4	RP-2215	RP-2115
17 1/2	RP-2217	RP-2117
19 1/4	RP-2219	RP-2119
21	RP-2221	RP-2121

ENSIGN BLANK PANELS

For general experimental and construction purposes, panels made from 1/16" Amaron are supplied in a number of sizes. These come in the natural Amaron finish for ease of soldering with Amar-Flux and Amar-Weld.

Size	Cat. Number
4x10	AP-2005
7x10	AP-2009
7x14	AP-2013
8x10	AP-2017
8x14	AP-2020
10x12	AP-2024
10x17	AP-2031

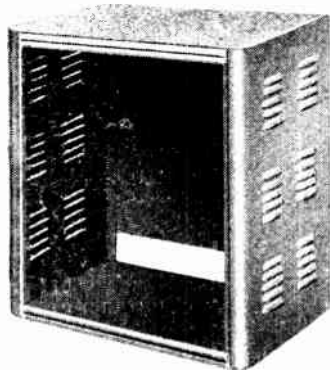


PASADENA 20,



CALIFORNIA

ENSIGN CABINET RACKS



As with Ensign chassis and panels, the various Ensign cabinets made from Amaron metal represent a real forward step in modern functional design. Particularly in RF applications is the high conductivity of Amaron effective in reducing eddy current losses. Even in AF work, the low resistance bonding of cabinet and panels is often valuable. But whether in RF, AF, power, or control applications, the strength, light weight, heat conductivity, and beauty of these unusual cabinets is always appreciated.

Ensign cabinet racks are supplied in eight sizes for housing deluxe receivers, test equipment, transmitters, public address installations, etc. These cabinets accommodate all standard notched 19" panels. The rounded corners and neat trim add an ultra-modern touch. Supplied in gray or black baked satin wrinkle.

ing of cabinet and panels is often valuable. But whether in RF, AF, power, or control applications, the strength, light weight, heat conductivity, and beauty of these unusual cabinets is always appreciated.

Overall Height	Depth	Panel Space	Catalog Number	
			Gray	Black
10 1/2	15	8 3/4	CR-2205	CR-2105
14	15	12 1/4	CR-2209	CR-2109
15 3/4	15	14	CR-2212	CR-2112

The above 3 cabinets are provided with a hinged lid in top.

19 1/4	15	17 1/2	CR-2217	CR-2117
28	15	26 1/4	CR-2221	CR-2121

The above 2 cabinets are provided with a hinged lid in top, and hinged door in rear.

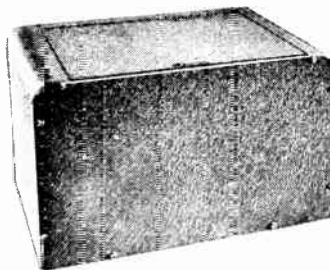
42	16 1/2	36 3/4	CR-2226	CR-2126
46 1/2	16 1/2	61 1/4	CR-2229	CR-2129
82 1/4	16 1/2	77	CR-2233	CR-2133

The above 3 cabinets are provided with a hinged door in rear.

ENSIGN BAKED FINISHES

Unsurpassed for beauty and durability. The unique natural surface of Amaron metal provides an ideal paint base comparable to the most expensively processed surface, yet without increased cost to you. Ensign finishes are applied and baked under precise automatic control. They stand up remarkably well during handling and machining. Comparison is invited. Ensign products are normally finished in gray or black satin wrinkle as well as in the natural Amaron finish. Beautiful modern "hammertone" tints may be supplied on special quantity orders where a distinctive effect is desired.

ENSIGN RECEIVER CABINETS

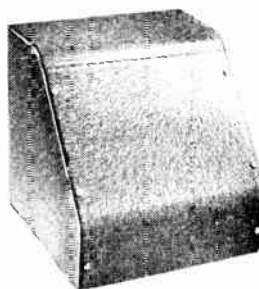


These beautiful cabinets are suggested where the best is desired in rugged, streamlined design for instrument or receiver. Amaron construction assures light weight, ease of machining, and electrical superiority.

The front panel is mounted with self-tapping screws. The recessed hinged lid affords easy access to components. A two-inch high opening in the rear is provided for necessary plugs and cables. Ample louvers at the rear are provided for ventilation. The thermal conductivity characteristics of Amaron also assure cooler operation. Outside surfaces are finished in gray satin wrinkle. Appropriate chassis are listed, and should be ordered separately.

Size H. W. D.	Catalog Number	Use Chassis Size
8x10x 7 1/2	RC-2210	7x 9x2
8x13x 8 1/2	RC-2213	8x12x2
8x15x10 1/2	RC-2215	10x14x3

ENSIGN INSTRUMENT CABINETS

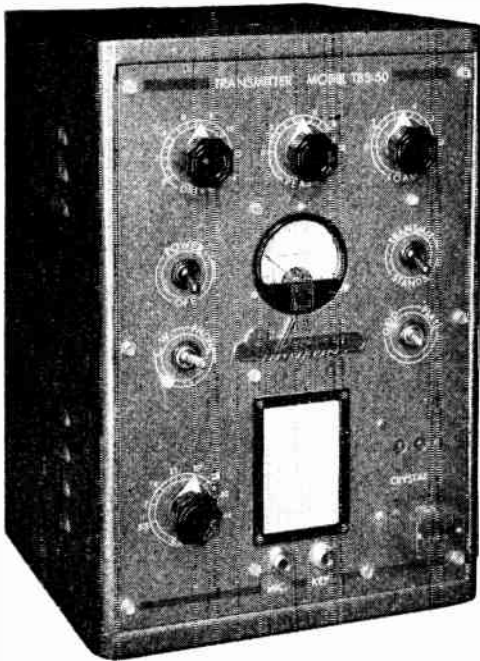


The 6" sloping face of this fine cabinet provides ample room for a wide variety of instruments and controls. All the mechanical and electrical advantages of Amaron are incorporated in this neat design. Outside surfaces are finished in gray satin wrinkle. Chassis, 2 1/2" deep, of the open-

end natural-finish type, are listed for each size cabinet, and should be ordered separately.

Cabinet Size D. W. H.	Cabinet Number	Chassis Number
8x 8x8	IC-2208	OC-2008
8x11x8	IC-2211	OC-2011
8x14x8	IC-2214	OC-2014

HAM EQUIPMENT



TBS-50 TRANSMITTER — 50 Watts — 8 Bands — Phone or CW. Band switched — size 8" x 13" x 9". No plug-in coils — 2 meters to 80 meters — For fixed station or mobile operation. No oscillator or multiple tuning — crystal controlled.

Price, including tubes \$99.50

TBS-50A TRANSMITTER — for use with crystal microphone — includes 3 tube preamplifier.

Price, including tubes \$121.25

POWER SUPPLIES

Developed specially for use with the TBS-50 and TBS-50A.

APS-50

Delivers 425 volts at 275 ma. and 6.3 volts at 4 amps. With Hi-Lo switch. May be mounted on Rack Panel TBS-1A.

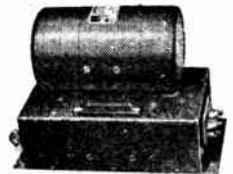
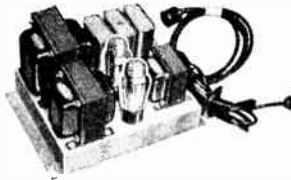
APS-50 — for 110 volt 50/60 cycle input. \$39.50

DPS-50

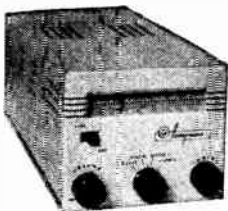
For portable operation. Delivers same voltages and current as APS-50.

DPS-50 for 6 volt operation. \$87.50

DPS-50 for 12 volt operation. \$54.30



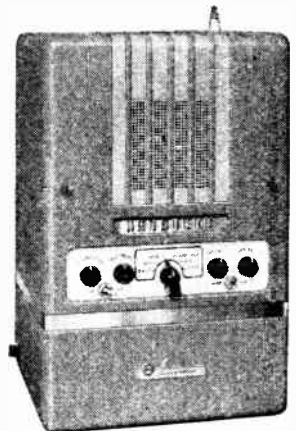
MARINE RADIO TELEPHONES



MTR-3 — A compact, efficiently engineered unit — weighs 14³/₄ pounds. Highly sensitive, ruggedly constructed. 195-400 kc. 2000-3000 kc plus broadcast band. 5 to 10 watts output — operates on 6 to 12 volts — 7 tubes. Features include broadcast reception, and navigational aid by means of loop reception.



MTR-76 — Highly practical — 80 watt Radio Telephone. Covers frequencies 2000 - 6000 kc. 6 crystal controlled channels. Range 500 - 1000 miles. Special feature includes exclusive Harvey Wells Deck Calling System. Available for 110 volt or 32 volt D.C. operation.



MTR-26 — World's most beautiful and efficient Marine Radio Telephone. 25 watt unit — 4 crystal controlled channels — range of 75 to 200 miles. Plus features include broadcast reception, deck calling system — record playing provision. 6" speaker. Available for 12 volt D.C. or 32 volt D.C. operation.

hallicrafters RADIO

T-54 Television Receiver

Now . . . high-quality television at a low price! Hallicrafters Model T-54 is a perfected, practical set for use in the home, clubs, schools, offices and similar installations. Pictures are sharp, amazingly clear with a minimum of distortion. 7-inch tube gives 23 square inches of brightly lighted picture area. A special brightness control makes the picture easily visible even in a fully lighted room.

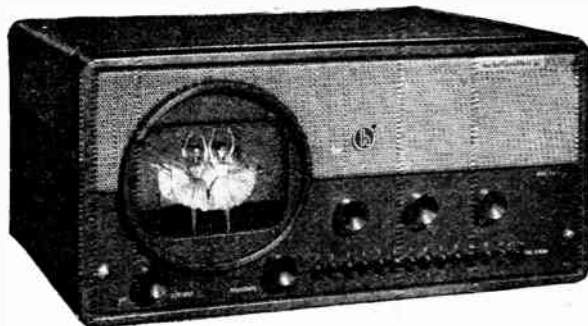
PUSH-BUTTON TUNING on all 12 channels, each channel pre-tuned before the set leaves the factory. Any desired station can be obtained by merely depressing the proper button. F.M. audio channel circuit eliminates man-made static, provides fine tonal fidelity.

DISTINCTIVELY STYLED, completely self-contained, the T-54 requires a minimum of space. Its modern steel cabinet blends equally well with period or contemporary surroundings.

CONTROLS: Front Panel — Combined power switch and contrast control turns set "on" and regulates picture for best definition; brightness control permits adjustment for best viewing brilliancy; volume control adjusts sound level; separate horizontal and vertical controls for easy synchronization; push buttons allow quick program selection on all 12 frequencies; fine tuning allows peaking each channel for maximum efficiency. Rear Panel — Focus control; vertical and horizontal position controls to properly center picture; width and height controls for correctly proportioned reproduction.

SPECIFICATIONS: 18 tubes plus picture tube and 4 rectifiers; 7 by 5 inch P.M. speaker, provision for external antenna using 300-ohm transmission line; all 12 channel frequencies 44-88 and 174-216 MC; permeability-tuned IF's; AGC on all RF and IF circuits; all RF and oscillator alignment adjustments at front of chassis. Cabinet power interlock for safety removes all voltages when lid of cabinet is opened. Operates from 105-125 volts, 50-60 cycles AC. Size 20 inches wide by 10 $\frac{1}{4}$ inches high by 16 inches deep.

T-54. Ship. wt. 52 lbs. Amateur net **\$189.50**



FEATURES OF T-54 AND 505

1. Push-button tuning gives quick program selection. 12 channels, covering all possible frequencies, already built in.
2. Easy on the eyes. No strain nor tired feeling. Clearer pictures, better focus.
3. Easy to operate — all controls are clearly marked.
4. Dependable performance assured by Hallicrafters' long experience and engineering "know how" in the high frequency field.
5. Picture tube doubly protected by rubber mountings and plastic safety shield.
6. Especially designed combination escutcheon and light-shield permit easy viewing even in fully lighted room.
7. Practical table size — ideal for den, living room, apartment.
8. Choice of modern steel or beautifully finished mahogany veneer cabinet.
9. Easy to install — you can do it yourself with the complete instructions included.

505 Television Receiver

Here, in a handsome mahogany veneer cabinet, is the same precision-engineered television receiver as shown above. Designed by Raymond Loewy, leading industrial stylist, Model 505 is ideal for apartment, den, or living room. Seven-inch electro-static picture tube brings a sharp, clear picture — 23 inches square. The 505 will prove a source of rich satisfaction, bringing you sports events, variety shows, newscasts. Easy to operate — controls are clearly marked; just push one of 12 pre-tuned buttons for instant channel selection.

ELECTRICAL SPECIFICATIONS same as for above model, including 18 tubes plus picture tube and 4 rectifiers. Size 20 $\frac{5}{8}$ " wide, 11 $\frac{1}{2}$ " high, 17" deep.

505. Ship. wt. 45 lbs. Amateur Net **\$199.50**



hallicrafters RADIO

T-61 10-in. Television Receiver



Hallicrafters latest addition to its line of precision-engineered television — a 10-inch direct-view receiver in a modern plastic cabinet. Picture is sharp, stable with plenty of contrast. Quick, convenient push-button tuning on all 12 television channels.

CONTROLS: Front Panel — Contrast control for best picture definition; brightness control for best viewing brilliancy; volume control; horizontal and vertical controls for synchronization; 12 push-button station selectors; fine tuning control. Rear Panel — Focus control, vertical and horizontal position controls; width and height controls; vertical linearity control.

SPECIFICATIONS: 19 tubes plus picture tube and 3 rectifiers; 12 push buttons covering all assigned TV frequencies; RF amplifier for improved signal-to-noise ratio; 3 IF amplifiers for proper band width and best picture definition; 2 video amplifiers to provide full picture contrast; AGC control-picture holds intensity despite variations in signal strength; automatic level; 6½" electrodynamic speaker. Size 17½ by 16¾ by 19¾ in. deep.

T-61. Ship. wt. 105 lbs. Amateur Net **\$289.95**

T-60 Projection Television



Hallicrafters Model T60 embodies the latest developments in projection television. A bright, flat, sharp image — 192 square inches of picture area . . . clear, steady, optically correct, eliminates all eye fatigue.

Basis of system consists of small cathode ray tube (2½" projection triode), an optical unit that magnifies, reflects and projects the image, and a high voltage unit to sustain brilliance and stability. A high quality FM sound system gives clear natural tone. System also includes 6-in. PM dynamic speaker mounted on baffle (not shown).

All elements go together in compact arrangements — permitting custom installations in book cases or small graceful cabinets. Sturdy wood frame is easy to install.

Excellent viewing day or night. No need to dim room lights. System provides 450 lines resolution — a contrast ratio of better than 30:1. Optical system is continually stable and remains in perfect adjustment.

CONTROLS: Front Panel — Contrast control for best picture definition; brightness control for best viewing brilliancy; volume control; horizontal and vertical controls for synchronization; 12 push-button station selectors; fine tuning control. Rear Panel — Focus control, vertical and horizontal position controls; width and height controls; vertical linearity control.

SPECIFICATIONS: 20 tubes plus projection triode and 5 rectifiers; 12 channel push-button selector switch; RF amplifier for improved signal-to-noise ratio; 3 IF amplifiers; 2 video amplifiers; improved synchronizing circuits; automatic gain control; automatic black level control; inter-carrier FM sound system. Size 45 in. high by 25 in. wide by 13 in. deep.

T.60. Ship. wt. 71 lbs. Amateur Net **\$595.00**

(All prices slightly higher West of Rockies)

hallicrafters RADIO

SX-62 FM/AM All-Wave Radio

SWL VERSION OF FAMOUS SX-42 . . . COVERAGE 540 KC — 109 MC INCLUDING FM . . . BUILT-IN CRYSTAL CALIBRATOR.

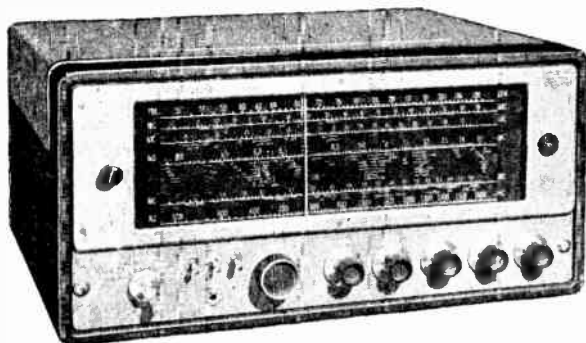
The newest addition to Hallicrafters line and just what the all-wave listener has been waiting for. Will out-perform any ordinary broadcast receiver on any frequency — Standard Broadcast, Short-Wave or FM.

Having basically the same chassis as Hallicrafters best communications receiver, the SX-62 provides communications-receiver performance in simplified form. A single tuning control covers the wide-visibility dial. Only one band lights up at a time — you always know just where you are tuning.

In addition a crystal calibration oscillator is built in. A flip of the switch at any time will put test signals at 500 KC intervals across the dial. You just tune in the nearest one of these signals and then use the calibration-reset control to adjust the dial pointer to the exact frequency.

Continuous AM reception from 540 KC to 109 MC; FM reception 27-109 MC. Temperature-compensated oscillator with voltage regulator. Two RF and three IF stages; dual IF channels (455 KC and 10.7 MC). Audio flat 60-15,000 cycles; 8-watt push-pull output.

CONTROLS: Band Selector — #1 540-1620 KC, #2 1.62-4.9 MC, #3 4.9-15 MC; #4 15-32 MC, #5 27-56 MC, #6 54-109 MC; Receive/Standby, Crystal calibration On/Off, Noise Limiter, Tuning, AF Gain, Phono/FM/AM/CW, six-position Selectivity, four-position Tone, RF Gain, and Calibration Reset.



PHYSICAL DATA: Gray steel cabinet with satin chrome trim. Top opens on piano hinge. Size 20 in. wide by 10½ in. high by 15 in. deep.

EXTERNAL CONNECTIONS: Doublet or single wire antenna. 500 and 5000 ohm outputs. Phone jacks. Phonograph jack. Socket for external power. Remote standby connections. 105-125 volt 50-60 cycle AC line.

14 TUBES PLUS VOLTAGE REGULATOR AND RECTIFIER: two 6AG5's RF amps., 7F8 Conv., 6SK7 IF Amp., 6SG7 IF Amp., 7H7 IF Amp., 7H7 Limiter and AM Det., 6H5 Discriminator, 7A4 BFO, 6H6 ANL, 6SL7 AF Amp., two 6V6's Push-pull Output, 6C4 Calibration Osc., VR-150 Regulator, 5U4G Rectifier.

SX-62. Ship. wt. 65 lbs. Amateur Net **\$269.50**

S-47 FM/AM All-Wave Radio

TOP QUALITY STRAIGHT BROADCAST RADIO . . . AUTOMATIC FREQUENCY CONTROL . . . PUSH-BUTTON TUNING . . . HIGH-FIDELITY AUDIO

Hallicrafters best radio for conventional home reception . . . comparable to chassis found in consoles in the \$600-\$800 price class.

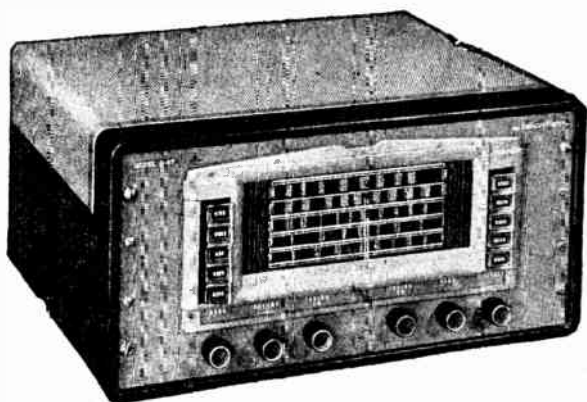
Push-button tuning for both Standard Broadcast and FM Bands — 5 buttons on each band. Long avoided by many manufacturers, push-button FM can now be yours . . . via Hallicrafters precision engineering.

Automatic frequency control gives unprecedented ease of tuning on FM . . . with unequalled accuracy. As a station is approached, this circuit "takes over" electronically, and holds the station in perfect tune, with knife-like precision, giving clearest reception.

Offers Standard Broadcast, Short-Wave, and FM. Two "band-spread" Short-Wave bands for easier tuning. Temperature compensated oscillator. One RF and three IF Amplifier stages; dual IF channels. 10-watt push-pull output; audio response 30-15,000 cycles.

CONTROLS: 5 push-buttons for AM and 5 for FM. Band Selector — FM 88-108 MC, AM 540-1720 KC, 5.9-18.2 MC, 9-12 MC, 15-18 MC. 3-position Bass Tone, 4-position Treble Tone, Volume, FM tuning, AM tuning.

PHYSICAL TUNING: Gray steel cabinet with satin chrome trim. Piano hinge top. 20 by 10½ by 16 in.



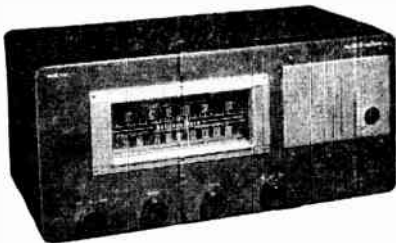
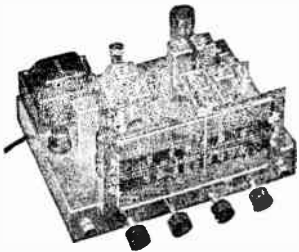
EXTERNAL CONNECTIONS: Doublet or single wire antenna. 500-ohm output. Phonograph jack. 110-volt outlet for phono motor. 105-125 v. 50-60 cycle AC.

14 TUBES PLUS RECTIFIER: 6BA6 RF Amp., 6BE6 Mixer, 6J6 Osc. and Auto. Freq. Control, two 6SG7's IF Amps., 6SG7 FM 3rd IF Amp. and AM Det., 6SH7 FM 4th IF Amp., 6AL5 FM Det., two 6J5's and two 6SQ7's AF Amps., two 6V6GT's output, 5U4G Rect.

S-47. Ship. wt. 65 lbs. Amateur Net **\$229.50**

hallicrafters RADIO

S-55 FM/AM Broadcast Radio



S-58 FM/AM Radio

A complete unit, with built-in speaker, for AC or DC use at an amazingly low price. Excellent performance with Hallicrafters precision engineering.

Standard Broadcast 540-1700 KC, FM 88-108 MC, or Phono; full-range Tone, Volume, Tuning. Modernly styled gray steel cabinet. Size 13¼ in. wide by 5¼ in. high by 6 in. deep. Doublet or single wire antenna. Phonograph jack. 105-125 v. 50-60 cycle AC or DC. 6 tubes plus Rectifier; 12BEC Converter, 6BJ6 IF Amp., 6BJ6 IF Amp. and AM Det., 12A15 FM Det., 12SQ7 AF Amp., 35L6 Output, 35Z5 Rectifier.

S-58. Ship. wt. 17 lbs. Amateur Net **\$59.50**

AUTOMATIC FREQUENCY CONTROL . . . PUSH-PULL OUTPUT. Top-performance on Standard Broadcast and FM in the medium price range. Comparable to chassis in consoles in \$400 to \$600 price class.

Automatic Frequency Control assures clearest possible reception on FM by eliminating the human error in tuning; as station is approached, this circuit "takes over" electronically, and holds the station in perfect tune, with knife-like precision. One RF, two IF stages of amplification. 7-watt push-pull output. Audio response 50-14,000 cycles.

CONTROLS: Band Selector — 540-1700 KC or 88-108 MC or Phono, Full-range Tone, Volume, Tuning.

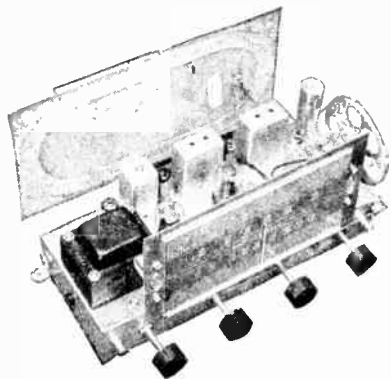
PHYSICAL DATA: Gray steel cabinet, handsomely finished. 18½ by 8¾ by 12 in. deep.

EXTERNAL CONNECTIONS: Doublet or Single wire antenna. 500-ohm output (no speaker). Phonograph jack. 110 v. power outlet for phono motor. Power cord for 105-125 volt 50-60 cycle AC line.

10 TUBES PLUS RECTIFIER: 6AU6 RF Amp., 6BA6 Mixer 6J6 Osc. and Auto. Freq. Control, 6BAC IF Amp., 6SI17 IF Amp., 6SH7 Limiter, 6H6 Discriminator, 6SJ7 AF Amp., two 6K6GT's Output, 5Y3GT Rectifier.

S-55. Ship. wt. 33 lbs. Amateur Net **\$129.50**

CHASSIS ONLY. Model S-56. 12¼ in. wide by 7¾ by 8¾ deep. Ship. wt. 23 lbs. Net **\$110.00**



S-59 FM/AM Chassis

A separate chassis of the more powerful AC type (better than in radio at left). Comparable to chassis in consoles in the \$140 to \$190 price range.

Standard Broadcast 540-1700 KC, FM 88-108 MC, or Phono; full-range Tone, Volume, Tuning. 4-watt output. 13¼ in. wide by 5½ in. high by 6 in. deep. Doublet or single wire antenna. Phonograph jack. 500-ohm output for speaker. 105-125 volts 50-60 cycle AC. 7 tubes plus Rectifier; 6BE6 Converter, 6BA6 IF Amp., 6BA6 IF Amp. and AM Det., 6AL5 FM Det., 6SQ7 AF Amp., two 6K6GT's Output, and 5Y3GT Rectifier.

S-59. Ship. wt. 14 lbs. Amateur Net **\$49.50**

hallicrafters RADIO

SX-42 Communications Receiver

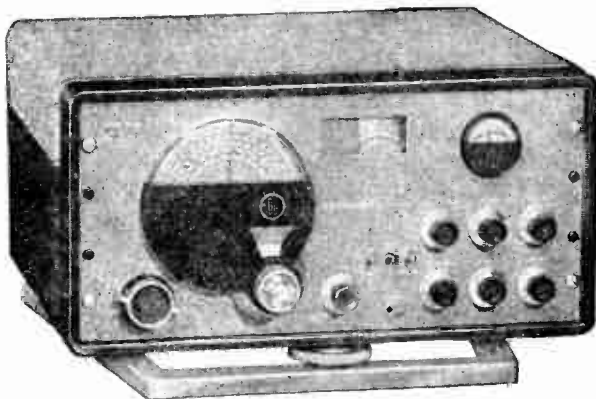
CONTINUOUS COVERAGE FROM 540 KC to 110 MC
IN 6 BANDS . . . FM RECEPTION ABOVE 27 MC.

Tops in performance and versatility . . . preferred by Amateurs, SWL's, and discriminating AM/FM broadcast listeners everywhere. AM reception 540 KC - 110 MC; FM 27-110 MC. Temperature-compensated oscillator with voltage regulator. Two RF and three IF stages; dual IF channels (455 KC and 10.7 MC). Audio flat 50-15,000 cycles; 8-watt output.

CONTROLS: Band Switch — #1 540-1620 KC, #2 1620-5000 KC, #3 5.0-15.0 MC, #4 15.0-30.0 MC, #5 27.0-55.0 MC, #6 55.0-110 MC. Main tuning dial with logging scale on knob. Band spread dial calibrated for 3.5, 7, 14, and 28 MC bands plus logging scale. Two-position dial lock secures either main or band-spread knobs. AF Volume Control with power switch, AVC, Noise Limiter and Receive/Standby switches. Crystal Phasing, AM/FM/CW/Phono, CW Pitch, six-position Selectivity, four-position Tone, and RF Gain Controls. "S" meter adjustment on rear. Control settings for Broadcast and FM Bands marked in color for simplified use by others in family.

PHYSICAL DATA: Gray steel cabinet with satin chrome trim. Top opens on piano hinge. Size 20 in wide by 10 $\frac{1}{4}$ in. high by 16 in. deep.

EXTERNAL CONNECTIONS: Doublet or single wire antenna. 500 and 5000-ohm outputs. Phone jack. Phonograph input jack. Socket for external power. Remote control. Power cord for 105-125



13 TUBES PLUS VOLTAGE REG. AND RECT. Two 6AG5's RF Amps., 7F8 Conv., 6SK7 IF Amp., 6SG7 2nd IF Amp., 6H6 2nd Det. and ANL, two 7H7's FM Amps., 6H6 Discriminator, 6SL7 Inverter, two 6V6's Push-pull Output, 7A4 BFO and FM Amp., VR-150 Reg., 5U4G Rectifier.

SX-42. Ship. wt. 65 lbs. Amateur Net **\$295.00**

E-42 Tilt Base. Ship. wt. 5 lbs. **\$7.50**

E-42 Speaker (not shown). Base reflex, 8 in. PM in metal cabinet. Two-position tone switch. 500-ohm input. Size 17 in. wide by 11 $\frac{3}{4}$ in. high by 12 $\frac{1}{2}$ in. deep. Ship. wt. 35 lbs. Net **\$34.50**

(Prices Slightly Higher West of Rockies)

Communications Receiver



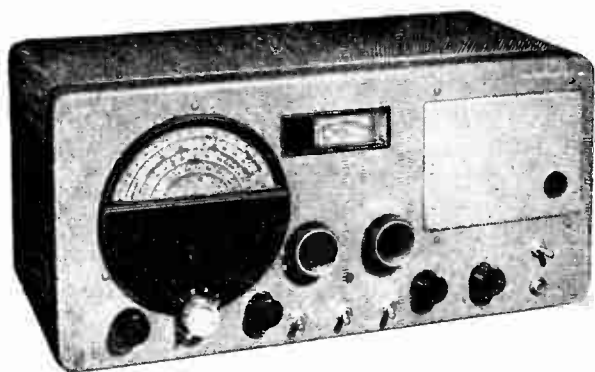
10 TUBES PLUS RECTIFIER. 6BA6 RF Amp., 7F8 Conv., 6SG7 IF Amp., 6SH7 2nd IF Amp., 6SH7 3rd IF Amp. (10.7 MC), 6H6 AM Det. and ANL, 6AL5 FM Det., 6SQ7 Audio, 6J5 BFO, 6V6 Output, 5Y3 Rectifier.

SX-43. Ship. wt. 45 lbs. Amateur Net **\$179.50**

R-44 Speaker (not shown). 6 by 9 in. oval PM type in metal cabinet matching SX-43. Two-position Tone switch. 500-ohm input. Size 18 $\frac{1}{2}$ by 8 $\frac{1}{2}$ by 9 $\frac{5}{8}$ in. deep. Ship. wt. 28 lbs. Net **\$19.50**

(Prices Slightly Higher West of Rockies)

hallicrafters RADIO



S-40A Communications Receiver

540 KC to 43 MC . . . TEMPERATURE COMPENSATED OSCILLATOR. ONE RF AND TWO IF STAGES. An outstanding value offering excellent performance in the lower medium price range. Built-in PM Speaker.

CONTROLS: Band Switch — #1 1540-1700 KC, #2 1.7-5.35 MC, #3 5.35-15.7 MC, #4 15.7-43.0 MC. Main tuning in MC; Bandsread has arbitrary scale. AF Gain, RF Gain; AVC, BFO and Noise Limiter switches; three-position Tone, BFO Pitch, Receive/Standby. Settings for Broadcast marked in color.

PHYSICAL DATA: Satin Black steel cabinet with brushed chrome trim. Top opens on piano hinge. Size 18½ in. wide by 9 in. high by 11 in. deep.

EXTERNAL CONNECTIONS: Doublet or single wire antenna. Phone jack. Socket for external power supply. Remote standby connections. 105-125 v. 50-60 cycle AC.

8 TUBES PLUS RECTIFIER: 6SG7 RF Amp., 6SA7 Conv., two 6SK7's IF Amps., 6H6 ANL and AVC, 6J5GT BFO, 6SQ7 2nd Det. and AF Amp., 6F6G Output, 80 Rectifier.

S-40A. Ship. wt. 33 lbs. Amateur Net **\$99.50**

S-52 Communications Receiver

Exactly like the S-40A except designed for AC or DC operation. 7 Tubes plus rectifier and ballast tube; RF and IF tubes like S-40A; then 6H6 Det., 6SC7 and AF Amp., 25L6 Output, 25Z6GT Rect., and Ballast.

S-52. Ship. wt. 30 lbs. Amateur Net **\$99.50**

(Price Shipped Postpaid)

S-53 Communications Receiver

540 KC - 31 MC PLUS 43-54.5 MC . . . 2 IF STAGES. Offers maximum performance in small size. 2 MC IF improves image ratio. Built-in speaker.

CONTROLS: Main tuning in MC; separate Band Spread; Receive/Standby; Band switch — #1 540-1630 KC, #2 2.5-6.3 MC, #3 6.3-16 MC, #4 14-31 MC, #5 43-54.5 MC; AM/CW; RF Gain; Noise Limiter; AF Gain; 2-position Tone. Speaker/Phones on rear.

PHYSICAL DATA: Steel cabinet, brushed chrome trim. Piano hinge top. Size 12¾ by 7 by 7¾ in.

CONNECTIONS: Doublet or single wire antenna. Phone tip jacks. Phono jack. 105-125 v. 50-60 cycle AC.

7 TUBES PLUS RECTIFIER: 6C4 Osc., 6BA6 Mixer, two 6A6's IF Amps., 6H6 Det., AVC, and ANL, 6SC7 BFO and AF Amp., 6K6GT Output, 5Y3 Rectifier. S153. Ship. wt. 23 lbs. Amateur Net **\$79.50**

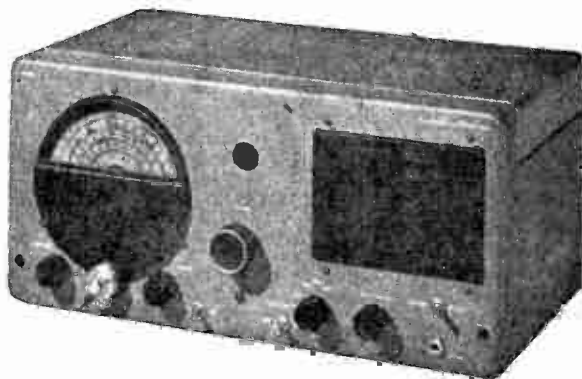
hallicrafters RADIO

S-51 Marine Receiver

Rugged and specially constructed for dependable sea or air use. Range 132 KC to 13 MC covers all important channels. Fixed frequency operation possible on three pre-tuned channels; facilitates switching frequency and/or standing guard. Built-in PM speaker. CONTROLS: Band Selector — 132-405 KC, 485-1530 KC, 1450-4550 KC. 4.2-13.0 MC, plus 3 fixed freq. positions in 200-300 KC and 2-3 MC range; RF gain. Volume, CW/Phone. ANL On/Off, Tuning, 3 position Tone, CW Pitch, Rec./Standby. Gray steel cabinet: 18½ by 9 by 11 in. deep; piano hinge top. Doublet or single wire antenna. Phone jack. Socket for 6, 12, or 32 v. vibrapack. 105-125 v. 50-60 cycle AC or DC.

9 TUBES PLUS RECTIFIER: 6SS7 RF Amp., 7A8 Conv., two 6SS7's IF Amps., 7C6 Det., 35L6 or 6V6 Output, 7A6 Noise Limiter, 6SS7 BFO, 35Z5 Rectifier.

S-51. Ship. wt. 31 lbs. Amateur Net **\$149.50**
Vibrapack for 6, 12, or 32 v. operation **\$22.50**



S-37 VHF Receiver

A top-quality precision instrument for AM or FM VHF communications. Range 130-210 MC covered without band switching. Two RF stages, three IF stages, and high IF (16 MC) give excellent selectivity and image rejection. Temperature compensated, voltage regulated.

CONTROLS: Single Tuning knob turns main and handsread dials; RF Gain, On/Off, Ant. Trimmer, AVC, AF Gain, ANL, AM/FM, Send./Rec., Tone. Steel cabinet in black wrinkle enamel. Size 19½ by 9½ by 14¾ in. deep. Doublet or single wire antenna. 500 and 5000-ohm outputs. Phone jack. Connections for external power supply and remote operation. Power cord for 105-125 or 210-250 volts 50-60 cycle AC.

12 TUBES PLUS REGULATOR AND RECT.: Two 954's RF Amps.; 955 HFO; 954 Mixer; 6AC7, 6AB7, 6SK7 RF Amps., 6H6 ANL, Det.; 6AC7 Limiter; 6H6 Discr.; 6SL7GT AF Amp.; 6V6GT Output; OD3/VR-150 Volt. Reg.; 5U4G Rectifier.

5-37. Ship. wt. 100 lbs. Amateur Net **\$591.75**

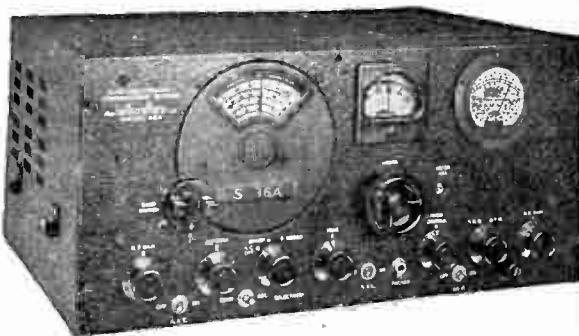


S-36A VHF Receiver

A highly sensitive, stable, and versatile unit for AM, FM, or CW reception through 27.8-143 MC. One RF, three IF stages give high selectivity. Temperature compensated, voltage regulated. All components designed for service in any climate (like S-37).

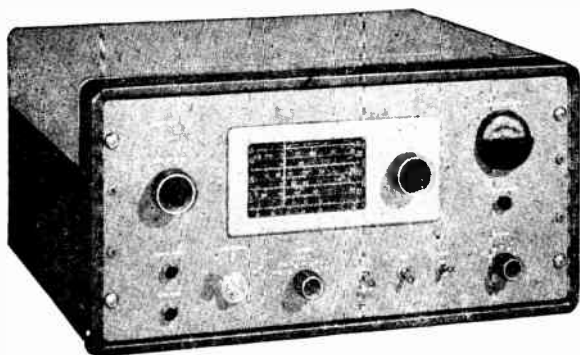
CONTROLS: Band Switch — 27.8-43 MC, 46-82 MC, 92-143 MC; single Tuning knob turns main and handsread dials; RF Gain, AV, Ant. Trimmer, Send/Rec., 2-position Selectivity, 4-position Tone, ANL, CW Pitch, BFO, AM/FM, AF Gain. Steel cabinet in black wrinkle enamel. Size 19¼ by 9½ by 15¾ in. deep. Doublet or single wire antenna. 500 and 5000-ohm outputs. Phone jack. Power cord for 105-125 or 230 v. 50/60 cycle AC. 13 TUBES PLUS REG. AND RECT.: 956 RF Amp.; 955 HFO; 954 Mixer; 6AC7, 6AB7 and 6SK7 IF Amp.; 6H6 ANL, Det.; 6J5 HFO; 6AC7 Limiter; 6H6 Discr.; 6SL7GT Inv.; two 6V6GT's Push-pull Output; VR-150 Reg.; 5U4G Rectifier.

S-36A Ship. wt. 100 lbs. Amateur Net **\$307.00**



hallicrafters RADIO

HT-19 Medium Power Transmitter



The newest addition to Hallicrafters Amateur line . . . a completely self-contained unit for the modern-minded Ham. Offers both Narrow Band FM and CW, plus provisions for AM, to give maximum flexibility on 5 popular Bands. In addition its compact size and smartly styled cabinet make it ideal wherever appearance and space are to be considered.

Basically the HT-19 consists of a Variable Frequency Oscillator (used as ECO or Pierce crystal), a frequency modulator with its speech amplifier, and an RF Buffer and Final Amplifier. The 4-65A in the final, cooled by a 3-inch 3000-rpm fan, gets plate input of 185 watts for about 125 watts output. Extremely high

stability and extremely low FM distortion. Pilot lights for both filaments and plate power. Size overall 20 by 10 $\frac{1}{4}$ by 18 in. deep.

CONTROLS: 5-position Operation Switch — 3 crystals, VFO, or NBFM. Band Selector (3.5-4.0 MC, 7.0-7.3 MC, 14.0-14.4 MC, 21.0-21.45 MC, and 27.16-29.7 MC) changes oscillator only; final coils are changed inside the unit, all five coil assemblies remaining inside at all times (dummy positions provided for the four coils not in use). Check Switch turns on osc. for spotting signal on receiver. Plate Switch controls all "B" power and makes connections for remote control. Power Switch is in 110-volt line. Deviation Control maintains 0.4 ratio on all bands. Osc. Plate Tuning operates osc. gang and calibrated dial. Power Amp. Tuning tunes final plate. Push-button Meter Switch throws ma. meter from normal connection in cathode of final to final grid.

EXTERNAL CONNECTIONS: Microphone Connector. Keying Terminals (osc. keying). 50-600 ohm output. 6 terminals for remoting of either trans. or revr. 4 terminals in final screen and plate circuits for applying AM from external modulator — 90 watts audio required. Cord for 105/125 v. 50/60 cycle AC.

5 TUBES PLUS 2 VOLTAGE REGULATORS AND 3 RECTIFIERS: 3 6BA6's — oscillator, freq. modulator, and speech amp.; 6L6 Buffer; 4-65A Output; VR-150 and VR-105 Regulators; 5Y3GT and 2 866's Rectifiers.

HT-19. Ship. wt. 98 lbs. Amateur Net **\$298.00**

HT-18 Variable Freq. Oscillator



Complete exciter with calibrated band-switching and built-in power supply. Xtal or VFO, NBFM or CW on 5 Bands. Output 2.5-4.5 watts. Temperature compensated, voltage regulated. Built-in speech amp.

Chassis similar to HT-19 above, less final amplifier. Operation Switch, Band Selector (ranges like HT-19). Check, Plate, Power, and Deviation Switches. Single Tuning control. Mike, keying, remote control connections. 72-ohm output. 3 6BA6's, 6L6, VR-150, VR-105, 5Y3GT. Size 12 $\frac{3}{4}$ by 7 by 7 $\frac{3}{4}$ in. deep.

HT-18. Ship. wt. 25 lbs. Amateur Net **\$110.00**

HT-17 Low Power Transmitter



Versatility, compactness, and built-in power supply at low cost. 10-20 w. output. Quality construction.

CONTROLS: Osc. and Amp. Tuning, Ant. Loading; Meter, Power, and Carrier Switches. Pi-Section coupler for matching single wire or doublet ant. Keying and modulation terminals. Cord for 110 v. 60 cycle AC. 6V6 Osc. 807 Output. 5Y3GT Rect. Ship. wt. 25 lbs.

HT-17, with coils for 7 MC only.....Net **\$49.50**
Set of coils for 3.5 MC \$3.50; for 14 or 28 MC \$7.00 per set. Plate ma. meter (in place of bulb) \$6.50.

(Prices Slightly Higher West of Rockies)

SINCE
1933

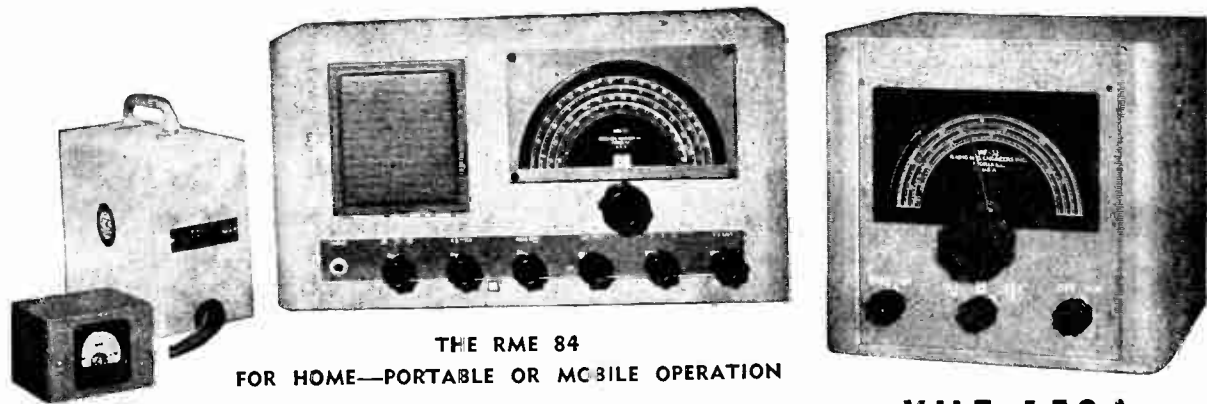


RME

FINE COMMUNICATIONS EQUIPMENT

RADIO MFG. ENGINEERS, INC.

Peoria 6, Illinois U. S. A.



THE RME 84
FOR HOME—PORTABLE OR MOBILE OPERATION

VHF-152A
3 BAND
CONVERTER

RME 84 at right, VP-2—6 volt power pack with cable attached, optional for RME 84 in center, CM-1—Carrier Level "S" Meter with cord and plug, optional for RME 84 at left.

The Coverage Is Complete .540 to 44 Megacycles

An important feature is the continuous coverage ranging from 540 kc to 44 megacycles. This coverage, in addition to providing for the regular broadcast band, takes in the 30, 40, 20, 15 and 10 meter amateur bands. The calibration is made on a 7 inch diameter scale. In addition, a smooth-running vernier dial gives band spread on any setting of the main scale. The vernier scale makes five complete revolutions for the 180 degree rotation of the tuning condenser.

Seven Tubes Have Been Chosen For The RME 84

1. A 7B7 local radio frequency amplifier is ahead of the first detector
2. A 7B7 local is used as a first detector and radio frequency oscillator
3. A 7B7 serves as the first IF operating at 455 kc
4. A 7B7 second IF further amplifies the signal.
5. A 7K7 local acts as second detector and first audio amplifier.
6. Another 7K7 provides the beat frequency and acts as noise limiter.
7. The 6AG6 provides the final audio frequency output.
8. A 5Y3GT is the power rectifier tube.

Portability Built Into The RME 84

Conscious of the fact that many thousands of amateurs want a receiver for portable operation, the new RME 84 is equipped with a special socket connection, making possible connections to either a B battery and an A battery supply or a similar source of power such as an external vibropack. 135 volts of B and 6 volts of A battery will operate the RME 84 at full power. The drain on the B battery is only 32 milliamperes at 135 volts and the 6 volt A battery provides 1.5 amps, including the two dial lights.

The new noise limiter, of the series type, performs exceptionally well. Also made available for future use with the RME 84 is a signal strength meter to be connected through the special socket located on the rear of the chassis apron.

SENSITIVITY: The average sensitivity of the RME 84 is of the order of 2 microvolts over the entire range of the instrument.

RME 84, CODE HANDY, complete for 115 volt, 60 cycle operation and for use with external battery supply. May also be had for 230 volt, 25 cycle operation at additional cost. f.o.b. Peoria, Illinois. Net Selling Price \$98.70

VP-2, CODE HOMER, A 6 volt power pack with cable attached, optional equipment for RME 84. f.o.b. Peoria, Illinois, Net Selling Price \$28.20

CM-1, CODE HURST, Carrier Level "S" Meter with cord and plug, optional equipment for RME 84. f.o.b. Peoria, Illinois, Net Selling Price \$14.00

Reception on the new high frequencies, 50 to 54 mc. and 144 to 148 mc. bands, and better reception on the 27 to 29.7 mc. band, using the double detection system, image free, at a cost which any amateur can afford—that is what the new VHF-152 is designed to give. . . . Every owner of a communications receiver can, with the acquisition of this new converter, do a much better job of working high frequency signals than is possible with most any higher priced, specially designed receiver.

This converter provides an order of stability at 50 mc. much higher than most communications receivers have when operating at 5 mc. New engineering design and construction make this possible.

Miniature tubes are used, a 6AK5 rf amplifier and a 6J6 detector and a 6J6 oscillator complete the converter proper. The built-in power supply uses a 5Y3GT rectifier tube and a VR150 voltage regulator. The three bands are calibrated to cover the full sweep of a seven-inch diameter scale, indirectly illuminated. . . . The tuning mechanism is of the same sturdy, positive construction characteristic of all RME units. Smooth, velvety operation of the large knob makes operation a pleasure.

The sensitivity of the VHF-152 is of the order of 2 microvolts. Its output frequency is 7000 kc.

Separate connections are provided for the 10, 6 and 2 meter antennas and for the antenna used with the receiver. Each band has its own especially designed antenna input circuit of approximately 300 ohms impedance. The input of the receiver is changed from the VHF-152 output to the receiver antenna by a front panel switch. Another front panel switch selects the 10, 6 or 2 meter band for VHF-152 operation.

Interconnecting plug and cord are also furnished, which permanently connect the VHF-152 direct to the input terminals of the receiver.

The cabinet is designed to match the RME-45 communications receiver, both in streamlined appearance and in two tone gray and black crinkle finish.

Dimensions are as follows: 11" high, 12" wide, 11" deep, with hinged lid. Standard operation is for 115 volt, 50-60 cycle power source.

Complete with tubes, interconnecting plug and cord. **CODE: HAMPY,** f.o.b. Peoria, Illinois, Net Selling Price \$86.60.

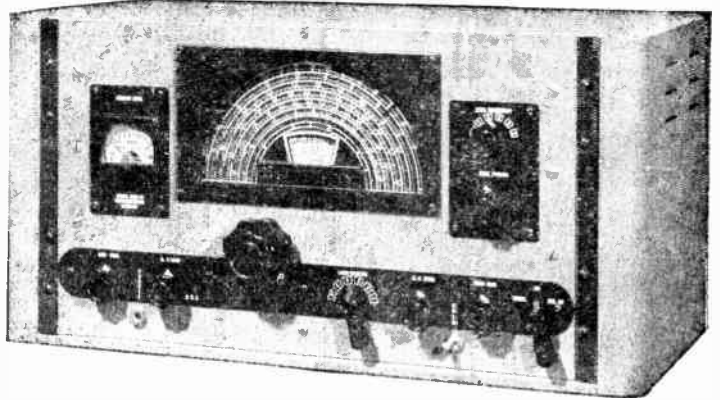
SINCE
1933



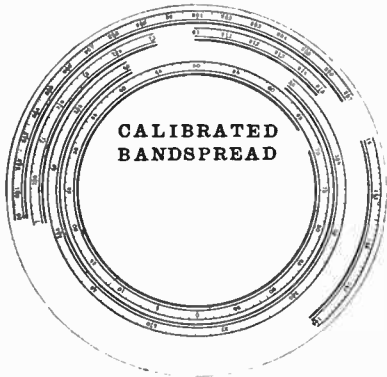
RME

FINE COMMUNICATIONS EQUIPMENT
RADIO MFG. ENGINEERS, INC.
Peoria 6, Illinois U. S. A.

1. 550 kc. to 33,000 kc. coverage in 6 bands.
2. Two speed tuning control mechanism.
3. Band spread dial an integral part of main dial, giving constant calibration.
4. 5 amateur bands calibrated on band spread dial: 3.5m., 7mc., 14m., 21mc., 28mc.
5. 0-100 added scale on bandspread dial to facilitate logging on all bands.
6. 5 position variable crystal selectivity with phasing control.
7. Decibel meter calibrated from 0 to R9— and past R9 to 96 decibels.
8. Automatic noise suppression.
10. High signal to noise ratio.
11. VR-150 voltage regulator tube.
12. 455 kc. intermediate frequency.
13. Antenna input terminals for single wire or transmission line.
14. Uniform audio response with headset of any impedance from 50 to 30,000 ohms.
15. Four watts of audio output.



RME-45 RECEIVER WITH CAL-O-MATIC TWO SPEED TUNING



Five amateur bands are calibrated on the band spread dial, with plenty of spread on each band. A station once logged can be quickly found again as there is no separated dial to adjust. . . . An additional scale of 0-100 is also incorporated on the band spread dial so that stations on any frequency within the tuning range of the receiver can be accurately logged.

Automatically calibrated over the entire tuning range—that's what Cal-O-Matic means.

Because of their high frequency tuning characteristics, loctal tubes were chosen to perform each rf, if, and af function in the critically balanced super-heterodyne circuit used.

Very high stability is obtained in the 45, and one of the reasons is the use of a double spaced rf oscillator and temperature compensated padders.

RME was the first to introduce a crystal filter circuit into a communications receiver many years ago. A variable selectivity crystal filter is a must in a receiver of the quality of the 45 and so is the DB meter, also introduced first in a communications receiver by RME.

Because of its overall sensitivity, its appearance and its ease of accurate tuning and logging, the RME-45, although designed for communications, is nevertheless also an excellent receiver for the home listener.

Tube line-up:

7B7—rf. ampl.	7A6—noise limiter	7C5—output
7S7—mixer & osc.	& 2nd det.	7C7—beat osc.
7B7—1st if	7C7—1st audio	5Y3GT—rectifier
7B7—2nd if	VR-150—Voltage Regulator	

The new RME-45 is a sensitive communications receiver which employs the new Cal-O-Matic two speed tuning mechanism to give continuous coverage from 550 kc. to 33,000 kc.

Cal-O-Matic tuning has won unqualified approval ever since it was introduced in the first RME receiver. This RME development gives to the user of a 45 the ability to log all stations accurately, since the bandspread dial and the main tuning dial operate from one control shaft.

There are two tuning knobs, concentrically mounted. The smaller knob turns approximately five times while the larger knob is turning once. A frequency band is quickly covered by using the large knob, and the critical adjustment necessary for finding a particular station is made with the smaller one.

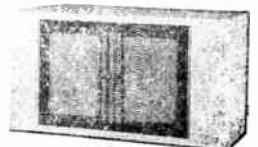
The receiver is mounted on a relay rack panel measuring 19" wide by 10½" high with four correctly spaced mounting slots on each side. The unit can easily be taken out of the cabinet and is then ready for relay rack mounting.

Gray crinkle finish with black trim gives receiver and speaker a fine appearance.

Controls, from left to right across bottom of panel are: Off-on switch with tone control, headset jack, rf gain control and AVC, tuning control, band-switch, BFO pitch control, BFO off-on switch, audio gain control, transmit-on-standby switch.

RME-45 communications receiver in crinkle gray with black trim cabinet measuring 22¼" wide by 10¾" deep by 11" high overall, complete with ten matched tubes, including 8" PM speaker in crinkle gray, black trim cabinet, 19¼" wide by 9¾" deep by 10¾" high overall, for 115 volt 50-60 cycle operation. CODE: PINES, Net Selling Price, f.o.b. Peoria, Ill. . . . \$185.20
Speaker, 8" PM, mounted in two tone crinkle finish housing. CODE: LACER. Net Selling Price, f.o.b. Peoria, Illinois . . . \$13.50

Special transformer, other than 115 volt 50-60 cycle, for conversion to 230 volt and/or 25 cycle operation. CODE: FOURS. Additional net selling price, f.o.b. Peoria, Illinois \$5.10



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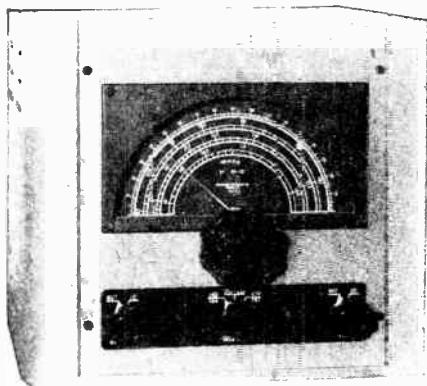


RME

FINE COMMUNICATIONS EQUIPMENT

RADIO MFG. ENGINEERS, INC.

Peoria 6, Illinois U. S. A.



THE HF 10-20 CONVERTER
For 10-11-15 and 20 Meters

Because of the double conversion system, the HF 10-20 provides outstanding and imageless reception on 10-11-15 and 20 meters. And it's an especially vital adjunct to those receivers that tune only up to 18 mc. or possess inadequate bandspread. The HF 10-20 provides an average of 7.8 linear inches of calibrated bandspread on each of the three bands. Images are non-existent. The output (I. F. frequency) of the HF 10-20 is 7 mc. It can be used with any all-wave or amateur receiver. Features include provision for separate antennae, self-contained power supply, antenna selector switch, band selector and high gain. The increase in gain, depending on the receiver and receiving conditions, is approximately 30 DB over the entire range of frequencies covered.

Tubes used are a 6BA6 RF amplifier and a 6J6 twin triode mixer. Built in power supply uses a 5Y3GT rectifier and a VR150 voltage regulator.

Model HF 10-20 Converter, Standard Model, CODE HORN, in cabinet to match RME 45 Receiver in appearance. Dimensions: 11" high, 12" wide, 11" deep.
Amateur Net Price\$77.00

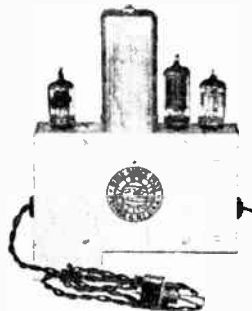
Model HF 10-20 Type "S" Converter, CODE HILL, in cabinet to match RME 84 in appearance. Dimensions: 9 1/4" high, 10 1/4" wide, 10 1/4" deep.
Amateur Net Price\$77.00

THE NEW RATIO DETECTOR (NBF4)
For Optimum Narrow Band FM Performance

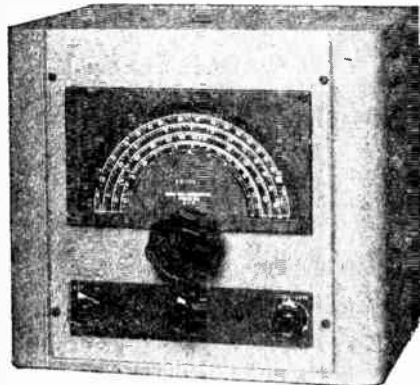
With this plug-in unit and an RME 45 receiver, the noise reducing advantages of NFM are fully realized.

NFM Signals that can't be heard with good AM communications receivers come in loud and clear against a noiseless background.

Equal sensitivity can be enjoyed on AM or NFM. It employs a highly efficient ratio-type detector and a limiter for noiseless reception of NFM signals. Only RME 45 receivers can employ the unit.



Amateur Net Price\$19.50



THE DB22A PRESELECTOR

Coverage .54 to 44 Mc. — Average Gain 30 DB

Here's the new DB22A completely redesigned for greater efficiency and higher signal to noise ratio. It uses new 6BA6 miniatures. Image ratio is better than 50 DB with a communications receiver having a single stage of RF. It's calibrated, has smooth planetary tuning, self contained power supply, antenna by-pass switch, gain control and many other features. Model DB22A Preselector, Standard Model, CODE BONNET, in cabinet to match RME 45 Receiver in appearance. Dimensions: 11" high, 12" wide, 11" deep.

Amateur Net Price\$71.00

Model DB22A—Type "S" Preselector, CODE CLEAR, in cabinet to match RME 84 Receiver in appearance. Dimensions: 9 1/4" high, 10 1/4" wide, 10 1/4" deep.

Amateur Net Price\$71.00

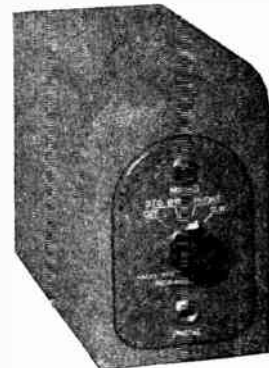
THE BOOMERANG (MB-3)

A Break-In & Monitoring Device for CW & Fone

The "Boomerang" is the solution to rapid and efficient break-in, and the avoidance of needless QRM. Dots and dashes are heard in the headphones or the speaker while sending—a great help in perfecting the fist and avoiding errors.

When the key is down, any signal normally going through the receiver is automatically suppressed. Raise the key and instantaneously the receiver functions.

The "Boomerang" can be used as a handy monitor for phone operation, as a code practice oscillator and a tone modulator. Tubes include a 7K7, a 6SL7 and a 6X4 rectifier. Cabinet is two-tone grey finish.



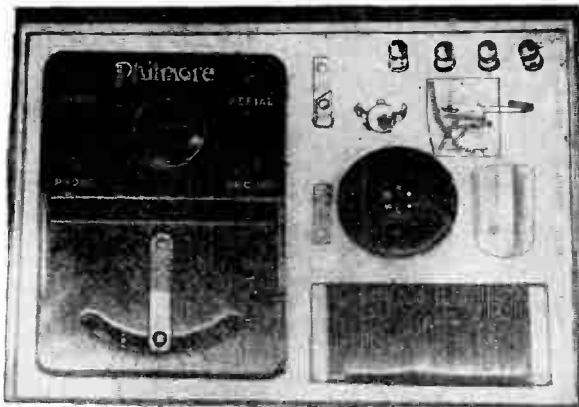
Amateur Net Price\$29.50

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RADIO'S MASTER

Philmore RADIO KITS

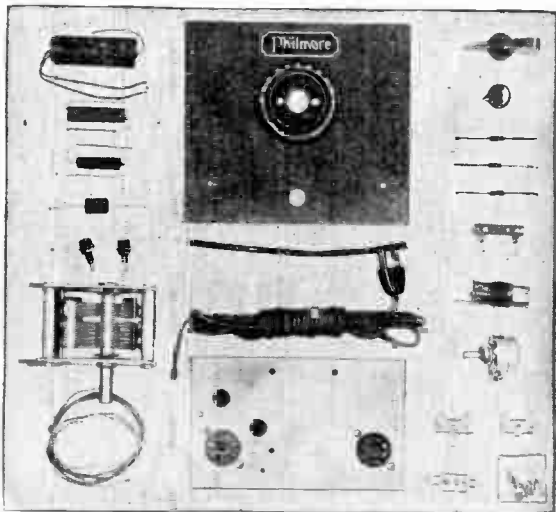


"Supertone" RADIO Crystal Set Kit

Complete in every detail for quick and simple assembly. Crystal set kits are a great hit with youngsters and adults the world over.

Kits consist of moulded bakelite base with contact slider, crystal holder; crystal detector and cover, cats-whisker support, spring cats-whisker, ready wound tuning coil, binding posts, plus all necessary wire, hardware and "easy-to-follow" instructions.

Cat. No. 7001A —
List Price **\$3.15***

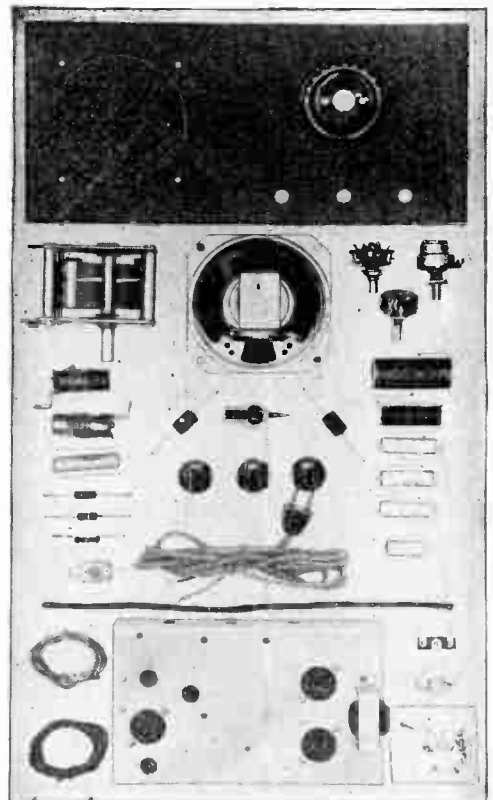


ONE TUBE (Plus Rectifier) Tube AC-DC RADIO KIT

Philmore radio kits have been designed purposely for easy construction and still use the most efficient types of circuits. Kits are replicas of parts and circuits used and thoroughly tested in master models and standardized. This permits anyone without previous knowledge or skill to obtain excellent results by following the simple instructions and diagrams.

Attractively packaged in a sturdy box. All parts are fitted in the inside, making a very presentable display.

No. 7001B — Complete, less tubes and headset.
List Price **\$9.90***



TWO TUBE (Plus Rectifier Tube) AC-DC RADIO KIT

The two-tube plus rectifier tube receiver kit is more elaborate than the one-tube and much greater in signal strength — permitting use of a 4" P.M. speaker. Simple instructions with pictorial as well as schematic diagrams make assembly simple and quick. Attractively packaged in sturdy box.

Here is a completely professional-type radio kit that is perfect for the beginner in radio. An excellent opportunity to learn the fundamentals of radio and at the same time build a radio that will be a high-quality unit, superior in tone and selectivity to many manufactured radios.

Completely assembled, you have a TWO-BAND set, covering standard broadcast (550-1700 Kc) and SHORT WAVE (6-18 Mc).

Cat. No. 7001C—Complete with Speaker, less tubes.....List Price **\$17.50***

*Plus Federal Excise Tax



Each Kit is attractively packaged in sturdy box.

**Glass Enclosed
CRYSTAL DETECTOR**



- Ideal for Crystal Reflex circuits.
 - Dust-proof.
 - Fixed at factory but delicately adjustable at all times.
 - Includes Supersensitive Crystal.
- Cat. No. 7008...List Price \$0.50



**Fixed
CRYSTAL
DETECTOR**

Will give renewed action to reflex or crystal sets. The sensitivity of the mineral is determined by laboratory methods and fixed permanently. Made to withstand high voltage. Small and enclosed in a bakelite case.

Cat. No. 7002.....List Price \$0.80



**Open Type
CRYSTAL
DETECTOR**

Universal joint on swivel arm provides quick, accurate adjustment on any point of crystal. Handsome polished metal finish. Completely assembled, ready for mounting.

Cat. No. 7003.....List Price \$0.38

Unmounted DETECTOR



Includes stand, crystal cup, arm with catswhisker and screws and nuts necessary for mounting.

Cat. No. 7010.....List Price \$0.20



**CRYSTALS and
CATSWHISKERS**

Mounted Galena Crystal on Display Card or Individually Boxed.

List Price

- Cat. No.
- 7001—Galena Crystal, indiv. box... \$0.125
 - 7005—Galena Crystal, disp. card... .125
 - 7006—Catswhiskers (2 on display card)..... .075



**HAND
MICROPHONE**

Ideal novelty for home parties. Cuts in on broadcasts and permits person to talk or sing through the radio speaker. Button switch cuts mike in and out of broadcast. Simple to install. Equipped with 9 ft. of cord.

Cat. No. 500H. List Price \$2.50



**Junior
MICROPHONE**

For home broadcasting; will operate efficiently from any radio set. It will help turn any dull house party into hilarious, enjoyable entertainment.

Equipped with push button switch for cutting off radio programs and bringing in the home broadcaster's voice very clearly. Sensitive, with excellent volume, any set without rewiring and can remain attached without interfering with regular broadcasting.

Cat. No. 500.....List Price \$1.65

Philmore

GUARANTEED RADIO PRODUCTS

**"Little Wonder" and "Supertone" RADIO SETS
Have These Outstanding Features!**

- Glass enclosed dust-proof detector, which is adjustable. (Supertone)
- Specially designed hook-up assuring reception within a radius of twenty-five (25) miles from a broadcasting station.
- Under favorable climatic conditions reception may be received as far as one hundred (100) miles from broadcasting station.
- Costs nothing for upkeep.
- No batteries, tubes or expensive accessories required.
- Manufactured in Genuine BAKELITE in 4 brilliant colored pastel shades of GREEN—ORANGE—RED and ROSE. The advantages of bakelite are well-known for its beauty and cleanliness. It will retain its color and can be kept clean for the life of the set which is practically infinite.

**"Little Wonder"
RADIO RECEIVING SET**

Compact in size but big in results. The open type detector permits adjustments to be made to the finest degree. This set includes the Philmore Supersensitive Crystal which assures quick results when "looking" for a station, because the entire surface of the crystal is sensitive.

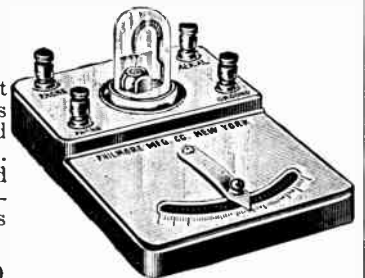
Cat. No. 7000.....List Price \$1.65



**"Supertone"
RADIO RECEIVING SET**

A remarkable Radio Receiving Set built to give everlasting service. This set will bring in broadcasting loud and clear without distortion or noises. The Supertone Crystal Set is equipped with a Philmore Supersensitive Crystal which will give excellent results over an indefinite period of time.

Cat. No. 7001.....List Price \$2.00



**U. S. Army Signal Corps
DOUBLE HEADPHONES**



Made for the U. S. Army—built to meet strict army specifications and offered at a price far below what the government paid for them. We added a plastic 5-foot cord so they may be adapted for civilian use. These are high impedance phones of 2000 ohms and are equipped with a heavy leather covered adjustable headband.

Cat. No. 2260A.....List Price \$3.15

AERIAL KIT

A complete kit of parts for assembly of a professional antenna. Attractively packaged in a multi-colored display box.

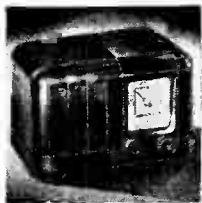
- 1 coil 7-26-50 ft. stranded copper aerial wire.
- 1 coil 25 ft. rubber covered lead-in wire.
- 1 Ground Clamp.
- 1 Lead-in-strip.
- 2 Porcelain insulators.
- 2 Nail-it knobs.
- 1 Instruction sheet.



Cat. No. 2103.....List Price \$1.35

EVERY ONE A CHAMPION!

All Kits Professionally Engineered, Professionally Designed and Professional Looking



KIT MODEL S-5, A 1-BAND RECEIVER

This radio kit contains the following features: improved superheterodyne circuit, built-in loop antenna, PM Alnico speaker, streamlined airplane dial, wide tuning range 550Kc-1600Kc, 5 tubes (including rectifier), 115 V, AC-DC, 12SK7 IF 12SA7 converter, 12SQ7 Det. and 1st audio, 50L6GT output and 35Z5GT rectifier. Complete with tubes including beautiful bakelite cabinet, ready for assembly.



KIT MODEL S-6X, A 2-BAND RECEIVER

Model S-6X, a 6-tube, 2-band receiver kit equipped for 110 AC or DC . . . covers the following ranges: 550 Kc-1600 Kc, 6-16 Mc. Complete with tubes including beautiful bakelite cabinet ready for assembly. This kit uses the following tubes: RF Amp. 12SK7, Converter 12SA7, IF 12SK7, Det. and 1st Audio 12SQ7, 35L6 output and 35Z5 rectifier.



KIT MODEL FM-7, A SELF-CONTAINED TABLE MODEL FREQUENCY MODULATED RADIO RECEIVER KIT

Model FM-7, has a frequency range of 86-110 Mc, can also be used as a TUNER with a high quality amplifier. A phonojack is provided in the rear of the chassis with double pole, double throw switch for feeding signal to either the radio speaker or to the phonojack. An additional jack for connecting extra loud speaker is included. The R.F. section of the kit is pre-assembled at the factory. This kit uses 2 IF stages, 1 limiter and 1 discriminator. Miniature tubes used throughout. Complete with tubes including beautiful bakelite cabinet, ready for assembly.



KIT MODEL 3W10, A THREE WAY PORTABLE RECEIVER

Model 3W10 operates on either AC or DC or self-contained batteries . . . power switch conveniently located on front of set so that "battery" or "AC-DC" may be selected without opening case. Five-inch Alnico 5 permanent dynamic speaker, and case covered with fine grade leatherette material. Complete with tubes, ready for assembly.



KIT MODEL B-4, A FOUR-TUBE PORTABLE RECEIVER

Model B-4 is our new 4-tube portable receiver which operates on self-contained batteries. Approximate size: 8 x 6 $\frac{3}{4}$ x 4. Uses the following tubes: 1R5, 1U4, 1S5 and 3S4. Power switch is conveniently located on front of set. Alnico 5 permanent magnet dynamic speaker. Case covered with fine grade leatherette material. Complete with tubes, ready for assembly.

Service Guarantee

1. Set is guaranteed to operate satisfactorily if directions are followed exactly.
2. If set fails to operate satisfactorily it may be returned to the Service Center for repairs.

All kits accompanied by a detailed, illustrated instruction sheet.
Many Other Kit Models Available. Write for Catalog C.

RADIO KITS COMPANY

120 Cedar Street

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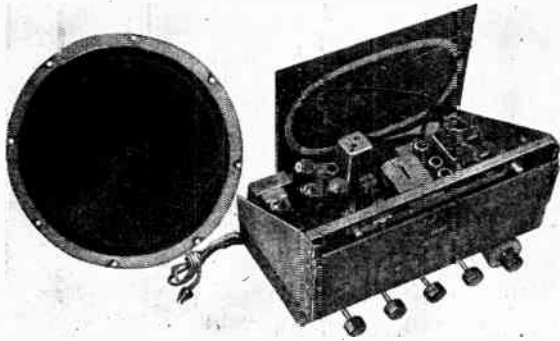
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RADIO'S MASTER

ESPEYMANUFACTURING CO. INC.
NEW YORK 21, NEW YORK

ESTABLISHED 1928

**Model 511 — AM-FM RADIO CHASSIS***A Low-Priced Replacement Chassis.
Fits All Types of Console Cabinets.***DEALER - SERVICEMAN Net \$98.00**

I. Model 511 is a Superheterodyne AM-FM Radio Receiver chassis designed to operate on: 105-125 volts AC; 50/60 cycles. Power consumption: 85 watts.

II. FEATURES: 1. AC Superheterodyne AM-FM receiver. — 2. Improved Frequency Modulation Circuit, Drift Compensated. — 3. 12 Tubes plus Rectifier and Tuning Indicator. — 4. 3 Dual Purpose Tubes give added performance. — 5. Treble Tone Control. — 6. 6-Gang Tuning Condenser. — 7. Full-range Bass Tone Control. — 8. High-Fidelity AM-FM Reception. — 9. Automatic Volume Control. — 10. 13-watt (maximum) Push-Pull Audio Output. — 11. 12-inch PM Speaker with Alnico V Magnet, 25 watts. — 12. — Indirectly Illuminated "Slide-Rule" Dial. — 13. Antenna for AM and Folded Dipole Antenna for FM reception. — 14. Provisions for external antennas. — 15. Wired for Phonograph Operations. — 16. Licensed under RCA patents. — 17. RMA listed. — 18. Multi-tap Output Transformer, 3.2, 8 and 500 ohms.

III. DESCRIPTION: Model 511 receiver features the latest in post-war engineering design. The FM circuit includes a tuned RF Amplifier stage, 2 stages of high gain Intermediate Frequency Amplification and an advanced design Ratio Detector circuit which provides low noise level between stations, freedom from AM interference, ease of tuning and ample gain for satisfactory operation with an indoor antenna in most urban locations. The AM circuit includes a Tuned RF Amplifier for improved selectivity and freedom from spurious responses. High Fidelity reproduction on FM and AM is insured through well-engineered circuits and the use of high quality parts. The tuning ranges are: Standard Broadcast — 535 to 1720 Kc. FM Band — 88 to 108 Mc.

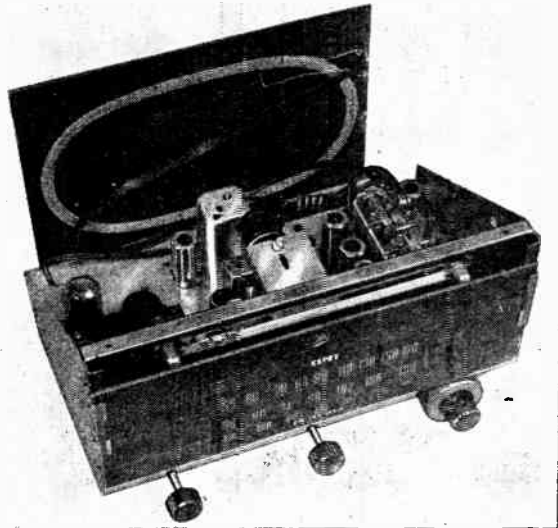
The large easy-to-read "slide-rule" type dial is illuminated by two pilot lights which also provide illumination for the red plastic dial pointer. A high ratio flywheel drive on the tuning condenser provides smooth tuning throughout the range of the receiver.

The receiver has two antennas; a Loop antenna for Standard Broadcast and a Folded Dipole antenna for the FM band. Provision is made for connecting an external Phonograph Pickup to the high-fidelity audio amplifier system of the receiver. The Multi-tap output transformer will permit the use of Most Popular Type Hi-Fidelity Speakers and dividing networks, or to match a standard 500-ohm line for Remote installations.

IV. TUBE COMPLEMENT: 1 AM-RF Amplifier tube. — 1 FM-RF Amplifier tube. — 1 AM Oscillator, Mixer tube. — 1 IF Amplifier tube. — 1 FM Detector Driver tube. — 1 FM Detector tube. — 1 FM Oscillator tube. — 1 FM Mixer tube. — 1 AM Detector, Audio Amplifier tube. — 1 Audio Amplifier-Inverter tube. — 2 Push-Pull Power Amplifier tube. — 1 Rectifier tube. — 1 Electron Ray Tuning Indicator tube.

V. ACCESSORIES: The Model 511 chassis is supplied ready to operate, complete with tubes, antennas, speaker and all necessary hardware for mounting in a table cabinet or console, including escutcheon.

VI. CHASSIS DIMENSIONS AND WEIGHT: Chassis Dimensions: 13½" wide x 8½" high x 10" deep. Carton Dimensions: (2 units) 20" x 14¼" x 10¾". Net Weight: 16½ lbs. each.

**Model 512 — AM-FM TUNER***Outstanding AM-FM TUNER, self-powered
for use with all types of Audio Amplifiers.***DEALER - SERVICEMAN Net \$82.15**

I. Model 512 Superheterodyne AM-FM Radio Tuner chassis is designed to operate on: 105-125 volts AC; 50/60 cycles. Power Consumption: 66 watts.

II. FEATURES: 1. AC Superheterodyne AM-FM tuning circuit. — 2. Improved Frequency Modulation Circuit, drift compensated. — 3. 9 Tubes plus Rectifier and Tuning Indicator. — 4. 3 Dual Purpose Tubes give added performance. — 5. Automatic Volume Control. — 6. 6-Gang Tuning Condenser. — 7. High-Fidelity AM-FM Reception. — 8. Indirectly Illuminated "Slide-Rule" Dial. — 9. Antenna for AM and Folded Dipole Antenna for FM Reception. — 10. Provisions for external antennas. — 11. Wired for Phonograph Operations. — 12. Licensed under RCA patents. — 13. RMA listed. — 14. High and Low Level Audio Output. — 15. Utility Socket provides power for magnetic reluctance pickup pre-amplifier.

III. DESCRIPTION: Model 512 Tuner features the latest in post-war engineering design. The FM circuit includes the tuned RF Amplifier stage, 2 stages of high-gain Intermediate Frequency Amplification, and an advanced design Ratio Detector circuit which provides low noise level between stations, freedom from AM interference, ease of tuning and ample gain for satisfactory operation with an indoor antenna. The AM circuit includes a Tuned RF Amplifier for improved selectivity and freedom from spurious responses. High-Fidelity reproduction on FM and AM is insured through well-engineered circuits and high-quality parts.

Line Voltage is made available at two outlets at the rear of the tuner; these are actuated by the tuner on-off switch. To facilitate custom installations, B+ and Heater Voltages are made available at a utility socket mounted in the tuner. This is suitable for powering auxiliary pre-amplifiers as used with variable reluctance type pickups. Holes for 2 additional controls are available for the convenience of the user. The tuning ranges are: Standard Broadcast — 535 to 1720 Kc. FM Band — 88 to 108 Mc. The receiver has two antennas; a Loop antenna for Standard Broadcast and a Folded Dipole antenna for the FM Band. Provision is made for connecting an external phonograph pickup to the tuner audio system, for use with all types of amplifier installations. Two audio output channels are provided, one at high level, the other at low level; both are controlled by the tuner volume control.

IV. TUBE COMPLEMENT: 1 AM-RF Amplifier tube. — 1 FM-RF Amplifier tube. — 1 AM Oscillator, Mixer tube. — 1 FM Detector Driver tube. — 1 IF Amplifier tube. — 1 FM Detector tube. — 1 FM Oscillator tube. — 1 FM Mixer tube. — 1 AM Detector, Audio Amplifier tube. — 1 Electron Ray Tuning Indicator tube. — 1 Rectifier tube.

V. ACCESSORIES: Model 512 chassis is supplied ready to operate, complete with tubes, antennas, and all necessary hardware for mounting in a table cabinet or console, including escutcheon.

VI. CHASSIS DIMENSIONS AND WEIGHT: Chassis Dimensions: 13½" wide x 8½" high x 9" deep. Carton Dimensions: (2 units) 20" x 14¼" x 10¾". Net Weight: 14 lbs.

Lowest Priced DeLuxe AM-FM UNIT On the Market!

Model 513 — AM-FM DeLuxe TUNER
Dealer-Serviceman Net \$ 78.60

Model 514 — DeLuxe Audio
Amplifier, 25 Watts
Dealer-Serviceman Net \$ 38.60

Alnico V PM Speaker, 12",
25 Watts
Dealer-Serviceman Net \$ 10.35

TOTAL—Dealer-Serviceman Net \$127.55

Model 513

I. FEATURES:

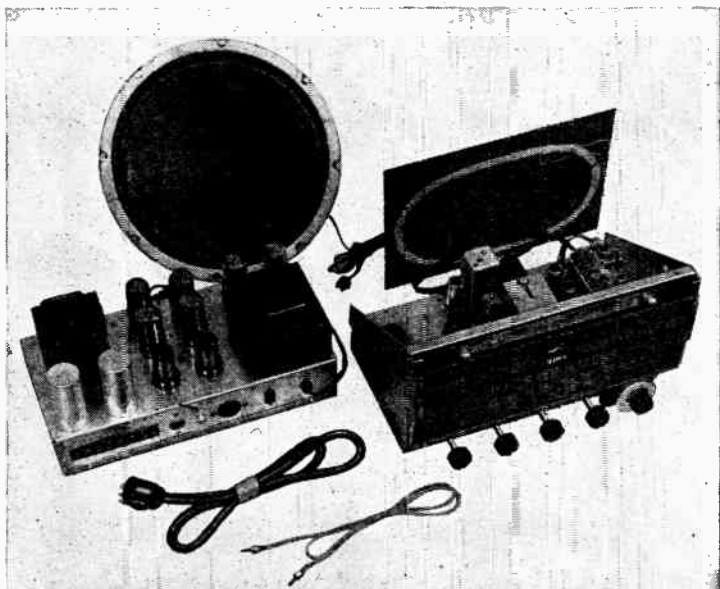
1. Superheterodyne AM-FM circuit.
2. Improved Frequency Modulation Circuit, stabilized against drift.
3. 10 Tubes plus Tuning Indicator.
4. Tuned RF Circuits on AM and FM.
5. 6-Gang Variable Tuning Condenser.
6. Automatic Volume Control.
7. Full Range Bass Boost Control.
8. Full Range Treble Control.
9. Indirectly Illuminated "Slide-Rule" Dial.
10. Fly Wheel Tuning Drive.
11. Antenna for AM and Folded Dipole Antenna for FM.
12. Provision for external antennas.
13. Wired for Phonograph Operation.
14. Utility Socket provides power for magnetic reluctance pickup pre-amplifier.
15. Licensed under RCA.
16. RMA listed.

II. Model 513 AM-FM Tuner employs 10 tubes plus a tuning indicator tube in a superheterodyne circuit. It is designed to operate from an external power supply and feed into an external audio amplifier. (Model 514 DeLuxe Power Supply-Audio Amplifier is specifically designed to work in conjunction with the Model 513 Tuner.) The power requirements for the tuner are 6.3 volts AC or DC at 3.5 amperes, and 200 volts DC at 60 milliamperes.

III. DESCRIPTION: The Model 513 Tuner incorporates the latest developments in engineering design. It is intended for the discriminating listener. Separate, Tuned RF stages are employed on both the AM and FM bands to provide extreme sensitivity and minimize spurious responses. The FM circuit also includes two stages of high-gain intermediate frequency amplification to drive a ratio detector circuit of advanced design. AM: 535 Kc. to 1720 Kc. — FM: 88 Mc. to 108 Mc.

IV. TUBE COMPLEMENT: 1 6BA6 AM-RF Amplifier tube. — 1 6BA6 FM-RF Amplifier tube. — 1 6BE6 AM Converter tube. — 1 6BE6 FM Mixer tube. — 1 6C4 Oscillator tube. — 1 6SG7 AM-FM IF Amplifier tube. — 1 6SH7 FM-Ratio Detector Driver tube. — 1 6J5 AM-Detector AVC tube. — 1 6SQ7 AM-FM 1st Audio tube. — 1 6AL5 FM Ratio Detector tube. — 1 6U5 Tuning Detector tube.

V. CHASSIS DIMENSIONS: 13½" wide x 8½" high x 9" deep. Weight: 9½ lbs.



Model 514 Amplifier & Power Supply.

Model 513 AM-FM Tuner.

Model 514

I. Model 514 DeLuxe Power Supply and Audio Amplifier contains 6 tubes, plus 2 rectifiers in a high gain push-pull amplifier circuit. It is designed specifically for use in conjunction with the Model 513 Tuner, but may be used wherever a high quality audio amplifier may be required. Power requirements are: 105/125 volts AC; 50/60 cycles; power consumption: approximately 15w watts.

II. FEATURES:

1. Parallel Push-Pull Output Circuit.
2. Self-Balanced Phase Inverter System.
3. Extended Range High-Fidelity Response.
4. Inverse Feedback Circuit.
5. 6 Tubes plus 2 Rectifiers.
6. Output Impedance selective for any speaker requirement (4 to 500 ohms).
7. License under RCA.
8. RMA listed.

III. DESCRIPTION: The Model 514 Power Supply-Audio Amplifier employs the best in proven engineering design. Six tubes are incorporated in a balanced phase inverter parallel push-pull amplifier. By the use of an inverse feedback circuit, high-fidelity performance is obtained.

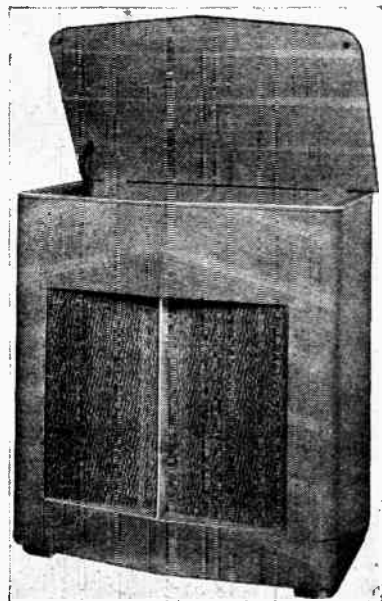
IV. TUBE COMPLEMENT:
2 6J5 Audio Driver tubes. —
4 6V6 Audio Output tubes.
— 2 5Y3 Rectifier tubes.

V. 13½" wide x 7½" high x
7" deep. Weight 18 lbs.

Model 243 Console Cabinet

Dealer-Serviceman . . . Net \$53.50

Modernistic, exquisitely finished limed walnut Console Cabinet. Furnished with panels to house ESPEY chassis and standard record changers.



Model 243 — Open

TRANSVISION

TELEVISION and F.M. KITS and COMPONENTS

NEW... Sensational TRANSVISION Development offers LARGE-IMAGE DIRECT-VIEW TELEVISION at low cost!

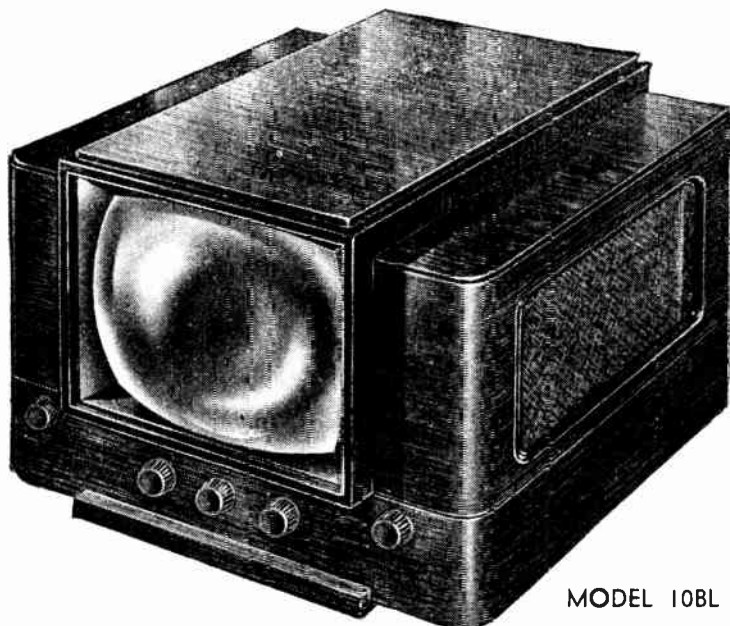
BIGGEST VALUE in TELEVISION

Model 10BL TELEVISION KIT with F.M. Radio . . . Features Beautiful CABINET with BUILT-IN LENS . . . Gives LARGE 120 Square Inch Picture

Rotopicture effect: Picture "rotates," giving the appearance of being in focus and clearly visible from every angle! Uses 10" Electromagnetic Direct-view Picture Tube.

Features new-type cabinet with built-in lens which magnifies, clarifies and heightens contrast of the picture. The lens also creates the effect of apparent rotation of the picture, so that when the observer moves, the picture still seems to be in focus and clearly visible from any angle.

ECONOMICAL KIT, EASY TO ASSEMBLE. In point of value, this Television Kit provides the opportunity of acquiring a LARGE-IMAGE direct-view television set at a VERY LOW PRICE; also very economical from a tube replacement angle. This model is available in KIT FORM, for easy assembly; no technical knowledge required. Simple step-by-step instructions are included. Saves as much as 50% over the cost of receivers with similar picture magnitude.



MODEL 10BL

TECHNICAL DATA: Model 10BL uses a 10" Electromagnetic Direct-view Picture Tube; has complete F.M. Radio which comes completely factory-wired; receives all channels in any area; supplied complete with antenna and lead-in wire. The LENS is 15" x 11", giving a picture size of approx. 10" x 12" or 120 sq. in.; the highly-styled cabinet measures 26" wide x 17" high x 19" deep, available in Mahogany, Walnut, or Blonde finishes.

PRICE: Transvision MODEL 10BL Television Kit, with F.M., 10" tube, cabinet with built-in lens antenna, 60 ft. lead-in wire . . . NET \$299.00

Scoop!

New Revolutionary MODEL 7BL Television Kit with Specially Designed CABINET with BUILT-IN LENS

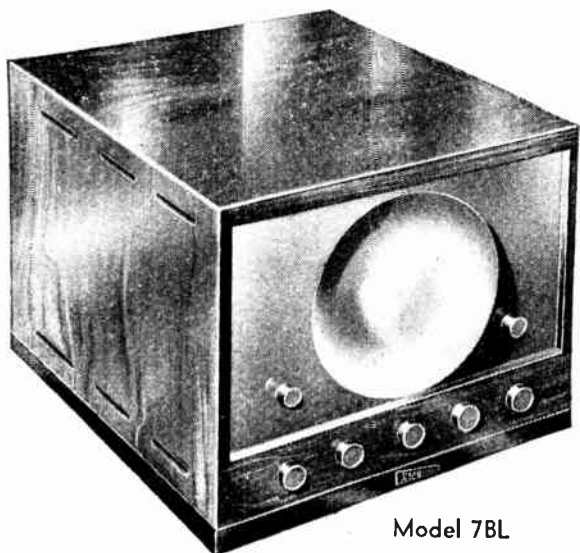
- Uses 7" Electrostatic Picture Tube
- Gives 50 square inch picture of superior quality

FEATURES: Though it has a 7" tube, the effect is equivalent to a 10" set because the built in lens magnifies the picture. Also picture performance is superior because the lens clarifies and heightens contrast of the image. Picture "rotates" apparently, as the observer moves, giving the effect of always facing the observer. This is effective to a very wide angle. Pre-tuned for 5 channels.

PRICE: Including cabinet with built-in lens, antenna, 60 ft. of lead-in wire. . . . NET \$189.00

MODEL 7CL — same as 7BL except that it is a Console/ette with Rotopicture feature. **PRICE:** including cabinet NET \$199.00

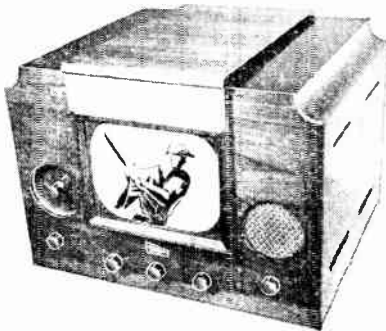
All prices listed herein are 5% additional west of the Mississippi. All prices are fair traded.



Model 7BL

TRANSVISION

TELEVISION and F.M. KITS and COMPONENTS



12" Kit (Table Model)



12" Kit (Console Model)

TRANSVISION offers

A Complete Line of Television 7", 10", 12", and 15" Kits; Cabinets, Tubes, Picture Enlarging Lenses; Basic Parts, Vision Filters; and F.M. Kits and Parts.

BUILD YOUR OWN QUALITY TELEVISION SETS

No Technical Knowledge Required for Assembly

Everything required to assemble a complete quality set is included in the kits—except a screw driver, cutting pliers and a soldering iron. The non-technical, easy-to-follow, step-by-step instructions permit quick, easy assembly by referring to each part as a package number. Sharp, steady picture is achieved with remarkable brightness, even in lighted room. As easy to tune as your radio.

TRANSVISION 12-INCH STANDARD TELEVISION KIT . . . 75 Square Inch Picture—1 1/2 Times Larger Than With 10 Inch Tube . . . with F.M. RADIO

Receives television sight and sound of superior quality . . . RF unit designed for 13 channels . . . factory wired and pre-tuned for 7 channels (no areas have been assigned more than 7 channels; however, if desired, up to 8 more channels may be added at very nominal cost) . . . 4 mc band-width for full picture definition . . . High fidelity F.M. sound reproduction . . . 9000 volts second anode potential for brightness and contrast . . . 3 stages of picture IF, factory pre-tuned . . . 2 stages of IF coils, factory pre-tuned and aligned . . . Maximum picture sensitivity better than 50 microvolts . . . All controls on front panel . . . Complete with 22 tubes and 12" picture tube plus accessories listed below (Cabinet extra, if desired) . . . Chassis size 22"x17 1/2"x4" . . . NET \$246.00

TRANSVISION 12-INCH DELUXE TELEVISION KIT with Superb BUILT-IN F.M. RADIO

Same characteristics and circuit as the Standard Model above plus the following ADDITIONAL FEATURES: 50-216 mc. continuous tuning . . . Covers the entire F.M. band and all 13 television channels . . . Cut-off switch eliminates unused tubes when set is used only as F.M. radio receiver. . . . NET \$299.00



7" Kit (Table Model)

TRANSVISION 7-INCH STANDARD TELEVISION KIT

Receives television sign and sound of superior quality . . . 18 tubes including 7 inch picture tube . . . newly designed sweep and synchronizing circuit . . . high signal sensitivity . . . 100 microvolts for picture circuit . . . pre-tuned for any 3 stations . . . Complete with 18 tubes and 7 inch picture tube, finished front panel plus accessories listed below . . . Chassis size 17"x15"x3 1/2" . . . 169.00



15" Picture Enlarging Lens



Picture Enlarging Lens



Folded Dipole Antenna

PRICE LIST:

TRANSVISION TELEVISION KITS

	Net
7" Std. (5 channels)*	\$169.00
10" Conversion Kit (converts any electro. 7" set to 10")	60.00
10" Deluxe (with FM)**	226.00
12" Std. (with FM)**	246.00
12" Deluxe***	299.00
15" Std. (with FM)**	325.00
15" Deluxe***	359.00

*Television sight and sound only.
**Television plus FM Radio, 88-108 MC.

***With Inputuner—13 TV channels plus FM radio, continuous tuning 50-216 MC.

TRANSVISION TELEVISION CABINETS

All cabinets, table and console models are extra. Made of select grain walnut with beautiful rubbed wood finish. Fully drilled, ready for installation of assembled television receiver. Be sure to buy a Transvision Cabinet for a Transvision Kit, thus insuring easy and perfect installation.

	Net
12" Table Mdl.—Std. or Del.	\$39.95
12" Console—Std. or Del.	75.00
15" Table Mdl.—Std. or Del.	47.95
15" Console—Std. or Del.	82.50
Table for 7", 10", 12" TV sets (walnut)	19.95
Table for Model 10B1 and 15" TV sets	24.95
(Both tables include Roto Feature)	

TRANSVISION PICTURE ENLARGING LENSES

	Net
10" Lens (52 sq. in. pict.)	\$14.95
12" Lens (75 sq. in. pict.)	18.95
15" Lens (125 sq. in. pict.)	26.50

All lenses are provided with mounting brackets.

TELEVISION ANTENNA

	Net
Folded dipole antenna with 60' lead-in (TV)	\$7.20
Reflector for above	3.90
Hi-end rig (channels 7-13) mounts on above antenna	3.95

VISION FILTER

For 7", 10" or 12" sets	\$1.25
For 10B1 or 15" sets	2.50

MAGIC EYE KIT

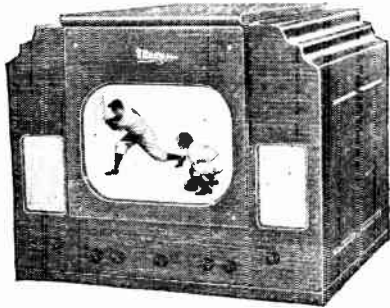
Magic eye kit—for 12/15" deluxe kits only. Includes eye, assembly, escutcheon, instructions. Net \$2.75

All prices listed herein are 5% additional west of the Mississippi. All prices are fair traded.

TRANSVISION

TELEVISION and F.M. KITS and COMPONENTS

TRANSVISION 15" TELEVISION MODEL with F.M. Radio

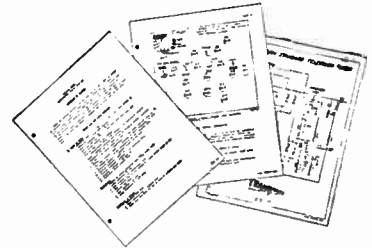


Same general characteristics as the 12" model described on Page K-4 except that it uses a 15" Cathode Ray Tube.

15" Std. (with F.M.)** NET \$325.00
 15" Deluxe*** NET \$359.00

** Television plus F.M. Radio, 89-108 MC.
 *** With Inductuner — 13 TV channels plus F.M. Radio continuous tuning 50-216 MC.

TRANSVISION "SERVICE NOTES" The Key to Successful Television Servicing



Transvision's "Service Notes" is a compilation of confidential Television Notes and Information, the product of experience with over 20,000 television receivers, now made available to the public.

The "Service Notes" is a most valuable compilation of instructions and data on Magnetic and Electrostatic Television Receivers. Though compiled in the course of servicing Transvision Kits, the information is applicable to any type of television receiver.

"Service Notes" is complete with photographs and diagrams. The information is worth a small fortune. The cost is low. NET \$1.95

THE COMPLETE TELEVISION DEPARTMENT



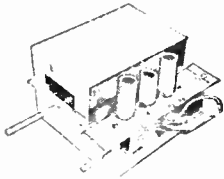
TRANSVISION OFFERS THE COMPLETE TELEVISION DEPARTMENT. The Transvision line of Television and FM Kits, Cabinets, Accessories, and Components is the most extensive of its kind and represents the outstanding values in the field today.

PLAN YOUR TELEVISION DEPT. with this illustration as a guide. Distributors and dealers are invited to send for copies of this beautiful illustration to guide them in setting up a complete, attractive and profitable TRANSVISION TELEVISION DEPARTMENT. Send for it today.

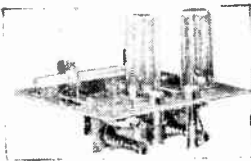
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TRANSVISION

TELEVISION and F.M. KITS and COMPONENTS



All-Channel R.F. Unit



FMF-2 Tuner Front End



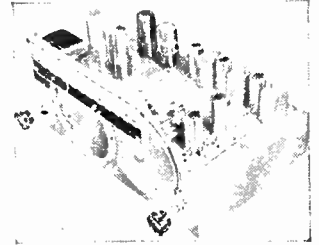
FM-107 IF Amplifier Kit

TRANSVISION F.M. RADIO—8 TUBE RECEIVER KIT

When wired this is a high quality F.M. Radio which would retail for 2 to 3 times the cost. . . . Complete instructions for easy, rapid assembly. . . . Makes an F.M. Receiver of the highest quality and fidelity. . . . No technical skill whatsoever required. This F.M. Receiver covers the entire F.M. Band from 87.5 to 109.5 megacycles.

TRANSVISION F.M. RADIO KITS AND F.M. UNITS

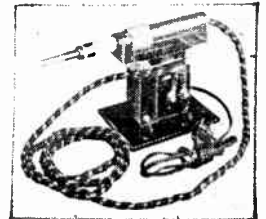
	Net
FM-1 Comp. F.M. Radio Kit (wired and tuned, less tubes)	\$56.90
FMF-2 2 tube tuner front end, wired, less tubes	13.00
FMF-3 3 tube tuner front end, wired, less tubes	18.60
FM-107R, 3 tube IF amplifier kit, unwired, less tubes	13.00
FM-107, 6 tube IF amplifier kit, unwired, less tubes	24.72
Combination FMF-2 & FM-107R wired and tuned, less tubes, mounted on one plate	34.95



FM-1 FM Radio Kit

R.F. TUNER UNITS

	Net
5 Channel RF Tuner with RF stage, wired & tuned incl. tubes (3)—2 upper and 3 lower channels	\$22.90
All-channel TV-RF Tuner (wired & tuned for 7 channels) with tubes, has RF stage	31.95
Set of FM radio strips to provide FM radio reception (88-108 MC tuning) on Std. all-channel RF tuner	10.00
All-channel TV-RF tuner with FM radio reception (88-108 MC) completely wired, with tubes & dial	41.95
Deluxe TV-FM Inputuner, 13 TV channels plus FM radio (50-216 MC continuous tuning) completely wired, with tubes & escutcheon plate	57.95



Soldering Iron

TRANSVISION FEATHERWEIGHT SOLDERING IRON

3 Ounces—Does Job of 200 Watt Iron —
Interchangeable Tips; No Cleaning or Filing
Easy to Use for Every Type of Soldering

Fingertip control . . . High working output . . . Low current drain . . . Heats up in 20 seconds . . . Cool grip . . . Retains heat (with switch off) up to one minute . . . Economical . . . Intermittent control feature prevents tip corrosion and necessity of frequent cleaning . . . Long, thin tip permits soldering in tight corners . . . Ready for attachment and operation on 110V AC, 60 cycles, from our 6-8 volt transformer furnished with this iron and including soldering tip.

FEATHERWEIGHT SOLDERING IRON . . . NET \$12.50

TRANSVISION TELEVISION PICTURE TUBES

7EP4 Electrostatic 7" picture tube—ea.	\$ 23.25
10HP4 Electrostatic 10" picture tube—ea.	65.00
10BP4 Magnetic Deflection 10" picture tube—ea.	42.50
12JP4 Magnetic Deflection 12" picture tube—ea.	69.75
15AP4 Magnetic Deflection 15" picture tube—ea.	129.50



Cathode Ray Picture Tube

TRANSVISION BASIC PARTS PRICE LIST

Part No.	Description	Net	Part No.	Description	Net	Part No.	Description	Net
No. 7	Coll Kit with Peaking Coils	\$10.75	158	Chassis		0-325	HV Shield, per set	\$ 1.05
16	Peaking Coil, 250 mh.	.26	159	Bottom Plate	\$ 7.95	0-330	10,000 volt ceramic condenser	1.05
17	Peaking Coil, 125 mh.	.26	161	Audio Shield	.48	0-334	Ceramic Trimmer	.67
19	Peaking Coil, 35 mh.	.26	166	Insulating plate, bakelite, 3"x1"	.32	0-345	HV Tube socket spacer	.34
22	Filter choke, 30 ma, 20 henries	1.40	167	Insulating plate, bakelite, 2"x1"	.32	0-348	CRT Mounting Strap	.10
23	Filter choke, 175 ma, 10 henries	3.50	174	I.F. Transformer, 1st & 3rd stages	3.00	0-363	Chassis & bottom pl.	12.25
24	Low Voltage Trans.		175	I.F. Transformer, 2nd stage	3.50	0-365	Slug Coil	.48
	Primary 117V, 60 cycles		176	I.F. Transformer, 4th stage	2.85	0-377	Hor. linearity cont.	.60
	Sec. = 1, 725V CT @ 175 ma		177	I.F. Transformer, Sound	2.85	0-382	Insulated shaft	.67
	Sec. = 2, 5V @ 5A		187	CRT Saddle	.75	0-390	Felt, 2"x1/2"	.18
	Sec. = 3, 0.5V @ 8A		188	CRT Blocks, per set	.50	0-346	Bakelite Spacer	.03
	Sec. #1, 6.3V @ 175A	9.95	0-230	4 mfd. Elec. 50 V	.35			
	Sec. #2, 2.5V @ 2A	6.30	0-303	Power Transformer	11.15			
82	Capacitor, mica, .001 mfd, 9500 V.	1.30	0-304	Choke	3.25			
83	Capacitor, mica, .05 mfd, 2500 V.	2.10	0-305	Vertical Output Tr.	4.85			
84	Capacitor, HV cam, 2", 2500 V.	2.45	0-306	Vert. Blocking Osc.	2.75			
85	Capacitor, ceramic, .001 mfd, 500 V.	.24	0-307	Hor. Osc. Transformer	2.75			
90	Electrolytic cond., 40 30/20/10 mfd., 450/25 Volts	1.75	0-308	Hor. Output Transformer	8.35			
97	Panel Bracket	.25	0-309	Focus Coil	4.85			
98	CRT Legs (Pair)	.50	0-310	Deflection Yoke	6.95			
99	CRT Clamp	.26	0-311	Deflection Yoke Hood	1.35			
116	Standard Anode Bracket	.11	0-312	Focus Coil Strippup	.87			
117	Grid cap, H.V.	.40	0-323	Speaker Bracket	.25			
152	Front panel, 7" kit only	2.95						

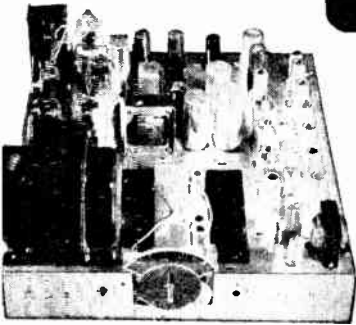
All prices listed herein are 5% additional west of the Mississippi. All prices are fair traded.

TELEVISION ASSEMBLY CO.

INTRODUCES THE

Champion Models
with

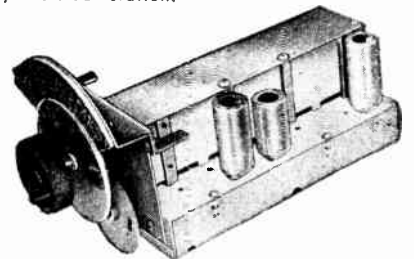
DUMONT INPUTUNER



The Dumont Inputuner tunes continuously from 44 to 216 megacycles without a break, covers all 13 channels as well as FM, amateur, and aviation channels. For ease and convenience of operation no band switching of any kind is required when tuning from channel to channel with the inputuner system. Just one simple operation to reach any desired station.

Assemble the Champion model of your choice, 10" flat surface screen picture, 52 sq. in. picture, 12" screen picture with 75 sq. in. picture or the 15" screen picture with 120 sq. in. picture.

All Champion Models are complete with all tubes and components including the CR tube.



10" FLAT SURFACE

12" SCREEN PICTURE

15" SCREEN PICTURE

52 sq. in.

75 sq. in.

120 sq. in.

Standard Models

NOW AVAILABLE WITH
THE STANDARD MODELS—
FM RADIO AT A SLIGHT
ADDITIONAL COST OF
\$7.95.

All Television Assemblies are complete and include: 29 RCA Tubes-1 CR Tube-Heavy Duty RCA 6.8 oz. slug 12" PM Speaker-Specially designed dipole antenna with 60 ft. lead in.

Superior performance is obtained with a new IF Video & Sound IF Strip (Pat. Pend.) aligned, wired, pretuned, tubed and tested. All circuits are contained on one chassis ready to use with the front end unit supplied. This front end will handle 13 channels and is aligned and tested, mounted on a separate chassis. Merely connect B plus filament and output IF leads to the television chassis. It is not necessary to make any RF alignments. These units utilize a clipper circuit which filters out ignition noises.

10" FLAT SURFACE

12" SCREEN PICTURE

15" SCREEN PICTURE

52 sq. in.

75 sq. in.

120 sq. in.

Guaranteed

All Television Assemblies are guaranteed to operate to your satisfaction when simple directions are followed.

SEE YOUR
LOCAL NATIONAL
PARTS
DISTRIBUTOR

TELEVISION
ASSEMBLY CO.

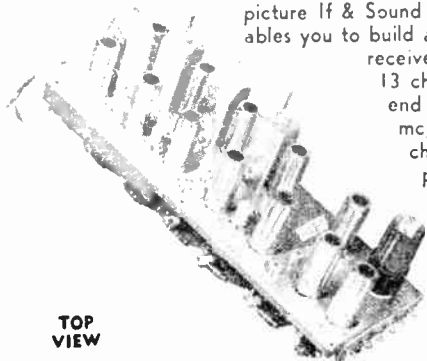
540 BUSHWICK AVE.
BROOKLYN 6, N. Y.

TELEVISION INDUSTRIES Co.

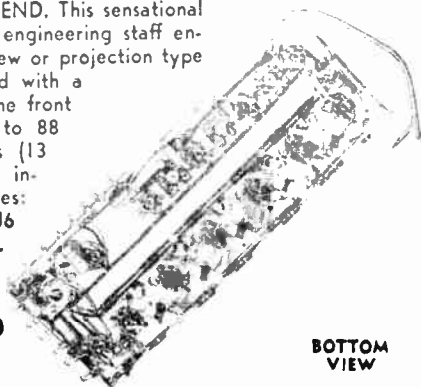
PICTURE IF & SOUND IF STRIP

PATENTS PENDING

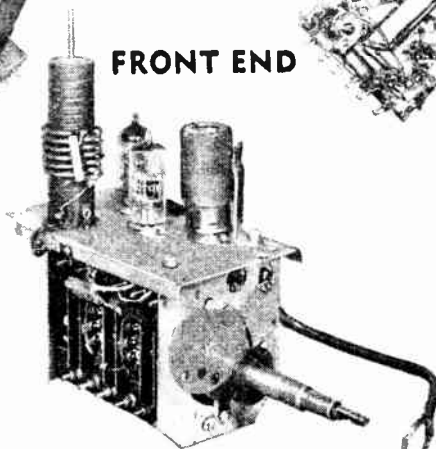
PICTURE IF & SOUND IF STRIP and FRONT END. This sensational picture If & Sound If Strip developed by our engineering staff enables you to build a 10"-12"-15"-20" direct view or projection type receiver with FM sound. Supplied with a 13 channel RF front end unit. The front end covers channels from 44 to 88 mc/s and 174 to 216 mc/s (13 channels). Matched antenna input for 300 ohm line. Tubes: 1-6J6 RF amplifier 1-6J6 converter 1-6J6 oscillator.



TOP VIEW



BOTTOM VIEW



FRONT END

The Front End covers channels from 44 to 88 mc/s and 174 to 216 mc/s (13 channels). Matched antenna input for 300 ohm line
Tubes: 1-6J6 RF Amplifier 1-6J6 Converter 1-6J6 Oscillator

● PICTURE IF = 5 picture IF stages of amplification and second detector. SOUND IF STAGES 2 IF stages with limiter and discriminator. VIDEO amplifiers = 2 stages video with a frequency response of 4.5 mc/s ONE DC RESTORER. IF FREQUENCY audio 21.25 — picture 25.75.

Picture IF band width 4.5 mc/s. All the above circuits and tubes are contained on one chassis. Front end unit on separate chassis. Both picture IF and sound IF delivered completely wired, tested, tubed, and matched ready for use.

DUMONT INPUTUNER

The Dumont Inputuner tunes continuously from 44 to 216 megacycles without a break—covers all 13 television channels as well as FM, amateur, and aviation channels. For ease and convenience of operation no band switching of any kind is required when tuning from channel to channel with the inputuner system. Just one simple operation to reach any desired station.



BAUSCH & LOMB TELEVISION PROJECTION LENS



Television Industries Co. is proud to announce that they have been appointed national wholesale distributors for the Bausch & Lomb f: 1.9 Television Projection Lens. Sample orders filled immediately.

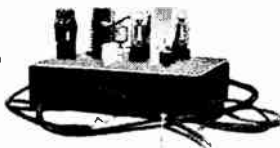
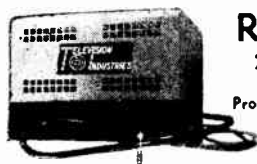
DEFLECTION COILS



Deflection Yoke similar to RCA part # 20 ID1

R. F. POWER SUPPLY

27 — 30 K.V.
for
Projection Television



Contact Us for your Local Distributor

540 BUSHWICK AVE.

TELEVISION INDUSTRIES

BROOKLYN 6, N. Y.

MARVA-LENS TELEVISION IMAGE MAGNIFIERS

BRINGS GIANT-SIZE SCREENS TO EVEN THE SMALLEST TELEVISION SETS

MARVA-LENS enlarges pictures up to four times original size without distortion. Clarity and detail are retained, brightness of the picture is actually increased, and a wide

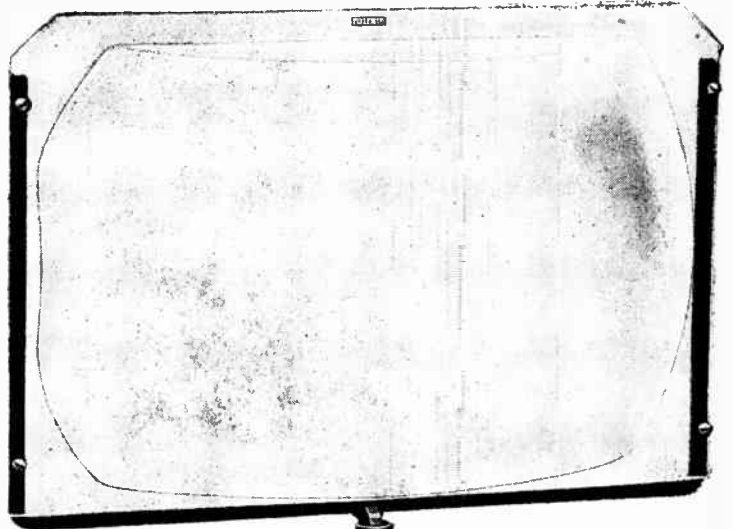
angle view is afforded. These magnifiers install in seconds without tools or tedious adjustments . . . once installed need no further attention.

A SIZE FOR EVERY SET AND PRICE RANGE
MARVA-LENS magnifiers available in these three models with adjustable brackets as shown below for mounting under television set.

MARVA-LENS — Model M-122
Competitively priced. High quality optics. Fits 7, 10 and 12 inch screens. Gives up to triple magnification. **\$39.95 RETAIL**

MARVA-LENS — Model M-101
Light-weight magnifier for 7 and 10 inch screens. More than double magnification for these sets. **\$29.95 RETAIL**

MARVA-LENS — Model M-70
Specifically designed for attachment to the new low-cost 7 inch television receivers. A sure-fire sale with every set you sell. Enlarges more than double. **\$19.95 RETAIL**



EASY-TO-INSTALL

NO TOOLS

NO SERVICE

NO CALL-BACKS

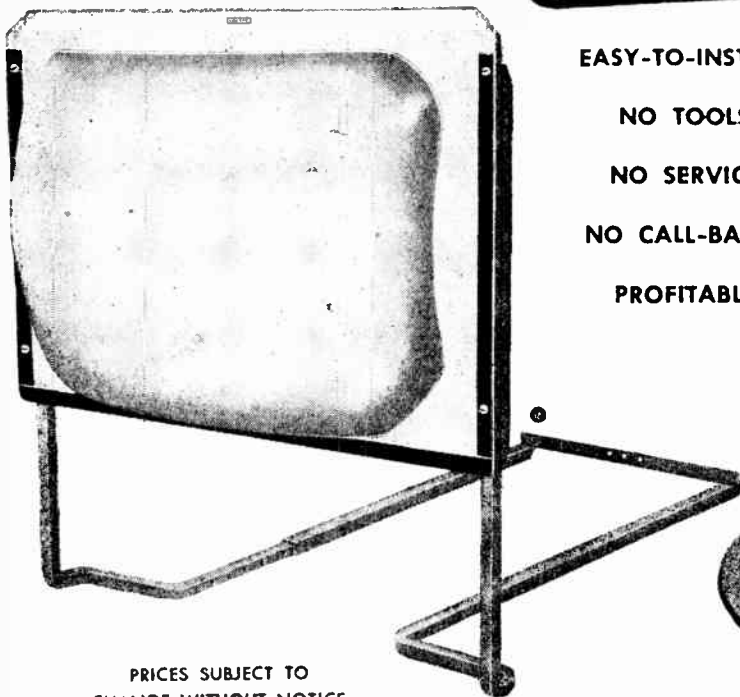
PROFITABLE

MARVA-LENS also furnished in Floor Stand model — easily and quickly adjusted for height.

MARVA-LENS FLOOR STAND TYPE —

Model M-125

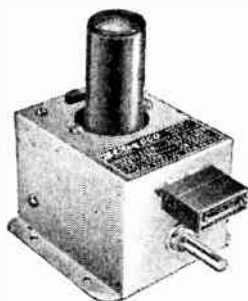
For 7, 10 and 12 inch screens.



PRICES SUBJECT TO
CHANGE WITHOUT NOTICE

Bliley

CRYSTALS AND CRYSTAL CONTROLLED OSCILLATORS



CCO — CRYSTAL CONTROLLED OSCILLATOR — MODEL 2A

For 2-6-10-11 Meters

With this basic oscillator, employing a 6AG7 tube, the advantages of VHF crystal control are easily achieved. Has direct output on 6-10-11 meters and ample output to drive tripler stage on 2 meters. Single tuning control, bandswitch and crystal socket are mounted on outside of painted metal subchassis with power and output

terminals at back. Uses Bliley AX2 20-meter crystals for output on 10 and 11 meters, new Bliley AX3 crystals for 6 and 2 meter operation. Ideal as nucleus for new construction or conversion of existing equipment.

Supplied less tube and crystal \$9.95

AMATEUR FREQUENCY CRYSTALS

TYPE AX2

These high stability advanced design crystals are plated to insure long term precision and reliability. Calibrated to $\pm .002\%$ with drift less than .0002% per degree Centigrade. Holder pins spaced on .486" centers.

Supplied	Range	Price
± 2 Kc	3500— 4000 Kc	\$2.80
± 2 Kc	7000— 7425 Kc	2.80
± 30 Kc	12500—13500 Kc	3.95
± 30 Kc	13580—13714 Kc	3.95
± 30 Kc	14000—14850 Kc	3.95



TYPE MC9 3105 Kc

This unit is suggested for use in private aircraft transmitters operating at 3105 Kc. The crystal is guaranteed to be within $\pm .02\%$ of 3105 Kc at any temperature between 0° C and 50° C and is factory tested for performance over this temperature range. Plug-in type holder is gasket sealed against moisture and humidity.

Price \$5.50

TYPE VX2 3105 Kc

Designed for applications where space is at a premium, this unit is recommended for private aircraft communication at 3105 Kc. Guaranteed to maintain frequency within $\pm .02\%$ at any temperature between 0° C and 50° C. Solder lug connections permit mounting under chassis and assembly is gasket sealed against moisture and humidity.

Price \$5.00

TYPE AX3

A new third overtone crystal unit produced for use in the Bliley CCO-2A. Has exceptionally high activity at operating frequency. Calibration accurate to $\pm .003\%$ in CCO-2A with drift less than .0002% per degree Centigrade. Plated crystal is mounted in gasket sealed holder with pins spaced .486" centers.

Supplied	Range	Price
± 5 Kc	24000—24333 Kc	\$3.95
± 5 Kc	25000—25500 Kc	3.95



TYPE KV3 100 Kc

A precision crystal designed for use in secondary standards. Crystal is silver plated and mounted between wire supports which are soldered to the plated surfaces. Exceptionally low drift crystal is adjustable to exactly 100 Kc at 25° C when used in recommended oscillator circuit.

Price \$6.95

TYPE CF6 455 Kc

Single signal filter crystal unit. Exceptionally low holder capacity permits sharp signal discrimination in filter network of general communications receivers. Frequency 455 Kc free from spurious responses within ± 7 Kc.

Price \$4.50



TYPE CF3 455 Kc

Single signal filter crystal unit. Frequency 455 Kc, ± 5 Kc—free from spurious responses within ± 7 Kc of fundamental. Designed for intermediate frequency filter in general communications receivers.

Price \$5.00



TYPE SMC100 100-1000 Kc

Dual frequency crystal provides either 100 Kc or 1000 Kc frequency source. When used in recommended oscillator circuit 1000 Kc frequency is within $\pm .05\%$ at 25° C and 100 Kc frequency can be adjusted to zero beat at 25° C. Suggested for signal generators used in alignment of radio receivers.

Price \$8.75

For complete dimensional information consult Bulletin 35 available at any Bliley distributor.

Bliley CCO

CRYSTAL
CONTROLLED OSCILLATOR

MODEL 1C

For instant channel selection and frequency accuracy, radio service technicians use this Bliley test instrument.

It provides direct crystal control for i-f alignment. Write for descriptive Bulletin 32.

Complete with 7 Bliley crystals, tubes and concentric output cable \$69.50

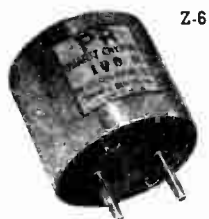
BLILEY ELECTRIC COMPANY

PR Precision CRYSTALS

COMMERCIAL TYPES—SPECIFICATIONS

Type	Frequency Range	Pin Spacing	Pin Diameter	Height Above Pins	Width	Depth	
Z-1 Fundamental	900 Kc. to 12000 Kc.	.486"	.093"	1-3/16"	13/16"	7/16"	
Z-1 Harmonic	12000 Kc. to 30000 Kc.	.486"	.093"	1-3/16"	13/16"	7/16"	
Z-1A Fundamental	425 Kc. to 12000 Kc.	3/4"	.125"	1 3/8"	1 3/8"	1/2"	
Z-1A Harmonic	12000 Kc. to 30000 Kc.	3/4"	.125"	1 3/8"	1 3/8"	1/2"	
Z-1B Fundamental	1000 Kc. to 12000 Kc.	3/4"	.125"	1 3/8"	1-3/16"	1/2"	
Z-1B Harmonic	12000 Kc. to 30000 Kc.	3/4"	.125"	1 3/8"	1-3/16"	1/2"	
Z-1D Same as Z-1	Same as Z-1	1/2"	.125"	1-3/16"	13/16"	7/16"	
Z-1E Same as Z-1	Same as Z-1	1/2"	.125"	1 1/4"	1 1/8"	7/16"	
Z-1H Single or dual unit Fundamental	100 Kc. to 5000 Ec.	3-Pin W.E.	.157"	2-1/16"	1-19/32"	1-3/16"	
Z-1K Same as Z-1A except has .157" dia. pins	Same as Z-1A						
Z-1M Fundamental	1000 Kc. to 5000 Kc.	7/8"	Std. Banana	2-3/32"	1-19/32"	3/4"	
Z-1R Fundamental	175 Kc. to 475 Ec.	1/2"	.093"	1 1/4"	1-3/32"	7/16"	
Z-8 Fundamental	400 Kc. to 5000 Ec.	3/4"	1/8"	1 3/4"	1-9/16"	11/16"	
Z-6 Fundamental	100 Kc. to 175 Ec.	3/4"	1/8"	1 1/2"	Diameter	1-25/32"	
E-1 Fundamental	400 Kc. to 7000 Ec.	Interchangeable with FT-164 and AC-95					
FT-171-B Fundamental	1000 Kc. to 8000 Kc.	3/4"	Std. Banana	2 1/4"	1 1/2"	13/16"	

* Can be Supplied with Standard Banana Pins.



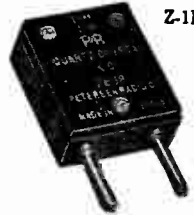
Z-6



Z-1



Z-1A



Z-1B

PETERSEN RADIO Company, Inc., 2800 W. Broadway, Council Bluffs, Iowa

PR Precision CRYSTALS



AMATEUR — Specifications and Frequencies

TYPE Z-2



Z-2



Z-3



Z-5

- 160 meter band for VFX-680 Narrow Band FM in Sonar Exciter.
- 1699.2 to 1710 Kc. for 11 meter band.
- 1750 to 1812 Kc. for 10 meter band.
- 1828 and 1844 Kc. These 2 frequencies cover entire 10 meter FM band in Sonar VFX-680.
- 1562.5 to 1687.5 Kc. for 6 meter band.
- 1778 to 1827 Kc. for 2 meter band.
- 3395 to 3428.5 Kc. for 11 meters.
- 3500 to 4000 Kc. for 80, 40, 20 and 10 meters.
- 6250 to 6750 Kc. for 2 meters.
- 6790 to 6857 Kc. for 11 meters.
- 7000 to 7425 Kc. for 40, 20 and 10 meters.
- 8000 to 8222 Kc. for 2 meters.
- 8334 to 9000 Kc. for 6 meters.
- 9000 to 9250 Kc. for 2 meters.

TYPE Z-3

- 12000 to 12333 Kc. for 2 meters.
- 12500 to 13500 Kc. for 6 meters.
- 13580 to 13715 Kc. for 11 meters.
- 14000 to 14850 Kc. for 20 and 10 meters.

TYPE Z-5

- 25000 to 27000 Kc. for 6 meters.
- 27160 to 27430 Kc. for 11 meters.
- 28000 to 29700 Kc. for 10 meters.

CHECK SUPERIORITY OF PR Crystals

Stability . . .

Drift characteristics of PR Crystals limited to less than 2 cycles per MC per degree. You get low drift, combined with high output, dependable frequency control. X-Ray orientation guarantees uniform cut for maximum low-drift performance.

Accuracy . . .

Guaranteed accurate within .01 per cent of specified frequency or better. When doubling and quadrupling accuracy is absolutely essential. You KNOW where you are with PRs.

Power Output . . .

PRs are designed to give maximum power output from the exciter stage when operating at the highest permissible voltages. PR Crystals can "take it."

Activity . . .

PRs give you high activity. They "come in" instantly on phone . . . key without chirps, even at high bug speeds, without excessive "backing off."

Unconditional Guarantee . . .

Every PR Precision CRYSTAL is guaranteed unconditionally, by the makers of fine crystals since 1934.

PETERSEN RADIO Company, Inc., 2800 W. Broadway, Council Bluffs, Iowa

PR Precision CRYSTALS



PRICE LIST SUBJECT TO CHANGE WITHOUT NOTICE

COMMERCIAL

Type	Frequency Range	Tolerance			Schedule
		.005%	.01%	.02%	
Z-1 Fundamental	900 to 12000 Kc.	\$12.50	\$11.00	\$10.00	A
Z-1 Harmonic	12000 to 20000 Kc.	15.00	12.50	11.00	A
Z-1 Harmonic	20000 to 30000 Kc.	18.00	15.00	13.00	A
Z-1A Fundamental	425 to 900 Kc.	15.00	12.50	11.00	A
Z-1A Fundamental	900 to 12000 Kc.	12.50	11.00	10.00	A
Z-1A Harmonic	12000 to 20000 Kc.	15.00	12.50	11.00	A
Z-1A Harmonic	20000 to 30000 Kc.	18.00	15.00	13.00	A
Z-1B Fundamental	1000 to 12000 Kc.	12.50	11.00	10.00	A
Z-1B Harmonic	12000 to 20000 Kc.	15.00	12.50	11.00	A
Z-1B Harmonic	20000 to 30000 Kc.	18.00	15.00	13.00	A
Z-1D Same as Z-1	Same as Z-1				A
Z-1E Same as Z-1	Same as Z-1				A
Z-1H Fundamental	100 Kc. Standard		(Exact Frequency)	12.00	B
Z-1H Fundamental	101 to 900 Kc.	18.00	15.00	13.00	A
Z-1H Fundamental	901 to 5000 Kc.	15.00	12.50	11.00	A
Z-1H Dual Unit	901 to 5000 Kc.	30.00	27.50	25.00	A
Z-1K Same as Z-1A	Same as Z-1A				A
Z-1M Fundamental	1000 to 5000 Kc.	15.00	12.50	11.00	A
Z-1R Fundamental	175 to 475 Kc.	18.00	15.00	13.00	A
Z-1R Fundamental for Signal Generators	{ 175, 200, 262, 370, } { 455, 456, 465 Kc. }		6.00		B
Z-1R Fundamental	475 to 1000 Kc.	15.00	12.50	11.00	A
Z-8 Fundamental	400 to 900 Kc.	18.00	15.00	13.00	A
Z-6 Fundamental	100 Kc. Standard		(Exact Frequency)	9.00	B
Z-6 Fundamental	101 to 175 Kc.	18.00	15.00	13.00	A
E-1 Fundamental	400 to 900 Kc.	20.00	18.00	15.00	A
E-1 Fundamental	900 to 7000 Kc.	18.00	15.00	13.00	A
FT-171-B Fundamental	1000 to 8000 Kc.	12.50	11.00	10.00	A

AIRCRAFT

Type	Frequency	Price	Schedule
Z-1, Z-1A, Z-1B	3105 and 6210 Kc.	\$5.00	C

MARINE

Type	Transmitter	Receiver	Schedule
Z-1	\$10.00	\$10.00	A
Z-1A	10.00	10.00	A
Z-1B	10.00	10.00	A
Z-1D	10.00	10.00	A
Z-1H	12.50	12.50	A
Z-1H Dual	25.00	25.00	A
Z-1K	12.50	12.50	A
Z-1M	12.50	12.50	A

AMATEUR

Note: Crystals Within Amateur Bands Supplied INTEGRAL KILOCYCLES Only.

Type	Tolerance	Price	Schedule
Z-2	.01%	\$2.75	B
Z-3	.01%	3.75	B
Z-5	.01%	5.00	B

Crystals for amateur service other than frequencies listed on Catalog Sheet can be supplied as follows:

Type	Range	Tolerance		Sched.
		Plus or Minus 5 Kc.	Plus or Minus .02%	
Z-2, Fundamental	1500 to 10000 Kc.	\$2.75	\$11.00	B
Z-3, 3rd Harmonic	10000 to 20000 Kc.	3.75	11.00	B
Z-5, 3rd Harmonic	20000 to 30000 Kc.	7.50	13.00	B

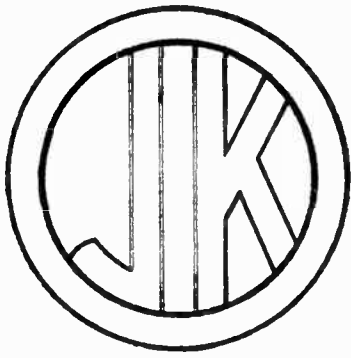
NOTICE

Prices on Commercial Crystals are based on quantities of 1 to 10 of the same frequency. For larger quantities write for prices.

Price on crystals below 100 Kc. furnished on request. Tolerance can be guaranteed only when oscillator or circuit diagram is furnished.

To facilitate the handling of your order, please order by type number and indicate permissible tolerance.

PETERSEN RADIO Company, Inc., 2800 W. Broadway, Council Bluffs, Iowa



Crystals for the Critical

JK "Stabilized" Crystals are produced by the most modern methods known to the science of crystal manufacture. Our process known as "Stabilizing" absolutely prevents frequency shifts due to aging in use or on the shelf. "Stabilized" Crystals are thus your assurance of better and longer crystal performance.

DIATHERMY

COMMUNICATIONS

AIRCRAFT

FREQUENCY STANDARD

MARINE

BROADCAST

POLICE

FILTER

SUPERSONIC

AMATEUR

Write for Complete
Illustrated Folder



JK OVEN

Range 80 to 7500 kc.
Approved by the FCC
for BC stations. Also
available without ther-
mometer or without side
terminal.

FOR ALL APPLICATIONS

To meet your requirements—or wishes—The James Knights Company is completely equipped to cut crystalline quartz into any shape and size for any application.

For those who prefer to finish their own communications crystals, blanks can be supplied in any cut, size and thickness. For those who desire complete frequency control units, The James Knights Company specializes in custom built crystals manufactured to any specifications.

We can readily cut crystalline quartz to fit any application for supersonic equipment, measuring and testing instruments, no matter how intricate or difficult.

THE JAMES KNIGHTS COMPANY
SANDWICH, ILLINOIS

PREMIER CRYSTALS



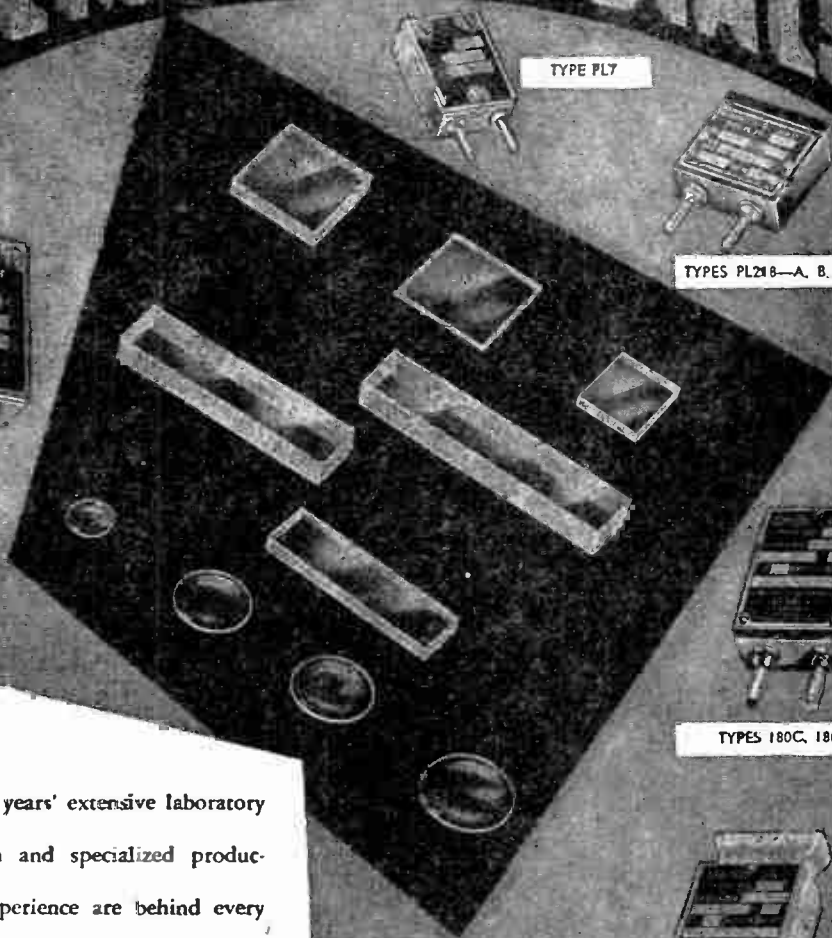
TYPE PL11



TYPE PL7



TYPES PL218—A, B, C, D & E



TYPES 180C, 180G, 180P



TYPES 180CF, 180GF, 180PF

Seventeen years' extensive laboratory research and specialized production experience are behind every PREMIER CRYSTAL unit manufactured today. All types of crystal units from 1 kc to 50 mc are available.



TYPES 150C, 150G



TYPES PL211—A, B, C, D & E



TYPES 80C, 80G

PREMIER CRYSTAL LABORATORIES, INC.

MANUFACTURERS OF RADIO AND ELECTRICAL APPARATUS
OPTICAL AND PIEZO CRYSTALS PRECISION CRYSTAL HOLDERS
58 PARK ROW (PULITZER BLDG) NEW YORK 7, N. Y.



INVARIABLY IT'S VALPEY



TYPE	FREQUENCY RANGE	PINS	BODY SIZE			DESCRIPTION	USE
			L	W	H		
CBC-O	60-10000KC	Standard 5-Pin Mount	2 1/4"	d x 2 3/4"		6, 8, 10 Volt Oven Variable Air Gap ± 1/2° C. Accuracy	Broadcast, Fixed Stations and Freq. Standards.
CBC	60-10000KC	Special	2 1/4"	d x 1 3/16"		Micrometer Adjust. Variable Air Gap	Broadcast, Fixed Stations and Freq. Standards.
VDO	1000-10000KC	Standard 5-Pin Mount	1 3/8"	x 1 1/8" x 1 3/16"		Single or Dual 6 Volt Oven Gasket Sealed ± 1/2° C. Accuracy	Fixed and Mobile for Transceiver Equipment, Railroad Communications.
VSS	1000-4000KC	.125 Dia. Pins 3/4" Spacing	1 3/4"	d x 1 3/32"		Variable Air Gap Horizontal Mount	Police and Fixed Stations.
VS1	1000-4000KC	.125 Dia. Pins 3/4" Spacing	1 3/4"	d x 3/4"		Fixed Air Gap Pressure Clamped Horizontal Mount	Police and Fixed Stations.
VD5	1000-6000KC	Special 3-Pin Mount 5/32" Dia.	1 19/32"	x 1 3/16" x 1 7/8"		Single or Dual Crystals Gasket Sealed	Marine, Aircraft or Police.
VD8	1000-6000KC	Octal 1, 8-4, 5 Xtal A—Xtal B	1 3/16"	x 1 1/4" x 1 7/16"		Single or Dual Crystals Gasket Sealed	Marine, Aircraft or Police.
XLS	80-1000KC	.125 Dia. Pins 3/4" Spacing	1 3/4"	d x 1 5/16"		Clamped Crystal Mount. Hermetically Sealed	Radar and Fixed Stations in the Low Frequency Range.
XL-100	100KC	.125 Dia. Pins 3/4" Spacing	1 9/16"	d x 1"		Clamped Crystal Mount. Hermetically Sealed	Frequency Standards.
VT1	1000-10000KC	Octal 2, 3-7, 8	1 1/4"	d x 2"		Vacuum Sealed Metal Tube Type Unit	Frequency Meters, Standards and General Applications.
VM2	1000-4000KC	.125 Dia. Pins 3/4" Spacing	1 23/64"	d x 2 1/32"		Fixed Air Gap Horizontal Mount Gasket Sealed	Fixed and Mobile Applications.
VP3	2000-60000KC	.125 Dia. Pins 3/4" Spacing	1"	d x 1 9/32"		Fixed Air Gap Horizontal Mount Gasket Sealed	Marine, Police, Amateur, Fixed and Mobile Stations.
CM1	1000-4000KC	.125 Dia. Pins and G.R. Pins 3/4", 5/8", 7/8", .850 Spacing	1 11/64"	x 9/16" x 1 3/8"		Gasket Sealed Fixed Air Gap Vertical Mount	Marine, Police, Aircraft and General Applications.
CM5	2000-60000KC	.094 Dia. Pins .486" Spacing	1 3/16"	x 7/16" x 1 1/8"		Gasket Sealed Fixed Air Gap Vertical Mount	Marine, Police, Amateur, Fixed and Mobile Stations.
A1	1000-4000KC	Solder Lugs	1 7/16"	x 1 1/4" x 1 5/32"		Flat Compact Gasket Sealed	Aircraft
VR1	2000-10000KC	.125 Dia. Pins .486" Spacing	1 1/4"	x 7/16" x 1 1/8"		Fixed Air Gap Vertical Mount Gasket Sealed	Marine, Police, Aircraft.
CF1	455, 456, 465 KC	Solder Lugs	3/4"	d x 5/16"		Small, Flat, Compact	Filter Applications.
VR6	4000-60000KC	.050 Dia. Pins .486" Spacing	1 1/16"	x 5/16" x 1 3/16"		Vacuum Sealed Metal Case	Mobile, Fixed Stations, VHF, Experimental.

For every crystal application, VALPEY invariably gives outstanding performance. Select your VALPEY unit from the above chart, or send your specific crystal requirements to VALPEY. In every field where accurate crystal control is the aim — invariably it's VALPEY.

Valpey
CRYSTALS

HOLLISTON, MASS.

Craftsmanship in Crystals Since 1931

MALLORY SWITCHES, JACKS AND PLUGS • LIST PRICES

★ Complete descriptions of these parts will be found on the following pages.

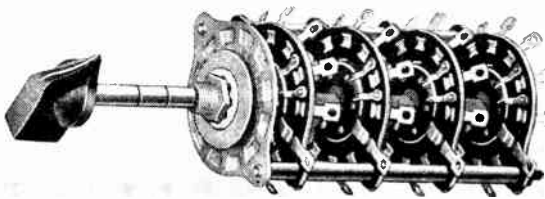
Mallory Cat. No.	List Price
<i>Mallory Page 2</i>	
1200L • 1300L Multi-Section Rotary Switches	
1216L	\$1.30
1211L	1.55
1215L	1.65
1213L	1.80
1212L	1.90
1226L	2.15
1221L	2.30
1225L	2.60
1223L	2.80
1222L	2.95
1236L	2.90
1231L	3.10
1235L	3.30
1246L	3.60
1241L	3.95
1245L	4.60
1251L	4.90
1256L	6.05
1261L	5.80
1266L	7.40
1316L	1.30
1311L	1.55
1315L	1.65
1313L	1.80
1312L	1.90
1326L	2.15
1321L	2.30
1325L	2.60
1323L	2.80
1322L	2.95
1336L	2.90
1331L	3.10
1335L	3.30
1346L	3.60
1341L	3.95
1345L	4.60
1351L	4.90
1356L	6.05
1361L	5.80
1366L	7.40
<i>Mallory Page 2</i>	
3100J • 3200J Single Section Rotary Switches	
3115J	\$1.15
3112J	1.15
3122J	1.15
3123J	1.15
3126J	1.15
3134J	1.20
3142J	1.20
3143J	1.20
31117J	1.80
3129J	1.80
3136J	1.95
3163J	1.95
3215J	1.15
32112J	1.15
3222J	1.15
3223J	1.15
3226J	1.15
3234J	1.20
3242J	1.20
3243J	1.20
32117J	1.80
3229J	1.80
3236J	1.95
3263J	1.95

Mallory Cat. No.	List Price
<i>Mallory Page 2</i>	
UNIVERSAL MOUNTING BRACKETS	
RB254	\$0.25
<i>Mallory Page 3</i>	
170C Ceramic Section Selector Switches	
171C	\$2.25
172C	2.25
173C	2.25
174C	2.25
175C	3.50
176C	3.50
177C	3.50
178C	3.50
179C	5.00
180C	5.00
181C	5.00
<i>Mallory Page 3</i>	
5000 • 6000 7000 Lever Action Switches • Positive Indexing and Spring Return	
5124	\$1.50
6142	1.25
6143	1.25
7122-L	1.25
7123-C	1.25
7142-L	1.25
7143-C	1.25
7162-L	1.25
5224	1.50
6242	1.25
6243	1.25
7222-L	1.25
7223-C	1.25
7242-L	1.25
7243-C	1.25
7262-L	1.25
<i>Mallory Page 3</i>	
13124L 24-Point Non-Shorting Tap Switch	
13124-L	\$3.50
<i>Mallory Page 4</i>	
1400L Circuit-Opening Switch	
1400L	\$5.90
<i>Mallory Page 4</i>	
151L "Hamswitch" • Two-Section • Five Position Switch	
151L	\$2.75
487	.20

Mallory Cat. No.	List Price
<i>Mallory Page 4</i>	
152L "Hamswitch" • Two-Section • Two-Circuit • Six-Position Switch	
152L	\$3.25
<i>Mallory Page 4</i>	
2100 Multiple Push-Button Switches	
2164	\$5.25
2166	6.55
2168	7.90
2184	5.25
2186	6.55
2188	7.90
2194	5.25
2196	6.55
2198	7.90
<i>Mallory Page 4</i>	
160C Ceramic Section "Hamhand" Switches	
161C	\$2.25
162C	3.50
163C	5.00
164C	6.00
165C	7.50
488	.20
<i>Mallory Page 5</i>	
2000 Single Push-Button Switches	
2001	\$1.30
2001-L	1.30
2002	1.30
2002-L	1.30
2003	1.40
2003-L	1.40
2004	1.60
2004-L	1.60
2005	1.60
2005-L	1.60
2006	1.95
2006-L	1.95
2007	1.75
2007-L	1.75
2008	2.20
2008-L	2.20
<i>Mallory Page 5</i>	
JACK SWITCHES Standard and Junior	
20	\$1.15
30	1.40
40	1.55
45	1.85
60	1.95
73	1.95
74	2.55
720	1.10
730	1.35
740	1.50
745	1.75
760	1.95
733	1.95
744	2.55
32	1.40
62	1.95
63	2.55
64	3.15
732	1.35
762	1.90
763	2.50
764	3.10

Mallory Cat. No.	List Price
<i>Mallory Page 6</i>	
JACKS Long Frame • Junior and Midjet	
1	\$0.65
2	.80
2A	.40
2B	.30
3	.95
3A	.95
3B	.95
3CJ	.95
4	1.10
4A	1.10
4B	1.10
5	1.20
6	1.30
701	\$0.55
702	.75
702A	.75
702B	.75
703	.85
703A	.85
703B	.85
703C	.85
704	1.00
704A	1.00
704B	1.00
705	1.15
706	1.25
A-1	.30
A-2	.50
A-2A	.55
A-3A	.40
GJ-1	.45
<i>Mallory Page 7</i>	
JACKS Type XP • Long Frame	
XP1	\$0.90
XP2B	1.00
XP3B	1.30
<i>Mallory Page 7</i>	
SC JACKS Signal Corps Type	
SC-1A	\$0.55
SCA-2B	.65
<i>Mallory Page 7</i>	
JACKS Extension Types	
100	\$1.30
100N	1.65
100A	2.30
<i>Mallory Page 7</i>	
PLUGS Phone and Microphone Types	
75	\$0.65
75N	1.00
75A	1.65
76	1.00
76A	1.95

MALLORY ROTARY SWITCHES



1200L · 1300L Multi-Section Rotary Switches

APPLICATION—Ideally suited for test equipment, meter switching, and low current switching in industrial applications, including machine tool equipment. Also miscellaneous electronic devices, such as medical equipment, navigation instruments, and radar.

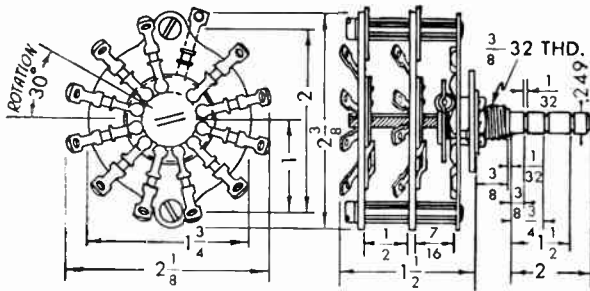
DESCRIPTION—All contacting members are silver plated, except rotor contact slugs, which are solid silver. This insures low contact resistance. The high lift of the contact springs provides a wiping and self-cleaning action to insure good electrical contact. The index spring, made of durable phosphor-bronze reinforced with web, prevents fracture failure and insures long-life operation.

An adjustable stop feature permits selection of the desired number of positions for extremely flexible use. The insulation used in all sections is high-grade phenolic resin. All switches supplied with $\frac{3}{8}$ " diameter, $\frac{3}{8}$ " long brass bushing, and 2" long shaft, grooved for easy cutting at popular lengths.

All switches have $\frac{1}{2}$ " spacing between sections, excepting the three and four-section, which have 1" spacing. If closer spacing is required between sections, the switch can be dis-assembled and spacers cut to proper length.

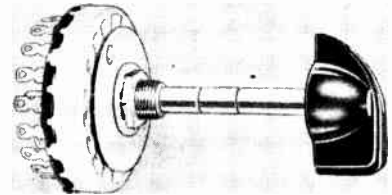
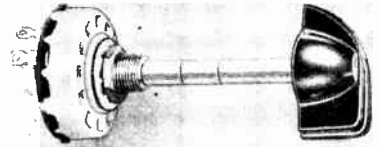
ACCESSORIES—One Mallory No. 366 knob, one No. 232 nut, and one No. 227 lock washer furnished with each switch. See Miscellaneous Items section for Dial Plates.

PACKAGING One switch and accessories per display carton.



Shorting Type Catalog No.	Non-Shorting Type Cat. No.	No. of Circuits per Section or Gang	Total No. of Circuits per Switch	No. of Positions	No. of Sections or Gangs per Switch
1216L*	1316L*	1	1	2 to 6	1
1211L	1311L	1	1	2 to 11	1
1215L*	1315L*	2	2	2 to 5	1
1213L*	1313L*	3	3	2 to 3	1
1212L*	1312L*	4	4	2 to 2	1
1226L*	1326L*	1	2	2 to 6	2
1221L	1321L	1	2	2 to 11	2
1225L*	1325L*	2	4	2 to 5	2
1223L*	1323L*	3	6	2 to 3	2
1222L*	1322L*	4	8	2 to 2	2
1236L*	1336L*	1	3	2 to 6	3
1231L	1331L	1	3	2 to 11	3
1235L*	1335L*	2	6	2 to 5	3
1246L*	1346L*	1	4	2 to 6	4
1241L	1341L	1	4	2 to 11	4
1245L*	1345L*	2	8	2 to 5	4
1251L	1351L	1	5	2 to 11	5
1256L	1356L	2	10	2 to 6	5
1281L	1381L	1	6	2 to 11	6
1286L	1386L	2	12	2 to 6	6

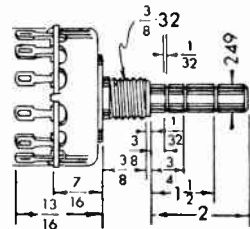
*These switches are provided with an "off" position which is in addition to the number of positions listed in the fifth column.



3100J · 3200J Single Section Rotary Switches

APPLICATION—For use in small receivers as tone controls, band selector and antennae switching; also ideal for meter switching in test equipment and many other electronic devices where space is at a premium.

DESCRIPTION—Available in single section only, and in two sizes: $1\frac{1}{4}$ " diameter, 30° indexing, and $1\frac{1}{16}$ " diameter, 20° indexing. All combinations made in both shorting and positive non-shorting action. The $1\frac{1}{16}$ " base switch is available with the adjustable stop feature. High quality XXX grade of phenolic resin insulation conforming to JAN specifications is used. All switches supplied with $\frac{3}{8}$ " diameter, $\frac{3}{8}$ " long brass bushing and 2" long shaft grooved for easy cutting at popular lengths.



3100J-3200J SERIES

ACCESSORIES—One Mallory No. 366 knob, one No. 232 nut, and one No. 227 lock washer furnished with each switch. See Miscellaneous Items section for Dial Plates.

PACKAGING—One switch and accessories per display carton.

Shorting Type Catalog No.	Non-Shorting Type Cat. No.	Number of Circuits	Number of Positions	Diameter of Base	Adjustable Stop
3115J	3215J	1	5	$1\frac{1}{4}$ "	No
3112J	3212J	1	12	$1\frac{1}{4}$ "	No
3122J	3222J	2	2	$1\frac{1}{4}$ "	No
3123J	3223J	2	3	$1\frac{1}{4}$ "	No
3126J	3226J	2	6	$1\frac{1}{4}$ "	No
3134J	3234J	3	4	$1\frac{1}{4}$ "	No
3142J	*3242J	4	2	$1\frac{1}{4}$ "	No
3143J	3243J	4	3	$1\frac{1}{4}$ "	No
†3117J	32117J	1	2 to 17	$1\frac{1}{16}$ "	Yes
3129J	3229J	2	2 to 9	$1\frac{1}{16}$ "	Yes
3136J	3236J	3	2 to 6	$1\frac{1}{16}$ "	Yes
3163J	†3263J	6	2 to 3	$1\frac{1}{16}$ "	Yes

*Replaces No. 2742.

†Replaces No. 2762 by using adjustable stop.

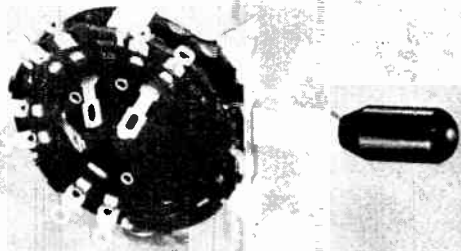
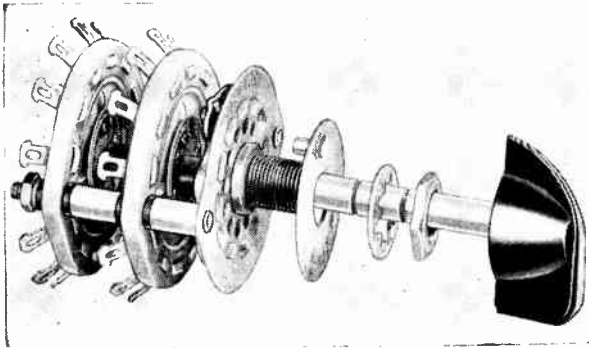
‡Replaces No. 150J by using adjustable stop.



UNIVERSAL MOUNTING BRACKET-RB254

Mallory Page 2 (See Mallory Page 1 for List Prices)

MALLORY SELECTOR, TAP AND LEVER ACTION SWITCHES



170C Ceramic Section Selector Switches

APPLICATION—These switches are ideal for highly efficient critical radio frequency circuit applications. Suitable for radio receivers and low-power transmitter circuits. They find widespread use in laboratories, by manufacturers of transmitters, receivers, test equipment and other electronic apparatus, and by experimenters and amateurs.

DESCRIPTION—Ceramic insulation minimizes RF losses and retards moisture absorption. Indexing mechanism is the "hill-and-valley" type providing a definite "snap" indexing action. An adjustable stop feature is designed into the index assembly to permit a choice of 2 to 11 positions. All current-carrying parts are heavily silver-plated. The contacts are of the double-wiping, self-cleaning type, which insures low contact resistance over an extended temperature range. All switches supplied with $\frac{3}{8}$ " diameter, $\frac{3}{8}$ " long brass bushing and 2" long shaft grooved for easy cutting at popular lengths.

The two-section switch has $\frac{1}{2}$ " spacing between sections. The three-section switch has 1" spacing.

ACCESSORIES—One Mallory No. 366 knob, one No. 232 nut, and one No. 227 lock washer furnished with each switch.

PACKAGING—One switch and accessories per display carton.

Catalog No.	Number of Gangs or Sections	Number of Circuits per Gang or Section	Number of Positions
171C	1	1	2 to 6
172C	1	1	2 to 11
173C	1	2	2 to 5
174C	1	3	2 to 3
175C	2	1	2 to 6
176C	2	1	2 to 11
177C	2	2	2 to 5
178C	2	3	2 to 3
179C	3	1	2 to 6
180C	3	1	2 to 11
181C	3	2	2 to 5

5000 · 6000 · 7000 Lever Action Switches • Positive Indexing and Spring Return

APPLICATION—These switches are particularly adapted to centralized radio, sound distribution, public address equipment, and intercommunication equipment for school installations of loud-speaker systems and office communication systems.

DESCRIPTION—The housing and mounting bracket of these switches are one integral part, which assures rigidity, and the design lends itself to the support of the section, thus preventing warping of the section or distortion in alignment of contacts. A smooth contact surface is guaranteed by the use of the exclusive Mallory "wrap-around" method of securing the terminal through the holes in the phenolic resin section. The phenolic resin is high grade for maximum insulation. The 5000 series have elongated mounting holes in the bracket, spaced from $2\frac{3}{16}$ " to $2\frac{3}{8}$ " apart. The 6000 and 7000 series have mounting brackets with round holes spaced $1\frac{5}{8}$ " apart. Switches may be mounted singly or grouped in multiple mounting with $\frac{3}{4}$ " between lever arm centers to facilitate conventional rack and panel installations.

ACCESSORIES—One knob, two 6-32 bolts and nuts are furnished with each switch.

PACKAGING—One switch and accessories per display carton.

Positive Indexing

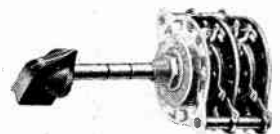
Cat. No. Shorting Type	Cat. No. Non-shorting Type	Number of Poles or Circuits	Number of Positions or Contacts
5124	5224	2	4
6142	6242	4	2
6143	6243	4	3

Spring Return

Cat. No.	Cat. No.	Number of Poles or Circuits	Number of Positions or Contacts
7122-L	7222-L	2	2
7123-C	7223-C	2	3
7142-L	7242-L	4	2
7143-C	7243-C	4	3
7162-L	7262-L	6	2

13124L

24-Point Non-Shorting Tap Switch



APPLICATION—This switch is particularly useful in test equipment applications where more than the conventional 12-point switch is required.

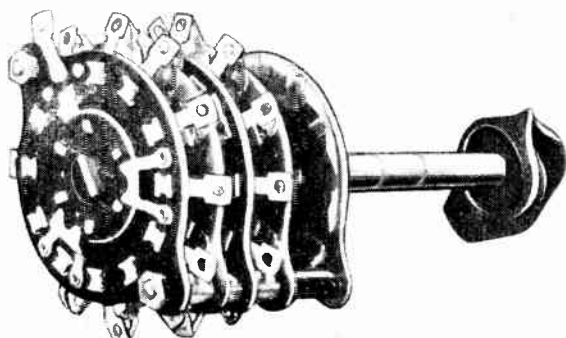
DESCRIPTION—The single circuit 24-point is accomplished through the use of two sections similar in design to the 1300L series switch. The indexing mechanism has no stops and is capable of continuous rotation with a 15° indexing action between positions. Furnished with $\frac{3}{8}$ " diameter, $\frac{3}{8}$ " long brass bushing and 2" long notched shaft.

ACCESSORIES—One Mallory No. 366 knob, one No. 232 nut, one No. 227 lock washer, and one No. 394 Mallory Dial Plate furnished with each switch.

PACKAGING—One switch and accessories per display carton.

**DON'T MISS THE
MALLORY 1485 CONTROL DEAL**
Turn to Page 3, Mallory Controls, for full information

MALLORY CIRCUIT-OPENING, "HAM", AND PUSHBUTTON SWITCHES



1400L Circuit-Opening Switch

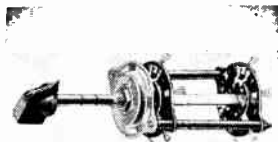
APPLICATION—This switch has found wide application in the construction of test sets, tube checkers, analyzers, and other apparatus where it is desirable to use only one meter.

DESCRIPTION—This is a special design of the series 1200L switch to provide for wiring of multiplying resistors to the switch, so that the switch not only opens the line but also automatically cuts in the proper multiplying resistor. The switch employs the standard 30° index, and is supplied with 3/8" diameter, 3/8" long brass bushing and a 2" long shaft grooved for easy cutting to proper lengths.

ACCESSORIES—One Mallory No. 366 knob, one No. 232 nut, one No. 227 lock washer, and one No. 382 Mallory etched Dial Plate.

PACKAGING—One switch and accessories per display carton.

151L "Hamswitch"* Two-Section • Five- Position Switch



APPLICATION—This switch provides a method of using a single meter to measure current or voltages up to and including 5 circuits of an amateur transmitter.

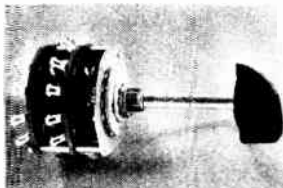
DESCRIPTION—This switch has the basic design of the 1200L series switch. It is of two-section construction with 2 1/4" spacing between sections to permit multiplying resistors to be soldered directly to the switch terminals. High insulating qualities and low loss construction permit a conservative rating of 1000 volts RMS AC or 1500 volts DC. 60° indexing between positions and provided with the adjustable stop feature, giving a maximum of 5 positions. Supplied with 3/8" diameter, 3/8" long brass bushing and 2" long shaft grooved for easy cutting at popular lengths.

ACCESSORIES—One Mallory No. 366 knob, one No. 237 nut and one No. 227 lock washer, furnished with each switch.

Refer to page 55 for special dial plate No. 487.

PACKAGING—One switch and accessories per display carton.

152L "Hamswitch" • Two- Section • Two-Circuit • Six-Position Switch



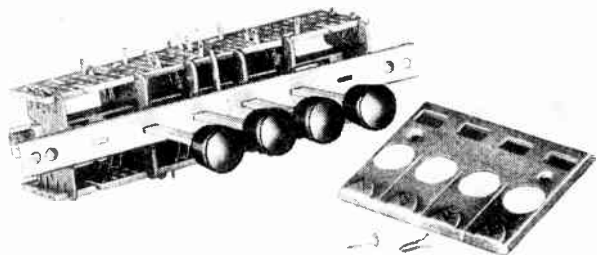
APPLICATION—Where all unused terminals are to be connected together and automatically shorted out.

DESCRIPTION—This switch is of the basic design of series 170C, excepting a phenolic resin insulation is used in the two-section assembly. Through the use of the 330° shorting shoes, all unused terminals are automatically connected. The spacing between sections is 1 1/2". Switch is supplied with adjustable stop feature for 2 to 6 positions. Supplied with 3/8" diameter, 3/8" long brass bushing and 2" long shaft grooved for easy cutting at popular lengths.

ACCESSORIES—One Mallory No. 366 knob, one No. 232 nut, and one No. 227 lockwasher furnished with each switch.

PACKAGING—One switch and accessories per display carton.

*Reg. U. S. Pat. Off.



2100 Multiple Push-Button Switches

APPLICATION—This switch is ideal for applications requiring a device for making, breaking, or transferring multiple circuits in automatic station selector tuning, inter-office communication systems, telephone and annunciator systems, set analyzers, tube checkers, and multimeters.

DESCRIPTION—Available from four to eight buttons with 3/8" spacing between center lines of plungers. Each plunger actuates a phenolic resin slider supporting the various combinations of shoes which engage the stationary contacts. Arrangement of the plunger and latch bar mechanism provides an inter-locking action whereby one or more plungers may be pressed simultaneously, and will remain latched until released by depressing another plunger. Available in both shorting and non-shorting types, and with contact arrangement for both circuit closing and circuit transfer.

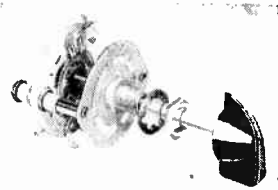
ACCESSORIES—Each switch furnished with brown phenolic resin knobs, one attractive statuary bronze escutcheon plate with blank designation inserts, and transparent strip for windows.

PACKAGING—One switch and accessories per display carton.

Catalog Number	Number of Buttons	Type
2164	4	Circuit Closing
2166	6	Circuit Closing
2168	8	Circuit Closing
2184	4	Circuit Transfer
2186	6	Circuit Transfer
2188	8	Circuit Transfer
2194	4	†Circuit Transfer
2196	6	†Circuit Transfer
2198	8	†Circuit Transfer

†Non-shorting.

160C Ceramic Section • "Hamband" Switches



APPLICATION—For transmitter band switching of low power transmitter circuits.

DESCRIPTION—A special ceramic switch designed for transmitter plate circuits using up to 1000 volts DC with power up to 100 watts inclusive. Ceramic insulation is employed in both the section and spacers between sections to obtain highest insulation qualities, and to provide low losses at high frequencies. Available in one to five sections, with each section having one circuit, 90° indexing between positions, and capable of continuous rotation. Supplied with 3/8" diameter, 3/8" long brass bushing and 2" long shaft grooved for easy cutting at popular lengths.

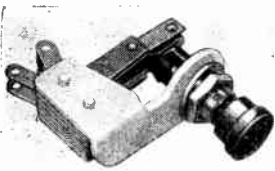
ACCESSORIES—One Mallory No. 366 knob, one No. 232 nut, and one No. 227 lock washer furnished with each switch.

Refer to Mallory page 9, Special Components, for special dial plate No. 488.

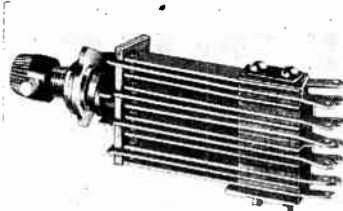
PACKAGING—One switch and accessories per display carton.

Catalog Number	No. of Sections or Gangs	Circuits per Switch	Spacing between Sections	Points or Contacts per Circuit
161C	1	1		4
162C	2	2	2"	4
163C	3	3	1"	4
164C	4	4	1"	4
165C	5	5	1"	4

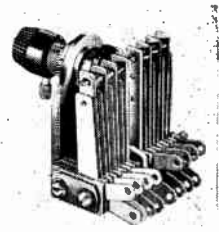
MALLORY PUSH-BUTTON AND JACK SWITCHES



2000
Single Push-Button
Switches



STANDARD



JUNIOR

JACK SWITCHES Standard and Junior

APPLICATION—Ideally suited for use in laboratories, test panels, meter circuits, and other equipment where variable circuit combinations are accomplished through the leaf spring type assembly.

DESCRIPTION—The Standard Jack (or long frame type) may be used where space is no factor, as the frame extends straight back from panel mounting. The spring stack is assembled on a horizontal line with the frame. Constructed with knob and shaft that rotates through the bushing, operating a cam to actuate the spring which accomplishes the circuit switching.

The Junior Jack (or short frame type) is made with the frame supporting the spring stack at right angles. Because of the short springs used, it requires a minimum of space for mounting. The actuation of the springs is the same as for the Standard Switch. Frames on both Standard and Junior types are cadmium plated. Brass bushings and phosphor bronze springs are nickel plated. The fine silver contacts insure good electrical and low resistance contact. Both switch types are suitable for mounting in a single hole $\frac{7}{16}$ " diameter on panels up to $\frac{1}{4}$ " thick.

ACCESSORIES—One Mallory black phenolic resin knob, one No. 232 nut, and one No. 225 washer furnished with each switch.

PACKAGING—One switch and accessories per display carton.

Two Position		Circuit Arrangement
Standard	Junior	
No.	No.	
20	720	Single-Pole, Single-Throw
30	730	Single-Pole, Double-Throw
40	740	Double-Pole, Single-Throw
45	745	Five Springs, two break and one make
60	760	Double-Pole, Double-Throw
73	733	Three-Pole, Single-Throw
74	744	Four-Pole, Single-Throw

Three Position		Circuit Arrangement
Standard	Junior	
No.	No.	
32	732	Single-Pole, Double-Throw Center off Position
62	762	Double-Pole, Double-Throw Center off Position
63	763	Three-Pole, Double-Throw Center off Position
64	764	Four-Pole, Double-Throw Center off Position

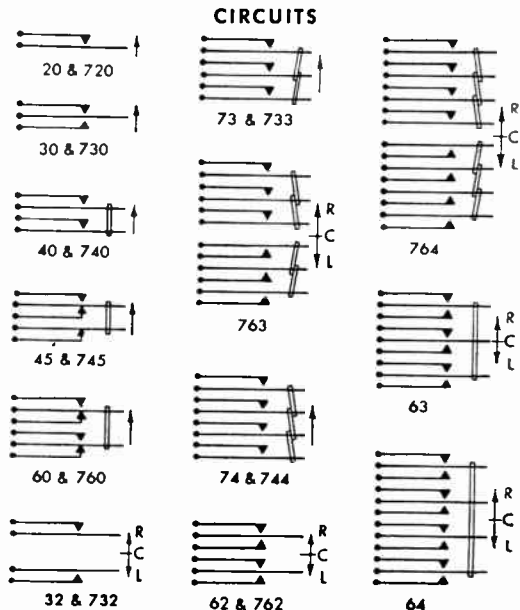
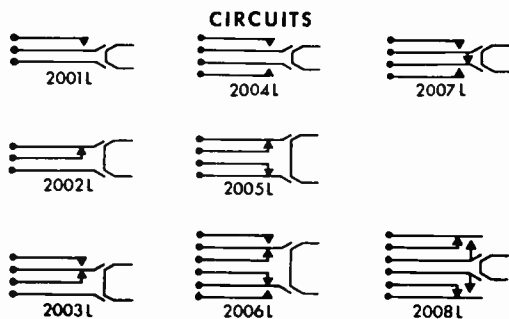
APPLICATION—These switches are ideal for a wide variety of applications requiring momentary or permanent contact. Especially adapted for use in laboratories, on test panels, in meter circuits, etc.

DESCRIPTION—Eight different circuit combinations available in either the locking or non-locking types. The locking types keep the circuit closed until the button is pulled out. The non-locking types maintain contact only while the button is held in the depressed position. Excellent electrical characteristics are achieved through the use of the phosphor bronze contact springs and the low resistance silver-plated contacts. The switch frame is steel cadmium plated, and the mounting bushing is nickel plated brass. Will mount in single hole $\frac{7}{16}$ " diameter on panels up to $\frac{1}{4}$ " thick.

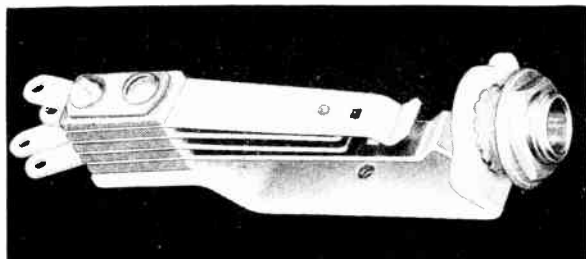
ACCESSORIES—One polished phenolic resin knob, one Mallory 232 nut and one No. 225 washer furnished with each switch.

PACKAGING—One switch and accessories per display carton.

Cat. No.	Circuit Arrangement
2001	S. P. Make contact—Non-locking type
2001-L	S. P. Make contact—Locking type
2002	S. P. Break contact—Non-locking type
2002-L	S. P. Break contact—Locking type
2003	S. P. Double-Throw—Non-locking type
2003-L	S. P. Double-Throw—Locking type
2004	2-Pole—Make two contacts—Non-locking type
2004-L	2-Pole—Make two contacts—Locking type
2005	2-Pole—Break two contacts—Non-locking type
2005-L	2-Pole—Break two contacts—Locking type
2006	2-Pole—Double-Throw—Non-locking type
2006-L	2-Pole—Double-Throw—Locking type
2007	2-Pole—Make two—Break one—Non-locking type
2007-L	2-Pole—Make two—Break one—Locking type
2008	Double-Throw—Make before break—Non-locking type
2008-L	2-Pole—Double-Throw—Make before break—Locking type



MALLORY JACKS



JACKS Long Frame, Junior, and Midget

APPLICATION—These jacks provide a conventional receptacle where it is desirable to open or close auxiliary circuits by use of a combination of spring assemblies actuated by insertion of connection plugs. Excellent for head sets, hand sets, or microphone cord and plug connections, for meter testing cord and plug connections, or as a receptacle for any device where desirable to connect or disconnect by cord and plug.

DESCRIPTION—The long frame jacks are provided with a variety of spring combinations. The spring stackups are mounted horizontally to the frame. The jack is designed to mount in a single $\frac{3}{8}$ " hole in panels up to $\frac{5}{16}$ " thick. Fits all standard Mallory plugs of two and three conductor types.

The Junior Jack (sometimes called "short frame" jack) is made with the frame supporting the spring stack at a right angle with the short springs requiring only $1\frac{5}{16}$ " space back of panel for mounting. Bushings are made to mount in single $\frac{3}{8}$ " diameter holes in panels up to $\frac{5}{16}$ " thick. Fits all standard Mallory plugs.

The Midget Jack is very compact (with shorter frame and springs than the Junior types), being extremely useful where bare minimums of space exist. Will mount in a single $\frac{3}{8}$ " diameter hole in panels up to $\frac{1}{4}$ " thick.

The Infant Jack (sometimes referred to as a "pup" jack) is the smallest single circuit jack manufactured to accommodate the conventional 2-way phone plug tip and sleeve connection.

All jacks are made with cadmium-plated frames. Brass bushings and phosphor bronze springs are nickel plated. Fine silver contacts provide a jack with excellent electrical contact and low-contact resistance.

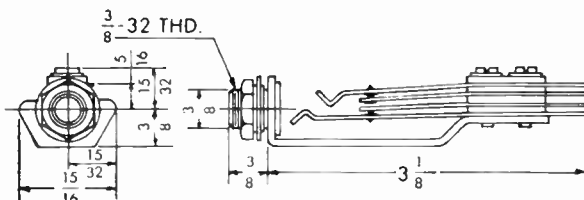
ACCESSORIES—One Mallory No. 232 nut and one No. 225 washer furnished with each long frame Junior and A-1 (Infant) Jack. Two nuts and one washer furnished with all Midget Jacks.

PACKAGING—One switch and accessories per display carton.

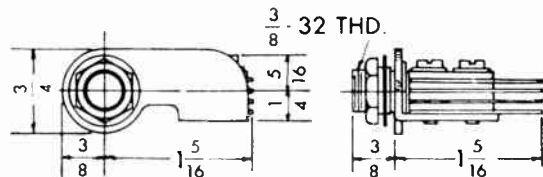
Long Frame Cat. No.	Junior Jacks Cat. No.	Infant and Midget Cat. No.
1	701	*A-1
2	702	A-2
2A	702A	A-2A
2B	702B	
3	703	
3A	703A	A-3A
3B	703B	*Commonly referred to as "Infant" Jack.
3CJ	703C	
4	704	
4A	704A	
4B	704B	
5	705	
6	706	

"GROUNDING" JACK—(Type GJ-1, for "grounding" airplanes while refueling. Similar in construction to A1 Jack except for insulation.

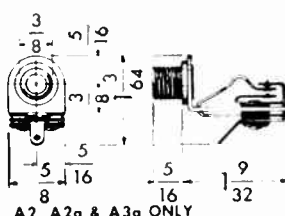
JACK DIMENSIONS



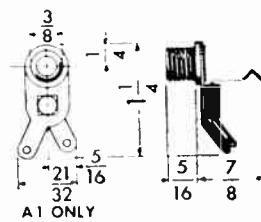
LONG FRAME



JUNIOR



MIDGET JACK

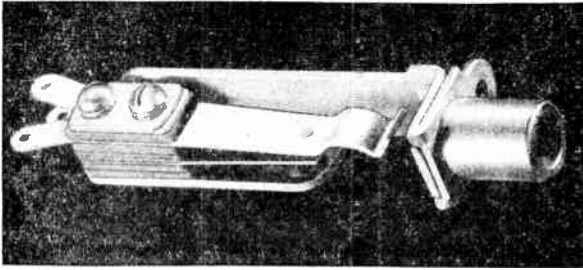


INFANT JACK

MALLORY VIBRATOR DATA BOOK

Complete . . . original . . . easy to read. Answers all your questions about vibrator power supplies. It's packed with information that cannot be duplicated anywhere else; information gained by Mallory in sixteen years of specialized power supply experience. The demand for this book is large—so order your copy now through your Mallory Distributor.

MALLORY JACKS AND PLUGS



Cat. No.	Type
XP1	(Open Circuit)
XP2B	(Three-Circuit Microphone)
XP3B	(Single Circuit, Make before Break)

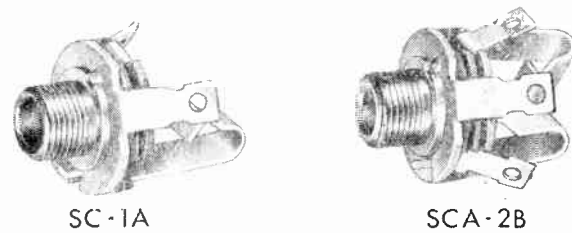
JACKS Type XP • Long Frame

APPLICATION—Ideal for telephone switchboard types of applications, as well as industrial applications where a more compact jack is required for close strip panel mounting.

DESCRIPTION—Although limited to three circuit combinations, these jacks serve the same purpose as the Mallory Standard Long Frame Jacks, but employ a special frame angle to provide greater support. The bushing is plain, unthreaded, and the jack is mounted by means of a screw through the panel mounting plate at the base of the bushing. Bushing fits all standard Mallory plugs of two and three conductor types. The springs are assembled horizontally to the frame. The frames are steel cadmium plated. Brass bushings and phosphor bronze springs are nickel plated. The fine silver contacts provide an excellent electrical contact and low contact resistance.

ACCESSORIES—None furnished.

PACKAGING—One jack per display carton.



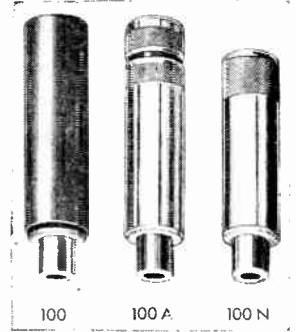
SC JACKS Signal Corps Type

No. SC-1A Phone Jack—Equivalent of Signal Corps Jack No. JK-34A. Same spring arrangement as No. 1 Long Frame Jack. Designed to receive following plugs: Mallory No. 75, Western Electric Nos. 47A and 47B; Signal Corps Nos. PL-47, PL-48, PL-55, PL-148, PL-155.

No. SCA-2B Microphone Jack—Equivalent of Signal Corps Jack No. JK-33A. Same spring arrangement as No. 2B Long Frame Jack. Designed to receive following plugs: Western Electric No. 109 and Signal Corps Nos. PL-46, PL-68 and PL-168.

JACKS

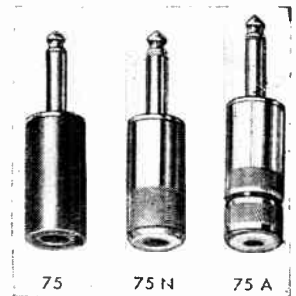
Extension Types



Cat. No.	Description
100	Two-Way Extension Jack (Fiber Shell) for No. 75 Phone Plug
100N	Two-Way Extension Jack (Shielded One-Piece Nickel Shell) for No. 75N Phone Plug
100A	Two-Way Extension Jack (Shielded Two-Piece Nickel Shell) for No. 75A Phone Plug (with Built-in Cable Clamp)

PLUGS

Phone and Microphone Types



Cat. No.	Description
75	Two-Way Phone Plug with Tie-Cord Anchor (Phenolic Resin Shell)
75N	Two-Way Phone Plug with Tie-Cord Anchor (Shielded One-Piece Nickel Shell)
75A	Two-Way Phone Plug with Tie-Cord Anchor (Shielded Two-Piece Nickel Shell) (with Built-in Cable Clamp)
76	Three-Way Microphone Plug (Phenolic Resin Shell)
76A	Three-Way Microphone Plug (Shielded Two-Piece Nickel Shell) (with Built-in Cable Clamp)

MALLORY

RADIO SERVICE ENCYCLOPEDIA

Page after page of replacement information for all pre-war and post-war receivers.

Mallory Page 7 (See Mallory Page 1 for List Prices)



SMALL SWITCHES, LIMIT SWITCHES, AND MAGNETIC RELAYS

SMALL SNAP-ACTION SWITCH, G-E SWITCHETTE CR1070-C103

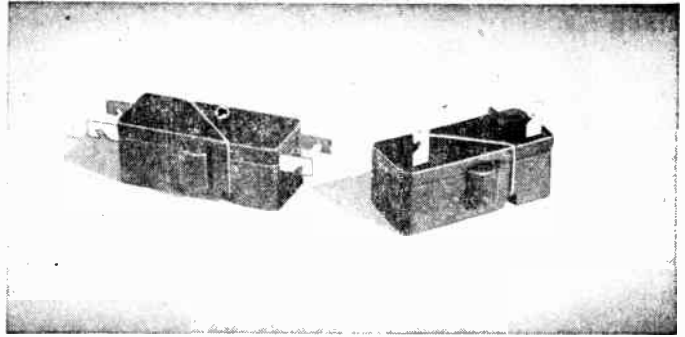
This new, lightweight switch mechanism lends itself especially to applications where space is limited and long life is required.

The Switchette is operated by movement of the spring-return button located in the housing. This button can be actuated by a lever, bellows, or other means. Snap-action, double-break-contact construction gives the G-E Switchette a high current rating and makes it suitable for applications where the vibration is severe.

FEATURES AND ADVANTAGES

1. Small (approximately 1 1/4 in. by 1/2 in. by 1/2 in.) and weighs only 9 grams (0.02 lb).
2. Resists vibration and corrosion.
3. Phenolic-resin operating button provides safety from live parts during operation.
4. Contact tips are 99.95 per cent pure silver.
5. Particularly suited to electronic applications because of negligible amount of contact bounce.
6. Two terminal arrangements are available, as shown above.
7. Wide variety of forms available, for example, three basic contact arrangements: single-circuit, normally open; single-circuit, normally closed; and two-circuit, normally open and normally closed. Also many special forms.

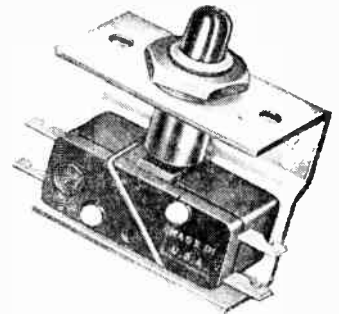
Switchettes are available in ratings up to 10 amperes at 115 or 230 volts a-c. Write for Bulletin GEA-4888.



Switchettes having two terminal arrangements

LIMIT SWITCH, CR1070-D112

This sturdy, open-type limit switch is operated by a plunger which provides 1/2-inch overtravel. The contact mechanism of this device is the G-E Switchette, which can be wired to control one normally open circuit and one normally closed circuit. Rated 10 amperes at 230 volts a-c. Write for Bulletin GEC-197.



Open-type limit switch with push-rod operation

MAGNETIC RELAY, CR2790-E

The CR2790 relay is a compact, attractively finished device for use either as a motor starter or a relaying unit. Available in either an open form or enclosed in a general-purpose housing. Three contact arrangements available: single-pole, single-throw; double-pole, single-throw; and double-pole, double-throw. In the open form, all three contact arrangements use the same base, which facilitates mounting. In the enclosed form, the U-shaped cover makes wiring and servicing convenient. Rated 10 amp. continuous, 110/120 volts a-c.

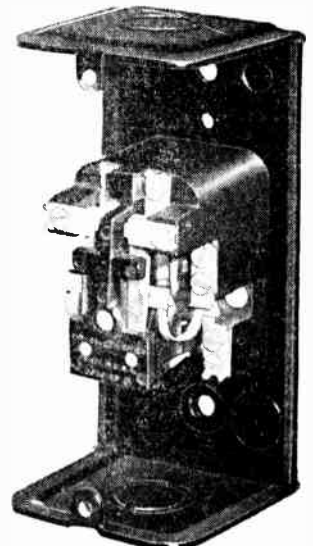
Applications

Control of pilot circuits in response to remote control switch or thermostat, or for direct control of small motors.

As a fractional-horsepower motor starter, or in conjunction with a magnetic switch controlling larger motors, heating or lighting circuits, and signal systems.



Enclosed magnetic relay



Enclosed relay with cover removed

SWITCHES

LEVER • FOOT
and
PUSH-BUTTON

TOUCH
•
TIMING

CONTROLS



MIDGET LEVER SWITCH Model MCM

A compact, lightweight switch designed for long life and trouble-free service under heavy duty requirements. Any combination of the contact forms shown below can be furnished, with locking or non-locking action. Both 2 and 3-position action are available. Total weight with 12 contact springs is 3 1/2 ounces. Contact rating: 5 amps., 125 volts, 60 cycles (non-inductive load). Breakdown-tested to withstand 2500 volts, 60 cycles, between contact springs and frame.

Type	List Price
A	.50
B	.50
C	.60

CONTACT FORMS

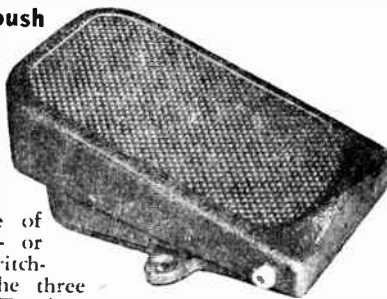
Type	List Price	Type	List Price
D	.75	G	.60
E	1.00	H	.60
F	.60	Frame	2.50

STANDARD MODELS (Locking Type)

Action	Type	Net Price	Action	Type	Net Price
4PDT	MCM-4F	\$4.10	2P Make	MCM-2A	\$2.95
2PDT	MCM-2F	3.10	2P Break	MCM-2B	2.95

FOOT SWITCH — Model MI

- Automatic Return
- Push on — push off
- Two-stage control

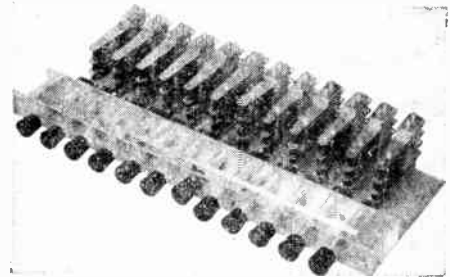


Provides any type of single-pole single-throw or double-throw switch action, in any of the three actions, with DPDT switching in the automatic return action. Adjustable throw. Cast iron case 4" wide by 6 3/8" long. Standard BX connection fitting at front of base. Ratings: motor load 1/3 HP at 115/230 volts a-c; lamp load 500 watts 115 volts a-c or 100 watts 115 volts d-c; heater load 10 amps., 115 volts or 5 amps., 230 volts a-c.

Automatic Return Push On — Push Off Two-Stage

Type No.	Price	Type No.	Price	Type No.	Price
MI-11	\$8.00	MI-20	\$9.50	MI-24	\$12.00
MI-15	8.00	MI-21	10.00	MI-21	12.00
MI-16	8.50			MI-25	14.00
MI-17HD	12.50				

MASTER PUSH-BUTTON SWITCH Model MPB



A single unit type push-button switch with high power handling ability to give direct push-button control without relays. Furnished in from two to a maximum of twelve positions. Standard frames are: (1) locking, (2) non-locking, (3) release-lock, and (4) accumulative locking with single-button release. Pure silver contacts, phosphor bronze springs. Rating: 5 amps., 125 volts a-c (non-ind.).

HEAVY DUTY ELECTRONIC TIMERS



Convenient and compact units for either full or semi-automatic control of industrial processes. Two or more timers control a number of individually timed operations in a pre-determined sequence with either self-recycling or manual recycling. Handle 10 amps. at 125 volts, 60 cycles, on DPDT power control contacts. Five

ranges: 0.06-1.2, 1/2-8, 3/4-15, 1.5-30, and 3-60 seconds. Plug-in capacitors give ready selection of timing range. Adaptable to use as photoelectric or sensitive relay in non-timing use.

"TOUCH-CONTROL" SWITCH START • STOP • RUN • JOG • SAFETY

Pressure anywhere on the top plate of this sensitive electric switch makes or breaks the control circuit. Operates by pressure of finger, foot, hand, elbow or knee . . . its positive, snap-action contactor works in any position and requires only 3/16" throw at four pounds pressure; contact returns to normal position on release. Standard BX connectors. Cast iron case 4" diam. x 2 1/8" high, 3/16" mounting holes on 3" centers in base. Circuits: SP normally open Model MC-1 list price \$5.00; SP normally closed Model MC-2 list price \$5.00; or SPDT Model MC-3 list price \$5.50. Ratings are the same as Model MI.



MODEL MC

AC VOLTS 110-230 AMPERE 5
GENERAL CONTROL COMPANY
BOSTON 34, MASS.



GENERAL CONTROL COMPANY
1203 SOLDIERS FIELD ROAD BOSTON 34, MASSACHUSETTS

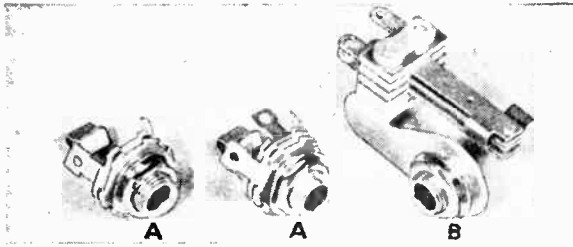


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SWITCHCRAFT INC.

CHICAGO 22, ILLINOIS

SWITCHCRAFT PHONE JACKS



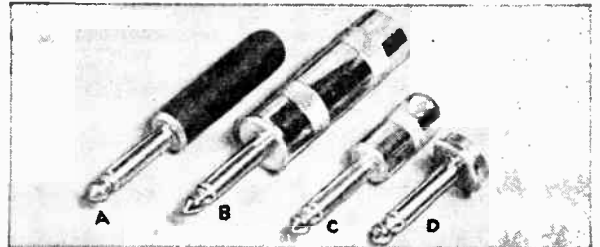
The "Littlet-Jax" (A), features notched insulating washers mechanically interlocking springs and lugs; "V-bend" in tip spring firmly "holds" mating Plug; minimum space requirements, economical. Mounts in single $\frac{3}{8}$ " dia. hole, panels up to $\frac{1}{8}$ " thick. The short frame type Jack known as "SF-JAX" (B), requires minimum panel depth, mounts in single $\frac{3}{8}$ " dia. hole, panels up to $\frac{1}{8}$ " thick.

"LITTEL-JAX"		"SF-JAX"		Description	Schematic
Part No.	U.S.A. List Price	Part No.	U.S.A. List Price		
11	\$0.35	21	\$0.50	Open Ckt. 2-cond.	
		22	\$0.65	Closed Ckt. 2-cond.	
12A	\$0.40	22A	\$0.65	Closed Ckt. 2-cond.	
12B	\$0.50	22B	\$0.65	Open Ckt. 3-cond.	
		23	\$0.75	Special "make" ckt.	
		23A	\$0.75	"Break-make" ckt.	
12B	\$0.70	23B	\$0.75	"Break" ckt. 3-cond.	
		23C	\$0.75	"Break" ckt. 3-cond.	
		23E	\$0.75	Special "Break" ckt.	
		24	\$0.85	Two "Break" ccts.	
		24A	\$0.85	Two-conductor — spl. ckt.	
		24B	\$0.85	Two "Break" ccts.	
		25	\$1.05	Special Circuit — 2-cond.	
		26	\$1.15	Special Circuit — 3-cond.	

PHONE JACKS • PHONE PLUGS SWITCHES: Push-Button . . . Rotary and Lever Action . . .

"SWITCHCRAFT" produces many custom made products for the industry. Inquiries invited.

SWITCHCRAFT PHONE PLUGS



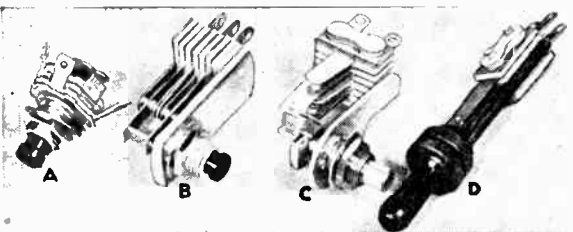
The "Littlet-Plug" (A), radically new, fitting standard Jacks; solder lug type features clamp terminal serving as a cable clamp and terminal—perfect for metal braid cable. Screw type terminals—no clamp. Tenite or Metal handles are $1\frac{1}{8}$ " L., $\frac{1}{2}$ " dia. Exterior metal parts bright nickel pl.

The Standard Plugs (B), conventional design, available both black Bakelite or metal handles $2\frac{1}{8}$ " L., $\frac{1}{8}$ " O.D., except No. 90 and No. 160 have metal handles 1" long. Exterior metal parts bright Nickel Pl.

The "Lug-Plug" (C), low-cost two conductor, solder lug term. Exterior metal parts bright Nickel Pl. Red or Black Tenite Handles are $1\frac{1}{8}$ " L., $\frac{1}{2}$ " O.D. No. 330 has metal handle $1\frac{1}{2}$ " L., bright Nickel Pl. Plug Adapter (D) used with MC1F or MC1FA Connectors for use with standard Phone Jacks.

Part No.	U.S.A. List Price	Plug Type	Color or Type of Handle	Description
240	\$0.70	"Littlet-Plug"	Black	2-conductor. Screw Term.
245	\$0.70	" "	Red	" " " "
270	\$0.95	" "	Metal	" " " "
250	\$0.65	"Littlet-Plug"	Black	2-conduct. Clamp-lug Term.
255	\$0.65	" "	Red	" " " "
220	\$0.90	" "	Metal	" " " "
260	\$1.10	"Littlet-Plug"	Black	3-conductor. Screw Term.
290	\$1.30	" "	Metal	" " " "
267	\$0.95	"Littlet-Plug"	Black	3-conduct. Clamp-lug Term.
269	\$0.95	" "	Red	" " " "
227	\$1.20	" "	Metal	" " " "
40	\$0.65	Standard	Black	2-conductor. Screw Term.
70	\$1.10	" "	Metal	" " " "
150	\$0.85	" "	Metal	" " " "
44	\$0.45	Adapter	—	" " " "
60	\$0.95	Standard	Black	3-conductor. Lug Terminals
90	\$1.20	" "	Metal	" " " "
350	\$0.50	"Lug-Plug"	Black	2-conductor. Lug Terminals
355	\$0.70	" "	Red	" " " "
380	\$0.60	" "	Metal	" " " "

SWITCHCRAFT SWITCHES



The "Littlet-Switch" (A), available 3 circuits, either red or black one-piece Plastic Push-Buttons, non-locking only. Mounts in single $\frac{3}{8}$ " dia. hole, panels up to $\frac{1}{4}$ " thick.

The "FF-Switch" (B), all common circuits, one-piece black Plastic Push-Button, non-locking only. Mounts in single $\frac{3}{8}$ " dia. hole, panels up to $\frac{1}{4}$ " thick.

The "RS-Switch" (C), non-locking, two-position rotary, all common circuits. Mounts in single $\frac{3}{8}$ " dia. hole, panels up to $\frac{1}{4}$ " thick. Ideal for "Talk-Listen" switches in Inter-Comm. Systems.

The "LS-Switch" (D), unusually small Lever Action Switch, made to special order only, two or three positions, non or locking. Mounts in single $\frac{1}{8}$ " dia. hole, panels up to $\frac{1}{8}$ " thick.

"LITTEL-SWITCH"			"FF-SWITCH"		"RS-SWITCH"		Schematic Circuit
Part No. Red. Push-button	Part No. Black Push-button	U.S.A. List Price	Part No.	U.S.A. List Price	Part No.	U.S.A. List Price	
101	201	\$0.80	1001	\$0.90	2001	\$0.90	
102	202	\$0.80	1002	\$0.90	2002	\$0.90	
103	203	\$0.85	1003	\$1.00	2003	\$1.00	
			1004	\$1.10	2004	\$1.15	
			1005	\$1.10	2005	\$1.15	
			1006	\$1.35	2006	\$1.50	

AVAILABLE AT ALL LEADING RADIO JOBBERS.

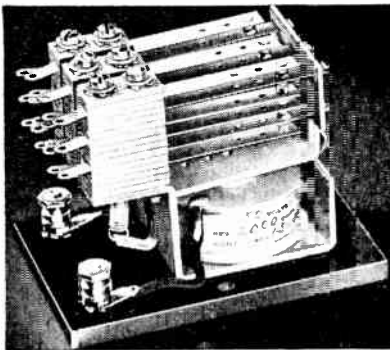
PRICES SUBJECT TO CHANGE WITHOUT NOTICE.

Advance RELAYS

GENERAL CIRCUIT CONTROL RELAYS Alternating and Direct Current

These sturdy, compact General Circuit Controls are available for operation on both alternating and direct current—Series 100 and 200 respectively—and incorporate many superior construction features not usually found in economically priced lines. "Full Floating" armature suspension, "wiping" contacts, and more than adequate insulation are but a few of their highly desirable qualities.

The switch stacks, composed of



Dimensions—3 1/4" x 2 1/4"

die-cut, spring phosphor-bronze blades, Bakelite spacers, and hard rubber sleeving, have a break-down test of 2500 volts, and will give a lifetime of service.

Each unit, mounted on a Bakelite base and equipped with binding posts for the coil connections, is entirely "above ground" and all current carrying screws and terminals are fully counter-sunk to prevent any possibility of "short-circuiting."

PRICE CHART—For Series 100 (A.C.) and Series 200 (D.C.) Relays

CONTACT RATINGS:	1/8" 4.5 AMPS. AT 6 VOLTS TO 1.5 AMPS. AT 115 VOLTS
	3/16" 15 AMPS. AT 6 VOLTS TO 5 AMPS. AT 115 VOLTS
	1/4" 30 AMPS. AT 6 VOLTS TO 10 AMPS. AT 115 VOLTS

Contact Combinations	Type Numbers, Contact Sizes and List Prices					
		1/8" List		3/16" List		1/4" List
SINGLE POLE-SINGLE THROW Normally Open	101	\$1.40	101A	\$1.65	101B	\$4.95
SINGLE POLE-SINGLE THROW Normally Closed	102	1.40	102A	1.65	102B	4.95
SINGLE POLE-DOUBLE THROW	103	4.65	103A	4.95	103B	5.50
DOUBLE POLE-DOUBLE THROW	104	4.95	104A	5.20	104B	5.75
DOUBLE POLE-SINGLE THROW Normally Open	105	4.65	105A	4.95	105B	5.50
DOUBLE POLE-SINGLE THROW Normally Closed	106	4.65	106A	4.95	106B	5.50
THREE POLE-SINGLE THROW Normally Open	107	5.20	107A	5.75	107B	6.30
THREE POLE-SINGLE THROW Normally Closed	108	5.20	108A	5.75	108B	6.30
THREE POLE-DOUBLE THROW	109	6.05	109A	6.60	109B	7.40
FOUR POLE—Two Make—Two Break	110	6.30	110A	6.85	110B	7.95
FOUR POLE-SINGLE THROW Normally Open	111	6.30	111A	6.85	111B	7.95
FOUR POLE-SINGLE THROW Normally Closed	112	6.30	112A	6.85	112B	7.95
FOUR POLE-DOUBLE THROW	113	7.15	113A	7.95	113B	9.60
FIVE POLE-SINGLE THROW Normally Open	114	7.10	114A	8.25	114B	9.60
FIVE POLE-SINGLE THROW Normally Closed	115	7.40	115A	8.25	115B	9.60
FIVE POLE-DOUBLE THROW	116	8.25	116A	9.35	116B	11.00
SIX POLE-SINGLE THROW Normally Open	117	8.50	117A	9.60	.....	.....
SIX POLE-SINGLE THROW Normally Closed	118	8.50	118A	9.60	.....	.....
SIX POLE-DOUBLE THROW	119	9.35	119A	11.55	.....	.....

The above chart, listing A.C. Relays, may also be used when ordering D.C. Relays by changing the Series Number from 100 to 200. To avoid possible errors, always specify the correct A.C. or D.C. input voltage. The Series 100 Coils are obtainable for any voltage from 1 to 115 A.C.—Series 200 Coils for any Voltage from 2 to 60 D.C. Prices for other voltages will be furnished on request.

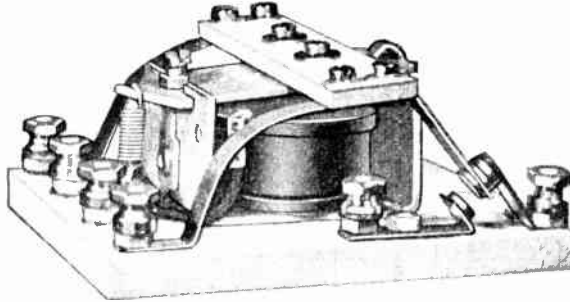
Advance RELAYS

Isolantite model Antenna Change-Over. Designed for use in Amateur Transmitters.

The contact system is Double Pole-Double Throw, using $\frac{1}{4}$ " Pure Silver contacts, with exceptional wiping action. Three and four pole arrangements are available on special order.

For high radio frequency control. Entirely hum-

TRANSMITTER RELAYS



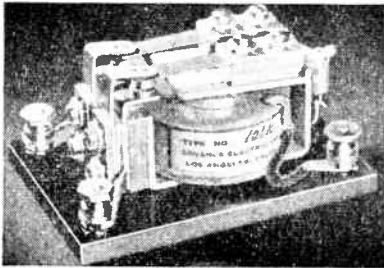
Type 400

free where intended for A.C. operation, and highly efficient on D.C. supplies. All metallic parts are cadmium and chromium plated.

Standard coils are for 110V A.C. and may also be used for 24V D.C. However, they will also be supplied for lower A.C. or D.C. voltages at no increase in price.

List Price \$9.90

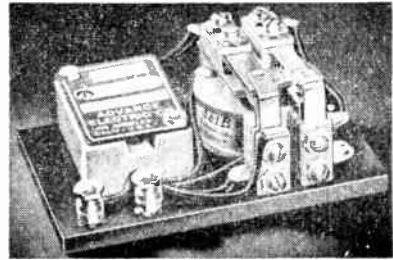
KEYING RELAYS



Type 101K—A.C.
Type 201K—D.C.

Type 300—N.C.
Type 350—N.C.

TIME DELAY RELAYS



Designed expressly for use in Keying Circuits where it is desired to use low voltage across the key to control high voltage transmission through the Relay contacts. The heavy duty coil and strong return spring makes possible an exceptional keying speed. Two sets of $\frac{1}{4}$ " Pure Silver contacts in series allow a carrying capacity of 2500 volts. The complete unit, mounted on a $\frac{3}{16}$ " Bakelite base with binding posts for coil connections, has over-all dimensions of 3" x 2" x $1\frac{3}{8}$ " and is obtainable for A.C. operation to 115 volts or D.C. operation to 60 volts.

List Price

\$5.50

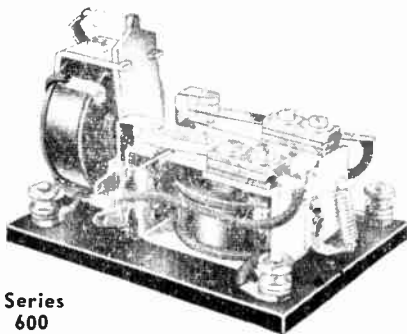
Particularly suited for use where short time delays (10 sec. to 1 min.) are required, these Relays are available with both normally open and normally closed thermostats. Types 300 and 350 respectively, the former being widely used for pre-heating tube filaments, etc. The contact combination on both models is Double Pole Single Throw with $\frac{1}{4}$ " Pure Silver contacts. Mounted on $\frac{3}{16}$ " Bakelite bases measuring $3\frac{3}{4}$ " x $2\frac{3}{8}$ " x $1\frac{1}{2}$ " with binding posts for coil connections. Standard operating voltage is 110 A.C.

List Price \$8.25

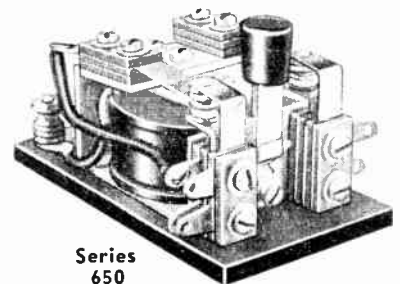
Low voltage units are available on special order.

LATCHING RELAYS

These Relays are highly desirable for applications where it is impractical to have the holding coil in constant service. When the coil actuating the contact arrangement is momentarily energized, the armature is locked in the closed position, and may be released electrically (Type 600) or manually (Type 650).



Series 600

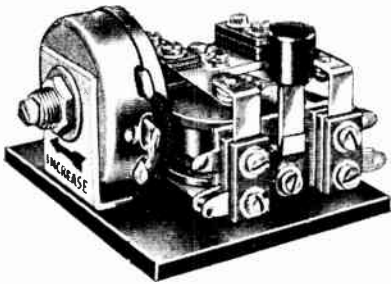


Series 650

Type	List			Type	List
Type 604B	\$9.60	.....	Double Pole-Double Throw	Type 654B	\$7.15
Type 605B	9.35	.....	Double Pole-Single Throw (N. O.)	Type 655B	6.85
Type 606B	9.35	.....	Double Pole-Single Throw (N. C.)	Type 656B	6.85

The above list prices are for $\frac{1}{4}$ " contacts. For $\frac{3}{16}$ " points deduct 25c—for $\frac{1}{8}$ " points deduct 50c. When ordering these types SPECIFY THE VOLTAGE.

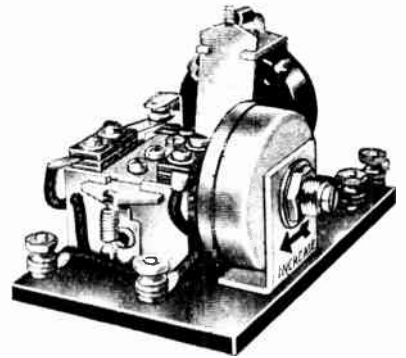
Advance RELAYS



Type 700

the safety setting, the Double Pole-Single Throw $\frac{1}{4}$ " Pure Silver contacts are opened, breaking the power supply circuit until reset.

Type 700—Base dimensions 3" x 2 $\frac{1}{2}$ "	List Price	\$10.15
Type 750—Base dimensions 1" x 2 $\frac{1}{2}$ "		13.20



Type 750

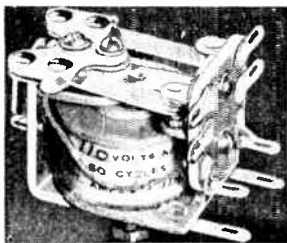
OVERLOAD RELAYS

These Relays are designed to provide accurate and positive protection against current surges and continuous overloads, and both the Manual Reset (Type 700) and Electrical Reset (Type 750) are divided into two classifications: Type "A" allows the Relay to attract on any current value between 250 and 500 mills, and Type "B" for any setting between 500 mills and 1 ampere. When the current flow passes

MIDGET RELAY

Of particular interest where size and cost are factors, this new series of Midget Relays, of improved design, incorporates all of the fine construction features typical of the ADVANCE line. This unit measures only 1 $\frac{1}{2}$ " x $\frac{3}{4}$ " x 1 $\frac{1}{4}$ " high. Pure Silver contacts are used, $\frac{1}{8}$ " in diameter. Standard coils are obtainable from 2 to 32 V D.C., and 1 to 115 V A.C. The following switch combinations can be supplied:

TYPE		CONTACT COMBINATION	LIST PRICES
A.C.	D.C.		
K1505	K1605	DP-ST NOR. OPEN	\$3.25
K1506	K1606	DP-ST NOR. CLOSED	3.25
K1504	K1604	DP-DT	3.50

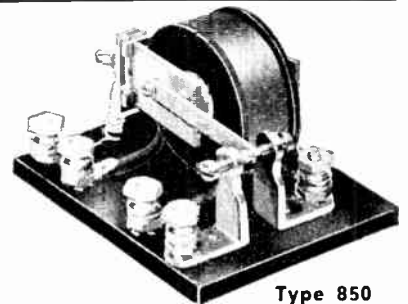


Series K1500 and K1600

ELECTRONIC RELAY

An ultra-sensitive unit for use in electronic tube circuits, providing positive, dependable control on as little as 12 milliwatts. Adjustment screws to change the air gap between the armature and the pole face, allow operation on a voltage differential of 30%, a condition ideal for electronic applications. The contact combination is Single Pole-Double Throw, employing $\frac{1}{8}$ " Pure Silver points to safely handle 100 watt non-inductive loads. Obtainable in resistances of 2500, 3000, 5000 and 10,000 ohms at no increase in price

List Price \$7.15



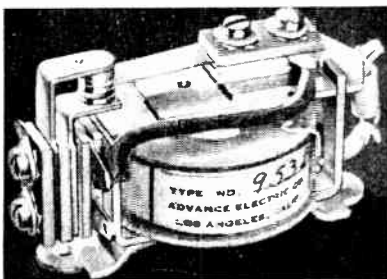
Type 850

GENERAL PURPOSE RELAYS

Types 951B — 952B — 953B

These Relays afford maximum power and efficiency at very low cost. $\frac{1}{4}$ " Pure Silver contacts are standard on the Single Pole-Single Throw (N. O.) Type 951B—Single Pole-Single Throw (N. C.)—952B—and Single Pole-Double Throw—953B—switch combinations. Adequately insulated and entirely above "ground," these Relays may be mounted on any type of panel, quickly and easily, by means of the metal mounting bracket. Coils are obtainable to 115V A. C. or 60V D. C.

List Price \$3.85

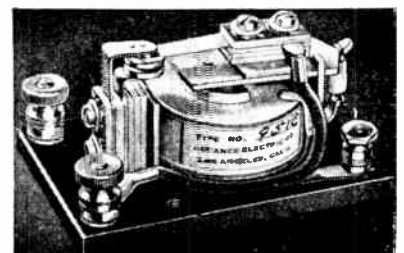


GEN-E-MOTOR STARTING RELAY

Type 951C

An exceptionally sturdy power transfer Relay, easily capable of handling the heavy current surge encountered on "cold" starts in motor-generator systems. The contacts are $\frac{3}{8}$ " Pure Silver and have ample carrying capacity for the usual 200-500V converters. Heavy-duty in every phase of construction, this unit is not to be compared with the common five and ten ampere circuit controls. Base dimensions are 3" x 2" and each unit is complete with a braided generator-cable pig-tail and binding posts for all connections. Coils for 5 $\frac{1}{2}$ to 32V D. C. or 1 to 115 A. C.

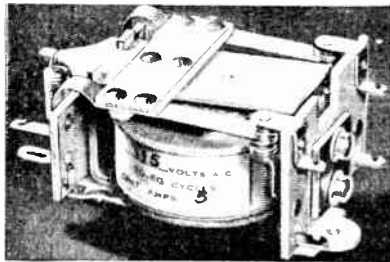
List Price \$6.60



Advance RELAYS

MIDGET TYPE CIRCUIT CONTROLS

These Relays are designed for general circuit control applications where the space for mounting is limited, and measure only 2½" in length, 1½" in width, and 1¼" in height. A.C. operated Relays in this series require but 4 watts on 50/60 cycle current, and the D. C. models from 1.5 to 2 watts, affording maximum effi-



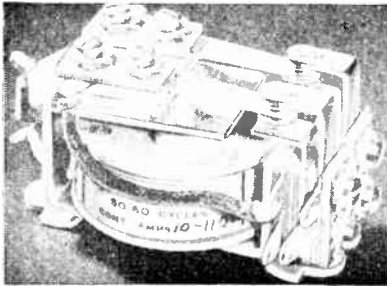
ciency without sacrifice of power and dependability. Metal brackets (not shown in the illustration) are supplied with all Relays of this type, and except on special order, these models are limited to the following contact arrangements and the usual standard operating voltages:

Contact Combinations
 Double Pole-Double Throw
 Double Pole-Single Throw (N. O.)
 Double Pole-Single Throw (N. C.)

The above chart lists type numbers for A.C. operated Relays. D. C. coils may be obtained by changing the series number from 100 to 200. Prices apply to both.

Type Numbers		Contact Sizes and List Prices	
	3/16"	1/4"	List
	104AM	104BM	\$6.05
	105AM	105BM	5.75
	106AM	106BM	5.75

INDUSTRIAL CONTROL RELAYS



Series 960

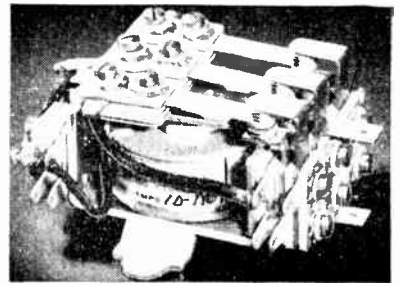
Designed mainly for industrial applications — air conditioning, lighting, and power transfer systems, the Series 960 Relays embody all of the rugged construction features demanded in units of this

type without sacrificing the desirable qualities of the midget style. Available in the following contact combinations, and to operate on standard A. C. and D. C. voltages.

Type 964B—Double Pole-Double Throw	List \$5.50
Type 965B—Double Pole-Single Throw (N. O.)	5.20
Type 966B—Double Pole-Single Throw (N. C.)	5.20

For smaller contacts, deduct 25c for 3/16" or 50c for 1/4" points, from the above list prices.

Having the same characteristics as the Series 960 Relays, these Three Pole units, Series 970, may be used for fractional h.p. 3-phase motor controls, etc. The area required for mounting 2½" x 1¾" for Type



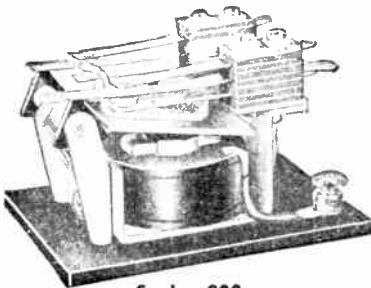
Series 970

970 Relays, as against 2½" x 1¼" for the Type 960's is due to the slightly larger frame. The metal brackets are the same in both instances—2-5/16" long, and 2" between centers of the 6/32 mounting holes. Available in the voltages indicated in the preceding series, and in the following contact combinations:

Type 977B—Three Pole-Single Throw (N. O.)	List \$5.75
Type 978B—Three Pole-Single Throw (N. C.)	5.75
Type 979B—Three Pole-Double Throw	6.60

For smaller contacts, deduct 50c for 3/16" or 75c for 1/4" point from the above list prices.

IMPULSE RELAYS



Series 900

This is another type of Relay for use where it is not feasible to have the holding coil in constant service, but differs from the latching types in that it may be controlled with a single push-button. Coils to operate this type of unit are

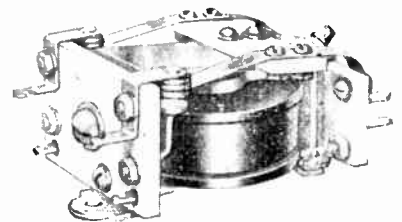
extremely heavy-duty, and are for intermittent (impulse) use only. Available for standard A. C. and D. C. voltages in the following combinations:

	D.P.S.T. List	D.P.D.T. List
With 1/4" Pure Silver contacts	\$9.35	\$9.90
With 3/16" Pure Silver contacts	9.90	10.45
With 1/4" Pure Silver contacts	10.45	11.55

When ordering these type, be sure to specify the input voltage, contact combination, and size of points.

MIDGET TYPE R.F. RELAYS

These models are sturdy, compact Double Pole - Double Throw Transmitter Relays, designed expressly for use in all types of mobile-portable communications equipment



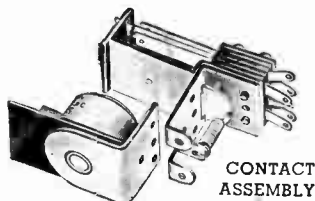
Series 1000—A.C. Series 2000—D.C.

where space is at a premium. The insulation on this, as on the Type 400's, is isolantite for both the cross-arm and end pieces, with all holes adequately well spaced to prevent structural weakness and possible "creepage." Coils are obtainable for all A. C. and D. C. voltages, and will operate in any position, the former consuming approximately four watts—the latter, two watts of power. Dimensions are 2¾" x 1½" x 1¼".

List Price \$8.25

RELAYS BY GUARDIAN

A COMPLETE LINE OF AMATEUR AND INDUSTRIAL RELAYS



CONTACT ASSEMBLY

COIL ASSEMBLY

CONTACT SWITCH ASSEMBLIES

Type 200-1—Standard, with SPDT Contact Assembly.....	List Price ea. \$1.83
Type 200-2—Standard, with DPDT Contact Assembly.....	2.50
Type 200-4—Standard, DPDT, 12.5 Amps.....	2.90
Type 200-M1—Midget, with SPDT Contact Assembly.....	1.70
Type 200-M2—Midget, with DPDT Contact Assembly.....	2.25

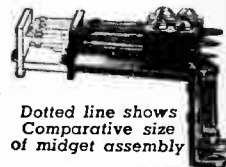
AC COILS*

6 Volt.....	List Price ea. \$2.25
12 Volt.....	2.25
24 Volt.....	2.25
115 Volt.....	2.80

*All AC coils available in 25 and 60 cycles.

SERIES 200—INTERCHANGEABLE

Two basic parts—a coil assembly and a contact assembly—comprise this simple, yet versatile, relay. Coil assembly consists of coil and field piece. Contact assembly consists of switch blades, armature, return spring and mounting bracket. The new midget contact assembly, which is interchangeable with the standard assembly, is also available in either single pole, double throw, or double pole, double throw. The standard contact assembly is 2 7/8" long, 1 3/4" high, 1" wide. The midget assembly is 1 5/8" long, 1 1/2" high, 1" wide. The four contact assemblies can be used with any one of 13 coils to make a required relay. Contact points are rated at 8 amps., 115 volts, 60 cycles AC, non-inductive load.



Dotted line shows comparative size of midget assembly

MIDGET CONTACT ASSEMBLY

DC COMS

6 Volt.....	List Price ea. \$2.25
12 Volt.....	2.25
24 Volt.....	2.25
32 Volt.....	2.25
110 Volt.....	2.80
5000-D—For Current Type Operation.....	2.90

CONTACT PARTS KIT 200-3. Assortment of contact parts to make other switch combinations. May be used with SPDT or DPDT contact assemblies to make 3PST, 4PST, 4PDT combinations, etc. Either contact assembly takes any combination up to four pole double throw. Includes complete assembly and wiring information for all possible combinations. Complete with all necessary hardware. Shipping weight 4 oz.

List Price \$1.85 ea.

RC-100 REMOTE LOCKING CONTROL RELAY



A Guardian development of the momentary impulse locking control relay. The circuit to the coil needs to be energized only long enough to close armature; contacts lock automatically. Each impulse reverses position of contacts.

Standard coils operate on 115 volts, 50-60 cycles AC. Coils

for other voltage and currents on specifications.

Contacts, 1/4" fine silver metal rated at 1500 watts at 115 volts, 60 cycle, non-inductive. Can also be used in AC primary circuits of any inductive power supply delivering up to 1 KW. 3" long, 2 1/8" wide, 1 17/32" high.

Applications—break-in control and phone to CW switching. Any circuit control where locking circuits are used.

	Shp. Wt.	List Price
RC-100-AR—(4PST).....	8 oz.	\$7.15 ea.
RC-100-BF—(3PDT) (SPDT) (DPST).....	8 oz.	7.85 ea.

U-100 AND U-200 ADJUSTABLE UNDERLOAD RELAYS

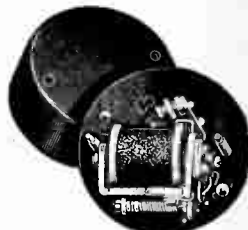
Sensitive, precise, designed and constructed for long, trouble-free service. Relays are encased in attractive black finished metal containers, protecting them from dirt, dust and maladjustment. Normal current through the coil on the U-100 is 300 amperes with an adjustable range of 100 to 200 milliamperes DC. Normal current through the coil on the U-200 is 600 milliamperes with an adjustable range of 200 to 400 milliamperes. Oversize contacts of fine silver, rated on the AC primary of any power supply delivering up to 500 watts.

Radio Application—protection of class "B" audio equipment in case of class "C" load failure.

Industrial Application—Any DC circuit where it is desirable to maintain currents above a set value.

U-100 and U-200 are 3-5/16" in diameter, 2 1/4" high. Shipping weight 14 oz.

List Price \$10.75 ea.



T-100 AND T-110 TIME DELAY RELAYS

Standard coils operate on 115 volts, 50-60 cycles non-inductive AC. Coils available on other voltages on specification. Oversize contacts rated at 1500 watts on 115 volts, 50-60 cycles non-inductive. Can also be used in the AC primary of any inductive power supply delivering up to 1 KW. Adjustable time delay for any period between 10 and 60 seconds.

Applications—Radio. In transmitter circuits to prevent damage of rectifiers and tube filaments by application of plate current before filaments are sufficiently heated.

Industrial. Any control problem requiring the changing of circuits after a predetermined interval.



GUARDIAN SERIES T-110 TIME DELAY RELAY

T-100—5 1/4" long, 3" wide, 2 1/4" high. Shipping weight 1 1/4 lbs. Laminated construction.

List Price \$17.15 ea.

The T-110 is a compact, sturdy, economical time delay relay for use in applications not requiring the capacities of the T-100. Contact capacity—1250 watts on 110 volt, 60 cycle non-inductive AC. Can also be used in the AC primary circuit of any inductive power supply delivering up to, and including, 1 KW. Adjustable time delay between 10 and 60 seconds.

T-110—5 3/8" long, 3 1/8" wide, 2 1/8" high. Shipping Weight 8 oz. List Price \$10.75 ea.

RELAYS BY GUARDIAN

A COMPLETE LINE OF AMATEUR AND INDUSTRIAL RELAYS



**SERIES R-100
H.F. RELAY**

HIGH FREQUENCY RELAYS

The Series R-100, R-100B, and A-300 Guardian Relays are primarily designed for high frequency applications. They are low-loss insulated, compact, economical and sturdily constructed. The R-100 and R-100B are AlSiMag insulated, while the A-300 is mounted on a mycalex base with polystyrene contact mounting bar.

Radio Applications — Antenna changeover, break-in, high voltage keying, grid controlled rectifier keying, remote control of receiver and transmitter, and other high frequency applications.

Industrial Applications — Oven control, remote motor control, short wave therapy and diathermy, heating equipment.



**SERIES A-300
H.F. RELAY**

	Length	Width	Height	Shpg. Wght. (oz.)	List Price ea.
R-100 —SPST (normally open).....	2 ³ / ₄ "	1"	2"	6	\$3.95
R-100-B —SPST (normally closed).....	2 ³ / ₄ "	1"	2 ³ / ₈ "	6	3.95
R-100-C —SPDT	2 ³ / ₄ "	1 ¹ / ₈ "	2 ³ / ₈ "	6	4.75
R-100-G —DPDT	2 ³ / ₄ "	1 ⁷ / ₈ "	2 ³ / ₈ "	6	8.55
A-300 —DPDT	3"	3"	2-1/16"	7	9.10

X-300-ER ADJUSTABLE OVERLOAD RELAY

with Electrical Reset



This relay offers positive, precise protection against current surges and continuous overloads — remote panel installation of the control potentiometer simplifying adjustment of relay to operate on

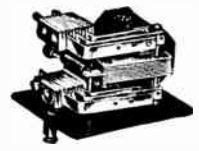
any current value from 250 to 750 milliamperes — auxiliary contacts for pilot light indication of "overload" or "clear" position — reset relay can be operated from any convenient point. Voltage drop across coil is less than 10 volts at any current value. Insulation between coil and ground rated at 3000 volts.

X-300-ER—4³/₄" long, 1-15/16" wide, 2" high. Shipping weight 12 oz.

List Price.....**\$9.25 ea.**

B-100 BREAK-IN RELAY

Specially designed for break-in operation on amateur transmitters. Low current drain and compact construction, plus the use of a laminated field piece and armature insuring efficient operation, make the B-100 an ideal relay for this application. Standard coil operates on 110 50-60 cycle AC. Silver contacts rated at 1500 watts, 60 cycles AC non-inductive, and in AC primary circuits of any inductive power supply delivering up to 1 KW.



B-100—2³/₄" long, 2¹/₈" high, 2¹/₄" wide. Shipping weight 11 oz.

List Price.....**\$10.75 ea.**

K-320 KEYING RELAY

A standard coil operates on 6 volts AC. Coils for other voltages on specification at 10% additional to list price. Contacts — special over-size silver. Can handle 5,000 watts on 60 cycle non-inductive 115 volts AC and in AC primary circuit of any inductive power supply delivering up to and including 1 KW. Control capacity — up to 2,000 volts with clean make and break.



Applications—Control of filament center tap keying of any stage having up to 2,000 volts on plate; primary keying or control of power supplies up to and including 1,000 watts; and grid-controlled rectifier keying of 3,000 volt power supplies.

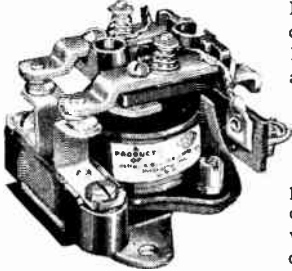
K-320—3" long, 1¹/₂" wide, 1-15/16" high. Shipping weight 4 oz.

List Price.....**\$4.50 ea.**



Potter & Brumfield

PR Series HEAVY DUTY POWER RELAYS

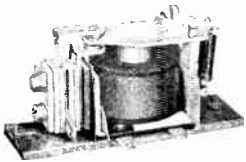


Relay contacts on PR3A, PR3D, PR4A and PR4D rated at 20 A, non-inductive load 110V AC or 1 HP, AC. All other relay contacts rated at 15 A, non-inductive at 110V AC. Size approximately 2⁵/₈" x 2 9/16" x 2 1/4" high. Specify coil voltage and frequency.

Designed for such power circuits as motor starting up to 1 HP., heater loads up to 20 amperes, remote break-in control of transmitters, electro plating devices, elevator controls, or any control circuit requiring fast positive switching. AC types operate on approximately 10 volt amperes. DC types require approximately 2 watts.

Description	A.C. RELAYS 6-12-24-E10-220 Volts				D.C. RELAYS 6-12-24-110 Volts			
	Normally Open	Net	Normally Closed	Net	Normally Open	Net	Normally Closed	Net
SPST	PR1A	\$2.85	PR2A	\$2.85	PR1D	\$2.85	PR2D	\$2.85
Heavy Duty SPST	PR3A	3.10	PR4A	3.15	PR3D	3.10	PR4D	3.15
DPST	PR7A	3.65	PR8A	3.85	PR7D	3.65	PR8D	3.85
SPDT	PR5A		3.20	PR5D		3.20		
DPDT	PR11A		4.90	PR11D		4.90		
	Add 60c to prices above for coils over 150 volts.				Add 60c to prices above for coils over 50 volts.			

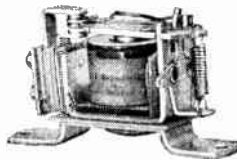
LS Series PLATE CIRCUIT RELAYS



Single pole double throw, 2500 ohm coil, net \$1.90.
Single pole double throw, 5000 ohm coil, net \$2.20.
Size 2⁵/₈" x 1³/₈" x 1³/₈" high.
When ordering, specify coil voltage or resistance.

Designed for application where size and cost are important. Often used in photo-electric circuits, temperature control circuits and electronic timing devices. Similar to the LM Series but less sensitive. Available in all resistances up to and including 5000 ohms. Requires .09 watt minimum actuating power.

FR Series PHOTO FLASH RELAYS

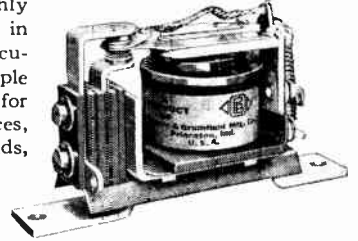


FR1A	\$3.00	FR5A	\$3.25
FR1D		FR5D	
FR2A	2.95	FR7A	3.95
FR2D		FR7D	
FR3A	3.65	FR8A	3.85
FR3D		FR8D	
FR11A	\$4.25		
FR11D			

The newly developed electronic photo flash units using a high voltage discharge through a xenon gas filled bulb require a relay of extraordinary characteristics. When the bulb is flashed the contacts must carry an extremely high surge of current without sticking, burning or pitting. The repetitive accuracy must be as uniform as a precision built shutter on a fine camera. Unfailing positive contact is vital to synchronization of the shutter with the 2500 volt capacitor discharge.

The Potter and Brumfield FR relay has been tried and proven under the most severe conditions of temperature, humidity and shock. Special contact material and the finest quality of baked varnish impregnation of coil and other insulating parts combine to give a reliable relay at economy prices. The FR is available in all the contact combinations listed under the MR Series shown on this page up to and including Double Pole Double Throw. Coils are available in all AC voltages up to 220 volts and DC voltages up to 110. Power requirements for coil operation is 1.5 to 2 watts DC and 3 to 4 volt amperes AC. Overall dimensions for single pole types are 2 15/16" x 1 1/2" x 1 3/8" high. Double pole types 2 3/4" x 2 3/8" x 1 7/8" high.

MR Series MEDIUM DUTY POWER RELAYS



Sturdy, compact, highly efficient, for mounting in confined spaces. Particularly adapted to multiple panel mounting. Ideal for safety and signal devices, call systems, heater loads, radio protective circuits, transmitter keying circuits, burglar alarms, photographic applications, electric sign controls, etc. Available in all contact arrangements up to and including double pole double throw. AC types operate on approximately 4 volt amperes and DC types operate on approximately 2 watts. Contacts rated at 8 A, 110V, 60 cycles non-inductive load. Approximate size single pole units 2 15/16" x 1 1/2" x 1 5/8" high. Double pole units 2 3/4" x 2 1/8" x 1 7/8" high.

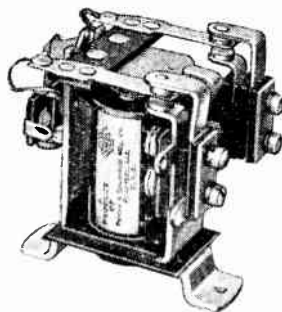
Description	A.C. RELAYS 6-12-24-110-220 Volts				D.C. RELAYS 6-12-24-110 Volts			
	Normally Open	Net	Normally Closed	Net	Normally Open	Net	Normally Closed	Net
SPST	MR1A	\$2.00	MR2A	\$1.95	MR1D	\$2.00	MR2D	\$1.95
DPST	MR7A	2.60	MR8A	2.50	MR7D	2.60	MR8D	2.50
SPDT	MR5A		2.15	MR5D		2.15		
DPDT	MR11A		2.80	MR11D		2.80		
	Add 40c to prices above for coils over 150 volts.				Add 40c to prices above for coils over 55 volts.			

POTTER & BRUMFIELD SALES COMPANY

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POTTER & BRUMFIELD SALES COMPANY

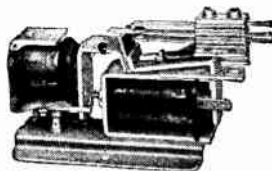
LM Series PLATE CIRCUIT RELAYS



Designed to meet demand for high grade medium cost plate circuit relays in both single and double pole contact arrangements. Large coils are particularly sensitive. The single pole LM operates on as low as .015 watts, the double pole types on .070 watts. Applicable to smoke control, packaging, counting and other electronic control circuits. Contacts supplied are 3/16" fine silver. Approximate size of single pole units 2 1/4" x 1 3/8" x 2 3/8" high. Double pole units 2 1/4" x 2 1/8" x 2 3/8" high. When ordering, specify coil resistance.

DESCRIPTION	Coil Resistance Ohms	SINGLE THROW			
		Normally Open	Net	Normally Closed	Net
SPST	2500	LM-1	\$2.10	LM-2	\$2.15
	5000		2.40		2.45
	10000		2.75		2.85
DPST	2500	LM-7	3.00	LM-8	3.05
	5000		3.25		3.30
	10000		3.65		3.70
DOUBLE THROW					
SPDT	2500	LM-5			2.30
	5000				2.55
	10000				2.95
DPDT	2500	LM-11			3.40
	5000				3.65
	10000				4.05

EL Series MULTIPLE CONTACT LATCHING RELAYS



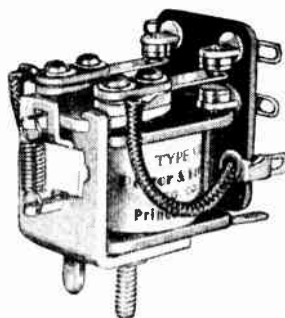
The EL is recommended for applications which require multiple contacts to open or close circuits simultaneously. An added feature is the latching coil and locking mechanism. The armature of the latching coil serves to lock the contacts in the energized position. The actuating coil may be de-energized as soon as the contacts are locked in position. Contacts may then be electrically reset to their normal position by push button control of current to the latching coil. The EL relay is available in all contact combinations up to and including four pole double throw as shown under the SU Series in the adjoining column. Actuating and latching coils are available for DC voltages up to 110 or AC voltages up to 220. Actuating coils require an average of 1.5 to 2 watts on DC and 1.75 to 2.5 watts on AC operation.

Orders must specify the voltage and frequency for each of the coils on the EL relay.

Two 5/32" mounting holes are required spaced 1 3/8" center to center. Maximum dimensions, depending upon the number of contacts, are 2 3/8" H x 2 1/2" L x 1 7/16" W. The 3/16" fine silver contacts are rated at 4 amperes 110 volts AC non-inductive load.

EL1A } \$3.60	EL12A } \$4.40
EL1D }	EL12D }
EL2A } 3.80	EL13A } 4.40
EL2D }	EL13D }
EL5A } 3.75	EL14A } 4.95
EL5D }	EL14D }
EL7A } 3.95	EL15A } 4.75
EL7D }	EL15D }
EL8A } 3.95	EL16A } 4.75
EL8D }	EL16D }
EL11A } 4.30	EL17A } 5.40
EL11D }	EL17D }

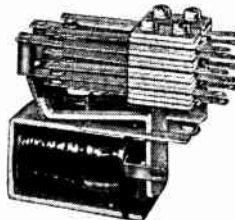
KR Series Small Light Duty



A relay designed for application where size and weight are important. Sturdy and efficient. In applications where operating current is not too limited, the DC types can be adjusted to withstand the vibration encountered in most aircraft applications. Ideal for sub-chassis mounting and switching of RF or AF circuits. Contacts are rated at 3 amperes 110 volts, 60 cycle non-inductive. Approximate size of KR11D 1 3/16" x 1 11/16" x 1 1/4" high. When ordering, specify coil voltage and frequency.

Description	A.C. RELAYS 6-12-24-110 Volts				D.C. RELAYS 6-12-24-60 Volts				
	Normally Open	Net	Normally Closed	Net	Normally Open	Net	Normally Closed	Net	
SPST	KR1A	\$2.00	KR2A	\$1.95	KR1D	\$1.90	KR2D	\$1.85	
DPST	KR7A		2.40	KR8A	2.35	KR7D	2.30	KR8D	2.25
SPDT	KR5A			2.00	KR5D			1.90	
DPDT	KR11A			2.50	KR11D			2.40	
A.C. coils up to 117 volts at above prices.					Add 25c to above prices for coils of 3500 to 5000 ohms. From 5001 to 6000 ohms add 35c.				

SU Series MULTIPLE LEAF RELAYS



Unique construction provides many valuable features at low cost. Larger coil space permits most efficient winding for higher voltages and lower consumption. May be mounted either vertically or horizontally, terminals easily accessible in either mounting. Suitable for applications such as signal or alarm controls, remote indicators, temperature controls, overload or underload protective devices, etc. Contacts rated at 4 amperes 110 volts AC non-inductive load. Contact combinations up to and including 4-pole double throw. DC types require 1.5 watts actuating power. Dimensions of SU17A (illustrated) are 2 1/2" x 1 7/16" x 2 1/2" high. When ordering, specify coil voltage and frequency.

Description	A.C. RELAYS 6-12-24-110-220 Volts				D.C. RELAYS 6-12-24-110 Volts			
	Normally Open	Net	Normally Closed	Net	Normally Open	Net	Normally Closed	Net
SPST	SU1A	\$1.95	SU2A	\$1.95	SU1D	\$1.95	SU2D	\$1.95
DPST	SU7A	2.45	SU8A	2.45	SU7D	2.35	SU8D	2.35
3PST	SU12A	2.90	SU13A	2.90	SU12D	2.60	SU13D	2.60
4PST	SU15A	3.30	SU16A	3.30	SU15D	3.20	SU16D	3.20
SPDT	SU5A			2.15	SU5D			2.15
DPDT	SU11A			2.70	SU11D			2.70
3PDT	SU14A			3.15	SU14D			3.15
4PDT	SU17A			3.65	SU17D			3.65
Add 63c to above prices for coils above 117 volts.					Add 63c to above prices for coils over 80 volts.			

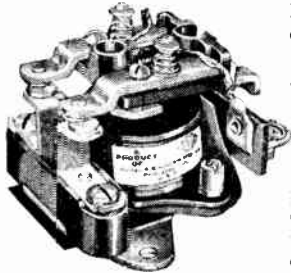
POTTER & BRUMFIELD SALES COMPANY

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Potter & Brumfield

PR Series HEAVY DUTY POWER RELAYS

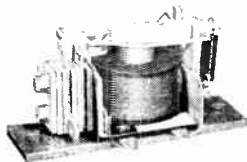


Relay contacts on PR3A, PR3D, PR4A and PR4D rated at 20 A, non-inductive load 110V AC or 1 HP, AC. All other relay contacts rated at 15 A, non-inductive at 110V AC. Size approximately 2 5/8" x 2 9/16" x 2 1/4" high. Specify coil voltage and frequency.

Designed for such power circuits as motor starting up to 1 HP., heater loads up to 20 amperes, remote break-in control of transmitters, electro plating devices, elevator controls, or any control circuit requiring fast positive switching. AC types operate on approximately 10 volt amperes. DC types require approximately 2 watts.

Description	A.C. RELAYS 6-12-24-110-220 Volts				D.C. RELAYS 6-12-24-110 Volts			
	Normally Open	Net	Normally Closed	Net	Normally Open	Net	Normally Closed	Net
SPST	PR1A	\$2.85	PR2A	\$2.85	PR1D	\$2.85	PR2D	\$2.85
Heavy Duty SPST	PR3A	3.10	PR4A	3.15	PR3D	3.10	PR4D	3.15
DPST	PR7A	3.65	PR8A	3.85	PR7D	3.65	PR8D	3.85
SPDT	PR5A		3.20		PR5D		3.20	
DPDT	PR11A		4.90		PR11D		4.90	
	Add 60c to prices above for coils over 150 volts.				Add 60c to prices above for coils over 50 volts.			

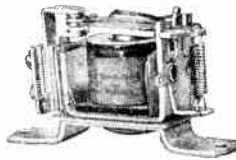
LS Series PLATE CIRCUIT RELAYS



Single pole double throw, 2500 ohm coil, net \$1.90.
Single pole double throw, 5000 ohm coil, net \$2.20.
Size 2 5/8" x 1 3/8" x 1 3/8" high.
When ordering, specify coil voltage or resistance.

Designed for application where size and cost are important. Often used in photo-electric circuits, temperature control circuits and electronic timing devices. Similar to the LM Series but less sensitive. Available in all resistances up to and including 5000 ohms. Requires .09 watt minimum actuating power.

FR Series PHOTO FLASH RELAYS



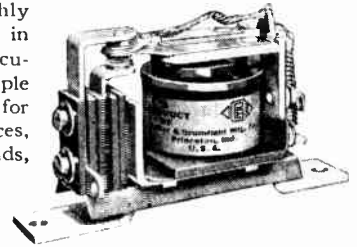
FR1A	\$3.00	FR5A	\$3.25
FR1D		FR5D	
FR2A	} 2.95	FR7A	} 3.95
FR2D		FR7D	
FR3A	} 3.65	FR8A	} 3.85
FR3D		FR8D	
FR11A	} \$4.25		
FR11D			

The newly developed electronic photo flash units using a high voltage discharge through a xenon gas filled bulb require a relay of extraordinary characteristics. When the bulb is flashed the contacts must carry an extremely high surge of current without sticking, burning or pitting. The repetitive accuracy must be as uniform as a precision built shutter on a fine camera. Unfailing positive contact is vital to synchronization of the shutter with the 2500 volt capacitor discharge.

The Potter and Brumfield FR relay has been tried and proven under the most severe conditions of temperature, humidity and shock. Special contact material and the finest quality of baked varnish impregnation of coil and other insulating parts combine to give a reliable relay at economy prices. The FR is available in all the contact combinations listed under the MR Series shown on this page up to and including Double Pole Double Throw. Coils are available in all AC voltages up to 220 volts and DC voltages up to 110. Power requirements for coil operation is 1.5 to 2 watts DC and 3 to 4 volt amperes AC. Overall dimensions for single pole types are 2 15/16" x 1 1/2" x 1 5/8" high. Double pole types 2 3/4" x 2 1/8" x 1 7/8" high.

MR Series MEDIUM DUTY POWER RELAYS

Sturdy, compact, highly efficient, for mounting in confined spaces. Particularly adapted to multiple panel mounting. Ideal for safety and signal devices, call systems, heater loads, radio protective circuits, transmitter keying circuits, burglar alarms, photographic applications, electric sign controls, etc. Available in all contact arrangements up to and including double pole double throw. AC types operate on approximately 4 volt amperes and DC types operate on approximately 2 watts. Contacts rated at 8 A, 110V, 60 cycles non-inductive load. Approximate size single pole units 2 15/16" x 1 1/2" x 1 5/8" high. Double pole units 2 3/4" x 2 1/8" x 1 7/8" high.



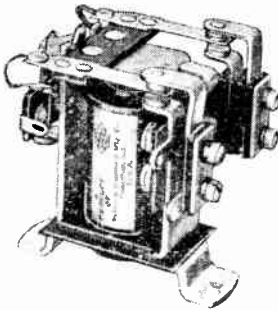
Description	A.C. RELAYS 6-12-24-110-220 Volts				D.C. RELAYS 6-12-24-110 Volts			
	Normally Open	Net	Normally Closed	Net	Normally Open	Net	Normally Closed	Net
SPST	MR1A	\$2.00	MR2A	\$1.95	MR1D	\$2.00	MR2D	\$1.95
DPST	MR7A	2.60	MR8A	2.50	MR7D	2.60	MR8D	2.50
SPDT	MR5A		2.15		MR5D		2.15	
DPDT	MR11A		2.80		MR11D		2.80	
	Add 40c to prices above for coils over 150 volts.				Add 40c to prices above for coils over 55 volts.			

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POTTER & BRUMFIELD SALES COMPANY

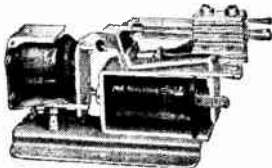
LM Series PLATE CIRCUIT RELAYS



Designed to meet demand for high grade medium cost plate circuit relays in both single and double pole contact arrangements. Large coils are particularly sensitive. The single pole LM operates on as low as .015 watts, the double pole types on .070 watts. Applicable to smoke control, packaging, counting and other electronic control circuits. Contacts supplied are 3/16" fine silver. Approximate size of single pole units 2 1/4" x 1 3/8" x 2 3/8" high. Double pole units 2 1/4" x 2 1/8" x 2 3/8" high. When ordering, specify coil resistance.

DESCRIPTION	Coil Resistance Ohms	SINGLE THROW			
		Normally Open	Net	Normally Closed	Net
SPST	2500	LM-1	\$2.10	LM-2	\$2.15
	5000		2.40		2.45
	10000		2.75		2.85
DPST	2500	LM-7	3.00	LM-8	3.05
	5000		3.25		3.30
	10000		3.55		3.70
DOUBLE THROW					
SPDT	2500	LM-5			2.30
	5000				2.55
	10000				2.95
DPDT	2500	LM-11			3.40
	5000				3.65
	10000				4.05

EL Series MULTIPLE CONTACT LATCHING RELAYS



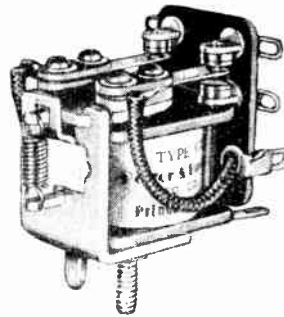
The EL is recommended for applications which require multiple contacts to open or close circuits simultaneously. An added feature is the latching coil and locking mechanism. The armature of the latching coil serves to lock the contacts in the energized position. The actuating coil may be de-energized as soon as the contacts are locked in position. Contacts may then be electrically reset to their normal position by push button control of current to the latching coil. The EL relay is available in all contact combinations up to and including four pole double throw as shown under the SU Series in the adjoining column. Actuating and latching coils are available for DC voltages up to 110 or AC voltages up to 220. Actuating coils require an average of 1.5 to 2 watts on DC and 1.75 to 2.5 watts on AC operation.

Orders must specify the voltage and frequency for each of the coils on the EL relay.

Two 5/32" mounting holes are required spaced 1 3/8" center to center. Maximum dimensions, depending upon the number of contacts, are 2 3/8" H x 2 1/2" L x 1 7/16" W. The 3/16" fine silver contacts are rated at 4 amperes 110 volts AC non-inductive load.

EL1A } \$3.60	EL12A } \$4.40
EL1D } \$3.60	EL12D } \$4.40
EL2A } 3.60	EL13A } 4.40
EL2D } 3.60	EL13D } 4.40
EL5A } 3.75	EL14A } 4.95
EL5D } 3.75	EL14D } 4.95
EL7A } 3.95	EL15A } 4.75
EL7D } 3.95	EL15D } 4.75
EL8A } 3.95	EL16A } 4.75
EL8D } 3.95	EL16D } 4.75
EL11A } 4.30	EL17A } 5.40
EL11D } 4.30	EL17D } 5.40

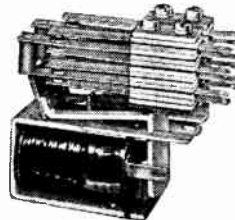
KR Series Small Light Duty



A relay designed for application where size and weight are important. Sturdy and efficient. In applications where operating current is not too limited, the DC types can be adjusted to withstand the vibration encountered in most aircraft applications. Ideal for sub-chassis mounting and switching of RF or AF circuits. Contacts are rated at 3 amperes 110 volts, 60 cycle non-inductive. Approximate size of KR11D 1 3/16" x 1 11/16" x 1 1/4" high. When ordering, specify coil voltage and frequency.

Description	A.C. RELAYS 6-12-24-110 Volts				D.C. RELAYS 6-12-24-60 Volts			
	Normally Open	Net	Normally Closed	Net	Normally Open	Net	Normally Closed	Net
SPST	KR1A	\$2.00	KR2A	\$1.95	KR1D	\$1.90	KR2D	\$1.85
DPST	KR7A	2.40	KR8A	2.35	KR7D	2.30	KR8D	2.25
SPDT	KR5A		2.00		KR5D		1.90	
DPDT	KR11A		2.50		KR11D		2.40	
A.C. coils up to 117 volts at above prices.					Add 25c to above prices for coils of 3500 to 5000 ohms. From 5001 to 6000 ohms add 35c.			

SU Series MULTIPLE LEAF RELAYS



Unique construction provides many valuable features at low cost. Larger coil space permits most efficient winding for higher voltages and lower consumption. May be mounted either vertically or horizontally, terminals easily accessible in either mounting. Suitable for applications such as signal or alarm controls, remote indicators, temperature controls, overload or underload protective devices, etc. Contacts rated at 4 amperes 110 volts AC non-inductive load. Contact combinations up to and including 4-pole double throw. DC types require 1.5 watts actuating power. Dimensions of SU17A (illustrated) are 2 1/2" x 1 7/16" x 2 1/2" high. When ordering, specify coil voltage and frequency.

Description	A.C. RELAYS 6-12-24-110-220 Volts				D.C. RELAYS 6-12-24-110 Volts			
	Normally Open	Net	Normally Closed	Net	Normally Open	Net	Normally Closed	Net
SPST	SU1A	\$1.95	SU2A	\$1.95	SU1D	\$1.95	SU2D	\$1.95
DPST	SU7A	2.45	SU8A	2.45	SU7D	2.35	SU8D	2.35
3PST	SU12A	2.90	SU13A	2.90	SU12D	2.80	SU13D	2.80
4PST	SU15A	3.30	SU16A	3.30	SU15D	3.20	SU16D	3.20
SPDT	SU5A		2.15		SU5D		2.15	
DPDT	SU11A		2.70		SU11D		2.70	
3PDT	SU14A		3.15		SU14D		3.15	
4PDT	SU17A		3.65		SU17D		3.65	
Add 63c to above prices for coils above 117 volts.					Add 63c to above prices for coils over 60 volts.			

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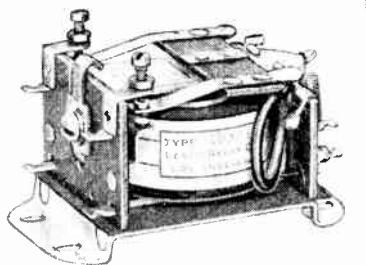
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LEACH RELAY CO.



These Leach Relays are considered standard items within the trade. These relays are maintained in shelf-stock supply in order to expedite shipment to jobbers throughout the United States.

For more than thirty years Leach has manufactured quality relays. This vast experience in engineering design and manufacturing ability is incorporated in these standard relay designs.



BASE DIMENSIONS: 1½" x 2-9/16", overall height 1-11/32"

WEIGHT: 4½ ounces.

RESISTANCES: 5,000 Ohms or 10,000 Ohms.
Type
No.

1037 Double Pole, Double Throw, 5,000 Ohms.
1037 Double Pole, Double Throw, 10,000 Ohms.

Be sure to specify coil resistance when ordering.

SENSITIVE METAL BASE RELAY

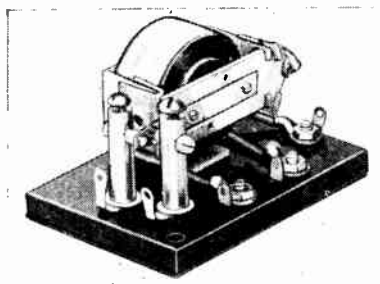
TYPE 1037 SERIES

This Relay is constructed for sensitive operation, and has ⅛" pure silver contacts mounted on screws to provide adjustments on top contacts which are capable of carrying 1 Ampere at 115 Volts, AC, Non-inductive. With these adjustment screws, the air gap can readily be adjusted so that the Relay can be set to pull in at some predetermined coil current. It is supplied at DPDT only. Nothing is grounded to the metal base. The minimum reliable coil consumption is .040 watts. It will operate on a good deal less, but the adjustment becomes fairly critical on these low values.

SENSITIVE DIRECT CURRENT RELAYS

TYPE 1032 SERIES

This Relay is used extensively in closed circuit burglar alarm systems, in the plate circuit of electron tubes, as secondary Relays for micro-ampere Relays, etc. It is a very fine all-around low current, high resistance Relay, capable of withstanding considerable vibration without affecting its operation. It is equipped with an adjustable spring and adjustable stationary contacts, fitted with set screws. All contacts are pure silver and capable of carrying 1 Ampere, 115 Volts, AC, Non-inductive. This Relay is pigtailed to prevent current passing through the hinge part. The contact system is SPDT, and minimum practical coil wattage is .015 watts.



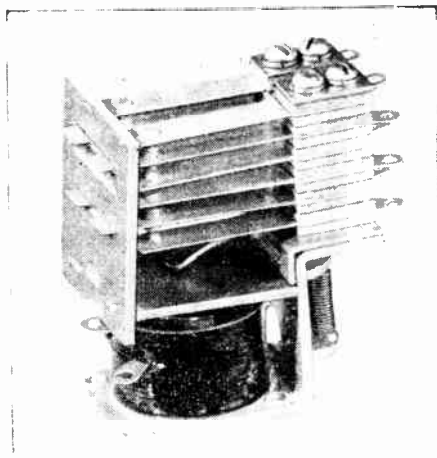
BASE DIMENSIONS: 2" x 2¾", overall height 1-11/16"

WEIGHT: 6 ounces.

RESISTANCES: 5,000 Ohms or 10,000 Ohms.
Type
No.

1032 Single Pole, Double Throw, 5,000 Ohms.
1032 Single Pole, Double Throw, 10,000 Ohms.

Be sure to specify coil resistance when ordering.



Type Number

6-C 7-C Single Pole, Double Throw.
6-2C 7-2C Double Pole, Double Throw.
6-4C 7-4C 4-Pole Double Throw.

MULTIPOLE RELAYS

TYPE 6 & 7 SERIES

This Relay is the most versatile Relay for its size in the Leach line, and is ideal for industrial and radio applications where currents to be handled by the contact systems do not exceed 8 Amperes at 115 VAC, Non-inductive. By using the desired stationary contacts, many combinations are available. For example, on the 7-4C Relay one could have various combinations of double-pole, single-pole open, single-pole closed, etc., as required. All contacts are pure silver and are mounted on heavy-plated phosphor-bronze pole pieces, which are designed to give a wiping action and positive contact pressure. Relay provides solder lugs for connecting coil and contact systems.

COILS: 6 Volt Direct Current Coils consume approximately 3 watts, 6 or 115 VAC Alternating Current Coils consume 6V/A approximately.

CONTACTS: Heavy fine silver contacts ⅛" diameter. Will carry loads up to 8 Amperes at 115 VAC, Non-inductive.

LEACH RELAY CO.



MIDGET RELAYS

TYPE 223-227 & 323-327 SERIES

ENGINEERED in miniature to weigh less than 2 ounces and measures from one to $1\frac{1}{4}$ inches in length, Leach Midget Relays dependably handle contact loads of up to 2 Amperes at 115 Volts AC, Non-inductive. Because of their space and weight saving factors, Midgets expand the range of control by Relays in many products where previous methods are considered unprofitable.

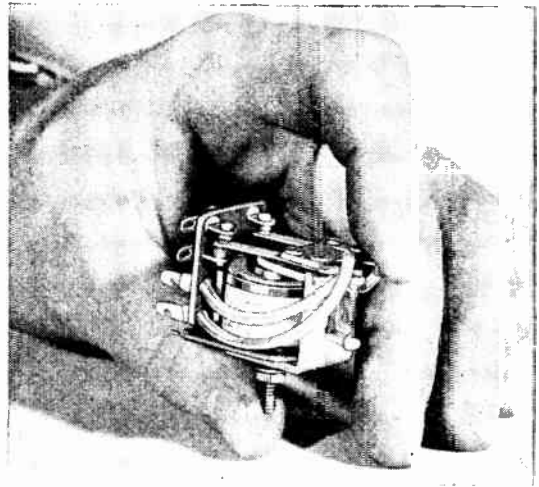
Supplied in a variety of contact arrangements, with moving contact poles insulated from the armature and frame, and with coils for operation on either AC or DC. The high quality, well-known in our standard and larger size Relays, is used throughout.

STANDARD COILS: 6 Volt Direct Current Coils consume approximately .750 watts of Alternating Current 6 or 115 Volts, approximately 4 V/A.

CONTACTS: $\frac{1}{8}$ " diameter Fine Silver, rated 2 Amperes at 115 VAC, Non-inductive.

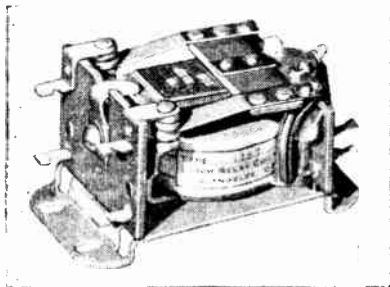
DIMENSIONS: SP — $1\frac{5}{16}$ " x $1\text{-}13/16$ "
DP — $1\text{-}3/16$ " x $1\text{-}13/16$ "

Overall height— $1\frac{1}{4}$ " not including mounting stud.



MOUNTING: Single No. 6-32 stud, $7/16$ " long.
WEIGHT: 1.5 ounces approximately.

Type Number		
DC	AC	
223	323	SPDT
227	327	DPDT



METAL BASE STYLE

TYPE 1057 & 1157 SERIES

THESE RELAYS are ruggedly built for industrial uses and are fitted with $\frac{1}{4}$ " fine silver contacts for handling heavier currents. Phosphor-bronze, nickel-plated, is used for the pole pieces. Nothing is grounded to the frame. All parts and pieces are so constructed that nothing can twist or turn out of alignment.

DIRECT CURRENT: Coil consumption 1.5 watts, 6 Volts.

ALTERNATING CURRENT: Coil consumption 50-60 cycles, 6 or 115 Volts, approximately 4 V/A.

CONTACTS: $\frac{1}{4}$ " diameter Pure Silver. 12.5 Amperes at 115 Volts AC, Non-inductive.

BASE DIMENSIONS: $1\frac{5}{8}$ " x $2\frac{3}{4}$ "; overall height $1\frac{3}{8}$ ".

WEIGHT: 5 ounces.

Type Number		
DC	AC	
1057	1157	DPDT

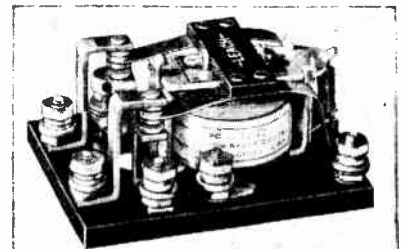
STANDARD SIZE CIRCUIT CONTROL RELAYS

TYPE 1257 & 1357 SERIES

This excellent Relay has many applications where it is not desirable to use solder terminal connections. They are highly insulated and made of the best materials obtainable. The magnetic circuit is exceptionally high grade of magnetic iron, heavily cadmium-plated. The contacts are $\frac{1}{4}$ -inch pure silver, slightly crowned, and are rated at 12.5 Amperes, 115 Volts AC, Non-Inductive.

AC coils consume 6 V/A, 6 or 115 Volts AC.

DC coils consume 1.5 watts, 6 Volts DC.



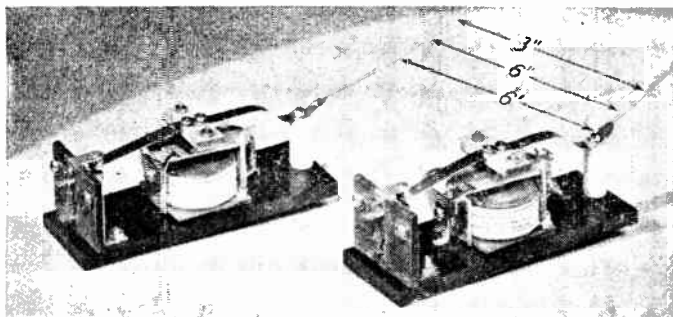
BASE DIMENSIONS: $\frac{1}{4}$ " black Bakelite, $2\text{-}3/16$ " x 3"; overall height, $1\text{-}7/16$ "

WEIGHT: 7 ounces.

Type Number		
DC	AC	
1257	1357	DPDT



RADIO AND HIGH FREQUENCY RELAYS—ANTENNA TRANSFER



TYPE 1623-S9 & 1723-S9

These Relays are exactly the same as above, except that a $\frac{1}{8}$ -inch fine silver SPST Normally Open auxiliary contact has been added. Usually one these relays is paired with one of the above types*, in order to provide the auxiliary contact for the power supply. This may also be used to close a power Relay, for grounding, or for controlling light power circuits.

AC coils consume approximately 6 V/A, 6 or 115 Volts, 50-60 cycles.

DC coils consume approximately 3.5 watts, 6 Volts DC.

DIMENSIONS: $1\frac{1}{2}$ " x $4\frac{5}{8}$ "; overall height, $1\frac{3}{4}$ ".

WEIGHT: $6\frac{1}{4}$ ounces, approximately (each relay).

Type Number

DC	AC	
1623	1723	SPDT
1623-S9	1723-S9	SPDT, with $\frac{1}{8}$ " Aux. Cont.

*Usually one No. 1723 and one No. 1723-S9 are paired for AC use or one No. 1623 and one No. 1623-S9 are paired for DC use.

MYCALEX AND ISOLANTITE

TYPE 1623 & 1723

This new idea for antenna change-over eliminates the major drawback of most Relays now used for this purpose. The spacing between leads, heretofore has been limited to the spacing between the Relay contact strips. A pair of the above matched Relays permits any desired spacing between antenna lead-out wires whether 6 inches, or 6 feet.

Maximum high frequency insulation is provided through the use of heavy Mycalex panels, and Isolantite insulators. The Relays are designed with a wide air gap, $\frac{1}{4}$ inch pure silver contacts with a SPST arrangement.

They will withstand over 4000 volts RMS, 60-cycle hi-spot test between contacts and between contacts and frame on ground.

RADIO AND HIGH VOLTAGE RELAYS CERAMICS

TYPE 1077 & 1177 SERIES

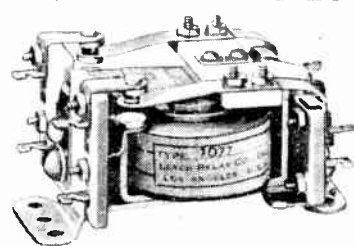
This is an AlSiMag insulated RF Relay designed for more or less universal service, such as police mobile radio, aircraft and amateur installations. Nothing has been left undone to make this Relay the best of its kind. The pole pieces are nickel-plated, phosphor-bronze. The main contacts are $\frac{1}{4}$ " pure silver. All iron parts cadmium plated. The tension spring is stainless steel.

No. 1077C and 1177C have Auxiliary $\frac{1}{8}$ " contacts which provide a third center pole on Relay. They are grounded to the frame, but not to the base of the Relay.

WEIGHT: 5 to $5\frac{1}{2}$ ounces.

Type Number

DC	AC	
1077	1177	DPDT
1077-C	1177-C	DPDT, with Aux. SPDT.



CONTACTS: $\frac{1}{4}$ " Pure Silver—Double Pole, Double Throw.

COIL DATA: 6 Volts DC, $2\frac{1}{2}$ watts, 6 or 115 Volts AC, 50-60 cycles, 6 V/A.

DIMENSIONS: $1\frac{1}{2}$ " wide by $2\frac{3}{4}$ " long by $1\frac{1}{2}$ " high.

Mounting hole centers, $2\frac{3}{8}$ ".

Center holes tapped 6-32.

Outer holes clear 6-32.

LEACH RELAY CO.



RADIO AND HIGH VOLTAGE RELAYS

MYCALEX

TYPE 1601-MX & 1701-MX

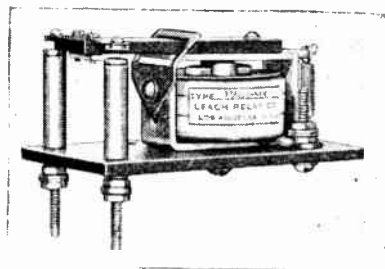
This Relay was designed to control a high voltage radio frequency circuit. Contacts are $\frac{1}{4}$ " pure silver, SPST normally open, double break. Metal spacers are supplied for mounting.

AC coils consume 6 V/A, or 115 Volts, 50-60 cycles AC.

DC coils consume approximately 3.5 watts, 6 Volts DC.

DIMENSIONS: $1\frac{3}{4}$ " x 3" overall height, not including studs or mounting spacers, $1\frac{1}{2}$ ".

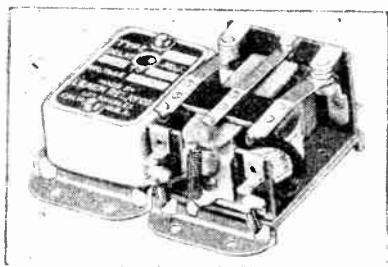
WEIGHT: 8 ounces.



Type Number

DC AC

1601-MX 1701-MX SPST-DB Normally open.



BASE DIMENSIONS: $3\frac{1}{4}$ " x $2\frac{3}{4}$ ", overall height, 1-7/16".

Type Number

DC AC

1057-T 1157-T DPDT.

TIME DELAY RELAY

TYPE 1057 & 1157 T SERIES

This Thermo Element Time Delay Relay is primarily for use on vacuum tube transmitters, but may also be used for a wide variety of other applications. They are all made DP, which may be used as normally open, normally closed or DT. The contacts are $\frac{1}{4}$ " pure silver, rated $12\frac{1}{2}$ Amperes, 115 Volts AC, non-inductive. The center pole, as shown, always is used for controlling the thermo element, which provides a variable delay of from 20 seconds to 1 minute. After the coil is energized, the Thermo element drops out of the circuit, cooling for the next cycle.

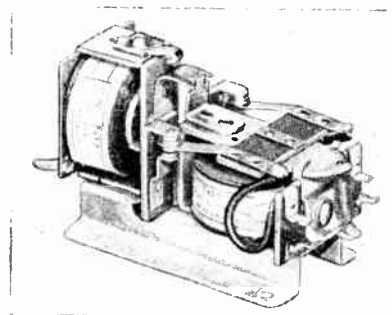
STANDARD COILS: AC—6 and 115 Volts (6 V/A)

DC—6 Volts—(1.5 Watts)

LATCH TYPE ELECTRICALLY RESET

TYPE 2417

This type Relay fits many applications where it is not desirable to have current continuously on the coil. The mechanical arrangement is such that after the pull-in coil is energized the armature closes and locks, closed by a mechanical latch on the armature of the Relay coil. The pole pieces are phosphor-bronze, and canvas-base natural Bakelite is used for the end panels and the pole mounting strip. The entire Relay is mounted on a metal base. The contacts are $\frac{3}{16}$ " diameter pure silver rated 8 Amperes at 115 Volts AC. Non-inductive. This Relay is supplied with 2—6 or 115 Volt AC coils or with 2—6 Volt DC coils.



DIMENSIONS: $1\frac{5}{8}$ " x $3\frac{5}{8}$ "; height 2-1/16".

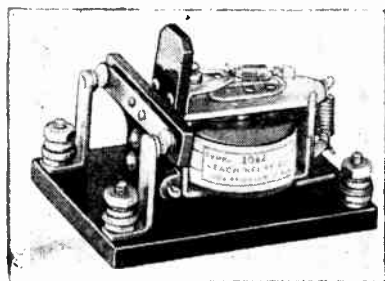
WEIGHT: 8 ounces.

Type Number

2417

DPDT.

Specify voltage and whether for AC or DC.



Type Number

1042 SPST Normally closed—double break. Contact rating 10 Amp., 115 Volts AC.

LIGHT DUTY OVERLOAD TRIP RELAYS

TYPE 1042 SERIES

The Relays shown are used as safety devices on electronic apparatus for the protection of the equipment against excessive currents. When current reaches a predetermined value the Relay is pulled in allowing the contacts to snap open and at the same time locking the armature closed. To reset the contacts, the coil circuit must be opened before pressing the Bakelite first finger. These Relays are supplied with the coil circuit highly insulated from the contacts; however, to use them as circuit breakers the coils and contacts may be connected in series.

Commonly used for the protection of power tubes. In this service the coil is put in series with the negative side of the plate supply and the contacts are in series with the transformer primary or the coil of the power contactor.

These Relays are all adjustable for the trip-out setting to approximately 20% plus or minus of their designated rating. In ordering it is necessary that you specify the approximate current on which they are to operate. Supplied in 2 standard coils: 250 MA or 500 MA.



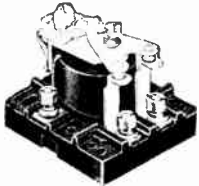
WARD LEONARD • RADIO AMATEUR and INDUSTRIAL RELAYS

RELAYS FOR AUTOMATIC CONTROL

Representative samples of the comprehensive line of relays made by Ward Leonard. The ones illustrated are those particularly adaptable to electronic and the more common industrial applications.

MIDGET MAGNETIC RELAY — TYPE No. 106. —

For remote control of A.C. or D.C. circuits. Has wide application for use on power circuits or electronic circuits in which the currents to be controlled do not exceed the ratings of the contacts. May be energized from main line or from an independent circuit. Built on a molded Bakelite base. Front or back connected terminals.



Coil Voltages —

D.C. — 6, 8, 12, 24, 32, 115 volts.
A.C. (60 cycles) — 6, 8, 12, 24, 32, 115 volts, 115 volts.

Contract Arrangement —

Single Pole, Double Break, Normally Open, Normally Closed and Double Throw.
Double Pole, Single Break, Normally Open, Normally Closed and Double Throw.
Double Pole (Common Feed), Single Break, Normally Open, Normally Closed and Double Throw.

Contact Ratings, in Amperes —

Volts	D. C.		60-Cycle A.C.	
	Single Break	Double Break	Single Break	Double Break
0-24	4	3	4	6
25-115	1*	2	4	6

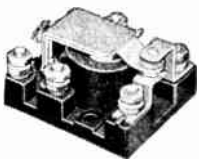
*0.7 Amperes if Double Throw.

Dimensions — 2" wide; 2 $\frac{3}{4}$ " high; 2 $\frac{3}{8}$ " deep.

Type No. 106 Relays for 3-wire control are also available. Details will be furnished on request.

HEAVY DUTY MIDGET RELAY — TYPE No. 105. —

A general purpose relay designed for remote control of the ordinary type of electrical appliances, such as electric heaters, electric signals, electric lights, electrically operated pumps, and most types of electronic equipments. The Heavy Duty Midget Relay is sturdily built on a molded



Bakelite base. Heavy, front connected terminals are provided. The Heavy Duty Midget Relay, as a standard unit, is of the open type, but it can be furnished with a steel knock-out box enclosure.

Coil Voltages —

D.C. — 6, 10, 12, 24, 32, 115 volts.
A.C. (60 cycles) — 6, 10, 12, 24, 32, 115, 230 volts.

Contact Arrangement —

Single Pole, Single Break, Normally Open, Normally Closed and Double Throw.
Double Pole, Single Break, Normally Open, Normally Closed and Double Throw.

Contact Ratings, in Amperes —

Volts	D. C.		60-Cycle A.C.	
	Normally Open	Normally Closed	Normally Open	Normally Closed
0-24	20	15	20	15
25-115	1	1	20	15
230	0.5	0.5	15	10

Dimensions — Single Pole: 1 $\frac{7}{8}$ " wide; 2 $\frac{3}{8}$ " high; 1 $\frac{1}{2}$ " deep. Double Pole: 2 $\frac{1}{2}$ " wide; 2 $\frac{3}{4}$ " high; 1 $\frac{3}{4}$ " deep.

SENSITIVE RELAY — TYPE No. 250. —

For use in applications where a high degree of sensitivity is required such as in electronic circuits. Built on a Bakelite base with large knurled heads and nuts to facilitate adjustment of the contacts and the spring tension on the armature. The use of nickel alloy in the magnetic circuits insures good contact torque at pull-up and crisp drop-out.

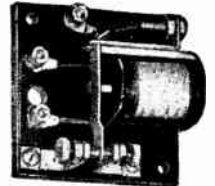
Contact Arrangement —

Single Pole, Double Throw.

Contact Rating, in Amperes —

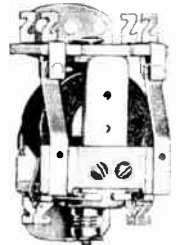
Volts	D.C.	60-Cycle A.C.
115	0.75	2.0
230	0.5	1.5

Dimensions — 2 $\frac{5}{8}$ " wide; 2 $\frac{5}{8}$ " high; 1 $\frac{5}{8}$ " deep.



MIDGET METAL BASE RELAY — TYPE No. 104. —

For use in small radio transmitters, sound equipment, aircraft control circuits, and other similar applications. Available with Bakelite insulation or ceramic insulation. Small size permits installation in limited spaces. Built on a metal base. Vibration resistant up to 10 times gravity when energized. Front connected, solder type terminals.



Coil Voltages —

D.C. — 6, 10, 12, 24, 32, 115 volts.
A.C. (60 cycles) — 6, 10, 12, 24, 32, 115 volts.

Contact Arrangement —

Single Pole and Double Pole. Various combinations with or without auxiliary contacts.

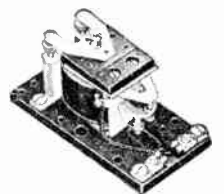
Contact Ratings, in Amperes —

Volts	D.C.	50-Cycle A.C.
0-24	4	4
25-115	0.5	4

Dimensions — 1 $\frac{3}{8}$ " wide; 2 $\frac{1}{8}$ " high; 1 $\frac{1}{8}$ " deep.

HEAVY DUTY RELAY — TYPE No. 130. —

A relay that has heavy current carrying and rupturing capacities for use in A.C. or D.C. circuits. Contact fingers are heavy stiff metal blades with large stainless steel springs for pressure. Large gap contacts with adequate surfaces. As high as four separate circuits may be opened simultaneously with the closing of up to four other circuits.



Coil Voltages —

D.C. — 24, 32, 115, 230 volts.
A.C. (60 cycles) — 24, 32, 115, 230, 440 volts.
Other voltages and frequencies available on special order.

Contact Arrangement —

Various combinations of contacts from one to four poles.

Contact Ratings, in Amperes —

Volts	Direct Current	D.C. with Blowout	A.C. 25 Cycles	A.C. 60 Cycles
0-24	25	25	25	25
25-125	3	20	25	25
128-250	1	10	25	25
251-440			10	15

Note: Blowouts required for relays that control Direct Current circuits in excess of 23 volts or a current of 1 ampere.

Dimensions — Base dimensions vary according to size of relay. Maximum depth, 3 $\frac{1}{8}$ ".



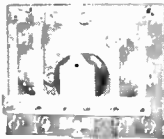
WARD LEONARD • RADIO AMATEUR and INDUSTRIAL RELAYS

RELAYS FOR THE RADIO AMATEUR

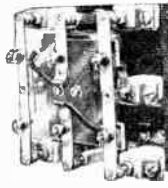
A few examples of Ward Leonard's popular line of relays for use in radio circuits are illustrated here. Information on specifications and prices are detailed in Catalog D-11 which will be furnished on request made to Ward Leonard directly or through one of its agents or distributors.

R. F. BREAK-IN RELAYS. —

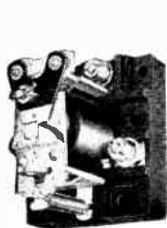
Otherwise known as "Push-to-Talk" Relay for phone transmitters. Pushing button in control circuit connects proper transmitter circuits and disconnects proper receiving circuits to transmit. Releasing button switches all circuits back to normal position for receiving. Furnished in two sizes, Midget Type for light duty and the Heavy Duty Type.



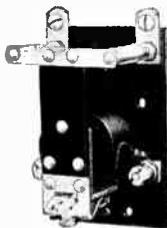
Midget Type



Heavy Duty Type



Low Voltage Type



High Voltage Type

KEYING RELAYS.—Low voltage type for center-tap or grid-bias keying. High voltage type for use with grid controlled high voltage rectifier tubes. Use of Keying Relays reduces length of circuit wiring and permits control of keying with key located in convenient position for operating. Capable of keying up to 40 words per minute.

UNDERLOAD RELAY. — Protects against damage to tubes and other components of amplifiers when load failures occur, due, for example, to inability of one or more vacuum tubes to hold the load because of loss of excitation. De-energizing of relay coil when load drops opens contacts and prevents damage to transformers or tubes. Available from stock with coil adjusted to pick up at 100 m.a. to 200 m.a. DC or with coil adjusted to pick up at 200 m.a. to 400 m.a. DC.



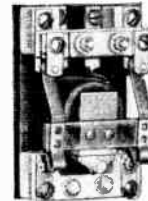
ROTARY RESET OVERLOAD RELAY. — For protection against overloading vacuum tubes of power amplifiers or transmitters. Current surge causes armature to be pulled in, breaking the rectifier primary circuit. A mechanical latch holds the contacts open until the operator closes them by turning the reset knob. Designed for panel mounting. Available from stock with 250 m.a. DC coil and 500 m.a. DC coil.

The use of Ward Leonard Relays in an Amateur Rig not only modernizes it, but also improves its efficiency and stability. Short r.f. leads prevent stray currents. Convenient control is provided.

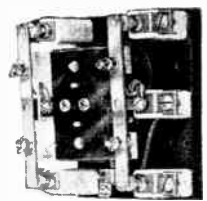


type and motor driven type — are also available. Furnished with 110 volt, 60-cycle AC coil.

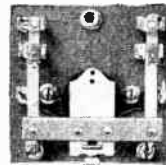
THERMAL TIME DELAY RELAY. — Delays the application of voltage to the plates of vacuum tubes until the filaments have heated. The relay illustrated is adjustable over a range of from 15 seconds to 45 seconds. Other time delay relays — thermal



Intermediate Type



Heavy Duty Type

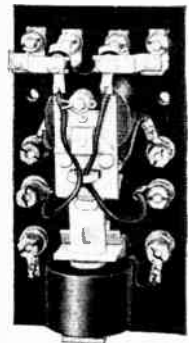


Midget Type

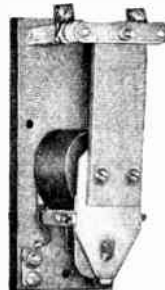
ANTENNA CHANGE-OVER RELAYS. — Switches antenna to transmit or receive. May also be used to switch transmitter or receiver to either of two antennas. Available in three sizes — Midget Type, Intermediate Type, and Heavy Duty Type. Midget Type built on Mycalex base. Contacts and terminals on Intermediate and Heavy Duty Types (except coil terminals) supported by ceramic blocks. Lucite crossarm used on all types.



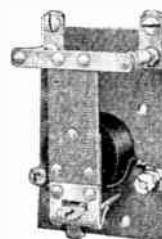
ANTENNA GROUNDING RELAY. — For grounding transmitting or receiving antenna when not in use. Contact arms supported on Lucite crossarm. Circuit contacts and terminals supported on ceramic insulation block. Coil terminals and grounding terminals mounted on Bakelite base. Double pole, double throw contacts, with fixed or adjustable normally closed contacts.



MIDGET LATCH-IN RELAY.—A multi-purpose relay especially useful in circuits where interference might be caused if relay coils were continually energized. Momentary energizing coil "pulls in" armature which is locked in position by mechanical latch. Momentary energizing reset coil releases latch allowing armature to drop to normal position.



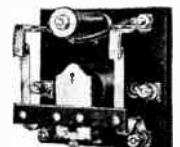
Heavy Duty Type



Midget Type

BAND SWITCHING RELAYS.—Automatically changes frequency bands through two-wire control circuit. Installation on the relay in the set near the coils eliminates the need for long R. F. leads, such as are required when a panel-mounted switch is used. Mycalex insulation used for base and contact arms. Contacts and terminals spaced to insure against leakage or creepage of high frequency and high voltage in the circuit.

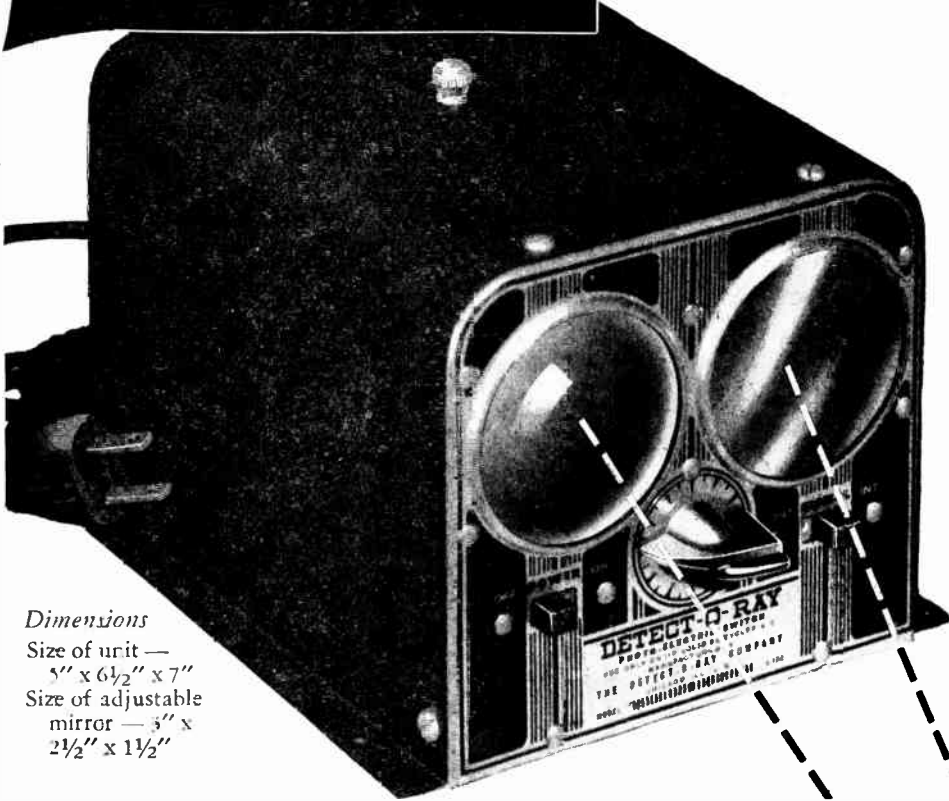
SAFETY RELAY. — A relay that should be installed in every amateur sig. It gives automatic protection against the hazards of high voltages in filter condensers when power supply unit is turned off. Furnished with resistor through which condensers are discharged. Furnished with normally closed contacts which open when transformer primary circuit is closed, energizing relay coil.



PROTECT • CONTROL

THE MODERN WAY

... with DETECT • O • RAY TWIN BEAM PHOTO ELECTRIC SWITCH



APPLICATIONS

- Safety Shut-off
- Automatic Counter
- Conveyor Control
- Production Control
- Traffic Control
- Water Control
- Remote Control
- Material Flow
- Illumination Control
- Shut-off Feed
- Stop, Start Paint Spray
- Record Production
- Container Filling
- Inspection for Size, etc.
- Display Lighting
- Door Opener
- Burglar Alarm
- Fire Alarm
- Entry Signal

Dimensions

- Size of unit — 5" x 6½" x 7"
- Size of adjustable mirror — 3" x 2½" x 1½"

This dependable single-unit control can be used for hundreds of applications in industry, businesses and homes wherever the automatic "throwing of a switch," on a motor . . . alarm . . . or any other device hooked to the circuit, is needed. Detect-O-Ray produces 6 volts, ¾ amperes, making it possible to operate low voltage devices without any added expense.

Detect-O-Ray Model L-162 for 110-120 volts, 50-60 cycles AC, List Price \$42.00
 Detect-O-Ray Model L-250 for 220-250 volts, 50-60 cycles AC, List Price \$44.00

FEATURES AND ADVANTAGES

- As easy to operate as a radio
- Operates in any position
- Effective range of white (visible) beam 60'
- Effective range of red (invisible) beam 35' — (Ranges increase with degree of darkness)
- AC current
- Selector knob for visible or invisible beam
- Radio-type dial regulates sensitivity
- Snap-switch for continuous or intermittent performance
- "On - Off" switch
- Terminal for connecting Power Relay and/or device to be operated

POWER RELAY for operation of motors, machinery, floodlights and other devices requiring more than 6 volts. ¾ amperes. Has input plug for 110 volt AC, output for connection to any device (up to 1000 watts, 110 volt, AC) and connecting lead for attaching to Detect-O-Ray output terminal.

Power Relay (Model L-205) List Price \$10.50

Write today for complete information and literature

DETECT • O • RAY COMPANY

2622 NORTH HALSTED STREET • CHICAGO 14, ILLINOIS



**112-K
KEY**

This key is designed for learners who want an instrument built scientifically correct. Mounted on a mahogany finished wood base with rubber feet. Key base cast iron black enamel finish. Key lever and binding posts in gun metal finish, switch lever brass, Platinor contacts .072" diameter.
List \$3.00



PONY RELAY

All the metal parts on this pony relay are brass with lacquer finish, excepting armature which is polished and plated steel. Magnets are non-adjustable. Mounted on a mahogany finished wood sub base and cast iron black enamel base.

	List
M-104—4 Ohm	\$8.95
M-105—20 Ohm	8.95
M-106—30 Ohm	9.20
M-107—75 Ohm	9.45



**R-43
KEY**

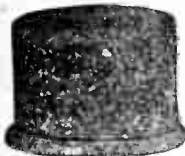
This key is recommended for rapid transmitting. The base and binding posts are brass with instrument lacquer finish. Key lever gun metal finish. Platinor contacts .072" diameter.
List \$3.65

R-68 PRACTICE SET



Set consists of a key and adjustable high frequency 2 ohm resistance buzzer. Key has cast iron black enamel base, key lever gun metal finish with .072" platinor contact. Buzzer and key mounted on a mahogany finished wood base with brass binding posts and rubber feet. Code appears on an etched plate attached to the base. Instruction manual packed with each instrument.
List \$5.20

R-60 BUZZER



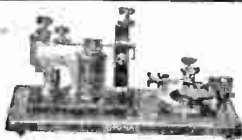
This high frequency buzzer is mounted on a steel base with steel cover black crystallized lacquer finish. Adjustable frequency with standard resistance of 2 ohms.
1-15/16 in. diameter by 1 3/8 in. high.
List \$1.80



SOUNDER

Properly designed for accurate instant action. Aluminum sounder bar for clear resonant tone. Cast iron bar frame black enamel finish. Bridge and adjustment screws brass instrument lacquer finish. Black lacquered steel sounder plate. Instrument mounted on a mahogany finished wood base equipped with brass binding posts and rubber feet.

112-S—4 Ohm	\$5.10
113-S—20 Ohm	5.35



LEARNER SET

For two way operation learners will find this instrument accurate and with a clear resonant sounder tone. Bar frame cast iron black enamel. Bridge and adjustment screws brass with instrument lacquered finish, sounding bar aluminum. Black lacquered steel sounder plate. Key has cast iron black enamel base, key lever gun metal finish with .072" platinor contact, brass adjusting screws. Sounder and key mounted on mahogany finished wood base with brass binding posts and rubber feet. Instruction manual packed with each instrument.

M-110—4 Ohm	\$7.65
M-111—20 Ohm	7.90



STANDARD KEY

This standard wireless key is designed to carry heavy currents. All brass construction with lacquer finish. Furnished with 3 1/16, 1/4 or 3/8-inch coin silver contacts. Navy type key knob.

R-62—3/16" contacts	\$4.50
R-63—1/4" contacts	4.60
R-64—3/8" contacts	4.85



COMMERCIAL RELAY

The commercial relay is well designed and constructed for long, continuous service on commercial lines. Heel iron and armature are made of Norway iron. Has rubber covered adjustable coils. Mounted on mahogany finished wood sub base and cast iron black enamel base.

	List
916—150 Ohm	\$15.00
917—250 Ohm	15.50

**M-100
KEY**



This key is recommended for rapid transmitting. The base, binding posts and switch lever are brass with instrument lacquer finish. Key lever gun metal finish. Platinor contacts .072" diameter.

List \$3.95

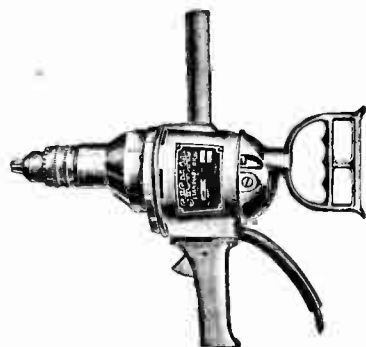
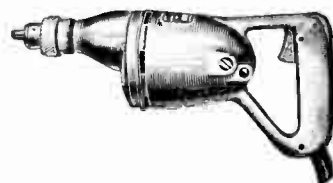
**KEY
R-50**



This instrument is designed for the amateur interested in a well built carefully made wireless key. Cast iron base well insulated, back wrinkle finish. 1/8" coin silver contacts. Key lever gun metal finish. Binding posts and adjusting screws brass instrument lacquer finish.

List \$1.90

**P O R T A B L E
E L E C T R I C
D R I L L S**



Type	O3-4	O3-8	OB-5
Size	1/4"	1/4"	1/2"
Speed	1700	3000	400
Weight	7 1/4	5 1/2	14
Price	\$37.50	\$32.00	\$60.00



SPEED-X

SPEED-X keys, formerly made by Les Logan Co. of San Francisco, Calif., have attained a pre-eminent position as the leading complete line. Now manufactured by JOHNSON, their reputation will be maintained, and improved wherever possible.

HIGH SPEED SEMI-AUTOMATIC KEYS

SPEED-X Semi-Automatic Keys are designed and constructed to rigid specifications and are approved by the experienced professional and amateur C. W. operators. They are fully adjustable from lowest to highest speeds. Manufactured in four distinctive and attractive models. Fully guaranteed against any defect in material or workmanship. Bases of all models drilled for stationary mounting.

STANDARD MODEL 114-500. New-Improved Standard Model Semi-Automatic Key mounted on extra heavy steel base $3\frac{1}{2}$ " x $6\frac{1}{4}$ " x $\frac{1}{2}$ " finished in attractive wrinkle baked enamel. Mounted on four rubber feet to insure stationary position at all times. The finish will not scratch or chip and will last indefinitely. The frame is finished same as base and has five adjustments with lock nuts, assuring dependable operations at all speeds. Vibrator arm, posts, switch and all machine parts heavily plated in beautiful satin chromium. Complete with adjustable weight, two sets $\frac{1}{8}$ " pure silver contacts, circuit-closing switch and two paddles adjustable to any desired height. Net weight $4\frac{1}{2}$ lbs.

114-500.....List Price \$17.50
114-500-L (Left-handed model).....List Price 19.50

MODEL 114-501. New-Improved Beautiful Chrome finish. Heavy steel base $6\frac{1}{4}$ " x $3\frac{1}{2}$ " x $\frac{1}{2}$ " with four non-slip rubber feet. Heavy brass connector strips mounted under base. Heavy die cast frame with same finish as base and with five screws for sensitive adjustments. Vibrator is designed to obtain slowest and fastest speeds required by high speed operators. Two sets of $\frac{1}{4}$ " pure silver contacts. Pigtail connections to vibrating arm. Perfectly aligned free acting vibrator bearings. Lock nuts on all adjustments. Paddles adjustable to any required height. All machine parts heavily chrome plated, which makes this the most outstanding semi-automatic key on the market. Furnished with circuit closing switch. Net Weight $4\frac{1}{2}$ lbs.

114-501.....List Price \$25.00
114-501-L (Left-handed model).....List Price 27.50



Nos. 500, 501



114-515

AMATEUR MODEL 114-515. Baked Black Wrinkle Enamel Finished Steel Base $6\frac{1}{4}$ " x 3 " x $\frac{3}{8}$ " with four rubber feet to prevent slipping or tilting. Heavy Brass connector strips. Die Cast Frame finished same as base with adjustable trunion screws. Chromium brass. Vibrator has main spring and U-spring made of clock spring for smooth snappy action. Adjustable weight. Two adjustable black fibre paddles. Two sets $\frac{1}{8}$ " pure silver contacts. Lock nuts for every adjustment. Deadener wheel, post screws, springs and terminals chrome plated. Packed in attractive carton. Net Weight $3\frac{1}{4}$ lbs.

114-515.....List Price \$12.50
114-515-L (Left-handed model).....List Price 15.00

JUNIOR MODEL 115-510. Die Cast Base $2\frac{3}{4}$ " x 6 " x $\frac{3}{4}$ " finished in black wrinkle baked enamel concealing heavy brass connector strips. Frame is same finish as base and all other parts are chromium plated. Vibrator Arm same as Standard Model with lots of pep. Adjustable from eight words per minute to as high a rate as desired. Two sets of $\frac{1}{8}$ " pure silver contacts adjustable weight and two adjustable paddles. Circuit closing switch mounted on base. Being small compact and streamlined this semi-automatic key is an outstanding value. A light-weight but sturdy built machine for clean-cut sending. Net Weight $2\frac{1}{2}$ lbs.

115-510.....List Price \$13.50

REPLACEMENT PARTS



114-370



114-330



114-335

List	
114-330 Adjustable Weight.....	\$0.25
114-335 Key Springs.....	.10
114-336 Dash Spring.....	.10
114-340 Set $\frac{1}{8}$ " Contacts.....	1.00
114-341 Set $\frac{1}{4}$ " Contacts.....	2.00
114-345 (2) $\frac{1}{4}$ " Contacts.....	.20
114-346 (2) $\frac{1}{4}$ " Contacts.....	.50
114-350 Knob.....	.20
114-360 Navy Knob.....	.30
114-333 Self-Locking Adj. weight.....	.50

List	
114-362 $\frac{3}{4}$ " Chrome Screw.....	\$0.13
114-363 1" Chrome Screw.....	.15
114-364 $\frac{1}{2}$ " Knurled Nut.....	.10
114-375 Vibrator Arm Comp.....	3.00
114-376 Vibrator Arm Only.....	1.75
114-370 Adjustable Paddle.....	.25
114-380 Cord and Plug.....	1.50
114-390 U-Spring $\frac{1}{8}$ " Contact.....	.60
114-391 U-Spring $\frac{1}{4}$ " Contact.....	.75



114-360



114-350



114-390

114-444 KIT

An assortment of the best selling parts for all makes of keys selected from the above list and packed in a beautiful display box.

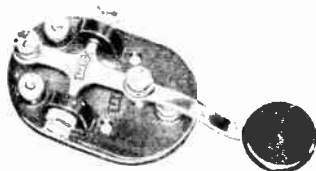
LIST PRICE OF COMPLETE KIT, \$20.00



SPEED-X

MOULDED BAKELITE KEYS, BUZZERS, PRACTICE SETS

SPEED-X Moulded Bakelite and Metal Hand Keys, Practice Sets and Buzzers are used throughout the world as standard equipment in amateur and commercial work. Each unit is built according to rigid specifications and is fully guaranteed. All models have holes for stationary mounting. Code card supplied with each individually packed unit.



114-301

AMATEUR KEY 114-301—A general purpose key with moulded black bakelite base. Perfect insulation—adjustable smooth acting bearings—improved spring—nickel key arm—pigtail connections—no current on bearings— $\frac{1}{8}$ " pure silver contacts. Net Wt. 6 oz.

114-301.....List Price \$3.00

114-301-S—Same as Model 301 with circuit closing switch mounted on base.....List Price 3.50

Add "L" for $\frac{1}{4}$ " Contacts—Extra.....List Price .25

PRACTICE KEY 114-300—A well-built and inexpensive practice key for the beginner. Moulded Brown Bakelite base and knob. Spring bearings, perfect action, simple adjustments $\frac{1}{8}$ " pure silver contacts. All machine parts nickel plated. Standard Code card furnished. Net Wt. 5 oz.

114-300.....List Price \$1.75

Add "L" for $\frac{1}{4}$ " Contacts—Extra.....List Price .25

PRACTICE KEY 114-312—Heavy die cast base finished in Gray Wrinkled Enamel. Smooth adjustable contacts, $\frac{1}{8}$ " pure silver contacts. Has provision for plugging in our semi-automatic keys when desired. Net Wt. 9 oz.

114-312.....List Price \$3.25

114-312-S—Same as Model 114-312 with circuit closing switch mounted on base.....List Price 3.75

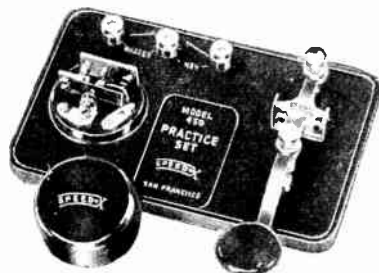
Add "L" for $\frac{1}{4}$ " Contacts—Extra.....List Price .25

PRACTICE SET 114-450—Consists of one constant frequency adjustable buzzer and a standard hand key with $\frac{1}{8}$ " pure silver contacts mounted on a moulded brown bakelite light-weight base 6" x 4". Adjusting screws, key arm and all machine parts nickel plated. Light Spring for perfect keying. A complete sending and receiving set. Three hook-up diagrams on carton show how this Practice Set may be used singly for code practice and in pairs for point to point communication. Standard Code Card included. Net Wt. 12 oz.

114-450.....List Price \$4.50

CONSTANT FREQUENCY BUZZER 114-400—Moulded Black Bakelite Base and Cap eliminates insulation problems. Large pure silver contacts—precision parts hold adjustments. Additional adjustment on vibrator. Resistance 2 ohms. Operates on two dry cells or one "C" battery. A high quality buzzer for all purposes. Net Wt. 3 oz.

114-400.....List Price \$1.80

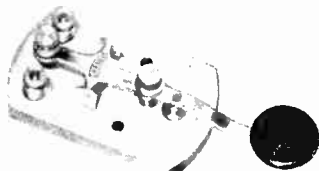


114-450



114-400

HEAVY DUTY METAL HAND KEYS



114-300, 114-305, 114-306

METAL HAND KEY 114-305—An inexpensive metal base key with black wrinkled enamel finish. Smooth acting spring bearings and adjustable key arm spring. Key arm and all machine parts bright nickel finish. $\frac{1}{8}$ " pure silver contacts. Net Wt. 10 oz.

114-305.....List Price \$1.90

114-306—Same as Model 114-305 with Baked Wrinkle Brass finished base.....List Price 1.90

STANDARD KEY 114-310—Heavy die cast base finished in black wrinkled enamel. Smooth adjustable bearings. $\frac{1}{8}$ " pure silver contacts. Has provisions for plugging in our semi-automatic keys when desired. Net Wt. 9 oz.

114-310.....List Price \$3.25

114-311—Same as 114-310 with Chromium finish base and parts.....List Price 4.00

114-316—Same as 114-310 with Baked Wrinkle Enamel Brass finish base.....List Price 3.25

Add "L" for $\frac{1}{4}$ " Contacts—Extra.....List Price .25

STANDARD KEY 114-310-S—Same specifications as Standard model key 114-310 with circuit closing switch mounted on base. $\frac{1}{8}$ " pure silver contacts. An attractive high-quality key. Net Wt. 10 oz.

114-310-S.....List Price \$3.75

114-311-S—Same as 114-311 with circuit closing switch mounted on base.....List Price 4.50

114-316-S—Same as 114-316 with circuit closing switch mounted on base.....List Price 3.75

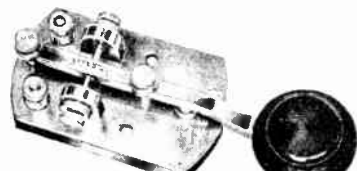
HEAVY DUTY KEY 114-320—Black wrinkle enameled extra heavy Die Cast Base. Large sturdy chromium plated key arm with adjustable steel bearings. Heavy brass connector strip concealed under base. Well insulated for heavy duty work. Improved Navy Type Knob and $\frac{1}{4}$ " pure silver contacts. Net Weight 12 oz.

114-320.....List Price \$4.25

114-321—Chromium Base.....List Price 5.00

HEAVY DUTY KEY 114-326—Same specifications as Heavy Duty Model 114-320 but base finished in a beautiful Lacquered BRASS finish. Arm and machine parts chromium plated. Well designed spring gives this model a light keying touch. Navy Type Knob and $\frac{1}{4}$ " pure silver contacts. Net Wt. 12 oz.

114-326.....List Price \$4.25



114-320, 114-321, 114-326

The Vibroplex

A SEMI-AUTOMATIC TELEGRAPH AND WIRELESS TRANSMITTING MACHINE

Embodying the latest exclusive features



Prominent features which have been contributed to the success of the Vibroplex are:

- Simplicity • Durability
- Perfect control • Easy adjustment
- Strong carrier • Ease of manipulation
- Adaptability to changing wire conditions
- Ability to transmit perfect Morse and Continental signals at high speed

These features, which are found only in the genuine Vibroplex models illustrated on these pages, make for clear, rapid, easy transmission; relieve the arm of strain caused by sending on the ordinary key; rest

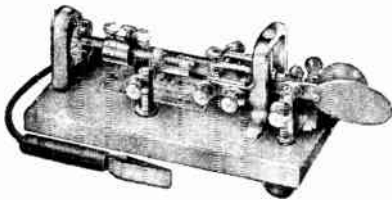
and strengthen the overworked muscles, and prevent telegrapher's paralysis.

CLEAR, RAPID SENDING MADE EASY

The Vibroplex transmits the same grade of Morse and Continental code as the strongest clearest hand sender, faster than is possible on the ordinary key, and with less than half the labor.

There is no tensing of the muscles, no nerve strain, no pounding on the key in order to make clear, rapid signals. You simply press the lever—the machine does the rest.

New SUPER DE LUXE "PRESENTATION" VIBROPLEX



Amateur Net Price

The Finest Bug Ever Built! 24K Gold-Plated Base Top, Patented Jewel Movement and Super-Speed Control! New patented adjustable main spring affords wider range of speed than ever obtained before in semi-automatic transmitting key. Beautifully designed with polished chromium machine parts mounted on a 24K gold-plated base top, colorful red switch knob, finger and thumb piece and precision-machined. This new Super-DeLuxe "Presentation" Vibroplex key at \$25 affords a life-time of sending enjoyment. Harder than metal, the jewels in this key reduce friction, maintain smoother, easier operation and prolong life.

\$25.00

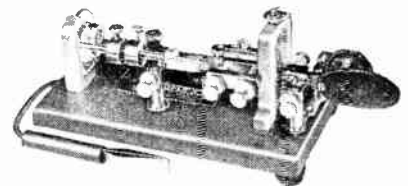
THE Improved "ORIGINAL" VIBROPLEX

Suitable for All Classes of Transmitting work Where Speed and Perfect Morse Are Prime Essentials

This great new Vibroplex is a smooth and easy working BUG. It has won fame on land and sea for its clarity, precision and ease of manipulation. Can be slowed down to 10 words per minute or less or geared to its high rate of speed as desired. Maintains the same high quality signal at whatever speed, insuring easy reception under all conditions.

SPECIFICATIONS

The improved model single lever. Two pairs of contact points: one for dots, the other for dashes. Weight, 3 lbs. 8 oz. A handsome and efficient transmitting machine, with unlimited sending possibilities. Complete with cord and wedge.



Standard — Polished Chromium top parts, black base. Amateur Net Price.....
DeLuxe—Polished Chromium base and top parts, with jeweled movement. Amateur Net Price

\$15.95

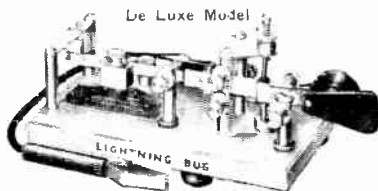
19.50

THE "LIGHTNING BUG" VIBROPLEX

High Quality Signals at All Speeds

SPECIFICATIONS

Single lever, with improved flat pendulum, instantly adjustable dot contact spring, circuit breaker parallel with pendulum. Two pairs of contact points, one for dots, the other for dashes. Complete with cord and wedge. Weight 3 lbs. 8 oz.



Standard—Polished Chromium top parts, black base.

Amateur Net Price

\$13.95

DeLuxe—Polished Chromium base and top parts, with jeweled movement.

Amateur Net Price

17.50

The

Vibroplex



Telegraph & Wireless Transmitting Machines

THE "ZEPHYR" VIBROPLEX

A Genuine Vibroplex. Slightly Lighter in Weight.
Having Plenty of "Pcp" and "Power"

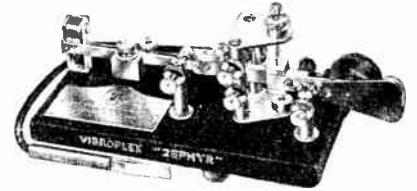
Smaller and more compact but designed in most details the same as the "Lightning Bug" model. Planned to meet the demand for a low priced, efficient and high speed transmitter for telegraph use.

SPECIFICATIONS

Single lever with standard size contact points. Mounted on slightly smaller base. Weight 3 lbs. 2 oz. Equipped with circuit closer, cord and wedge. Standard finish only. Chromium finished top parts, with black crystal base.

Amateur Net Price

\$12.50



THE "CHAMPION" VIBROPLEX

For Radio Use Only

The new "Champion" is an inexpensive transmitter having exceptional sending qualities . . . clarity . . . speed . . . sending ease, which will appeal alike to amateur and professional radio operators. Designed to meet the demand for a low priced Vibroplex in the radio field.

SPECIFICATIONS

Single lever with two pairs of contact points. Mounted on large standard size base. Weight 3 lbs. 8 oz. Without circuit closer, cord and wedge. Standard finish only. Chromium finished top parts, with black crystal base.

Amateur Net Price

\$9.95



Designed to Fulfill the Demand for
a Low Priced Radio Transmitter

THE "BLUE RACER" VIBROPLEX

Small and compact, the "Blue Racer" Vibroplex can be carried around and never be in the way. Embodies the same sending possibilities, the same carrying qualities, the same strength and durability as the larger models. Built especially to meet the demand of telegraphers requiring a small, lightweight and efficient sending machine.

SPECIFICATIONS

Single Lever. Two pairs of contact points—one for dots, the other for dashes. Weight, 2 lbs. 8 ozs. Complete with cord and wedge.

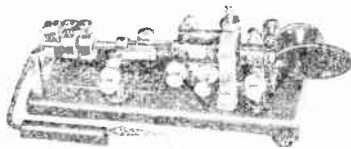
Standard—Polished Chromium top parts, black base . . .

Amateur Net Price

\$15.95

DeLuxe—Polished Chromium base and top parts, with jeweled movement. Amateur Net Price

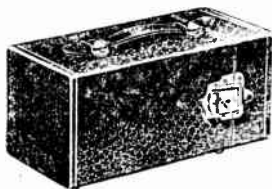
19.50



Very similar to the Original Vibroplex except that it is only half the size. Suitable for all classes of telegraph work and in high favor with wireless men

VIBROPLEX CARRYING CASE

Keeps the Machine Free from Dust, Dirt and Moisture
Insures Safe-keeping When Not in Use



A cloth-lined case, finished in handsome simulated black moiré. Corners are reinforced, adding to its durability and attractiveness. A flexible leather handle makes it more convenient to carry. Has lock and key.

PRICE **\$5.50**

The JEWELS used in the DeLuxe Model Vibroplex are the same as placed in the world's finest precision made watches and instruments

A JEWEL bearing main lever insures a "LIFETIME" of service and an ease of operation that can only be referred to as "FEATHER TOUCH" sending.

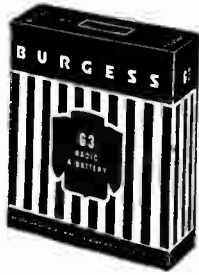
BURGESS BATTERIES



4F



2R



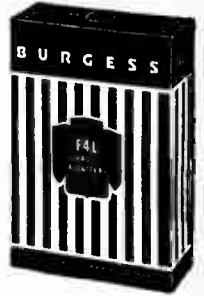
G3



F4PI



T5



F4L

BURGESS PORTABLE "A" BATTERIES

- No. 2F. 1½ volts. Size, 2½" x 1½" x 4½". Standard package 6..... List price, \$.56
- No. 2F4. 6 volts. Size, 3½" x 2¼" x 5¾". Standard package 6..... List price, 1.70
- No. 2F4L. 6 volts. Size, 3½" x 1¾" x 10½". Standard package 6..... List price, 1.80
- No. 2R. 1½ volts. Size, 2½" x 1½" diameter. Standard package 12..... List price, .10
- No. 4F. 1½ volts. Size, 2½" x 2½" x 4½". Standard package 12..... List price, .90
- No. 4FL. 1½ volts. Size, 3½" x 1½" x 5½". Standard package 10..... List price, .90
- No. 6F. 1½ volts. Size, 4½" x 2½" x 4". Standard package 6..... List price, 1.25
- No. 8F. 1½ volts. Size, 3½" x 2½" x 5½". Standard package 6..... List price, 1.60
- No. 8FL. 1½ volts. Size, 3½" x 1½" x 10½". Standard package 6..... List price, 1.69
- No. F4L. 6 volts. Size, 3½" x 1¾" x 5¾". Standard package 6..... List price, .90
- No. F4PI. 6 volts. Size, 2½" x 2½" x 4½". Standard package 12..... List price, .90
- No. F4PIX. 6 volts. Size, 2½" x 2½" x 4½". Standard package 6..... List price, 1.87
- No. FX. 1½ volts. Size, 1½" diameter x 3½". Standard package 6..... List price, .46
- No. G3. 4½ volts. Size, 4" x 1½" x 4¾". Standard package 12..... List price, .66
- No. G5. 7½ volts. Size, 3½" x 2½" x 4½". Standard package 6..... List price, 1.10
- No. T5. 7½ volts. Size, 2½" x 2½" x 3¾". Standard package 6..... List price, 1.25



A30



B30



M30

BURGESS PORTABLE "B" BATTERIES

- No. A30. 45 volts. Size, 3½" x 2½" x 4¾". Standard package 6..... List price, \$2.15
- No. A30M. 45 volts. Size, 4½" x 3½" x 2½". Standard package 6..... List price, 3.50
- No. A60. 90 volts. Size, 4¾" x 3¾" x 4¾". Standard package 6..... List price, 4.35
- No. B30. 45 volts. Size, 4½" x 2½" x 5½". Standard package 12..... List price, 2.15
- No. M30. 45 volts. Size, 3½" x 1½" x 5½". Standard package 12..... List price, 2.15
- No. W20PI. 30 volts. Size, 1½" x 1½" x 3¾". Standard package 6..... List price, 2.00
- No. W30PI. 45 volts. Size, 2½" x 1½" x 3¾". Standard package 6..... List price, 2.05
- No. W34. 51 volts. Size, 2½" x 1½" x 4¼". Standard package 6..... List price, 3.18
- No. W40. 60 volts. Size, 3½" x 1¼" x 5½". Standard package 6..... List price, 3.45
- No. XX30. 45 volts. Size, 2½" x 1½" x 3½". Standard package 12..... List price, 1.75
- No. XX45. 67½ volts. Size, 2½" x 1½" x 3½". Standard package 12..... List price, 2.45
- No. Z30. 45 volts. Size, 2½" x 2¼" x 4½". Standard package 6..... List price, 2.58
- No. Z59. 88½ volts. Size, 3½" x 2¼" x 5¾". Standard package 6..... List price, 3.70



XX45



XX30

A QUALITY DRY BATTERY FOR EVERY PURPOSE

SUBJECT TO TRADE DISCOUNT

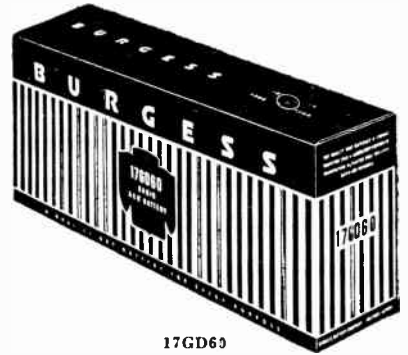
BURGESS BATTERIES



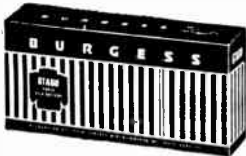
G6B60



4GA42



17GD60



6TA60



5DA60



F6A60



F4B60

BURGESS FARM "A & B" BATTERIES

No. 17GD60. 1½ volt "A", 90 volt "B". Size, 15⁵/₈" x 4¹/₈" x 7". Standard package 1.

List price, \$7.50

No. 18GD60. 1½ volt "A", 90 volt "B". Size, 5⁵/₈" x 6³/₄" x 12¹/₈". Standard package 1.

List price, \$7.50

No. 398. 6 volt "A", 90 volt "B". Size, 8¹/₂" x 4⁵/₈" x 14". Standard package 1.

List price, \$12.35

No. 3G6D60. 9 volt "A", 90 volt "B". Size, 8¹/₈" x 4¹/₈" x 14". Standard package 1.

List price, \$7.50

No. 739. 7½ volt "A", 90 volt "B". Size, 8¹/₂" x 4⁵/₈" x 14". Standard package 1.

List price, \$13.60

BURGESS PORTABLE "A" & "B" BATTERIES

No.	Voltage	Size	List Price
2F4A60.	6A, 90B	12" x 2 ³ / ₄ " x 4 ³ / ₈ "	\$5.60
2F4B60.	6A, 90B	10 ⁵ / ₈ " x 3 ³ / ₈ " x 4 ¹ / ₈ "	6.55
2TXX40.	1½A, 60B	2 ³ / ₈ " x 1 ¹ / ₈ " x 7 ³ / ₈ "	3.00
3FA60.	1½A, 90B	4 ³ / ₂ " x 2 ¹ / ₂ " x 10 ³ / ₄ "	6.60
3G4D50.	6A, 75B	14 ¹ / ₂ " x 4 ³ / ₂ " x 6 ³ / ₂ "	7.50
4FA60.	1½A, 90B	7" x 3 ¹ / ₂ " x 4 ¹ / ₄ "	5.05
4GA41.	1½A, 61½B	9 ¹ / ₈ " x 2 ¹ / ₈ " x 3 ⁷ / ₈ "	3.90
4GA42.	1½A, 63B	9" x 2 ¹ / ₈ " x 4 ¹ / ₈ "	3.50
4TA60.	1½A, 90B	8 ³ / ₈ " x 2 ¹ / ₂ " x 4 ³ / ₂ "	5.25
5DA60.	1½A, 90B	5 ¹ / ₈ " x 2 ¹ / ₈ " x 6 ¹ / ₂ "	4.80
6FA60.	1½A, 90B	11 ¹ / ₂ " x 1 ⁵ / ₈ " x 6 ³ / ₂ "	4.80
6TA60.	1½A, 90B	9 ¹ / ₂ " x 2 ³ / ₂ " x 4 ³ / ₂ "	5.15
D4A60.	6A, 90B	5 ¹ / ₂ " x 2 ³ / ₄ " x 6 ¹ / ₂ "	6.35
D5A60.	7½A, 90B	9 ³ / ₈ " x 2 ³ / ₂ " x 4 ⁵ / ₂ "	5.05
F4A41.	6A, 61½B	9 ⁷ / ₈ " x 2 ¹ / ₄ " x 4 ³ / ₂ "	4.10
F4A50.	6A, 75B	9 ¹ / ₈ " x 2 ¹ / ₈ " x 3 ⁵ / ₈ "	4.50
F4B60.	6A, 90B	10 ³ / ₄ " x 2 ¹ / ₂ " x 4 ³ / ₂ "	4.70
F5M45.	7½A, 67½B	9 ³ / ₂ " x 2 ⁵ / ₈ " x 4 ¹ / ₈ "	4.20
F6A60.	9A, 90B	9 ¹ / ₄ " x 2 ³ / ₄ " x 4 ⁷ / ₈ "	4.80
G4B50.	6A, 75B	12 ³ / ₈ " x 2 ¹ / ₂ " x 4 ¹ / ₈ "	4.50
G4B60.	6A, 90B	10 ³ / ₄ " x 2 ³ / ₂ " x 5"	4.85
G5A42.	7½A, 63B	9 ¹ / ₈ " x 2 ³ / ₄ " x 4 ³ / ₂ "	4.20
T5Z60.	7½A, 90B	9 ¹ / ₂ " x 2 ¹ / ₈ " x 3 ³ / ₄ "	5.75
G6B60.	9A, 90B	13 ⁷ / ₈ " x 2 ³ / ₂ " x 4 ⁵ / ₈ "	5.35
G6M60.	9A, 90B	10 ¹ / ₈ " x 3 ¹ / ₈ " x 4 ⁷ / ₂ "	5.35

A QUALITY DRY BATTERY FOR EVERY PURPOSE

BURGESS BATTERIES



5308



5540



2370



10308



2308

BURGESS RADIO "B" BATTERIES

No. 10308.	45	volts.	Size, 8 3/8" x 4 3/8" x 7 1/8".	Standard package 6.....	List price, \$2.93
No. 21308.	45	volts.	Size, 8 1/8" x 4 1/8" x 7 1/8".	Standard package 6.....	List price, 3.32
No. 2308.	45	volts.	Size, 8 3/8" x 2 3/8" x 7 1/8".	Standard package 6.....	List price, 2.40
No. 5156.	22 1/2	volts.	Size, 4 3/8" x 2 1/8" x 2 3/8" x 3 1/4".	Standard package 10.....	List price, 1.70
No. 5308.	45	volts.	Size, 4" x 2 3/8" x 5 1/8" x 5 1/8".	Standard package 10.....	List price, 2.15

BURGESS RADIO "B" & "C" BATTERIES

No. 3156.	22 1/2	volts.	Size, 6 3/8" x 4 1/8" x 2 3/8" x 3 1/4".	Standard package 6.....	List price, 1.63
No. 2370.	4 1/2	volts.	Size, 4 3/8" x 1 1/8" x 2 1/8" x 3 1/8".	Standard package 10.	List price, .75
No. 4156.	22 1/2	volts.	Size, 3 1/8" x 2 1/8" x 2 3/8" x 2 7/8".	Standard package 10.	List price, 1.30
No. 5360.	4 1/2	volts.	Size, 2 3/8" x 3/8" x 2 5/8" x 2 1/8".	Standard package 10.....	List price, .43
No. 5540.	7 1/2	volts.	Size, 3 7/8" x 3/8" x 2 1/8" x 3 3/8".	Standard package 10.....	List price, .90

BURGESS FARM RADIO "A" BATTERIES

No. 12F3.	4 1/2	volts.	Size, 10 3/8" x 3 7/8" x 6 1/8".	Standard package 1.....	List price, 4.55
No. 19G.	1 1/2	volts.	Size, 5 1/8" x 4 1/8" x 6 3/8".	Standard package 6.....	List price, 2.95
No. 20F.	1 1/2	volts.	Size, 7 5/8" x 2 3/8" x 6 1/8".	Standard package 6.....	List Price, 2.95
No. 20F2.	3	volts.	Size, 11 3/8" x 3 1/8" x 6 1/8".	Standard package 1.....	List price, 4.75

BURGESS HEARING AID BATTERIES

"A" BATTERIES FOR VACUUM TUBE HEARING AIDS

No. 1ES.	1 1/2	volts.	Size, 1" x 1 1/8".	Standard package 10.....	List price, \$.10
No. 2ES.	1 1/2	volts.	Size, 1 1/8" x 2 1/8".	Standard package 12.....	List price, .10
No. 2ZE.	1 1/2	volts.	Size, 1 3/8" x 1 1/8" x 1 7/8" x 1 1/8".	Standard package 10.....	List price, .20
No. 5ES.	1 1/2	volts.	Size, 3/8" x 2 1/8".	Standard package 10.....	List price, .10
No. CL.	1 1/2	volts.	Size, 1" diameter x 2 3/8".	Standard package 10.....	List price, .15
No. TE.	1 1/2	volts.	Size, 1 1/8" x 3/8".	Standard package 4.....	List price, .25

"B" BATTERIES FOR VACUUM TUBE HEARING AIDS

No. K10E.	15	volts.	Size, 1 3/8" x 3/8" x 1 1/2".	Standard package 20.....	List price, .90
No. K15E.	22 1/2	volts.	Size, 1 3/8" x 3/8" x 2 1/8".	Standard package 20.....	List price, 1.45
No. K20E.	30	volts.	Size, 1 3/8" x 3/8" x 2 3/8".	Standard package 20.....	List price, 1.65
No. U10E.	15	volts.	Size, 1 7/8" x 1/8" x 3/8".	Standard package 20.....	List price, .85
No. U15E.	22 1/2	volts.	Size, 1 3/8" x 1/8" x 3/8".	Standard package 20.....	List price, 1.10
No. U20E.	30	volts.	Size, 2 1/8" x 1/8" x 3/8".	Standard package 20.....	List price, 1.25
No. XX15E.	22 1/2	volts.	Size, 1 1/8" x 1/8" x 3 7/8".	Standard package 10.....	List price, 1.45
No. XX22E.	33	volts.	Size, 2 1/8" x 3/8" x 3 1/8".	Standard package 10.....	List price, 1.70
No. XX30E.	45	volts.	Size, 2 1/2" x 1/8" x 3 7/8".	Standard package 20.....	List price, 1.95

"A" AND "B" ASSORTMENTS

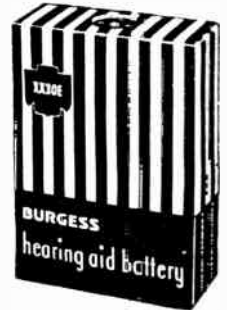
HA73.	Consists of 30 No. 1ES, 24 No. 2ES, 12 No. TE, 6 No. XX30E, and 1 No. XX22E.	Standard package 1.....	List price, \$21.80
HA21.	Consists of 2 No. XX30E, 1 No. XX22E, 8 No. TE, 6 No. 1ES, 4 No. 2ES.	Standard package 1.....	List price, 8.60

For Carbon Hearing Aids—Universal Batteries

No. T2R.	3	volts.	Size, 2 1/8" x 1 1/8" x 4 1/8" x 4 1/8".	Standard package 12.	List price, \$1.10
No. T3R.	4 1/2	volts.	Size, 3 1/8" x 1 3/8" x 3 1/8" x 4 1/2".	Standard package 12.....	List price, 1.00

For Western Electric Ortho-Technic Models

No. C3WE.	4 1/2	volts.	Size, 3 1/8" x 1 3/8" x 2 5/8".	Standard package 12.....	List price, .85
No. T2WE.	3	volts.	Size, 2 3/8" x 1 1/8" x 4".	Standard package 12.....	List price, 1.10
No. T3WE.	4 1/2	volts.	Size, 3 1/8" x 1 3/8" x 3 1/8".	Standard package 12.....	List price, 1.00



XX30E



K15E



TE



U20E



2ZE



T3WE



T3R

A QUALITY DRY BATTERY FOR EVERY PURPOSE

SUBJECT TO TRADE DISCOUNT

BURGESS BATTERIES



4FH



4F2H



No. 2



No. 1



Z

BURGESS FLASHLIGHT BATTERIES



4F4H

No. 1.	1½ volts. Size, 1" x 1½". Standard package 12.....	List price, \$.10
No. 2.	1½ volts. Size, 1½" x 2½". Standard package 48.....	List price, .10
No. Z.	1½ volts. Size, 1½" x 1½". Standard package 12.....	List price, .075

BURGESS IGNITION BATTERIES



2F2H

4FH.	1½ volts. Size, 2½" x 2½" x 3½" x 4¼". Standard package 20... List price, \$.70
4F2H.	3 volts. Size, 3½" x 2½" x 5½". Standard package 8..... List price, 1.35
4F4H.	6 volts. Size, 8¼" x 2¼" x 5½" x 6¾". Standard package 6... List price, 3.20
4F5H.	7½ volts. Size, 7½" x 3½" x 5½" x 6¾". Standard package 4..... List price, 3.98
4F6H.	9 volts. Size, 8½" x 3½" x 5½" x 6¾". Standard package 6..... List price, 4.55

FOR INDUSTRIAL APPLICATIONS

BURGESS "A" BATTERIES



F2BP

No. 2F2H.	3 volts. Size, 2½" x 2½" x 4" x 4¾". Standard package 10... List price, \$.90
No. 2FBP.	1½ volts. Size, 2½" x 1½" x 3½" x 4½". Standard package 10... List price, .71
No. 4FH.	1½ volts. Size, 2½" x 2½" x 3½" x 4¼". Standard package 20. List price, .70
No. F2BP.	3 volts. Size, 2½" x 1½" x 4" x 4¾". Standard package 10... List price, .71
No. F4BP.	6 volts. Size, 2½" x 2½" x 3½" x 4¾". Standard package 10. List price, .73

BURGESS "B" BATTERIES



F4BP

No. A75BP.	112½ volts. Size, 10½" x 3½" x 2½". Standard package 1..... List price, \$6.18
No. W30.	45 volts. Size, 2½" x 1½" x 3¼" x 4½". Standard package 6... List price, 3.00
No. W30BPX.	45 volts. Size, 2½" x 1½" x 3½" x 4½". Standard package 6... List price, 2.73
No. Z30NX.	45 volts. Size, 2½" x 1½" x 4½" x 5". Standard package 10... List price, 2.58
No. Z30PX.	45 volts. Size, 2½" x 1¼" x 4¾" x 4½". Standard package 6... List price, 6.33

BURGESS "C" BATTERIES



Z30BP

No. A8BP.	12 volts. Size, 2¼" x 1½" x 2½" x 2¾". Standard package 6. List price, 2.25
No. B2BP.	3 volts. Size, 1½" x 3½" x 2½" x 2½". Standard package 6... List price, .65
No. W5BP.	7½ volts. Size, 3½" x 2½" x 1¾" x 1½". Standard package 6... List price, 1.37

A QUALITY DRY BATTERY FOR EVERY PURPOSE

RCA BATTERIES

RADIO-ENGINEERED FOR EXTRA LISTENING HOURS



RCA Type	Voltage	Dimensions	Interchangeable with		Sugg'd List Price
			Eveready	Burgess	
→ → PORTABLE "A" BATTERIES					
VS002	4½	4 x 1⅜ x 4⅜	746	G3	\$.75
VS004	1½	2⅝ x 2⅝ x 4¼	742	4F	.90
VS007	1½	3⅜ x 2⅝ x 4¼	743	6F	1.25
VS008	1½	3⅝ x 1⅞ x 10¾	745	8FL	1.70
VS009	6	2⅝ x 2⅝ x 4¼	—	F4P1	.95
VS010	6	3⅜ x 2⅜ x 5⅝	718	2F4	1.70
VS011	6	3⅝ x 1⅞ x 10¾	747	2F4L	1.80
VS036	1½	2⅝ x 1⅞	"Sealed-in-Steel"		.125

→ → PORTABLE "B" BATTERIES					
VS012	45	4⅞ x 2⅞ x 5⅝	762	B30	2.15
VS013	45	3⅝ x 1⅜ x 5⅝	482	M30	2.15
VS014	45	3⅞ x 2¼ x 4½	—	A30	2.30
VS015	45	3 x 2⅞ x 4⅞	738	Z-30	2.60
VS016	67½	2⅞ x 1⅞ x 3⅜	467	XX45	2.45
VS055	45	2⅝ x 1 x 3½	455	XX30	1.75

→ → PORTABLE "AB" BATTERY PACKS					
VS018	7½-9-9	10⅝ x 3⅝ x 4⅞	754	G6M60	5.45
VS019	7½-9-90	9⅝ x 2⅞ x 4½	753	16A60	5.25
VS046	6-75	12⅝ x 4⅞ x 2¾	Zenith Z675	G4B60	4.50
VS047	9-90	13⅞ x 4⅞ x 2¾	Zenith Z985	G6B60	5.35

→ → FARM "AB" BATTERY PACKS					
VS021	1½-90	10⅝ x 2¾ x 6⅝	758	—	5.70*
VS022	1½-90	15¾ x 4¼ x 6⅝	748	17GD60	7.50*
VS023	1½-90	15¾ x 4¼ x 6⅝	748M	—	7.80*
VS045	1½-90	12⅞ x 6⅜ x 5⅝	Zenith Z28	18GD60	7.50*

→ → FARM "A" BATTERIES*					
VS024	1½	7¾ x 2⅞ x 7⅞	740	20F	3.30*
VS025	3	12 x 4 x 6⅞	X125	20F2	4.90*

→ → FARM "B-BC-C" BATTERIES					
VS026	22½-45	8⅞ x 3⅞ x 7⅞	485	2308	2.40*
VS027	22½-45	8⅞ x 4⅞ x 7⅞	386	10308	2.93*
VS028	4½	2⅝ x ⅞ x 2½	781	5360	.63
VS029	1½-3-4½	4 x ⅞ x 2¾	773	5540	1.10
VS030	-6-7½	4⅞ x 1½ x 3⅞	X771	2370P1	.80
VS031	3-4½	4⅞ x 2⅞ x 3⅞	768	5156P1	1.80
	16¼-22½				

→ → FLASHLIGHT BATTERIES					
VS001	1½	2⅝ x 1⅞	950	Z	.10
VS033	1½	1 x 1⅞	935	1	.10
VS034	(Baby) 1½	⅞ x 1⅞	915	Z	.075
	(Penlite)				

→ → INDUSTRIAL & SPECIAL BATTERIES					
VS006S	1½	2⅝ x 6	6	—	.65
VS039	(Ign.) 6	10⅝ x 2¾ x 7	1461-2	4F4H	3.15*
VS040	(Hot-shot) 6	2⅝ x 2⅝ x 4⅞	409	F4H	.70
(Spring)	(Lant.)				

* Prices slightly higher on Pacific Coast. All prices in effect 6/1/48.

PORTABLE RADIO



VS036



VS013



VS019

FARM RADIO



VS022

NON-RADIO TYPES



VS001



VS033



VS034



VS006S

Turn page for additional types →



RCA BATTERIES

RADIO-ENGINEERED FOR EXTRA LISTENING HOURS

PORTABLE RADIO



VS 003



VS 051



VS 053

FARM RADIO

INDUSTRIAL



VS 006C



VS 127

RCA Type	Voltage	Dimensions	Interchangeable with		Sugg'd List Price
			Eveready	Burgess	

→ → PORTABLE "A" BATTERIES

VS003	7½	3 ¹⁵ / ₁₆ × 2 ¹¹ / ₁₆ × 4½	687	G5	\$1.10
VS005	1½	3 ⁷ / ₈ × 1 ³ / ₈ × 5 ³ / ₈	—	4FL	.73

→ → PORTABLE "AB" BATTERY PACKS

VS017	6-90	10 ³ / ₄ × 2 ¹³ / ₁₆ × 3 ¹⁵ / ₁₆	—	—	5.25
VS020	7½ (or 6) 67½	9½ × 2 ¹¹ / ₁₆ × 4 ⁷ / ₁₆	—	F5M45	4.20
VS037	1½-90	11 ⁵ / ₁₆ × 1 ⁹ / ₁₆ × 6½	—	6FA60	4.80
VS038	7½-63	8 ⁵ / ₈ × 2 ³ / ₄ × 4 ¹ / ₄	—	G5A42	4.20
VS041	1½A 7½C 67½B	4 ⁵ / ₁₆ × 3 ³ / ₄ × 6 ³ / ₈	—	—	5.35
VS043	1½-90	5 ⁹ / ₁₆ × 2 ³ / ₄ × 7 ¹ / ₈	—	5DA60	4.80
VS044	6-90	12 ¹ / ₈ × 2 ⁷ / ₈ × 4 ⁷ / ₁₆	—	2F4A60	5.60
VS048	6-90	10 ³ / ₄ × 2 ³ / ₄ × 5	—	F4B60	4.70
VS051	1½A 67½B 7½C	4 ¹ / ₄ × 3 ¹ / ₁₆ × 6	—	4FA50	5.95
VS052	1½-61½	9 ¹ / ₄ × 2 ³ / ₄ × 3 ³ / ₄	Philco 41A4G	4GMA41	3.90
VS053	1½-63	9 ⁷ / ₁₆ × 2 ¹ / ₈ × 4 ¹ / ₁₆	Philco 41A4FL	4GMA42	3.50
VS054	1½-90	10 ¹ / ₁₆ × 2 ¹ / ₈ × 4 ¹ / ₁₆	—	6TMA60	5.15

→ → FARM "AB" BATTERY PACKS

VS049	6-75	14 ⁷ / ₁₆ × 4 ⁵ / ₁₆ × 6 ³ / ₄	Zenith Z682	3G4D50	6.65
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→ → INDUSTRIAL & SPECIAL BATTERIES

VS006C	1½A	2 ⁵ / ₈ × 6	6 Ign	—	.65*
VS040 (Screw)	6 (Lant.)	2 ⁵ / ₈ × 2 ⁵ / ₈ × 3 ³ / ₄	409	F4BP	.70
VS042C-S	1½A	2 ⁵ / ₈ × 6	Tel.	—	.60
VS100	3	2 ⁷ / ₁₆ × 1 ³ / ₈ × 4	—	F2BP	.71
VS101	1½	2 ⁷ / ₁₆ × 1 ³ / ₈ × 4	—	2FBP	.71
VS102	22½	3 ⁷ / ₁₆ × 2 ¹ / ₈ × 2½	763	4156	1.30
VS106	1½	2 ⁵ / ₈ × 2 ⁵ / ₈ × 3 ³ / ₄	—	4FH	.65*
VS112	22½-45	4½ × 2 ⁵ / ₈ × 5½	762S	5308	2.15
VS114	22½-45	3 ¹ / ₁₆ × 1 ¹⁵ / ₁₆ × 4½	—	Z30NX	2.50
VS126	22½-45	8 ¹ / ₈ × 3 ¹ / ₄ × 6 ¹ / ₁₆	—	2308SC	2.40
VS127	22½-45	8 ¹ / ₈ × 4 ³ / ₈ × 6 ¹ / ₁₆	—	10308SC	2.95*
VS130	1½-3-4½	4 × 1 ⁷ / ₁₆ × 3 ¹ / ₁₆	761T	2370BP	.80
VS131	3-4½-6-9- 10½-16½- 22½	4 ¹ / ₈ × 2½ × 3	778	5156SC	1.80
VS157	22½-45	8 ¹ / ₈ × 4 ⁵ / ₈ × 6 ¹ / ₁₆	794	21308SC	3.35*

All prices in effect 6/1/48.

*Prices slightly higher on Pacific Coast.

be sure with



GENERAL

DRY BATTERIES

General dry batteries contain many outstanding advancements such as extra heavy seamless extruded zinc cups, the famous paper thin separator permitting more mix and more active zinc area by utilization of the cell bottom. The curled rim lock seal which seals each cell individually. These features assure long shelf life as well as the maximum in dry battery performance.

GENERAL A & B RADIO FARM PACKS

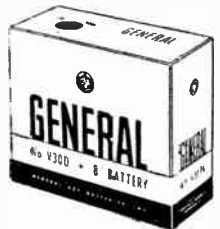
General A-B packs are made with L size cells in the A section. These cells are 40% longer than the largest conventional 1 1/4" diameter cell. This construction assures the perfect balance between these "A" and "B" sections for current drains established by the Radio Industry.



Type	Voltage	Terminals	Std. Pkge.	Pounds Weight	Length	Width	Height	Price East	Price P.C.
60DL11L	A 1 1/2, B 90	Std. Socket	1	24 1/2	16	4 3/8	6 5/8	\$7.50	\$7.80
Z60D12L	A 1 1/2, B 90	Sp. Octal Socket	1	23 3/4	12	5 1/2	6 11/16	7.50	7.80
60D12L6	A 9, B 90	Std. Octal Socket	1	23 3/4	7 13/16	4 3/8	13 3/8	7.50	7.80
60B6L	A 1 1/2, B 90	Std. Socket	4	39	10 11/16	2 5/8	6 1/4	5.35	5.35
90FL6D	135, B 9C	Spec. 7 Pt. Socket	1	42	8	8 3/4	11 1/8	10.50	11.11

GENERAL ABC HOME RADIO BATTERIES

All cells used in General batteries are filled with active mix by loading equipment developed by General which automatically puts the right amount of mix into each cell and packs it uniformly. General home radio batteries are accepted for their uniformity, dependability and long service.



Type	Voltage	Terminals	Std. Pkge.	Pounds Weight	Length	Width	Height	Price East	Price P.C.
12L1L	1 1/2	Std. Socket	4	34 1/4	7 3/4	2 3/4	6 3/8	\$2.95	\$2.95
12L1S	1 1/2	Std. Socket	4	34 1/4	5 3/8	3 13/16	6 3/8	2.95	2.95
P24L2	3	Std. Socket	1	17	10 3/8	4	6 3/4	4.73	5.15
5H5	7 1/2	Std. Socket	4	8.6	3 3/8	2 11/16	4 3/8	1.25	1.25
V30D	45	Std. Socket	6	45	7 1/8	3 1/16	7	2.40	2.40
V30DL	45	Std. Socket	6	51	7 3/8	3 1/16	7	2.50	2.50
V30F	45	Std. Socket	6	68	7 3/8	4 1/8	7	2.93	3.14
V30FL	45	Std. Socket	3	39 1/2	7 3/8	4 1/8	7	3.32	3.53
H3D	4 1/2	Std. Socket	10	7 1/2	3 15/16	1 5/8	2 15/16	.75	.75
H3B	4 1/2	8-32 Screws	10	3	2 7/8	1 5/8	3	.45	.45
V5B	7 1/2	5 Screws 1 wire	10	6.3	4 1/8	3/8	3 3/8	.90	.90
H15B5	22 1/2	Std. Socket	10	15.4	4 3/8	2 1/2	2 3/8	1.70	1.70
H15B	22 1/2	Fahnestock Type	10	15.4	4 3/8	2 1/2	3 3/8	1.70	1.70
H15A	22 1/2	2-Screw	10	10	3 7/8	2	2 11/16	1.30	1.30



GENERAL PORTABLE A&B PACKS AND A&B BATTERIES

The small size cells used in portable batteries greatly reflect the benefits derived from General's patented construction. General Batteries deliver more service hours per dollar, therefore you will find them used as original equipment in more battery radios than any other brand.

Type	Voltage	Terminals	Std. Pkge.	Pounds Weight	Length	Width	Height	Price East	Price P.C.
40CW2CF	A 1 1/2, B 60	Midget Std. Socket	6	8.7	7 7/8	2 3/8	1 1/4	\$3.00	\$3.00
41A4FL	A 1 1/2, B 61 1/2	Midget Std. Socket	6	25 1/2	9 3/8	2	4 3/4	3.85	3.85
60A2L	A 1 1/2, B 90	Large Std. Socket	1	4 3/4	5 1/8	2 5/8	6 15/16	5.25	5.25
60A4L	A 1 1/2, B 90	Midget Std. Socket	6	38 1/2	12	1 1/2	6 3/8	5.25	5.25
42A5G5	A 7 1/2, B 63	Std. Socket	6	30	9 1/2	2 11/16	4	4.35	4.35
291	A 7 1/2, 9-B 90	Std. Socket	1	6 1/2	10 1/2	3 1/4	4 1/8	5.25	5.25



General Portable A & B Packs and A & B Batteries (Cont.)

Type	Voltage	Terminals	Std. Pkge.	Pounds Weight	Length	Width	Height	Price
60A4F4	A 6, B 90	4 Hole Socket	6	33½	8½	2½	4½	\$5.25
60A6F6-5	A 7½, 9, B 90	Std. Octal Socket	1	6	9½	2½	4½	5.25
60B6F6-5	A 7½, 9, B 90	Std. Octal Socket	1	7½	11½	3½	4½	5.45
Z50B4H4	A 6, B 75	Spec. 4 Prong Plug	1	7	12½	2½	4½	5.00
Z60B6H6	A 9, B 90	4 Prong Plug	1	8.9	12½	2½	4½	5.45



GENERAL PORTABLE A BATTERIES

Type	Voltage	Terminals	Std. Pkge.	Pounds Weight	Length	Width	Height	Price
4F1	1½	Std. Socket	6	9.1	2½	2½	3½	\$0.90
6F1	1½	Std. Socket	6	13.2	3½	2½	4	1.25
8F1	1½	Std. Socket	6	17.4	3½	2½	5½	1.60
3L1	1½	Std. Socket	6	11.4	3½	1½	6½	.75
4L1	1½	Std. Socket	6	15	2½	2½	6½	.85
3H3	4½	Std. Socket	6	8	3½	1½	4½	.75
4F4	6	Std. Socket	6	9	2½	2½	4½	.90
8F4	6	Std. Socket	6	17.4	3½	2½	5½	1.70



GENERAL PORTABLE B BATTERIES

Type	Voltage	Terminals	Std. Pkge.	Pounds Weight	Length	Width	Height	Price
V30A	45	Comb. Std. Socket	6	11.4	3½	2½	4½	\$2.15
F30A	45	Comb. Std. Socket	6	11.3	4½	1½	5½	2.15
V30B	45	Comb. Std. Socket	6	17.1	4½	2½	5½	2.15
V30AA	45	Comb. Std. Socket	6	9	2½	2½	4	2.58
V30AA2	45	3 Screw	6	9	3	1½	4½	2.58
W45A	67½	Glovesnap	12	10	2½	1½	3½	2.45
W30A	45	Glovesnap	12	7	2½	1½	3½	1.75
W30B	45	Comb. Std. Socket	6	12	3½	1½	5½	2.15



GENERAL FLASHLIGHT CELLS AND LANTERN BATTERIES

General Flashlight and Lantern batteries are designed to give brighter light and recuperate rapidly while idle. The Heavy Duty cells are made for moderate home use. The Industrial is to be used where light is needed frequently and for long periods.

Type	Voltage	Terminals	Std. Pkge.	Pounds Weight	Length	Width	Height	Price
C	1½	Flashlite Cell	72	8	1 diam.		1½	\$0.10
D	1½	Flashlite Cell	240	58½	1½		2½	.10
D Industrial	1½	Flashlite Cell	250	59½	1½		2½	.10
AA	1½	Penlite	180	8	1½		1½	.07½
V4F	6	Spiral Springs	10	15.8	2½	2½	4½	.70
4FB	6	Spiral Springs	10	15.5	2½	1½	8	.70



GENERAL IGNITION BATTERIES, MULTIPLE AND ELECTRIC FENCE

All General batteries are designed to use the most efficient cells available. The 4L1 Hywatt is far superior in service and shelf life to any other battery of comparable size because it consists of four L cells, the service being about double that secured from the conventional No. 6 dry cell. These same L cells are used in the Electric Fence and Multiple batteries and produce most satisfactory performance. GENERAL Electric Fence batteries have no equal.

Type	Voltage	Terminals	Std. Pkge.	Pounds Weight	Length	Width	Height	Price East	Price P.C.
No. 6	1½	8-32 Screw	24	60	2½ diam.		6½	\$0.65	\$0.70
641	6	Insulated Screw	6	54.5	10½	2½	7½	3.15	3.45
4L1	1½	8-32 Screw	25	62½	2½	2½	6½	.75	.80
4F1	1½	8-32 Screw	25	37	2½	2½	4¼	.65	.70



We manufacture all types of Hearing Aid and Model Airplane batteries. Write for particulars.

GENERAL DRY BATTERIES, INC.

MAIN OFFICES AND FACTORY • 13000 ATHENS AVE., CLEVELAND, OHIO
 FACTORIES • DUBUQUE, IA. • GLOVERSVILLE, N. Y. • TORONTO, ONT.

BRANCH OFFICES & WAREHOUSES • NEW YORK, CHICAGO, DALLAS, SAN FRANCISCO,
 LOS ANGELES, PORTLAND, MEMPHIS, MINNEAPOLIS



PORTABLE RADIO BATTERIES



2R



P-694A



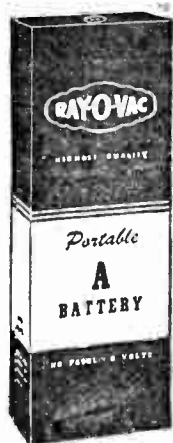
P-698A



P-94A



P-83A



P-698L



P-96A



AB-99A



AB-995



AB-878



AB-85



P-7830



P-5303



P-430



4367

Turn page for more RAY-O-VAC Batteries and Specifications →



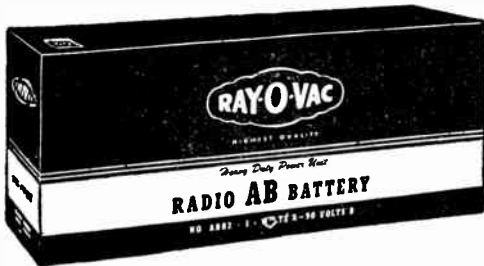
FARM RADIO BATTERIES



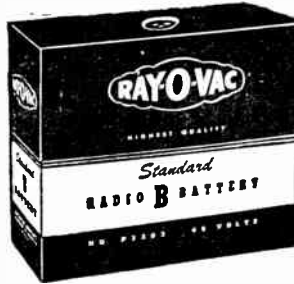
P-9403



P-9203



AB-82



P-2303



P-9303



P-5151



551



531R



P-231W

SPECIFICATIONS

PORTABLE "A" BATTERIES

Catalog No.	Voltage and Type	Dimensions in Inches	Terminals	Standard Quan.	Pkg. Wt.
P694A	6A	2 ³ / ₁₆ x 2 ⁹ / ₁₆ x 4 ¹ / ₈	2 Hole Socket	6	8 ¹ / ₂
*P698A	6A	3 ⁷ / ₈ x 2 ¹³ / ₁₆ x 5 ¹ / ₂	2 Hole Socket	6	16
P94A	1 ¹ / ₂ A	2 ⁵ / ₈ x 2 ⁵ / ₈ x 4 ¹ / ₁₆	2 Hole Socket	6	8
P83A	4 ¹ / ₂ A	4 x 1 ³ / ₈ x 4 ¹ / ₁₆	2 Hole Socket	6	6 ³ / ₄
P698L	6A	3 ⁷ / ₈ x 1 ⁷ / ₁₆ x 10 ³ / ₄	2 Hole Socket	6	16
P96A	1 ¹ / ₂ A	3 ¹⁵ / ₁₆ x 2 ⁵ / ₈ x 4 ¹ / ₈	2 Hole Socket	4	8

PORTABLE "AB" BATTERIES

AB994	7 ¹ / ₂ or 9A-90B	9 ⁵ / ₈ x 2 ⁷ / ₈ x 4 ¹ / ₂	Standard 8 Hole Socket	6	35
AB995	9A-90B	13 ⁵ / ₈ x 2 ⁷ / ₈ x 4 ⁵ / ₈	Recessed 4 Prong Male Plug	6	49
AB878	7 ¹ / ₂ or 9A-90B	10 ⁵ / ₈ x 3 ⁷ / ₁₆ x 4 ¹ / ₈	Standard 8 Hole Socket	6	44

PORTABLE "B" BATTERIES

P7830	45B	3 ⁹ / ₁₆ x 1 ¹³ / ₁₆ x 5 ¹ / ₂	Combination B Socket	6	13
P5303	45B	4 ¹ / ₈ x 2 ⁵ / ₈ x 5 ⁵ / ₁₆	Combination B Socket	6	16
P430	45B	3 ⁷ / ₁₆ x 2 ¹ / ₄ x 4 ¹ / ₂	Combination B Socket	6	10 ¹ / ₄
4367	67 ¹ / ₂ B	2 ⁵ / ₈ x 1 ⁵ / ₁₆ x 3 ⁵ / ₈	2 Snap Fasteners	12	

FARM "A" BATTERIES

P9403	3A	11 ¹¹ / ₁₆ x 4 x 5 ¹⁵ / ₁₆	2 Hole Socket	1	14
P9203	1 ¹ / ₂ A	7 ¹¹ / ₁₆ x 2 ¹³ / ₁₆ x 7	2 Hole Socket	6	42 ¹ / ₂

FARM "AB" BATTERIES

AB85	1 ¹ / ₂ A-90B	10 ¹³ / ₁₆ x 2 ³ / ₄ x 6 ³ / ₈	4 Hole Socket	6	53 ¹ / ₂
AB82	1 ¹ / ₂ A-90B	15 ³ / ₄ x 4 ¹ / ₈ x 6 ³ / ₄	4 Hole Socket	1	21

FARM "B" BATTERIES

P9303	45B	8 ¹ / ₁₆ x 4 ⁵ / ₁₆ x 7 ³ / ₁₆	3 Hole Socket	4	45
P2303	45B	8 ¹ / ₁₆ x 3 ³ / ₁₆ x 7 ³ / ₁₆	3 Hole Socket	6	46

FARM "C" BATTERIES

*P231W	4 ¹ / ₂ C	4 ¹ / ₁₆ x 1 ⁷ / ₁₆ x 3 ¹ / ₁₆	3 Hole Socket	10	7 ¹ / ₄
* 531R	4 ¹ / ₂ C	2 ³ / ₈ x 1 ¹ / ₁₆ x 2 ⁹ / ₁₆	Screw	10	3
* 551	7 ¹ / ₂ C	3 ¹⁵ / ₁₆ x 7 ³ / ₈ x 2 ¹³ / ₁₆	5 Screw 1 Pigtail	10	6
*P5151	22 ¹ / ₂ B or C	4 x 2 ¹ / ₂ x 3	5 Hole Socket	6	8

*Indicates special battery types made on order only and not carried in stock.

Mueller Electric Co.

CLEVELAND, OHIO

MUELLER BATTERY AND TEST CLIPS

U.S. PATENTS: 1,521,903; 1,686,842; 1,779,442; 1,791,976; 1,965,151; 1,994,251; 1,999,613; 2,074,324; 2,136,814; 2,416,113.

For use in making quick, temporary electrical connections. Packed 10 in a box, half marked + half plain to indicate polarity. Screw connections



No. 45 PEE WEE

A very small test clip for radio, ignition, meter and similar work. 1 1/2" long. Jaw spread 3/8". Steel, cadmium plated.

EACH NET.....\$0.06 LOTS OF 10.....\$0.04



No. 45-C

Solid Copper R.F. Test Clip

Solid copper radio frequency test clip. Phosphor bronze spring, brass screw. Will not heat up in high frequency test work, entirely non-ferrous. 1 1/2" long.

No. 45-C Clip
No. 47 Insulator

EACH NET.....\$0.09 LOTS OF 10.....\$0.06

(Use No. 47 Insulator for clips 45 and 45-C.)



No. 48-B

A small test and battery clip for radio use and general testing purposes. 2" long. Jaw spread 1/2". Steel, cadmium plated.

EACH NET.....\$0.07 LOTS OF 10.....\$0.045

No. 48-C—Solid Copper. Same size as 48-B.
EACH NET.....\$0.11 LOTS OF 10.....\$0.075



No. 82 Needle Clip

Needle pierces insulated wire. Ideal for quick hookup of truck trailer lighting systems, telephone and signal work. Steel, cadmium plated. 2" long.

EACH NET.....\$0.14 LOTS OF 10.....\$0.10

Use No. 49 Insulator for Clips 48-B, 48-C and 82.



No. 27

A high grade test clip with meshing teeth on three sides of jaws. For laboratory and shop test work 2 1/2" long. Jaw spread 5/8". Steel, cadmium plated.

EACH NET.....\$0.10 LOTS OF 10.....\$0.07

No. 27-C—Solid copper. Same size as No. 27.
EACH NET.....\$0.17 LOTS OF 10.....\$0.12

Use No. 29 Insulator for clips 27 and 27-C.



No. 24-A

A medium sized battery clip. Stands erect on battery post. Lead coated, copper shunt protects spring. 2 3/4" long. Jaw spread 1". Steel, lead plated.

EACH NET.....\$0.12 LOTS OF 10.....\$0.085

No. 24—Solid copper. Same size as No. 24-A.
EACH NET.....\$0.22 LOTS OF 10.....\$0.16

Use No. 26 Insulator for Clips 24-A and 24.

LARGER SIZES OF CLIPS

	Each Net	Lots of 10
No. 21-A—Heavy Duty Steel, lead plated, 4" long	\$0.18	\$0.13
No. 21—100 Amp. Solid Copper, 4 1/2" long	.55	.38
No. 11A—100 Amp. Steel, lead plated, 6" long	.67	.47
No. 11—200 Amp. Solid copper, 6" long	1.10	.77
No. 33—300 Amp. Solid copper, 7 3/4" long	1.90	1.31

(Above furnished with lug connections.)

FLEXIBLE INSULATORS FOR CLIPS



A convenient protection against short circuit and electric shock. Packed 10 in a box, 5 red and 5 black to indicate polarity. Long tail prevents breakage of wire. Constructed so that clip is held in firmly.

Copyright by U. C. P., Inc.

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

CROCODILE CLIPS

U.S. Patent No. 1,999,613



No. 85 or 85-C Clip with
No. 87 Insulator



No. 85-T Clip

No. 85—A very small clip with slender, elongated jaws for getting into tight places in radio or electrical test work. Screw connection. 2 1/4" long.

EACH NET.....\$0.07 LOTS OF 10.....\$0.045

No. 85-C—Same as No. 85, except solid copper. A radio frequency, entirely non-ferrous test clip.

EACH NET.....\$0.10 LOTS OF 10.....\$0.07

No. 85-T—New Crocodile "Tip-Clip"—equipped with standard phone tip on one jaw, otherwise same as No. 85. Ideal for use as a prod, for ordinary clip connections and for connections to insulated binding posts having non-removable leads. 2 5/8" long.

EACH NET.....\$0.14 LOTS OF 10.....\$0.10

Use No. 87 Insulators for clips 85, 85-C and 85-T. Red and black. Cover entire clip except nose. Protects against short and shock. Helps to distinguish leads.

ALLIGATOR CLIPS

No. 60—CONVENTIONAL TYPE

Accurately made, slim jaws, fine meshing teeth. Convenient, round thumb grip, barrel connection for banana plug. Equipped with small soldering lip. Strong spring with a hard bite. Cadmium plated. 2" long.

EACH NET.....\$0.07 LOTS OF 10.....\$0.045



No. 60-S—SCREW CONNECTION

Eliminates necessity for soldering. Otherwise same as No. 60.

EACH NET \$0.08 LOTS OF 10 \$0.05



No. 60-CS—COPPER R.F. ALLIGATOR CLIP

Same as No. 60-S except made of solid copper. Has brass screw connection. Ideal for R.F. work. Will not heat up in H.F. circuits. Bright, natural copper finish. 2" long.

EACH NET.....\$0.10 LOTS OF 10.....\$0.07



No. 60-HS—STEEL ALLIGATOR CLIP WITH INSULATED HANDLE

Same as No. 60-S except equipped with red and black insulating sleeves on end. Very convenient for distinguishing leads. Has screw connection also. Cadmium plated. 2 1/4" long.

EACH NET.....\$0.11 LOTS OF 10.....\$0.08



No. 60-CHS—COPPER ALLIGATOR CLIP WITH INSULATED HANDLE

Same as No. 60-CS except equipped with red and black insulating sleeves on end. Brass screw connection, for R.F. work. 2 1/4" long.

EACH NET.....\$0.14 LOTS OF 10.....\$0.10



WEE-PEE-WEE No. 88

Entirely Non-ferrous. Smaller Than Ever!

An extremely small clip for fine testing in radio and electrical work. Light-Weight; thin-nosed; spring-temper phosphor bronze. Ideal for close-wound coils. 1 1/4" long; jaw spread 1/4".

EACH NET.....\$0.15 LOTS OF 10.....\$0.10

Use No. 93-P R.F. Insulator.

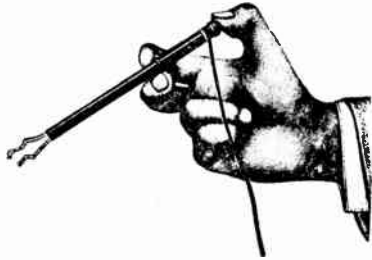


Insulator No.	For Use with Clip No.	Each Net	Lots of 10
13	11, 11-A	\$0.54	\$0.38
23	21, 21-A	.33	.23
26	24, 24-A	.23	.16
29	27, 27-C	.17	.12
35	33	1.42	1.00
47	45, 45-C	.11	.075
49	48-B, 48-C, 82	.11	.075
87	85, 85-C, 85-T	.10	.066
93-P	88	.06	.035

Mueller Electric Co.

THE SNAPPER

A Long Insulated Test Clip and
A "Triple Threat" Radio Tool



U. S. Patent No. 2,074,324

No. 99—7" Long Insulated

The long tube is of insulating material and is fitted with spring contact jaws on the far end.

The jaws are operated by a push of the thumb on the near end. Wire is quickly and easily connected in a hole in the insulator knob binding post on the near end.

May be used as (1) A "Deep Sea" Electric Test Clip—test contacts with ease, deep in the recesses of radio chassis with no danger of short circuits; (2) An Electric Contact Prod—clip jaws may be used to make quick prod contacts, or clip one Snapper on ground circuit and prod with another; (3) A Retriever—start small screws and nuts or pick up odds and ends that may accidentally be dropped into inaccessible places.

PRICE...\$0.83 EACH Dealers' Wholesale Price, each...\$0.50 Net
Snappers are generally used in pairs—1 red and 1 black.

THE NEW No. 22 "TWIN-CLIP"

HAS JAWS ON BOTH ENDS
Something New and Different!



Both jaws may be opened at the same time by pressing the center of the clip, or either jaw may be opened separately without disturbing the grip of the other.

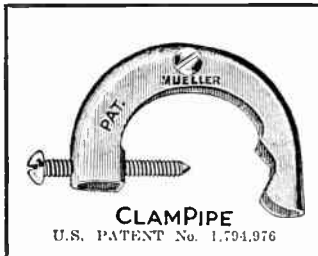
Two inches long, made of cadmium plated steel. Has screw connection.

The Twin-Clip is a real time-saver in many electrical and mechanical applications. May be used to make a quick splice, temporary repair hookup, hanging and racking various articles for display or industrial processing, holding identification and record cards, etc.

Packed 10 in a box

EACH NET \$0.10 LOTS OF 10 \$0.07

CLAMPIPE GROUND CLAMP



CLAMPIPE

U.S. PATENT No. 1,794,976

No. 58

The best ground clamp value on the market. Applicable to pipe 3/8" to 1 1/2" outside diameter.

Packed 10 in a box

EACH NET \$0.13 LOTS OF 10 \$0.09

BATTERY POST ADAPTER

For Making Non-Corrosive, Semi-Permanent
Connections to Storage Batteries

No. 103—Is simply pressed, not burned, on to battery post. The wire is quickly and easily connected under the thumb nut.

Made of non-corrosive antimonial lead. Ideal for use on battery operated home appliances.



No. 103

Packed 10 in a box

EACH NET \$0.24 LOTS OF 10 \$0.17

BATTERY CHARGING JUMPERS



No. 89—MUELLER CLIP JUMPER

A complete jumper, ready to use. Two No. 24-A clips and 14" of insulated wire.

EACH NET \$0.30 Packed 10 in a box LOTS OF 10 \$0.21



No. 57—MUELLER TAP-TITE SPIKE JUMPER

Hard, pointed steel pins soldered to ends of wire and held firmly in lead coated steel jackets. Drive into battery posts.

EACH NET \$0.28 Packed 10 in a box LOTS OF 10 \$0.20



No. 38—MUELLER PRES-TITE JUMPER

Is simply pressed over battery posts. Made of non-corrosive, antimonial lead.

EACH NET \$0.43 Packed 10 in a box LOTS OF 10 \$0.30

BATTERY CARRIERS



No. 73—MUELLER "COCKEYED CARRIER"

No. 73—A rugged carrier with heavy, rubber covered strap which will stand plenty of abuse. To use, drop the end pieces over the battery posts and lift up. This cocks the eyes and they grab hold. The heavier the battery the tighter the grip. 12" long. Packed 10 in a box.

EACH NET \$0.42 LOTS OF 10 \$0.30

NEW EXTRA LONG CARRIER

No. 73-EL—19" long. Ample length to take the new long batteries in some latest model cars. Same construction as No. 73. Packed 10 in a carton.

EACH NET \$0.53 LOTS OF 10 \$0.37

MALLORY VIBRATORS • VIBRAPACKS* • RECTIFIERS • BATTERY CHARGERS

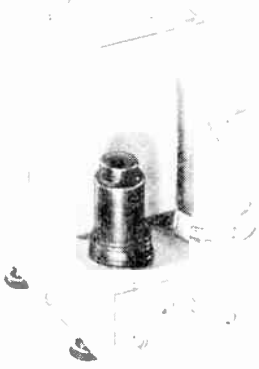
SPECIAL COMPONENTS AND MISCELLANEOUS ITEMS

*Reg. U. S. Pat. Off.

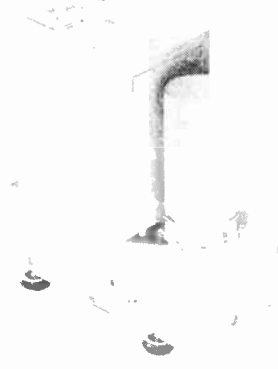
★ Complete descriptions of these parts will be found on the following pages.

Mallory Cat. No.	List Price	Mallory Cat. No.	List Price	Mallory Cat. No.	List Price	Mallory Cat. No.	List Price
<i>Mallory Page 2</i>		<i>Mallory Page 3</i>		<i>Mallory Page 8</i>		<i>Mallory Page 9</i>	
VIBRAPACKS*		954 \$6.90		(TYPE YO)		SOLDERING	
*Reg. U. S. Pat. Off.		1100 4.10		YARD-OHM		IRON TIPS	
		1501 4.10		Resistance Kits			
VF-223 \$ 8.00		T4002 9.70		YO-1 \$.75		311 \$.70	
VP-540 30.00		T4003 8.90		YO-5 .75		312 .80	
VP-551 22.00		GC7 .40		YO-10 .75			
VP-552 26.25		<i>Mallory Page 5</i>		YO-25 .75		DIAL PLATES	
VP-553 24.50				YO-50 .75			
VP-554 28.75				YO-100 .75			
VP-555 52.00				YO-250 .75		453 \$.20	
VP-557 52.00				YO-500 .75		454 .20	
VP-G556 28.75						455 .20	
VP-F558 31.25						456 .20	
<i>Mallory Page 3</i>						457 .20	
VIBRATORS		BATTERY CHARGERS AND ACCESSORIES		GRID BIAS CELLS		458 .20	
222 \$7.65		6AC4 \$13.95		BC-1 \$.40 each		459 .20	
245 6.90		6AC6 18.95		BC-2 .40 each		460 .20	
245A 6.90		6AC10 25.95		GB11A .15 each		461 .20	
245C 6.90		12AC5 33.95		GB11B .20 each		462 .20	
W245 6.90		6AC60 79.50		GB12 .25 each		463 .20	
W245A 6.90		R-652 1.80		GB13 .35 each		464 .20	
246 6.90		R-653 .25		GB14 .40 each		465 .20	
246A 6.90		R-654 6.50		GB15 .15 each		466 .20	
W246 6.90		<i>Mallory Page 7</i>		GB16 .15 each		467 .20	
247 6.90						468 .20	
F247 7.65				<i>Mallory Page 9</i>		472 .20	
248 6.90						473 .20	
249 6.90						474 .20	
270B 8.30						475 .20	
ADAPTER 1.35		RECTIFIERS		KNOBS Round and Bar Types		476 .20	
271HD 8.30		IB4R \$2.10		365-1 \$.25		477 .20	
273C 7.65		IB6R 2.60		365-R-1 .25		478 .20	
273D 7.65		IB12R 3.15		366-1 .20		479 .20	
292 4.80		IB12C1J 5.75		366-R-1 .20		480 .20	
294 4.10		F16C3 7.20		367-1 .25		481 .20	
F294 6.20		1F16CB7M 8.65		368-1 .20		482 .20	
298 5.50		IS16CB7 8.40		MOUNTING NUTS		483 .20	
F502P 8.30		IS16B7 10.15		Hexagon Type		484 .20	
505P 3.45		IS16B9 12.10		232 \$.15 per 10		485 .20	
506P 5.50		F20C7 9.90		255 .20 each		486 .20	
514 6.90		F24C7 10.45		V-11260-2 .30 each		487 .20	
716 6.90		IS24B9 16.90		V-11260-12 .25 each		488 .20	
725C 7.65		IS28C7J 12.55				372 .20	
G725C 9.05		F16HIP 4.85				373 .20	
742 6.90		F20HIP 6.45				374 .20	
743 6.90		F24HIP 7.80				375 .20	
748 6.90		F28HIPM 8.40				376 .20	
G748C 9.05		F32HIPM 9.30				377 .20	
825C 6.25		<i>Mallory Page 8</i>				378 .20	
826C 5.50						379 .20	
F826C 6.90						380 .20	
G826C 6.90						381 .20	
839 4.80		MALLORY INDUCTUNER*				382 .20	
852 4.10		*Reg. Trade Mark				383 .20	
853 4.10		8301 \$45.00				384 .20	
854 4.10						385 .20	
859 4.10						386 .20	
860 4.10						387 .20	
870 4.10						388 .20	
901M 3.45		VIDEOCOUPLER				389 .20	
952W 6.90		VC-101 \$1.75				390 .20	
953W 6.90						394 Special .20	

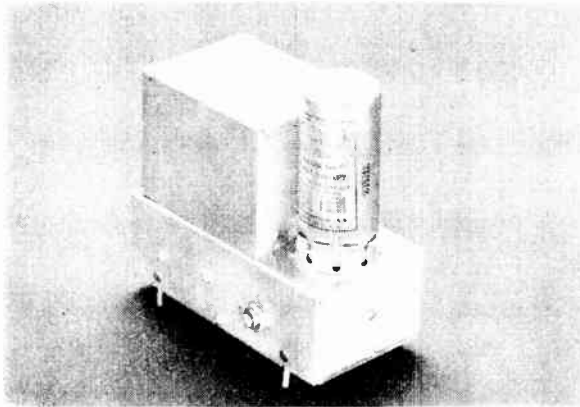
MALLORY VIBRAPACK* POWER SUPPLIES



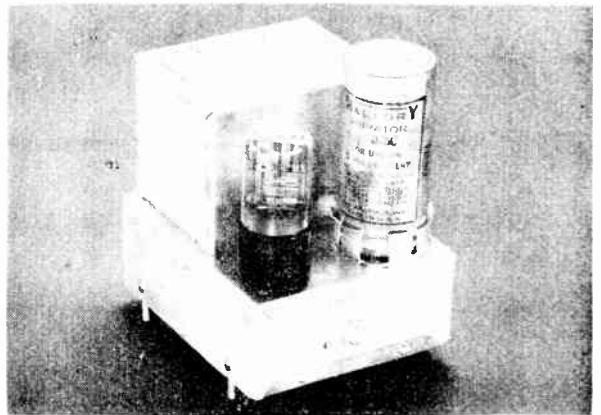
Type VP-554 • VP-F558



Type VP-552 • VP-G556



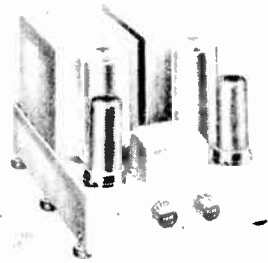
Type VP-551



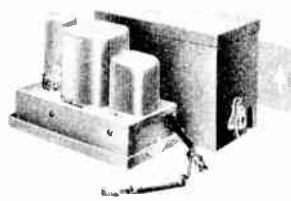
Type VP-553

NOISE SUPPRESSION

● Vibrapacks are equipped with built-in noise suppression equipment. Type VP-555 also includes an efficient low-frequency hum filter. Type VP-557 incorporates the first input filter condenser only. Other Vibrapacks do not include the high-voltage hum filter. High-voltage filter requirements are similar to equivalent AC power packs.



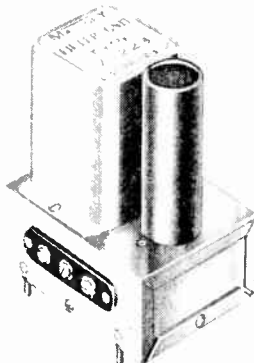
Type VP-555 • VP-557



Type VP-540

Type VF-223 Audio Filter

● A complete audio filter system for use with all single-unit Vibrapacks. Designed to give maximum suppression of hum with minimum voltage drop. Especially recommended for applications which are sensitive to hum, or where voltage regulation is important as in Class "B" audio amplifiers.

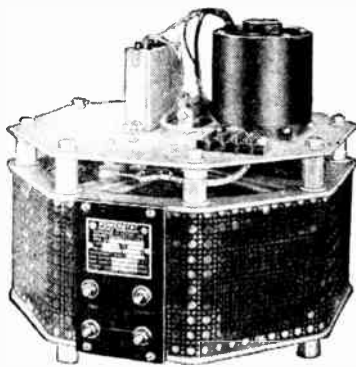


Catalog Number	Nominal Operating Voltage	Nominal Output Voltage	Maximum Output Current	Type
VP-540	6.3	250	60 ma.	Self-Rectifying
VP-551	6.3	125-150 175-200	100 ma.	Self-Rectifying
VP-552	6.3	225-250 275-300	100 ma.	Self-Rectifying
VP-553	6.3	125-150 175-200	100 ma.	Tube Rectifier
VP-554	6.3	225-250 275-300	100 ma.	Tube Rectifier
VP-555	6.3	300	200 ma.	Tube Rectifier
VP-557	6.3	400	150 ma.	Tube Rectifier
VP-G556	12.6	225-250 275-300	100 ma.	Self-Rectifying
VP-F558	32	225-250 275-300	100 ma.	Tube-Rectifying

*Includes complete audio filter.

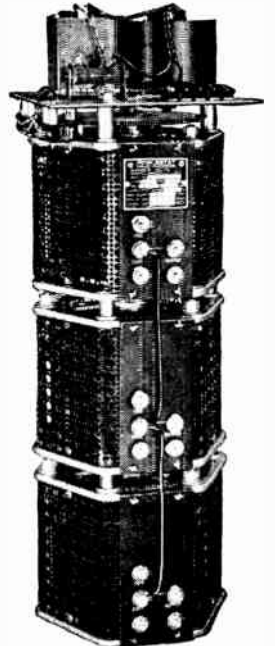
MOTOR-DRIVEN POWERSTATS

Many applications require that POWERSTATS be controlled from remote push-button stations or by automatic controllers. For these requirements, a standard line of motor-driven POWERSTAT variable transformers is available in the same capacities as manually operated units. To offer the same control as obtained with handwheel adjustment, a special three-wire synchronous motor is used to drive the POWERSTAT. It consists of two windings with externally mounted capacitor and resistor. By employing the appropriate gearing combinations, various speeds can be obtained to suit each need.



TYPE MX1156

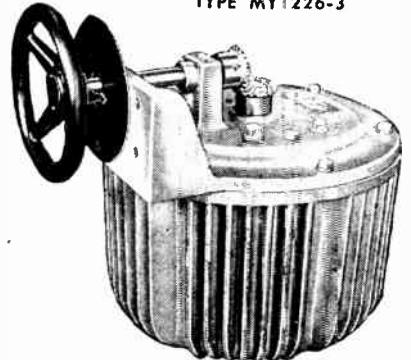
Standard speeds . . . 5, 6, 14, 19 and 45 seconds . . . for time of full range travel from zero to maximum output voltages. Motor assembly operates from a 115 volt single phase source . . . maximum current — 0.4 amps. Rotor shaft ball-bearing mounted . . . rapid starting . . . and practically instantaneous stopping.



TYPE MY1226-3

OIL-COOLED POWERSTATS

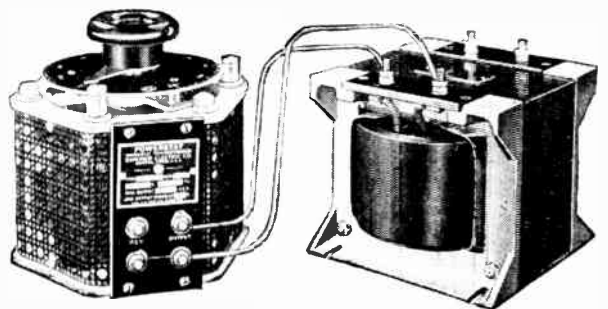
Space limitations and the atmosphere in which a POWERSTAT is to operate sometimes dictates the use of an oil-cooled unit. The capacity of POWERSTATS can be increased above normal air-operation when mounted in transformer oil . . . amount of increase depends on type of POWERSTAT . . . area of wetted surface . . . type of container. Most POWERSTATS can be adapted to oil mounting but since applications vary extensively only single phase O-116, O-216, O-1126 and O-1226 types are available as standard. Type O-1126 illustrated is typical unit. Refer all inquiries on use of oil-cooled POWERSTATS to the factory.



TYPE O-1126

POWERSTAT LINE CORRECTORS

Where the wide output voltage range of a POWERSTAT variable transformer is not necessary, but relatively large amounts of power must be controlled, a POWERSTAT Line Corrector is recommended. POWERSTAT type LC consists of a POWERSTAT, appropriately tapped, controlling the primary of a step-down fixed-ratio transformer. By rotating the brush element, different voltages are applied enabling the secondary, which is in series with one side of the line, to buck or boost the line voltage. Can be used for line voltage correction to obtain nominal output voltage from varying power lines . . . or on constant voltage line or furnish variable output voltage over a limited range at large current capacities.



TYPE 2106 LC

THE SUPERIOR ELECTRIC CO., 12 MEADOW STREET BRISTOL, CONN.
 POWERSTAT VARIABLE TRANSFORMERS • STABILINE VOLTAGE REGULATORS • VOLTBOX A-C POWER SUPPLY



MALLORY VIBRATORS



Type No.	Volt	Type	Base Dia.	Can Type	Size
222	6	Syn.	20	2	4 3/8 x 1 3/8 x 1 1/16
245	6	Syn.	21	1	1 1/2 x 3 1/4
245A	6	Syn.	21	1	1 1/16 x 3 1/2
245C	6	Syn.	28	1	1 1/2 x 3 1/4
W245	4	Syn.	21	1	1 1/2 x 3 1/4
W245A	4	Syn.	21	1	1 1/16 x 3 1/2
246	6	Syn.	38	1	1 1/2 x 3 1/4
246A	6	Syn.	38	1	1 1/16 x 3 1/2
W246	4	Syn.	38	1	1 1/2 x 3 1/4
247	6	Syn.	46	1	1 1/2 x 3 1/4
F247	32	Syn.	46	1	1 1/2 x 3 1/4
248	6	Syn.	44	1	1 1/2 x 3 1/4
249	6	Syn.	32	1	1 1/2 x 3 1/4
270B	6	Syn.	23	1	2 x 4 1/2
ADAPTER					
271HD	6	Syn.	24	1	2 x 4 1/2
273C	6	Syn.	29	1	2 x 4 1/2
273D	6	Syn.	31	1	2 x 4 1/2
292	6	Int.	3	2	1 1/2 x 1 1/8 x 2 7/16
294	6	Int.	8	1	1 1/2 x 3 1/4
F294	32	Int.	8	1	1 1/2 x 3 1/4
298	6	Int.	51	1	1 1/2 x 2 7/8
F502P	32	Int.	9	5	1 1/8 x 3 3/8
505P	6	Int.	8	1	1 1/16 x 3 1/2
506P	6	Int.	36	1	1 1/16 x 3 1/2
514	6	Syn.	30	6	1 1/16 x 3 1/2
716	6	Syn.	30	7	1 1/16 x 3 1/2
*725C	6	Syn.	32	1	1 1/2 x 3 1/4
*G725C	12	Syn.	32	1	1 1/2 x 3 1/4
742	6	Syn.	32	1	1 1/2 x 2 7/8
743	6	Syn.	38	1	1 1/4 x 3 1/4
748	6	Syn.	44	1	1 1/2 x 2 7/8
*G749C	12	Syn.	21	1	1 1/2 x 3 1/4
*825C	6	Int.	8	1	1 1/2 x 3 1/4
*826C	6	Int.	8	1	1 1/2 x 3 1/4
*F826C	32	Int.	8	1	1 1/2 x 3 1/4
*G826C	12	Int.	8	1	1 1/2 x 3 1/4
839	6	Int.	8	1	1 1/2 x 3 1/4
852	6	Int.	14	3	1 1/8 x 3 3/8
853	6	Int.	10	3	1 1/8 x 3 3/8
854	6	Int.	11	1	1 1/2 x 3 1/4
859	6	Int.	8	1	1 1/2 x 2 7/8
860	6	Int.	14	7	1 1/2 x 3 1/4
870	6	Int.	14	1	1 1/2 x 3
901M	6	Int.	8	1	1 1/2 x 3 1/4
952W	6	Syn.	16	1	1 3/8 x 2 7/8
953W	6	Syn.	16	1	1 1/2 x 3 1/16
954	6	Syn.	39	1	1 1/2 x 3 1/16
1100	6	Int.	8	1	1 1/16 x 2 3/8
1501	6	Int.	53	1	1 1/2 x 2 7/8
\$T4000	2	Syn.	50	1	1 1/2 x 2 7/8
T4002	2	Syn.	52	8	1 1/2 x 1 1/2 x 2 1/8
T4003	2	Syn.	50	1	1 1/16 x 2 1/8
1GC7		Ground Cup			

Recommended Substitutions for Discontinued Vibrators

Discontinued Type	Recommended Replacement	Discontinued Type	Recommended Replacement
220B	See Note 2	297	298
F220C	See Note 2	F297	F294 (See Note 3)
221	292	299	298
223	222 (See Note 1)	500P	853
F223	See Note 2	501P	853
224	222 (See Note 1)	503	292
226	222 (See Note 1)	504	246 (See Note 1)
245SW	245	507P	853
G245	G749C	508P	859
G249	G725C	509P	859
F251	F294	510P	859
G253	G826C	722A	246 (See Note 1)
253Y	294	728A	246 (See Note 1)
271	270B	850	859
277S	286S (See Note 1)	G850	G826C
P285Y	246 (See Note 1)	866	859
286S	248	868	870
289Y	249	869	859
294C	852	902M	859
294SW	854	903M	859
296	298	951P	246

NOTE 1. To make this substitution certain wiring changes are necessary. See instruction sheet packed with vibrator or installation note in the Mallory Vibrator Guide and the 5th Edition Radio Service Encyclopedia.

NOTE 2. An exact duplicate is no longer available. Every effort is being exerted to determine a satisfactory substitute. If a substitute can be made available, your Mallory Distributor will be advised.

NOTE 3. To make this substitution the six-prong socket must be changed to a 4-prong UX base socket and wired to match basic diagram 8.

Int.—Interrupter Syn.—Synchronous

*Hermetically Sealed Construction.

iA grounding cup for 1 1/2" dia. vibrators which makes a low r.f. ground connection between vibrator can and power supply chassis.

‡To be discontinued when supplies are exhausted.

1No ground strap.

MALLORY TECHNICAL MANUAL

● This simply written, practical book bridges the gap between radio theory and practice. Designed for the radio serviceman, engineer, amateur or experimenter who wants the latest technical information . . . presented so that he can easily apply it to everyday problems.

Contains page after page of information profusely illustrated. It's worth far more than its price.

MALLORY VIBRATORS

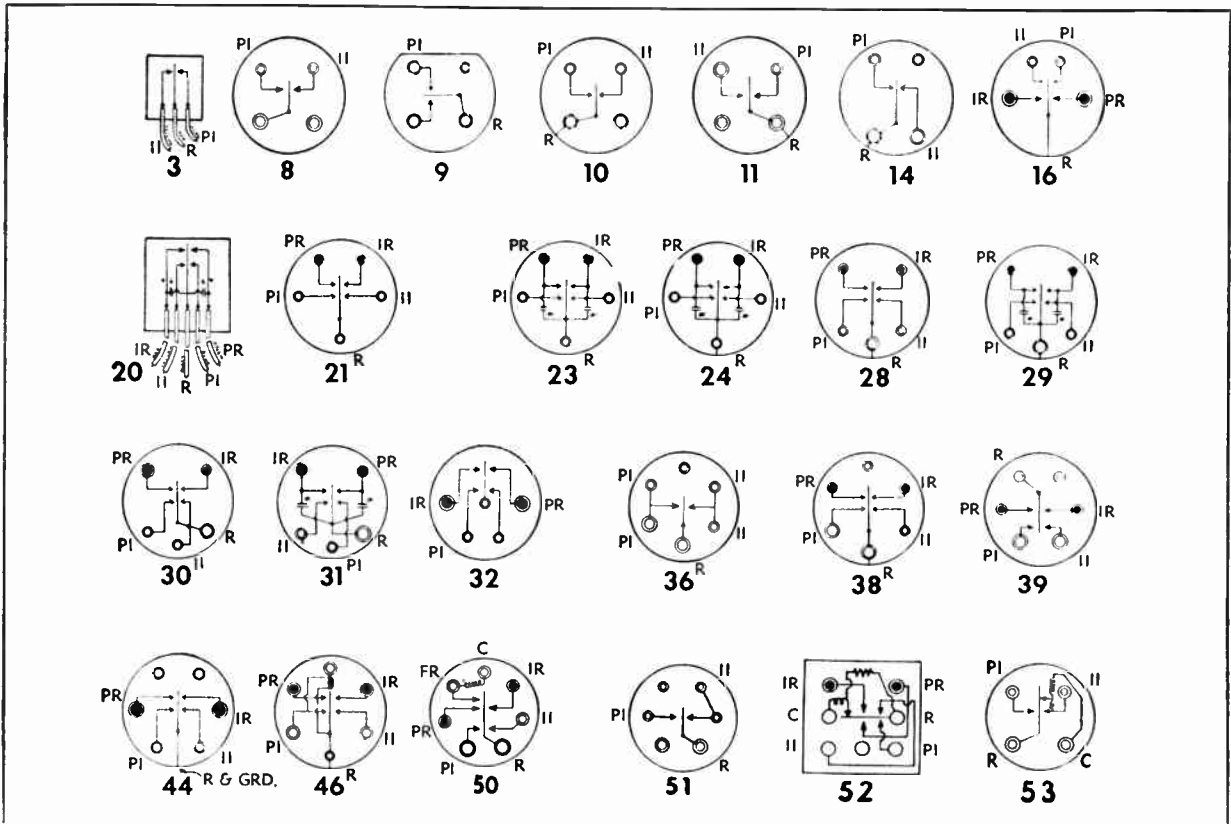
These Mallory Vibrators Meet 90% of Your Replacement Needs

● The 12 basic vibrator types listed at right cover 90% of your replacement needs. The entire line of Mallory Vibrators has been simplified so that replacements can be made easily and quickly. By effecting substitutions, Mallory is materially reducing the number of vibrators needed to meet your requirements.

This Mallory standardization program means that your distributor stocks fewer vibrator types and more units of each—thus delivery is tremendously speeded up.

The vibrator replacement problem is being simplified but Mallory quality remains the same. Mallory precision vibrators, backed by years of outstanding performance, still offer the dependability, the long life and the trouble-free service that you and your customers expect. It pays to insist on Mallory Approved Precision Products.

Type No.	Volt	Type	Base Dia.	Size
245	6	Syn.	21	1½ x 3¼
246	6	Syn.	38	1½ x 3¼
248	6	Syn.	44	1½ x 3¼
249	6	Syn.	32	1½ x 3¼
273C	6	Syn.	29	2 x 4½
294	6	Int.	8	1½ x 3¼
716	6	Syn.	30	1½ x 3½
852	6	Int.	14	1½ x 3¾
854	6	Int.	11	1½ x 3¼
859	6	Int.	8	1½ x 2¾
870	6	Int.	14	1½ x 3
1100	6	Int.	S	1½ x 2¾

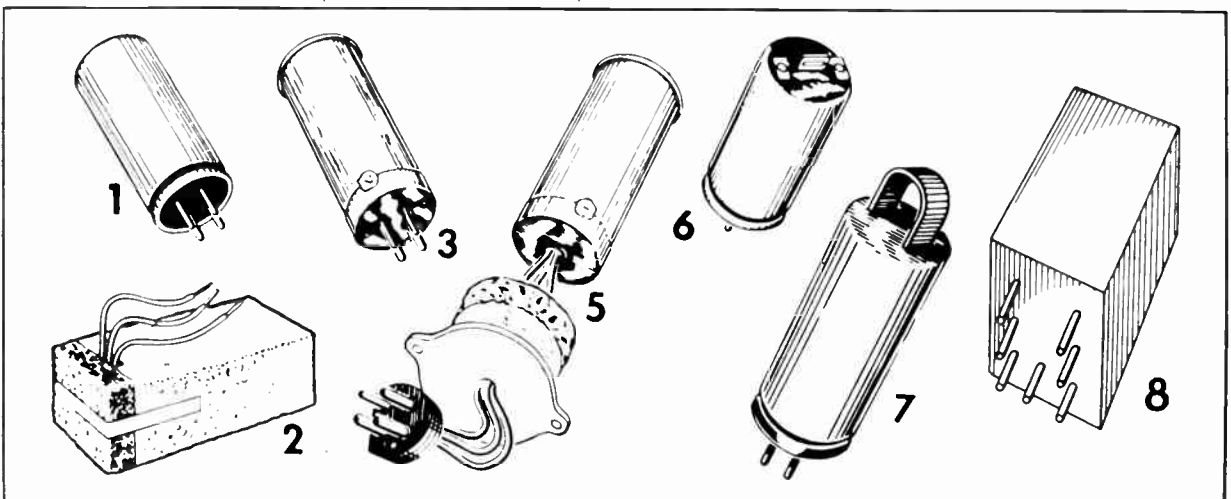


R = Reed
PI = Pull Interrupter

PR = Pull Rectifier
II = Inertia Interrupter

IR = Inertia Rectifier
C = Coil

FR = Frame



Mallory Page 4 (See Mallory Page 1 for List Prices)

MALLORY BATTERY CHARGERS

APPLICATIONS — Mallory Automotive Battery Chargers provide convenient, efficient and economical charging of any storage battery used in automobiles, buses, trucks, tractors, taxicabs, small boats, airplanes, and on the farm. Taper charging (an automatically decreasing charging rate) is designed into all Mallory chargers to prevent damage to battery plates and to insure maximum battery life. These chargers also are ideal for charging any 6 or 12-volt storage battery used in industrial applications, engineering and research laboratories, test equipment, and service benches, etc.

Although designed principally for storage battery charging, Mallory Automotive Battery Chargers may be used for numerous other applications. They provide an ideal power source for electroplating, model and toy trains, telegraph systems, relays and solenoids, vending machines, electric organs, generator fields, etc. In conjunction with an adequate filter they may be used as a power source for farm and portable radio filaments, telephone systems, loud speaker fields, exciter lamps, scientific apparatus, etc.

DESCRIPTION—The heart of these chargers is the Mallory Magnesium-Copper Sulfide all-metal rectifier. Unaffected by temperature and able to withstand phenomenal abuse, they provide stable output without adjustment over long life. With an exclusive self-healing feature, Mallory rectifiers have been time-tested and proved to be the most rugged dependable rectifier for battery-charging applications.

Mallory Automotive Battery Chargers are made in five models to cover the complete charging field from battery boosters

to fast chargers. All chargers are conservatively designed with circuit protection and meters where required, and large capacity battery clips for ready connection to battery posts. All models are designed for operation from 115-volt 60-cycle power lines and are equipped with ample lengths of both AC and DC cables.

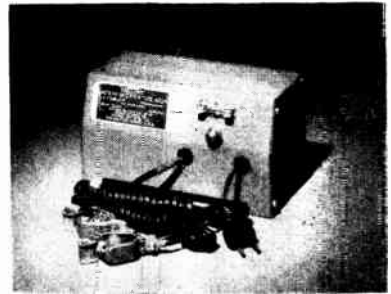
MOUNTING—All chargers are readily portable. They may be placed anywhere: in the car, on the garage floor, on a bench, etc. The small models are equipped with two holes for wall mounting where desirable.

ACCESSORIES—Although equipped with battery clips, a readily attachable polarized dashboard plug and receptacle (No. R-652) is available as an accessory for simple installation in an automobile. The addition of this receptacle makes possible simple plug-in connection of the charger to the car battery. Extra battery clips (No. R-653) are available. Automatic timer control (No. R-654) is offered for use with battery chargers to control the charge. It may also be used with many household appliances.

PACKAGING—One charger per cardboard shipping carton.

No. R-652—Polarized Dashboard Receptacle.

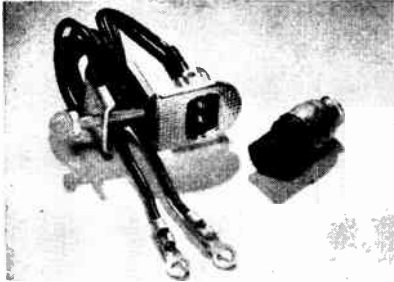
No. R-654—Automatic Timer Control for 6AC60 Charger. Variable time setting up to 57 minutes. Contacts rated 20 amperes, 115 volts AC or 10 amperes, 230 volts, (suitable for light DC loads). Also ideally suited to control lights, sunlamps, radios, fans, heating devices and numerous other electrical household appliances.



6-AC-4



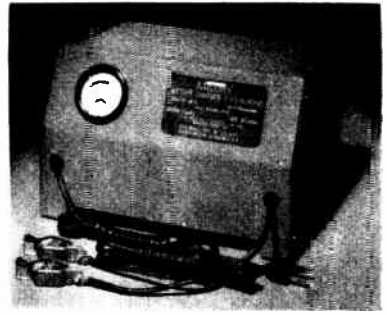
6-AC-6



R-652



R-654



6-AC-10 • 12-AC-5

Mallory Charger Catalog Number	Nominal Battery DC Volts	Maximum Charging Rate DC Amps.	Tapered Rate DC Amps.	Charging Indicator	Approx. Overall Dimensions in Inches			Length in Feet of		Approx. Shipping Weight in Pounds
					Height	Width	Depth	AC Cord	DC Cord	
6AC4†	6	4	2	No	4 ⁷ / ₁₆	7 ³ / ₈	3 ⁵ / ₁₆	6	6	4 ³ / ₈
6AC6†	6	6	4	Yes	6	8	4 ¹ / ₄	6	6	7
6AC10†	6	10	7	Yes	6 ³ / ₄	10 ¹ / ₈	5 ¹ / ₂	6	6	22 ¹ / ₄
12AC5†	12	5	3	Yes	6 ³ / ₄	10 ¹ / ₈	5 ¹ / ₂	6	6	20 ¹ / ₂
6AC60*	6	60	40	Yes	10 ³ / ₄	18	9 ³ / ₄	15	9	27

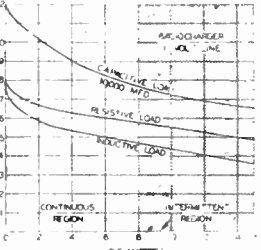
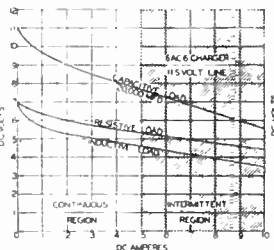
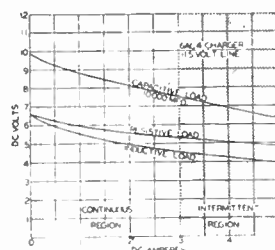
*Fan cooled with 6-position charge control switch and cable rack.

† No. R-652—Polarized dashboard receptacle and plug available for these models.

The graphs below show typical charger characteristics when operating into various types of loads.

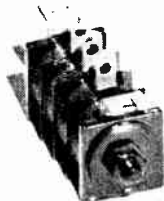


6-AC-60

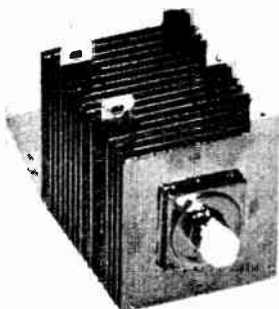


Mallory Page 5 (See Mallory Page 1 for List Prices)

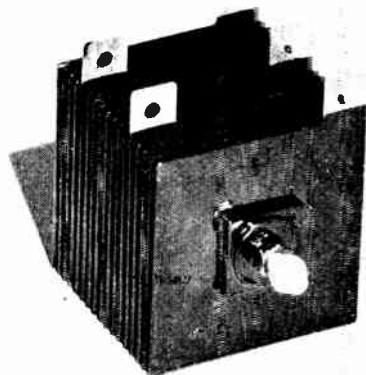
MALLORY RECTIFIERS



F24H1P



IS16CB7



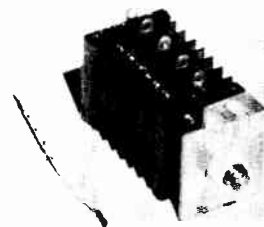
IS16B9



IB4R



IB8R



IB12C1J

APPLICATION—Mallory Magnesium-Copper Sulfide Rectifiers are time-tried and proved to be the most rugged, dependable rectifiers for those applications requiring low DC voltages at medium and high currents such as battery chargers and eliminators, electroplating, motion picture projector arcs, welding, engine starting, circuit breaker reclosing, solenoid and relays operation, etc.

DESCRIPTION — Mallory Magnesium-Copper Sulfide Rectifiers are all metal in construction, ruggedly assembled under high pressure to withstand severe vibrations and shock. There are no bulbs, liquids, moving parts or sparking contacts. Unlike all other types of rectifiers, they contain no temperature-sensitive films or layers, and have phenomenal ability to withstand abuse and extremes of temperature (-90° to $+265^{\circ}\text{F.}$). Constant output without circuit adjustments is assured over many years of useful life. Should an accidental voltage surge occur, the rectifying film will "self-heal."

SCOPE AND SIZES—Many sizes are available to supply low DC voltages from watts to kilowatts. A new rectifier engineering data folder is available upon request, covering other sizes for single phase and three phase applications, both convection and fan cooled. In addition to rectifier stacks, P. R. Mallory & Co., Inc. also manufacture a complete line of Rectoplatters (distributed exclusively by the UdyLite Corporation, 1651 East Grand Boulevard, Detroit 11, Michigan), Rectotruck Chargers (industrial electric truck chargers available through truck agents), Rectostarters (aircraft engine starters and electrical equipment testers) and Rectopower Sup-

plies for general laboratory use). Catalogs and additional information available upon request.

REPLACEMENT RECTIFIERS—The Mallory Magnesium-Copper Sulfide Rectifiers listed below are only those popular sizes regularly carried in stock, principally for replacement purposes. These same rectifiers, however, may be used for numerous other applications. For example, the IB4R and IB8R rectifiers are ideal for reversing the direction of HO and O gauge model train locomotives respectively, using wound field motors (as illustrated in the wiring diagram, page 7). IB12C1J, IS16CB7, and IS16B9 rectifiers may be readily used to assemble tapering battery chargers as illustrated in the wiring diagram, page 7. The IS24B9 rectifier may be used to make up a battery eliminator to operate and test modern automobile radio receivers as shown, page 7. Other applications immediately suggest themselves, such as electroplating, model and toy train DC power sources, radio filament supplies, chatter-free relay and solenoid operation, electric organ, automotive electrodynamic speaker field supplies, generator fields, telephone and telegraph system power supplies, etc.

MOUNTING—Rectifiers are available in either foot, bolt, or stud mounting, the latter two insulated from mounting means. Refer to note below table for type of mounting on replacement rectifiers.

HARDWARE—Wherever possible or practical, universal mounting hardware is included to assist in the ready replacement of old rectifier types.

PACKAGING—Rectifiers are packed one per display carton.

Mallory Page 6 (See Mallory Page 1 for List Prices)

MALLORY RECTIFIERS

CHART OF REPLACEMENT RECTIFIERS

New Catalog Number	Maximum AC Volts (Normal Line)		Approx. DC Volts			Max. DC† Amperes		Approximate Overall Dimensions in Inches			Replacement for Old Catalog Number	Replacement in Equipment
	No Load	Full Load	Inductive Load	Resistive Load	Capacitive-Battery Load	Continuous Duty	Intermittent Duty	Length	Width	Height		
Ultra-Compact Replacement Rectifiers for Battery Eliminators, etc.												
IB4R	3.6	3.2	1.5	1.7	2.5	1.5	5.0	1	3/16	3/8		G.T.C. Porta-Power Electro Battery Eliminator
IB8R	7.2	6.4	3.1	3.4	5.1	1.5	5.0	1 3/8	3/16	3/8		G.T.C. Porta-Power Electro Battery Eliminator
IB12R	10.8	9.7	4.8	5.2	7.8	1.3	5.0	1 3/4	3/16	3/8		All Power Supplies for Electric Fence
Replacement Rectifiers for Automotive Chargers and Eliminators, etc.												
IB12C1J	10.8	9.8	4.6	5.1	7.7	3.2	24	2 3/4	1 1/4	1 1/4	12C1, F12C1, IF12C1B, 12C1F, F12C1K, IB12C1, IB12C1M, X12, X112, U12	4-2 Amp. Boosters Mallory 3C, 6AC4
F16C3	14.4	13.0	6.1	6.8	10.2	3.9	24	3	1 3/4	2 1/2	16C3, F16CB3, 16CB3, 16C3B*, XB16*, M16*, X16, X116, ME16	5-3 Amp. Old Chargers Mallory 5535
IF16CB7M	14.4	13.0	6.0	6.7	10.1	6.3	24	3	2 1/2	3 3/16		6-3 Amp. Charger, Mallory 5535A
IS16CB7	14.4	13.0	6.0	6.7	10.1	6.3	24	3 3/4	2 1/2	3	IS16CB7M	6-3 Amp. Charger Mallory 5535B, 6AC6
IS16B7	14.4	12.8	5.8	6.5	9.8	8.3	24	5 1/2	2 1/2	3	IS16B7M	10-7 Amp. Charger, Mallory 107
IS16B9	14.4	12.7	5.7	6.4	9.7	11.6	24	5 1/2	3 1/2	4 1/4		10-7 Amp. Charger, Mallory 6AC10
F20C7	18.0	16.2	7.6	8.4	12.6	4.8	24	4 3/8	2 1/2	3 3/16	F20C7P	A.T.R. Battery Eliminators, etc.
F24C7	21.6	19.4	9.3	10.3	15.5	3.2	24	3 3/4	1 3/4	2 1/2	F24C3, F24C3P, F24C7P, FCX24D7, 201C1, R24LR, R24LS	Stancor Eliminators, Univerter, Pin Game Supplies, etc.
IS24B9	21.6	19.1	8.5	9.6	14.4	11.0	24	7 1/2	3 1/2	4 1/4		Stancor Battery Eliminators, etc.
IS28C7J	25.2	22.7	10.7	11.7	17.8	4.3	24	6	2 1/2	3	F28C7, F28C7P, 228C1, 267C1, R28LS	5-3 Amp. 12-volt Chargers, Mallory 125, 12AC5
Replacement Rectifiers for Pin Ball Machines, Power Supplies, etc.												
F16HIP	14.4	13.1	6.3	7.0	10.4	2.2	24	2 1/4	1 1/4	2	16A1, F16G1, F16G1P, F16H1, W16A1, 211C1, R16S	Electropak, Rectopak, Univerter, etc.
F20HIP	18.0	16.4	7.9	8.7	13.0	2.0	24	2 3/4	1 1/4	2	20A1, F20G1, F20G1P, F20H1, W20A1, 212C1, R20S, X20	Electropak, Rectopak, Univerter, etc.
F24HIP	21.6	19.7	9.6	10.4	15.7	1.9	24	3	1 1/4	2	F24G1, F24G1P, F24H1, W24A1, 203C1, R24S	Electropak, Rectopak, Univerter, etc.
F28HIPM	25.2	23.0	11.2	12.2	18.4	1.7	24	3 1/4	1 1/4	2	F28G1, F28G1P, F28H1, F28H1P, W28A1, F28H1MP, 210C1, R28S	Electropak, Rectopak, Univerter, etc.
F32HIPM	28.8	26.2	12.8	14.0	21.0	1.6	24	3 3/4	1 1/4	2	F32G1, F32G1P, F32H1, F32H1P	Electropak, Rectopak, Univerter, etc.

NOTE: All rectifiers are single phase, full wave, bridge type.

Mounting Prefix: IB=Insulated Bolt; B=Grounded Bolt; F Grounded Foot; IF=Insulated Foot; IS=Insulated Stud.

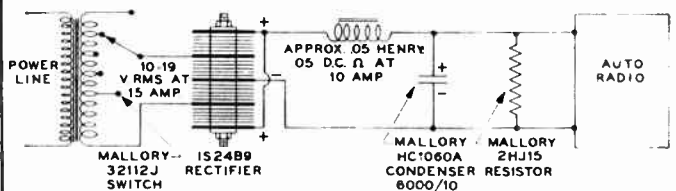
P suffix designates reverse polarity stacking. Center terminal is DC positive.

J suffix designates universal construction with loose mounting feet for foot, bolt or stud mounting replacement.

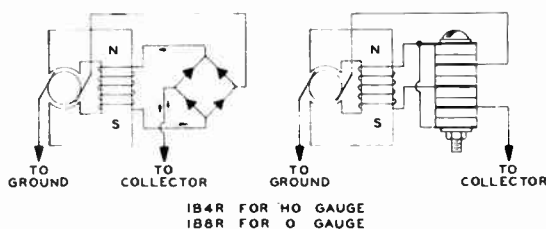
†To determine AC Amps: Multiply the DC amps by the following factors:
Inductive load by 1.1; resistive load by 1.2; capacitive load by 1.4.

*Use base from old rectifier.

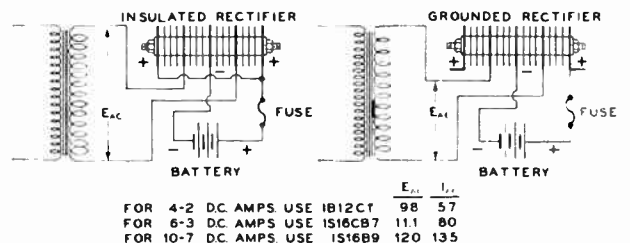
AUTOMOBILE RADIO POWER SUPPLY CIRCUIT



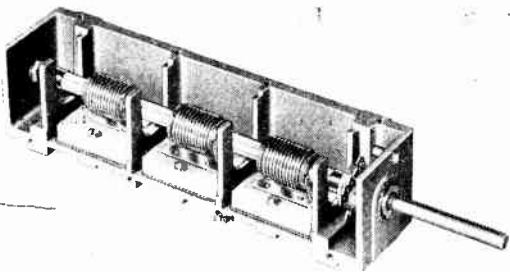
MODEL TRAIN LOCOMOTIVE REVERSING CIRCUITS



TYPICAL BATTERY CHARGING CIRCUITS



MALLORY SPECIAL COMPONENTS AND MISCELLANEOUS ITEMS



MALLORY Type 8301 INDUCTUNER*

● The Inductuner is a three-gang, infinitely variable inductance tuning device, designed to provide continuous frequency selection over a range of frequencies from approx. 50 to 240 megacycles, covering the 1 $\frac{1}{2}$, 2, and 6-meter bands, as well as all television and FM bands. Various tuning ranges can be selected by varying the circuit constants, as required. The ten-turn, or 3600° rotation, permits convenient selection of the frequency desired without the use of a bandspread by the use of a suitable bandpass circuit.

At the present time the Inductuner has acceptance as the tuning unit in television receivers that offer FM, police, aircraft and amateur reception, as well as the full 13 channels assigned for video transmission.

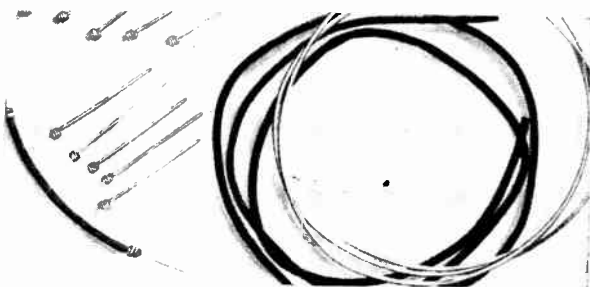
The complete assembly is substantially mounted in a die-cast frame, completely shielded. Size 7 $\frac{3}{16}$ " long x 1 $\frac{9}{16}$ " x 1 $\frac{13}{16}$ ".

A technical information bulletin is available on request, containing complete details, electrical characteristics, and suggested circuits.

Inductuner—Registered trade mark for Mallory variable inductance tuning devices. Manufactured and sold under one or more of the following Paul Ware and Mallory patents: 2,163644, 2,163645, 2,163646, 2,163647, 2,260877, 2,377789, 2,377790, 2,399060, 2,405890. Other patents applied for.

TYPE VC-101 VIDEOCOUPLER

● The Mallory VC-101 Videocoupler is a compact inter-stage coupling unit for use in the wide-band amplifiers commonly found in television, radar and oscilloscope equipment. It consists of peaking inductances and a load resistance which provide an essentially flat frequency response to 4 mc. per second. It is designed to work into a terminating capacity of 22.5 mmfd. When used with a 6AC7 tube in a proper circuit, a stage gain of approximately 25 may be realized. Mounting space required: 1 $\frac{3}{4}$ " long x $\frac{3}{4}$ " in diameter; max. dissipation 2 watts; finish, high-temperature enamel. Use a No. 6 bolt through the core for mounting.



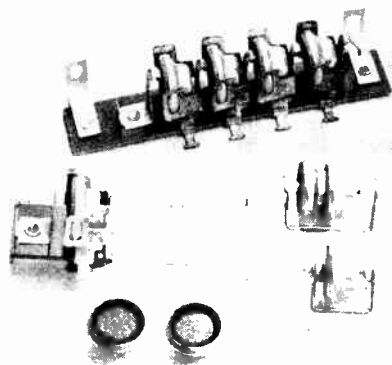
(TYPE YO) YARD-OHM RESISTANCE KITS

● Each Yard-Ohm Resistance Kit consists of all necessary materials to construct flexible resistors of a wide range of values. The Yard-Ohm Kit provides a real solution to the odd-value resistor problem. In addition to replacement applications, resistors made from the Yard-Ohm Kit are ideal for meter shunts, and for use wherever a high quality flexible resistor is desired.

Each Mallory Yard-Ohm Kit consists of the following: 1 yard spiral wound resistance wire; 1 yard insulated braid; 24 spiral wire leads. The kit is available in eight resistance values.

Dissipation—all types: $\frac{1}{2}$ watt per inch.

Catalog Number	Resistance Value (Ohms per Inch)	Carrying Capacity in Amperes	Catalog Number	Resistance Value (Ohms per Inch)	Carrying Capacity in Amperes
YO-1	1	.707	YO-50	50	.100
YO-5	5	.315	YO-100	100	.071
YO-10	10	.223	YO-250	250	.044
YO-25	25	.141	YO-500	500	.031



GRID BIAS CELLS

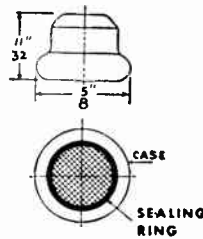
● The Mallory Grid Bias Cell is a small acorn-shaped, self-contained device. The metal container or cup is the negative electrode. The black disc is the positive electrode. Available in two types—1-volt and 1 $\frac{1}{4}$ -volt cells. For new installations, the choice of Bias Cell types will depend on the voltage desired. Replacements should be made with the type of Bias Cell used as original equipment.

The 1 $\frac{1}{4}$ -volt Bias Cells may be distinguished from the 1-volt unit by the concave depression in the bottom of the shell case.

Application

The principal use of Mallory Grid Bias Cells is in the biasing of the first audio amplifier tube in modern high-gain receivers. Diagram of a typical circuit is shown at right. The bias cell does not need to be bypassed to ground.

Correspondence is invited regarding the application of Mallory Grid Bias Cells. Special Technical Bulletin No. GBC746 may be obtained on request.



Characteristics

The no-current potential of Mallory Grid Bias Cells is within plus or minus 10% of their rated voltage.

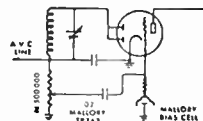
Current—The cell is strictly a potential or voltage cell for biasing class "A" amplifier tubes and should not be used for biasing power tubes or oscillators; or for any circuit where direct current may flow through, or be drawn from, the cell.

Temperature—The cells may be used at temperatures from 0°F to 140 F. The voltage of the cell remains reasonably constant throughout this wide temperature range. It is recommended, however, that wherever possible the bias cell be placed in the coolest location.

Humidity—The cell exhibits no change in characteristics when exposed to a relative humidity of 90% at 120°F.

Impedance—Mallory Grid Bias Cells are non-reactive at audio frequencies. For the 1-volt cell, the DC resistance ranges between 11,000 and 50,000 ohms. The DC resistance of the 1 $\frac{1}{4}$ -volt cell ranges between 10,000 and 40,000 ohms.

Noise—The cells do not cause noise.



Cat. No.	Description
BC-1	1-volt Grid Bias Cell (packed 10 to box)
BC-2	1 $\frac{1}{4}$ -volt Grid Bias Cell (packed 10 to box)
GB11A	Cell Holder, 1-cell capacity
GB11B	Cell Holder, 1-cell capacity
GB12	Cell Holder, 2-cell capacity
GB13	Cell Holder, 3-cell capacity
GB14	Cell Holder, 4-cell capacity
GB15	Cell Clip, 1-cell capacity
GB16	Cell Clip, 2-cell capacity

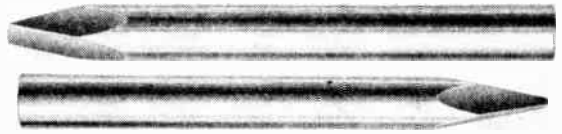
Mallory Page 8 (See Mallory Page 1 for List Prices)

MALLORY SPECIAL COMPONENTS AND MISCELLANEOUS ITEMS



KNOBBS • ROUND AND BAR TYPES

Cat. No.	Description
365-1	2 1/4" Bar Type Knob, Black
365-R-1	2 1/4" Bar Type Knob, Red
366-1	1 1/4" Bar Type Knob, Black
366-R-1	1 1/4" Bar Type Knob, Red
367-1	1 1/2" Dia. Round Knob, Black
368-1	1 1/2" Dia. Round Knob, Black



SOLDERING IRON TIPS

No. 311 Replacement tip for soldering irons that are turned on for short periods only. Heats quicker than No. 312, but is not as long wearing. Made of a special Mallory copper alloy long in use as a welding tip material. Nickel plated to resist corrosion. Size—3/8" diameter, 4" length. Plunger style with "screw driver" point.

No. 312—Replacement tip for soldering irons that are used continuously for long periods of time. Made of a special Mallory copper alloy of great hardness and high electrical conductivity. Nickel plated to resist corrosion. Size—3/8" diameter, 4" length. Plunger style, with "screw driver" point.

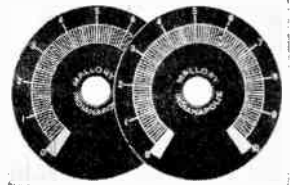


MOUNTING NUTS • HEXAGON TYPE

Cat. No.	Description	Thread	Dimension
232	Flat Hex Mounting Nut	3/8-32	1/2 x 3/32
255	Hex Mounting Nut	3/8-32	1/2 x 7/64 x 7/64 shoulder nut
A-11260-2	Hex Mounting Nut	3/8-32	1/2 x 7/64 x 1 1/2 shoulder nut
A-11260-12	Hex Mounting Nut	3/8-32	1/2 x 7/64 x 7/32 shoulder nut

DIAL PLATES

For Mallory Circuit Selector, Tap and All-Wave Switches. (Plates to match rotation of Mallory Adjustable Resistors.)



Neat-appearing Dial plates with easy-to-read aluminum figures clearly etched on solid black background. Dimensions are 1 13/16" in diameter with 7/16" hole, with figures 7/64" high. .020" aluminum stock.



WASHERS • INSULATING AND METAL

Catalog No.	Description and Dimensions
203	Extruded Washer—Fiber—3/4" O.D. x 3/8" I.D. x 1/16"; Extruded 1/2" x 1/32"
212	For Set See No. 212 Flat Washer.
225	Flat Washer—3/4" O.D. x 3/8" I.D. x 1/32"; Bakelite
226	Metal Washer—Nickel Finish—3/8" O.D. x 3/8" I.D. .040 Brass
227	Metal Washer—Nickel Finish—5/8" O.D. x 7/16" I.D. .040 Brass
227	Lock Washer—Cadmium Plated Steel—1 1/16" O.D. x 2 5/64 I.D.

For all types 3100J, 3200J Switches with 1 1/16" base. 20 degree spacing between numerals.	For all Switch types 1200L, 1300L and 1 1/4" base 3100J, 3200J. 30 degree spacing between numerals.	Marking
Cat. No.	Cat. No.	
453	372	1 to 2
454	373	1 to 3
455	374	1 to 4
456	375	1 to 5
457	376	1 to 6
458	377	1 to 7
459	378	1 to 8
460	379	1 to 9
461	380	1 to 10
462	381	1 to 11
463	382	1 to 12
464		1 to 13
465		1 to 14
466		1 to 15
467		1 to 16
468		1 to 17
472		1 to 18
473	383	Off 1 to 2
474	384	Off 1 to 3
475	385	Off 1 to 4
476	386	Off 1 to 5
477	387	Off 1 to 6
478	388	Off 1 to 7
479	389	Off 1 to 8
480	390	Off 1 to 9
481		Off 1 to 10
482		Off 1 to 11
483		Off 1 to 12
484		Off 1 to 13
485		Off 1 to 14
486		Off 1 to 15
		Off 1 to 16
	*394 Special	1 to 24
	†487 Special	1 to 5
	‡488 Special	1 to 4

*15° Spacing Between Numerals
 †60° Spacing Between Numerals
 ‡90° Spacing Between Numerals

MALLORY

RADIO SERVICE ENCYCLOPEDIA

Page after page of replacement information for all pre-war and post-war receivers.

Mallory Page 9 (See Mallory Page 1 for List Prices)

(See Page M-11 for Mallory List Prices)

Thank You!

When writing for additional
information or when ordering
from sources of supply listed
in this book, please mention

RADIO'S MASTER

ATR • VIBRATORS • ATR

AMERICAN TELEVISION & RADIO CO.

ATR AUTO RADIO VIBRATORS



ATR Manufactures a Complete Line of Auto Radio Replacement Vibrators

Ask your ATR Distributor for your Free Copy of the Latest ATR Vibrator Guide

ATR VIBRATORS

feature Ceramic Stack Spacers, and are proven units of the highest quality, engineered to perfection. They are backed by more than 17 years of vibrator design and research, development and manufacturing — ATR Pioneered in the Vibrator Field.

ATR VIBRATOR EQUIVALENT CHART

ATR	TYPE	SIZE	ATR LIST PRICE	E-L	MALLORY	RADIART
324	Int.	1 1/2" x 3 1/8"	\$4.10	1703	294	5300
328	Int.	1 1/2" x 3 1/8"	4.10	2090	854	5331
335	Int.	1 1/2" x 3 1/8"	4.10	2088	852	5303
340	Int.	1 1/2" x 2 7/8"	4.10	2605	859	5301
508	Syn.	1 13/16" x 4 1/2"	7.65	2682	273C	5425
520	Syn.	1 1/2" x 3 1/8"	6.90	2688	245	5409
522	Syn.	1 1/2" x 3 1/8"	6.90	2089	246	5411
524	Syn.	1 1/2" x 3 1/8"	6.90	2107	248	5400
525	Syn.	1 1/2" x 3 1/8"	6.90	2687	249	5406
547	Syn.	1 13/16" x 3 1/2"	6.90	2092	716	5426

THESE 10 POPULAR ATR VIBRATORS MEET 90% OF YOUR SERVICE NEEDS

ATR • ELIMINATORS • ATR

AMERICAN TELEVISION & RADIO CO.



Illustrates Heavy Duty "A" Battery Eliminator, Type 620C-ELIP. Equipped with Voltmeter, Ammeter and Voltage Control.

- Fully Automatic and Fool-Proof.
- Eliminates Storage Batteries and Battery Chargers.
- Operates the Equipment at Maximum Efficiency at all Times.
- Delivers Filtered Direct Current at the Correct Voltage for Proper Operation.

SUGGESTED USES:

As a power supply for radio sets, aircraft instruments, relays, motors and other electrical and electronic equipments. In the laboratory, for supplying various low D. C. voltages.

Battery Eliminators may be treated as batteries in the sense that they can be connected in series for higher voltages at the same current output per unit or in parallel for the same output voltage per unit at higher currents.

Equipped with Full-Wave Dry Disc Type Rectifier, Assuring Noiseless, Interference-Free Operation and Extreme Long Life and Reliability.

TYPE 610 ELIB—Rated output 6 volts at 10 amperes. Size 6½" x 9¾" x 8½"; shipping weight, 22 lbs. Code word, "SELIB".

Net Price \$29.70

TYPE 620C ELIP—Uses dual rectifiers. Size 6½" x 12¾" x 8½". Shipping weight, 33 lbs. Code word, "HELIN".

Rated Output: 6 volts at 18 amperes or 12 volts at 9 amperes. Either output obtainable by means of simple output terminal switching arrangement.

Net Price \$45.90

All ATR Eliminators have as standard equipment: On-Off Switch, Voltage Control, Meters, Fuse Protection, Rubber Mounting Feet, 6-Ft. All-Rubber Cord Set, and Cabinet of heavy gauge metal having attractive grey-wrinkled finish.

ATR "A" BATTERY ELIMINATORS

Specially Designed for Testing and Operating Auto Radios and D. C. Electrical Apparatus on Regular A. C. Lines, 105-125 Volts 50-60 Cycles.



Illustrating Standard "A" Battery Eliminator, Type 610 ELIB. Equipped with Voltmeter and Voltage Control.

ATR • INVERTERS • ATR

AMERICAN TELEVISION & RADIO CO.

ATR STANDARD AND
HEAVY DUTY

RADIO INVERTERS

Specially Designed for Operating A.C. Radios, Public Address Systems, Television Sets, Amplifiers, Intercall Systems, and Radio Test Equipment from D. C. Voltages in Vehicles, Ships, Trains, Planes, and in D. C. Districts.



Illustrates all Standard ATR Radio Inverters except types 6 and 12 RSB.

This group of ATR Inverters is specially recommended for use with A. C. radios, amplifiers, and similar electronic equipment, being exceptionally well filtered to insure interference-free radio reception. With ATR Inverters, the need for special equipment is eliminated. They are designed for quiet, long-life radio operation. All models indicated are equipped with an ATR ten-contact plug-in Inverter Vibrator of new design and construction having dual arms and utilizing eight 1/4" diameter tungsten power contacts and two silver alloy driver contacts, insuring increased long life and reliable service. These Inverters also come equipped with four point voltage regulators, which make possible the correct output voltage for minimum to maximum loads and also help compensate for input voltages which are lower or higher than normal; the operating efficiency is in excess of 85%.

Type	Input D.C. Volts	A.C. Output 60 Cycles	Output Wattage		Code Word	List Price
			Inter- mittent	Con- tinuous		
6 RSC	6	110 volts	85	75	ARSCP	\$44.00
12 RSC	12	110	125	100	BRSCF	44.00
24 RSC	24	110	125	100	NRSCQ	48.50
32 RSC	32	110	150	100	CRSCF	45.50
32B-RHC	32	110	200	150	DRHCG	69.50
50 RSC	50	110	150	100	ERSCF	57.00
110 RSC	110	110	250	150	GRSCJ	45.50
110A-RHC	110	110	325	225	FRHCK	65.00
110B-RHC	110	110	500	350	IRHCL	75.00
110C-RSC	110	110/220	250	150	JRSCM	57.00
220 RSC	220	110	250	150	LRSCQ	48.50
220A-RSC	220	110/220	250	150	MRSCP	57.00

Radio frequency interference completely suppressed.

Any of the above type Inverters are available with 220 volt A.C. output at prices 25% higher. In ordering, specify "S" after the type number and substitute for the last letter in the code word "T"; that is, if a 110 volt D. C. Inverter having a 220 volt A. C. output is desired, this would be ordered as Type 110S covered by code word, "GRSCT".

ATR Standard and Heavy Duty Radio Inverters are housed in attractively finished grey-wrinkled metal cabinets.

Dimensions of Standard Model Radio Inverters, 8 3/8" x 9" x 5 1/4"; Shipping weight, 10 lbs.

Dimensions of Heavy Duty Model Radio Inverters, 6 1/2" x 11 1/8" x 8 1/2"; Shipping weight, 30 lbs.

For correct replacement vibrator, consult Inverter Vibrator Guide.



Illustrates Types 6 and 12 RSB
Standard Radio and Industrial
Inverters only.

ATR • INVERTERS • ATR

AMERICAN TELEVISION & RADIO CO.



Illustrating all Types LID Inverters except Types 6 and 12.

ATR Low Power INVERTERS

For Operating Small A. C. Motors, Electric Razors, Radios, and Devices of Approximately 35 watts Consumption from 6, 12, 24, 32, 110, and 220 volt D. C. Lines.

This line of ATR Low Power Inverters was specially brought out to meet the insistent demand for a good, low power, inexpensive portable inverter for operating phonograph and other A. C. motors and a host of small A. C. devices from D. C. voltage sources. These inverters operate at an efficiency in excess of 90% and are designed for operation of loads having a power factor as low as 60%. They are ruggedly built and powered by a special ATR six-contact plug-in Inverter Vibrator utilizing four 1/4" diameter tungsten power contacts and two silver alloy driver contacts.

Type	Input D. C. volts	A.C. Output 60 cycles	Wattage		Code Word	List Price
			Intermittent	Continuous		
6 LID	6	110 volts	40	35	ALIDM	\$29.50
12 LID	12	110	50	35	BLIDN	29.50
24 LID	24	110	50	35	FLIDR	32.50
32 LID	32	110	50	35	CLIDB	32.50
110 LID	110	110	75	50	DLIDP	29.50
220 LID	220	110	75	50	ELIDQ	32.50

Radio frequency interference suppressed.
 Any of the above type Low Power Inverters are available with 220 volt A. C. output at prices 25% higher. In ordering, specify "S" after the type number and substitute for the last letter in the code word "T"; that is, if a 110 volt D. C. Low Power Inverter having a 220 volt A. C. output is desired, this would be ordered as Type 110S covered by code word, "DLIDT". Dimensions, 5 3/4" x 4" x 6 3/4"; shipping weight, 7 lbs.
 Replacement Vibrators for any of the above Low Power Inverters are available. Be sure to mention the type number as well as model number when ordering. Consult Inverter Vibrator Guide.

ATR STANDARD AND HEAVY DUTY INDUSTRIAL INVERTERS

For Operating A. C. Motors, Electronic Apparatus, Electrical Testing Equipment, and A. C. Electrical Appliances from D. C. Lines.

These units are specially designed for applications as indicated, permitting the use of standard A. C. equipment on D. C. lines. These inverters operate at an efficiency in excess of 80% and are carefully built and equipped to give the longest possible life and operating satisfaction. All inverters indicated utilize ATR ten contact plug-in vibrators, and are also equipped with four point voltage regulators as fully described above. These Industrial Inverters are recommended for use with loads having power factors as low as 60%, and as low as 50% for the "P" Inverters indicated. These Inverters should not be used with Neon signs.



Illustrating Heavy Duty Models Radio and Industrial Inverters except types 6 and 12. Types 6 and 12 Industrial Inverters are illustrated by small cut on page M-23.

Type	Input D.C. volts	A.C. Output 60 cycles	Output Wattage		Code Word	List Price
			Intermittent	Continuous		
6 ISP	6	110 volts	85	75	AISPD	\$44.00
12 ISP	12	110	125	100	BISPE	44.00
24 ISP	24	110	125	100	LISPX	48.50
32 ISP	32	110	150	100	CISPE	45.50
32P*-ISP	32	110	150	125	DISPE	57.00
32B-IHP	32	110	200	180	EHSPH	69.50
110 ISP	110	110	250	150	FISPH	45.50
110P*-ISP	110	110	250	150	GISPH	57.00
110A-IHP	110	110	325	225	HHHPJ	65.00
110B-IHP	110	110	500	350	IHHPK	75.00
220 ISP	220	110	250	150	JISPL	48.50
220P*-ISP	220	110	300	150	KISPM	57.00

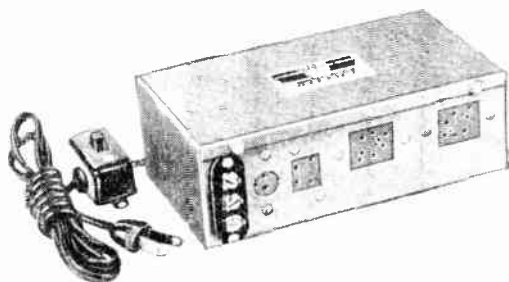
Radio frequency interference not suppressed.
 Any of the above type Inverters are available with 220 volt A. C. output at slightly higher prices. In ordering, follow similar directions given above.
 ATR Standard and Heavy Duty Industrial Inverters are housed in attractively finished grey-wrinkled metal cabinets.
 Dimensions of Standard Model Industrial Inverters, 8 3/4" x 9" x 5 1/4".
 Shipping weight, 19 lbs.
 Dimensions of Heavy Duty Industrial Inverters, 6 1/2" x 11 1/8" x 8 1/2"; shipping weight, 30 lbs.
 For correct replacement vibrator, consult Inverter Vibrator Guide.
 "P" Inverters are corrected for loads having power factors as low as 50%.
 Built-in filter, \$10.00 additional.

ELECTRIFY with ELECTRO

Now battery radio reception can be enjoyed at its best without the usual grief and expense incurred when using batteries. Radio can be used for unlimited periods without fading. Costs but a few cents per hundred hours of operation.

FOUR TYPICAL MODELS are shown on this and

the following page. These are ruggedly constituted units of unusually long life—easy to install—no liquids to spill—no moving parts to get out of order and wear out—operate in any position. Completely filtered, hum free and silent in operation. Universal plugs and sockets are provided to accommodate any radio. All units durably finished in blue hammerloid.



MODEL "S" COMPACT
With Selenium Rectifier

Operates Any 1.4 Volt — 4, 5 or 6 Tube Battery Radio from 115 Volt, 60 Cycle Source

Designed for sets using 1A7, 1E1, 1N5G, 1Q5G, tubes to convert battery radio to an efficient AC receiver with low operating cost. Fits in battery compartment of most radios. Ideal for use in home, hotel, camp or any place where normal AC is available.

Technical Data

"A" Supply Output

5-6 tubes (average) 1.4 V. @ 320 ma.
4 tubes 1.4 V. @ 250 ma.
4 tubes 1.4 V. @ 200 ma.

"B" Supply Output

50 Volts DC @ 12 ma. max.

Primary

115 Volts AC @ 60 cycles.

Specifications

Six foot cord and plug — switch in cord.

Size: 2 3/8" x 3 1/2" x 6 3/4".

Weight packed: 5 1/2 pounds.

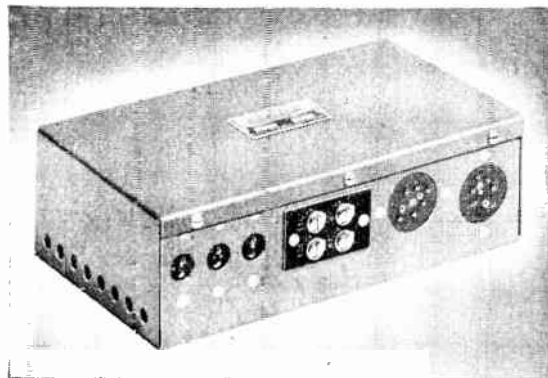
On and Off switch for permanent mounting — becomes part of the radio.

LIST PRICE \$16.75

MODEL "P" COMPACT

Same as MODEL "S" except has tube rectifier. Also available for 220 Volt operation.

LIST PRICE \$15.00



MODEL "F" COMPACT

Operates Any 2 Volt — 4, 5, 6 or 7 Tube Battery Radio from 115 Volt, 60 Cycle Source

For receivers using 1A4, 1C7, 1D5, 1E5, 1F5, 1F7, 1H1G, etc. tubes to change radio into an all-electric set. Inexpensive to operate.

Technical Data

"A" Supply Output

7 tubes 2 V. @ 480 Ma. — 500 ma. max.
6 tubes 2 V. @ 420 ma.
4-5 tubes (average) 2 V. @ 325 ma.

"B" Supply Output

67, 90, 1.2, 135 Volts DC @ 18 ma.

Primary

115 Volts AC @ 60 Cycles. Also available for 220 Volt Operation.

Specifications

Six foot cord and plug, switch in cord.

Size: 2 5/8" x 4 1/2" x 8 1/4".

Weight packed: 5 1/2 pounds.

LIST PRICE \$17.95

MODEL "R" SYNCRO POWER

Same as Model "F" but operates from 6 Volt DC source. Supplied with cord and battery clips. On and Off switch in eliminator turns power on.

LIST PRICE \$18.95

ELECTRO PRODUCTS LABORATORIES

ELECTRO

ELECTRICAL AND RADIO EQUIPMENT

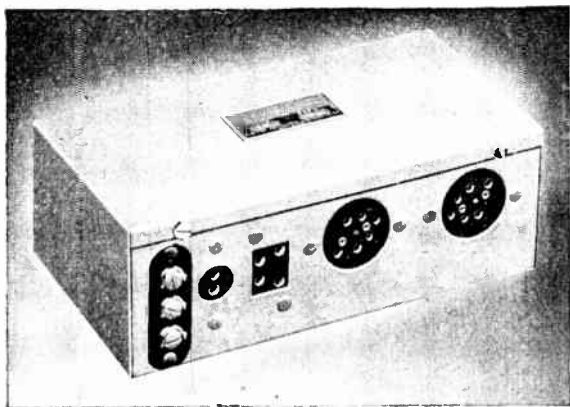
BATTERY ELIMINATORS *of Distinction*

ELECTRIFY with ELECTRO

Now battery radio reception can be enjoyed at its best without the usual grief and expense incurred when using batteries. Radio can be used for unlimited periods without fading. Costs but a few cents per hundred hours of operation.

FOUR TYPICAL MODELS are shown on this and

the preceding page. These are ruggedly constituted units of unusually long life—easy to install—no liquids to spill—no moving parts to get out of order and wear out—operate in any position. Completely filtered, hum free and silent in operation. Universal plugs and sockets are provided to accommodate any radio. All units durably finished in blue hammerloid.



MODEL "Q" SYNCRO POWER

Operates Any 1.4 Volt — 4, 5, or 6 Tube Battery Radio from 6 Volt DC Source

This Eliminator is to be used where 115 Volt AC lines are not available. Will provide all "A" and "B" voltages more efficiently and at lower cost from 6 Volt battery. Will operate a 4-tube radio three weeks at 3 hours a day on a single storage battery (100 A.H.) charge.

Technical Data

"A" Supply Output

5-6 tubes (average)	1.4 V. at 320 ma.
4 tubes	1.4 V. at 250 ma.
4 tubes	1.4 V. at 200 ma.

"B" Supply Output

90 Volts DC at 12 ma. max.

Primary

6 Volts DC at 0.8 Amp. (for 4-tube radio).

Specifications

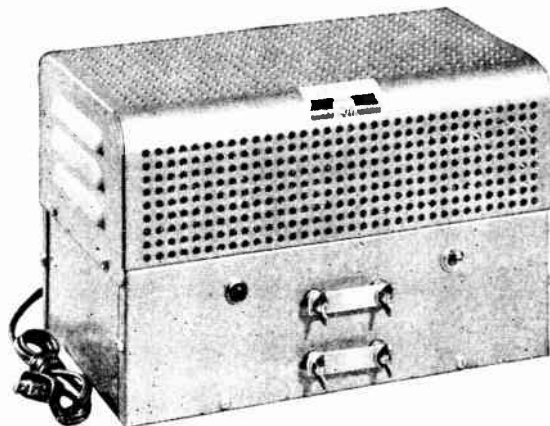
Cord and battery clips on primary.

On and Off switch in Eliminator turns power on.

Size: 2 $\frac{3}{8}$ " x 3 $\frac{1}{2}$ " x 6 $\frac{3}{4}$ ".

Weight packed: 3 $\frac{1}{2}$ pounds.

LIST PRICE \$16.50



MODEL "A" POWER SUPPLY

Operates latest type auto radios with solenoid tuning and tone controls — also 12 Volt marine and aircraft radios from 115 Volt, 60 Cycle Source. In parallel supplies 6 Volts at 15 Amps. In series 12 Volts at 7 $\frac{1}{2}$ Amps.

Separately, 6 Volts at 7 $\frac{1}{2}$ Amps.

Designed especially to do away with the bother of old-fashioned storage batteries. Ideal for the radio service man. Two separately filtered DC output sources are provided for convenience. Heavy duty transformer and chokes; and two large capacity condensers provide excellent voltage regulation.

Technical Data

Output

6 Volts — 15 Amps. continuous.
6 Volts — 25 Amps. max. instantaneous.
12 Volts — 7 $\frac{1}{2}$ Amps. continuous.
6 Volts — 7 $\frac{1}{2}$ Amps. two sections continuous.

Primary

Taps on transformers for 105, 115, 125 Volts, 60 cycle AC. Each completely filtered section is separately fused for heavy overloads.

Specifications

Six foot rubber cord and plug.

Size: 7 $\frac{3}{4}$ " x 7 $\frac{3}{4}$ " x 11 $\frac{3}{4}$ ".

Weight packed: 31 pounds.

Electrostatic shield with R.F. line filter.

Large capacity bridge type rectifiers.

Two 2,000 M.F.D. condensers.

Terminals on front of panel with wing nuts.

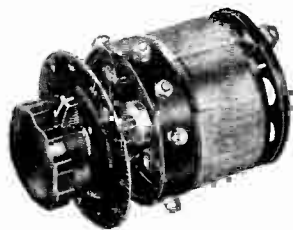
LIST PRICE \$65.00

ELECTRO PRODUCTS LABORATORIES

POWERSTAT VARIABLE TRANSFORMERS

A POWERSTAT variable transformer is an auto-transformer of toroidal core design with a movable brush-tap which rotates to deliver a continuously adjustable output

voltage from a-c power lines. Incorporated into each POWERSTAT are superior qualities of top electrical performance, rugged mechanical construction, compact design, and durability.



TYPE 20

Input: 115 volts, 60 cycles, single phase.
Output: 0-135 volts, 3.0 amperes, 405 va.

THE 1/2 KVA SERIES — TYPE 20

Ideally suited for applications requiring small, compact variable transformer of relatively low electrical capacity . . . rated at 3.0 amperes . . . fits space 3 1/2" x 3 3/4". Five terminals permit clockwise or counter-clockwise rotation . . . increases voltage up to or above line voltage. Can be ganged for wye or open-delta operation to meet 3-phase requirements. Back-of-panel mounting.

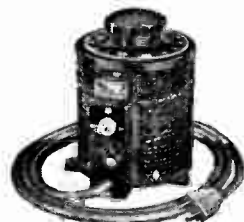


TYPE 116U

Input: 115 volts, 50/60 cycles, single phase.
Output: 0-115/135 volts, 7.5 amperes.

THE 1 KVA SERIES — TYPES 116-216

Both units alike in physical appearance . . . type 116 for 115 volt application . . . type 216-230 volt operation. Bench or wall-mounted. Units have protective screening, output receptacle, "on-off" switch, input cord-plug, and output lead fused . . . standard units furnish output 17.5 percent above line. Back-of-panel mounting available . . . without above accessories. Clockwise or counter-clockwise rotation . . . can be mounted in tandem for two and three phase operation. Motor drives available.



TYPE 116

Input: 115 volts, 50/60 cycles, single phase.
Output: 0-135 volts, 7.5 amperes, 1 KVA.



THE 2 KVA SERIES — TYPES 1126-1226

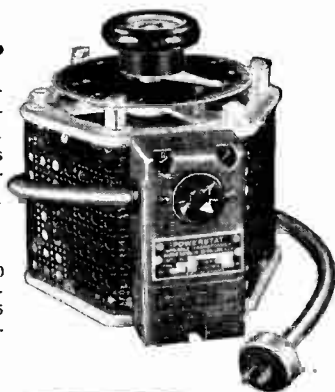
Available in a number of models for single or poly-phase duty. Different types feature . . . exposed terminals . . . fuse protection . . . output receptacle . . . input cord-plug. All units with exposed terminal studs can be obtained with motor-operators. Type 1126 for 115 volts . . . type 1226 for 230 volt operation.

TYPE 1226

Input: 230/115 volts, 50/60 cycles, single phase.
Output: 0-270 volts, 9.0 amperes, 2.4 KVA.

TYPE 2PF1126

Input: 115 volts, 50/60 cycles, single phase.
Output: 0-135 volts, 15 amperes, 2.0 KVA.

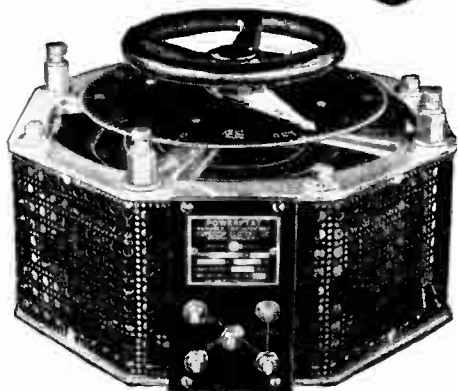


THE 5 KVA SERIES — TYPES 1156-1256

High power units . . . type 1156 (115 volts) controls any load up to 25 amperes . . . type 1256 (230 volts) has a current rating of 28 amperes. Six parallel, ganged, type 1156 on a common shaft will deliver a variable voltage to load requirements up to 270 amperes . . . six parallel, ganged, type 1256 offers a variable output of 0-270 volts at 168 amperes. Motor drive available.

TYPE 1256

Input: 230/115 volts, 50 60 cycles, single phase.
Output: 0-270 volts, 28 amperes, 7.5 KVA.

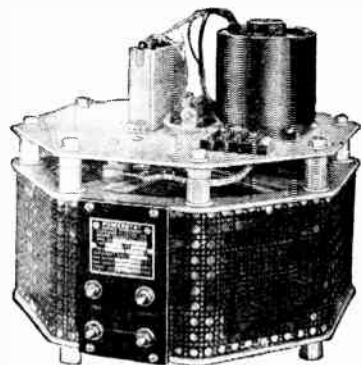


THE **SUPERIOR ELECTRIC CO.**, 12 MEADOW STREET BRISTOL, CONN.
POWERSTAT VARIABLE TRANSFORMERS • STABILINE VOLTAGE REGULATORS • VOLTBOX A-C POWER SUPPLY



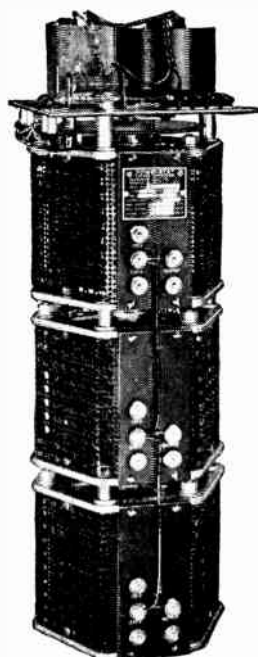
MOTOR-DRIVEN POWERSTATS

Many applications require that POWERSTATS be controlled from remote push-button stations or by automatic controllers. For these requirements, a standard line of motor-driven POWERSTAT variable transformers is available in the same capacities as manually operated units. To offer the same control as obtained with handwheel adjustment, a special three-wire synchronous motor is used to drive the POWERSTAT. It consists of two windings with externally mounted capacitor and resistor. By employing the appropriate gearing combinations, various speeds can be obtained to suit each need.



TYPE MX1156

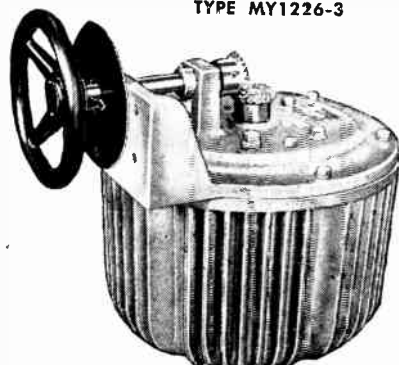
Standard speeds . . . 5, 6, 14, 19 and 45 seconds . . . for time of full range travel from zero to maximum output voltages. Motor assembly operates from a 115 volt single phase source . . . maximum current — 0.4 amps. Rotor shaft ball-bearing mounted . . . rapid starting . . . and practically instantaneous stopping.



TYPE MY1226-3

OIL-COOLED POWERSTATS

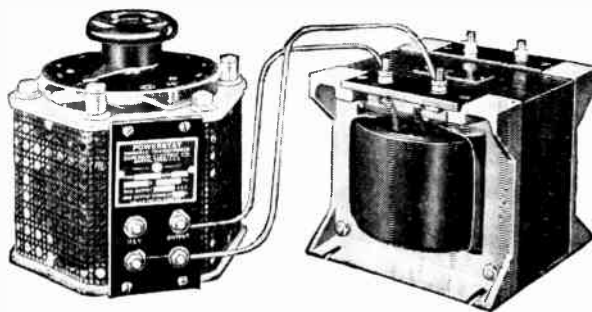
Space limitations and the atmosphere in which a POWERSTAT is to operate sometimes dictates the use of an oil-cooled unit. The capacity of POWERSTATS can be increased above normal air-operation when mounted in transformer oil . . . amount of increase depends on type of POWERSTAT . . . area of wetted surface . . . type of container. Most POWERSTATS can be adapted to oil mounting but since applications vary extensively only single phase O-116, O-216, O-1126 and O-1226 types are available as standard. Type O-1126 illustrated is typical unit. Refer all inquiries on use of oil-cooled POWERSTATS to the factory.



TYPE O-1126

POWERSTAT LINE CORRECTORS

Where the wide output voltage range of a POWERSTAT variable transformer is not necessary, but relatively large amounts of power must be controlled, a POWERSTAT Line Corrector is recommended. POWERSTAT type LC consists of a POWERSTAT, appropriately tapped, controlling the primary of a step-down fixed-ratio transformer. By rotating the brush element, different voltages are applied enabling the secondary, which is in series with one side of the line, to buck or boost the line voltage. Can be used for line voltage correction to obtain nominal output voltage from varying power lines . . . or on constant voltage line or furnish variable output voltage over a limited range at large current capacities.



TYPE 2106 LC

THE SUPERIOR ELECTRIC CO., 12 MEADOW STREET BRISTOL, CONN.
 POWERSTAT VARIABLE TRANSFORMERS • STABILINE VOLTAGE REGULATORS • VOLTBOX A-C POWER SUPPLY



VOLTBOX A-C POWER SUPPLIES

VOLTBOX a-c power supplies are instruments which have many applications in the physical and chemical laboratory as the compact portable source of variable a-c voltage.

The new VOLTBOXES offer features of lightness, pleasing appearance and flexibility . . . contained in a cast-aluminum case are a POWERSTAT variable transformer; an easily read voltmeter accurate to two (2) percent; three (3) output receptacles, and a set of Superior Binding Posts; an "ON-OFF" switch and "LINE-LOAD" switch; renewable fuse; and six (6) foot cord-plug.

The new VOLTBOXES are type UC1M (115 volts) and type UC2M (230 volts) . . . both are alike in appearance. Operation is simple . . . input cord-plug is connected to 50/60 cycle single phase source . . . "ON-OFF" switch in "ON" position . . . "LINE-LOAD" switch at "LOAD" . . . rotation of knob produces a continuously adjustable output voltage from 0 to 17 percent above line voltage . . . line voltage is read by moving "LINE-LOAD" switch to "LINE" . . . renewable fuse offers overload protection.

For users who already have a POWERSTAT variable transformer type 116 or 216 in their possession, but require features of new VOLTBOX, the VOLTBASE is available . . . easily installed. VOLTBASE ratings are dependent on POWERSTAT used.

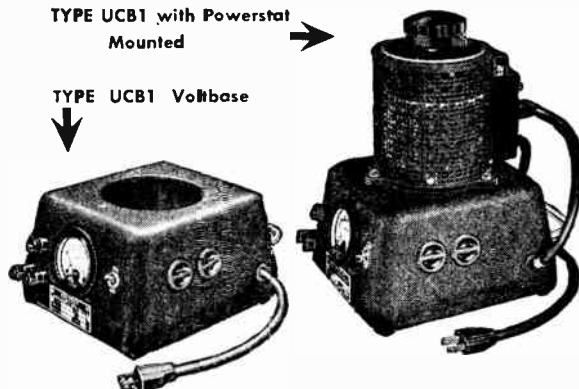


TYPE UC1M

Input: 115 volts, 50/60 cycle, single phase.
Output: 0-135 volts, 7.5 amperes, 1060 va.

TYPE UC2M with Powerstat Mounted

TYPE UC1M Voltbase

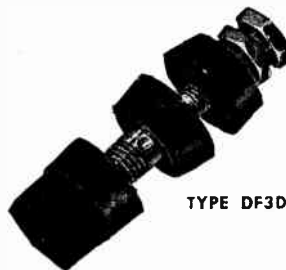


SUPERIOR 5-WAY BINDING POST

Offering complete insulation . . . current capacity of 30 amperes . . . working voltage of 1000 volts; the new Superior Binding Post type DF30 meets the need for a multi-purpose electrical connector.

Featuring FIVE connections:

1. Permanent clamping of wire up to #12 through the center hole.
2. Looping of wire around the center shaft and clamping.
3. Plug-in standard 3/4" banana plug.
4. Clip-lead by removing the hexagonal shaped phenolic head.
5. Spade lug connection.



TYPE DF30 Binding Post

Binding Post type DF30 is the ideal connector to use on all electrical instruments . . . installation is simple . . . a dead front provides instrument and user protection . . . a standard 1/2 inch socket wrench can be employed to tighten the extra strong phenolic head . . . and the five different methods of connection satisfy any requirement.

THE SUPERIOR ELECTRIC CO., 12 MEADOW STREET BRISTOL, CONN.
POWERSTAT VARIABLE TRANSFORMERS • STABILINE VOLTAGE REGULATORS • VOLTBOX A-C POWER SUPPLY



STABILINE VOLTAGE REGULATORS

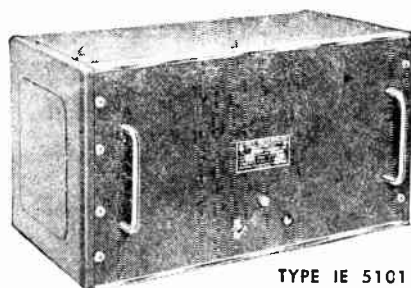
STABILINE automatic voltage regulators deliver a constant output voltage regardless of variations in input voltage or load current. Two distinct types of STABILINE automatic voltage regulators are available . . . STABILINE Instantaneous Electronic regulator has no moving parts, and is completely electronic in operation . . . STABILINE Electromechanical regulator consists of an electronic detector circuit controlling a motor-driven POWERSTAT variable transformer. These basic differences in operation make it possible for STABILINE voltage regulators to meet the requirements of any problem in voltage regulation. Since the Electromechanical regulator has moving parts, its speed of correction of line voltage fluctuations cannot compare to the instantaneous correction offered by type IE. Another important difference is the design feature of extremely close control offered by the IE unit. The type EM has zero waveform distortion while the type IE produces a very small amount of waveform distortion. It is readily seen that the application will dictate what STABILINE unit is to be used . . . but either can solve all voltage regulation problems.

For further information write The Superior Electric Company

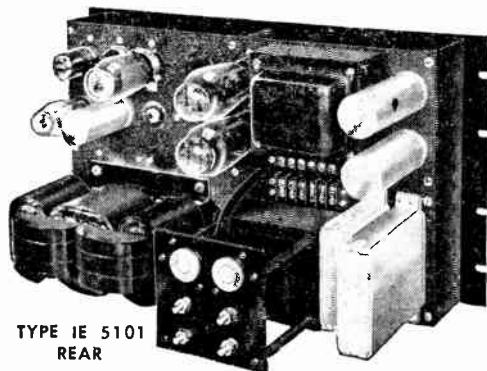
ENGINEERING SERVICE...

The Superior Electric Company is prepared to assist you in your special requirements. A qualified staff of voltage control engineers can offer the solution to your voltage problems. Request a copy of Bulletin 547 for complete engineering data on all of The Superior Electric Company's voltage control equipment.

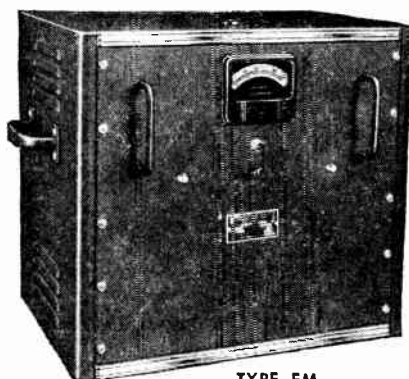
Write, The Superior Electric Company, 12 Meadow Street, Bristol, Connecticut.



TYPE IE 5101



TYPE IE 5101
REAR



TYPE EM



BULLETIN 547

THE SUPERIOR ELECTRIC CO., 12 MEADOW STREET BRISTOL, CONN.
POWERSTAT VARIABLE TRANSFORMERS • STABILINE VOLTAGE REGULATORS • VOLTBOX A-C POWER SUPPLY



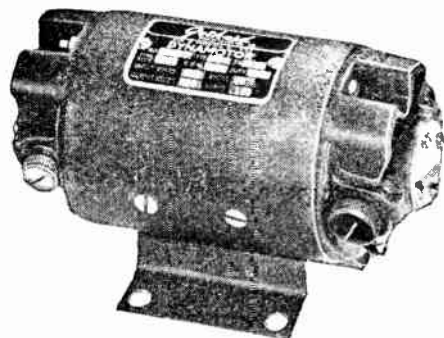
DYNAMOTORS *Gothard* CONVERTERS

GOTHARD DYNAMOTORS

The GOTHARD Model "GP-26" is especially designed and built for Mobile Transmitter applications, intermittent duty. Length 7 1/4", Diam. 3 1/2", Height 4". Weight 8 3/4 lbs.

INPUT		OUTPUT		Approx. Effice.	App. Reg.	List Price
Volts	Amps.	Volts	MA Watts			
5.6	24	100	200	60%	17%	\$73.50
5.6	26	600	150	61%	18%	75.50
5.6	29	400	250	61%	19%	75.50
5.6	31	620	170	61%	20%	75.50
5.6	33	500	225	61%	21%	75.50
5.6	34	420	280	62%	22%	75.50
6.0	40	400	375	63%	23%	78.00

Also supplied for 12, 14, 24, 28, or 32 Volt input. For continuous duty applications, Models GP-12, GP-17 and GP-26 cover wattage ratings from 20 to 80 Watts. Input voltages 6, 12, 24, or 32. GP-12: Length 5 3/4", Diam. 3 1/2", Height 4", Weight 5 1/4 lbs. GP-17: Length 6 1/4", Diam. 3 1/2", Height 4", Weight 6 lbs. GP Models have steel mounting bases; width 4 1/2".



MODEL "GP-26" DYNAMOTOR

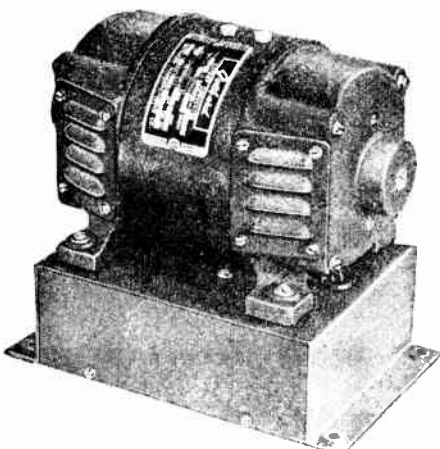


MODEL "SF-20" DYNAMOTOR

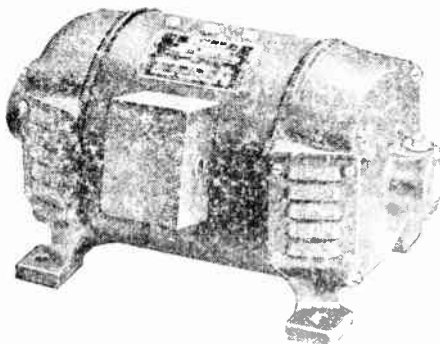
GOTHARD AIRCRAFT DYNAMOTORS

Frame Size	INPUT		OUTPUT		List Price	Length	Diam.	Weight
	Volt	Amps.	Volts	MA				
DS-12	12	2.6	250	60	\$61.00	4 1/2"	2 1/2"	2 7/8"
DS-17	12	3.6	250	90	68.00	5 1/4"	2 3/4"	3 7/8"
SP-12	12	4.0	250	100	76.00	6 1/2"	3 1/2"	4 3/4"
SP-17	12	5.2	300	125	83.00	6 1/2"	3 1/2"	5 3/8"
SP-22	12	6.4	400	125	87.00	7 1/2"	3 1/2"	6 1/2"
SF-20	12	8.4	400	150	99.00	6 1/2"	4"	8 1/2"
SF-25	12	10.	300	150	117.00	7 1/4"	4"	9 3/4"

Above ratings are continuous-duty with temperature of 40°C. Also supplied for 6, 14, 24, 28, or 32 Volt input. "SP" and "SF" dynamotors may be supplied in fan-ventilated construction as types "SPT" and "SFT". Prices upon request.



MODEL "AK-15" CONVERTER (With Filter)



MODEL "BK-35" CONVERTER (Less Filter)

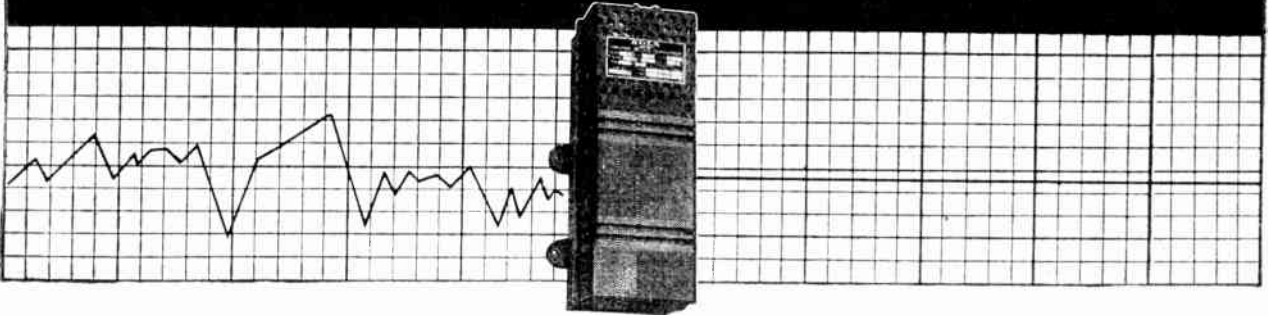
GOTHARD ROTARY CONVERTERS

TYPE "K" 3600 RPM (60 Cycle) • 3000 RPM (50 Cycle)

Type No.	Frame Size	INPUT		OUTPUT at 90% P.E.			App. Net Wt. Conv. Add for Filter	List Price - Loss	Price - With Filter
		Volts	Amps.	A.C. Volts	VA at 60 cy.	VA at 50 cy.			
6K11	AK-15	6	36	110	110	90	24#	6#	\$70.00 \$89.00
12K11	AK-15	12	18	110	110	90	24#	6#	70.00 89.00
12K16	AK-25	12	24	110	160	125	29#	6#	79.00 97.00
24K11	AK-15	24	9	110	110	90	24#	6#	70.00 89.00
24K20	AK-25	24	11	110	200	160	29#	6#	86.00 112.00
24K30	BK-22	24	19.4	110	300	250	38#	6#	107.00 134.00
24K50	BK-35	24	39.1	110	500	400	45#	6#	131.00 159.00
3K11	AK-15	32	6.2	110	110	90	24#	6#	64.00 83.00
3K20	AK-25	32	10.4	110	200	160	29#	6#	80.00 106.00
3K30	BK-22	32	14.5	110	300	250	38#	6#	101.00 128.00
3K50	BK-35	32	22.0	110	500	400	45#	6#	125.00 153.00
2K75	CK-35	32	34	110	750	600	68#	7#	183.00 228.00
4K11	AK-15	48	4.4	110	110	90	24#	6#	70.00 89.00
4K20	AK-25	48	7.0	110	200	160	29#	6#	81.00 100.00
4K30	BK-22	48	9.7	110	300	250	38#	6#	110.00 137.00
4K50	BK-35	48	15.2	110	500	400	45#	6#	134.00 162.00
4K75	CK-35	48	22.7	110	750	600	68#	7#	192.00 237.00
1K11	AK-15	115	1.8	110	110	90	24#	6#	64.00 83.00
1K20	AK-25	115	3.0	110	200	160	29#	6#	80.00 106.00
1K30	BK-22	115	4.2	110	300	250	38#	6#	101.00 128.00
1K50	BK-35	115	6.6	110	500	400	45#	6#	125.00 153.00
1K75	CK-35	115	9.1	110	750	600	68#	7#	183.00 228.00
1K100	CK-45	115	12.1	110	1000	800	80#	7#	224.00 283.00
2K11	AK-15	230	3.9	110	110	90	24#	6#	67.00 86.00
2K20	AK-25	230	6.5	110	200	160	29#	6#	83.00 109.00
2K30	BK-22	230	9.1	110	300	250	38#	6#	104.00 131.00
2K50	BK-35	230	13.3	110	500	400	45#	6#	128.00 156.00
2K75	CK-35	230	17.1	110	750	600	68#	7#	186.00 231.00
2K100	CK-45	230	22.2	110	1000	800	80#	7#	227.00 286.00

Also supplied with Marine Type Filter, 220 Volt A.C. Output, at 1000 cycles per second frequency control. Prices upon request.

Constant Voltage Transformers



FLUCTUATING LINE VOLTAGE

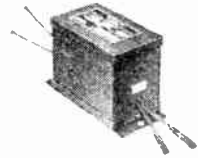
SOLA
CONSTANT
VOLTAGE
TRANSFORMER
TYPE 3



Constant Voltage Transformers are designed to provide a constant output voltage which is unaffected by changes in input voltage. Stabilization is instantaneous and automatic and there are no moving parts. Constant Voltage Transformers also provide isolation between input and output circuits. Low output voltage wave distortion and small size make these transformers especially attractive for use with all types of electronic equipment.

CONSTANT OUTPUT VOLTAGE

SOLA
CONSTANT
VOLTAGE
TRANSFORMER
TYPE 1

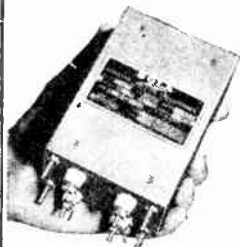


SOLA
CONSTANT
VOLTAGE
TRANSFORMER
TYPE 21



FOR CHASSIS MOUNTING

Output capacities up to 15 VA, with output at either 6.3 volts or 115 volts. Both types are immersion proof and capable of tropical service. Type 12 furnished with separate condenser. Prices include condenser.



TYPE 11



TYPE 12

SOLA
CONSTANT
VOLTAGE
TRANSFORMER
TYPE 22



SOLA
CONSTANT
VOLTAGE
TRANSFORMER
TYPE 2



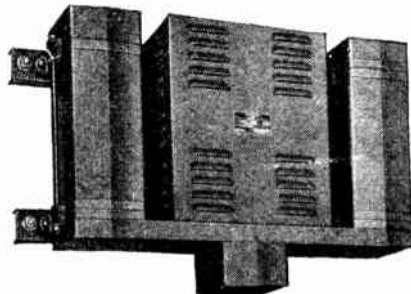
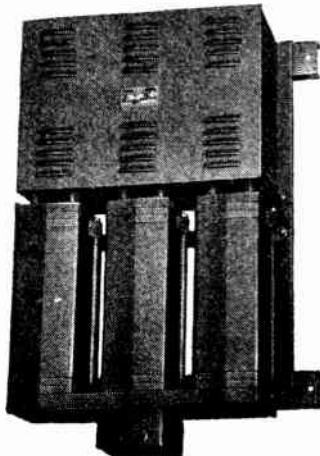
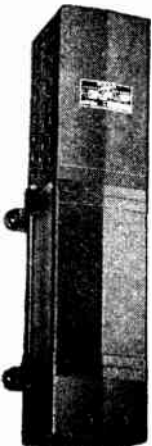
FOR COMPLETE CATALOG INFORMATION SEE OPPOSITE PAGE →

For complete operational data write for Bulletin 13CV-102

SOLA
CONSTANT
VOLTAGE
TRANSFORMER

← TYPE 4

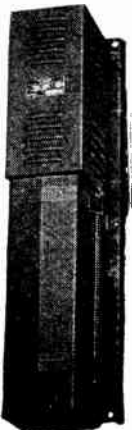
TYPE 6 →



SOLA CONSTANT VOLTAGE
TRANSFORMERS

↑ TYPE 5

TYPE 41 →



SOLA Constant Voltage Transformers

ELECTRICAL AND MECHANICAL SPECIFICATIONS

60 CYCLE

Catalog Number	Output Capacity in VA	Input Volts	Output Volts	Dimensions in Inches					Approx. Shipping Weight	List Price Each
				A	B	C	E	F		
TYPE 1										
30488	15	95-125	6.0	5 $\frac{11}{16}$	2 $\frac{5}{8}$	3 $\frac{7}{16}$	5 $\frac{1}{16}$	....	6	\$ 15.00
30492	15	95-125	6.3	5 $\frac{11}{16}$	2 $\frac{5}{8}$	3 $\frac{7}{16}$	5 $\frac{1}{16}$	....	6	15.00
30498	15	95-125	115.0	5 $\frac{11}{16}$	2 $\frac{5}{8}$	3 $\frac{7}{16}$	5 $\frac{1}{16}$	....	6	15.00
TYPE 2										
30804	30	95-125	115.0	8 $\frac{7}{16}$	4 $\frac{3}{16}$	4 $\frac{3}{8}$	7 $\frac{13}{16}$	2 $\frac{3}{8}$	12	17.00
30805	60	95-125	115.0	8 $\frac{13}{16}$	4 $\frac{3}{16}$	4 $\frac{3}{8}$	8 $\frac{1}{16}$	2 $\frac{3}{8}$	13	24.00
30806	120	95-125	115.0	9 $\frac{11}{16}$	4 $\frac{3}{16}$	4 $\frac{3}{8}$	8 $\frac{15}{16}$	2 $\frac{3}{8}$	17	32.00
TYPE 3										
30807	250	95-125	115.0	11 $\frac{5}{8}$	6 $\frac{15}{16}$	5 $\frac{5}{8}$	3 $\frac{1}{4}$	6 $\frac{1}{8}$	30	52.00
30M807	250	190-250	115.0	11 $\frac{5}{8}$	6 $\frac{15}{16}$	5 $\frac{5}{8}$	3 $\frac{1}{4}$	6 $\frac{1}{8}$	30	52.00
30808	500	95-125	115.0	14 $\frac{1}{2}$	6 $\frac{13}{16}$	5 $\frac{5}{8}$	5	6 $\frac{1}{8}$	40	75.00
30M808	500	190-250	115.0	14 $\frac{1}{2}$	6 $\frac{13}{16}$	5 $\frac{5}{8}$	5	6 $\frac{1}{8}$	40	75.00
TYPE 4										
30809	1000	95-125	115.0	19 $\frac{1}{8}$	9 $\frac{1}{2}$	7 $\frac{7}{8}$	6 $\frac{3}{4}$	8 $\frac{1}{2}$	115	125.00
30M809	1000	190-250	115.0	19 $\frac{1}{8}$	9 $\frac{1}{2}$	7 $\frac{7}{8}$	6 $\frac{3}{4}$	8 $\frac{1}{2}$	115	125.00
30811	2000	95-125	115.0	31 $\frac{1}{8}$	9 $\frac{1}{2}$	7 $\frac{7}{8}$	12 $\frac{1}{4}$	8 $\frac{1}{2}$	205	225.00
30M811	2000	190-250	115.0	31 $\frac{1}{8}$	9 $\frac{1}{2}$	7 $\frac{7}{8}$	12 $\frac{1}{4}$	8 $\frac{1}{2}$	205	225.00
TYPE 5										
30M814	4000	95/190-125/250	115.0	21 $\frac{5}{8}$	42 $\frac{3}{4}$	9 $\frac{7}{16}$	12 $\frac{1}{4}$	40 $\frac{1}{4}$	520	380.00
30M815	5000	95/190-125/250	115.0	24 $\frac{1}{8}$	42 $\frac{3}{4}$	9 $\frac{7}{16}$	14 $\frac{3}{4}$	40 $\frac{1}{4}$	570	475.00
30M816	5000	95/190-125/250	230.0	24 $\frac{1}{8}$	42 $\frac{3}{4}$	9 $\frac{7}{16}$	14 $\frac{3}{4}$	40 $\frac{1}{4}$	570	475.00
TYPE 6										
30M817	10,000	190/380-250/500	115.0	48	35 $\frac{1}{4}$	9 $\frac{5}{8}$	38 $\frac{7}{8}$	33 $\frac{1}{4}$	1025	930.00
30M818	10,000	190/380-250/500	230.0	48	35 $\frac{1}{4}$	9 $\frac{5}{8}$	38 $\frac{7}{8}$	33 $\frac{1}{4}$	1025	930.00
TYPE 11										
30785	17	95-125	6.3	5 $\frac{13}{16}$	3 $\frac{21}{32}$	2 $\frac{19}{32}$	3	2	5 $\frac{1}{2}$	20.00
30955	17	95-125	115.0	5 $\frac{13}{16}$	3 $\frac{21}{32}$	2 $\frac{19}{32}$	3	2	5 $\frac{1}{2}$	20.00
TYPE 12										
301002	15	95-125	6.3	5 $\frac{5}{16}$	3 $\frac{1}{2}$	2 $\frac{1}{4}$	3	1 $\frac{1}{2}$	2 $\frac{1}{2}$	18.50
301003	15	95-125	115.0	5 $\frac{5}{16}$	3 $\frac{1}{2}$	2 $\frac{1}{4}$	3	1 $\frac{1}{2}$	2 $\frac{1}{2}$	18.50
TYPE 21										
30801	25	95-125	6.0	8 $\frac{7}{16}$	4 $\frac{3}{16}$	4 $\frac{3}{8}$	7 $\frac{1}{16}$	2 $\frac{3}{8}$	12	16.00
30881	25	95-125	6.3	8 $\frac{7}{16}$	4 $\frac{3}{16}$	4 $\frac{3}{8}$	7 $\frac{1}{16}$	2 $\frac{3}{8}$	12	16.00
30802	50	95-125	6.0	8 $\frac{13}{16}$	4 $\frac{3}{16}$	4 $\frac{3}{8}$	8 $\frac{1}{16}$	2 $\frac{3}{8}$	13	22.00
30882	50	95-125	6.3	8 $\frac{13}{16}$	4 $\frac{3}{16}$	4 $\frac{3}{8}$	8 $\frac{1}{16}$	2 $\frac{3}{8}$	13	22.00
TYPE 22										
30885	60	95-125	115.0	10 $\frac{5}{16}$	4 $\frac{3}{16}$	4 $\frac{3}{8}$	9 $\frac{9}{16}$	2 $\frac{3}{8}$	13	24.00
30886	120	95-125	115.0	11 $\frac{3}{16}$	4 $\frac{3}{16}$	4 $\frac{3}{8}$	10 $\frac{7}{16}$	2 $\frac{3}{8}$	19	32.00
TYPE 41										
30M813	3000	95/190-125/250	115.0	44 $\frac{11}{16}$	10	9 $\frac{3}{8}$	42 $\frac{5}{8}$	8 $\frac{1}{2}$	325	300.00

DIMENSIONS— A: OVERALL LENGTH
B: OVERALL WIDTH

C: OVERALL HEIGHT
E&F: MOUNTING DIMENSIONS

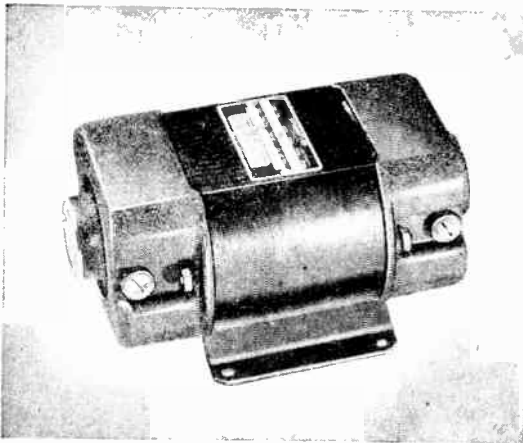
PRICES SUBJECT TO CHANGE
WITHOUT NOTICE

SOLA ELECTRIC COMPANY • 4633 WEST 16th STREET, CHICAGO 50, ILLINOIS

CARTER—the oldest name

in Rotary Power Supplies for mobile radio

THE ORIGINAL CARTER GENEMOTOR FOR THREE WAY POLICE — TAXICAB RADIO AND SMALL AIRCRAFT COMMUNICATIONS



OUTSTANDING FEATURES

- SMALL SIZE—**
Simplicity of design permits minimum mounting space.
- INSTANT POWER—**
Full output in less than 3 10 second, the fastest starting Dynamotor made.
- ARMATURE—**
Finest design, triple insulated winding, transformer grade laminations, static and dynamically balanced.
- FILTER—**
Complete filter and starting relay available.

The Original Genemotor is the recognized standard power supply of leading mobile communications manufacturers. Designed for Police, taxicab, marine and aircraft communications. Available in three frame sizes for receiver and transmitter requirements. In service over 14 years in many Police radio networks.

The 1 1/2" and 2" frame Genemotors are equipped with oil-less bronze bearings with sufficient lubrication for the life of the Genemotor. The 3" frame transmitter models are ball-bearing equipped and are the fastest starting Dynamotors made. Full 600 volt output in less than 3 10 second.

Complete filter and heavy duty starting relay available. Average output regulation 25%, efficiency 60%, ripple 1% unfiltered.

GENEMOTOR

1 1/2" frame, 5 1/16" long x 4 1/8" wide x 3 1/2" high, weight 7 lbs.

Code No.	DC Input Volts	DC Input Amps	DC Output Volts	DC Output MA	Duty	List Price
251A	6	7.9	250	100	Con.	\$47.00
351A	6	10.9	350	100	Con.	49.00

2" frame, 6 1/8" long x 4 1/8" wide x 3 1/2" high, weight 8 lbs.

355A	6	16.4	350	150	Con.	\$52.00
415A	6	18.2	400	150	Con.	54.00

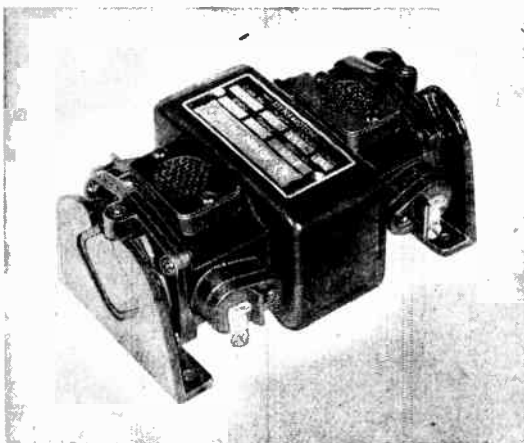
GENEMOTOR

3" frame, 7 1/8" long x 4 1/8" wide x 3 1/2" high, weight 10 lbs.

420A	6	23.4	400	200	Con.	\$57.50
420V	5.5	25	400	200	Con.	60.00
450AS	6	28	400	250	Int.	58.00
520AS	6	28	500	200	Int.	59.00
520VS	5.5	31	500	200	Int.	61.50
620AS	6	32	600	200	Int.	64.50
620VS	5.5	34	600	200	Int.	67.00
650AS	6	39	600	250	Int.	67.80

The above models can be furnished with filter and starting relay. 1 1/2" and 2" frame models add \$24.00 to list price for filter and "X" to code number. 3" model, add \$25.00 to price for filter and "X" to code number. Starting relay for all models, add "R" to code number and \$12.00 to list. 12, 24, 28, 32, 64, DC input voltage available on all above models, add \$2.50 to list. 115 volt DC input add \$3.50 to list.

THE ORIGINAL CARTER MAGMOTOR FOR TAXICAB AND POLICE RADIO RECEIVERS — SMALL AIRCRAFT TRANSMITTERS — GEOPHYSICAL EQUIPMENT



OUTSTANDING FEATURES

- PERMANENT MAGNET FIELDS**
Eliminates field coils and increases efficiency.
- SMALL SIZE**
Original compact design.
- FLEXIBILITY—**
Also available as an AC or DC Generator.

The Carter Magmotor is the ideal Power Supply for Police and taxicab radio receivers. The Permanent Magnet field increases efficiency and contributes to the small, compact design. The intermittent duty models are designed for small, low power aircraft, taxicab transmitters, and geophysical equipment. Ball bearing equipped. Average output voltage regulation 20%. Efficiency 50 to 60%. AC ripple 1% unfiltered.

The Magmotor is also available in extended shaft models as AC or DC Generators for 30 watt continuous duty and 50 watt intermittent duty.

MAGMOTOR

5 5/8" long x 3 11/16" wide x 2 1/2" high, weight 4 3/4 lbs.

Code No.	DC Input Volts	DC Input Amps	DC Output Volts	DC Output MA	Duty	List Price
MA250	6	4.3	250	50	Con.	\$48.50
MA265	6	5.4	250	65	Con.	49.00
MA251	6	8	250	100	Con.	50.50
MA301	6	9.5	300	100	Con.	51.00
MAS355	6	15	350	150	Int.	53.00
MVS415	5.5	19	400	150	Int.	57.50
MAS420	6	22	400	200	Int.	56.00

All of the above models can be furnished with filter and starting relay. Add "X" to code number for filter and \$24.00 to list. Add "R" to code number for receiver type relay and \$6.50 to list. Transmitter type relay, add \$12.00 to list. 5.5, 12, 24, 28, 32, 64 volt DC input available on above models, add \$2.50 to list. 115 volt input, add \$3.50 to list.

CARTER — the oldest name

in Rotary Power Supplies for mobile radio

OUTSTANDING CARTER SUPER DYNAMOTOR FOR AIRCRAFT — MARINE — POLICE AND RAILROAD RADIO EQUIPMENT

Preferred by leading communications manufacturers, specified by domestic and foreign airlines, State Police Radio patrols and for marine ship-to-shore radiotelephone. Designed especially for transmitters requiring 150 to 250 watt Dynamotor power. Exclusive features guarantee highest efficiency, long life and dependable operation. Armatures are wound with triple insulated wire and the core is insulated with laminated cambric and fishpaper slot insulation. Finest transformer grade armature laminations increase efficiency. Brushes, bearings, commutators and other component parts are carefully inspected and tested to assure finest electrical and mechanical performance.

Average output voltage regulation, approximately 25% or less. Efficiency 60%, 1% AC ripple unfiltered. Cast aluminum mounting base without grommets supplied. Easy to filter and install.

SUPER DYNAMOTOR

8 1/4" long x 4 1/2" wide x 4 3/4" high, net weight 11 3/4 lbs.

Code No.	DC Input		DC Output		Duty	List Price
	Volts	Amps	Volts	MA		
AF450	6	27	400	250	Con.	\$63.00
AF430	6	31	400	300	Con.	76.50
AF520	6	27	500	200	Con.	65.50
AF530	6	40	500	300	Con.	82.00
AF650	6	40	600	250	Con.	82.00
VSP630	5.5	56	600	300	Int.	86.50
BFS540	12	25	500	400	Int.	89.00
BFS820	12	21	800	200	Int.	92.50

HIGH VOLTAGE SUPER DYNAMOTOR

10 1/4" long x 4 1/2" wide x 4 3/4" high, weight 18 lbs.

B540	12	26	500	400	Con.	\$100.00
B635	12	26	600	350	Con.	100.00
B1150	12	20	1000	150	Con.	114.00
BS1250	12	31	1000	250	Int.	125.00

12, 24, 28, 32 and 64 volt input available on above models, add \$2.50 to list. For 115 volt DC input, add \$3.50 to list. Filter and starting relay available. Add "X" to code number for filter and \$30.00 to list. Add "R" to code number for relay and \$12.00 to list.

CARTER SUPER CONVERTER — CHANGES DC TO AC

FOR AMPLIFIERS — RADIO RECEIVERS

The Carter Super Converter is a small, compact, quiet running, two pole fan-cooled unit for changing direct current to alternating current. Of the same general construction as the Super Dynamotor, this long-life double wound type Converter is ideally suited for radio equipment. Public Address systems, musical instruments, amplifiers, testing devices, etc. CAUTION: Available for 85 to 100% power factor only, suitable for non-inductive loads. Will not satisfactorily operate low power factor inductive devices such as AC motors, low power factor transformers, etc. Ball bearing equipped, 3600 RPM at 60 cycle output. Cast aluminum base less grommets supplied.

Special long-life Converters can be supplied for marine and railroad applications possessing 2500 hour life without requiring maintenance. Extra long brushes and special windings permit maximum performance. Manual frequency controlled Super Converters are available on special order. Vibrating reed frequency meter filter and manual frequency control rheostat are contained in aluminum housing base. Constant 60 cycle output is maintained with a $\pm 10\%$ input voltage fluctuation. High power factor only, average efficiency 60%, output AC voltage regulation 15%.

CARTER SUPER CONVERTER

8 1/4" long x 4 1/2" wide x 4 3/4" high, weight 13 lbs.

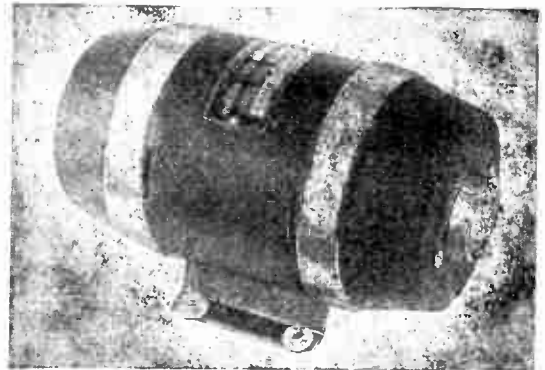
Code No.	DC Input		AC Output		Duty	List Price
	Volts	Amps	Volts	Watts		
D1040C	115	.7	115	40	Con.	\$58.00
D1060C	115	1.0	115	60	Con.	58.50
D1080C	115	1.1	115	80	Con.	59.90
D1010C	115	1.7	115	100	Con.	60.00
D1015C	115	2.0	115	150	Con.	65.00
A1010C	6	30	110	100	Con.	62.50
A1015C	6	40	110	150	Con.	67.50

MODEL HV FRAME SUPER CONVERTER

10 1/4" long x 4 1/2" wide x 4 3/4" high, weight 19 lbs.

D1020C	115	2.9	115	200	Con.	74.00
D1025C	115	3.5	115	250	Con.	79.00

All of the above 115 volt DC input Converters can be furnished with radio filter in aluminum housing base. Add "X" to code number and \$25.00 to list. Built-in condenser type filter available on battery input models from 6 to 32 volts. Add "X" to code number and \$20.00 to list. Above Converters available in 6 volt input up to 150 watt capacity: 12, 24, 28, 32 and 64 volt input supplied on all models. Add \$2.50 to list. Special output frequencies and voltages available.

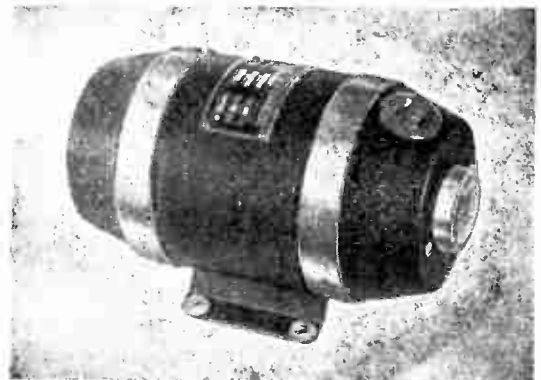


OUTSTANDING FEATURES

ONE PIECE FIELD RING—
Increases efficiency, simplifies construction.

ARMATURE—
Finest design, transformer grade laminations. Built-in fan, standard equipment. Static and dynamically balanced.

INSULATION—
Finest cambric laminated high dielectric slot insulation, double varnished. Ideal for marine installations.



OUTSTANDING FEATURES

SMALL SIZE
Simplicity of Design

OUTPUT RECEPTACLE—
Standard AC output receptacle furnished as illustrated.

ARMATURE—
Double wound, insulated, ungrounded windings. Transformer grade laminations. Static and dynamically balanced.

FILTER—
Standard filter in aluminum housing or built-in condenser filter available.

FREQUENCY CONTROL—
Manual frequency control with filter and frequency meter available on special order. Ideal for wire recorder applications.



VIBRATOR CONVERTERS

Complete New Line • New Design • New Engineering

For efficiency, dependability, and long-life these new CD Vibrator Converters bring you the finest power conversion equipment in 16 years of engineering leadership. The result of intensive research on vibrators and vibrator power supply circuits, the CD line meets with new satisfaction all of the standard ap

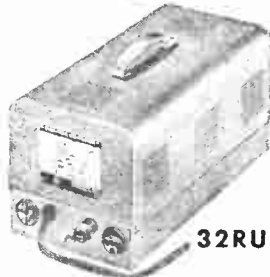
lications: Radio phonograph combinations, small power tools, fans and small appliances, P. A. Systems, wire-recorders, television, razors, communication receivers and transmitters, intercom systems, amplifiers, test equipment, etc. Specifications on representative models are shown below:



6R10



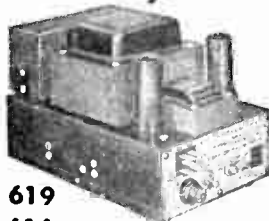
12RU15



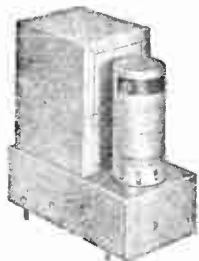
32RU15



110RT15
110RT35



619
616



604 A
605 A
601

■ CD CONVERTERS, DC-AC ■

SPECIFICATIONS	6R10	12RU15	32RU15	110RT15	110RT35
INPUT:	6 volts DC (storage battery)	12 volt DC (storage battery)	32 volt DC (batteries, farm or marine systems)	110 volt DC (commercial power line)	110 volt DC (commercial power line)
OUTPUT:	110 volts AC, 60 cycles	110 volt AC, 60 cycles	110 volt AC, 60 cycles	110 volt AC, 60 cycle	110 volt AC, 60 cycles
RADIO LOAD:	15 to 100 watts at 80-100% power factor	15 to 150 watts at 80-100% power factor	15 to 150 watts at 80-100% power factor	15 to 150 watts at 80-100% power factor	50 to 350 watts at 80-100% Power Factor
UTILITY LOAD:		25 to 175 volt amps. at 50-80% power factor. Toggle switch to match converter to type of load	25 to 175 volt amps. at 50-80% power factor. Toggle switch to match converter to type of load		
VIBRATOR REPLACEMENT:	Model 4123	Model 3047	Model 2989—Frequency adjustable to permit exact 60 cycle output	Model 3077—Frequency adjustable to permit exact 60 cycle output	Model 3079—Frequency adjustable to permit exact 60 cycle output
FILTERING:	Radio frequency filtered completely for broadcast, short wave and FM bands	Radio frequency filtered completely for broadcast, short wave and FM bands	Radio frequency filtered completely for broadcast, short wave and FM bands	Converter is radio frequency filtered completely for broadcast, shortwave, FM, and television bands	Converter is radio frequency filtered completely for broadcast, shortwave, FM, and television bands
REGULATION CONTROL:	Four position switch for adjustment of output voltage for various loads and battery conditions	Four position switch for adjustment of output voltage for various loads and battery conditions	Variation of voltage over output power range is so slight, that no external regulation control is necessary	Variation of voltage over output power range is so slight that no external regulation control is necessary	Variation of voltage over output power range is so slight that no external regulation control is necessary
DIMENSIONS:	12½" long, 6¼" wide, 7½" high	12½" long, 6¼" wide, 7½" high	12½" long, 6¼" wide, 7½" high	12½" long, 6¼" wide, 7½" high	14" long, 7¼" wide, 8½" high
WEIGHT:	19 pounds	22 pounds	21 pounds	15 pounds	40 pounds
FINISH:	Hammered blue enamel with chrome handle	Hammered blue enamel with chrome carrying handle	Hammered blue enamel with chrome handle	Hammered blue enamel with chrome handle	Hammered blue enamel with chrome handle
STARTING:	Manual on-off switch	Manual on-off switch	Autostart with connection of load	Autostart with connection of load	Autostart with connection of load
INPUT CONNECTION:	Two heavy duty wing nut terminals	Two heavy duty wing nut terminals	Standard line plug	Standard line plug	Standard line plug
FUSES:	40 amps. standard 2" cartridge fuse (spare provided)	20 amps. 2" cartridge fuse (spare provided)	10 amps. 3 AG type (spare provided)	5 amps. 3 AG type (spare provided)	7½ amps. 3 AG type (spare provided)

■ CD CONVERTERS, DC-DC ■

SPECIFICATIONS	MODEL 605A	MODEL 604A	MODEL 601	MODEL 619	MODEL 616
INPUT	6 volt DC	6 volt DC	6 volt DC	6 volt DC and 115 volt, 60 cycle AC	6 volt DC and 115 volt AC, 60 cycle
OUTPUT	150 volt at 35 ma. 200 volt at 40 ma. 250 volt at 50 ma. 275 volt at 65 ma.	225 volt at 50 ma. 250 volt at 65 ma. 275 volt at 80 ma. 300 volt at 100 ma.	225 volt at 50 ma. 250 volt at 65 ma. 275 volt at 80 ma. 300 volt at 100 ma.	300 volt DC at 100 ma. for each input. Filament power direct from battery 6.3 volt AC at 4.85 amps.	115 volt AC, 60 cycle for phono motor only, with 6 volt DC input; 4-pos. tap switch: 325 V. at 150 ma.; 350 V. at 175 ma.; 400 V. at 200 ma.
OUTPUT POWER	19 watts	30 watts	30 watts	60 watts (max.)	100 watts (max.)
FILTERING	No filtering included	No filtering included	No filtering included	Filtered to eliminate RF noise to cover a frequency band of 20 mc. to 150 mc.	Requires external filtering 100 watts (max.)
SIZE	5½" x 3¼" x 6"	5½" x 3¼" x 6"	4¼" x 4" x 6"	9¼" x 5¼" x 6"	6¼" x 7" x 7½"
WEIGHT	5½ pounds	5½ pounds	6 pounds	14½ pounds	16 pounds
CONTROLS	Tap switch	Tap switch	Tap Switch		Tap Switch
VIBRATOR	Model 2089	Model 2039	Model 1703	Model LSB10:7	Model LTD2639
RECTIFICATION	Self Rect.	Self Rect.	6X5GT/G or 0Z4	6X5GT/G or 0Z4	CK1006
FINISH	Blue-gray enamel	Blue-gray enamel	Blue-gray enamel	Blue-gray enamel	Blue-gray enamel



CORNELL-DUBILIER ELECTRIC CORP.
ELECTRONIC DIVISION • SOUTH PLAINFIELD, N. J.

RADIART VIBRATORS

RADIART AERIALS RADIART VIPOWERS



LIST PRICES CURRENT RADIART VIBRATORS

Showing vibrator numbers formerly specified for these applications

5300 SERIES vibrator types are Standard Automotive and Household Non-Synchronous units. They are stocked by all RADIART Distributors who carry a complete line.

5400 SERIES vibrator types are Standard Automotive and Household Synchronous units. They are stocked by all RADIART Distributors who carry a complete line.

Light face numbers are discontinued types replaced by current models indicated. See your RADIART REPLACEMENT GUIDE for most complete listing published. Ask your jobber for your free copy!

Type No.	Price	Type No.	Price	Type No.	Price	Type No.	Price	Type No.	Price	Type No.	Price	Type No.	Price
5300	\$4.10	5326P	\$3.45	5366	\$5.50	5400	\$6.90	5411	\$6.90	5426	\$6.90	5443	\$6.90
5311M		5325P		3223, 3226, 3263,		3850, 4501		5420P, 5428		5436		3784	
5300-32	6.20	5328P-32	8.30	3356, 4320, 5312		5408	6.90	5413	6.90	5429	7.65	5443-32	7.65
5305		4319		5367-32	6.90	5409	6.90	5413-4	6.90	5431	1501, 1-11	439E	
5301	4.10	5331	4.10	3503, 4314		5405	6.90	5415	6.90	5431	7.65	5454	6.90
53271*	4.10	5333	4.10			4255H, 4411	6.90	5416	8.30	5434	6.90	5463	7.65
5303	4.10	5335	4.10			5407	6.90	3283, 4502		5435	6.90	3305, 3315,	
5339		5337				5408	6.90	5421	6.90	5438	6.90	3317, 3848,	
5304	5.50	5342M	3.45			5409-4	6.90	5422	7.65	5435-4	6.90	1415, 4500	
3786		5340M				5410	6.90	4608		5427		5464	8.30
5307	4.10	5343M	5.50					5425	7.65	5436	6.90	3313	
5308	4.80	3815						3461, 4613,		5438	6.90	5468	9.70
5309	4.10	5363	4.80					4614		5440	7.65	5469	8.90
5314	4.10	2819, 2867, 3227,											
5320P	3.45	3313, 3375, 3442											
5321	4.10												
5323P	3.45												
3320, 5322P													

5500 SERIES vibrator types are Special Application Non-Synchronous units. These are stocked by RADIART Distributors in accordance with local requirements. They are available for immediate shipment from the Factory. Order through your local distributor.

5600 SERIES vibrator types are Special Application Synchronous units. These are stocked by RADIART Distributors in accordance with local requirements. They are available for immediate shipment from the Factory. Order through your local distributor.

Light face numbers are discontinued types replaced by current models indicated. See your RADIART REPLACEMENT GUIDE for most complete listing published. Ask your jobber for your free copy!

Type No.	Price	Type No.	Price	Type No.	Price	Type No.	Price	Type No.	Price	Type No.	Price	Type No.	Price
5503-12	\$6.90	5504P	\$5.50	5515	\$6.25	5604	\$8.30	5605-12	\$9.05	5607	\$7.65	5610	\$6.90
4253-12, 4256-12,		5523P		4253, 5313,		4505		4255-12,		4257		5365-5439	
5306-12		5506	6.25	5500, 5503		5605	7.65	4258-12,		5607-12	9.05	5510-12	7.65
5503-32	6.90	4256		5516	6.25	4255, 4258		5106-12		4257-12	9.05	5339-12	
4253-32, 4256-32		5510	6.25	4251H, 5501				5605-32	9.05	5607-32	9.05	5614-12	7.65
		5511-12	6.90	5517-12	6.90			4255-32,		4257-32		5154-12	
		5513-12	6.90	5518	6.25			4258-32		5609-12	9.05	5615-12	7.65
		5514-4	6.90							5409-12		5615-24	7.65
												5616	7.65
												5616-12	9.05

CURRENT RADIART VIPOWERS

RADIART Engineering "KNOW HOW" and RADIART Dependability in an unique line of vibrator-power units. Completely Filtered—R.F. and A.F. Output lines filtered to

a hum level of 50 mv or less. Within the range of 160 KC to 20 MC. R.F. hash is held below 50 microvolts, even less at higher frequencies.

VIPOWER MODEL	INPUT VOLTS D.C. (Nominal)	OUTPUT VOLTS D.C. (Nominal)	OUTPUT MILLIAMPS.	TYPE
451	6.0 or 12.0	250 or 180	60 or 40	Synchronous
452	6.0	300*	100	Synchronous
452-12	12.0	300*	100	Synchronous
453	6.0	300*	100	Non-Synchronous
453-12	12.0	300*	100	Non-Synchronous
454	6.0	300	200	Non-Synchronous
454-12	12.0	300	200	Non-Synchronous
455	6.0	400	150	Non-Synchronous
455-12	12.0	400	150	Non-Synchronous
456	6.0 or 110 V.A.C. 60 Cycle	300*	100	Non-Synchronous
457	6.0	150	40	Synchronous
4201-B2	6.0	250	50	Non-Synchronous

* NOTE:—Tapped at 275V, 250V, 225V.

RADIART VIBRATORS

RADIART AERIALS

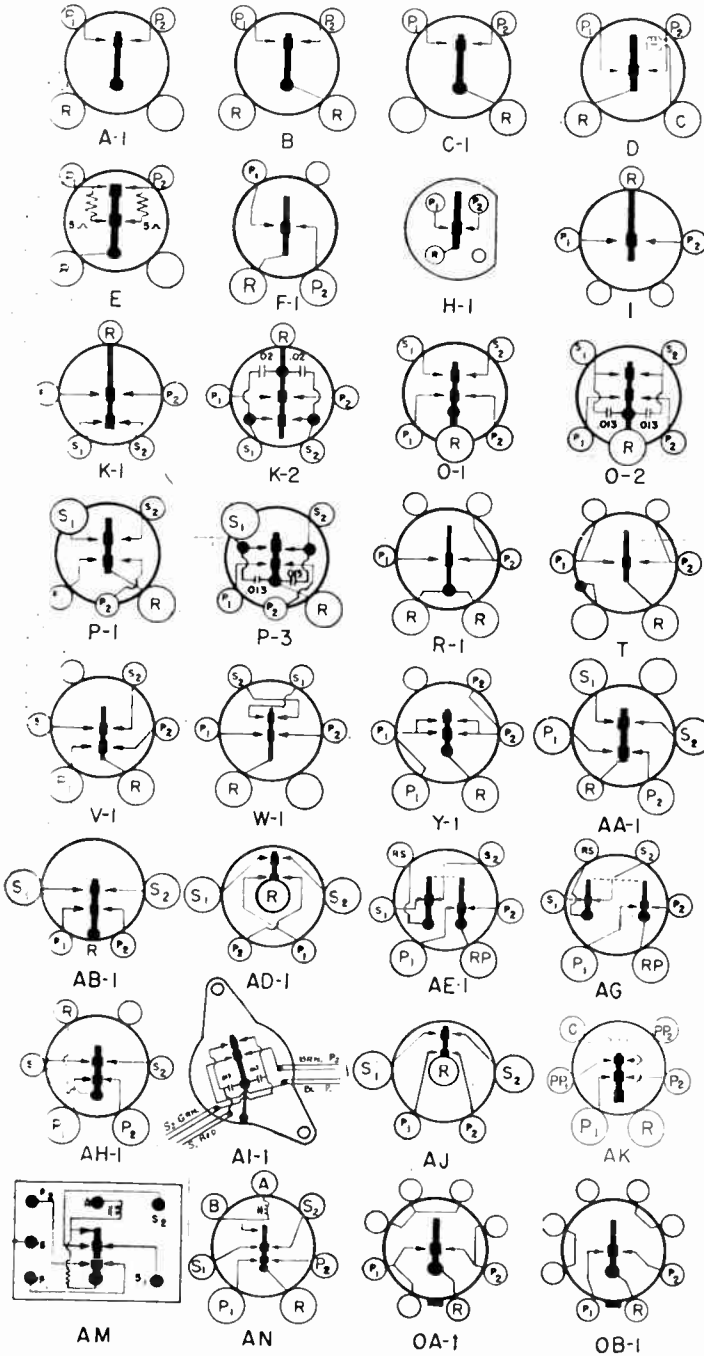
RADIART VIPOWERS

VIBRATOR BASE DIAGRAM CROSS INDEX



Symbols Used in Vibrator Base Diagrams

- A — Line into vibrator.
- B — Line pass for driving point.
- C — External coil lead in shunt vibrator.
- P₁ — Primary contact, usually, but not necessarily connected to the magnet coil in shunt vibrators.
- PP — Dual primary contact, closed when P₁ is closed.
- P₂ — Primary contact, may be the magnet coil connection instead of P₁.
- PP₂ — Dual primary contact, closed when P₂ is closed.
- R — Vibrating reed in single-reed vibrators.
- RP — Primary vibrating reed in split-reed vibrators.
- S — Secondary contact, closed when P₁ is closed.
- S₂ — Secondary contact, closed when P₂ is closed.
- All dimensions given are in inches.
- For other information as to Identifying Characteristics, see information given on Radiart Replacement Guide.



Radiart Type No.	Base Diagram	Voltage	Frequency	Max. Load	Dia.	Height
5300	A-1	6	115	6	1 1/2	3 1/8
5300-32	A-1	32	115	1.4	1 1/2	3 1/8
5301	A-1	6	115	6	1 1/2	2 7/8
5303	F-1	6	115	6	1 1/8	3 1/8
5304	I	6	115	6	1 1/4	3 1/4
5307	A-1	6	150	6	1 1/2	3 1/8
5308	E	6	115	6	1 1/2	3 1/8
5309	C-1	6	115	6	1 1/2	2 1/2
5314	A-1	6	115	6	1 1/4	2 3/8
5320P	A-1	6	115	6	1 1/2	3 1/2
5321	A-1	6	115	6	1 1/8	3 1/8
5323P	A-1	6	115	6	1 1/2	3 1/4
5326P	A-1	6	115	6	1 1/2	2 7/8
5328P32	H-1	32	115	1.4	1 1/2	3 1/2
5331	C-1	6	115	6	1 1/2	3 1/2
5333	F-1	6	115	6	1 1/2	3 1/2
5335	F-1	6	115	6	1 1/2	2 7/8
5342M	A-1	6	115	6	1 1/2	2 7/8
5343M	B	6	115	6	1 1/2	4 1/2
5363	LEADS	6	115	4	—	—
5366	R-1	6	115	6	1 1/2	2 7/8
5367-32	T	32	115	1.4	1 1/2	2 7/8
5400	AB-1	6	115	6	1 1/2	3 1/2
5404	AH-1	6	180	6	1 1/2	3 1/2
5406	AD-1	6	115	6	1 1/2	3 1/2
5407	AB-1	6	180	5	1 1/2	3 1/2
5408	AB-1	6	140	6	1 1/2	2 7/8
5409	K-1	6	115	6	1 1/2	3 1/8
5409-4	K-1	4	115	6	1 1/2	3 1/8
5410	O-1	6	115	6	1 1/2	3 1/8
5411	V-1	6	115	6	1 1/2	2 7/8
5413	K-1	6	115	6	1 1/2	3 1/8
5413-4	K-1	4	115	6	1 1/2	3 1/8
5416	K-2	6	115	6	1 1/2	4 1/2
5421	V-1	6	115	6	1 1/2	3 1/2
5422	AE-1	6	115	5	1 1/2	3 1/8
5425	O-2	6	115	6	1 1/2	4 1/2
5426	P-1	6	115	6	1 1/2	3 1/2
5429	P-3	6	115	6	1 1/2	4 1/2
5431	AG	4	115	5	1 1/2	3 1/8
5434	W-1	6	115	6	1 1/2	3 1/2
5435	V-1	6	115	6	1 1/8	3 1/8
5435-4	V-1	4	115	6	1 1/8	3 1/8
5436	V-1	6	180	5	1 1/2	2 7/8
5437	AB-1	6	180	5	1 1/2	2 7/8
5438	AB-1	6	140	6	1 1/2	3 1/2
5440	AB-1	6	115	6	1 1/2	4 1/2
5443	AA-1	6	115	6	1 1/2	3 1/8
5443-32	AA-1	32	115	1.4	1 1/2	3 1/8
5454	AD-1	6	115	6	1 1/2	2 7/8
5463	LEADS	6	115	6	—	—
5464	AI-1	6	115	6	1 1/2	4 1/2
5468	AM	2	115	2	1 1/2	2 1/8
5469	AN	2	115	2	1 1/2	2 1/8
5503-12	A-1	12	115	6	1 1/2	3 1/2
5503-32	A-1	32	115	2.5	1 1/2	3 1/8
5504P	Y-1	6	115	6	1 1/2	3 1/2
5506	D	6	115	10	1 1/2	3 1/8
5510	OA-1	6	115	10	1 1/2	3 1/8
5511-12	OB-1	12	115	6	1 1/2	3 1/8
5513-12	AK	12	180	3	1 1/2	3 1/8
5514-4	A-1	4	180	5	1 1/2	2 7/8
5515	A-1	6	115	10	1 1/2	3 1/4
5516	A-1	6	115	10	1 1/2	3 1/8
5517-12	V-1	12	180	3	1 1/2	3 1/8
5518	V-1	6	115	10	1 1/2	2 7/8
5604	K-2	6	115	6	1 1/2	4 1/2
5605	AD-1	6	445	10	1 1/2	3 1/8
5605-12	AD-1	12	115	6	1 1/2	3 1/8
5605-32	AD-1	32	115	2.5	1 1/2	3 1/8
5607	AJ	6	180	5	1 1/8	2 3/4
5607-12	AJ	12	180	3	1 1/8	2 3/4
5607-32	AJ	32	180	1.4	1 1/8	2 3/4
5609-12	K-1	12	115	3	1 1/2	3 1/8
5610	V-1	6	115	6	1 1/4	3 1/4
5610-12	V-1	12	115	3	1 1/4	3 1/4
5614-12	AD-1	12	115	4	1 1/2	2 7/8
5615-12	V-1	12	180	3	1 1/2	2 5/8
5615-24	V-1	24	180	1.4	1 1/2	2 5/8
5616	AJ	6	180	5	1 1/2	2 7/8
5616-12	AJ	12	180	3	1 1/2	2 7/8
5620	AB-1	6	115	6	1 1/2	2 7/8

ALTEC

LANSING CORPORATION

SPEAKERS AMPLIFIERS TRANSFORMERS

1161 N. VINE ST., HOLLYWOOD, CALIFORNIA • 250 WEST 57 STREET, NEW YORK, N. Y.



TRANSFORMERS

Altec Lansing has developed a complete line of transformers which have the necessary frequency range, power carrying capacity, low insertion loss, low phase shift, and ample electro-magnetic and electrostatic shielding, good balance of windings for push pull operation, and proper impregnation and treatment so that heat and moisture will not adversely affect their continued operation. Ability to handle the rated power at low frequencies insures that intermodulation products will be very low.

The use of negative feedback in amplifiers requires that the frequency range of the amplifier must be made much broader than the actual amplification characteristic needed. The required frequency range

over which the transmission characteristics of the feedback loop must be controlled is surprisingly high and represents the price that must be paid in order to obtain the benefits of negative feedback.

Altec Lansing transformers, unless otherwise specified, have a transmission range of 20-20,000 cycles (± 1 db) and this condition will hold over a range of 60 db in power. In most cases the transformers will have good transmission up to 50 KC so that it is not necessary to use special compensation in the feedback path when the transformer is part of it. The same is true at the very low frequencies since in general the transformers will not be down over 3 db at 10 cycles.

INPUT AND INTERSTAGE TRANSFORMERS

TYPE	Application	Balanced to Ground	Impedances—Ohms		Frequency Range	Response \pm	Max. Level Ref. 6 mw	Shielding	Overall Dimensions as Mounted (Inches)	Shipping Weight	LIST PRICE
			Input	Output							
TB-103	Input line to single or PP grids	Secondary only	500 250 30	70000 17500	20-20000	1DB	-20DB	25 DB Magnetic & Electrostatic	1 3/4 x 1 3/8 dia.	9 1/2 oz.	\$33.33
TB-151	Interstage or bridging single or PP grids to single or PP grids	Primary & Secondary	10000 2500	40000 10000	20-20000	1DB	-20DB	20 DB Magnetic & Electrostatic	1 3/4 x 1 3/8 dia.	9 1/2 oz.	40.00
TBB-102	Input line to single or PP grids	Secondary only	250 125 62.5 31	70000 17500	20-20000	1DB	-20DB	90 DB Magnetic & Electrostatic	2 3/4 x 2 3/8 x 2 3/4 H	1 3/4 lb.	53.33
TBB-103	Input line to single or PP grids	Secondary only	500 250 30	70000 17500	20-20000	1DB	-20DB	90 DB Magnetic & Electrostatic	2 3/4 x 2 3/8 x 2 3/4 H	1 3/4 lb.	38.67
TBB-115	Input line to single or PP grids	Secondary only	20 5	70000 17500	20-20000	1DB	-20DB	90 DB Magnetic & Electrostatic	2 3/4 x 2 3/8 x 2 3/4 H	1 3/4 lb.	53.33
TBB-151	Interstage or bridging single or PP grids to single or PP grids	Primary & Secondary	10000 -2500	40000 10000	20-20000	1DB	-20DB	90 DB Magnetic & Electrostatic	2 3/4 x 2 3/8 x 2 3/4 H	1 3/4 lb.	46.67
TL-101B	Input A-287F AMPL.	Primary & Secondary	500 220 125 56 14	30000 7500	20-20000	1DB	+34 DB 15 watts	None	3 1/2 x 3 3/8 x 4 1/8 H	5 1/2 lbs.	53.33

MATCHING TRANSFORMERS

TYPE	Application	Balanced to Ground	Impedances—Ohms		Frequency Range	Response \pm	Max. Level Ref. 6 mw	Shielding	Overall Dimensions as Mounted (Inches)	Shipping Weight	LIST PRICE
			Input	Output							
TL-262	Medium Level	No	1000 500 250	20 10	20-20000	1DB	+35DB 19 watts	None	3 1/2 x 3 3/8 x 4 1/8 H	7 lbs.	\$24.00
TP-255A	Hybrid 3 winding	All windings	500 300	500	20-10000 20-20000	1DB 2DB	+15DB 0.2 watt	30DB	2 3/4 x 2 1/2 x 3 1/2 H	2 lbs. 5 oz.	56.00
TP-256A	Matching Low Level	All windings	1000 250	500 125	20-10000 20-20000	1DB 2DB	+15DB 0.2 watt		2 3/4 x 2 1/2 x 3 1/2 H		
	Low Level	All windings	500/600 250/300 125/150 62.5/75	500/600 250/300 125/150 62.5/75	20-20000	1DB	+15DB 0.2 watt	40DB	2 3/4 x 2 1/2 x 3 1/2 H	2 lbs. 9 oz.	60.00

ALTEC

LANSING CORPORATION

SPEAKERS

AMPLIFIERS

TRANSFORMERS

1161 N. VINE ST., HOLLYWOOD, CALIFORNIA • 250 WEST 57 STREET, NEW YORK, N. Y.

OUTPUT TRANSFORMERS

TYPE	Application	Impedances - Ohms		Frequency Range	Re-sponse ±	Max. Level REF. 6 mw.	Shielding	Total Max. D.C. Plate Current	Max. D.C. Un-balance	Overall Dimensions as Mounted (Inches)	Shipping Wt.	LIST PRICE
		Input	Output									
TJ-152A	Output or interstage PP high level with tertiary winding	9500 2375	3000 2000 750 500	20-20000	1DB	+39DB 48 watts	None	200MA	10MA	4 x 4½ x 5½ H	11½ lbs.	\$80.00
TJ-211B	PP high level	9500	20 10	20-20000	1DB	+39DB 48 watts	None	130MA	7MA	4 x 4½ x 5½ H	11½ lbs.	64.00
TL-216A	PP medium level with tertiary winding	6600 1650	500 220 125 58 14	20-20000	1DB	+35DB 19 watts	None	130MA	7MA 6600 ohm 14MA 1650 ohm	3½ x 3½ x 4½ H	6 lbs.	42.67
TL-217A	PP medium level	6600	25/5 8/12 16/24	20-20000	1DB	+35DB 19 watts	None	130MA	7MA	3½ x 3½ x 4½ H	6 lbs.	24.00
TL-217B	An output transformer identical in design to the TL-217-A. The TL-217-B has no terminal boards. It has 12" long leads.											21.33
TL-219	Output or interstage PP medium level with tertiary	6600 1650	3000 2000 750 500	20-20000	1DB	+35DB 19 watts	None	130MA	7MA 6600 ohm 14MA 1650 ohm	3½ x 3½ x 4½ H	6 lbs.	46.67
TM-220A	PP high level	4000	16 8 1 2	20-20000	1DB	+41DB 75 watts	None	240MA	12MA	5½ x 6 x 6H	23 lbs.	80.00
TP-202	PP low level	20000 5000	500 250 125 62.5	20-20000	1DB	+15DB 0.2 watt	60DB	Parallel Feed		2½ x 2½ x 3½ H	2 lbs. 5 oz.	46.67
TP-204	PP low level	12500 3125	500 250 125 62.5	20-20000	1DB	+15DB 0.2 watt	60DB	Parallel Feed		2½ x 2½ x 3½	2 lbs. 5 oz.	53.33

POWER TRANSFORMERS

TYPE	Frequency	Primary Volts	Secondary Volts	Amps	Electro-static Shield	Overall Dimensions as Mounted (Inches)	Shipping Weight	LIST PRICE
TJ-604B	50-60	105 117 130	350-0-350 6.3 CT 5.0	0.125 DC 5.0 3.0	Yes	4 x 4½ x 5½ H.	11½ lbs.	\$37.33
TJ-618D	50-60	105 117 130	605-0-605 565-0-565 6.3 CT 5.0	0.150 DC 0.150 DC 3.5 3.0	No	4 x 4½ x 5½ H.	11½ lbs.	40.00
TJ-619C	50-60	105 117 130	545-0-545 6.3 CT 5.0 6.3 6.3	0.200 DC 3.0 3.0 3.0 0.7	No	4 x 4½ x 5½ H.	11½ lbs.	42.68
TL-608	50-60	117	350-0-350 6.3 CT 5.0	0.125 DC 2.4 3.0	Yes	3½ x 3½ x 4½ H.	6 lbs.	26.67

CHOKE COILS

TYPE	Application	Inductance		D. C. Resistance Ohms	Overall Dimensions As Mounted (Inches)	Shipping Weight	LIST PRICE
		Henries	D.C.M.A.				
TBB-301	Plate feeder with TP 202 and TP 204 TRANS.	100 25	5 10	4600 1150	2½ x 2½ x 2½ H.	1 lb. 10 oz.	\$24.00
TBB-314	Filter	35+	40	400	2½ x 2½ x 2½ H.	1 lb. 13 oz.	21.33
TP-506B	Filter	9	150	170	2½ x 2½ x 3½ H.	2 lb. 6 oz.	20.00



TRANSFORMERS AND REACTORS

For Radio, Television

and Other Electronic Devices

"PROMPT SHIPMENT ON UNITS BUILT TO YOUR SPECIFICATIONS!"

Three general types of transformers and a complete line of reactors all assembled from standard unit parts to meet specified requirements: **power**—with plate, and plate-and-filament units; **filament**—both conventional types and high-voltage units; **audio-frequency**—include microphone, input, interstage (or grid), modulation, and output types.

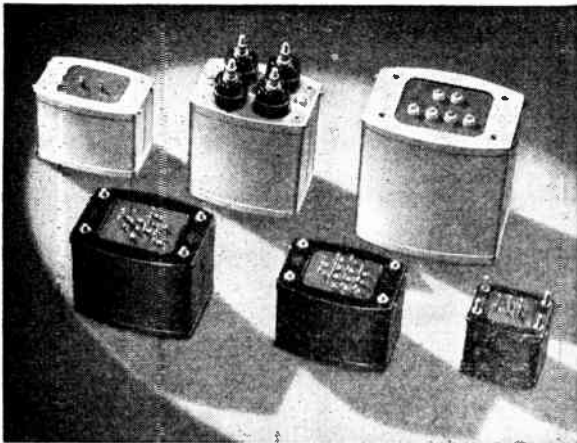
The line of reactors contains microphone, plate,

filter (conventional or swinging), and modulation units.

Rather than stock standard units, General Electric maintains standard parts from which virtually any unit can be built promptly according to your specifications. This method of production enables every transformer to be specially designed for its given application.

Hermetically Sealed Units

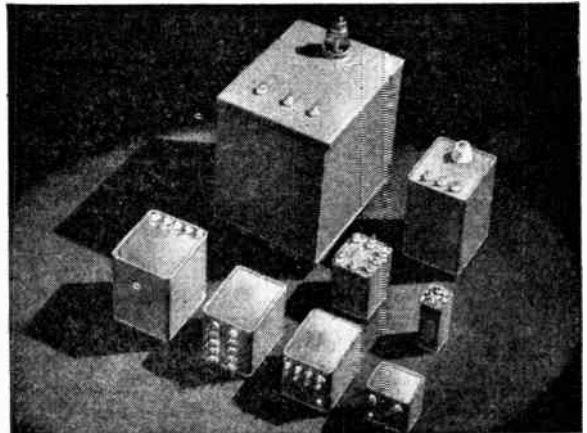
Compound-filled and hermetically sealed against the entrance of moisture. Designed to meet U. S. Navy salt water immersion tests. Standard hermetic case types range from very small up to units approximately 200 volt-amperes physical size. Special construction is employed for larger units.



Conventional compound-filled units

Core-and-coil Units

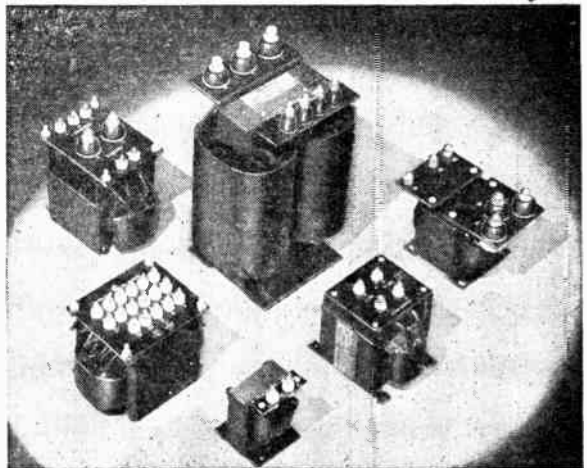
Usually applied where moisture resistance is not a factor, and where size and weight must be kept to the minimum. Standard core laminations are utilized in core-and-coil units 75 kva and smaller (physical size). Larger units are built up from special parts and ratings above 75 kva require special laminations.



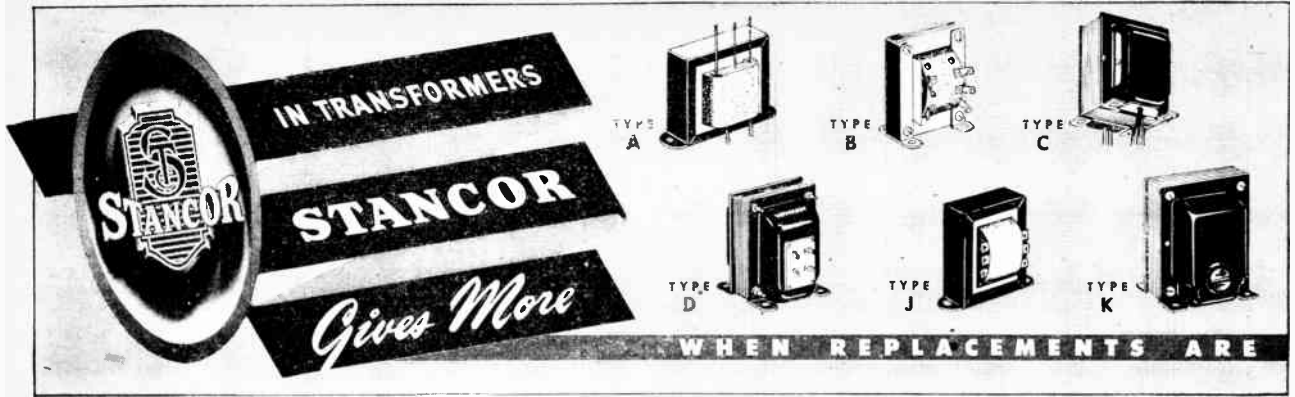
Hermetically sealed units

Conventional Compound-filled Units

Not hermetically sealed. Moisture resistant, but not immersion-proof. Wide application in the Frequency-Modulation field. Top or bottom mounting for open or underdeck wiring. Standard case types include units up to 250 volt-amperes physical size. Larger units employ special construction.



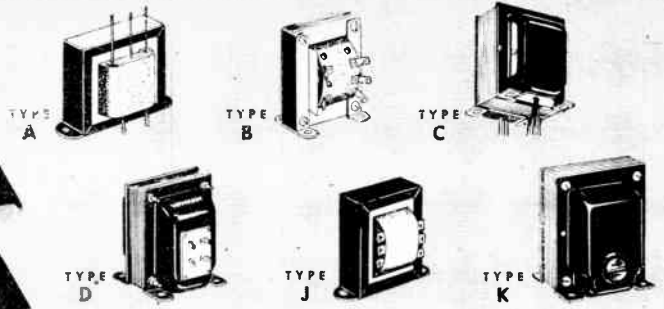
Core-and-coil units



Power Transformers
New Universal Type

Stancor's Universal Power Transformers represent the last word in efficient transformer construction, they are designed for compactness without sacrificing efficiency.

Four universal brackets permit their being mounted in either vertical or horizontal position. Special studs* provide underwriters type mounting. Transformers equipped with 8" flexible RMA color coded leads and static shields.



UNIVERSAL TYPE—2.5 VOLT

Stancor Number	No. of Tubes	Plate V.C.T. Ma.	Fil. No. 1 V. A.	Fil. No. 2 V. A.	Fil. No. 3 V. A.	Mtg. Type	Mtg. Area	Mtg. Ctrs.	Wgt. in Ctn.	List Price	
P-6001	4-5	650	10 5.0-C.T.	2.0 2.5-C.T.	1.0	M	2 1/2" x 3"	2" x 2 1/2"	3.3	\$6.00	
P-6002	5-6	700	50 5.0-C.T.	2.0 2.5-C.T.	7.25	M	2 1/2" x 3"	2" x 2 1/2"	3.3	7.00	
P-6009	6-7	550	70 5.0-C.T.	2.0 5.0-C.T.	0.5 2.5-C.T.	10.5	M	2 1/2" x 3 1/2"	2 1/4" x 2 1/2"	4.2	9.00
P-6005	6-7	700	70 5.0-C.T.	3.0 2.5-C.T.	9.0 2.5-C.T.	3.5	M	2 1/2" x 3 3/8"	2 1/4" x 2 1/2"	5.4	7.75
P-6003	6-7	700	70 5.0-C.T.	2.0 2.5-C.T.	9.0	M	2 1/2" x 3 1/2"	2 1/4" x 2 1/2"	3.8	8.35	
P-6004	8-9	700	90 5.0-C.T.	2.0 2.5-C.T.	12.5	M	3 1/2" x 3 1/2"	2 1/2" x 3 1/2"	5.4	7.75	
P-6007	10-12	800	110 5.0-C.T.	3.0 2.5-C.T.	15.0 2.5-C.T.	3.5	M	3 1/2" x 3 3/4"	2 1/2" x 3 1/2"	6.3	10.25
P-6006	11-13	700	120 5.0-C.T.	3.0 2.5-C.T.	12.5 2.5-C.T.	3.5	M	3 1/2" x 3 3/4"	2 1/2" x 3 1/2"	5.9	10.60

UNIVERSAL TYPE—6.3 VOLT

Stancor Number	No. of Tubes	Plate V.C.T. Ma.	Fil. No. 1 V. A.	Fil. No. 2 V. A.	Fil. No. 3 V. A.	Mtg. Type	Mtg. Area	Mtg. Ctrs.	Wgt. in Ctn.	List Price
P-6289	6-5	420	10 5.0-C.T.	2.0 6.3-C.T.	2.0	M	2 1/2" x 3"	2" x 2 1/2"	3.1	\$7.00
P-6237	4-5	480	10 5.0-C.T.	2.0 6.3-C.T.	2.0	M	2 1/2" x 3"	2" x 2 1/2"	3.2	6.75
P-6010	4-5	650	10 5.0-C.T.	2.0 6.3-C.T.	2.0	M	2 1/2" x 3"	2" x 2 1/2"	3.3	5.75
P-6119	6-7	600	55 5.0-C.T.	2.0 6.3-C.T.	2.7	M	2 1/2" x 3"	2" x 2 1/2"	3.5	6.90
P-6120	7-9	630	70 5.0-C.T.	2.0 6.3-C.T.	3.5	M	2 1/2" x 3 3/8"	2 1/4" x 2 1/2"	5.2	7.70
P-6011	6-7	700	70 5.0-C.T.	2.0 6.3-C.T.	2.5	M	2 1/2" x 3"	2" x 2 1/2"	3.3	7.30
P-6312	7-8	580	90 5.0-C.T.	2.0 6.3-C.T.	2.8	M	3 1/2" x 2 1/2"	2 1/2" x 2 1/2"	5.4	8.40
P-6012	8-9	700	90 5.0-C.T.	2.0 6.3-C.T.	3.5	M	2 1/2" x 3 3/8"	2 1/4" x 2 1/2"	5.2	7.70
P-6013	11-13	700	120 5.0-C.T.	3.0 6.3-C.T.	1.7	M	3 1/2" x 3 1/2"	2 1/2" x 3 1/2"	5.3	8.55
P-6313	11-13	580	125 5.0-C.T.	3.0 6.3-C.T.	1.5	M	3 1/2" x 3 1/2"	3 1/2" x 2 1/2"	6.1	9.50
P-6014	13-15	700	150 5.0-C.T.	3.0 6.3-C.T.	5.0	M	3 1/2" x 3 3/4"	2 1/2" x 3 1/2"	5.8	10.50
P-6165	14-16	800	200 5.0-C.T.	3.0 6.3-C.T.	5.5	M	3 3/4" x 1 1/2"	3" x 3 3/4"	6.5	12.55
P-6314	14-16	700	200 5.0-C.T.	3.0 6.3-C.T.	5.5	M	4 1/2" x 3 3/4"	3 3/4" x 3"	7.7	12.30
P-6315	16-18	710	215 5.0-C.T.	3.0 6.3-C.T.	7.0	M	4 1/2" x 3 3/4"	3 3/4" x 3"	8.5	16.00

UNIVERSAL TYPE—6.3 AND 2.5 VOLT COMBINATION

Stancor Number	No. of Tubes	Plate V.C.T. Ma.	Fil. No. 1 V. A.	Fil. No. 2 V. A.	Fil. No. 3 V. A.	Mtg. Type	Mtg. Area	Mtg. Ctrs.	Wgt. in Ctn.	List Price	
P-6293	6-7	600	60 5.0-C.T.	2.0 6.3-C.T.	2.5 2.5-C.T.	7.5	M	2 1/2" x 3 1/2"	2 1/4" x 2 1/2"	4.0	\$8.25
P-6294	8-9	700	80 5.0-C.T.	2.0 2.5-C.T.	9.0 6.3-5.0-C.T.	3.5	M	2 1/2" x 3 1/2"	2 1/4" x 2 1/2"	4.0	9.75
P-6295	8-9	700	90 5.0-C.T.	2.0 6.3-2.5-C.T.	3.5 2.5-C.T.	9.0	M	3 1/2" x 3 3/4"	2 1/2" x 3 1/2"	5.7	10.25
P-6234	11-13	600	90 5.0-C.T.	2.0 2.5-C.T.	12.0 5.3-5.0-C.T.	1.0	M	3 1/2" x 3 3/4"	2 1/2" x 3 1/2"	5.9	12.50
P-6008	14-16	700	180 5.0-C.T.	3.0 6.3-C.T.	3.3 2.5-C.T.	6.0	M	3 1/2" x 4 1/2"	2 3/4" x 3 1/2"	6.5	11.65

UNIVERSAL TYPE—WITH MOTOR TUNING WINDINGS

Stancor Number	No. of Tubes	Plate V.C.T. Ma.	Filament 1 V. A.	Filament 2 V. A.	Filament 3 V. A.	Mtg. Type	Mtg. Area	Mtg. Ctrs.	Wgt. in Ctn.	List Price
P-6290	11-13	700	120 5.0-C.T.	3.0 6.3-C.T.	1.7 50-24-18	M	3 1/2" x 3 1/2"	2 1/2" x 3 1/2"	5.4	\$10.75
P-6291	13-15	750	150 5.0-C.T.	3.0 6.3-C.T.	5.0 50-24-18	M	3 3/4" x 3 1/2"	3 1/2" x 2 1/2"	5.9	11.60
P-6292		800	200 5.0-C.T.	3.0 6.3-C.T.	5.2 50-24-18	M	4 1/2" x 3 3/4"	3 3/4" x 3"	7.8	14.65

*Underwriters' type mounting studs, tapped to fit the bolts on these transformers. Catalog No. 2053. List price \$0.25 per set.

Half Shell Transformers

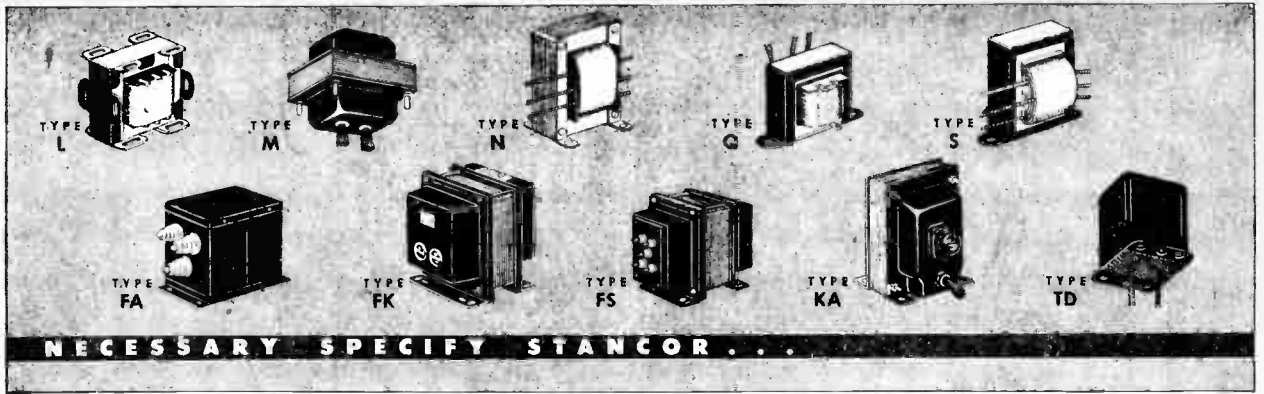
HALF SHELL WITH LUGS—2.5 VOLTS

Stancor No.	No. of Tubes	Plate V.C.T. Ma.	Filament 1 V. A.	Filament 2 V. A.	Filament 3 V. A.	Mtg. Type	Mtg. Area	Mtg. Ctrs.	Wgt. in Ctn.	List Price
P-2750	4	650	10 5.0	2.0 2.5-C.T.	3.75	G	2 1/2" x 3"	2" x 2 1/2"	2.2	\$7.50
P-2770	4-5	650	10 5.0	2.0 2.5-C.T.	4.5	G	2 1/2" x 3"	2" x 2 1/2"	2.5	7.25
P-2859	6-7	700	70 5.0	2.0 2.5-C.T.	3.5 2.5 7.5	G	3 1/2" x 3 1/2"	2 1/2" x 3 1/2"	3.6	9.00
P-2860	8-9	700	90 5.0	2.0 2.5-C.T.	3.5 2.5 9.0	G	3 1/2" x 3 1/2"	2 1/2" x 3 1/2"	5.2	10.00

HALF SHELL WITH LUGS—6.3 VOLTS

Stancor No.	No. of Tubes	Plate V.C.T. Ma.	Filament 1 V. A.	Filament 2 V. A.	Filament 3 V. A.	Mtg. Type	Mtg. Area	Mtg. Ctrs.	Wgt. in Ctn.	List Price
P-2751	4	650	10 5.0	2.0 6.3-C.T.	1.6	G	2 1/2" x 3"	2" x 2 1/2"	2.2	\$7.00
P-2771	4-5	650	10 5.0	2.0 6.3-C.T.	2.0	G	2 1/2" x 3"	2" x 2 1/2"	2.5	7.00
P-947	4-5	700	50 5.0	2.0 6.3-C.T.	2.0	G	2 1/2" x 3 1/2"	2 1/4" x 2 1/2"	3.3	6.35
P-948	5-6	675	70 5.0	2.0 6.3-C.T.	2.5	G	3 1/2" x 3 3/4"	2 1/2" x 3 1/2"	4.7	7.85
P-949	7-10	700	120 5.0	3.0 6.3-C.T.	3.0	G	3 1/2" x 4 1/2"	2 1/2" x 3 1/2"	5.5	9.00
P-6335	6-8	700	120 5.0	3.0 6.3-C.T.	3.0	G	2 7/8" x 3 1/2"	2 1/4" x 2 7/8"	1.2	9.50
P-6336	6-8	600	150 5.0	3.0 6.3-C.T.	3.0	G	2 7/8" x 3 1/2"	2 1/4" x 2 7/8"	4.2	9.50
P-955	11-11	800	160 5.0	3.0 6.3-C.T.	1.5	G	3 3/4" x 1 1/2"	3" x 3 3/4"	6.5	10.75

All of the above transformers are for operation on 117 volts, 60 cycles. Other voltage and frequency combinations available on special order. Write for quotations.



FULLY SHIELDED WITH LEADS—2.5 VOLTS

Stancor No.	No. of Tubes	Plate V.C.T.	Ma.	Fil. No. 1 V.C.T.	A.	Fil. No. 2 V.C.T.	A.	Fil. No. 3 V.C.T.	A.	Mtg. Type	Mtg. Area	Mtg. Ctrs.	Wgt. in Ctn.	List Price
P-4042	6-7	700	70	5.0	2.0	2.5-C.T.	3.5	2.5	7.5	C	3 1/2" x 2 1/2"	2 1/2" x 1 1/2"	3.7	\$8.75
P-4043	8-9	700	90	5.0	2.0	2.5-C.T.	3.5	2.5	9.0	C	3 1/2" x 3 1/2"	2 1/2" x 2 1/2"	4.5	10.00
P-4044	10-12	700	110	5.0	3.0	2.5-C.T.	3.5	2.5	14.0	C	3 1/2" x 3 1/2"	2 1/2" x 2 1/2"	4.7	11.00

FULLY SHIELDED WITH LEADS—6.3 VOLTS

P-4076	4-5	650	40	5.0	2.0	6.3-C.T.	2.0			C	2 1/2" x 2 1/2"	2 1/2" x 1 1/2"	2.7	\$6.75
P-4077	5-6	700	50	5.0	2.0	6.3-C.T.	2.6			C	3" x 2 1/4"	2 1/4" x 1 7/8"	3.2	7.50
P-4078	6-7	700	70	5.0	2.0	6.3-C.T.	3.0			C	3 1/4" x 3"	2 1/2" x 1 7/8"	4.0	8.50
P-4079	8-9	700	90	5.0	2.0	6.3-C.T.	3.5			C	3 1/2" x 3 1/8"	2 1/4" x 2 1/4"	4.9	9.50
P-4080	10-12	700	110	5.0	3.0	6.3-C.T.	4.5			C	3 1/2" x 3 1/8"	3" x 2 1/4"	5.4	10.00
P-6143	8-9	880	130	5.0	3.0	6.3-C.T.	3.5			C	3 1/2" x 4"	2 3/4" x 3"	5.0	12.25
P-4081	11-14	800	160	5.0	3.0	6.3-C.T.	4.5			C	3 1/2" x 3 1/8"	3" x 2 1/2"	5.0	12.00
P-4004*	11-14	800	175	5.0	3.0	6.3-C.T.	2.5	6.3-C.T.	2.5	C	3 1/2" x 4 1/8"	3" x 2 3/4"	11.0	13.50
P-5059	11-14	675	200	5.0	3.0	6.3-C.T.	5.0			C	3 1/2" x 4 1/8"	3" x 3 1/2"	10.0	13.75
P-6170	.....	1200	200	5.0	3.0	6.3-C.T.	3.0	6.3-C.T.	4.0	C	3 1/2" x 4 1/8"	3" x 3 1/2"	13.3	13.50

FULLY SHIELDED WITH LEADS—2.5 AND 6.3 OR 7.5 VOLT COMBINATION

P-4045	4-5	600	40	5.0	2.0	2.5-C.T.	5.25	6.3	2.0	C	2 1/2" x 2 1/2"	2 1/4" x 1 1/4"	2.7	\$8.00
P-4046	5-6	700	50	5.0	2.0	2.5-C.T.	7.25	6.3	2.6	C	3" x 3"	2 1/4" x 2"	3.2	8.65
P-4047	6-7	700	70	5.0	2.0	2.5-C.T.	9.0	6.3	3.0	C	3 1/4" x 3"	2 1/2" x 1 7/8"	3.7	9.00
P-4048	8-9	700	90	5.0	2.0	2.5-C.T.	10.0	6.3	3.5	C	3 1/2" x 3 1/2"	2 1/2" x 2 1/2"	5.0	10.50
P-4049	10-12	700	110	5.0	3.0	2.5-C.T.	14.0	6.3	4.5	C	3 1/2" x 3 1/2"	3" x 2 3/4"	5.3	11.75
P-3005†	10-12	720	125	5.0	3.0	2.5-C.T.	10.0	6.3-C.T.	4.0	C	3 1/2" x 3 1/2"	3" x 2 3/4"	5.5	13.50
P-4050*	11-14	800	160	5.0	3.0	2.5-C.T.	14.0	6.3	4.5	C	3 1/2" x 3 1/2"	3" x 2 3/4"	6.2	13.75
P-6169	.....	1200	200	5.0	3.0	2.5-C.T.	10.0	7.5-C.T.	3.0	C	3 1/2" x 4 1/4"	3" x 3 1/2"	12.0	13.95

*Has 80 V. bias tap and extra 2.5 V. 1.75A filament. †Has 80 V. bias tap and extra 5 V. 2A filament.

FULLY SHIELDED WITH LEADS—1.5; 2.5 AND 5 VOLT COMBINATION

Stancor No.	Plate		Rectifier Filament		Filaments No. 1, 2		Filaments No. 3, 4		Mounting Type	Mounting Area	Mounting Ctrs.	Wgt. in Ctn.	List Price
	V.C.T.	Ma.	V.	A.	V.	A.	V.	A.					
P-1501	600	60	5.0	2.0	1.5-C.T.	1.0	1.5	4	C	3 1/2" x 3 1/4"	2 1/2" x 2 1/2"	5.0	\$10.50
					2.5-C.T.	4.0	5.0	0.5					
P-1503	700	120	5.0	3.0	1.5-C.T.	1.0	1.5	5	C	4" x 3 1/4"	3 1/2" x 3 1/2"	7.5	13.75
					2.5-C.T.	4.0	2.5-C.T.	3.5					
P-1505	700	120	5.0	3.0	2.5-C.T.	4.0	2.5-C.T.	9	C	4" x 3 1/4"	3" x 3"	7.5	13.50
					2.5-C.T.	3.5							

Stancor No.	Secondary		Type Mounting	Dimensions			Weight in Carton	List Price
	D.C. Volts to Filter	Ma.		H	W	D		
P-6301	150	40	S	2 1/2"	2 1/8"	1 3/4"	1.3	\$4.50
P-4060	225	40	N	3 1/4"	2 1/2"	3"	2.2	4.90
P-4061	250	50	N	3 1/4"	2 1/2"	3"	2.3	5.25
P-4062	260	65	N	3 1/2"	2 1/2"	3"	2.6	5.75
P-4063	285	75	N	3 1/4"	2 1/2"	3 1/2"	3.0	6.50
P-6131	330	100	N	3 1/2"	2 1/2"	3 1/4"	3.5	7.00
P-6166	350 V @ 135 Ma. Fil. 6.3 V.C.T. @ 2.25 A		C	4 1/2"	3 3/8"	4"	9.0	12.65

Stancor No.	Primary Voltage	Secondary		Filament Winding	Type Mounting	Mounting Dimensions			Weight in Carton	List Price
		D.C. Volts	Ma. Output			H	W	D		
P-6149	115	100	150	5 V @ 3 A	C	3 3/4"	2 1/2"	3 1/4"	3.2	\$8.35
P-6146	115	115	Up to 250	5 V @ 3 A	C	4"	3 1/2"	3 1/4"	5.0	9.10
P-6147	115	300	Up to 200	5 V @ 3 A	C	4 3/4"	3 3/8"	3 3/4"	7.5	11.90

Stancor No.	Primary		Secondary Volts	Type Mounting	Dimensions			Weight in Carton	List Price
	Volts	Cycles			H	W	D		
P-1834-3	105, 115, 125	50-60	1.1, 1.4, 1.5, 2.0, 2.5, 3.0, 3.3, 5.0, 6.3, 7.0, 7.5, 12, 25, 30, 35, 50, 70, 85, 110, 117	A	2 5/8"	4 1/4"	2"	2.6	\$12.00

All of the above power transformers are for operation on 117 volts, 60 cycles. Other voltage and frequency combinations available on special order. Write for quotations.

Power Transformers (Fully Cased)

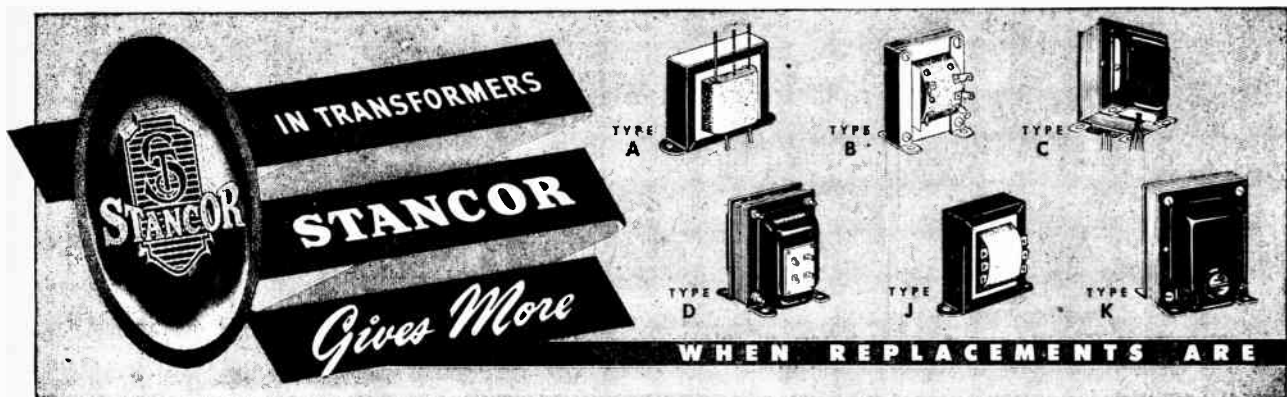
Vibrator Transformers Six Volt Universal

These units equipped with mounting brackets for universal replacement work.

Six Volt D.C. or 115 Volt A.C. Speaker Field Supply Transformers

Tube Checker Transformer

Especially designed for use in modernizing older types of tube checkers. Ideal for other testing equipment and laboratory. Packed with wiring instructions giving color coding of leads.



Universal Output Transformers

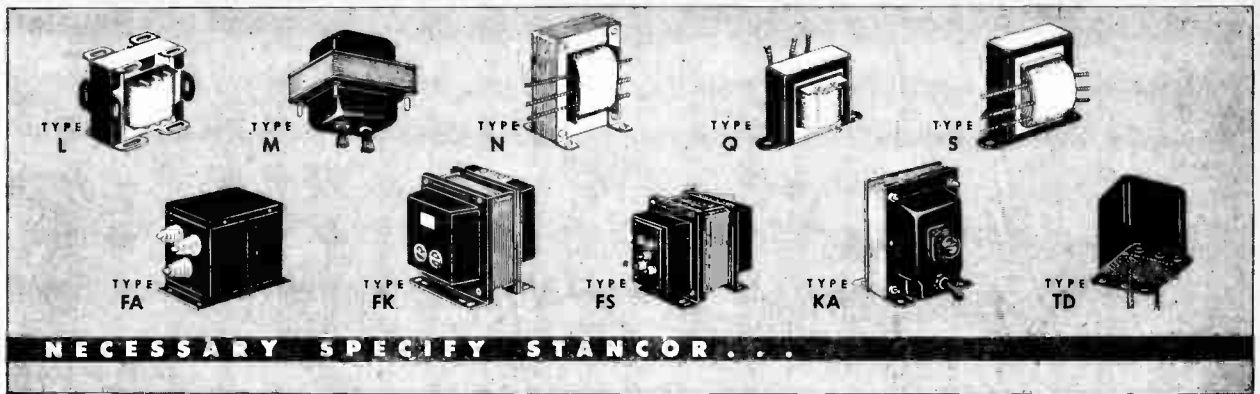
Stancor No.	Output Tubes	Impedance		D.C. Pri. M.A.	Max. Audio Watts	Type Mounting	Dimensions			Weight in Carton	List Price
		Primary	Sec.				H	W	D		
A-3856	Single or P.P. Plates	2,000, 4,000, 5,000, 6,000, 8,000, 10,000 C.T.	4, 8, 15	35	...	Q	1 $\frac{1}{16}$ "	2 $\frac{3}{8}$ "	1 $\frac{3}{8}$ "	0.6	\$2.60
A-3849	Universal Single Plate	1,500, 2,000, 4,000, 5,000, 7,000, 10,000	4, 8, 15	55	10	Q	1 $\frac{3}{8}$ "	2 $\frac{7}{8}$ "	1 $\frac{1}{2}$ "	0.7	2.60
A-3823	Single or P.P. Plates	2,000, 4,000, 5,000, 6,000, 8,000, 10,000 C.T.	4, 8, 15	40	8	Q	2"	2 $\frac{13}{16}$ "	1 $\frac{1}{2}$ "	0.7	2.75
A-3850	Single or P.P. Plates	4,000, 7,000, 8,000, 10,000, 14,000 C.T.	4, 8, 15	40	8	J	2"	2 $\frac{3}{8}$ "	1 $\frac{1}{2}$ "	0.7	2.95
A-3852	Single or P.P. Plates	4,000, 7,000, 8,000, 10,000, 14,000 C.T.	4, 8, 15	40	18	J	2 $\frac{1}{16}$ "	2 $\frac{3}{8}$ "	2"	1.6	3.55
A-3870	Single or P.P. Plates	4,000, 7,000, 8,000, 10,000, 14,000 C.T.	4, 8, 15	50	18	Q	2 $\frac{7}{8}$ "	3 $\frac{1}{4}$ "	2"	1.6	3.75
A-3880	Single or P.P. Plates	4,000, 7,000, 8,000, 10,000, 14,000 C.T.	4, 8, 15	40	15	Q	2 $\frac{1}{4}$ "	3 $\frac{3}{4}$ "	2 $\frac{1}{4}$ "	1.7	4.90
A-3830	Single or P.P. Plates	2,000, 4,000, 5,000, 6,000, 8,000, 10,000 C.T.	4, 8, 15	60	20	Q	2 $\frac{1}{16}$ "	3 $\frac{5}{16}$ "	2 $\frac{1}{4}$ "	3.0	4.90
A-3890	Single or P.P. Plates	4,000, 7,000, 8,000, 10,000, 14,000 C.T.	4, 8, 15	50	15	TD	2 $\frac{1}{16}$ "	2 $\frac{3}{4}$ "	2 $\frac{3}{8}$ "	1.3	6.50
A-2855	Single or P.P. Plates	4,000, 7,000, 8,000, 10,000, 14,000 C.T.	4, 8, 15	50	15	L	2 $\frac{1}{4}$ "	2 $\frac{5}{16}$ "	1 $\frac{3}{4}$ "	1.3	4.20
A-3841	Universal Single Plate	2,500, 4,000, 5,000, 6,000, 7,000		500	60	J	2 $\frac{1}{16}$ "	3 $\frac{5}{16}$ "	2 $\frac{1}{4}$ "	1.8	6.25
A-3842	Universal P.P. Plates	8,000, 10,000, 12,000, 14,000 C.T.		500	55	J	2 $\frac{1}{16}$ "	3 $\frac{5}{16}$ "	2 $\frac{1}{4}$ "	1.8	6.55

Crystal Recorder Output Transformers

Stancor No.	Output Tubes	Impedance in Ohms		Core Size	Max. Watts Level	Type Mtg.	Dimensions			Wgt. in Ctn.	List Price	
		Primary	Secondary				H	W	D			
A-3853	Sgl. 2A5, 6AC5, 6B5, 7B5, 6F6, 6K6, 6N6, 42	7,000	70,000 or 4-6	3 $\frac{1}{4}$ "x3 $\frac{1}{4}$ "	5	A	2"	3 $\frac{1}{4}$ "	1 $\frac{3}{4}$ "	2 $\frac{13}{16}$ "	1.0	\$4.50
A-3854	Sgl. 2A5, 6AC5, 6B5, 7B5, 6F6, 6K6, 6N6, 42	7,000	70,000 and 4-6	3 $\frac{1}{8}$ "x7 $\frac{1}{8}$ "	10	A	2 $\frac{1}{4}$ "	3 $\frac{1}{4}$ "	2 $\frac{1}{4}$ "	3 $\frac{1}{8}$ "	1.5	4.75
A-3859	P.P. 6AC5, 6B5, 7B5, 6F6, 6K6, 6N6, 42	10,000	70,000 or 4-6	3 $\frac{1}{4}$ "x3 $\frac{1}{4}$ "	5	A	2"	3 $\frac{1}{4}$ "	1 $\frac{3}{4}$ "	2 $\frac{13}{16}$ "	1.0	4.50
A-3860	P.P. 6AC5, 6B5, 7B5, 6F6, 6K6, 6N6, 42	10,000	70,000 and 4-6	3 $\frac{1}{8}$ "x7 $\frac{1}{8}$ "	10	A	2 $\frac{1}{4}$ "	3 $\frac{1}{4}$ "	2 $\frac{1}{4}$ "	3 $\frac{1}{8}$ "	1.5	5.50
A-3869	P.P. 2A3, 6A3, 6L6 (Cl. A1)	3,000-5,000	70,000	7 $\frac{1}{8}$ "x7 $\frac{1}{8}$ "	10	W2	3 $\frac{1}{2}$ "	2 $\frac{7}{8}$ "	3 $\frac{1}{8}$ "	...	3.0	14.60
A-3886	P.P. 6AC5, 6B5, 7B5, 6F6, 6K6, 6N6, 42	10,000	70,000	7 $\frac{1}{4}$ "x7 $\frac{1}{8}$ "	10	W2	3 $\frac{1}{2}$ "	2 $\frac{7}{8}$ "	3 $\frac{1}{8}$ "	...	3.0	14.60
A-3897	500 Ohm Line	500	70,000	7 $\frac{1}{8}$ "x7 $\frac{1}{8}$ "	10	W2	3 $\frac{1}{2}$ "	2 $\frac{7}{8}$ "	3 $\frac{1}{8}$ "	...	3.0	16.80

Tube to Line Transformers (UNIVERSAL)

Stancor No.	From	To	Impedance		D.C. Pri. Ma.	Type Mtg.	Dimensions			Wgt. in Ctn.	List Price
			Pri.	Sec.			H	W	D		
A-3250	Sgl. or P.P. 27, 30, 12A, 37, 55, 56, 76, 6C5, 6C6.	Line	10,000 or 20,000	50, 125, 200, 333, 500	10	Q	2"	3 $\frac{1}{4}$ "	1 $\frac{3}{4}$ "	1.2	\$4.50
A-3315	Sgl. or P.P. 27, 30, 37, 55, 56, 76, 12A, 6C5, 6C6.	Line	10,000 or 20,000	50, 125, 200, 333, 500	35	D	3 $\frac{1}{16}$ "	2 $\frac{5}{8}$ "	3 $\frac{5}{8}$ "	2.6	10.00
A-4770	Univ. Single Tube	Line	2,500, 4,000, 5,000, 6,000, 7,000	500	60	J	3 $\frac{3}{8}$ "	2 $\frac{5}{8}$ "	2 $\frac{5}{8}$ "	2.3	6.00
A-4771	Univ. P.P. Tubes	Line	8,000, 10,000, 12,000, 14,000 C.T.	500	55	A	2 $\frac{5}{8}$ "	4"	2 $\frac{5}{8}$ "	2.3	6.30

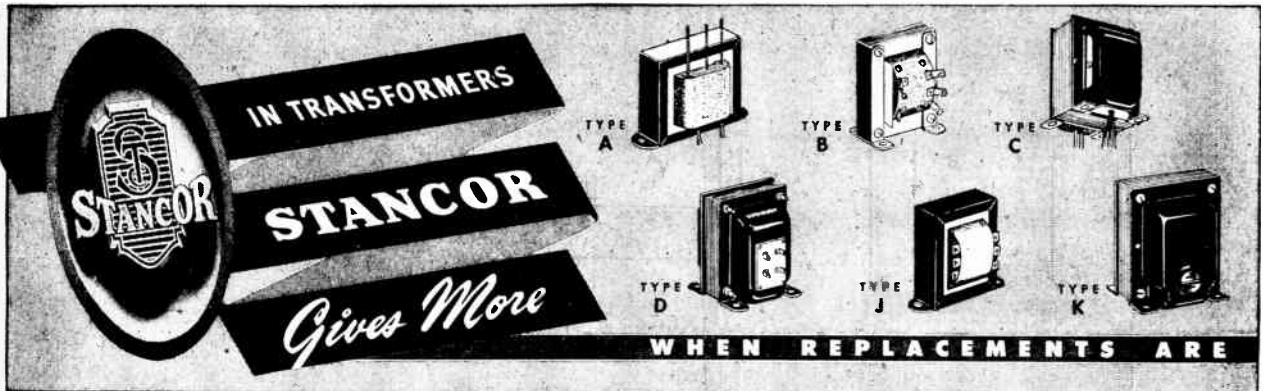


Stancor No.	Output Tubes	Class	Impedance in Ohms		D.C. Pri. Ma.	Max. Audio Watts	Type Mtg.	Dimensions			Wgt. in Ctn.	List Price
			Pri.	Sec				H	W	D		
A-3865	Sgl. 48, 25B6, 25L6, 50L6	A	1,000	2, 4, 6	55	5	A	1 1/2"	2 1/2"	1 3/4"	0.5	\$2.35
A-3876	Sgl. 2A3, 6A3, 6H4, 6W6, 6Y6, 25AC5, 25B5, 25B6, 25L6, 35A5, 35L6, 50L6	A	2,000	1	60	5	A	1 1/2"	2 1/2"	1 3/4"	0.5	1.75
A-3825	Sgl. 2A3, 6A3, 6H4, 6L6, 6W6, 6Y6, 25AC5, 25B5, 25L6, 25N6, 35N6, 35L6, 50L6	A	2,500	1, 2, 4	75	8	Q	2"	3 1/4"	1 3/4"	1.0	3.25
A-2203	Sgl. 12A5, 25A6, 31, 43, 45, 71, 48	A	4,000	8	40	5	A	1 3/4"	2 1/2"	1 3/4"	0.7	2.65
A-3877	Sgl. 2B6, 6V6, 7C5, 12A, 25A6, 31, 43, 59	A	5,000	1	40	5	A	1 3/4"	2 1/2"	1 3/4"	0.5	1.85
A-3822	Sgl. 2A5, 6AC5, 6B5, 6F6, 6K6, 6N6, 7B5, 38, 41, 42, 47, 59, 89	A	7,000	0.7, 1, 1.4, 2, 2.8, 4	45	5	Q	1 1/2"	2 1/2"	1 1/2"	0.5	2.20
A-3878	Sgl. 2A5, 6AC5, 6B5, 7B5, 6F6, 6K6, 6N6, 29, 31, 33, 42	A	7,000	1	30	5	A	1 3/4"	2 1/2"	1 3/4"	0.5	1.80
A-2313	Sgl. 2A5, 6AC5, 6F6, 6K6, 6N6, 7B5, 33, 41, 42, 47, 59, 89	A	7,000	8	40	10	A	2"	3 1/4"	1 1/2"	1.1	2.70
A-2201	Sgl. 6A6, 53 P.P. 25A6, 43, 45, 48, 71	A	8,000	6	40	10	A	2"	3 1/4"	1 1/2"	1.0	3.10
A-3824	Sgl. 6A6, 6N7, 53; P.P. 46	B	8,000	1, 2, 4	75	8	Q	1 1/2"	3 1/4"	2"	1.4	4.10
A-3879	Sgl. 1J6, 6C5, 6A1, 6C6, 6N7, 6R7, 12A, 38	A	10,000	4	30	5	A	1 3/4"	2 1/2"	1 3/4"	0.5	1.75
A-3831	Sgl. 1G6, 1J6, 19, 6E6 P.P. 30, 49	B	10,000	2, 4, 8	40	5	A	1 3/4"	2 1/2"	1 1/2"	2.6	2.70
A-3496	P.P. 2A5, 6F6, 6K6, 7B5, 33, 41, 42, 47, 49	A	14,000	4	45	5	A	1 3/4"	2 1/2"	1 3/4"	0.7	2.35
A-2312	P.P. 2A5, 6F6, 6K6, 7B5, 33, 41, 42, 47, 49	A	14,000	4	40	10	A	2"	3 1/4"	1 1/2"	1.1	2.80
A-3881	Sgl. 1D8, 1E7, 1F4, 1F5, 1J5, 1T5, 6V7, 6Y7, 12A7	A	15,000	4	10	5	A	1 3/4"	2 1/2"	1 3/4"	0.5	1.75
A-3848	Sgl. 1D8, 1F4, 1F5, 1J5, 1T5, 6R7, 950	A	16,000	1, 2, 4	10	5	Q	1 3/4"	2 1/2"	1 3/4"	0.5	2.60
A-3857	Sgl. 1A5, 1E7, 1N6, 6V7 P.P. 1F4, 1F5, 1J5, 1T5, 6C6,	A	25,000	4	10	5	A	1 3/4"	2 1/2"	1 3/4"	0.7	2.25
A-3306	P.P. PAR. 48, 25L6 P.P. PAR. 2A3, 45	A AB	2,500	4, 8, 15, 500	100	25	C	3 3/8"	3"	3 1/4"	3.6	\$8.00
A-3301	P.P. 2A3, 6A3, 6B4 P.P. 48, 25L6	AB A	3,000	4, 8, 15, 500	55	30	C	3 3/8"	3"	3 1/2"	3.7	7.70
A-3802	P.P. PAR. 6L6 P.P. 45, 6L6	AB1 AB2	3,300 3,800	4, 8, 250, 500	250	75	C	4 1/2"	3 1/2"	3 1/2"	8.3	11.50
A-5528	P.P. 6Y6, 25L6	A	4,000	4, 8, 15, 500	65	8	C	3 1/8"	2 1/2"	2 1/2"	2.4	6.60
A-3851	P.P. 6L6	AB1	4,400	4, 8, 15, 250, 500	70	30	C	3 1/2"	3"	3 1/2"	3.6	8.90
A-3872	P.P. 6L6; P.P. 2A3, 6A3, 45	A	5,000	4, 8, 15	150	18	TD	2 1/2"	2 1/4"	2 1/2"	1.8	6.00
A-3310	Sgl. 45, 2B6, 6L6, 6V6, 25A6, 25A7	A	5,000	1, 8, 15, 500	55	20	C	3 3/8"	2 1/2"	2 1/2"	2.5	6.95
A-3800	P.P. 6L6 P.P. 2A3, 6A3, 45	A AB	5,000	4, 8, 15, 250, 500	80	30	C	3 1/2"	3"	3 1/2"	3.7	7.90
A-3307	P.P. 2A5, 6F6, 42 P.P. 46, 59 P.P. PAR. 6A6, 6N7, 53	AB2 B	6,000	4, 8, 15, 500	100	30	C	3 3/8"	3"	3 1/4"	3.6	8.40
A-3801	P.P. 6L6	AB1	6,600	4, 8, 15, 250, 500	150	35	C	3 1/2"	3 1/2"	3 1/2"	5.0	9.20
A-3855	Sgl. 2A5, 6AC5, 6F6, 6K6, 6N6, 7B5, 33, 41, 42, 47, 59, 89; P.P. 12A5, 45	A	7,000	10, 2,000	40	5	TD	2 1/2"	2 1/4"	2 1/2"	1.7	5.65
A-3885	P.P. 6L6	AB1	9,000	4, 8, 15, 250, 500	150	35	C	3 1/2"	3 1/2"	3 3/4"	5.0	5.20
A-3304	Sgl. 6A4, 6H5, 6N6 P.P. 6V6, 45 Sgl. 6A6, 6N7, 53; P.P. 6AC5	A B	7,000 10,000	4, 8, 15, 500	60	25	C	3 1/2"	2 1/2"	2 1/2"	2.6	7.20
A-3839	Sgl. 1G6, 1J6, 19 P.P. 1H4, 30, 49 Sgl. 1G5, 3C5, 6G6, 6R7, 12A	B A	10,000	4, 8, 15, 2000	30	10	TD	2 1/2"	2 1/4"	2 1/2"	1.7	5.00
A-3311	Sgl. 6A6, 6N7, 53 P.P. 6H5, 6N6 P.P. 6F6, 6V6	B AB	10,000	4, 8, 45, 500	70	25	C	3 3/4"	3"	3 1/4"	3.8	7.50
A-3303	Sgl. 6Y7, 6Z7, 79 P.P. 2A5, 6F6, 6K6, 7B5, 41, 42, 47, 59, 89	B A	14,000	4, 8, 15, 500	55	20	C	3 1/2"	2 1/2"	2 1/2"	2.6	7.00

*10% Inverse Feedback Winding Used. NOTE: All transformers shown for P.P. operation have C.T.

**Replacement
Output
Transformers**

**Heavy Duty
Output
Transformers to
Line or Speaker
(HIGH LEVEL)**



Interstage Transformers

Designed primarily as radio replacements, this group of transformers has a multiplicity of applications because of the wide range of sizes and types. Listed are units in channel frames, ranging from the smallest to the largest in common usage, a universal bracket universal winding transformer, large core heavy duty units for higher fidelity push-pull and universal interstage transformers and a fine grouping of drivers. Size for size, unit for unit, these transformers represent the finest offering by any manufacturer — and they're so easy to use.

Stancor No.	From	To	Impedance		Turns Ratio Sec. to Pri.	D.C. Pri. Ma.	Mounting Dimensions			Wgt. in Ctn.	List Price	
			Pri.	Sec.			Type Mtg.	H	W			D
A-4205	20,000 ohm plate	Grid	20,000	115,000	2.4:1	15	C	3 1/16"	2 3/8"	2 3/8"	2.5	\$7.50
A-53C	10,000 ohm plate	Grid	10,000	90,000	3:1	10	A	1 1/16"	2 3/8"	1 1/4"	0.5	2.45
A-63C	10,000 ohm plate	Grid	10,000	90,000	3:1	10	A	1 1/8"	2 7/8"	1 3/4"	0.75	2.65
A-73C	10,000 ohm plate	Grid	10,000	90,000	3:1	10	A	2"	3 1/16"	1 5/8"	1.0	3.20
A-2132	Screen Grid Tube	P.P. Grids	10,000	10,000	1:1	10	S	3 1/8"	3 3/8"	2 1/4"	2.4	6.55
For coupling screen grid or power detector.												
A-52C	10,000 ohm plate	P.P. Grids	10,000	40,000	2:1	10	A	1 3/8"	2 3/8"	1 3/8"	0.5	2.45
A-62C	10,000 ohm plate	P.P. Grids	10,000	40,000	2:1	10	A	1 5/8"	2 7/8"	1 3/4"	0.75	2.65
A-4741	10,000 ohm plate	P.P. Grids	10,000	40,000	2:1	10	S	2"	2 3/8"	1 1/2"	0.8	2.80
A-4745	10,000 ohm plate	P.P. Grids	10,000	40,000	2:1	10	TD	2 1/16"	2 3/4"	2 1/16"	1.5	6.35
For super-regenerative detector, static shield between windings.												
A-53C	10,000 ohm plate	P.P. Grids	10,000	90,000	3:1	10	A	1 3/8"	2 3/8"	1 3/8"	0.5	2.45
A-63C	10,000 ohm plate	P.P. Grids	10,000	90,000	3:1	10	A	1 5/8"	2 7/8"	1 3/4"	0.75	2.65
A-73C	10,000 ohm plate	P.P. Grids	10,000	90,000	3:1	10	A	2"	3 1/4"	1 3/4"	1.0	3.20
A-103C	10,000 ohm plate	P.P. Grids	10,000	90,000	3:1	10	A	2 5/8"	4"	2 1/4"	2.2	6.45
A-4155	10,000 ohm plate	P.P. Grids	10,000	90,000	3:1	10	L	2 1/4"	2 1/8"	1 3/4"	1.2	4.75
A-4719	10,000 ohm plate	P.P. Grids	10,000	90,000	3:1	10	TD	2 1/16"	2 3/4"	2 1/16"	1.5	5.85
A-4750	10,000 ohm plate	P.P. Grids	10,000	90,000	3:1	10	S	2 5/8"	4"	2 1/4"	1.0	3.50
A-4740	10,000 ohm plate	P.P. Grids	10,000	90,000	3:1	10	S	2"	2 3/8"	1 1/2"	0.75	3.00
A-83C	10,000 ohm plate	P.P. Grids	10,000	90,000	3:1	10	A	2 1/2"	3 3/4"	2 1/4"	1.5	4.90
A-4206*	20,000 ohm plate	P.P. Grids	20,000	180,000	3.25:1	15	C	3 3/8"	2 5/8"	2 5/8"	2.5	7.50
A-64C	10,000 ohm plate	P.P. Grids	10,000	160,000	4:1	10	S	2"	2 3/8"	1 3/4"	0.75	3.00

*Split Secondary.

A-4208*	P.P. Plates	P.P. Grids	25,000	13,000	1:1.39	15	C	3 3/8"	2 5/8"	2 5/8"	2.5	\$6.00
A-4711	P.P. Plates	P.P. Grids	20,000	20,000	1:1	10	A	1 5/8"	2 7/8"	1 1/2"	0.8	3.10
A-4772*	P.P. Plates	P.P. Grids	20,000	45,000	1.5:1	10	S	3 3/8"	3 3/8"	2 1/4"	2.2	5.85
A-4777*	P.P. Plates	P.P. Grids	20,000	45,000	1.5:1	10	C	3 3/8"	2 5/8"	2 5/8"	2.5	6.50
A-4155	P.P. Plates	P.P. Grids	10,000	90,000	3:1	10	L	2 1/4"	2 1/8"	1 3/4"	1.2	4.75

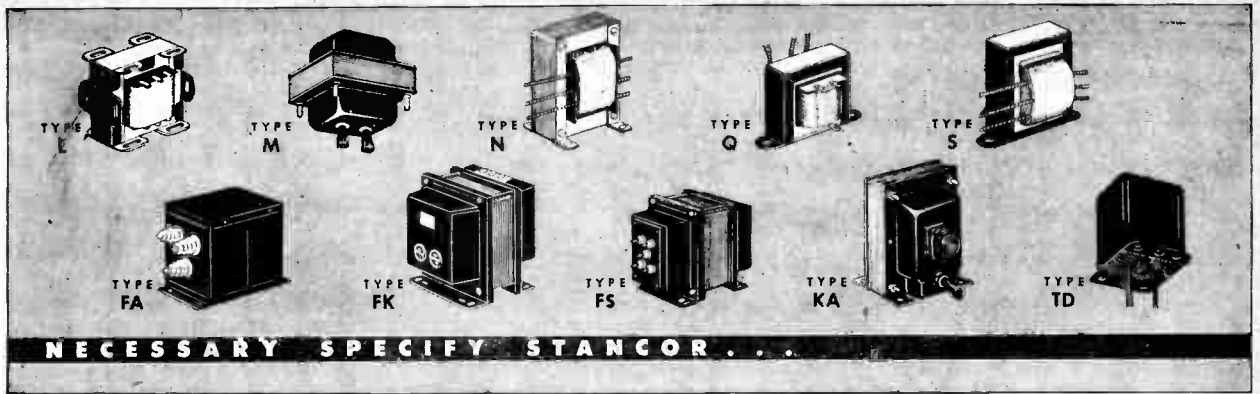
*Split Secondary.

Universal Interstage Transformers (Split Secondaries)

Stancor No.	Application	Turns Ratio	D.C. Pri. Ma.	Type Mtg.	Dimensions			Mtg. Ctrs.	Wgt. in Ctn.	List Price
					H	W	D			
A-4773	Universal	3:1	10	TD	2 1/16"	2 3/4"	2 3/16"	2 3/8"	1.5	\$6.00
A-4774	Universal	3:1	10	S	2 5/8"	2 7/8"	1 3/4"	2 3/8"	1.5	4.05
A-4775	Universal	3:1	10	S	2 5/8"	3 1/16"	2 1/4"	2 1/16"	1.8	5.25

May be used as plate to grid; push pull input or push-pull interstage replacement transformers. Have 3:1 over all ratio, however, primary is center-tapped and secondary has split winding, thus permitting ratios of 1:1, 3:1 and 6:1. Transformers may be used in either step-up or step-down applications.

Stancor No.	From	To	Class	Pri. Impedance	1/2 Sec. Impedance	Turns Ratio Pri. to 1/2 Sec.	D.C. Pri. Ma.	Type Mtg.	Mounting Dimensions			Wgt. in Ctn.	List Price
									H	W	D		
A-4722	1-42, 47 2A5, 6K6	P.P. 42, 2A5, 6F6, 6K6	AB	10,000	2,500	2:1	30	TD	2 1/16"	2 3/4"	2 3/16"	1.5	\$5.40
A-4752	1-6G6G, 6F6, 42, 2A5 as Triodes	P.P. Grids 6V6, 6Y6, 6F6, 6L6, 6Z7	AB	10,000	2,500, 4,400, 10,000	2:1, 1.5:1, 1:1	35	A	2"	3 1/8"	1 3/4"	1.5	4.00
May be used from P.P. primary with ratio of 2:1.													
A-4713	1-46, 45, 2A5, 6F6,	P.P. Grids 79, 2A5, 6A6, 6F6	AB	10,000	2,500	2:1	30	A	1 5/8"	2 3/8"	1 1/2"	0.7	2.60
A-4292	1-6C5, 30, 49	1-1J6, 19, 2-30, 2-49	B	10,000	1,600	2.5:1	10	A	1 5/8"	2 7/8"	1 1/2"	0.7	2.60
A-4734	1-30, 2A5, 6A6, 1G5, 6F6, 6K6	P.P. Grids 19, 2A5, 6A6, 1J6	B	10,000	1,600	2.5:1	15	S	2 3/16"	2 7/8"	1 3/4"	1.4	3.40
A-4401	1-27, 30, 37 56, 76, 6C5, 1H4, 6J5	1-19, 79, 1J6	B	10,000	1,400	2.63:1	15	J	2 1/4"	2 3/8"	1 5/8"	1.3	3.95
A-4723	1-30, 2A5, 6A6, 1G5, 6K6 etc.	P.P. Grids 19, 79, 2A5, 6A6 6F6, 1J6, 6K6	B	10,000	1,100	3:1	30	A	1 5/8"	2 3/8"	1 1/2"	0.7	2.60
A-4712	P.P. 27, 30, 37, 56, 76 6C5, 1H4, 6J5	P.P. 19, 53, 6A6, 1J6, 6N7	B	20,000	2,200	3:1	10	A	1 5/8"	2 3/8"	1 1/2"	0.7	2.90



NECESSARY SPECIFY STANCOR . . .

Stancor No.	From	To	Impedance		Ratio Overall	Type Mtg.	Dimensions in			Wgt. in Ctn.	List Price
			Pri.	Sec.			H	W	D		
A-4742	S.B. Microphone	Sgl. or P.P. Grids	100	400,000 C. T.	1:64	S	2 $\frac{3}{8}$ "	2 $\frac{3}{8}$ "	1 $\frac{3}{4}$ "	1.0	\$3.95
A-4743	S.B. Microphone Has shield cover which encloses entire coil.	Sgl. or P.P. Grids	100	400,000 C. T.	1:64	S	2 $\frac{3}{8}$ "	2 $\frac{3}{8}$ "	2 $\frac{3}{8}$ "	1.1	4.30
A-4707	S.B. Microphone	Single Grid	100	58,500	1:24.2	J	2"	2 $\frac{3}{8}$ "	1 $\frac{5}{8}$ "	0.8	3.20
A-4706	S.B. Microphone	Single Grid	100	60,000	1:24.6	A	1 $\frac{3}{8}$ "	2 $\frac{3}{8}$ "	1 $\frac{1}{2}$ "	0.6	2.40
A-4708	D.B. Microphone	Single Grid	200 C.T.	57,000	1:17	J	2"	2 $\frac{3}{8}$ "	1 $\frac{5}{8}$ "	0.8	3.55
A-4727	D.B. Microphone	Single Grid	200 C.T.	100,000	1:22.2	TD	2 $\frac{1}{16}$ "	2 $\frac{3}{4}$ "	2 $\frac{3}{16}$ "	1.8	6.05
A-4709	Dynamic or Pickup	Single Grid	4, 8, 15, 30	106,000	1:60	TD	2 $\frac{1}{16}$ "	2 $\frac{3}{4}$ "	2 $\frac{3}{16}$ "	1.8	6.40
A-4351	S.B. or D.B. Microphone or line	Single Grid	50, 125, 200, 333, 500	89,000	1:13.3	TD	2 $\frac{1}{16}$ "	2 $\frac{3}{4}$ "	2 $\frac{3}{16}$ "	1.0	5.90
A-4408	S.B. or D.B. Microphone or Line	Single Grid	50, 125, 200, 333, 500	80,000	1:12.5	D	3 $\frac{1}{8}$ "	2 $\frac{3}{8}$ "	3 $\frac{1}{8}$ "	2.6	9.10
A-4726	D.B. Microphone and 200 ohm line	P.P. Grids	200 C.T.	100,000	1:22.3	TD	2 $\frac{1}{16}$ "	2 $\frac{3}{4}$ "	2 $\frac{3}{16}$ "	1.8	6.40
A-4352	S.B. or D.B. Microphone or Line	P.P. Grids	50, 125, 200, 333, 500	89,000	1:13.3	Q	2"	3 $\frac{1}{8}$ "	1 $\frac{3}{4}$ "	1.0	5.20
A-4409	S.B. or D.B. Microphone or Line	P.P. Grids	50, 125, 200, 333, 500	157,000	1:17.7	D	3 $\frac{1}{8}$ "	2 $\frac{3}{8}$ "	3 $\frac{1}{8}$ "	2.6	9.50
A-4705	S.B. Microphone	Single Grid	200 or 70	80,000	1:20	A	1 $\frac{3}{8}$ "	2 $\frac{3}{8}$ "	1 $\frac{3}{8}$ "	0.5	2.35
A-4728	1, 2, 3, or 4 Circuit Mixer	Single Grid	50, 100, 150, 200	100,000	1:22.2	TD	2 $\frac{1}{16}$ "	2 $\frac{3}{4}$ "	2 $\frac{3}{16}$ "	1.8	6.95
A-4350	Sgl. or D.B. microphone	Line	50, 125, 200, 333, 500	50, 125, 200, 333, 500		Q	2"	3 $\frac{1}{8}$ "	1 $\frac{3}{4}$ "	1.0	\$5.60
A-4407	Sgl. or D.B. microphone	Line	50, 125, 200, 333, 500	50, 125, 200, 333, 500		D	3 $\frac{1}{8}$ "	2 $\frac{3}{8}$ "	3 $\frac{1}{8}$ "	2.6	9.50

Microphone, Pickup or Line to Grid Transformers

Stancor No.	For Coupling	Primary Impedance	Secondary Impedance	Max. Audio Watts	Type Mtg.	Dimensions			Wgt. in Ctn.	List Price
						H	W	D		
A-7947	Line to voice coil	500, 1000, 1,500, 2000	6 ohms	8	Q	1 $\frac{1}{8}$ "	2 $\frac{1}{16}$ "	1 $\frac{1}{16}$ "	0.8	\$2.90
A-7949	Line to voice coil	500, 1000, 1500, 2000	6-8 ohms	12	J	2 $\frac{5}{16}$ "	2 $\frac{3}{8}$ "	1 $\frac{11}{16}$ "	0.9	3.45
A-3882	Line to voice coil	250, 333, 500	4, 8, 15	25	D	3 $\frac{1}{16}$ "	2 $\frac{5}{8}$ "	3 $\frac{1}{2}$ "	2.6	7.25
A-3883	Line to voice coil	500	4, 6, 8, 15	25	J	2 $\frac{5}{16}$ "	2 $\frac{3}{8}$ "	1 $\frac{3}{4}$ "	1.5	3.90
A-3818	Line to voice coil	500, 1000, 1500	4, 8, 15	25	J	3 $\frac{1}{8}$ "	3 $\frac{3}{8}$ "	2 $\frac{1}{4}$ "	2.6	4.75
A-3820	Line to voice coil	500, 1000, 1500, 2000	4, 8, 15	40	D	4 $\frac{1}{16}$ "	3 $\frac{3}{8}$ "	4 $\frac{1}{2}$ "	5.8	9.95
A-3838	Line to speakers autoformer	500	250, 166, 125, 100, 84	30	B	3 $\frac{1}{8}$ "	2 $\frac{1}{2}$ "	2 $\frac{1}{4}$ "	2.6	5.75
A-3837	Line to voice coil. 1 to 6 can be paralleled across 500 ohm line	500, 1000, 1500, 2000, 2500, 3000	.06 to 8 ohm from primary of 500 ohms—12 to 16 from 1000, etc.	15	J	2 $\frac{5}{16}$ "	2 $\frac{3}{8}$ "	2"	2.0	5.00

Microphone or Line to Line Transformer

Line to Voice Coil Transformers

Stancor No.	From	To	Impedance in Ohms		Core Size	Type Mtg.	Dimensions			Wgt. in Ctn.	List Price	
			Pri.	Sec.			H	W	D			
A-4744	Voice Coil	Sgl. Grid	4	25,000	$\frac{1}{2}$ " x $\frac{3}{8}$ "	VI	1 $\frac{3}{8}$ "	2 $\frac{3}{8}$ "	1 $\frac{1}{2}$ "	2 $\frac{3}{8}$ "	0.5	\$2.45

Input Transformer Inter communication

Stancor No.	Application	Impedance in Ohms		Max. Pri. Ma. D.C.	Max. Audio Watts	Type Mtg.	Dimensions			Wgt. in Ctn.	List Price
		Pri.	Sec.				H	W	D		
A-3833	Sgl. Button Micro. and Plate to Single Grid.	5,000	60,000	10	5	A	1 $\frac{1}{8}$ "	2 $\frac{3}{8}$ "	1 $\frac{1}{2}$ "	0.7	\$3.40
A-4413	Sgl. Button Micro. and Plate to Single Grid.	10,000	90,000	45	10	J	2 $\frac{5}{16}$ "	2 $\frac{3}{8}$ "	1 $\frac{1}{4}$ "	1.5	4.75
A-3836	Pentode Plate to Low or High Impedance Phone or Oscillator	10,000	2,000	30	5	A	1 $\frac{1}{8}$ "	2 $\frac{3}{8}$ "	1 $\frac{1}{2}$ "	0.7	3.30

Transceiver Transformers

Tone Control Unit

The necessary components for a dual tone control circuit to provide both bass and treble attenuation when used in conjunction with two dual 250,000 ohm potentiometers. Contained in Hi-Fi-type W-1 cast case for

shielding against hum pickup and provided with 12 Flexible Coded Leads for direct connection in the circuit. Dimensions H.3 $\frac{1}{2}$ " x W.2 $\frac{3}{4}$ " x L.3 $\frac{1}{4}$ ". Packed with complete instructions for installation and use.

STANCOR No. **C-2332-1** List **\$8.80**



Variable Line Autoformers

These transformers designed so that the associated equipment may be kept at a specific input voltage regardless of line voltage. Line regulating transformers continuously variable in 5 volt steps from 5-125 volts.

Stancor No.	Primary		Secondary	Output Watts	Type Mtg.	Dimensions			Wgt. in Ctn.	List Price
	Volts	Cycles	Volts			H	W	D		
P-5066	85-125	50-60	85-125	35	B	3 1/8"	2 1/2"	2 1/2"	2.0	\$8.10
P-5067	85-125	50-60	85-125	75	B	3 1/2"	3"	2 3/4"	3.4	9.30
P-5068	85-125	50-60	85-125	125	B	3 1/2"	3"	3 1/8"	4.0	9.60
P-6145	85-125	50-60	85-125	500	B	4 1/2"	3 3/4"	4 1/2"	10.0	14.50
P-6148	25-55-75 95-105-110 115-120 125-130	50-60	25-55-75 95-105-110 115-120 125-130	250	B	4 1/2"	3 3/4"	3 3/4"	8.0	13.90

Special Autoformer

This Autoformer will deliver full output wattage at any secondary voltage specified below or can be used to supply any voltage in 5 volt steps from zero to 130 volts for special experimental applications.

Testing Autoformer

Incorporates a convenient tap switch to permit variable voltages from 90 to 150 volts. Primary equipped with 5 ft. approved cord and plug. Secondary connected to female receptacle. Locking screw mounted on switch.

Step-Down Autoformer

These transformers are excellent units to be used with standard apparatus on 220-250 volt lines. May also be wired to step up 110-125 volts to 220-250 volts for test purposes or other applications.

Stancor No.	Secondary Voltage	Primary Voltage	Output Watts	Type Mtg.	Dimensions			Wgt. in Ctn.	List Price
					H	W	D		
P-6299	90, 100, 110, 120, 130, 140, 150, @ 50-60 cy.	115V.	150	KA	3 7/8"	3 1/4"	4 3/4"	8.9	\$14.95

Stancor No.	Primary		Secondary	Output Watts	Type Mtg.	Mounting Dimensions			Wgt. in Ctn.	List Price
	Volts	Cycles	Volts			H	W	D		
P-6287	220-250	50-60	110-125	40	*	4 1/4"	3"	3"	2.5	57.00
P-5062	220-250	50-60	110-125	80	K	3 5/8"	2 13/16"	3 1/4"	4.5	8.40
P-5063	220-250	50-60	110-125	100	K	3 7/8"	3 1/4"	3 1/4"	5.2	9.65
P-5064	220-250	50-60	110-125	150	K	4 1/4"	3 1/2"	3 5/8"	6.6	11.00
P-5065	220-250	50-60	110-125	250-300	K	4 5/8"	3 7/8"	4 1/8"	9.8	13.90
P-6141	220-250	50-60	110-125	500	K	4 5/8"	3 7/8"	5 1/4"	14.5	21.00
P-6124	220-250	50-60	110-125	1000	F	7 3/8"	6"	6 1/8"	30.0	40.00

*Mounted in special can and equipped with cord, plug and receptacle.

Isolation Transformers

These transformers are designed with an electrostatic shield to isolate line noises and interference from the apparatus being used. They are suitable for screen test booths, electrical therapeutic machines, medical instruments, beauty parlor equipment, electric furnaces, amateur transmitters, etc. Each unit complete with a 6 ft. cord and plug and a female receptacle. Units in first group are straight Isolation types; second group are step-down isolation units. Tap switch controls primary voltage, except on Nos. P-6123, P-6125, P-6389 and P-6390.

Stancor Number	Watts	Primary	Secondary	Type Mounting	Mounting Dimensions			Weight in Carton	List Price
					H	W	D		
P-6160	100	125 115 105	115	KA	4 5/8"	3 3/8"	3 3/8"	5.5 lbs.	\$17.25
P-6161	250	125 115/105	115	KA	4 5/8"	3 3/8"	5 1/4"	14.0 lbs.	34.00
P-6298	500	125 115/105	115	FK	7 3/8"	6"	6 1/4"	37.0 lbs.	49.50
P-6125	1000	125/115 105	115	FK	7 1/2"	7 3/8"	6 1/2"	50.0 lbs.	60.90
P-6123	1500	125/115 105	115	FK	7 1/2"	7 1/8"	7 1/2"	60.0 lbs.	76.70

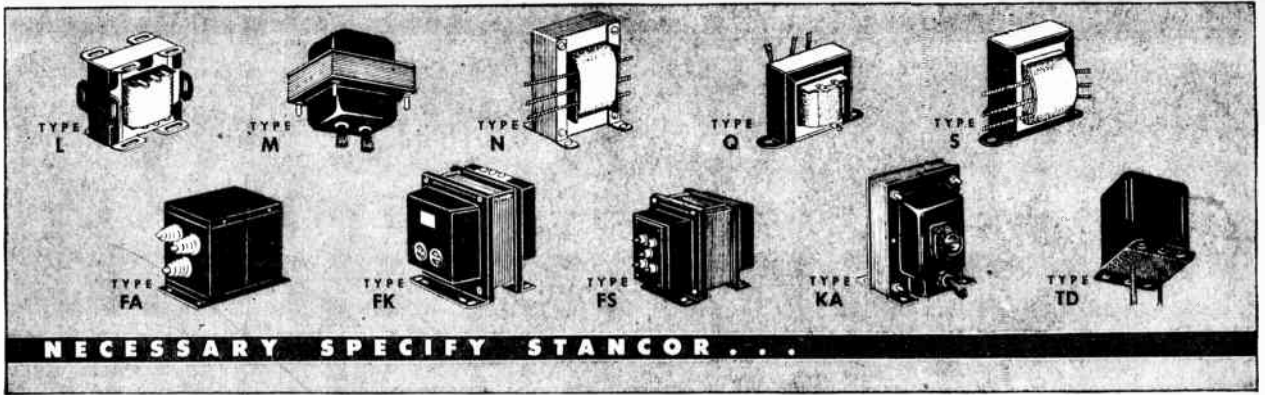
NOTE: Type FK is Type F with female receptacle mounted in side.

Stancor Number	Watts	Primary	Secondary	Type Mounting	Mounting Dimensions			Weight in Carton	List Price
					H	W	D		
P-6383	100	250 230 210	115	KA	4 3/4"	4"	3 5/8"	7.3	\$17.65
P-6385	250	250 230 210	115	KA	4 3/4"	4"	5 3/8"	14.2	29.80
P-6387	500	250 230 210	115	FK	7 5/8"	6 3/8"	7 1/8"	29.5	45.95
P-6389	1000	250 230 210	115	FK	7 3/4"	7 3/8"	6 3/8"	31.8	60.90
P-6390	1500	250/230 210	115	FK	7 3/4"	7 3/8"	8 1/2"	49.8	76.70

Universal Speaker Field Substitute Choke

Designed for the service department, to take the place of the speaker field on the test bench. Packed complete with full instructions.

Stancor No.	D. C. Resistance in Ohms	Resistance and Current Rating	Type Mtg.	Dimensions			Wgt. in Ctn.	List Price
				H	W	D		
C-2302	3000 tapped at 2500, 1000 and 750	250, 750, 1000, 1750 ohms—60 Ma. cont. or 75 Ma. Int. Duty 500, 1500, 2000, 2250, 2500, 3000 ohms—40 Ma. cont. or 55 Ma. Int. Duty	B	3 3/4"	2 3/8"	3"	2.6	\$7.50



Stancor No.	Rated Inductance in Henries	Maximum Current in Ma.	D.C. Resistance in Ohms	Volts Insulation	Type Mtg.	Mounting Dimensions			Wgt. in Ctn.	List Price
						H	W	D		
C-1515	20	15	900	1650	A	1 3/8"	2 3/8"	1 3/4"	0.7	\$1.80
C-1706	4.5	50	300	1650	A	1 3/8"	2 3/8"	1 3/4"	0.5	1.60
C-1707	7	50	500	1650	A	1 3/8"	2 3/8"	1 3/4"	0.5	1.60
C-1003	16	50	580	1650	A	1 3/8"	3 3/8"	1 5/8"	1.4	2.15
C-1708	13	65	460	1650	A	1 7/8"	3 1/4"	2 13/16"	1.1	2.35
C-1355	8	75	275	1650	L	2 1/4"	2 3/8"	1 3/4"	1.2	2.50
C-1002	15	75	400	1650	A	2 1/4"	3 11/16"	1 7/8"	1.7	2.95
C-1420	16	80	350	2000	C	3 3/8"	2 5/8"	2 1/2"	2.6	4.30
C-1709	8	85	250	1650	A	1 7/8"	3 1/4"	2 13/16"	1.5	2.75
C-2305	5	100	275	2000	TD	2 11/16"	2 3/4"	2 3/16"	1.7	4.00
C-1001	10.5	110	200	3000	A	2 1/2"	4"	2"	2.4	3.70
C-2303	2.5	130	100	2000	A	2"	3 3/8"	1 3/8"	1.4	2.50
C-1421	7	140	160	3000	C	3 3/16"	2 5/8"	2 1/2"	2.7	5.30
C-2304	2.3	150	65	2000	A	2"	3 3/8"	1 5/8"	1.4	2.60
C-2309	3	150	90	2000	A	2 1/4"	3 11/16"	1 3/8"	1.5	2.80
C-1710	7	150	200	1650	A	2 1/2"	4"	2 3/16"	2.3	3.50
C-1410	4.0	175	100	3000	C	3 3/8"	2 5/8"	2 1/2"	2.7	5.10
C-1646	5.0	200	70	5000	C	4"	3 1/4"	3 3/8"	4.7	7.30
C-1411	4.5	200	80	3000	C	3 5/8"	2 13/16"	3 1/4"	4.0	6.10
C-1721	8.5	200	120	3000	N	4"	3 1/4"	3 3/4"	4.5	6.30
C-1703	1.0	250	60	3000	B	3 1/2"	2 13/16"	3 1/2"	3.9	6.95
C-1412	4.0	250	60	3000	C	3 3/8"	2 13/16"	3 1/4"	4.8	7.70
C-1722	8.0	300	80	3000	N	4 1/2"	3 3/4"	3 1/2"	8.5	8.50
C-2308	8.0	300	80	3000	C	4 5/8"	3 7/8"	3 7/8"	9.0	9.90
C-1413	8.0	300	80	5000	D	4 5/8"	3 7/8"	3 7/8"	8.5	11.50
C-1414	7.5	400	60	5000	D	4 5/8"	3 7/8"	4 7/8"	13.5	15.85
C-1415	6.0	500	70	7500	FS	8 3/8"	6"	5 3/4"	17.0	32.80

Stancor No.	Inductance in Henries	Maximum Current in Ma.	D.C. Resistance in Ohms	Volts Insulation	Type Mtg.	Mounting Dimensions			Wgt. in Ctn.	List Price
						H	W	D		
C-1718	13.5-3.5	150	130	2000	C	3 3/8"	2 5/8"	2 1/2"	2.5	\$5.00
C-1400	12-2	175	100	3000	C	3 3/8"	2 5/8"	2 1/2"	2.7	5.30
C-1401	12-2	200	80	3000	C	3 3/4"	2 13/16"	3 1/8"	3.5	6.50
C-1645	12-2	200	90	5000	C	3 3/8"	3 3/4"	3 3/8"	4.7	7.30
C-1719	18-3	200	120	3000	N	3 3/4"	3 1/4"	3 1/4"	5.0	6.95
C-1702	12-2	250	60	3000	B	3 1/2"	2 13/16"	3"	3.9	6.95
C-1402	12-2	250	60	3000	C	3 3/8"	2 13/16"	3 1/8"	4.6	7.70
C-1720	20-4	300	80	3000	N	4 1/2"	3 3/4"	3 1/2"	8.5	8.80
C-2307	20-4	300	80	3000	C	4 5/8"	3 7/8"	3 7/8"	9.0	9.90
C-1403	20-4	300	80	5000	D	4 5/8"	3 7/8"	3 7/8"	8.4	11.25
C-1404	17-3	400	60	5000	D	4 5/8"	3 7/8"	4 7/8"	12.3	15.85
C-1405	16-4	500	75	7500	FS	8 3/8"	6"	5 3/4"	17.0	32.80

Stancor No.	Rated Inductance in Henries	Inductance Measured at Ma.	Maximum Current Ma.	D.C. Res. Ohms	Volts Insulation	Type Mtg.	Mounting Dimensions			Wgt. in Ctn.	List Price
							H	W	D		
C-2300	70.0	0.5	10	5400	1500	TD	2 11/16"	2 3/4"	2 3/8"	1.5	\$4.75
C-2301	135.0	5	10	6500	1500	TD	2 11/16"	2 3/4"	2 3/8"	1.8	5.20
C-1701*	175.0	10	10	12200	1500	D	3 3/8"	2 5/8"	3 1/2"	2.5	8.35

*Center tapped.

Filter Chokes (REPLACEMENT TYPES)

These chokes include all commonly used ratings for units of their type. Since inductance varies with the amount of D.C. flowing through the coil these units have been tested under uniform conditions. Filter chokes are rated at 10 Volts 60 Cycles with maximum D.C. in winding. Swinging chokes are rated at 10 Volts 60 Cycles from maximum to 10% of maximum D.C. in windings. Audio chokes are rated at 2 Volts 200 Cycles with maximum D.C. in winding. Tolerance of plus 15% is maintained on all ratings.

Filter Chokes (HEAVY DUTY TYPES)

Swinging Chokes

A.C.-D.C. Chokes

Output Chokes

Audio Reactors

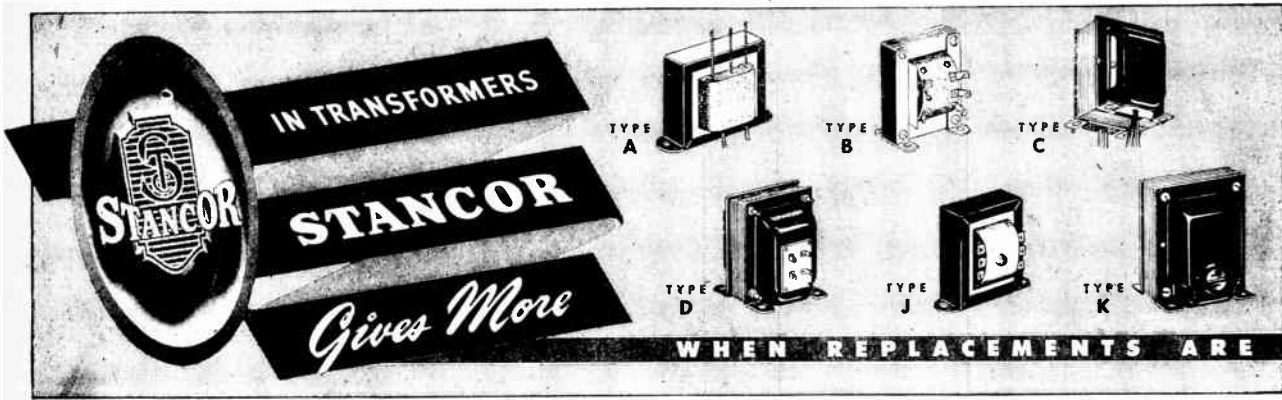


Plate Transformers

This group of transformers is designed primarily to deliver the rated D.C. voltage and current outputs when used with full-wave mercury vapor rectifier tubes in conjunction with a two section filter employing choke input and two 2 mfd. condensers working into a resistive load. Generous coil and core design result in a transformer with above average regulation and efficiency. Phenolic terminal boards and heavy duty ceramic insulators assure protection from voltage breakdown.

Stancor No.	Primary Voltage	D.C. Voltage After Filter	Taps	MA. D.C.		Type Mtg.	Mounting Dimensions			Wgt. in Ctn.	List Price
				I C A S	C C S		H	W	D		
P-8040	115	400	40	375	300	C	4 3/4"	4"	4 1/2"	12.3	\$14.25
P-8041	115	500	400-40	310	250	C	4 3/4"	4"	5 1/8"	9.0	17.50
P-8042	115	600	400-40	375	300	C	4 3/4"	4"	6 1/2"	16.5	23.50
P-8043	115	750	600-40	375	300	FS	7 1/2"	6 1/8"	8"	27.2	43.50
P-8044*	115	1000	400	190-190	150-150	FS	7 1/2"	6 1/8"	8 1/4"	28.0	45.50
P-8045	115	1000	750	310	250	FS	7 1/2"	6 1/8"	8"	27.2	43.50
P-8025	115	1000	750	500	400	FS	7 1/2"	6 1/8"	8 3/4"	35.5	45.30
P-8026	115	1250	1000	375	300	FS	7 3/8"	7 3/8"	8 1/4"	36.0	54.00
P-8027	115	1250	1000	625	500	FS	7 3/8"	7 3/8"	9"	40.0	58.80
P-8028	115	1500	1250	375	300	FS	7 3/8"	7 3/8"	8 1/2"	38.0	56.00
P-8029	115-230	1500	1250	625	500	FS	11 1/4"	7 3/8"	8 3/4"	52.0	74.00
P-8030	115	1750	1500	375	300	FS	7 3/8"	7 3/8"	9"	40.0	62.00
P-8031	115-230	1750	1500	625	500	FS	11 1/4"	7 3/8"	8 3/4"	52.0	88.50
P-8032	115	2000	1750	375	300	FS	7 3/8"	7 3/8"	9 1/4"	45.0	71.00
P-8033	115-230	2000	1750	625	500	FS	11 1/4"	7 3/8"	9 1/2"	57.0	102.00
P-8034	115-230	2500	2000	375	300	FS	11 1/4"	7 3/8"	8 3/4"	52.0	86.80
P-8035	115-230	2500	2000	575	500	FS	11 1/4"	7 3/8"	9 3/4"	60.0	112.00

* Secondary with taps suitable for dual rectifier supply. Each output available at rated current.
 Note: Transformers with more than one high voltage output have secondary with taps suitable for dual rectifier supply. Total current should not exceed rating.

Bias Transformers

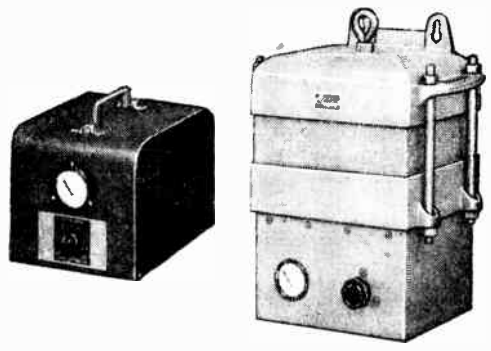
Stancor No.	D.C. Output		Filament		Primary Volts	Type Mtg.	Dimensions			Wgt. in Ctn.	List Price
	Volts	Ma.	Volts	Amps.			H	W	D		
P-6317	90-130-170-200	200	5 C. T.	3	115	CD	3 3/8"	3 1/4"	3 3/4"	4.9	\$14.00
P-6318	250-350-400-450	200	5 C. T.	3	115	CD	4 3/4"	3 3/8"	4 1/4"	7.0	16.00

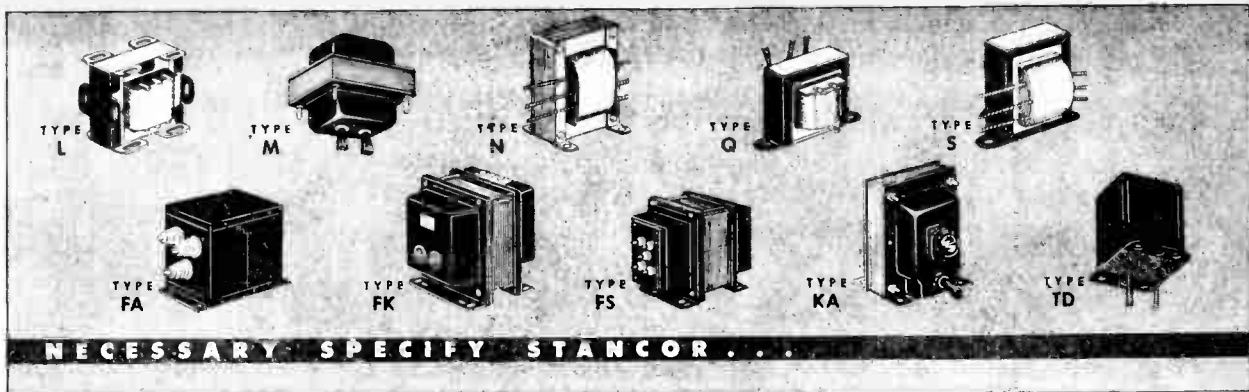
Above plate and bias transformers are for listed voltage 60 cycle operation. Other voltage and frequency combinations available on special order. Write for quotations.

STANCOR VOLT ADJUSTERS

STANCOR'S volt-adjuster is the answer to the fluctuating voltage problem. It is a compact unit containing a ruggedly constructed step-up; step down autoformer.

The primary winding accommodates various voltages in 10 volt steps. A 10 position tap switch with an off position permits changing of the primary winding when a voltage shift occurs, and through this switch the output may be changed and kept at 115 or 230 volts. A meter with 0-150 or 0-250 volt range indicates the output at all times. The nominal output is indicated on the meter face by a red line. Unit is housed in beautiful black wrinkle finish case. Available in eight sizes ranging from 150 V. A. to 5,000 V. A., in both 115 V. and 230 V., 50-60 cycle types.





Stancor No.	Primary Voltage	Secondary		Type Mtr.	Mounting Dimensions			Sec. Volts Insulation	Wgt. in Ctn.	List Price	
		Volts	Ampere		H	W	D				
P-4026	115	2.5 C.T.	1.5	A	1 1/8"	1 3/16"	2 1/8"	2,500	0.5	\$3.00	
P-4082	105-115	2.5 C.T.	2.5	TD	2 1/16"	2 1/4"	2 3/16"	2,500	1.4	6.00	
P-6133	115	2.5 C.T.	5	S	2 1/16"	2 1/4"	2 3/16"	7,500	2.7	4.50	
P-4083	105-115	2.5 C.T.	6	C	3 1/4"	2 3/8"	2 3/8"	2,500	2.2	6.50	
P-3024	105-115	2.5 C.T.	10	C	3 1/4"	2 3/8"	2 3/8"	2,500	2.7	6.25	
P-3060	115	2.5 C.T.	10	B	3 1/2"	2 3/8"	2 3/8"	10,000	3.0	5.70	
P-3025	105-115	2.5 C.T.	10	FA	5"	1 1/4"	8 1/2"	10,000	5.3	16.50	
P-3026	105-115	5.0 C.T.	3	C	3 1/4"	2 3/8"	2 3/8"	2,500	2.5	6.00	
P-4088	115	5.0 C.T.	3	B	3 1/2"	2 3/8"	2 3/8"	2,500	2.0	4.80	
P-3062	115	5.0 C.T.	6	B	3 1/2"	2 3/8"	2 3/8"	2,500	2.3	5.50	
P-5000	105-115	5.0 C.T.	6	C	3 1/4"	2 3/8"	2 3/8"	2,500	3.2	6.50	
P-6135	115	5.0 C.T.	10	N	3 1/4"	2 3/8"	3 1/4"	2,500	3.1	6.00	
P-4086	105-115	5.0 C.T.	11	FA	5"	1 1/4"	8 1/2"	10,000	9.4	19.50	
P-6302	105-115	5.0 C.T.	22	FA	5"	1 1/4"	8 1/2"	10,000	12.0	21.10	
P-6305	105-115	5.0 C.T.	30	FB	5"	1 1/4"	10"	10,000	17.1	22.00	
P-6136	115	5.25 C.T.	4	S	2 1/8"	2 1/4"	2 1/4"	2,500	2.3	4.45	
P-6137	115	5.25 C.T.	13	N	3 1/4"	3 1/4"	3 3/8"	2,500	4.2	7.60	
P-5011	105-115	5.25 C.T.	13	C	3 1/4"	3 1/4"	3 3/8"	2,500	5.8	8.75	
P-6134	115	6.3 C.T.	1.2	A	1 1/8"	2 1/16"	1 1/2"	2,500	0.6	2.65	
P-5014	115	6.3 C.T.	3	B	3 1/2"	2 3/8"	2 3/8"	2,500	2.0	4.50	
P-4019	105-115	6.3 C.T.	4	C	3 1/4"	2 3/8"	2 3/8"	2,500	2.8	5.75	
P-3064	115	6.3 C.T.	6	B	3 1/2"	2 3/8"	2 3/8"	2,500	2.4	5.50	
P-4089	105-115	6.3 C.T.	6	C	3 1/4"	2 3/8"	3 1/4"	2,500	3.7	6.50	
P-6308	105-115	6.3 C.T.	10	N	3 1/4"	2 3/8"	3 1/4"	2,500	4.0	6.40	
P-6309	115	6.3 C.T.	20	N	4 1/4"	3 1/4"	3 3/8"	2,500	7.5	12.50	
P-5015	115	7.5 C.T.	4	B	3 1/2"	2 3/8"	2 3/8"	2,500	2.5	4.50	
P-4091	105-115	7.5 C.T.	5	C	3 1/4"	2 3/8"	2 3/8"	2,500	4.0	7.75	
P-6138	115	7.5 C.T.	8	N	3 1/4"	3 1/4"	3 1/2"	2,500	4.1	7.60	
P-4092	105-115	7.5 C.T.	8	C	3 1/4"	3 1/4"	3 3/8"	2,500	5.6	8.00	
P-4094	105-115	7.5 C.T.	15	FA	5"	1 1/4"	8 1/2"	5,000	7.8	22.00	
P-4093	105-115	7.5 C.T.	24	FB	5"	1 1/4"	10"	5,000	15.8	25.00	
P-5016	115	10.0 C.T.	4	B	3 1/2"	3"	2 3/4"	2,500	3.0	6.00	
P-4096	105-115	10.0 C.T.	5	C	3 1/4"	3 1/4"	3 3/8"	2,500	4.6	8.25	
P-6139	115	10.0 C.T.	8	N	3 1/4"	3 1/4"	3 1/2"	2,500	4.1	7.45	
P-4097	105-115	10.0 C.T.	8	C	3 1/4"	3 1/4"	3 3/8"	2,500	5.8	8.50	
P-5002	105-115	10.0 C.T.	12	FA	5"	1 1/4"	8 1/2"	7,500	11.6	20.00	
P-3020	105-115	11.0 C.T.	10	C	4 3/8"	3 3/4"	3 3/8"	2,500	7.8	12.50	
P-6164	115	*6.3, 5, 2.5	2.5	B	2 3/8"	2 1/4"	2 3/8"	2,500	1.8	4.50	
P-5012	105-115	2.5 C.T.	10.0	FA	5"	4 1/4"	8 1/2"	10,000	7.5	\$26.00	
		5.0 C.T.	3.0								
P-3061	115	2.5 C.T.	5.0	B	3 1/2"	2 3/8"	3"	2,500	3.5	7.50	
		7.5 C.T.	4.0								
P-6324	105-115	5.0 C.T.	3.0	C	3 1/4"	3 1/4"	3 3/8"	2,500	5.0	12.00	
		2.5 C.T.	6.0								
P-5009	105-115	5.0 C.T.	3.0	C	3 1/4"	3 1/4"	3 3/8"	2,500	4.7	10.65	
		6.3 C.T.	6.0								
P-5008	105-115	5.0 C.T.	4.0	C	3 1/4"	2 3/16"	3 1/4"	2,500	1.0	9.30	
		6.3 C.T.	3.6								
P-4022	105-115	5.0 C.T.	6.0	C	3 1/4"	3 1/4"	3 3/8"	2,500	5.0	10.50	
		6.3 C.T.	6.0								
P-4090	115	6.3 C.T.	3.0	B	3 1/2"	2 3/8"	3"	2,500	3.7	7.50	
		7.5 C.T.	4.0								
P-6144	115	2.5 C.T.	3.5	C	3 3/8"	2 3/16"	3 1/8"	2,500	4.0	9.70	
		5.0 C.T.	3.0								
		6.3 C.T.	3.0								
P-4084	105-115	5.0 C.T.	3.0	C	3 1/4"	3 1/4"	3 3/8"	2,500	5.6	12.00	
		6.3 C.T.	3.6								
		7.5 C.T.	3.25								
P-6310	105-115	2.5 C.T.	*2.5	4.0	C	3 3/8"	2 3/16"	3 1/8"	2,500	3.7	10.45
		2.5 C.T.									
P-6333	115	7.5, 6.3 C.T.	3.0	B	2 3/8"	3 3/8"	2 3/4"	2,500	4.6	10.25	
		*5.0	3.0								
		*3.0	3.0								
		*6.3	4.0								
P-6338	115	6.3 *2.5, *5.0	3.0	N	3 1/4"	2 3/8"	2 3/4"	2,500	4.0	9.10	
		5.0 C.T.	2.0								

Filament Transformers
Single Secondary
 This group of filament transformers represents a complete listing of all commonly used electrical and physical specifications for units of this type. All transformers except those especially indicated have center taps. They are designed to provide accurate voltage output at rated loads with good regulation. Generous insulation provides a safety factor over and above the test voltage as indicated. Each group of transformers by voltage ratings is available in several convenient mounting styles which lend themselves to most applications.

Multiple Secondary

*Windings not center tapped. Other voltage and frequency combinations available on special order. Write for quotations



Modulation Transformers

Poly-Pedance Modulation Transformers

Stancor No.	Max. Aud. Watts	Pri. Ma. Per Side	Secondary Ma.		Type Mtg.	Dimensions			Wgt. in Ctn.	List Price
			Series	Parallel		H	W	D		
A-3891	15	45	45	90	D	3 $\frac{3}{16}$ "	2 $\frac{5}{8}$ "	3 $\frac{1}{8}$ "	2.5	\$12.00
A-3892	30	80	80	160	D	3 $\frac{3}{8}$ "	3 $\frac{1}{4}$ "	3 $\frac{3}{8}$ "	6.0	12.00
A-3893	60	125	125	250	D	3 $\frac{3}{4}$ "	3 $\frac{1}{4}$ "	4 $\frac{3}{8}$ "	7.3	14.00
A-3894	125	150	150	300	D	4 $\frac{5}{8}$ "	3 $\frac{3}{8}$ "	5"	12.0	18.45
A-3898	300	260	260	520	FS	7 $\frac{5}{8}$ "	7 $\frac{1}{4}$ "	9"	40.0	57.85
A-3899	600	350	350	700	FS	11 $\frac{1}{4}$ "	7 $\frac{1}{4}$ "	9"	75.0	119.35

Plate Modulation Transformers

Listings cover two distinct groups of transformers, universal or Poly-pedance and specific types. The latter group covers the most frequently used ratios, core sizes and mounting styles. They should be used in permanent installations whenever possible since their design permits the best efficiency and fidelity for units of this type. Poly-pedance transformers are ideally suited for use in experimental or temporary equipment, such as schools, laboratories, etc., since they are provided with a large number of taps to permit the user to secure the widest practical range of impedance match. All units represent outstanding values.

Stancor No.	Output Tubes	Class	Impedance		D.C. Pri. Ma.	D.C. Sec. Ma.	Max. Audio Watts	Type Mtg.	Dimensions			Wgt. in Ctn.	List Price
			Pri.	Sec.					H	W	D		
A-3812	1-1G6, 1J6, 19, 6E6, 6G6, 6Z7, P.P. 1H4, 30, 49, 1-1G5, 6K6, 37, 38, 41	B	10,000	4,000	32	50	5	A	1 $\frac{5}{8}$ "	2 $\frac{3}{8}$ "	1 $\frac{1}{2}$ "	0.7	\$2.90
A-3871	1-6B5*, 6F6*, 6L6, 6N6*, HY69	A1	4,500	8,500	60	50	10	TD	2 $\frac{11}{16}$ "	2 $\frac{3}{4}$ "	2 $\frac{3}{16}$ "	1.8	\$5.75
A-3873	P.P. 6L6, RK56, HY60	AB1	8,500	8,000	100	100	25	C	3 $\frac{3}{16}$ "	2 $\frac{5}{8}$ "	3 $\frac{3}{8}$ "	6.1	8.80
A-3845	1-6A6, 6N7, 53, 79, 6Y7 P.P. 6F6, 6V6, 2A5, 42	B AB2	10,000	3,000, 5,000, 6,500, 8,000	100	100	25	C	3 $\frac{3}{16}$ "	2 $\frac{5}{8}$ "	2 $\frac{3}{4}$ "	3.5	6.15
A-3835	P.P. 2A3, 6A3, 45 6A5, 6B4, 50, P.P. 6L6	AB A1	3,000, 5,000	5,350, 8,350, 10,000	80	100	25	C	3 $\frac{3}{8}$ "	3 $\frac{1}{4}$ "	3 $\frac{3}{8}$ "	5.2	7.90
A-3868	P.P. 6L6	AB1	6,600	10,000, 12,000	100	70	35	C	3 $\frac{3}{16}$ "	2 $\frac{5}{8}$ "	3 $\frac{5}{8}$ "	6.1	8.40
A-2906	P.P. 10, HK24, 46, 59, 801, 1602 P.P. 6L6, 50, HY69	B AB	6,000	3,300, 4,000, 5,000, 6,250	200	125	40	D	4 $\frac{1}{4}$ "	3 $\frac{1}{2}$ "	4 $\frac{3}{4}$ "	7.0	12.40
A-3843	P.P. 6L6, RK56, HY60	AB1	6,600	5,000, 7,500, 14,500	150	150	40	D	4 $\frac{1}{4}$ "	3 $\frac{1}{2}$ "	4 $\frac{3}{4}$ "	7.0	11.90
A-3874	P.P. 6L6	AB1	6,000	500, 2,800	100	200	50	C	4 $\frac{1}{4}$ "	3 $\frac{1}{2}$ "	3 $\frac{3}{4}$ "	6.5	10.35
A-3808	P.P. 6L6, 807, HY61, RK41 P.P. PAR. 6L6	AB2 AB1	3,800	4,000, 5,000, 7,500, 10,000	260	170	60	D	4 $\frac{5}{8}$ "	3 $\frac{3}{4}$ "	4 $\frac{3}{4}$ "	7.7	13.25
A-2907	P.P. 10, T20, TZ20, HY25, 46, 801, 825, 841	B	8,000	3,300, 5,000, 6,800, 9,000, 12,500	200	150	90	D	4 $\frac{5}{8}$ "	3 $\frac{3}{8}$ "	5 $\frac{1}{4}$ "	10.2	14.55
A-2908	P.P. RK18, T20, TZ20, HY25, RK31, 35T, 50T, 800, 801, 830B, 1623	B	7,200, 12,000	3,000, 4,500, 5,350, 6,250	260	220	120	D	4 $\frac{5}{8}$ "	3 $\frac{3}{4}$ "	5 $\frac{5}{8}$ "	10.4	15.35
A-3829	P.P. RK12, HY25, 35T, HY40Z, T40, TZ40, 100TL, HK354, 756, 809, 830B	B	6,900, 9,000	3,300, 4,000, 5,000, 6,250	250	300	175	D	4 $\frac{5}{8}$ "	3 $\frac{3}{4}$ "	6 $\frac{1}{4}$ "	11.8	16.55

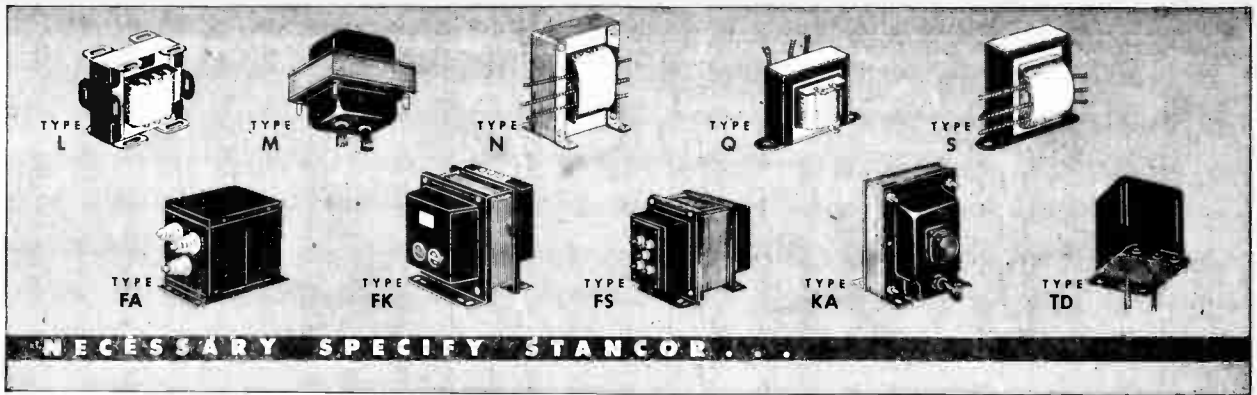
* Secondary winding used as primary.

Cathode Modulation Transformers

Stancor No.	Impedance		D.C. Pri. Ma.	D.C. Sec. Ma.	Max. Audio Watts	Type Mtg.	Dimensions			Wgt. in Ctn.	List Price
	Pri.	Sec.					H	W	D		
A-3888	4000, 6000, C.T.	150, 250, 500, 750, 1000, 1500, 2000, 2500	50	250	25	D	3 $\frac{3}{16}$ "	2 $\frac{5}{8}$ "	3 $\frac{3}{4}$ "	3.0	\$10.70
A-3889	4000, 6000, C.T.	150, 250, 500, 750, 1000, 1500, 2000, 2500	125	450	60	D	3 $\frac{3}{8}$ "	3 $\frac{1}{4}$ "	4 $\frac{1}{4}$ "	4.8	12.55

Modulation Transformers Line to R.F. Load

Stancor No.	Ohms Impedance		D.C. Sec. Ma.	Max. Audio Watts	Type Mtg.	Dimensions			Wgt. in Ctn.	List Price
	Primary	Secondary Load				H	W	D		
A-3834	500, 200	4,000, 6,000, 9,500	150	30	C	4 $\frac{1}{16}$ "	3 $\frac{3}{16}$ "	3 $\frac{1}{2}$ "	6.5	\$11.40
A-3866	500, 200	5,000, 6,000, 7,000, 8,000, 9,000, 10,000	150	30	D	4 $\frac{1}{16}$ "	3 $\frac{3}{16}$ "	3 $\frac{1}{2}$ "	6.5	12.15



Stancor No.	Capacity in Watts	Primary Ma Per Side	Ratio Primary to 1/2 Secondary	Dimensions			Type Mtg.	Wgt. in Ctn.	List Price
				H	W	D			
A-4761	15	60	1.25:1, 1:1, 1.6:1, 1.8:1, 2:1, 2.2:1, 2.4:1	3 1/16"	2 5/8"	3 3/4"	CD	3.0	\$13.00
A-4762	15	60	2.6:1, 3:1, 3.2:1, 3.4:1, 4:1, 4.5:1, 5:1	3 1/16"	2 5/8"	3 3/4"	CD	2.8	12.10
A-4763	30	120	1.25:1, 1.5:1, 1.75:1, 2:1, 2.25:1, 3.2:1	3 5/8"	3"	4"	CD	4.3	13.95
A-4764*	30	120	1.5:1, 2:1, 2.5:1, 3:1, 3.5:1	3 5/8"	3"	4"	CD	4.3	15.00

*P.P. 6L6's with 16% inverse feedback.

Driver Transformers Poly-Pedance

Stancor No.	Capacity in Watts	Ratio Primary to 1/2 Secondary	Dimensions			Type Mtg.	Wgt. in Ctn.	List Price
			H	W	D			
A-4765	15	1:0.75, 1:0.85, 1:1, 1:1.25, 1:1.45, 1:1.75, 1:2, 1:2.25, 1:2.5, 1:2.75, 1:3.15	3 1/16"	2 5/8"	3 1/2"	CD	3.0	\$13.50
A-4766	30	1:0.75, 1:0.85, 1:1, 1:1.2, 1:1.45, 1:1.75, 1:2, 1:2.25, 1:2.5, 1:2.75, 1:3.15	3 5/8"	3"	3 3/4"	CD	4.0	14.85

Poly-Pedance Line Driver Transformers

Stancor No.	From	To	Class	Impedance		Ratio Pri. to 1/2 Sec.	D.C. Pri. Ma.	Type Mtg.	Mounting Dimensions			Wgt. in Ctn.	List Price
				Pri.	1/2 Sec.				H	W	D		
A-4752†	P.P. or Sgl. 45, 6F6, 2A3, 42, 6K6, 6N7, 6C5	P.P. 6K6, 2A5, 42, 6F6, 6L6, 6V6, 6Y6, 6Z7	AB	10,000	1,000	1:1, 4:400, 1.5:1, 2:1	35	S	2 1/4"	2 1/8"	1 1/8"	1.3	4.00
A-4405	Sgl. 45, 6F6, 42, 2A5, 6K6, 41	P.P. 42, 89, 2A5, 6F6, 6V6, 6Z7	B	10,000	6,400	1.24:1	40	C	3 3/8"	2 5/8"	2 5/8"	2.7	6.50
A-4406	P.P. 2A3, 6A3, 45	P.P. 50T, 151, 203A, 1F100, 1F200, 825	B	18,500	6,250	1.71:1	95	C	3 3/8"	2 5/8"	2 5/8"	2.6	6.80
A-4721	Sgl. 2A3, 6A3, 45, 46, 59, 42, 6F6, 2A5, 89, 53, 6A6, 6N7, 6C5, 37, 30, 1H4	P.P. 116, 19, 79, 6Z7, 51, 6N7, 42, 45, 6F6, 46, 49, 2A5, 59, 89, 6K6, TZ20	B	10,000	2,500	2:1, 3:1	30	TD	2 1/16"	2 3/4"	2 1/16"	1.5	5.70
A-4404	P.P. 2A3, 6A3, 45, 6L6, 6V6	P.P. 819, P.P. 800, 830B, 10, RK18, 1F100, 811, P.P. 154, 812, 203A, 838, 211, 203Z, RK38, 1F100, 10CTL, 1F200, 822, 1H203A, 351, 150T	A B	14,000	3,500	2:1	90	C	3 5/8"	3"	3 1/8"	3.7	7.30
A-4292	Sgl. 6C5, 6J5, 30, 1H4, 49	P.P. 116, 19, 79, 6Z7, 30, 1H4, 49	B	10,000	1,600	2.5:1	10	A	1 5/8"	2 1/16"	1 1/2"	0.7	2.60
A-4208‡	P.P. 6C5, 6J5, 6N7, 6L5, 56, 27, 76, 55, 85, 6R7	P.P. 2A3, 2A5, 6A3, 6F6, 6L6, 6V6, 42, 45, 56, 59, 89	AB	25,000	3,200	2.79:1	15	C	3 3/8"	2 5/8"	2 5/8"	2.5	6.20
A-4210	Sgl. 2A3, 6A3, 45, 46, 59, 2A5, 6F6, 42, 89, 6C5, 6N7, 76	P.P. 2A3, 6A3, 46, 59, P.P. 2A5, 42, 45, 6F6, 6L6, 807	B AB	22,500	2,500	3:1	40	C	3 3/8"	2 5/8"	2 5/8"	2.6	5.50
A-4701‡	P.P. 46, 89, 6C5, 6J5, 56, 37, 27, 76	P.P. 6L6, 6V6, 6Y6, 42, 6F6, 45, 2A3, 6A3	AB1	20,000	2,200	3.1:1	25	C	3 1/16"	2 5/8"	2 5/8"	2.7	6.35
A-4212	P.P. 2A3, 6A3, 45, 6L6	P.P. 801, 830B, 35T, 808, 838, RK57, HY40Z, 805, 828, 756, 100TL, 100TIL, TZ20, T110, P.P. Par. 46, 59, PP, 807	B	25,600	2,500	3.2:1	50	C	3 1/16"	2 1/8"	2 5/8"	2.6	6.15
A-4216	Sgl. 53, 6A6, 6N7, 79, 6E6	P.P. 53, 6A6, 6N7, 6E6, 6N6, 89	B	25,000	1,000	5:1	15	TD	2 1/16"	2 3/4"	2 1/16"	1.5	5.50
A-4416‡	P.P. 2A3, 45, 46, 59, 6F6, P.P. 53, 6A6, 6N7	P.P. 6L6, 6V6, P.P. Par. 46, 59, P.P. Par. 53, 6A6, 6N7	AB2 B	30,000	1,200	5:1	40	C	3 1/16"	2 5/8"	2 5/8"	2.7	6.60
A-4702‡	Sgl. 2A3, 45, 46, 89, 2A5, 6F6, 42	P.P. 6L6, 6V6, 6F6, 45, P.P. Par. 6L6	AB2 AB1	50,000	2,000	5:1	80	C	3 1/16"	2 5/8"	2 5/8"	2.7	5.80
A-4703‡	P.P. 2A3, 45, 46, 6L6, 89, 6F6, 2A5, 42	P.P. 807, HY61, P.P. Par. 6L6	AB2	10,000	325	5.6:1	95	C	3 5/8"	3"	3 1/8"	3.8	7.50

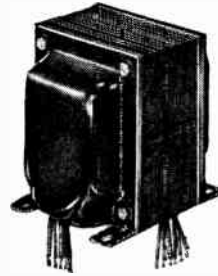
†P.P. primary ratio is 2:1. ‡Split Secondary.

Two distinct groups of driver transformers are shown. Tapped or Poly-pedance and specific or fixed ratio types. Poly-pedance units are especially designed for experimental and laboratory work where it is desirable to change the turns ratio to optimum value. Two power ratings one of which is applicable to circuits employing inverse feedback and two line drivers are available. Specific types are listed in the most frequently used ratios, core sizes and mounting styles. They should be used wherever possible in permanent installations because their design permits the best efficiency and fidelity for units of this type.



STANCOR High Fidelity OUTPUT TRANSFORMERS

Part No.	Pri. Z C. T. Ohms	Sec. Z in Ohms*	Type of Tubes	Class of Operation	Max. Pri. D. C. Per Side	Max. Audio Watts	Type of Mtg.	Weight in Carton	List Price
A-8050	1500	8, 16	P.P. Par. 2A3's	AB	80	50	C	6.5	\$14.20
A-8051	2500	8, 16	P.P. Par. 6L6's	A	150	50	C	6.5	14.20
A-8052	3000	8, 16	P.P. 2A3's	AB	75	25	C	6.5	12.80
A-8053	5000	8, 16	P.P. 6L6's or P.P. 2A3's	A	75	25	C	6.5	12.80
A-8054	9000	8, 16	P.P. 6L6's	AB1	75	25	C	6.5	12.80
A-8060	1500	500	P.P. Par. 2A3's	AB	80	50	C	6.5	14.20
A-8061	2500	500	P.P. Par. 6L6's	A	150	50	C	6.5	14.20
A-8062	3000	500	P.P. 2A3's	AB	75	25	C	6.5	12.80
A-8063	5000	500	P.P. 6L6's or P.P. 2A3's	A	75	25	C	6.5	12.80
A-8064	9000	500	P.P. 6L6's	AB1	75	25	C	6.5	12.80



*WHERE MORE THAN ONE SECONDARY IMPEDANCE IS SHOWN ONLY ONE VALUE IS TO BE USED AT ANY TIME

STANCOR'S ST-202-A TRANSMITTER KIT

A VERSATILE TRANSMITTER WITH EVERY FEATURE AN AMATEUR DESIRES



- 100-125 WATTS INPUT TO FINAL AMPLIFIER
- CW OPERATION
- ALL AMATEUR BANDS BETWEEN 3.5 and 30 MCS.
- BAND-SWITCHING OF EXCITER STAGES
- ONLY TWO TUNING CONTROLS (Exciter and Amplifier)
- SELECTION OF SIX CRYSTAL POSITIONS
- ADJUSTABLE LINE OUTPUT CIRCUIT
- TWO SEPARATE POWER SUPPLIES INCLUDED
- EASE OF CONSTRUCTION (Cable Wiring Harness Supplied)
- COMPACT DESIGN—APROX. 14" x 13" x 9"
- AMPLITUDE OR FREQUENCY MODULATOR MAY BE APPLIED
- AMATEUR NET PRICE OF ST-202-A KIT, LESS ACCESSORIES **User's Net \$92.80**

STANCOR'S POWER PACK MODEL 752

CONTINUOUS OUTPUT RATING—6 Volts @ 12.5 Amperes D.C.—5% max. ripple at full load.

INTERMITTENT OUTPUT RATING—25.0 Amperes D.C. For use with push-button or floor-switch magnetic tuning of all popular car radio receivers.

CONTINUOUS VOLTAGE CHECK—Built-in voltmeter for visual checking of output voltage.

ADJUSTABLE VOLTAGE CONTROL—Tap switch provides selection of proper output voltage for various loads.

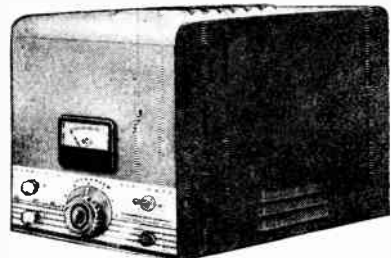
CONSERVATIVE RATING—Built with heavy duty components throughout.

HIGH OVERLOAD CAPACITY—Low internal resistance—good voltage regulation provide high output current capability for intermittent loads.

CONTROL PANEL—Readily accessible at front of case.

STURDY STEEL CASE—Featuring mechanical strength—neat appearance.

User's Net \$43.90



FOR DEMONSTRATING AND SERVICING

- AUTO RADIOS AND OTHER AUTO ACCESSORIES
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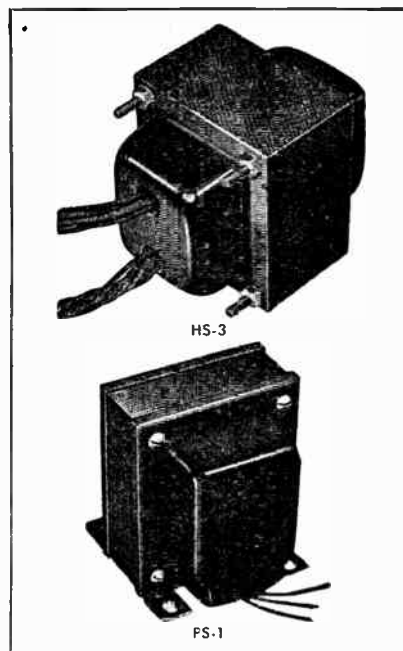
Universal Replacement POWER TRANSFORMERS

FREED



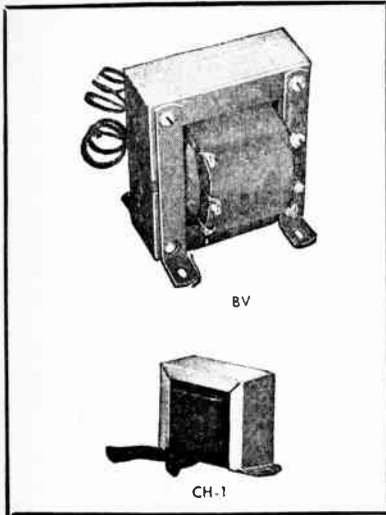
TRANSFORMER CO., INC.

This group of units provides replacement for the majority of existing radio receivers. The design of special mounting angles permits mounting in flush, vertical and horizontal positions. Leads are R.M.A. color coded.



Freed No.	H.V. A.C. Volts	C.T. D.C. Ma.	Rect.		Fil. C.T.		Fil. C.T.		Mounting Type	Mounting Center		Dimensions			Ship. Wt.	List Price
			V.	A.	V.	A.	V.	A.		W	D	W	D	H		
F-410 A	480	40	5	2	6.3	2			PS-1	2	1 7/8	2 1/2	2 5/8	3 3/8	2 1/2	\$5.85
F-411 A	650	40	5	2	2.5	4			PS-1	2	1 1/2	2 1/2	2 3/4	3 3/8	2 3/4	5.85
F-412 A	590	50	5	2	6.3	2			PS-1	2	1 1/2	2 1/2	2 7/8	3 3/8	3	6.30
F-413 A	650	50	5/6.3	2/6	6.3	2.5			PS-1	2	1 1/2	2 1/2	2 7/8	3 3/8	3	6.90
F-414 A	700	50	5	2	2.5	7.5			PS-1	2	1 1/2	2 1/2	2 7/8	3 3/8	3	7.30
F-415 A	700	70	5	2	2.5	9			PS-1	2 1/4	1 7/8	2 3/4	3 1/4	3 3/4	4	7.60
F-416 A	700	70	5/6.3	2/6	6.3	2.5			PS-1	2 1/4	2	2 3/4	3 1/4	3 3/4	4 3/8	7.90
F-417 A	700	70	5	2	6.3	2.5			PS-1	2	2 1/8	2 1/2	3 3/8	3 3/4	4 3/8	7.55
F-418 A	700	90	5	2	2.5	12.5			PS-1	2 1/2	2 1/8	3 3/8	3 3/4	3 3/4	5 1/4	8.75
F-419 A	700	90	5	2	6.3	3.5			PS-1	2 1/2	2 1/8	3 3/8	3 1/2	3 3/4	5	8.30
F-420 A	700	120	5	3	2.5	3.5	2.5	12.5	PS-1	3	2 5/8	3 3/8	3 1/2	4 1/4	6 1/2	10.20
F-421 A	700	120	5	3	6.3	5			PS-1	2 1/2	2 7/8	3 3/8	3 5/8	3 3/4	5 1/4	9.10
F-422 A	750	150	5	3	6.3	5			PS-1	3	2 7/8	3 3/8	3 3/8	4 1/4	6 1/2	10.90
F-423 A	750	150	5	3	6.3	5	2.5	5	PS-1	3	2 7/8	3 3/8	3 3/8	4 1/4	7	12.00
F-424 A	800	200	5	4	6.3	5			PS-1	3	2 1/4	3 3/8	3 7/8	4 1/4	7 3/4	12.45
F-410	480	40	5	2	6.3	2			HS-3	2 1/2	2	3	2 1/2	2 1/2	2 1/2	4.50
F-411	650	40	5	2	2.5	4			HS-3	2 1/2	2	3	2 1/2	2 5/8	2 3/4	4.50
F-412	590	50	5	2	6.3	2			HS-3	2 1/2	2	3	2 1/2	2 3/4	3	4.55
F-413	650	50	5/6.3	2/6	6.3	2.5			HS-3	2 1/2	2	3	2 1/2	2 3/4	3	5.10
F-414	700	50	5	2	2.5	7.5			HS-3	2 1/2	2	3	2 1/2	2 3/4	3	5.75
F-415	700	70	5	2	2.5	9			HS-3	2 1/2	2 1/4	3 3/8	2 1/2	3	4	6.00
F-416	700	70	5/6.3	2/6	6.3	2.5			HS-3	2 1/2	2 1/4	3 3/4	2 1/2	3 1/8	4 3/8	6.35
F-417	700	70	5	2	6.3	2.5			HS-3	2 1/2	2	3	2	3 3/4	4 3/8	5.75
F-418	700	90	5	2	2.5	12.5			HS-3	3 1/8	2 1/2	3 3/4	3 5/8	3 1/2	5 1/4	7.05
F-419	700	90	5	2	6.3	3.5			HS-3	3 1/8	2 1/2	3 3/4	3 3/8	3 1/4	5	6.50
F-420	700	120	5	3	2.5	3.5	2.5	12.5	HS-3	3 3/4	3	4 1/2	2 3/4	3 3/4	6 1/2	8.70
F-421	700	120	5	3	6.3	5			HS-3	3 3/8	2 1/2	3 3/4	3 3/8	3 3/8	5 1/4	7.15
F-422	750	150	5	3	6.3	5			HS-3	3 3/4	3	4 1/2	3 1/4	3 3/4	6 1/2	9.40
F-423	750	150	5	3	6.3	5	2.5	5	HS-3	3 3/4	3	4 1/2	3 3/4	3 3/4	7	10.15
F-424	800	200	5	4	6.3	5			HS-3	3 3/4	3	4 1/2	3 3/4	3 3/8	7 3/8	10.90

The above transformers are designed for primary operation of 115 volts 50-60 cycles. They are also available for 220 volts 60 cycles and 115 volts 25 cycles.



Replacement FILTER CHOKES and VIBRATOR TRANSFORMERS

FREED



TRANSFORMER CO., INC.

REPLACEMENT FILTER CHOKES

Freed No.	Ind. Henry	D.C. Cur.	D.C. Res.	R.M.S. Test Volt.	Mounting Type	Mtg. Centers		Dimensions			Weight	List Price
						W	D	W	D	H		
F-600	2	40	160	1600	CH-1	2		2 3/8	1 5/8	1 1/8	1/2	\$1.40
F-601	4	40	200	1600	CH-1	2		2 3/8	1 5/8	1 1/8	1/2	1.40
F-602	6	40	300	1600	CH-1	2		2 3/8	1 5/8	1 1/8	1/2	1.40
F-603	9	40	400	1600	CH-1	2		2 3/8	1 5/8	1 1/8	1/2	1.40
F-604	11	40	500	1600	CH-1	2		2 3/8	1 5/8	1 1/8	1/2	1.40
F-605	7	55	200	1600	CH-1	2 3/4		2 1/2	1 3/4	1 1/4	3/4	1.45
F-606	9	55	300	1600	CH-1	2 3/4		2 1/2	1 3/4	1 1/4	3/4	1.45
F-607	10	55	400	1600	CH-1	2 3/4		2 1/2	1 3/4	1 1/4	3/4	1.45
F-608	13	55	500	1600	CH-1	2 3/4		2 1/2	1 3/4	1 1/4	3/4	1.45
F-609	20	30	1250	1600	CH-1	2		2 3/8	1 5/8	1 1/8	1/2	1.75
F-610	6	50	400	1600	CH-1	2		2 3/8	1 5/8	1 1/8	1/2	1.40
F-611	4	60	300	1600	CH-1	2		2 3/8	1 5/8	1 1/8	1/2	1.40
F-612	3	75	200	1600	CH-1	2		2 3/8	1 5/8	1 1/8	1/2	1.40
F-613	15	35	625	1600	CH-1	2 3/4		2 1/2	1 3/4	1 1/4	3/4	1.45
F-614	5	75	200	1600	CH-1	2 3/4		2 1/2	1 3/4	1 1/4	3/4	1.45
F-615	20	50	475	1600	CH-1	2 1/2		3 1/4	2	2	1 1/2	2.55
F-616	10	75	250	1600	CH-1	2 1/2		3 1/4	2	2	1 1/2	2.40
F-617	6	100	150	2000	CH-1	2 1/2		3 1/4	2	2	1 1/2	2.40
F-618	3.5	150	100	2000	CH-1	2 1/2		3 1/4	2	2	1 1/2	2.40
F-619	2	200	60	2000	CH-1	2 1/2		3 1/4	2	2	1 1/2	2.40

VIBRATOR TRANSFORMERS

Designed for Automobile Receivers Using
A Vibrator from a Six Volt Battery Source.

Freed No.	D.C. Output Deliver by Sec.		Style Mtg.	Mounting Dimensions		Dimensions			Weight	List Price
	Volts	Ma.		W	D	W	D	H		
F-450	225	40	BV	2	1 3/4	2 1/2	2	3 1/2	2	\$4.25
F-451	250	50	BV	2	1 7/8	2 1/2	2 1/4	3 1/2	2 1/4	4.60
F-452	250	60	BV	2 1/4	1 3/4	2 1/2	2 1/8	3 1/2	2 1/2	5.30
F-453	275	70	BV	2 1/4	1 7/8	2 1/2	2 1/4	3 1/2	3	6.00
F-454	350	75	BV	2 1/4	2	2 1/2	2 3/8	3 1/2	3 1/2	6.50

COMPONENTS AVAILABLE TO CUSTOMERS' SPECIFICATIONS

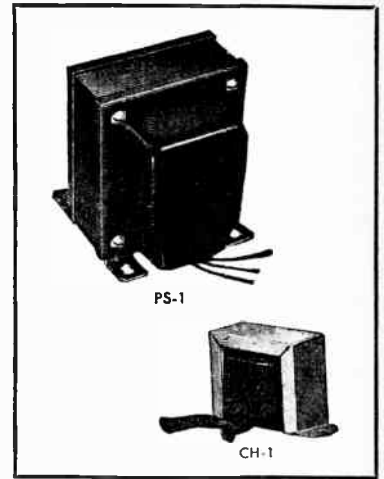
- Driver Transformers
- Modulation Transformers
- Hybrid Transformers
- Bridging Transformers
- Oscillator Transformers
- Pulse Transformers
- Phase Shift Transformers
- Phase Shift Chokes
- Saturable Core Reactors
- Equalizers
- Wave Filters
 - Low Pass Filters
 - High Pass Filters
 - Band Pass Filters
 - Band Elimination Filters
- Audio Frequency Discriminators
- Tuned Circuits

CHOKES and AUDIO REACTORS



FREED

TRANSFORMER CO., INC.



AMPLIFIER AND SMALL TRANSMITTER FILTER CHOKES Rated under full D.C. current.

Freed No.	Ind. Hen.	D.C. Cur.	D.C. Resis.	R.M.S. Test Volts	Mounting Type	Mounting Dimensions		Dimensions			Weight	List Price
						W	D	W	D	H		
F-620	20	50	475	1600	PS-1	1 1/2	1 5/8	1 3/8	2 1/2	2 7/8	1 3/4	\$3.15
F-621	10	75	250	1600	PS-1	1 1/2	1 3/8	1 3/8	2 1/4	2 7/8	1 1/2	3.05
F-622	6	100	150	2000	PS-1	1 1/2	1 3/8	1 3/8	2 1/4	2 7/8	1 1/2	3.05
F-623	3.5	150	100	2000	PS-1	1 1/2	1 3/8	1 3/8	2 1/4	2 7/8	1 1/2	3.05
F-624	2	200	60	2000	PS-1	1 1/2	1 3/4	1 7/8	2 1/4	2 7/8	1 1/2	3.05
F-625	20	75	375	1600	PS-1	1 3/4	1 1/2	2 7/8	2 3/8	2 11/8	2 1/8	3.25
F-626	10	110	210	2000	PS-1	1 3/4	1 5/8	2 7/8	2 1/2	2 11/8	2 1/4	3.40
F-627	5	150	100	2000	PS-1	1 3/4	1 1/2	2 7/8	2 3/4	2 11/8	2 1/8	3.25
F-628	20	100	400	2000	PS-1	2	1 11/8	2 5/8	3	3 3/2	3 1/2	4.95
F-629	10	125	240	2000	PS-1	2	1 11/8	2 5/8	2 3/4	3 3/2	3	4.60
F-630	12	160	180	2500	PS-1	2	2 7/8	2 5/8	3 1/8	3 3/2	3 1/2	4.95
F-631	7	200	100	2500	PS-1	2	1 11/8	2 5/8	3	3 3/2	3 1/2	4.95
F-632	5	250	70	3000	PS-1	2	1 11/8	2 5/8	3	3 1/4	3 1/2	4.95
F-633	12	180	235	2500	PS-1	2 1/4	1 7/8	2 11/8	3 1/8	3 3/2	4	5.70
F-634	10	200	150	2500	PS-1	2 1/4	2	2 11/8	3 1/4	3 3/2	4 1/4	5.85
F-635	5	300	65	3000	PS-1	2 1/4	2 1/8	2 11/8	3 3/8	3 3/2	4 1/2	5.85
F-636	20	160	330	2500	PS-1	2 1/2	2 1/8	3 3/2	3 7/8	3 7/4	5 1/8	7.30
F-637	15	200	200	2500	PS-1	2 1/2	2 7/8	3 3/2	3 5/8	3 7/4	5 1/2	7.30
F-638	10	250	135	3000	PS-1	2 1/2	2 7/8	3 3/2	3 5/8	3 7/4	5 1/2	7.30
F-639	20	250	160	3000	PS-1	3	3 1/8	3 3/2	4 1/4	4 3/4	10	9.90

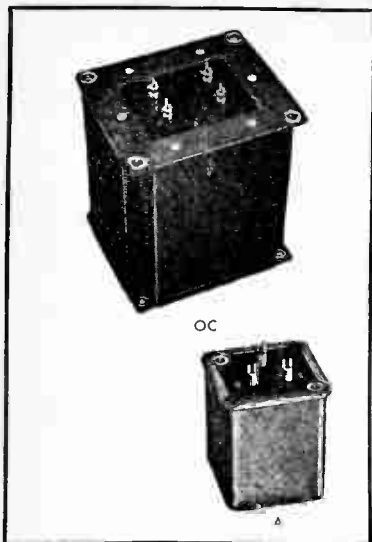
AMPLIFIER AND SMALL TRANSMITTER SWINGING CHOKES Rated under full D.C. current.

F-640	5-25	160	180	2500	PS-1	2	1 11/8	2 5/8	2 3/4	3 3/4	3	\$4.95
F-641	5-25	180	235	2500	PS-1	2 1/4	1 7/8	2 11/8	3 1/8	3 11/4	4	5.70
F-642	5-20	200	150	2500	PS-1	2 1/4	2	2 11/8	3 1/4	3 7/4	4 1/4	5.85
F-643	5-30	200	200	2500	PS-1	2 1/2	2 1/8	3 3/2	3 5/8	3 7/4	5 1/2	7.30
F-644	5-20	250	135	3000	PS-1	2 1/2	2 1/8	3 3/2	3 5/8	3 7/4	5 1/2	7.30

PARALLEL FEED AUDIO REACTORS

Designed to eliminate the direct current component in the primary of audio transformers to be used as plate coupling reactor where the use of a high resistance is objectionable. Low distributed capacity insures excellent high frequency response.

F-645	100	10	3500	1600	CH-1	2		2 3/4	1 5/8	1 7/8	1 1/2	\$1.95
F-646	350	.5	4900	1600	CH-1	2 3/4		2 11/8	1 3/4	1 7/8	3/4	2.10
F-647	500	.5	6150	1600	CH-1	2 11/8		3 1/4	2	2	1 1/2	3.00
F-648	700	.5	6150	1600	CH-1	2 11/8		3 1/4	2	2	1 1/2	3.00
F-649	30	35	650	1600	CH-1	2 11/8		3 1/4	2	2	1 1/2	2.55



FILTER CHOKES and HI "Q" REACTORS

FREED



TRANSFORMER CO., INC.

HUM BUCKING CONSTRUCTION FILTER CHOKES
Designed for Series - Parallel Operation at Full Rated Load and Low Temperature Rise

Freed No.	Induct.	D.C. Cur.	D.C. Resis.	R.M.S. Test Volts	Mounting Type	Mtg. Dimensions		Dimensions			Weight Lbs.	List Price
						W	D	W	D	H		
F-700	320/80	3/6	6000/1500	2500	OC	2 1/8	1 3/4	2 5/8	2 1/4	3 1/8	3	\$11.00
F-701	106/25	35/70	1400/350	2500	OC	3 1/8	2 1/8	4 1/8	3 1/2	4 5/8	7 1/2	11.25
F-702	50/12.5	50/100	600/150	2500	OC	2 1/8	2 3/8	3 1/4	2 1/8	3 1/8	5 1/2	11.25
F-703	50/12.5	100/200	528/132	3000	OC	4 1/2	3 5/8	5 1/8	4 1/8	5 1/8	10	20.30
F-704	16/4	125/250	240/60	3000	OC	3 1/8	2 1/8	4 1/8	3 1/2	4 5/8	7	11.25
F-705	16/4	175/350	88/22	5000	OC	4 1/8	3 3/8	5 1/8	4 1/8	5 1/8	10	20.30
F-706	24/6	200/400	160/40	7500	OC	5 1/2	5 1/2	6 3/4	6 3/8	7 1/4	20	36.50

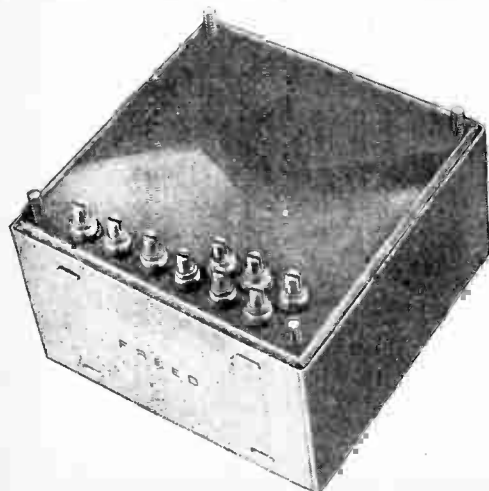
HI "Q" REACTORS

To be used in filters or tuned circuits.

Standard values range from 10 millihenries to 50 henries

Freed No.	Application	Ind. Hen.	Cur. MA	DC Ohms	Mounting Type	Mounting Dimensions		Dimensions			Weight Lbs.	List Price
						W	D	D	W	H		
F-750	Filters, tuned circuits	10	10	1200	A	1 3/8	*	1 1/8	1 1/8	2"	1/2	\$ 5.70
F-751	Filter or tuned circuits	1	20	315	A	1 5/8	*	1 1/8	1 1/8	2"	1/2	5.70
F-752	Filter or tuned circuits	.25	20	30	A	1 5/8	*	1 1/8	1 1/8	2"	1/2	5.70
F-753	Filter or tuned circuits	2	30	190	OC	2 1/8	1 3/4	2 5/8	2 1/4	3 1/4	2	11.40
F-754	Filter or tuned circuits	.5	30	75	OC	2 1/8	1 3/4	2 5/8	2 1/4	3 1/8	2	11.40

The mounting dimension 1 5/8 is given between centers across corners.



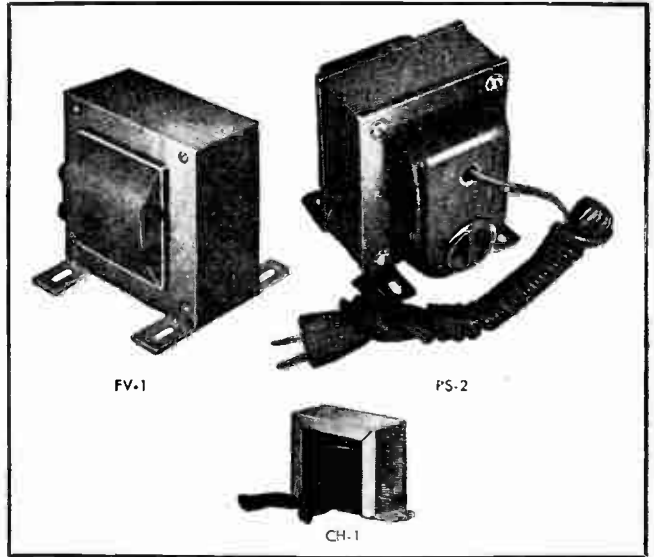
THE FREED MULTICHANNEL FILTER

The unit is a five channel interstage type narrow bandpass filter designed for frequency selective remote control applications. The five inputs are connected in parallel, the five outputs are available separately. The frequency characteristic of each individual filter is ± 1.5 DB for $\pm 10\%$ of the nominal frequency. The attenuation per octave ranges from 35 to 40 DB. Each individual filter provides a step up ratio of 6 DB. The units are designed for a 10,000 ohms input impedance. Filters of this type can be supplied for frequencies from 300 to 10,000 cps.

FILAMENT, AUTO and ISOLATION TRANSFORMERS

FREED

TRANSFORMER CO., INC.



FILAMENT TRANSFORMERS

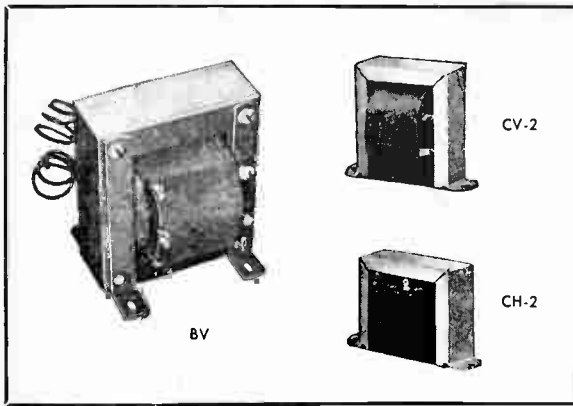
Part No.	Fil. V	C.T. A	Test Volts R.M.S.	Mounting Type	Mounting Centers		Dimensions			Weight Lbs.	List Price
					W	D	W	D	H		
F-210	2.5	8	1600	CH-1	2 3/8		2 1/2	1 3/4	1 1/2	3/4	\$2.05
F-211	2.5	7.5	1600	CH-1	2 1/2		3 1/4	2	2	1 1/4	2.90
F-212	2.5	12	1600	CH-1	3 3/8		3 1/2	2 1/4	2 1/8	2	3.25
F-213	5	1.5	1600	CH-1	2 3/8		2 1/2	1 3/4	1 1/2	3/4	2.05
F-214	5	4	1600	CH-1	2 1/2		3 1/4	2	2	1 1/4	2.90
F-215	5	6	1600	CH-1	3 3/8		3 1/2	2 1/4	2 1/8	2	3.25
F-216	6	8	1600	FV-1	2	2 1/8	2 1/2	2 3/8	3 1/8	2 3/4	4.25
F-217	5	13	1600	FV-1	2 1/4	2 1/4	2 1/2	2 7/8	3 1/8	4	5.60
F-218	6.3	1.35	1600	CH-1	2 3/8		2 1/2	1 3/4	1 1/2	3/4	2.05
F-219	6.3	3	1600	CH-1	2 1/2		3 1/4	2	2	1 1/4	2.90
F-220	6.3	5	1600	CH-1	3 3/8		3 1/2	2 1/4	2 1/8	2	3.25
F-221	6.3	7	1600	FV-1	2	2 1/8	2 1/2	2 3/8	3 1/8	2 3/4	4.25
F-222	6.3	10	1600	FV-1	2 1/4	2 1/4	2 1/2	2 7/8	3 1/8	4	5.60
F-223	7.5	4	1600	CH-1	3 3/8		3 1/2	2 1/4	2 1/8	2	3.25
F-224	7.5	8	1600	FV-1	2 1/4	2 1/4	2 1/2	2 7/8	3 1/8	4	5.75
F-225	10	12	1600	FV-1	2 1/2	2 1/2	3 3/8	3 1/2	3 1/2	6	9.10

AUTO TRANSFORMERS To be used as a step-down transformer. Equipped with standard receptacle and line cord.

Freed No.	V. A. Rating	230/115 50/60 cy.	Mounting Type	Mounting Centers		Dimensions			Weight	List Price
				W	D	W	D	H		
F-900	100	" " "	PS-2	2 1/4	1 3/4	2 3/4	3	3 1/2	4 1/2	\$8.40
F-901	200	" " "	PS-2	2 1/2	2 1/8	3 3/4	3 3/8	3 1/2	6 1/4	9.55
F-902	300	" " "	PS-2	3	2 1/8	3 3/4	3 5/8	4 1/4	7 3/4	12.15
F-903	400	" " "	PS-2	3	2 1/2	3 3/4	3 7/8	4 1/4	8.0	15.20
F-904	500	" " "	PS-2	3	3 1/2	3 3/4	4 7/8	4 1/2	13 1/2	18.25
F-905	750	" " "	PS-2	3 1/2	3 7/8	4 1/8	5 1/4	5 1/2	20	24.30
F-906	1000	" " "	PS-2	3 1/2	5 3/8	4 1/8	6 3/4	5 1/2	29	30.75
F-907	1500	" " "	PS-2	3 1/2	6 3/8	4 1/8	7 3/4	5 1/2	36	45.65

ISOLATION TRANSFORMERS Electrostatic shield between primary and secondary. Equipped with standard receptacle and line cord.

Freed No.	V. A. Rating	115/115 50/60 cy.	Mounting Type	Mounting Centers		Dimensions			Weight	List Price
				W	D	W	D	H		
F-920	50	" " "	PS-2	2 1/4	1 3/4	2 3/4	3	3 1/2	4 1/2	\$9.10
F-921	100	" " "	PS-2	2 1/2	2 1/8	3 3/4	3 5/8	3 1/2	6 1/4	13.00
F-922	300	" " "	PS-2	3 1/2	3 3/4	4 1/8	4 3/4	5 1/2	18	32.85
F-923	500	" " "	PS-2	3 1/2	4 7/8	4 1/8	6 1/4	5 1/2	27	40.00



Replacement and Universal
OUTPUT TRANSFORMERS

FREED
TRANSFORMER CO., INC.

REPLACEMENT OUTPUT TRANSFORMERS For coupling receiver audio output tube to speaker. These transformers are usually mounted on the loudspeaker frame.

Freed No.	Application or Tube Type	Class	Ohms Impedance		Pri. MA	Max. Per Side	Watt.	Mtg. Type	Mtg. Centers		Dimensions			Wt. Lbs.	List Price
			Pri.	Sec.					W	D	H				
F-314	1-251B, 48	A	1,500 or 2,000	3.2	55	5	CH-2	2"	2 3/8"	1 5/8"	1 7/8"	1 1/2"	1/2	\$1.40	
F-315	1-43, 45, 71-A, 12A5 1-25A6	A	4,000	3.2	40	5	CH-2	2"	2 3/8"	1 5/8"	1 7/8"	1 1/2"	1/2	1.40	
F-316	1-2A5, 6A4, 6F6, 41 1-42, 47, 89	A	7,000	3.2	40	5	CH-2	2"	2 3/8"	1 5/8"	1 7/8"	1 1/2"	1/2	1.40	
F-317	1-3Q5, 384, 1Q5, 1C5 1-184, 3A4	A	8,000	3.2	10	5	CH-2	2"	2 3/8"	1 5/8"	1 7/8"	1 1/2"	1/2	1.45	
F-318	1-1D5, 1F5, 1T5, 38	A	14,000 or 16,000	3.2	10	5	CH-2	2"	2 3/8"	1 5/8"	1 7/8"	1 1/2"	1/2	1.45	
F-319	1-3Q4 1-19PP, 116GPP, 1G6G 2-30PP, 19PP	A B B	10,000 CT	3.2	15	8	CH-2	2 3/8"	2 1/2"	1 3/4"	1 1/2"	3/4"	3/4	2.00	
F-320	2-451P 71PP, 43PP 2-25 AG PP	A	8,000 CT	3.2	40	10	CH-2	2 1/8"	3 1/4"	2"	2"	1 1/4"	1 1/4	2.70	
F-321	2- 6F6 PP, 42 PP 2- 2A5PP, 6A4, P.P.	A	14,000 CT	3.2	40	8	CH-2	2 3/8"	2 1/2"	1 3/4"	1 1/2"	3/4"	3/4	2.00	

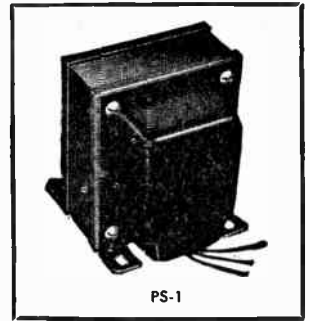
UNIVERSAL OUTPUT TRANSFORMERS Covering most applications. Correct matching for the various conditions can be obtained by the wide range of plate or line and voice call impedances.

Freed No.	Classification or Application	Ohms Impedance		Pri. MA	Max. Watts	Mtg. Type	Mounting Centers		Dimensions			Wt. Lbs.	List Price	
		Pri.	Sec.				W	D	W	D	H			
F-300	Universal single or P.P. tubes to speaker	From 1500 to 20,000	Adjustable .1-29	36	6	CH-2	2 3/8"	2 1/2"	2 1/2"	1 3/4"	1 1/2"	3/4"	\$2.25	
F-301				55	10	CH-2	2 1/2"	2 1/2"	2"	1 1/2"	1 1/4"	1/2	2.90	
F-302				80	15	CV-2	2 1/4"	2 1/4"	2 1/4"	2 1/4"	2 1/4"	2 1/4"	2 1/4"	4.25
F-303	Universal single tube to speaker			60	10	CH-2	2 3/8"	2 1/2"	2 1/2"	1 3/4"	1 1/2"	1	2.25	
F-304	Universal P.P. tubes to speaker	From 3,000 to 10,000	Adjustable .1-29	60	20	CV-2	3 1/8"	3 1/8"	2 1/2"	3 1/8"	3 1/8"	2 1/2"	4.25	
F-305	Universal single tube to line	2,500-4,000 5,000-7,000	500 600	60	12	CV-2	3 1/8"	3 1/8"	2 1/2"	3 1/8"	3 1/8"	2 1/2"	5.35	
F-306	Universal P.P. tubes to line	8,000-10,000 12,000-14,000	500 600	60	12	CV-2	3 1/8"	3 1/8"	2 1/2"	3 1/8"	3 1/8"	2 1/2"	5.75	
F-307	Line to tapped voice coil	500-1,000 1,500-2,000 2,500-3,000	Min. .06 to Max. 48	10	10	CV-2	2 1/4"	2 1/4"	3 1/8"	2 1/4"	2 3/8"	1 1/4"	4.60	
F-308				15	15	CV-2	3 1/8"	3 1/8"	2 1/2"	3 1/8"	3 1/8"	2 1/2"	5.40	
F-309				20	20	BV-2	2 1/4"	2 1/4"	2 1/4"	2 1/4"	3 1/8"	3 1/8"	3 1/2"	6.00
F-310				30	30	BV-2	2 1/2"	2 1/2"	2 1/2"	2 1/2"	3 1/8"	3 1/8"	3 1/2"	4 1/4"	7.40
F-311	Line to voice coil	500/250	15-8 4-2 50 25-16 8 4			CV-2	2 3/8"	2 3/8"	2 7/8"	2"	2 3/8"	1 1/4"	3.40	
F-312						BV-2	2 1/2"	2 1/2"	3 1/8"	3 1/4"	3 1/2"	4 1/4"	9.10	
F-313	Line to multiple speakers (auto-transformer)	500	250/166 125 100/84		70	BV-2	2 1/2"	2 1/4"	3 1/8"	3 1/4"	3 1/2"	4 1/4"	9.10	

FREED TRANSFORMER CO., INC.



OUTPUT TRANSFORMERS H. O. T. Series



Designed for delivering the maximum audio frequency power from an amplifier to a load (voice coil or line). Good frequency response and low harmonic distortion are the quality factors of the H.O.T. output transformers. Fully enclosed shielded type with leads. All H.O.T. series transformers have multiple secondary impedances.

HEAVY OUTPUT TRANSFORMERS

Freed No.	Application or Tube Type	Class	Ohms Impedance		Pri. Ma. Per Side	Max. Wat.	Inv. Feed-back %	Mtg. Type	Mounting Centers		Dimensions			Wt. Lbs.	List Price
			Pri.	Sec.					W	D	W	D	H		
F-110	1-6A3, 2A3, 6Y6, 6L6	A	2,500	2-4-8-500	80	8		PS-1	2	1 1/4	2 5/8	2 1/2	3 1/8	2 1/2	\$5.10
F-111	1-6L6	A	4,000	2-4-8-500	70	10		PS-1	2	1 1/4	2 5/8	2 1/2	3 1/8	2 1/2	6.05
F-112	1-6V6, 1-7C5	A	5,000	2-4-8-500	50	6		PS-1	1 3/4	1 1/2	2 3/8	2 3/4	2 1/2	1 3/4	4.35
F-113	1-6F6, 42, 2A5, 47 6N6, 6B5	A	7,000	2-4-8-500	40	5		PS-1	1 3/4	1 1/2	2 3/8	2 3/4	2 1/2	1 3/4	4.35
F-114	2-6V6-7C5 PP	AB ₁	8,000	2-4-8-250-500	50	15	10	PS-1	2 1/4	2	2 1/8	3 1/4	3 1/2	3 1/2	6.85
F-115	2-2A3 PP 6A3 PP 6B4G PP 45 PP 2-6L6 PP 6Y6 PP	AB A	5,000	2-4-8-250-500	80	20		PS-1	2 1/4	2	2 1/8	3 1/4	3 1/2	3 1/2	6.85
F-116	2-6L6 PP	AB ₁	6,600	2-4-8-250-500	80	30	10	PS-1	2 1/2	2 1/8	3 1/4	3 1/2	3 3/8	5	8.00
F-117	2-6L6 PP	AB ₁	3,800	2-4-8-250-500	80	20	10	PS-1	2 1/2	2 1/8	3 1/4	3 1/2	3 3/8	5	8.00
F-118	2-6L6 PP	AB ₁	9,000	2-4-8-250-500	60	30	10	PS-1	2 1/2	2 1/8	3 1/4	3 1/2	3 3/8	5	8.00
F-119	2-6L6 PP	AB ₂	6,000	4-8-16-250-500	80	40	10	PS-1	2 1/2	2 1/8	3 1/4	3 1/2	3 3/8	5	8.75
F-120	2-6L6 PP	AB ₂	3,800	4-8-16-250-500	110	50	10	PS-1	2 1/2	2 1/8	3 1/4	3 3/4	3 3/8	5 1/2	8.75
F-121	4-6L6 PP Par.	AB ₁	3,300	4-8-16-250-500	160	60	10	PS-1	2 1/2	2 1/8	3 1/4	3 3/4	3 3/8	5 1/2	9.50
F-122	4-6L6 PP Par.	AB ₁	3,300	50-125-200-250 333-500	160	60		PS-1	2 1/2	2 1/8	3 1/4	3 3/4	3 3/8	5 1/2	9.50
F-123	4-6L6 PP Par.	AB ₂	1,900	84-100-125-166 250-500	220	100	10	PS-1	3	3 1/8	3 3/8	5	4 3/8	13 1/2	21.90
F-124	2-6F6-42-2A5 PP 1-6N7, 6A6, 53 PP 2-6N6, 6B5, 2B6, 6AC5	AB ₂ B A	10,000	4-8-15-500	45	20		PS-1	2 1/4	2	2 1/8	3 1/4	3 1/2	3 1/2	6.85
F-125	2-2A3, 6A3, 6B4G 2-48, 25L6	AB A	3,000	4-8-15-500	60	20		PS-1	2 1/4	2	2 1/8	3 1/4	3 1/2	3 1/2	6.05
F-126	4-2A3, 6A3, 6B4G, 45 PP Par.	AB	1,500	4-8-15-500	80	40		PS-1	2 1/4	2	2 1/8	3 1/4	3 1/2	3 1/2	5.85
F-127	2-45, 43, 25 A6 PP 1-6N7, 6A6, 53 PP	A B	8,000	4-8-15-500	36	15		PS-1	2	1 1/4	2 5/8	2 1/2	3 1/8	2 1/2	5.85
F-128	1-12A6-6K6-7B5	A	7,500	4-8-15-500	40	5		PS-1	1 3/4	1 1/4	2 3/8	2 3/4	2 1/4	1 3/4	4.35
F-129	2-12A6-6K6-7B5	A	12,000	4-8-15-500	40	15	10	PS-1	2	1 1/4	2 5/8	2 1/2	3 1/8	2 1/2	5.35
F-130	2-807 PP	AB ₂	4,200	50-125-200-250 333-500	120	75		PS-1	3	3 1/8	3 3/8	5	4 3/8	13 1/2	21.90
F-131	2-50 PP 2-6F6, 42, 2A5 PP	A AB ₂	8,000	4-8-15-500	55	30		PS-1	2 1/4	2	2 1/8	3 1/4	3 1/2	3 1/2	7.30

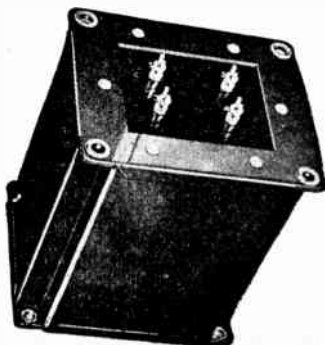
The 500 ohms secondary is designed in such a way that it can be used with a 600 ohm line.

FREED BAND PASS FILTER

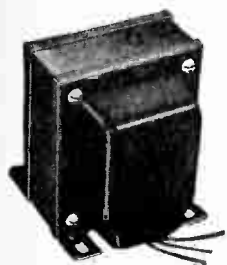
This unit is designed for use in communication equipment to transmit speech frequencies only. The highly selective property of the filter makes possible the increase of power in the frequency band necessary for special communication work and eliminates undesirable frequency components in the high and low end of the audio spectrum.

THE FILTER HAS THE FOLLOWING CHARACTERISTICS:

10,000 ohms or 8000 ohms impedance	1.5 DB Insertion Loss
Low frequency cut-off at 300 cps	40 DB attenuation at 100 cps
High frequency cut-off at 3000 cps	Working Level — 0 DB
2.5 DB attenuation at the cut-off frequencies	Maximum Level — ±10 DB.
40 DB attenuation at 50% of the high frequency cut-off.	



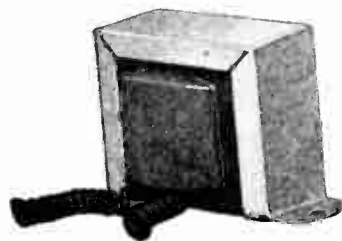
FREED TRANSFORMER CO., INC.



PS-1

AUDIO TRANSFORMERS

Receiver and Amplifier



CH-1

RECEIVER AUDIO TRANSFORMERS

Designed for use in receiver audio circuits where a reasonably good frequency response is required. To be used for Class A applications, i.e., where no great current is drawn.

Freed No.	Classification	Application	Ohms Impedance		Turns Ratio	Pri MA Per Side	Mtg. Type	Mtg. Centers W	Dimensions			Wgt. Lbs.	List Price
			Pr.	Sec.					W	D	H		
F-550	Input	DB mike to grid	200/50	100,000	1:22.4		CH-1	2 1/2	3 1/4	2	2	1 1/4	\$3.15
F-551	Input	SB mike to grid	100	100,000	1:31.6	100	CH-1	2 1/2	3 1/4	2	2	1 1/4	3.15
F-552	Input	Dyn. mike line or mixer to single or P.P. grid	200/50	100,000 CT	1:22.4		CH-1	2 1/2	3 1/4	2	2	1 1/4	3.40
F-553	Input	Line to single or P.P. class A grids	125/500	100,000 CT	1:14.1		CH-1	3 1/8	3 1/2	2 1/4	2 1/2	1 3/4	4.10
F-554	Input	Plate and single button mike to grid	10,000/100	100,000/100,000	1:3.16/1:31.6		CH-1	2 1/2	3 1/4	2	2	1 1/4	3.15
F-555	Input	Voice coil to grid	4/8	100,000	1:112		CH-1	2 1/2	3 1/4	2 1/4	2	1 1/2	3.65
F-556	Matching	DB mike to line	200/50	500/125	4.8:1		CH-1	3 1/4	3 1/2	2 1/4	2 1/2	1 3/4	4.50
F-557	Matching	High impedance mike to line or mixer	100,000	200/50	1:22.4		CH-1	3 1/4	3 1/2	2 1/4	2 1/2	1 3/4	4.50
F-558	Interstage	Single plate to single grid	10,000	90,000	1:3	8	CH-1	2 1/2	3 1/4	2	2	1 1/4	2.60
F-559	Interstage	Single plate to P.P. grids	10,000	90,000 CT	1:3	8	CH-1	2 1/2	3 1/4	2	2	1 1/4	2.70
F-560	Interstage	Single High Imp. plate to single grid	50,000	50,000	1:1	2	CH-1	2 1/2	3 1/4	2	2	1 1/4	4.25
F-561	Interstage	P.P. plates to P.P. grids	20,000 CT	20,000 CT	1:1	8	CH-1	2 1/2	3 1/4	2	2	1 1/4	4.25
F-562	Output	Single plate to line or mixer	10,000	200/50	7.1:1	8	CH-1	2 1/2	3 1/4	2	2	1 1/4	3.05
F-563	Output	Single plate to line	10,000	500/125	4.8:1	8	CH-1	2 1/2	3 1/4	2	2	1 1/4	3.05
F-564	Output	P.P. plates to line or mixer	20,000	200/50	10:1	8	CH-1	2 1/2	3 1/4	2	2	1 1/4	3.05
F-565	Output	P.P. plates to line	20,000	500/125	6.32:1	8	CH-1	2 1/2	3 1/4	2	2	1 1/4	3.05

AMPLIFIER AUDIO TRANSFORMERS

Designed for amplifier and transmitter audio circuits. To be used for Class "A" applications.

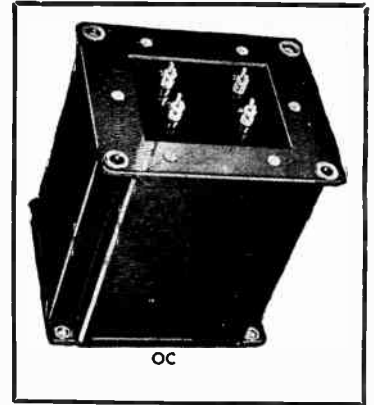
Fully enclosed shielded type construction, conservative design and good frequency response are the quality features of the amplifier audio transformers.

F-500	Input	DB mike to grid	200/50	100,000	1:22.4		PS-1	1 1/2	1 1/2	1 7/8	2 1/4	2 1/2	1 3/8	\$3.75
F-501	Input	SB mike to grid	100	100,000	1:31.6	100	PS-1	1 1/2	1 1/2	1 7/8	2 1/4	2 1/2	1 3/8	3.75
F-502	Input	Dyn. mike line or mixer to single or P.P. grids	200/50	100,000 CT	1:22.4		PS-1	1 1/2	1 1/2	1 7/8	2 1/4	2 1/2	1 3/8	4.00
F-503	Input	Line to single or P.P. class A grids	150/600	100,000 CT	1:12.9		PS-1	1 3/4	1 1/2	2 1/4	2 3/8	2 1/2	2 1/8	4.75
F-504	Input	Plate and single button mike to grid	10,000/100	100,000/100,000	1:3.16/1:31.6		PS-1	1 1/2	1 1/2	1 7/8	2 1/4	2 1/2	1 3/8	3.75
F-505	Input	Voice coil to grid	4/8	100,000	1:112		PS-1	1 1/2	1 1/2	1 7/8	2 1/2	2 1/2	1 3/8	4.25
F-506	Matching	DB mike to line	200/50	500/125	4.8:1		PS-1	1 3/4	1 1/2	2 1/4	2 3/8	2 1/2	2 1/8	5.10
F-507	Matching	High Impedance mike to line or mixer	100,000	200/50	1:22.4		PS-1	1 3/4	1 1/2	2 1/4	2 3/8	2 1/2	2 1/8	5.10
F-508	Interstage	Single plate to single grid	10,000	90,000	1:3	8	PS-1	1 1/2	1 1/2	1 7/8	2 1/4	2 1/2	1 3/8	3.35
F-509	Interstage*	Single plate to PP grid	10,000	90,000	1:3	8	PS-1	1 1/2	1 1/2	1 7/8	2 1/4	2 1/2	1 3/8	3.45
F-510	Interstage	Single High Imp. plate to single grid	50,000	50,000	1:1	2	PS-1	1 1/2	1 1/2	1 7/8	2 1/4	2 1/2	1 3/8	4.80
F-511	Interstage*	PP plate to PP grids	20,000 CT	20,000 CT	1:1	8	PS-1	1 1/2	1 1/2	1 7/8	2 1/4	2 1/2	1 3/8	4.80
F-512	Output	Single plate to line or mixer	10,000	200/50	7.1:1	8	PS-1	1 1/2	1 1/2	1 7/8	2 1/4	2 1/2	1 3/8	3.65
F-513	Output	Single plate to line	10,000	500/125	4.8:1	8	PS-1	1 1/2	1 1/2	1 7/8	2 1/4	2 1/2	1 3/8	3.65
F-514	Output	PP plate to line or mixer	20,000 CT	200/50	10:1	8	PS-1	1 1/2	1 1/2	1 7/8	2 1/4	2 1/2	1 3/8	3.65
F-515	Output	P.P. plates to line	20,000 CT	500/125	6.32:1	8	PS-1	1 1/2	1 1/2	1 7/8	2 1/4	2 1/2	1 3/8	3.65



AUDIO TRANSFORMERS

C Series



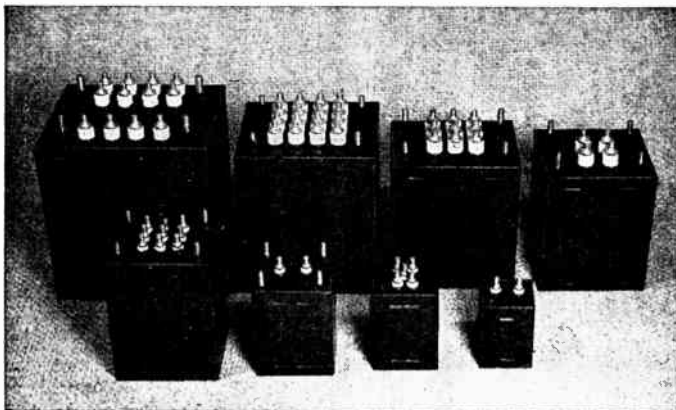
FREED TRANSFORMER CO., INC.

A quality line of transformers used in Public Address amplifiers and transmitters. Uniform case design, universal mounting, conservative ratings, vacuum impregnation of coils and moisture proof sealing of all these transformers is one of the outstanding

features of the C Series Audio Transformers. Low level input and output transformers have a balanced hum bucking coil construction. The frequency response of all these units is flat within ± 2 db from 60 to 10,000 cps.

Freed No.	Classification	Application	Ohms Impedance		Turns Ratio	Pri MA Per Side	Mtg. Centers		Dimensions			Wgt. Lbs.	List Price
			Pr.	Sec.			W	D	W	D	H		
F-150	Input	Microphone, line or mixer to grid	500*/333 250/200* 125/50	60,000 or 15,000	1:11	OC	2 1/8	1 3/8	2 5/8	2 1/4	3 1/8	1 3/4	\$11.65
F-151	Input	Microphone, line or mixer to P.P. grids	500*/333 250/200* 125/50	120,000 CT	1:22	OC	2 1/8	1 3/8	2 5/8	2 1/4	3 1/8	1 3/4	11.65
F-152	Input	Dynamic mike to grid	60/38 30/22 15/10 5.5/2.5	60,000 or 15,000	1:31.6	OC	2 1/8	1 3/8	2 5/8	2 1/4	3 1/8	1 3/4	11.65
F-153	Input	Microphone, line or mixer to grid; magnetic shielding	500*/333 250/200* 125/50	50,000	1:10	OC	2 1/8	1 3/8	2 5/8	2 1/4	3 1/8	1 3/4	14.60
F-154	Matching	Microphone, mixer or line to low impedance line	500*/333 250/200* 125/50	500*/333 250/200* 125/50	1:1	OC	2 1/8	1 3/8	2 5/8	2 1/4	3 1/8	1 3/4	11.65
F-155	Matching	Dynamic mike or mixer to low impedance line	60/38 30/22 15/10 5.5/2.5	500*/333 250/200* 125/50	1:2.9	OC	2 1/8	1 3/8	2 5/8	2 1/4	3 1/8	1 3/4	11.65
F-156	Output	Single plate to line or mixer	10,000 to 15,000	500*/333 250/200* 125/50	8	OC	2 1/8	1 3/8	2 5/8	2 1/4	3 1/8	1 3/4	11.65
F-157	Output	Single plate to line or mixer; magnetic shielding	10,000 or 15,000	500*/333 250/200* 125/50		OC	2 1/8	1 3/8	2 5/8	2 1/4	3 1/8	1 3/4	14.60
F-158	Output	P.P. plates to line or mixer	20,000 CT	500*/333 250/200* 125/50	8	OC	2 1/8	1 3/8	2 5/8	2 1/4	3 1/8	1 3/4	11.65

*Indicates balanced C.T.



HERMETICALLY SEALED UNITS AVAILABLE

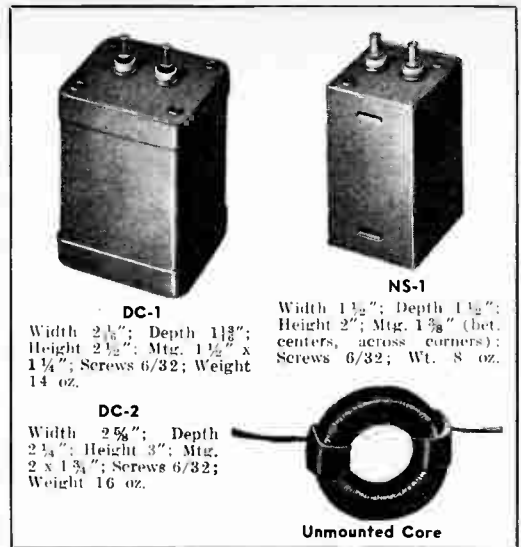
Made to customer's specifications where temperature and humidity are factors. For performance under most adverse conditions.

TELEVISION TRANSFORMERS

and

HIGH Q TOROID INDUCTORS

FREED TRANSFORMER CO., INC.



DC-1

Width 2 1/8"; Depth 1 1/8";
Height 2 1/2"; Mtg. 1 1/2" x
1 1/4"; Screws 6/32; Weight
14 oz.

NS-1

Width 1 1/2"; Depth 1 1/2";
Height 2"; Mtg. 1 3/8" (bet.
centers, across corners);
Screws 6/32; Wt. 8 oz.

DC-2

Width 2 5/8"; Depth
2 1/4"; Height 3"; Mtg.
2 x 1 3/4"; Screws 6/32;
Weight 16 oz.

Unmounted Core

TELEVISION TRANSFORMERS

Used in television receivers, oscilloscopes, test equipment and high voltage, low current power supplies.

Freed No.	HV AC Volts	DC MA.	Rect V	Rect A	Fil V	Fil A	Mtg. Type	Mtg. Center W	Mtg. Center D	Dimensions W	Dimensions D	Dimensions H	Ship Wt.	List Price
F-950	1700	4	2.5	2			PS-1	2	1 1/8	2 1/8	3	3 1/8	3	\$10.25
F-951	2000	2	2.5	1.75	6.3	.9	PS-1	2 1/4	2 1/4	2 1/8	3 3/8	3 3/8	4 1/2	12.10
F-952	2500	2	2.5	1.75	6.3	.9	PS-1	2 1/4	2 1/4	2 1/8	3 3/8	3 3/8	4 1/2	13.35

TELEVISION TRANSFORMERS

Used for a plate supply in television receivers (12 and 15 inch tube).

Freed No.	HV AC Volts	CT DC MA.	Rect V	Rect A	Fil V	Fil A	Mtg. Type	Mtg. Center W	Mtg. Center D	Dimensions W	Dimensions D	Dimensions H	Ship Wt.	List Price	
F-960	775	225	5	3	6.3	1.75	6.3	10A	PS-1	3	3 1/8	4 7/8	4 1/8	11 1/2	\$14.80
F-961	800	300	5	3	5	6	12.6	10A (CT)	PS-1	3 1/2	4	4 1/8	5 3/8	15 1/2	30.75

TELEVISION TRANSFORMERS

Freed No.	Description	Mtg. Type	Mtg. Center W	Mtg. Center D	Dimensions W	Dimensions D	Dimensions H	Ship Wt.	List Price
F-970	Horizontal Blocking Oscillator Transformer.....	CH-1	2		2 3/8	1 5/8	1 1/8	1/2	\$4.50
F-971	Vertical Blocking Oscillator Transformer.....	CH-1	2		2 3/8	1 5/8	1 1/8	1/2	4.25
F-972	Vertical Output Tr. for Magnetic Deflection CRT	FV-1	1 1/8	2	2 1/2	2 1/8	3 1/8	2 1/2	8.50
F-973	Horizontal Output Tr. for Electrostatic Deflection CRT	CH-1	1 1/2		1 3/8	1	1 1/8	1/4	4.50

HIGH Q TOROID INDUCTORS

CATALOG NUMBER	INDUCTANCE VALUE	TYPE OF CASE	CATALOG NUMBER	INDUCTANCE VALUE	TYPE OF CASE	CATALOG NUMBER	INDUCTANCE VALUE	TYPE OF CASE
F-800T	5 MHY	DC-1	F-852T	15 MHY	NS-1	F-1811T	150 MHY	DC-1
F-801T	10 MHY	DC-1	F-853T	30 MHY	NS-1	F-1812T	200 MHY	DC-1
F-802T	15 MHY	DC-1	F-854T	50 MHY	NS-1	F-1813T	300 MHY	DC-1
F-803T	30 MHY	DC-1	F-855T	75 MHY	NS-1	F-1814T	400 MHY	DC-1
F-804T	50 MHY	DC-1	F-856T	100 MHY	NS-1	F-1815T	500 MHY	DC-1
F-805T	75 MHY	DC-1	F-857T	150 MHY	DC-1	F-1850T	.5 MHY	DC-1
F-806T	100 MHY	DC-1	F-858T	200 MHY	DC-1	F-1851T	1 MHY	DC-1
F-807T	150 MHY	DC-1	F-859T	300 MHY	DC-1	F-1852T	2 MHY	DC-1
F-808T	200 MHY	DC-1	F-860T	400 MHY	DC-1	F-1853T	3 MHY	DC-1
F-809T	500 MHY	DC-1	F-861T	500 MHY	DC-1	F-1854T	4 MHY	DC-1
F-810T	750 MHY	DC-1	F-862T	600 MHY	DC-1	F-1855T	5 MHY	DC-1
F-811T	1000 MHY	DC-1	F-863T	700 MHY	DC-1	F-1856T	10 MHY	DC-2
F-812T	1250 MHY	DC-1	F-864T	800 MHY	DC-1	F-1857T	15 MHY	DC-2
F-813T	1500 MHY	DC-1	F-865T	900 MHY	DC-1	F-1858T	20 MHY	DC-2
F-814T	1750 MHY	DC-1	F-866T	1000 MHY	DC-1	F-1859T	30 MHY	DC-2
F-815T	2000 MHY	DC-1	F-1800T	1 MHY	DC-1	F-1860T	40 MHY	DC-2
F-816T	2250 MHY	DC-1	F-1801T	2 MHY	DC-1	F-1861T	50 MHY	DC-2
F-817T	2500 MHY	DC-1	F-1802T	3 MHY	DC-1	F-1862T	75 MHY	DC-2
F-818T	2750 MHY	DC-1	F-1803T	4 MHY	DC-1	F-1863T	100 MHY	DC-2
F-819T	3000 MHY	DC-1	F-1804T	5 MHY	DC-1	F-1900T	100 HY	DC-2
F-820T	3500 MHY	DC-1	F-1805T	10 MHY	DC-1	F-1901T	75 HY	DC-2
F-821T	4000 MHY	DC-1	F-1806T	15 MHY	DC-1	F-1902T	50 HY	DC-2
F-822T	4500 MHY	DC-1	F-1807T	30 MHY	DC-1	F-1903T	25 HY	DC-2
F-823T	5000 MHY	DC-1	F-1808T	50 MHY	DC-1	F-1904T	10 HY	DC-2
F-850T	5 MHY	NS-1	F-1809T	75 MHY	DC-1	F-1905T	5 HY	DC-2
F-851T	10 MHY	NS-1	F-1810T	100 MHY	DC-1	F-1906T	1 HY	DC-2

STANDARD TOLERANCE ±2%

IN TOLERANCES OF ±1%, ADD 7% TO COST

All inductors listed above can be supplied in hermetically sealed cans, commercial type construction or open units.

PRICES ON REQUEST

SNC

QUALITY TRANSFORMERS
Give
OUTSTANDING PERFORMANCE!

Style AL Mtg. Style CL Mtg. Style BL Mtg.

Style DL Mtg. Style ET Mtg. Style FL Mtg.

Skilful Engineering, latest production techniques and highest quality materials . . . backed by careful workmanship, exacting step-by-step inspection and rigorous final testing . . . are combined in every SNC transformer to provide a quality product that gives MORE in dollar value.

AUDIO TRANSFORMERS—THE "ONE" SERIES

AUDIO INPUT

Type Number	Application	Impedance		Pri. Mils (D.C.)	Max. Turns Ratio	Frequency Characteristics — c. p. s.					Mtg. Style	Dimensions				Net Wt.	List Price
		Primary	Secondary			50	200	1M	5M	10M		A	B	C	D		
1P121	P.M. Speaker to Grid	4	100,000	0	1:158	-4.0	-1.0	0	0	0	BL	1-7/8	1-9/16	1-1/2	2	.5	2.90
1P124	S.B. Mic. to Sgl. or P.P. Grids	100	400,000 C.T.	50	1:63		-6.0	0	-2.0	-6.0	BL	1-7/8	1-9/16	1-1/2	2	.5	3.10
1P125	Low Z to Sgl. or P.P. Grids	50	100,000 C.T.	0	1:45		-3.0	0	0	0	BL	1-7/8	1-9/16	1-1/2	2	.5	2.85
1P128	Sgl. or D.B. Mic. or Line to Sgl. or P.P. Grids	200*/50	100,000 C.T.	50	1:45	-2.0	-0.3	0	0.7	-2.0	DL	2-5/8	2-3/16	2-1/8	2-13/16	1.3	4.50
1P136	Line to Sgl. or P.P. Grids	500*/125	100,000 C.T.	0	T:28	3.0	-0.4	0	-0.4	-1.5	DL	2-5/8	2-3/16	2-1/8	2-13/16	1.4	4.50
1P145	Sgl. or P.P. Plates to Line	20,000 C.T.	500*/125	8	12.6:1	-3.5	-1.0	0	0	0	DL	2-1/4	1-7/8	1-13/16	2-3/8	.9	3.70
1P152	Sgl. or P.P. Plates to Line	20,000 C.T.	200*/50	8	20:1	-4.0	-1.0	0	0	0	DL	2-1/4	1-7/8	1-13/16	2-3/8	.9	3.70
1P161	Line to Line	500	500*/125	0	≥:1	-0.4	-0.1	0	-0.4	-1.0	DL	2-1/4	1-7/8	1-13/16	2-3/8	.9	4.00

*Indicates Balanced Center Tap

AUDIO INTERSTAGE

1P323	Sgl. Plate to Sgl. Grid	10,000	90,000	8	1:3	-5.0	-1.5	0	0	0	BL	1-7/8	1-9/16	1-1/2	2	.5	2.70
1P331	Sgl. Plate to P.P. Grids	10,000	90,000 C.T.	8	1:3	-6.0	-2.0	0	0	-1.0	BL	1-7/8	1-5/16	1-1/2	2	.5	2.90
1P339	Sgl. Plate to P.P. Grids	10,000	90,000 C.T.	8	1:3	-3.0	-0.5	0	-0.1	-0.5	BL	2-1/4	1-7/8	1-13/16	2-3/8	.9	3.25
1P342	Sgl. Plate to P.P. Grids	10,000	90,000 C.T.	8	1:3	-2.5	-0.5	0	0	0	DL	2-5/8	2-3/16	2-1/8	2-13/16	1.5	4.20
1P346	P.P. Plates to P.P. Grids	20,000 C.T.	45,000 C.T.	10	1:1.5	-1.0	-0.2	0	0	0	DL	2-5/8	2-3/16	2-1/8	2-13/16	1.5	4.35
1P351	Universal	Universal		8	1:3	-2.0	-0.4	0	0	0	BL	2-1/4	1-7/8	1-13/16	2-3/8	.9	3.45
3P363	Sgl. Type 30 to 19, 1J5 or P.P. 30 Class B	10,000	7,000 C.T.	8	Z4:1	-0.5	0	0	-0.2	-1.0	BL	1-7/8	1-9/16	1-1/2	2	.5	2.35

CHOKES AND REACTORS—THE "TWO" SERIES

AUDIO REACTORS

Type Number	D.C. Mils		D-D.C.	Inductance			Insul. Test Voltage	D.C. Res.	Mtg. Style	Dimensions					Net Weight	List Price
	Nom.	Max.		50%	Nom. D.C.	Max. D.C.				A	B	C	D	E		
2P123	5-0.5	15	550	—	300-500	80	2000	5500	AL	1-7/8	2-1/4	1-5/8	2-13/16		.9	2.90
2P124	5-0.5	15	550	—	300-500	80	2000	5500	CL	1-7/8	2-1/4	1-3/4	2-13/16		.9	3.25
2P126	35-15	45	65	—	25-35	20	2000	800	AL	1-7/8	2-1/4	1-5/8	2-13/16		.9	2.30
2P127	35-15	45	65	—	25-35	20	2000	800	CL	1-7/8	2-1/4	1-3/4	2-13/16		.9	2.70

FILTER AND SWINGING CHOKES

2P132	40	50	22	13	8	6	2000	450	AL	1-5/16	1-5/8	1-1/8	2		.3	1.50
2P135	65	80	18	11	8	7	2000	300	AL	1-9/16	1-7/8	1-3/8	2-3/8		.5	1.80
2P138	85	100	30	16	8	7	2000	350	AL	1-7/8	2-1/4	1-7/8	2-13/16		1.2	2.35
2P141	110	135	20	10.5	8	7	2000	200	BL	2-5/8	2-3/16	1-7/8	2-13/16		1.5	3.10
2P142	110	135	20	10.5	8	7	2000	200	DL	2-5/8	2-3/16	2-1/8	2-13/16		1.5	3.25
2P144	150	180	26	13	8	5.5	2000	190	BL	3	2-1/2	2-1/8	3-1/8		2.1	3.10
2P145	150	180	26	13	8	5.5	2000	190	TGL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.2	4.20
2P147	200-200	250	16	10	8	6.5	3500	110	GL	3-1/2	2-7/8	3-1/8	2-1/4	2	3.2	5.40
2P148	200-20	—	—	—	3-15	—	3500	110	GL	3-1/2	2-7/8	3-1/8	2-1/4	2	3.2	5.40
2P151	300	350	18	11	8	7	5000	75	GL	4-5/8	3-3/4	3-7/8	3	2-13/16	7.5	9.25
2P152	300-30	—	—	—	3-15	—	5000	75	GL	4-5/8	3-3/4	3-7/8	3	2-13/16	7.5	9.25
2P155	500	600	16	10	8	5.5	5000	55	HT	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	22.8	26.00
2P156	500-50	—	—	—	3-15	—	5000	55	HT	7-1/8	5-1/2	5-15/16	4-2/8	4-13/16	22.8	26.00

DRIVER TRANSFORMERS—THE "THREE" SERIES

Type Number	Primary Impedance	Watts	Ratio, Pri. to 1/2 Sec. or Sec. Z	Pri. D.C. Mils	Frequency Characteristics — c. p. s.					Mtg. Style	Dimensions					Net Wt.	List Price
					50	200	1M	5M	10M		A	B	C	D	E		
3P323	6,000 C.T. to 10,000 C.T.	25	6.5:5.5:1	60	-0.5	0	0	0	-0.3	GL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.3	9.40
3P328	3,000 C.T. to 5,000 C.T.	25	6.5:5.5:1	60	-0.4	0	0	0	-0.1	GL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.3	9.40
3P334	5,000 C.T. to 10,000 C.T.	25	4.5:4:3.5:1	60	-1.0	-0.3	0	+0.1	-0.6	GL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.3	9.30
3P338	3,800 C.T. to 5,000 C.T.	25	4.5:4:3.5:1	60	-1.7	-0.5	0	0	0	GL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.3	9.45
3P342	6,000 C.T. to 10,000 C.T.	25	3:2:1:1	60	-0.7	-0.1	0	-0.1	-0.4	GL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.3	9.80
3P347	3,000 C.T. to 5,000 C.T.	25	3:2:1:1	60	-0.8	0	0	0	-0.8	GL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.3	9.65
3P353	6,000 C.T. to 10,000 C.T.	25	500 Dhms	60	-1.1	-0.3	0	0	-0.3	GL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.3	9.50
3P358	3,000 C.T. to 5,000 C.T.	25	500 Dhms	60	-0.9	-0.1	0	-0.4	-1.0	GL	3-1/8	2-1/2	2-5/8	2	1-11/16	2.3	9.50
3P363	10,000	5	2.4:1	10	-0.5	0	0	-0.2	-1.0	BL	1-7/8	1-9/16	1-1/2	2	.5	2.35	

See Page N-28 for additional Mounting Styles, Illustrations and Dimensions



Style GL Mtg.



Style HP Mtg.



Style ATL Mtg.



Style BTL Mtg.



Style BxL Mtg.



Style HSP Mtg.



Style GTL Mtg.



Style HT Mtg.



Style JT Mtg.



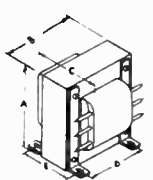
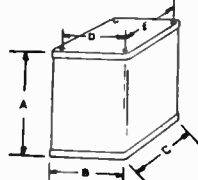
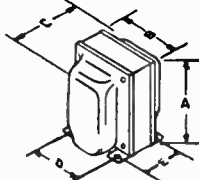
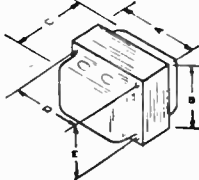
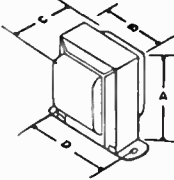
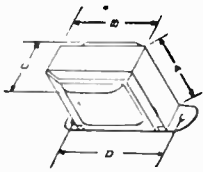
Style GP Mtg.

NOTE

Basic mounting types are classified as "A," "B," "C," "D," "E," "F," "G," "H," "J," and Bx.

Explanation of Suffix Symbols
L = Leads
T = Lugs
P = Cord and Plug
SP = Switch, Cord and Plug

DIMENSIONAL ILLUSTRATIONS



OUTPUT TRANSFORMERS—THE "SIX" SERIES

SPECIFIC DUTY REPLACEMENT TYPES—TUBE TO VOICE COIL

Type Number	Primary Imp.—Ohms	Pri. D.C. Mils	Sec. Z.—Ohms	Watts	Mtg. Style	Dimensions				Net Wt.	List Price
						A	B	C	D		
6P300	Single 2,000 Plate	50	3-6	6	AL	1-5/16	1-5/8	1-1/2	2	.3	1.50
6P306	Single 4,000 Plate	35	3-6	6	AL	1-5/16	1-5/8	1-1/2	2	.3	1.50
6P312	Single or P.P. 7,500 Plates	35	3-6	6	AL	1-5/16	1-5/8	1-1/2	2	.3	2.00
6P316	Single or P.P. 10,000 Plates	35	3-6	6	AL	1-5/16	1-5/8	1-1/2	2	.3	2.05
6P319	Push-Pull 15,000 Plates	35	3-6	6	AL	1-5/16	1-5/8	1-1/2	2	.3	2.05
6P321	Push-Pull 20,000 Plates	30	3-6	6	AL	1-5/16	1-5/8	1-1/2	2	.3	2.05
6P325	Push-Pull 25,000 Plates	20	3-6	6	AL	1-5/16	1-5/8	1-1/2	2	.3	2.05

UNIVERSAL REPLACEMENT TYPES—TUBE TO VOICE COIL—TUBE TO LINE—LINE TO VOICE COIL

Type Number	Primary Imp.—Ohms	Pri. D.C. Mils	Sec. Z.—Ohms	Watts	Mtg. Style	Dimensions				Net Wt.	List Price
						A	B	C	D		
6P165	Sgl. or P.P. 4M to 14M Plates	40	1.1 to 14	4	ATL	1-5/16	1-5/8	1-3/8	2	.3	2.35
6P166	Sgl. or P.P. 4M to 14M Plates	50	1.1 to 14	8	ATL	1-9/16	1-7/8	1-5/8	2-3/8	.5	2.35
6P167	Sgl. or P.P. 3M to 10M Plates	50	1.2 to 13	15	BTL	1-7/8	1-9/16	1-3/4	2	.5	2.90
6P169	Sgl. 1500 to 7M Plate	55	.8 to 19	10	ATL	1-9/16	1-7/8	1-5/8	2-3/8	.5	2.35
6P172	P.P. 3500 to 12M Plates	60	1.3 to 14	20	BTL	2-5/8	2-3/16	2-1/8	2-13/16	1.5	4.25
6P701	Single 2500 to 7500 Plate	45	165 to 1500	10	BTL	2-1/4	1-7/8	1-7/8	2-3/8	.9	3.70
6P710	P.P. 7500 to 15M Plates	45	250 to 1000	10	BTL	2-1/4	1-7/8	1-7/8	2-3/8	.9	4.20
6P714	Sgl. or P.P. 2500 to 12M Plates	45	150 to 2400	10	BTL	2-1/4	1-7/8	1-7/8	2-3/8	.9	4.40
6P717	125 to 500 Line	0	1 to 32	35	BTL	2-5/8	2-3/16	2-1/8	2-13/16	1.5	4.50
6P722	500 to 3M Line in 500-Ohm Steps	0	1.3 to 48	10	BTL	2-1/4	1-7/8	1-7/8	2-3/8	.9	4.25

AMPLIFIER AND EQUIPMENT TYPES—TUBE TO LINE AND VOICE COIL

Type Number	Primary Imp.—Ohms	Pri. D.C. Mils	Secondary Imp.—Ohms	Watts	Frequency Characteristics—c. p. s.					Mtg. Style	Dimensions					Net Wt.	List Price
					50	200	1M	5M	10M		A	B	C	D	E		
					6P726	P.P. 3300 or 3800 Plates	90	4-8-16-250-500	60		-0.3	0	0	+0.1	+0.5			GL	3-3/4	3-1/16	3-3/8	2-1/2	2-3/16	4.4	8.90
6P731	P.P. 4500 or 6800 Plates	90	4-8-16-250-500	60	-0.3	0	0	-0.2	0	GL	3-3/4	3-1/16	3-3/8	2-1/2	2-3/16	4.4	8.90
6P736	P.P. 5000 Plates	70	4-8-16-250-500	25	-0.9	-0.2	0	+0.2	+0.5	DL	2-5/8	2-3/16	2-1/8	2-13/16		1.5	6.00
6P740	P.P. 4300 Plates	70	4-8-16-250-500	25	-0.9	-0.3	0	+0.3	-0.5	DL	2-5/8	2-3/16	2-1/8	2-13/16		1.5	6.00
6P743	P.P. 6600 Plates	70	4-8-16-250-500	25	-0.7	-0.1	0	-0.2	-0.5	DL	2-5/8	2-3/16	2-1/8	2-13/16		1.5	6.00
6P746	P.P. 8000 Plates	70	4-8-16-250-500	25	-0.7	-0.1	0	+0.1	-0.3	DL	2-5/8	2-3/16	2-1/8	2-13/16		1.5	6.00
6P749	P.P. 10,000 Plates	60	4-8-16-250-500	25	-0.4	-0.1	0	-0.2	+0.3	DL	2-5/8	2-3/16	2-1/8	2-13/16		1.5	6.30
6P752	Sgl. 2500 Plate	60	4-8-16-250-500	10	-3.0	-0.4	0	+0.3	+0.5	DL	2-1/4	1-7/8	2-1/8	2-3/8		1.0	4.75

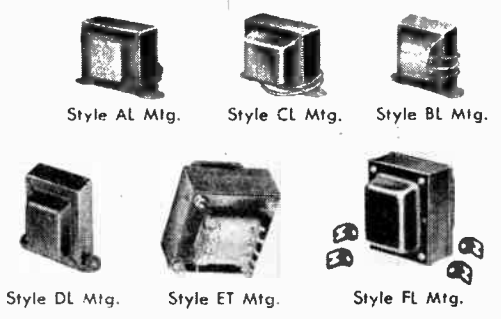
MODULATION TRANSFORMERS—THE "FIVE" SERIES

SNC universal modulation transformers are specifically designed to provide maximum application possibilities per type. All units are provided with two identical secondary windings, permitting series or parallel operation. Changes in the ratio can be readily accomplished, when desired, without removing the unit from the chassis. Most units available in either air cooled or compound filled cases.

UNIVERSAL TYPES

Type Number	Watts	Primary Current Mils	Secondary Characteristics				Primary Impedance Ohms	Mtg. Style	Dimensions					Net Weight	List Price
			Series Sec.		Parallel Sec.				A	B	C	D	E		
			Impedance	Mils	Impedance	Mils									
5P341	15	60	50	50	100	3M to 8M	DL	2-5/8	2-3/16	2-3/8	2-13/16		1.5	7.50	
5P346	50	80	2M to 18M	75	500 to 4500	150	3M to 15M	GTL	3-7/8	3-1/8	3-3/8	2-1/2	2-3/16	4	11.75
5P352	100	120	2M to 18M	100	500 to 4500	200	3M to 15M	GTL	4-5/8	3-3/4	3-7/8	3	2-13/16	9.7	18.75
5P354	200	200	2M to 18M	150	500 to 4500	300	3M to 15M	HT	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	24	43.00
5P355								JT						32	47.00
5P357	300	250	2M to 18M	250	500 to 4500	500	3M to 15M	HT	7-1/8	6-1/2	7-1/4	5-3/8	6-1/8	33	52.00
5P358								JT						41	56.00
5P363	500	300	2M to 18M	300	500 to 4500	600	3M to 15M	HT	10-3/4	6-1/2	7-1/4	5-3/8	6-1/8	51	105.00
5P364								JT						64	115.00

S N C MANUFACTURING CO., INC., GLENVIEW, ILLINOIS



Skilful Engineering, latest production techniques and highest quality materials . . . backed by careful workmanship, exacting step-by-step inspection and rigorous final testing . . . are combined in every SNC transformer to provide a quality product that gives MORE in dollar value.

POWER TRANSFORMERS—THE "EIGHT" SERIES

All units conservatively rated for operation on either 50 or 60 cycles and contain an electrostatic shield between primary and all other windings

REPLACEMENT TYPES (6.3 Volt Heater Winding)

Type Number	Primary Voltage	R. M. S.—High Volt. Secondary	Pri. D.C. Mils	Rectifier Filament	Heater Winding Center Tapped	Mtg. Style	Dimensions					Net Wt.	List Price
							A	B	C	D	E		
8P040	117	265-0-265	40	5V. @ 2A.	6.3V. @ 2A.	FL	3	2-1/2	2-3/4	2-1/2	2	2.3	4.50
8P055	117	300-0-300	55	5V. @ 2A.	6.3V. @ 2.5A.	FL	3	2-1/2	3-1/8	2-1/2	2	2.8	4.55
8P070	117	325-0-325	70	5V. @ 2A.	6.3V. @ 3A.	FL	3	2-1/2	3-1/2	2-1/2	2	3.2	5.75

HEAVY DUTY REPLACEMENT AND NEW EQUIPMENT TYPES (6.3 Volt Heater Winding)

Type Number	Primary Voltage	R. M. S.—High Volt. Secondary	Pri. D.C. Mils	Rectifier Filament	Heater Winding Center Tapped	Mtg. Style	Dimensions					Net Wt.	List Price
							A	B	C	D	E		
8P180 8P180G	117	265-0-265	40	5V. @ 2A.	6.3V. @ 2A.	FL GL	3 3-1/16	2-1/2 2-7/32	3-1/4 3-1/8	2-1/2 2	2 2-3/16	3.2	6.15
8P183 8P183G	117	300-0-300	50	5V. @ 2A.	6.3V. @ 2A.	FL GL	3-3/8 3-7/16	2-13/16 2-27/32	3-7/16 3-1/4	2-13/16 2-1/4	2-1/4 2-1/8	3.5	6.50
8P186 8P186G	117	325-0-325	60	5V. @ 2A.	6.3V. @ 3A.	FL GL	3-3/8 3-7/16	2-13/16 2-27/32	3-11/16 3-1/2	2-13/16 2-1/4	2-1/4 2-3/8	4.0	6.85
8P189 8P189G	117	350-0-350	70	5V. @ 3A.	6.3V. @ 3.5A.	FL GL	3-3/4 3-13/16	3-1/8 3-5/32	3-3/4 3-5/8	3-1/8 2-1/2	2-1/2 2-7/16	5.0	7.50
8P192 8P192G	117	350-0-350	90	5V. @ 3A.	6.3V. @ 4A.	FL GL	3-3/4 3-13/16	3-1/8 3-5/32	4 3-7/8	3-1/8 2-1/2	2-1/2 2-11/16	5.7	8.25
8P194 8P194G	117	375-0-375	110	5V. @ 3A.	6.3V. @ 4A.	FL GL	3-3/4 3-13/16	3-1/8 3-5/32	4-1/8 4	3-1/8 2-1/2	2-1/2 2-13/16	6.0	9.25
8P196 8P196G	117	350-0-350	150	5V. @ 3A.	6.3V. @ 4.8A.	FL GL	4-1/8 4-3/16	3-7/16 3-15/32	4-3/8 4-3/8	3-7/16 2-3/4	2-3/4 3-5/16	7.7	9.75
8P199 8P199G	117	400-0-400	70	5V. @ 3A.	6.3V. @ 3.5A.	FL GL	3-3/4 3-13/16	3-1/8 3-5/32	4 3-7/8	3-1/8 2-1/2	2-1/2 2-11/16	5.8	8.75
8P202 8P202G	117	450-0-450	200	5V. @ 3A.	6.3V. @ 5A.	FL GL	4-1/2 4-9/16	3-3/4 3-25/32	4-3/4 4-3/8	3-3/4 3	3 3-11/16	10.7	12.50
8P205	117	450-0-450	325	5V. @ 6A.	6.3V. @ 8A.	HT	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	22.3	34.00
8P208	117	550-0-550	275	5V. @ 6A.	6.3V. @ 6A.	HT	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	23.3	34.00

REPLACEMENT TYPES (2.5 Volt Heater Winding)

8P287	117	350-0-350	70	5V. @ 3A.	2.5V. @ 6A.	FL	3-3/4	3-1/8	3-3/4	3-1/8	2-1/2	5.0	7.50
8P293	117	350-0-350	90	5V. @ 3A.	2.5V. @ 8A.	FL	3-3/4	3-1/8	4	3-1/8	2-1/2	5.6	8.15
8P295	117	350-0-350	150	5V. @ 3A.	2.5V. @ 12A.	FL	4-1/8	3-7/16	4-3/8	3-7/16	2-3/4	7.8	9.75

REPLACEMENT TYPES (Two 2.5 Volt Heater Windings)

8P487 8P487G	117	350-0-350	70	5V. @ 3A.	No. 1 = 2.5V. @ 3.5A. No. 2 = 2.5V. @ 8A.	FL GL	3-3/4 3-13/16	3-1/8 3-5/32	4 3-7/8	3-1/8 2-1/2	2-1/2 2-11/16	5.8	9.00
8P494 8P494G	117	375-0-375	110	5V. @ 3A.	No. 1 = 2.5V. @ 3.5A. No. 2 = 2.5V. @ 10A.	FL GL	3-3/4 3-13/16	3-1/8 3-5/32	4-1/4 4-1/8	3-1/8 2-1/2	2-1/2 2-15/16	6.2	9.85

GENERAL PURPOSE TYPES WITH CONVENIENT LUG TERMINALS (6.3 Volt Heater Winding)

Type Number	Primary Voltage	R. M. S.—High Volt. Secondary	Pri. D.C. Mils	Rectifier Filament	Heater Winding Center Tapped	Mtg. Style	Dimensions					Net Wt.	List Price
							A	B	C	D	E		
8P382	117	300-0-300	50	5V. @ 2A.	6.3V. @ 2A.	ET	3-3/8	2-13/16	3-7/16	2-13/16	2-1/4	3.2	5.90
8P385	117	325-0-325	60	5V. @ 2A.	6.3V. @ 3A.	ET	3-3/8	2-13/16	3-11/16	2-13/16	2-1/4	4.0	6.35
8P388	117	350-0-350	70	5V. @ 3A.	6.3V. @ 3.5A.	ET	3-3/4	3-1/8	3-3/4	3-1/8	2-1/2	4.7	6.90

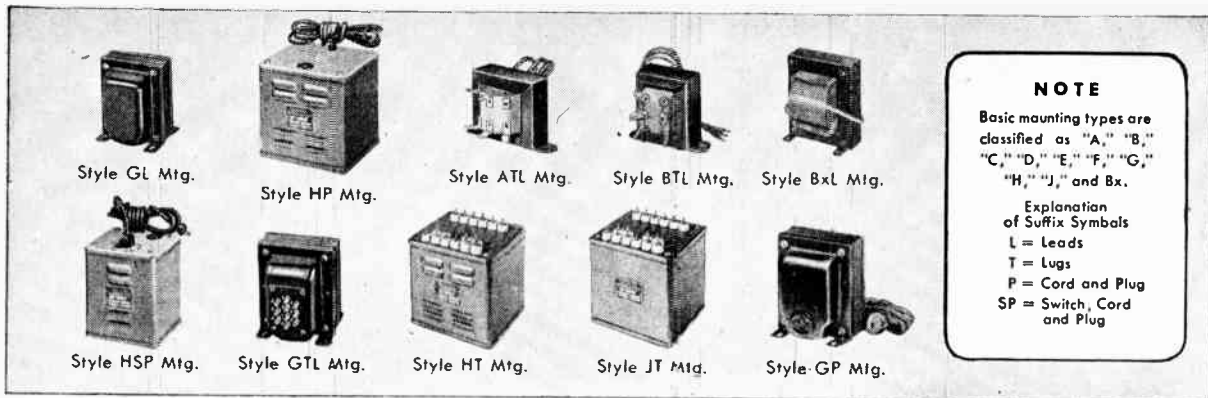
BIAS TYPES

8P510	117	40-0-40	25	5V. @ 2A.		CL	1-7/8	2-1/4	1-3/4	2-13/16		1.0	3.75
8P511	117	0-90-150-200-250	50	5V. @ 2A.		GL	3-1/16	2-7/32	2-5/8	2	1-11/16	2.0	5.45

VIBRATOR TYPES

8P610	6	225-0-225	40			AL	2-3/16	2-5/8	2	3-1/8		1.3	4.25
8P611	6	320-0-320	40			GL	3-1/16	2-7/32	2-1/2	2	1-9/16	2.1	5.10
8P612	6	350-0-350	60			GL	3-7/16	2-27/32	3-5/16	2-1/4	2-3/16	3.7	5.75

See Page N-28 for Dimensional Illustrations



NOTE
 Basic mounting types are classified as "A," "B," "C," "D," "E," "F," "G," "H," "J," and Bx.
 Explanation of Suffix Symbols
 L = Leads
 T = Lugs
 P = Cord and Plug
 SP = Switch, Cord and Plug

PLATE TRANSFORMERS—THE "SEVEN" SERIES

All SNC plate transformers have dual secondary ratings. Most units available in either air cooled or compound filled cases. All units contain electrostatic shields between primary and high voltage windings.

Type Number	Primary Voltage	Pri. V.A.	Secondary R.M.S. Voltage	D.C. Voltage From Filter*	D.C. Current	Mtg. Style	Dimensions					Net Wt.	List Price
							A	B	C	D	E		
7P530	115-230	220	920-0-920 or 740-0-740	750 or 600	200MA	GL	4-3/4	3-3/4	5-1/8	3	4-1/16	12	15.00
7P535 7P536	115-230	320	930-0-930 or 750-0-750	750 or 600	300MA	HT JT	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	22 30	35.00 40.00
7P542 7P543	115-230	530	1470-0-1470 or 1220-0-1220	1250 or 1000	300MA	HT JT	7-1/8	6-1/2	7-1/4	5-3/8	6-1/8	33 41	42.00 46.00
7P551 7P552	115-230	750	2050-0-2050 or 1740-0-1740	1750 or 1500	300MA	HT JT	7-1/8	6-1/2	7-1/4	5-3/8	6-1/8	43 51	45.00 55.00
7P557 7P558	115-230	1060	2880-0-2880 or 2350-0-2350	2500 or 2000	300MA	HT JT	10-3/4	6-1/2	7-1/4	5-3/8	6-1/8	53 69	62.00 67.00
7P563 7P564	115-230	1760	2900-0-2900 or 2370-0-2370	2500 or 2000	500MA	HT JT	10-3/4	9	7-1/4	7	5-13/16	96 126	90.00 125.00

*All units may be operated with simultaneous loads—provided the total D.C. current of the two loads does not exceed the rating listed.

FILAMENT TRANSFORMERS—THE "FOUR" SERIES

Most SNC Filament Transformers are constructed to provide two identical center tapped secondary windings and offer a minimum of three applications. They provide three-fold the number of possible applications of ordinary filament types. A few are single secondary units and are so designated. All have 117 V. 50/60 cycle primary.

Type Number	Applications			Test Voltage	Mtg. Style	Dimensions					Net Wt.	List Price
	Parallel Secondaries	Series Secondaries	Independent Identical Secondaries			A	B	C	D	E		
4P222	2.5V. C.T. @ 5 A.	5 V. C.T. @ 2.5 A.	Two of 2.5V. C.T. @ 2.5 A.	200C	BL	2-1/4	1-7/8	1-3/4	2-3/8		1.0	2.95
4P226*	2.5V. C.T. @ 10 A.*			750C	BL	3	2-1/2	2-3/8	3-1/8		2.0	4.60
4P227	2.5V. C.T. @ 10 A.	5 V. C.T. @ 5 A.	Two of 2.5V. C.T. @ 5 A.	2000	BL	2-5/8	2-3/16	2	2-13/16		1.5	4.00
4P234	2.5V. C.T. @ 15 A.	5 V. C.T. @ 7.5 A.	Two of 2.5V. C.T. @ 7.5 A.	2000	BL	3	2-1/2	2-1/4	3-1/8		2.2	4.75
4P239	5 V. C.T. @ 6.5A.	10 V. C.T. @ 3.25A.	Two of 5 V. C.T. @ 3.25A.	2000	BL	3	2-1/2	2-1/4	3-1/8		2.2	4.25
4P242*	5 V. C.T. @ 20 A.*			10000	BxL	4-1/8	3-7/16	2-3/4	2-3/4	2-1/8	4.6	8.50
4P243	5 V. C.T. @ 20 A.	10 V. C.T. @ 10 A.	Two of 5 V. C.T. @ 10 A.	2000	BxL	3-3/4	3-1/8	2-3/4	2-1/2	2-1/4	4.3	7.50
4P244*	6.3V. C.T. @ 0.6A.*			2000	BL	1-7/8	1-9/16	1-1/2	2		.8	2.90
4P245*	6.3V. C.T. @ 1.2A.*			2000	BL	1-7/8	1-9/16	1-5/8	2		.7	3.15
4P246	6.3V. C.T. @ 2 A.	12.6V. C.T. @ 1 A.	Two of 6.3V. C.T. @ 1 A.	2000	BL	2-1/4	1-7/8	1-3/4	2-3/8		1.0	3.50
4P251	6.3V. C.T. @ 6 A.	12.6V. C.T. @ 3 A.	Two of 6.3V. C.T. @ 3 A.	2000	BL	3	2-1/2	2-1/4	3-1/8		2.0	4.05
4P256	6.3V. C.T. @ 10 A.	12.6V. C.T. @ 5 A.	Two of 6.3V. C.T. @ 5 A.	2000	BxL	3-3/8	2-13/16	2-1/2	2-1/4	2-1/8	2.9	5.25
4P260	7.5V. C.T. @ 3 A.	15 V. C.T. @ 1.5 A.	Two of 7.5V. C.T. @ 1.5 A.	2000	BL	2-5/8	2-3/16	2	2-13/16		1.5	4.25
4P267	7.5V. C.T. @ 4.5A.	15 V. C.T. @ 2.3 A.	Two of 7.5V. C.T. @ 2.3 A.	2000*	BL	3	2-1/2	2-1/4	3-1/8		2.0	5.25
4P272	11 V. C.T. @ 10 A.	22 V. C.T. @ 5 A.	Two of 11 V. C.T. @ 5 A.	2000	BxL	3-3/4	3-1/8	2-3/4	2-1/2	2-1/4	4.1	7.50

*Single secondary units

VOLTAGE CHANGER AND ISOLATION—THE "NINE" SERIES

All Units Have Primary Card and Secondary Plug and Are For 50/60 Cycle Operation

VOLTAGE CHANGER (ISOLATION)

Type Number	Primary Voltage	Secondary Voltage	Capacity in V. A.	Mtg. Style	Dimensions					Net Wt.	List Price
					A	B	C	D	E		
9P707	220-250	110-125	75	GP	3-13/16	3-5/32	3-1/8	2-1/2	1-15/16	3.9	7.75
9P713	220-250	110-125	150	GP	4-9/16	3-25/32	3-7/8	3	2-13/16	8.0	11.50
9P718	220-250	110-125	350	HP	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	23.3	30.00

ISOLATION TYPES

9P721	110-250	110-250	150	GP	4-9/16	3-25/32	4-5/8	3	3-9/16	12.1	15.00
9P725	110-250	110-250	250	HP	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	23.3	24.50
9P728	110-250	110-250	500	HP	7-1/8	6-1/2	7-1/4	5-3/8	6-1/8	34.8	34.50

VOLTAGE ADJUSTMENT TYPES WITH TAP CHANGE SWITCH

9P732	95-130 in 5V. Steps	115	150	HSP	4-7/8	3-7/8	3-7/8	3-1/8	3-1/8	4.7	21.00
9P737	95-130 in 5V. Steps	115	250	HSP	5-3/8	4-3/8	4-1/4	3-5/8	3-1/2	8.0	27.50
9P739	80-130 in 5V. Steps	115	500	HSP	7-1/8	5-1/2	5-15/16	4-3/8	4-13/16	23.3	41.00

All list prices given are subject to regular trade discounts and may be changed without notice.

S N C MANUFACTURING CO., INC., GLENVIEW, ILLINOIS

See Page N-28 for Dimensional Illustrations

HALLDORSON REPLACEMENT TRANSFORMERS

OUTPUT TRANSFORMERS



L Mtg.

Number	To Feed From	Voice Coil Impedance	Mounting	Mounting Centers	Core	H. Size L. W.	Wt.
D4-604			D4	2"	1 1/2" x 1 1/2"	1 1/2" x 2 1/4" x 1 1/2"	1/2
A4-777	Universal.....	Given In Chart	A4	2 1/2"	3/4" x 3/4"	1 1/4" x 2 1/4" x 1 1/2"	10 oz.
B6-816A			B6	Universal	3/4" x 3/4"	2" x 2 1/2" x 1 1/4"	1
B5-816			B5	2 1/2"	3/4" x 3/4"	2 1/4" x 2 1/4" x 1 1/4"	1
S-72	P. P. 6L6—(60 Watt).....	4, 8, 15, 500	S	2 1/2" x 2 1/4"	1 1/4" x 1 1/4"	4 1/4" x 3 1/4" x 3 1/4"	5 1/2
E-1042	P. P. 6L6, 2A3, 6B5 (30 Watt)	4, 8, 15, 500	E	2" x 1 1/4"	1" x 1"	3" x 2 1/4" x 2 1/4"	2 1/2
S-81	P. P. 6L6, Reverse Feedback (35W.)	4, 8, 15, 500	S	2 1/2" x 2 1/4"	1 1/4" x 1 1/4"	4" x 3 1/4" x 3 1/4"	4 1/2
B4-850	2A3, 43, 45, 50, 59, 71A.....	4, 8, 15	B4	2 1/2"	3/4" x 3/4"	2 1/4" x 2 1/4" x 1 1/4"	1
B4-851	31, 33, 42, 47, 79, 2A5.....		B4	2 1/2"	3/4" x 3/4"	2 1/4" x 2 1/4" x 1 1/4"	1
B4-852	6A4, 10, 38, 41, 53.....		B5	2 1/2"	3/4" x 3/4"	2 1/4" x 2 1/4" x 1 1/4"	1
B5-853	P. P. 2A3, 43, 45, 50, 59, 71A, 6B5.....		B5	2 1/2"	3/4" x 3/4"	2 1/4" x 2 1/4" x 1 1/4"	1
B5-854	P. P. 31, 33, 42, 47, 79, 2A5.....		B5	2 1/2"	3/4" x 3/4"	2 1/4" x 2 1/4" x 1 1/4"	1
B5-855	P. P. 6A4, 10, 38, 41, 53.....		B5	2 1/2"	3/4" x 3/4"	2 1/4" x 2 1/4" x 1 1/4"	1
A5-700	P. P. 2A3, 43, 45, 50, 59, 71A, 6B5.....	2, 4, 8	A5	2"	3/4" x 3/4"	2" x 2 1/2" x 1 1/4"	10 oz.
D4-600	2A5, 42, 47, 79 — For Midget	3 to 6 Ohm	D4	2"	3/4" x 3/4"	1 1/4" x 2 1/4" x 1 1/4"	1/2
D4-601	43 — and A.C.-D.C. Sets		D4	2"	3/4" x 3/4"	1 1/4" x 2 1/4" x 1 1/4"	1/2
D4-602	41, 19, 38		D4	2"	3/4" x 3/4"	1 1/4" x 2 1/4" x 1 1/4"	1/2
A4-770	Universal Types for Midget and A.C.-D.C. Sets 2A5, 19, 38, 41, 42, 43, 47, 79.....	3 to 6 Ohm Voice Coil	A4	2 1/2"	3/4" x 3/4"	1 1/4" x 2 1/4" x 1 1/4"	10 oz.
A5-772	Single and P. P. 2A5, 19, 38, 41, 42, 43, 47, 79.....	3 to 6 Ohm Voice Coil	A5	2"	3/4" x 3/4"	2" x 2 1/2" x 1 1/4"	10 oz.
K4-800	Single 184	3 to 6 Ohm Voice Coil	K4	1 1/2"	3/4" x 3/4"	1 1/4" x 2 1/4" x 1 1/4"	6 oz.
*A4-775	Single 1A5G, 1167G, 1N6G, 6V7G.....	3 to 6 Ohm Voice Coil	A4	2 1/2"	3/4" x 3/4"	1 1/4" x 2 1/4" x 1 1/4"	10 oz.
S-86	Single 6L6—4000 Ohm.....	4, 8, 15, 500	S	2" x 1 1/4"		3 1/2" x 2 1/2" x 3"	2 1/2
D4-605A	25L6, 10 Ohm Tap on PR1.....	3 to 6	D4	2"		1 1/4" x 2 1/4" x 1 1/4"	8 oz.



M Mtg.



D4, B4, E4 D4 Mtg.



B5 A5 Mtg.

AUDIO TRANSFORMERS

Number	Application	Mounting	Over All Ratio	Mounting Centers	Core	H. Size L. W.	Wt.
B4-805	Single Plate to Single Grid Class A From general purpose tubes such as 27, 56, etc.	B4	2 1/2—1	2 1/2"	3/4" x 3/4"	2" x 3 1/2" x 1 1/4"	1
B4-807		B4	3 1/2—1	2 1/2"	3/4" x 3/4"	2" x 3 1/2" x 1 1/4"	1
A4-751		A4	3—1	2 1/2"	3/4" x 3/4"	1 1/4" x 2 1/4" x 1 1/4"	10 oz.
E-1027	Single Plate to Pushpull Grids Class A From general purpose tubes such as 27, 56, etc. To 27's, 45's, 2A5's, etc., in Push Pull.	E	4—1	2" x 2"	1" x 1"	3" x 2 1/2" x 2 1/2"	2 1/2
B4-810		B4	4—1	2 1/2"	3/4" x 3/4"	2 1/4" x 2 1/4" x 1 1/4"	1
B4-893		B4	3—1	2 1/2"	3/4" x 3/4"	2 1/4" x 2 1/4" x 1 1/4"	1 1/2
A4-703		A4	2—1	2 1/2"	3/4" x 3/4"	1 1/4" x 2 1/4" x 1 1/4"	15 oz.
A4-761		A4	3 1/2—1	2 1/2"	3/4" x 3/4"	1 1/4" x 2 1/4" x 1 1/4"	9 oz.
A4-760		A4	3—1	2 1/2"	3/4" x 3/4"	1 1/4" x 2 1/4" x 1 1/4"	10 oz.
B4-818	Universal Pushpull Input To replace any input transformer used in Class A Circuit.	B4	3—1	2 1/2"	3/4" x 3/4"	2" x 3 1/2" x 1 1/4"	1
B7-820		B7	3—1	2 1/2"	3/4" x 3/4"	2 1/4" x 2 1/4" x 1 1/4"	1
C4-918	C. T. PR1 Split Secondary.....	C4	3—1	3 1/2"		2 1/4" x 3 1/4" x 2 1/4"	2
B7-811	Two Plates to Two Grids—Class A	B7	1 1/2—1	1 1/2" x 2 1/4"	3/4" x 3/4"	2 1/4" x 2 1/4" x 2 1/4"	1 1/2
B4-811		B4	1 1/2—1	2 1/2"	3/4" x 3/4"	2" x 3 1/2" x 1 1/4"	1
E-1037	P. P. Plates to P. P. Grids.....	E	3, 16—1			3" x 2 1/2" x 2 1/2"	2 1/2

MICROPHONE AND LINE TRANSFORMERS

Number	Application	Pri. Impedance	Sec. Impedance	Mtg.	Mounting Centers	H. Size L. W.	Wt.
E-1040	Microphone, Line or Mixer to Single Grid.....	*500 C.T., 250, *200 C.T., 50	Grid of Tube C.T	E	2" x 2"	3" x 2 1/2" x 2 1/2"	2 1/2
E-1041	Line to Line or Line to Voice Coil.....	*500 C.T., 250, *200 C.T., 50	4, 8, 15, 500	E	2" x 2"	3" x 2 1/2" x 2 1/2"	2 1/2
B7-822	Microphone to Single Grid.....	200 C.T.	Grid of Tube	B7	2 1/2"	3" x 2 1/4" diam.	1 1/4
P-300	Line to Multiple Speakers—60 Watt.....	250 or 500	Adjustable to Match 1 to 6 Speakers	Special		3" x 5" x 4 1/2"	6 1/2
E-1036	Line to Crystal Head.....	500	75,000	E	2x2"	3" x 2 1/2" x 2 1/2"	2 1/2
G7-965	Line to Voice Coil.....	500	8-4-2.6-2-1.5-7	C7		2 1/4" x 3 1/4" x 3"	2 1/2

FILTER CHOKES

Number	Ohms	Henries	At M.A.	Mounting	Mounting Centers	Core	H. Size L. W.	Wt.
E-1030	250	23	110	E	2" x 2"	1" x 1"	3" x 2 1/2" x 2 1/2"	2 1/2
C4-967	350	20	80	C4	3 1/2"	3/4" x 3/4"	2 1/4" x 3 1/4" x 2 1/4"	1 1/2
C4-968	1400	50	60	C4	3 1/2"	3/4" x 3/4"	2 1/4" x 3 1/4" x 2 1/4"	1 1/2
B4-837	400	15	40	B4	2 1/2"	3/4" x 3/4"	2" x 2 1/2" x 1 1/4"	1
T-1002	300	8	50	A4	2 1/2"	3/4" x 3/4"	1 1/4" x 2 1/4" x 1 1/4"	10 oz.
T-1001	400	12	40	A4	2 1/2"	3/4" x 3/4"	1 1/4" x 2 1/4" x 1 1/4"	10 oz.
T-391	350	14.5	35	A4	2 1/2"	3/4" x 3/4"	1 1/4" x 2 1/4" x 1 1/4"	10 oz.
T-333	200	6.5	60	A4	2 1/2"	3/4" x 3/4"	1 1/4" x 2 1/4" x 1 1/4"	10 oz.
T-341	400	12.5	30	D4	2"	3/4" x 3/4"	1 1/4" x 2 1/4" x 1 1/4"	6 oz.
E-1031	2200	80	28	E	2" x 1 1/4"	1" x 1"	3 1/2" x 2 1/2" x 2 1/2"	2 1/2
E-1032	160	7.5	150	E	2" x 2"	1" x 1"	3 1/2" x 2 1/2" x 3"	2 1/2
S-243	70	4	250	E		3 1/4" x 3 1/4"	4 1/2" x 4 1/2"	8
S-242	150	15	350	E		3 1/4" x 3 1/4"	4 1/2" x 4 1/2"	11
S-250	100	5-15	350	S		4 1/2" x 4"	4 1/2" x 4"	9 1/2



E or S Mtg.

HALLDORSON Replacement Transformers

POWER TRANSFORMERS

Cat. No.	Plate Voltage C.T.	5 V. Fil.	2.5 V. Fil.	6.3 V. Fil.	Tube Combinations	Mtg Type	Dimensions H. W. D.	Mounting Centers	Wgt. Lbs.
S-21	500 V.—60 M.A.	2 A.		2 A., C.T.		Z			
L-20	700 V.—70 M.A.	3 A.		2.5 A., C.T.		L	3 1/2" x 3" x 2 1/2"	Universal	4 1/2
S-84	800 V.—160 M.A.	3 A.	14 A., C.T.	4.5 A., C.T.		S	4 1/2" x 3 1/2" x 4 1/2"	3" x 3 1/2"	10 1/2
M663	700 V.—110 M.A.	3 A.	(1) 3.5 A., C.T., or (2) 10.5 A., C.T.	3.5 A., C.T.	2-47, 2A5, or 7-77, 6K7; 2-42, 6F6 6-24, 27, or 10-56, 57	M	3 3/4" x 3 1/2" x 3 1/2"	Universal	6 1/4
L-64	700 V.—100 M.A.	3 A.	(1) 3.5 A., C.T. (2) 15 A.		2-47, 2A5 8-24, 27, or 10-56, 57	L	3 3/4" x 4 1/2" x 3 1/2"	Universal	7 1/2
S-66	650 V.—50 M.A.	3 A.		2 A., C.T.	4-77, 78, 6K7; 1-42, 6F6	Z	3 1/2" x 2 1/2" x 3 1/2"	2 1/2" x 2 1/2"	3 1/4
S-67	700 V.—70 M.A.	3 A.		3 A., C.T.	5-77, 78, 6K7; 2-42, 6F6	Z	4" x 3 1/2" x 3 1/2"	2 1/2" x 2 1/2"	5
L-68	700 V.—120 M.A.	3 A.		4.5 A., C.T.	10-76, 6C6, 6K7; 2-42, 6F6	L	3 3/4" x 4 1/2" x 3 1/2"	Universal	6 1/2
S-58	700 V.—100 M.A.	3 A.		5 A., C.T.	12-76, 6C6, 6K7; 2-42, 6F6	Z	4 1/2" x 4" x 3 1/2"	3" x 2 1/2"	7 1/2
S-59	800 V.—120 M.A.	3 A.	(1) 3.5 A., C.T. (2) 14.5 A., C.T.		2-47, 2A5 8-24, 27 or 14-56, 57	Z	4 1/2" x 4" x 3 1/2"	3" x 2 1/2"	9
S-70	700 V.—100 M.A.	3 A.		3.5 A., C.T.	Including 77, 78, 6K7; 42, 6F6, 47 2A5, 24, 27, 56, 58	Z	4 1/2" x 4" x 3 1/2"	3" x 2 1/2"	8
L-70	700 V.—100 M.A.	3 A.	6 A., C.T.			L	3 1/2" x 4 1/2" x 3 1/2"	Universal	8
S-80	800 V.—150 M.A.	3 A.		2.5 A., C.T.	6J7, 6Y7, 2-6L6	Z	4 1/2" x 3 1/2" x 3 1/2"	3 1/2" x 2 1/2"	7 3/4
S-75	750 V.—180 M.A.	3 A.	6 A., C.T.	3.5 A., C.T.		Z	4 1/2" x 3 1/2" x 3 1/2"	3 1/2" x 2 1/2"	8
L-75	750 V.—180 M.A.	3 A.				L	4 1/2" x 4 1/2" x 3 1/2"	Universal	8
S-77	800 V.—200 M.A.	3 A.		5.5 A., C.T.		Z	4 1/2" x 3 1/2" x 3 1/2"	3 1/2" x 3"	9
S-74	745 V.—145 M.A.	3 A.		5 A., C.T.	6L6, 42, 6F6	Z	4 1/2" x 4" x 3 1/2"	3" x 2 1/2"	8 3/4
L-74	745 V.—145 M.A.	3 A.				L	3 3/4" x 4 1/2" x 3 1/2"	Universal	8 3/4
L-85	560 V.—50 M.A.			(1) 1.5 A. (2) .6 A.		L	3" x 3" x 2 1/2"	Universal	3
S-44	450 V.—40 M.A.	2 A.		1 A., C.T.		Z	3 1/2" x 2 1/2" x 2 1/2"		2 1/4
S67A	550 V.—80 M.A.	3 A.		3 A., C.T.		Z	4" x 3 1/2" x 3 1/2"		5
S-89	840 V.—135 M.A.	3 A.		35 A., C.T.		S	4" x 3 1/2" x 3 1/2"		5
M-21	500 V.—60 M.A.	2 A.		2 A., C.T.		M	1 7/8" x 3" x 2 1/2"		2 1/2
S-90	660 V.—200 M.A.	3 A.		5 A., C.T.		S	4 1/2" x 4" x 4"		10
					7.5 V. Fil.		1.5 V. Fil.		
S-50	600 V.—70 M.A.	(1) 3 A. (2) 1/2 A.	3.5 A., C.T.			S	4 1/2" x 3 1/2" x 3 3/8"	2 1/2" x 2 1/2"	5
S-54	800 V.—110 M.A.	3 A.	(1) 3.5 A. (2) 3 A., C.T.			S	4 1/2" x 4" x 4"	3" x 3"	8 3/4
S-73	900 V.—110 M.A.		10.5 A.		(1) 2.5 A. (2) 2.5 A., C.T.	S	4 3/4" x 4" x 4 1/2"	3" x 3 3/8"	10 1/2
S-76	700 V.—100 M.A.	3 A.	(1) 2 A., C.T. (2) 3 A., C.T.			S	4" x 3 1/2" x 3 1/2"	2 1/2" x 2 1/2"	5 1/4

The above are 117 V 50-60 cycle.

FILAMENT TRANSFORMERS

Number	Capacity at 50-60 Cycles	Mounting	Mounting Centers	Core	H.	Size L. W.	Wt.
E4-1051	115 V. to 2 1/2 Volts, 12 A. C.T.	E	3 3/8"	1" x 1"	2 1/2"	3 1/2" x 2 1/2"	2 1/4
B5-860	115 V. to 6.3 Volts, 3 A.	B5	2 3/8"	3/4" x 3/4"	2 1/2"	3 1/2" x 1 1/2"	1
B5-861	115 V. to 2 1/2 Volts, 6 A. C.T.	B5	2 3/8"	3/4" x 3/4"	2 1/2"	3 1/2" x 1 1/2"	1
S-25	115 V. to 6.3 V., 6 A. C.T., 5 V., 3 A.	S	2 1/2" x 2 1/4"	1 1/2" x 1 1/2"	4 1/2"	3 1/2" x 3 1/2"	3
B5-859	115 V. to 5 V., 3 A.	B5	2 3/8"	3/4" x 3/4"	2 1/2"	3 1/2" x 1 1/2"	1
U5-1052	117 V. to 5 V. C.T.—10A.	U5		3 1/4" x 3 1/4"	3 1/2"	3 1/2" x 3 1/2"	3 1/2
U5-1153	107-117 V.—6.3 V.—6A.	U5		3 1/4" x 3 1/4"	3 1/2"	3 1/2" x 3 1/2"	2 1/2
S-935	117 V. to 7.5 V. C.T.—5A.	S		3 1/4" x 3 1/4"	3 1/2"	3 1/2" x 3 1/2"	3 1/2
B5-862	117 V. to 7.5 V. C.T.—2.5 A.	B5		3 1/4" x 3 1/4"	3 1/2"	3 1/2" x 3 1/2"	1 1/2
U5-1301	117 V. to 10 V. C.T.—5A.	U5		4 1/4" x 3 1/4"	4 1/2"	3 1/2" x 3 1/2"	5 1/2
S-26	117 V. to 5 V. C.T.—3A.	S		4 1/4" x 3 1/4"	4 1/2"	3 1/2" x 3 1/2"	3
A4-702	117 V. to 6.3 V.—1.5 A.	A4		2 3/4" x 2 3/4"	4 1/4"	3 1/4" x 3 1/4"	10 oz

DRIVER TRANSFORMERS

Number	Drivers	Class	Driving	Mounting	Ratio Pri. to 1/2 Sec.	Mounting Centers	H.	Size L. W.	Wt.
E-1045	6C5, 6R7 or 6F6 Triode	AB	61.6 P.P.	E	5-1	2" x 1 3/8"	3 1/4"	2 1/2" x 2 3/4" x 2 3/4"	2 1/2
B6-830	6C5, 6R7 or 6F6 Triode	AB	61.6 P.P.	B7	5-1	2 3/4"	2 3/4"	2 1/4" x 2 3/4" x 1 1/4"	1
B4-819	30.	B	1-19 or 2-30	B4	2.5-1	2 3/8"	2"	3 3/4" x 1 3/4" x 1 3/4"	1
B7-832	89 Triode or 46 or 59.	B	1-79 2-46 or 2-59	B7	2.2-1	2 3/4"	2 1/4"	2 1/4" x 2 3/4" x 1 1/4"	1

SIX VOLT VIBRATOR TRANSFORMERS

Cat. No.	Sec. D.C. Volts to Filter	Sec. M.A.	Mounting	Size Height, Width, Depth	Weight, Lbs.
J-92	250	60	J	3 1/2" x 2 1/2" x 2 3/8"	2
J-94	285	75	J	2 3/8" x 3 3/8" x 2 3/8"	2 1/4
J-90	225	40	C5	2 5/8" x 3 1/4" x 2 3/8"	2
J-91	250	50	J	3 1/2" x 2 3/8" x 2 3/8"	2 1/4

SIX VOLT D.C. OR 115-VOLT A.C. VIBRATOR TRANSFORMERS

S-500	350	135	Z	4 1/2" x 3 3/4" x 4 1/4"	10
S-501	375	115	Z	4 1/2" x 3 1/2" x 4 1/4"	7

STEP-DOWN TRANSFORMERS

P-610	160 WATTS	S2	220 V. to 110 V., 50-60 CYCLE
P-612	100 WATTS	S2	220 V. to 110 V., 50-60 CYCLE
P-1964	50 WATTS	S2	220 V. to 110 V., 50-60 CYCLE
P-613	250 WATTS	S2	220 V. to 110 V., 50-60 CYCLE
P-614	500 WATTS	S2	220 V. to 110 V., 50-60 CYCLE
P-1871	350 WATTS	S2	220 V. to 110 V., 50-60 CYCLE

THORDARSON TRANSFORMERS

NEW STREAMLINED SERIES

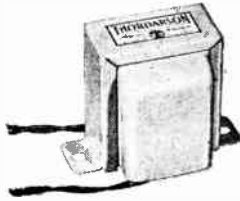
This is the new Thordarson post-war series of Transformers and Chokes. Every unit has been designed for utmost efficiency and adaptability. Many of the engineering and production advancements developed by Thordarson during the war, are used in producing this line.

The new lamination alloys and insulating material, incorporated in this series, results in superior performance and a greater factor of safety without an increase in size or weight. Consequently, some types are smaller and more compact

without sacrificing efficiency or performance.

Finished in baked grey enamel and fitted with matched mounting styles, the units present a uniform appearance. This is especially desirable where several Transformers and Chokes are mounted on the same chassis.

Types for Radio Receiver Replacement, Amateur Radio, Sound Systems and allied applications, can be selected from this listing.



FGV



BAH



Z



RTV



RAV

AUDIO INPUT TRANSFORMERS

Type No.	Mtg.	Application	Ohms Impedance		Turns Ratio	Mtg. Centers	Dimensions			Wt. Lbs.	
			Primary	Secondary			W.	D.	H.		
T-20A00	BAH	Line or mic to single or push-pull grids*	600 Ct.	60,000 Ct.	1:10	2	2 3/8	1 1/4	1 1/2	1 1/2	
			200 Ct.	20,000 Ct.							
			50	20,000 Ct.							
T-20A01	FGV	Line or mic to single grid†	600 Ct.	240,000	1:20	2 3/8	2 7/8	1 7/8	2 3/16	1 1/4	
			200 Ct.	80,000							
			50	80,000							
T-20A02	FGV	Line or mic to push-pull grids‡	600 Ct.	240,000 Ct.	1:20	2 3/8	2 7/8	1 7/8	2 3/16	1 1/4	
			200 Ct.	80,000 Ct.							
			50	80,000 Ct.							
T-20A03	BAH	Single plate and mic or line to grid*	5,000 to 10,000	100,000	1:3.25	2 3/8	2 13/16	1 5/8	1 5/8	3/4	
			200	250,000							
			3 to 6	37,000							
T-20A04	BAH	Voice coil or mic to grid*	3 to 6	37,000	1:7.9	2	2 3/8	1 3/4	1 1/2	1 1/2	
			50	315,000							
			600 Ct.	60,000 Ct.							
T-20A05	RTV	Line or mic to single or push-pull grids§ (Hum-bucking coil and core—fully potted)	600 Ct.	60,000 Ct.	1:10	1 5/16	1 5/16 diam.	2	2 3/16	1 1/2	
			200 Ct.	20,000 Ct.							
			50	20,000 Ct.							
T-20A40	Z	Microphone cable input transformer†	30 to 60	50,000	1:31.6				1 Diam.	2 1/16	3/4
T-20A41	Z	Microphone cable input transformer‡	200 to 250	50,000	1:14.2				1 Diam.	2 1/16	3/4

† Can be used in reverse—i.e., High impedance source to line.

* Frequency response—250 to 10,000 c.p.s.

‡ Frequency response—60 to 10,000 c.p.s.

§ Used for converting high impedance input of amplifier to accommodate low impedance microphones—Frequency response within 1/2 Db 30 to 15,000 c.p.s.—High permeability shield for reduction of hum—Fitted with 2-prong connector for balanced mic cable and single contact connector for fitting to amplifier input.

AUDIO INTERSTAGE TRANSFORMERS

Type No.	Mtg.	Application	Ohms Impedance		Turns Ratio	Pri. M.A.	Mtg. Centers	Dimensions			Wt. Lbs.
			Primary	Secondary				W.	D.	H.	
T-20A16	BAH	Single plate to single or push-pull grids	10,000	40,000 Ct.	1:2	8	2	2 3/8	1 1/4	1 1/2	1 1/2
T-20A17	RAV	Single plate to single or push-pull grids	10,000	40,000 Ct.	1:2	8	1 1/2	1 9/16	Diam. 2	1 1/2	1 1/2
T-20A19	BAH	Single or push-pull plates to single or push-pull grids	Universal	Universal	1:3	8	2 3/8	2 1/8	1 5/8	2	3/4
T-20A22	BAH	Single plate to single or push-pull grids	10,000	90,000 Ct.	1:3	8	2 7/8	3 1/4	2 1/8	1 1/2	1 1/2
T-20A23	FGV	Single plate to single or push-pull grids	10,000	90,000 Ct.	1:3	8	2 3/8	2 7/8	2 1/8	2 3/16	1 1/2
T-20A24	FGV	Push-pull plates to push-pull grids	20,000 Ct.	180,000 Ct.	1:3	8 Bal.	2 3/8	2 7/8	2 1/8	2 3/16	1 1/2
T-20A25	RTV	Single or push-pull plates to single or push-pull grids (Hum-bucking coil and core—fully potted)	Universal	Universal	1:1.41	8 Bal.	1 5/16 x 1 1/16	1 1/16	Diam. 2	2	1 1/2

TUBE TO LINE TRANSFORMERS (Low Level)

T-22S90	FGV	Single or push-pull plates to line	20,000 Ct.	500 Ct. or 125 to 200		8	2 3/8	2 7/8	1 7/8	2 3/8	1 1/2
T-22S92	RTV	Single or push-pull plates to line (Hum-bucking coil and core—fully potted)	20,000 Ct.	500 Ct. or 125 to 200		8	1 5/16 x 1 1/16	1 1/16	Diam. 2	2	1 1/2

DRIVER TRANSFORMERS

Type No.	Mtg.	Application	Turns Ratio		Pri. M.A.	Mtg. Centers	Dimensions			Wt. Lbs.
			Pri.—1/2 Sec.	Sec.			W.	D.	H.	
T-20D75	BAH	Single plate to push-pull Class B grids	2.4:1		3	2	2 3/8	1 1/4	1 3/8	1 1/2
		Primary 10,000 ohms—1H4-G or 30 to 19, etc.								
T-20D76	BAH	Single plate to push-pull Class B grids	5.2:1		7	2	2 3/8	1 1/4	1 3/8	1 1/2
		Primary single 6N7 to Class B 6N7, etc.								
T-20D77	FGV	Primary single 6F6 to PP 6L6, etc.	2.5:1		30	2 3/8	2 7/8	2 1/8	2 3/16	1 1/2
T-20D78	GGV	Push-pull plates to push-pull grids	4:1		40	2 x 1 1/16	2 3/8	2 1/16	3 1/8	2 1/2
		Primary 6F6 triode to PP 6L6, etc.								
T-20D79	FGV	Parallel or P-P parallel 6N7 to P-P parallel 6N7, etc.	5.2:1		30	2 3/8	2 7/8	2 1/8	2 3/16	1 1/2
T-20D80	GGV	Push-pull 2A3 or 6A3 to 805-838, etc.	3.2:1		40	2 x 1 1/16	2 3/8	2 1/16	3 1/8	2 1/2
T-20D81	GGV	Push-pull 815 to push-pull 805-833, etc.	5:1		50	2 1/2 x 2 3/16	3 3/8	3 1/8	3 3/8	4 1/2
T-20D82	GGV	Push-pull plates to push-pull grids	5:1		60	2 x 1 1/16	2 3/8	2 1/16	3 1/8	2 1/2
		Push-pull 2A3-6F6, etc. to 805, etc.								
T-20D83	PUV	15 Watt 500 Ohm line to class B grids.			1:1.75, 1:8.5, 1:1.25, 1:1.4, 1:1.75, 1:2.1, 2:25, 1:2.5, 1:2.75, 1:3.15	1 3/8 x 4 3/8	3 3/8	4 3/8	4	8



TRANSFORMER SPECIALISTS SINCE 1895 THORDARSON

THORDARSON TRANSFORMERS



GGV



PUV



BHH



KTV

OUTPUT TRANSFORMERS

Type No.	Mtg.	Application	Primary Imp. Ohms	Max. Prim. Per Side	D.C. M.A. Unbal.	Secondary Imp. Ohms	Power Watts	Mtg. Centers	Dimensions			Wt. Lbs.
									W	D	H	
T-22S45	BAH	Single plate to voice coil	1500 to 3000	..	55	3.2	3	2	2 3/8	1 1/2	1 3/8	1 1/2
T-22S46	BAH	Single plate to voice coil	3000 to 6000	..	35	3.2	3	2	2 3/8	1 1/2	1 3/8	1 1/2
T-22S47	BAH	Single or push-pull plates to voice coil	6000 to 12000 Ct.	35	35	3.2	3	2	2 3/8	1 1/2	1 3/8	1 1/2
T-22S48	BAH	Single or push-pull plates to voice coil	12000 to 25000 Ct.	10	8	3.2	3	2	2 3/8	1 1/2	1 3/8	1 1/2
T-22S56	BAH	Single or push-pull plates to voice coil	8000/10000 Ct.	50	35	3.2 to 4/6 to 8	8	2 1/8	3 1/4	1 3/4	2	1 3/4
T-22S58	BAH	Single or push-pull plates to voice coil	5000/7000 Ct.	50	45	3.2 to 4/6 to 8	8	2 1/8	3 1/4	1 3/4	2	1 3/4
T-22S60	BAH	Single or push-pull plates to voice coil	2500/4000 Ct.	60	60	3.2 to 4/6 to 8	8	2 1/8	3 1/4	1 3/4	2	1 3/4
T-22S64	GGV	Single or push-pull plates to voice coil	10000 Ct.	50	30	3.2 to 4/6 to 8/15/250/500	25	2 x 1 1/4	2 1/2	2 1/4	3 1/2	2 1/4
T-22S66	GGV	Single or push-pull plates to voice coil	8000 Ct.	50	30	3.2 to 4/6 to 8/15/250/500	25	2 x 1 1/4	2 1/2	2 1/4	3 1/2	2 1/4
T-22S68	GGV	Single or push-pull plates to voice coil	6500 Ct.	70	40	3.2 to 4/6 to 8/15/250/500	25	2 x 1 1/4	2 1/2	2 1/4	3 1/2	2 1/4
T-22S70	GGV	Single or push-pull plates to voice coil	5000 Ct.	80	45	3.2 to 4/6 to 8/15/250/500	25	2 x 1 1/4	2 1/2	2 1/4	3 1/2	2 1/4
T-22S72	GGV	Single or push-pull plates to voice coil	3000 Ct.	90	50	3.2 to 4/6 to 8/15/250/500	25	2 x 1 1/4	2 1/2	2 1/4	3 1/2	2 1/4
T-22S78	GGV	Single or push-pull plates to voice coil	3300 Ct.	180	150	3.2 to 4/6 to 8/15/250/500	60	2 1/2 x 2 1/8	3 1/2	3 3/8	3 1/8	5 1/4
T-22S74	BHH	Universal single or push-pull tubes to voice coil	14000/10000/8000/6600/5000/3000/2500 Ct.	80	60	1 to 30	25	3 3/8	4	2 1/2	2 1/8	2 1/4
T-22S76	BHH	Universal single or push-pull tubes to line	14000/12000/10000/8000/5000/3000 Ct.	80	60	500	25	3 3/8	4	2 1/2	2 1/8	2 1/4
T-22S80	BHH	Single line to voice coil	500 to 600	..	..	3.2 to 4/6 to 8/15	8	3 1/4	3 1/4	2	2 1/4	1 3/4
T-22S82	BHH	Multiple lines to voice coil	2000/1500/1000/500	..	..	3.2 to 4/6 to 8/15	25	3 3/8	4	2 1/4	2 1/8	2 1/4
T-22S83	BAH	Multiple lines to voice coil	2000/1500/1000/500	..	..	3.2 to 4/6 to 8/15	15	3 1/4	3 1/4	2	2 1/4	1 3/4
T-22S84	BAH	Multiple lines to voice coil	2000/1500/1000/500	..	..	3.2 to 4/6 to 8/15	.5	2 1/8	3 1/4	1 3/4	2	1
T-22S85	BAH	Multiple lines to voice coil	2000/1500/1000/500	..	..	3.2 to 4/6 to 8/15	3	2 1/4	2 1/4	1 3/4	1 3/4	3/4
T-22S62	BHH	Universal single plate to voice coil	4000/3000/2500/2000/1500	..	50	.1 to 29	8	2 1/8	3 1/4	2	2	1 3/4
T-22S88	BAH	Universal single or push-pull plates to voice coil	14000 Ct./8000 Ct./3500/2000	50	35	3.2 to 4/6 to 8/15	8	2 1/8	3 1/4	1 3/4	2	1
T-22S87	BAH	Universal single or push-pull plates to voice coil	14000 Ct./8000 Ct./3500/2000	50	35	3.2 to 4/6 to 8	6	2 1/4	2 1/4	1 3/4	1 3/4	3/4
T-22S86	BAH	Universal single or push-pull plates to voice coil	14000 Ct./8000 Ct./3500/2000	50	35	3.2 to 4/6 to 8	3	2	2 1/4	1 3/4	1 3/4	3/4

MODULATION TRANSFORMERS

Type No.	Mtg.	Capacity Watts	Primary Imp. Ohms	Secondary Imp. Ohms	Secondary Series Volts	M.A.	Primary Application	Mtg. Centers	Dimensions			Wt. Lbs.
									W.	D.	H.	
T-21M50	BAH	3	10,000 Ct.	4500	135	30	19, etc.	2	2 3/8	1 3/8	1 3/8	1/2
T-21M52	FGV	10	10,000 Ct.	4500/3750/3000	350	80	6N7, etc.	2 3/8	2 1/8	2 1/8	2 1/8	1 1/4
T-21M54	GGV	25	6,600 Ct.	4000	400	100	PP 6L6, etc.	2 x 1 1/8	2 1/8	2 1/8	3 1/8	2 3/4
T-21M56	GGV	75	10,000 Ct.	6600/3750	1250	200	TZ-20-809 etc.	2 1/2 x 2 1/8	3 1/8	4 3/8	3 1/8	6 3/4
T-21M58	KTV	100	15,000 Ct.	6250	Max. 1250	200	811-812, etc.	3 1/2 x 4 1/8	4 3/8	5 1/8	5 3/8	13

It is essential that the class C R.F. load be properly matched to the class B modulator tubes for a maximum transfer of speech energy with low distortion. Thordarson Multi-Match modulation transformers have sufficient flexibility to enable the engineer or amateur to adjust the impedance ratio of primary to secondary, to meet any practical condition of operation. This feature forestalls the possibility of the modu-

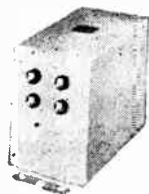
lation transformer becoming obsolete due to changing the modulator or class C tubes. The use of new tubes or a change in class C voltage and current will not necessitate the need of a new modulation transformer, providing the power capacity is adequate. Complete charts and instructions for proper matching are supplied with each unit.

UNIVERSAL MULTI-MATCH MODULATION TRANSFORMERS

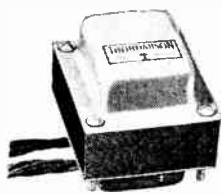
Type No.	Mtg.	Capacity Watts	Primary M.A. each side	Secondary Series	M.A. Pa:all	Mtg. Centers	W.	Dimensions			Wt. Lbs.
								D.	H.		
T-21M60	KTV	15	50	50	100	2 1/8 x 2 1/8	2 1/8	3 1/8	4	3 3/4	3 3/4
T-21M61	PUV	60	125	125	250	1 3/4 x 4 3/8	3 1/8	5 1/4	4	8 1/2	8 1/2
T-21M62	PUV	125	210	160	320	2 3/8 x 6 1/8	4 1/8	6 3/8	5 3/8	16 3/4	16 3/4
T-21M64	PUV	300	250	250	500	2 1/8 x 6 1/8	4 1/8	7 3/8	6	20	20
T-21M65	PUV	500	320	320	640	3 1/8 x 10	5 3/8	11	6 7/8	50	50
T-21M66	KTV	50	500 Ohm Line to R.F. Load—5000/6000/7000/8000/9000/10,000 Ohms—Max. Sec. D.C. 200 M.A.			3 3/4 x 3 3/4	4 3/8	5 3/8	5 1/4	11	11

 TRANSFORMER SPECIALISTS SINCE 1895 THORDARSON

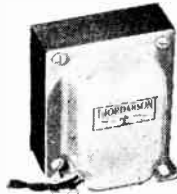
THORDARSON TRANSFORMERS



KTF



GGV



AGF



PUV



CAV



BAH



BAV

REPLACEMENT POWER TRANSFORMERS

Type No.	Mfg.	H.V. Secondary A.C. Volts	M.A. D.C.	Ret. Fil.	Fil. No. 2	Fil. No. 3	Pri. Volts 50/60 Cy.	Pri. VA.	Mtg. Centers	Dimensions W. D. H.	Wt. Lbs.	
T-22R00	AGF	250-250	40	5V.-2A.	6.3V. CT-2A.		117	45	2 x 2 1/2	2 1/2 x 3	1 1/16	1 3/4
T-22R01	AGF	275-275	50	5V.-2A.	6.3V. CT-2.5A.		117	55	2 x 2 1/2	2 1/2 x 3	1 1/16	2 1/2
T-22R02	AGF	300-300	70	5V.-2A.	6.3V. CT-3A.		117	65	2 x 2 1/2	2 1/2 x 3	2 1/16	2 3/4
T-22R04	AGF	300-300	90	5V.-2A.	6.3V. CT-3.5A.		117	80	2 1/2 x 2 1/2	2 1/2 x 3 3/8	2 1/16	3
T-22R05	AGF	300-300	120	5V.-3A.	6.3V. CT-5A.		117	95	2 1/2 x 3 1/8	3 1/8 x 3 3/8	2 1/2	4 1/4
T-22R06	AGF	325-325	150	5V.-3A.	6.3V. CT-5A.		117	125	2 1/2 x 3 1/8	3 1/8 x 3 3/8	3	5 3/4
T-22R07	AGF	350-350	200	5V.-3A.	6.3V. CT-6A.		117	165	3 x 3 3/8	3 3/8 x 4 1/2	2 1/2	7 3/4
T-22R08	AGF	250-250	40	5V.-2A.	2.5V. CT-1A.		117	40	2 x 2 1/2	2 1/2 x 3	1 1/16	1 3/4
T-22R09	AGF	275-275	50	5V.-2A.	2.5V. CT-7.5A.		117	55	2 x 2 1/2	2 1/2 x 3	1 1/16	2 1/4
T-22R10	AGF	325-325	85	5V.-2A.	2.5V. CT-9A.	2.5V. CT-3.5A.	117	90	2 1/2 x 3 1/8	3 1/8 x 3	2 1/4	3 1/2
T-22R11	AGF	325-325	120	5V.-3A.	2.5V. CT-12.5A	2.5V. CT-5A	117	125	2 1/2 x 3 1/8	3 1/8 x 3 3/8	3	5 1/2

POWER TRANSFORMERS (AMPLIFIER, ETC.)

T-22R30	GGV	275-275	50	5V.-2A.	6.3V. CT-2.5A.		117	55	2 x 2 3/8	2 1/4 x 3 1/8	3 3/8	3 1/4
T-22R31	GGV	360-360	80	5V.-2A.	6.3V. CT-2.5A.		117	76	2 x 2 1/8	2 1/4 x 3 1/8	3 1/8	4
T-22R32	GGV	350-350	110	5V.-2A.	6.3V. CT-3A.	6.3V. CT-3A.	117	107	2 1/2 x 2 1/8	3 3/8 x 3 1/8	3 1/8	5 3/4
T-22R33	GGV	375-375	160	5V.-3A.	6.3V. CT-5A.		117	145	3 x 3 3/8	3 3/8 x 4 1/2	4 3/8	7 3/4
T-22R34	GGV	385-385	225	5V.-3A.	6.3V. CT-5A.		117	186	3 x 3 3/8	3 3/8 x 4 1/2	4 3/8	10
T-22R35	GGV	400-400	340	5V.-6A.	6.3V. CT-7A.		117	290	3 x 3 1/2	3 3/8 x 5 1/8	4 3/8	12 1/2

VIBRATOR POWER TRANSFORMERS

Type No.	Mfg.	Primary	H.V. Secondary	Sec. No. 2	Mtg. Centers	Dimensions W. D. H.	Wt. Lbs.
T-22R20	CAV	6-8 volts D.C.	250 volts D.C. at 50 M.A.		2 x 1 3/4	2 1/2 x 2 1/4	2 1/2
T-22R22	CAV	6-8 volts D.C.	325 volts D.C. at 75 M.A.		2 x 2 1/2	2 1/2 x 3	3 1/2
T-22R24	GGV	117V. 60 cycle or 6-8 volts D.C.	325 volts D.C. at 135 M.A.	6.3 volts Ct. at 4.75 A.	3 x 3 1/2	3 1/2 x 4 1/2	8 3/4

PLATE TRANSFORMERS

The new Thordarson plate transformers are designed to deliver the rated D.C. voltage from a two-section filter which includes the voltage drop in the rectifier tubes and chokes. Two current ratings are indicated, "Continuous Commercial

Service" (CCS) and "Intermittent Commercial or Amateur Service" (ICAS). These dual ratings make it possible to select the plate transformer exactly suited for each application.

Type No.	Mfg.	Pri. Volts 50-60 Cy.	Prim. V.A. ICAS CCS	Secondary Volts R.M.S.	D.C. Volts	D.C.M.A. ICAS CCS	Mtg. Centers	Dimensions W. D. H.	Wt. Lbs.
T-21P75	PUV	115/230	1900 1500	3000-2100-1500-0-1500-2100-3000	2500-2000-1250-650	500	4 3/4 x 12 1/2	7 3/8 13 1/2 9 1/8	135
T-21P77	PUV	115/230	1250 900	3000-2450-0-2450-3000	2500-2000	425	3 1/4 x 10	6 3/8 11 9	77
T-21P79	PUV	115/230	1000 750	1875-1500-0-1560-1875	1500-1250	550	400 3 1/8 x 10 1/8	5 1/2 11 6 7/8	60
T-21P81	PUV	115*	630 480	1560-1265-0-1265-1560	1250-1000	425	300 3 1/8 x 10 1/8	5 1/2 11 6 7/8	57
T-21P82	PUV	115*	820 600	2335-1700-0-1700-2335	2000-1500	300	220 3 1/8 x 9 1/8	5 1/2 10 6 7/8	43
T-21P83	PUV	115*	440 300	1560-1250-0-1250-1560	1250-1000	300	200 2 1/4 x 7 3/8	4 1/8 8 1/2 6	33
T-21P85	PUV	115*	370 260	850-730-0-730-850	600-500	425	300 2 3/8 x 6 3/8	4 1/8 6 7/8 5 1/8	19
T-21P87	GGV	115*	250 185	835-656-0-656-835	650-500	300	220 3 x 3 1/8	3 3/4 4 1/8 4 3/8	10
T-21P89	GGV	115	135 95	550-0-550	450	250	175 2 1/2 x 2 1/8	3 1/8 4 1/8 3 7/8	6 1/2
T-21P91	PUV	115	375 280	1200-0-1200	1000 and 750†	200	150 2 1/2 x 4 1/8	4 1/8 7 3/8 5 1/8	22
T-21P93	GGV	115	210 160	900-0-900† 1075-0-1075 500-0-500†	1000 and 400†	110 150 150	95 3 x 3 1/8	3 3/4 4 1/8 4 3/8	10

* Secondary voltages changed by means of primary taps.

† Designed for double rectifiers and will deliver both secondary ratings simultaneously. If only the lower voltage taps are used the current rating is equal to the current rating of both windings.



TRANSFORMER SPECIALISTS SINCE 1895 THORDARSON

THORDARSON TRANSFORMERS

FILAMENT TRANSFORMERS

Type No.	Mtg.	Secondary		Ins. R.M.S.	Pri. Volts 50/60 Cy.	Mtg. Centers	Dimensions			Wt. Lbs.
		Volts	Amps.				W	D	H	
T-21F00	BAV	2.5 Ct.	@ 5	1600	117	2 3/8	2 3/8	1 3/4	2 3/16	1
T-21F01	BAV	2.5 Ct.	@ 10	1600	117	2 1 1/16	3 1/16	2	2 1/16	1 1/2
T-21F02	CAV	2.5 Ct.	@ 10	7500	117	2 x 1 3/4	2 1/2	2 3/4	3 1/16	2 1/4
T-21F03	BAV	5 Ct.	@ 3	1600	117	2 3/8	2 3/8	1 3/4	2 3/16	1
T-21F04	BAV	5 Ct.	@ 7	1600	117	2 1 1/16	3 1/16	2	2 1/16	1 1/2
T-21F05	CAV	5 Ct.	@ 3	10,000	117	2 x 1 3/4	2 1/2	2 3/4	3 1/16	2
T-21F06	CAV	5 Ct.	@ 13	1600	117	2 x 2	2 1/2	2 3/2	3 1/16	2 3/4
T-21F07	CAV	5 Ct.	@ 21	1600	117	2 1/2 x 2 1/4	3 1/2	3 3/4	3 1/16	5 1/4
T-21F08	BAV	6.3 Ct.	@ 1	1600	117	2	2 3/8	1 1/2	2	1 3/4
T-21F10	BAH	6.3 Ct.	@ 3	1600	117	2 3/4	3 3/4	1 3/4	2 3/4	1
T-21F11	BAV	6.3 Ct.	@ 6	1600	117	2 1 1/16	3 1/16	2	2 3/4	1 1/2
T-21F12	CAV	6.3 Ct.	@ 10	1600	117	2 x 2	2 1/2	2 3/4	3 1/16	2 3/4
T-21F14	BAH	6.3-5-2.5	@ 2.5	1600	117	2 3/4	3 3/4	1 3/4	2	1
T-21F15	BAV	7.5 Ct.	@ 4	1600	117	2 1 1/16	3 1/16	2	2 1 1/16	1 1/2
T-21F16	CAV	7.5 Ct.	@ 12	1600	117	2 x 2	2 1/2	2 3/4	3 1/16	2 3/4
T-21F17	CAV	7.5 Ct.	@ 5	1600	117	2 1/2	2 1/2	3 3/4	3 1/2	4
T-21F18	CAV	10 Ct.	@ 12 or	1600	117	2 x 1 3/4	2 1/2	2 3/4	3 1/16	2 3/4
T-21F19	CAV	10 Ct.	@ 11	1600	117	2 3/2 x 2 3/4	3 3/8	3 3/4	3 1/16	5 1/4

CHOKES—REACTORS

Universal Types—Swinging and Smoothing

Thordarson Universal Chokes are designed for use both in the input and smoothing positions. Where the current taken from the power supply is essentially constant (not varying more than a few percent) the chokes should be selected so as not to exceed the rated D.C.—M.A. If the current fluctuates considerably, as is the case where the power supply furnishes a class B modulator stage, the chokes should be selected so as not to exceed the rated D.C.—M.A. rating under the steady

state of operation, and not to exceed the Max. D.C.—M.A. rating when the modulator stage is fully excited.

These are truly universal chokes suitable for use in power supplies requiring either input, swinging or smoothing types.

The tapped Splatler Chokes are used between the modulator and Class C stage for eliminating objectionable side band splatler. Full instructions and circuit diagrams are supplied with each unit.

Type No.	Mtg. Fig.	Inductance in Henries*		Current in M.A.		D.C. Res. Ohms	Test Volts R.M.S.	Mtg. Centers W.	D.	Dimensions			Wt. Lbs.
		O D.C.	Rated D.C.	Max. D.C.	Rated D.C.					Max. D.C.	W.	D.		H.
T-20C50	BAH	475	350	75	5	25	5500	2000	2 3/8	3 1/4	2	2	1 1/2
T-20C51	BAH	70	35	15	15	25	1850	1200	2	2 3/8	1 1/4	1 3/8	1 1/2
T-20C52	BAH	13	8	4	40	65	450	1200	2	2 3/8	1 1/4	1 3/8	1 1/2
T-20C53	BAH	24	12	8	80	100	375	2000	2 3/8	3 3/4	2	2	1 1/2
T-20C54	GGV	16	8	4	150	200	145	2700	2	1 1/16	2 1/2	3 1/2	2 1/2
T-20C55	GGV	11	6	2	200	300	75	2700	2 3/4	2 3/8	3 3/4	3 3/8	3 3/8
T-20C56	GGV	10	7	4	300	375	60	3500	2 3/2	3	3 1/8	4 1/8	6 1/2
T-20C57	PUV	16	10	6	500	600	65	7500	2 3/8	7	4 1/16	7 3/4	26
T-20C58	BAH		75		.5		30	1100	2 3/8	2 1/8	1 1/2	1 5/8	1 1/2

*Measured at 50 volts, 60 cycles at D.C. current shown.

Dual Tone Control Reactor

T-20C74 R-1068	RAV	22	0	HUM-BUCKING CONSTRUCTION USED IN CONJUNCTION WITH DUAL TONE CONTROL CHOKE T-20C74		220	500	1 1/16	1 3/16	Diameter 2	1 1/2
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Splatler Chokes

Type No.	Mtg.	Application	D.C. Resistance	Mtg. Dim.	Dimensions			Wt. Lbs.
					W.	D.	H.	
T-20C60	KFV	Inductance—.2 to 1.5 H. @ 300 M.A. D.C.	30 ohms	2 3/8 x 3 1/2	3 1/2	4 13/16	4 1/2	7
T-20C61	KTV	Inductance—.2 to 1.5 H. @ 500 M.A. D.C.	27 ohms	2 3/8 x 3 1/8	3 3/8	4 13/16	4 3/8	9

Automatic Voltage Regulators

Type No.	Mtg.	Primary Voltage	Secondary Voltage Plus or Minus 1%	V.A.	Mtg. Centers	Dimensions			Wt.
						W.	D.	H.	
T-23V06	KTF	95-130-60 Cye.	6.3	20	2 x 3 1/2	4	4 1/2	4 1/2	7
T-23V00	KTF	95-130-60 Cye.	110/115/120	40	2 x 4	4 1/2	4 3/8	4 3/8	17
T-23V01	KTF	95-130-60 Cye.	110/115/120	100	11 3/8 x 2 3/8	12 7/8	5 3/4	6 3/8	9
T-23V02	KTF	95-130-60 Cye.	110/115/120	250	11 3/8 x 3 3/8	12 7/8	6 3/8	8 3/8	26
T-23V05	KTF	95-130-60 Cye.	110/115/120	500	16 x 4	17	6 3/8	7 3/8	50
T-23V10	KTF	95-130-60 Cye.	110/115/120	1000	10 x 4	20	7 3/8	10 1/4	95

Voltage Changer—Auto Transformers

T-23V21	GGV*	220-250	110-125†	80	2 1/2 x 1 1/16	3 3/8	2 1/16	3 3/8	5
T-23V22	GGV*	220-250	110-125†	150	2 1/2 x 1 1/16	3 3/8	3 3/8	3 3/8	6 1/2
T-23V23	GGV*	220-250	110-125†	250	3 x 2 1/16	3 1/2	3 3/8	4 1/16	10 1/4
T-23V24	GGV*	220-250	110-125†	500	3 x 3 1/8	3 1/2	4 3/8	4 1/16	13

*Furnished with primary cord and secondary receptacle.

†Output is proportional to voltage applied to input.

THORDARSON LITERATURE

TRANSFORMER MANUAL: A complete book containing literature on Radio receiver replacement transformers, Sound amplifiers, amateur transmitters and current Thordarson catalogs. Bound in heavy blue and orange loose leaf cover permitting addition of future Thordarson releases. Manual No. 340—35 cents.

TRANSFORMER CATALOG: A complete listing of Thordarson transformers, chokes, voltage changers, and regulators for receiver replacement, amateur radio and sound amplifiers. Tables and curves give complete data on application and characteristics of output, modulation and other transformers and chokes. Catalog 400—Free.

TRU-FIDELITY TRANSFORMER CATALOG: Complete technical data on Thordarson broadcast units. Includes audio

transformers, filters, line equalizers, filament transformers, filter reactors, plate transformers, and modulation reactors and transformers. Highest quality units that satisfy the requirements of discriminating engineers, broadcast stations and laboratories. Catalog 500—Free.

AMATEUR RADIO: Carefully prepared and edited to make learning of Radio, by all beginners, easy and interesting. Presents fundamental theory and instructions for making code practice oscillators, receivers and transmitters. Has 160 pages and over 100 illustrations and drawings. Heavy book cover, finished in wear-resistant blue cloth and imprinted with gold lettering. Amateur net price—75 cents.

Literature prices are amateur net.



TRANSFORMER SPECIALISTS SINCE 1895 THORDARSON



PRICE LIST

Type No.	List Price	Type No.	List Price	Type No.	List Price	Type No.	List Price	Type No.	List Price	Type No.	Net Price
A-10	\$15.00	CVA-1	\$10.00	LS-5	\$42.00	LS-185	\$400.00	R-39	\$3.80	S-37	\$14.00
A-11	16.00	CVA-2	13.00	LS-6	31.00	LS-190	27.00	R-40	5.50	S-38	14.00
A-12	15.00	CVA-3	17.50	LS-7	31.00	LS-691	350.00	R-41	7.50	S-39	10.50
A-14	11.00	CVA-4	26.00	LS-10	25.00	LS-692	700.00	R-42	8.50	S-40	10.50
A-16	13.00	CVA-5	36.00	LS-10X	32.00	LS-693	1500.00	R-43	9.50	S-41	9.50
A-18	14.00			LS-12	28.00	LS-950	14.00	R-44	12.50	S-42	12.50
A-19	18.00	CVL-1	8.00	LS-12X	35.00	LS-980	40.00	R-45	20.00	S-43	17.50
A-20	15.00	CVL-2	11.50	LS-14	28.00			R-46	35.00	S-44	15.50
A-21	16.03	CVL-3	17.50	LS-14X	35.00	MC-1	13.00	R-47	10.00	S-45	12.00
A-24	15.00	CVL-10	8.00	LS-15	28.00	MC-2	17.00	R-48	13.50	S-46	15.00
A-25	14.00	CVL-11	11.50	LS-15X	35.00	O-1	13.25	R-53	3.70	S-47	19.00
A-26	15.00	CVL-12	17.50	LS-18	31.00	O-2	13.25	R-54	6.60	S-48	28.00
A-27	15.00	CVM-0	8.50	LS-19	21.00	O-3	12.00	R-55	1.75	S-49	26.50
A-30	10.00	CVM-1	14.00	LS-20	21.00	O-4	10.50	R-56	3.70	S-50	37.00
CG-1C	60.00	CVM-2	20.50	LS-21	24.00	O-5	10.50	R-57	5.80	S-51	9.00
CG-1S	60.00	CVM-3	30.00	LS-22	31.00	O-6	12.00	R-58	3.00	S-52	12.00
CG-2L6	19.00	CVM-4	50.00	LS-25	28.00	O-7	12.00	R-59	3.50	S-53	3.20
CG-4L6	20.00	CVM-5	115.00	LS-26	25.00	O-8	13.25	R-60	3.70	S-54	3.20
CG-15	11.00	CVP-1	9.00	LS-27	21.00	O-9	13.25	R-64	70.00	S-55	3.20
CG-16	11.00	CVP-2	14.00	LS-30	25.00	O-10	13.25	R-72	8.50	S-56	3.20
CG-19	11.00	CVP-3	20.00	LS-30X	32.00	O-11	13.25	R-73	13.00	S-57	4.50
CG-34	11.50	CVP-4	29.00	LS-31	28.00	O-12	12.00	R-74	24.00	S-58	5.50
CG-40	8.50	CVP-5	50.00	LS-31X	35.00	O-13	9.50	R-75	35.00	S-59	4.50
CG-41	8.50			LS-32	28.00	O-14	13.25	R-76	55.00	S-60	10.00
CG-44	8.50	FT-1	2.70	LS-33	28.00	O-15	13.25	R-77	95.00	S-61	4.50
CG-45	8.50	FT-2	2.70	LS-34	42.00	P-1	14.50	R-78	18.00	S-62	5.50
CG-48C	8.50	FT-3	3.00	LS-38	32.00	P-2	14.50	R-79	22.00	S-63	10.00
CG-51AX	10.50	FT-4	3.25	LS-39	25.00	P-3	13.25	R-80	30.00	S-64	5.50
CG-53AX	12.50	FT-5	3.25	LS-40	24.00	P-4	12.00	R-81	60.00	S-65	5.50
CG-59AX	12.50	FT-6	3.25	LS-47	35.00	P-5	12.00	R-83	18.00	S-66	5.50
CG-100	9.00	FT-7	3.25	LS-48	50.00	P-6	13.25	R-84	22.00	S-67	5.50
CG-101	9.00	FT-8	6.00	LS-49	42.00	P-7	13.25	R-85	30.00	S-68	6.00
CG-102	14.00	HA-100	19.00	LS-50	21.00	P-8	14.50	R-86	60.00	S-69	6.00
CG-103	14.00	HA-100X	24.00	LS-51	24.00	P-9	14.50	R-90	3.00	S-70	6.00
CG-104	21.00	HA-101	22.00	LS-52	25.00	P-10	14.50	R-91	7.00	S-71	10.00
CG-105	21.00	HA-101X	27.00	LS-54	20.00	P-11	14.50	R-92	7.00	S-72	6.30
CG-108	37.00	HA-103A	22.00	LS-55	28.00	P-12	13.25	R-93	14.00	S-74	16.50
CG-109	37.00	HA-104	20.00	LS-56	28.00	P-13	10.50	R-94	20.00	V-0	11.50
CG-120	15.00	HA-105	11.00	LS-57	20.00	P-14	14.50	R-95	15.00	V-0-B	15.00
CG-121	21.00	HA-106	16.00	LS-58	50.00	P-15	14.50	SO-1	5.60	V-1	17.50
CG-122	18.00	HA-107	24.00	LS-60A	35.00	PF-1	10.00	SO-2	5.60	V-1-M	29.00
CG-124	18.00	HA-108	19.00	LS-61	28.00	PF-2	10.00	SO-3	5.60	V-2	17.00
CG-125	21.00	HA-108X	24.00	LS-62A	35.00	PF-3	4.50	SO-4	5.60	V-2-B	18.00
CG-126	33.00	HA-111	19.00	LS-63	20.00	R-1	6.10	SO-5	5.10	V-3	22.00
CG-131	9.50	HA-113	15.00	LS-66	100.00	R-2	7.40	Type No.	Net Price	V-3-B	29.00
CG-132	10.00	HA-114	19.00	LS-67	100.00	R-3	9.00	S-1	\$3.30	V-4	32.00
CG-133	12.50	HA-130X	27.00	LS-70	34.00	R-4	10.70	S-2	3.80	V-4-B	40.00
CG-134	12.50	HA-133	18.00	LS-72	40.00	R-5	13.00	S-3	3.10	VI-C1	\$11.00
CG-135	13.50	HA-134	20.00	LS-73	54.00	R-6	6.10	S-4	5.20	VI-C2	11.00
CG-136	13.50	HA-135	19.00	LS-80	23.00	R-7	7.80	S-5	4.25	VI-C3	11.00
CG-137	10.00	HA-137	22.00	LS-82	30.00	R-8	9.50	S-6	3.10	VI-C4	11.00
CG-140	12.00	HC-115	13.00	LS-83	60.00	R-9	11.00	S-7	5.70	VI-C5	11.00
CG-141	13.50	HC-116	20.00	LS-84	23.00	R-10	14.00	S-8	4.00	VI-C6	11.00
CG-233	11.00	HC-117	12.00	LS-88	11.00	R-11	9.50	S-9	5.20	VI-C7	14.00
CG-235	17.50	HP-122	13.00	LS-89A	87.00	R-12	10.80	S-10	4.70	VI-C8	14.00
CG-233AX	32.00	HP-123	20.00	LS-90	11.00	R-13	15.50	S-11	4.25	VI-C9	14.00
CG-300	18.00	Type No.	Net Price	LS-91	11.00	R-14	2.10	S-12	4.70	VI-C10	14.00
CG-301	25.00	HQA-12.5	\$7.00	LS-92	23.00	R-15	2.10	S-13	6.20	VI-C11	14.00
CG-302	30.00	HQA-30	8.50	LS-93	40.00	R-16	2.10	S-14	4.50	VI-C12	14.00
CG-303	45.00	HQA-80	10.00	LS-94	14.00	R-17	2.80	S-15	4.70	VI-C13	14.00
CG-304	120.00	HQA-200	11.50	LS-96	67.00	R-18	2.80	S-16	6.20	VI-C14	14.00
CG-305	68.00	HQA-500	13.00	LS-98	40.00	R-19	3.90	S-17	7.50	VI-C15	16.50
CG-306	120.00	HQA-1.25	14.50	LS-99	100.00	R-20	4.30	S-18	5.00	VI-C16	16.50
CG-307	105.00	HQA-2.0	17.00	LS-02	70.00	R-21	4.30	S-19	7.50	VI-C17	16.50
CG-308	141.00	LS-103	98.00	LS-103	98.00	R-22	3.90	S-20	11.00	VI-C18	16.50
CG-309	250.00	LS-104A	500.00	LS-104A	500.00	R-23	4.10	S-21	15.50	VI-C19	16.50
CG-310	185.00	LS-105	100.00	LS-120	43.00	R-24	4.30	S-22	24.00	VI-C20	16.50
CG-311	68.00	LS-120	43.00	LS-121Y	51.00	R-25	4.50	S-23	3.40	VI-C21	17.50
CG-315	15.00	LS-121Y	51.00	LS-140	35.00	R-26	4.50	S-24	3.70	FILTERS AND EQUALIZERS	
CG-316	25.00	LS-140	35.00	LS-141	28.00	R-27	4.10	S-25	3.10	Type No.	Net Price
CG-333	11.00	LS-141	28.00	LS-142	35.00	R-28	5.80	S-26	3.10	3A	\$125.00
CG-422	19.00	LS-142	35.00	LS-143	28.00	R-29	4.30	S-27	3.80	3AX	205.00
CG-428	25.00	LS-143	28.00	LS-150	25.00	R-30	11.00	S-28	3.80	4C	185.00
CG-429	27.50	LS-150	25.00	LS-151	25.00	R-31	3.50	S-29	3.80	BPI	35.00
CG-431	40.00	LS-151	25.00	LS-180	17.00	R-32	5.00	S-30	3.80	BPL	35.00
CG-433	12.00	LS-180	17.00	LS-180H	21.00	R-33	2.90	S-31	5.00	HPI	35.00
CG-512	30.00	LS-180H	21.00	LS-181	67.00	R-34	3.00	S-32	5.00	HPL	35.00
CG-710	11.00	LS-181	67.00	LS-182	87.00	R-35	3.70	S-33	7.00	LPI	35.00
CG-312	67.00	LS6L1	\$12.00	LS-183	110.00	R-36	3.70	S-34	7.00	LPL	35.00
CGE-1	25.00	LS6L3	28.00	LS-184	170.00	R-37	3.90	S-35	10.50		
		LS6L4	50.00			R-38A	3.00	S-36	10.50		

Prices shown are as of May 1948 and are subject to change without notice.



LINEAR STANDARD AUDIO TRANSFORMERS

The ever increasing use of wide range equipment for broadcast service has reached the point where the major limiting factor is the frequency range of the transformers employed. UTC Linear Standard components represent the closest approach to the ideal transformer from the standpoint of uniform frequency response, low wave form distortion, high efficiency, thorough shielding, and dependability.

LINEAR STANDARD AUDIO UNITS FEATURE:

UNIFORM FREQUENCY RESPONSE . . . at low frequencies, is effected through the use of HIPERM-ALLOY, a STABLE nickel iron alloy of very high initial permeability. Uniform high frequency response is the result of multiple section interleaved windings arranged in a semi-toroidal coil structure. This, plus special winding methods and insulations, assures a minimum of distributed capacity and leakage reactance.

UTC LINEAR STANDARD transformers are the ONLY audio units with a **GUARANTEED** uniform response . . . ± 1 . DB from 20 to 20,000 cycles.

MINIMUM HUM PICKUP . . . is accomplished through the use of a hum balanced, semi-toroidal, coil structure which affords maximum neutralization of external fields. In addition, all low level units employ an internal high permeability alloy case as well as the high conductivity outer case for maximum shielding. For very low level applications, units whose code numbers end in X employ quadruple alloy shielding, making possible a transformer with the lowest inductive pickup commercially available.

NEGLIGIBLE WAVE FORM DISTORTION . . . is a function of proper impedance matching, minimum phase shift, and low flux density. These elements have been given great attention in the design of Linear Standard units. It is interesting to note that an output transformer reasonably flat from 20 to 20,000 cycles may show serious distortion at 30 and 10,000 cycles. For this reason, UTC high level units have a frequency range better than guaranteed value in some instances up to 50,000 cycles.

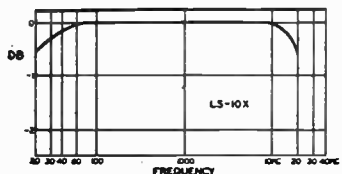
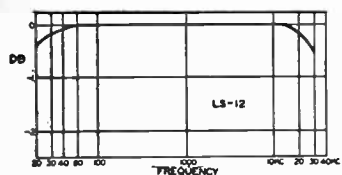
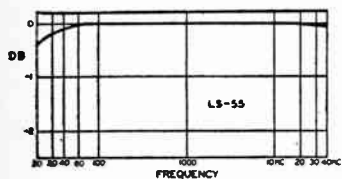
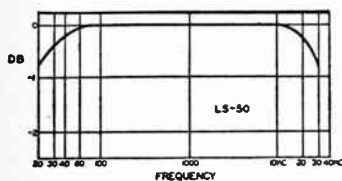
MULTIPLE TAP WINDINGS . . . make possible a wide combination of impedance terminations without impairing fidelity or efficiency. Precision winding methods result in winding accuracy of .1% . . . perfect balance of inductance and capacity . . . exact impedance reflection. For all practical uses, 500 ohm termination may be used for 600 ohm requirements. For maximum efficiency and balance, 250 ohm lines are recommended to be connected to 200 ohm terminations.

DEPENDABILITY . . . is a function of external and internal structure. Linear Standard units are housed in rugged die cast cases of precise dimension with reversible mounting to permit above chassis or subchassis wiring. The solid terminal posts on low absorption bakelite are arranged in a circular layout so that a round chassis hole will clear all terminals. Coils are vacuum baked and impregnated. Semi-hermetic sealing is accomplished through the use of a high adhesion compound poured through the large opening opposite the terminal board after controlled preheating of the unit for full compound penetration.

LOW IMPEDANCE TO GRID TRANSFORMERS

Type No.	Application	Primary Impedance	Secondary Impedance	± 1 db from	Max. Level	Relative* hum-pickup reduction	Max. Unbalanced DC Case in prim'y No.
LS-10	Low impedance mike, pickup, or multiple line to grid	50, 125/150, 200, 250, 333, 500/600 ohms	60,000 ohms	In 20-20,000	+15 DB	-74 DB	5 MA LS-1
LS-10X	As above.	As above	50,000 ohms	20-20,000	+14 DB	-92 DB-Q	5 MA LS-1
LS-12	Low impedance mike, pickup, or multiple line to push pull grids	50, 125/150, 200, 250, 333, 500/600 ohms	120,000 ohms	20-20,000	+15 DB	-74 DB	5 MA LS-1
LS-12X	As above	As above	80,000 ohms overall, in two sections	20-20,000	+14 DB	-92 DB-Q	5 MA LS-1
LS-14	Low impedance mike, pickup or parallel mixer to grid	2.5, 5.5, 10, 15, 22, 30, 38, 60 ohms	60,000 ohms	In 20-20,000	+15 DB	-74 DB	5 MA LS-1
LS-14X	As above	As above	50,000 ohms	20-20,000	+14 DB	-92 DB-Q	5 MA LS-1
LS-15	Three isolated lines or pads to one or two grids	30, 50, 200, 250 ohms each primary	60,000 ohms	20-20,000	+15 DB	-74 DB	5 MA LS-1
LS-15X	As above	As above	As above	20-20,000	+14 DB	-92 DB-Q	5 MA LS-1
LS-18	High level multiple line to push pull grids	50, 125/150, 200, 250, 333, 500/600 ohms	50,000 ohms	20-20,000	+30 DB	-50 DB	5 MA LS-2
LS-26	Bridging line to single or push pull grids	5,000 ohms	60,000 ohms	In 15-20,000	+20 DB	-74 DB	0 LS-1

The values of unbalanced DC shown will effect approximately 1.5 DB loss at 30 cycles.
 * Comparison of hum balanced unit with magnetic shielding to normal unbalanced type.
 Q Quadruple alloy magnetic shield.



LS-1 CASE

Length _____ 3 1/8"
 Width _____ 2 3/8"
 Height _____ 3 1/4"
 Mounting _____ 1 15/16" x 2 7/16"
 Screws _____ 6-32
 Cutout _____ 1 7/8" dia.
 Unit Weight _____ 3 lbs.



INTERSTAGE AUDIO TRANSFORMERS

Type No.	Application	Primary Impedance	Secondary Impedance	± 1 db from	Max. Level	Relative* hum-pickup reduction	Max. Unbalanced DC in prim'y	Case No.
LS-19	Single plate to push pull grids like 2A3, 6L6, 300A. Split secondary	15,000 ohms	95,000 ohms; 1.25:1 each side	20-20,000	+17 DB	-50 DB	0 MA	LS-1
LS-20	Single plate to single grid	15,000 ohms	60,000 ohms; 2:1 turn ratio	20-20,000	+14 DB	-74 DB	0 MA	LS-1
LS-21	Single plate to push pull grids. Split primary and secondary	15,000 ohms	135,000 ohms; turn ratio 3:1 overall	20-20,000	+14 DB	-74 DB	0 MA	LS-1
LS-40	Single plate to push pull grids. Split secondary	15,000 ohms	135,000 ohms; turn ratio 3:1 overall	30-20,000	+20 DB	-74 DB	8 MA	LS-1
LS-22	Push pull plates to push pull grids. Split primary and secondary	30,000 ohms plate to plate	80,000 ohms; turn ratio 1.8:1 overall	20-20,000	+26 DB	-50 DB	.25 MA	LS-2
LS-25	Push pull plates to push pull grids. Medium level. Split primary and secondary	30,000 ohms plate to plate	50,000 ohms; turn ratio 1.3:1 overall	20-20,000	+17 DB	-74 DB	1 MA	LS-1
LS-26	Bridging line to 1 or 2 grids	5000	60,000 in two sections	15-20,000	+20 DB	-74 DB	0	LS-1



LS-2 CASE

Length 4⁷/₁₆"
 Width 3¹/₂"
 Height 4³/₁₆"
 Mounting 2¹/₁₆" x 3¹/₁₆"
 Screws 8-32
 Cutout 2³/₄" dia.
 Unit Weight 7.5 lbs.

MIXING TRANSFORMERS

Type No.	Application	Primary Impedance	Secondary Impedance	± 1 db from	Max. Level	Relative* hum-pickup reduction	Max. Unbalanced DC in prim'y	Case No.
LS-30	Mixing, low impedance mike, pickup, or multiple line to multiple line	50, 125/150, 200, 250, 333, 500/600 ohms	50, 125, 200, 250, 333, 500/600 ohms	20-20,000	+17 DB	-71 DB	5 MA	LS-1
LS-30X	As above	As above	As above	20-20,000	+15 DB	-92 DB-Q	3 MA	LS-1
LS-31	Three isolated lines or pads to multiple line	30, 50, 200, 250 ohms each primary	50, 125/150, 200, 250, 333, 500/600 ohms	20-20,000	+15 DB	-74 DB	5 MA	LS-1
LS-31X	As above	As above	As above	20-20,000	+14 DB	-92 DB-Q	3 MA	LS-1
LS-32	Mixing, low impedance mike, pickup, or parallel mixer to multiple line	2.5, 5.5, 10, 15, 22, 30, 38, 60 ohms	50, 125/150, 200, 250, 333, 500/600 ohms	20-20,000	-15 DB	-74 DB	5 MA	LS-1



LS-3 CASE

Length 5¹/₁₆"
 Width 5"
 Height 4¹/₁₆"
 Mounting 4³/₁₆" x 5¹/₁₆"
 Screws 10-32
 Cutout 3³/₄" dia.
 Unit Weight 7.5 lbs.

PLATE, CRYSTAL, PHOTOCCELL, AND BRIDGING TO LINE TRANSFORMERS

Type No.	Application	Primary Impedance	Secondary Impedance	± 1 db from	Max. Level	Relative* hum-pickup reduction	Max. Unbalanced DC in prim'y	Case No.
LS-27	Single plate to multiple line	15,000 ohms	50, 125/150, 200, 250, 333, 500/600 ohms	30-12,000 cycles	-20 DB	-71 DB	8 MA	LS-1
LS-50	Single plate to multiple line	15,000 ohms	50, 125/150, 200, 250, 333, 500/600 ohms	20-20,000	+17 DB	-74 DB	0 MA	LS-1
LS-51	Push pull low level plates to multiple line	30,000 ohms plate to plate	50, 125/150, 200, 250, 333, 500/600 ohms	20-20,000	+20 DB	-71 DB	1 MA	LS-1
LS-38	Crystal microphone pickup to multiple line, with internal equalizer	100,000 ohms	50, 125/150, 200, 250, 333, 500/600 ohms	Equalized for crystal	-14 DB	-71 DB	0 MA	LS-1
LS-39	Photocell, high-mu triode, diode or overbiased detector to multiple line	100,000 ohms	50, 125/150, 200, 250, 333, 500/600 ohms	20-20,000	+14 DB	-74 DB	0 MA	LS-1
LS-150	Bridging transformer from 50 to 500 ohm line to line	4,000 ohms	50, 125/150, 200, 250, 333, 500/600 ohms	15-30,000	+20 DB	-74 DB	1 MA	LS-1
LS-151	Bridging transformer from 50 to 500 ohm line to line	10,000 ohms	50, 125/150, 200, 250, 333, 500/600 ohms	15-30,000	+22 DB	-74 DB	1 MA	LS-1

HYBRID AND REPEAT COILS

Type No.	Application	Pri. and Sec. Impedances	± 1 db from	Max. Level	Hum* Reduction	Max. Unbalanced DC in prim'y	Case No.
LS-140	Line to line for isolating balanced and unbalanced circuits; balanced for maximum reduction cross talk (70 DB)	500/600 ohms split 500/600 ohms split	30-30,000	+10 DB	-92 DB Quadruple alloy shield	0 MA	LS-1
LS-141	Three sets of balanced windings for hybrid service, center-tapped	500/600 ohms 500/600 ohms	30-15,000	+10 DB	-74 DB	0 MA	LS-1
LS-142	Line to line and to push pull grids for hybrid service	500/600 ohms 500/600 ohms 60,000 ohms	30-15,000	+10 DB	-74 DB	0 MA	LS-1
LS-143	High efficiency ring and talk repeat coil, for low frequency ringing	500/600 ohms 500/600 ohms	Efficient 15/12,000 cycles	+25 DB	-74 DB	5 MA	LS-2

SPECIAL LOW LEVEL LINEAR STANDARD UNITS

Where unusual impedance or frequency ranges are required, UTC can supply units to specific customer requirements.

For example, one special design, for bolometer service, has following characteristics:

Frequency Range 1 cycle to 20 cycles
 Secondary Inductance 250,000 Hys.
 Primary Impedance 10 ohms
 Impedance Ratio 75,000:1
 Shielding...for 100 DB operation



LS-6 CASE

Length 15 3/4"
 Width 13"
 Height 22"
 Mounting 7 3/8" x 1 1/4"
 Mounting Hole 3/8" dia
 Unit Weight 350 lbs



DRIVER TRANSFORMERS

Type No.	Application	Primary Impedance	Reflected Secondary Impedance	± 1 db from	Max. Level	Max. Unbalanced OC in Primary	Case No.
LS-5	Driver, multiple line to class B 838's, 805's, ZB-120's, 203A's and similar tubes	50, 125, 200, 250, 333, 500/600 ohms	2,000 ohms; 1:2 overall turns ratio	20-20,000	+36 DB	5 MA	LS-2
LS-6	Driver, push pull 45's, 59's, 2A3's, 6A5G's, etc., to push pull 845 or 211D grids	5,000 ohms plate to plate	2.25 primary impedance; turns ratio 1.5:1 overall	20-20,000	+33 DB	5 MA	LS-2
LS-7	Push pull 56, 6CG or similar plates to A prime 45's, 42's, 6P6's, 2A3's, 6L6's	30,000 ohms plate to plate	.45 primary impedance turn ratio 1.5:1 Pri. to Sec.	20-20,000	+27 DB	1 MA	LS-2
LS-47	Driver from push pull 2A3's, 6A5G's, or 300A's to class B 888's, 203A's, 805's, or ZR120's	5,000 ohms plate to plate	1 pri. impedance turns ratio, Pri./1/2 Sec. 3:2:1	20-20,000	+33 DB	6 MA	LS-2
LS-48	Driver transformer push pull 845's to 204 or 849 grids in class B.	12,000 ohms plate to plate to plate	.038 pri. impedance turns ratio, Pri./1/2 Sec. 5:1:1	20-20,000	+42 DB	15 MA	LS-3
LS-49	Push pull parallel 2A3, 6A5G, or 300A tubes to four 838, 203A, 805, or ZB120 tubes.	2,500 ohms plate to plate	Ratio Pri./1/2 Sec. 4:1 and 2.5:1	20-20,000	+39 DB	10 MA	LS-3

OUTPUT TRANSFORMERS

Linear Standard output and matching transformers employ large cores of high permeability steel and precisely balanced, highly interleaved coil structures. The frequency response and harmonic distortion are unequalled in commercially available material.

The multiple tap windings afford a wide range of impedances for every application. The impedance values given are for one load. Where it is desired to feed two loads simultaneously, with equal power, it is necessary to connect the loads to terminations of half the impedance value.

For example, if it is desired to split the output between a 500 ohm line and a 15 ohm voice coil, connect the 500 ohm line to 250 ohm termination and the 15 ohm speaker to the 7.5 ohm termination. If the bulk of the output is desired in one of the loads, connect this load to its correct termination and the other load to a termination of 20% rating or less. For example, if in the above case, the speaker were used solely for monitoring, connect 500 ohm line to 500 ohm termination and 15 ohm voice coil to 2.5 ohm termination.

OUTPUT TRANSFORMERS TO LINE AND VOICE COIL

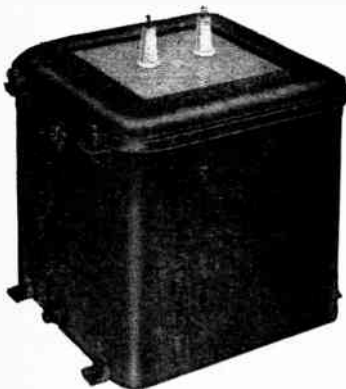
Type No.	Primary will match following typical tubes	Primary Impedance	Secondary Impedance	± 1 db from	Max. Level	Case No.
LS-52	Push pull 245, 250, 6V6, 42 or 2A5 A prime	8,000 ohms	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	25-20,000	15 watts	LS-2
LS-54	Same as above	8,000 ohms	30, 20, 15, 10, 7.5, 5, 2.5, 1.2	25-20,000	15 watts	LS-2
LS-55	Push pull 2A3's, 6A5G's, 300A's, 275A's, 6A3's, 6L6's	5,000 ohms plate to plate and 3,000 ohms plate to plate	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	25-20,000	20 watts	LS-2
LS-57	Same as above	5,000 ohms plate to plate and 3,000 ohms plate to plate	30, 20, 15, 10, 7.5, 5, 2.5, 1.2	25-20,000	20 watts	LS-2
LS-58	Push pull parallel 2A3's, 6A5G's, 300A's, 6A3's	2,500 ohms plate to plate and 1,500 ohms plate to plate	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	25-20,000	40 watts	LS-3
LS-60A	Push pull 2A3's, 6A3's, 6B4G's fixed bias, cathode following drive	4,600 ohms plate to plate	15, 10, 7.5, 5, 3.75, 2.5, 1.2	20-20,000	30 watts	LS-3
LS-62A	Same as above	As above	500, 125	20-20,000	30 watts	LS-3
LS-61	Push pull 6B5, 6A8, 53, 6P6, 71A, 59, 79, 89, class B46, 59's	10,000 ohms plate to plate and 6,000 ohms plate to plate	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	25-20,000	15 watts	LS-2
LS-63	Same as above	10,000 ohms plate to plate and 6,000 ohms plate to plate	30, 20, 15, 10, 7.5, 5, 2.5, 1.2	25-20,000	15 watts	LS-2
LS-6L1	Push pull 6L6's self bias AB1	9,000 ohms plate to plate	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	25-20,000	30 watts	LS-3
LS-6L3	Same as above	9,000 ohms plate to plate	30, 20, 15, 10, 7.5, 5, 2.5, 1.2	25-20,000	30 watts	LS-3
LS-6L4	Push pull 6L6's fixed bias or push pull parallel 6L6's self bias	3,800 ohms plate to plate and 4,500 ohms plate to plate	500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	25-20,000	55 watts	LS-3

OUTPUT TRANSFORMERS TO HIGH IMPEDANCE (RF) LOAD

Type No.	Primary will match following typical tubes	Primary Impedance	Secondary Impedance	+ 1 db from	Max. Level	Case No.
LS-56	Push pull 2A3's, 6A5G's, 300A's, 275A's, 6A3's	5,000 ohms plate to plate and 3,000 ohms plate to plate	6000, 5000, 4000, 1500, 1500, 1000, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2	25-20,000	20 watts	LS-2
LS-66	Class B 203A, 838, ZB120, 805	9,000 ohms plate to plate	5000, 4200, 4100, 3500, 3300, 2650, 2500, 2100, 1250, 600	25-20,000	200 watts	See chart next page
LS-67	Class B 203A, 838, ZB120, 805	9,000 and 6900 ohms plate to plate	10000, 2500	25-20,000	200 watts	See chart next page
LS-691	Class B 849, 833, 250TH	10,400 ohms plate to plate	4500, 4000, 3500, 2750, 2000	25-20,000	1000 watts	LS-6
LS-692	Class B push pull parallel 833's	3,650 ohms plate to plate	2500, 2000, 1750, 1500, 1250	25-20,000	2500 watts	LS-7
LS-693	To specifications			25-20,000	5000 watts	Spec.

HIGH LEVEL MATCHING TRANSFORMERS

Type No.	Application	Primary Impedance	Secondary Impedance	± 1 db from	Max. Level	Case No.
LS-33	High level line matching	50, 125, 200, 250, 333, 500/600 ohms	1.2, 2.5, 5, 7.5, 10, 15, 20, 30, 50, 125, 200, 250, 333, 500/600	20-20,000	15 watts	LS-2
LS-34	High level line matching	50, 125, 200, 250, 333, 500/600 ohms	1.2, 2.5, 5, 7.5, 10, 15, 20, 30, 50, 125, 200, 250, 333, 500/600	20-20,000	30 watts	LS-3



LS-7 CASE

Length 20 3/8"
 Width 17 3/4"
 Height 26"
 Mounting 1 1/8" x 1 3/8"
 Mounting Hole 3/8" dia
 Unit Weight 500 lbs.



LINEAR STANDARD POWER EQUIPMENT

In choosing power components for broadcast and commercial equipment, the first factor to be considered is dependability. Linear standard power components are very conservatively designed for maximum reliability. Designs provide for low temperature rise 40°, and high insulation safety factors. Only the finest of materials and workmanship are used throughout.

The low power components of the Linear Standard series are housed in the familiar rectangular LS case with top or bottom mounting facilities. High power components are housed in end castings which completely protect the winding, while directly exposing the laminations for maximum heat transfer.

All units have a deep grey finish to obtain the highest heat radiation coefficient. Large components (up to 250 KVA) are housed in oil tanks.

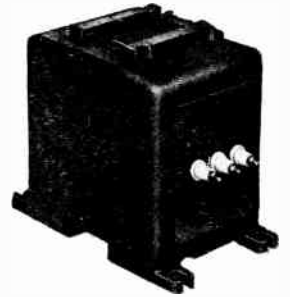


PLATE TRANSFORMERS

Type No.	Application	Primary Voltage 50/60 cycles	High Voltage	Approximate DC Voltage Out of Filter	DC Current
LS-181	For push pull 845, 800, etc.	100, 110, 120, 220, 230, 240	1500-1250-0-1250- 1500	1250-1050	200 MA
LS-182	Class B 203, 838, ZB120, etc.	100, 110, 120, 220, 230, 240	1500-1250-0-1250- 1500	1250-1050	350 MA
LS-183	Class B 805 or push pull parallel 203A's, etc.	100, 110, 120, 220, 230, 240	1750-1500-0-1500- 1750	1500-1250	400 MA
LS-184	Class B 204A, 849, HF200, HF300, 250TH, HK354, 100TH, etc.	100, 110, 120, 220, 230, 240	3500-3000-2500-0- 2500-3000-3500	3000-2500-2100	500 MA
LS-185	For combined class B and class C stages as above	100, 110, 120, 220, 230, 240	3500-3000-2500-0- 2500-3000-3500	3000-2500-2100	1.2 amp.

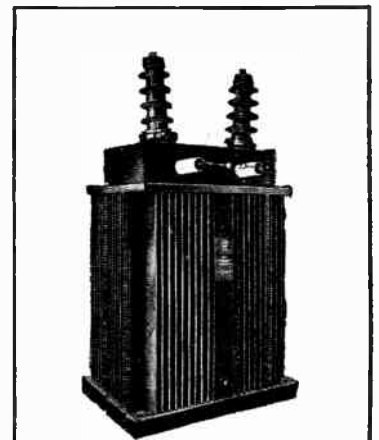
Type No.	L	W	H	Mtg.	Wt.
LS-66	9 3/4	4 1/4	6 3/4	3 1/4 x 9 1/4	37
LS-67	9 3/4	4 1/4	6 3/4	3 1/4 x 9 1/4	37
LS-73	9 3/4	4 1/4	6 3/4	3 1/4 x 8 3/4	34
LS-83	9 3/4	4 1/4	6 3/4	3 1/4 x 8 3/4	25
LS-89A	9 1/2	7	9	4 x 8 3/4	68
LS-96	10 1/4	4 1/4	6 3/4	3 1/4 x 9 1/4	40
LS-99	14 1/4	8 1/2	10 1/4	7 1/4 x 13 1/4	80
LS-102	9 3/4	4 1/4	6 3/4	3 1/4 x 9 1/4	37
LS-103	13 1/4	8 1/2	10 1/4	7 1/4 x 12 1/4	58
LS-104A	15 1/2"	High	LS-7 Case		500
LS-105	13 1/4	8 1/2	10 1/4	7 1/4 x 12 1/4	58
LS-121Y	8 1/4	3 3/4	5 1/4	3 x 7-13/16	23
LS-181	9 3/4	4 1/4	6 3/4	3 1/4 x 9 1/4	37
LS-182	10 3/4	4 3/4	6 3/4	3 1/4 x 10 1/4	45
LS-183	15 1/4	10	13 1/4	8 1/4 x 14 1/4	70
LS-184	7 1/4	10	13 1/4	8 1/4 x 16 1/4	102
LS-185	23	10	13 1/4	8 1/4 x 22	230

COMBINED PLATE AND FILAMENT TRANSFORMERS

Type No.	Application	Primary Voltage 50/60 cycles	High Voltage	Filament Windings	Case No.
LS-180	For pre-amplifier service	110	225-0-225 15 MA	6.3 V.C.T.-2A 8.3 V.C.T.-.5A	LS-1
LS-180H	Same as above but in hum-balanced construction (dual coils symmetrically arranged to neutralize stray fluxes)				LS-1
LS-190	Low power amplifier and receiver service	100, 105, 110, 115, 120, 125	350-300-0-300-350 125 MA	5 V.C.T.-3A 2.5 V.C.T.-6A 6.3 V.C.T.-3A	LS-3
LS-70	High power amplifier service	100, 105, 110, 115, 120, 125	425-375-0-375-425 200 MA 70-0-70 50 MA	5 V.C.T.-3A 5 V.C.T.-2A 2.5 V.C.T.-10A 6.3 V.C.T.-1A 6.3 V.C.T.-3A	LS-3
LS-72	For fixed or self bias 6L6's, 300A's	100, 105, 110, 115, 120, 125	525-450-0-450-525 250 MA 70-0-70 50 MA	5 V.C.T.-3A 2.5 V.C.T.-3A 2.5 V.C.T.-3A 6.3 V.C.T.-1A 6.3 V.C.T.-3A tapped at 5 V.C.T.-6A	LS-3
LS-73	For push pull parallel 6L6's, 300A's, 2A3's	100, 105, 110, 115, 120, 125	500-400-0-400-500 500 MA 70-0-70 50 MA	5 V.C.T.-6A 2.5 V.C.T.-10A 2.5 V.C.T.-3A 6.3 V.C.T.-4A 6.3 V.C.T.-6A tapped at 5 V.C.T.-8A	See chart above, right

FILAMENT TRANSFORMERS

Type No.	Application	Primary Voltage 50/60 cycles	Secondary Voltage	Insulation Test Voltage	Case No.
LS-80	866 rectifiers	100, 110, 120, 220, 230, 240	2.5 V.C.T.-10A	10,000	LS-3
LS-82	872 rectifiers	100, 110, 120, 220, 230, 240	5 V.C.T.-20A	12,000	LS-3
LS-84	203A, 845, etc. HF200, HF300	100, 110, 120, 220, 230, 240	10 V.C.T.-8A	10,000	LS-3
LS-88	6.3 volt tubes	105, 115, 125	6.3 V.C.T.-2A	2,500	LS-1
LS-120	866 Bridge rectifier	100, 110, 120, 220, 230, 240	2.5 V.C.T.-10A 2.5 V.C.T.-5A 2.5 V.C.T.-5A	12,000	LS-3
LS-121Y	872 Bridge rectifier	100, 110, 120, 220, 230, 240	5 V.C.T.-20A 5 V.C.T.-10A 5 V.C.T.-10A	12,000	See chart
LS-83	872A, 575 or 869 rectifiers	100, 110, 120, 220, 230, 240	5 V.C.T.-20A	35,000	See chart
LS-89A	Three 869 rectifiers	100, 110, 120, 220, 230, 240	5 V.C.T.-60A	35,000	See chart



A considerable number of power supply applications require special components. These can be made to your specifications. The filter choke illustrated (for a 100 KW broadcast transmitter) is typical of the high power custom LS components.



LINEAR STANDARD FILTER, SWINGING, AND AUDIO CHOKES

(Inductance values are at D.C. current shown)

Type No.	Application	Inductance	D.C. Current	D.C. Resistance	Insulation Test Voltage	Case No.
LS-90	Filter choke with hum bucking tap	Series-50 hy Parallel-12.5 hy	50 MA 100 MA	510 ohms 128 ohms	2000	LS-2
LS-91	Filter choke with hum bucking tap	Series-14 hy Parallel-3.5 hy	125 MA 250 MA	200 ohms 50 ohms	2000	LS-2
LS-92	Filter choke with hum bucking tap	Series-16 hy Parallel-4 hy	175 MA 350 MA	96 ohms 24 ohms	2500	LS-3
LS-93	Filter choke with hum bucking tap	Series-26 hy Parallel-6.25 hy	200 MA 400 MA	112 ohms 28 ohms	3500	LS-3
LS-94	Parallel feed and filter choke	Series-320 hy Parallel-80 hy	3 MA 6 MA	6400 ohms 1600 ohms	1500	LS-1
LS-95	Filter choke with hum bucking tap	Series-100 hy Parallel-25 hy	35 MA 70 MA	1000 ohms 200 ohms	1500	LS-2
LS-96	Filter choke with hum bucking tap	Series-20 hy Parallel-5 hy	500 MA 1 amp	90 ohms 22.5 ohms	7500	•
LS-980	Filter choke with hum bucking tap	Series-14 hy Parallel-3.5 hy	400 MA 800 MA	100 ohms 25 ohms	5000	LS-3
LS-98	Swinging choke	8-40 hy	400 MA	90 ohms	5000	LS-3
LS-99	Filter choke with hum bucking tap	Series-20 hy Parallel-5 hy	1 amp 2 amp	50 ohms 12.5 ohms	10000	•
LS-105	Swinging choke	8-40 hy	1 amp	50 ohms	10000	•

* See chart on preceding page.

MODULATION REACTORS

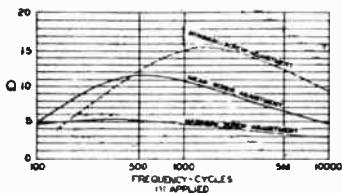
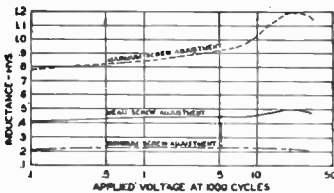
Type No.	Application	Inductance	D.C. Current	D.C. Resistance	Insulation Test Voltage	Case No.
LS-102	Modulation reactor	50 hy	350 MA	250 ohms	5000	•
LS-103	Modulation reactor	50 hy	500 MA	175 ohms	7500	•
LS-104A	Modulation reactor	50 hy	1.3 amp	75 ohms	20000	•

* See chart on preceding page.

UTC VARIABLE INDUCTORS

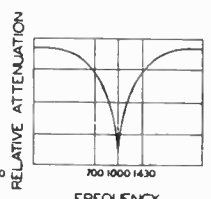
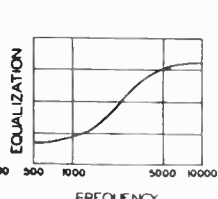
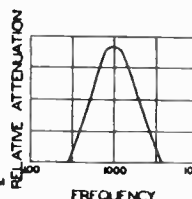
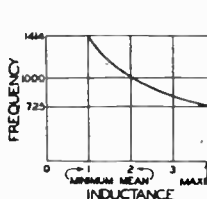
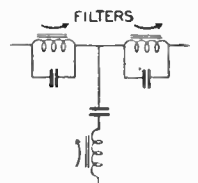
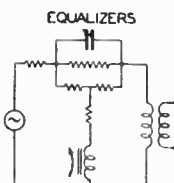
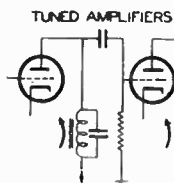
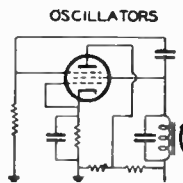
UTC type VIC variable inductors offer a revolutionary approach to the problem of tuned audio circuits. By adjusting a set screw in the side of the case, an inductance value of +90%, -50% from mean value is obtainable. Setting is positive. Effective Q for a wide frequency range and variation of inductance with applied AC voltage are shown on the illustrated curves, for a typical VIC unit.

The VIC inductor is housed in a rugged die cast case 1 1/2" long, 1 1/4" wide and 1 1/8" high with mounting centers on terminal board side 1 1/16" by 2 3/32". Weight is 5 1/2 oz.



TYPICAL VIC APPLICATIONS

Type	Mean Hys.	Type	Mean Hys.
VI-C1	.0085	VI-C11	85
VI-C2	.013	VI-C12	1.3
VI-C3	.021	VI-C13	2.2
VI-C4	.034	VI-C14	3.4
VI-C5	.053	VI-C15	5.4
VI-C6	.084	VI-C16	8.5
VI-C7	.13	VI-C17	13
VI-C8	.21	VI-C18	21
VI-C9	.34	VI-C19	33
VI-C10	.54	VI-C20	52
		VI-C21	83





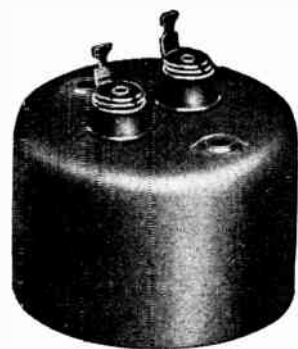
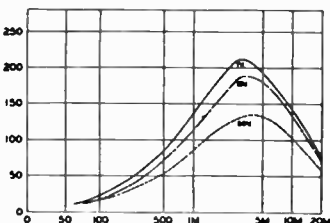
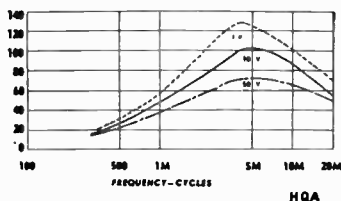
UTC HIGH Q TOROID INDUCTORS

There are many applications in the audio, carrier, and supersonic field requiring inductors of high Q and great stability. The HQ series of units developed for these applications have remarkable characteristics as illustrated below. HQA coils have high Q (100 at 5000 cycles) and are available in inductances from 5 MHY to 2 henrys; HQB coils have very high Q (200 at 4000 cycles) and are available in inductances from 5 MHY to 12 henrys.

HUM PICKUP is low due to the toroidal winding structure, 70 and 140 microvolts per gauss respectively for the HQA and HQB at 60 cycles.

Stability is excellent. For the .14 Hy. HQA coil illustrated, inductance change is less than 1% for applied voltages from .1 to 25 volts 1000 cycles. For the .45 Hy. HQB coil illustrated, the inductance change is less than 1% for applied voltages from 1 to 50 volts 1000 cycles. Inductance variation from -55 to plus 86 degrees Centigrade is less than 1/3%. Change in inductance due to DC current is approximately 1% per 10 MA linearly for the HQA unit illustrated and 3/4% for the HQB. All units are hermetically sealed.

When ordering, specify type followed by inductance. For example a 250 MHY type HQB coil would be ordered as HQB-250 MHY. Standard inductance tolerance is 2%. For 1% tolerance price increase is 10%.



Diameter	.....	1 13/16"
Height	.....	1 3/16"
Mounting	.....	1 1/8"
Screws	.....	6-32
Cutout	.....	9/16" x 1 3/16"
Weight	.....	5 oz.

UNITS CARRIED IN STOCK

Type No.	H Q A	Inductance
HQA-12.5 MHY		12.5 MHY
HQA-30 MHY		30.0 MHY
HQA-80 MHY		80.0 MHY
HQA-200 MHY		200 MHY
HQA-500 MHY		500 MHY
HQA-1.25 HY		1.25 HY.
HQA-2.0 HY		2.00 HY.

UTC INTERSTAGE FILTERS

Interstage filters lend themselves to effecting gain simultaneously with their frequency discrimination. UTC manufactures three basic types of filters for such application with a nominal impedance of 10,000 ohms to be used in a circuit as illustrated.

Type BPI (band pass), LPI (low pass), and HPI (high pass) interstage filters are not carried in stock, but are available from standardized designs and components. They are available for any frequency from 200 to 10,000 cycles. Order by type followed by frequency as: LPI-2500, which designates a low pass filter—2500 cycles cutoff frequency. For low impedance circuits (500/600 ohms), order as BPL, LPL or HPL in similar manner.

All interstage filters are housed in hermetically sealed cases identical in dimensions to HQB, but cutout is 3/8 x 2 inches. Dual alloy shielding reduces hum pickup to 150 MV per gauss at 60 cycles.

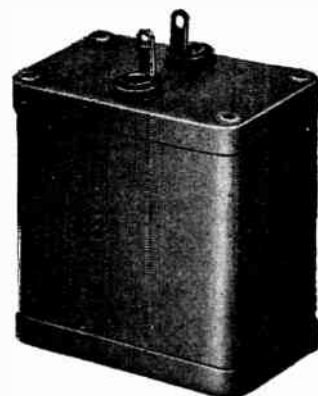
BPI units have 2:1 gain. They are sharply peaked, having approximately 2 DB attenuation at plus or minus 3% from mean frequency and attenuations of approximately 40 DB per octave. They are adjusted to zero phase shift at mean frequency.

HPI units have loss of less than 6 DB at cutoff frequency. At .67 cutoff frequency the attenuation is 35 DB and at .5 cutoff frequency, 40 DB.

LPI units have loss of less than 6 DB at cutoff frequency. At 1.5 cutoff frequency the attenuation is 35 DB and at twice cutoff frequency, 40 DB.

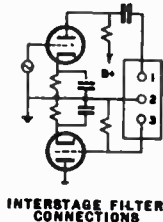
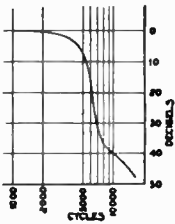
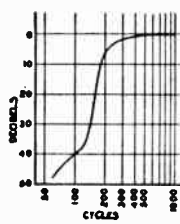
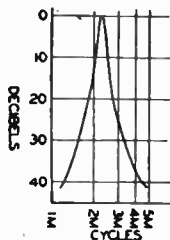
UNITS CARRIED IN STOCK

Type No.	H Q B	Inductance
HQB-30 MHY		30 MHY
HQB-120 MHY		120 MHY
HQB-.5 HY		.5 HY.
HQB-2 HY		2.0 HY.
HQB-7.5 HY		7.5 HY
HQB-12 HY		12.0 HY.



HQB, BPI, HPL, LPI, BPL, HPL, LPL CASE

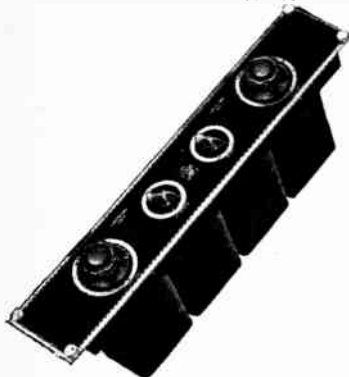
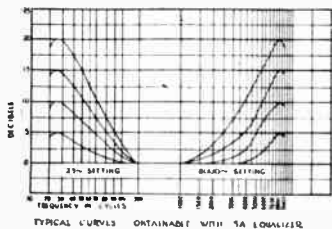
Length	.....	2 3/8"
Width	.....	1 5/8"
Height	.....	2 1/2"
Mounting	.....	1 11/16" x 2 11/16"
Screws	.....	6-32
Cutout	.....	9/16" x 1 1/8"
Unit Weight	.....	14 oz.





EQUALIZERS and FILTERS

3AX UNIVERSAL EQUALIZER *



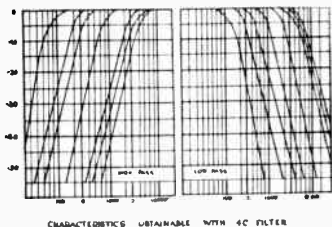
The universal characteristics of the UTC 3AX equalizer have made it the most popular item for broadcast and recording equalization. This unique unit, with which most communications engineers are already familiar, is an accurately calibrated, quickly adjustable, combined low and high frequency equalizer. The low frequency controls include a switch for adjusting the maximum equalization frequency to 25, 50, or 100 cycles and a calibrated T-pad for exact adjustment of the amount of equalization. The high frequency portion of this unit includes a switch to set maximum equalization point at 4000, 6000, 8000, 10,000 or 15,000 cycles, and a similar calibrated control reading directly in DB. Equalization up to 25 DB available at any frequency selected.

Through a unique arrangement of compensating pads, changes in adjustment of the 3AX equalizer do not affect the insertion loss (50 DB). This permits rapid changes in tone color, with negligible change in volume. Where rapid change-over is required in service from one line to another, or from recording to play back, it is merely necessary to predetermine the required setting. The actual adjustment of the controls can be taken care of almost instantaneously. The construction is of the depressed chassis, etched panel, rack mount type. Thoroughly shielded against inductive pickup with UTC Trialloy Shielding. Dimensions of panel 3 1/2" x 19" Depth 7 1/2". Weight 15 lbs.

3A UNIVERSAL EQUALIZER *

The 3A equalizer is identical to the 3AX described above, except that it does not incorporate the compensating pads for constant insertion loss. The insertion loss is roughly proportional to the amount of equalization employed. All other characteristics identical with the 3AX unit, this item weighs 10 lbs.

4C SOUND EFFECTS FILTER *



The use of filters to obtain unusual sound effects is now finding wide application in broadcast technique. The Model 4C Filter was originally developed for one of the large broadcast chains, and is now used extensively by most broadcast stations. Two controls are provided on the 5 1/4" x 19" panel, which is similar in appearance to the 3AX unit. The weight of the 4C unit is 20 lbs.

The low pass switch can be set for cutoff frequencies of 100, 250, 500, 1000, 2000, 3000, 4000, or 5000 cycles. The high pass switch has identical frequency points. The great number of cutoff frequencies provides for a wide latitude of tone control. If desired, though not normally necessary, external potentiometers may be inserted in the circuit for attenuation control.

* for 500/600 ohm circuits.

UTC VARITRAN CONTROL UNITS

For controlling: Rectifier output . . . motors . . . heaters . . . lights . . . line voltage



The UTC Varitran is a simple autotransformer whose turns are arranged on one layer with the insulation removed so that every exposed turn may be used as a tap of the winding. A special non-fusing contact can be moved to any position on the winding, permitting the exact voltage desired to be obtained. The regulation and efficiency are excellent and no distortion of wave form occurs. The output voltage is independent of load. In addition to its many laboratory uses, the Varitran is widely employed for controlling electric ovens, fans, soldering irons, furnaces and heaters, for photographic and enlarging lighting control, for life tests of lamps and for dimming illumination.

VARITRAN RATINGS

Standard Varitrans are designed for 115 or 230 volt service. The respective output voltages are 0-130 and 0-260 volts. The Varitran autotransformer current and wattage rating is based at 115 volts (115V models). As the voltage is reduced, the wattage output is reduced correspondingly. The maximum current can be taken at any point from 0 to 20 volts and from 95 to 130 volts. Between 20 and 95 volts the current capacity tapers off from the two ends to approximately 60% of the rated maximum current at the 65 volt point. The mounting facilities are at both top and bottom of each unit to assure ease of mounting on panel, chassis or for laboratory bench service.

Type	Input Voltage	Output Voltage	Watts	Max. Amps.	Figure	Approx. Dimensions	Weight
V-0	115 volts	0-130	230	2	A	4 1/4 x 6 1/2 x 4 1/2	10
V-0-B	230 volts	0-260	230	1	A	4 1/4 x 6 1/2 x 4 1/2	11
V-1	115 volts	0-130	570	5	B	4 1/4 x 8 x 3 3/4	12
V-1-M	115 volts	0-130	570	5	C	4 1/4 x 9 1/2 x 3 3/4	14
V-2	115 volts	0-130	570	5	A	4 1/4 x 7 1/2 x 3 3/4	13
V-2-B	230 volts	0-260	570	2.5	A	4 1/4 x 7 1/2 x 3 3/4	16
V-3	115 volts	0-130	850	7.5	A	4 1/4 x 7 1/2 x 3 3/4	16
V-3-B	230 volts	0-260	850	3.75	A	5 1/2 x 7 1/2 x 5 1/4	20
V-4	115 volts	0-130	1250	11	A	6 1/4 x 10 1/4 x 5	34
V-4-B	230 volts	0-260	1250	5.5	A	6 1/4 x 10 1/4 x 5	36



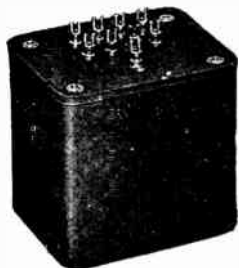
UTC HIPERM ALLOY TRANSFORMERS

The UTC Hiperm alloy audio and power transformers are specifically designed for portable and compact service. While light in weight and small in dimensions, neither dependability nor fidelity has been sacrificed. The frequency characteristic of the Hiperm alloy audio units is uniform from 30 to 20,000 cycles. These units are similar in general design and characteristics to the Linear Standard audio units, incorporating a Hiperm-alloy nickel iron core and a hum balanced coil structure. The rugged die cast case is of high conductivity alloy finished in grey, arranged for mounting with the terminals either up or down.



TYPE H-1 CASE

Length 2 7/8"
 Width 1 15/16"
 Height 3 1/8"
 Mounting 1 3/8" x 1 13/16"
 Screws 6-32
 Cutout 1 13/16" dia.
 Unit Weight 2 lb.



TYPE H-2 CASE

Length 3 9/16"
 Width 2 13/16"
 Height 3 1/2"
 Mounting 2" x 2 1/4"
 Screws 8-32
 Cutout 2 1/16" dia.
 Unit Weight 5 lbs.



UTC MICROPHONE CABLE TRANSFORMERS

UTC cable transformers are designed to be inserted in the cable circuit, and are ruggedly constructed to withstand mechanical abuse. The cable connections (supplied less cable) are made through the spring strain relief to terminal boards inside the end caps. These units may be located any place on the cable within twenty-five feet of the amplifier. 1 1/2" diameter . . . 2 1/2" long . . . 1/2" b.

LOW IMPEDANCE TO GRID AND MIXING TRANSFORMERS

Type No.	Application	Primary Impedance	Secondary Impedance	± 1 db from	Max. Level	Max. Unbal. DC in Prim'y	Case No.
HA-100	Low impedance mike, pickup, or multiple line to grid	50, 125/150, 200, 250, 333, 500/600 ohms	60,000 ohms in two sections	30-20,000	+15 DB	5 MA	H-1
HA-100X	Same as above but with tri-alloy internal shield to effect very low hum pickup	as above	as above				H-1
HA-101	Low impedance mike, pickup, or multiple line to push pull grids	50, 125/150, 200, 250, 333, 500/600 ohms	120,000 ohms overall, in two sections	30-20,000	+15 DB	5 MA	H-1
HA-101X	As above but with tri-alloy internal shield to effect very low hum pickup	as above	80,000 ohms overall, in two sections				H-1
HA-103A	Low impedance mike, pickup, or parallel mixer to grid	2.5, 5.5, 10, 15, 22, 30, 38, 60 ohms	60,000 in two sections	30-20,000	+15 DB	5 MA	H-1
HA-108	Mixing, low impedance mike, pickup, or multiple line	50, 125/150, 200, 250, 333, 500/600 ohms	50, 125/150, 200, 250, 333, 500/600 ohms	30-20,000	+15 DB	5 MA	H-1
HA-108X	Same as above but with tri-alloy internal shield to effect very low hum pickup						H-1
HA-130X	Three isolated lines or pads to one or two grids with tri-alloy internal shield	30, 50, 200, 250 ohms each primary	60,000 ohms overall, in two sections	30-20,000	+15 DB	5 MA	H-1

INTERSTAGE AUDIO TRANSFORMERS

Type No.	Application	Primary Impedance	Secondary Impedance	± 1 db from	Max. Level	Max. Unbal. DC in Prim'y	Case No.
HA-104	Single plate to P.P. grids like 2A3, 55, 6L6 (split secondary)	15,000 ohms	95,000 ohms 1.25:1	30-20,000	+17 DB	0 MA	H-1
HA-105	Single plate to single grid (split secondary)	15,000 ohms	60,000 ohms 2:1 turn ratio	30-20,000	+17 DB	0	H-1
HA-106	Single plate to push pull grids (split secondary)	15,000 ohms	135,000 ohms 3:1 ratio overall	30-20,000	+17 DB	0	H-1
HA-107	Push pull plates to push pull grids (split primary and secondary)	30,000 ohms plate to plate	80,000 ohms 1.6:1 turn ratio overall	30-20,000	+25 DB	.25 MA	H-2
HA-137	Push pull plates to push pull grids (split primary and secondary)	30,000 ohms plate to plate	68,000 ohms 1:1 turn ratio overall	30-20,000	+17 DB	0	H-1

PLATE AND CRYSTAL TO LINE TRANSFORMERS

Type No.	Application	Primary Impedance	Secondary Impedance	± 1 db from	Max. Level	Max. Unbal. DC in Prim'y	Case No.
HA-111	Crystal microphone or pickup, to multiple line	100,000 ohms	50, 125/150, 200, 250, 333, 500/600 ohms	30-20,000 measured with resistive source	+4 DB	0 MA	H-1
HA-113	Single plate to multiple line	15,000 ohms	50, 125/150, 200, 250, 333, 500/600 ohms	30-20,000	+18 DB	0 MA	H-1
HA-133	Single plate to multiple line (D.C. in Pri.)	15,000 ohms	50, 125/150, 200, 250, 333, 500/600 ohms	30-15,000	+18 DB	8 MA	H-1
HA-114	Push pull low level plates to multiple line	30,000 ohms plate to plate	50, 125/150, 200, 250, 333, 500/600 ohms	30-20,000	+20 DB	1 MA	H-1
HA-134	Push pull 89's or 2A3's to line	5,000/9,400 ohms plate to plate	50, 125/150, 200, 250, 333, 500/600 ohms	30-20,000	+32 DB	5 MA	H-2
HA-135	Push pull 2A3's to voice coil	5,000 ohms plate to plate	30, 20, 15, 10, 7.5, 5, 2.5, 1.2	30-20,000	+36 DB	5 MA	H-2

POWER TRANSFORMERS AND CHOKES

Type No.	Application	Primary Voltage 50/60 cycles	High Voltage	Filament Windings	Case No.
HP-122	Pre-amp. power supply using 84 rectifier	115	220-0-220 15 MA	6.3 V.C.T.-.5A 6.3 V.C.T.-1.2A	H-1
HP-123	Pre-amp. or tuner power supply using 84 rectifier	115	275-0-275 35 MA	6.3 V.C.T.-.5A 6.3 V.C.T.-2A	H-2

Type No.	Application	Inductance	DC Current	DC Resistance	Insulation Test Voltage	Case No.
HC-115	Parallel feed and filter choke	Series-400 hy Parallel-100 hy	2.5 MA 5 MA	7000 ohms 1750 ohms	1500	H-1
HC-116	Parallel feed and filter choke	Series-600 hy Parallel-150 hy	8 MA 16 MA	4000 ohms 1600 ohms	1500	H-2
HC-117	Filter choke with hum bucking tap	60 hy	15 MA	3000 ohms	1500	H-1

UTC MICROPHONE CABLE TRANSFORMERS

Type MC-1—primary tapped 30/50 and 200/250 ohms, secondary to grid standard fidelity.

Type MC-2—primary tapped 30/50 and 200/250 ohms, secondary to grid, high fidelity.

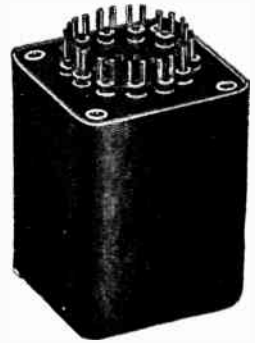


ULTRA COMPACT AUDIO UNITS

The UTC Ultra compact audio units are small and light in weight, ideally suited to remote amplifier and similar compact equipment. High fidelity is obtainable in all individual units, the frequency response being ± 2 DB from 30 to 20,000 cycles.

All units except those carrying DC in Primary employ a true hum balancing coil structure, which combined with a high conductivity outer case, effects good inductive shielding. The die-cast (Type A) case provides for top or bottom mounting. Maximum operating level $+ 10$ DB.

Type No.	Application	Primary Impedance	Secondary Impedance	± 2 db from
A-10	Low impedance mike, pickup, or multiple line to grid	50, 125/150, 200/250, 333, 500/600 ohms	50,000 ohms	30-20,000
A-11	Low impedance mike, pickup, or line to 1 or 2 grids	50, 200, 500	50,000 ohms	50-20,000 multiple alloy shield for extremely low hum pickup
A-12	Low impedance mike, pickup, or multiple line to push pull grids	50, 125/150, 200/250, 333, 500/600 ohms	80,000 ohms overall, in two sections	30-20,000
A-14	Dynamic microphone to one or two grids	30 ohms	50,000 ohms overall, in two sections	30-20,000
A-16	Single plate to single grid	15,000 ohms	60,000 ohms, 2:1 turn ratio	30-20,000
A-18	Single plate to two grids. Split primary, can also be used for P.P. plates	15,000 ohms	80,000 ohms overall, 2.3:1 turn ratio overall	30-20,000
A-19	Single plate to two grids 8 MA unbalanced D.C.	15,000 ohms	80,000 ohms overall, 2.3:1 turn ratio overall	50-20,000
A-20	Mixing, low impedance mike, pickup, or multiple line to multiple line	50, 125/150, 200/250, 333, 500/600 ohms	50, 125/150, 200/250, 333, 500/600 ohms	30-20,000
A-21	Mixing, low impedance mike, pickup or line to line	50, 200/250, 500/600	50, 200/250, 500/600	50-20,000 multiple alloy shield for extremely low hum pickup
A-24	Single plate to multiple line	15,000 ohms	50, 125/150, 200/250, 333, 500/600 ohms	30-20,000
A-25	Single plate to multiple line 8 MA unbalanced D.C.	15,000 ohms	50, 125/150, 200/250, 333, 500/600 ohms	50-20,000
A-26	Push pull low level plates to multiple line	30,000 ohms plate to plate	50, 125/150, 200/250, 333, 500/600 ohms	30-20,000
A-27	Crystal microphone to multiple line	100,000 ohms	50, 125/150, 200/250, 333, 500/600 ohms	30-20,000 measured with non-inductive source
A-30	Audio choke, 300 henrys @ 2 MA 6000 ohms D.C., 75 henrys @ 4 MA 1500 ohms D.C. Inductance with no D.C.			



TYPE A CASE

Length	1 1/2"
Width	1 1/2"
Height	2"
Mounting	1 1/2" sq.
Screws	4-40
Cutout	1 3/8" dia.
Unit Weight	1/2 lb.

OUNCER AND PLUG-IN AUDIO UNITS

OUNCER Type No.	Application	Pri. Imp.	Sec. Imp.	PLUG-IN Type No.
O-1	Mike, pickup or line to 1 grid	50, 200/250, 500/600	50,000	P-1
O-2	Mike, pickup or line to 2 grids	50, 200/250, 500/600	50,000	P-2
O-3	Dynamic mike to 1 grid	7.5/30	50,000	P-3
O-4	Single plate to 1 grid	15,000	60,000	P-4
O-5	Single plate to 1 grid, D.C. in Pri.	15,000	60,000	P-5
O-6	Single plate to 2 grids	15,000	95,000	P-6
O-7	Single plate to 2 grids, D.C. in Pri.	15,000	95,000	P-7
O-8	Single plate to line	15,000	50, 200/250, 500/600	P-8
O-9	Single plate to line, D.C. in Pri.	15,000	50, 200/250, 500/600	P-9
O-10	Push pull plates to line	30,000 ohms plate to plate	50, 200/250, 500/600	P-10
O-11	Crystal mike or pick-up to line	50,000	50, 200/250, 500/600	P-11
O-12	Mixing and matching	50, 200/250	50, 200/250, 500/600	P-12
O-13	Reactor, 200 Hys.—no D.C.: 50 Hys.—2MA. D.C., 8000 ohms			P-13
O-14	60:1 mike or line to 1 grid	200	1/2 megohm	P-14
O-15	10:1 single plate to 1 grid	15,000	1 megohm	P-15



OUNCER CASE

Diameter	7/8"
Height	1 1/8"
Mounting	1 1/8"
Screws	2-56



PLUG-IN (P) CASE

Diameter	1 3/32"
Height	1 1/32"
Socket	Standard Octal

UTC OUNCER components represent the acme in compact quality transformers. These units, which weigh one ounce, are fully impregnated and sealed in a drawn aluminum housing 7/8" diameter . . . mounting opposite terminal board.

Ouncer items are ideal for portable broadcast, hearing aid, aircraft, concealed service, and similar applications. High fidelity characteristics are provided, uniform, from 40 to 15,000 cycles, except for O-14, O-15, and units carrying DC which are intended for voice frequencies from 150 to 4,000 cycles. Maximum operating level 0DB.

"P" series units are identical to the UTC OUNCER units but are sealed in bakelite housings with plug in base to fit standard octal socket. While of submersion proof design, these units weigh but two ounces. Oversize pins in the base make it impossible to dislodge these units from their sockets, even when used upside down in portable equipment.

SUBOUNCER UNITS

FOR HEARING AIDS . . . VEST POCKET RADIOS . . . MIDGET DEVICES

UTC Sub-Ouncer units weigh only 1/3 ounce. Through unique construction, however, these miniature units have performance and dependability characteristics far superior to any other comparable items. The coil is uniform layer wound of Formex wire . . . On a molded nylon bobbin . . . insulation is of cellulose acetate . . . leads mechanically anchored . . . core material Hiperm-alloy . . . entire unit triple (waterproof) sealed. The frequency response of these standard items is ± 3 DB from 200 to 5,000 cycles.

Type	Application	Level	Pri. Imp.	D.C. In Pri.	Sec. Imp.
SO-1*	Input	+ 4 V.U.	200 50	0	250,000 65,500
SO-2	Interstage/3:1	+ 4 V.U.	10,000	0	90,000
SO-3*	Plate to Line	+ 23 V.U.	10,000 25,000	3 mil. 1.5 mil.	200 500
SO-4	Output	+ 20 V.U.	30,000	1.0 mil.	50
SO-5	Reactor 50 HY at 1 mil. D.C.		3000 ohms	D.C. Res.	

* Impedance ratio fixed. Can be employed with any primary impedance between values shown.



SUB-OUNCER UNIT

Dimensions	3/16" x 5/8" x 7/8"
Weight	1/3 oz.

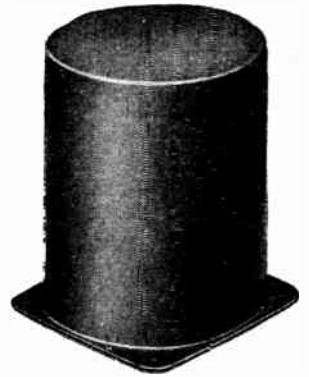


UTC COMMERCIAL GRADE COMPONENTS



The commercial grade series of transformers incorporate conservative design and rugged construction to assure dependability under continuous service operation in industrial and commercial grade communication equipment. These units are mounted in uniform drawn cases finished in light grey enamel, and intended for chassis mounting. All items are poured with special sealing compound in addition to vacuum impregnation of coil structures. The CG line was developed to replace our very popular PA series in a more rugged construction, with professional appearance. Type numbers are identical with the PA units except for the prefix "CG".

CG-134, 135 and 136 are of the hum-bucking type to assure low hum pick-up. All audio components are linear, $\pm 1\frac{1}{2}$ DB from 60 to 8,500 cycles (no unbalanced D.C.). Parallel feed low level interstage units with 50,000 ohms and .25 mfd. 200 ohm windings on input transformers are balanced and may be used for 250 ohm circuits.



INPUT, INTERSTAGE, MIXING AND LOW LEVEL OUTPUT TRANSFORMERS

(200 ohm windings are balanced and can be used for 250 ohms)

Type No.	Application	Primary Impedance Ohms	Secondary Impedance Ohms	Case No.
CG-131	1 plate to 1 grid	15,000	135,000 3:1 ratio	RC-50
CG-132	1 plate to 2 grids	15,000	135,000 center-tapped 3:1 ratio overall	RC-62
CG-133	2 plates to 2 grids	30,000 P to P	80,000 overall	RC-75
CG-134	Line to 1 grid hum-bucking	50, 200, 500	1.6:1 ratio overall	RC-50
CG-135	Line to 2 grids hum-bucking	50, 200, 500	120,000 overall	RC-50
CG-235	Line to 1 or 2 grids, hum-bucking; multiple alloy shielded for low hum pickup	50, 200, 500 ohms	80,000 overall	RC-75
CG-136	Single plate and low impedance mke or line to 1 or 2 grids, hum-bucking	15,000, 50, 200	80,000 overall	RC-62
CG-233	PP 6C5, 56, similar triodes to AB 13's, 2A3's, 6L6's, etc.	30,000 P to P	25,000 overall 3:1 ratio overall	RC-87
CG-333	PP 6C5, 56, similar triodes to fixed bias 6L6's	30,000 P to P	7,500 overall 3:1 ratio overall	RC-87
CG-433	PP 45, 2A3, similar tubes to fixed bias 2 or 4 6L6's	5,000 P to P	1,250 overall 4:1 ratio overall	RC-100
CG-137	Mixing	50, 200, 500	50, 200, 500	RC-50
CG-140	Triode plate to line	15,000	50, 200, 500	RC-50
CG-141	PP triode plates to line	30,000 P to P	50, 200, 500	RC-50

COMMERCIAL GRADE CASE

Case No.	Base Dim. (Sq.)	Mounting Dim. (Sq.)	Height	Cutout Dia.	Unit Weight (Lbs.)
RC-50	1 1/2"	1-5/16"	2 1/4"	1 1/2"	1 1/2
RC-62	1-13/16"	1 1/2"	2 1/4"	1 1/2"	3/4
RC-75	2-3/16"	1-13/16"	2 3/4"	1 1/2"	1 1/2
RC-87	2-9/16"	2-3/32"	3 1/4"	2"	2
RC-100	3"	2 1/2"	3 3/4"	2"	3
RC-112	3-7/16"	2-11/16"	4 1/4"	3"	4 1/2
RC-125	3 3/4"	3"	4 1/2"	3"	5 1/2
RC-150	4 1/2"	3-9/16"	5 1/4"	3"	10
RC-152	5 1/4"	4 1/4"	5 1/4"	4"	15
RC-175	5 3/4"	4 1/2"	7 1/8"	4"	20

OUTPUT TRANSFORMERS

Secondary Impedances: 500, 200, 70, 16, 8, 5, 3, 1.5 ohms

Type No.	Imped. P.P. Ohms, Overall	Typical Tubes	Max. Watts	Case No.
CG-15	8,000	15, 18, 6F6 triode	20	RC-100
CG-16	3,000/5,000	2A3, 6A3, 18, 6B1	20	RC-100
CG-19	6,000 10,000	6N7, 6A6, 6F6, 39, 46, 6V6	20	RC-100
CG-710	11,000 20,000	11, 12, 17, 49, 6X6, 7B5	20	RC-100
CG-2L6	9,000	6L6's, AB1	30	RC-125
CG-4L6	3,800/4,500	2-6L6's, AB1 or 4-6L6's AB1	55	RC-150

CG VARIMATCH OUTPUTS FOR P. A.

Universal units designed to match any tubes within the rated output power, to line or voice coil. Output impedance 500, 250, 50, 16, 8, 5, 3, 1.5 ohms. Primary impedance 3000, 5000, 6000, 7000, 8000, 10,000, 14,000 ohms

Case No.	Audio Watts	Typical Tubes	Case No.
CVP-1	12	42, 43, 45, 47, 2A3, 6A6, 6F6, 25L6	RC-100
CVP-2	30	42, 45, 2A3, 6L6, 6V6, 6B5	RC-125
CVP-3	60	46's, 50's, 300A's, 6L6's, 801, 807	RC-150
CVP-4	125	800's, 801's, 807's, 4-6L6's, 845's	RC-152
CVP-5	300	211, 242A's, 203A's, 838's, 4-845's, ZB-120's	RC-175

CG VARIMATCH LINE TO VOICE COIL TRANSFORMERS

The UTC VARIMATCH line to voice coil transformers will match any voice coil or group of voice coils to a 500 ohm line. More than 50 voice coil combinations can be obtained, as follows:

2, 4, 5, 6, 1.25, 1.5, 2, 2.5, 3, 3.3, 3.8, 4, 4.5, 5, 5.5, 6, 6.25, 6.8, 7, 7.5, 8, 9, 10, 11, 12, 14, 15, 16, 18, 20, 25, 28, 30, 31, 40, 47, 50, 63, 69, 75.

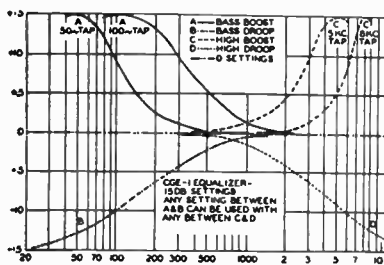
Where speakers are to be connected in groups to one transformer, it is preferable that parallel connection be used to eliminate the possibility of multiple resonance. If two speakers of different impedances are connected in parallel, the lower impedance speaker will develop greater power. If connected in series, the higher impedance speaker will develop greater power.

Type No.	Audio Watts	Primary Impedance	Secondary Impedance	Case No.
CVL-1	15	500 ohms	.2 to 75 ohms	RC-87
CVL-2	40	500 ohms	.2 to 75 ohms	RC-125
CVL-3	75	500 ohms	.2 to 75 ohms	RC-150

CG VARIMATCH LINE AUTOFORMERS

UTC Varimatch Line Autoformer will match one to ten 500 ohm lines or CGL windings to the 500 ohm output of an audio amplifier. The CGA-10 to 12 autoformers have impedances of 50, 250, 167, 125, 100, 83, 71, 62, 50 ohms.

Type No.	Audio Watts	Case No.
CVL-10	15	RC-87
CVL-11	30	RC-125
CVL-12	60	RC-150



Ask for free detailed manual.

UNIVERSAL INTERSTAGE EQUALIZER

This new UTC unit is the ideal device for any application requiring frequency response correction. Designed to be connected between two triode audio stages or will match a high impedance (5000 to 30000 ohms) source to grid.

The CGE-1 equalizer is not a simple R-C tone control, but employs resonant circuits to permit low or high end equalization without affecting mid-frequencies. With controls in center, no equalization is effected. Moving one control to left increases bass; to right, drops bass. Moving other control to left increases highs; to right drops highs. Controls are independent so that bass may be raised and highs dropped simultaneously, etc. Amount of equalization is continuously adjustable, up to 15 DB. The insertion loss effected is equal to the combined low frequency and high frequency settings plus 6 DB, or a maximum of 36 DB. Unless existent gain of equipment to which CGE-1 is added is high, an additional audio stage may be required.

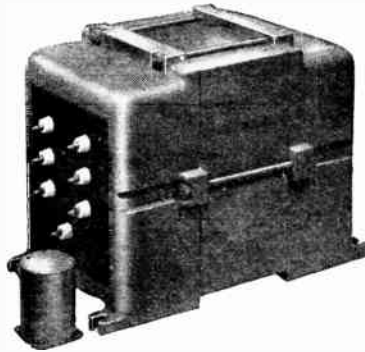
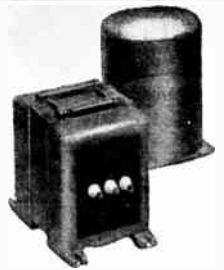
This unit comes complete so that controls with etched panel (calibrated in DB) can be mounted on a chassis (2 1/2 inch minimum) or a panel with case containing the electrical elements held by etched panel screws.

CGE-1 Panel Dim. 2 3/8 x 4. Wt. 2 Lb.





COMMERCIAL GRADE COMPONENTS



UTC CG power transformers, Varimatch units and chokes are designed to A.I.E.E. commercial standards. Ratings are conservative for continuous duty. Designs provide temperature rise less than 55 degrees C. Units are tested for breakdown at twice maximum working voltage plus 1000 volts. Plate transformers are given a surge test of 250% normal voltage at 200 cycles. All items are vacuum impregnated and sealed with special insulating compound.

The conservative design and manufacturing procedure of these units make them suitable for virtually all types of commercial equipment as well as ideally suited for quality amateur and public address service.

CG VARIMATCH MODULATION UNITS

Will match any modulator tubes to any RF load

The ever increasing number of vacuum tubes available for audio and RF applications has increased the difficulty of obtaining transformers suitable for matching to the various correct tube loads. If a standard transformer having a limited impedance range is purchased and used for a specific purpose as the "nearest thing" available, comparatively high distortion is inevitable. While a 20% mismatch caused by such an occurrence does not represent a serious loss in power, it greatly reduces the undistorted power available from a class B modulator because optimum plate load is not reflected to the tubes. The UTC Varimatch transformer eliminates this difficulty through the use of a combination of tapped windings affording an extremely wide range in impedance matching. Designs provide that for any load impedance employed, full class C plate current can be carried by secondary winding.

Primary impedances from 500 to 20,000 ohms
Secondary impedances from 30,000 to 300 ohms

Type No.	Max. Audio Watts	Max. Class C Input	Typical Modulator Tubes	Case No.
CVA-0	12	25	30, 49, 79, 6A6, 53, 2A3, 6B5	RC-100
CVM-1	30	60	6V6, 6B5, 2A3, 42, 46, 6L6, 210	RC-125
CVM-2	60	125	801, 6L6, 809, 4-46, T-20, 1608	RC-150
CVM-3	125	250	800, 807, 845, T2-20, RK-30, 35-T	RC-152
CVM-4	300	600	50 T, 203A, 805, 838, T-55, ZB-120	RC-175
CVM-5	600	1200	805, 11F-200, 204A, HK-354, 250TH	7x12x9H 60 lbs.

CG VARIMATCH DRIVER TRANSFORMERS

Type No.	Primary	Typical Output Tubes	Case No.
CG-51AX	All single tubes like: 6C5, 30, 49, 53, 79, 89, 6A6, 45, 46, 2A3	19, 30, 49, 79, 89, 2A3, 45, 46, 6L6, 42, 59	RC-87
CG-53AX	P. P. tube like: 45, 59, 2A3, 6B5, 6L6	46, 4-46, 841, 210, 801, RK-18, 800, 203A, 835, 805, 50T, 830B	RC-112
CG-59AX	50, 200, 500 ohm line	805, 838, 203A, ZB-120, 100TH, 800, 55T, RK-18	RC-112
CG-238AX	4-2A3, 4-45, 4-50, 2-211A, 2-845	4-805's, 4-838's, 4-203A's, 2-204's, 2-849's, 2-11F300's, 2-11F200's, 2-250TH's, 2-450TH's	RC-150
CG-512	50, 200, 500 ohm line	2-250TH, 2-450TH, 2-11F200, 2-11F300, 2-204A, 2-849	RC-150

VARIPOWER AUTO-FORMERS

Designed for line voltage control, filament control and reduced power operation. Output voltage from 0 to 150 volts, 50/60 cycles. Vari power units permit control of filament voltage at the tube socket to within 2 1/2% of desired value simultaneously with line voltage control and plate voltage control. Can be used to reduce or increase voltages on filament transformers. Taps at 25, 55, 75, 95, 100, 105, 110, 115, 120, 125 and 130 volts permit output voltages from 0 to 150 volts in 5 volt steps.

Type No.	Watts Output	Case No.
CVA-1	150	RC-112
CVA-2	250	RC-125
CVA-3	500	RC-150
CVA-4	1000	RC-152
CVA-5	2000	RC-175

POWER AND BIAS TRANSFORMERS

Primary 115 volts 50/60 cycles

Type No.	High Voltage	DC MA.	Fl. 1	Fl. 2	Fl. 3	Fl. 4	Case No.
CG-422	435-365-0-365-435 125-0-125	125	5V-3A	5V-2A	6.3 VCT-3A	2.5 VCT-5A	RC-150
CG-428	500-0-500 80-0-80	250	5V-3A	5V-2A	6.3 VCT-4A	6.3 VCT-3A, tapped 2.5 VCT-3A	RC-152
CG-429	600-525-0-525-600	250	5V-3A	5V-2A	6.3 VCT-3A	7.5 VCT-2A, tapped 6.3 VCT-3A	RC-152
CG-431	500-400-0-400-500 80-0-80	500	5V-3A	5V-2A	6.3 VCT-5A	6.3 VCT-3A	RC-175
CG-316	Tapped for any DC voltage from 15 to 100 volts within 6% — 250 MA						
CG-316	Tapped for any DC voltage from 75 to 400 volts within 6% — 250 MA						

CG PLATE TRANSFORMERS

Primaries for 105, 115, 220, 230 volts, 50/60 cycles. For reduced power, secondary voltages can be reduced to half by using 220V. Pri. on 110 volts. These transformers may be used on 25 to 43 cycles if 220V Pri. is used on 110 volt.. Secondary voltage is simultaneously halved.

Type No.	High Voltage	DC Voltage	DC MA	Case No.
CG-300	625-515-0-515-625	500/400	200	RC-150
CG-301	540-530-300-0-300-530-580	475/425/250	420	RC-152
CG-302	9-0-750-0-750-950	760/610	360	RC-175
CG-303	1400-1235-400-0-400-1235-1500	1250/1000 500	260 175	RC-175

TYPE EC CASE UNITS

Type No.	High Voltage	DC Voltage	DC MA	L	W	H	Wt. Lbs.
CG-304	1500-1235-0-1235-1500	1250/1000	800	15	8 1/2	10 1/2	100
CG-305	2400-1750-0-1750-2400	2000/1500	300	10 1/2	4 1/2	6 1/2	50
CG-306	2400-1750-0-1750-2400	2000/1500	500	15	8 1/2	10 1/2	100
CG-307	3500-3000-2400-0-2400-3000-3500	3000/2500 2000	300	14 1/2	8 1/2	10 1/2	90
CG-308	3500-3000-2400-0-2400-3000-3500	3000/2500 2000	500	16 1/2	8 1/2	10 1/2	125
CG-309	3500-3000-2400-0-2400-3000-3500	3000/2500 2000	1000	21	10	13 1/2	185
CG-310	4600-4050-3500-0-3500-4050-4600	4000/3500 3000	600	19	10	13 1/2	150
CG-311	1500-1235-0-1235-1500	1250/1000	500	10 1/2	4 1/2	6 1/2	50
CG-312	1500-1500-0-1500-1500	1500/1250	400	10 1/2	4 1/2	6 1/2	50

FILTER CHOKES

INDUCTANCE SHOWN IS AT RATED DC MA

Type No.	Inductance Henrys	DC MA	DC Res. Ohms	Test Volts	Case No.
CG-40	10	200	110	1750	RC-112
CG-41	4-20	200	110	1750	RC-112
CG-44	30	100	400	1750	RC-100
CG-45	250	15	5000	1750	RC-87
CG-48C	7.5	50	2500	1750	RC-87
CG-100	12	150	120	2500	RC-125
CG-102	12	250	105	3000	RC-150
CG-104	10	350	90	5000	RC-152
CG-108	10	500	55	7000	RC-175
CG-1S	10	1000	45	9000	1 1/2 x 4 1/2 x 6 1/2 H, 60 lb.

SWINGING INPUT CHOKES

INDUCTANCE SHOWN IS FROM 100% TO 10% OF RATED DC MA

Type No.	Inductance Henrys	DC MA	DC Res. Ohms	Test Volts	Case No.
CG-101	5-25	150	120	2500	RC-125
CG-103	5-25	250	105	3000	RC-150
CG-105	5-25	350	90	5000	RC-152
CG-109	5-25	500	55	7000	RC-175
CG-1C	5-25	1000	45	9000	1 1/2 x 4 1/2 x 6 1/2 H, 60 lb.

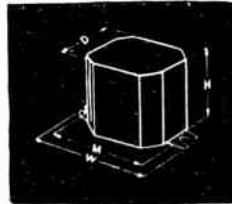
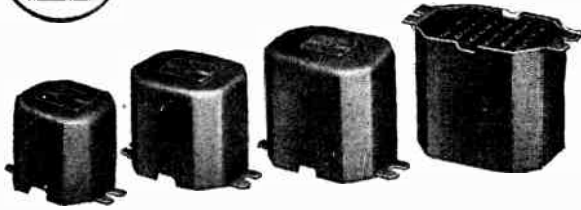
FILAMENT TRANSFORMERS

Primary for 105, 115, 220, 230 volts, 50/60 cycles. These transformers may be used on 25 to 43 cycles if 220 volt primary is used on 110 volts. Secondary voltage is simultaneously reduced to half.

Type No.	Sec. Volts C. T.	Sec. Amps.	Working Voltage	Test Voltage	Case No.
CG-34	2 1/2	10	2500	6000	RC-112
CG-120	2 1/2	10	5000	11000	RC-125
CG-121	5	22	5000	11000	RC-150
CG-122	7.5 6.3	10	1500	4000	RC-125
CG-124	10	10	1500	1000	RC-150
CG-125	11 12 11	10	1500	4000	RC-150
CG-126	*11 11 10 14 11 10	10 10	1500	4000	RC-152



SPECIAL SERIES AUDIO TRANSFORMERS



CASE SIZES

Type No.	H	W	D	M	Wt. Lbs.
G-1	1 1/2"	2-13/16"	1 1/2"	2 1/2"	1
G-2	2-5/16"	3 1/2"	1-15/16"	2 1/2"	1 1/2"
G-3	3 1/4"	3 3/4"	2-5/32"	3 1/2"	2
G-4	2-15/16"	4 1/2"	2-5/16"	3 3/4"	3

CLASS A INPUT TRANSFORMERS

Type No.	Application	Ratio	Case
S-1	1 plate* to 1 grid	3 1/2:1	G-2
S-2	1 plate* to 2 grids	2:1	G-2
		4:1	
S-3	1 plate* to 1 or 2 grids compact type	2:1	G-1
S-4	1 plate* to 2 grids wide range response	1:1	G-3
S-5	Single or double button mike or line to 1 grid hum-bucking type	16:1	G-2
S-6	Single or double button mike or line to 1 grid, compact type	16:1	G-1
S-7	Single plate* and carbon mike to one or two grids	3:1 16:1	G-2

* Will match tubes like 56, 6C5, 6C6 triode, 77 triode, 37 etc. Can be used with high mu triodes with loss in low frequencies.

UNIVERSAL DRIVER TRANSFORMERS (See Modulator chart for tube types)

Type No.	Application	Case
S-8	Single driver plate to pushpull grids	G-3
S-9	Pushpull driver plates to grids of class B tubes up to 400 watts output	G-4
S-10	Pushpull 56, 6C6 triode, 6C5, or similar plates to 45's, 2A3's or 6L6's, self of fixed bias.	G-3

MATCHING TRANSFORMERS

Type No.	Application	Pri. Ohms	Sec. Ohms	Case
S-11	Single 56, 6C6 triode, 6C5 or similar tube to line.	15,000	200/500	G-2
S-12	Line to speaker 15 watts.	500, 2000, 4000	2, 4, 8, 15	G-2
S-13	Line to speaker 30 watts.	500, 2000, 4000	2, 4, 8, 15	G-4

UNIVERSAL OUTPUT TRANSFORMERS TO LINE AND VOICE COIL (Secondary Impedances: 500, 15, 8, 2 ohms)

Type No. Max. Watts	Primary Impedance	Typical Tubes	Class	Case
S-14 10 W.	Single Tubes: 2500 ohms	2A3, 6A3, 6A5, 6B4, 6L6, 6Y6, 251A, 351A	A	G-2
	4000 ohms	31, 47, 45, 48, 6V6, 12A5, 12A6	A	
	7000 ohms	33, 47, 42, 47, 58, 89, 2A5, 6AC5, 6P6, 6K6, 6N6, 7B5	A	
	10,000 ohms	37, 38, 41, 1G5, 3C5, 6A4, 6N7	A	
S-15 12 W.	P. P. Tubes: 4000 ohms	6Y6, 25L6	AB	G-2
	6000 ohms	45, 2A3, 6A3, 6A5, 6B4	AB	
	10,000 ohms	30, 1H4, 6AG5G, 6B5, 19, 49, 53, 79, 89, 6A6, 6N6, 6N7, 6Y7	AB B	
S-16 30 W.	3000 ohms	45, 48, 2A3, 6A3, 6A5, 6B4, 25L6	AB	G-4
	6000 ohms	42, 2A5, 6P6 triodes	A, B	
	9000/10000 ohms	46, 59, Parallel 53, 6A6, 6N7	B	
S-17 55 W.	3800 ohms	6L6's	AB2	G-5
	4500/5000 ohms	4-6L6's	AB1 R	
		46, 1608, 809	R	

UNIVERSAL MODULATION TRANSFORMERS Secondary carries class C current Any modulator tubes to any RF load. (See c (art))

Type No.	Audio Power	Case
S-18	12 watts	G-3
S-19	30 watts	G-4
S-20	55 watts	G-5
S-21	110 watts	G-7
S-22	250 watts	G-9

UTC Special Series transformers are specifically designed for amateur and popular-priced PA service. The Special units are finished in a rich, commercial type medium gray enamel. A recessed terminal strip is provided permitting above chassis or breadboard wiring in addition to standard chassis type wiring. The universal windings provided on driver, matching and output transformers assure a maximum of flexibility. Modulator output units will carry the DC current of the class C stage for any of the impedances available and will match practically any audio tubes to any RF load within the power rating of the transformer. Large components are housed in formed cases with top or bottom mounting. All units are vacuum impregnated — compound filled.

TYPICAL MODULATOR COMBINATIONS

S-18 — 12 WATTS MAX.

DRIVER TUBES: In the combinations shown below, typical suitable driver tubes are: 27, 30, 37, 49, 53, 56, 76, 79, 89, 6A6, 6C5, 6C6 triode, 6E6, 6N7.

DRIVER Transf.	Sec. Term.	P.P. Tubes	Watts Output	P.P. Load	MODULATOR STAGE Plate Volts	Bias Volts
S-2	G-G	6P6	1.6	14,000	250	27
S-8	G-O	19, 1J6G	2.1	10,000	135	0
S-8	G-G	30	2.5	10,000	180	18
S-8	G-G	49	3.5	12,000	180	0
S-8	G'-G'	89	3.5	10,000	180	0
S-2	G-G	25L6	4	4,000	110	7.5
S-8	G'-G'	6Y7G	4.2	12,000	180	0
S-2	G-G	6V6G	7	4,000	135	13.5
S-8	G-G	19, 6Y7G	8	14,000	250	0
S-8	G'-G'	6AC5G	8	10,000	250	0
S-8	G'-G'	53, 6A6, 6N6, 6N7	10	10,000	300	0
S-2	G-G	2A3, 6A3, 6A5G, 6B4G	10	5,000	325	750 ohms
S-2	G-G	6B5	10	10,000	300	0
S-8	G-G	45	10	5,000	275	770 ohms
SINGLE TUBES						
					Pri. Load	
					43, 45, 59, 71A, 12A5, 25A6, 25A7	4,000 ohms
					31, 46, 59, 6V6, 33	6,000 ohms
S-1	P-G	33, 42, 46, 47, 49, 89, 2A5, 6P6, 6B5			7,000 ohms	
					59, 89 pentode	8,000 ohms
					10, 41, 32, 6G6, 6K6	10,000 ohms
					38, 12A7	14,000 ohms

S-19 — 30 WATTS MAX.

(53, 56, 6C6 triode, 6N7, may be substituted for 6C5 tubes)

Tube or Tubes	DRIVER Transf.	Sec. Terms.	P.P. Tubes	Watts Output	P.P. Load	Plate Volts	Bias Volts
6C5	S-10	G-G	6V6	13	8,000	300	20
6C5	S-2	G-O	6H5	13.5	10,000	325	0
6C5	S-10	G-G	2A3, 6A3, 45, 6A5G, 6B4G	15	3,000	325	68
			2A5, 42, 6P6, Pen-tode AB	10	10,000	375	340 ohms
2A5	S-8	G-G	2A5, 42, 6P6, 1H1 oide AB	19	6,000	350	38
89	S-8	G'-G'	Parallel 53's, 6A6, 6N6, 6N7	19	5,000	300	0
45	S-8	G-G	10, 160Z	25	8,000	425	50
45	S-8	G'-G'	46, 59	25	6,000	425	0
45	S-8	G'-G'	841	28	7,000	425	5
6C5	S-10	G-G	6L6 self bias	30	9,800	400	23

S-20 — 55 WATTS MAX.

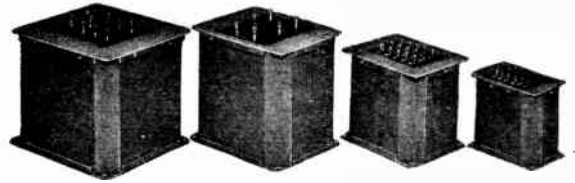
P.P. Tubes	DRIVER Transf.	Sec. Term.	P.P. Tubes	Watts Output	P.P. Load	MODULATOR STAGE Plate Volts	Bias Volts	Bias Trsf.
Single 45	S-8	G'-G'	46	40*	5000	470	N-44	0
2A3	S-9	1-1	801	45	10000	600	S-45	75
2A3	S-9	3-3	1608	50	5000	425	S-44	15
2A3	S-9	1-1	7-20	50	8000	600	S-45	30
Single 45	S-8	G'-G'	4-48	56	3000	425	S-44	0
6C5	S-10	G-G	6L6 AB2	60	3800	400	S-39	25
6C5	S-10	G-G	4-6L6	60	4500	400	S-40	23
2A3	S-9	3-3	809	60	5000	500	S-41	0

* Above manufacturers' rating, but frequently employed by amateurs.



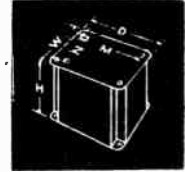
UTC SPECIAL SERIES POWER EQUIPMENT

UTC Special Series power supply components are designed specifically for amateur and popular-priced PA service. The ratings are based on such applications and recommended for intermittent service. For commercial applications, CG or LS grade components should be employed. Tapped coil structures on power and bias supply transformers afford maximum flexibility, permitting a given transformer to be used with many circuits and types of tubes. Do not affect standby service by interrupting high voltage center tap.



CASE SIZES

Type No.	H	W	D	M	N	Wt. Lbs.
G-5	3 3/4	3 1/4	4 1/4	3 3/4	2-7/16	4 1/2
G-7	4 1/4	4 1/4	5 1/4	4-27/32	3-25/32	8
G-8	4 1/4	5 1/4	5 1/4	4-25/32	4 1/4	12
G-9	5 1/4	5 1/4	6 1/4	6-3/32	4-19/32	21
G-10	5 1/4	6 1/4	6 1/4	5-15/16	5-13/32	24
G-11	5 1/4	6 1/4	7 1/4	6-21/32	5-29/32	31
G-12	10 1/4	7 1/4	9 1/4	8 1/4	8 1/4	52



S-21 — 115 WATTS MAX.

P.P.-2A3 Driver S-9 Transf. Sec. Term.	P.P. Tubes	Watts Output	MODULATOR STAGE P.P. Load	Plate Volts	Plate Transf.	Bias Volts	Bias Trsl.
2-2	TZ-20	70	12000	800	S-46	0	
1-1	T-20	70	12000	800	S-46	40	S-51
*	845	75	4600	1000	S-47	175	S-52
3-3	4-48, 59	80	2500	470	S-44	0	
1-1	807	80	6000	600	S-45	30	S-51
1-1	800, RK-30	80	6000	750	S-45	40	S-51
1-1	800, RK-30	100	12000	1000	S-47	55	S-51
3-3	809	100	8400	750	S-45	5	S-51
2-2	825	100	6600	850	S-46	30	S-51
2-2	TZ-40	100	6000	750	S-45	0	
2-2	T-756	100	7000	850	S-46	30	S-51
1-1	50-T	100	8000	1000	S-47	90	S-51
2-2	RK-18	100	12000	1000	S-47	50	S-51
1-1	RK-351	100	15000	1000	S-47	60	S-51
*	845	105	8800	1250	S-47	225	S-52
3-3	RK-31	110	14000	1000	S-47	0	
1-1	4-6L6	110	2000	400	S-44	25	S-51
2-2	35-T	115	11000	1000	S-47	30	S-51

* Reverse S-9 transformer using terminals 1-1 for plates and P-P for grids.

S-22 — 250 WATTS MAX.

P.P.-2A3 Driver S-9 Transf. Sec. Term.	P.P. Tubes	Watts Output	MODULATOR STAGE P.P. Load	Plate Volts	Plate Transf.	Bias Volts	Bias Trsl.
3-3	RK-31	140	17000	1250	S-47	0	
*	50 T	135	12000	1250	S-47	112	S-52
*	50 T	250	20000	2000	S-50	180	S-52
*	50 T	160	17000	1500	S-49	140	S-52
2-2	TZ-40	175	6800	1000	S-47	0	
1-1	T-55	175	6900	1000	S-47	40	S-51
1-1	T-55	225	9400	1250	S-47	50	S-51
2-2	HF-100	200	7000	1000	S-47	35	S-51
2-2	HF-100	250	12000	1500	S-49	52	S-51
2-2	100 TH	200	5800	1000	S-47	0	
2-2	100 TH	250	7200	1250	S-47	0	
†	100 TL	170	5200	1000	S-47	90	S-51
†	100 TL	230	7200	1250	S-47	112	S-52
2-2	ZH-120	150	4800	750	S-45	0	
2-2	ZH-120	200	6900	1000	S-47	0	
2-2	ZH-120	245	9000	1250	S-47	0	
*	HK-154	200	7500	1000	S-47	155	S-52
*	HK-154	225	11400	1250	S-47	210	S-52
1-1	203 A	200	6900	1000	S-47	25	S-51
1-1	203 A	250	9000	1250	S-47	45	S-51
3-3	203 Z	200	6900	1000	S-47	0	
2-2	203 Z	250	6700	1100	S-47	0	
1-1	211	200	6900	1000	S-47	77	S-51
1-1	211	250	9000	1250	S-47	100	S-51
1-1	HK-354	220	15000	1500	S-49	100	S-51
2-2	808	190	12700	1250	S-47	15	S-51
2-2	830 B	175	7600	1000	S-47	35	S-51
2-2	838	200	6900	1000	S-47	0	
2-2	838	250	9900	1250	S-47	0	

* Reverse S-9, using 2-2 for plates and P-P for grids.

† Reverse S-9, using 1-1 for plates and P-P for grids.

FILTER, SWINGING, AND AUDIO CHOKES

Type No.	Service	Inductance	Current	Resistance	Insulation	Case No.
S-23	Audio	500 Hy.	5 Ma.	6000 ohms	1500 V.	G-2
S-24	P.P.	500 Hy.				
	Choke	C.T.	3 Ma.	4000 ohms	1500 V.	G-2
S-25	Filter	30 Hy.	30 Ma.	900 ohms	1500 V.	G-2
S-26	Filter	15 Hy.	60 Ma.	230 ohms	1500 V.	G-2
S-27	Filter	30 Hy.	75 Ma.	350 ohms	1500 V.	G-4
S-28	Filter	20 Hy.	100 Ma.	350 ohms	1500 V.	G-4
S-29	Filter	10 Hy.	175 Ma.	95 ohms	1500 V.	G-4
S-30	Swinging	5/25 Hy.	175 Ma.	95 ohms	1500 V.	G-4
S-31	Filter	20 Hy.	225 Ma.	120 ohms	2700 V.	G-5
S-32	Swinging	5/25 Hy.	225 Ma.	120 ohms	2700 V.	G-5
S-33	Filter	20 Hy.	300 Ma.	90 ohms	4000 V.	G-7
S-34	Swinging	5/25 Hy.	300 Ma.	90 ohms	4000 V.	G-7
S-35	Filter	20 Hy.	400 Ma.	85 ohms	5000 V.	G-8
S-36	Swinging	5/25 Hy.	400 Ma.	85 ohms	5000 V.	G-8
S-37	Filter	20 Hy.	550 Ma.	80 ohms	6000 V.	G-8
S-38	Swinging	5/25 Hy.	550 Ma.	80 ohms	6000 V.	G-8

COMBINED PLATE AND FILAMENT TRANSFORMERS

Primary 115 V. — 50/60 Cycles

Type No.	Voltage	D.C. Voltages*	Rectifier Fil.	Fil. No. 1	Fil. No. 2	Case No.
S-39	490-400-0-400-490 175 Ma.	400/310	5 V-3A	2.5 V.C.T. -6A	6.3 V.C.T. 4A	G-7
S-40	525-495-0-425-525 250 Ma.	400/310	5 V-3A	6.3 V.C.T. -6A	6.3 V.C.T. 3A	G-7
S-41	600-0-600 200 Ma.	475	5 V-3A	7.5 V. tapped 6.3 V-3A	6.3 V.C.T. 2A	G-7
S-42	600-525-0-525-600 300 Ma.	480/400	5 V-3A	7.5 V. tapped 6.3 V-3A	6.3 V.C.T. 3A	G-8
S-43	525-0-525 450 Ma. 40-0-40 200 Ma.	400	5 V-3A 5 V-6A	6.3 V.C.T. -2A	6.3 V.C.T. 5A	G-9

* Based on two section filter, choke input

PLATE TRANSFORMERS — BIAS TRANSFORMERS

Primary 115 V. — 50/60 Cycles

Type No.	High Voltage	DC Voltages*	DC Current	Case No.
S-44	575-525-0-525-575	470/430	500 Ma.	G-9
S-45	900-750-0-750-900	750/620	200 Ma.	G-8
S-46	1000-750-0-750-1000	825/600	300 Ma.	G-9
S-74	1175-500-0-500-1175 Duplex rectifier	1000 400	1150 Ma.	G-10
S-47	1500-1250-1000-0-1000-1250-1500	1275/1050/825	300 Ma.	G-10
S-48	1500-1250-1000-0-1000-1250-1500	1300/1075/850	500 Ma.	G-11
S-49	2100-1800-1500-0-1500-1800-2100	1815/1540/1275	300 Ma.	G-11
S-50	3000-2500-0-2500-3000	2625/2175	300 Ma.	G-12
S-51	Will supply any bias voltage from 15 to 100 volts DC within approximately 0% of desired value.		200 Ma.	G-5
S-52	Will supply any bias voltage from 75 to 400 volts DC within approximately 0% of desired value.		200 Ma.	G-7

* Based on two section filter for 200 Ma. and 300 Ma. units, single section filter for 500 Ma. units, both choke input
1200 Ma. if used alone 1300 Ma. if used alone

FILAMENT TRANSFORMERS

Primary Tapped 105, 115 Volts — 50/60 Cycles

Type No.	Secondary Volts	Secondary Current	Insulation	Case No.
S-53	2.5 VCT	10 A.	1500 V.	G-3
S-54	5 VCT	4 A.	2500 V.	G-3
S-55	6.3 VCT	3 A.	1,600 V.	G-3
S-56	7.5 VCT	3 A.	1500 V.	G-3
S-57	2.5 VCT	10 A.	10,000 V.	G-5
S-58	2.5 VCT	20 A.	10,000 V.	G-5
S-59	5 to 5.25 VCT	13 A.	5000 V.	G-5
S-60	5 to 5.25 VCT	22 A.	10,000 V.	G-7
S-61	7.5 VCT tapped 6.3 VCT	8 A.	3000 V.	G-5
S-62	10 VCT	10 A.	3000 V.	G-5
S-63	14 VCT (tapped) 12 VCT and 11 VCT	10 A.	5000 V.	G-7

Type No.	Fil. 1	Fil. 2	Fil. 3	Insulation	Case No.
S-64	2.5 VCT-5A	2.5 VCT-5A	5 VCT-6A	3000 V.	G-5
S-65	2.5 VCT-5A	5 VCT-4A	6.3 VCT-3A	3000 V.	G-5
S-66	2.5 VCT-10A	7.5 VCT-6.5A		3000 V.	G-5
S-67	5 VCT-6A	6.3 VCT-5A		3000 V.	G-5
S-68	5 VCT-3A	6.3 VCT-1A	7.5 VCT-5A	3000 V.	G-5
S-69	6.3 VCT-3A	7.5 VCT-6.5A		3000 V.	G-5
S-70	6.3 VCT-5A	6.3 VCT-5A		3000 V.	G-5
S-71	2.5 VCT-6A	2.5 VCT-6A	2.5 VCT-12A	10000 V.	G-7
S-72	5 VCT-3A	5 VCT-3A	5 VCT-6A	8000 V.	G-5



UTC REPLACEMENT TYPE COMPONENTS

VARITAP DUPLICATE REPLACEMENT POWER TRANSFORMERS (A)

Type No.	High Volt- age	Rect. Fil.	Dimensions, In.						Wt. Lb.	
			Fil. 1	Fil. 2	W	D	H	M		N
R-1	325-0- 325 40MA	5V-2A	6.3 VCT- 2A or 2.5- VCT-4A		3	2½	2¾	2½	2	2½
R-2	350-0- 350 70MA	5V-3A	6.3 VCT- 2.5A or 2.5 VCT-8A		3½	2½	3	2-13/16	2½	3
R-3	350-0- 350 95MA	5V-3A	6.3 VCT- 4.5A or 2.5- VCT-4.5A	2.5 VCT- 9A	3	3¾	3¾	3¾	2½	3½
R-4	375-0- 375 120- 3A	5V-4A	6.3 VCT- 5A or 2.5- VCT-5A	2.5 VCT- 15A	4½	3¾	3¾	3¾	3	3½
R-5	385-0- 385 180- MA	5V-4A	6.3 VCT- 4A or 2.5- VCT-6A	6.3 VCT- 5A	4¾	3¾	1¾	3¾	3	3¾

VARITAP FLUSH TYPE POWER TRANSFORMERS (B)

Type No.	High Volt- age	Rect. Fil.	Dimensions, In.						Wt. Lb.	
			Fil. 1	Fil. 2	W	D	H	M		N
R-6	300-0- 300 50MA	5V-2A	6.3 VCT- 2A or 2.5- VCT-5A		3	2½	3	2½	2	2½
R-7	350-0- 350 75MA	5V-3A	6.3 VCT- 3A or 2.5- VCT-8A	2.5 VCT- 8A	3¾	2½	3¾	2-13/16	2½	3
R-8	375-0- 375 100- MA	5V-3A	6.3 VCT- 4A or 2.5- VCT-4A	2.5 VCT- 10A	3¾	3¾	3¾	3¾	2½	3½
R-9	400-0- 400 125- MA	5V-3A	6.3 VCT- 4A or 2.5- VCT-4A	6.3 VCT- 2A or 2.5 VCT- 10A	4½	3¾	4	3¾	3	3½
R-10	425-0- 425 200- MA	5V-3A	6.3 VCT- 5A or 2.5- VCT-5A	6.3 VCT- 3A or 2.5 VCT- 12A	4½	3¾	4¾	3¾	3	3¾

VERTICAL SHIELDED POWER TRANSFORMERS FOR RECEIVERS AND AMPLIFIERS (C)

Type No.	High Volt- age	Rect. Fil.	Dimensions, In.						Wt. Lb.	
			Fil. 1	Fil. 2	W	D	H	M		N
R-54	300-0- 300 50MA	5V-2A	6.3 VCT- 2A or 2.5- VCT-5A		2½	2½	3¼	2	1¾	2½
R-11	350-0- 350 75MA	5V-3A	6.3 VCT- 3A or 2.5 VCT-3A	2.5 VCT- 8A	3	3¼	3¼	2¼	2¼	3½
R-12	375-0- 375 100- MA	5V-3A	6.3 VCT- 4A or 2.5- VCT-4A	6.3 VCT- 2A or 2.5 VCT- 8A	3¾	3¾	4	2½	2½	6
R-13	425-0- 425 200- MA	5V-3A	6.3 VCT- 5A or 2.5- VCT-5A	6.3 VCT- 3A or 2.5 VCT- 12A	3¾	4½	4¾	3	3¾	8¾

FILTER AND AUDIO CHOKES (D)

Inductance Shown Is at Rated D.C.M.A.—Insulation Test: 1750 Volts

Type No.	Induct. Hys.	Current	Resist- ance Ohms	Dimensions, In.			Lbs.
				W	D	M	
R-55	6	40MA	300	2½	1¾	1¾	½
R-14	8	40MA	250	2¾	1¾	1-11/16	¾
R-15	12	30MA	450	2¾	1¾	1-11/16	¾
R-16	15	30MA	600	2¾	1¾	1-11/16	¾
R-17	20	40MA	850	3-5/16	1¾	2	2-13/16
R-18	8	80MA	250	3-5/16	1¾	2	2-13/16
R-19	14	100MA	450	3¾	1¾	2-5/16	1¾
R-20	7	160MA	100	4¾	2	2¾	3-9/16
R-21	4/20	160MA	100	4¾	2	2¾	3-9/16
R-22	120	55A	4000	3-5/16	1¾	2	2-13/16

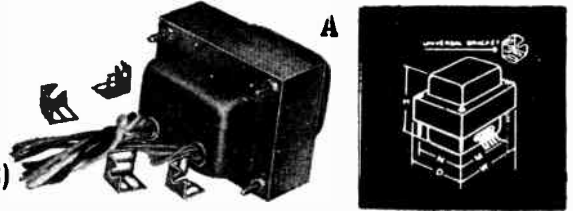
CHANNEL FRAME FILAMENT TRANSFORMERS (D)

Pri. 115 V. 50/60 Cycles—1500 V. Breakdown

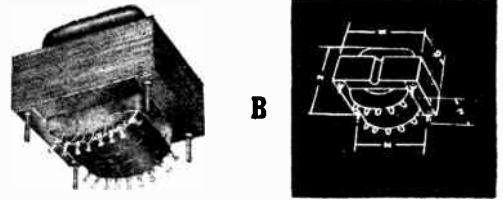
Type No.	Secondary	Dimensions, Inches			Wt. Lbs.
		W	D	M	
FT-1	2.5 V.C.T.-3A	2¾	1¾	1-11/16	¾
FT-2	6.3 V.C.T.-1.2A	2¾	1¾	1-11/16	¾
FT-3	2.5 V.C.T.-6A	3-5/16	1¾	2	2-15/16
FT-4	6.3 V.C.T.-2.5A	3-5/16	1¾	2	2-13/16
FT-5	2.5 V.C.T.-10A	3¾	1¾	2-5/16	1¾
FT-6	5 V.C.T.-3A	3¾	1¾	2-5/16	1¾
FT-7	7.5 V.C.T.-3A	3¾	1¾	2-5/16	1¾
FT-8	6.3 V.C.T.-8A	4¾	2¾	2¾	3-9/16

The UTC replacement type transformers represent the culmination of years of development in this field. All units are vacuum sealed against humidity with special impregnating materials to prevent corrosion and electrolysis. Shells and brackets are finished in attractive high lustre black enamel.

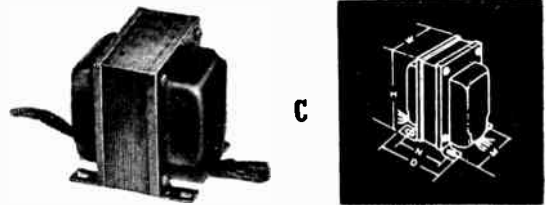
The UTC shells and universal brackets employed make possible a latitude in mounting dimensions never approached heretofore. Using Varitap coil construction a minimum number of transformers have been developed to cover any requirement in the replacement field.



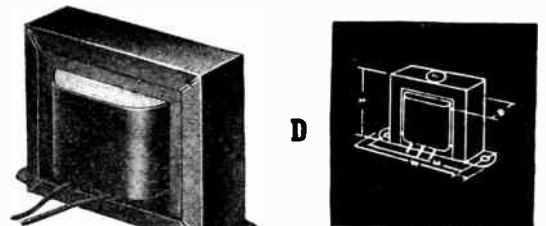
Through unique construction the five UTC VARITAP DUPLICATE replacement transformers will service as many types of radio receivers as the 15 or 20 units more customarily employed for such service. The universal feet may be used for upright or horizontal mounting, or eliminated for flush mounting.



UTC FLUSH TYPE transformers are husky units designed for low temperature use and good regulation. By employing a Varitap universal coil structure, the five units described are universal in application. The rugged solder terminals permit ease of circuit change for the experimenter.



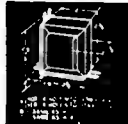
UTC VERTICAL power transformers are unusually attractive in appearance, having smooth drawn cases finished in high lustre black enamel. The Varitap coil structure assures flexibility of application.



Channel frame chokes, audios, and filament transformers are conservatively designed. Standard black enamel mounting channels are employed. Coils are tropic-sealed by vacuum-pressure method.



Varitap Duplicate audio units are extremely attractive, the double shells and universal mounting brackets being finished in high lustrous black enamel. The figure A units use the UTC universal bracket. This bracket makes possible four hole horizontal or vertical mounting and two hole, channel type, horizontal or vertical mounting. The coils of these units, in addition to efficient design and mechanical shielding, are vacuum impregnated and sealed with a special compound to assure complete protection against adverse climatic conditions.



SHIELDED UNIVERSAL MOUNTING AUDIO TRANSFORMERS AND FILTER CHOKES

Type No.	Application	Description	Fig.	Wt. Lbs.
R-23	1 plate* to 1 grid	3 1/2:1 ratio	A	1
R-24	1 plate* to 2 grids	2:1 ratio	A	1
R-25	2 plates* to 2 grids	1.5:1 stepup for class A triodes, 1.5:1 stepdown for 6L6's, 2A3's, 2A5's, etc.	A	1 1/4
R-26	Driver, 1 plate to 2 grids	Single 12, 2A5, 6F6, 45, 46	A	1 1/4
R-27	15 watt Universal Output	All tubes up to 15 watts to any voice coil from .1 to 30 ohms	A	1 1/4
R-28	35 watt Universal Output	All tubes up to 35 watts to any voice coil from .1 to 30 ohms	B	2 1/4
R-29	Mike to grid	Single or double button mike or line to 1 grid	A	1 1/4
R-30	Filter choke	13 Hys—250 MA—100 ohms	C	7
R-31	Filter Choke	10 Hys—80 MA—250 ohms	A	2 1/4
R-32	Filter choke	10 Hys—150 MA—100 ohms	B	2 1/4

* Will match tubes like 27, 37, 56, 6C6 triode, 6C5. Can be used with high mu triodes with loss in low frequencies.

CHANNEL FRAME AUDIO TRANSFORMERS (D)

(See preceding page for photo)

Type No.	Application	Description	Dimen., Ins.				Wt. Lbs.
			W	D	H	M	
R-33	1 plate* to 1 grid	4:1 ratio	2 1/2	1 1/2	1-11/16	2 3/4	3/4
R-34	1 plate* to 2 grids	2:1 ratio	2 1/2	1 1/2	1-11/16	2 3/4	3/4
R-35	Mike to 1 grid	17:1 ratio	2 1/2	1 1/2	1-11/16	2 3/4	3/4
R-90	Intercomm. speaker to grid	4 ohm to 40,000 ohm grid	2 1/2	1 1/2	1 1/2	2 3/4	3/4
R-53	Plate & mike to grid	3:1 and 17:1 ratio	2 1/2	1 1/2	1-11/16	2 3/4	3/4
R-56	1 plate to 2 grids	2:1 ratio	3-5/16	1 1/2	2	2-13/16	1
R-57	1 plate to 2 grids	2 1/2:1 ratio	4 1/4	2	2 1/2	3-9/16	2 1/4
R-36	Driver	30, 49, etc. to class B 19, 49, 79, 89 grids	2 1/2	1 1/2	1-11/16	2 3/4	3/4
R-37	R.F. Output	Class B 19, 49, 79, 89 plates to 3500 and 5,000 ohms	2 1/2	1 1/2	1-11/16	2 3/4	3/4
R-58	5 watt Universal output	Any single tube to any voice coil, .1 to 30 ohms	2 1/2	1 1/2	1 1/2	2 3/4	3/4
R-38A	6 watt Universal	Any tubes up to 6 watts to any voice coil, .1 to 30 ohms	2 1/2	1 1/2	1 1/2	2 3/4	3/4
R-59	10 watt Universal	Any tubes up to 10 watts to any voice coil, .1 to 30 ohms	2 1/2	1 1/2	1-11/16	2 3/4	3/4
R-60	15 watt Universal	Any tubes up to 15 watts to any voice coil, .1 to 30 ohms	3-5/16	1 1/2	2	2-13/16	1
R-39	10 watt line Matching Transformer	250, 500, 1,500 ohms to 2, 8, 15 ohms	2 1/2	1 1/2	1-11/16	2 3/4	3/4
R-40	25 watt line Matching Transformer	250, 500, 1,500 ohms to 2, 8, 15 ohms	4 1/4	2 1/4	2 1/2	3-9/16	2 1/4

* Will match tubes like 27, 37, 56, 6C6 triodes, 6C5. Can be used with high mu triodes with loss in low frequencies.

STEP DOWN AUTO-TRANSFORMERS

With 6 foot cord and female receptacle
220-240 to 110-120 Volts—50/60 Cycles

Type No.	Application	Wgt. Lbs.
R-41	85 watt capacity	4
R-42	125 watt capacity	5
R-43	175 watt capacity	5 1/2
R-44	250 watt capacity	6 1/2
R-45	500 watt capacity	12
R-46	1200 watt capacity	18
R-64	2500 watts, no cord	30



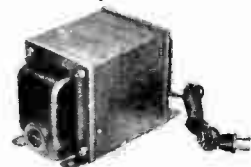
N-52

ISOLATION TRANSFORMERS

Ideal for isolating line noise, AC-DC sets, etc. Excellent electrostatic shielding. 2000 volt breakdown test. Six foot cord and female receptacle.

Primary 110-120 volts, 50/60 cycles—Secondary 110-120 volts

Type No.	Rating	Wgt. Lbs.
R-72	10 watts	1
R-73	100 watts	6
R-74	250 watts	12
R-75	600 watts	20
R-76	1200 watts	30
R-77	2500 watts (no cord)	70



EXPORT VOLTAGE ADAPTER

Complete with cord and plug and special locking switch providing for line voltages of 105, 115, 125, 135, 150, 210, 230, 250 volts. 42 to 60 cycles Output voltage 115.

Type No.	Rating	Wgt. Lbs.
R-47	85 watts	4 1/2
R-48	150 watts	5 3/4



LINE VOLTAGE ADJUSTERS WITH METER

The perfect answer to abnormal or fluctuating line voltage. Adjust switch so that meter reads at red line and you know that your equipment is working at correct voltage.

These units combine a tapped auto-transformer with a switch and meter in a compact, rugged assembly.

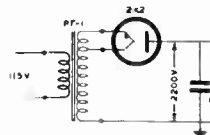
The nine tap switch provides for line voltages of 60 to 140 volts on 115 volt output models and 160 to 240 volts on 230 volt output models. All units are designed for 50/60 cycle service and come complete with 6 foot input cord and plug and outlet receptacle.

Type No.	Primary Voltages	Sec. Volts	Watts	Wt. Lbs.
R-78	60, 70, 80, 90, 100, 110, 120, 130, 140	115	150	6
R-79	60, 70, 80, 90, 100, 110, 120, 130, 140	115	300	9
R-80	60, 70, 80, 90, 100, 110, 120, 130, 140	115	600	13
R-81	60, 70, 80, 90, 100, 110, 120, 130, 140	115	1200	21
R-83	160, 170, 180, 190, 200, 210, 220, 230, 240	230	150	6
R-84	160, 170, 180, 190, 200, 210, 220, 230, 240	230	300	9
R-85	160, 170, 180, 190, 200, 210, 220, 230, 240	230	600	13
R-86	160, 170, 180, 190, 200, 210, 220, 230, 240	230	1200	21

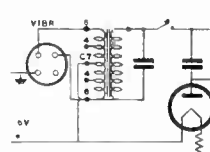
PHOTO FLASH TRANSFORMERS

Can be used for either standard (Amalg type) or trigger (Sylvania type) multiple flash bulbs. Circuit details included with transformer, or on request.

PF-1 Primary for 115 volts, 50/60 cycles. Secondaries for power supply delivering 2200 volts DC to condenser up to 100 Mfd. (30 Mfd. charges in 4 Sec.) Compound sealed in G-3 case 2 1/8 x 2 3/4 x 2 1/2 inches high. Weight 2 Lbs.



PF-2 For portable photoflash service Primary tapped for 4 volt or 6 volt battery (full wave vibrator). Secondary for power supply delivering 2200 volts DC to condenser up to 60 Mfd. (30 Mfd. charges in 8 sec. with 6 volts or 14 Sec. with 4 volts). Compound sealed in G-3 case. Weight 2 Lbs.



PF-3 Trigger Transformer 15 KV peak

TELEVISION TRANSFORMERS

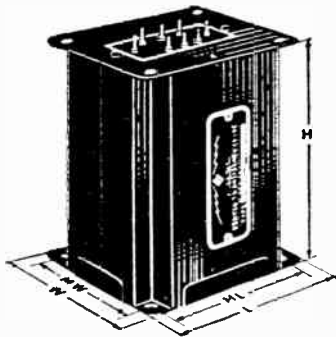
These components are quality designs, vacuum impregnated and fully compound sealed in heavy steel cases affording a high degree of shielding.

Type No.	Application	Case	Wt. Lbs.
R-91	Horizontal oscillator (15750 cycles)	RC-50	1
R-92	Vertical oscillator (60 cycles)	RC-50	1
R-93	Vertical output, tapped for different tubes	RC-100	4
R-94	Horizontal output (special core), tapped for adjustment	RC-100	4
R-95	2500 vac (4000 DC) 2.5V-1.8A, 6 3V-0.6A tapped 2.5V-2. LA, 7000 V test	RC-125	5



KENYON "T" LINE TRANSFORMERS

DIMENSIONS OF "T" LINE TRANSFORMERS



MOUNTING DIMENSIONS			OVERALL DIMENSIONS		
Case No.	ML	MW	Length (L)	Width (W)	Height (H)
1A	2 1/2	1 9/16	2 7/16	2	2 7/8
2A	2 1/8	1 13/16	2 3/4	2 3/4	3 3/8
3A	2 5/16	1 15/16	3 1/16	2 9/16	3 5/8
4A	3 7/8	2 7/16	4 1/2	3	3 7/8
5A	4 3/16	3 3/16	5	3 7/8	5
5 1/2 A	4 3/16	3 25/32	5	4 1/2	5
6A	4 3/16	4 1/2	5	5 1/8	5 5/8
7A	5 1/2	4 3/16	6 5/16	5 3/16	6 3/8
8A	5 3/4	4 13/16	6 9/16	5 11/16	7 1/8
9A	6 1/16	5 3/4	7 3/4	6 5/8	7 3/16
10A	8 5/8	7 11/32	9 1/2	8 1/4	10 5/8

LOW IMPEDANCE SOURCE TO GRID TRANSFORMERS

Type No.	From	Primary Ohms	Secondary Ohms	Case No.	Weight	List Price
T-1 (Hum bucking type)	S.B. or D.B. Mic.	400-300-200-100-50	80,000 Single Grid	1A	1 lb., 1 oz.	\$7.95
T-2 (Hum bucking type)	Any line	500-333-250-200-125-50	80,000 Single Grid	1A	1 lb., 1 oz.	7.95
T-3 (Hum bucking type)	Any line	500-333-250-200-125-50	80,000 P.P. Grids	1A	1 lb., 1 oz.	8.20
T-6 (See Top Page 7)	Any line	500-333-250-200-125-50	20,000 Single Grid	1A	1 lb.	10.10

LINE-TRANSFORMERS—LINE TO LINE AND LINE TO VOICE COIL

Type No.	Primary Ohms	Secondary Ohms	Maximum Level	Case No.	Weight	List Price
T-25	500-200-50	500-200-50	+ 24 D.B.	2A	1 lb., 14 ozs.	\$7.40
T-25 (Hum bucking type)	500-333-250-200-125-50	500-333-250-200-125-50	- 24 D.B.	1A	1 lb., 10 ozs.	7.25
T-28	500-200	15-8-4	30 watts	4A	5 lbs., 10 ozs.	12.45

INTERSTAGE AUDIO TRANSFORMERS

Type No.	From	To	Ratio	Case No.	Weight	List Price
T-51	Single 10,000 ohm plate	Single Grid	1:4	1A	1 lb., 4 ozs.	\$5.95
T-52	Single 10,000 ohm plate	P.P. Grids	1:4	1A	1 lb., 4 ozs.	6.15
T-54	P.P. 10,000 ohm plates	P.P. Grids	1:1.8	2A	1 lb., 14 ozs.	7.85
T-55	Single 10,000 ohm plate	Single Grid	1:3	2A	1 lb., 14 ozs.	7.15
T-56	Single 10,000 ohm plate	P.P. Grids	1:2	2A	1 lb., 14 ozs.	7.20
T-57 (Hum bucking type)	Single 10,000 ohm plate	Single Grid	1:2	2A	1 lb., 7 ozs.	7.70
T-58 (Hum bucking type)	Single 10,000 ohm plate	P.P. Grids	1:2	2A	1 lb., 7 ozs.	7.95

DRIVER TRANSFORMERS

Type No.	Primary to match	Class AB or Class B Tubes	Ratio (pri. to 1/2 Sec.)	Case No.	Weight	List Price
T-251	Single 53, 6A6, 6N7, 56, 6C5	53, 6A6, 6N7	2.3:1	2A	1 lb., 14 ozs.	\$6.60
T-252	Single 50, 49, 89	19, 30's, 49's	1.7:1	1A	1 lb., 13 ozs.	5.70
T-253	Single 46, 59	46's, 59's, 6F6's	2.3:1	2A	1 lb., 14 ozs.	6.35
T-255	P.P. 56, 6C5, 53, 6N7	6L6's	3.2:1	2A	1 lb., 14 ozs.	7.10
T-267	4-2A3's	354E's, 354F's	2.1:1	4A	5 lbs., 10 ozs.	12.35
T-271	P.P. 45's, 2A3's, 6F6's	6L6's, 809's, TZ40's	3.7:1	3A	2 lbs., 13 ozs.	9.20

KEN-O-TAP UNIVERSAL DRIVER TRANSFORMERS

500 Ohm Line to any Class B Grids Primary to Secondary Ratio Variable from 1:13.3 to 1: 7

Type	Power Rating	Case No.	Weight	List Price
T-251	7 Watts	3A	2 lbs., 12 oz.	\$ 9.70
T-252	18 Watts	4A	5 lbs., 4 oz.	13.20

Any Line or Single or Push Pull Plates to Class B Grids Primary to 1/2 Secondary Ratio Variable from 7.0:1 to 1:9.0

Type	Audio Rating	Case Size	Max. Pri. D.C.	Max. Sec. D.C.	Weight	List Price
T-262	7 Watts	3A	100 MA	100 MA	2 lbs., 12 oz.	\$ 9.95
T-263	18 Watts	4A	200 MA	200 MA	5 lbs., 12 oz.	15.25

PREAMPLIFIER OUTPUT TRANSFORMERS

Type No.	From	Secondary Ohms	Case No.	Weight	List Price
T-101	Single 56, 76, 6C5	200-500	1A	1 lb., 4 ozs.	\$5.65
T-102	P.P. 56, 76, 6C5	200-500	1A	1 lb., 4 ozs.	6.05

OUTPUT TRANSFORMERS TO 500-200 OR 15-8-4 OHMS

Type No.	From	Primary Ohms	Case No.	Weight	List Price
T-104	Single 2A5, 6F6, 42, 47, 89	7,000	2A	1 lb., 14 ozs.	\$7.60
T-105	Class "A" P.P. 2A5's, 6F6's, 42's, 47's, 89's	14,000	2A	2 lbs.	8.25
T-37	Class "AB" P.P. 6L6's	6,600 or 3,800	4A	5 lbs., 6 ozs.	14.00
T-379	Class "AB2" P.P. 6L6's	6,000 or 3,800	5A	8 lbs., 7 ozs.	17.75
T-301	Class "A," P.P. 6L6's, Class AB 45's, 2A3's	5,000 or 3,000	4A	4 lbs., 5 ozs.	12.60



KENYON "T" LINE TRANSFORMERS

KEN-O-DYNE UNIVERSAL OUTPUT TRANSFORMERS

Type No.		Case No.	Weight	List Price	
T-108	15 watts	3A	2 lbs. 13 ozs.	\$9.30	Will match any set of Push-Pull or Push-Pull Parallel or a single plate to 500-200 or speaker voice-coils. Low impedance connection for speaker voice coils range from .5 to 25 ohms.
T-109	30 watts	4A	5 lbs. 2 ozs.	13.55	
T-110	60 watts	5A	10 lbs. 1 oz.	18.20	

KEN-O-TAP MODULATION TRANSFORMERS

Type No.	Audio Watts	Class C W. Sec.	Max. Pri. D.C.	Max. Sec. D.C.	Max. D.C. Voltage	Primary Range Ohms	Secondary Range Ohms	Case No.	Weight	List Price
T-489	15	30	120	120	600	2000-20000	200-20000	3A	2 lbs. 13 oz.	\$ 8.90
T-490	40	80	250	250	750	2000-20000	200-20000	4A	5 lbs. 10 oz.	13.35
T-491	75	150	250	300	1250	2000-20000	200-20000	5A	9 lbs.	18.10
T-441	125	250	250	250	1500	2000-20000	200-20000	6A	15 lbs. 8 oz.	25.20
T-495	125	250	200	250	2000	500-18000	200-19000	7A	19 lbs. 2 oz.	48.30
T-496	300	600	250	300	2500	500-18000	200-19000	8A	26 lbs. 4 oz.	56.00
T-442	600	1200	400	400	3000	500-18000	200-19000	9A	45 lbs.	67.50

PLATE TRANSFORMERS DESIGNED FOR INTERMITTENT DUTY ONLY

(55°C. RISE— 15 Minutes On, 15 Minutes Off)

Type No.	Secondary Voltage	D.C. Volts	D.C. M A	Case No.	Weight	List Price
T-668	1000/750-0-750/1000	600/800	250	5 1/2 A	12 lbs., 6 oz.	\$21.80
T-669	1160/1180-0-1180/1160	1000/1250	300	7A	19 lbs., 2 oz.	35.80
T-670	2360/2080/1760-0-1760/2080/2360	1500/1750/2000	270	8A	31 lbs., 9 oz.	46.75
T-671	1460/1180-0-1180/1460	1000/1250	450	8A	31 lbs., 9 oz.	44.75

PLATE TRANSFORMERS DESIGNED FOR BOTH CONTINUOUS AND INTERMITTENT DUTY

Type No.	Primary Conn.	Volts Secondary No. 1		55°C. Rise 15Min On MA Cont.	55°C. Rise 15Min Off MA Int.	Volts Secondary No. 2		55°C. Rise 15Min On MA Cont.	55°C. Rise 15Min Off MA Int.	Volts Secondary No. 3		55°C. Rise 15Min On MA Cont.	55°C. Rise 15Min Off MA Int.	Case No.	Weight	List Price
		D.C.	A.C.			D.C.	A.C.			D.C.	A.C.					
T-664		600	740-0-740	150	200									5A	10 lbs., 10 oz.	\$ 17.45
T-655	High Low	450 350	575-0-575 460-0-460	— 250	340 375									5A	10 lbs., 1 oz.	19.20
T-656	High Low	750 600	925-0-925 740-0-740	— 270	320 360									6A	15 lbs., 9 oz.	28.80
T-657	High Low	1000 750	1170-0-1170 900-0-900	— 150	200 225	1000 750	1170-0-1170 900-0-900	— 150	200 225					7A	21 lbs., 9 oz.	41.25
T-658	High Med Low	500 450 400	650-0-650 585-0-585 520-0-520	— 150	200 225 250	560 510 450	710-0-710 640-0-640 570-0-570	— 150	200 225 250	560 510 450	710-0-710 640-0-640 570-0-570	— 150	200 225 250	7A	22 lbs., 12 oz.	44.00
T-654	High Med Low	470 420 375	610-0-610 550-0-550 490-0-490	— 200	250 275 300	925 500 500	785-0-785 710-0-710 630-0-630	— 200	250 275 300	625 560 500	785-0-785 710-0-710 630-0-630	— 200	250 275 300	8A	32 lbs., 9 oz.	47.00
T-659	High Med Low	500 450 400	650-0-650 585-0-585 520-0-520	— 230	300 325 350	560 510 450	710-0-710 640-0-640 570-0-570	— 230	300 325 350	560 510 450	710-0-710 640-0-640 570-0-570	— 230	300 325 350	9A	48 lbs.	61.50
T-665	High Low	1250 1000	1470-0-1470 1180-0-1180	— 200	270 300									7A	23 lbs., 4 oz.	42.40
T-666		1250	1460-0-1460	280	350									8A	32 lbs., 2 oz.	46.50
T-667		1250	1460-0-1460	400	600									9A	50 lbs.	52.00
T-660		1250	1460-0-1460	400	600	500	630-0-630	150	200					9A	49 lbs., 11 oz.	55.00
T-652	High Low	1750 1500	2080-0-2080 1760-0-1760	— 320	450 500									9A	50 lbs., 8 oz.	59.00
T-663		2000	2360-0-2360	350	500									10A	82 lbs.	106.00
T-673	High Low	3000 2500	3400-0-3400 2840-0-2840	— 425	400 500									10A	82 lbs.	110.00
T-674	High Low	3000 2500	3400-0-3400 2840-0-2840	— 850	800 1000									Spec.	135 lbs.	155.00

KENYON "T" LINE TRANSFORMERS



FILTER REACTORS

Type No.	Inductance At Rated D.C.	Rated D.C. MA.	D.C. Resistance	Insulation Test R.M.S.	Case No.	Weight	List Price
T-155	280	10	5200	1500	2A	2 lbs.	\$ 5.95
T-156	30	25	800	1500	1A	1 lb., 4 oz.	4.55
T-157	10	50	200	1500	1A	1 lb., 4 oz.	4.45
T-153	20	90	360	1500	3A	2 lbs., 12 oz.	6.05
T-154	12.5	165	220	1500	3A	3 lbs., 2 oz.	7.05
T-151	7.5	250	100	1500	4A	5 lbs., 10 oz.	8.50
T-152	7	200	140	1500	3A	2 lbs., 13 oz.	6.45
T-164	13	250	120	1500	5A	10 lbs., 1 oz.	15.50
T-166	10	300	120	1500	5A	10 lbs., 1 oz.	15.50
T-159	10	500	70	1500	6A	15 lbs., 9 oz.	17.30
T-165	10	150	260	3000	3A	3 lbs., 2 oz.	7.60
T-168	12	250	120	3000	5A	10 lbs., 10 oz.	15.50
T-160	11	300	120	3000	5A	10 lbs., 1 oz.	15.50
T-167	11	400	70	3000	6A	15 lbs., 9 oz.	17.30
T-175	10	200	140	5000	4A	5 lbs., 10 oz.	10.75
T-176	10	300	103	5000	5A	10 lbs., 11 oz.	17.20
T-178	10	400	90	5000	6A	15 lbs., 2 oz.	19.30
T-177	11	500	90	5000	7A	21 lbs., 1 oz.	33.30
T-161	7.5	600	50	5000	7A	21 lbs., 4 oz.	31.80
T-180	10	500	60	7000	8A	26 lbs., 4 oz.	43.00
T-181	5	1000	18	7000	9A	50 lbs.	63.00

SWINGING REACTORS

Type No.	Inductance At Rated D.C.	Rated D.C. MA.	D.C. Resistance	Insulation Test R.M.S.	Case No.	Weight	List Price
T-517	11/40	90/20	360	1500	3A	2 lbs., 12 oz.	\$ 6.03
T-515	6/21	165/30	220	1500	3A	3 lbs., 2 oz.	6.15
T-506	4/16	200/30	140	1500	3A	2 lbs., 13 oz.	6.45
T-501	5/15	250/30	100	1500	4A	5 lbs., 10 oz.	8.50
T-510	6/20	300/30	120	1500	5A	10 lbs., 1 oz.	15.50
T-502	6/22	500/50	70	1500	6A	15 lbs., 9 oz.	17.30
T-509	7/22	200/30	140	5000	4A	5 lbs., 10 oz.	10.75
T-512	6/22	300/30	103	5000	5A	10 lbs., 1 oz.	15.50
T-513	5/24	400/50	90	5000	6A	15 lbs., 2 oz.	19.25
T-521	6/26	500/60	90	5000	7A	21 lbs., 1 oz.	33.20
T-505	6/21	600/60	50	5000	7A	21 lbs., 4 oz.	31.70
T-516	6/22	400/50	70	3000	6A	15 lbs., 9 oz.	17.30
T-530	6/21	500/50	60	7000	8A	26 lbs., 4 oz.	43.00
T-531	3/9	1000/100	18	7000	9A	50 lbs.	63.00

OPERATING VOLTAGES FOR 1500 VOLT TEST—UP TO 600 VOLTS D.C.
 OPERATING VOLTAGES FOR 3000 VOLT TEST—UP TO 1000 VOLTS D.C.
 OPERATING VOLTAGES FOR 5000 VOLT TEST—UP TO 2000 VOLTS D.C.
 OPERATING VOLTAGES FOR 7000 VOLT TEST—UP TO 3000 VOLTS D.C.

PLATE AND FILAMENT TRANSFORMERS

Type No.	High Voltage—Volts	M.A.	Filament No. 1 Volts	Amps	Filament No. 2 Volts	Amps	Filament No. 3 Volts	Amps	Filament No. 4 Volts	Amps	Case No.	Weight	List Price
T-249*	235-0-235	20	6.3 C.T.	0.6	6.3 C.T.	0.9					2A	2 lbs.	\$8.60
T-245*	320-0-320	40	5	2	6.3 C.T.	2					3A	2 lbs., 13 ozs.	9.65
T-205*	350-0-350	75	5	2	6.3 C.T.	3					4A	5 lbs., 10 ozs.	12.50
T-222*	250-0-250	50	5	2	6.3 C.T.	2					3A	2 lbs., 13 ozs.	9.25
T-206*	325-0-325	100	5	3	6.3 C.T.	3	6.3 C.T.	2			5A	9 lbs.	18.00
T-2'2	420-0-420	125	5	3	6.3 C.T.	3	2.5 C.T.	4			5A	9 lbs., 2 ozs.	19.00
T-244*	425-0-425	165	5	3	6.3 C.T.	3	6.3 C.T.	3			6A	13 lbs., 11 ozs.	24.20
T-248*	425-0-425	165	5	3	2.5 C.T.	6	2.5 C.T.	6			6A	13 lbs., 11 ozs.	24.20
T-213	520-110-0-520	180	5	3	2.5	3	6.3 C.T.	3	6.3 C.T.	3	5A	10 lbs., 6 ozs.	25.00
T-215	360-125-0-360	200	5	3	2.5 C.T.	3	2.5 C.T.	10	6.3 C.T.	2.1	5A	10 lbs., 10 ozs.	19.00
T-217	590-0-590	200	5	3	6.3 C.T.	3	6.3 C.T.	3			5A	12 lbs., 8 ozs.	25.80
T-216	520-85-0-520	250	5	3	2.5 C.T.	3	6.3 C.T.	3	6.3 C.T.	3	6A	15 lbs., 9 ozs.	28.60
T-202*	0-150	20	6.3	0.6							1A	1 lb., 4 ozs.	5.95
T-220*	125-0-125	200	5	3			6.3 C.T.	3			4A	5 lbs.	11.70
T-246	625-0-625	250	5	3	6.3 C.T.	3	6.3 C.T.	3			6A	15 lbs., 9 ozs.	27.30
T-223	600-0-600	300	5	6	6.3 C.T.	3	6.3 C.T.	2			6A	15 lbs., 9 ozs.	21.10
T-221	High voltage secondary 520-390- and 300 V. D.C. at 160 M.A.		Filament No. 1 5 V.-6A	Filament No. 2 5 V.-3A	Filament No. 3 105-390-520 to deliver 400 V. D.C. at 400 M.A.	Filament No. 4 6.3 V. C.T.-4A	Filament No. 5 6.3 V. C.T.-4A				7A	21 lbs., 10 ozs.	43.00

* Indicates unit designed for condenser input. All other units should be used choke input. If used with condenser input, the D.C. current rating of these items should be reduced to 70% of that specified.

POWER LINE AUTO TRANSFORMERS

Type No.	Input	Output	Capacity Volt-Amperes	Case No.	Weight	List Price
T-219	88 to 130 volts	115 volts	500	5A	10 lbs. 1 oz.	\$21.00

All power transformers are designed for 115 volt, 50 to 60 cycle operation. For any other voltage 50 to 60 cycle operation add 25% to list prices. For 115 volt 25 cycle operation, add 60% to list prices. For any other voltage 25 cycle operation add 100% to list prices. Case sizes for 25 cycle application are different from those specified for standard 115 volt 50 to 60 cycle operation.

KENYON "T" LINE TRANSFORMERS



FILAMENT TRANSFORMERS

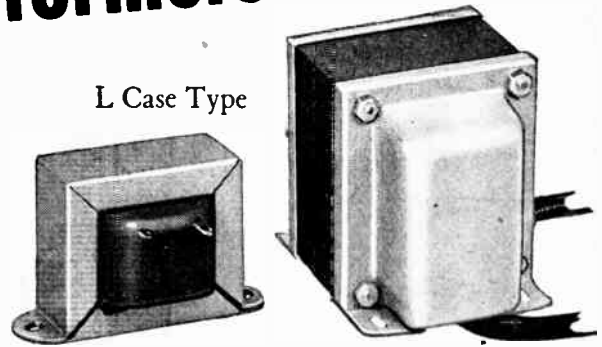
Type No.	SINGLE WINDING				Case No.	Weight	List Price						
T-388	2.5, 5, 6.3 V.-3A		1000 V. Test		1A	1 lb. 7 ozs.	\$ 5.90						
T-379	2.5 V.-5 A. CT.		2000 V. Test		1A	1 lb. 6 ozs.	5.40						
T-352	2.5 V.-10 A. CT.		2000 V. Test		2A	1 lb. 14 ozs.	6.45						
T-360	2.5 V.-10 A. CT.		5000 V. Test		3A	2 lbs. 13 ozs.	7.95						
T-389	2.5 V.-10 A. CT.		9000 V. Test		4A	4 lbs. 14 ozs.	11.75						
T-354	5 V.-3 A. CT.		2000 V. Test		2A	1 lb. 14 ozs.	6.35						
T-357	5.25 V.-12 A. CT.		2000 V. Test		4A	5 lbs. 10 ozs.	10.40						
T-358	5.25 V.-20 A. CT.		2000 V. Test		5A	9 lbs. 2 ozs.	15.25						
T-390	5 V.-20 A. CT.		10000 V. Test		5 1/2 A	11 lbs. 9 ozs.	18.90						
T-380	5, 5.1, 5.25 V.-8 A. CT.		2000 V. Test		4A	4 lbs. 5 ozs.	10.50						
T-381	5, 5.1, 5.25 V.-10.5 A. CT.		2000 V. Test		4A	5 lbs.	11.90						
T-382	5, 5.1, 5.25 V.-16 A. CT.		2000 V. Test		4A	5 lbs. 10 ozs.	12.80						
T-383	5, 5.1, 5.25 V.-21 A. CT.		2000 V. Test		5A	9 lbs. 2 ozs.	17.10						
T-393	5, 5.1, 5.25 V.-26 A. CT.		2000 V. Test		5A	9 lbs. 8 ozs.	17.30						
T-394	5, 5.1, 5.25 V.-32 A. CT.		2000 V. Test		5A	10 lbs. 8 ozs.	18.65						
T-351	6.3 V.-3 A. CT.		2000 V. Test		2A	1 lb. 14 ozs.	6.15						
T-378	6.3, 7.5 V.-7 A. CT.		2000 V. Test		3A	2 lbs. 13 ozs.	8.20						
T-387	6.3, 6.45, 6.6 V.-8 A. CT.		2000 V. Test		3A	2 lbs. 13 ozs.	8.50						
T-395	6.3 V.-20 A. CT.		2000 V. Test		5A	9 lbs.	15.30						
T-396	6.3 V.-30 A. CT.		2000 V. Test		5 1/2 A	12 lbs.	21.00						
T-397	6.3 V.-12 A. CT.		2000 V. Test		4A	5 lbs. 12 ozs.	10.90						
T-392	7.5, 7.7, 7.9 V.-6 A. CT.		2000 V. Test		3A	2 lbs. 13 ozs.	8.60						
T-353	7.5 V.-4 1/2 A. CT.		2000 V. Test		2A	2 lbs.	6.75						
T-359	7.5 V.-9 A. CT.		2000 V. Test		4A	5 lbs.	11.70						
T-365	10 V.-4 A. CT.		5000 V. Test		3A	2 lbs. 13 ozs.	7.85						
T-361	10 V.-8 A. CT.		5000 V. Test		4A	5 lbs. 10 ozs.	10.65						
T-384	10, 10.5, 11 V.-5 A. CT.		2000 V. Test		4A	5 lbs.	11.70						
T-385	10, 10.5, 11 V.-10 A. CT.		2000 V. Test		5A	8 lbs. 15 ozs.	17.20						
TWO WINDINGS													
T-386	6.3 V.-3 A. CT.	2000 V. Test	5 V.-4 A. CT.	2000 V. Test	3A	2 lbs. 13 ozs.	\$8.95						
T-369	2.5 V.-8 A. CT.	1000 V. Test	6.3 V.-4 A. CT.	1000 V. Test	4A	4 lbs. 11 ozs.	12.20						
T-368	6.3 V.-4 A. CT.	2000 V. Test	6.3 V.-4 A. CT.	2000 V. Test	4A	4 lbs. 11 ozs.	12.20						
T-366	2.5 V.-10 A. CT.	5000 V. Test	2.5 V.-10 A. CT.	5000 V. Test	4A	5 lbs. 10 ozs.	13.75						
THREE WINDINGS													
T-376	6.3 V.-4 A. CT.	2000 V. Test	6.3 V.-4 A. CT.	2000 V. Test	5 V.-3 A.	2000 V. Test	4A	5 lbs. 10 ozs.	\$12.70				
T-356	6.3 V.-3 A. CT.	750 V. Test	5 V.-4 A. CT.	3000 V. Test	5 V.-8 A. CT.	3000 V. Test	4A	5 lbs. 9 ozs.	12.70				
T-355	5 V.-3 A. CT.	4000 V. Test	5 V.-3 A. CT.	4000 V. Test	5 V.-6 A. CT.	4000 V. Test	4A	5 lbs. 10 ozs.	13.10				
T-375	2.5 V.-5 A. CT.	6000 V. Test	2.5 V.-5 A. CT.	6000 V. Test	2.5 V.-10 A. CT.	6000 V. Test	4A	5 lbs. 9 ozs.	13.20				
FOUR WINDINGS													
T-367	6.3 V.-5 A. CT.	2000 V. Test	6.3 V.-5 A. CT.	2000 V. Test	5 V.-6 A. CT.	2000 V. Test	5 V.-3 A. CT.	2000 V. Test	5A	10 lbs. 1 oz.	\$18.80		
FIVE WINDINGS													
T-377	5 V.-3 A.	2000 V. Test	5 V.-6 A.	2000 V. Test	6.3 V.-1 A. CT.	2000 V. Test	6.3 V.-5 A. CT.	2000 V. Test	6.3 V.-5 A. CT.	2000 V. Test	5A	10 lbs. 1 oz.	\$20.00

OPERATING VOLTAGES FOR 2000 VOLT TEST—UP TO 750 VOLTS D.C.
 OPERATING VOLTAGES FOR 3000 VOLT TEST—UP TO 1000 VOLTS D.C.
 OPERATING VOLTAGES FOR 4000 VOLT TEST—UP TO 1500 VOLTS D.C.
 OPERATING VOLTAGES FOR 5000 VOLT TEST—UP TO 2000 VOLTS D.C.
 OPERATING VOLTAGES FOR 6000 VOLT TEST—UP TO 4000 VOLTS D.C.
 OPERATING VOLTAGES FOR 10000 VOLT TEST—UP TO 4500 VOLTS D.C.

PRICES AND SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

Thermador Transformers

Superior materials, workmanship and performance have established these Thermador transformers as America's finest. Designed, engineered and produced by the West's largest manufacturer of transformers, the name Thermador guarantees their rugged, precision construction and their longer life.



TRANSCEIVER TRANSFORMER

TYPE NO.	CASE TYPE	PRI.	SEC.	RATIO	OUTSIDE DIM.			MOUNTING CENTERS			WEIGHT	LIST PRICE
					H.	W.	D.	D.	W.	D.		
2L1726	L	100-10,000	65,000	1.0:25.5	1-5/16	1-13/16	1	1 1/2			3 Oz.	\$3.65

INTERSTAGE TRANSFORMER

TYPE	CASE	PRI.	SEC.	TURN RATIO	OUTSIDE DIM.			MOUNTING CENTERS			WEIGHT	LIST PRICE
					H.	W.	D.	D.	W.	D.		
3A2602	A	20,000 P.P.	55,000 P.P.	1:1.73	2 7/8	2 3/8	2 3/8	1 3/4	2	1 #	13 Oz.	\$6.10
3L1103	L	10,000 Sngl.	100,000 P.P.	1:3.16	1 5/8	2 3/4	1 3/8	2 1/4			8 Oz.	\$2.95

OUTPUT TRANSFORMER

TYPE	CASE	PRI.	SEC.	WATTS	MA. PRI.	OUTSIDE DIM.			MOUNTING CENTERS			WEIGHT	LIST PRICE
						H.	W.	D.	D.	W.	D.		
4L1026	L	5K, 7K, 10K, Sngl.	2-6 Ohms	2	15	1-5/16	1-13/16	1 1/8	1 1/2			3 Oz.	\$2.70
4L1048	L	3.5K, 5K, 8K, 10K, Sngl. & P.P.	2-8 Ohms	5	40	1-7/16	2-7/16	1 1/2	2			5 Oz.	\$3.10
4L4066	L	2K, 2.5K, 3K, 4K, Sngl.	2-6 Ohms	5	55	1 1/2	2 3/8	1 1/2	2			5 Oz.	\$3.00
4L1051	L	4K, 5K, 8K, 10K, P.P.	2-12 Ohms	10	50	2 3/8	3	1 7/8	2 1/2			1 # 5 Oz.	\$3.55
4L1046	L	2K, 2.5K, 3.5K, 5K, 7K, 10K, Sngl.; 3K, 5K, 7K, 10K, P.P.	1-6 Ohms	7.5	45	1-9/16	2 3/4	1 1/2	2-5/16			8 Oz.	\$3.25
4A8105	A	5 & 8K C.T. P.P.	4-8-500 Ohms	15	95	2 3/4	2 3/8	2 7/8	1 3/4 x 1-15/16			1 # 12 Oz.	\$6.00
4A7145	A	5 & 6.6K C.T. P.P.	3-4-6-8-16-500 Ohms	26	140	3 1/2	2-15/16	3 1/2	2 1/4 x 2-9/16			4 # 8 Oz.	\$9.50

POWER TRANSFORMER

TYPE	CASE	SEC.	SEC. CUR.	RECT. FIL.	FIL.	OUTSIDE DIM.			MOUNTING CENTERS		WEIGHT	LIST PRICE
						H.	W.	D.	W.	D.		
5A4056	A	205-0-205	50 Ma.		6.3 @ 2.5A	2 3/4	2 3/8	3 1/8	1 3/4	2-13/16	2 # 5 Oz.	\$4.80
5A5066	A	270-0-270	60 Ma.	5V 2A	6.3 @ 2A	3 1/4	2 3/4	3 1/4	2	2-7/16	3 # 6 Oz.	\$5.90
5A6076	A	300-0-300	45 Ma.		6.3 @ 2.7A	3 1/4	2 3/4	3 1/4	2	2-7/16	3 #	\$5.35
5A6066	A	300-0-300	65 Ma.	5V 2A	6.3 @ 2.1A	3 1/4	2 3/4	3 1/4	2	2-7/16	3 # 6 Oz.	\$6.50
5A6086	A	300-0-300	75 Ma.	5V 2A	6.3 @ 2.85A	3 1/2	3-3/16	3-7/16	2 1/4	2-9/16	4 # 1 Oz.	\$6.80
5A6096	A	275-0-275	90 Ma.	5V 2A	6.3 Ct. 3.15A	3 1/2	3-3/16	3-5/16	2 1/4	1-15/16	3 # 11 Oz.	\$7.35
5A6116	A	310-0-310	110 Ma.	5V 3A	6.3 Ct. 5A	4 1/8	3 5/8	3-5/16	2 3/4	2	5 #	\$7.10
5A6146	A	300-0-300	135 Ma.	5V 3A	6.3 Ct. 3.3A	4 1/8	3 5/8	3 3/4	2 3/4	2 1/4	5 # 13 Oz.	\$8.10
5A6196	A	320-0-320	185 Ma.	5V 3A	6.3 Ct. 6A	4 1/8	3 5/8	4	2 3/4	2-11/16	7 # 8 Oz.	\$10.25

CHOKES

TYPE	CASE	IND.	CURRENT	RESIS.	OUTSIDE DIM.			MOUNTING CENTERS		WEIGHT	LIST PRICE
					H.	W.	D.	W.	D.		
7L1005	L	10 Hy.	50 Ma.	450 Ohms	1 5/8	2 3/4	1 3/8	2 1/4		9 Oz.	\$2.45
7L1008	L	10 Hy.	75 Ma.	380 Ohms	2	3 1/8	1 1/2	1 3/4		8 Oz.	\$2.90
7A1809	A	18 Hy.	90 Ma.	600 Ohms	2 7/8	2 3/8	1 1/2-13/16	1 3/4	1-15/16	1 # 14 Oz.	\$4.85
7A1414	A	14 Hy.	135 Ma.	260 Ohms	3 1/4	3 3/4	3	2	2-3/16	2 # 12 Oz.	\$5.00
7A0819	A	8 Hy. Ct.	185 Ma.	212 Ohms	3-3/16	2-11/16	3 3/8	2 x 2 1/2		3 # 8 Oz.	\$5.15

FILAMENT TRANSFORMER

TYPE	CASE	FIL.	CURRENT	TEST	OUTSIDE DIM.			MOUNTING CENTERS		WEIGHT	LIST PRICE
					H.	W.	D.	W.	D.		
6L6022	L	6.3 Ct.	2.25 A	2000	2	3 1/8	1 7/8	2 3/4		1 # 8 Oz.	\$3.00
6A6042	A	6.3 Ct.	4.0 A	2000	2 3/4	2 3/8	3-3/16	1 3/4	2 1/4	2 # 5 Oz.	\$4.80

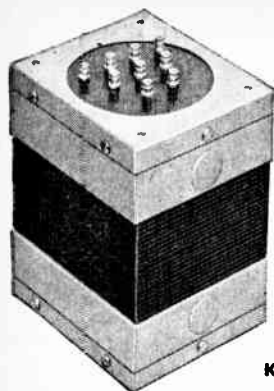
Case "A" is an Enclosed Underwriters' approved case Upright Mounted, leads through bottom of case.
Case "L" is an Open Bracket Strap Mounted type with Leads and Lugs.

Prices subject to usual trade discounts.

All prices subject to change without notice.

F.O.B. Factory. Freight allowed on shipments in U.S.A. \$100.00 net or over.

TURN PAGE FOR MORE THERMADOR TRANSFORMERS



K Case Type

F Case Type



HG Case Type



HB and HM Case Types



STUDIO QUALITY TRANSFORMERS

INPUT TRANSFORMERS

TYPE	CASE	PRIMARY IMPEDANCE	SECONDARY IMPEDANCE	IND @ 1 MV RATIO	TURN RATIO	SHIELDING & HUM REDUCTION	TERMINALS	RESPONSE	WEIGHT	PRICE
SQ2	HB	500**/333/250 200**/125*/50*	100000 PP grids	6 h	1-14.1	90 DB Reduction 1 PM & Hum Bucking	9 TER.	2 DB Down @ 20 C 2 DB Down @ 20 KC	7 oz.	\$21.00
SQ4	HM	500*/333/250 200*/125*/50*	50000 grids	6 h	1-10	45 DB Shielding 1 PM	8 TER.	2 DB Down @ 20 C 2 DB Down @ 20 KC	3 1/2 oz.	17.00

* Balanced windings ** Balanced DC windings

INDUCTANCE

TYPE	CASE	INDUCTANCE	Q	SHIELDING	TERMINALS	D. C. CURRENT	WEIGHT	PRICE
SQ96	HB	200*/140/90 50*/22*/5.5*h 16*/12/7 /4* 1.8*/.4h	3 to 8	90 DB 1 PM & Hum Bucking 90 DB 1 PM & Hum Bucking	8 TER. 8 TER.	8 Ma. Max. 10 Ma. Max.	7 oz. 7 oz.	\$18.00 17.00

* Balanced windings

OUTPUT TRANSFORMERS

TYPE	CASE	PRI. IMP.	SEC. IMP.	PRI. OCL @ 60 CYCLES	PRI. CCL LEAKAGE @ 1000 CYCLES	USE	WATTS	MAX. LEVEL DB	PRI. CURRENT	RESPONSE	PRICE
SQ30	HG	15000 (1) or 8000 (2)	500*/125 or 16*12-8*6-4-2	200 h	60 Mh	2-6C5 2-6J5 6SN7 etc.	1 to 2	30 DB	10 Ma.	1 DB Down @ 20 Cycles 1 DB Down @ 25 KC	\$25.00
SQ32	F5	10000 (1) or 8000 (2)	500*/125 or 16*12-8*6-4-2	85 h	20 Mh	2-6V6 2-7C5 2-6K6 2-6F6	10 to 12	33 DB	80 Ma.	2 DB Down @ 20 Cycles 0 DB Down @ 25 KC	30.00
SQ34	F6	5000 (1) or 3000 (2)	500*/125 or 16*12-8*6-4-2	45 h	12 Mh	2-6A3 2-6A4 2-616 A ₁ or A ₈₁	15	34 DB	80 Ma. 1 1/2	0 DB Down @ 20 Cycles 0 DB Down @ 20 KC	32.00
SQ36	F7	6600 (1) or 5000 (2)	500*/125 or 16*12-8*6-4-2	52 h	12 Mh	2-616 2-1619 2-1624 2-815 etc.	26.5	36.5 DB	145 Ma.	2 DB Down @ 20 Cycles 0 DB Down @ 25 KC	38.50
SQ38	F7	2500 (1) or 1500 (2)	500*/125 or 16*12-8*6-4-2	23 h	7 Mh	4-2A3 4-6A3 2-616 A ₈₂	30	37 DB	160 Ma. 1 1/2	0 DB Down @ 25 KC 0 DB Down @ 25 KC	40.50
SQ40	K1	6000 (1) or 3800 (2)	500*/125 or 16*12-8*6-4-2	48 h	12 Mh	4-6A3 2-616 A ₈₂	45	39 DB	205 Ma.	2 DB Down @ 20 Cycles 0 DB Down @ 25 KC	48.50
SQ42	K1	3300 (1) or 2500 (2)	500*/125 or 16*12-8*6-4-2	27 h	8 Mh	4-616 2-807	60	40 DB	280 Ma.	2 DB Down @ 20 Cycles 0 DB Down @ 25 KC	52.50

All primary windings are split and may be used in parallel at one quarter the impedance. * Balanced windings

POWER TRANSFORMERS

TYPE	CASE	PRI. VOLTAGE	SECONDARY	FIL. #1	FIL. #2	FIL. #3	PRICE
SQ80	F7	105 115 125	380-320-80-0-320-380 @ 120 Ma.	5 V C.T. @ 3A	6.3 V C.T. @ 4A	2.5 V C.T. @ 5A	\$24.00
SQ82	K1	105 115 125	420-375-80-0-375-420 @ 200 Ma.	5 V C.T. @ 3A	6.3 V C.T. @ 5.5A	2.5 V C.T. @ 10A	30.00
SQ84	K1	105 115 125	575-440-60-0-440-575 @ 325 Ma.	5 V C.T. @ 6A	6.3 V C.T. @ 4A	6.3 V C.T. @ 2.5A	34.50

Primary completely static shielded from secondary and filaments.

CHOKES

TYPE	CASE	INDUCTANCE	CURRENT	VOLTAGE INSULATION	PRICE
SQ90	F6	16/4	120 Ma or 240 Ma	2000	\$19.50
SQ92	F7	16/4	175 Ma or 350 Ma	2500	24.00

STUDIO QUALITY TRANSFORMERS

THE HI-FIDELITY series of audio equipment listed above represents probably the highest degree of quality yet attained in audio transformers. In addition to the absolute moisture elimination provided by "Thermatite" treatment THERMADOR hi-fidelity transformers have the following advantages:

Wide Frequency Range: Transformers of the SQ series are linear within one db. from 20 to 20000 cycles.

Balanced Winding: THERMADOR transformers are constructed to give the best practical magnetic, capacity and resistive balance. In designs where capacity balance is important, each winding is made up of two symmetrical coils. Input transformers are supplied with a static shield between primary and secondary.

Low Harmonic Distortion: THERMADOR transformers are designed to offer the proper load impedance to

the tubes with which they operate. Maximum primary inductance, low leakage reactance and low flux densities in the core permit unusually low harmonic levels.

REPLACEMENT TRANSFORMERS

Adaptable to a Particular Job: The transformer models listed have been engineered to cover the replacement field for both the old and new home radio receivers. The new line affords the widest range of application for use in receivers, amplifiers and small transmitters.

Thermatite Treated to Withstand Heat and Humidity: THERMADOR transformers are Thermatite treated, which is a well tested and approved form of vacuum impregnation. This treatment, proved on thousands of transformers under severe climatic conditions, gives these units the resistance to withstand extreme conditions of humidity and heat.

THERMADOR

THERMADOR ELECTRICAL MFG. CO., LOS ANGELES 22, CALIF.



"Seven Leagues Ahead"

Chicago POWER TRANSFORMERS & REACTORS

CHICAGO TRANSFORMER DIV. — ESSEX WIRE CORPORATION

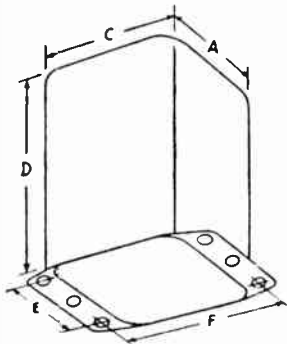


POWER TRANSFORMERS

Ratings of Chicago Power Transformers have been selected to fit a wide range of modern electronic circuits and will supply the power requirements of from two to sixteen tubes with voltages and currents ample for the applications listed. They will provide the maximum in performance with the minimum in physical size. Built for minimum temperature rise in accordance with RMA standards.

REACTORS

The Chicago Filter Reactors listed below are designed with current ratings particularly suited for use with the power transformers above them, but will provide equally satisfactory service in any other correct application. They will give maximum inductance for given current rating in the smallest possible size of unit.



SEALED IN STEEL CONSTRUCTIONS

FEATURES — 1. "Steel wall" protection against corrosive moisture. 2. Efficient shielding. 3. Unsurpassed strength to withstand shock and vibration. 4. Mounting convenience. 5. Compactness. 6. Clean, streamlined appearance.

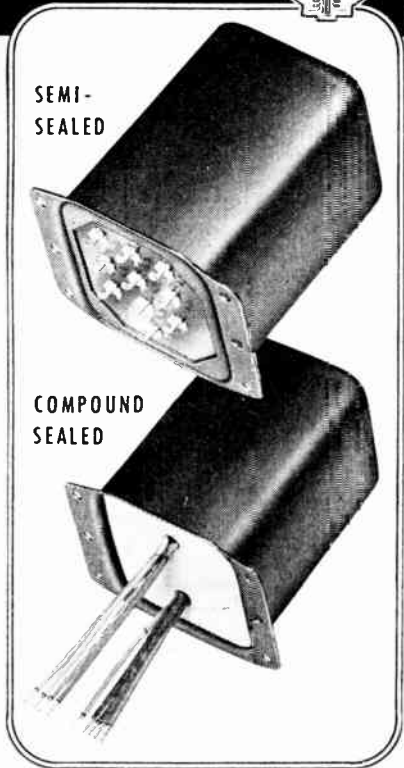
Units on this page are listed in either of the following two Sealed in Steel, drawn steel case constructions:

SEMI-SEALED— Precision-fitted steel base covers and phenolic terminal board, plus compound filling, keep moisture out. Convenient solder lugs have clear identifications engraved in terminal board.

COMPOUND-SEALED — Moisture-resistant compound surrounds the core and coil. Ten-inch, RMA color-coded leads are stripped and tinned for easy soldering.

DIMENSIONS FOR SEMI-SEALED AND COMPOUND-SEALED CONSTRUCTIONS

Case Type	Dimensions in Inches				
	A	C	D	E	F
F6	2 1/4	2 1/8	2 1/16	1 1/2	2 1/8
F6D	2 1/4	2 1/8	2 1/16	1 1/2	2 1/8
F7	2 1/2	2 3/8	3 1/16	1 3/4	2 1/16
F7D	2 1/2	2 3/8	3 1/16	1 3/4	2 1/16
F8	2 3/8	2 1/16	3 1/2	2	3 1/8
F8D	2 3/8	2 1/16	3 1/2	2	3 1/8
F9	3 1/4	3	4 1/4	2 1/4	3 1/2
F9D	3 1/4	3	4 1/4	2 1/4	3 1/2
F10	3 1/16	3 3/16	4 3/16	2 3/16	3 3/8
F10D	3 1/16	3 3/16	4 1/16	2 3/16	3 3/8
F11	4 3/16	4 1/8	5 1/16	2 1/2	4 3/4
F12	5 3/16	4 13/16	6 1/16	3 1/2	5 3/8
F13	6 1/8	5 1/4	7 1/16	4 1/4	6



POWER TRANSFORMERS — PLATE AND FILAMENT SUPPLY

For CAPACITOR INPUT SYSTEMS — Primary 117 Volts, 50-60 Cycles

High Voltage Secondary Volts A-C	Ma. D-C	Output Volts	Rectifier		Filaments		Wt. Lbs.	Semi-Sealed, With Solder Lugs		Compound-Sealed, With Wire Leads			
			Volts	Amps.	No. 1 Volts	No. 2 Volts		Cat. No.	Case Type	List Price	Cat. No.	Type Case	Price List
270-0-270	55	260	5	2	6.3CT	2	3	PSC-55	F8D	\$10.00	PCC-55	F8	\$6.50
335-0-335	70	320	5	2	6.3CT	3	4 1/4	PSC-70	F9D	11.50	PCC-70	F9	9.00
330-0-330	85	320	5	2	6.3CT	3	5 1/4	PSC-85	F10	12.25	PCC-85	F10	3.75
345-0-345	105	320	5	2	6.3CT	3.5	6	PSC-105	F10D	13.00	PCC-105	F10	9.50
375-0-375	120	380	5	3	6.3CT	4	8 1/2	PSC-120	F11	14.75	PCC-120	F11	11.25
370-0-370	150	390	5	3	6.3CT	4	9 3/4	PSC-150	F11	19.50	PCC-150	F11	15.00
385-0-385	200	390	5	3	6.3CT	4.5	11 1/2	PSC-200	F11	20.75	PCC-200	F11	16.25

For REACTOR INPUT SYSTEMS — Primary 117 Volts, 50-60 Cycles

350-0-350	55	260	5	2	6.3CT	2	3	PSR-55	F8D	10.25	PCR-55	F8	6.75
425-0-425	70	320	5	2	6.3CT	3	4 1/4	PSR-70	F9D	11.75	PCR-70	F9	8.25
440-0-440	85	325	5	2	6.3CT	3	5 1/2	PSR-85	F10	12.50	PCR-85	F10	9.00
445-0-445	105	325	5	2	6.3CT	3.5	5 3/4	PSR-105	F10D	13.25	PCR-105	F10	9.75
500-0-500	120	400	5	3	6.3CT	4	8 1/2	PSR-120	F11	15.00	PCR-120	F11	11.50
505-0-505	150	400	5	3	6.3CT	4	10	PSR-150	F11	19.75	PCR-150	F11	15.25
520-0-520	200	410	5	3	6.3CT	4.5	11	PSR-200	F11	21.00	PCR-200	F11	16.50
550-370-75-0													
-75-370-550	300	425	5	6	6.3CT	5	16	PSR-300	F12	30.00	PCR-300	F12	23.50

FILTER REACTORS

(For use with Power Transformers above)

Inductance in henries	Maximum D-C Current Ma.	D-C Resistance in Ohms	Insulation Test Volts	Approx. Wt., Lbs.	Semi-Sealed, With Solder Lugs			Compound-Sealed, With Wire Leads		
					Cat. No.	Case Type	List Price	Cat. No.	Case Type	List Price
15	55	385	2,500	2	RS-1555	F6D	\$5.00	RC-1555	F6	\$3.75
15	85	270	2,500	2 3/4	RS-1585	F7D	7.50	RC-1585	F7	4.50
12	105	.70	2,500	3 1/4	RS-12105	F8D	6.50	RC-12105	F8	5.25
12	150	150	2,500	5	RS-12150	F9D	8.75	RC-12150	F9	7.35
12	200	140	2,500	6 1/2	RS-12200	F10D	10.25	RC-12200	F10	8.75
10	55	222	2,500	2	RS-1055	F6D	4.75	RC-1055	F6	3.50
10	85	175	2,500	2 3/4	RS-1085	F7D	7.25	RC-1085	F7	4.25
8	105	103	2,500	3 1/4	RS-8105	F8D	6.25	RC-8105	F8	5.90
8	150	100	2,500	5	RS-8150	F9D	8.50	RC-8150	F9	7.90
8	200	85	2,500	6 1/2	RS-8200	F10D	10.00	RC-8200	F10	8.50
8	300	70	2,500	9 1/2	RS-8300	F11	15.50	RC-8300	F11	13.50

BIAS TRANSFORMERS

Combination Plate and Filament Supply

Primary Volts	High Voltage A-C Volts	Supply D-C Ma.	Rectifier Volts	Filament Approx. Amps.	Wt., Lbs.	Semi-Sealed, With Solder Lugs		Compound-Sealed, With Wire Leads			
						Cat. No.	Case Type	List Price	Cat. No.	Case Type	List Price
115	180-160-140-120	150	5.0	3.0	5	1BS-150	F9D	\$13.00	1BC-150	F9	\$8.25
23C	180-160-140-120	150	5.0	3.0	5	2BS-150	F9D	12.75	2BC-150	F9	9.00

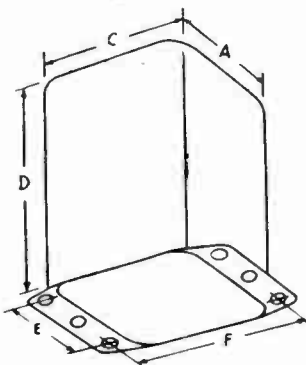


Chicago POWER TRANSFORMERS & REACTORS

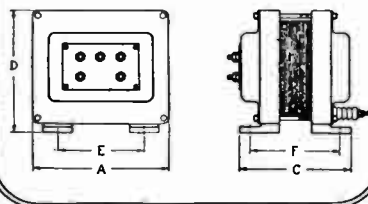
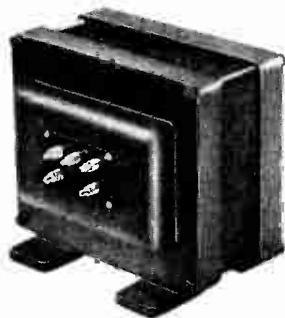
CHICAGO TRANSFORMER DIV. - ESSEX WIRE CORPORATION



SEMI-SEALED



Case Type	Dimensions in Inches				
	A	C	D	E	F
F4D	1 1/2	1 1/2	2 3/8	1 3/4	1 7/8
F7	2 1/2	2 3/8	3 1/8	1 3/4	2 1/8
F7D	2 1/2	2 3/8	3 1/8	1 3/4	2 1/8
F8	2 7/8	2 11/16	3 1/2	2	3 3/4
F8D	2 7/8	2 11/16	3 1/2	2	3 1/8
F9	3 1/4	3	3 3/8	2 1/2	3 1/2
F9D	3 1/4	3	4 1/4	2 1/2	3 1/2
F10	3 11/16	3 3/16	4 3/8	2 3/4	3 7/8
F10D	3 11/16	3 3/16	4 11/16	2 3/4	3 7/8
F11	4 9/16	4 1/8	5 1/8	2 1/2	4 3/4
F12	5 1/8	4 13/16	6 1/8	3 1/2	5 3/8
F13	5 9/16	5 1/4	7 1/8	4 1/4	6
F14	7 1/8	6 1/8	8 1/8	5	7



FILAMENT TRANSFORMERS

Chicago Filament Transformers fit the requirements of a wide range of today's most widely used types of tubes. They are supplied in the Semi-Sealed, drawn steel case construction with steel base covers and phenolic terminal boards.

Those with secondaries rated for less than 6 amps. have standard solder lugs as shown

at left; those with secondaries rated at more than 6 amps. have screw-type terminals.

Filament Transformers Nos. F-210 and F-210H are specially designed for high voltage, rectifier filament supplies. They have screw-type terminals, insulated on the secondaries with ceramic bushings.

Secondary Volts	Amps.	Primary Volts	Cycles	Insulation Test Volts	Type of Case	Approx. Wt., Lbs.	Catalog Number	List Price
2.5 CT	5.25	115-230	50-60	3,500	F7D	2 3/4	F-25	\$ 7.50
2.5 CT	10.0	115-230	50-60	5,000	F8D	2 3/4	F-210	10.75
2.5 CT	10.0	115-230	50-60	9,000	F9D	3 3/4	F-210H	12.50
5 CT	4.0	115-230	50-60	2,500	F7D	2	F-54	7.75
5 CT	10.0	115-230	50-60	2,500	F8D	3 1/4	F-58	10.75
5 CT	20.0	115-230	50-60	2,500	F10D	6	F-516	15.50
6.3 CT	5.5	115-230	50-60	2,500	F8D	3 1/4	F-65	9.00
6.3 CT	10.0	115-230	50-60	2,500	F9D	4 1/2	F-610	12.75
7.5 CT	5.0	115-230	50-60	2,500	F8D	3 1/4	F-75	8.75
7.5 CT	25.0	115-230	50-60	2,500	F11	11 3/4	F-725	20.50
10 CT	4.0	115-230	50-60	2,500	F8D	2 3/4	F-104	9.25
10 CT	6.5	115-230	50-60	2,500	F9D	4 3/4	F-106	12.75
10 CT	10.0	115-230	50-60	2,500	F10D	6	F-1010	15.00
11 CT	10.0	115-230	50-60	2,500	F11	8 1/2	F-1110	16.00

STEP-DOWN TRANSFORMERS



For operating 110-volt radios, amplifiers, and other low-wattage equipment where 220 volts is normal power supply. Autotransformer design.

Insulated, 7-foot cord on input side. Output side has female receptacle that takes any standard electric appliance plug. Locking slide switch adjusts for voltage variations from 215 to 235 volts.

Housed in drawn steel cases with press-fitted steel bases and compound filled to withstand corrosion in humid or other extreme climates.

Load Watts	Primary	Secondary	Case Type	Approx. Weight	Catalog No.	List Price
50 watts	215-235 volts, 50-60 cycles	117 volts	F8	2 1/4	SD-50	\$ 8.25
100 watts	215-235 volts, 50-60 cycles	117 volts	F10	4	SD-100	10.25
150 watts	215-235 volts, 50-60 cycles	117 volts	F11	6 1/2	SD-150	12.00

PLATE TRANSFORMERS AND REACTORS

Chicago Plate Transformers and matching reactors are heavily insulated and quality constructed throughout. The five transformers and two of the reactors, Nos. R-105 and R-65, have heavy-duty shields and frames. See below left.

Terminals on the double primaries of the

plate transformers are screw-type binding posts. The high voltage secondary terminals, other side, are insulated with sturdy, ceramic bushings.

Reactors Nos. R-103 and R-63 are mounted in drawn steel cases with bushing-insulated terminals out the bottoms.

PLATE TRANSFORMERS

Primary: Volts	Max. V-A	Sec.: Load	A-C Volts	D-C after Filter Ma.	Dimensions: Inches A C D E F	Wgt. Lbs.	Cat. No.	List Price
115-230	310	1150-0-1150	1000	250	7 1/2 6 3/4 7 4 3/4 5 7/8 37	P-107	\$ 75.00	
		870-0-870	750					
115-230	550	1710-0-1710	1500	300	7 1/2 7 1/2 7 4 3/4 6 1/2 43	P-1512	80.00	
		1430-0-1430	1250					
115-230	915	2820-0-2820	2500	300	8 7/8 8 5/8 8 1/2 5 1/2 7 55	P-2520	125.00	
		2260-0-2260	2000					
115-230	1850	3450-0-3450	3000	500	11 1/2 10 1/4 10 1/2 7 1/2 8 1/4 125	P-3025	205.00	
		2850-0-2850	2500					

FILTER REACTORS

Inductance in Henries	Max. D-C Ma.	D-C Resist. in Ohms	Test Voltage	Dimensions: Inches A C D E F	Wgt. Lbs.	Cat. No.	List Price
10	500	40	9,000	7 1/2 7 1/8 7 4 3/4 6 1/4	35	R-105	\$52.00
10	300	40	7,500	(F13 Case: See above)	22	R-103	40.00
6	500	35	9,000	7 1/2 6 7 4 3/4 5 1/2	35	R-65	49.00
6	300	35	7,500	(F12 Case: See above)	16	R-63	35.00

Chicago AUDIO TRANSFORMERS

CHICAGO TRANSFORMER DIV. - ESSEX WIRE CORPORATION



AUDIO TRANSFORMERS

Full Frequency Range — 30 to 15,000 Cycles

Uniformly high fidelity response within $\pm 1/2$ db. is provided by the input and output units in this outstanding series of Chicago Audio Transformers. The $\pm 1/2$ db. rating is conservative — only slightly greater loss applies past 15,000 and up to 20,000 cycles. Their percentage of distortion is very low, at low as well as high frequencies.

All of the input and output series are Solder Sealed, a Sealed in Steel construction with steel base covers bonded into

the cases by deep-seal soldering, for compactness, modern appearance and maximum protection of the delicate fine wire windings against corrosion. Solid steel, pin-type terminals, compact and easy to connect, are identified by numerals engraved in the phenolic terminal boards.

Input units have hum-bucking core construction and additional inner alloy shields for extra hum shielding.

INPUT TRANSFORMERS

Application	Impedance Primary—Secondary	Max. Power Level	Hum Shielding	Case Wt. Type Lbs.	Cat. No.	List Price
Line to Single or Push-Pull Grids.....	*Pri.: 600 150 ohms CT *Sec.: 50,000 ohms CT	+20 dbm.	-70 dbm.	S6D 2	BI-1	\$22.00
Line to Single or Push-Pull Grids.....	*Pri.: 600 150 ohms CT *Sec.: 50,000 ohms CT	+20 dbm.	-90 dbm.	S6D 2	BI-2	29.00
Line bridging to Push-Pull Grids.....	*Pri.: 8,000 6,000 ohms CT *Sec.: 50,000 ohms CT	+20 dbm.	-70 dbm.	S6D 2	BI-3	21.00
Line to line.....	*Pri.: 600 150 ohms CT *Sec.: 600 150 ohms CT	+20 dbm.	-70 dbm.	S6D 2	BI-4	21.00
Line to line.....	*Pri.: 600 150 ohms CT *Sec.: 600/150 ohms CT	+30 dbm.	-90 dbm.	S9 3	BI-5	30.00
Interstage: P.P. Plates to Single or P.P. Grids.....	*Pri.: 20,000 ohms CT *Sec.: 50,000 ohms CT	+20 dbm.	-70 dbm.	S6D 2	BI-6	22.00
	*Split and balanced windings.					

OUTPUT TRANSFORMERS

Application	Impedance Primary—Secondary	Max. Power Level	Typical Tubes	Case Wt. Type Lbs.	Cat. No.	List Price
Single Plate to Line.....	*Pri.: 15,000 ohms *Sec.: 600/150 ohms CT	+20 dbm.	6C4 or equiv.	S7 2	BO-1	\$13.00
Push-Pull Plates to Line.....	*Pri.: 20,000 ohms CT *Sec.: 600 150 ohms CT	+30 dbm.	6C5 or equiv.	S8 2 ^{3/4}	BO-2	19.00
Push-Pull Plates to Line.....	*Pri.: 5,000 ohms CT *Sec.: 600/150 ohms CT	+40 dbm.	6B4G or equiv.	S10 5 ^{1/2}	BO-3	17.00
Push-Pull Plates to Line.....	*Pri.: 7,500 ohms CT *Sec.: 600 150 ohms CT	+43 dbm.	6L6 or equiv.	S10 5	BO-4	18.00
Push-Pull Plates to Line.....	*Pri.: 20,000 ohms CT *Sec.: 600/150 ohms CT and 16/8/4 ohms	+37 dbm.	6V6 or equiv.	S9D 4	BO-5	24.00
	*Split and balanced windings.					
	*Has tertiary winding to provide 15% inverse feedback.					

DRIVER AND MODULATION TRANSFORMERS

Full Frequency Range Driver and Modulation Transformers and Modulation Reactors are designed in matched sets for use in 250-watt, 1-Kw, and 5-Kw transmitters. Frequency response within ± 1 db. over the full 30 to 15,000-cycle range. Driver transformers are mounted in drawn steel cases, as are Modulation Transformer BM-1 and Reactor BR-1.

Transformers BM-2 and Reactor BR-2 have shield and frame mountings similar to the plate transformers, opposite page.

Dimensions: A and D — $11\frac{1}{4}$ ", C — $12\frac{3}{4}$ " for BM-2, 10 $\frac{1}{4}$ " for BR-2.

Transformers BM-3 and Reactor BR-3 are in large, oil-filled cases, made of heavy welded steel plates. (See below right).

DRIVER TRANSFORMERS

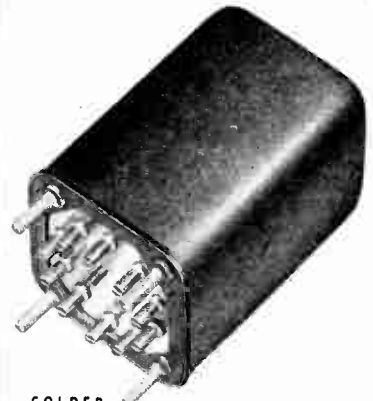
Application	Ratio Pri./1/2 Sec.	Case Wt. Type Lbs.	Cat. No.	List Price
Driver from two 2A3's, 6B4's or similar push-pull plates to Class B 838's, 805's or 203-A's. Recommended for use in 250-watt transmitter.....	3:5	S10 6	BD-1	\$ 30.00
Driver from four 2A3's, 6B4's, or similar push-pull plates to two 833-A's or similar p.p. grids. Recommended for use in 1-KW transmitter.....	5:1	F12 16	BD-2	62.00
Driver for four 845's, two 152-TL's or similar p.p. plates to 891-R or similar p.p. grids. Recommended for use in 5-KW transmitter.....	4.9:1	F13 22	BD-3	160.00

MODULATION TRANSFORMERS

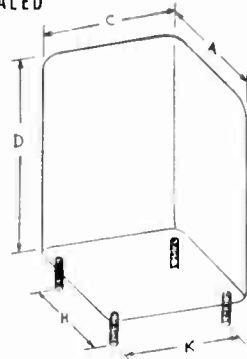
Recommended for use with:	Impedance (Pri.: Plate to Plate)	Typical Tubes	Mount- ing	Wt. Lbs.	Cat. No.	List Price
BD-1 Driver Transformer in 250-watt Transmitter.....	*Pri.: 7,500 ohms CT *Sec.: 5,000 ohms	203-A, 838 805, etc.	F13	24 $\frac{1}{2}$	BM-1	\$ 67.00 390.00 (net)
BD-2 Driver Transformer in 1-KW Transmitter.....	*Pri.: 9,000 ohms CT *Sec.: 7,500 ohms	833-A, etc.	Shield- frame	175	BM-2	1068.00 (net)
BD-3 Driver Transformer in 5-KW Transmitter.....	*Pri.: 13,500 ohms CT *Sec.: 10,250 ohms	891-R, etc.	(right)	1100	BM-3	(net)

MODULATION REACTORS

Application: Recommended for use with:	Inductance Henries	D-C Ma.	Type of Mounting	Wt. Lbs.	Cat. No.	List Price
No. BM-1 Modulation Transformer in 250-watt Transmitter.....	65	250	F-14	41	BR-1	\$ 97.00
No. BM-2 Modulation Transformer in 1-KW Transmitter.....	100	500	Shield- frame	165	BR-2	185.00 891.00 (net)
No. BM-3 Modulation Transformer in 5-KW Transmitter.....	120	900	(right)	1100	BR-3	(net)



SOLDER
SEALED



Case Type	Dimensions in Inches					Stud Size
	A	C	D	H	K	
S6D	2 $\frac{1}{2}$	2 $\frac{1}{8}$	2 $\frac{15}{16}$	1 $\frac{9}{16}$	1 $\frac{3}{4}$	6-32
S7D	2 $\frac{1}{2}$	2 $\frac{1}{8}$	3 $\frac{1}{16}$	1 $\frac{11}{16}$	1 $\frac{11}{16}$	6-32
S8D	2 $\frac{1}{2}$	2 $\frac{1}{8}$	3 $\frac{1}{2}$	2	1 $\frac{7}{8}$	8-32
S8D	2 $\frac{1}{2}$	2 $\frac{1}{8}$	3 $\frac{1}{2}$	2	1 $\frac{7}{8}$	8-32
S9	3 $\frac{1}{2}$	3	3 $\frac{1}{2}$	2 $\frac{1}{2}$	2 $\frac{1}{4}$	8-32
S9D	3 $\frac{1}{2}$	3	4 $\frac{1}{2}$	2 $\frac{1}{2}$	2 $\frac{1}{4}$	8-32
S10	3 $\frac{1}{16}$	3 $\frac{3}{16}$	4 $\frac{1}{16}$	2 $\frac{3}{8}$	2 $\frac{3}{8}$	10-32
S11	4 $\frac{1}{16}$	4 $\frac{1}{8}$	5 $\frac{1}{16}$	3 $\frac{1}{8}$	3	10-32



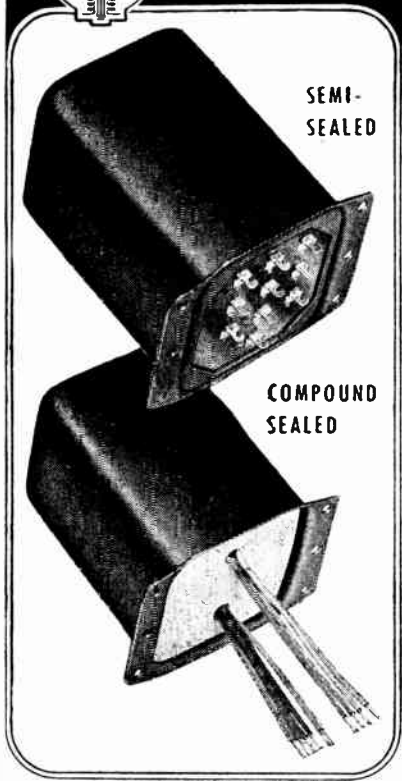
TRANSFORMER NO. BM-3

Overall Case Dimensions:
H—31 $\frac{1}{2}$ " W—26 $\frac{1}{2}$ " D—23 $\frac{1}{2}$ "
(Also apply to Reactor BR-3)



Chicago AUDIO TRANSFORMERS

CHICAGO TRANSFORMER DIV. - ESSEX WIRE CORPORATION



Public Address Range — 50 to 10,000 Cycles

These Driver and Output Transformers provide uniform response within ± 1 db. over the entire range of 50 to 10,000 cycles. Designed for three general power levels with secondary impedances that match conventional 600 and 150 ohm lines, 16, 8, and 4-ohm reproducing systems. Out-

put units have tertiary windings for 10% inverse feed-back that provide extra gain of faithful watts per transformer dollar. Available in either the Semi-Sealed or Compound-Sealed drawn steel cases. See first page of Chicago Transformer listings for construction details.

DRIVER TRANSFORMERS

Application	Ratio Pri./1/2 Sec.	Max. D-C Pri. CT	Wt. Lbs.	Semi-Sealed, With Solder Lugs Case			Compound-Sealed, With Wire Leads Case		
				Cat. No.	Type	List	Cat. No.	Type	List
P.P. Plates (20,000 ohms) to P.P. Grids	3:1	10 ma.	2	PSD-10	F7	\$7.25	PCD-10	F7	\$5.00
P.P. Plates (20,000 ohms) to P.P. Grids	3:1	25 ma.	2 3/4	PSD-25	F7D	7.00	PCD-25	F7	4.75
P.P. Plates (5,000 or 10,000 ohms) to P.P. Grids	5:1	100 ma.	5	PSD-100	F9	12.00	PCD-100	F9	8.50

OUTPUT TRANSFORMERS

Applic- ation	Class	Typical Output Tubes	Max. Audio Watts	Max. D-C Pri. CT	Wt. Lbs.	Semi-Sealed, With Solder Lugs Case			Compound-Sealed, With Wire Leads Case		
						Cat. No.	Type	List	Cat. No.	Type	List
(1)	A, AB	2A3, 6A3, 6B4, 6L6, 6V6, etc.	20	80 ma.	6 1/2	PSO-80	F10	\$15.00	PCO-80	F10	\$11.00
(2)	A, AB, AB ₁	6V6, 6F6, 6K6, etc. Two 6L6's, four 6V6's or similar	15	150 ma.	5	PSO-150	F9D	13.50	PCO-150	F9D	9.50
(3)	B, AB ₂		30	200 ma.	9 1/2	PSO-200	F11	16.50	PCO-200	F11	12.50

- (1) *P.P. 5,000 ohm plate to plate to 600/150/16/8/4 ohms.
 (2) *P.P. 10,000 ohm plate to plate to 600/150/16/8/4 ohms
 (3) *P.P. 6,000 ohm plate to plate to 600/150/16/8/4 ohms.
 *Has tertiary winding to provide 10% inverse feedback.

FOR DIMENSIONS OF CASES IN THE ABOVE TWO CONSTRUCTIONS, SEE TABLE OPPOSITE PRECEDING PAGE.

Communications Range — 200 to 3,500 Cycles

Uniform frequency response is characteristic of this series of audio transformers, not exceeding ± 1 db. over the range of voice frequencies. Units are offered in two

variations of Chicago Transformer's *Sealed in Steel* construction, either Semi-Sealed or Compound-Sealed. See first page of Chicago Transformer listings for details.

INPUT TRANSFORMERS

Application	Impedance		Weight Lbs.	Cat. No.	Semi-Sealed, With Solder Lugs			Compound-Sealed, With Wire Leads		
	Primary	Secondary			Case	Type	List Price	Cat. No.	Case	Type	List Price
Line to single or push-pull grids.....	*Pri.: 600/150 ohms *Sec.: 100,000 ohms CT		3/4	CIS-1	F4D	\$10.50	CIC-1	F4D	\$7.50	
S.B. or D.B. microphone to single or push-pull grids	Pri.: 125/50 ohms @ 80 ma. Sec.: 125,000 ohms CT		3/4	CIS-2	F4D	6.00	CIC-2	F4D	3.75	

*Split and balanced windings; may be used singly or push-pull.

DRIVER TRANSFORMER

Application	Ratio Pri./1/2 Sec.	Max. Pri. D-C	Weight Lbs.	Semi-Sealed, With Solder Lugs			Compound-Sealed, With Wire Leads		
				Cat. No.	Case	Type List Price	Cat. No.	Case	Type List Price
P.P. plates: two 2A3's or similar (5,000 ohms CT) to P.P. grids	3:1	100 ma. CT	3	CDS-1	F8D	\$8.25	CDC-1	F8D	\$5.75

MODULATION TRANSFORMER

Audio Watts	Impedance		Typical Modulator Tubes	Class	Max. D-C Sec. Unbalance	Weight Lbs.	Semi-Sealed, With Solder Lugs		
	Primary	Secondary					Cat. No.	Case	Type List Price
250	Pri.: 9,000/6,700 ohms CT Sec.: 8,000/6,000/4,000 ohms		P.P. 203A, 211, 805, 800S, 75TL	B	350 ma.	22	CMS-1	F13	\$60.00

OUTPUT TRANSFORMERS

Application	Typical Output	Max Audio Watts	Max. Pri. D-C	Wt. Lbs.	Semi-Sealed			Compound-Sealed		
					Cat. No.	Case	Type List Price	Cat. No.	Case	Type List Price
Single 5,000 ohm plate to 600 / 150 / 16 / 8 / 4 ohms	Class A Tubes 6L6, 6V6, 25A6, etc.	5	55 ma.	2 3/4	COS-1	F7	\$7.50	COC-1	F7	\$4.75
Single 8,000 ohm plate to 600 / 150 / 16 / 8 / 4 ohms	Class A Tubes 6F6, 6V6, 6K6, 6N6, 7B5, etc.	5	55 ma.	2 3/4	COS-2	F7	7.75	COC-2	F7	5.00



TRANSFORMERS

OUTPUT TRANSFORMERS Receiver Replacement Type

To couple the plate or plates of the output stage to the speaker voice coil. Sec. impedance—3.5 ohms.

Type No.	List Price	Tube	Class	Pri. Impedance	Pri. M.A.	Max. Watts	Mtg. Centers	Dimen.			Mtg.
								H.	W.	D.	
A-2927	\$1.10	Single 1C5-G, 1G5-G, 1G5, 184, 3Q1, 3Q5, 3S4, 6A4	A	8000	20	3	1 1/2	1 3/8	1 1/8	1	B
A-2928	\$1.25	Single 2A3, 6A3, 6B4, 6Y6, 25AC5, 25B6, 25N6, 25L6, 35A5, 35L6, 50L6, 48, 50B5, 35B5, 50A5	A	2000	60	5	2	1 3/8	2 3/8	1 1/4	A
A-2930	1.30	Single 6V6, 7C5, 12A, 12A5, 25A6, 25A7, 35A5, 35L6, 31, 45, 50, 59	A	5000	40	5	2	1 3/8	2 3/8	1 1/4	A
A-2935	2.50	PP 6L6	A	5000 e.t.	150	18	2 15/16	2	3 1/4	1 3/8	A
A-2931	1.30	Single 2A5, 6AC5, 6B5, 6F6, 6K6, 6N6, 7B5, 20, 31, 42, 47, 59, 6V5	A	7000	30	5	2	1 3/8	2 3/8	1 1/4	A
A-2932	1.35	Single 1C5, 1Q5, 3C5, 6A4, 6G6, 6N7, 6R7, 12A, 38, 41, 49, 3V4	A	10000	30	5	2	1 3/8	2 3/8	1 1/4	A
A-2938	1.85	Single 19, 1G6, 1J6 PP 1H4, 30, 49	B	10000 e.t.	40	5	2	1 3/8	2 3/8	1 1/4	A
A-2936	2.10	PP 6AC5 PP 6V6, 7C5	B AB ₁	10000 e.t.	40	10	2 3/8	1 3/8	2 15/16	1 1/2	A
A-2933	1.55	Single 1D8, 7B5, 6K6, 6G6	A	12000	10	5	2	1 3/8	2 3/8	1 1/4	A
A-2934	1.40	Single 1D8, 1F4, 1F5, 1J5, 1T5, 6V7, 12A7, 85	A	15000	10	5	2	1 3/8	2 3/8	1 1/4	A
A-2937	1.80	Single 1A5, 1N6, 6V7, 85 PP 1E7, 1J5, 6G6, 3A4, 3V4	A	25000 e.t.	10	5	2	1 3/8	2 3/8	1 1/4	A

OUTPUT TRANSFORMER KITS

Kit No.	List Price	
Kit No. 1	\$11.75	(2 ea.) A-2928, (1 ea.) A-2930, A-2931, A-2932, A-2934, A-2936, A-2937
Kit No. 2	12.20	(2 ea.) A-2928, A-2937, (1 ea.) A-2930, A-2931, A-2934, A-2936
Kit No. 3	11.80	(1 ea.) A-2928, A-2930, A-2931, A-2932, A-2933, A-2934, A-2937, A-2938
Kit No. 4	12.90	(2 ea.) A-2928, A-2931, A-2936, A-2937

FILTER TAPPED OUTPUT TRANSFORMERS Pri. has 3% and 6% Humbucking Taps Sec. Impedance 3-4 ohms

Type No.	List Price	Tube	Class	Pri. Impedance	Pri. M.A.	Max. Watts	Mtg. Centers	Dimensions			Mtg.
								H	W	D	
A-3031	\$1.50	Single 2A3, 6A3, 7A5, 25L6, 35A5, 35B5, 35L6, 45, 50B5, 50L6	A	3000	50	5	2	1 3/8	2 3/8	1 1/4	A
A-3032	1.50	Single 6V6, 6B5, 7C5, 6F6	A	6000	40	5	2	1 3/8	2 3/8	1 1/4	A

SPECIAL OUTPUT TRANSFORMERS To Couple Push Pull Plates to Line or Voice Coil Sec. Impedance 4-8-15-250-500 ohms

Type No.	List Price	Tube	Class	Pri. Impedance	Pri. M.A. per Side	Max. Watts	Mtg. Centers	Dimensions			Mtg.
								H	W	D	
A-3027	\$4.75	PP2A5, 6V6, 7C5, 19, 6F6 PP1H4G, 1J6, 6AC5, 49	A AB ₁	10000 e.t.	45	15	2 3/8	2	3 1/4	1 5/8	F
A-3028	5.50	PP6L6 PP2A3	B AB ₁	5000 e.t.	70	20	3 3/8	2 3/16	3 11/16	2	F

All prices subject to trade discount, and change without notice.



Products of Merit



TRANSFORMERS

DUAL PRIMARY OUTPUT TRANSFORMERS

For Use with AC-DC Bottery Portable Receivers—Sec. Impedance 3-4 ohms

Type No.	List Price	Tube	Class	Pri. Impedance	Pri. M.A.	Max. Watts	Mtg. Centers	Dimensions			Mtg.
								H	W	D	
A-3029	\$1.50	Single 25AC5, 25B6, 25L6, 25N6, 35B5, 35L6, 50A5, 50B5, 50L6 OR	A	2000 or	60 or	5	2	1 3/8	2 3/8	1 1/4	A
A-3030	1.50	Single 184, 1Q5, 3Q4, 3Q5, 3V4 Single 25AC5, 25B6, 25L6, 25N6, 35A5, 35L6, 50A5, 50B5, 50L6 OR Single 184, 1Q5, 3Q4, 3Q5, 3V4	A A A	6000 2000 10000	10 60 10	5	2	1 3/8	2 3/8	1 1/4	A

UNIVERSAL OUTPUT TRANSFORMERS

To Provide Correct Coupling Between a Variety of Output Tubes and Any Speaker Voice Coil

Type No.	List Price	Tube	Ohms Impedance		Pri. M.A.	Max. Watts	Mtg. Centers	Dimen.			Mtg.
			Pri.	Sec.				H.	W.	D.	
A-2900	\$2.10	Single or Push-pull	4000-7000-8000-10000-14000 e.t.	.17 to .32	35	4	2	1 3/8	2 3/8	1 1/4	F
A-2901	2.25	Single or Push-pull	4000-7000-8000-10000-14000 e.t.	.17 to .32	40	8	2 3/8	1 3/8	2 1/16	1 1/2	F
A-2902	2.20	Single	1500-2000-4000-5000-7000-10000	.1 to .40	35	10	2 3/8	1 3/8	2 1/16	1 1/2	F
A-2903	1.80	Single	2000-4500-7000-10000	3.2	30	10	2	1 3/8	2 3/8	1 1/4	F
A-2904	2.80	Single or Push-pull	4000-7000-8000-10000-14000 e.t.	.17 to .32	40	18	2 3/8	2 1/4	2 3/8	1 3/8	G
A-2905	3.75	Single or Push-pull	3000-5000-7000-8000-10000 e.t.	.17 to .32	70	24	3 3/8	2 1/4	3 1/16	2 3/8	F
A-2998	1.80	Single	3500-5000-7000-10000	3.2	35	3	1 3/4	1 1/4	2 3/8	1 1/8	F
A-2999	1.80	Single	12000-15000-18000-25000	3.2	10	3	1 1/4	1 1/4	2 3/8	1 3/8	F

HEAVY DUTY OUTPUT TRANSFORMERS

High Level Type to Couple to Line or Speaker. Sec. Impedance: 4-8-15-250-500 ohms

Type No.	List Price	Tube	Class	Pri. Impedance	Pri. M.A. per Side	Max. Watts	Dimensions			Mtg.
							H.	W.	D.	
A-3127	\$4.25	Single 6L6, 2A3, 6A3, 6Y6	A	2500	80	8	3 3/8	2 3/8	2 1/2	D
A-3128	6.75	PP6V6, 6F6	AB ₁	8000 e.t.*	50	14	3 1/2	2 1/16	3 1/2	D
A-3129	6.75	PP6L6	AB ₁	4300 e.t.*	95	25	3 1/2	2 3/8	3 1/2	D
A-3130	7.50	PP6L6	AB ₁	6600 e.t.*	80	34	3 7/8	3 3/8	3 3/8	D
A-3131	5.75	PP6L6, 6Y6, PP2A3, 6A3, 6B4, 45, PP6N7, 46	A AB B	5000 e.t.	80	30	3 1/2	2 3/8	3 3/8	D
A-3132	6.00	PP6F6, 2A5, 7C5, Single 6N7, 6A6	AB ₂ B	10000 e.t.	40	25	3 1/2	2 1/16	3 3/8	D

* 10% Feedback Winding.

HEAVY DUTY OUTPUT TRANSFORMERS

High Level Type to Couple to Line or Voice Coil. Sec. Impedance 4-8-15-250-500 Ohms

Type No.	List Price	Tube	Class	Pri. Impedance	Pri. Ma. per Side	Max. Watts	Dimensions			Mtg.
							H	W	D	
A-4027	\$7.50	Single 6L6, 2A3, 6A3, 6Y6	A	2500	80	8	3 3/8	3 1/16	2 3/16	H
A-4028	10.50	PP6V6, 6F6	AB ₁	8000 C.T.*	50	14	3 1/2	4 1/2	3	H
A-4029	10.50	PP6L6	AB ₁	4300 C.T.*	95	25	3 1/2	4 1/2	3	H
A-4030	11.50	PP6L6	AB ₁	6600 C.T.*	80	34	3 7/8	4 1/2	3	H
A-4031	9.50	PP6L6, 6Y6, PP2A3, 6A3, 6B4, 45, PP6N7, 46	A AB B	5000 C.T.	80	30	3 3/8	4 1/2	3	H
A-4032	10.00	PP6F6, 2A5, 7C5, Single 6N7, 6A6	AB ₂ B	10000 C.T.	40	25	3 3/8	4 1/2	3	H

* 10% Feedback Winding.

All prices subject to trade discount, and change without notice.



Products of Merit



TRANSFORMERS

UNIVERSAL LINE TRANSFORMERS To Couple Various Line Impedances to a Voice Coil

Type No.	List Price	Ohms Impedance		Watts	Mtg. Centers	Dimensions			Mtg.
		Pri.	Sec.			H.	W.	D.	
A-2906	\$1.90	500-1000-1500-2000	3:2, 6-8	10	2 3/8	1 5/8	2 13/16	1 1/2	F
A-2907	3.25	500-1000-1500-2000	3:2, 6-8	18	2 5/8	2 1/4	2 7/8	1 7/8	G
A-2908	3.50	500-1000-1500-2000	6-8, 16	24	3 1/8	2 1/4	3 11/16	2 3/8	F
A-2909	1.90	4:5-50	3:2, 6-8	8	2	1 5/8	2 13/16	1 1/2	G
A-3005	1.50	500	3:2, 6-8	5	2	1 3/8	2 3/8	1 1/4	A

TUBE TO LINE TRANSFORMERS For Coupling Single or Push-Pull Plates to Line or Mixer

Type No.	List Price	Ohms Impedance		Pri. M.A.	Mtg. Centers	Dimensions			Mtg.
		Pri.	Sec.			H.	W.	D.	
A-2925	\$3.25	20000 e.t.	500 / 125	10	2 13/16	2	3 1/4	1 5/8	A
A-2926	3.25	20000 e.t.	200 / 50	10	2 13/16	2	3 1/4	1 5/8	A

INPUT TRANSFORMERS For Coupling Microphone or Line to Single or Push-Pull Grids

Type No.	List Price	Ohms Impedance		Turns Ratio	Mtg. Centers	Dimensions			Mtg.
		Pri.	Sec.			H.	W.	D.	
A-2923	\$1.80	3:2	50000	1:125	2	1 3/8	2 3/8	1 1/4	A
A-2918	3.00	100	100000 e.t.	1:64	2 13/16	2	3 1/4	1 5/8	A
A-2919	2.75	200 / 50	100000	1:22	2 13/16	2	3 1/4	1 5/8	A
A-2924	3.25	500 / 125	100000 e.t.	1:14	2 13/16	2	3 1/4	1 5/8	A

INTERSTAGE TRANSFORMERS To Couple a Single Plate to a Single Grid

Type No.	List Price	Ohms Impedance		Turns Ratio	Pri. M.A.	Mtg. Centers	Dimensions			Mtg.
		Pri.	Sec.				H.	W.	D.	
A-2910	\$1.60	10000	90000	3:1	10	2	1 3/8	2 3/8	1 1/4	A
A-2911	1.85	10000	90000	3:1	10	2 3/8	1 3/8	2 13/16	1 1/2	A

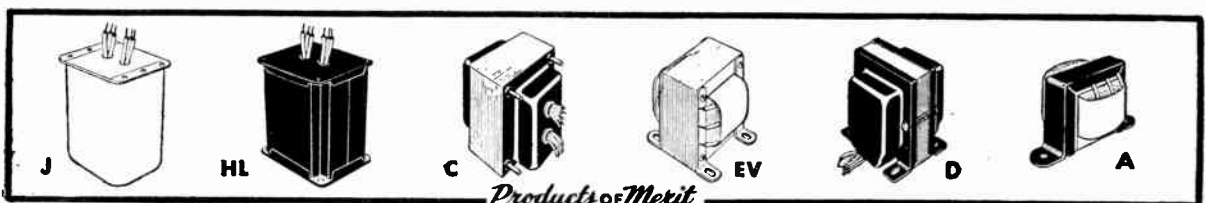
To Couple a Single Plate to Push-Pull Grids

A-2914	1.80	10000	90000 e.t.	3:1	10	2	1 3/8	2 3/8	1 1/4	A
A-2915	2.10	10000	90000 e.t.	3:1	10	2 3/8	1 3/8	2 13/16	1 1/2	A
A-2916	2.50	10000	90000 e.t.	3:1	10	2 13/16	2	3 1/4	1 5/8	A

To Couple Push-Pull Plates to Push-Pull Grids

A-2912	3.00	10000 e.t.	90000 e.t.	3:1	10 per side	2 13/16	2	3 1/4	1 5/8	A
A-2913	2.50	20000 e.t.	20000 e.t.	1:1	10 per side	2 3/8	1 3/8	2 13/16	1 1/2	A
A-2917	3.00	20000 e.t.	45000 e.t.	1.5:1	10 per side	2 13/16	2	3 1/4	1 5/8	A

All prices subject to trade discount, and change without notice.





TRANSFORMERS

DRIVER TRANSFORMERS To Couple Driver Plate to Amplifier Grids

Type No.	List Price	Driver	Output	Ratio, Pri. to 1/2 Sec.	Class	Pri. M.A.	Mtg. Centers	Dimensions			Mtg.
								H.	W.	D.	
A-2920	\$2.00	6C5, 1H4, 30, 49	Single 1J6, 19, Push-pull 30, 49	2.5:1	B	10	2 3/8	1 5/8	2 1/16	1 1/2	A
A-2921	3.00	6F6, 2A5, 42	PP6F6, 2A5, 6L6	1.7:1, 1.5:1, 1.3:1	AB	35	2 13/16	2	3 1/4	1 5/8	A
A-2922	3.50	6A6, 6C5, 6N7, 46	Single 6A6, 6N7, Push-pull 46	5:1, 4:1, 3:1, 2.5:1	B	20	2 13/16	2	3 1/4	1 5/8	A
A-3120	9.00	500 ohm line	Class B Grids 15 Watt Capacity	1:75, 1:85, 1:1, 1:1.25, 1:1.45, 1:1.75, 1:2, 1:2.25, 1:2.5, 1:2.75, 1:3	B	-----	2 3/16 x 2	3 3/16	2 3/8	3 3/8	DL
A-3121	10.50	500 ohm line	Class B Grids 30 Watt Capacity	1:75, 1:85, 1:1, 1:1.25, 1:1.45, 1:1.75, 1:2, 1:2.25, 1:2.5, 1:2.75, 1:3	B	-----	2 1/4 x 2 1/4	3 3/16	3	3 3/4	DL
A-3123	4.25	PP6A6, 53, PP6C5, 6N7, 6J5	PP6N7, 6A6, 53, PP6L6, T21	5:1*	B AB ₂	15	2 x 1 11/16	3 1/8	2 3/8	2 3/8	D
A-3124	4.25	6F6, 46, 59, 2A5, 42	PP46, 59, PP6L6, 807	2.2:1	B AB ₂	30	2 x 1 11/16	3 1/4	2 3/8	2 3/8	D
A-3125	6.00	6F6, 2A5, 47, 42	PP6L6	1.4:1*	B AB ₂	40	2 1/4 x 2	3 1/2	2 13/16	3 1/8	D
A-3126	5.00	PP2A3, 6L6, 45, 6V6, 6F6	PP800, 203A, 811, 812, RK18, RK58, T20, T240, T55	2:1	B	40	2 x 1 11/16	3 1/8	2 3/8	2 5/8	D

*Split secondary.

DRIVER TRANSFORMERS

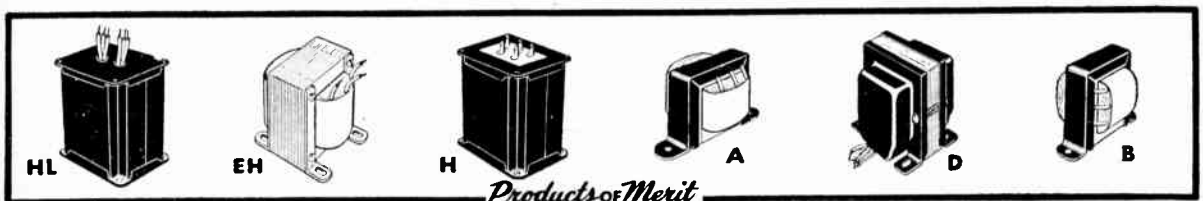
Type No.	List Price	Driver Tube	Output Tube	Turn Ratio Pri. to 1/2 Sec.	Class	Pri. MA	Dimensions			Mtg.
							H	W	D	
A-4020	\$4.50	6C5, 30, 49, 1H4	Single 1J6, 19, PP30, 49	2.5:1	B	10	2 13/16	2 1/16	2	H
A-4021	5.50	6F6, 42, 2A5	PP6F6, 6L6	1.7:1, 1.5:1, 1.3:1	AB	35	2 13/16	2 1/16	2	H
A-4022	6.00	6A6, 6C5, 6N7, 46	Single 6A6, 6N7, PP46	5:1, 4:1, 3:1, 2.5:1	B	20	2 13/16	2 1/16	2	H
A-4023	7.50	PP6A6, 53, PP6AC5, 6J5, 6N7, 46, 6F6, 59	PP6N7, 6A6, 53, PP6L6, 6V6, T21	5:1*	B AB ₂	15	3 5/8	3 1/16	2 9/16	H
A-4024	7.00	2A5, 42	PP46, 59, PP6L6, 807	2.2:1	B AB ₂	30	3 3/8	3 1/16	2 3/16	H
A-4025	10.00	6F6, 2A5, 47, 42	PP6L6	1.4:1*	B AB ₂	40	3 7/8	4 1/2	3	H
A-4026	8.50	PP2A3, 6L6, 45, 6V6, 6F6	PP800, 203A, 811, 812, RK18, RK58, T20, TZ40, T55	2:1	B	40	3 5/8	3 1/16	2 9/16	H

* Split Secondary.

MODULATION TRANSFORMERS For Specific Applications

Type No.	List Price	Output Tubes	Ohms Impedance		Max. MA		Watts	Dimensions			Mtg.
			Pri.	Sec.	Pri.	Sec.		H.	W.	D.	
A-3008	\$2.50	PP6AQ5, 6V6, 6F6, Single 6A6, 6N7, 53	10000 e.t.	3000-5000 6500-8000	50	60	10	2 1/4	2 3/8	2 1/8	B
A-3109	6.00	PP2A3, 6A3, 6B4, 6L6, 45, 46, 59	6000 e.t. 3800 e.t. 3000 e.t.	5000-8000 10000	80	100	25	3 1/8	2 5/8	2 3/4	D
A-3110	10.50	PP6L6, 807, RK41, HY56, HY61, HK24	6600-3800 e.t.	4000-5000 7500-10000 12000	175	150	60	4 1/4	3 1 1/2	3 3/4	D
A-3113	15.75	PP 800, 809, TZ-40, T-55, HK-54, RK-31, HY-40, 811, 807, 812	15000-6900CT	3000-4000 5000-6000	250	300	175	4 3/8	3 13/16	5 3/8	D

All prices subject to trade discount, and change without notice.





TRANSFORMERS

MODULATION TRANSFORMERS Compound Filled Cases—For Specific Applications

Type No.	List Price	Output Tubes	Ohms Impedance		Max. MA		Watts	Dimensions			Mtg.
			Pri.	Sec.	Pri.	Sec.		H.	W.	D.	
A-4010	\$5.50	6P6AQ5, 6V6, 6E6 Single 6A6, 6X7, 53	10000 C.T.	4000-5000 7500-10000 12000	50	60	10	2 ¹⁵ / ₁₆	2 ⁷ / ₁₆	2	H
A-4013	9.50	PP2A3, 6A3, 6B4, 6L6 45, 46, 59	6000 C.T. 3800 C.T. 3000 C.T.	5000-8000 10000	80	100	25	3 ⁵ / ₈	3 ¹ / ₁₆	2 ⁹ / ₁₆	H
A-4014	15.50	PP6L6, 807, RK-11, HY56, HY61, HK24	6600-3800 C.T.	4000-5000 7500-10000 12000	175	150	60	5	5	3 ⁷ / ₈	H
A-4015	17.50	PP800, 809, TZ-10, T-55, HK-54, RK-31, H5-10, 811, 807, 812	15000 C.T. 6000 C.T.	3000-4000 5000-6000	250	300	175	5	5	5 ¹ / ₈	H

UNIVERSAL MODULATION TRANSFORMERS Tapped Series-Parallel Coils Provide a Wide Range of Modulation Ratios

Type No.	List Price	Pri. Impedance	Pri. M.A. per Side	Sec. Impedance	Max. Sec. M.A.*	Watts	Dimensions			Mtg.
							H.	W.	D.	
A-3104	\$7.50	2000-20000	50	2000-20000	50-100	15	3 ¹⁵ / ₁₆	2 ⁵ / ₈	2 ³ / ₄	DL
A-3105	11.25	2000-20000	150	2000-20000	150-300	60	3 ⁷ / ₈	3 ¹ / ₈	4 ¹ / ₈	DL
A-3106	16.00	2000-20000	220	2000-20000	220-440	125	4 ⁵ / ₈	3 ³ / ₁₆	4 ⁵ / ₈	DL
A-4004	11.00	2000-20000	50	2000-20000	50-100	15	3 ⁵ / ₈	3 ¹ / ₁₆	2 ⁹ / ₁₆	H
A-4005	15.00	2000-20000	150	2000-20000	150-300	60	5	5	3 ⁷ / ₈	H
A-4006	22.00	2000-20000	220	2000-20000	220-440	125	5	5	5 ¹ / ₈	H
A-4007	45.00	2000-20000	250	2000-20000	250-500	300	7 ¹ / ₄	6 ⁵ / ₈	5 ⁵ / ₈	H

*Series/Parallel

POWER TRANSFORMERS Receiver Replacement Type

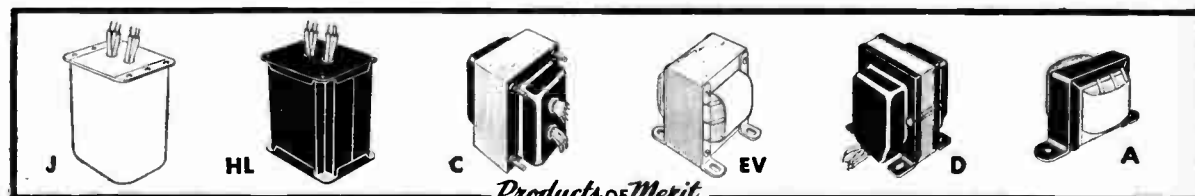
Primary for 115 V., 60 Cy. Leads R.M.A. Color Coded—Mtg. Fig. C

Type No.	List Price	H. V. Secondary		Rectifier		Fil. Wdgs.		Mtg. Centers	Dimensions		
		Volts	DC M.A.	Volts	Amp.	Volts	Amp.		H.	W.	D.
P-2949	\$4.25	210-210	40	5	2	6.3 c.t.	2	1 x 2 ¹ / ₂	2 ¹ / ₂	3	2 ¹ / ₂
P-2965	4.50	325-325	10	5	2	2.5 c.t.	1	2 x 2 ¹ / ₂	2 ¹ / ₂	3	2 ³ / ₄
P-2966	6.25	350-350	70	5	3	2.5 c.t.	9	2 ¹ / ₄ x 2 ¹ / ₁₆	2 ¹ / ₁₆	3 ³ / ₈	3 ⁵ / ₈
						2.5 c.t.	3.5				
P-2967	6.75	350-350	90	5	3	2.5 c.t.	12.5	2 ¹ / ₂ x 3 ¹ / ₈	3 ¹ / ₈	3 ³ / ₄	4 ¹ / ₈
P-2968	8.75	400-400	110	5	3	2.5 c.t.	15	3 x 3 ³ / ₄	3 ³ / ₄	4 ¹ / ₂	3 ¹ / ₁₆
						2.5 c.t.	3.5				
P-2950	4.50	325-325	40	5	2	6.3 c.t.	2	2 x 2 ¹ / ₂	2 ¹ / ₂	3	2 ⁷ / ₈
P-2951	5.75	350-350	70	5	3	6.3 c.t.	2.5	2 x 2 ¹ / ₂	2 ¹ / ₂	3	3 ¹ / ₈
P-2952	6.25	350-350	90	5	3	6.3 c.t.	3.5	2 ¹ / ₂ x 2 ¹ / ₁₆	2 ¹ / ₁₆	3 ³ / ₈	3 ³ / ₈
P-2953	7.00	350-350	120	5	3	6.3 c.t.	4.7	2 ¹ / ₂ x 3 ¹ / ₈	3 ¹ / ₈	3 ³ / ₄	3 ¹ / ₁₆
P-2954	9.00	375-375	150	5	3	6.3 c.t.	5	2 ¹ / ₂ x 3 ¹ / ₈	3 ¹ / ₈	3 ³ / ₄	4 ¹ / ₁₆
P-2955	10.75	400-400	200	5	3	6.3 c.t.	5	3 x 3 ³ / ₄	3 ³ / ₄	4 ¹ / ₂	4 ¹ / ₈
P-2956	12.75	435-435	250	5	3	6.3 c.t.	3	3 x 3 ³ / ₄	3 ³ / ₄	4 ¹ / ₂	4 ¹ / ₈
		(80-volt Bias Tap)		2.5	10	6.3 or 5	3				
P-2957	5.50	350-350	50	5	2	6.3 c.t.	2.6	2 ¹ / ₄ x 2 ¹ / ₁₆	2 ¹ / ₁₆	3 ³ / ₈	3
P-3047	3.75	210-210	50			6.3	2.5	2 x 2 ¹ / ₂	2 ¹ / ₂	3	2
P-3048	4.75	260-260	90			6.3	3.5	2 x 2 ¹ / ₂	2 ¹ / ₂	3	2 ⁵ / ₈

POWER TRANSFORMERS Fully Shielded Upright Mounting Type—Mtg. Fig. D

Type No.	List Price	H. V. Secondary		Rectifier		Fil. Wdgs.		Mtg. Centers	Dimensions		
		Volts	DC M.A.	Volts	Amp.	Volts	Amp.		H.	W.	D.
P-3147	\$4.25	210-210	50			6.3	2.5	2 x 1 ⁹ / ₁₆	3 ¹ / ₈	2 ⁵ / ₈	2 ¹ / ₂
P-3148	5.25	260-260	90			6.3	3.5	2 x 2 ¹ / ₁₆	3 ¹ / ₈	2 ⁵ / ₈	3 ¹ / ₈
P-3149	5.00	210-210	10	5	2	6.3 c.t.	2	2 x 1 ¹¹ / ₁₆	3 ¹ / ₈	2 ⁵ / ₈	2 ⁵ / ₈
P-3150	5.50	325-325	10	5	2	6.3 c.t.	2	2 x 1 ⁷ / ₈	3 ¹ / ₈	2 ⁵ / ₈	2 ¹ / ₁₆
P-3160	6.00	350-350	50	5	2	6.3 c.t.	2.6	2 ¹ / ₄ x 1 ⁷ / ₈	3 ¹ / ₂	2 ¹ / ₁₆	3 ¹ / ₁₆
P-3151	7.00	350-350	70	5	3	6.3 c.t.	3	2 ¹ / ₂ x 1 ¹¹ / ₁₆	3 ¹ / ₈	3 ¹ / ₁₆	3 ¹ / ₁₆
P-3152	7.75	350-350	90	5	3	6.3 c.t.	3.5	2 ³ / ₄ x 2 ¹ / ₂	4 ¹ / ₈	3 ¹ / ₂	3 ¹ / ₁₆
P-3153	8.75	350-350	110	5	3	6.3 c.t.	4.5	3 x 2 ¹ / ₄	4 ⁵ / ₈	3 ¹ / ₂	3 ¹ / ₁₆
P-3155	10.75	400-400	200	5	3	6.3 c.t.	5	3 x 3 ¹ / ₁₆	4 ⁵ / ₈	3 ¹ / ₁₆	4 ¹ / ₄
P-3156	12.75	435-435	250	5	3	6.3 c.t.	3	3 x 3 ¹ / ₁₆	4 ⁵ / ₈	3 ¹ / ₁₆	4 ¹ / ₈
		(80-volt Bias Tap)		2.5	10	6.3 or 5	3				

All prices subject to trade discount, and change without notice.



Products of Merit



TRANSFORMERS

FILAMENT TRANSFORMERS For Amplifier, Amateur, Industrial Use. Pri.: 115 Volts, 60 Cycles

Type No.	List Price	Sec. Volts	Sec. Amp.	Insulation Volts	Dimensions			Mtg.
					H.	W.	D.	
P-2939	\$2.75	2.5 e.t.	5	2500	2	3 1/4	1 5/8	A
P-2940	4.00	2.5 e.t.	10	7500	3	3 5/8	2 1/4	B
P-2941	3.50	5 e.t.	6	2500	2 1/4	3 11/16	1 7/8	A
P-2942	5.00	5 e.t.	12	2500	3 1/16	2 11/16	2 3/8	EV
P-2943	7.75	5 e.t.	20	2500	3 3/4	3 1/8	3	EV
P-2944	2.00	6.3 e.t.	1	2500	1 5/8	2 1/16	1 1/2	A
P-2945	2.25	6.3 e.t.	2	2500	2	3 1/4	1 5/8	A
P-2946	2.75	6.3 e.t.	3	2500	2	3 1/4	1 7/8	A
P-2947	4.00	6.3 e.t.	6	2500	3	3 5/8	2 1/4	B
P-2948	5.50	6.3 e.t.	10	2500	3 5/16	2 1/16	2 7/8	EV
P-2960	3.50	7.5 e.t.	4	2500	2 5/8	3 1/4	1 7/8	B
P-2961	5.00	6.3 e.t.	3A	2500	3	3 5/8	2 1/4	B
		6.3 e.t.	3A					
P-3040	3.00	5 e.t.	3	2500	2	3 1/4	2 1/4	A
P-3041	5.00	5 e.t.	3	2500	2 1/2	4	2 3/4	A
		6.3 e.t.	3.6					
P-3143	5.75	7.5 e.t.	8	2500	3 1/2	2 15/16	3 1/8	D
P-3145	5.75	10 e.t.	5	2500	3 1/2	2 15/16	3	D
P-3146	7.50	10 e.t.	10	3000	3 7/8	3 3/16	3 5/8	D

PLATE TRANSFORMERS For Small Transmitters. DC Voltage Ratings are Approx. Values Obtained at Output of a 2 Section Choke Input Filter Using Mercury Vapor Rectifier Tubes. Pri. is for 115 V. 60 cy.

Type No.	List Price	Sec. Rms. Volts	Sec. DC Volts	DC Sec. M.A.	Dimensions			Mtg.
					H.	W.	D.	
P-3157	\$9.25	{660-660 (†) {550-550	{500 {400	250	4 5/8	3 13/16	4 3/8	D
P-3158	12.00	{1080-1080 {500-500	{1000 * {400	125 150	4 5/8	3 13/16	5	D
P-3159	10.00	{900-900 {800-800	{750 {600	225	4 5/8	3 13/16	5 1/8	D
P-3167	29.75	{1450-1450 {1175-1175	{1200 {1000	300	5 3/4	6 1/8	4	EH
P-3168	35.50	{2100-2100 {1800-1800	{1750 {1500	300	5 3/4	6 1/8	4 1/2	EH
P-4062	54.50	{2900-2900 {2385-2385	{2500 {2000	300	8 1/2	6 1/2	5 5/8	H

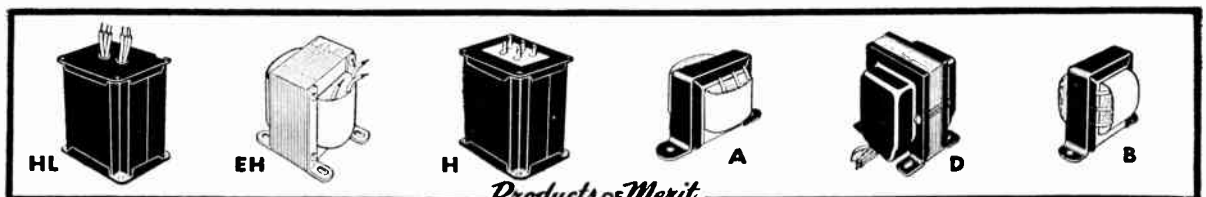
*For dual operation with simultaneous use of both sec. ratings. †Has 40-volt bias tap.

PLATE TRANSFORMERS For Small Transmitters, Amateur, or Experimental Use, DC Voltage Ratings are Approx. Values Obtained at Output of a 2 Section Choke Input Filter Using Mercury Vapor Rectifier Tubes. PRI. is for 115 V. 60 Cy.

Type No.	List Price	Sec. Rms. Volts	Sec. DC Volts	Sec. DC MA	Dimensions			Mtg.
					H	W	D	
P-4057	\$13.00	{660-660 {550-550	{** 500 {400	250	5	5	1 1/2	H
P-4058	16.00	{1080-1080 {500-500	{* 1000 {400	125 150	5	5	5 3/8	H
P-4059	14.00	{900-900 {800-800	{750 {600	225	5	5	5 1/4	H
P-4067	39.00	{1450-1450 {1175-1175	{1200 {1000	300	7 1/4	6 5/8	5 5/8	H
P-4061	42.00	{2100-2100 {1800-1800	{1750 {1500	300	7 1/4	6 5/8	5 5/8	H
P-4062	54.50	{2900-2900 {2385-2385	{2500 {2000	300	8 1/2	6 5/8	5 5/8	H

** Has 40V. Bias Tap.
* For Dual Operation with Simultaneous Use of Both Sec. Ratings.

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TRANSFORMERS

VIBRATOR TRANSFORMERS For Operation From 6V Battery and Vibrator

Type No.	List Price	Sec. DC Volts to Filter	Sec. M.A.	Dimensions			Mtg.
				H	W	D	
P-2969	\$3.75	150	40	2 1/4	2 7/8	1 3/4	B
P-2970	4.00	225	40	2 5/8	3 1/8	2 1/8	B
P-2971	4.25	250	50	2 5/8	3 1/8	2 1/4	B
P-2972	5.30	260	60	3	3 5/8	2 1/8	B
P-4073	6.50	285	75	3 9/16	3 1/8	2 9/16	HL
P-4074	8.00	330	100	3 3/4	3 1/8	2 13/16	HL

VIBRATOR TRANSFORMERS Sealed in Compound Filled Cases for Interference or Hash Reduction. For Operation from 6 V. Battery and Vibrator

Type No.	List Price	Sec. DC Volts to Filter	Sec. MA	Dimensions			Mtg.
				H	W	D	
P-4069	\$6.00	150	40	2 3/4	2 11/16	2 7/8	J
P-4070	6.50	225	40	3	3	2 1/2	J
P-4071	7.00	250	50	3	3	2 1/2	J
P-4072	7.50	260	60	3	3 5/8	2 1/8	HL
P-4073	6.50	285	75	3 9/16	2 1/8	3 1/8	HL
P-4074	8.30	330	100	3 3/4	3 1/8	2 13/16	HL

AC-DC VIBRATOR TRANSFORMER For Operation from 6 V. Battery and Vibrator or 115 V. 60 cy. Line

Type No.	List Price	H.V. Secondary		Filament		Dimensions			Mtg.
		DC Volts	MA	Volts	Amps	H	W	D	
P-4075	\$10.00	300	100	6.3	4	3 13/16	4 1/2	3	HL

PHOTO-FLASH POWER TRANSFORMER Primary for 117 V. 60 Cy. Line or 4 V. Battery Vibrator (or Charger Winding)

Type No.	List Price	Secondary		Mtg. Centers	Dimensions			Mtg.
		AC Volts	DC M.A.		H	W	D	
P-3065	\$5.50	1100	1.5	2 11/16	2 5/8	3 1/8	2	B

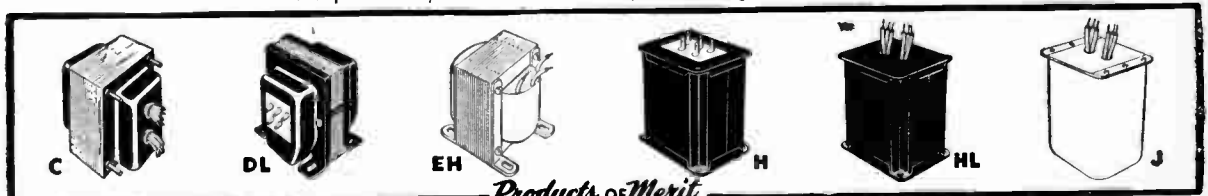
STEP-DOWN AUTOTRANSFORMERS Input 220-250 V. 60 cy. Output 110-125 V. Pri. Cord and Plug. Sec. Receptacle.

Type No.	List Price	Output Watts	Dimensions			Mtg.
			H	W	D	
P-3161	\$7.00	80	3 1/2	2 15/16	3	D
P-3162	9.25	150	3 7/8	3 1/8	3 5/8	D
P-3163	11.75	250	4 5/8	3 11/16	4	D
P-3164	15.25	500	4 5/8	3 13/16	4 3/4	D
P-4065	35.00	1000	7 1/4	6 5/8	5 5/8	H

REPLACEMENT TYPE FILTER CHOKES Inductance Ratings are at 10 V. 60 cy. with Rated Current Flowing as Recommended by the R.M.A.

Type No.	List Price	Inductance Henries	Current Rating M.A.	DC Res. Ohms	Volts Insul.	Mtg. Centers	Dimensions			Mtg.
							H	W	D	
C-2974	\$2.75	2.0	200	50	1500	2 11/16	2	3 1/4	1 5/8	A
C-2977	1.30	4.5	50	200	1500	2 3/8	1 5/8	2 13/16	1 1/2	A
C-2975	1.25	5.5	50	330	1500	2	1 5/8	2 3/8	1 1/2	A
C-2976	1.25	8	40	500	1500	2	1 3/8	2 3/8	1 1/2	A
C-2981	1.35	8.5	50	400	1500	2 3/8	1 5/8	2 13/16	1 1/2	A
C-2985	1.35	20	15	900	1500	2 3/8	2	3 1/4	1 1/2	A
C-2987	1.75	16	50	550	1500	2 13/16	2 1/4	3 11/16	2 1/8	A
C-2990	2.35	15	75	400	1500	3 1/8	2 1/4	3 11/16	2 1/8	A
C-2993	3.00	10.5	110	220	1500	3 9/16	2 9/16	4	2 1/4	A

All prices subject to trade discount, and change without notice.



Products of Merit



TRANSFORMERS

FILTER CHOKES For Small Transmitter and Amplifier Applications

Type No.	List Price	Inductance Henries	Current Rating M.A.	DC Res. Ohms	Volts Insul.	Dimensions			Mtg.
						H.	W.	D.	
C-3192	\$3.50	15	85	325	1500	3 1/4	2 5/8	2 5/8	D
C-3193	3.25	10	110	200	1500	3 1/4	2 5/8	2 5/8	D
C-3194	4.00	12	150	230	1500	3 1/2	2 7/8	3 1/4	D
C-3195	6.00	15	150	180	2000	3 7/8	3 3/16	3 3/8	D
C-3196	5.35	5	200	80	1500	3 1/2	2 1/16	3 1/8	D

FILTER SMOOTHING CHOKES For Transmitter Power Supplies

C-3180	\$4.50	10	150	210	3000	3 1/8	2 5/8	2 3/4	D
C-3181	5.75	10	200	110	3000	3 1/2	2 1/16	3 1/2	D
C-3182	8.75	10	250	125	3000	3 7/8	3 3/16	3 3/4	D
C-3183	9.75	8	300	80	3000	3 7/8	3 3/16	3 3/4	D

FILTER INPUT OR SWINGING CHOKES

C-3187	\$4.50	1-16	150	210	3000	3 1/4	2 5/8	2 3/4	D
C-3188	5.75	1-16	200	110	3000	3 1/2	2 1/16	3 1/2	D
C-3189	8.75	1-16	250	125	3000	3 7/8	3 3/16	3 3/4	D
C-3190	9.75	3-11	300	80	3000	3 7/8	3 3/16	3 3/4	D

FILTER SMOOTHING CHOKES

Type No.	List Price	Inductance Henries	Current Rating M.A.	DC Res. Ohms	Volts Insul.	Dimensions			Mtg.
						H.	W.	D.	
C-4080	\$7.50	10	150	210	3000	3 5/8	3 1/16	2 1/16	H
C-4081	9.00	10	200	110	3000	3 7/8	4 1/2	3	H
C-4082	12.00	10	250	125	3000	5	5	4	H
C-4083	13.00	8	300	80	3000	5	5	4	H

FILTER INPUT OR SWINGING CHOKES

C-4087	7.50	1-16	150	210	3000	3 5/8	3 1/16	2 3/16	H
C-4088	9.00	1-16	200	110	3000	3 7/8	4 1/2	3	H
C-4089	12.00	1-16	250	125	3000	5	5	4	H
C-4090	13.00	3-11	300	80	3000	5	5	4	H

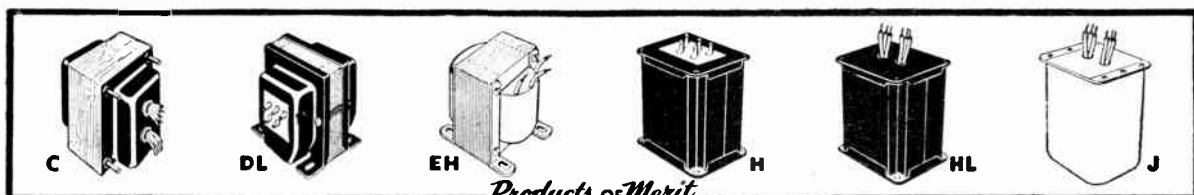
ISOLATION TRANSFORMERS To Provide Isolation Between Line and Associated Circuits. Primary for 50-60 Cy. Static Shielding Between Primary and Secondary.

Type No.	List Price	Primary Volts	Secondary Volts	Watts	Dimensions			Mtg.
					H.	W.	D.	
P-3096	\$5.00	117	117	40	3 1/4	2 5/8	2 5/8	B
P-3197	7.50	117	117	80	3 7/8	3 3/16	3 1/2	D

ISOLATION TRANSFORMERS Equipped with Line Cord and Standard Receptical

Type No.	List Price	Primary Volts	Secondary Volts	Watts	Dimensions			Mtg.
					H.	W.	D.	
P-3198	\$13.50	117	117	100	1 1/4	3 9/16	3 3/4	D
P-3199	23.00	117	117	250	1 5/8	3 13/16	4 1/8	D

All prices subject to trade discount, and change without notice.



- $\pm 1/2$ db 30-15,000 cps, all types
- Low transmission loss
- Excellent longitudinal balance
- Power ratings at 30 cycles
- Either top or bottom mounting
- Extremely low hum pickup
- Humbucking winding on all Impedance, Output & Bridging types

For AM & FM Broadcast Stations and Recording Studios

IMPEDANCE MATCHING TRANSFORMERS:

Type	Primary Impedance	Secondary Impedance	Description	Max. Level	Case	Code
114A	600/250 (150/62.5)	600/250 (150/62.5)	2 mu-metal shields	+16	14A	Kaaba
114B	600/250 (150/62.5)	600/250 (150/62.5)	Cast case only	+20	14AD	Kabay
114C	10,000/600 (2500/150)	600/250 (150/62.5)	Bridging & line to line. 2 mu-metal shields	+16	14A	Kaber
114D	10,000/600 (2500/150)	600/250 (150/62.5)	Bridging & line to line. Cast case only	+20	14AD	Kabet
114E	10,000 (2500)	600/150 (150/37.5)	Bridging to line. 2 mu-metal shields	+16	14A	Kalium
114F	600/150 (150/37.5)	600/150 (150/37.5)	2 mu-metal shields	+16	14A	Kaffir
114G	600/150 (150/37.5)	600/150 (150/37.5)	Cast case only	+20	14AD	Kaiser

NOTE: All Bridging transformers have built-in primary resistors. Bridging impedance is twice primary winding impedance as listed above due to series resistors.

STANDARD LINE IMPEDANCES:

Throughout this catalog you will note that impedances obtainable by paralleling windings of transformers are given in parentheses. Thus a listing "600 (150) ohms" indicates a total impedance of 600 ohms, with 150 ohms obtainable by paralleling the two windings. With either connection windings are well balanced, but center tap is available only when both windings are connected in series. These transformers can be used with good results in matching 500 ohm circuits since the small resulting mismatch will produce very little shift of frequency response.

PLATE TO LINE PREAMPLIFIER SERVICE:

Type	Primary Impedance	Secondary Impedance	Description	Pri. MA or Unbalance	Max. VU Level	Case	Code
314A	15,000	600/250 (150/62.5)	1 6J5, etc.	8	+23	14AD	Karos
314B	20,000	600/250 (150/62.5)	PP 6J5, etc.	1	+27	14AD	Karri

TUBE TO LINE AND V.C., POWER TYPE:

($\pm 1/2$ db response guaranteed on 600 ohm output only)

Type	Primary Impedance	Secondary Impedance	Description	Pri. MA or Unbalance	Max. VU Level	Case	Code
314C	5000/ 3000	600/16/8 (150/4/2)	AB ₁ , 2A3, 6A3, 6B4	5	+42	14D	Kasha
314D	8000	600/16/8 (150/4/2)	AB ₁ , 6F6 triode	1	+35	14D	Katub
314E	*10,000/ 8000	600/16/8 (150/4/2)	PP 6V6, 6F6 pentode	5	+43	14D	Katal
314F	*9000/ 6600	600/16/8 (150/4/2)	PP 6L6 pentode	5	+45	14D	Katha

***NOTE:** Feedback winding full 10% of primary turns.



INPUT TRANSFORMERS:

Type	Primary Impedance	Secondary Impedance	Description	Pri. MA or Un-balance	Max. VU Level	Case	Code
214A	600/250 (150/62.5)	80,000	Line to 1 grid 3 mu-metal shields	0	+20	14A	Kairu
214B	600/250 (150/62.5)	80,000	Line to 1 grid Cast case	0	+20	14AC	Kaise
214C	600/250 (150/62.5)	60,000 (15,000)	Line to PP grids 3 mu-metal shields	0	+20	14A	Kakem
214D	600/250 (150/62.5)	60,000 (15,000)	Line to PP grids Cast case	0	+20	14AC	Kakar
214E	10,000/600 (2500/150)	60,000	Bridging & line to grid. 3 mu-metal shields	0	+20	14A	Kalid
214F	10,000/600 (2500/150)	60,000	Bridging & line to grid. Cast case	0	+20	14AC	Kakul

NOTE: All Bridging transformers have built-in primary resistors. Bridging impedance is twice primary winding impedance as listed above due to series resistors. May be used with excellent results on 500 ohm line.

INTERSTAGE:

Type	Primary Impedance	Secondary Impedance	Description	Pri. MA or Un-balance	Max. VU Level	Case	Code
214H	10,000	80,000 (20,000)	Single plate to PP grids. Humbuck- ing. Cast case	0	+26	14AC	Kappa
214J	20,000 (5000)	80,000 (20,000)	PP plate to PP grids. Humbucking. Cast case	1	+30	14AC	Karuk

F-M FREQUENCY REQUIREMENTS:

The wide frequency transmission requirements that Federal Communications Commission have required of frequency modulated radio stations demands that the quality of audio components be maintained at the highest possible level. This is particularly true of transformers. The transformers listed on these pages have been designed with these requirements in mind. Your transmitter or high fidelity receiver has a better chance of staying within prescribed limits if you use **ADC** components.

REACTORS:

Type	Description	Inductance	DC MA Current	Approx. DC Resistance	Case	Code
414A	PP plate or grid coupling	1000 (250)	1	8400/ 2100	14AD	Ketuk
414B	Pre-amplifier filter } or plate } Pre-amplifier filter } coupling }	100 hy	20	3200	14AD	Ketch
414C		45 hy	30	1250	14AD	Kethu

MU-METAL SHIELDING:

Because of the difficulty experienced in reproducing test results on the various methods employed, no statements are made here regarding exact shield efficiencies. The use of high permeability mu-metal for shielding, the incorporation of certain features in the design of the alloy shields and in the transformer windings, together with special balanced terminal arrangements, make these transformers far superior to competitive makes.

We welcome tests comparing any of these units with the best shielded transformers of other makes, regardless of price or claims made.



For Quality P. A. Systems and High Fidelity Music Reproduction

- $\pm 1\frac{1}{2}$ db 50-10,000 cps
- Minimum insertion loss
- Dependable at lower cost
- Power ratings at 50 cycles

IMPEDANCE MATCHING TRANSFORMERS:

Type	Primary Impedance	Secondary Impedance	Description	Pri. MA or Un-balance	Watts	Case	Code
115A	600 (150)	600 (150)	Line to Line	0	8	14A	Kagan
115B	1/2/3/6/8/10/16/22/37/ 43/50/75/140/220/250/ 333/400/440/500/600		Auto transformer	0	20	14B	Kahal

INPUT TRANSFORMERS:

Type	Primary Impedance	Secondary Impedance	Description	Pri. MA or Un-balance	Max. VU Level	Case	Code
215A	600 (150)	50,000	Line to single or PP grids. Humbucking windings.	0	+26	14A	Kalmu
215B	10,000	2200 Total	Single plate to Class AB ₂ grids. 6F6, 6L6, etc.	10	+30	14A	Kamis
215C	10,000	80,000 CT	Single plate to PP grids. 45 6L6, 2A3, etc. (A, AB ₁)	10	+30	14A	Kanak
215D	20,000	90,000	PP plates to PP grids. Humbucking windings.	.5	+33	14A	Kanga
215E	7500	60,000 CT	Line bridging to single or PP grids. (Bridging impedance 15,000 ohms)	0	+30	14A	Kanti

OUTPUT TRANSFORMERS:

Type	Primary Impedance	Secondary Impedance	Description	Pri. MA or Un-balance	Watts	Case	Code
315A	15,000	600/250 (150/62.5)	1 6C5, 6J5, 1 F5, etc.	8	$\frac{1}{2}$	14A	Kedge
315B	20,000 CT	600/250 (150/62.5)	PP 6C5, 6J5, etc.	.5	1	14A	Keeve
315C	5000	600/250/16/8/6/3/ 2/1	Single 6V6, etc.	35	6	14B	Kefir
315D	10,000/ 8000	600/250/16/8/6/ 3/2/1	AB ₁ , and AB ₂ , 6F6 6V6 pentode	2	15	14B	Kelep
315E	6000/3800	600/250/16/8/6/3/ 2/1	AB ₁ , AB ₂ , 6L6, 10% feedback winding	6	47	14D	Kelis
315F	5000/3000	600/250/16/8/6/ 3/2/1	2A3, 6B4, 6A3, 6L6 (A ₁)	5	18	14C	Kenez
315G	2500/1500	600/250/16/8/6/ 3/2/1	PPP 2A3, 6B4, 6L6	10.	30	14D	Kerac

LINE TO V.C. — $\pm 1\frac{1}{2}$ db 30-15,000 cps.

Type	Primary Impedance	Secondary Impedance	Watts	Case	Code
115M	3000/2400/1800/1200/600	20/16/8/4	15	14C	Kahan
115N	3000/2400/1800/1200/600	20/16/8/4	30	14D	Kaiak

ADC PLUGS



PJ-1 PLUG

Type	No. Conductors	Code
PJ-1	3	Rabet

ADC PLUGS are interchangeable with similar standard plugs. They are designed for ease in cord replacement. Precision made from the finest materials, their safety features assure utmost dependability in service.



SINGLE ROW JACK PANEL

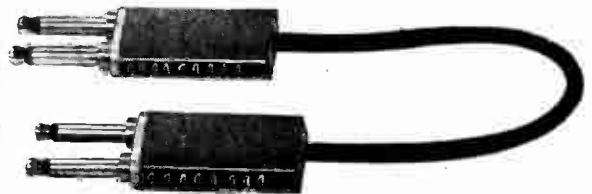
ADC JACK PANELS have standard spacing for use with any double plug. Mounting holes are drilled and tapped to fit all standard jacks. Pairs of holes are so spaced that plug cannot be inserted to connect one side of each of two circuits. Panels are made of solid bakelite reinforced with steel for greatest strength and rigidity, complete with slotted brackets for mounting on standard 19" relay rack. Improved designation strip eases removal and replacement of designation cards. Width of panel for double row of jacks is 2 1/8". Width of panel for single row of jacks is 1 3/4". 48 jacks mount on a double row panel, 24 on single row.

Type	Description	Code
PJ-31	Double row jack panel complete with designation strip and slotted mounting brackets, but without jacks.	Reder
PJ-33	Single row jack panel complete with designation strip and slotted mounting brackets, but without jacks.	Regal
PJ-141	Unit consisting of one PJ-31 jack panel and 48 type PJ-118 jacks assembled.	Reput
PJ-143	Unit consisting of one PJ-33 jack panel and 24 type PJ-118 jacks assembled.	Repor



DOUBLE ROW JACK PANEL

ADC PATCH CORDS



PATCH CORD WITH PJ-1 PLUGS

ADC PATCH CORDS are made from the finest stranded, tinned copper 2 conductor wire well shielded and insulated. Heavy overall braid insures long dependable service. Six inch reinforcement on both ends. Shield connects to sleeves on both plugs.

Type	Length	Code
------	--------	------

PJ-1 Plugs on each end:

PJ-11	1 ft.	Rafle
PJ-12	2 ft.	Raned
PJ-13	3 ft.	Rakin
PJ-14	4 ft.	Ranch
PJ-15	5 ft.	Randy
PJ-10	10 ft.	Ranks

ADC JACKS are of approved welded box type construction assuring rigid alignment of all parts. Non-aging, non-ferrous springs provide permanent, proper tension. Silver alloy contacts are riveted through blades. Other circuits can be furnished. Dimensions are standard. Interchangeable with any standard telephone type jacks using 1/4" plug. Heavy nickel plate to prevent corrosion. Can be supplied with plain brass sleeves on special order.



ADC JACK

Type	Fig. No.	Code
PJ-118	2	Riket

If you do not know which one of your local jobbers stocks **ADC** Audio components, send your order direct to us. We will forward it to the **ADC** distributor serving your area.

AUDIO DEVELOPMENT CO.

CREST TRANSFORMER CORP.

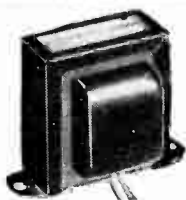


FIGURE F

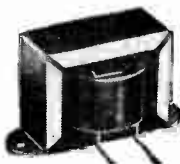


FIGURE A

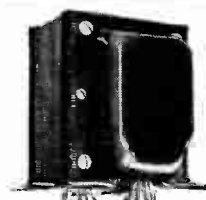


FIGURE K

AUDIO — TRANSFORMERS — INPUT

Type No.	Ohms Impedance		Turns Ratio	Pri. M.A.	Mtg. Fig.	Mtg. Ctrs.	Dimensions			Wt. in Ctns.	List Price
	Pri.	Sec.					W.	D.	H.		
6301	10000	90000	P.P. 3:1	10	A	2 3/8"	2 3/8	1 1/2	1 5/8	.8	\$1.85
6302	10000	90000	Sgl. 3:1	10	A	2"	2-8	1 1/2	1 3/8	.6	1.60
6305	10000	125000	Sgl. 3.5:1	10	A	2 1/8"	3 1/4	1 5/8	2	.12	2.15
6306	10000	90000	P.P. 3:1	10	A	2 1/8"	3 1/4	1 5/8	2	.15	2.15

AUDIO — TRANSFORMERS — OUTPUT

Type No.	Tube	Class	Ohms Impedance		Pri. M.A.	Max. Watts	Mtg. Fig.	Mtg. Ctrs.	Dimensions			Wt. in Ctns.	List Price
			Pri.	Sec.					W.	D.	H.		
6010	Sgl. 2A3, 6B4, 6Y6, 25A6, 25B6, 25N6	A	2000	3.2	60	5	A	2"	2 3/8	1 1/2	1 3/8	.5	\$1.20
6011	Sgl. 6B6, 7C5, 12A, 25A6, 27A7, 35A5	A	5000	3.2	40	5	A	2"	2 3/8	1 1/2	1 3/8	.5	1.20
6012	Sgl. 1C5G, 1Q5G	A	8000	3.6	20	5	A	2"	2 3/8	1 5/8	1 3/8	.5	1.30
6008	P.F. 1-19, 1J6G, 1C6G	B	10,000	4.8	30	8	A	2 1/8"	3 1/4	1 5/8	2	.5	1.70
6020	2-2A3, 684G, P.P. 2-4B, 25LP, P.P.	AB A	3000	4.8 15.500	120	30	K	2" x 2 1/2"	2 5/8	2 1/2	3 1/8	2.7	4.50
6021	2-6L6 P.P.	AB2	3800	4.8 15.500	230	60	K	2 1/2" x 1 3/4"	3 1/4	3 3/8	3 3/8	4.6	7.00
6022	2-6L6 P.P. 2-6L6	AB1	6600	4.8 15.500	160	25	K	2" x 1 1/2"	2 5/8	2 1/2	3 1/8	2.8	4.95
6023*	2-6V6 P.P.	AB1	8000	4.8 15 250 500	100	15	F	2 1/8"	3 1/8	2 1/4	2 3/8	1.10	5.50
6000	Universal Sgl. or P.P.	A	4000 7000 8000 10000.14000 CT	Adj. .1-29	70	8	C	2 3/8"	2 7/8	1 3/4	1 5/8	.10	1.80
6003	Universal Sgl. or P.P.	A	4000 7000 8000 10000.14000 CT	Adj. .1-29		12	D	2 3/8"	2 7/8	1 7/8	2 3/8	.15	2.25
6004	Universal Sgl. or P.P.	A	4000 7000 8000 10000.14000 CT	Adj. .1-29		18	D	2 1/8"	3 1/8	2 1/4	2 3/8	1.8	2.60

*10% Feed-back wdg.

CHOKES

Type No.	Inductance Henries	Current Rating M.A.	D.C. Res. Ohms	Volts Ins.	Type Fig.	Mounting Dimensions			Weight in Carton	List Price
						H.	W.	D.		
6200	25	25	850	1600	A	1 7/8	3 1/4	1 5/8	1.0	\$1.40
6201	10	60	200	1600	A	1 7/8	3 1/4	1 1/2	1.0	1.50
6202	10	80	250	1600	A	1 7/8	3 1/4	1 3/4	1.4	1.60
6203	10	100	160	1600	A	2 3/8	3 1/8	1 7/8	1.8	1.90
6204	30	75	400	1600	A	2 1/4	3 1/8	1 7/8	1.8	2.10
6205	250	5	3500	1600	A	1 7/8	3 1/4	1 5/8	1.4	1.95
6206	30	110	200	2500	A	2 1/2	4	2	2.4	2.65
6207	10	130	100	2000	A	1 8	3 3/8	1 5/8	1.0	1.85
6208	8	40	530	1600	A	1 7/8	2 3/8	1 3/8	0.8	1.20
6209	15	85	375	1600	B	3	3 3/4	2 1/2	2.4	2.65
6219	15	200	120	3000	K	4 3/4	3 3/4	4	8.8	5.95
6220	15	250	60	3000	K	4 3/4	3 3/4	4 3/4	4.8	6.60
6221	5	80	138	1600	B	1 8	3 1/4	1 3/4	1.5	2.10
6222	10	110	200	1600	K	3 1/8	2 3/8	2 1/2	1.8	2.70
6223	12	150	231	1600	K	3 3/8	2 1/2	2 3/8	3.5	3.30
6224	5	200	80	1600	K	3 3/8	2 3/8	3 3/8	2.6	3.30
6225	13	250	121	1600	K	4 3/8	3 3/8	3 3/8	5.14	6.50
6217	5-20	150	215	3000	K	2 3/8	2 3/8	2 1/4	2.8	4.30
6218	5-20	300	105	5000	L	4 3/8	3 1/2	4 1/4	5.12	9.25

CREST TRANSFORMER CORP.

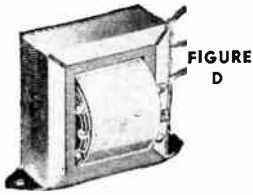


FIGURE D



FIGURE S

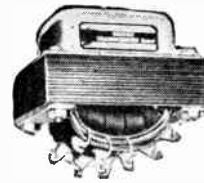


FIGURE H

POWER TRANSFORMERS — 115 VOLT PRI. — 60 CYCLE

Type No.	H. V. Load	A.C. Volts	Sec. D.C. M.A.	Rect. Fil.	Filament Windings		Fil. No. 1	Fil. No. 2	Mtg. Fig.	Mtg. Ctrs.	Mtg. Dimensions			Wt. in Ctns.	List Price
6600	650	40	5V-2A	6.3V-2A	C.T.	-----	-----	-----	K	2" x1 1/2"	2 1/2	2 5/8	3 1/8	2.8	\$5.25
6601	650	50	5V-2A	6.3V-3A	C.T.	-----	-----	-----	K	2" x1 3/4"	2 3/4	2 5/8	3 1/8	3.0	5.50
6602	700	70	5V-3A	6.3V-3.5A	C.T.	-----	-----	-----	K	2 1/2" x1 5/8"	3 1/8	3 3/8	3 7/8	4.2	6.75
6603	700	100	5V-3A	6.3V-4.5A	C.T.	-----	-----	-----	K	2 1/4" x1 7/8"	3 1/2	3 3/8	3 7/8	4.12	7.50
6604	700	120	5V-3A	6.3V-5A	C.T.	-----	-----	-----	K	2 1/2" x2 1/8"	3 5/8	3 3/8	3 7/8	5.7	7.75
6605	800	200	5V-4A	6.3V-6A	C.T.	-----	-----	-----	K	3" x2 3/4"	3 3/4	3 3/4	4 1/2	7.12	10.00
6606	860	325	5V-6A	6.3V-8A	C.T.	-----	-----	-----	K	3" x4 1/2"	5 5/8	3 3/4	4 1/2	14.7	16.00
6608	700	70	5V-3A	2.5V-9A	C.T.	-----	-----	-----	K	2 1/2" x1 5/8"	3 1/8	3 3/8	3 7/8	4.8	6.50
6609	700	120	5V-3A	2.5V-12.5A	C.T.	2.5V-3.5A	-----	-----	K	2 3/4" x2 1/8"	4	3 1/2	4 3/8	6.0	9.50

HALFSHELL TRANSFORMERS — 6.3 VOLTS — 115 VOLT PRI. — 60 CYCLE

Type No.	Load	H.V. Secondary Volt	D.C. M.A.	Rect. Fil.	Filament Windings		Fil. No. 1	Fil. No. 2	Mtg. Fig.	Mtg. Ctrs.	Mtg. Dimensions			Wt. in Ctns.	List Price
P-6413	650	-----	45	5V-2A	6.3V- 2A	C.T.	-----	-----	H	2" x2 1/2"	2 1/2"	x3"	1.14	\$3.90	
P-6414	675	-----	50	5V-2A	6.3V- 2A	C.T.	-----	-----	H	2" x2 1/2"	2 1/2"	x3"	2.14	4.65	
P-6415	700	-----	70	5V-3A	6.3V- 3.5A	C.T.	-----	-----	H	2 1/2" x3 1/8"	3 1/8"	x3 3/4"	3.11	5.95	
P-6416	700	-----	100	5V-3A	6.3V- 4A	C.T.	-----	-----	H	2 1/2" x3 1/8"	3 1/8"	x3 3/4"	4.11	6.50	
P-6426	700	-----	120	5V-3A	6.3V- 4A	C.T.	-----	-----	H	2 1/4" x3 1/8"	3 1/8"	x3 3/4"	4.9	6.80	
P-6420	675	-----	50	5V-2A	2.5V- 7.5A	C.T.	-----	-----	H	2" x2 1/2"	2 1/2"	x2"	2.5	4.60	
P-6421	700	-----	70	5V-3A	2.5V- 3.5A	C.T.	2.5A- 7.5A	-----	H	2 1/2" x3 1/8"	3 1/8"	x3 3/4"	3.12	5.45	
P-6422	700	-----	100	5V-3A	2.5V- 3.5A	C.T.	2.5A-10.5A	-----	H	2 3/4" x3 1/8"	3"	x4 1/8"	5.10	6.15	

UNIVERSAL POWER TRANSFORMERS — 115 VOLT PRI. — 60 CYCLE

P-6556	650	-----	45	5V-2A	6.3V- 2A	C.T.	-----	-----	P	2" x2 1/2"	2 1/2"	x3"	2.4	4.30
P-6557	700	-----	70	5V-3A	6.3V- 2.5A	C.T.	-----	-----	P	2 1/4" x2 7/8"	2 7/8"	x3 3/8"	3.4	5.30
P-6558	700	-----	90	5V-3A	6.3V- 3.5A	C.T.	-----	-----	P	2 1/4" x2 7/8"	2 7/8"	x3 3/8"	3.14	6.00
P-6559	700	-----	120	5V-3A	6.3V- 4.7A	C.T.	-----	-----	P	2 1/2" x3 1/8"	3 1/8"	x3 3/4"	4.14	7.00
P-6560	750	-----	150	5V-3A	6.3V- 4.7A	C.T.	-----	-----	P	2 3/4" x3 1/8"	3 7/8"	x4 1/8"	5.4	8.25
P-6550	650	-----	45	5V-2A	2.5V-3.75A	C.T.	-----	-----	P	2" x2 1/2"	2 1/2"	x3"	1.5	4.25
P-6552	700	-----	70	5V-3A	2.5V- 9A	C.T.	-----	-----	P	2 1/2" x2 7/8"	2 7/8"	x3 3/8"	2.8	5.60
P-6553	700	-----	90	5V-3A	2.5V-12.5A	C.T.	-----	-----	P	2 1/2" x3 1/8"	3 1/8"	x3 3/4"	3.8	6.40

LINE REGULATORS — STEP UP OR STEP DOWN — 50-60 CYCLE

5910	220-250	110-125	75	J	2 1/4" x1 3/8"	2 7/8	3	3 3/8	2.14	6.40
5911	220-250	110-125	100	J	2 1/4" x1 1/2"	2 7/8	3 1/8	3 3/8	3.3	7.20
5912	220-250	110-125	150	J	2 3/4" x1 1/2"	3 1/2	3 3/8	4 1/8	4.12	8.10

FILAMENT TRANSFORMERS — RATINGS GIVEN FOR CONTINUOUS DUTY

Type No.	Pri. Volts	Sec.		Sec. Volts Ins.	Mtg. Fig.	Mtg. Dimensions			Wt.	List Price
		Volts	Amps			W.	H.	D.		
F-6724	115	6.3 c.t.	1.5	1600	B	1 3/4	2	1 3/4	.10	\$1.95
F-6727	115	6.3 c.t.	3	1600	B	2 7/8	2 3/8	2 1/8	1.4	2.40
F-6728	115	6.3 c.t.	6	1600	N	2 1/2	3 1/4	2 1/4	2.4	3.90
F-6730	115	2.5 c.t.	5.25	1800	B	2 7/8	2 3/8	2 1/8	1.4	2.80
F-6732	115	2.5 c.t.	10	7500	N	3 3/4	4	3 1/4	2.6	4.20
F-6740	115	5 c.t.	5	1800	B	3 3/8	3 1/8	2 1/8	2.2	3.15
F-6750	115	7.5 c.t.	4	1800	N	2 1/2	3 1/4	2 1/4	2.4	3.60

DRIVER TRANSFORMERS

Type No.	Driver Tubes	Output Tubes	Class	Ratio Pri. to 1/2 Sec.	Pri. M.A.	Mtg. Fig.	Mtg. Ctrs.	Dimensions			Wt. in Ctns.	List Price
								W.	D.	H.		
6115	1-30, 49, 1-J6G	19, 2-30, 49	B	2.4:1	8	B	2"	2 3/8	1 5/8	1 7/8	.10	\$1.80
6116	1-6F6, 1-42, 1-2A5	2-6F6, 6L6, 6V6	AB	1.7:1 1.5:1 1.3:1	30	A	2 1/8"	3 1/4	1 1/2	2	.6	2.50
6117	1-6F6	2-6L6	AB2 B	1.4:1	40	K	2 1/4 x2"	3	3 1/8	3 1/2	2.2	5.50
6118	1-46, 59, 6F6	2-46, 59, 2-6L6	AB2	2.2:1	32	K	2x2 1/2"	2 5/8	2 1/2	3 1/8	2.2	3.80

MICROPHONE TRANSFORMERS — LINE TO GRID — LINE TO LINE

Type No.	Application	Pri. Ohms	Sec. Impedance	Turns Ratio	Mtg. Fig.	Mtg. Ctrs.	Dimensions			Wt.	List Price
							W.	D.	H.		
6100	S.B. Mic. to Single or P.P.	100	400000/C.T.	1:64	C	2 3/8"	2 7/8	1 5/8	1 5/8	.9	\$2.15
6105	D.B. Mike to Line	200/50	500/125	1:1.68	F	2 3/8"	2 7/8	2 7/8	2 3/8	1.8	4.20



TRANSFORMERS

for REPLACEMENT AND SPECIAL PURPOSE
OUTPUT, POWER, VIBRATOR, FILAMENT and OPERATION of
WAR SURPLUS EQUIPMENTS

OUTPUT TRANSFORMERS

RECEIVER REPLACEMENT TYPE

To couple the plate or plates of the output stage to the speaker voice coil. Sec. impedance—3.5 ohms

Type No.	List Price	Tube	Class	Pri. Impedance	Pri. M.A.	Max Watts	Mtg. Cntrs.	Mtg. Dimen.			Mtg.
								H.	W.	D.	
A-7001	\$1.25	Single 105-G, 105-G1, 1G5, 184, 304, 384, 6A4, 3Q5	A	8000	20	3	1 3/4"	1 1/2"	2 1/2"	1"	A
A-7003	1.50	Single 2A3, 6A3, 6B4, 6Y6, 25A5, 25B6, 25N6, 25L6, 35A5, 35L6, 50L6, 48, 50B5, 35B5, 50A5	A	2000	60	5	2"	1 3/8"	2 3/8"	1 3/4"	A
A-7007	1.55	Single 6V6, 7C5, 12A, 12A5, 25A6, 25A7, 35A5, 35L6, 31, 45, 50, 59	A	5000	40	5	2"	1 3/8"	2 3/8"	1 1/4"	A
A-7018	1.55	Single 2A5, 6A5, 6B5, 6F6, 6K6, 6N6, 7B5, 20, 31, 33, 42, 47, 50, 6V5	A	7000	30	5	2"	1 3/8"	2 3/8"	1 1/4"	A
A-7022	1.60	Single 105, 1Q5, 3C5, 6A4, 6B6, 6N7, 6R7, 12A, 38, 41, 49, 3V4	A	10000	30	5	2"	1 3/8"	2 3/8"	1 1/4"	A
A-7023	2.30	Single 19, 1G6, 1J6 PP 1H4, 30, 49	B	10000 c.t.	40	5	2"	1 3/8"	2 3/8"	1 1/4"	A
A-7029	2.30	PP 6V6, 7C5	AB-	10000 c.t.	40	10	2 3/8"	1 5/8"	2 13/16"	1 3/2"	A
A-7033	1.60	Single 1108, 7B5, 6K6, 6G6	A	12000	10	5	2"	1 3/8"	2 3/8"	1 1/4"	A
A-7041	1.60	Single 1D8, 1F4, 1F5, 1J5, 1T5, 6V7, 12A7, 85	A	15000	10	5	2"	1 3/8"	2 3/8"	1 1/4"	A
A-7047	1.70	Single 1A5, 1N6, 6V7, 85 PP 1E7, 1J5, 6G6, 3A4, 3V4	A	25000 c.t.	10	5	2"	1 3/8"	2 3/8"	1 1/4"	A

POWER TRANSFORMERS

Replacement Type Pri. 115 V. 60 Cycle. Leads RMA Color Coded

Type No.	List Price	H.V. Secondary		Rectifier		Fil. Wdgs.		Mtg. Centers	Mtg. Dimensions			Mtg.
		Volts	De.M.A.	Volts	Amp.	Volts	Amp.		H.	W.	D.	
P-6004	\$ 4.85	240 240	40	5	2	6.3 c.t.	2	2" x 2 1/2"	2 1/2"	3"	2 1/2"	C
P-6008	4.85	325 325	40	5	2	6.3 c.t.	2	2" x 2 1/2"	2 1/2"	3"	2 7/8"	C
P-6009	6.35	350 350	70	5	3	6.3 c.t.	2.5	2" x 2 1/2"	2 1/2"	3"	3 7/8"	C
P-6013	6.70	350 350	90	5	3	6.3 c.t.	3.5	2 1/2" x 2 1/2"	2 1/2"	3 3/8"	3 3/4"	C
P-6021	7.45	350 350	120	5	3	6.3 c.t.	4.7	2 1/2" x 3 1/2"	3 1/8"	3 3/4"	3 13/16"	C
P-6027	9.40	375 375	150	5	3	6.3 c.t.	5	2 1/2" x 3 1/2"	3 1/8"	3 3/4"	4 1/16"	C
P-6032	10.90	400 400	200	5	3	6.3 c.t.	5	3" x 3 3/4"	3 3/4"	4 1/2"	4"	C

FULLY SHIELDED UPRIGHT MOUNTING TYPE

P-6024	\$ 5.85	240 240	40	5	2	6.3 c.t.	2	2" x 1 11/16"	3 1/8"	2 5/8"	2 5/8"	B
P-6027	5.85	325 325	40	5	2	6.3 c.t.	2	2" x 1 7/8"	3 1/8"	2 5/8"	2 13/16"	B
P-6031	6.30	350 350	50	5	2	6.3 c.t.	2.6	2 1/2" x 1 7/8"	3 3/8"	2 5/8"	3 1/16"	B
P-6033	7.55	350 350	70	5	3	6.3 c.t.	3	2 1/2" x 1 13/16"	3 3/8"	3 3/8"	3 3/16"	B
P-6036	8.30	350 350	90	5	3	6.3 c.t.	3.5	2 3/4" x 2 1/2"	4 1/4"	3 3/8"	3 3/16"	B
P-6041	9.10	350 350	110	5	3	6.3 c.t.	4.5	3" x 2 1/2"	4 5/8"	3 3/8"	3 3/16"	B
P-6047	12.90	400 400	200	5	3	6.3 c.t.	5	3" x 3 1/2"	4 5/8"	3 3/8"	4 1/4"	B

VIBRATOR TRANSFORMERS

For Operation from 6 V. Battery and Vibrator

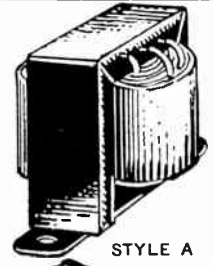
Type No.	List Price	Sec. DC Volts to Filter	Sec. M.A.	Mtg. Dimensions			Mtg.
				H.	W.	D.	
VP-6201	\$4.00	150	40	2 1/8"	2 7/8"	1 5/8"	D.
VP-6207	4.25	225	40	3 1/8"	2 1/2"	2 1/8"	E.
VP-6213	4.60	250	50	3 1/2"	2 1/2"	2 3/8"	E.
VP-6221	5.15	260	60	3 3/8"	2 1/2"	2 1/8"	E.

MULTI-USE FILAMENT TRANSFORMERS

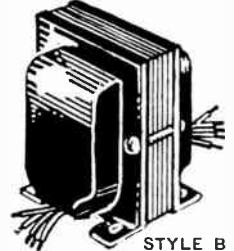
For Amplifier, Amateur, Industrial Use. Pri.: 115 Volts, 60 Cycles.
All windings center tapped except those marked *

Type No.	Use #1	Use #2	Use #3	Volt Insul.	Mtg.	Mtg. Dimensions			Ship. Wt.	List Price
						H.	W.	D.		
F5049	Two Sec. of 2.5 V. @ 2.5 A	5 V. @ 2.5 A	2.5 V. @ 5 A	2000	D	2 3/8"	2"	1 7/8"	3	\$2.95
F5050	Two Sec. of 2.5 V. @ 5 A	5 V. @ 2.5 A	2.5 V. @ 10 A	10000	E	3 1/8"	3 1/4"	3 1/4"	3	4.60
F5051	Two Sec. of 2.5 V. @ 5 A	5 V. @ 5 A	2.5 V. @ 10 A	2000	E	3 1/8"	2 1/2"	2 5/8"	3	4.00
F5052	Two Sec. of 2.5 V. @ 7.5 A	5 V. @ 7.5 A	2.5 V. @ 15 A	2000	D	3 1/8"	2 1/2"	2 1/2"	5	4.75
F5053	Two Sec. of 5 V. @ 3.25 A	10 V. @ 3.25 A	5 V. @ 6.5 A	2000	D	3 1/8"	2 1/2"	2 1/2"	5	4.25
F5054	Two Sec. of 5 V. @ 10 A	10 V. @ 10 A	5 V. @ 20 A	10000	E	4 3/8"	3 7/8"	3 1/8"	7	8.50
F5055	Two Sec. of 5 V. @ 10 A	10 V. @ 10 A	5 V. @ 20 A	2000	E	4 13/16"	3 3/8"	3 3/8"	7	7.50
F5056			6.3 V. @ 6 A	2000	D	1 5/8"	1 3/8"	1 1/2"	2	2.90
F5057			6.3 V. @ 1.2 A	2000	D	1 7/8"	1 5/8"	1 1/2"	2	3.15
F5057			6.3 V. @ 3 A	2000	D	2 1/8"	2"	1 7/8"	3	3.50
F5058	Two Sec. of 6.3 V. @ 1 A	12.6 V. @ 1 A	6.3 V. @ 2 A	2000	D	2 5/8"	2"	1 7/8"	3	3.50
F5006	Two Sec. of 6.3 V. @ 3 A	12.6 V. @ 3 A	6.3 V. @ 6 A	2000	D	3 1/8"	2 1/2"	2 1/2"	5	5.55
F5004	Two Sec. of 6.3 V. @ 6.5 A	12.6 V. @ 6.5 A	6.3 V. @ 13 A	2000	E	3 13/16"	3 1/8"	2 1/2"	6	7.75
F5059	Two Sec. of 7.5 V. @ 1.5 A	15 V. @ 1.5 A	7.5 V. @ 3 A	2000	D	2 3/8"	2 5/8"	2 1/2"	3	4.25
F5090	Two Sec. of 7.5 V. @ 2.3 A	15 V. @ 2.3 A	7.5 V. @ 4.6 A	2000	D	3 1/8"	2 1/2"	2 1/2"	5	5.25
F5061	Two Sec. of 11 V. @ 5 A	22 V. @ 5 A	11 V. @ 10 A	2000	E	3 13/16"	3 1/8"	3 1/8"	7	7.50
F5055*	Two Sec. of 12 V. @ 4 A	24 V. @ 4 A	12 V. @ 8 A	2000	E	3 13/16"	3 1/8"	2 1/2"	6	7.25
F5069*	One Sec. of 24 V. @ 3 A	War Surplus Equipment		2000	E	3 3/8"	3 3/8"	2 5/8"	2 1/2	6.50
F5075*	One Sec. of 24 V. @ 1 A	War Surplus Equipment		2000	D	2 3/4"	3 1/4"	2"	1 1/4	4.00

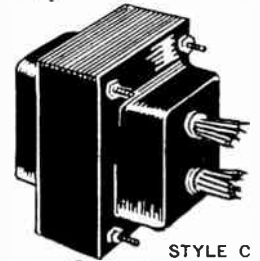
* Types F5004, F5005, F5006, F5069, and F5075 designed for operation of 12 and 24 volt War Surplus Equipment.



STYLE A



STYLE B



STYLE C



STYLE D



STYLE E



AUTO-TRANSFORMERS • ISOLATED PRIMARY TRANSFORMERS • METERED TRANSFORMERS

Adjust-A-Volt

VARIABLE TRANSFORMER

METERED MODELS



**TYPES
PA-CA-MA-NA**



**TYPE
LR**

AUTO-TRANSFORMER MODELS

Type	Code Word	Input Voltage	Output Voltage	Output Rated	Amperes Max.	Maximum Rating (V.A.)	Overall Dimensions	Shipping Weight for One Unit	Net Prices	Type
PA-5	PADRE	115	0-140	5.0	7.5	860	6 ³ / ₄ " x 9 ¹ / ₈ " x 5"	25 lbs.	\$23.50	PA-5
PA-10	PAMMY	115	0-140	10.0	15.0	1500	6 ³ / ₄ " x 9 ¹ / ₈ " x 7 ³ / ₄ "	37 lbs.	45.50	PA-10
CA-5	CADDY	115	0-280	2.5	3.5	430	6 ³ / ₄ " x 9 ¹ / ₈ " x 7 ³ / ₄ "	30 lbs.	27.50	CA-5
CA-10	CAMMY	115	0-280	5.0	7.5	860	6 ³ / ₄ " x 9 ¹ / ₈ " x 9 ⁵ / ₈ "	40 lbs.	52.50	CA-10
MA-5	MADRE	230	0-280	2.5	3.5	860	6 ³ / ₄ " x 9 ¹ / ₈ " x 7 ³ / ₄ "	30 lbs.	31.50	MA-5
MA-10	MAMMY	230	0-280	5.0	7.5	1500	6 ³ / ₄ " x 9 ¹ / ₈ " x 9 ⁵ / ₈ "	40 lbs.	52.50	MA-10
NA-5	NADDDY	230	0-140	5.0	7.5	860	6 ³ / ₄ " x 9 ¹ / ₈ " x 5"	27 lbs.	28.50	NA-5
NA-10	NAMMY	230	0-140	10.0	15.0	1500	6 ³ / ₄ " x 9 ¹ / ₈ " x 9 ⁵ / ₈ "	40 lbs.	55.50	NA-10

ISOLATION TRANSFORMER MODELS

ELECTROSTATICALLY SHIELDED

Type	Code Word	Input Voltage	Output Voltage	Output Rated	Amperes Max.	Maximum Rating (V.A.)	Overall Dimensions	Shipping Weight for One Unit	Net Prices	Type
LR-5	LARKE	115	70-140	5.0	5.0	500	6 ³ / ₄ " x 9 ¹ / ₈ " x 6 ⁷ / ₈ "	27 lbs.	\$29.50	LR-5
LR-10	LAMBE	115	70-140	10.0	10.0	1000	6 ³ / ₄ " x 9 ¹ / ₈ " x 11"	40 lbs.	57.50	LR-10
LR-22	LOOSE	230	70-140	5.0	5.0	500	6 ³ / ₄ " x 9 ¹ / ₈ " x 6 ⁷ / ₈ "	27 lbs.	31.50	LR-22
LR-24	LOOKE	230	70-140	10.0	10.0	1000	6 ³ / ₄ " x 9 ¹ / ₈ " x 11"	40 lbs.	61.50	LR-24

METERED AUTO-TRANSFORMER MODELS

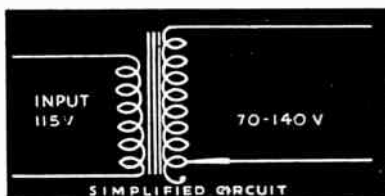
Type	Code Word	Input Voltage	Output Voltage	Output Rated	Amperes Max.	Maximum Rating (V.A.)	Overall Dimensions	Shipping Weight for One Unit	Net Prices	Type
PAL-5	PALLE	115	0-140	5.0	7.5	860	6 ³ / ₄ " x 9 ¹ / ₈ " x 6 ⁷ / ₈ "	27 lbs.	\$35.50	PAL-5
PAL-10	LALLE	115	0-140	10.0	15.0	1500	6 ³ / ₄ " x 9 ¹ / ₈ " x 9 ⁵ / ₈ "	39 lbs.	57.50	PAL-10
CAL-5	MALLE	115	0-280	2.5	3.5	430	6 ³ / ₄ " x 9 ¹ / ₈ " x 9 ⁵ / ₈ "	32 lbs.	38.50	CAL-5
CAL-10	NALLE	115	0-280	5.0	7.5	860	6 ³ / ₄ " x 9 ¹ / ₈ " x 11"	42 lbs.	64.50	CAL-10
NAL-5	QALLE	230	0-280	2.5	3.5	860	6 ³ / ₄ " x 9 ¹ / ₈ " x 9 ⁵ / ₈ "	32 lbs.	43.50	MAL-5
MAL-10	RALLE	230	0-280	5.0	7.5	1500	6 ³ / ₄ " x 9 ¹ / ₈ " x 11"	42 lbs.	64.50	MAL-10
NAL-5	TALLE	230	0-140	5.0	7.5	860	6 ³ / ₄ " x 9 ¹ / ₈ " x 7 ³ / ₄ "	29 lbs.	40.50	NAL-5
NAL-10	SALLE	230	0-140	10.0	15.0	1500	6 ³ / ₄ " x 9 ¹ / ₈ " x 11"	42 lbs.	67.50	NAL-10

METERED ISOLATION TRANSFORMER MODELS

ELECTROSTATICALLY SHIELDED

Type	Code Word	Input Voltage	Output Voltage	Output Rated	Amperes Max.	Maximum Rating (V.A.)	Overall Dimensions	Shipping Weight for One Unit	Net Prices	Type
LRL-5	BARKE	115	0-140	5.0	5.0	500	6 ³ / ₄ " x 9 ¹ / ₈ " x 6 ⁷ / ₈ "	29 lbs.	\$41.50	LRL-5
LRL-10	BAMBE	115	0-140	10.0	10.0	1000	6 ³ / ₄ " x 9 ¹ / ₈ " x 11"	42 lbs.	69.50	LRL-10
LRL-22	BOOSE	230	0-140	5.0	5.0	500	6 ³ / ₄ " x 9 ¹ / ₈ " x 6 ⁷ / ₈ "	29 lbs.	43.50	LRL-22
LRL-24	BOOKE	230	0-140	10.0	10.0	1000	6 ³ / ₄ " x 9 ¹ / ₈ " x 11"	42 lbs.	73.50	LRL-24

ISOLATED TRANSFORMER

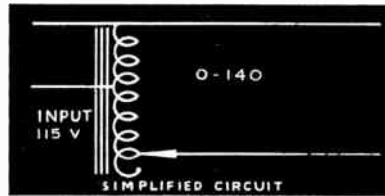


**LR and LRL* MODELS
* 0-140 volts**

SMOOTH, CONSTANT CONTROL IN 4/10 VOLT STEPS. CONSERVATIVE RATINGS. PROVIDES CONTROL OF VOLTAGE TO REGULATE A.C. LINES • POWER • HEAT • LIGHT AND SPEED.

ALL MODELS FINISHED IN BLACK WRINKLE BAKED ENAMEL.

AUTO-TRANSFORMER



**PA-CA-MA-NA-PAL-CAL-
CAL-NAL MODELS**

MANUFACTURED UNDER U. S. PATENT 2,009,013 AND OTHER PATENTS PENDING



TRANSFORMERS

STEP

DOWN

STEP

UP

ISOLATION AND LINE CORRECTION

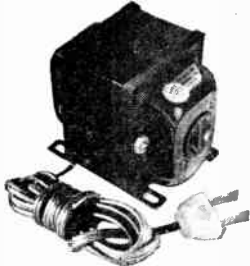


FIG. 1



FIG. 2

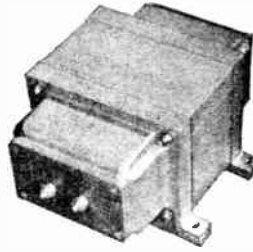


FIG. 3



FIG. 4

STEP-DOWN AUTOTRANSFORMERS

Input 220-240 V. 60 cy. Output 115 V. Pri. Cord and Plug Sec. Receptacle

Cat. No.	Code	Mount Fig. No.	Capacity Watts	Input, Volts	Output, Volts	Cycles	Dimensions in Inches			Net Wt. in Lbs.	List Price	Cat. No.
							H.	W.	D.			
SB-0075	STEBA	1	75	200-240	115	50-60	3 1/8"	2 5/8"	3 3/4"	3 1/2	\$ 7.00	SB-0075
SB-0150	STECA	1	150	200-240	115	50-60	3 7/8"	3 1/4"	3 5/8"	4 1/2	9.25	SB-0150
SB-0250	STEDA	1	250	200-240*	115	50-60	4 3/8"	3 7/8"	4 3/8"	5 1/2	13.50	SB-0250
SB-0500	STEFA	1	500	200-240*	115	50-60	4 3/4"	3 3/8"	6 1/8"	12 1/2	22.50	SB-0500
SB-1000	STEGA	3	1000	200-240*	115	50-60	4 7/8"	7 1/4"	9"	22 1/2	38.50	SB-1000
SB-2000	STELA	3	2000	200-240*	115	50-60	5 1/4"	8 5/8"	11 1/4"	40 1/2	61.00	SB-2000

* These models have primary taps of 200, 220, 240 Volts. Simply remove cover plate (see Figure 2) and connect to required taps.

LINE CORRECTION STEP-UP AUTOTRANSFORMERS

Models SU 100, 105 Volt. Input. Models RU 200/210 Volt Input
All SU Models Boost Input 10 Volts. All RU Models Boost Input 20 Volts.

Model	Code	Mount Fig. No.	Capacity Watts	Input, Volts	Output, Volts	Cycles	H.	W.	D.	Net Wt. in Lbs.	List Price	Cat. No.
SU-0100	SUBAT	1	100	100-110	110-120	50-60	3 1/8"	2 5/8"	2 7/8"	2 3/4	\$ 5.15	SU-0100
SU-0250	SUCAT	1	250	100-110	110-120	50-60	3 1/8"	2 5/8"	3 3/8"	3 1/2	7.35	SU-0250
SU-0500	SUDAT	1	500	100-110	110-120	50-60	3 7/8"	3 1/4"	3 1/2"	4 1/2	8.85	SU-0500
SU-1000	SUFAT	1	1000	100-110	110-120	50-60	4 5/8"	3 7/8"	4 1/8"	5 1/2	17.65	SU-1000
SU-2000	SUGAT	1	2000	100-110	110-120	50-60	4 5/8"	3 7/8"	5 5/8"	14 1/2	35.40	SU-2000
RU-0100	SREBA	1	100	200-210	220-230	50-60	3 1/8"	2 5/8"	2 7/8"	2 3/4	5.15	RU-0100
RU-0250	SRECA	1	250	200-210	220-230	50-60	3 1/8"	2 5/8"	3 3/8"	3 1/2	7.35	RU-0250
RU-0500	SREDA	1	500	200-210	220-230	50-60	3 7/8"	3 1/4"	3 1/2"	4 1/2	8.85	RU-0500
RU-1000	SREFA	1	1000	200-210	220-230	50-60	4 5/8"	3 7/8"	4 1/8"	5 1/2	17.65	RU-1000
RU-2000	SREGA	1	2000	200-210	220-230	50-60	4 5/8"	3 7/8"	5 5/8"	14 1/2	35.40	RU-2000

ISOLATION TRANSFORMERS

All Models 115 V. Input. 115 V. Output. Electrostatically Shielded.

Model	Code	Mount Fig. No.	Capacity Watts	Input, Volts	Output, Volts	Cycles	H.	W.	D.	Net Wt. in Lbs.	List Price	Cat. No.
SI-050	SICAR	1	50	115	115	50-60	3 1/8"	2 7/8"	3"	4 1/2	\$ 7.50	SI-050
SI-100	SICER	1	100	115	115	50-60	3 23/32"	3 5/8"	3 5/8"	7 1/4	14.50	SI-100
SI-250	SICOR	1	250	115	115	50-60	4 3/4"	3 7/8"	5 1/8"	14 1/2	27.50	SI-250

LINE VOLTAGE ADJUSTORS, METERED

B Position Rotary Switch Corrects Low or High Line to 115 V. from 85-95-105-115-125-135 V-AUTOTRANSFORMER

Model	Code	Mount Fig. No.	Capacity Watts	Input, Volts	Output, Volts	Cycles	H.	W.	D.	Net Wt. in Lbs.	List Price	Cat. No.
LC-150	LABAD	4	150	85-135	115	50-60	6 1/2"	4 3/8"	5"	7 3/4	\$24.75	LC-150
LC-350	LAFAD	4	350	85-135	115	50-60	6 1/2"	4 3/8"	5"	10 3/4	31.50	LC-350
LC-500	LAJAD	4	500	85-135	115	50-60	6 1/2"	4 3/8"	5"	11 1/2	37.50	LC-500

STACO Transformers are compact and modern in design. Only the highest quality silicon lamination steel is used which assures cool operating transformers. Each coil is layer wound with the best quality enameled wires, each layer is insulated with heavy insulating material, each coil is varnished impregnated and high temperature baked. High Voltage Breakdown Test is performed on each coil and transformer in accordance with existing RMA Specs. This combination of high quality materials plus the finest workmanship is assurance of better and lasting performance at highest operating efficiency, yet costs no more than average.

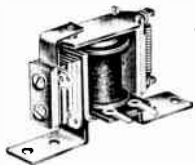
Finishes: Mount type #1, Black baked enamel, Mount type #2, Black baked enamel, Mount type #3, Natural Buffed Aluminum, Mount type #4, Black Wrinkle baked enamel.



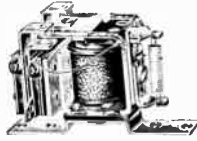
RELAYS FOR AMATEUR AND INDUSTRIAL USES



MINIATURE RELAYS



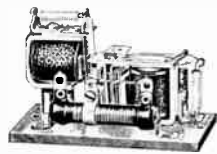
These units are very compact and are especially designed for plate circuit and general purpose control application. Overall dimensions: MR 1 7/8" x 1 3/8" x 7/8"—MRD 1 7/8" x 1 3/8" x 1 1/4". Contacts are fine silver rated 5 amps at 115 V. All AC relays are free from hum and AC chatter. The MR-2 and MRD-2 have 2500 ohm coil, will pick up at 6 ma. and 12 ma. respectively. The MR-5 and MRD-5 have 5000 ohm coils, will pick up at 3 ma. and 7.5 ma. respectively. The drop out value of these relays is approximately 50% of the pick up value.



MRD

Type	A.C.	D.C.	Contacts	Net Prices
MR-2		Plate Circuit	SPDT	\$1.50
MR-5		Plate Circuit	SPDT	2.10
MR-6		6 V.	SPDT	1.50
MR-7	6 V.		SPDT	1.59
MR-11	110 V.		SPDT	1.59
MRD-2		Plate Circuit	DPDT	2.70
MRD-5		Plate Circuit	DPDT	3.60
MRD-6		6 V.	DPDT	2.70
MRD-7	6 V.		DPDT	3.00
MRD-11	110 V.		DPDT	3.00

OVERLOAD RELAYS



Adjustable overload relays provide accurate and positive protection against current surges and continuous overloads. Contact arrangements SPDT using 3/16" fine silver contacts. This allows the use of either audible or visual signal to aid in the electrical reset type which allows remote control resetting of the relay. Size—3 3/4" x 2" x 1 1/2".

Type	Current Range	Reset Coil	Net Prices
OA-2	250 500 ma.	110 V. A.C.	\$4.50
OA-5	500 1000 ma.	110 V. A.C.	4.50
OC-2	250 500 ma.	6 V. A.C.	4.50
OC-5	500 1000 ma.	6 V. A.C.	4.50
OD-2	250 500 ma.	6 V. D.C.	4.50
OD-5	500 1000 ma.	6 V. D.C.	4.50

LATCHING RELAYS

These relays are employed where it is not desirable to have current continuously on the coil. The latching arrangement is such that when the relay coil is energized the armature closes and locks in a closed position by mechanical latching. An electrical impulse on the reset coil releases the armature from the latch and allows the relay to assume its initial position. 3/16" fine silver contacts. Bakelite Base. Size—3 3/4" x 2" x 3/4".



Type	Reset Coil	Pull-in Coil	Net Prices
LEA	110 Volts A.C.	110 Volts A.C.	\$3.75
LEA-6	6 Volts A.C.	6 Volts A.C.	3.75
LED	6 Volts D.C.	6 Volts D.C.	3.75

COMMUNICATION RELAYS

Ideally suited for use in telephone, remote control, signaling, communications circuits etc. High speed operation plus high sensitivity with high contact pressure. Contacts will handle 4 amps at 115 V. non-inductive load. Each relay has one make and one break contact sets. Size—3 3/4" x 1 3/16" x 1 1/8".



Type	Res. of Coil Ohms	Volts Pick-up	M.A. Pick-up	Net Prices
T10G	10,000	31	3.2	\$3.30
T63F	6,300	24	4.0	3.30
T40F	4,000	19	5.0	3.15
T10F	1,000	10	10.0	2.85
T25E	250	5	20.0	2.55

ANTENNA CHANGE-OVER

Mycalex Insulation is satisfactory for operation up to 60 MC. Triple-X insulation for operation up to 15 MC. All models use 3/16" fine silver wiping action contacts rated at 4 amps. These relays are designed with ball-bearing armature pivot and have large contact spacing to assure minimum capacity between contact arms. The armature is designed so as to eliminate AC chatter. Size—3 1/4" x 3 1/8" x 2 3/16".

Type	Insulation	Coil Voltage	Net Prices
ABA	TRIPLE-X	110 V. A.C.	\$3.00
ABD	TRIPLE-X	6 V. D.C.	3.00
AMA	MYCALEX	110 V. A.C.	4.00
AMD	MYCALEX	6 V. D.C.	4.00



BREAK-IN RELAYS

Same type of relay as above only two additional poles are added, one normally open, one normally closed. This arrangement is perfect for PUSH-TO-TALK control. Contacts etc. identical with Antenna-Change-Over Relay. Size—4 1/2" x 3 3/8" x 2 3/16".



Type	Insulation	Coil Voltage	Net Prices
BBA	TRIPLE-X	110 V. A.C.	\$4.20
BBD	TRIPLE-X	6 V. D.C.	4.20
BMA	MYCALEX	110 V. A.C.	6.00
BMD	MYCALEX	6 V. D.C.	6.00

R.F. AND GENERAL PURPOSE RELAY

An excellent relay for R.F. or high voltage remote control. Contacts are 3/16" fine silver rated 4 amps. Designed with extremely short R.F. path. Ball-bearing armature pivot. All metal parts cadmium plated. RB Series are TRIPLE-X insulated for frequencies up to 15 MC., RM series are MYCALEX insulated for frequencies up to 60 MC. Size—2 1/4" x 3 3/8" x 2 3/16".



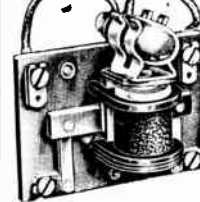
Type	Insulation	Contact Combination	Coil Voltage	Net Prices
RBA-1	TRIPLE-X	SPST (dble-break)	110 V. A.C.	\$2.10
RBD-1	TRIPLE-X	SPST (dble-break)	6 V. D.C.	2.10
RMA-1	MYCALEX	SPST (dble-break)	110 V. A.C.	2.55
RMD-1	MYCALEX	SPST (dble-break)	6 V. D.C.	2.55
RBA-2	TRIPLE-X	DPST (sngle-break)	110 V. A.C.	2.25
RBD-2	TRIPLE-X	DPST (sngle-break)	6 V. D.C.	2.25
RMA-2	MYCALEX	DPST (sngle-break)	110 V. A.C.	3.00
RMD-2	MYCALEX	DPST (sngle-break)	6 V. D.C.	3.00

KEYING RELAY

Same specifications as RB Series except that the coil and return spring are faster acting. Follows a "Bug" with ease.

Type	Coil Voltage	Contacts	Net Prices
KBA	110 V. A.C.	SPST (double-break)	\$2.10
KBD	6 V. D.C.	SPST (double-break)	2.10
KBA-6	6 V. A.C.	SPST (double-break)	2.10

MERCURY-SWITCH RELAY

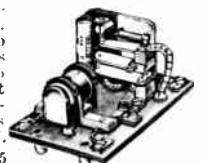


This type relay is used for controlling inductive loads and may be safely used in the presence of explosive dust, gas and vapor. This unit will safely handle a 1/4 H.P. motor or its equivalent. This single pole single throw mercury relay can easily be changed from normally open to normally closed by reversing the mercury tube in the clip. In addition this relay is equipped with SPST double break 3/16" fine silver contact sets which can be used to electrically lock this relay, or other applications. Mounts vertically with adjusting screws. Size—3 3/8" x 2 5/8".

Type	Coil Voltage	Net Prices
MSA	110 V. A.C.	\$3.75
MSA-6	6 V. A.C.	3.75
MSD-6	6 V. D.C.	3.75

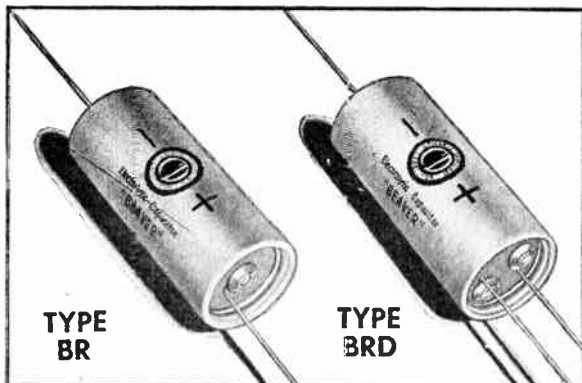
TIME-DELAY RELAY

Low cost Thermostatic Time delay relays designed for transmitting and industrial use. Prevents damage to tube filaments due to application of plate current before filaments are thoroughly heated. TD-11 is equipped so that it automatically compensates for ambient temperature changes. Time delay can be adjusted by means of screwdriver. Stock models are 110 V. A.C. Size—3 1/8" x 3 1/8" x 2 3/16". TD-11 (10-60 Sec.)—With compensator Net \$4.75





TUBULAR CAN-TYPE DRY ELECTROLYTIC CAPACITORS



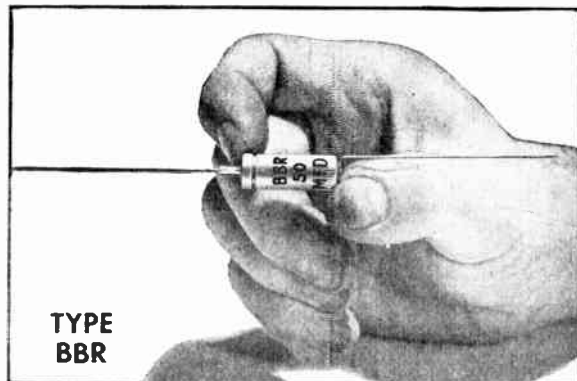
"BLUE BEAVER"* CAPACITORS

Types BR and BRD "Blue Beavers" are the most popular electrolytic capacitors employed for all applications where units are required for convenient mounting in small spaces beneath a chassis or connected directly in the wiring assembly. They are small in physical size and self-supporting by means of strong, bare tinned-copper wire leads, while the larger sizes may be mounted with a metal strap.

Type BR capacitors employ seamless, drawn aluminum can construction encased in a tightly fitted insulated cardboard tube sleeve. A bare tinned-copper wire lead is riveted to the bottom of the can for negative connection while the positive terminal lead is riveted in the center of an insulated disc cover at the opposite end. Polarity of all units is clearly indicated on the cardboard tube casing.

Cat. No.	Cap. Mid.	Size—Inches Diam. x Length	List Price	Net Price
25 V. D.C.				
BR 102A	10	5/8 x 1 1/16	\$0.75	\$0.45
BR 202A	20	5/8 x 1 1/16	.80	.48
BR 252A	25	5/8 x 1 1/16	.85	.51
BR 502	50	5/8 x 1 1/16	.95	.57
50 V. D.C.				
BR 550	5	5/8 x 1 1/16	.75	.45
BR 105	10	5/8 x 1 1/16	.80	.48
BR 205	20	5/8 x 1 1/16	.85	.51
BR 255	25	5/8 x 1 1/16	.90	.54
BR 505	50	5/8 x 1 1/16	1.05	.63
150 V. D.C.				
BR 415	4	5/8 x 1 1/16	.75	.45
BR 815	8	5/8 x 1 1/16	.80	.48
BR 1215	12	5/8 x 1 1/16	.85	.51
BR 1615	16	5/8 x 1 1/16	.90	.54
BR 2015	20	5/8 x 1 1/16	.95	.57
BR 3015	30	3/4 x 2	1.00	.60
BR 4015	40	3/4 x 2	1.10	.66
BR 5015	50	3/4 x 2	1.20	.72
BR 8015	80	7/8 x 2 1/2	1.45	.87
250 V. D.C.				
BR 425	4	5/8 x 1 1/16	.80	.48
BR 825	8	5/8 x 1 1/16	.80	.48
BR 1225	12	5/8 x 2	1.00	.60
BR 1625	16	5/8 x 1 1/16	1.10	.66
BR 2025	20	5/8 x 1 1/16	1.20	.72
BR 4025	40	3/4 x 2 1/2	1.40	.84
350 V. D.C.				
BR 435	4	5/8 x 1 1/16	.85	.51
BR 835	8	5/8 x 1 1/16	.90	.54
BR 1235	12	5/8 x 2	1.05	.63
BR 1635	16	5/8 x 1 1/16	1.20	.72
450 V. D.C.				
BR 145	1	5/8 x 1 1/16	.80	.48
BR 245	2	5/8 x 1 1/16	.85	.51
BR 445	4	5/8 x 1 1/16	.90	.54
BR 845	8	5/8 x 1 1/16	.95	.57
BR 1045	10	5/8 x 2	1.05	.63
BR 1245	12	5/8 x 2	1.15	.69
BR 1645	16	5/8 x 2	1.35	.81
BR 2045	20	1 x 2	1.50	.90
BR 3045	30	1 x 2 1/2	1.65	.99
BR 4045	40	1 x 3	2.00	1.20
500 V. D.C.				
BR 850	8	7/8 x 1 1/16	1.30	.78
BR 1650	16	1 x 2 1/2	2.00	1.20

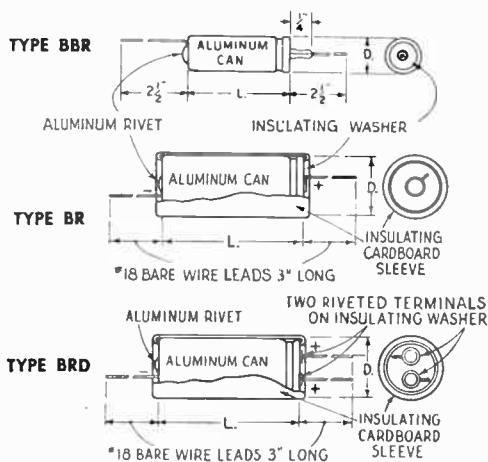
For cardboard tube electrolytic units, see page 6.
* Reg. U. S. Pat. Off.



MINIATURE TUBULAR CAPACITORS

Type BBR "baby BR-type capacitors" are designed for use in compact apparatus such as hearing aids, pocket radios and other small assemblies. They are hermetically sealed in tubular aluminum containers and ideally suited to meet requirements in low voltage circuits.

Cat. No.	Cap. Mid.	D.C. W. Volts	Size—Ins. Dia. x Lth.	List Price	Net Price
BBR 50-3	50	3	3/8 x 1 1/16	\$1.00	\$.60
BBR 25-3	25	3	3/8 x 1 1/16	1.00	.60
BBR 50-6	50	6	3/8 x 1 1/16	1.00	.60
BBR 25-6	25	6	3/8 x 1 1/16	1.00	.60
BBR 5-6	5	6	3/8 x 1 1/16	1.00	.60
BBR 20-25	20	25	3/8 x 1 1/16	1.00	.60
BBR 10-25	10	25	3/8 x 1 1/16	1.00	.60
BBR 10-50	10	50	3/8 x 1 1/16	1.00	.60
BBR 5-50	5	50	3/8 x 1 1/16	1.00	.60
BBR 10-90	10	90	1/2 x 1 1/16	1.00	.60
BBR 16-90	16	90	1/2 x 1 1/16	1.00	.60

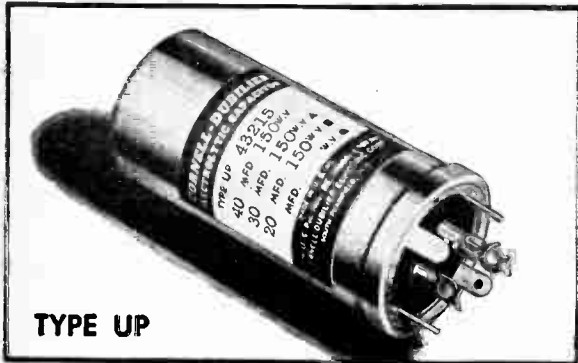


Cat. No.	Cap. Mid.	D.C. W. Volts	Size—Ins. Dia. x Lth.	List Price	Net Price
BRD 202A†	20-20	25	3/4 x 1 1/4	\$1.10	\$.66
BRD 2215	20-20	150	3/8 x 1 1/16	1.30	.78
BRD 3315	30-30	150	1 x 2	1.50	.90
BRD 3515	30-50	150	1 x 2 1/2	1.70	1.02
BRD 4215	40-20	150	1 x 2	1.50	.90
BRD 4415	40-40	150	1 x 2 1/2	1.70	1.02
BRD 2225	20-20	250	1 x 2	1.80	1.08
BRD 2235	20-20	350	1 x 3	2.10	1.26
BRD 1145	10-10	450	1 x 2 1/2	1.85	1.11
BRD 1845	18-18	450	1 x 3	2.35	1.41

† Provided with positive lead at both ends and common negative mounting strap on can.



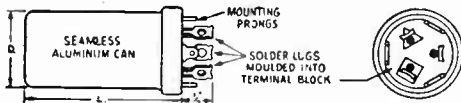
PRONG-BASE DRY ELECTROLYTIC CAPACITORS



TYPE UP

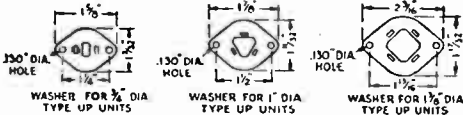
PRONG-BASE TYPE CAPACITORS

Type UP capacitors are small, conveniently-mounted, round can-type electrolytic units furnished with bakelite and metal mounting washers. Terminals are tinned for soldering.



TYPE UP

METAL WASHER - .025\"/>



DIMENSIONS OF METAL AND BAKELITE MOUNTING WASHERS

New Cat. No.	Old Cat. No.	Cap. Mfd.	D.C. W. Volts	Size—In. D. x L.	List Price	Net Price
UP 1M-15		1000	15	1 x 3	\$3.25	\$1.95
UP 2M-15		2000	15	1 1/2 x 3	4.70	2.82
UP 40-25	UP 1AJ22	40	25	1 3/4 x 2	1.10	.66
UP 100-25	UP 4AJ23	100	25	1 1/2 x 2	1.45	.87
UP 500-25		500	25	1 x 3	2.45	1.47
UP 1M-25		1000	25	1 1/2 x 2 1/2	3.55	2.13
UP 3015	UP 1AJ24	30	150	1 3/4 x 2	1.25	.75
UP 5015	UP 4AJ25	50	150	1 1/2 x 2	1.45	.87
UP 8015		80	150	1 x 2	1.75	1.05
UP 2025	UP 1AJ26	20	250	1 3/4 x 2	1.45	.87
UP 3025	UP 4AJ10	30	250	1 1/2 x 2	1.55	.93
UP 4025	UP 4AJ27	40	250	1 x 2	1.70	1.02
UP 1535		15	350	1 x 2	1.45	.87
UP 3035		30	350	1 x 2	1.70	1.02
UP 5035	UP 6AJ30	50	350	1 1/2 x 3	2.05	1.23
UP 12535	UP 9AJ31	125	350	1 3/4 x 3	3.55	2.13
UP 8040	UP 9AJ32	80	400	1 3/8 x 3	3.85	2.31
UP 1045	UP 1045	10	450	1 x 2	1.30	.78
UP 1545	UP 4AJ18	15	450	1 x 2	1.55	.93
UP 2045	UP 2045	20	450	1 x 2	1.75	1.05
UP 3045		30	450	1 x 3	1.90	1.14
UP 4045	UP 4045	40	450	1 x 3	2.25	1.35
UP 8045		80	450	1 3/8 x 3	3.85	2.31
UP 1050		10	500	1 x 2	1.75	1.05
UP 2050		20	500	1 x 2 1/2	2.65	1.59
UP 3050		30	500	1 x 3	3.50	2.10

Dual Section Units

UP	UP	UP	UP	UP	UP	UP	UP
UP 11M-15		1000-1000	15	1 3/8 x 3	\$4.95	\$2.97	
UP 44-25		40-40	25	1 x 2	1.50	.90	
UP 4015C	UP 4BJ33	40-20	150/25	1 x 2	1.65	.99	
UP 1045C		10-20	450/25	1 x 2	1.95	1.17	
UP 2045C		20-20	450/25	1 x 2	2.00	1.20	
UP 4045C		40-20	450/25	1 x 3	2.10	1.26	
UP 2215	UP 2215	20-20	150	1 x 2	1.55	.93	
UP 1115		10-10	150	1 x 2	1.45	.87	
UP 3215		30-20	150	1 x 2	1.65	.99	
UP 3315	UP 3315	30-30	150	1 x 2	1.75	1.05	
UP 4215		40-20	150	1 x 2	1.75	1.05	
UP 4315		40-30	150	1 x 2	1.85	1.11	
UP 5315		50-30	150	1 x 2	1.95	1.17	
UP 4415		40-40	150	1 x 2	1.95	1.17	
UP 5515	UP 6BJ34	50-50	150	1 x 3	2.10	1.26	
UP 8415		80-40	150	1 x 3	2.25	1.35	
UP 2225		20-20	250	1 x 2	1.75	1.05	
UP 3325		30-30	250	1 x 3	2.05	1.23	
UP 15D35		15-15	350	1 x 2	2.10	1.26	

Dual Section Units

New Cat. No.	Old Cat. No.	Cap. Mfd.	D.C. W. Volts	Size—In. D. x L.	List Price	Net Price
UP 2235		20-20	350	1 x 3	\$2.20	\$1.41
UP 1145	UP 1145	10-10	450	1 x 2	2.10	1.26
UP 15D45		15-15	450	1 x 3	2.30	1.38
UP 2145		20-10	450	1 x 3	2.35	1.41
UP 2245	UP 6BJ38	20-20	450	1 x 3	2.65	1.59
UP 3345		30-30	450	1 3/8 x 3	3.25	1.95
UP 4245		40-20	450	1 3/8 x 3	3.25	1.95
UP 4445	UP 9BJ39	40-40	450	1 3/8 x 3	4.00	2.40
UP 8140	UP 9BJ40	80-10	400	1 3/8 x 3	4.00	2.40
UP 2250		20-20	500	1 3/8 x 2 1/2	4.15	2.49

Triple Section Units

UP	UP	UP	UP	UP	UP	UP	UP
UP 2215C		20-20/20	150/25	1 x 2	\$2.00	\$1.20	
UP 4215C		40-20/20	150/25	1 x 2	2.20	1.32	
UP 4415C		40-40/20	150/25	1 x 2	2.40	1.44	
UP 5515C	UP 6CJ41	50-50/20	150/25	1 x 3	2.55	1.53	
UP 15D25C	UP 4CJ3	15-15/20	250/25	1 x 2	2.45	1.47	
UP 3325C	UP 6CJ21	30-30/20	250/25	1 x 3	2.70	1.62	
UP 1135C	UP 4CJ5	10-10/20	350/25	1 x 2	2.30	1.38	
UP 2235C		20-20/20	350/25	1 x 3	2.80	1.68	
UP 1145C	UP 6CJ12	10-10/20	450/25	1 x 2	2.35	1.41	
UP 2245C		20-20/20	450/25	1 x 3	2.95	1.77	
UP 4445C		40-40/20	450/25	1 3/8 x 3	4.45	2.67	
UP 222-25	UP 4CJ43	20-20-20	25	1 x 2	2.00	1.20	
UP 444-25		40-40-40	25	1 x 2	2.25	1.33	
UP 42215	UP 4CJ1	20-20-20	150	1 x 2	2.30	1.38	
UP 42215		40-20-20	150	1 x 2	2.40	1.44	
UP 43215		40-30-20	150	1 x 3	2.45	1.47	
UP 44415	UP 6CJ44	40-40-40	150	1 x 3	2.65	1.59	
UP 64215		60-40-20	150	1 x 3	2.65	1.59	
UP 84215		80-40-20	150	1 x 3	2.80	1.68	
UP 11135		10-10-10	350	1 x 2	2.30	1.38	
UP 22135		20-20-10	350	1 x 3	2.45	1.47	
UP 11145	UP 6CJ18	10-10-10	450	1 x 3	2.50	1.50	
UP 15D145	UP 6CJ47	15-15-10	450	1 x 3	3.05	1.83	

Quadruple Section Units

UP	UP	UP	UP	UP	UP	UP	UP
UP 44315C	UP 7DJ19	40-40-30/20	150/25	1 3/8 x 2	\$3.10	\$1.86	
UP 55515C	UP 9DJ48	50-50-50/20	150/25	1 3/8 x 2	3.40	2.04	
UP 11145C	UP 7DJ51	10-10-10/20	450/25	1 3/8 x 2	3.05	1.83	
UP 2245CC		20-20/20-20	450/25	1 3/8 x 2	3.55	2.13	
UP 4315C	UP 9DJ53	40-30-10/20	450/25	1 3/8 x 3	4.15	2.49	
UP 11145	UP 7DJ54	10-10-10-10	450	1 3/8 x 2	3.25	1.95	
UP 22245	UP 9DJ56	20-20-20-20	450	1 3/8 x 3	4.50	2.70	
UP 22245C		20-20-20/20	450/25	1 3/8 x 3	3.95	2.37	

Special Triple Section Units

Cat. No.	Cap. Mfd.	D.C. W. Volts	Size—In. D. x L.	List Price	Net Price
UP 4CJ65	40-20/100	150/25	1 x 2	\$3.00	\$1.80
UP 6CJ64	50-30/100	150/25	1 x 3	3.25	1.95
UP 4CJ58	20-20/100	150/6	1 x 2	2.60	1.56
UP 4CJ59	40-20/100	150/6	1 x 2	2.70	1.62
UP 4CJ60	20-20/250	150/6	1 x 2	2.70	1.62
UP 4CJ61	40-20/250	150/6	1 x 2	2.80	1.68
UP 4CJ62	40-20/100	150/12	1 x 2	2.80	1.68
UP 6CJ20	20/15-10	450/300	1 x 3	2.85	1.71
UP 6CJ17	15/20-20	450/350/250	1 x 3	2.95	1.77

Special Quadruple Section Units

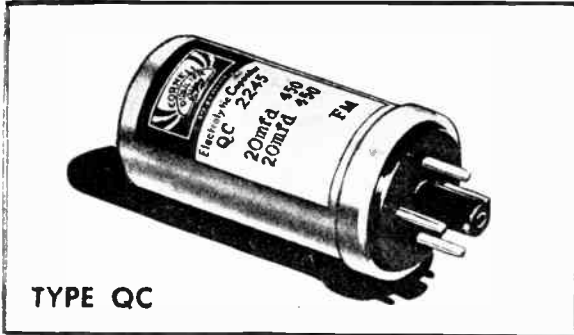
UP	UP	UP	UP	UP	UP
UP 7DJ63	40-40-40/100	150/25	1 3/8 x 2	\$3.85	\$2.31
UP 9DJ50	20/15-15/20	450/350/25	1 3/8 x 3	3.60	2.16
UP 9DJ55	20-20/30-30	450/300	1 3/8 x 3	4.35	2.61

Hardware For Type UP Capacitors

Cat. No.	Item	Description	List Price	Net Price
22272	Wrench for	Mtg. UP Units	\$1.13	\$0.67
19891	Bakelite Washer	For 3/8\"/>		
19884	Bakelite Washer	For 1/2\"/>		
19888	Bakelite Washer	For 1 3/8\"/>		
19890	Metal Washer	For 3/8\"/>		
19883	Metal Washer	For 1/2\"/>		
19887	Metal Washer	For 1 3/8\"/>		
21368-1	Mounting Clip	For 3/8\"/>		
21368-2	Mounting Clip	For 1/2\"/>		
21368-3	Mounting Clip	For 1 3/8\"/>		
22153-1	Insulating Tube	For 3/4 x 2\"/>		
22153-4	Insulating Tube	For 1 x 2\"/>		
22153-6	Insulating Tube	For 1 x 3\"/>		
22153-7	Insulating Tube	For 1 3/8 x 2\"/>		
22153-9	Insulating Tube	For 1 3/8 x 3\"/>		



ROUND CAN DRY ELECTROLYTIC CAPACITORS



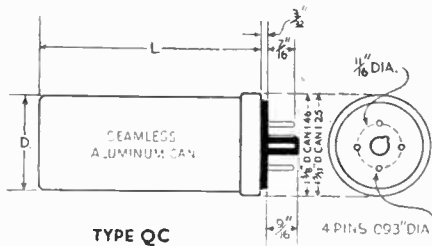
TYPE QC

PLUG-IN TYPE CAPACITORS

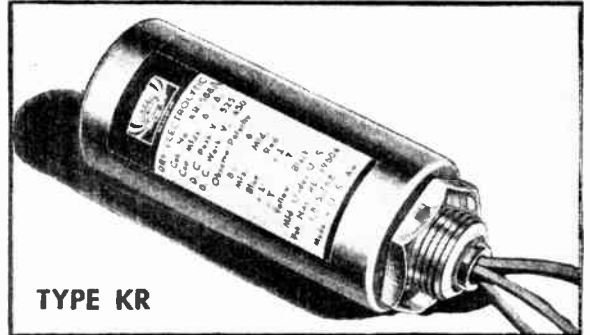
Type QC Capacitors are hermetically sealed in round aluminum containers and provided with a four-pin octal base mounting in order to be readily removed and replaced in standard octal base tube sockets. They are ideally suited for experimental, testing uses and other applications where quick capacitor changes are required.

All units employ pure aluminum construction internally in order to preclude against corrosion of dissimilar metals. Connections to brass pin terminals of the octal base are imbedded in bakelite. Base pins are nickel plated to insure good electrical contact with socket terminals. The molded bakelite octal base construction is so designed that the container will not contact mounting surfaces.

A popular range of capacities and voltage ratings are listed below. Units are also available in other single and multiple section combinations upon special order. In special quad ripple section units a common negative ground connection is made to the can with a standard base mounting ring.



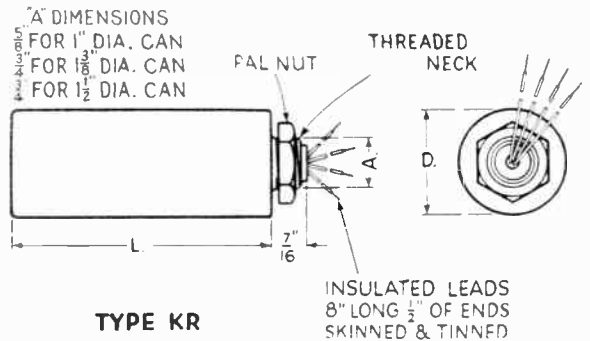
TYPE QC



TYPE KR

SCREW-NECK TYPE CAPACITORS

Types KR and KRC single hole mounting units are compact etched foil type dry electrolytic capacitors furnished in round (inverted mounting) aluminum cans. Available in single, dual and triple sections with color-coded leads. Made in all popular voltage ratings for use in A.C.-D.C. or voltage doubler midgets and A.C. operated sets.



TYPE KR

Cat. No.	Cap. Mfd.	D.C. W. Volt.	Size—Inch. Dia. x Lth.	List Price	Net Price
KR 105	50	250	1 1/2 x 2 1/2	\$1.75	\$1.05
KR 204	5	250	1 1/2 x 2 1/2	1.55	.93
KR 208	8	250	1 1/2 x 2 1/2	1.60	.96
KR 212	12	250	1 1/2 x 2 1/2	1.75	1.05
KR 225	25	250	1 1/2 x 2 1/2	2.00	1.20
KR 350	50	300	1 1/2 x 3 3/4	5.00	1.80
KR 504	4	450	1 1/2 x 2 1/2	1.70	1.02
KR 508	8	450	1 1/2 x 2 1/2	1.75	1.05
KR 512A	12	450	1 1/2 x 2 1/2	2.15	1.29
KR 516A	16	450	1 1/2 x 3 1/2	2.40	1.44
KR 520	20	450	1 1/2 x 2 1/2	2.65	1.59
KR 530	30	450	1 1/2 x 3 1/2	3.00	1.80
KR 540	40	450	1 1/2 x 4 1/2	3.40	2.04
KR 604	4	600	1 1/2 x 3 1/2	3.00	1.80
KR 608	8	600	1 1/2 x 4 1/2	4.00	2.40
KR 616	16	600	1 1/2 x 4 1/2	5.00	3.00

Common Negative Units

KRC 248	4 B	250	1 1/2 x 2 3/4	\$2.15	\$1.29
KRC 288	8 B	250	1 1/2 x 2 3/4	2.30	1.38
KRC 2888	8 B-8	250	1 1/2 x 3 1/2	3.80	2.28
KRC 548	4 B	450	1 1/2 x 3 1/2	2.50	1.50
KRC 588	8 B	450	1 1/2 x 2 1/2	2.75	1.65
KRC 5116	16-16	450	1 1/2 x 3 1/2	3.50	2.10
KRC 5220	20-20	450	1 1/2 x 4 1/2	4.00	2.40
KRC 5888	8 B-8	450	1 1/2 x 3 1/2	4.25	2.55

Separate Section Units

KR 248	4 B	250	1 1/2 x 2 3/4	\$2.15	\$1.29
KR 288	8 B	250	1 1/2 x 2 3/4	2.30	1.38
KR 2888	8 B-8	250	1 1/2 x 3 1/2	3.80	2.28
KR 2881	8 B-16	250	1 1/2 x 3 1/2	4.05	2.43
KR 2811	8-16-16	250	1 1/2 x 3 1/2	4.30	2.58
KR 548A	4 B	450	1 1/2 x 3 1/2	2.50	1.50
KR 588A	8 B	450	1 1/2 x 3 1/2	2.75	1.65
KR 5816A	8-16	450	1 1/2 x 4 1/2	3.25	1.95
KR 5888A	8 B-8	450	1 1/2 x 4 1/2	4.25	2.55

Cat. No.	Cap. Mfd.	D.C. W. Volt.	Size—Inch. Dia. x Lth.	List Price	Net Price
QC 2215	20-20	150	1 1/2 x 2 1/2	\$3.10	\$1.80
QC 4415	40-40	150	1 1/2 x 2 1/2	3.90	2.34
QC 22215	20-20-20	150	1 1/2 x 2 1/2	4.60	2.76
QC 44415	40-40-40	150	1 1/2 x 2 1/2	5.00	3.00
QC 1045	10	450	1 1/2 x 2 1/2	2.60	1.56
QC 2045	20	450	1 1/2 x 2 1/2	3.20	2.10
QC 4045	40	450	1 1/2 x 2 1/2	4.50	2.70
QC 8045	80	450	1 1/2 x 3 1/2	7.70	4.62
QC 1145	10-10	450	1 1/2 x 2 1/2	4.20	2.52
QC 2245	20-20	450	1 1/2 x 2 1/2	5.30	3.18
QC 11:45	10-10-10	450	1 1/2 x 2 1/2	5.00	3.00
QC 33:45C	30-30-10/20	450/50	1 1/2 x 4 1/2	7.75	4.65



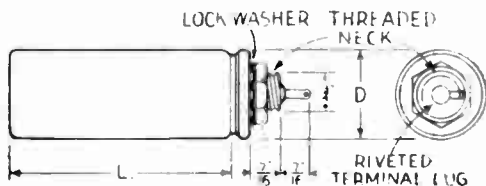
REPLACEMENT DRY ELECTROLYTIC CAPACITORS



TYPE WR

REPLACEMENTS FOR WET-TYPE UNITS

These dry electrolytic capacitors furnished in round aluminum cans are offered as substitutes for replacement of wet electrolytic units which have been discontinued in manufacture during the war. The limited range of capacities listed below cover practically all applications in standard radio receivers and other equipment in which wet type electrolytic capacitors were originally employed.

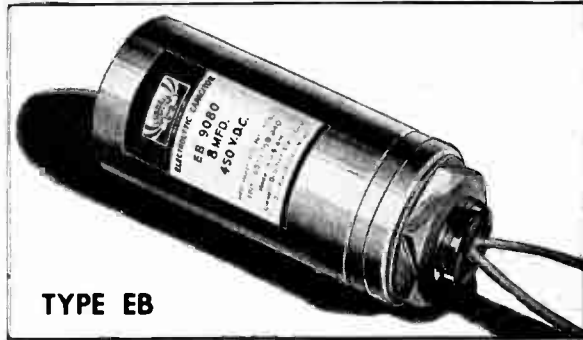


WET ELECTROLYTIC REPLACEMENT
TYPE WR

450-Volt D.C. Replacement Capacitors

Cap. No.	Cap. Mfd.	Capacity—Mfd.	Size—Ins. Dia. x Lth.	List Price	Net Price
WR 10	10	1.50-20 mfd.	1 1/2 x 2 1/2	\$1.49	\$0.87
WR 20	20	1.50-30 mfd.	1 1/2 x 2 1/2	—	1.35
WR 30	30	1.50-30 mfd.	1 1/2 x 2 1/2	—	1.86
WR 40	40	1.50-30 mfd.	1 1/2 x 2 1/2	—	1.74

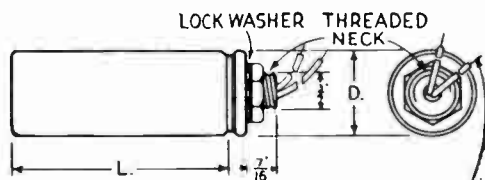
For one-to-one transfer you will find this replacement set of aluminum electrolytic C.D. Type WR capacitors an excellent source of units of equivalent capacity and voltage ratings.



TYPE EB

FILTER REPLACEMENT UNITS

Type EB electrolytic capacitors are especially suited for replacement purposes in radio receivers to replace units of larger physical sizes. They are identical in mounting hole dimensions and general construction to Type WR capacitors except they are provided with insulated color-coded wire leads 8" long brought through the threaded neck of the unit.



TYPE EB

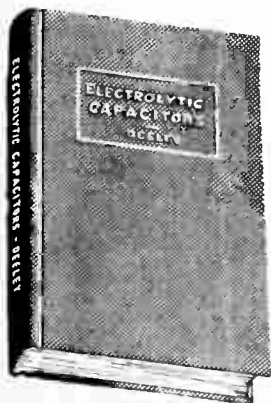
INSULATED LEADS 8" LONG 1/2 OF ENDS SKINNED & TINNED

450-Volt D.C. Replacement Capacitors

Cap. No.	Cap. Mfd.	Size—Ins. Dia. x Lth.	List Price	Net Price
EB 9080	8	1 1/2 x 4 3/8	\$1.80	\$1.08
EB 9100	10	1 1/2 x 4 3/8	2.10	1.26
EB 9120	12	1 1/2 x 4 3/8	2.35	1.41
EB 9160	16	1 1/2 x 4 3/8	2.65	1.59
EB 9180	18	1 1/2 x 4 3/8	2.75	1.65
EB 8800	8-8	1 1/2 x 4 3/8	2.70	1.62

"ELECTROLYTIC CAPACITORS"

By PAUL McK. DEELEY



Here in the "Electrolytic Capacitors" you will find a wealth of the most important information published on the subject of electrolytic capacitors.

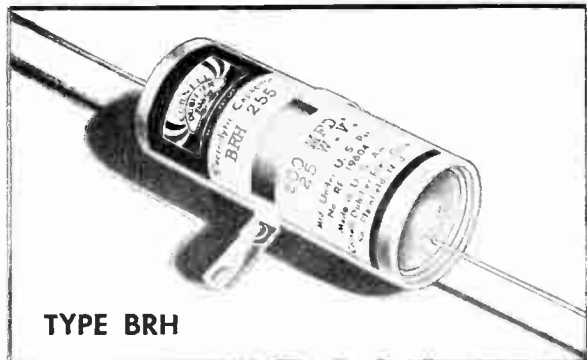
Never before has the hobbyist been offered a manual so complete and so comprehensive at the price—\$1.00 net, formerly \$3.00. "Electrolytic Capacitors" should be in every radio hobbyist's personal library and technical file.

The author has provided the reader with specific information concerning the many factors involved in the design and construction of electrolytics. It is profusely illustrated with numerous applications of electrolytic capacitors. 300 pages, size 5 1/2" x 7 1/2" with bound-in index. Every page is a gold mine of facts and data.

This 300-page book is now available—paid—for only..... **\$1.00 net**



HIGH CAPACITY DRY ELECTROLYTIC CAPACITORS

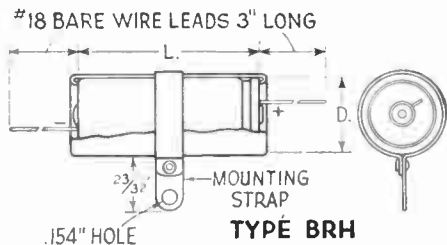


TYPE BRH

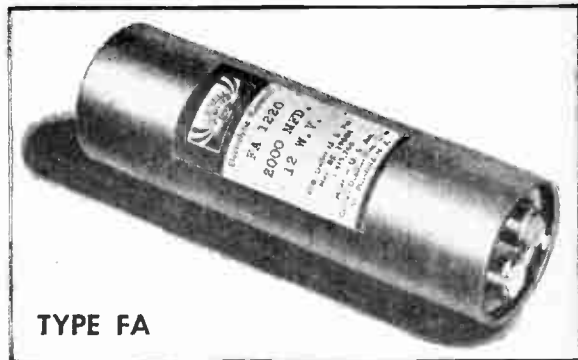
METAL TUBULAR TYPE CAPACITORS

These compact C-D etched foil electrolytic capacitors have been especially designed for all applications requiring high capacity units operating in low voltage D.C. circuits. They are widely employed in portable radio power rectifying circuits, electric fence devices, telephone and D.C. timing circuits. Units are available in standard capacities and voltage ratings for all uses.

Hermetically sealed in pure aluminum cans with an external cardboard insulating sleeve, these units are provided with metal mounting strap and bare wire leads for convenient wiring into any circuit assembly. They are constructed identically the same as Type BR "Blue Beavers" except all units are provided with a mounting strap.



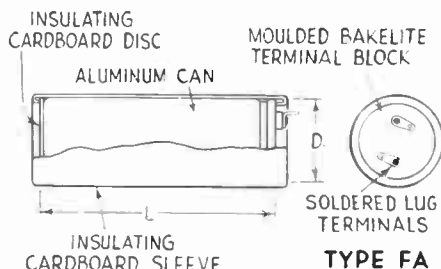
Cap. No.	Cap. Value	W. Voltage	Dimensions (Dia. x L)	Lead Length	Net Price
BRH 601	100	6	7/8 x 2 1/2	3.18"	\$0.69
BRH 6025	250	6	7/8 x 2 1/2	3.18"	.87
BRH 605	500	6	7/8 x 2 1/2	3.18"	1.02
BRH 610	1000	6	7/8 x 2	3.31"	1.35
BRH 615	1500	6	7/8 x 2 1/2	3.00"	1.80
BRH 620	2000	6	1 x 2 1/2	3.90"	2.34
BRH 121	100	12	7/8 x 1 7/8	3.21"	.75
BRH 1225	250	12	3/4 x 2	1.75"	1.05
BRH 125	500	12	7/8 x 2 1/2	1.90"	1.14
BRH 151	100	15	5/8 x 1 7/8	1.30"	.78
BRH 1525	250	15	3/4 x 2	1.94"	1.14
BRH 155	500	15	7/8 x 2 1/2	2.10"	1.26
BRH 251	100	25	5/8 x 2	1.95"	.81
BRH 2525	250	25	3/8 x 2	2.00"	1.20
BRH 255	500	25	1 x 2 1/2	2.25"	1.35
BRH 501	100	50	3/4 x 2	1.50"	.90



TYPE FA

INSULATED CAN CAPACITORS

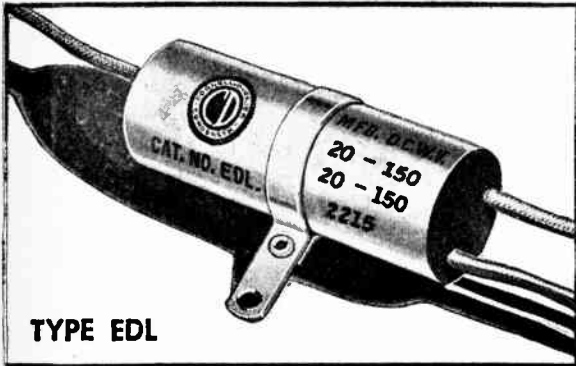
Type FA capacitors in round aluminum cans are designed for high capacity, low voltage applications, and are especially popular as replacements in motion picture sound equipment, "A" battery power supplies and other low voltage circuits where hum-free operation is essential. All units are provided with lug terminals on a moulded bakelite cover and furnished with an external cardboard insulating sleeve for protection against short circuits.



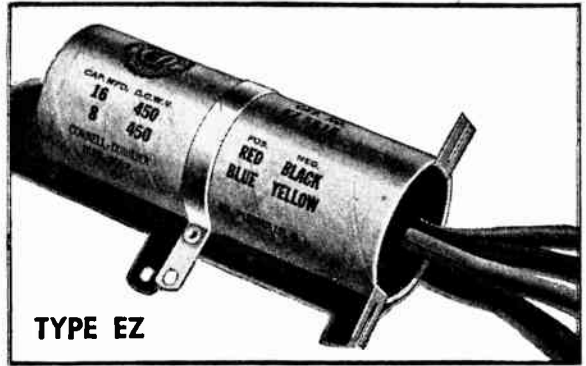
Cap. No.	Cap. Value	D.C. W. Voltage	Dimensions (Dia. x L)	Lead Length	Net Price
FA 1205	500	12	7/8 x 2 1/2	3.18"	\$1.65
FA 1210	1000	12	7/8 x 2 1/2	3.18"	1.74
FA 1215	1500	12	7/8 x 2 1/2	3.18"	2.70
FA 1220	2000	12	7/8 x 2 1/2	3.18"	2.88
FA 1225	2500	12	7/8 x 2 1/2	3.18"	3.24
FA 1230	3000	12	7/8 x 2 1/2	3.18"	3.60
FA 1240	4000	12	7/8 x 2 1/2	3.18"	4.26
FA 1505	500	15	5/8 x 1 7/8	3.10"	1.66
FA 1510	1000	15	5/8 x 1 7/8	3.10"	2.22
FA 1520	2000	15	5/8 x 1 7/8	3.10"	3.48
FA 1530	3000	15	5/8 x 1 7/8	3.10"	4.20
FA 1540	4000	15	5/8 x 1 7/8	3.10"	4.86
FA 1805	500	18	13/16 x 2 1/2	3.40"	2.04
FA 1810	1000	18	13/16 x 2 1/2	3.40"	2.40
FA 1820	2000	18	13/16 x 2 1/2	3.40"	3.72
FA 1840	4000	18	13/16 x 2 1/2	3.40"	5.25
FA 2005	500	20	13/16 x 2 1/2	3.75"	2.25
FA 2010	1000	20	13/16 x 2 1/2	3.75"	2.64
FA 2020	2000	20	13/16 x 2 1/2	3.75"	3.90
FA 2040	4000	20	13/16 x 2 1/2	3.75"	5.55
FA 2505	500	25	13/16 x 2 1/2	4.00"	2.40
FA 2510	1000	25	13/16 x 2 1/2	4.00"	2.91
FA 2520	2000	25	13/16 x 2 1/2	4.00"	4.32
FA 2540	4000	25	13/16 x 2 1/2	4.00"	5.91
FA 3010	1000	30	13/16 x 2 1/2	4.75"	3.45
FA 3020	2000	30	13/16 x 2 1/2	4.75"	4.74
FA 3040	4000	30	13/16 x 2 1/2	4.75"	6.72
FA 3505	500	35	13/16 x 2 1/2	5.25"	3.90
FA 3510	1000	35	13/16 x 2 1/2	5.25"	2.55
FA 3520	2000	35	13/16 x 2 1/2	5.25"	4.60
FA 3530A	3000	35	13/16 x 2 1/2	5.25"	9.00
FA 4010	1000	40	13/16 x 2 1/2	5.75"	4.71
FA 4020	2000	40	13/16 x 2 1/2	5.75"	5.55
FA 5005	500	50	13/16 x 2 1/2	6.80"	2.88
FA 5010	1000	50	13/16 x 2 1/2	6.80"	5.10
FA 5020	2000	50	13/16 x 2 1/2	6.80"	6.30



CARDBOARD TUBE DRY ELECTROLYTIC CAPACITORS



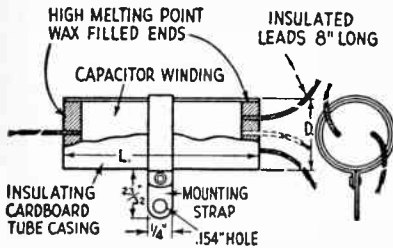
TYPE EDL



TYPE EZ

CARDBOARD TUBE UNITS (Formerly Type BRL)

Type EDL Capacitors are dual and triple common negative units in cardboard tube containers with wax-filled ends. Capacities, voltages and polarity of the leads are clearly defined by color coding stamped on the cardboard tube casing. Units are provided with insulated wire leads brought out at both ends of the unit. A mounting strap around the center of the cardboard tube casing enables mounting the unit with one screw under the chassis assembly.



TYPE EDL

COLOR CODING OF LEADS STAMPED ON CARDBOARD TUBE CASING OF ALL UNITS

Color Coding Of Wire Leads

- BLACK — Common negative lead.
- RED — Positive, highest voltage or capacity.
- BLUE — Positive, next highest voltage or capacity.
- GREEN — Positive, next highest voltage or capacity.
- YELLOW — Positive, next highest voltage or capacity, or negative in units where two separate negative terminals are required.
- BROWN — Negative, in units where three separate negative terminals are required.

TYPE EDL FORMERLY TYPE BRL Dual Common Negative Units

Cat. No.	Cap. Mid.	D.C. W. Volts	Size—Inches Dia. x Lgth.	List Price	Net Price
EDL 2101	10-10	25	5/8 x 1 3/4	\$1.05	\$0.63
EDL 115	10-10	50	5/8 x 2 1/2	1.15	.69
EDL 2115	20-10	150	7/8 x 2 1/2	1.25	.75
EDL 2215	20-20	150	7/8 x 2 1/2	1.30	.78
EDL 4215	40-20	150	1 1/16 x 2 3/4	1.50	.90
EDL 4415	40-40	150	1 x 3	1.70	1.02
EDL 5315	50-30	150	1 x 3	1.70	1.02
EDL 8125	8-16	250	7/8 x 2 3/4	1.60	.96
EDL 1125	16-16	250	1 x 2 3/4	1.70	1.02
EDL 8845	8-8	450	1 x 2 3/4	1.70	1.02
EDL 8145	8-16	450	1 1/16 x 3 1/4	2.00	1.20

Dual Separate Section Unit

EDL 2215SS	20-20	150	1 3/16 x 2 3/8	\$2.00	\$1.20
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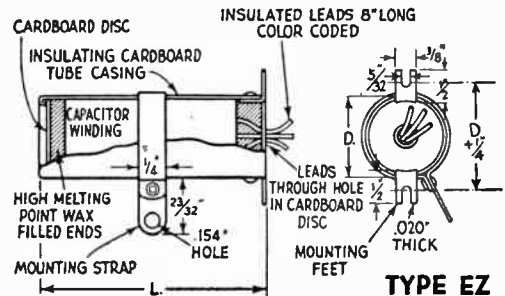
Triple Common Negative Units

EDL 2215C	20-20/20	150/25	1 x 2 1/2	\$1.90	\$1.14
EDL 4215C	40-20/20	150/25	1 x 2 3/4	2.00	1.20
EDL 5315C	50-30/20	150/25	1 1/8 x 3	2.10	1.26

UNIVERSAL-MOUNTING UNITS

Type EZ capacitors are especially popular for radio servicing where low cost replacements are required. They are designed with mounting feet for upright mounting to replace inverted can-type units, spade-lug units, or may be mounted beneath the chassis by means of the mounting strap provided around the center of the cardboard tube casing. In any instance, the unused mountings may easily be cut off.

These units are without doubt the most practical all-around replacement capacitors available and incorporate C-D etched foil features in design and construction. They are completely sealed in moisture-proof cardboard tube casing, filled with special wax compound, and provided with insulated wire leads eight inches long. All units are clearly stamped with capacities, voltages and color code designation of leads.



TYPE EZ

Single Section Units

Cat. No.	Cap. Mid.	D.C. W. Volts	Size—Inches Dia. x Lgth.	List Price	Net Price
EZ 825	8	250	3/8 x 2 1/2	\$1.05	\$0.63
EZ 1625	16	250	1 x 2 3/4	1.30	.78
EZ 2425	24	250	1 1/16 x 2 3/4	1.45	.87
EZ 835	8	350	15/16 x 2 1/2	1.10	.66
EZ 1235	12	350	15/16 x 2 1/2	1.30	.78
EZ 1635	16	350	1 x 2 3/4	1.45	.87
EZ 2435	24	350	1 x 3 1/8	1.55	.93
EZ 845	8	450	3/8 x 2 3/4	1.15	.69
EZ 1245	12	450	1 x 2 3/4	1.35	.81
EZ 1645	16	450	1 1/16 x 2 3/4	1.55	.93
EZ 3045	30	450	1 1/4 x 3 1/2	1.85	1.11

Dual Common Negative Units

EZ 2215	20-20	150	1 x 2 1/2	\$1.50	\$0.90
EZ 3315	30-30	150	1 1/16 x 2 3/4	1.70	1.02
EZ 5515	50-50	150	1 1/16 x 3 1/2	2.05	1.23
EZ 8825	8-8	250	1 x 2 3/4	1.65	.99
EZ 8835	8-8	350	15/16 x 2 3/4	1.80	1.08
EZ 8845	8-8	450	1 x 3 1/2	1.90	1.14

(For Type EZ Multiple Units, see next page.)

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CARDBOARD TUBE DRY ELECTROLYTIC CAPACITORS

(Type EZ Universal Mounting Capacitors Continued from preceding page)

Dual Separate Section Units

Cat. No.	Cap. Mfd.	W. Volts	Size—Inches Dia. x Lgth.	List Price	Net Price
EZ 288	8-8	250	1 3/8 x 2 3/4	\$2.20	\$1.32
EZ 2116	16-16	250	1 3/8 x 3 3/4	2.75	1.65
EZ 388	8-8	350	1 3/8 x 3	2.25	1.35
EZ 3112	12-12	350	1 3/8 x 3 3/4	2.70	1.62
EZ 3116	16-16	350	1 3/8 x 4 3/4	3.00	1.80
EZ 588	8-8	450	1 3/8 x 3	2.30	1.38
EZ 5816	8-16	450	1 3/8 x 3 3/4	2.70	1.62
EZ 5112	12-12	450	1 3/8 x 3 3/4	2.70	1.62
EZ 5116	16-16	450	1 3/8 x 4 3/4	3.20	1.92

Triple Common Negative Units

EZ	Cap. Mfd.	W. Volts	Size—Inches Dia. x Lgth.	List Price	Net Price
EZ 2215C	20-20/20	150/25	1 x 3	\$2.10	\$1.26
EZ 3215C	30-20/20	150/25	1 x 3	2.15	1.29
EZ 3115C	30-10/20	150/25	1 x 3	2.05	1.23
EZ 4215C	40-20/20	150/25	1 1/8 x 3	2.00	1.20
EZ 32115	30-20/10	150	1 1/8 x 2 3/4	2.15	1.29
EZ 42215	40-20-20	150	1 1/8 x 3	2.30	1.38
EZ 1A135C	15-10/20	350/25	1 1/8 x 3 1/4	2.30	1.38
EZ 2143C	20/10/20	400/350/25	1 1/8 x 3 1/4	2.50	1.50

Triple Separate Section Units*

EZ	Cap. Mfd.	W. Volts	Size—Inches Dia. x Lgth.	List Price	Net Price
EZ 8825S	8-8/20	250/25	1 3/8 x 3	\$2.45	\$1.47
EZ 8835S	8-8/20	350/25	1 3/8 x 3 3/4	2.55	1.53
EZ 12D35S	12-12/20	350/25	1 3/8 x 3 3/4	2.75	1.65
EZ 16D35S	16-16/20	350/25	1 3/8 x 4 3/4	3.20	1.92
EZ 8845S	8-8/20	450/25	1 3/8 x 3 3/4	2.65	1.59
EZ 12D45S	12-12/20	450/25	1 3/8 x 4 3/4	3.00	1.80
EZ 8882S	8-8-8	250	1 3/8 x 3	2.50	1.50
EZ 8883S	8-8-8	350	1 3/8 x 3 3/4	2.65	1.59
EZ 8884S	8-8-8	450	1 3/8 x 4 3/4	2.75	1.65

Quadruple Common Negative Units

Cat. No.	Cap. Mfd.	W. Volts	Size—Inches Dia. x Lgth.	List Price	Net Price
EZ 8815CC	8-8/10-10	150/25	1 x 2 3/4	\$2.35	\$1.41
EZ 3215CC	30-20/10-10	150/25	1 1/8 x 2 3/4	2.60	1.56
EZ 42215C	40-20-20/20	150/25	1 1/8 x 3	2.85	1.71
EZ 53215C	50-30-20/20	150/25	1 1/8 x 3 1/2	2.95	1.77
EZ 44315C	40-40-30/20	150/25	1 1/8 x 3 1/2	3.00	1.80
EZ 55515C	50-50-50/20	150/25	1 1/8 x 3 1/2	3.30	1.98

Quadruple Separate Section Units*

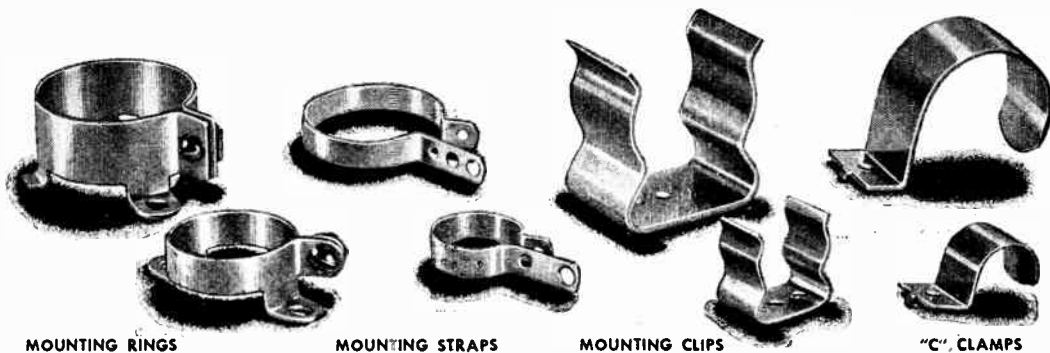
EZ	Cap. Mfd.	W. Volts	Size—Inches Dia. x Lgth.	List Price	Net Price
EZ 16D15SS	16-16/10-10	150/25	1 1/8 x 3	\$3.15	\$1.89
EZ 8845SS	8-8/10-10	450/25	1 3/8 x 3 3/4	3.25	1.95
EZ 43215SS	40-30-20/20	150/25	1 1/8 x 3 3/4	3.65	2.19

*First section separate, others common negative.

Explanation of Terminal Connections

In all cases only a single common negative lead is provided to all sections in multiple section capacitors listed under the heading of Common Negative Units. Separate Section Units are provided with separate negative and separate positive leads.

In triple and quadruple section capacitors with separate sections, indicated with an asterisk (*), the very first capacity listed is a separate section, having separate negative and positive leads, while all other capacities shown are connected to a single common negative lead with separate positive leads to each section.



MOUNTING RINGS

MOUNTING STRAPS

MOUNTING CLIPS

"C" CLAMPS

CAPACITOR MOUNTING HARDWARE

Additional hardware for mounting all types of electrolytic capacitors as well as tubular paper units is available as shown in the accompanying diagrams and listed below.

Part No.	Description	List Price	Net Price
14582	Mounting Ring for 1" dia. Cans	\$0.09	\$0.05
12125	Mounting Ring for 1 1/8" dia. Cans	.09	.05
15591	Mounting Ring for 1 3/8" dia. Cans	.14	.08
14693	Mounting Ring for 1 3/4" dia. Cans	.17	.10
14464	Mounting Ring for 2" dia. Cans	.21	.12
13890	Mounting Ring for 2 1/8" dia. Cans	.21	.12
13591	Mounting Ring for 2 3/8" dia. Cans	.21	.12
15266	Mounting Ring for 3 1/8" dia. Cans	.21	.12
17842	Mounting Ring for 1 1/8" dia. Cans	.09	.05
19213	Mounting Ring for 1 1/4" dia. Cans	.09	.05
18573	Mounting Ring for 1 1/2" dia. Cans	.09	.05
17843	Mounting Ring for 1 3/4" dia. Cans	.09	.05
17844	Mounting Ring for 1 7/8" dia. Cans	.14	.08
21368-1	Mounting Ring for 2" dia. Cans	.14	.08
21368-2	Mounting Ring for 2 1/8" dia. Cans	.14	.08
21368-3	Mounting Ring for 2 3/8" dia. Cans	.14	.08
17920	"C" Clamp for 1" dia. Cans or Tubulars	.14	.08
17921	"C" Clamp for 1 1/8" dia. Cans or Tubulars	.14	.08
17922	"C" Clamp for 1 1/4" dia. Cans or Tubulars	.14	.08
17923	"C" Clamp for 1 1/2" dia. Cans or Tubulars	.14	.08
16279	Tubular Straps for Mounting	.06	.03
16287	All Types of Tubular Units	.06	.03

MOUNTING RINGS

MADE OF 035" CADMIUM PLATED STEEL

FOR CAN SIZES 1" TO 1 1/2" DIA.

PART No.	A*	B	C
17842	1 1/8"	1 1/8"	1 1/8"
18573	1 1/4"	1 1/4"	1 1/4"
17843	1 3/8"	1 3/8"	1 3/8"
17844	1 7/8"	1 7/8"	1 7/8"

*INSIDE DIAMETER (CANDIAMETER SIZE)

MOUNTING RINGS

FOR CAN SIZES - 1" TO 3 1/2" DIAMETER

MADE OF 1/2" CADMIUM PLATED STEEL

PART No.	A	B	C	FOR CAN
14582	1"	1 1/8"	1 1/8"	1"
12125	1 1/8"	1 3/8"	1 3/8"	1 1/8"
15591	1 3/8"	1 7/8"	1 7/8"	1 3/8"
14693	1 3/4"	2 1/8"	2 1/8"	1 3/4"
14464	2"	2 3/8"	2 3/8"	2"
13890	2 1/8"	2 7/8"	2 7/8"	2 1/8"
13591	2 3/8"	3 1/8"	3 1/8"	2 3/8"
15266	3 1/8"	3 3/4"	3 3/4"	3 1/8"

MOUNTING CLIPS

EMBOSSED 1/8" DEEP

MADE OF CADMIUM PLATED STEEL

PART No.	A	B	C	D	FOR CAN
21368-1	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"
21368-2	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"
21368-3	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"

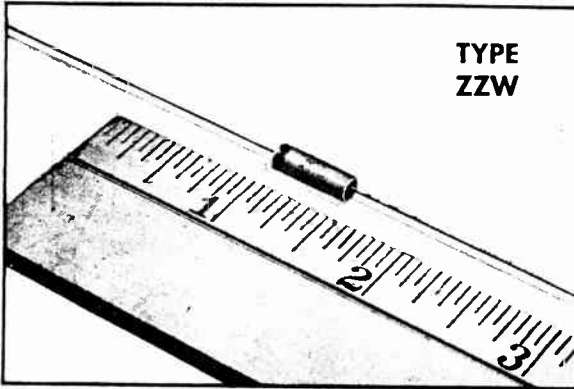
TUBULAR STRAPS

MADE OF 020 TINNED STEEL

PART No.	I	D	PART No.	I	D
16279	3/8"	20440	17920	1 1/8"	1 1/8"
16280	7/8"	27950	17921	1 1/4"	1 1/4"
17203	1 1/8"	21187	17922	1 1/2"	1 1/2"
17516	1 3/8"	21088-1	17923	1 7/8"	1 7/8"
16285	1 1/2"	19033-1			
17517	1 7/8"	17673-1			
27886	7/8"	17606			



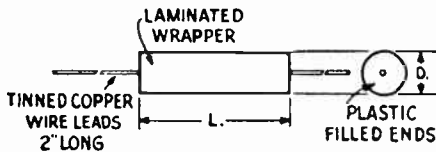
TUBULAR PAPER CAPACITORS



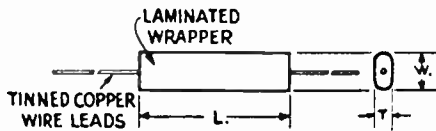
TYPE
ZZW

MINIATURE TUBULAR CAPACITORS

Types ZYW, ZZW, and flat type ZNW, tiny tubular paper capacitors are especially suited for use in very small electronic assemblies, such as hearing aids, pocket radios, etc., where minimum space and weight are essential. These capacitors are the result of Cornell-Dubilier developments for the VT radio proximity fuze for shells and bombs made for the Navy during the War and today find many applications in ultra compact electronic equipment of all kinds. All units are non-inductively wound, wax impregnated by special process, and sealed in a laminated paper wrapper with plastic compound ends. They are additionally protected against moisture with a complete wax coating.



TYPES ZYW and ZZW



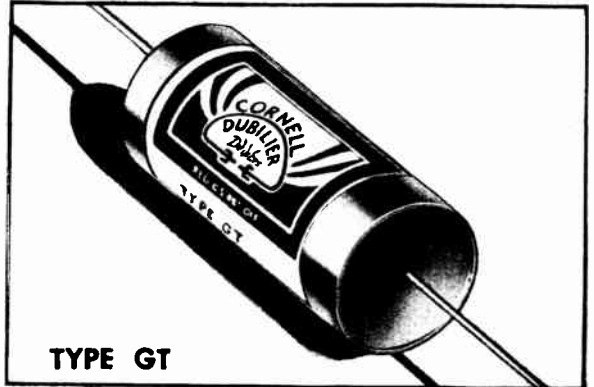
TYPE ZNW

TYPES ZZW AND ZYW—Round Units

Cap. No.	Cap. Mid.	D.C. W. Volts	Size—Inches Dia. x Lgth.	List Price	Net Price
ZZW1T5	.0005	150	$\frac{1}{16}$ x $\frac{1}{2}$	\$.35	\$.21
ZZW1D2	.002	150	$\frac{1}{16}$ x $\frac{1}{2}$	.35	.21
ZZW1D4	.004	150	$\frac{1}{16}$ x $\frac{1}{2}$	.35	.21
ZZW1D6	.006	150	$\frac{1}{16}$ x $\frac{1}{2}$	.35	.21
ZZW1S1	.01	150	$\frac{1}{16}$ x $\frac{1}{2}$	.40	.24
ZYW6D1	.001	600	$\frac{1}{16}$ x $\frac{13}{16}$	.65	.39
ZYW4D2	.002	400	$\frac{1}{16}$ x $\frac{13}{16}$	.45	.27
ZYW4D5	.005	400	$\frac{1}{16}$ x $\frac{13}{16}$	.50	.30
ZYW1S3	.03	150	$\frac{1}{16}$ x $\frac{13}{16}$	.45	.27
ZYW1S5	.05	150	$\frac{1}{16}$ x $\frac{13}{16}$	.50	.30

TYPE ZNW—Flat Units

Cap. No.	Cap. Mid.	D.C. W. Volts	Size—Inches T. x W. x L.	List Price	Net Price
ZNW6D1	.001	600	$\frac{5}{32}$ x $\frac{7}{32}$ x $\frac{13}{16}$	\$.65	\$.39
ZNW4D2	.002	400	$\frac{5}{32}$ x $\frac{7}{32}$ x $\frac{13}{16}$	.45	.27
ZNW4D5	.005	400	$\frac{5}{32}$ x $\frac{7}{32}$ x $\frac{13}{16}$	.50	.30
ZNW4D6	.006	400	$\frac{5}{32}$ x $\frac{7}{32}$ x $\frac{13}{16}$	.50	.30
ZNW4S1	.01	400	$\frac{5}{32}$ x $\frac{7}{32}$ x $\frac{13}{16}$	.55	.33
ZNW1S1	.01	150	$\frac{5}{32}$ x $\frac{7}{32}$ x $\frac{13}{16}$	.45	.27
ZNW1S2	.02	150	$\frac{5}{32}$ x $\frac{7}{32}$ x $\frac{13}{16}$	.50	.30
ZNW1S3	.03	150	$\frac{5}{32}$ x $\frac{7}{32}$ x $\frac{13}{16}$	.50	.30
ZNW1S5	.05	150	$\frac{5}{32}$ x $\frac{7}{32}$ x $\frac{13}{16}$	.55	.33
ZNW1P1	1	150	$\frac{5}{32}$ x $\frac{7}{32}$ x $\frac{13}{16}$	.65	.39



TYPE GT

"GREY TIGER" CAPACITORS

Type GT "Vikane" impregnated capacitors assure top performance and extra long life at temperatures from minus 55°C to plus 100°C, low power factor, and are excellently sealed against moisture.

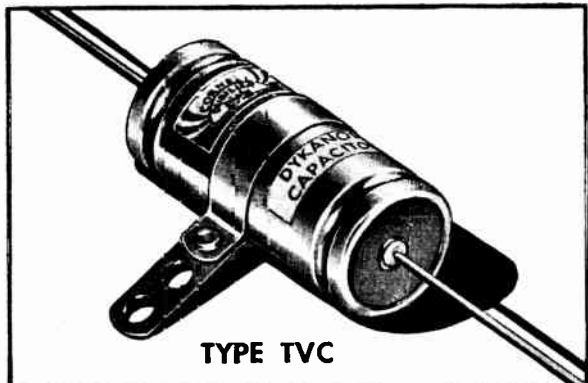
"GT" TYPE CAPACITORS

Cap. No.	Cap. Mid.	Size—Inches Dia. x Length	List Price	Net Price
200 V. D.C.				
GT2S1	.02	$\frac{1}{8}$ x $1\frac{1}{8}$	\$.20	\$.12
GT2S2	.02	$\frac{1}{8}$ x $1\frac{1}{8}$	.20	.12
GT2S5	.05	$\frac{1}{8}$ x $1\frac{1}{8}$	.25	.15
GT2P1	.1	$\frac{1}{8}$ x $1\frac{1}{8}$	.30	.18
GT2P25	.25	$\frac{1}{8}$ x 2	.40	.24
GT2P5	.5	$\frac{1}{8}$ x 2	.55	.33
GT2W1	1.	1 x $2\frac{3}{8}$	.75	.45
400 V. D.C.				
GT4S1	.01	$\frac{1}{8}$ x $1\frac{1}{8}$	.25	.15
GT4S2	.02	$\frac{1}{8}$ x $1\frac{1}{8}$	.25	.15
GT4S25	.025	$\frac{1}{8}$ x $1\frac{1}{8}$	.25	.15
GT4S3	.03	$\frac{1}{8}$ x $1\frac{1}{8}$	.25	.15
GT4S5	.05	$\frac{1}{8}$ x $1\frac{1}{8}$	.30	.18
GT4P1	.1	$\frac{1}{8}$ x $1\frac{1}{8}$	.35	.21
GT4P2	.2	$\frac{1}{8}$ x $1\frac{1}{8}$	.40	.24
GT4P25	.25	$\frac{1}{8}$ x 2	.45	.27
GT4P5	.5	$\frac{1}{8}$ x 2	.60	.36
GT4W1	1.	1 x $2\frac{3}{8}$	.90	.54
600 V. D.C.				
GT6T1	.0001	$\frac{1}{16}$ x $1\frac{1}{8}$	.25	.15
GT6T25	.00025	$\frac{1}{16}$ x $1\frac{1}{8}$	.25	.15
GT6T5	.0005	$\frac{1}{16}$ x $1\frac{1}{8}$	.25	.15
GT6D1	.001	$\frac{1}{16}$ x $1\frac{1}{8}$	.25	.15
GT6D2	.002	$\frac{1}{16}$ x $1\frac{1}{8}$	.25	.15
GT6D3	.003	$\frac{1}{16}$ x $1\frac{1}{8}$	.25	.15
GT6D4	.004	$\frac{1}{16}$ x $1\frac{1}{8}$	.25	.15
GT6D5	.005	$\frac{1}{16}$ x $1\frac{1}{8}$	.25	.15
GT6D6	.006	$\frac{1}{16}$ x $1\frac{1}{8}$	.25	.15
GT6S1	.01	$\frac{1}{16}$ x $1\frac{1}{8}$	.30	.18
GT6S15	.015	$\frac{1}{16}$ x $1\frac{1}{8}$	.30	.18
GT6S2	.02	$\frac{1}{16}$ x $1\frac{1}{8}$	.30	.18
GT6S25	.025	$\frac{1}{16}$ x $1\frac{1}{8}$	.35	.21
GT6S3	.03	$\frac{1}{16}$ x $1\frac{1}{8}$	.35	.21
GT6S4	.04	$\frac{1}{16}$ x $1\frac{1}{8}$	.35	.21
GT6S5	.05	$\frac{1}{16}$ x $1\frac{1}{8}$	.40	.24
GT6P1	.1	$\frac{1}{16}$ x 2	.45	.27
GT6P2	.2	$\frac{1}{16}$ x 2	.55	.33
GT6P25	.25	$\frac{1}{16}$ x 2	.55	.33
GT6P5	.5	1 x $2\frac{3}{8}$	.80	.48
1600 V. D.C.				
GT16D1	.001	$\frac{3}{16}$ x $1\frac{1}{8}$	.55	.33
GT16D2	.002	$\frac{3}{16}$ x $1\frac{1}{8}$	.55	.33
GT16D25	.0025	$\frac{3}{16}$ x $1\frac{1}{8}$	.55	.33
GT16D3	.003	$\frac{3}{16}$ x $1\frac{1}{8}$	.55	.33
GT16D4	.004	$\frac{3}{16}$ x $1\frac{1}{8}$	.55	.33
GT16D5	.005	$\frac{3}{16}$ x $1\frac{1}{8}$	.55	.33
GT16D6	.006	$\frac{3}{16}$ x $1\frac{1}{8}$	.55	.33
GT16D7	.007	$\frac{3}{16}$ x $1\frac{1}{8}$	.55	.33
GT16D8	.008	$\frac{3}{16}$ x $1\frac{1}{8}$	.55	.33
GT16S1	.01	$\frac{3}{16}$ x $1\frac{1}{8}$	.60	.36
GT16S15	.015	$\frac{3}{16}$ x $1\frac{1}{8}$	.60	.36
GT16S2	.02	$\frac{3}{16}$ x 2	.60	.36
GT16S3	.03	$\frac{3}{16}$ x 2	.60	.36
GT16S5	.05	$\frac{3}{16}$ x 2	.70	.42

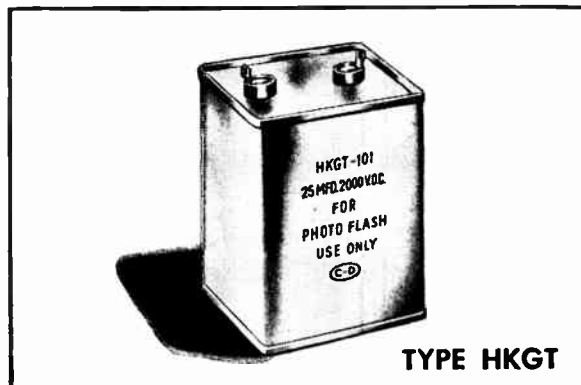
Type DT, standard wax impregnated and MD 1600 volts oil impregnated, smaller size units, available at lower cost. Comparable capacities and voltages available, simply order DT or MD instead of GT.



METAL CASED PAPER CAPACITORS



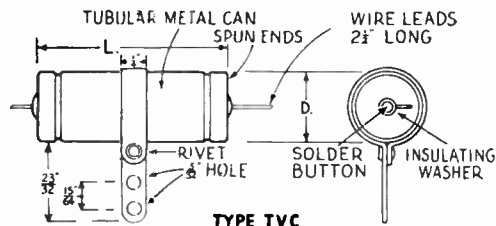
TYPE TVC



TYPE HKGT

OIL-IMPREGNATED METAL TUBULAR UNITS

Type TVC capacitors are compact tubular metal can type units designed to withstand severe climatic conditions. They are non-inductively wound, impregnated with Dykanol "B" to maintain high insulation resistance.



TYPE TVC

TYPE TVC - Oil Impregnated Capacitors*

Cat. No.	Cap. Mfd.	Size—Inches Dia. x Length	List Price	Net Price
400 V. D.C.				
TVC 4D5	.025	1 1/8 x 1 1/8	\$0.90	\$0.54
TVC 4S1	.01	1 1/8 x 1 1/8	.80	.54
TVC 4S15	.015	1 1/8 x 1 1/8	1.00	.60
TVC 4S2	.02	1 1/8 x 1 1/8	1.00	.60
TVC 4S3	.03	1 1/8 x 1 1/8	1.05	.63
TVC 4S4	.04	1 1/8 x 1 1/8	1.05	.63
TVC 4S5	.05	1 1/8 x 1 1/8	1.08	.63
TVC 4P1	1	5/8 x 2 1/8	1.45	.69
TVC 4P25	25	3/4 x 2 1/8	1.45	.87
TVC 4P5	5	1 x 2 1/8	1.70	1.02
600 V. D.C.				
TVC 6D5	.025	1 1/8 x 1 1/8	.95	.57
TVC 6S1	.01	1 1/8 x 1 1/8	.95	.57
TVC 6S15	.015	1 1/8 x 1 1/8	1.00	.60
TVC 6S2	.02	1 1/8 x 1 1/8	1.05	.63
TVC 6S3	.03	1 1/8 x 1 1/8	1.10	.66
TVC 6S4	.04	1 1/8 x 1 1/8	1.10	.66
TVC 6S5	.05	1 1/8 x 1 1/8	1.10	.66
TVC 6P1	1	5/8 x 2 1/8	1.25	.75
TVC 6P25	25	3/4 x 2 1/8	1.70	1.02
TVC 6P5	5	1 x 2 1/8	2.20	1.32
1000 V. D.C.				
TVC 10D5	.005	1 1/8 x 1 1/8	1.10	.66
TVC 10S1	.01	1 1/8 x 1 1/8	1.10	.66
TVC 10S15	.015	1 1/8 x 1 1/8	1.20	.72
TVC 10S2	.02	1 1/8 x 1 1/8	1.20	.72
TVC 10S3	.03	1 1/8 x 1 1/8	1.20	.72
TVC 10S4	.04	1 1/8 x 1 1/8	1.20	.72
TVC 10S5	.05	1 1/8 x 1 1/8	1.30	.78
TVC 10P1	1	5/8 x 2 1/8	1.50	.90
OIL-FILLED UNITS				
1600 V. D.C.				
TVC 16D5	.005	5/8 x 1 1/8	1.20	.72
TVC 16S1	.01	5/8 x 1 1/8	1.20	.72
TVC 16S15	.015	5/8 x 1 1/8	1.25	.75
TVC 16S2	.02	5/8 x 1 1/8	1.30	.78
TVC 16S3	.03	5/8 x 1 1/8	1.30	.78
TVC 16S4	.04	5/8 x 1 1/8	1.30	.78
TVC 16S5	.05	5/8 x 1 1/8	1.40	.84

*For units provided with insulating sleeve over metal tubes add 10c to list price. When ordering add ".6" to Cat. No. (Example TVC 4D5-6).

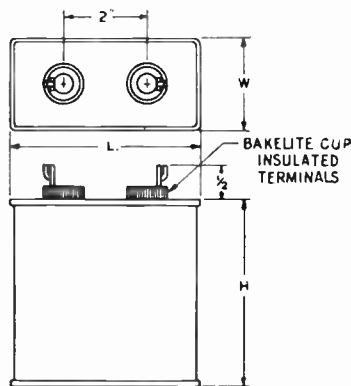
HIGH-SPEED PHOTO-FLASH ENERGY STORAGE CAPACITORS

Type HKGT capacitors are specially designed for use in high-speed photographic equipment, traffic light blinkers, light metal welding and other light-duty d.c. energy storage and discharge applications. They are compact and comparatively light-weight consistent with safe electrical ratings, operating characteristics and extra long life.

Multiple sections in these units are assembled in sturdy metal containers and provided with heavy-duty internal leads connected to bakelite-cup insulated terminals.

The watt-second energy storage capacitance of these units is shown below. Capacitors for this type of duty are rated by their energy storage capacity when fully charged at rated peak voltages. Watt-second rating equals 0.5 CE², where C = Capacity in Farrads, and E = charging volts.

Type HKGT capacitors are normally furnished without mounting brackets. Standard brackets such as supplied with type T capacitors can be supplied on request.



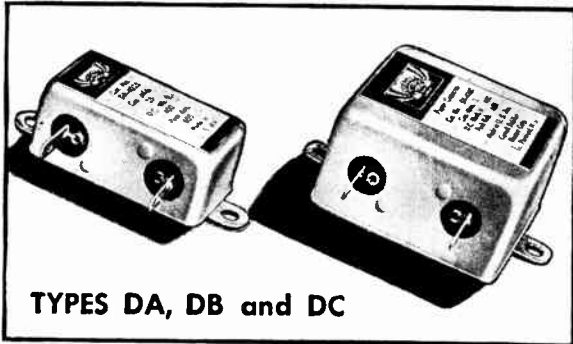
TYPE HKGT

Cat. No.	Cap. Mfd.	Watt Sec.	Size—Inches L. x W. x H.	Apprx. Wt. Lbs.	List Price	Net Price
2000 V. D.C. Peak						
HKGT 1A00	15	30	3 3/4 x 2 1/4 x 4 3/4	2 1/4	\$17.00	\$10.20
HKGT 1A01	25	50	3 3/4 x 4 3/8 x 4 3/4	4 1/4	19.00	11.40
2250 V. D.C. Peak						
HKGT 115	28	71	3 3/4 x 4 3/8 x 4 3/4	4 1/4	31.00	18.60
2500 V. D.C. Peak						
HKGT 1A02	15	50	3 3/4 x 2 1/4 x 6 5/8	3 1/4	17.00	10.20
HKGT 103	25	80	3 3/4 x 4 3/8 x 6 5/8	5 3/4	23.00	13.80
HKGT 104	32	100	3 3/4 x 4 3/8 x 6 5/8	6	37.00	22.00
4000 V. D.C. Peak						
T112-1	12	96	3 3/4 x 4 3/8 x 5 1/4	5 1/4	26.00	10.40

NOTE: Special units can also be furnished in other ratings or round can construction on special order upon request.



DRAWN METAL SHELL PAPER CAPACITORS



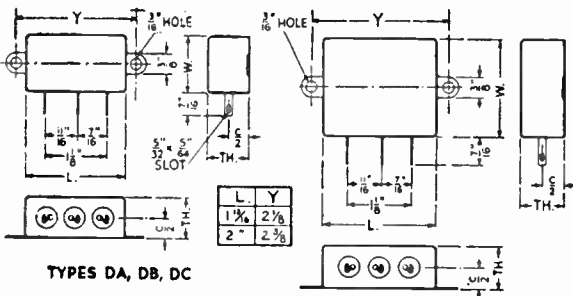
TYPES DA, DB and DC

WAX-FILLED CAPACITORS

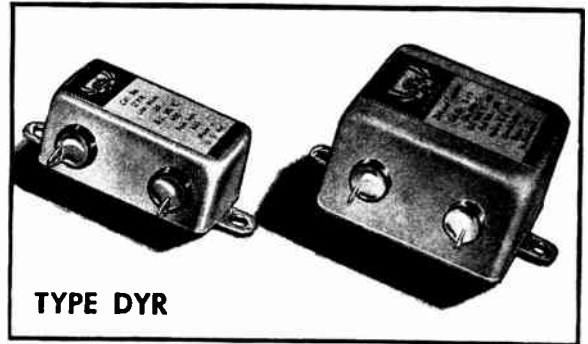
Types DA to DC capacitors are non-inductively wound and wax-potted in drawn metal shell containers. They are available in a large variety of ratings for radio frequency bypass, audio frequency coupling and bypass functions. Lug terminals are amply insulated. Integral with casing, the mounting feet allow ease of assembly.

In the single and dual section capacitor units, the terminals are insulated from the container. The duals have three terminals, the common lug being on the left. In the triple section capacitors, the common terminal connection is grounded to the metal case.

All units are wound with the highest grade pure aluminum foil and multi-laminated kraft tissue, thoroughly dried under vacuum pressure, impregnated in the finest grade wax compound, oil-cooled, and potted in a special wax compound. Conservative D.C. ratings of these capacitors by triple testing assure dependable service in operation.



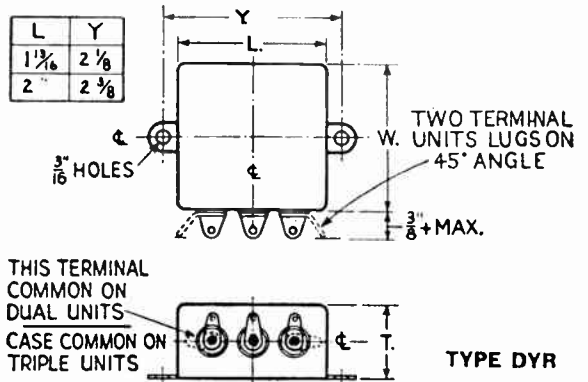
TYPES DA, DB, DC



TYPE DYR

DYKANOL-FILLED CAPACITORS

Type DYR Dykanol Bypass Capacitors are non-inductively wound and meet the need for dependable capacitors of fractional capacities that will operate efficiently in R.F. and A.F. bypass, audio frequency coupling and A.C. circuits under all humidity conditions and at temperatures up to approximately 85° C. (185° F.). They are built to stand an immersion test in hot water and have been specially designed to fill the severe requirements of aircraft, submarine, marine and tropical applications for maximum capacity and voltage in minimum space, where quality and reliability are of paramount importance. They are impregnated and filled with Dykanol "G" and sealed in metal cases with leakproof riveted terminals.



THIS TERMINAL COMMON ON DUAL UNITS
CASE COMMON ON TRIPLE UNITS

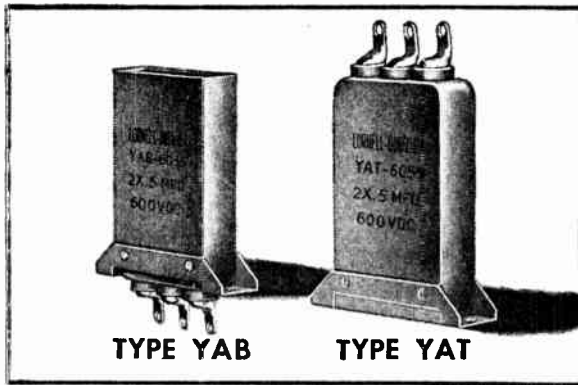
TYPE DYR

Cat. No.	Cap. Mfd.	Size—Inches Lth. x Wid. x Thick.	List Price	Net Price
400 V. D.C. Work.				
DA 4011	.1	1 13/16 x 1 x 3/8	\$1.75	\$1.05
DA 4025	.25	1 13/16 x 1 x 3/8	2.00	1.20
DA 4050	.5	1 13/16 x 1 x 3/8	2.15	1.29
DA 4100	1	2 x 1 3/4 x 15/16	2.60	1.56
DA 4200	2	2 x 2 x 1 1/4	3.35	2.01
DB 4010	.1-1	1 13/16 x 1 x 3/8	2.75	1.65
DB 4025	.25-25	2 x 1 3/4 x 3/8	3.00	1.80
DB 4050	.5-5	2 x 1 3/4 x 1	3.50	2.10
DC 4010	.1-1-1	1 13/16 x 1 x 3/8	3.40	2.04
600 V. D.C. Work.				
DA 6011	.1	1 3/16 x 1 x 3/4	2.40	1.44
DA 6025	.25	1 13/16 x 1 1/4 x 3/4	2.55	1.53
DA 6050	.5	2 x 1 3/4 x 15/16	2.75	1.65
DA 6100	1	2 x 2 x 1 1/2	3.15	1.89

Cat. No.	Cap. Mfd.	Size—Inches Lth. x Wid. x Thick.	List Price	Net Price
500 V. D.C. Work.				
DYR 6005	.05	1 13/16 x 1 x 3/4	\$2.60	\$1.56
DYR 6010	.1	1 13/16 x 1 x 3/4	2.65	1.59
DYR 6025	.25	1 13/16 x 1 x 3/4	2.80	1.68
DYR 6050	.5	1 13/16 x 1 x 3/4	3.00	1.80
DYR 6100	1	2 x 1 3/4 x 1 1/4	3.40	2.04
DYR 6200	2	2 x 2 x 1 1/4	4.55	2.73
DYR 60055	.05-.05	1 13/16 x 1 x 3/4	3.30	1.98
DYR 6011	.1-1	1 13/16 x 1 x 3/4	3.35	2.01
DYR 6022	.25-.25	2 x 1 3/4 x 15/16	3.90	2.04
DYR 6055	.5-5	2 x 1 3/4 x 1 1/4	4.90	2.34
DYR 6110	1-1	2 x 2 x 1 1/4	4.80	2.88
DYR 6111	1-1-1	1 13/16 x 1 x 3/4	3.80	2.28
DYR 6222	.25-.25-.25	2 x 1 3/4 x 15/16	4.30	2.58
DYR 6555	.5-.5-.5	2 x 2 x 1 1/4	5.20	3.12
1000 V. D.C. Work.				
DYR 10005	.05	1 13/16 x 1 x 3/8	2.75	1.65
DYR 10010	.1	1 13/16 x 1 x 3/8	2.85	1.71
DYR 10025	.25	1 13/16 x 1 x 3/8	2.95	1.77
DYR 10050	.5	2 x 1 3/4 x 15/16	3.20	1.92
DYR 10100	1	2 x 2 x 1 1/4	4.00	2.40
DYR 100055	.05-.05	1 13/16 x 1 x 3/8	3.50	2.10
DYR 10011	.1-1	1 13/16 x 1 x 3/8	3.60	2.16
DYR 10022	.25-.25	2 x 1 3/4 x 15/16	3.80	2.28
DYR 10055	.5-5	2 x 2 x 1 1/4	4.95	2.97
DYR 10111	1-1-1	1 13/16 x 1 1/4 x 3/8	4.15	2.49
DYR 10222	.25-.25-.25	2 x 2 x 1 1/4	5.00	3.00



DRAWN METAL SHELL PAPER CAPACITORS



TYPE YAB **TYPE YAT**

COMPACT DYKANOL CAPACITORS

Types YAT and YAB are impregnated and filled with Dykanol "G" (chlorinated diphenyl) a synthetic, non-inflammable, non-oxidizable liquid compound which is unaffected by wide latitude of temperature changes or voltage stresses. They are especially suited for use in bypass, audio frequency coupling circuits and other applications where conditions of high humidity and temperatures are encountered.

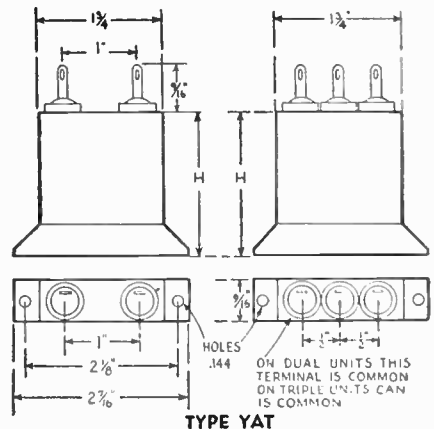
Units are sealed in drawn metal shell containers and provided with leakproof terminals either on top or bottom of the can containers, designated as Types YAT and YAB accordingly. All units are provided with rugged metal mounting brackets which provide rigid mountings. Two or more units may be mounted close together in an assembly. Single section units are provided with two terminals while dual and triple section units have three terminals. In single and dual section units terminals are insulated from the metal container. The third terminal of dual section units is the common terminal and marked for identification. In triple section units the common terminal connection is grounded to the metal case.

Types WAT and WAB Capacitors are smaller size units of similar construction and electrical characteristics but only applied in single section units with two terminals. These units are ideally suited for use in assemblies where space is limited and multiple units may be mounted close together for compactness.

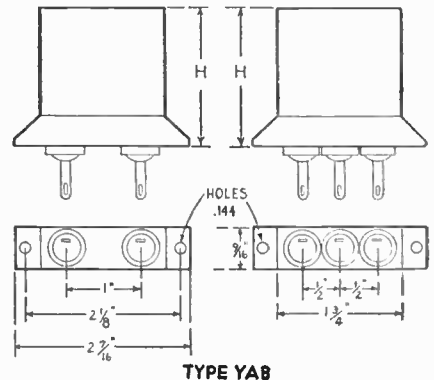
TYPES YAT AND YAB—Dykanol "G" Impregnated and Filled Units

Cat. Nos.	Cap. Mfd.	Size—Inches L. x W. x H.	List Price	Net Price
600 V. D.C. Work.				
YAT or YAB 6005	.05	2 ¹ / ₁₆ x 9 ⁹ / ₁₆ x 1	\$3.25	\$1.95
YAT or YAB 6010	.1	2 ¹ / ₁₆ x 9 ⁹ / ₁₆ x 1	3.25	1.95
YAT or YAB 6025	.25	2 ¹ / ₁₆ x 9 ⁹ / ₁₆ x 1 1/8	3.50	2.10
YAT or YAB 6050	.5	2 ¹ / ₁₆ x 9 ⁹ / ₁₆ x 1 3/8	3.75	2.25
YAT or YAB 6100	1.0	2 ¹ / ₁₆ x 9 ⁹ / ₁₆ x 2 1/8	4.25	2.55
YAT or YAB 60055	.05-.05	2 ¹ / ₁₆ x 9 ⁹ / ₁₆ x 1	3.30	1.98
YAT or YAB 6011	.1-.1	2 ¹ / ₁₆ x 9 ⁹ / ₁₆ x 1 1/2	4.25	2.55
YAT or YAB 6022	.25-.25	2 ¹ / ₁₆ x 9 ⁹ / ₁₆ x 1 3/8	4.25	2.55
YAT or YAB 6055	.5-.5	2 ¹ / ₁₆ x 9 ⁹ / ₁₆ x 2 1/2	5.00	3.00
YAT or YAB 60555	.05-.05-.05	2 ¹ / ₁₆ x 9 ⁹ / ₁₆ x 1	4.75	2.85
YAT or YAB 6111	.1-.1-.1	2 ¹ / ₁₆ x 9 ⁹ / ₁₆ x 1 1/2	3.80	2.28
YAT or YAB 6222	.25-.25-.25	2 ¹ / ₁₆ x 9 ⁹ / ₁₆ x 2 1/2	5.25	3.15

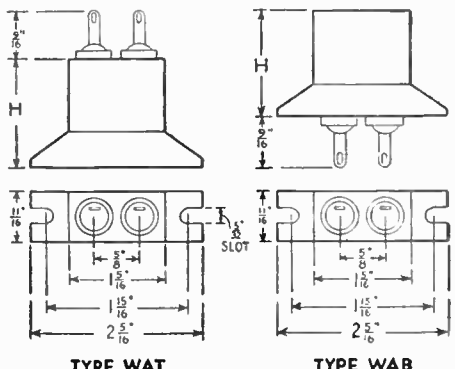
Cat. Nos.	Cap. Mfd.	Size—Inches L. x W. x H.	List Price	Net Price
1000 V. D.C. Work.				
YAT or YAB 10005	.05	2 ¹ / ₁₆ x 9 ⁹ / ₁₆ x 1	\$3.35	\$2.01
YAT or YAB 10010	.1	2 ¹ / ₁₆ x 9 ⁹ / ₁₆ x 1	3.60	2.16
YAT or YAB 10025	.25	2 ¹ / ₁₆ x 9 ⁹ / ₁₆ x 1 7/8	3.75	2.25
YAT or YAB 10050	.5	2 ¹ / ₁₆ x 9 ⁹ / ₁₆ x 2 1/2	4.00	2.40
YAT or YAB 100055	.05-.05	2 ¹ / ₁₆ x 9 ⁹ / ₁₆ x 1 1/2	4.00	2.40
YAT or YAB 10011	.1-.1	2 ¹ / ₁₆ x 9 ⁹ / ₁₆ x 1 1/2	4.50	2.70
YAT or YAB 10022	.25-.25	2 ¹ / ₁₆ x 9 ⁹ / ₁₆ x 2 1/2	4.75	2.85
YAT or YAB 100555	.05-.05-.05	2 ¹ / ₁₆ x 9 ⁹ / ₁₆ x 1 1/2	3.25	3.15
YAT or YAB 10111	.1-.1-.1	2 ¹ / ₁₆ x 9 ⁹ / ₁₆ x 2 1/2	5.75	3.45



TYPE YAT



TYPE YAB



TYPE WAT

TYPE WAB

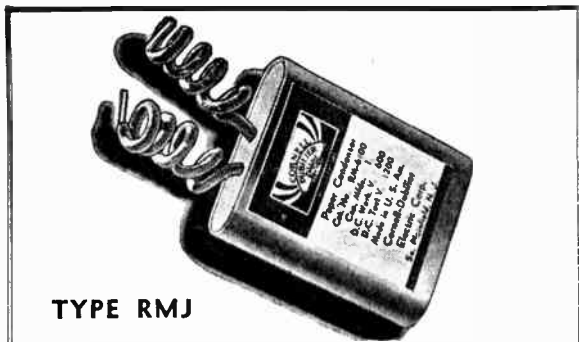
TYPES WAT AND WAB—Dykanol "G" Impregnated and Filled Units

Cat. Nos.	Cap. Mfd.	Size—Inches L. x W. x H.	List Price	Net Price
600 V. D.C. Work.				
WAT or WAB 6005	.05	2 ⁵ / ₁₆ x 1 ¹ / ₁₆ x 1 ⁷ / ₁₆	\$3.50	\$2.10
WAT or WAB 6010	.1	2 ⁵ / ₁₆ x 1 ¹ / ₁₆ x 1 ⁷ / ₁₆	3.75	2.25
WAT or WAB 6025	.25	2 ⁵ / ₁₆ x 1 ³ / ₁₆ x 2 ¹ / ₁₆	4.00	2.40
WAT or WAB 6050	.5	2 ⁵ / ₁₆ x 1 ³ / ₁₆ x 2 ¹ / ₁₆	4.25	2.55
WAT or WAB 6100	1.0	2 ⁵ / ₁₆ x 1 ³ / ₁₆ x 2 ¹ / ₁₆	4.75	2.85

Cat. Nos.	Cap. Mfd.	Size—Inches L. x W. x H.	List Price	Net Price
1000 V. D.C. Work.				
WAT or WAB 10005	.05	2 ⁵ / ₁₆ x 1 ¹ / ₁₆ x 1 ⁷ / ₁₆	\$3.75	\$2.25
WAT or WAB 10010	.1	2 ⁵ / ₁₆ x 1 ¹ / ₁₆ x 1 ⁷ / ₁₆	3.75	2.25
WAT or WAB 10025	.25	2 ⁵ / ₁₆ x 1 ³ / ₁₆ x 2 ¹ / ₁₆	4.00	2.40
WAT or WAB 10050	.5	2 ⁵ / ₁₆ x 1 ³ / ₁₆ x 2 ¹ / ₁₆	4.00	2.40



REPLACEMENT PAPER CAPACITORS

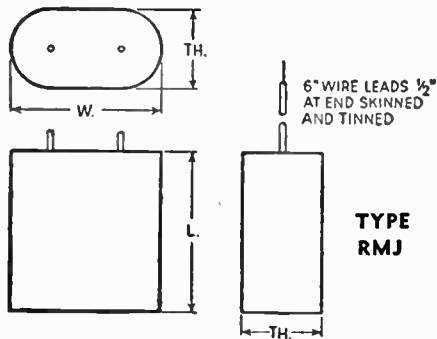


TYPE RMJ

UNCASED PAPER CAPACITORS

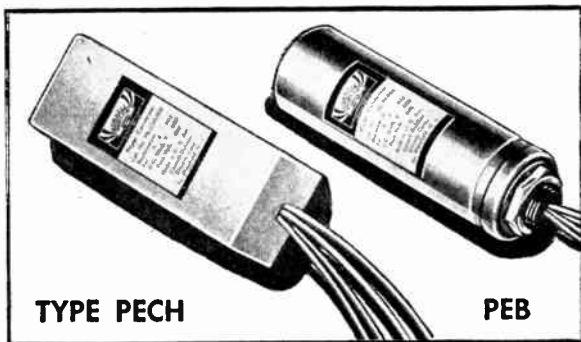
Type RMJ uncased capacitors are made available to repair paper dielectric filter blocks which were used in the early models of A.C. operated radio sets. Also useful in the elimination of electrical interference caused by pushbuttons, bells, buzzers, and similar applications in radio, electronic and electrical devices.

Special capacitor units can be made up and potted into suitable containers by servicemen to fulfill many requirements.



TYPE RMJ

Cat. No.	Cap. Mfd.	Size—Inches Lth. x Wid. x Thick.	List Price	Net Price
600 V. D.C.				
RMJ 6010	.1	2 x 1 x 1/4	\$0.80	\$0.48
RMJ 6025	.25	2 x 1 x 1/4	.90	.54
RMJ 6050	.5	2 x 1 1/2 x 2 1/8	1.05	.63
RMJ 6100	1	2 x 2 x 1 1/2	1.40	.84
RMJ 6200	2	3 1/2 x 2 x 1	2.10	1.26
RMJ 6400	4	4 3/8 x 2 1/8 x 1 1/2	3.80	2.28

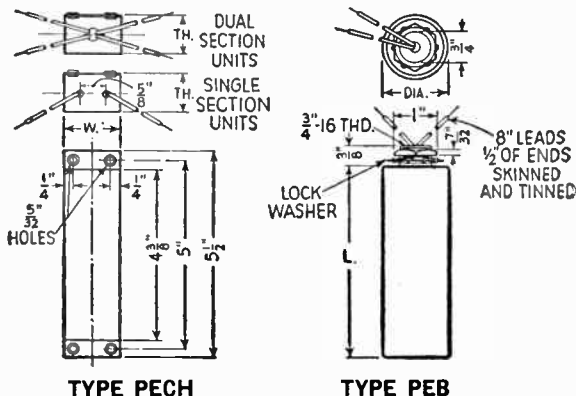


TYPE PECH

PEB

REPLACEMENTS FOR ELECTROLYTICS

Paper Replacement Capacitors that simulate electrolytics in appearance; these types fulfill many service requirements. There is no polarity to observe when using these capacitors. Mounting flanges are provided on all cardboard box units. Dual section units have separate leads.



TYPE PECH

TYPE PEB

Cat. No.	"Replacement" for Electrolytic Cap. Mfd.	Actual Capacity Approx. Mfd.	Size—Inches Length x Width x Thickness	List Price	Net Price
600 V. D.C.					
PECH 6004	4	2	4 3/8 x 1 3/8 x 1 1/8	\$2.00	\$1.20
PECH 6008	8	5.5	4 3/8 x 1 3/8 x 1 1/8	3.25	1.95
PECH 6808	8-8	2.7-2.7	4 3/8 x 2 x 1 1/2	4.00	2.40
PEB 6004	4	1.75	4 3/8 x 1 3/8	2.10	1.26
PEB 6008	8	2.75	4 3/8 x 1 3/8	3.50	2.10
PEB 6808	8-8	1.7-1.7	4 3/8 x 1 1/2	4.30	2.58



TYPE KFS

FLUORESCENT LIGHT REPLACEMENT UNITS

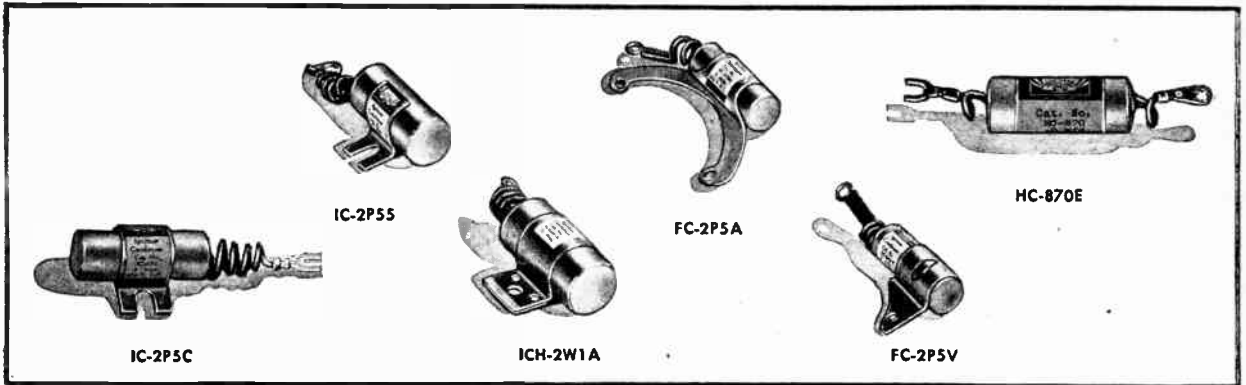
Types KFS capacitors are designed to correct power factor of standard 120 volt A.C. fluorescent lighting fixtures employing from one to four lamps. Data is given on instruction label of each unit for desired correction with diagram of connections. All units supplied with two flexible insulated wire leads 15" long.

TYPE KFS—120 V.A.C. 60 Cycles

Cat. No.	Cap. Mfd.	Size—Inches Lth. x Wid. x Thick.	List Price	Net Price
KFS 1030	3.0	3 x 2 1/8 x 1	\$4.25	\$2.55
KFS 1047	4.7	4 3/8 x 2 1/8 x 1	5.50	3.30
KFS 1060	6.0	4 3/8 x 2 1/8 x 1	6.50	3.90
KFS 1085	8.5	8 3/8 x 2 1/8 x 1	8.25	4.95
KFS 1110	11.0	10 3/8 x 2 1/8 x 1	10.50	6.30



AUTO RADIO CAPACITORS



MOTOR GENERATOR AMMETER AND BUFFER CAPACITORS

The mechanical design of C-D Auto Radio Capacitors insures against damage by the high temperatures and excessive vibration existing under the hood of an auto. Special units such as these are designed for certain particular

installations. Thus, for instance, Ford generator capacitor, FC-2P5V, has a special mounting bracket while others are also provided with special mountings and terminals.

GENERATOR UNITS

Cat. No.	Cap. Mid.	Size—Inches Lih. x Dia.	List Price	Net Price
ICS 2S5A	.05	1 1/4 x 7/16	\$1.00	\$0.60
IC 2P5C	.5	1 1/2 x 1 1/16	1.00	.60
FC 2P5A	.5	1 1/2 x 1 1/16	1.25	.75
FC 2P5V	.5	1 1/2 x 1 1/16	1.00	.60
IC 2P55	.5-.5	2 x 7/8	1.50	.90
ICH 2W1A	1.0	2 3/16 x 1	1.35	.81
ICV 2P25A	.25	1 1/2 x 1 1/16	.90	.54
ICV 2P5A	.5	1 1/2 x 1 1/16	1.00	.60
ICV 2W1A	1.0	2 3/16 x 1	1.35	.81

AMMETER UNIT

HC 870E	.5	3/4 x 2	\$1.00	\$0.60
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MOTOROLA NO. 3321 VIBRATOR UNIT

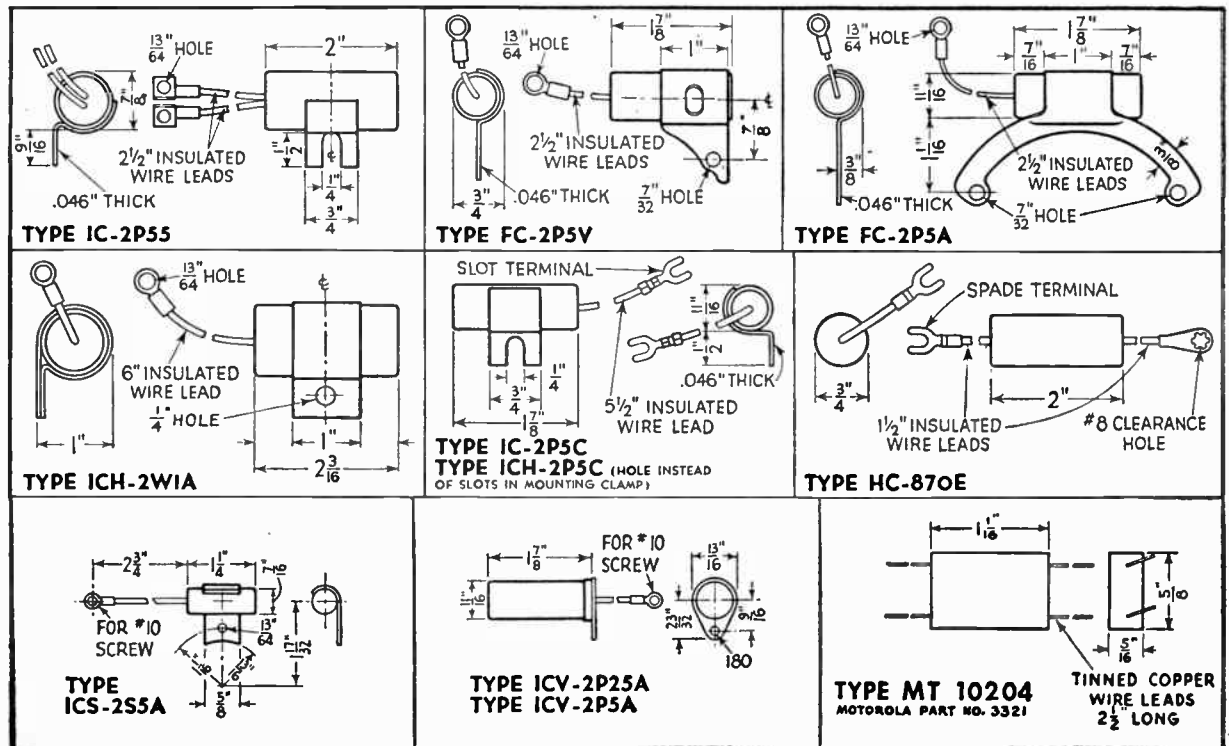
Cat. No.	Cap. Mid.	V. D.C.	Size—Inches L. x W. T.	List Price	Net Price
MT 10204	2 x .0008	1600	5/8 x 1 1/16 x 5/16	\$.70	\$.42

VIBRATOR BUFFER UNITS

Cat. No.	Cap. Mid.	Size—Inches Dia. x Lgth.	List Price	Net Price
TVC 16D5-6	.005	1 1/16 x 1 1/2	\$1.20	\$0.72
TVC 16D7-6	.007	1 1/16 x 1 1/2	1.20	.72
TVC 16S1-6	.01	1 1/16 x 1 1/2	1.20	.72
TVC 16S2-6	.02	1 1/16 x 1 1/2	1.30	.78

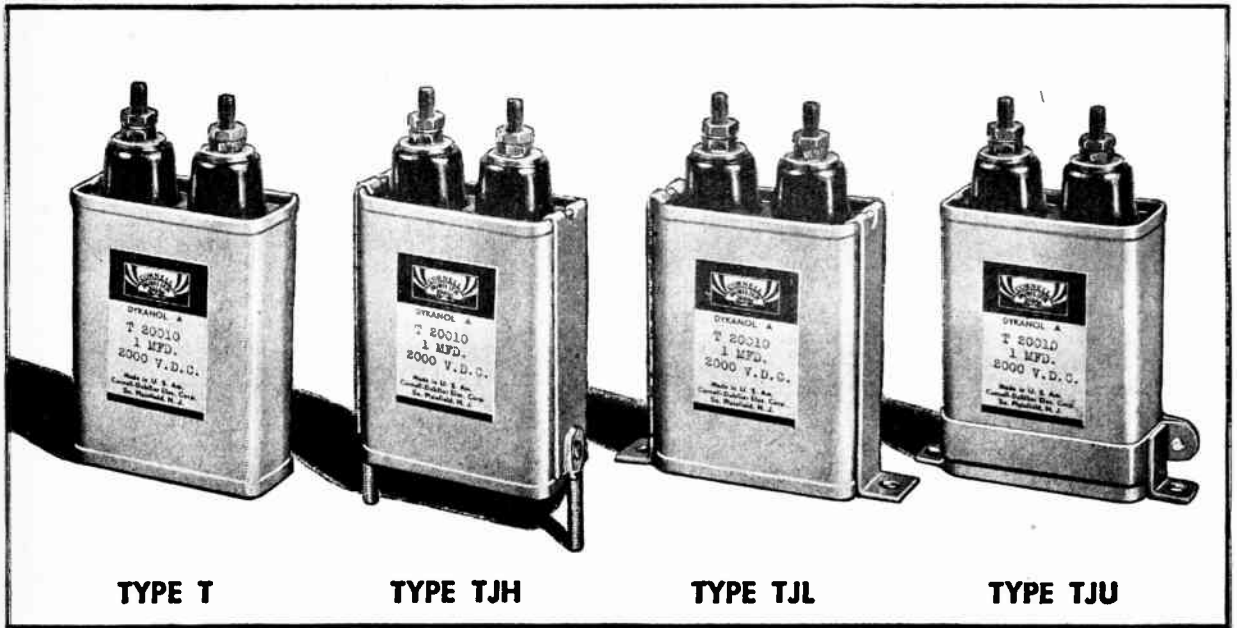
Metal cased oil-impregnated and processed tubular paper capacitors with cardboard insulating sleeve and mounting strap. 2000 V.D.C. Peak

For oil-impregnated and processed paper tubular capacitors, see Type MD listed on page 8.





DYKANOL TRANSMITTING CAPACITORS



TYPE T

TYPE TJH

TYPE TJL

TYPE TJU

TYPE T CAPACITORS WITH VARIOUS TYPES OF MOUNTINGS

Type T-series Dykanol transmitting capacitors are the finest and most dependable units obtainable for use in all amateur, broadcast and commercial equipment. Units are provided with well insulated terminals, and mountings desired as shown in the accompanying illustrations. These units are standard in thousands of broadcast and government stations all over the world, and also employed in all types of sound equipment, television receivers and transmitters, and other electronic apparatus.

Type T capacitors are thoroughly impregnated and filled with Dykanol "G" (chlorinated diphenyl), a non-inflammable, fireproof, non-oxidizable liquid compound which provides a high factor of safety and exceptionally long life at high temperatures.

In the past, organic oils, resins, and waxes were used as paper impregnants in electrical insulation. Because of the variation of these natural materials, uniformity of results could be desired only and not attained. The concentrated attention of chemists and electrical engineers was turned toward the development of non-organic, synthetic substitutes and new substances, the properties of which could be controlled and modified as desired. The chlorinated diphenyls were recognized as outstanding among the rapidly increasing number of synthetics available. Of these compounds, continued research pointed to one narrow group, that known as Dykanol "G," the characteristics of which were particularly suited to the capacitor art. This material, having the lowest power factor compatible with the highest dielectric constant, is used as the impregnant in Type T capacitors.

For the dielectric separator in Type T capacitors, only the highest grade of kraft paper is used, ranging in thickness

from .0003 to .001 of an inch for a single sheet. Three or more layers of paper dielectric as a separator between foil members are always used. The higher voltage units use as many as six or more layers. This multiple lamination builds a high safety factor into Type T capacitors.

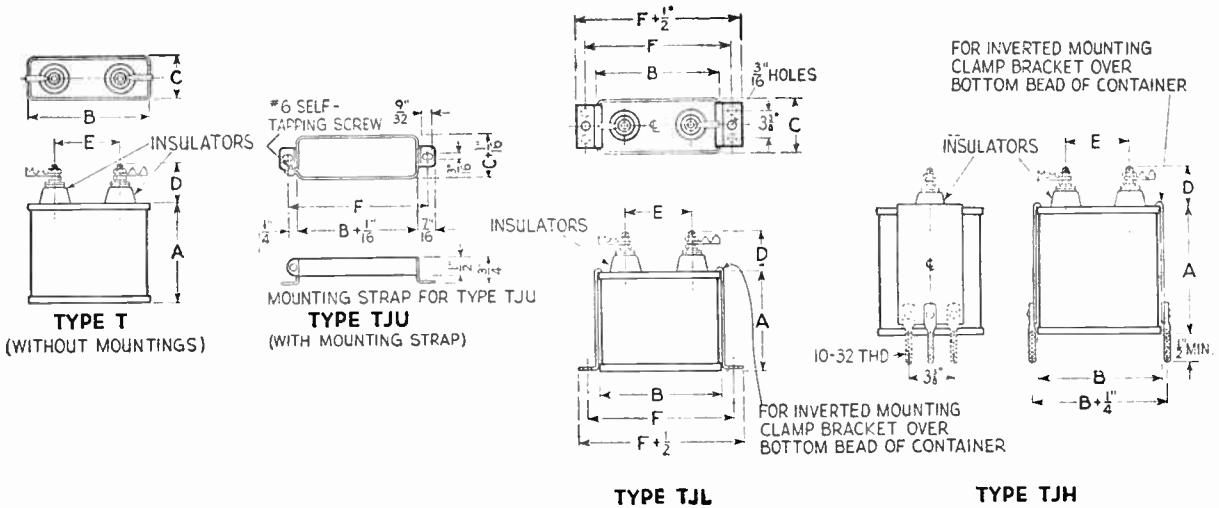
All paper is manufactured to meet rigid specifications and is subjected to a series of tests at the C-D laboratories before acceptance for use in these capacitors. The paper must be of exceptionally high quality to pass the tests. In order to determine its many characteristics, tests are made for porosity, tensile strength, effect of heating, conducting particles, dielectric strength, ash content and ash analysis, acidity or alkalinity, soluble impurities, general appearance, and mechanical considerations such as yield, thickness, width, etc.

Due to the use of Dykanol "G" and multi-layer kraft capacitor tissue in these units, many outstanding advantages are thus gained, i.e., small size, light weight, low dielectric stress and long life at higher operating temperatures. The size is reduced due to the high dielectric constant of Dykanol "G" which also affords reduction in weight. A low dielectric stress is obtained as the result of efficient use of container volume, and the high specific inductive capacity of the impregnant. And since the dielectric stress is low, the life of the unit in operation is greatly increased. The synthetic liquid impregnant employed in these capacitors does not oxidize or deteriorate like commonly used organic oils. For complete listing of Type T-series, see next page.

For higher voltage units, ranging from 6000 to 25,000 v.d.c., write for data and prices on Type TK capacitors.



DYKANOL TRANSMITTING CAPACITORS



TYPE DESIGNATIONS—Type T (basic units) are without mountings. To order Types TJH, TJL or TJU with mountings as shown above, add letter symbols of type mountings desired to Cat. No. as follows:

TYPE T—(Basic unit) without mountings.
 TYPE TJH—With screw spade-lug brackets.

TYPE TJL—With mounting foot brackets.
 TYPE TJU—With universal mounting strap.

Prices below include mounting brackets or universal mounting strap when ordered according to these type numbers.

Cat. No.	Cap. Mid.	Dimensions—Inches						List Price	Net Price
		A	B	C	D	E	F		
600 V. D.C. Working									
T 6005	.5	2 1/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	\$4.25	\$2.55
T 6010	1	2 1/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	5.25	3.15
T 6020	2	2 1/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	6.50	3.90
T 6030	3	2 1/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	7.50	4.50
T 6040	4	2 1/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	8.25	4.95
T 6050	5	2 1/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	9.00	5.70
T 6060	6	2 1/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	10.25	6.15
T 6080	8	2 1/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	12.25	7.35
T 6100	10	2 1/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	13.75	8.25
1000 V. D.C. Working									
T 10001	1	2 1/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	3.75	2.25
T 100025	.25	2 1/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	4.25	2.55
T 10005	.5	2 1/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	4.50	2.70
T 10010	1	2 1/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	5.75	3.45
T 10020	2	2 1/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	7.50	4.50
T 10030	3	2 1/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	8.75	5.25
T 10040	4	2 1/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	9.50	5.70
T 10050	5	2 1/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	11.50	6.90
T 10060	6	2 1/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	12.75	7.65
T 10080	8	2 1/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	13.75	8.25
T 10100	10	2 1/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	15.25	9.15
T 10120	12	2 1/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	16.50	9.90
T 10150	15	2 1/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	18.25	10.95
1500 V. D.C. Working									
T 15005	.5	2 3/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	5.75	3.45
T 15010	1	2 3/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	6.75	4.65
T 15020	2	2 3/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	9.50	5.70
T 15030	3	2 3/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	11.25	6.75
T 15040	4	2 3/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	12.75	7.65
T 15050	5	2 3/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	13.75	8.25
T 15060	6	2 3/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	15.50	9.30
T 15080	8	2 3/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	19.00	11.40
T 15100	10	2 3/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	22.75	13.65
T 15120	12	2 3/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	24.75	14.85
T 15150	15	2 3/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	27.25	16.35

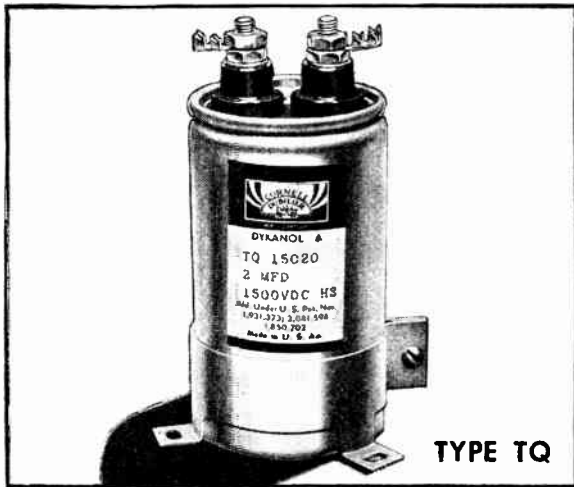
Cat. No.	Cap. Mid.	Dimensions—Inches						List Price	Net Price
		A	B	C	D	E	F		
2000 V. D.C. Working									
T 20001	.1	2 1/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	\$6.00	\$3.60
T 200025	.25	2 1/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	6.50	3.90
T 20005	.5	2 1/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	6.75	4.05
T 20010	1	2 1/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	8.25	4.95
T 20020	2	2 1/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	9.75	5.85
T 20030	3	2 1/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	12.00	7.20
T 20040	4	2 1/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	13.75	8.25
T 20050	5	2 1/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	15.25	9.15
T 20060	6	2 1/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	18.25	10.95
T 20080	8	2 1/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	22.75	13.65
T 20100	10	2 1/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	27.75	16.65
T 20120	12	2 1/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	30.25	18.15
2500 V. D.C. Working									
T 25005	.5	3 1/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	10.50	6.30
T 25010	1	3 1/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	12.00	7.20
T 25020	2	3 1/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	19.50	11.70
T 25040	4	3 1/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	27.25	16.35
T 25100A	10	6 3/8	3 1/8	3 1/8	1 1/8	1 1/8	2 1/4	68.25	40.95
3000 V. D.C. Working									
T 30001	.1	2 1/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	12.75	7.65
T 300025	.25	2 1/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	13.50	8.10
T 30005	.5	2 1/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	15.25	9.15
T 30010	1	2 1/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	18.25	10.95
T 30020	2	2 1/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	22.75	13.65
T 30040	4	2 1/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	33.50	20.10
4000 V. D.C. Working									
T 40001	.1	2 3/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	22.75	13.65
T 400025	.25	2 3/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	24.00	14.40
T 40005	.5	2 3/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	27.25	16.35
T 40010	1	2 3/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	33.50	20.10
T 40020	2	2 3/8	1 1/8	1 1/8	7/8	1 1/8	2 1/4	42.50	25.50
T 40040A	4	4 3/8	2 1/8	2 1/8	1 1/8	1 1/8	2 1/4	60.75	36.45
5000 V. D.C. Working									
T 50005	.5	4 1/8	2 1/8	2 1/8	1 1/8	1 1/8	2 1/4	30.25	18.15
T 50010	1	4 1/8	2 1/8	2 1/8	1 1/8	1 1/8	2 1/4	38.00	22.80
T 50020	2	4 1/8	2 1/8	2 1/8	1 1/8	1 1/8	2 1/4	48.75	29.25
6000 V. D.C. Working									
T 60010A	1	8	3 3/8	3 3/8	1 1/8	1 1/8	2 1/4	76.00	45.60

NOTES—* Type TJU units are not furnished in these larger sizes.
 † TYPES TJL and TJH units furnished with two mounting holes or spade-lugs 3/8" apart. All other units furnished with a single mounting hole or spade-lug centered on each bracket.

For higher voltage units, from 6000 to 25,000 v.d.c., write for data and prices on Type TK capacitors.



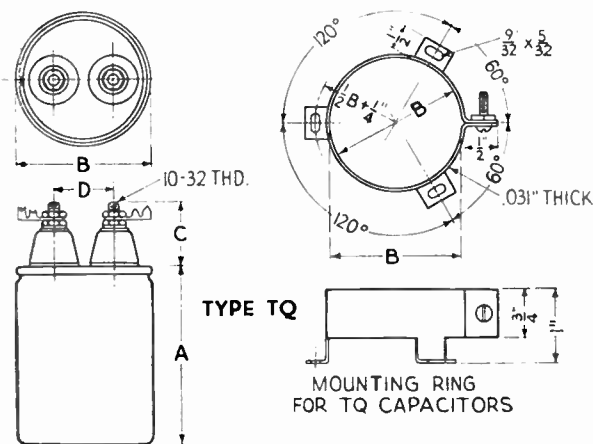
DYKANOL TRANSMITTING CAPACITORS



TYPE TQ

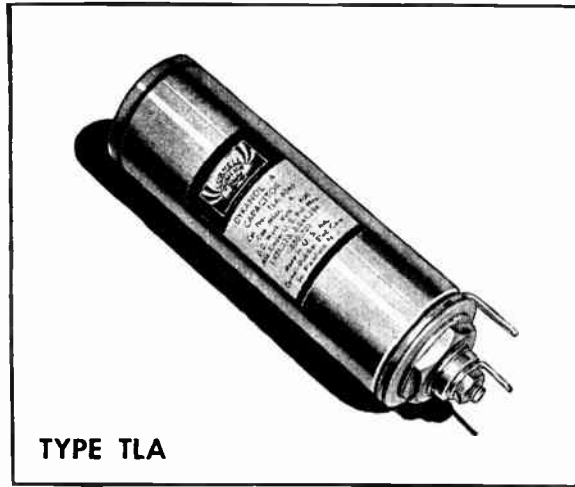
ROUND CAN-TYPE CAPACITORS

Cornell-Dubilier, Type TQ Dykanol Capacitors, in round metal containers are provided with two insulated terminals and universal mounting rings for mounting the unit in any position with terminals either above or below a subpanel assembly. These units are designed primarily for filter circuits in amateur, low-power broadcast and commercial transmitters. They are also adapted for high-power, high-fidelity public address systems and portable power amplifiers.



TYPE TQ

MOUNTING RING FOR TQ CAPACITORS



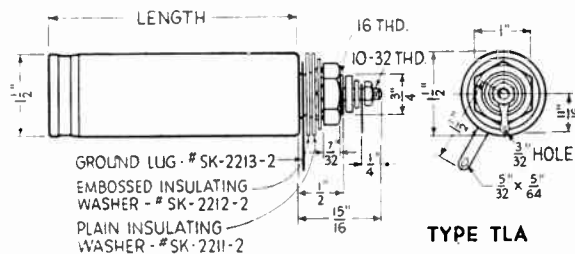
TYPE TLA

ONE-HOLE MOUNTING CAPACITORS

For compact high-voltage filter applications in high-fidelity P.A. amplifiers, power supplies for short-wave portable transmitters and transceivers, type TLA Dykanol filter units in round aluminum containers are ideal in every respect. One terminal is well insulated, the other being the metal can itself. Insulating washers, as well as a large spade lug, are provided so that the metal container may be insulated from the chassis.

Type TLA capacitors are thoroughly impregnated and filled with Dykanol "G" (chlorinated diphenyl), a non-inflammable, fireproof, non-oxidizable liquid compound which provides a high factor of safety and exceptionally long life at high temperatures.

Type TLAD Capacitors are similar in construction except that the capacitor section is insulated from the metal container and furnished with two soldering lug terminals instead of one.



TYPE TLA

Cat. No.	Cap. Mfd.	Dimensions—Inches				List Price	Net Price
		A	B	C	D		
600 Volts D.C. Working							
TQ 6020	2	2 1/4	2	1	13/16	\$4.95	\$2.97
TQ 6040	4	2 3/4	2	1	13/16	6.85	4.11
1000 Volts D.C. Working							
TQ 10010	1	1 3/4	2	1	13/16	4.20	2.52
TQ 10020	2	1 3/4	2	1	13/16	5.70	3.42
TQ 10040	4	3 3/4	2	1	13/16	7.25	4.35
1500 Volts D.C. Working							
TQ 15010	1	2 3/4	2	1	13/16	5.30	3.18
TQ 15020	2	3 3/4	2	1	13/16	7.25	4.35
2000 Volts D.C. Working							
TQ 20010	1	3 1/4	2	1	13/16	6.85	4.11
TQ 20020	2	4 3/4	2	1	13/16	7.60	4.56
TQ 20040	4	4 3/4	3	1 1/4	13/16	10.75	6.45
3000 Volts D.C. Working							
TQ 30010	1	3 1/4	3	1 1/4	13/16	13.75	8.25
TQ 30020	2	5 1/4	3	1 1/4	13/16	16.75	10.05

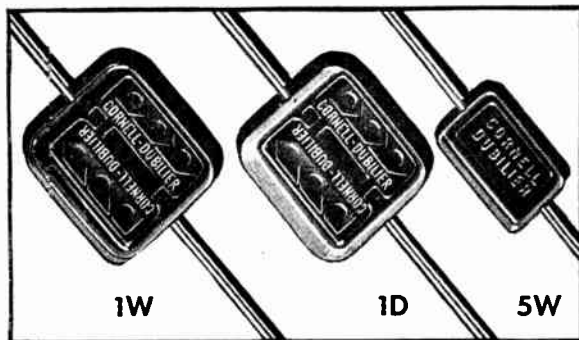
Cat. No.	Cap. Mfd.	D.C. W. Volts	Size—Inches Lqth. x Diam.	List Price	Net Price
TLA 6020	2	600	2 7/8 x 1 1/2	\$4.15	\$2.49
TLA 6040	4	600	4 1/2 x 1 1/2	5.70	3.42
TLA 10010	1	1000	2 7/8 x 1 1/2	3.80	2.28
TLA 10020	2	1000	4 1/2 x 1 1/2	4.95	2.97
TLA 15005	1	1500	2 7/8 x 1 1/2	4.55	2.73
TLA 15010	1	1500	4 1/2 x 1 1/2	4.95	2.97

TYPE TLAD—Units Insulated from Container

Cat. No.	Cap. Mfd.	D.C. W. Volts	Size—Inches Lqth. x Diam.	List Price	Net Price
TLAD 6020	2	600	2 7/8 x 1 1/2	\$4.90	\$2.94
TLAD 6040	4	600	4 1/2 x 1 1/2	6.45	3.87
TLAD 10010	1	1000	2 7/8 x 1 1/2	4.55	2.73
TLAD 10020	2	1000	4 1/2 x 1 1/2	5.70	3.42
TLAD 15005	1	1500	2 7/8 x 1 1/2	5.30	3.18
TLAD 15010	1	1500	4 1/2 x 1 1/2	5.70	3.42

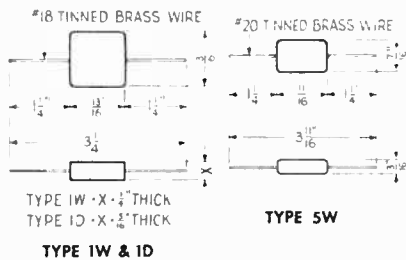


MOULDED MICA RECEIVING CAPACITORS



MOULDED BAKELITE UNITS

Types 1W, 1D, and 5W are suitable for numerous electronic uses and are specially adapted to serve many important functions in low-voltage radio receiving circuits. They are individually tested for accuracy of capacity and voltage breakdown and designed to give dependable service where small size units are required.

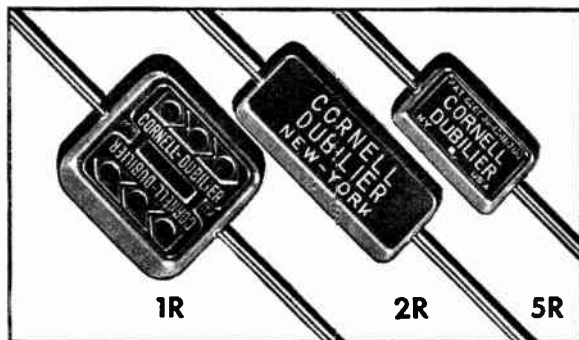


Cap. Mfd.	Type 5W Cat. No.	Type 1W Cat. No.	Type 1D Cat. No.	List Price	Net Price
.000005	5W 5V5			\$0.25	\$0.15
.000C1	5W 5Q1			.25	.15
.000C2	5W 5Q2			.25	.15
.00002	5W 5Q25			.25	.15
.000C3	5W 5Q3			.25	.15
.00004	5W 5Q4			.20	.12
.00005	5W 5Q5			.20	.12
.000C7	5W 5Q7			.20	.12
.0001	5W 5T1			.20	.12
.00015	5W 5T15			.20	.12
.0002	5W 5T2			.20	.12
.00025	5W 5T25			.25	.15
.0005	5W 5T3			.25	.15
.0004	5W 5T4			.25	.15
.0005	5W 5T5			.25	.15
.000E		1W 5T6		.25	.15
.0007		1W 5T7		.25	.15
.000E		1W 5T8		.25	.15
.000E		1W 5T9		.25	.15
.001		1W 5D1		.30	.18
.0015		1W 5D15		.30	.18
.002		1W 5D2		.40	.24
.0025		1W 5D25		.45	.27
.003		1W 5D3		.50	.30
.004			1D 5D4	.55	.33
.005			1D 5D5	.60	.36
.006			1D 5D6	.75	.45
			600 V. D.C. Test 300 V. D.C. Working		
.007			1D 3D7	.90	.54
.008			1D 3D8	1.00	.60
.009			1D 3D9	1.00	.60
.01			1D 3S1	1.20	.72

Notes On Ordering Special Units

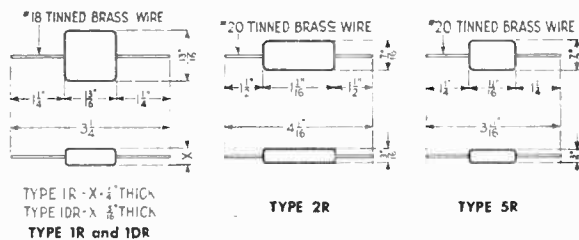
The listing above gives the range of capacities available from stock. Intermediate capacities, not exceeding the maximum as listed for each type, can also be furnished upon request.

Standard capacity tolerance is plus or minus 20%. Also available, on order, in plus or minus 10%, 5%, 3% and 2% tolerance ratings (or within 1 mmfd.—whichever is greater). For capacity tolerance of: 10% add 10% to list prices; 5% add 20% to list prices; 3% add 40% to list prices; 2% add 75% to list prices.



HIGH-STABILITY "SILVER-MIKE" UNITS

Types 1R, 1DR, 2R and 5R "Silver-Mike" silvered mica capacitors are designed for use in high Q electronic circuits where frequency stability and minimum loss must be maintained. They are ideally suited for use in circuits where the LC product must be maintained constant, and particularly adapted for use in tuning IF transformers, push-button tuning circuits and other similar applications. Standard units are moulded in low-loss red bakelite.



Cap. Mfd.	Type 5R Cat. No.	Type 2R Cat. No.	Type 1R & 1DR Cat. No.	List Price	Net Price
.000005	5R 5V5			\$0.45	\$0.27
.00001	5R 5Q1			.40	.24
.00002	5R 5Q2			.40	.24
.000025	5R 5Q25			.40	.24
.00003	5R 5Q3			.40	.24
.00004	5R 5Q4			.40	.24
.00005	5R 5Q5			.40	.24
.00007	5R 5Q7			.40	.24
.0001	5R 5T1	2R 5T1		.40	.24
.00015	5R 5T15	2R 5T15		.45	.27
.0002	5R 5T2	2R 5T2		.45	.27
.00025	5R 5T25	2R 5T25		.45	.27
.0003	5R 5T3	2R 5T3		.55	.33
.0004	5R 5T4	2R 5T4		.65	.39
.0005	5R 5T5	2R 5T5		.70	.42
.0007		2R 5T7		.85	.51
.0008		2R 5T8		.95	.57
.0009		2R 5T9		1.00	.60
.001		2R 5D1	1R 5D1	1.10	.66
.0015			1R 5D15	1.35	.81
.002			1R 5D2	1.35	.81
.0025			1R 5D25	1.80	1.08
.003			1R 5D3	2.05	1.23
.004			1DR 5D4	2.15	1.29
.005			1DR 5D5	2.25	1.35

Notes On Ordering Special Units

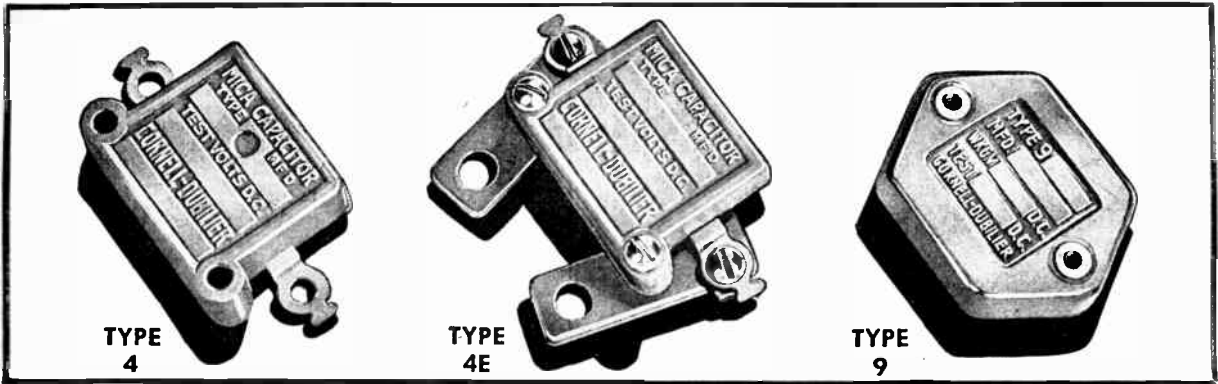
The listing above gives range of capacities which are available from stock. Intermediate capacities, not exceeding the maximum as listed for each type, can also be furnished upon request.

Standard capacity tolerance is 5%. Also available, on special order, in tolerance ratings of plus or minus 3%, add 10% to list prices, 2% add 15% to list prices and 1% add 25% to list prices, (or within 1 mmfd.—whichever is greater). All types can also be supplied in plus or minus 10% and 20% tolerances at lower prices.

CORNELL DUBILIER



MOULDED MICA TRANSMITTING CAPACITORS



MOULDED BAKELITE MICA CAPACITORS

C-D Mica Capacitors Types 4 and 9 are designed to meet the requirements of power amplifiers and low-power transmitters. They are principally employed for grid and plate blocking purposes and for r. f. by-pass functions.

Notes on Ordering Special Capacitors

Type No. Suffix STANDARD TOLERANCE is plus or minus 10%. Also available on order in plus or minus 5% and 2%. For capacity tolerance of: 5% add 15c to list prices; 2% add 40c to list prices.

"L" MOULDED IN LOW-LOSS BAKELITE available on order. Add "L" to Cat. No. (example: 4L-22060; 9L-11010). Add 25c to list prices.

"S" SPECIAL SALT WATER IMMERSION SEAL AGAINST HUMIDITY. To order, add "S" to Cat. No. (example: 4S-53010; 9S-12050). Add 10c to list prices.

"T" HEAT AGEING TREATMENT for stabilizing capacity over extremely wide temperature changes, minus 40° C. to plus 70° C., furnished on special order. Add "T" to Cat. No. (example: 4T-12010; 9T-21020). Add 15c to list prices.

"LST" TO ORDER A COMBINATION OF ABOVE FEATURES, add letters specified to Cat. No. (example: 4LST-12040; 9LST-13020). Add 50c to list prices.

INSULATION RESISTANCE—Brown Bakelite, 20,000 megohms per unit—Low-Loss Bakelite, 40,000 megohms per unit. Low-Loss Bakelite provides higher Q and lowers the power factor.

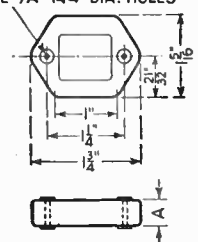
"4E" SMALL METER BRACKETS adapted for Weston Model 301 meters, add "E" to Cat. No. (example: 4E-22050). Add 20c to list prices.

"9A" UNTAPPED MOUNTING HOLES. Standard units are tapped for 6-32 and furnished with round head screws. For untapped mounting hole, .144" diameter (No. 6 clearance), add "A" to Cat. No. (example: 9A-11030).

"9F" HIGHER VOLTAGE CONSTRUCTION, rated 6,000 v.d.c. test, 3,000 v.d.c.—1500 v.a.c. operating. Capacity range limited. Moulded in low-loss Bakelite, BM 262. The thickness of these units, or "A" dimension, is 1/16" for capacities up to .002 mfd. and 3/16" for capacities from .0022 to .005 mfd. max. To order, add "F" to Cat. No. (example: 9F-63050, the numeral "6" designating 6,000 volts test). Prices of "9F" units are double the list prices shown.

"9R" HIGH STABILITY UNITS—Special high stability units, comprising low-loss Bakelite, BM 262, temperature aged and sealed construction for use as low power master oscillator tank capacitors or accessory positions. These units are fixed and permanent in characteristics, having a capacity-temperature coefficient of approximately plus .003% (30 parts per million) per degree C. To order, add "R" to Cat. No. (example: 9R-52020). Prices of 9R units are double the list prices shown.

TYPE 9-6-32 THD. TAPPED HOLES
TYPE 9A-1/4" DIA. HOLES

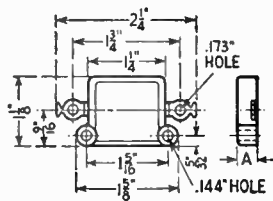


TYPE 4			
Cat. No.	Cap. Mfd.	List Price	Net Price
1200 V. D.C. Test—600 V. D.C. Working			
4-14050	.00005	\$0.70	\$0.42
4-13010	.0001	.70	.42
4-13020	.0002	.70	.42
4-13025	.00025	.70	.42
4-13030	.0003	.70	.42
4-13040	.0004	.70	.42
4-13050	.0005	.70	.42
4-12010	.001	.70	.42
4-12015	.0015	.70	.42
4-12020	.002	.80	.48
4-12025	.0025	.90	.54
4-12030	.003	1.00	.60
4-12040	.004	1.00	.60
4-12050	.005	1.00	.60
4-12060	.006	1.20	.72
4-12070	.007	1.30	.78
4-12080	.008	1.40	.84
4-11010	.01	1.60	.96
4-11015	.015	1.80	1.08
4-11020	.02	2.20	1.32
4-11025	.025	2.65	1.59
4-11030	.03	2.95	1.77

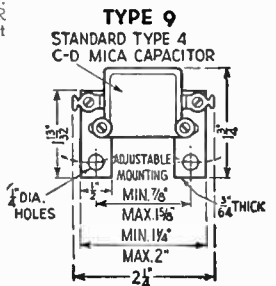
TYPE 9			
Cat. No.	Cap. Mfd.	List Price	Net Price
1200 V. D.C. Test—600 V. D.C. Working			
9-14050	.00005	\$0.85	\$0.51
9-13010	.0001	.85	.51
9-13025	.00025	.85	.51
9-13050	.0005	.85	.51
9-12010	.001	.85	.51
9-12020	.002	.90	.54
9-12025	.0025	1.00	.60
9-12030	.003	1.20	.72
9-12040	.004	1.20	.72
9-12050	.005	1.20	.72
9-12060	.006	1.40	.84
9-12080	.008	1.65	.99
9-11010	.01	1.95	1.17
9-11015	.015	2.25	1.35
9-11020	.02	2.60	1.56
9-11025	.025	3.20	1.92
9-11030	.03	3.45	2.07
9-11040	.04	4.50	2.70
9-11050	.05	5.35	3.21
9-11060	.06	6.20	3.72

2500 V. D.C. Test—1200 V. D.C. Working			
Cat. No.	Cap. Mfd.	List Price	Net Price
9-24050	.00005	\$1.00	\$0.60
9-23010	.0001	1.00	.60
9-23025	.00025	1.00	.60
9-23050	.0005	1.00	.60
9-22010	.001	1.25	.75
9-22020	.002	1.90	1.14
9-22025	.0025	2.00	1.20
9-22030	.003	2.20	1.32
9-22040	.004	2.20	1.32
9-22050	.005	2.40	1.44
9-22060	.006	2.40	1.44
9-22080	.008	3.10	1.86
9-21010	.01	3.90	2.34
9-21015	.015	4.65	2.79
9-21020	.02	5.45	3.27
9-21025	.025	6.10	3.66
9-21030	.03	6.40	3.84

5000 V. D.C. Test—2500 V. D.C. Working			
Cat. No.	Cap. Mfd.	List Price	Net Price
9-54050	.00005	\$1.23	\$0.75
9-53010	.0001	1.23	.75
9-53025	.00025	1.50	.90
9-53050	.0005	1.70	1.02
9-52010	.001	2.05	1.23
9-52020	.002	3.10	1.86
9-52025	.0025	3.45	2.07
9-52030	.003	3.80	2.28
9-52040	.004	4.35	2.61
9-52050	.005	4.70	2.82
9-52060	.006	4.85	2.91
9-52080	.008	5.30	3.18
9-51010	.01	5.70	3.42
9-51015	.015	6.20	3.72



TYPE 4



TYPE 9

* Dimension "A" in diagram—1/4"
† Dimension "A" in Diagram—3/4"



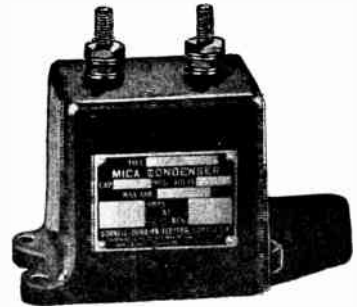
BAKELITE CASED MICA TRANSMITTING CAPACITORS



TYPE 6

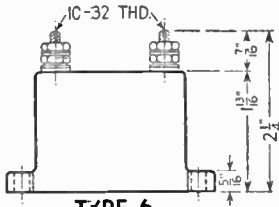
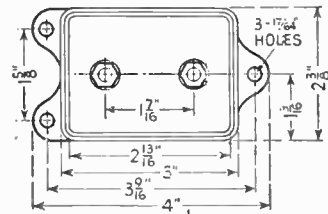
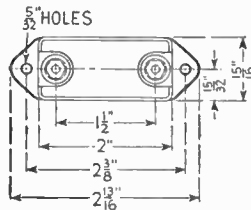
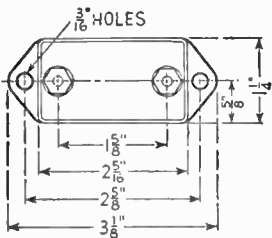


TYPE 15L

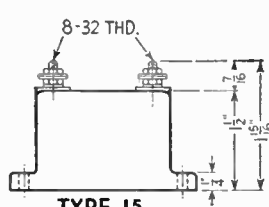


TYPE 30B

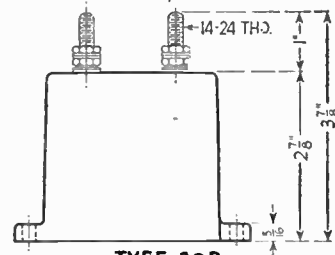
BAKELITE CASED MICA CAPACITORS



TYPE 6



TYPE 15L



TYPE 30B

Types 6, 15L and 30B Mica Capacitors in moulded bakelite cases are designed for a wide variety of radio frequency applications where size and weight are at a premium, such as in aircraft, portable equipment, low-power transmitters and the earlier stages of high-power transmitters. They are specially suited for use as grid, plate, coupling, tank and by-pass functions. These units are among the smallest types employing the patented series-stack construction permitting their use on higher r.f. voltages.

Notes on Ordering Special Capacitors

Type 15L units are available only in low-loss Bakelite (BM-262 or equivalent) cases. Types 6 and 30B may be had in either standard (brown) or low loss (yellow) Bakelite cases. When ordering low-loss units, add "L" to Cat. No. (example: 217-6L; 604-30BL). Add \$1.00 to list price for Type 6. Add \$1.50 to list price for Type 30B.
STANDARD CAPACITY TOLERANCES—Plus or minus 5%. Tolerance of 2% can be furnished on special order. Add \$1.50 to list price for Types 6 and 15L. Add \$2.00 to list price for Type 30B.
OPERATING AMBIENT TEMPERATURE—Up to 60° C. maximum.
SALT WATER IMMERSION SEAL—To order, add "S" to Cat. No. (example: 246-5S; 726-15LS; 113-30BS). Add to list: \$.30 for Types 6 and 15L. Add to list: \$.50 for Type 30B.

"H" Type—These units have been developed for use where excellent retrace and low temperature coefficient are required. Over a range of -40° C. to +70° C., the capacity temperature coefficient is approximately +.003% per degree C. A limited range of capacity and voltage ratings is available. Made only in low-loss Bakelite and sealed for immersion test. To order, add "H" to Cat. No. (example: 6H, 15H, 30BH). Add to list: \$.40 for Type 6. Add to list: \$.20 for Type 15L. Add to list: \$.50 for Type 30B.

TYPE 6K—This unit is a still further refinement being a compensated unit which can be made with a positive, zero or negative coefficient within the limits of +.003% to -.005% per degree C. over a temperature range of from -40° C. to +70° C. Type 6K is available in a limited range of low capacities and voltage ratings. "K" Type includes low-loss Bakelite and immersion seal. When ordering Type 6K, temperature coefficient must be specified. (Type 6 only) Add to list Price: for plus or minus 5%—\$12.00; for plus or minus 3%—\$13.00; for plus or minus 2%—\$14.00; for plus or minus 1%—\$18.00.

TYPE 6 BAKELITE CASED MICA UNITS

Cat. No.	Cap. Mid.	Test. Volt. Effective	Max. Oper. Cir. in Amps.				List Price	Net Price
			3000 kc.	1000 kc.	300 kc.	100 kc.		
390-6	.00005	5,000	1.5	.8	.2	.07	\$14.40	\$8.64
362-6	.0000625	5,000	1.8	.8	.2	.07	14.40	8.64
321-6	.0001	5,000	2	1	.3	.1	14.40	8.64
395-6	.00015	5,000	3	1.5	.5	.16	14.40	8.64
307-6	.0002	5,000	3.5	1.7	.7	.18	14.40	8.64
364-6	.00025	5,000	5	2.5	1	.3	14.40	8.64
294A-6	.0003	5,000	3.5		.8	.4	14.40	8.64
283-6	.0004	5,000	4		1	.5	14.40	8.64
272-6	.0005	5,000	4		1.4	.5	14.40	8.64
266-6	.0006	5,000	5		1.6	.3	14.40	8.64
654-6	.00075	5,000	5	2.5	2	1	14.40	8.64
599-6	.0008	5,000	6	3	2	1	14.40	8.64
246-6	.001	5,000	7	3.5	2	1.5	14.40	8.64
234-6	.0015	5,000	9	4.5	3	1.5	14.40	8.64
215-6	.002	3,000	6	3	1.5	1	11.50	6.90
217-6	.002	6,000	9	4.5	2	1.5	14.40	8.64
473-6	.0025	5,000	9	4.5	2	1.5	14.40	8.64
197-6	.003	3,000	8	4	2	1.5	14.40	8.64
184-6	.004	3,000	8	4	2	1.5	14.40	8.64
173-6	.005	2,000	8	4	3	1.5	14.40	8.64
474-6	.005	3,000	9	4.5	3	1.5	14.40	8.64
565-6	.0075	2,000	10	5	3	1.5	14.40	8.64
476-6	.008	2,000	11	5	3	1.5	14.40	8.64
162-6	.008	3,000	10	5	3	1.5	14.40	8.64
151-6	.01	2,000	10	5	3.5	1.5	14.40	8.64
140-6	.015	1,500	12	6	4	1.5	13.00	7.80
784-6	.015	2,000	12	6	4	1.5	14.40	8.64
131-6	.02	2,000	12	6	4	1.5	16.00	9.60
479-6	.03	2,000	14	7	5	1.5	16.00	9.60
480-6	.04	1,500	12	6	4	1.5	14.40	8.64
118-6	.05	1,500	13	7	5	1.5	14.50	8.70
111-6	.1	500	17	8	5	1.5	16.50	9.90
406-6	.1	1,000	18	9	5	1.5	19.00	11.40
110-6	.1-1	250	20	10	6	1.5	21.00	12.60
105-6	.2	250	20	10	6	1.5	22.00	13.20
885-6	.25	250	20	10	6	1.5	24.00	14.40

(Types 15L and 30B listed on next Page)

CORNELL DUBILIER



BAKELITE CASED MICA TRANSMITTING CAPACITORS

(Continued from preceding page)

TYPE 15L BAKELITE CASED MICA UNITS

Cat. No.	Cap. Mfd.	Test. Volt. Effective	Max. Oper. Cur. in Amps.				List Price	Net Price
			3000 kc.	1000 kc.	300 kc.	100 kc.		
639-15L	.00005	3,000	1.2	.6	.15	.05	\$10.80	\$6.48
583-15L	.0001	3,000	2.2	.8	.3	.1	10.80	6.48
657-15L	.00015	3,000	2.3	1	.45	.15	10.80	6.48
582-15L	.0002	3,000	3	1.2	.6	.2	10.80	6.48
805-15L	.00025	3,000	3	2.5	1	.4	10.80	6.48
640-15L	.0003	3,000	3.5	2	.8	.4	10.80	6.48
641-15L	.0004	3,000	4	2	.9	.45	10.80	6.48
642-15L	.0005	3,000	4	2	1	.55	10.80	6.48
643-15L	.0006	3,000	4.5	2	1.2	.6	10.80	6.48
727-15L	.0008	3,000	4.5	2.5	1.5	.7	10.80	6.48
581-15L	.001	3,000	5	3	1.6	.8	10.80	6.48
679-15L	.0015	3,000	6	3.5	2	1	10.80	6.48
726-15L	.002	3,000	6.5	4	2.5	1.5	10.80	6.48
645-15L	.003	2,000	7.5	5	3	1.5	10.80	6.48
699-15L	.004	2,000	8	6	3.5	1.6	10.80	6.48
725-15L	.005	2,000	8.5	6.5	4	2	10.80	6.48
580-15L	.006	2,000	9	7.5	4.5	2.2	10.80	6.48
724-15L	.008	1,500	10	8	5	2.3	10.80	6.48
677-15L	.01	1,000	10	8	5	2.5	10.80	6.48
723-15L	.02	1,000	11	10	7	3	11.50	6.90
722-15L	.05	500	11	10	8	5	11.50	6.90
721-15L	.1	250	11	12	10	6	12.00	7.20

TYPE 30B BAKELITE CASED MICA UNITS

Cat. No.	Cap. Mfd.	Test. Volt. Effective	Max. Oper. Cur. in Amps.				List Price	Net Price
			3000 kc.	1000 kc.	300 kc.	100 kc.		
633-30B	.0001	4,000	(20 Amps. at 60 mc.)	(3 Amps. at 4 mc.)			\$22.00	\$13.20
958-30B	.00025	8,000	7	4.5	1.5	.5	30.00	18.00
959-30B	.0005	8,000	8.5	6	3	1	30.00	18.00
960-30B	.001	8,000	10	8.5	4.5	1.5	34.00	20.40
961-30B	.002	8,000	11	11	7.5	2.5	34.00	20.40
759-30B	.003	8,000	12	14	10	5	36.00	21.60
757-30B	.004	8,000	12	14	10	6	42.00	22.80
758-30B	.005	8,000	13	15	11	6	42.00	25.20
756-30B	.006	6,000	15	15	11	6	42.00	25.20
962-30B	.01	5,000	16	20	15	8	36.00	21.60
915-30B	.01	8,000	16	20	15	8	48.00	28.80
963-30B	.02	5,000	18	20	17	10	48.00	28.80
741-30B	.03	4,000	20	20	18	12	48.00	28.80
771-30B	.05	2,000	18	25	22	12	54.00	32.40
964-30B	.05	4,000	18	25	22	12	54.00	32.40
113-30B	.1	2,000	18	25	22	12	42.00	25.20
603-30B	.2	600	18	25	22	12	34.00	20.40
750-30B	.25	600	18	25	22	12	38.00	22.80
933-30B	.3	600	18	25	22	12	38.00	22.80
604-30B	.5	600	18	25	22	12	46.00	27.60
898-30B	1.0	600	18	25	22	12	72.00	43.20

FREE TO ALL
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TECHNICIANS



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CAPACITOR TEST INSTRUMENTS



MODEL BF-50

CAPACITOR ANALYZER

The Model BF-50 Capacitor Analyzer quickly and accurately measures all important characteristics of all types of capacitors. It offers the most accurate and thorough capacitor test of any instrument of its type, and may be operated on any 110-volt, 50-60 cycle power line.

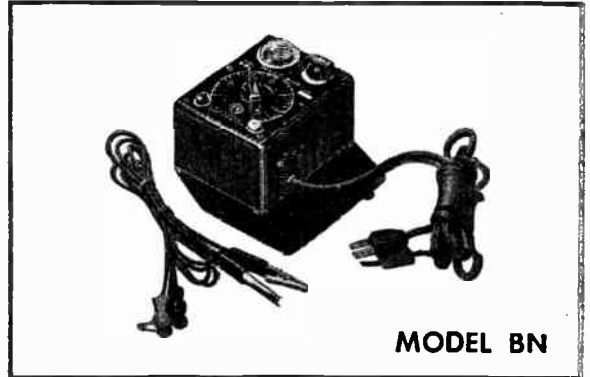
The analyzer will determine the true condition of all paper, mica and electrolytic capacitors, including A.C. motor starting types.

Features of Model BF-50 Analyzer

1. Measures Capacity—Accurately measures capacity of paper, mica, air, electrolytic and motor-starting capacitors from .00001 to 240 mfd.
2. Measures Power Factor—Measurement of power factor from zero to 50 percent on all types of electrolytic capacitors including motor-starting types.
3. Employs Wien Bridge—Assures permanent accuracy of capacity and power factor measurements. Readings not effected by line voltage variations.
4. Indicates Insulation Resistance—Insulation resistance measurements of paper and mica capacitors up to 1500 megohms. Also measures many types of insulation.
5. Indicates Leakage—Measurements of leakage of electrolytic capacitors by means of built-in direct current power supply.
6. Visual Eye Leakage Indicator—Provides simplified and reliable leakage tests on all types of capacitors. Enables measurements to be made rapidly.
7. Detects Defective Capacitors—Character measurements, such as leaky, shorted, open, high and low capacity, and high power factor on all capacitors.
8. High Sensitivity on All Measurements—Amplifier for capacity, power factor and leakage tests provides sharp and accurate readings. Amplifier built-in Analyzer.
9. Balance Sensitivity Control—Provides sharp or broad balances for quick and accurate readings. All readings are made simply and directly.
10. Direct Reading Linear Scale Calibration—Provides simplified measurements. All scales on panel uniformly spaced, easy to read, thus avoiding possible errors in using multipliers or charts.
11. Push-Button Switching—For convenient and simplified adjustments, all tests and circuit changes are made by means of modern push-button switches.
12. Visual Eye Bridge Balance—Visual detector gives positive indication of bridge balance for convenient, simplified and accurate capacity and power factor measurements.
13. Six Color-Coded Scales—Accurately calibrated, six color-coded scales. Uniformly spaced over total spacing of sixty inches. Easy to read. No "blind" spots.
14. General Purpose Instrument—May be used to check continuity capacity between circuits, insulation of transformer windings and other types of coils, etc.
15. Self-Contained—Portable—An instrument complete in itself, requiring no external standard, headphones, meters or accessories. A portable unit, for 110 volt, 50-60 cycle operation, supplied in walnut cabinet, removable cover, with carrying handle. Size, 6½ x 12 x 9¾ inches Weight, 9 pounds.

MODEL BF-50 CAPACITOR ANALYZER
 Net Price complete with tubes.....
 Replacement Tubes for Use in Model BF-50:
 6E5—List Price \$1.50—Net Price \$.90
 12A7—List Price \$2.65—Net Price \$1.59

\$41.80



MODEL BN

CAPACITOR BRIDGE

Features of Model BN Capacitor Bridge

1. Measures Capacity—Accurately measures capacity of paper mica electrolytic and air capacitors from .00001 mfd. to 50 mfd.
2. Indicates Power Factor—Power factor of electrolytic capacitor indicated by means of visual eye detector tube.
3. Detects Defective Capacitors—Detects open and short circuits, high and low capacity, and high power factor.
4. Checks Circuit Continuity—May be used as continuity meter. A handy instrument for checking circuits, coils, transformers and many other uses. For operation on 110 volts, 60 cycles.
5. Employs Wien Bridge—Employs Wien Bridge circuit for all measurements. Accuracy independent of line voltage variations.
6. Visual Eye Bridge Balance—Dual type visual bridge balance for accurate measurements facilitates quick tests on service jobs.
7. Direct Reading Scale—Direct reading ranges with all scale markings directly in microfarads. Clear reading dial scale. All capacity calibrations marked on panel. No charts or multipliers required.
8. Self-Contained—The Capacitor Bridge is complete in itself and requires no headphones, standards, external meters, etc.
9. Extremely Compact—The unusually small size of this bridge makes it particularly handy for portable use—3¾" x 5" x 3" weight 2 pounds.
10. Attractive—Supplied in attractive walnut Bakelite case complete with detachable test leads and useful instruction booklet.

MODEL BN CAPACITOR BRIDGE

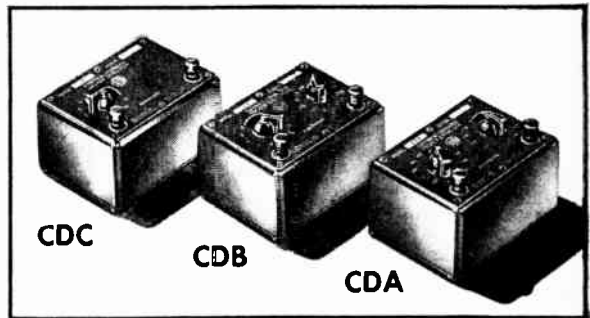
\$19.50

Net Price complete with tubes.....

Replacement tubes for use in Model BN Bridge:

6AF6G—List Price \$2.20—Net Price \$1.32

12A7—List Price \$2.65—Net Price \$1.59



CDC

CDB

CDA

CAPACITOR DECADES

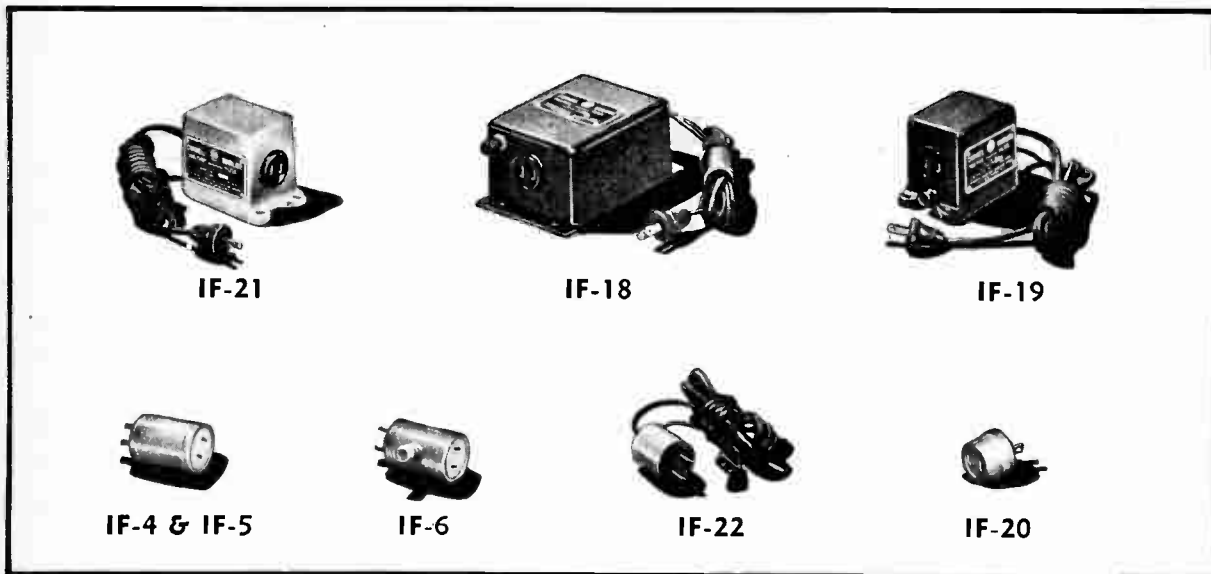
C-D Capacitor Decades provide accurate standards over a wide range of capacity. May be used in groups of the three decades, shown above, or used individually for maximum flexibility. Each decade is furnished with calibration chart giving exact capacity values for all scale markings, extending use to more precise measurements.

Rated Voltage—600 D.C.—220 A.C.

Model	Capacity	+ or - Tol.	Dielectric	Net Price
CDA-5	.011 mfd. in .0001 mfd. steps	5%	Mica	\$8.50
CDB-5	1.1 mfd. in .01 mfd. steps	5%	Oil-Paper	8.50
CDB-3	1.1 mfd. in .01 mfd. steps	3%	Oil-Paper	12.00
CDC-5	10.0 mfd. in 1.0 mfd. steps	5%	Oil-Paper	17.50
CDC-3	10.0 mfd. in 1.0 mfd. steps	3%	Oil-Paper	19.50



QUIETONE INTERFERENCE FILTERS



RADIO AND APPLIANCE QUIETONES

Most satisfactory results are obtained when Quietones are installed at the source of the interference. A Quietone installed in connection with an offending appliance corrects the noise caused by that appliance.

Where source of interference cannot be located a Quietone connected in the electric supply line of the radio receiver will alleviate, if not fully correct, the condition. When a Quietone is installed, interference will be greatly reduced. Remaining interference usually enters receiver through the antenna system.

Quietones for Use at the Radio Receiver

TYPE IF-4—For use on small radio receivers, such as A.C.-D.C. midget sets, etc., where noise level is not too severe. Connects in power line between the radio receiver plug and wall receptacle. Rating: 110 V.A.C.-D.C. 5 amps. Colors—Furnished in ivory, walnut, or green finish.
List Price \$1.10 Net Price **\$0.66**

TYPE IF-18—For use in connection with all radio receivers where noise level is severe. Furnished in Bakelite case (see colors). Employs highly effective all-wave capacitive-inductive type filter. Ratings: 110 V.A.C.-D.C. 5 amps. Colors—Furnished in ivory or walnut Bakelite.
List Price \$8.35 Net Price **\$5.01**

Quietones for Use at Appliances

TYPE IF-5—For small electrical appliances such as food mixers, hair dryers, etc., where radio interference is of low intensity. Plug type filter. Convenient to install. Rating 110 V.A.C.-D.C. 5 amps. Colors—Furnished in ivory, walnut or green finish.
List Price \$1.10 Net Price **\$0.66**

TYPE IF-6—For all types of home electrical appliances where interference is of moderately low intensity. Installed between appliance and power supply line with short return lead which reduces radiation. Rating: 110 V.A.C.-D.C. 5 amps. Colors—Furnished in ivory, walnut or green finish.
List Price \$1.75 Net Price **\$1.05**

TYPE IF-18—An efficient all-wave capacitive-inductive sectional band type filter for use in connection with all types of electrical appliances where interference conditions are severe. Provided with frame connection for reduction of radiation. Furnished in Bakelite case (see colors). Rating: 110 V.A.C.-D.C. 5 amps. Colors—Bakelite case, walnut finished.
List Price \$8.35 Net Price **\$5.01**

TYPE IF-19—Capacitive-inductive type filter for use where interference is severe. Frame connection provided. Furnished in Bakelite case. Rating: 110 V.A.C.-D.C. 5 amps. Colors—Bakelite case. Ivory or walnut finish.
List Price \$7.00 Net Price **\$4.20**

TYPE IF-20—For use on small electrical appliances where interference is very low. Simply connected to cord plug of appliance and plugged into wall receptacle. Rating: 110 V.A.C.-D.C. 5 amps. Colors—Bakelite case. Ivory or walnut finish.
List Price \$0.75 Net Price **\$0.45**

TYPE IF-21—All-wave capacitive-inductive type filter for use on appliances where return lead to the frame of appliance cannot be made, such as shaver, barber clippers, etc. Furnished in Bakelite case. Rating: 110 V.A.C.-D.C. 1.6 amps. Colors—Bakelite case. Ivory or walnut finish.
List Price \$4.00 Net Price **\$2.40**

TYPE IF-22—For use in connection with electric shavers of all standard types. Line cord and plug provided with Schick and Packard type adapters which fit practically all type shavers. (Specify type desired when ordering.) Type IF-22A for Schick, Knapp Monarch, and similar type shavers. Type IF-22B for Packard, Zephyr, Remington-Rand and Ronson type shavers. Rating: 110 V.A.C. 5 amps. Colors—Bakelite case. Ivory or black finish.
List Price \$2.75 Net Price **\$1.65**



QUIETONE INTERFERENCE FILTERS



IF-11 & IF-12



IF-7A, IF-15 & IF-16



IF-14



IF-24



IF-25 & IF-26



IF-54



IF-27, IF-28 & IF-29

INDUSTRIAL QUIETONES

The development of radio receiving and broadcasting equipment has been perfected to a degree where complete enjoyment of programs is within the reach of all. However, only too frequently is radio reception marred by disturbing noises commonly referred to as "man-made static." This condition does not have to be endured. It is unnecessary to tolerate the majority of these offending noises. Quietone Filters enable you to enjoy quiet, noise-free reception.

Although atmospheric disturbances in many instances cause radio noises, this condition is not chronically annoying. With the average radio receiver, noise is generally caused by the operation of electrical appliances or apparatus which create high frequency oscillations. Many types of equipment cause minute sparks as a result of a change in electrical conditions within the device, which are essential to its operation. In effect these appliances act as miniature radio transmitters, setting up a disturbance which may affect radio receivers at a considerable distance.

It is highly desirable to correct noise conditions at the source as one filter properly installed at this point may eliminate the noise in a number of radio receivers. Where it is impossible to locate the equipment which is causing the interference a Quietone installed at the receiver will correct the noise in that receiver.

The Quietones listed below will correct radio noise conditions caused by motors, generators, elevators, stokers and many other types of industrial electrical apparatus. They are designed for convenient mounting, and contain highest quality capacitors, with lowest possible impedance internal connections. There are no current limitations for (CP) Capacitive Quietones.

Fluorescent Light Quietones

Among the Quietone Interference Filters especially suited to correct noise conditions caused at fluorescent lights, as well as other electrical appliances, are types IF-6, IF-24 and IF-54, the former being a very convenient plug-in arrangement that fits the receptacles of floor and table lamps.

Type IF-24 Quietone is a dual capacitive type filter for use on fluorescent light and other electrical equipment where noise conditions are not too severe. It is contained in a round metal casing $\frac{1}{8}$ " diameter by 2" long and provided with insulated wire leads 8" long.

Type IF-54 Quietone is a capacitive-inductive filter which provides extremely high attenuation over a wide range of frequencies. This unit is housed in a drawn metal container 2" x 2" x 1 $\frac{1}{8}$ " high, and is provided with insulated wire leads 6" long. It is rated at 2 amps. 110-220 V.A.C. or D.C.

Fluorescent Light Quietones

Type	Volts A.C.— D.C.	Connections	Housing	List Price	Net Price
IF-6	110	Plug-in	Metal	\$1.75	\$1.05
IF-24	110	Flex-Leads	Metal	1.10	.66
IF-54	110-220	Flex-Leads	Metal	2.25	1.35

Capacitive (CP) Quietones

Type	Volts A.C.— D.C.	Connections	Housing	List Price	Net Price
IF-25	110-220	Flex-Leads	Metal	\$4.50	\$2.70
IF-26	110-220	Flex-Leads	Metal	6.00	3.60
IF-11	110	BX	Cutout Box	12.00	7.20
IF-12	220	BX	Cutout Box	16.50	9.90
IF-14**	110-220	BX	Cutout Box	22.50	13.50

** All Quietones listed above with exception of IF-14 are for single phase circuits. IF-14 is for 2 or 3 phase circuits.

The Quietones listed below are for the more severe radio noise conditions caused by motors, generators, elevators, diathermy, oil burners, etc. They are designed for convenient mounting and quick connection to these machines. They consist of low-loss coils and highest quality capacitors which correct noise conditions in both broadcast and short wave receivers. They are the most efficient filters available for heavy duty application. All capacitive-inductive (CI) Quietones are for single phase circuits.

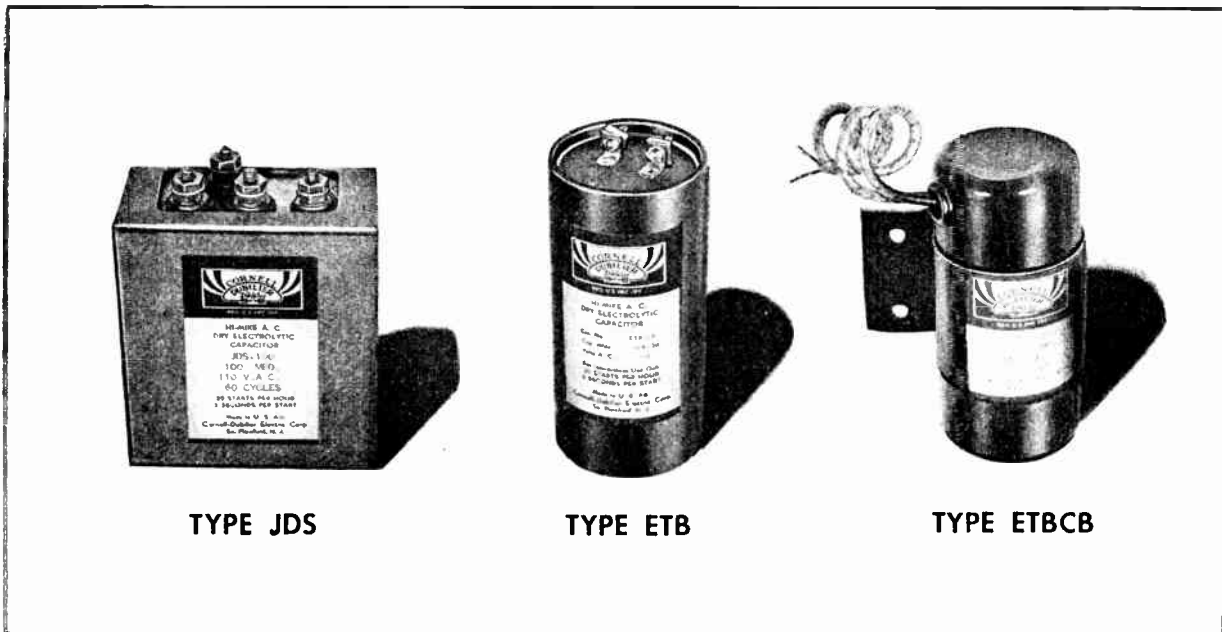
Capacitive-Inductive (CI) Quietones

Type	Volts A.C.— D.C.	Max. Amps.	Connections	Housing	List Price	Net Price
IF-7A*	110-220	5	BX	Cutout Box	\$12.50	\$7.50
IF-15	110-220	10	BX	Cutout Box	25.00	15.00
IF-16	110-220	20	BX	Cutout Box	35.00	21.00
IF-27	110	5	Flex-Leads	Steel Box	7.00	4.20
IF-28	110	10	Flex-Leads	Steel Box	12.50	7.50
IF-29	110	20	Flex-Leads	Steel Box	22.00	13.20

* For use on oil burners.



A. C. MOTOR STARTING CAPACITORS



TYPE JDS

TYPE ETB

TYPE ETBCB

A.C. MOTOR STARTING REPLACEMENT CAPACITORS

Types ETB and JDS Electrolytic Motor-Starting Capacitors are universal replacement units for use in standard makes of oil-burners, refrigerators and other motor driven equipment. The list of units below simplifies the selection of the capacitor required when the capacity, voltage rating, and size are known.

In many cases where a round can-type unit is to be replaced a smaller size capacitor of the same capacity and voltage rating may be selected as a replacement. The smaller size unit may be wrapped tightly with ordinary corrugated paper and fitted into the capacitor housing on the motor. While only the most widely used range of capacities are listed below, Type ETB 110 V.A.C. capacitors can be supplied in intermediate capacities from 10 mfd. to 480 mfd.

Write for complete A.C. Motor Starting Replacement Capacitors, Catalog No. 163.

TYPE JDS 110 VOLTS A.C. 50-60 CYCLES

Cat. No.	Cap. Mfd.	Dimensions—Ins. L. x W. x T.	List Price	Net Price
JDS70	70	3 1/2 x 3 1/2 x 2	\$3.20	\$1.92
JDS80	80	3 1/2 x 3 1/2 x 2	3.20	1.92
JDS90	90	3 1/2 x 3 1/2 x 2	3.20	1.92
JDS100	100	3 1/2 x 3 1/2 x 2	3.34	2.00
JDS115	115	3 1/2 x 3 1/2 x 2	3.79	2.27
JDS130	130	3 1/2 x 3 1/2 x 2	3.79	2.27

All units are furnished with tightly fitted insulating cardboard tube or paper box casings with screw terminals on Type ETB or with terminal board on Type JDS capacitors. Type ETB units are available with black lacquered steel end caps, designated as Type ETBC, or with both end caps and black lacquered steel mounting bracket designated as Type ETBCB (see illustration above). Units must be designated accordingly upon ordering. (See note below.)

TYPE ETB 110 VOLTS A.C. 50-60 CYCLES

Cat. No.	Cap. Mfd. Min. Max.	Dimensions—Ins. Dia. x L. H.	List Price	Net Price
ETB-20	20-24	1 1/2 x 2 1/4	\$1.70	\$1.02
ETB-35	32-36	1 1/2 x 2 1/4	1.82	1.09
ETB-40	38-46	1 1/2 x 2 1/4	1.82	1.09
ETB-45	43-48	1 1/2 x 2 1/4	1.82	1.09
ETB-55	53-60	1 1/2 x 2 1/4	1.89	1.13
ETB-70	64-72	1 1/2 x 2 1/4	1.89	1.13
ETB-80	75-84	1 1/2 x 3 1/4	2.02	1.21
ETB-90	86-96	1 1/2 x 3 1/4	2.08	1.25
ETB-100	97-107	1 1/2 x 3 1/4	2.14	1.28
ETB-110	107-129	1 1/2 x 3 1/4	2.14	1.28
ETB-115	108-120	1 1/2 x 3 1/4	2.14	1.28
ETB-130	124-138	1 1/2 x 3 1/4	2.27	1.36
ETB-145	130-157	1 1/2 x 4 1/4	4.29	1.51
ETB-155	145-162	1 1/2 x 4 1/4	2.78	1.62
ETB-175	161-180	1 1/2 x 4 1/4	3.03	1.87
ETB-200	189-210	1 1/2 x 4 1/4	3.59	2.15
ETB-225	216-240	1 1/2 x 4 1/4	4.11	2.47
ETB-340	324-360	2 x 4 1/4	6.06	3.64
ETB-400	378-420	2 x 4 1/4	6.83	4.10
ETB-450	432-480	2 1/2 x 4 1/4	7.59	4.55

NOTE—For units with metal end caps, Type ETBC, add 60c to list price. For units with metal end caps and mounting bracket, Type ETBCB, add \$1.00 to list price.



SENIOR AND JUNIOR "SERVICE MIKES"

These capacitors are designed for emergency replacements of A. C. motor starting electrolytic capacitors from 18.75 to 300 mfd. They enable the motor repair man to determine correct capacity required for a given motor and eliminate necessity of carrying stock of assorted sizes. Each capacitor provides a range of twelve separate capacities by means of changing external connections at four terminals, two at each end. Both units are for 110-120 V.A.C. 60 cycle duty.

JUNIOR "SERVICE MIKE", 18.75 to 150 mfd., size 1 1/8" dia. x 3 3/4" long. Complete with leads, clips and jumpers. Net Price \$4.65

SENIOR "SERVICE MIKE", 37.5 to 300 mfd., size 2 1/8" dia. x 4 3/4" long. Complete with leads, clips and jumpers. Net Price \$5.50

MALLORY CAPACITORS • LIST PRICES

★ Complete descriptions of these parts will be found on the following pages.

Mallory Cat. No.	List Price	Mallory Cat. No.	List Price	Mallory Cat. No.	List Price	Mallory Cat. No.	List Price	Mallory Cat. No.	List Price	Mallory Cat. No.	List Price
<i>Mallory Page 9</i>		<i>Mallory Page 10</i>		<i>Mallory Page 12</i>		<i>Mallory Page 14</i>		<i>Mallory Page 15</i>		<i>Mallory Page 16</i>	
OW340	\$0.55	CBD403	\$3.25	X Appliance Filters	MCE215	\$0.50	MH557	\$0.80	TZ389	\$7.25	
OW341	.55	CBD404	3.75		X1	.50	MH657	1.90	TZ386	5.05	
OW331	.55	CBD602	3.35		X3	\$1.60	MH757	3.10	TZ387	5.45	
OW342	.55	CBT403	4.00		X5	1.80	MH565	1.00	TZ388	7.25	
OW343	.55	CBT404	4.75		X6	2.70	MH665	2.40	TZ390	6.85	
OW332	.55	CBT602	3.80	<i>Mallory Page 13</i>		MCE236	.55	MH575	1.60	TZ391	7.60
OW344	.55	<i>Mallory Page 11</i>		Z Appliance Filters	MCE237	.55	MH675	3.90	<i>Mallory Page 17</i>		
OW345	.55	AM • FM • DL RF • CA Automotive Noise Suppression Capacitor	MCE240		.55	MH577	2.20	CAPACITOR TOOLS & HARDWARE			
OW346	.60		AM454		\$1.00	MC445	.30	115-1	\$0.20		
OW333	.60		FM441		1.25	MC451	.30	118-1	.20		
OW334	.60		FM442		1.00	MC455	.40	118-1	.20		
OW335	.60		DL445	2.25	MC456	.40	119-1	.20			
OW336	.60	RF480	.80	LC5 • LC10 Heavy Duty Appliance Filters	MC457	.40	121-1	.35			
OW337	.60	RF481	.90		LC5	\$11.25	122-1	.35			
OW338	.70	RF482	1.15	LC10	15.00	123-1	.35				
OW339	.70	CA275X	3.00	Z8A Fluorescent lighting Filters	MCE251	1.10	124-1	.35			
<i>Mallory Page 10</i>		UB Uncased Wax Capacitor			Z8A	\$3.00	MX Mica Transmitting Capacitors				
MT Miniature Metal Tubular Capacitor	MT105	\$0.90	UB351	\$1.00	LB Heavy Duty Appliance Filter	MC475	1.20	MX855	\$8.00		
	MT107	.90	UB352	1.50		LB10	\$17.50	MX857	11.00		
	MT115	.90	UB353	2.60		LB20	47.50	MX865	14.50		
	MT125	.90	UB354	1.15		LB40	58.75	MX875	15.25		
	MT127	.95	UB355	1.80		<i>Mallory Page 14</i>		MX877	16.00		
	MT135	.95	UB356	3.00	MC Mica Receiver Capacitors	MCE445	.85	MX885	18.50		
	MT145	1.00	UB357	1.05		MC205	\$0.25	MX895	18.50		
	MT605	.95	UB358	1.40		MC215	.25	<i>Mallory Page 16</i>			
	MT607	.95	UB359	2.10		MC220	.25	TX801	\$5.20		
	MT615	.95	UB364	3.90		MC223	.20	TX802	6.50		
MT625	.95	UB362	2.30	MC225	.20	TX803	8.50				
AG • AS Automobile Generator Noise Suppression Capacitor		UB363	3.80	MC230	.20	TX816	10.50				
AG442	\$0.80	VB • VD • VO Vibrator Buffer Capacitor		MC235	.20	TX817	14.00				
AG443	1.00	VB470	\$1.10	MC236	.20	TX822	4.55				
AG444	.90	VB471	1.15	MC237	.20	TX804	5.70				
AG450	1.50	VD491	1.00	MC240	.25	TX805	7.60				
AG451	1.00	VO480	1.00	MC241	.25	TX806	9.60				
AG452	1.35	<i>Mallory Page 12</i>		MC243	.25	TX824	12.75				
AG453	1.50	RF Radio Frequency Choke Coils	RF581	\$0.60	MC245	.25	TX825	15.50			
AS125	1.20		RF582	.60	MC251	.25	TX807	6.85			
AS145	1.40		RF583	1.25	MC255	.30	TX808	9.50			
AS165	1.50		W Motor Brush Filters		MC256	.30	TX809	12.75			
AS185	1.75		W7	\$1.35	MCB205	.45	TX829	15.75			
AS525	1.35	W9	1.75	MCB215	.40	TX830	23.00				
AS645	1.60	W11	2.10	MCB220	.40	TX831	6.50				
AS565	2.00	W7SP	1.80	MCB223	.40	TX832	6.90				
CB Oil Filled • Steel Cased By-pass Capacitor		W9SP	2.20	MCB225	.40	TX810	8.40				
CB403	\$2.25	<i>Mallory Page 15</i>		MCB230	.40	TX811	9.95				
CB404	2.40	MH Mica Transmitting Capacitors	MH535	\$0.70	MCB235	.40	TX823	13.75			
CB405	2.85		MH635	1.00	MCB236	.40	TX833	18.00			
CB406	3.60		MH735	1.25	MCB237	.40	TX834	28.50			
CB602	2.65		MH545	.70	MCB240	.45	TX812	12.25			
CB603	2.80		MH645	1.00	MCB241	.55	TX813	20.00			
CB604	3.00	MH745	1.70	MCB243	.65	TX835	12.75				
CB605	3.40	MH555	.70	MCB245	.70	TX836	14.00				
CB1002	2.85	MH655	1.25	MCB246	.75	TX837	15.50				
CB1003	2.95	MH755	2.05	MCB247	.45	TX814	18.75				
CB1004	3.20	<i>Mallory Page 17</i>		MCB248	.85	TX815	23.25				
				MCB251	.95	TX838	34.00				
				MCB255	1.10	TX839	34.00				
						TX827	43.00				
						TX828	62.00				
						TX818	39.00				
						TX819	50.00				
						TX820	62.00				
						TX821	77.00				
						TZ Oil Impregnated • Round Can Capacitors					
						TZ382	\$4.65				
						TZ383	6.20				
						TZ384	4.30				
						TZ385	5.45				

MALLORY DRY ELECTROLYTIC CAPACITORS



TC Dry Electrolytic • Single Tubular Capacitor
Aluminum Encased • External Insulating Sleeve

TCD • TCS Dry Electrolytic • Dual Tubular Capacitor • Aluminum Encased
• External Insulating Sleeve

APPLICATION—For under-chassis mounting in filter and audio bypass circuits where long life and small size is desirable.

DESCRIPTION—Single section dry electrolytic type encased in hermetically sealed aluminum tube with external insulating sleeve. For extreme dependability at high voltage, types TC82 and TC92 employ the special Mallory balanced series unit construction.

TERMINALS—One 3" bare solid tinned copper lead at each end. Positive lead marked (+) on insulating sleeve.

MOUNTING—Designed for mounting by its own leads or with applicable hardware listed on page 17.

PACKAGING—25, 50, or 100 capacitors per display carton.

APPLICATION—For under-chassis mounting in filter and audio bypass circuits where long life and small size is desirable.

DESCRIPTION—Dual section dry electrolytic type encased in hermetically sealed aluminum tube with external insulating sleeve. Type TCD is dual common negative, TCS dual separate section.

TERMINALS—Type TCD is supplied with 3" bare solid tinned copper leads, both positive leads at one end and common negative lead at opposite end. Type TCS is supplied with soldering lugs, positive and negative of one section at one end and the other section at the opposite end.

MOUNTING—Type TCD is designed for mounting by its own leads or with applicable hardware shown on page 19. Type TCS is supplied with the Mallory TH clips for mounting, further described on page 17.

PACKAGING—Individual display carton.

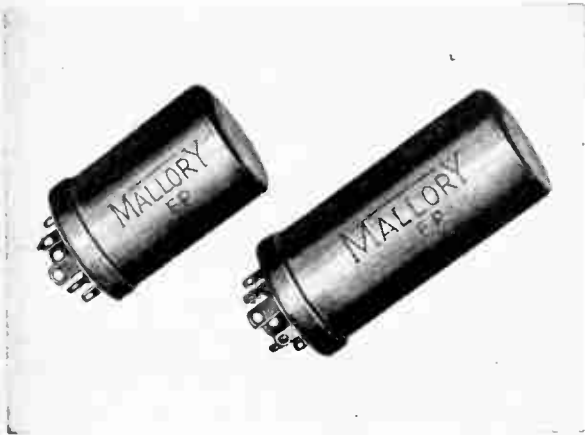
Mallory Cat. No.	Cap. Mfd.	DC Wkg. Volts	Maximum Surge Voltage	Size	
				Dia.	Length
TC310	1000	3	4	15/16 x 2	
TC605	500	6	10	15/16 x 1 3/4	
TC610	1000	6	10	1 1/16 x 2 3/8	
TC1505	500	15	20	1 1/16 x 2	
TC22	10	25	40	9/16 x 1 1/4	
TC26	25	25	40	9/16 x 1 1/4	
TC29	50	25	40	1 1/16 x 1 1/2	
TC2501	100	25	40	1 3/16 x 1 3/4	
TC32	10	50	75	9/16 x 1 1/4	
TC36	25	50	75	1 1/16 x 1 1/2	
TC39	50	50	75	1 3/16 x 1 1/2	
TC40	5	150	200	9/16 x 1 1/4	
TC42	10	150	200	1 1/16 x 1 1/4	
TC44	15	150	200	1 1/16 x 1 1/2	
TC45	20	150	200	1 3/16 x 1 1/2	
TC47	30	150	200	1 3/16 x 1 1/2	
TC48	40	150	200	1 5/16 x 1 3/4	
TC49	50	150	200	1 5/16 x 1 3/4	
TC50	60	150	200	1 1/16 x 1 3/4	
TC52	10	250	325	1 1/16 x 1 3/4	
TC55	20	250	325	1 3/16 x 1 3/4	
TC62	10	350	425	1 3/16 x 1 3/4	
TC65	20	350	425	1 5/16 x 1 3/4	
TC70	5	450	525	1 1/16 x 1 3/4	
TC71	8	450	525	1 3/16 x 1 3/4	
TC72	10	450	525	1 3/16 x 1 3/4	
TC74	15	450	525	1 5/16 x 1 3/4	
TC75	20	450	525	1 1/16 x 1 3/4	
TC77	30	450	525	1 1/16 x 2 3/8	
TC78	40	450	525	1 1/16 x 2 3/8	
TC82	10	500	650	1 1/16 x 2 15/16	
TC92	10	600	750	1 1/16 x 2 15/16	

TCD Dual Common Negative					
Mallory Cat. No.	Cap. Mfd.	DC Wkg. Volts	Maximum Surge Voltage	Size	
				Dia.	Length
TCD26	25-25	25	40	1 3/16 x 1 1/4	
TCD45	20-20	150	200	1 3/16 x 2	
TCD47	30-30	150	200	1 5/16 x 2	
TCD48	40-40	150	200	1 1/16 x 2	
TCD52	10-10	250	325	1 5/16 x 2	
TCD55	20-20	250	325	1 1/16 x 2	
TCD62	10-10	350	425	1 5/16 x 2	
TCD65	20-20	350	425	1 1/16 x 3 1/16	
TCD71	8-8	450	525	1 5/16 x 2	
TCD72	10-10	450	525	1 1/16 x 2	
TCD74	15-15	450	525	1 1/16 x 3 1/16	
TCD75	20-20	450	525	1 1/16 x 3 1/16	

TCS Dual Separate-Section					
Mallory Cat. No.	Cap. Mfd.	DC Wkg. Volts	Maximum Surge Voltage	Size	
				Dia.	Length
TCS44	15-15	150	200	1 3/16 x 2 3/8	
TCS45	20-20	150	200	1 5/16 x 2 3/8	
TCS47	30-30	150	200	1 1/16 x 2 3/8	
TCS48	40-40	150	200	1 1/16 x 2 3/8	
TCS52	10-10	250	325	1 5/16 x 2 3/8	
TCS55	20-20	250	325	1 1/16 x 2 3/8	
TCS61	8-8	350	425	1 5/16 x 2 3/8	
TCS64	15-15	350	425	1 1/16 x 2 3/8	
TCS71	8-8	450	525	1 1/16 x 2 3/8	
TCS74	15-15	450	525	1 1/16 x 2 3/8	
TCS75	20-20	450	525	1 1/16 x 3 1/2	

Mallory Page 3 (See Mallory Page 1 for List Prices)

MALLORY DRY ELECTROLYTIC CAPACITORS



FP Fabricated Plate Dry Electrolytic Capacitor • Aluminum Encased

WP Dry Electrolytic Capacitor • Aluminum Encased

APPLICATION—For top chassis mounting in filter and audio bypass circuits. Extremely dependable under heavy ripple current, high surge voltage and high temperature up to 185 F. conditions.

DESCRIPTION—Single, dual, triple and quad section units encased in compact hermetically sealed aluminum cases with self-contained mounting feature. Type FP is supplied with famous Mallory Fabricated Plate (metallized cotton gauze) anodes, type WP with etched plate anodes. Special internal design provides low RF impedance and minimum coupling between sections. Case at negative potential.

TERMINALS—Solder lug type all at one end. Positive terminals identified by symbols in terminal board corresponding to case marking. Mounting ring provides negative terminal connection.

MOUNTING—Primarily designed for twist prong mounting through suitable chassis slots and may also be mounted as follows:

1. Type MP metal wafer providing the necessary slots without actually punching the chassis for grounded negative circuits.
2. Type BP bakelite wafer for insulated mounting, otherwise similar to Paragraph No. 1.
3. Type TH clip for horizontal mounting.
4. Type PS socket for plug-in mounting. (Remove blank ear with diagonal pliers to polarize unit in relation to socket.)

See page 17 for applicable hardware.

PACKAGING—Individual display carton.

Mallory Cat. No.	Capacity Mfd.	Wkg. Volts DC	Size
WP032	3000	10	1 3/8 x 3
WP039	1000	15	1 x 3
WP041	2000	15	1 3/8 x 3
WP055	100	25	1 x 2
WP057	500	25	1 x 3
WP059	1000	25	1 3/8 x 3
WP065	500	50	1 3/8 x 3
FP115	50	150	1 x 2
FP116	100	150	1 x 3
FP135	30	350	1 x 2
FP137	50	350	1 x 3
FP140	125	350	1 3/8 x 3
FP142	10	450	3/4 x 2
FP143	15	450	1 x 2
FP144	20	450	1 x 2
FP145	30	450	1 x 3
FP146	40	450	1 x 3
FP149	80	450	1 3/8 x 3
WP200	1000-1000	15	1 3/8 x 3
FP211	30-30	150	1 x 2
FP214	50-50	150	1 x 3
FP217	20-20	250	1 x 2
FP225	15-15	350	1 x 2
FP227	20-20	350	1 x 3
FP228	30-30	350-300	1 x 3
FP231	10-10	450	1 x 2
FP234	20-20	450	1 x 3
FP238	40-40	450	1 3/8 x 3
FP550	10-80	450-400	1 3/8 x 3
FP245	80-10	450	1 3/8 x 3
WP520	40-40-40	25	1 x 2
WP302	15-15-1000	150-150-2	1 x 2
FP304	40-20-200	150-150-25	1 x 3
FP306	40-20-20	150-150-25	1 x 2
FP309	50-30-100	150-150-25	1 x 3
FP311	50-50-20	150-150-25	1 x 3
FP313	30-20-20	200-200-25	1 x 2
FP316	20-15-20	250-250-25	1 x 2
FP328	15-10-20	350-350-25	1 x 2
FP369	20-10-5	350-350-250	1 x 2
FP371	30-10-20	350-350-250	1 x 3
FP330	30-20-20	350-350-25	1 x 3
FP331	30-30-20	350-300-25	1 x 3
FP332	10-10-20	450-450-25	1 x 2
FP380	20-15-15	450-350-300	1 x 3
FP339	20-20-20	450-450-25	1 x 3
FP346	40-40-20	450-450-25	1 3/8 x 3
FP354	20-20-20	150	1 x 2
FP357	40-40-40	150	1 x 3
FP360	15-20-20	250-150-150	1 x 2
FP363	40-20-20	250	1 3/8 x 2
FP367	10-10-10	350	1 x 2
FP389	10-10-10	450	1 x 3
FP390	15-15-10	450	1 x 3
FP407	30-20-20-200	150-150-150-10	1 3/8 x 2
FP409	40-40-30-20	150-150-150-25	1 3/8 x 2
FP410	50-50-50-20	150-150-150-25	1 3/8 x 3
FP416	40-40-20-20	350-300-300-25	1 3/8 x 3
FP424	15-15-10-20	450-450-450-25	1 3/8 x 2
FP426	20-15-20-20	450-450-25-25	1 3/8 x 2
FP429	40-30-10-20	450-450-450-25	1 3/8 x 3
FP434	10-10-10-10	450	1 3/8 x 2
FP444	20-20-20-20	450	1 3/8 x 3

MALLORY TECHNICAL MANUAL

Simply written, practical book that bridges the gap between radio theory and practice. Designed for the radio serviceman, engineer, amateur or experimenter. 392 pages of valuable information that you should have.

Surge Voltage Data

● Due to the many multiple section listings on FP capacitors, it is not practical to show surge voltage ratings without consuming considerable space in the chart. The surge voltage ratings are, therefore, given separately in the small chart.

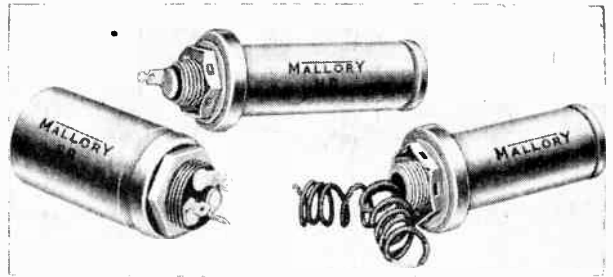
Wkg. V.D.C.	Surge Volts
6	10
10	15
15	20
25	40
150	200
200	275
250	325
300	375
350	425
400-450	525

Mallory Page 4 (See Mallory Page 1 for List Prices)

(See Pages P-25 and P-26 for Mallory List Prices)

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MALLORY DRY ELECTROLYTIC CAPACITORS



FP · WP Special Television Capacitors Dry Electrolytic • Aluminum Encased

APPLICATION—For use in television applications where special frequencies are encountered.

Type WP520 for bypassing in the audio and synchronizing amplifier stages, and the deflecting amplifier cathodes.

Type FP550 for filtering the low voltage power supply. The 10 mfd. 450-volt section is input, and the 80 mfd. 400-volt section is output.

Type WP505 for Video amplifier cathode bypass.

Type WP510 for horizontal centering control bypass.

Type WP540 for vertical centering control bypass.

DESCRIPTION—Similar to regular FP and WP units except in impedance value at the applicable frequency. Note that some are rated in "Impedance" rather than capacity since this is the important characteristic.

TERMINALS—Solder lug type all at one end. Positive terminals identified by symbols in terminal board corresponding to case marking. Mounting ring provides negative terminal connection.

MOUNTING—Primarily designed for twist prong mounting through suitable chassis slots and may also be mounted as follows:

1. Type MP metal wafer providing the necessary slots without actually punching the chassis for grounded negative circuits.
2. Type BP bakelite wafer for insulated mounting, otherwise similar to Paragraph No. 1.
3. Type TH clip for horizontal mounting.
4. Type PS socket for plug-in mounting. (Remove blank ear with diagonal pliers to polarize unit in relation to socket.)

See page 17 for applicable hardware.

PACKAGING—Individual display carton.

Mallory Cat. No.	Capacity or Impedance	Wkg. Volts	Max. Surge Voltage	Size
WP520	40-40-40	25 DC	40	1 x 2
FP550	10 80	450 DC 400 DC	525 475	1 3/8 x 3
WP505	10Z @ 30 cycles to 5 megacycles	3 NP	4	3/4 x 2
WP510	.5Z @ 15750 cycles	3 NP	4	1 x 2
WP540	1.0Z @ 60 cycles	3 NP	4	1 3/8 x 3

RS · RM · HD · HS · SR

Dry Electrolytic • Threaded Neck Capacitors • Aluminum Encased

APPLICATION—Designed for replacement of wet or dry electrolytic threaded neck type filter capacitors originally employed in any type of electronic filter for bypass circuit.

DESCRIPTION—Type RS are single section, RM multiple separate section capacitors encased in aluminum cans equipped with threaded necks for mounting. Both types are internally insulated from their aluminum can. Type HD is for heavy duty, type HS for high surge voltage conditions. Type SR638 is lug type dual. Type SR645 has special internal connections, one terminal common anode, one terminal negative to one section and case negative to the other section.

TERMINALS—RS, RM and HS have 8" flexible insulated stranded copper leads all out through the threaded neck part of the case. Type HD has one solder lug terminal for positive and case is negative. Type SR has two positive lug terminals with case common negative.

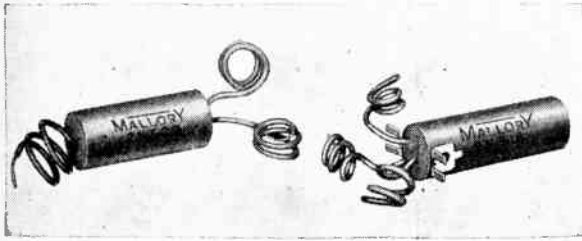
MOUNTING—Types RS, RM, HD and HS have threaded necks (5/8 x 16 for 1" dia.—3/4 x 16 for 1 3/8" dia.) supplied with polnut and special washer providing installation in various chassis hole sizes. All 1" diameter units in these types are also supplied with a special turned-over washer for 1 3/8" clamp mounting. Type SR has 7/8-16 thread molded necks with solid nut. See page 17 for other hardware.

PACKAGING—Individual display carton.

Mallory Cat. No.	Mfd.	Volts DC	Size
RS207	30	250	1 x 3 1/2
RS212	8	450	1 1/2 x 3
RS213	8	450	1 x 2 3/4
RS215	12	450	1 x 2 3/4
RS214	12	450	1 3/8 x 3
RS216	16	450	1 x 3 1/2
RS217	16	450	1 3/8 x 3
RS219	20	450	1 3/8 x 3
RS223	30	450	1 3/8 x 3
RS224	40	450	1 3/8 x 3
HD684	10	450	1 x 3
HS693	8	600	1 3/8 x 4
RM262	8-8	450	1 3/8 x 3 3/4
RM265	8-8-8	450	1 3/8 x 4 1/4
SR638	8-8	450	1 3/8 x 2 3/4
SR645	8-8	450	1 3/8 x 2 3/4

Mallory Page 5 (See Mallory Page 1 for List Prices)

MALLORY DRY ELECTROLYTIC CAPACITORS



2N · 2S · 3N · 3S · 4S · ST · TN · UR Dry Electrolytic • Cardboard Tubular Capacitors

APPLICATION—Low cost filter and bypass units for above or below-chassis mounting where humidity conditions are not extreme.

DESCRIPTION—Single, dual, triple and quad section units in cardboard tubes with extra inner seal and ample wax seal at ends. Dual, triple and quad section units are common negative or separate section type, as indicated in chart.

TERMINALS—All types (except TN111, which has bare leads) are supplied with 8" flexible covered leads out one end except those marked (*) which have negative lead out opposite end.

MOUNTING—All units (except TN111) are supplied with an adjustable horizontal mounting strap (MS-1) and all units with leads out one end have special feet for vertical mounting in addition to the strap. For other hardware, see page 17.

PACKAGING—Individual display carton.

Single Sections

Mallory Catalog	Mfd.	Volts DC	Size
ST595	8	450	3/4 x 2 1/2
ST597	16	450	1 3/16 x 2 3/4
ST598	20	450	1 x 2 3/4
ST599	30	450	1 x 3 1/2

Dual Common Negative

Mallory Catalog	Mfd.	Volts DC	Size
TN111	10-10	25	5/8 x 1 1/4
2N509*	20-20	150	7/8 x 2 3/8
2N513*	30-30	150	7/8 x 2 3/8
2N514*	40-20	150	7/8 x 2 3/8
2N511*	40-40	150	1 x 2 5/8
2N520*	50-30	150	1 x 2 5/8
2N521	50-50	150	1 1/8 x 2 7/8
2N516*	8-8	250	7/8 x 2 3/8
2N518	8-8	450	1 5/16 x 2 3/4

Dual Separate Sections

Mallory Catalog	Mfd.	Volts DC	Size
2S556	30-30	150	1 1/8 x 2 7/8
2S567	8-8	450	1 1/8 x 2 7/8
2S569	16-16	450	1 1/4 x 3 1/8

Triple Common Negative

Mallory Catalog	Mfd.	Volts DC	Size
3N527*	20-20-20	150-25	1 5/16 x 2 5/8
3N533*	30-30-20	150-25	1 x 2 3/8
TN125*	20-10-10	150	7/8 x 2 1/4
TN129	40-20-20	150	1 1/8 x 2 7/8

Triple Separate Section

Mallory Catalog	Mfd.	Volts DC	Size
UR182-193 3S579	10-10-25 8-8-20	150 450-25	1 1/16 x 2 1/2 1 1/4 x 2 3/8
3S582	8-8-8	250	1 1/8 x 2 7/8
3S584	8-8-8	450	1 3/8 x 2 7/8

Quad Separate Sections

Mallory Catalog	Mfd.	Volts DC	Size
4S715	16-16, 10-10	150-25	1 3/8 x 2 5/8
4S718	8-8, 10-10	450-25	1 3/8 x 2 5/8

NOTE—Triple and Quad Separate Section units have first section separate, others common negative.



MSF · MSG Dry Electrolytic Rectangular Case • Motor Starting Capacitor

APPLICATION—For replacement of rectangular case type motor starting capacitors.

DESCRIPTION—Dry electrolytic intermittent duty AC capacitors housed in rectangular cases and provided with terminal arrangement similar to the design of the original capacitors they replace.

TERMINALS—Equipped with two capacitor terminals and two dummy terminals. The L and unmarked terminal are the capacitors, while T and TL are dummies for convenience in wiring.

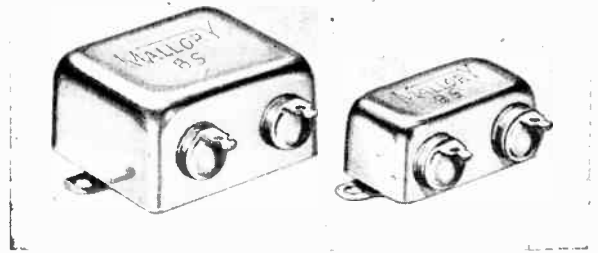
MOUNTING—Designed to mount in the original clamps or boxes used for the original capacitors.

PACKAGING—Individual display carton.

Mallory Cat. No.	Mfd. New	Rating Old	Volts AC	Size*		
				W	L	H
MSG220	32	32-36	110	2	3 1/2	3 1/2
MSG221	53	53-60	110	2	3 1/2	3 1/2
MSG222	64	64-72	110	2	3 1/2	3 1/2
MSG223	78	78-85	110	2	3 1/2	3 1/2
MSF224	86	86-96	110	1 1/4	4 1/2	4 1/2
MSG225	97	97-107	110	2	3 1/2	3 1/2
MSG226	108	108-120	110	2	3 1/2	3 1/2
MSF227	108	108-120	110	1 1/4	4 1/2	4 1/2
MSG228	124	124-138	110	2	3 1/2	3 1/2
MSF229	124	124-138	110	1 1/4	4 1/2	4 1/2
MSG230	145	145-162	110	2	3 1/2	3 1/2
MSG231	161	161-180	110	2	3 1/2	3 1/2
MSF232	161	161-180	110	1 1/2	4 1/2	4 1/2
MSF233	189	189-210	110	1 1/2	4 1/4	4 1/4
MSG234	270	270-300	110	2	3 1/2	3 1/2
MSG250	26	26-30	220	2	3 1/2	3 1/2
MSG251	32	32-36	220	2	3 1/2	3 1/2
MSF252	32	32-36	220	1 1/4	4 1/2	4 1/2
MSG253	43	43-48	220	2	3 1/2	3 1/2

*W—Width; L—Length; H—Height.

MALLORY DRY ELECTROLYTIC CAPACITORS



HC · NP Dry Electrolytic • High Capacity— Low Voltage • Non-Polarized Capacitors • Plastic Insulating Case

APPLICATION—Type HC are for filtering dry disc rectifiers and for electric fence controls, talking picture equipment, and other high-capacity low-voltage applications. Type HC1060A is especially designed for replacement in fence control equipment.

Type NP are non-polarized units for use where polarity may be applied in either direction, but are not suitable for continuous AC applications. Useful in welding and control equipment as a stored energy device.

DESCRIPTION—High quality etched plate electrolytic capacitors supplied in moisture-proof plastic cases requiring no external insulation. Type HC are polarized, and NP are non-polarized type.

TERMINALS—Two solder lug terminals at one end.

MOUNTING—Supplied with type VR bracket for vertical mounting, and design permits horizontal mounting with protector end cap (sold separately). See page 17 for hardware details.

PACKAGING—Individual display carton.

Mallory Cat. No.	Capacity Mfd.	DC Wkg. Volts	Maximum Surge Voltage	Size
HC1020	2000	10	15	1 7/16 x 3 3/8
HC1040	4000	10	15	1 13/16 x 4 3/8
HC1060	6000	10	15	2 1/16 x 4 3/8
HC1060A*	6000	10	15	1 1/2 x 4 3/8
HC1520	2000	15	20	1 13/16 x 3 3/8
HC1540	4000	15	20	1 13/16 x 4 3/8
HC1560	6000	15	20	2 1/16 x 4 3/8
HC2510	1000	25	40	1 7/16 x 3 3/8
HC2520	2000	25	40	1 13/16 x 4 3/8
HC2540	4000	25	40	2 1/16 x 4 3/8
HC5005	500	50	75	1 7/16 x 3 3/8
HC5010	1000	50	75	1 13/16 x 4 3/8
HC5020	2000	50	75	2 1/16 x 4 3/8
HC15010	1000	150	200	2 1/16 x 4 3/8
HC20005	500	200	275	2 1/16 x 4 3/8

NP0340	2000	25	40	2 1/16 x 4 3/8
NP0555	500	50	75	1 13/16 x 4 3/8
NP1225	200	125	200	1 13/16 x 4 3/8
NP1235	300	125	200	2 1/16 x 4 3/8
NP1245	400	125	200	2 1/16 x 4 3/8
NP1255	500	125	200	2 1/16 x 4 3/8
NP2514	100	250	325	1 13/16 x 4 3/8
NP2520	150	250	325	1 13/16 x 4 3/8
NP2525	200	250	325	2 1/16 x 4 3/8
NP3003	15	300	375	1 7/16 x 3 3/8
NP3006	30	300	375	1 7/16 x 3 3/8
NP3008	50	300	375	1 7/16 x 3 3/8
NP3014	100	300	375	1 13/16 x 4 3/8
NP3020	150	300	375	2 1/16 x 4 3/8
NP3025	200	300	375	2 1/16 x 4 3/8

*This unit in Aluminum Case

BS Dry Electrolytic • Bath Tub Capacitor • Steel Case

APPLICATION—For filter and bypass circuits in marine, aircraft, geophysical and other applications where extreme operating conditions are encountered. BS81 and BS91 are ideal for power amplifier and other high voltage applications.

DESCRIPTION—Dry electrolytic capacitors where cartridges are first sealed in aluminum tubes and then encased in sturdy corrosion-resistant, hot-tinned steel cases providing complete hermetical seal under all weather conditions. All units internally insulated from outer case. BS81 and BS91 employ the special Mallory balanced series unit construction for extreme dependability at high voltage. Temperature range, -40 F. to +185 F.

TERMINALS—Two solder lug terminals on one side

MOUNTING—Provided with mounting flanges at each end having 3/16" holes.

PACKAGING—Individual display carton.

Mallory Cat. No.	Cap. Mfd.	DC Wkg. Volts	Max. Surge Voltage	Size*			
				H	W	L	Y
BS26	25	25	40	3/8	x 1	x 1 3/4	x 2 1/8
BS29	50	25	40	3/8	x 1	x 1 3/4	x 2 1/8
BS36	25	50	75	3/8	x 1	x 1 3/4	x 2 1/8
BS39	50	50	75	7/8	x 1	x 1 3/4	x 2 1/8
BS45	20	150	200	7/8	x 1	x 1 3/4	x 2 1/8
BS48	40	150	200	1	x 1 1/4	x 1 3/4	x 2 1/8
BS62	10	300	375	7/8	x 1	x 1 3/4	x 2 1/8
BS65	20	300	375	1 1/8	x 1 1/4	x 1 3/4	x 2 1/8
BS81	8	500	650	1	x 1 3/8	x 2	x 2 3/8
BS91	8	600	750	1	x 1 3/8	x 2	x 2 3/8

*H—Height; W—Width; L—Length; Y—Mounting Centers.

MALLORY VIBRATOR GUIDE

Long recognized as one of the most useful publications in the radio service field. Up-to-date, completely organized for quick, accurate reference. Contains all available information through 1947 automobile and battery-operated home radio receivers as well as vibrator power supplies. See your Mallory Distributor.

MALLORY DRY ELECTROLYTIC CAPACITORS



P-MSU Dry Electrolytic • Motor Starting Capacitor • Non-Polarized • Round Plastic Case

APPLICATION—For intermittent duty in starting AC capacitor motors in any application where round type cases are required.

DESCRIPTION—Dry electrolytic non-polarized type capacitors housed in round cases. Rated at the minimum capacity value with a plus tolerance of 20% unless otherwise indicated by reference to old minimum-maximum capacity rating. Type P furnished in moisture-proof plastic containers, and type MSU in aluminum cases with external insulating sleeve.

TERMINALS—Two solder lug terminals at one end.

MOUNTING—Both type P and MSU may be mounted interchangeably in any original mounting for units of equivalent size. Type P may also be mounted by means of a plastic end cap (type PL) and sturdy metal snap-in type bracket (type HB) furnished separately when desired. See page 17 for these and other mounting hardware.

PACKAGING—Individual display carton.

Mallory Cat. No.	Mfd. New	Rating Old	Volts AC	Size
MSU120	20	20-24	110	1 3/8 x 2 3/4
MSU121	26	26-30	110	1 3/8 x 2 3/4
MSU122	32	32-36	110	1 3/8 x 2 3/4
MSU123	38	38-42	110	1 3/8 x 2 3/4
MSU124	43	43-48	110	1 3/8 x 2 3/4
P5310	53	53-60	110	1 7/8 x 3 3/8
P6410	64	64-72	110	1 7/8 x 3 3/8
P7010	70	70-78	110	1 7/8 x 3 3/8
P7510	75	75-84	110	1 7/8 x 3 3/8
P8610	86	86-96	110	1 7/8 x 3 3/8
P9710	97	97-107	110	1 7/8 x 3 3/8
P10810	108	108-120	110	1 7/8 x 3 3/8
P12410	124	124-138	110	1 7/8 x 3 3/8
P13010	130	130-157	110	1 7/8 x 3 3/8
P14510A	145	145-162	110	1 7/8 x 3 3/8
MSU134	161	161-180	110	1 3/4 x 4 1/4
P16110	161	161-180	110	1 3/4 x 3 3/8
MSU136	194	194-216	110	1 3/4 x 4 1/4
P19410	194	194-216	110	1 3/4 x 3 3/8
MSU138	200	200-220	110	1 3/4 x 4 1/4
P21610	216	216-240	110	1 3/4 x 3 3/8
P24310	243	243-270	110	1 3/4 x 4 3/8
P27010	270	270-300	110	1 3/4 x 4 3/8
P32410	324	324-360	110	1 3/4 x 4 3/8
P34010	340	340-412	110	2 1/8 x 4 3/8
P37810	378	378-420	110	2 1/8 x 4 3/8
P40010	400	400-450	110	2 1/8 x 4 3/8
P43010	430	430-485	110	2 1/8 x 4 3/8
P2520	25	26-30	220	1 7/8 x 3 3/8
P3220	32	32-36	220	1 3/4 x 3 3/8
P3820	38	38-42	220	1 3/8 x 3 3/8
P4320	43	43-48	220	1 3/8 x 3 3/8
P5320	53	53-60	220	1 3/8 x 3 3/8
P6420	64	64-72	220	1 3/8 x 4 3/8
P7020	70	70-78	220	2 1/8 x 4 3/8
P7520	75	75-84	220	2 1/8 x 4 3/8
P8620	86	86-96	220	2 1/8 x 4 3/8

MSS-100

Dry Electrolytic • Adjustable Capacitor

For Selection of Proper Motor Starting Capacity

APPLICATION—For determining correct capacity to use in making replacement of defective motor starting capacitors which have lost their identity.

DESCRIPTION—A special adjustable capacitor provided with flexible leads and clips for connections while checking for proper capacity. Capacity range from 26 to 161 mfd.

TERMINALS—Two flexible insulated leads provided with spring clips.

MOUNTING—Not intended for permanent installation.

PACKAGING—Individual display carton.



OT Oil Filled • Metal Tubular Capacitor



APPLICATION—For vibrator buffer, coupling, and other circuits where highest quality tubular type capacitors are required.

DESCRIPTION—Mineral oil impregnated hermetically sealed aluminum tubulars with external insulating sleeves.

TERMINALS—Two bare tinned copper leads, one at each end.

MOUNTING—Designed for mounting by its own leads, may also be mounted by use of the TH clip furnished with each capacitor. See page 17 for description of the TH clip and other hardware.

PACKAGING—10 capacitors per display carton.

Mallory Cat. No.	Cap. Mfd.	Working Volts DC	Size
OT101	.01	600	5/8 x 1 3/8
OT103	.02	600	5/8 x 1 3/8
OT106	.05	600	1 1/8 x 1 3/8
OT110	.1	600	1 1/8 x 1 1/2
OT113	.25	600	1 3/8 x 2 1/8
OT116	.5	600	1 1/8 x 2 1/8
OT301	.01	1000	5/8 x 1 3/8
OT303	.02	1000	5/8 x 1 3/8
OT306	.05	1000	1 1/8 x 2 3/8
OT310	.1	1000	1 3/8 x 2 3/8
OT370	.002	1600	5/8 x 1 3/8
OT377	.003	1600	5/8 x 1 3/8
OT371	.005	1600	5/8 x 1 3/8
OT372	.008	1600	5/8 x 1 3/8
OT373	.01	1600	1 1/8 x 1 3/8
OT375	.015	1600	1 1/8 x 1 1/2
OT376	.02	1600	1 1/8 x 1 1/2
OT378	.03	1600	1 1/8 x 2 3/8
OT379	.04	1600	1 1/8 x 2 3/8
OT380	.05	1600	1 1/8 x 2 7/8
OT458	.0025	2000	1 1/8 x 1 3/8
OT459	.005	2000	1 1/8 x 1 1/2
OT460	.0075	2000	1 1/8 x 1 1/2
OT461	.01	2000	1 1/8 x 1 1/2
OT462	.0125	2000	1 1/8 x 1 1/2
OT463	.015	2000	1 1/8 x 1 1/2
OT464	.02	2000	1 3/8 x 2 3/8
OT465	.03	2000	1 3/8 x 2 3/8
OT466	.04	2000	1 3/8 x 2 3/8
OT467	.05	2000	1 3/8 x 2 3/8

MALLORY CARDBOARD TUBULAR CAPACITORS



Type TP Size Chart

To save space in the main chart, the various sizes have been listed below. Column "S" refers to these sizes.

S	Size	S	Size
1	$1\frac{1}{32} \times 1$	10	$\frac{5}{8} \times 1\frac{1}{8}$
2	$\frac{7}{16} \times 1$	11	$1\frac{1}{16} \times 1\frac{1}{8}$
3	$\frac{7}{16} \times 1\frac{1}{4}$	12	$\frac{3}{4} \times 1\frac{1}{8}$
4	$\frac{1}{2} \times 1\frac{1}{16}$	13	$1\frac{1}{16} \times 1\frac{1}{8}$
5	$\frac{1}{2} \times 1\frac{1}{8}$	14	$\frac{7}{8} \times 1\frac{1}{8}$
6	$\frac{9}{16} \times 1\frac{1}{4}$	15	$\frac{7}{8} \times 2$
7	$\frac{1}{2} \times 1\frac{1}{2}$	16	$1 \times 2\frac{1}{2}$
8	$1\frac{1}{32} \times 1\frac{1}{2}$	17	$1 \times 2\frac{1}{2}$
9	$\frac{5}{8} \times 1\frac{9}{16}$	18	$1\frac{1}{4} \times 2\frac{1}{2}$

TP · OW Cardboard Tubular Capacitors

APPLICATION—For use in radio and electronic circuits, especially RF bypassing, where low cost and small size are paramount. Well protected from moisture but not hermetically sealed.

DESCRIPTION—Both TP and OW are compact paper tubular construction. Type TP is wax impregnated and filled. Type OW is oil impregnated and wax filled.

TERMINALS—Two bare tinned copper leads, one at each end.

MOUNTING—By means of their lead wires or TH clips of applicable size. See page 17 for mounting hardware.

PACKAGING—Type TP—25, 50 or 100 capacitors per display carton. Type OW—5 or 10 capacitors per display carton.



(For Type OW)

Mallory Cat. No.	Cap. Mfd.	Working Volts DC	Size
OW340	.0005	1600	$\frac{9}{16} \times 1\frac{1}{8}$
OW341	.001	1600	$\frac{9}{16} \times 1\frac{1}{8}$
OW331	.002	1600	$\frac{9}{16} \times 1\frac{1}{8}$
OW342	.003	1600	$1\frac{1}{16} \times 1\frac{1}{8}$
OW343	.004	1600	$\frac{5}{8} \times 1\frac{5}{16}$
OW332	.005	1600	$\frac{5}{8} \times 1\frac{3}{8}$
OW344	.006	1600	$\frac{5}{8} \times 1\frac{9}{16}$
OW345	.007	1600	$\frac{5}{8} \times 1\frac{9}{16}$
OW346	.0075	1600	$\frac{5}{8} \times 1\frac{9}{16}$
OW333	.008	1600	$\frac{5}{8} \times 1\frac{9}{16}$
OW334	.01	1600	$1\frac{1}{16} \times 1\frac{9}{16}$
OW335	.015	1600	$1\frac{1}{16} \times 1\frac{9}{16}$
OW336	.02	1600	$\frac{3}{4} \times 1\frac{9}{16}$
OW337	.03	1600	$\frac{3}{4} \times 2$
OW338	.04	1600	$1\frac{1}{8} \times 2$
OW339	.05	1600	$\frac{7}{8} \times 2$

(For Type TP)

Cap. Mfd.	400 Volts DC		600 Volts DC		1000 Volts DC	
	Mallory Cat. No.	S	Mallory Cat. No.	S	Mallory Cat. No.	S
.0001			TP401	1		
.00025			TP402	1		
.0005			TP403	1		
.001			TP404	2	TP455	2
.002			TP405	2	TP456	2
.003			TP406	2	TP457	3
.004			TP407	2	TP458	3
.005			TP408	2	TP459	5
.006			TP409	2	TP460	5
.007			TP445	4	TP461	6
.008			TP450	4	TP462	6
.01	TP421	2	TP410	4	TP434	6
.015	TP400	4	TP411	5	TP463	7
.02	TP423	5	TP412	5	TP435	8
.025			TP451	6		
.03	TP424	6	TP413	6	TP464	9
.04	TP425	6	TP414	7	TP465	9
.05	TP426	7	TP415	8	TP437	10
.06	TP427	7	TP416	8	TP466	10
.075			TP452	9	TP467	11
.1	TP428	8	TP418	9	TP439	12
.15			TP417	11		
.2	TP429	10	TP419	12		
.25	TP430	11	TP420	13		
.3	TP444	11	TP453	14		
.4	TP442	12	TP454	15		
.5	TP431	14	TP432	16		
1.0	TP422	17	TP433	18		

MALLORY RADIO SERVICE ENCYCLOPEDIA

● The most complete Mallory Radio Service Encyclopedia of all—listing radio sets never before included—bringing your service information up to date on every pre-war and post-war model.

Complete tube complements. I. F. Peaks. Original part numbers and recommended replacements that are readily available. Circuit references. In short, everything you need to know to do a thorough service job—quickly and profitably.

MALLORY METAL TUBULAR, SUPPRESSION & OIL FILLED CAPACITORS



MT Miniature Metal Tubular Capacitors

APPLICATION—For hearing aid, personal radio, and other uses where very small size tubulars are desirable.

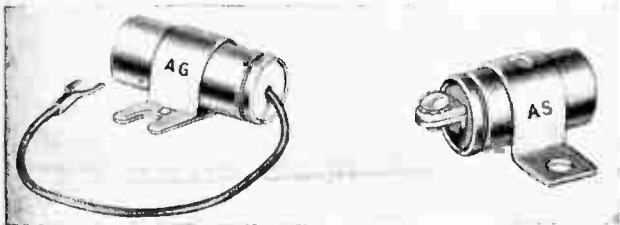
DESCRIPTION—Oil impregnated tubular capacitor in minute hermetically sealed metal tubes with insulating sleeve.

TERMINALS—Two bare tinned copper leads, one at each end.

MOUNTING—By means of its own leads.

PACKAGING—Individual display carton.

Mallory Cat. No.	Cap. Mfd.	Working Volts DC	Size
MT105	.001	100	9/32 x 1/2
MT107	.002	100	9/32 x 1/2
MT115	.005	100	9/32 x 1/2
MT125	.01	100	2 1/64 x 1/2
MT127	.02	100	2 1/64 x 1 1/16
MT135	.05	100	2 1/64 x 1 1/16
MT145	.1	100	2 1/64 x 1 3/8
MT605	.001	600	9/32 x 1 3/16
MT607	.002	600	9/32 x 1 5/16
MT615	.005	600	9/32 x 1 5/16
MT625	.01	600	2 1/64 x 1 9/16



AG · AS Automobile Generator Noise Suppression Capacitor

APPLICATION—For suppressing radio interference emanating from auto generators, oil gauges, ammeters, etc., or for general contact spark reduction.

DESCRIPTION—Type AG is round type with flexible lead, well protected from moisture but not hermetically sealed. Type AS is hermetically sealed, provides lower impedance, and is ideal for extreme climatic conditions.

TERMINALS—AG has one flexible covered lead with spade lug, the case being grounded to other side of section. AS has one screw type terminal, other side grounded to case.

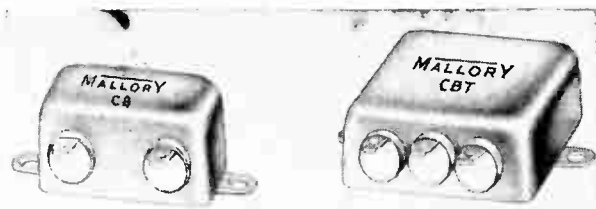
MOUNTING—By means of self-contained tangential flange.

PACKAGING—Individual display cartons.

Mallory Cat. No.	Cap. Mfd.	Working Volts DC	Size
AG442*	.05	100	3/8 x 1 1/4
AG443	.05	100	7/16 x 1 3/16
AG444	.25	200	3/8 x 1 3/8
AG450	.5-.5	100	3/8 x 2
AG451	.5	200	3/4 x 2
AG452	1.0	200	1 x 2 3/16
AG453†	.5	200	3/4 x 2
AS125	.01	100	.675 x 1 5/16
AS145	.1	160	.675 x 1 3/8
AS165	.25	100	3/4 x 1 1/2
AS185	.5	100	1 x 1 1/8
AS525	.01	500 AC-DC	.675 x 1
AS545	.1	500 AC-DC	1 x 1 1/2
AS565	.25	500 AC-DC	1 x 2 1/2

*For Midget Aircraft Motors

†Has shielded lead



CB Oil Filled • Steel Cased Bypass Capacitors

APPLICATION—For general use in aircraft, marine, geophysical and industrial electronic equipment where extreme dependability under severe conditions is desired.

DESCRIPTION—Oil impregnated single, dual, and triple section units housed in rugged, hermetically sealed, hot-tinned steel cases.

TERMINALS—Single section has two terminals. Dual section units have three terminals with center terminal common, and both are internally insulated from case. Triple units have three terminals with common grounded to case. All terminals protrude in a row on one long side of case.

MOUNTING—By means of flanges at each end.

PACKAGING—Individual display carton.

Mallory Cat. No.	Cap. Mfd.	Working Volts DC	Size*			
			W	L	H	X
CB403	.25	400	3/8	1 3/4	x	3/4 x 2 1/2
CB404	.5	400	1	1 3/4	x	3/8 x 2 1/2
CB405	1.0	400	1 3/8	x 2	x	3/4 x 2 3/8
CB406	2.0	400	2	x 2	x	1 1/8 x 2 3/8
CB602	.1	600	3/8	x 1 3/4	x	3/4 x 2 1/2
CB603	.25	600	1	x 1 3/4	x	3/4 x 2 1/2
CB604	.5	600	1 1/4	x 1 3/4	x	3/8 x 2 1/2
CB605	1.0	600	1 3/4	x 2	x	3/8 x 2 3/8
CB1002	.1	1000	3/8	x 1 3/4	x	3/4 x 2 1/2
CB1003	.25	1000	1 1/4	x 1 3/4	x	3/4 x 2 1/8
CB1004	.5	1000	1 3/4	x 2	x	3/8 x 2 3/8
CBD403	.25-.25	400	1 1/4	x 1 3/4	x	3/4 x 2 1/2
CBD404	.5-.5	400	1 3/4	x 2	x	3/4 x 2 3/8
CBD602	.1-.1	600	3/8	x 1 3/4	x	3/4 x 2 1/2
CBT403	3X .25	400	1 3/4	x 2	x	3/4 x 2 3/8
CBT404	3X .5	400	1 3/4	x 2	x 1	x 2 3/8
CBT602	3X .1	600	1	x 1 3/4	x	3/8 x 2 1/2

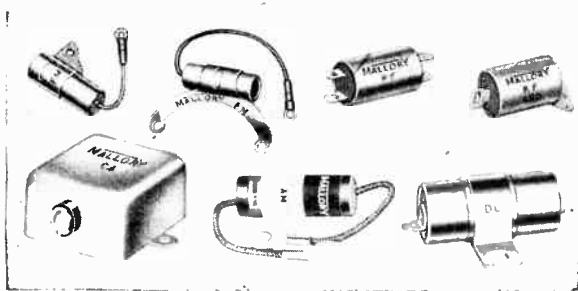
*W—Width; L—Length; H—Height; X—Mounting Centers.

Mallory Page 10 (See Mallory Page 2 for List Prices)

(See Pages P-25 and P-26 for Mallory List Prices)

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MALLORY SUPPRESSION, WAX, & BUFFER CAPACITORS



Types: (Top Row) FM441; FM442; RF481-RF482; RF480. (Bottom Row) CA275X; AM454; DL445.

AM · FM · DL · RF · CA

Automotive Noise Suppression Capacitors

APPLICATION—For radio interference suppression from auto or marine motors and other similar equipment.

AM—For ammeter and gauge suppression.

FM—For Ford generator suppression.

DL—For domelight suppression.

RF—for vibrator hash suppression.

CA—For general suppression in aircraft and marine application.

DESCRIPTION—Wax impregnated cartridges assembled in various style housings, as pictured.

TERMINALS—Various, as pictured.

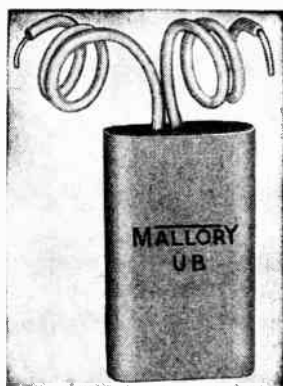
MOUNTING—AM454 and RF481 are held in place by the connecting wires or with TH clips. Others have own self-contained mounting features. See page 17 for mounting hardware if desired.

PACKAGING—Individual display cartons.

Mallory Cat. No.	Cap. Mfd.	Working Volts DC	Size	
			D	L
AM454	.5	200	1 1/8 x 2	
FM441	.5	100	.675 x 1 3/8	
FM442	.5	160	.675 x 1 3/8	
DL445X	.4	200	1 x 2 3/8	
RF480	.5	100	1 3/16 x 1 5/16	
RF481	.5	50	3/4 x 1 3/8	
RF482	1.0	50	1 5/16 x 1 3/8	
CA275X	4.0	50	2 x 2 x 1	

UB

Uncased Wax Capacitors



APPLICATION—Designed for replacement of defective sections in large paper capacitor blocks or other applications where sealing pitch is applied for final seal.

DESCRIPTION—Wax impregnated section wrapped in varnish paper for moisture protection until finally potted when installed.

TERMINALS—Two flexible insulated leads out one end.

MOUNTING—Held in place by pouring with hot pitch.

PACKAGING—Individual display carton.

Mallory Cat. No.	Cap. Mfd.	Working Volts DC	Size*		
			W	L	H
UB351	1	200	1/2 x 1 3/8 x 2 1/8		
UB352	2	200	3/4 x 1 1/16 x 2 1/8		
UB353	4	200	1 1/16 x 2 1/16 x 2 1/8		
UB354	1	400	9/16 x 1 1/16 x 2 1/8		
UB355	2	400	1 x 1 3/4 x 2 1/8		
UB356	4	400	1 5/16 x 1 5/8 x 4 3/8		
UB357	.5	600	1/2 x 1 3/8 x 2 1/8		
UB358	1	600	7/8 x 1 1/16 x 2 1/8		
UB359	2	600	1 1/8 x 2 1/16 x 2 1/8		
UB364	4	600	1 1/16 x 1 3/8 x 4 1/4		
UB362	1	1000	5/8 x 1 1/16 x 4 3/8		
UB363	2	1000	1 1/8 x 1 7/8 x 4 3/8		

*W—Width; L—Length; H—Height.

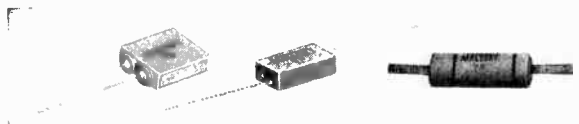


Fig. 1

Fig. 2

Fig. 3

VB · VD · VO

Vibrator Buffer Capacitor

APPLICATION—Intended for replacement of original vibrator buffer and hash suppressor capacitors of similar design.

DESCRIPTION—Type VB is oil impregnated and housed in small rectangular metal case. Section is insulated from case. Type VD is dual wax impregnated unit in small rectangular waxed cardboard case. Type VO is wax impregnated and filled in oval waxed tube.

TERMINALS—VB has two bare tinned copper leads out one end. VD has two bare tinned copper leads out one end and one similar common lead out the other end. VO has heavy copper braid at each end.

MOUNTING—In recess or clamp used in the original equipment.

PACKAGING—Individual display carton.

Mallory Cat. No.	Cap. Mfd.	Working Volts DC	Size*			Fig. No.
			W	L	H	
VB470	.0075	1600	5/16 x 5/8 x 7/8			1
VB471	.01	1600	5/16 x 5/8 x 7/8			1
VD491	.0008 .0008	1600	5/16 x 5/8 x 1 1/16			2
VO480	.5	120	7/16 x 3/4 x 2 1/2			3

*H—Height; W—Width; L—Length.

MALLORY TECHNICAL MANUAL

● This simply written, practical book bridges the gap between radio theory and practice. Designed for the radio serviceman, engineer, amateur or experimenter who wants the latest technical information . . . presented so that he can easily apply it to everyday problems.

Contains 408 pages of information profusely illustrated. It's worth far more than its price.

Mallory Page 11 (See Mallory Page 2 for List Prices)

MALLORY CHOKE COILS AND FILTERS



RF Radio Frequency Choke Coils

APPLICATION—General purpose radio frequency choke coils for all circuits.

DESCRIPTION—Hour-glass wound for low distributed capacity and housed in compact insulating tubes.

TERMINALS—Two bare tinned copper wire leads, one at each end.

MOUNTING—By means of its leads or with TH clips, as described on page covering hardware.

PACKAGING—Individual display carton.

Mallory Cat. No.	Turns	Wire	Size
RF581	90	16	1 x 1½
RF582	55	16	1 x 1¾
RF583	55	12	1¾ x 1¾

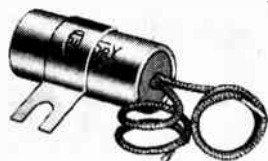
General Noise Elimination Information

● All radio noise suppression devices should be applied at the source of the noise. Filters inserted in radio receiver cords are usually ineffective.

The filters described herein are, therefore, designed for insertion at the offending device. They incorporate many improvements accomplished through the extensive research and war production experience of the P. R. Mallory Company. While there will be some exceptions, most of the types of interference found in the home can be effectively reduced by the Mallory filters described. Unusual cases should be referred to the Mallory Engineering Department for advice.

Each filter is supplied with a complete instruction sheet for proper installation.

W Motor Brush Filters



APPLICATION—Type W filters, while primarily designed for installation on motor brushes, may be used wherever a permanently installed dual capacity filter is desired. Where un-grounded motor frames or appliance cases are involved, type WSP is recommended for elimination of possible shock hazard.

DESCRIPTION—Dual wax impregnated capacitors housed in sealed metal tubes and specially designed to have low RF impedance. Case is grounded to common terminal of the included sections except in SP type where a shock limiting capacitor is employed between the common lead and case.

TERMINALS—Two flexible covered leads, case common ground.

MOUNTING—By means of attached tangential strap.

PACKAGING—Individual display cartons.

Type W7—115-220 Volts AC-DC for Light Interference

Type W9—115-220 Volts AC-DC for Medium Interference

Type W11—115-220 Volts AC-DC for Severe Interference

Type W7SP—115-220 Volts AC-DC for Light Interference

Type W9SP—115-220 Volts AC-DC for Medium Interference



X Appliance Filters

APPLICATION—For use with plug-in type appliances where straight capacity type filters are sufficient to produce desired noise suppression.

DESCRIPTION—Single and dual type capacitor filters in round metal housings designed for insertion between appliance cord and wall outlet. X-6 is furnished in attractive compact brown plastic case.

TERMINALS—Male prongs for insertion into wall outlet and slots for appliance plug.

MOUNTING—Self-supporting by its prongs.

PACKAGING—Individual display carton.

Type X1 is for relatively slight interference. Size 1¾" x 1¾", rated 110 volts, 5 amperes.

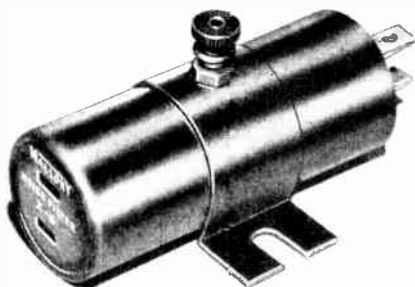
Type X3 is a capacitor type filter having greater efficiency than Type X1. Size 1¾" x 2¼", rated 110-220 volts, 5 amperes.

Type X5 is a triple capacity filter with provision for return lead to appliance. Special safety feature prevents possibility of shock and makes this unit ideal for use with vacuum cleaners, food mixers, etc. Size 1¾" x 2½", rated 110-220 volts, 5 amperes, and equipped with binding post for connection to appliance or motor frame.

Type X6 for medium interference. Furnished in an attractive, compact, rectangular brown plastic case. Size 1¼" x 2¼" x 1". Rated at 110 volts AC-DC, 5 amperes.

Mallory Page 12 (See Mallory Page 2 for List Prices)

MALLORY FILTERS



Z Appliance Filters

APPLICATION—For use with plug-in type appliances where inductance-capacity continuation filters are necessary to accomplish desired noise suppression.

DESCRIPTION—Single and dual inductance-capacity filters housed in round metal containers designed for insertion between appliance cord and wall outlet.

TERMINALS—Male prongs and female receptacles. Types Z4, 6 and 8 have extra provision for return lead to ground or appliance frame.

MOUNTING—Self-supported by its prongs.

PACKAGING—Individual display carton.

Type Z2 is a capacitor-inductance filter for medium interference. Use with electric razor or small appliances. Most effective on grounded line systems where reversal of plugs will affect operation. Size 1 $\frac{3}{8}$ " x 2 $\frac{3}{4}$ ", rated 110-220 volts, 3 amperes.

Type Z4 is a dual inductance-capacity filter for severe interference on appliances where a return lead from the filter is inconvenient. Ideal for electric razor, vibrators and household appliances. Size 1 $\frac{3}{8}$ " x 3", rated 110-220 volts, 3 amperes.

Type Z6 is a dual inductance-capacity filter with provision for return lead to ground. Recommended for suppressing severe interference. Size 1 $\frac{1}{2}$ " x 3 $\frac{3}{8}$ ". Rated 110-220 volts, 3 amperes.

Type Z8 is same as Z6 but with provision for return wire connection to motor or appliance frame rather than ground. An efficient filter equivalent to box type within 3 ampere rating.

LC5 · LC10

Heavy-Duty Appliance Filters

APPLICATION—For portable plug-in applications where severe interference is involved and ampere rating exceeds that of type Z.

DESCRIPTION—Combination inductance-capacity filter housed in rectangular metal case.

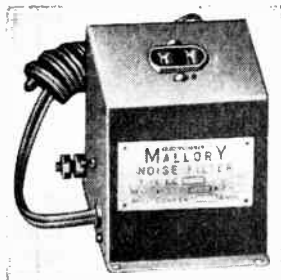
TERMINALS—Ample line cord with male plug for insertion in wall outlet. Female receptacle for appliance cord plug. Binding post for return wire lead to appliance or motor frame.

MOUNTING—Two metal flanges (when permanent mounting is desired).

PACKAGING—Individual carton.

Type LC5 rated 115-220 volts AC-DC, 5 amperes.

Type LC10 rated 115-220 volts AC-DC, 10 amperes.



Z8A Fluorescent Lighting Filters

APPLICATION—Specially designed for fluorescent lights where permanent installation on or in the light fixture is desired.

DESCRIPTION—Dual inductance-capacity filter housed in round metal tubes. Contains shock limiting capacitor.

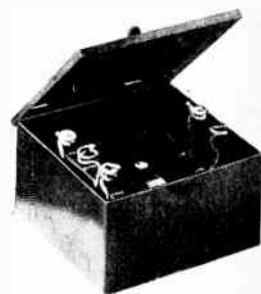
TERMINALS—Flexible covered wire leads, two at one end for input—three at other end for output of which the red lead is for grounding to light frame.

MOUNTING—By means of attached tangential strap.

PACKAGING—Individual display carton.

Type Z8A, 115-220 volts, AC-DC, 3 amperes. For fluorescent lights

LB Heavy-Duty Appliance Filters



APPLICATION—For permanent installation wherever heavy-duty filters are required, such as outdoor signs, large motors, or at house meter board.

DESCRIPTION—Heavy-duty choke-capacity combination filters sealed in rectangular case and housed in standard heavy gauge metal cut-out boxes.

TERMINALS—Heavy, flexible insulated wire leads for splicing with house or motor wiring.

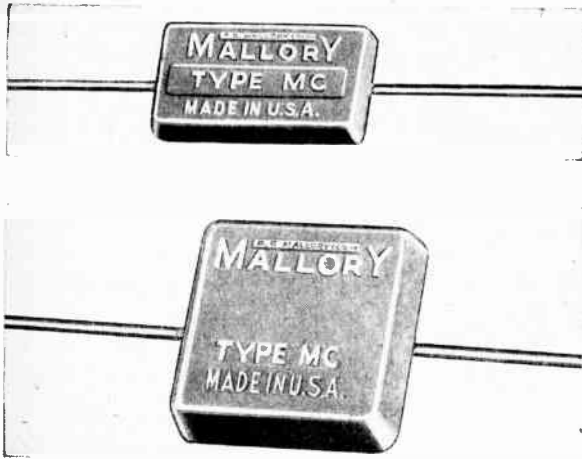
MOUNTING—Mounts by means of screws through bottom of cut-out box.

PACKAGING—Individual carton.

Type	Rating	Size
LB-10	220V-10 Amp.	6" x 6" x 4"
LB-20	220V-20 Amp.	10" x 10" x 6"
LB-40	220V-40 Amp.	12" x 10" x 6"

Mallory Page 13 (See Mallory Page 2 for List Prices)

MALLORY MICA CAPACITORS



MC Mica Receiver Capacitors

APPLICATION—Designed primarily for radio receiving applications, they may be used in television and other electronic circuits within their voltage range.

DESCRIPTION—Made with carefully selected mica and foil and housed in high quality compact rectangular bakelite case with standard RMA color coding for identification.

TERMINALS—Bare tinned copper leads.

MOUNTING—By means of its leads.

PACKAGING—10 capacitors per display carton.

Case Size— $\frac{7}{16}$ " x $\frac{25}{32}$ " x $\frac{7}{32}$ " with $\frac{1}{8}$ " Wire Leads
Voltage Rating—500 VDC Working—1000 VDC Test

Capacity Mfd.	Standard Mica ±20% Cap. Tolerance	Silver Mica ±10% Cap. Tolerance	Silver Mica ±2% Cap. Tolerance
	Mallory Cat. No.	Mallory Cat. No.	Mallory Cat. No.
.000005	MC205	MCB205	MCE215
.00001	MC215	MCB215	MCE215
.000025	MC220	MCB220	MCE220
.00004	MC223	MCB223	MCE223
.00005	MC225	MCB225	MCE225
.000075	MC230	MCB230	MCE230
.0001	MC235	MCB235	MCE235
.00015	MC236	MCB236	MCE236
.0002	MC237	MCB237	MCE237
.00025	MC240	MCB240	MCE240
.0003	MC241	MCB241	MCE241
.0004	MC243	MCB243	MCE243
.0005	MC245	MCB245	MCE245
.0008	MC251	MCB251	MCE251
.001	MC255	MCB255	MCE255
.0015	MC256		

Case Size— $\frac{13}{16}$ " x $\frac{13}{16}$ " x $\frac{5}{16}$ " with $\frac{1}{8}$ " Wire Leads
Voltage Rating—500 VDC Working—1000 VDC Test

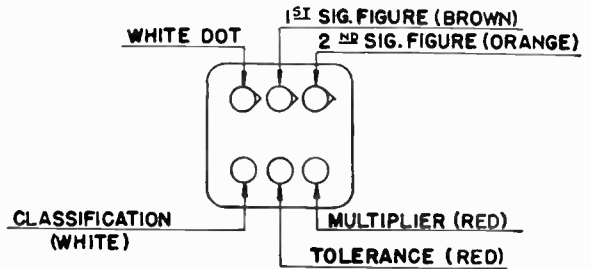
Capacity Mfd.	Standard Mica ±20% Cap. Tolerance	Silver Mica ±10% Cap. Tolerance	Silver Mica ±2% Cap. Tolerance
	Mallory Cat. No.	Mallory Cat. No.	Mallory Cat. No.
.0005	MC445	MCB445	MCE445
.0008	MC451	MCB451	MCE451
.001	MC455	MCB455	MCE455
.0015	MC456	MCB456	MCE456
.002	MC457	MCB457	MCE457
.0025	MC460	MCB460	MCE460
.003	MC461	MCB461	MCE461
.004	MC463	MCB463	MCE463
.005	MC465	MCB465	MCE465
.006	MC467	MCB467	MCE467
.007	MC469	MCB469	MCE469
.008	MC471	MCB471	MCE471
.01	MC475	MCB475	MCE475

New RMA Color Code

● The new RMA color code, shown below, permits positive identification of the mica capacitors listed.

Reading across the top from left to right with the arrow pointing to the right, the first dot shall always be white to indicate standard RMA molded mica capacitor. The second and third dots become the first two significant figures in the capacitance. The second row is read from right to left. The lower right dot should be the multiplier. The lower second dot indicates the tolerance and the lower left dot indicates the class.

The key to color significance is as follows:



Example shown above = 1300 mmfd. ±2%, 500 V.W.

Note: When any Mallory mica capacitor has a white dot in the upper left hand corner (when the arrows point to the right) that capacitor is coded under the new RMA color code, as shown above. Any other color in the upper left hand corner indicates the old color code, which may be found in Catalogue No. 467-A.

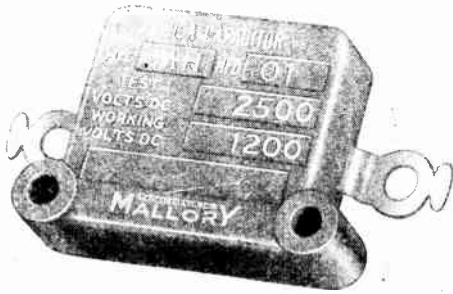
Color	Sig. Fig.	Mult.	Tol.	Class.*
Black	0	1	±20%	A
Brown	1	10		B
Red	2	100	±2%	C
Orange	3	1000	±3%	D
Yellow	4	10000		
Green	5		±5%	
Blue	6			
Violet	7			
Gray	8			I
White	9			J
Gold		0.1		
Silver		0.01	±10%	

*Denotes various electrical characteristics.

Voltage ratings vary with capacitance as shown in RMA Specification—April, 1946.

**DON'T MISS THE
MALLORY I485 CONTROL DEAL**
Turn to Page 3, Mallory Controls, for full information.

MALLORY MICA CAPACITORS



MH Mica Transmitting Capacitors

APPLICATION—For use in transmitting and power amplifier circuits where voltage exceeds the 500-volt rating of type MC.

DESCRIPTION—Made with accurately gauged high-quality India mica in bakelite molded case providing insulated mounting. Capacity tolerance $\pm 20\%$. Only size variation for various ratings is the thickness as shown in the chart.

TERMINALS—Short, heavy tinned copper solder lugs for minimum RF and contact resistance.

MOUNTING—Insulated mounting by means of screws through holes molded in case.

PACKAGING—Individual display carton.

Mallory Cat. No.	Cap. Mfd.	Working Volts DC	Test Volts DC	Thickness
MH535	.0001	600	1000	$2\frac{3}{64}$
MH635	.0001	1200	2500	$2\frac{3}{64}$
MH735	.0001	2500	5000	$2\frac{3}{64}$
MH545	.0005	600	1000	$2\frac{3}{64}$
MH645	.0005	1200	2500	$2\frac{3}{64}$
MH745	.0005	2500	5000	$2\frac{3}{64}$
MH555	.001	600	1000	$2\frac{3}{64}$
MH655	.001	1200	2500	$2\frac{3}{64}$
MH755	.001	2500	5000	$2\frac{3}{64}$
MH557	.002	600	1000	$2\frac{3}{64}$
MH657	.002	1200	2500	$2\frac{3}{64}$
MH757	.002	2500	5000	$2\frac{3}{64}$
MH565	.005	600	1000	$2\frac{3}{64}$
MH665	.005	1200	2500	$2\frac{3}{64}$
MH765	.005	2500	5000	$2\frac{3}{64}$
MH575	.01	600	1000	$2\frac{3}{64}$
MH675	.01	1200	2500	$2\frac{3}{64}$
MH577	.02	600	1000	$2\frac{3}{64}$

MX Mica Transmitting Capacitors

APPLICATION—Ideal for amateur transmitting equipment. They may also be used in coupling, tank, and bypass circuits at radio frequencies within their rating. (Note that the maximum amperes for several radio frequencies are given in the chart. The operating current should be kept within these limits.)

DESCRIPTION—Heavy-duty mica construction, supplied in attractive rectangular porcelain cases.

TERMINALS—Two screw type with complete washer and nut assembly.

MOUNTING—Two flanges with ample holes for machine screw mounting.

PACKAGING—Individual display carton.

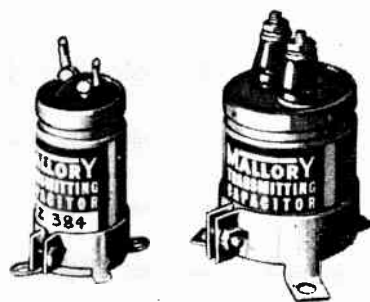
Mallory Cat. No.	Cap. Mfd.	Test Volts DC	Max. Amprs.	Freq. KC.
MX855	.001	12,500	9.0	15000
			10.0	7500
			11.0	3750
MX857	.002	12,500	9.0	15000
			12.0	7500
			13.0	3750
MX865	.005	10,000	10.0	15000
			13.0	7500
			14.0	3750
MX875	.01	7,000	10.0	15000
			13.0	7500
			15.0	3750
MX877	.02	3,500	10.0	15000
			13.0	7500
			17.0	3750
MX885	.05	3,500	11.0	15000
			14.0	7500
			18.0	3750
MX895	.1	2,000	11.0	15000
			14.0	7500
			18.0	3750

MALLORY

RADIO SERVICE ENCYCLOPEDIA

Page after page of replacement information for all Pre-war and post-war receivers

MALLORY OIL FILLED AND IMPREGNATED CAPACITORS



TX Oil Filled • Rectangular Can Capacitors

APPLICATION—For radio, television, transmitting, and all circuits requiring high voltage capacitors.

DESCRIPTION—Compact rectangular oil filled capacitors of sturdy construction.

TERMINALS—Suitable standoff insulated terminals at one end to safely cover maximum voltage rating of each unit.

MOUNTING—Base dimensions less than 3 1/2 x 5 1/8, by rectangular clamp providing either upright or inverted position. Base sizes of 3 1/2 x 5 1/8 and above, by permanent flanges at the unit base.

PACKAGING—Individual carton.

Mallory Cat. No.	Cap. Mfd.	Working Volts DC	Size*		
			W	L	H
TX801	1	600	1 x 1 3/4 x 2 1/8		
TX802	2	600	1 x 1 3/4 x 2 3/8		
TX803	4	600	1 x 1 3/4 x 4 1/4		
TX816	6	600	1 3/16 x 2 1/2 x 4 3/8		
TX817	10	600	1 1/4 x 3 3/4 x 4 3/8		
TX822	.5	1000	1 x 1 3/4 x 2 1/8		
TX804	1	1000	1 x 1 3/4 x 2 3/8		
TX805	2	1000	1 x 1 3/4 x 3 3/8		
TX806	4	1000	1 3/16 x 2 1/2 x 4 3/8		
TX824	6	1000	1 1/4 x 3 3/4 x 4 3/8		
TX825	10	1000	1 3/4 x 3 3/4 x 4 3/8		
TX807	1	1500	1 x 1 3/4 x 4 1/4		
TX808	2	1500	1 3/16 x 2 1/2 x 4 3/8		
TX809	4	1500	1 1/2 x 3 3/4 x 4 3/8		
TX829	6	1500	1 3/8 x 3 3/4 x 4 3/8		
TX830	10	1500	3 3/16 x 3 3/4 x 4 3/8		
TX831	.25	2000	1 x 1 3/4 x 2 1/8		
TX832	.5	2000	1 x 1 3/4 x 2 3/8		
TX810	1	2000	1 3/16 x 2 1/2 x 3 3/8		
TX811	2	2000	1 1/4 x 3 3/4 x 4 1/4		
TX823	4	2000	2 1/4 x 3 3/4 x 4 3/4		
TX833	6	2000	3 3/16 x 3 3/4 x 4 5/8		
TX834	10	2000	4 3/16 x 3 3/4 x 4 5/8		
TX812	1	2500	1 3/4 x 3 3/4 x 3 3/4		
TX813	2	2500	1 3/4 x 3 3/4 x 4 3/4		
TX835	.1	3000	1 3/16 x 2 1/2 x 2 3/8		
TX836	.25	3000	1 3/16 x 2 1/2 x 3 3/8		
TX837	.5	3000	1 13/16 x 2 1/2 x 4 3/8		
TX814	1	3000	1 3/8 x 3 3/4 x 4 3/8		
TX815	2	3000	3 3/16 x 3 3/4 x 4 3/8		
TX838	4	3000	4 3/16 x 3 3/4 x 5 1/2		
TX839	1	4000	2 1/4 x 3 3/4 x 4 3/4		
TX827	2	4000	4 3/16 x 3 3/4 x 4 3/4		
TX828	4	4000	8 1/8 x 5 1/8 x 3 1/2		
TX818	1	5000	5 1/8 x 3 1/2 x 5 5/8		
TX819	2	5000	5 1/8 x 3 1/2 x 9		
TX820	.5	6000	4 3/8 x 5 1/8 x 3 1/2		
TX821	1	6000	4 3/16 x 3 3/4 x 8		

*W—Width; L—Length; H—Height.

TZ Oil Impregnated • Round Can Capacitors

APPLICATION—For filter and bypass circuits in power amplifiers, television and transmitting equipment where compact round can units are desired.

DESCRIPTION—Oil impregnated type capacitor furnished in round containers for upright or inverted mounting. All units internally insulated from case.

TERMINALS—The 1 3/8" diameter units have two solder lug terminals with ample insulation for the voltage ratings involved. The 2" diameter units have special standoff insulated terminals.

MOUNTING—Supplied with type VR bracket for inverted or upright mounting.

PACKAGING—Individual carton.

Mallory Cat. No.	Cap. Mfd.	Working Volts DC	Size	
			Dia	Height
TZ382	2.0	600	1 3/8	x 3 3/8
TZ383	4.0	600	1 3/8	x 4 3/8
TZ384	1.0	1000	1 3/8	x 2 3/8
TZ385	2.0	1000	1 3/8	x 4 3/8
TZ389	4.0	1000	2	x 4
TZ386	.5	1500	1 3/8	x 3 3/8
TZ387	1.0	1500	1 3/8	x 4 3/8
TZ388	2.0	1500	2	x 4
TZ390	1.0	2000	2	x 3 1/2
TZ391	2.0	2000	2	x 4 1/2

MALLORY TECHNICAL MANUAL

● This simply written, practical book bridges the gap between radio theory and practice. Designed for the radio serviceman, engineer, amateur or experimenter who wants the latest technical information . . . presented so that he can easily apply it to everyday problems. Contains page after page of information profusely illustrated. It's worth far more than its price.

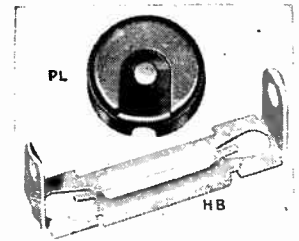
MALLORY CAPACITOR HARDWARE

Mallory Cat. No.	Type "MSU" Hardware Description	Size
115-1	Top Cap.	1 ³ / ₈
116-1	Top Cap.	2
118-1	Bottom Cap.	1 ³ / ₈
119-1	Bottom Cap.	2
121-1	Bracket	1 ³ / ₈ x 3 ¹ / ₄
122-1	Bracket	1 ³ / ₈ x 4 ¹ / ₄
123-1	Bracket	2 x 3 ¹ / ₈
124-1	Bracket	2 x 4 ¹ / ₈

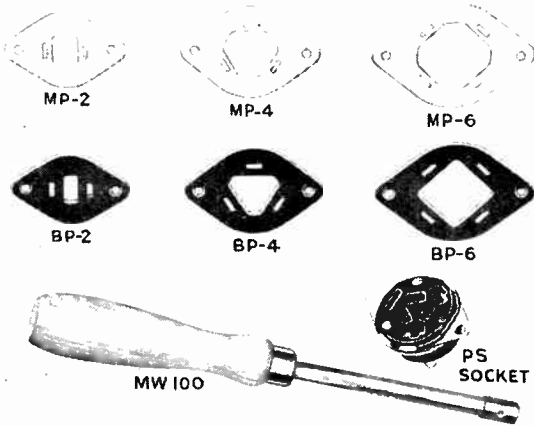
Type "P" Hardware

Type PL—Plastic end cap to protect terminals on HC or NP units when desired.

Type HB—Horizontal bracket for mounting HC and NP units complete with end cap type PL.



Cat. No.	Description	Size
PL-3	Plastic end cap	1 ⁷ / ₁₆
PL-6	Plastic end cap	1 ¹³ / ₁₆
PL-8	Plastic end cap	2 ¹ / ₁₆
HB-4	Horizontal bracket plastic cases	3 ³ / ₈
HB-8	Horizontal bracket plastic cases	4 ³ / ₈

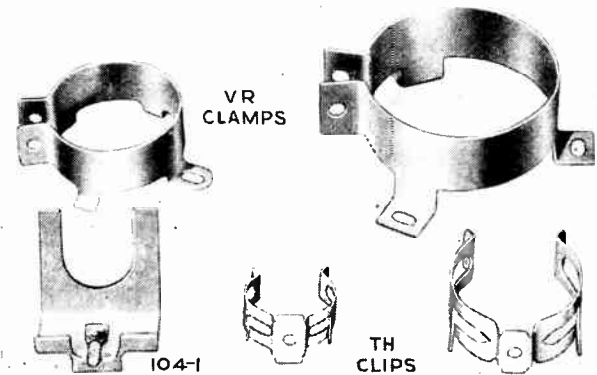


Type MP—Metal plates for grounded mounting of FP and WP capacitors.

Type BP—Bakelite plates for insulated mounting of FP and WP capacitors.

Type PS—Molded plastic sockets for plug-in mounting FP or WP capacitors. (Blank ear on capacitor should be removed to permit polarization with respect to socket.)

Type MW-100 Special wrench for twisting mounting ears on FP or WP capacitors.



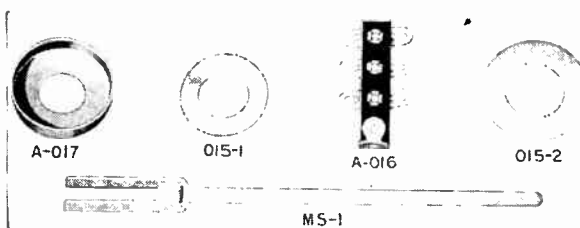
Type TH Special clips for horizontal mounting of any tubular or FP unit within the diameter range shown. Designed primarily to mount without tools under special chassis lances in original equipment, they may also be attached to chassis with 5-32 screw and nut in any 1/8" hole.

Type VR—Brackets for vertical mounting round units.

Type 104-1—Special bracket with spade bolt for mounting RS and RM units where spade bolt mounting was used.

Cat. No.	Description	Size
TH-13	Spring clip for TC	3/8
TH-15	Spring clip for TC	1/2 to 9/16
TH-17	Spring clip for TC	5/8 to 11/16
TH-19	Spring clip for TC and FP	3/4 to 13/16
TH-21	Spring clip for TC	7/8 to 15/16
TH-23	Spring clip for TC and FP	1 to 1 1/16
TH-25	Spring clip for TC and FP	1 3/8 to 1 7/16
VR-1	Clamps for vertical mounting	1 to 1 1/16
VR-3	Clamps for vertical mounting	1 3/8 to 1 7/16
VR-4	Clamps for vertical mounting	1 1/2 to 1 9/16
VR-6	Clamps for vertical mounting	1 3/4 to 1 13/16
VR-8	Clamps for vertical mounting	2 to 2 1/16
VR-10	Clamp for vertical mounting	2 1/2
104-1	Spade bolt mounting for neck type cans	Variable

Cat. No.	Description	Size
MP-2	Metal mounting wafer for FP	3/4
MP-4	Metal mounting wafer for FP	1
MP-6	Metal mounting wafer for FP	1 3/8
BP-2	Bakelite mounting wafers for FP	3/4
BP-4	Bakelite mounting wafers for FP	1
BP-6	Bakelite mounting wafers for FP	1 3/8
PS-4	Plug-in socket for FP	1
PS-6	Plug-in socket for FP	1 3/8
MW-100	Mounting wrench for FP	Var.



Type MS-1—Adjustable metal strap for horizontal mounting tubular types up to 1 3/8" diameter.

Type A-016—Terminal connector or anchor strap for general use where required.

Type O15-1—Washer for RS type "a" neck when used in over-size chassis hole.

Type O15-2—Washer for use with RS, RM or HS units where chassis hole is too large for regular mounting. Use two washers, one above and one below chassis.

Type A-017—Special washer with turned-over edge for ring clamp mounting 1" RS type in 1 3/8" ring clamp.

Cat. No.	Description	Size
O15-1	Washer for 5/8" neck in 7/8" hole	Var.
O15-2	Washer for 3/4" neck in 1" hole	Var.
MS-1	Adjustable mounting strip	Var.
A-016	Terminal connector	Var.
A-017	Washer for clamp mounting neck cans	Var.

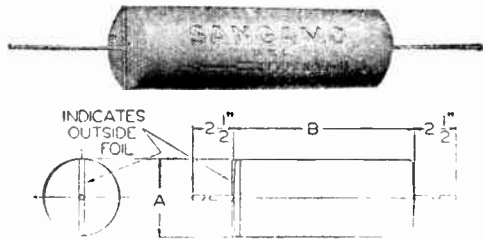
OE and CE Insulating Sleeve

Cat. No.	Description	Size
OE-1	Open end FP insulating sleeves	3/4 x 2
OE-3	Open end FP insulating sleeves	1 x 2
OE-4	Open end FP insulating sleeves	1 x 3
OE-5	Open end FP insulating sleeves	1 3/8 x 2
OE-6	Open end FP insulating sleeves	1 3/8 x 3
CE-1	Closed end FP insulating sleeve	3/4 x 2
CE-3	Closed end FP insulating sleeve	1 x 2
CE-4	Closed end FP insulating sleeve	1 x 3
CE-5	Closed end FP insulating sleeve	1 3/8 x 2
CE-6	Closed end FP insulating sleeve	1 3/8 x 3

SANGAMO CAPACITORS

TYPE 30 PLASTIC MOLDED PAPER TUBULAR CAPACITORS

"Molded Like Micacs"



Here is an entirely new concept in paper tubular construction: capacitors which are molded in plastic—just like micacs! The immediate results are obvious: more stable capacity values, excellent seal characteristics, and application at higher ambient temperatures. In the long run, too, the result is obvious: a new standard of permanence. Halowax impregnation, identified by tan coloring of the molded plastic, is suitable for operation in ambient temperature ranges from -55°C . to $+55^{\circ}\text{C}$. Diacolor impregnated capacitors, identified by a red plastic case, are recom-

mended for operation at higher voltages or temperatures. A chlorinated dielectric, diacolor possesses a high dielectric constant, dielectric strength, volume resistivity and low power factor. The great chemical stability of diacolor permits prolonged operation at elevated temperatures with little change in capacity, breakdown characteristics or other properties. For 1000 or 1600 volt applications or for temperatures as high as 85°C ., diacolor is definitely superior to wax as a capacitor impregnant.

TYPE 30 WAX IMPREGNATED

Catalog Number	Capacity Mfd.	Size Inches A x B	List Price	Net Price
400 V.D.C. Working				
300421	.001	$\frac{3}{8} \times 1\frac{1}{8}$	\$0.25	\$0.15
300411	.01	$\frac{3}{8} \times 1\frac{1}{8}$	.25	.15
300412	.02	$\frac{3}{8} \times 1\frac{1}{8}$	.25	.15
300415	.05	$\frac{1}{16} \times 1\frac{1}{4}$	.30	.18
300401	.1	$\frac{1}{16} \times 1\frac{5}{8}$	.35	.21
3004015	.15	$\frac{1}{16} \times 1\frac{5}{8}$	.35	.21
300402	.2	$\frac{7}{8} \times 2$	.40	.24
3004025	.25	$\frac{7}{8} \times 2$	.45	.27
300405	.5	$\frac{7}{8} \times 2$	.60	.36
300410	1.	$1\frac{1}{16} \times 2\frac{1}{2}$	.90	.54
600 V.D.C. Working				
3006325	.00025	$\frac{3}{8} \times 1\frac{1}{8}$	\$0.25	\$0.15
300635	.0005	$\frac{3}{8} \times 1\frac{1}{8}$	.25	.15
300621	.001	$\frac{3}{8} \times 1\frac{1}{8}$	.25	.15
300622	.002	$\frac{3}{8} \times 1\frac{1}{8}$	.25	.15
300623	.003	$\frac{3}{8} \times 1\frac{1}{8}$	.25	.15
300624	.004	$\frac{3}{8} \times 1\frac{1}{8}$	.25	.15
300625	.005	$\frac{3}{8} \times 1\frac{1}{8}$	.25	.15
300626	.006	$\frac{3}{8} \times 1\frac{1}{8}$	.25	.15
300611	.01	$\frac{1}{16} \times 1\frac{1}{4}$	.30	.18
3006115	.015	$\frac{1}{16} \times 1\frac{1}{4}$	.30	.18
300612	.02	$\frac{1}{16} \times 1\frac{1}{4}$	.30	.18
3006125	.025	$\frac{1}{2} \times 1\frac{1}{2}$	.35	.21
300614	.04	$\frac{1}{2} \times 1\frac{1}{2}$	.35	.21
300615	.05	$\frac{3}{16} \times 1\frac{5}{8}$	.40	.24
300616	.06	$\frac{3}{16} \times 1\frac{5}{8}$	.40	.24
300601	.1	$\frac{5}{8} \times 2$	.45	.27
3006015	.15	$\frac{3}{4} \times 2$	.50	.30
300602	.2	$\frac{7}{8} \times 2$	.55	.33
3006025	.25	$\frac{7}{8} \times 2$	.55	.33
300605	.5	$1\frac{1}{16} \times 2\frac{1}{2}$	.80	.48
300610	1.	$1\frac{3}{8} \times 2\frac{5}{8}$	1.25	.75

Voltage required will determine type of impregnant unless order specifies otherwise.
This type also available in 200 V.D.C. Working.
Prices subject to change without notice.

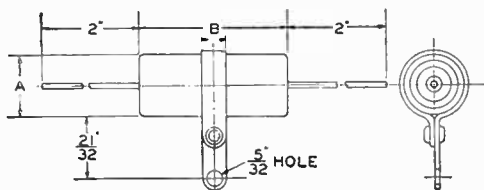
TYPE 30 DIACOLOR IMPREGNATED

Catalog Number	Capacity Mfd.	Size Inches A x B	List Price	Net Price
1000 V.D.C. Working				
301021	.001	$\frac{3}{8} \times 1\frac{1}{8}$	\$0.30	\$0.18
301022	.002	$\frac{3}{8} \times 1\frac{1}{8}$	.30	.18
301023	.003	$\frac{3}{8} \times 1\frac{1}{8}$	.35	.21
301024	.004	$\frac{3}{8} \times 1\frac{1}{8}$	.35	.21
301025	.005	$\frac{1}{16} \times 1\frac{1}{4}$	.40	.24
301026	.006	$\frac{1}{16} \times 1\frac{1}{4}$	.40	.24
301011	.01	$\frac{1}{16} \times 1\frac{1}{4}$	.50	.30
3010115	.015	$\frac{1}{2} \times 1\frac{1}{2}$	.50	.30
301012	.02	$\frac{1}{2} \times 1\frac{1}{2}$	.50	.30
301013	.03	$\frac{3}{16} \times 1\frac{5}{8}$	.55	.33
301015	.05	$\frac{5}{8} \times 2$	.60	.36
301016	.06	$\frac{5}{8} \times 2$	.60	.36
301001	.1	$\frac{3}{4} \times 2$	.75	.45
3010025	.25	$1\frac{1}{16} \times 2\frac{1}{2}$	.85	.51
1600 V.D.C. Working				
301621	.001	$\frac{3}{8} \times 1\frac{1}{8}$	\$0.55	\$0.33
301622	.002	$\frac{3}{8} \times 1\frac{1}{8}$	.55	.33
3016225	.0025	$\frac{1}{16} \times 1\frac{1}{4}$	.55	.33
301623	.003	$\frac{1}{16} \times 1\frac{1}{4}$	.55	.33
301624	.004	$\frac{1}{2} \times 1\frac{1}{2}$	.55	.33
301625	.005	$\frac{1}{2} \times 1\frac{1}{2}$	.55	.33
301626	.006	$\frac{1}{2} \times 1\frac{1}{2}$	.55	.33
301627	.007	$\frac{1}{16} \times 1\frac{5}{8}$	.55	.33
301628	.008	$\frac{1}{16} \times 1\frac{5}{8}$	.55	.33
301629	.009	$\frac{1}{16} \times 1\frac{5}{8}$	.55	.33
301611	.01	$\frac{5}{8} \times 2$	.60	.36
3016115	.015	$\frac{5}{8} \times 2$	.60	.36
301612	.02	$\frac{5}{8} \times 2$	.60	.36
3016125	.025	$\frac{3}{4} \times 2$	.60	.36
301613	.03	$\frac{3}{4} \times 2$	.60	.36
301614	.04	$\frac{7}{8} \times 2$	.65	.39
301615	.05	$\frac{7}{8} \times 2$	.70	.42

Voltage required will determine type of impregnant unless order specifies otherwise.
Prices subject to change without notice.

SANGAMO CAPACITORS

TYPES 20 AND 21 METAL CASED MINERAL OIL PAPER CAPACITORS



TYPES 20 AND 21

Designed for by-pass and coupling applications, types 20 and 21 are non-inductively wound paper capacitors impregnated in mineral oil of greatest stability and housed in metal tubes. Type 21, having terminals insulated from the case, is covered with a cardboard sleeve. Type 20, having one terminal grounded to the case, is similarly covered unless specified without sleeve, in which case for all ratings the diameter and length are reduced by 1/16 and 3/16 inches respectively. The Type 20 is the same price as the Type 21.

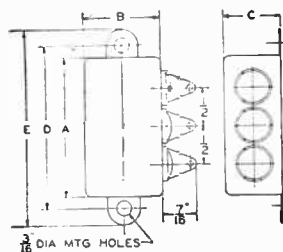
Type 21

Catalog Number	Capacity Mfd.	Size Inches A x B	List Price	Net Price
600 V.D.C. Working				
210626	.006	1 1/8 x 1 1/2	\$0.95	\$0.57
210611	.01	1 1/8 x 1 1/2	.95	.57
210615	.05	1 1/8 x 1 1/2	1.10	.66
210601	.1	1 1/8 x 1 1/2	1.25	.75
210665	.5	1 1/8 x 2 1/8	2.20	1.32
1000 V.D.C. Working				
211035	.0005	1 1/8 x 1 1/2	1.10	.66
211025	.005	1 1/8 x 1 1/2	1.10	.66
211011	.01	1 1/8 x 1 1/2	1.10	.66
211015	.05	1 1/8 x 1 1/2	1.30	.78
211061	.1	1 1/8 x 2 1/8	1.50	.90
1600 V.D.C. Working				
211635	.0005	1 1/8 x 1 1/2	1.10	.66
211621	.001	1 1/8 x 1 1/2	1.10	.66
211622	.002	1 1/8 x 1 1/2	1.10	.66
211625	.005	1 1/8 x 1 1/2	1.20	.72
211611	.01	1 1/8 x 1 1/2	1.20	.72
211612	.02	1 1/8 x 1 1/2	1.30	.78
211615	.05	1 1/8 x 2 1/8	1.30	.78
211601	.1	1 1/8 x 2 1/8	2.10	1.26
2000 V.D.C. Working				
212035	.0005	1 1/8 x 1 1/2	1.25	.75
212021	.001	1 1/8 x 1 1/2	1.25	.75
212025	.005	1 1/8 x 1 1/2	1.25	.75
212011	.01	1 1/8 x 1 1/2	1.25	.75
212045	.05	1 1/8 x 2 1/8	1.45	.87

Inquiries should be directed to the factory for capacities and voltages other than those listed above.

Prices subject to change without notice.

TYPES 50 AND 59 BYPASS PAPER CAPACITORS



TYPES 50 AND 59

Types 50 and 59 paper capacitors are non-inductively wound paper dielectric sections sealed in seamless containers. Primarily intended for by-pass applications, their characteristics are excellent for R.F. and A.F. bypass, audio frequency coupling and A.C. circuits. The Type 50 capacitors are vacuum impregnated and filled with the finest mineral oil available for use; the Type 59 capacitors are vacuum impregnated and filled with diaclor; a chlorinated dielectric providing maximum capacity and voltage in minimum space.

Catalog Number	Capacity Mfd.	Size Inches A x B x C	List Price	Net Price
Type 50 600 V.D.C. Working				
500615	.05	1 1/8 x 1 x 3/4	\$2.60	\$2.10
500605	.5	1 1/8 x 1 x 3/4	3.00	1.80
50061	1.	2 x 1 3/4 x 7/8	3.40	2.04
500615x2	.05-.05	1 1/8 x 1 x 3/4	3.30	1.98
500605x2	.5-.5	2 x 1 3/4 x 7/8	3.90	2.07
500601x3	1.-1-1	1 1/8 x 1 x 3/4	3.80	2.28
500605x3	.5-.5-.5	2 x 2 x 1 1/4	5.20	3.12
Type 50 1000 V.D.C. Working				
501015	.05	1 1/8 x 1 x 3/4	2.75	1.65
50101	1.	2 x 2 x 1 1/4	4.00	2.40
501015x2	.05-.05	1 1/8 x 1 x 3/4	3.50	2.10
501005x2	.5-.5	2 x 2 x 1 1/4	4.95	2.97
5010025x3	.25-.25-.25	2 x 2 x 1 1/4	5.00	3.00
Type 59 600 V.D.C. Working				
590615	.05	1 1/8 x 1 x 3/4	2.60	1.50
59061	1.	2 x 1 3/4 x 7/8	3.40	2.04
59062	2.	2 x 2 x 1 1/4	4.55	2.73
590615x2	.05-.05	1 1/8 x 1 x 3/4	3.30	1.98
59061x2	1.-1.	2 x 2 x 1 1/4	4.80	2.88
590601x3	1.-1-1	1 1/8 x 1 x 3/4	3.80	2.28
590605x3	.5-.5-.5	2 x 2 x 1 1/4	5.20	3.12
Type 59 1000 V.D.C. Working				
591015	.05	1 1/8 x 1 x 3/4	2.75	1.65
59101	1.	2 x 2 x 1 1/4	4.00	2.40
591015x2	.05-.05	1 1/8 x 1 x 3/4	3.50	2.10
591005x2	.5-.5	2 x 2 x 1 1/4	4.95	2.97
5910025x3	.25-.25-.25	2 x 2 x 1 1/4	5.00	3.00

Standard tolerance +20% -10%. Types 50 and 59 standard capacitors supplied with side terminals or to customer spec. When ordering non-standard terminals specify design, R—Bivet, S—Screw, F—Glass; specify position, T—Top, B—Bottom, E—End.

Inquiries should be directed to the factory for capacities and voltages other than those listed above.

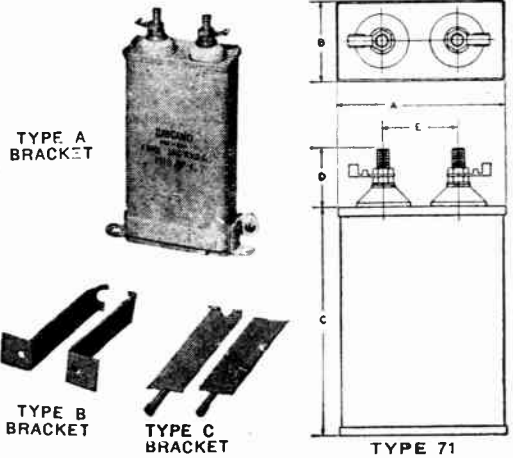
Prices subject to change without notice.

SANGAMO CAPACITORS

TYPE 71 DIACLOR IMPREGNATED TRANSMITTING CAPACITORS

Sangamo Diacolor impregnated capacitors have the advantage of longer life, lighter weight, and smaller size. Diacolor is a specially compounded, chemically purified chlorinated liquid dielectric. This synthetic impregnant, whose characteristics can be controlled with great uniformity, assures a high dielectric constant, high volume resistivity, low power factor, high dielectric strength, and is non-inflammable and non-explosive.

Type 71 Diacolor impregnated capacitors are supplied with Type A universal bracket, Type B footed bracket, or Type C spade lug bracket. Mounting dimensions of these brackets are given from center to center, in inches, in column "F" below. Terminals: composition rivet or screw; pyrex glass; or, stand-off porcelain. Prices include choice of brackets and terminals.



Catalog Number	Capacity Mfd.	A	B	Dimensions — Inches			List Price	Net Price
				C	D	F		
600 V.D.C. Working								
710605	.5	1 3/4	1	1 1/2	1 1/2	2 1/2	\$ 4.25	\$ 2.55
71061	1	1 3/4	1	1 1/2	1 1/2	2 1/2	5.25	3.15
71062	2	1 3/4	1	1 1/2	1 1/2	2 1/2	6.50	3.90
71064	4	2 1/2	1 1/2	1 1/2	1 1/2	3 1/2	8.25	4.95
71065	5	1 3/4	1	1 1/2	1 1/2	2 1/2	9.50	5.70
71066	6	2 1/2	1 1/2	1 1/2	1 1/2	3 1/2	10.25	6.15
71068	8	2 1/2	1 1/2	1 1/2	1 1/2	3 1/2	12.25	7.35
710610	10	2 1/2	1 1/2	1 1/2	1 1/2	3 1/2	13.75	8.25
1000 V.D.C. Working								
711001	.1	1 3/4	1	1 1/2	1 1/2	2 1/2	3.75	2.25
7110025	.25	1 3/4	1	1 1/2	1 1/2	2 1/2	4.25	2.55
711005	.5	1 3/4	1	1 1/2	1 1/2	2 1/2	4.60	2.70
71101	1	1 3/4	1	1 1/2	1 1/2	2 1/2	5.75	3.45
71102	2	2 1/2	1 1/2	1 1/2	1 1/2	3 1/2	7.50	4.50
71104	4	2 1/2	1 1/2	1 1/2	1 1/2	3 1/2	9.50	5.70
71105	5	1 3/4	1	1 1/2	1 1/2	2 1/2	11.50	6.90
71106	6	2 1/2	1 1/2	1 1/2	1 1/2	3 1/2	12.75	7.65
71108	8	2 1/2	1 1/2	1 1/2	1 1/2	3 1/2	13.75	8.25
711010	10	2 1/2	1 1/2	1 1/2	1 1/2	3 1/2	15.25	9.15
711012	12	2 1/2	1 1/2	1 1/2	1 1/2	3 1/2	16.50	9.90
711015	15	2 1/2	1 1/2	1 1/2	1 1/2	3 1/2	18.25	10.95
1500 V.D.C. Working								
711505	.5	1 3/4	1	1 1/2	1 1/2	2 1/2	5.75	3.45
71151	1	1 3/4	1	1 1/2	1 1/2	2 1/2	6.75	4.05
71152	2	2 1/2	1 1/2	1 1/2	1 1/2	3 1/2	9.50	5.70
71154	4	2 1/2	1 1/2	1 1/2	1 1/2	3 1/2	12.75	7.65
71155	5	1 3/4	1	1 1/2	1 1/2	2 1/2	13.75	8.25
71156	6	2 1/2	1 1/2	1 1/2	1 1/2	3 1/2	15.50	9.30
71158	8	2 1/2	1 1/2	1 1/2	1 1/2	3 1/2	19.00	11.40
711510	10	2 1/2	1 1/2	1 1/2	1 1/2	3 1/2	22.75	13.65
711512	12	2 1/2	1 1/2	1 1/2	1 1/2	3 1/2	24.75	14.85
711515	15	2 1/2	1 1/2	1 1/2	1 1/2	3 1/2	27.25	16.35
2000 V.D.C. Working								
712001	.1	1 3/4	1	1 1/2	1 1/2	2 1/2	6.00	3.60
7120025	.25	1 3/4	1	1 1/2	1 1/2	2 1/2	6.50	3.90
712005	.5	1 3/4	1	1 1/2	1 1/2	2 1/2	6.75	4.05
71201	1	2 1/2	1 1/2	1 1/2	1 1/2	3 1/2	8.25	4.95
71202	2	1 3/4	1	1 1/2	1 1/2	2 1/2	9.75	5.85
71204	4	2 1/2	1 1/2	1 1/2	1 1/2	3 1/2	13.75	8.25
71205	5	1 3/4	1	1 1/2	1 1/2	2 1/2	15.25	9.15
71206	6	2 1/2	1 1/2	1 1/2	1 1/2	3 1/2	18.25	10.95
71208	8	2 1/2	1 1/2	1 1/2	1 1/2	3 1/2	22.75	13.65
712010	10	2 1/2	1 1/2	1 1/2	1 1/2	3 1/2	27.75	16.65
712012	12	2 1/2	1 1/2	1 1/2	1 1/2	3 1/2	30.25	18.15
2500 V.D.C. Working								
712505	.5	3 3/4	1 1/2	1 1/2	1 1/2	4 1/2	10.50	6.30
71251	1	1 3/4	1	1 1/2	1 1/2	2 1/2	12.00	7.20
71252	2	2 1/2	1 1/2	1 1/2	1 1/2	3 1/2	19.50	11.70
71254	4	2 1/2	1 1/2	1 1/2	1 1/2	3 1/2	27.25	16.35
712510	10	2 1/2	1 1/2	1 1/2	1 1/2	3 1/2	68.25	40.95
3000 V.D.C. Working								
713001	.1	2 1/2	1 1/2	1 1/2	1 1/2	3 1/2	12.75	7.65
7130025	.25	2 1/2	1 1/2	1 1/2	1 1/2	3 1/2	13.50	8.10
713005	.5	2 1/2	1 1/2	1 1/2	1 1/2	3 1/2	15.25	9.15
71301	1	3 1/2	1 1/2	1 1/2	1 1/2	4 1/2	18.25	10.95
71302	2	1 3/4	1	1 1/2	1 1/2	2 1/2	22.75	13.65
71304	4	2 1/2	1 1/2	1 1/2	1 1/2	3 1/2	33.50	20.10
4000 V.D.C. Working								
714001	.1	2 1/2	1 1/2	1 1/2	1 1/2	3 1/2	22.75	13.65
7140025	.25	2 1/2	1 1/2	1 1/2	1 1/2	3 1/2	24.00	14.40
714005	.5	2 1/2	1 1/2	1 1/2	1 1/2	3 1/2	27.00	16.35
71401	1	3 1/2	1 1/2	1 1/2	1 1/2	4 1/2	33.50	20.10
71402	2	1 3/4	1	1 1/2	1 1/2	2 1/2	42.50	25.50
71404	4	2 1/2	1 1/2	1 1/2	1 1/2	3 1/2	60.75	36.45
5000 V.D.C. Working								
715005	.5	3 3/4	1 1/2	1 1/2	1 1/2	4 1/2	30.25	18.15
71501	1	2 1/2	1 1/2	1 1/2	1 1/2	3 1/2	38.00	22.80
71502	2	2 1/2	1 1/2	1 1/2	1 1/2	3 1/2	48.75	29.25
6000 V.D.C. Working								
71601	1	4 1/2	1 1/2	1 1/2	1 1/2	5 1/2	76.00	45.60

Standard tolerance $\pm 10\%$

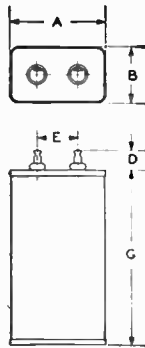
Prices subject to change without notice.

SANGAMO CAPACITORS

TYPE 75 DIACLOR IMPREGNATED A.C. CAPACITOR



TYPE 75



Type 75 Sangamo Diacolor Impregnated Capacitors are designed for continuous A.C. duty in ambient temperatures up to 75 degrees centigrade. These capacitors are recommended for use with capacitor motors—as power factor correction capacitors—and other similar A.C. applications. They are supplied with either the composition rivet or screw terminal, with pyrex glass terminals, or with stand-off porcelain terminal. Type mounting bracket desired should be specified when ordering.

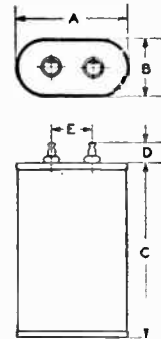
Catalog Number	Capacity Mfd.	Dimensions — Inches				List Price	Net Price
		A	B	C	D		
220 V.A.C. Working							
75222	2.	1 3/4	1	2 3/4	7/8	\$3.65	\$2.19
75223	3.	1 3/4	1	3 3/4	7/8	3.95	2.37
7522375	3.75	2 1/2	1 3/8	3 1/2	7/8	4.05	2.43
75225	5.	2 1/2	1 3/8	3 3/8	7/8	4.50	2.70
752275	7.5	3 3/4	1 3/4	3 1/2	7/8	5.80	3.48
75228	8.	3 3/4	1 3/4	3 1/2	7/8	6.25	3.75
752210	10.	3 3/4	1 3/4	4 5/8	7/8	7.05	4.23
752212	12.	3 3/4	1 3/4	3 3/4	7/8	8.10	4.86
752215	15.	3 3/4	1 3/4	4 5/8	7/8	9.90	5.94
752225	25.	3 3/4	3 3/8	4 5/8	7/8	15.85	9.51
330 V.A.C. Working							
75332	2.	1 3/4	1	2 3/4	7/8	4.00	2.40
75333	3.	1 3/4	1	3 3/4	7/8	4.50	2.70
7533375	3.75	2 1/2	1 3/8	3 1/2	7/8	4.60	2.76
75335	5.	2 1/2	1 3/8	3 3/8	7/8	6.45	3.87
753375	7.5	3 3/4	1 3/4	3 1/2	7/8	6.65	3.99
753310	10.	3 3/4	1 3/4	4 5/8	7/8	8.05	4.83
440 V.A.C. Working							
75441	1.	1 3/4	1	2 1/4	7/8	3.00	1.80
75442	2.	1 3/4	1	3 1/4	7/8	3.90	2.34
75443	3.	2 1/2	1 3/8	3 1/2	7/8	4.85	2.91
7544375	3.75	2 1/2	1 3/8	4 5/8	7/8	5.05	3.03
75445	5.	3 3/4	1 3/4	3 3/8	7/8	6.60	3.96
754475	7.5	3 3/4	1 3/4	3 3/8	7/8	8.00	4.80
754410	10.	3 3/4	1 3/4	4 5/8	7/8	9.80	5.88
660 V.A.C. Working							
75661	1.	1 3/4	1	3 3/4	7/8	3.60	2.16
75662	2.	2 1/2	1 3/8	4 1/4	7/8	4.95	2.97
75663	3.	3 3/4	1 3/4	3 1/2	7/8	5.95	3.57
7566375	3.75	3 3/4	1 3/4	3 1/2	7/8	7.15	4.29
75665	5.	3 3/4	1 3/4	4 1/2	7/8	8.45	5.07

Inquiry should be directed to the factory for capacities and voltages other than those listed above. Prices subject to change without notice.

TYPE 80 DIACLOR IMPREGNATED A.C. CAPACITOR



TYPE 80



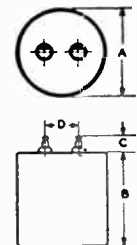
Sangamo Type 80 Diacolor Impregnated capacitors are especially recommended for fluorescent use but can be employed for numerous A.C. applications. These units are designed to operate continuously at 75 degrees centigrade.

Catalog Number	Capacity Mfd.	Dimensions — Inches					List Price	Net Price
		A	B	C	D	E		
220 V.A.C. Working								
8022375	3.75	2 1/2	1	3 1/2	3/8	1	\$3.20	\$1.92
802245	4.5	2 1/2	1	4 1/8	3/8	1	3.40	2.04
8022475	4.75	2 1/2	1	4 1/8	3/8	1	3.50	2.10
80225	5.	2 1/2	1	4 1/8	3/8	1	3.60	2.16
802255	5.5	2 1/2	1	4 1/8	3/8	1	4.00	2.40
330 V.A.C. Working								
80332	2.	2 1/2	1	2 3/4	3/8	1	2.80	1.68
803325	2.5	2 1/2	1	2 3/4	3/8	1	3.20	1.92
8033275	2.75	2 1/2	1	2 3/4	3/8	1	3.30	1.98
80333	3.	2 1/2	1	3 3/8	3/8	1	3.50	2.10
8033325	3.25	2 1/2	1	3 3/8	3/8	1	3.60	2.16
803335	3.5	2 1/2	1	3 3/8	3/8	1	3.80	2.28
8033375	3.75	2 1/2	1	3 3/8	3/8	1	3.90	2.34
80334	4.	2 1/2	1	3 3/8	3/8	1	4.00	2.40

TYPE 90 DIACLOR IMPREGNATED A.C. CAPACITOR



TYPE 90



Sangamo Type 90 Diacolor Impregnated capacitors are designed to operate continuously at 75 degrees centigrade in any standard A.C. application. They are particularly adaptable to fluorescent use. Either composition rivet or pyrex glass terminals are available.

Catalog Number	Capacity Mfd.	Dimensions — Inches				List Price	Net Price	
		A	B	C	D			
330 V.A.C. Working								
903315	1.5	2 1/2	1	3 3/8	3/8	1	\$2.50	\$1.50
903325	2.5	2 1/2	1	3 3/8	3/8	1	3.20	1.92
9033275	2.75	2 1/2	1	3 3/8	3/8	1	3.40	2.04
90333	3.	2 1/2	1	3 3/8	3/8	1	3.50	2.10
903335	3.5	2 1/2	1	3 3/8	3/8	1	3.85	2.31
9033375	3.75	2 1/2	1	3 3/8	3/8	1	3.90	2.34
90334	4.	2 1/2	1	3 3/8	3/8	1	4.00	2.40
90335	5.	2 1/2	1	3 3/8	3/8	1	4.75	2.85
903310	10.	2 1/2	1	4 1/2	3/8	1	8.05	4.83

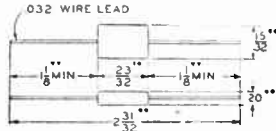
Inquiry should be directed to the factory for capacities and voltages other than those listed above. Prices subject to change without notice.

SANGAMO CAPACITORS

TYPE K Mica Capacitor



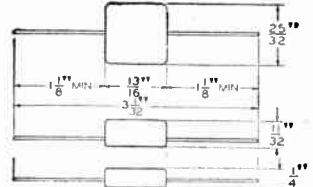
TYPE KR Silvered Mica



TYPE C Mica Capacitor



TYPE CR Silvered Mica



Type K Mica

Catalog Number	Capacity Mfd.	List Price	Net Price
500 V.D.C. Working— 1000 V.D.C. Test			
K-1550	.000005	\$0.25	\$0.15
K-1410	.00001	.25	.15
K-1415	.000015	.25	.15
K-1420	.00002	.25	.15
K-1425	.000025	.25	.15
K-1430	.00003	.25	.15
K-1439	.000039	.25	.15
K-1443	.000043	.20	.12
K-1450	.00005	.20	.12
K-1475	.000075	.20	.12
K-1310	.001	.20	.12
K-1315	.0015	.20	.12
K-1320	.002	.20	.12
K-1325	.0025	.25	.15
K-1330	.003	.25	.15
K-1340	.004	.25	.15
K-1350	.005	.25	.15
K-1370	.007	.35	.21
K-1380	.008	.35	.21
K-1210	.001	.35	.21

Standard tolerance, $\pm 20\%$, B characteristic.

Inquiry should be directed to the factory as to the availability of capacities and voltages other than those listed.

Type KR Silvered Mica

Catalog Number	Capacity Mfd.	List Price	Net Price
500 V.D.C. Working— 1000 V.D.C. Test			
KR-1550	.000005	\$0.15	\$0.27
KR-1410	.00001	.40	.24
KR-1415	.000015	.40	.24
KR-1420	.00002	.40	.24
KR-1425	.000025	.40	.24
KR-1430	.00003	.40	.24
KR-1439	.000039	.40	.24
KR-1443	.000043	.40	.24
KR-1450	.00005	.40	.24
KR-1475	.000075	.40	.24
KR-1310	.001	.40	.24
KR-1315	.0015	.45	.27
KR-1320	.002	.45	.27
KR-1325	.0025	.45	.27
KR-1330	.003	.55	.33
KR-1340	.004	.65	.39
KR-1350	.005	.70	.42
KR-1370	.007	.75	.45
KR-1380	.008	.80	.48
KR-1210	.001	.90	.54

Standard tolerance, $\pm 5\%$, C characteristic.

Type C Mica

Catalog Number	Capacity Mfd.	List Price	Net Price
500 V.D.C. Working— 1000 V.D.C. Test			
C-1350	.0005	\$0.25	\$0.15
C-1362	.00062	.25	.15
C-1375	.00075	.25	.15
C-1380	.0008	.25	.15
C-1390	.0009	.25	.15
C-1210	.001	.30	.18
C-1215	.0015	.30	.18
C-1220	.002	.40	.24
C-1225	.0025	.45	.27
C-1230	.003	.50	.30
C-1240	.004	.50	.30
C-1250	.005	.65	.39
C-1260	.006	.65	.39
300 V.D.C. Working— 600 V.D.C. Test			
C-06275	.0075	.90	.54
C-06280	.008	1.00	.60
C-06290	.009	1.00	.60
C-06110	.01	1.20	.72

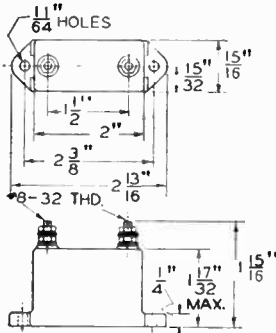
Standard tolerance, $\pm 20\%$, B characteristic. *Thickness $\frac{1}{16}$ "

Inquiry should be directed to the factory as to the availability of capacities and voltages other than those listed.

Type CR Silvered Mica

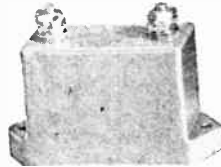
Catalog Number	Capacity Mfd.	List Price	Net Price
500 V.D.C. Working— 1000 V.D.C. Test			
CR-1350	.0005	\$0.70	\$0.42
CR-1362	.00062	.80	.48
CR-1375	.00075	.85	.51
CR-1380	.0008	.95	.57
CR-1390	.0009	1.00	.60
CR-1210	.001	1.10	.66
CR-1215	.0015	1.35	.81
CR-1220	.002	1.35	.81
CR-1225	.0025	1.80	1.08
CR-1230	.003	2.05	1.23
CR-1240	.004	2.15	1.29
CR-1250	.005	2.25	1.35
CR-1260	.006	2.40	1.44
300 V.D.C. Working— 600 V.D.C. Test			
CR-06275	.0075	2.45	1.47
CR-06280	.008	2.80	1.68
CR-06290	.009	2.95	1.77
CR-06110	.01	3.20	1.92

Standard tolerance, $\pm 5\%$, C characteristic. *Thickness $\frac{1}{16}$ "

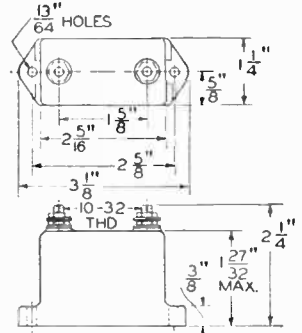


TYPE F1

TYPES F1 AND F2 MICA CAPACITORS



Types F1 and F2 capacitors, the smallest of the Sangamo line of transmitting types, possess a range of voltage and current ratings suitable for many applications. They are housed in low loss molded bakelite cases. The mica and foil sections are permanently clamped, vacuum impregnated, and installed in the case in such a manner as to provide stable characteristics and adequate moisture proofing.



TYPE F2

TYPE F1 MICA CAPACITORS

Catalog Number	Capacity Mfd.	Test Volts Effective Peak Wkg.	List Price	Net Price
F1-331	.0001	3000	\$10.80	\$6.48
F1-332	.0002	3000	10.80	6.48
F1-3325	.00025	3000	10.80	6.48
F1-335	.0005	3000	10.80	6.48
F1-321	.001	3000	10.80	6.48
F1-322	.002	3000	10.80	6.48
F1-223	.003	2000	10.80	6.48
F1-224	.004	2000	10.80	6.48
F1-225	.005	2000	10.80	6.48
F1-226	.006	2000	10.80	6.48
F1-1528	.008	1500	10.80	6.48
F1-111	.01	1000	10.80	6.48
F1-112	.02	1000	11.50	6.90
F1-0215	.05	250	11.50	6.90
F1-0201	.1	250	12.00	7.20

Standard tolerance $\pm 5\%$, B characteristic.

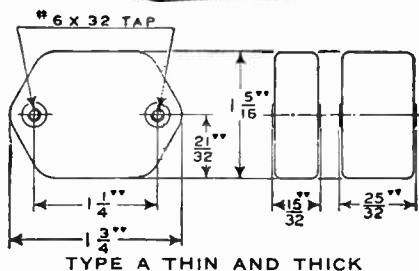
Inquiry should be directed to the factory for availability of capacities and voltages other than those listed above. Prices subject to change without notice.

TYPE F2 MICA CAPACITORS

Catalog Number	Capacity Mfd.	Test Volts Effective Peak Wkg.	List Price	Net Price
F2-531	.0001	5000	\$14.40	\$8.64
F2-5325	.00025	5000	14.40	8.64
F2-535	.0005	5000	14.40	8.64
F2-536	.0006	5000	14.40	8.64
F2-521	.001	5000	14.40	8.64
F2-522	.002	5000	14.40	8.64
F2-523	.003	5000	16.00	9.60
F2-325	.005	3000	14.40	8.64
F2-326	.006	3000	14.40	8.64
F2-211	.01	2000	14.40	8.64
F2-212	.02	2000	16.00	9.60
F2-1515	.05	1500	14.50	8.70
F2-0501	.1	500	16.50	9.90
F2-0202	.2	250	22.00	13.50
F2-02025	.25	250	24.00	14.40

SANGAMO CAPACITORS

TYPE A MICA CAPACITORS



TYPE A THIN AND THICK

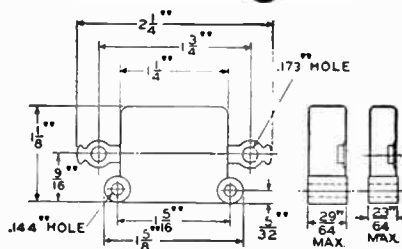
Catalog Number	Capacity Mfd.	List Price	Net Price
600 V.D.C. Working — 1200 V.D.C. Test			
A-1450	.00005	\$0.85	\$0.51
A-1310	.0001	.85	.51
A-1320	.0002	.85	.51
A-1350	.0005	.85	.51
A-1210	.001	.85	.51
A-1220	.002	.90	.54
A-1230	.003	1.20	.72
A-1250	.005	1.20	.72
A-1110	.01	1.95	1.17
A-1115	.015	2.25	1.35
A-1120	.02	2.60	1.56
*A-1125	.025	3.20	1.92
*A-1130	.03	3.45	2.07
*A-1150	.05	5.35	3.21
1200 V.D.C. Working — 2500 V.D.C. Test			
A-2450	.00005	1.00	.60
A-2310	.0001	1.00	.60
A-2320	.0002	1.00	.60
A-2350	.0005	1.00	.60
A-2210	.001	1.25	.75
A-2220	.002	1.90	1.14
A-2230	.003	2.20	1.32
A-2250	.005	2.40	1.44
A-2110	.01	3.90	2.34
*A-2115	.015	4.65	2.79
*A-2120	.02	5.45	3.21
A-2130	.03	6.40	3.84
2500 V.D.C. Working — 5000 V.D.C. Test			
A-5450	.00005	1.25	.75
A-5310	.0001	1.25	.75
A-5320	.0002	1.40	.84
A-5350	.0005	1.70	1.02
A-5210	.001	2.05	1.23
A-5215	.0015	2.60	1.56
A-5220	.002	3.10	1.86
A-5230	.003	3.80	2.28
A-5250	.005	4.70	2.82
*A-5110	.01	5.70	3.42
*A-5115	.015	6.20	3.72

*Thickness 25/32" — Standard Insulators are available if desired. If .144" clearance holes are required, designate by adding letter "A" to Type No. (AA).

Standard tolerance $\pm 20\%$. B Characteristic, unless otherwise specified.

Inquiry should be directed to the factory as to the availability of capacities and voltages other than those listed above.

TYPE H MICA CAPACITORS



TYPE H THICK AND THIN

Catalog Number	Capacity Mfd.	List Price	Net Price
600 V.D.C. Working — 1200 V.D.C. Test			
H-1450	.00005	\$0.70	\$0.42
H-1310	.0001	.70	.42
H-1320	.0002	.70	.42
H-1350	.0005	.70	.42
H-1210	.001	.70	.42
H-1220	.002	.70	.42
H-1230	.003	.80	.48
H-1250	.005	1.00	.60
H-1110	.01	1.60	.96
*H-1115	.015	1.80	1.08
*H-1120	.02	2.20	1.32
*H-1125	.025	2.65	1.59
*H-1130	.03	2.95	1.77
1200 V.D.C. Working — 2500 V.D.C. Test			
H-2450	.00005	1.00	.60
H-2310	.0001	1.00	.60
H-2320	.0002	1.00	.60
H-2350	.0005	1.00	.60
H-2210	.001	1.25	.75
H-2220	.002	1.90	1.14
H-2230	.003	2.10	1.26
*H-2250	.005	2.40	1.44
*H-2110	.01	3.90	2.34
2500 V.D.C. Working — 5000 V.D.C. Test			
H-5450	.00005	1.25	.75
H-5310	.0001	1.25	.75
H-5320	.0002	1.40	.84
H-5350	.0005	1.70	1.02
H-5210	.001	2.05	1.23
H-5215	.0015	2.70	1.62
H-5220	.002	3.10	1.86
*H-5230	.003	3.80	2.28
*H-5250	.005	4.70	2.82

*Thickness 29/64". For meter mounting bracket add letter "E" to Type designation; if assembled add 30 cents to list price; if unassembled add 20 cents and specify case size.

Standard tolerance $\pm 20\%$. B Characteristic, unless otherwise specified.

Inquiry should be directed to the factory as to the availability of capacities and voltages other than those listed above.

Prices subject to change without notice.

SPRAGUE CAPACITORS

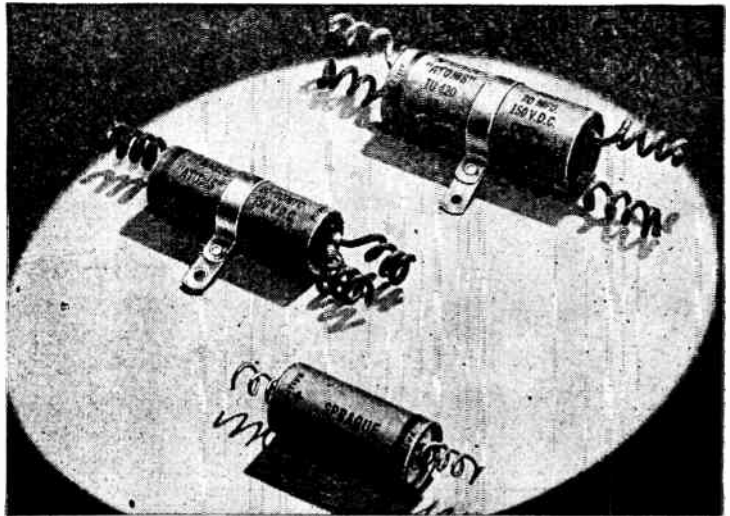


SPRAGUE ATOMS THE UNIVERSAL MIDGET DRY ELECTROLYTICS

Sprague Atom Capacitors—"Mightiest Midgets of All"—are the answer to 90% or more of all radio service requirements for replacement dry electrolytic units. A small stock of different capacities and voltages equips you for quick, dependable service on practically every job.

Sprague atoms will fit anywhere. The smaller units can be mounted by means of their sturdy, tinned-copper leads. Metal mounting straps are provided with all dual units and are available for the larger single units. (See Hardware page P-61.) Or if desired, you can mount them by any other suitable means. Despite their extremely small size, Atoms will last longer and stand far more punishment than much larger, old-style dry electrolytics.

Atoms are guaranteed to have low leakage, to withstand high surge voltages, and to have exceptionally long shelf life. They are fully sealed against moisture and blow-ups by an exclusive Sprague process.



Cat. No.	Voltage—Dimen.				List Price	
	Mfd.	DC working	Surge	D L		
TA-5	5	25	40	1 1/8	1 1/8	\$0.70
TA-10	10	25	40	1 1/8	1 1/8	.75
TA-25	25	25	40	1 1/8	1 1/8	.85
TA-50	50	25	40	1 1/8	1 1/8	1.00
TA-55	5	50	75	1 1/8	1 1/8	.75
TA-510	10	50	75	1 1/8	1 1/8	.80
TA-525	25	50	75	1 1/8	1 1/8	.90
TA-550	50	50	75	1 1/8	1 1/8	1.05
UT-41	4	150	200	1 1/8	1 1/8	.75
UT-81	8	150	200	1 1/8	1 1/8	.80
UT-121	12	150	200	1 1/8	1 1/8	.85
UT-161	16	150	200	1 1/8	1 1/8	.90
UT-201	20	150	200	1 1/8	1 1/8	.95
UT-301	30	150	200	1 1/8	1 1/8	1.00
UT-401	40	150	200	1 1/8	1 1/8	1.10
UT-501	50	150	200	1 1/8	1 1/8	1.20
UT-42	4	250	300	1 1/8	1 1/8	.80
UT-82	8	250	300	1 1/8	1 1/8	.80
UT-122	12	250	300	1 1/8	1 1/8	1.00
UT-162	16	250	300	1 1/8	1 1/8	1.10
UT-202	20	250	300	1 1/8	1 1/8	1.20

Cat. No.	Voltage—Dimen.				List Price	
	Mfd.	DC working	Surge	D L		
UT-402	40	250	300	1 1/8	2 5/8	\$1.45
UT-43	4	350	400	1 1/8	1 1/8	.85
UT-83	8	350	400	1 1/8	1 1/8	.90
UT-123	12	350	400	1 1/8	1 1/8	1.10
UT-163	16	350	400	1 1/8	1 1/8	1.25
UT-203	20	350	400	1 1/8	1 1/8	1.30
UT-4	4	450	525	1 1/8	1 1/8	.90
UT-8	8	450	525	1 1/8	1 1/8	.95
UT-12	12	450	525	1 1/8	1 1/8	1.15
UT-16	16	450	525	1 1/8	1 1/8	1.35
UT-20	20	450	525	1 1/8	1 1/8	1.50
UT-30	30	450	525	1 1/8	1 1/8	1.65
UT-40	40	450	525	1 1/8	1 1/8	2.00
UT-85	8	500	600	1 1/8	1 1/8	1.30
UT-165	16	500	600	1 1/8	1 1/8	2.00
UT-205	20	500	600	1 1/8	1 1/8	2.40

COMMON NEGATIVE—3 LEADS

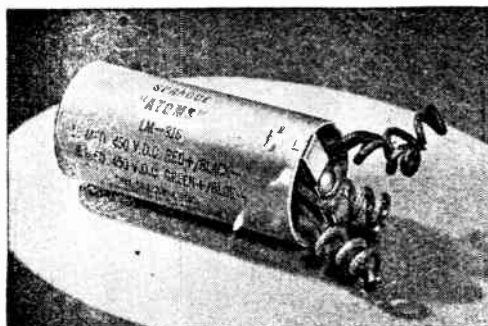
TA-110	10-10	25	40	1 1/8	2 3/8	\$1.05
TA-100	10-10	50	75	1 1/8	2 3/8	1.15
TA-88	8-8	150	200	1 1/8	2 3/8	1.15
TA-122	12-20	150	200	1 1/8	2 3/8	1.25
TA-116	16-16	150	200	1 1/8	2 3/8	1.25
TA-220	20-20	150	200	1 1/8	2 3/8	1.30

Cat. No.	Voltage—Dimen.				List Price	
	Mfd.	DC working	Surge	D L		
TA-230	20-30	150	200	7/8	2 3/8	\$1.40
TA-240	20-40	150	200	1 1/8	2 3/8	1.50
TA-330	30-30	150	200	1 1/8	2 3/8	1.50
TA-430	40-30	150	200	1	2 3/8	1.60
TA-440	40-40	150	200	1	2 3/8	1.70
TA-530	50-30	150	200	1	2 3/8	1.70
TA-505	50-50	150	200	1 1/8	3 3/8	1.85
TA-816	8-16	200	250	1 1/8	2 3/8	1.30
TA-212	12-12	200	250	1 1/8	2 3/8	1.30
TA-216	16-16	200	250	1 1/8	2 3/8	1.50
AT-816	8-16	250	300	1 1/8	2 3/8	1.60
AT-261	16-16	250	300	1 1/8	2 3/8	1.70
UT-88	8-8	450	525	1	2 3/8	1.70
UT-816	8-16	450	525	1	2 3/8	2.00

SEPARATE POSITIVE AND SEPARATE NEGATIVE—4 LEADS

TU-220	20-20	150	200	1	2 3/8	\$2.00
TU-420	40-20	150	200	1 1/8	2 3/8	2.25
TU-816	8-16	250	300	1	2 3/8	2.25
TU-216	16-16	250	300	1	2 3/8	2.55
TU-88	8-8	450	525	1 1/8	3 3/8	2.10
TU-1616	16-16	450	525	1 1/8	3 3/8	3.15
TA-303	30-30-30	150	200	1 1/8	2 3/8	2.20


SPRAGUE LM UNIVERSAL MOUNTING REPLACEMENTS



Sprague Type LM are the handiest, most convenient dry electrolytics yet developed for vertical chassis mounting. Mount them in any position to replace inverted can or spade-leg capacitors, or any other type. Their special mounting arrangements are designed to replace screw type can mounting and will fit any chassis hole from 3/8" to 7/8" diameter. All Type LM units have separate positive and separate negative leads, which can be connected together to get common positive or negative sections. They are particularly recommended to replace old common positive capacitors since they eliminate the possibility of section to section electrolysis, which causes common positive sections to fail. Units are of famous Sprague etched foil construction completely sealed and moisture-proofed.

Catalog No.	Mfd.	Voltage		Dimensions		List Price
		DC working	Surge	D	L	
LM-121	20	150	200	3/4	2 7/8	\$1.15
LM-8	8	450	525	3/4	2 7/8	1.15
LM-16	16	150	525	1	2 7/8	1.55
LM-220	20-20	150	100	1	2 7/8	2.20
LM-28	8-8	250	300	1	2 7/8	2.20
LM-216	16-16	250	300	1	3 3/8	2.75
LM-88	8-8	450	525	1	3 3/8	2.30
LM-816	8-16	450	525	1 1/8	3 3/8	2.70
LM-1616	16-16	450	525	1 1/8	3 3/8	3.20
LM-2016	20-16/25	250/25	300/40	1 1/4	3 3/8	3.05
LM-4020	40-20/25	250/25	400/40	1 1/4	3 3/8	3.35

SPRAGUE CAPACITORS

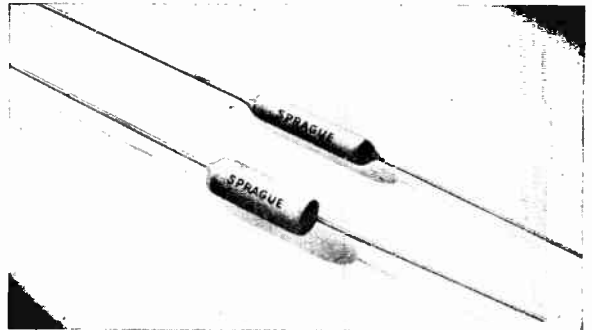


SPRAGUE 68P MIDGET TUBULARS WHERE SPACE IS AT A PREMIUM

Sprague 68P type capacitors are the ultimate in extra small paper tubular capacitors. These midget capacitors are especially designed for miniature radio applications where space saving is a prime

factor. These units are of fundamentally new engineering design and construction. The outstanding humidity performance which these capacitors exhibit is a result of this new construction.

Catalog No.	Mfd.	Voltage DC working	Dimensions		List Price
			D	L	
68P1	.001	400	1 1/4	1 1/2	\$0.35
68P2	.002	400	1 1/4	1 1/2	.35
68P3	.003	400	1 1/4	1 1/2	.35
68P4	.004	400	1 1/4	1 1/2	.35
68P5	.005	400	1 1/4	1 1/2	.35
68P6	.005	400	1 1/4	1 1/2	.35
68P8	.01	400	1 1/4	1 1/2	.40
68P9	.02	400	1 1/4	1 1/2	.45
68P10	.05	400	1 1/4	1 1/2	.50
68P11	.005	200	1 1/4	1 1/2	.35
68P12	.005	200	1 1/4	1 1/2	.35
68P14	.01	200	1 1/4	1 1/2	.40
68P15	.02	200	1 1/4	1 1/2	.45
68P16	.05	200	1 1/4	1 1/2	.50
68P17	.1	200	1 1/4	1 1/2	.60
68P19	.25	100	1 1/4	1 1/2	.70
68P20	.5	100	1 1/4	1 1/2	.80



SPRAGUE UHC HIGH-CAPACITY, LOW-VOLTAGE TUBULARS

These miniature high-capacity, low-voltage tubular dry electrolytics are specifically constructed for use as cathode by-pass capacitors and as smoothing filters for low-voltage, high-current power supplies. Whereas ordinary high-capacity, dry electrolytics have high leakage current and relatively high power factor, Type UHC provides exceptionally low leakage current and low power factor. In by-pass applications, this means unusually high filtering action,

without the introduction of shunt resistance across low-resistance bias units, and it is particularly important in controlled feedback amplifiers.



Catalog No.	Mfd.	Voltage		Dimensions		List Price
		DC working	Surge	D	L	
UHC-106	100	6	10	1 1/4	1 1/2	\$1.40
UHC-206	250	6	10	1 1/4	1 1/2	1.55
UHC-506	500	6	10	1 1/4	1 1/2	1.70
UHC-1000	1000	6	10	1 1/4	1 1/2	2.25
UHC-1500	1500	6	10	1 1/4	1 1/2	3.00
UHC-112	100	12	15	1 1/4	1 1/2	1.55
UHC-212	250	12	15	1 1/4	1 1/2	1.75
UHC-512	500	12	15	1 1/4	1 1/2	1.90
UHC-1012	1000	12	15	1 1/4	1 1/2	2.75
UHC-115	100	15	20	1 1/4	1 1/2	1.70
UHC-215	250	15	20	1 1/4	1 1/2	1.90
UHC-515	500	15	20	1 1/4	1 1/2	2.10
UHC-1015	1000	15	20	1 1/4	1 1/2	3.00
UHC-102	100	25	40	1 1/4	1 1/2	1.20
UHC-202	250	25	40	1 1/4	1 1/2	2.00
UHC-502	500	25	40	1 1/4	1 1/2	2.25
UHC-105	100	50	75	1 1/4	1 1/2	1.50

SPRAGUE HLV HIGH-CAPACITY, LOW-VOLTAGE ALUMINUM CAN TYPES

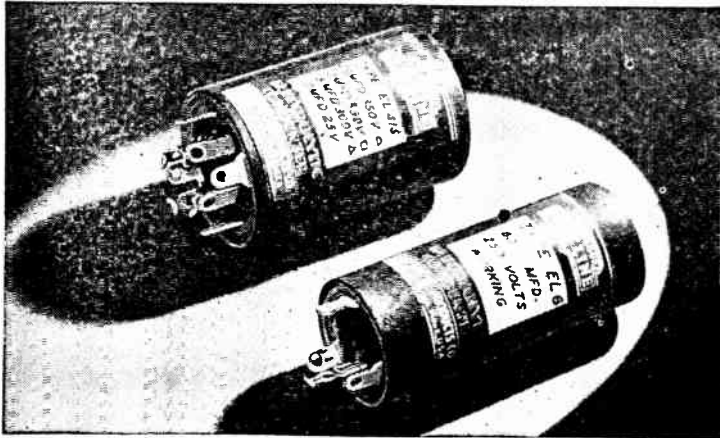
These aluminum can high-capacity, low-voltage capacitors are specifically designed for tough filter applications, in "A" eliminators, talking movie equipment, plant telephone systems and

similar low-voltage, high capacity filter circuits where it is essential to have absolute reliability, and to eliminate all hum. All units have outer insulating tube.

Catalog No.	Mfd.	Voltage		Dimensions		List Price
		DC working	Surge	D	L	
HLV-506	500	6	10	1 1/4	2 1/4	\$2.70
HLV-106	1000	6	10	1 1/4	2 1/4	3.25
HLV-156	1500	6	10	1 1/4	2 1/4	4.00
HLV-206	2000	6	10	1 1/4	2 1/4	4.80
HLV-5012	500	12	15	1 1/4	2 1/4	2.75
HLV-1012	1000	12	15	1 1/4	2 1/4	2.90
HLV-1512	1500	12	15	1 1/4	2 1/4	4.50
HLV-2012	2000	12	15	1 1/4	2 1/4	4.80
HLV-5015	500	15	20	1 1/4	2 1/4	3.10
HLV-1015	1000	15	20	1 1/4	2 1/4	3.70
HLV-1515	1500	15	20	1 1/4	2 1/4	4.75
HLV-2015	2000	15	20	1 1/4	2 1/4	5.80
HLV-525	500	25	40	1 1/4	2 1/4	4.00
HLV-1025	1000	25	40	1 1/4	2 1/4	4.85
HLV-2025	2000	25	40	1 1/4	2 1/4	7.20



SPRAGUE CAPACITORS



SPRAGUE EL SELF-MOUNTING MIDGET CAN TYPE

The popularity of EL units is proved by their wide-spread use by leading manufacturers. They are easy to mount, and no other dry type gives so much dependability in such compact size. EL Capacitors are of highest quality etched-foil construction, hermetically sealed in aluminum cans and have twist-prong tabs for washer or direct to chassis mounting. Tabs have holes and are tinned for easy soldering. Each unit is supplied to you with Bakelite and metal washers, making them ideal for above-chassis mounting. The mounting tab ring, formed by the end of the metal container and serving as the negative terminal, is electrically welded to the capacitor cathode. Multi-Section EL Capacitors are concentrically wound and have common cathode construction.

SINGLE SECTION

Catalog No.	Mfd.	Voltage DC working	Dimensions D	L	List Price
EL-13	1000	10	1 3/8	3	\$4.50
EL-111	1000	15	1 1/8	3	3.25
EL-121	2000	15	1 3/8	3	4.70
EL-142	40	25	3/4	2	1.10
EL-112	100	25	3/4	2	1.45
EL-152	500	25	1 3/8	2 1/2	2.45
EL-122	1000	25	1 3/8	2	3.55
EL-50	150	50	3/4	2 1/2	2.45
EL-55	500	50	1 3/8	2 1/2	3.55
EL-31	20	150	3/4	2	1.25
EL-51	50	150	3/4	2 1/2	1.45
EL-14	40	200	1 1/8	2	1.50
EL-12	20	250	3/4	2	1.45
EL-30	50	250	3/4	2 1/2	1.55
EL-42	40	250	1 1/8	2	1.70
EL-6	60	250	1 1/8	2 1/2	2.05
EL-203	15	300	3/4	2	1.40
EL-33	30	300	1 1/8	2	1.65
EL-53	50	300	1 1/8	2 1/2	1.95
EL-123	125	300	1 3/8	3	3.20
EL-5	50	350	1 1/8	3	2.05
EL-125	125	350	1 3/8	3	3.55
EL-10	10	400	3/4	2	1.25
EL-20	20	400	1 1/8	2	1.65
EL-80	80	400	1 3/8	2 1/2	2.95
EL-1	70	450	3/4	2	1.30
EL-15	15	450	1 1/8	2	1.55
EL-2	20	450	1 1/8	2	1.75
EL-3	10	450	1 1/8	2 1/2	1.90
EL-4	40	450	1 1/8	3	2.25
EL-115	10	225	1 1/8	2	1.75

DUAL SECTION

EL-242	40	10	25	1	2	1.50
EL-250	50	50	50	1	2	1.70
EL-221	20	20	150	1	2	1.55
EL-231	30	15	150	1	2	1.60
EL-230	20	50	150	1	2	1.75
EL-24	40	20	150	1	2	1.75
EL-35	50	20	150	1	2	1.95
EL-25	50	50	150	1	2	2.10
EL-26	60	60	150	1	3	2.25
EL-101	100	10	250	1	2	1.75
EL-120	200	20	250	1	2	2.05
EL-245	10	40	250	1	3	2.30
EL-21	10	10	300	1	2	1.80
EL-253	15	15	300	1	2	1.95
EL-22	20	20	300-25	1	2	1.85
EL-23	30	30	300-350	1	3	2.60
EL-32	30	20	350	1	3	2.50
EL-254	100	15	100	1	2 1/2	2.30
EL-214	50	10	400	1 3/4	3	4.00
EL-210	10	10	450	1	2	2.10
EL-151	15	10	450	1	2 1/2	2.35
EL-220	20	20	450	1	3	2.65
EL-240	10	10	450	1 3/8	3	4.00

TRIPLE SECTION

Catalog No.	Mfd.	Voltage DC working	Dimensions D	L	List Price		
EL-325	20	20	20	25	1	2	\$2.00
EL-335	30	30	30	50	1	2	2.30
EL-313	10	30	30	150	1	2	2.30
EL-320	20	20	20	150	1	2	2.30
EL-224	40	20	20	150	1	2	2.40
EL-340	40	40	40	150	1	3	2.60
EL-321	30	20	100	150-150-6	1	2	2.65
EL-222	20	20	20	150-150-25	1	2	2.20
EL-324	30	20	20	150-150-25	1	2	2.20
EL-332	30	30	20	150-150-25	1	2	2.25
EL-43	30	40	25	150-150-25	1	2	2.35
EL-343	40	30	20	150-150-25	1	2	2.35
EL-351	50	30	100	150-150-25	1	2	3.10
EL-352	50	50	20	150-150-25	1	2 1/2	2.55
EL-355	10	15	15	250	1	2	2.50
EL-315	10	15	30	250	1	2	2.65
EL-354	40	20	20	250	1	3	3.00
EL-331	15	15	20	250-250-25	1	2	2.45
EL-334	30	30	20	250-250-25	1	2 1/2	2.70
EL-314	10	20	30	250-250-350	1	3	2.80
EL-316	10	10	10	300	1	2	2.40
EL-333	20	20	20	300-300-25	1	2	2.60
EL-341	40	15	20	300-300-25	1	2 1/2	2.80
EL-102	10	10	20	350-350-25	1	2	2.30
EL-153	15	10	20	350-350-25	1	2	2.40
EL-326	15	15	20	350-350-25	1	2 1/2	2.55
EL-212	20	10	20	350-350-25	1	2 1/2	2.45
EL-323	30	20	20	350-350-25	1	3	2.80
EL-311	10	10	10	400	1	2 1/2	2.50
EL-342	15	15	40	400-400-25	1	2 1/2	2.70
EL-322	20	20	20	400-400-25	1	3	2.80
EL-310	10	10	10	450	1	2 1/2	2.50
EL-344	15	15	10	450	1	3	2.85
EL-362	20	15	10	450-300-300	1	3	2.85
EL-363	10	10	20	450-350-25	1	2	2.30
EL-364	15	20	20	450-350-250	1 3/4	2	2.95
EL-345	10	10	10	450-150-25	1	2	2.30
EL-202	10	10	20	450-450-25	1	2	2.35
EL-312	10	20	20	450-150-25	1	3	2.55
EL-353	15	15	20	450-450-25	1	3	2.70
EL-205	20	15	20	450-150-25	1	3	2.80
EL-350	20	20	20	150-150-25	1	3	2.95
EL-330	30	30	20	450-150-25	1 3/4	2 1/2	3.15
EL-360	15	15	10	450-150-300	1	3	2.80
EL-215	15	5	15	450-150-350	1	3	2.50

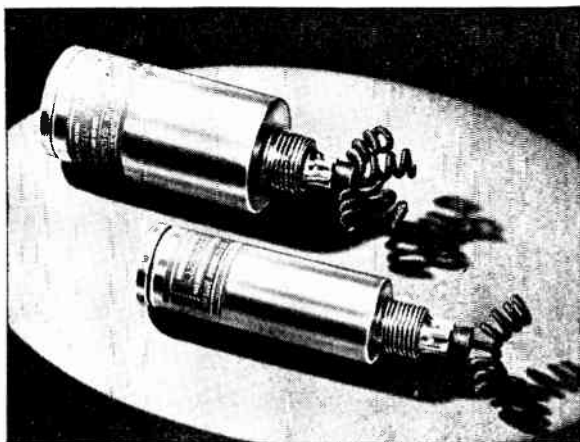
QUADRUPLE SECTION

EL-434	30	30	30	10	150	150	25	1 3/4	2	3.05	
EL-443	30	30	30	20	150	150	25	1 3/4	2	3.10	
EL-452	50	50	50	20	150	150	25	1 3/4	2	3.40	
EL-422	10	20	10	20	200	200	200	25	1 3/4	2	3.15
EL-412	10	10	10	20	300	300	300	25	1 3/4	2	2.95
EL-432	10	10	20	20	350	300	300	25	1 3/4	3	3.95
EL-415	20	10	5	10	350	350	350	25	1 3/4	1	3.05
EL-442	20	20	20	20	400	400	400	25	1 3/4	2 1/2	3.80
EL-410	10	10	10	10	150				1 3/4	2	3.25
EL-420	20	20	20	20	150				1 3/4	3	4.50
EL-421	20	15	15	20	450	350	350	25	1 3/4	2	3.60
EL-423	20	15	20	20	450	150	25	25	1 3/4	2	3.40
EL-425	20	20	30	30	450	150	300	300	1 3/4	3	4.35
EL-431	10	10	10	20	450	450	450	25	1 3/4	2	3.05
EL-424	40	30	10	20	450	450	450	25	1 3/4	3	4.15

SPRAGUE CAPACITORS



SPRAGUE PLS "TINY MIKE" 450V



Type PLS Capacitors can be used with complete dependability on applications where much larger, old-style can-type dry electrolytics were previously necessary. Their exceptional quality and dependability in minimum size are made possible by the exclusive Sprague etched foil process which permits high capacity with very small leakage currents and low power factor. Aluminum cans have threaded bushing and locknut at one end for mounting. Cans are completely insulated from the capacitor sections.

Special ring clamps are available for upright mounting. (See Hardware, page P-61.)

**CONTINUOUS WORKING VOLTAGE 450 VOLTS
MAXIMUM SURGE VOLTAGE 525 VOLTS**

Catalog No.	Mfd.	Voltage		Dimensions		List Price
		DC working	Surge	D	L	
PLS-4	4	450	525	1	2 1/2	\$1.70
PLS-8	8	450	525	1	2 1/2	1.75
PLS-12	12	450	525	1	2 1/2	2.15
PLS-16	16	450	525	1	2 1/2	2.40
PLS-20	20	450	525	1 3/8	2 1/2	2.65
PLS-25	25	450	525	1 3/8	3 1/8	2.85
PLS-30	30	450	525	1 3/8	3 1/2	3.00
PLS-40	40	450	525	1 3/8	3 1/2	3.40
PLS-48	4-8	450	525	1 3/8	2 1/2	2.50
PLS-88	8-8	450	525	1 1/2	2 1/2	2.75
PLS-816	8-16	450	525	1 1/2	4 1/4	3.25
PLS-216	16-16	450	525	1 1/2	3 1/2	3.50
PLS-888	8-8-8	450	525	1 1/2	2 1/2	4.25

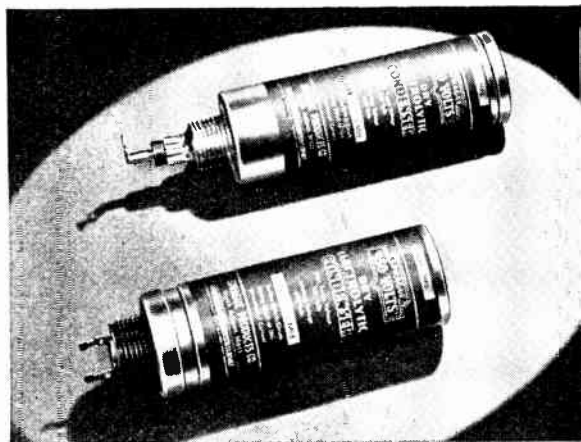
SPRAGUE LS ALUMINUM CAN TYPES, 450V

Popular units for replacing older can type capacitors. May be mounted in any position. Standard mounting through chassis by threaded bushing on can. Packed with mounting hardware and insulating washers for use where can must be insulated from chassis. Special ring mounting clamps are available for upright mounting with can partly extending through panels or chassis. (See Hardware, page P-61.)

TYPE LS UNITS have the can as negative terminal, and lug terminals for anode connections.

**CONTINUOUS WORKING VOLTAGE 450 VOLTS
MAXIMUM SURGE VOLTAGE 525 VOLTS**

Catalog No.	Mfd.	Voltage		Dimensions		List Price
		DC working	Surge	D	L	
LS-8	8	450	525	1 3/8	2 1/2	\$1.75
LS-12	12	450	525	1 3/8	2 1/2	2.15
LS-16	16	450	525	1 3/8	2 1/2	2.40
LS-20	20	450	525	1 3/8	2 1/2	2.65
LS-25	25	450	525	1 3/8	3 1/8	2.85
LS-30	30	450	525	1 3/8	3 1/2	3.00
LS-40	40	450	525	1 3/8	3 1/2	3.40
LS-88	8-8	450	525	1 3/8	2 1/2	2.75



SPRAGUE SC INVERTED SCREW CAN MOUNTING TYPE, 475V

(WITH CAN AS NEGATIVE TERMINAL)



Can type dry electrolytics especially designed for the exacting continuous duty requirements of public address and power amplifier work. High surge voltage rating provides extra safety in high-current power supplies where high peaks often occur. Unexcelled for "extra tough" service replacement uses. Provided with threaded bushing for standard mounting in any position. Can is the negative terminal in all units. Positive terminal is lug connection. Supplied with mounting nut, and insulating washer to insulate can from chassis. Special ring clamps are available for upright mounting. (See Hardware, page P-61.)

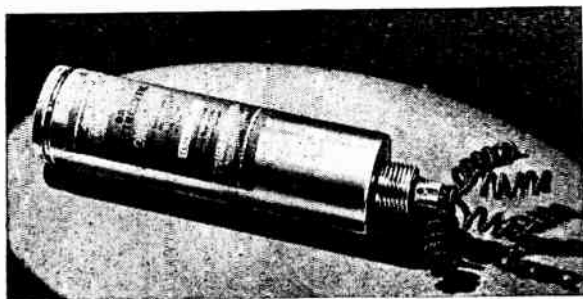
Catalog No.	Mfd.	Voltage		Dimensions		List Price
		DC working	Surge	D	L	
SC-4	4	475	600	1	2 1/2	\$1.90
SC-8	8	475	600	1 3/8	1 1/2	2.25
SC-12	12	475	600	1 3/8	4 1/8	3.15
SC-16	16	475	600	1 1/2	4 1/4	3.50
SC-88	8-8	475	600	1 1/2	4 1/2	3.65

**CONTINUOUS WORKING VOLTAGE 475 VOLTS
MAXIMUM SURGE VOLTAGE 600 VOLTS**

SPRAGUE CAPACITORS



SPRAGUE CL INVERTED SCREW CAN MOUNTING TYPE, 475V (WITH CAN INSULATED FROM SECTIONS)

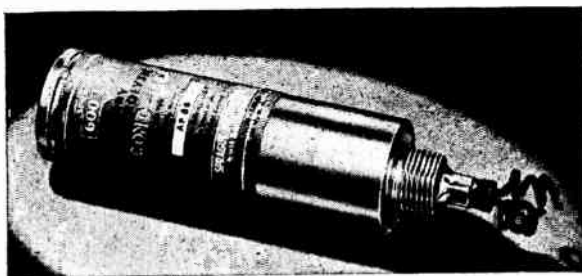


These can-type dry electrolytics are similar to Type SC Capacitors except that the can is insulated from the filter sections. Separate positive and negative terminal leads for each section. Especially recommended for high gain, high power amplifiers where minimum inter-stage coupling through power supply is desired. Special ring clamps are available for upright mounting. (See Hardware, p. P-61.)

CONTINUOUS WORKING VOLTAGE 475 VOLTS
MAXIMUM SURGE VOLTAGE 600 VOLTS

Catalog No.	Mfd.	Voltage		Dimensions		List Price
		DC working	Surge	D	L	
CL-8	8	475	600	1 3/8	4 1/8	\$2.25
CL-16	16	475	600	1 1/2	4 1/8	3.50
CL-88	8-8	475	600	1 1/2	4 1/8	3.65

SPRAGUE AP HIGH-VOLTAGE CAN TYPES, 600V



These sturdy can-type units are outstandingly popular for all public address and theater applications where the working voltage is high and surges run well over 600 volts. These high capacities and high voltage ratings are obtained by use of balanced dry electrolytic sections connected in series, assuring long, trouble-free performance. Full capacity, full working voltage and low power factor are GUARANTEED.

CONTINUOUS WORKING VOLTAGE 600 VOLTS
MAXIMUM SURGE VOLTAGE 800 VOLTS

Catalog No.	Mfd.	Voltage		Dimensions		List Price
		DC working	Surge	D	L	
AP-46	4	600	800	1	4 1/8	\$3.00
AP-86	8	600	800	1 3/8	4 1/8	4.00
AP-16	16	600	800	1 1/2	4 1/8	5.00

SPRAGUE WR WET ELECTROLYTIC REPLACEMENTS

Sprague Type WR Capacitors are NOT SUBSTITUTES. Instead they are dry electrolytics of very high voltage formation specifically designed for use whenever wet electrolytic capacitors may have been used in the past. Not only will they stand high peak voltages, but they'll handle a-c ripple that might cause ordinary 450 volt dries to break down. Diameter is the same as standard wet mounting holes.

Catalog No.	Mfd.	Voltage		Dimensions		List Price
		DC working	Surge	D	L	
WR-8	8	500	600	1	4 1/8	\$1.55
WR-16	16	500	600	1 1/2	4 1/8	2.35
WR-25	25	500	600	1 1/2	5 1/8	2.75

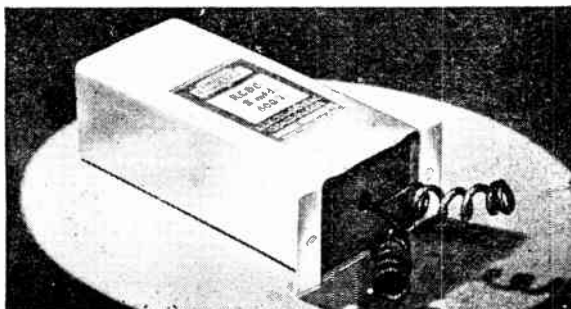


SPRAGUE RC HIGH-VOLTAGE METAL CONTAINER TYPE, 800V


These units are for use in portable public address and theater equipment applications where space is limited and working voltages are high and surges may run well over 600 volts. Operation at full rated working voltage, low leakage and low power factor are FULLY GUARANTEED. Type RC-88 is recommended for use on equipments for capacities up to and including 8 mfd.

CONTINUOUS WORKING VOLTAGE 800 VOLTS
MAXIMUM SURGE VOLTAGE 1000 VOLTS

Catalog No.	Mfd.	Voltage		Dimensions			List Price
		DC working	Surge	W	T	L	
RC-88	8	800	1000	1 1/2	1 1/2	4 1/2	\$5.50



SPRAGUE CAPACITORS



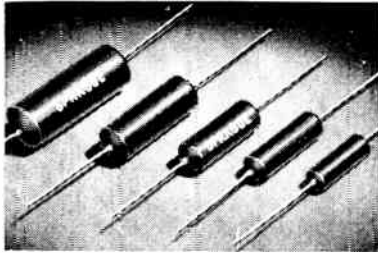
MOLDED TM TUBULARS, 600V Greatest Paper Tubular Advance in 20 Years!

Highly Heat Resistant
Moisture Resistant
Non-Inflammable

Conservatively Rated
Small in Size
Mechanically Rugged

Completely Insulated

The new Sprague Molded Tubulars listed here are the result of more than four years' intensive research — and one of the largest retooling programs in Sprague history! The unique high-temperature molded



construction of these units assures maximum dependability, even under extremes of heat, humidity, and physical stress. They're especially recommended for use in auto radios, in small ac sets that get hot, or for any application which is "tough" on normal, waxed paper units. Soldered lead designates outside foil.

Catalog No.	Mfd.	Voltage DC Working	Dimensions		List Price
			D	L	
TC-31	.0001	600	3/8	1 1/4	\$0.25
TC-325	.00025	600	3/8	1 1/4	.25
TC-34	.0004	600	3/8	1 1/4	.25
TC-35	.0005	600	3/8	1 1/4	.25
TM-21	.001	600	1/2	1	.25
TM-22	.002	600	1/2	1	.25
TM-23	.003	600	1/2	1	.25
TM-24	.004	600	1/2	1	.25
TM-25	.005	600	3/8	1 1/4	.25
TM-26	.006	600	3/8	1 1/4	.25
TM-11	.01	600	3/8	1 1/4	.30
TM-12	.02	600	3/8	1 1/4	.30
TM-13	.03	600	1/2	1 1/2	.35
TM-14	.04	600	1/2	1 1/2	.35
TM-15	.05	600	1/2	1 1/2	.40
TM-16	.06	600	3/8	1 1/4	.40
TM-1	.1	600	3/8	1 1/4	.45
TC-2	.25	600	1 1/2	2 1/2	.55
TC-5	.5	600	1 3/8	2 1/2	.80
TC-10	1.0	600	1 3/8	2 1/2	1.25

Supplied in waxed cardboard units pending completion of molds.

Catalog No.	Mfd.	Voltage DC Working	Dimensions		List Price
			D	L	
TR-35	.0005	1600	3/8	1 1/4	\$0.55
TR-21	.001	1600	3/8	1 1/4	.55
MB-22	.002	1600	3/8	1 1/4	.55
MB-23	.003	1600	3/8	1 1/4	.55
MB-24	.004	1600	3/8	1 1/4	.55
MB-25	.005	1600	3/8	1 1/4	.55
MB-26	.006	1600	3/8	1 1/4	.55
MB-27	.007	1600	3/8	1 1/4	.55
MB-275	.0075	1600	3/8	1 1/4	.55
MB-28	.008	1600	3/8	1 1/4	.55
MB-11	.01	1600	1/2	1 1/2	.60
MB-115	.015	1600	1/2	1 1/2	.60
MB-12	.02	1600	1/2	1 1/2	.60
TR-13	.03	1600	1/2	1 1/2	.60
TR-14	.04	1600	1/2	1 1/2	.60
TR-15	.05	1600	1/2	1 1/2	.70

Supplied in waxed cardboard units pending completion of molds.

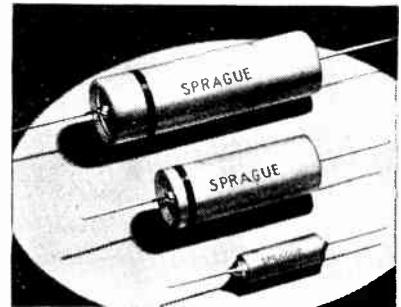
SPRAGUE MB HIGH-VOLTAGE MOLDED PAPER TUBULARS, 1600V

These Sprague high-temperature MOLDED paper tubulars are especially designed for use as buffers and other high-voltage applications such as automobile radio, vibrator power supplies, etc. They are constructed throughout for long life under extreme conditions of vibration and heat. Soldered lead designates outside foil.



SPRAGUE PX HERMETICALLY-SEALED OIL-IMPREGNATED METAL TUBULARS, 600V AND 1000V DC

Here is your answer to every need calling for higher-voltage tubular capacitors in the smallest possible size for real dependability under difficult operating conditions. Sprague Type PX Capacitors consist of specially wound sections, impregnated with an exclusive Sprague oil and hermetically sealed in metal containers for long trouble-free service. Each unit is supplied with an external sleeve to insulate it from the chassis and other metal parts. Mounting may be made by means of the tinned copper leads 2 1/2" long, or by standard Sprague mounting straps (see Hardware P-61).



SPRAGUE TYPE PX TABLE

Catalog No.	Mfd.	Voltage DC working	Dimensions		List Price	Catalog No.	Mfd.	Voltage DC working	Dimensions		List Price
			D	L					D	L	
PX-316	.0001	600	1/2	1 1/4	\$0.95	PX-26	.25	600	1 1/2	2 1/2	\$1.70
PX-3256	.00025	600	1/2	1 1/4	.95	PX-56	.5	600	1 1/2	2 1/2	2.20
PX-356	.0005	600	1/2	1 1/4	.95	PX-106	1.0	600	1 1/2	2 1/2	3.00
PX-216	.001	600	1/2	1 1/4	.95	PX-311	.0001	1000	1 1/2	1 1/4	1.10
PX-226	.002	600	1/2	1 1/4	.95	PX-3251	.00025	1000	1 1/2	1 1/4	1.10
PX-236	.003	600	1/2	1 1/4	.95	PX-351	.0005	1000	1 1/2	1 1/4	1.10
PX-246	.004	600	1/2	1 1/4	.95	PX-211	.001	1000	1 1/2	1 1/4	1.10
PX-256	.005	600	1/2	1 1/4	.95	PX-221	.002	1000	1 1/2	1 1/4	1.10
PX-266	.006	600	1/2	1 1/4	.95	PX-231	.003	1000	1 1/2	1 1/4	1.10
PX-276	.007	600	1/2	1 1/4	.95	PX-241	.004	1000	1 1/2	1 1/4	1.10
PX-286	.008	600	1/2	1 1/4	.95	PX-251	.005	1000	1 1/2	1 1/4	1.10
PX-296	.009	600	1/2	1 1/4	.95	PX-261	.006	1000	1 1/2	1 1/4	1.10
PX-116	.01	600	1/2	1 1/4	.95	PX-271	.007	1000	1 1/2	1 1/4	1.10
PX-126	.02	600	1/2	1 1/4	1.05	PX-281	.008	1000	1 1/2	1 1/4	1.10
PX-136	.03	600	3/8	1 3/8	1.10	PX-291	.009	1000	1 1/2	1 1/4	1.10
PX-146	.04	600	3/8	1 3/8	1.10	PX-111	.01	1000	1 1/2	1 1/4	1.10
PX-156	.05	600	3/8	1 3/8	1.10	PX-121	.02	1000	1 1/2	1 1/4	1.20
PX-166	.06	600	1 1/8	1 7/8	1.20	PX-131	.03	1000	1 1/2	1 3/4	1.20
PX-186	.08	600	1 1/8	1 7/8	1.20	PX-141	.04	1000	1 1/2	1 3/4	1.20
PX-16	.1	600	1 1/8	1 7/8	1.25	PX-151	.05	1000	1 1/2	1 3/4	1.30

SPRAGUE CAPACITORS



SPRAGUE PX (CONTINUED)

Catalog No.	Mfd.	Voltage DC working	Dimensions D	L	List Price	Catalog No.	Mfd.	Voltage DC working	Dimensions D	L	List Price
PX-161	.06	1000	1 1/8	2	1.35	PX-352	.0005	2000	1 3/8	1 3/8	1.25
PX-181	.08	1000	1 1/8	2	1.40	PX-212	.001	2000	1 3/8	1 3/8	1.25
PX-11	1.	1000	1 1/8	2	1.50	PX-252	.005	2000	1 3/8	1 3/8	1.25
PX-21	.25	1000	1 1/8	2 1/2	2.00	PX-262	.006	2000	1 3/8	1 3/8	1.25
PX-51	.5	1000	1 1/8	3 1/2	2.85	PX-2752	.0075	2000	1 3/8	1 3/8	1.25
PX-2215	.002	1500	5/8	1 1/4	1.20	PX-112	.01	2000	1 3/8	1 3/8	1.25
PX-2515	.005	1500	5/8	1 1/4	1.20	PX-122	.02	2000	2 1/8	2 1/8	1.35
PX-1115	.01	1500	1 1/8	1 5/8	1.20	PX-132	.03	2000	2 1/8	2 1/8	1.40
PX-1215	.02	1500	1 1/8	1 5/8	1.30	PX-142	.04	2000	2 1/8	2 1/8	1.40
			1 1/8	1 5/8		PX-152	.05	2000	2 1/8	2 1/8	1.45

OIL-FILLED TRANSMITTING CAPACITORS

Filled with

KVO

(KILO-VOLT-OIL — The Sprague wartime research oil development)

SPRAGUE CR

(With Universal

Mounting Feature)

An oil-filled transmitting capacitor is no better than the oil with which it is filled—and Sprague brings you the best! KVO*—Kilo Volt Oil—is the result of extensive Laboratory research and engineering tests and has proved its excellence throughout the world during the war in capacitors used on practically every type of equipment. KVO retains its dielectric efficiency at low temperatures to a greater extent than any other type of oil in common use. High insulation resistance and low power factor are maintained over a very broad range of operating temperatures. Oil-filled capacitors are essential for high-voltage use, and you can rely upon Sprague KVO units under all conditions. Terminals are insulated from the cans for AT LEAST TWICE the working voltage. Capacitor sections are hermetically sealed in sturdy rectangular metal cans which can be automatically grounded through the mounting clamps.

For special industrial applications, where extremely high insulation resistance requirements must be met, Sprague can supply special dielectric materials.



CR Capacitors are of convenient rectangular shape and have handy adjustable universal flanges for mounting in any position. Each unit is labelled with operating information based on A.R.R.L. standards and, in accordance with Sprague custom, ALL RATINGS ARE CONSERVATIVE. No need to "play safe" by buying most costly, higher-voltage transmitting capacitors than you actually need.

Unconditionally guaranteed against breakdown when used as specified.

*Trademark applied for.

FREE! LIFEGUARD PROTECTIVE CAPS

Don't run any chance of getting hold of a "hot one!" Each Sprague Type KVO Capacitor comes to you equipped with the famous Sprague "Lifeguard" Protective Insulating Caps at no extra charge. They afford maximum protection at all times.

BUY LIFEGUARDS FOR YOUR OLD CAPACITORS
LG-1—List price per pair, 30¢

Catalog No.	Mfd.	Voltage DC working	Dimensions T	W	L	List Price
CR-056	.5	600	1 1/2	1 1/2	2 1/4	\$4.15
CR-16	1.0	600	1 1/2	1 1/2	2 1/4	5.30
CR-26	2.0	600	1 1/2	1 1/2	2 1/4	6.45
CR-36	3.0	600	1 1/2	1 1/2	3 1/4	7.60
CR-46	4.0	600	1 1/2	2 1/2	3 1/2	8.35
CR-66	6.0	600	1 3/4	2 1/2	4 3/4	10.25
CR-86	8.0	600	1 3/4	3 3/4	3 3/4	12.15
CR-106	10.0	600	1 3/4	3 3/4	4 3/4	13.65
CR-011	.1	1000	1 1/2	1 1/2	1 5/8	3.80
CR-0251	.25	1000	1 1/2	1 1/2	2 1/4	4.15
CR-051	.5	1000	1 1/2	1 1/2	2 1/4	4.55
CR-11	1.0	1000	1 1/2	1 1/2	2 1/4	5.70
CR-21	2.0	1000	1 1/2	1 1/2	3 7/8	7.60
CR-41	4.0	1000	1 1/2	2 1/2	4 3/4	9.50
CR-81	8.0	1000	1 3/4	3 3/4	4 3/4	13.65
CR-101	10.0	1000	1 3/4	3 3/4	4 3/4	15.20
CR-121	12.0	1000	2 1/4	3 3/4	4 3/4	16.45
CR-151	15.0	1000	2 1/4	3 3/4	4 3/4	18.25
CR-0515	.5	1500	1 1/2	1 1/2	2 5/8	5.70
CR-115	1.0	1500	1 1/2	1 1/2	3 7/8	6.85
CR-215	2.0	1500	1 7/8	2 1/2	4 1/4	9.50
CR-415	4.0	1500	1 3/4	3 3/4	4 3/4	12.65
CR-515	5.0	1500	1 3/4	3 3/4	4	13.65
CR-815	8.0	1500	2 1/2	3 3/4	4 3/4	19.00
CR-1015	10.0	1500	3 3/8	3 3/4	4 3/4	22.80
CR-012	.1	2000	1 1/2	2 1/2	2 1/2	6.05
CR-0252	.25	2000	1 1/2	2 1/2	2 1/2	6.45
CR-052	.5	2000	1 1/2	2 1/2	2 7/8	6.85
CR-12	1.0	2000	1 1/2	2 1/2	3 1/2	8.35
CR-22	2.0	2000	1 3/4	3 3/4	4 1/4	9.85
CR-32	3.0	2000	1 3/4	3 3/4	4 3/4	12.15
CR-42	4.0	2000	2 1/4	3 3/4	3 7/8	13.65
CR-62	6.0	2000	3 3/8	3 3/4	4 1/2	17.85
CR-102	10.0	2000	4 3/8	3 3/4	4 3/4	27.85
CR-0125	.1	2500	1 1/2	2 1/2	2 1/2	9.35
CR-0525	.5	2500	1 3/4	3 3/4	3 1/4	10.65
CR-125	1.0	2500	1 3/4	3 3/4	3 1/4	12.15
CR-225	2.0	2500	1 3/4	3 3/4	4 3/8	19.60
CR-425	4.0	2500	4 3/8	3 3/4	4 3/8	27.20
CR-013	.1	3000	1 1/2	2 1/2	2 1/2	12.65
CR-0253	.25	3000	1 1/2	2 1/2	2 7/8	13.65
CR-053	.5	3000	1 1/2	2 1/2	4 1/4	15.20
CR-13	1.0	3000	2 1/4	3 3/4	3 7/8	18.25
CR-23	2.0	3000	3 3/8	3 3/4	4 1/2	22.80
CR-43	4.0	3000	4 3/8	3 3/4	4 3/4	33.40
CR-014	.1	4000	2 1/4	3 3/4	2 3/4	22.80
CR-0254	.25	4000	2 1/4	3 3/4	2 3/4	24.05
CR-054	.5	4000	2 1/4	3 3/4	3 7/8	27.20
CR-14	1.0	4000	2 1/4	3 3/4	5 1/4	33.40
CR-24	2.0	4000	4 1/8	3 3/4	5 3/8	42.40
CR-025	.2	5000	1 3/4	3 3/4	3 3/8	27.20
CR-055	.5	5000	2 1/4	3 3/4	4 1/2	30.40
CR-15	1.0	5000	4 1/8	3 3/4	4 3/8	38.00
CR-25	2.0	5000	4 3/8	3 3/4	6	48.60
CR-0160	.1	6000	2 1/4	3 3/4	3 3/8	30.40
CR-0260	.2	6000	1 3/4	3 3/4	4 1/4	38.00
CR-160	1.0	6000	8	4	11	75.95
CR-0175	.1	7500	2 1/4	3 3/4	3 7/8	43.05
CR-0275	.2	7500	1 3/4	3 3/4	4 3/4	45.60

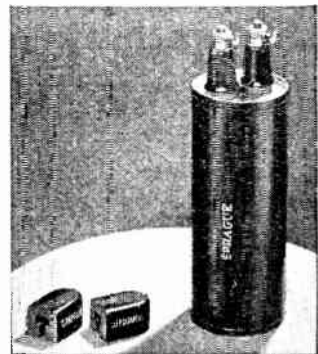
SPRAGUE CAPACITORS

SPRAGUE OT POPULAR, INEXPENSIVE ROUND CAN TRANSMITTING TYPES, 600V TO 3000V

Catalog No.	Mfd.	Voltage DC working	Dimensions			List Price
			D	L	R	
OT-26	2	600	2	2 1/2	1 1/4	\$4.95
OT-11	1	1000	2	2 1/2	1 1/4	4.20
OT-21	2	1000	2	3 1/2	1 1/4	5.70
OT-41	4	1000	2	5 1/2	1 1/4	7.25
OT-515	0.5	1500	2	2 1/2	1 1/4	4.55
OT-115	1	1500	2	2 1/2	1 1/4	5.30
OT-215	2	1500	2	4 1/2	1 1/4	7.25
OT-12	1	2000	2	4 1/2	1 1/4	6.85
OT-22	2	2000	2 1/2	4 1/2	1 1/4	7.60
OT-13	1	3000	2 1/2	4 1/2	1 1/4	13.75

Long a favorite with amateurs, broadcasters, etc., throughout the world, impregnated and filled with KVO. Rated to conform with tube and circuit design requirements. As with other Sprague high-voltage transmitting types, each unit is equipped with ceramic terminals and LIFEGUARD Safety Caps. Mounting clamp is provided. Unconditionally guaranteed when used as specified.

*Trademark applied for.



SPRAGUE PC INVERTED ROUND SCREW CAN TRANSMITTING TYPES, 600V TO 1500V

These popular Sprague TYPE PC inverted round screw can capacitors are filled (NOT just impregnated) with KVO, the famous Sprague 500°F. flash protection oil that has the added advantage of retaining its dielectric efficiency at low temperatures. The PC Capacitors find a wide field of usefulness in such applications as public address systems, medium-voltage transmitters, television and high-gain amplifiers. THEY ARE RATED CONSERVATIVELY and labelled according to A.R.R.L. standards. Ample safety factor is assured. Units include spark washer and insulating lug to insulate the round metal can containers from the chassis. Ring clamp is available for upright mounting. (See page P-61.)

*Trademark applied for.

Catalog No.	Mfd.	Voltage DC working	Dimensions		List Price
			D	L	
PC-26	2.0	600	1 1/2	2 3/4	\$4.15
PC-36	3.0	600	1 1/2	3 3/4	4.95
PC-46	4.0	600	1 1/2	4 1/2	5.70
PC-11	1.0	1000	1 1/2	2 3/4	3.80
PC-21	2.0	1000	1 1/2	4 1/2	4.95
PC-515	0.5	1500	1 1/2	2 3/4	4.55
PC-115	1.0	1500	1 1/2	3 3/4	4.95

SPRAGUE AR & LR AUTO GENERATOR AND VIBRATOR TYPES

Exceptionally sturdy design to withstand the bouncing and vibration of automobile use is a feature of these Automobile Generator and Vibrator types. They are oil-impregnated and metal-cased for long service under difficult conditions of heat and humidity.

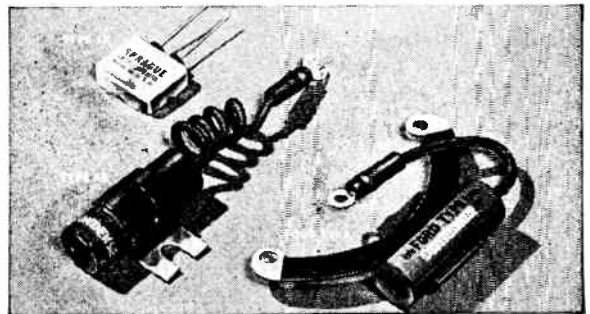
AR (GENERATOR TYPES)

Catalog No.	Mfd.	Voltage DC working	Dimensions		List Price
			D	L	
AR-1	1.0	400	1 1/2	2 1/2	\$0.90
AR-2	.5	400	1 1/2	1 3/4	.65
AR-25	.5	400	1 1/2	2 3/4	1.00
AR-Ford	.5	400	1 1/2	1 3/4	.85

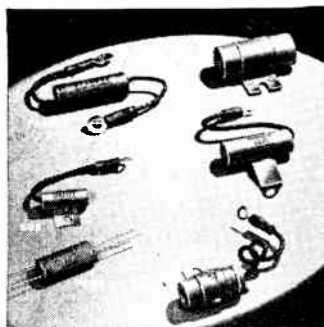
LR (VIBRATOR TYPES)

Catalog No.	Mfd.	Voltage DC working	Dimensions			List Price
			D	L	R	
LR-11	.01	1600	1/4	7/8	1 1/8	\$0.80
LR-12	.02	1600	1/4	7/8	1 1/8	.80
LR-27	.007	1600	1/4	7/8	1 1/8	.80

The Ford Type has a special mounting bracket to accommodate cars of this make. All units are conservatively rated, and designed to withstand high surge voltages. Full capacity-true voltage ratings.



SPRAGUE SPECIAL AUTOMOBILE TYPES



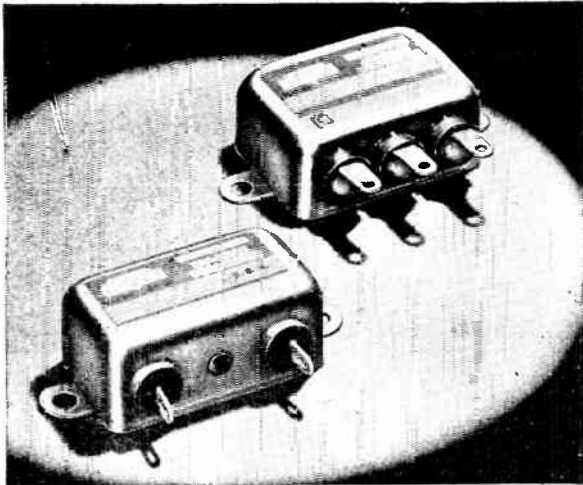
Designed for special automobile services as indicated in the table, the following Sprague capacitors are equipped with suitable mounting features.

Catalog No.	Mfd.	Voltage DC working	Dimensions		List Price
			D	L	
DL-1—Dome Light Filter	.2	200	1	2 3/4	\$1.10
GG-5—Gas Gauge Filter	.05	200	1 1/2	1 1/2	.50
OG-50—Oil Gauge Filter	.25	200	1 1/2	1 3/4	.60
P-2077—Ford Replacement	.5	200	1 1/2	1 3/4	.65
P-3402—Ammeter Capacitor	.5	200	1 1/2	2	.65
P-2153—Motorola Replacement	.0008-.0008	1000	3/4	1 3/4	.65

SPRAGUE CAPACITORS



SPRAGUE BP METAL-ENCASED BATHTUB UNITS (WITH SIDE TERMINALS)



These popular units are styled for use where the most severe conditions of heat and moisture must be met. They are oil impregnated and filled with KVO₂. Mounting flanges or ears are integral parts of the containers.

* Trademark applied for.

Catalog No.	M ^{d.}	Voltage DC working	Dimensions			List Price
			L	W	H	
BP-1	1	400	1 1/2	1	3/4	\$1.75
BP-25	.25	400	1 1/2	1	3/4	2.00
BP-50	.5	400	1 1/2	1	7/8	2.15
BP-10	1.0	400	2	1 3/4	7/8	2.60
BP-21	1-1	400	1 1/2	1	3/4	2.75
BP-225	.25-.25	400	1 1/2	1	1	3.00
BP-250	.5-.5	400	2	1 3/4	7/8	3.50
BP-31	1-1-1	400	1 1/2	1	3/4	3.40
BP-56	.05	600	1 1/2	1	3/4	2.60
BP-16	.1	600	1 1/2	1	3/4	2.65
BP-256	.25	600	1 1/2	1	3/4	2.80
BP-506	.5	600	1 1/2	1	7/8	3.00
BP-106	1.0	600	2	1 3/4	7/8	3.40
BP-206	2.0	600	2	2	1 1/4	4.55
BP-2056	.05-.05	600	1 1/2	1	3/4	3.30
BP-216	1-1	600	1 1/2	1	3/4	3.35
BP-2256	.25-.25	600	1 1/2	1	1	3.40
BP-2506	.5-.5	600	2	1 3/4	7/8	3.90
BP-116	1.0-1.0	600	2	2	1 1/4	4.80
BP-316	1-1-1	600	1 1/2	1	3/4	3.80
BP-3256	.25-.25-.25	600	2	1 3/4	7/8	4.30
BP-356	.5-.5-.5	600	2	2	1 1/4	5.20
BP-51	.05	1000	1 1/2	1	3/4	2.75
BP-11	.1	1000	1 1/2	1	3/4	2.85
BP-251	.25	1000	1 1/2	1	3/4	2.95
BP-501	.5	1000	2	1 3/4	7/8	3.20
BP-101	1.0	1000	2	2	1 1/4	4.00
BP-2051	.05-.05	1000	1 1/2	1	3/4	3.50
BP-211	1-1	1000	1 1/2	1	3/4	3.60
BP-2251	.25-.25	1000	2	1 3/4	7/8	3.80
BP-2501	.5-.5	1000	2	2	1 1/4	4.95
BP-311	1-1-1	1000	1 1/2	1	7/8	4.15
BP-3251	.25-.25-.25	1000	2	2	1 1/4	5.00



Sprague Type UC cardboard-cased capacitors cost only about one-third the price of conventional high-voltage units—and you can count on them fully for tip-top service for practically any transmitting or similar use up to 1000 volts as rated. They are equally popular with beginners as well as old-time amateurs who want to save money on their rigs without interfering with reliability. These capacitors are oil impregnated, wax filled, fully cased and sealed in durable cardboard containers. Handy mounting flanges may be cut off when not needed. Unconditionally guaranteed when used at rated voltages.

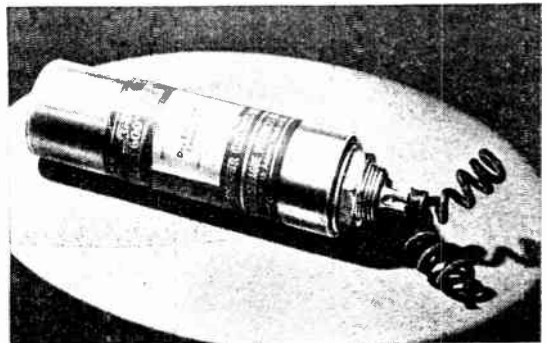
SPRAGUE UC INEXPENSIVE CARDBOARD-CASED TRANSMITTING TYPES, 400V TO 1000V

Catalog No.	M ^{d.}	Voltage DC working	Dimensions			List Price
			L	W	H	
UC-54	0.5	400	3/4	1 3/8	2 1/8	\$0.85
UC-14	1	400	3/4	1 3/8	2 3/8	1.15
UC-24	2	400	1 1/4	1 3/8	2 3/8	1.80
UC-124	2	400	1 1/4	1 3/8	3 1/2	1.80
UC-16	1	600	1 1/4	1 1/2	2 3/8	1.40
UC-26	2	600	1 1/4	1 3/8	1 1/2	2.10
UC-46	4	600	1 1/2	2 1/4	4 1/2	3.80
UC-18	1	800	1 1/4	1 3/8	3 1/2	1.85
UC-28	2	800	1 1/4	1 3/8	4 1/2	2.95
UC-11	1	1000	1 3/4	1 3/8	4 1/2	2.30
UC-21	2	1000	1 3/4	2 1/8	4 1/2	3.80
UC-41	4	1000	2 1/4	3 1/2	4 1/2	5.50

SPRAGUE DR CAN-ENCASED PAPER DIELECTRIC TYPE, 600V (FOR DRY ELECTROLYTIC REPLACEMENTS)

The steady demand for Paper Dielectric Capacitors of the same sizes and shapes as Dry Electrolytics to serve as replacements for Dry Electrolytics has prompted us to bring you this line of capacitors. The actual capacity is one-third to one-half that of a Dry Electrolytic in the same size container. The leakage and power factor are extremely low. No polarity has been observed. Ideal for replacements in high-voltage public address systems, power amplifiers and high-voltage filter circuits.

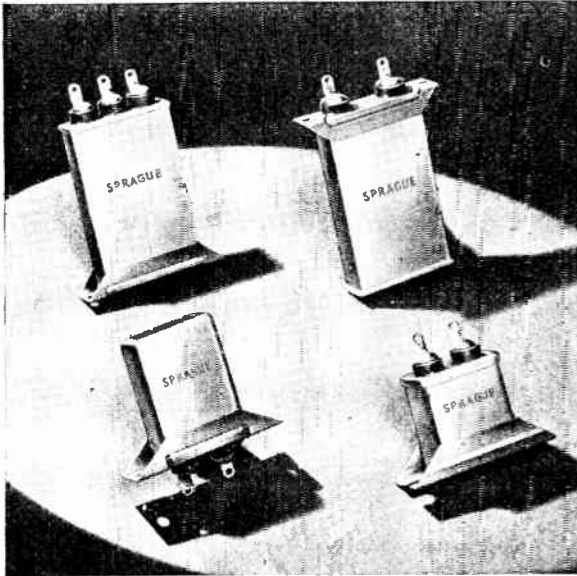
Catalog No.	Replacement Cap. M ^{d.}	Voltage DC working	Dimensions D	Dimensions L	List Price
DR-8	8	600	1 3/8	4 1/2	\$3.50
DR-8E	8-8	600	1 3/8	4 1/2	4.30



SPRAGUE CAPACITORS



SPRAGUE CAB, CAT, CNB & CNT WITH CHANNEL BRACKET MOUNTINGS



These oil-impregnated paper dielectric Capacitors meet many special needs where the call is for sturdy, small-size units to withstand severe operating conditions. Extreme care is exercised to assure hermetic sealing of the metal containers. Channel bracket mountings, firmly soldered to the containers, are supplied as standard.

These units are specifically designed for chassis and relay rack mounting, and are mechanically constructed to withstand severe vibration in automotive, aircraft, or industrial use.

The capacitor sections are oil impregnated and the units are oil filled with specially processed KVO². All units are flash tested at twice rated voltage, and ground tested from terminal to container at twice rated voltage. Standard capacity tolerance for single and dual units is -10%, +20%, and for triple units is ±20%.

*Trademark applied for.

CNB—CNT

Catalog No.	Mfd.	Voltage DC Working	—Dimensions—			List Price
			T	W	H	
CNB-154	CNT-154	.05	400	1 1/8	1	\$2.85
CNB-14	CNT-14	.1	400	1 1/8	1	2.95
CNB-24	CNT-24	.25	400	1 1/8	1 1/2	3.05
CNB-54	CNT-54	.5	400	1 1/8	1 1/2	3.15
CNB-104	CNT-104	1.0	400	1 1/8	2 1/2	3.50
CNB-2154	CNT-2154	.05-.05	400	4 1/8	1	3.65
CNB-214	CNT-214	.1-.1	400	4 1/8	1 1/2	3.75
CNB-224	CNT-224	.25-.25	400	4 1/8	1 1/2	3.50
CNB-254	CNT-254	.5-.5	400	4 1/8	2 1/2	4.25
CNB-3154	CNT-3154	.05-.05-.65	400	4 1/8	1	4.50
CNB-314	CNT-314	.1-.1-.1	400	4 1/8	1 1/2	4.80
CNB-324	CNT-324	.25-.25-.25	400	4 1/8	2 1/2	5.20
CNB-126	CNT-126	.02	600	1 1/8	1	2.80
CNB-156	CNT-156	.05	600	1 1/8	1	2.90
CNB-16	CNT-16	.1	600	1 1/8	1	3.05
CNB-26	CNT-26	.25	600	1 1/8	1 1/2	3.15
CNB-56	CNT-56	.5	600	1 1/8	1 1/2	3.35
CNB-106	CNT-106	1.0	600	1 1/8	2 1/2	3.65
CNB-2156	CNT-2156	.05-.05	600	4 1/8	1	3.80
CNB-216	CNT-216	.1-.1	600	4 1/8	1 1/2	3.90
CNB-226	CNT-226	.25-.25	600	4 1/8	1 1/2	4.15
CNB-256	CNT-256	.5-.5	600	4 1/8	2 1/2	4.50
CNB-3156	CNT-3156	.05-.05-.05	600	4 1/8	1	4.55
CNB-316	CNT-316	.1-.1-1	600	4 1/8	1 1/2	4.95
CNB-326	CNT-326	.25-.25-.25	600	4 1/8	2 1/2	5.30
CNB-151	CNT-151	.05	1000	1 1/8	1	3.05
CNB-11	CNT-11	.1	1000	1 1/8	1	3.15
CNB-21	CNT-21	.25	1000	1 1/8	1 1/2	3.30
CNB-51	CNT-51	.5	1000	1 1/8	2 1/2	3.50
CNB-2151	CNT-2151	.05-.05	1000	4 1/8	1	4.15
CNB-211	CNT-211	.1-.1	1000	4 1/8	1 1/2	4.45
CNB-221	CNT-221	.25-.25	1000	4 1/8	2 1/2	4.55
CNB-3151	CNT-3151	.05-.05-.05	1000	4 1/8	1 1/2	4.95
CNB-311	CNT-311	.1-.1-1	1000	4 1/8	2 1/2	5.30

CAB—CAT

Catalog No.	Mfd.	Voltage DC Working	—Dimensions—			List Price
			T	W	H	
CAB-154	CAT-154	.05	400	1 1/8	1	\$2.65
CAB-14	CAT-14	.1	400	1 1/8	1	2.85
CAB-24	CAT-24	.25	400	1 1/8	1 1/2	2.90
CAB-54	CAT-54	.5	400	1 1/8	2	2.95
CAB-104	CAT-104	1.0	400	1 1/8	2 1/2	3.30
CAB-156	CAT-156	.05	600	1 1/8	1 1/2	2.80
CAB-16	CAT-16	.1	600	1 1/8	1 1/2	2.90
CAB-26	CAT-26	.25	600	1 1/8	1 1/2	2.95
CAB-56	CAT-56	.5	600	1 1/8	2	3.05
CAB-106	CAT-106	1.0	600	1 1/8	2 1/2	3.40
CAB-151	CAT-151	.05	1000	1 1/8	1 1/2	2.85
CAB-11	CAT-11	.1	1000	1 1/8	1 1/2	2.95
CAB-21	CAT-21	.25	1000	1 1/8	2	3.05
CAB-51	CAT-51	.5	1000	1 1/8	2 1/2	3.30

SPRAGUE MICA CAPACITORS

Twice Tested for R-F Characteristics

Sprague Mica Capacitors provide maximum quality for R-F applications where exacting requirements involving low-power factor and high-insulation resistance at high frequencies must be met. The line includes types for every requirement ranging from the tiny "toothpick" IFM types to the giant ceramic-jacketed types 40C. Each type incorporates outstanding developments based on far-reaching Sprague wartime engineering.

Mica units are perhaps the most critical of all capacitor types to produce properly—and it is in the handling of these essential details that Sprague engineering and production excels. Beginning with selection and handling of the mica itself, extreme care is taken in every operation to assure completed units which, although they look like conventional units on the surface, will far surpass ordinary mica capacitors in actual service.

Stocks of raw mica are carefully selected. So critical are Sprague requirements that far more mica is rejected than is actually selected for use. The selected mica is then hand split and each piece electrically graded by exclusive Sprague methods.

Particular care is exercised in the interleaving of section foils and in connecting them to terminals through specially designed low-resistance R-F bonds. Perhaps most important of all is the fact that each and every Sprague Mica Capacitor section receives a painstaking radio frequency test before being encased in its mold. After this test, each section is carefully impregnated and moisture-proofed prior to the molding operation.

Upon completion, all Sprague Mica Capacitors required to carry large R-F currents are actually R-F current tested for their peak ratings. This test combined with thorough testing before molding assures the serviceman, amateur, experimenter or industrial user of units of utmost dependability for any application or any condition of use.

SPRAGUE MS SILVER MICA CAPACITORS

Catalog Nos.	Dimensions		
	L	W	T
MS-55 through MS-35	3 1/2	1 1/2	3/8
MS-35 through MS-23	3 1/2	3/4	3/8
MS-24 through MS-28	5 1/2	5/8	1 1/8
MS-29 through MS-11	1	5/8	1 1/8

Standard Capacity Tolerance ±5%

Catalog No.	Mfd.	—DC Voltage—		List Price
		Working	Test	
MS-55	.000005	500	1000	\$0.45
MS-41	.00001	500	1000	.40
MS-415	.000015	500	1000	.40
MS-42	.00002	500	1000	.40
MS-425	.000025	500	1000	.40
MS-43	.00003	500	1000	.40
MS-44	.00004	500	1000	.40
MS-45	.00005	500	1000	.40
MS-46	.00006	500	1000	.40
MS-47	.00007	500	1000	.40
MS-31	.0001	500	1000	.40
MS-32	.0002	500	1000	.45
MS-33	.0003	500	1000	.55
MS-34	.0004	500	1000	.65
MS-35	.0005	500	1000	.70
MS-36	.0006	500	1000	.80
MS-37	.0007	500	1000	.85
MS-38	.0008	500	1000	.95
MS-39	.0009	500	1000	1.00
MS-21	.001	500	1000	1.10
MS-22	.002	500	1000	1.35
MS-23	.003	500	1000	2.05
MS-24	.004	500	1000	2.15
MS-25	.005	500	1000	2.25
MS-26	.006	500	1000	2.40
MS-27	.007	300	600	2.60
MS-28	.008	300	600	2.80
MS-29	.009	300	600	3.10
MS-11	.01	300	600	3.40

SPRAGUE CAPACITORS



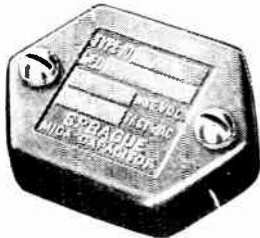
MICA TYPES (continued)



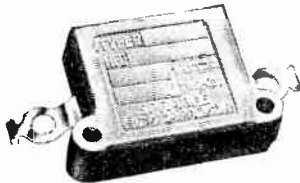
TYPES MS
and 1FM



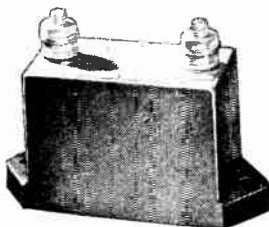
TYPES 3AFM
3BFM and 3CFM



TYPES 7FM
8FM and 9FM



TYPES XFM
YFM and ZFM



TYPES 1MC
and 2MC

SPRAGUE 1FM STANDARD CAPACITY TOLERANCE ±20%

Catalog No.	Mfd.	—DC Voltage—		List Price
		Working	Test	
1FM-44	.00004	500	1000	\$0.20
1FM-45	.00005	500	1000	.20
1FM-475	.000075	500	1000	.20
1FM-31	.0001	500	1000	.20
1FM-315	.00015	500	1000	.20
1FM-32	.0002	500	1000	.20
1FM-325	.00025	500	1000	.25
1FM-335	.00035	500	1000	.25
1FM-34	.0004	500	1000	.25
1FM-35	.0005	500	1000	.25
1FM-37	.0007	500	1000	.25
1FM-21	.001	500	1000	.30
1FM-215	.0015	500	1000	.30
1FM-22	.002	500	1000	.40
1FM-23	.003	500	1000	.50
1FM-24	.004	500	1000	.55
1FM-25	.005	500	1000	.60
1FM-26	.006	500	1000	.75
1FM-27	.007	300	600	.90
1FM-28	.008	300	600	1.00
1FM-29	.009	300	600	1.00
1FM-11	.01	300	600	1.20

Catalog Nos.	Dimensions		
	L	W	T
1FM-44 through 1FM-35	1 1/2	1 1/2	1/8
1FM-37 through 1FM-23	1 1/2	1 1/2	1/8
1FM-24 through 1FM-28	1 1/2	1 1/2	1/8
1FM-29 through 1FM-11	1 1/2	1 1/2	1/8

SPRAGUE 3AFM 3BFM & 3CFM STANDARD CAPACITY TOLERANCE ±10%

Catalog No.	Mfd.	—DC Voltage—		List Price
		Working	Test	
3AFM-25	.005	300	600	\$0.60
3AFM-26	.006	300	600	.75
3AFM-27	.007	300	600	.90
3AFM-28	.008	300	600	1.00
3AFM-11	.01	300	600	1.20
3AFM-115	.015	300	600	1.00

Catalog No.	Mfd.	—DC Voltage—		List Price
		Working	Test	
3BFM-31	.0001	500	1000	.20
3BFM-32	.0002	500	1000	.20
3BFM-325	.00025	500	1000	.25
3BFM-33	.0003	500	1000	.25
3BFM-34	.0004	500	1000	.25
3BFM-35	.0005	500	1000	.25
3BFM-21	.001	500	1000	.30
3BFM-215	.0015	500	1000	.30
3BFM-22	.002	500	1000	.40
3BFM-225	.0025	500	1000	.45
3BFM-23	.003	500	1000	.50
3BFM-24	.004	500	1000	.55
3BFM-25	.005	500	1000	.60
3BFM-26	.006	500	1000	.75
3BFM-27	.007	500	1000	.90
3BFM-28	.008	500	1000	1.00

Catalog No.	Mfd.	—DC Voltage—		List Price
		Working	Test	
3CFM-45	.00005	1000	2000	.60
3CFM-31	.0001	1000	2000	.60
3CFM-32	.0002	1000	2000	.60
3CFM-325	.00025	1000	2000	.60
3CFM-33	.0003	1000	2000	.70
3CFM-34	.0004	1000	2000	.70
3CFM-35	.0005	1000	2000	.70
3CFM-21	.001	1000	2000	.75
3CFM-215	.0015	1000	2000	.80
3CFM-22	.002	1000	2000	.80
3CFM-225	.0025	1000	2000	.80

Catalog Nos.	Dimensions		
	L	W	T
3AFM Types	1 1/2	1 1/2	1/8
3BFM Types	1 1/2	1 1/2	1/8
3CFM Types	1 1/2	1 1/2	1/8

SPRAGUE 7FM 8FM & 9FM STANDARD CAPACITY TOLERANCE ±10%

Catalog No.	Mfd.	—DC Voltage—		List Price
		Working	Test	
7FM-45	.00005	600	1200	\$0.85
7FM-31	.0001	600	1200	.85
7FM-315	.00015	600	1200	.85
7FM-32	.0002	600	1200	.85
7FM-325	.00025	600	1200	.85
7FM-35	.0005	600	1200	.85
7FM-21	.001	600	1200	.85
7FM-22	.002	600	1200	.90
7FM-225	.0025	600	1200	1.00
7FM-23	.003	600	1200	1.20
7FM-24	.004	600	1200	1.20
7FM-25	.005	600	1200	1.20
7FM-26	.006	600	1200	1.40
7FM-28	.008	600	1200	1.45
7FM-11	.01	600	1200	1.95
7FM-115	.015	600	1200	2.25
7FM-12	.02	600	1200	2.50
7FM-13	.03	600	1200	3.45
7FM-14	.04	600	1200	4.10
7FM-15	.05	600	1200	5.35
7FM-16	.06	600	1200	6.20

Catalog Nos.	Dimensions		
	L	W	T
7FM-45 through 7FM-13	1 3/4	1 3/4	1/8
7FM-14 through 7FM-16	1 3/4	1 3/4	1/8

Catalog No.	Mfd.	—DC Voltage—		List Price
		Working	Test	
8FM-45	.00005	1200	2500	\$1.00
8FM-31	.0001	1200	2500	1.00
8FM-315	.00015	1200	2500	1.00
8FM-32	.0002	1200	2500	1.00
8FM-325	.00025	1200	2500	1.00
8FM-35	.0005	1200	2500	1.00
8FM-21	.001	1200	2500	1.25
8FM-22	.002	1200	2500	1.90
8FM-225	.0025	1200	2500	2.00
8FM-23	.003	1200	2500	2.20
8FM-24	.004	1200	2500	2.20
8FM-25	.005	1200	2500	2.40
8FM-26	.006	1200	2500	2.40
8FM-28	.008	1200	2500	3.10
8FM-11	.01	1200	2500	3.90
8FM-115	.015	1200	2500	4.65
8FM-12	.02	1200	2500	5.45
8FM-125	.025	1200	2500	6.10
8FM-13	.03	1200	2500	6.40

Catalog Nos.	Dimensions		
	L	W	T
8FM-45 through 8FM-115	1 3/4	1 3/4	1/8
8FM-12 through 8FM-13	1 3/4	1 3/4	1/8

Catalog No.	Mfd.	—DC Voltage—		List Price
		Working	Test	
9FM-45	.00005	2500	5000	\$1.25
9FM-31	.0001	2500	5000	1.25
9FM-325	.00025	2500	5000	1.50
9FM-35	.0005	2500	5000	1.70
9FM-21	.001	2500	5000	2.05
9FM-22	.002	2500	5000	3.10
9FM-225	.0025	2500	5000	3.45
9FM-23	.003	2500	5000	3.80
9FM-24	.004	2500	5000	4.35
9FM-25	.005	2500	5000	4.70
9FM-26	.006	2500	5000	4.85
9FM-28	.008	2500	5000	5.30
9FM-11	.01	2500	5000	5.70
9FM-115	.015	2500	5000	6.20

Catalog Nos.	Dimensions		
	L	W	T
9FM-45 through 9FM-26	1 3/4	1 3/4	1/8
9FM-28 through 9FM-115	1 3/4	1 3/4	1/8

SPRAGUE CAPACITORS



SPRAGUE XFM YFM & ZFM

STANDARD CAPACITY TOLERANCE $\pm 10\%$
(See Photos, Page P-59.)

XFM				
Catalog No.	Mfd.	—DC Voltage— Working Test	List Price	
XFM-45	.00005	600 1200	\$0.70	
XFM-31	.0001	600 1200	.70	
XFM-32	.0002	600 1200	.70	
XFM-325	.00025	600 1200	.70	
XFM-33	.0003	600 1200	.70	
XFM-34	.0004	600 1200	.70	
XFM-35	.0005	600 1200	.70	
XFM-21	.001	600 1200	.70	
XFM-215	.0015	600 1200	.70	
XFM-22	.002	600 1200	.80	
XFM-225	.0025	600 1200	.90	
XFM-23	.003	600 1200	1.00	
XFM-24	.004	600 1200	1.00	
XFM-25	.005	600 1200	1.00	
XFM-26	.006	600 1200	1.20	
XFM-27	.007	600 1200	1.30	
XFM-28	.008	600 1200	1.40	
XFM-11	.01	600 1200	1.60	
XFM-12	.02	600 1200	2.20	
XFM-13	.03	600 1200	2.95	

Catalog Nos.	Dimensions		
	L	W	T
XFM-45 through XFM-11	1 1/2	1 1/4	1 1/2
XFM-12 through XFM-13	1 5/8	1 1/8	1 1/2

YFM				
Catalog No.	Mfd.	—DC Voltage— Working Test	List Price	
YFM-45	.00005	1200 2500	\$1.00	
YFM-31	.0001	1200 2500	1.00	
YFM-32	.0002	1200 2500	1.00	
YFM-325	.00025	1200 2500	1.00	
YFM-33	.0003	1200 2500	1.00	
YFM-34	.0004	1200 2500	1.00	
YFM-35	.0005	1200 2500	1.00	
YFM-21	.001	1200 2500	1.25	
YFM-215	.0015	1200 2500	1.60	
YFM-22	.002	1200 2500	1.90	
YFM-225	.0025	1200 2500	2.00	
YFM-23	.003	1200 2500	2.10	
YFM-24	.004	1200 2500	2.10	
YFM-25	.005	1200 2500	2.40	
YFM-26	.006	1200 2500	2.40	
YFM-27	.007	1200 2500	2.75	
YFM-28	.008	1200 2500	3.10	
YFM-11	.01	1200 2500	3.90	

Catalog Nos.	Dimensions		
	L	W	T
YFM-45 through YFM-24	1 5/8	1 3/4	1 1/2
YFM-25 through YFM-11	1 5/8	1 3/8	1 1/2

ZFM				
Catalog No.	Mfd.	—DC Voltage— Working Test	List Price	
ZFM-45	.00005	2500 5000	\$1.25	
ZFM-31	.0001	2500 5000	1.25	
ZFM-32	.0002	2500 5000	1.40	
ZFM-325	.00025	2500 5000	1.50	
ZFM-33	.0003	2500 5000	1.55	
ZFM-34	.0004	2500 5000	1.65	
ZFM-35	.0005	2500 5000	1.70	
ZFM-21	.001	2500 5000	2.05	
ZFM-215	.0015	2500 5000	2.70	
ZFM-22	.002	2500 5000	3.10	
ZFM-23	.003	2500 5000	3.80	
ZFM-24	.004	2500 5000	4.35	
ZFM-25	.005	2500 5000	4.70	

Catalog Nos.	Dimensions		
	L	W	T
ZFM-45 through ZFM 22	1 5/8	1 1/4	1 1/2
ZFM-23 through ZFM-25	1 5/8	1 1/4	1 1/2

SPRAGUE 1MC & 2MC

STANDARD CAPACITY TOLERANCE $\pm 5\%$
(See Photos, Page P-59.)

1MC				
Catalog No.	Mfd.	Voltage AC Peak	List Price	
1MC-45	.00005	3000	\$10.80	
1MC-31	.0001	3000	10.80	
1MC-315	.00015	3000	10.80	
1MC-32	.0002	3000	10.80	
1MC-325	.00025	3000	10.80	
1MC-33	.0003	3000	10.80	
1MC-34	.0004	3000	10.80	
1MC-35	.0005	3000	10.80	
1MC-36	.0006	3000	10.80	
1MC-37	.0007	3000	10.80	
1MC-38	.0008	3000	10.80	
1MC-21	.001	3000	10.80	
1MC-215	.0015	3000	10.80	
1MC-22	.002	3000	10.80	
1MC-23	.003	2000	10.80	
1MC-24	.004	2000	10.80	
1MC-25	.005	2000	10.80	
1MC-26	.006	2000	10.80	
1MC-27	.007	2000	10.80	
1MC-28	.008	1500	10.80	
1MC-11	.01	1000	10.80	
1MC-115	.015	1000	10.80	
1MC-12	.02	1000	11.50	
1MC-13	.03	500	11.50	
1MC-14	.04	500	11.50	
1MC-15	.05	250	11.50	
1MC-1	.1	250	12.00	

Catalog No.	Dimensions		
	L	W	H
1MC	2	1 1/2	1 1/2

2MC

Catalog No.	Mfd.	Voltage AC Peak	List Price
2MC-45	.00005	5000	\$14.40
2MC-31	.0001	5000	14.40
2MC-315	.00015	5000	14.40
2MC-32	.0002	5000	14.40
2MC-325	.00025	5000	14.40
2MC-33	.0003	5000	14.40
2MC-34	.0004	5000	14.40
2MC-35	.0005	5000	14.40
2MC-36	.0006	5000	14.40
2MC-37	.0007	5000	14.40
2MC-38	.0008	5000	14.40
2MC-21	.001	5000	14.40
2MC-215	.0015	5000	14.40
2MC-22	.002	5000	14.40
2MC-23	.003	3000	14.40
2MC-24	.004	3000	14.40
2MC-25	.005	3000	14.40
2MC-26	.006	3000	14.40
2MC-27	.007	3000	14.40
2MC-28	.008	2000	14.40
2MC-11	.01	2000	14.40
2MC-115	.015	2000	14.40
2MC-12	.02	2000	16.00
2MC-13	.03	1500	14.40
2MC-14	.04	1500	14.40
2MC-15	.05	1500	14.50
2MC-16	.06	1000	15.00
2MC-17	.07	1000	15.50
2MC-18	.08	500	16.00
2MC-1	.1	500	16.50

Catalog No.	Dimensions		
	L	W	H
2MC	2 1/4	1 1/4	1 1/2

SPRAGUE 1CC & 2CC

STANDARD CAPACITY TOLERANCE $\pm 5\%$
(See Photos, Page P-61.)

1CC				
Catalog No.	Mfd.	Voltage AC Peak	List Price	
1CC-45	.00005	6000	\$26.40	
1CC-475	.000075	6000	27.75	
1CC-31	.0001	6000	28.80	
1CC-315	.00015	6000	31.20	
1CC-32	.0002	6000	31.20	
1CC-325	.00025	6000	31.20	
1CC-33	.0003	6000	32.40	
1CC-34	.0004	6000	32.40	
1CC-35	.0005	6000	32.40	
1CC-36	.0006	6000	32.40	
1CC-37	.0007	6000	32.40	
1CC-38	.0008	6000	32.40	
1CC-21	.001	6000	32.40	
1CC-215	.0015	6000	33.60	
1CC-22	.002	6000	33.60	
1CC-23	.003	6000	34.80	
1CC-24	.004	6000	34.80	
1CC-25	.005	4000	34.80	
1CC-26	.006	4000	34.80	
1CC-27	.007	4000	34.80	
1CC-28	.008	4000	34.80	
1CC-11	.01	4000	36.00	
1CC-115	.015	3000	36.00	
1CC-12	.02	2000	36.00	
1CC-125	.025	2000	37.50	
1CC-13	.03	1500	39.00	
1CC-14	.04	1500	41.00	
1CC-15	.05	1500	42.50	
1CC-16	.06	1500	44.00	
1CC-17	.07	1000	45.00	
1CC-18	.08	1000	46.00	
1CC-1	.1	1000	48.00	

Catalog No.	Dimensions		
	D	D	H
1CC	2 1/2	2 1/2	2 1/2

2CC				
Catalog No.	Mfd.	Voltage AC Peak	List Price	
2CC-45	.00005	10000	\$48.00	
2CC-475	.000075	10000	48.00	
2CC-31	.0001	10000	48.00	
2CC-315	.00015	10000	45.60	
2CC-32	.0002	10000	45.60	
2CC-33	.0003	10000	45.60	
2CC-34	.0004	10000	45.60	
2CC-35	.0005	10000	45.60	
2CC-36	.0006	10000	45.60	
2CC-37	.0007	10000	45.60	
2CC-38	.0008	10000	45.60	
2CC-21	.001	10000	45.60	
2CC-215	.0015	10000	45.60	
2CC-22	.002	10000	45.60	
2CC-23	.003	8000	45.60	
2CC-24	.004	8000	45.60	
2CC-25	.005	6000	48.00	
2CC-26	.006	5000	48.00	
2CC-27	.007	5000	48.00	
2CC-28	.008	5000	48.00	
2CC-11	.01	5000	48.00	
2CC-115	.015	4000	48.00	
2CC-12	.02	3000	48.00	
2CC-125	.025	3000	50.00	
2CC-13	.03	2000	51.00	
2CC-14	.04	2000	54.00	
2CC-15	.05	2000	56.00	
2CC-16	.06	2000	57.50	
2CC-17	.07	1500	59.00	
2CC-18	.08	1500	60.00	
2CC-1	.1	1500	62.50	

Catalog No.	Dimensions		
	D	D	H
2CC	3 1/2	3 1/2	3

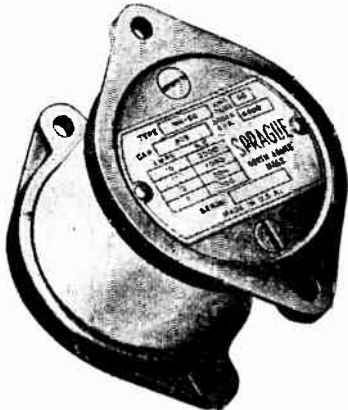
SPRAGUE CAPACITORS



MICA TYPES

(continued)

SPRAGUE 3CC-4CC



TYPES 1CC, 2CC,
3CC and 4CC

STANDARD CAPACITY TOLERANCE OF
TYPES 3CC AND 4CC IS $\pm 5\%$.

3CC				4CC			
Catalog No.	Mfd.	Voltage AC Peak	List Price	Catalog No.	Mfd.	Voltage AC Peak	List Price
3CC-45	.00005	20000	\$72.00	4CC-31	.0001	30000	\$114.00
3CC-475	.000075	20000	78.00	4CC-315	.00015	30000	123.00
3CC-31	.0001	20000	80.40	4CC-32	.0002	30000	132.00
3CC-315	.00015	20000	80.40	4CC-33	.0003	30000	132.00
3CC-32	.0002	20000	80.40	4CC-34	.0004	30000	132.00
3CC-33	.0003	20000	80.40	4CC-35	.0005	30000	132.00
3CC-34	.0004	20000	80.40	4CC-36	.0006	30000	132.00
3CC-35	.0005	20000	80.40	4CC-37	.0007	30000	126.00
3CC-36	.0006	20000	80.40	4CC-38	.0008	30000	126.00
3CC-37	.0007	20000	80.40	4CC-21	.001	30000	126.00
3CC-38	.0008	20000	78.00	4CC-215	.0015	25000	114.00
3CC-21	.001	20000	78.00	4CC-22	.002	20000	114.00
3CC-215	.0015	15000	78.00	4CC-23	.003	20000	120.00
3CC-22	.002	15000	78.00	4CC-24	.004	15000	120.00
3CC-23	.003	12000	78.00	4CC-25	.005	15000	138.00
3CC-24	.004	12000	78.00	4CC-26	.006	15000	138.00
3CC-25	.005	10000	79.20	4CC-27	.007	15000	144.00
3CC-26	.006	10000	82.00	4CC-28	.008	12000	144.00
3CC-27	.007	10000	84.00	4CC-29	.009	12000	144.00
3CC-28	.008	10000	86.00	4CC-11	.01	10000	150.00
3CC-11	.01	8000	90.00	4CC-115	.015	8000	144.00
3CC-115	.015	5000	86.00	4CC-12	.02	6000	138.00
3CC-12	.02	5000	86.00	4CC-13	.03	6000	138.00
3CC-125	.025	3000	79.20	4CC-14	.04	5000	144.00
3CC-13	.03	3000	79.20	4CC-15	.05	5000	150.00
3CC-14	.04	3000	79.20	4CC-16	.06	5000	160.00
3CC-15	.05	3000	79.20	4CC-17	.07	4000	165.00
3CC-16	.06	3000	83.00	4CC-18	.08	3000	170.00
3CC-17	.07	2000	86.00	4CC-1	.1	3000	180.00
3CC-18	.08	2000	90.00				
3CC-1	.1	2000	95.00				

Catalog No.	Dimensions	
	D	H
3CC	5	4

Catalog No.	Dimensions	
	D	H
4CC	5	5 3/4

SPRAGUE HARDWARE

Sprague Mounting Clamps and Straps provide quick, dependable means for securing a wide variety of capacitors and resistors to a mounting surface. All clamps and straps are made from plated steel.

CMC Vertical Mounting Clamps for Cylindrical Capacitors (Figs. 1 and 2) are ideally suited for vertical or "above chassis" mounting of Sprague capacitor types AP, CL, BB, EL, HL, V, LM, LS, OT, PC, PLS, RW, S, or other round can units.

The RMC Wrap Around Clamps for Rectangular Capacitors (Fig. 3) are designed for mounting Type CR Capacitors or other rectangular units.

Type TMS Mounting Straps for Tubular Capacitors (Fig. 4) fit any tubular capacitor or resistor having a diameter of between 1/4" and 1 1/2", inclusive. They may be used with Sprague Types AP, PA, SW, TA, TC, TH, TR, TMC, TP or other tubular units as well with Standard Radio Shack Types 5KT 50T, 6KT 100T, 25KT 250T, 50KT 500T and 125KT 1250T.

VERTICAL MOUNTING CLAMPS FOR CYLINDRICAL CAPACITORS

Catalog No.	A Diameter	B Mounting Radius	Figure No.	List Price
CMC-12	1/4"	1/8"	1	\$0.08
CMC-16	1/2"	1/8"	1	.08
CMC-20	3/8"	1/8"	1	.08
CMC-22	1/2"	1/8"	1	.08
CMC-24	1 1/2"	1/8"	1	.12
CMC-28	1 1/2"	1/8"	1	.34
CMC-32	1 1/2"	1/8"	2	.38
CMC-40	1 1/2"	1/8"	2	.56

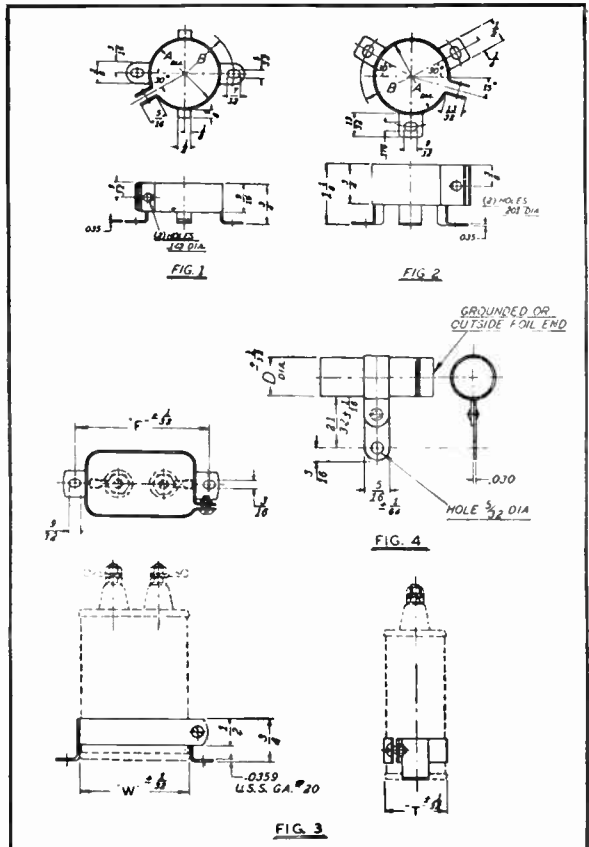
WRAP AROUND CLAMPS FOR RECTANGULAR CAPACITORS

Catalog No.	Dimensions		Figure No.	List Price
	T	W		
RMC-17	1 1/2"	1 1/2"	1	\$0.20
RMC-19	1 1/2"	1 1/2"	1	.20
RMC-20	1 1/2"	1 1/2"	1	.20
RMC-28	1 1/2"	1 1/2"	1	.20
RMC-36	2 1/2"	1 1/2"	1	.25
RMC-40	2 1/2"	1 1/2"	1	.25
RMC-51	2 1/2"	1 1/2"	1	.25
RMC-73	4 1/2"	1 1/2"	1	.40
RMC-128	4 1/2"	1 1/2"	1	.50

MOUNTING STRAPS FOR TUBULAR CAPACITORS

Catalog No.	Tube Diameter	Figure No.	List Price	Catalog No.	Tube Diameter	Figure No.	List Price
TMS-4	1 1/4"	4	\$0.06	TMS-14	1 1/4"	4	\$0.06
TMS-5	1 1/4"	4	.06	TMS-15	1 1/4"	4	.06
TMS-6	1 1/4"	4	.06	TMS-16	1 1/4"	4	.10
TMS-7	1 1/4"	4	.06	TMS-17	1 1/4"	4	.10
TMS-8	1 1/4"	4	.06	TMS-18	1 1/4"	4	.10
TMS-9	1 1/4"	4	.06	TMS-19	1 1/4"	4	.10
TMS-10	1 1/4"	4	.06	TMS-20	1 1/4"	4	.15
TMS-11	1 1/4"	4	.06	TMS-21	1 1/4"	4	.15
TMS-12	1 1/4"	4	.06	TMS-22	1 1/4"	4	.15
TMS-13	1 1/4"	4	.06				

*Trademark Reg. U. S. Pat. Off.



SPRAGUE KOOLOHMS



THE RESISTORS WITH THE CERAMIC-COATED WIRE INSULATION

Sprague Koolohm Wire-Wound Resistors are wound with wire that is insulated before it is wound with a flexible, ceramic coating that is impervious to heat as high as 1000° C. In addition, each resistor is doubly protected by a glazed ceramic coating and new type of end seals which guard it effectively against any moisture or other climatic conditions. Ordinary resistors may be designed to provide some degree of "tropicalized" protection at extra cost. STANDARD Koolohms give FULL protection at regular prices!

No Other Resistors Have These Features

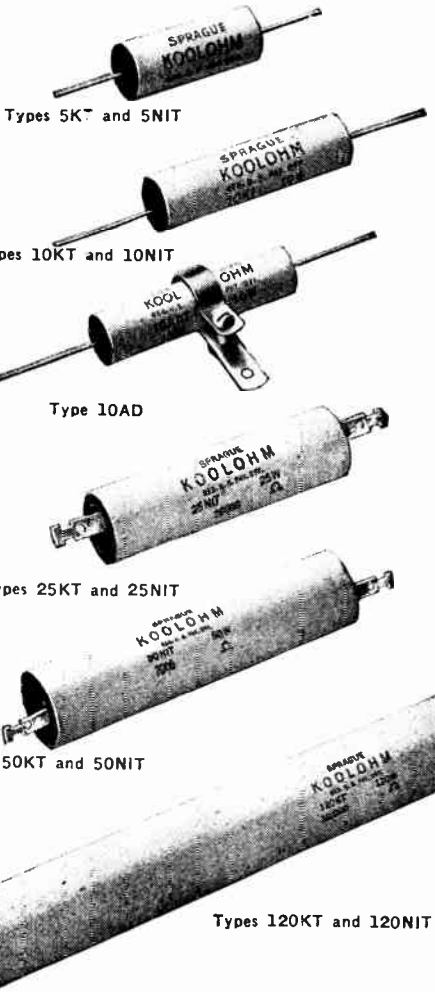
Because of the complete protection afforded by both their wire insulation and outer ceramic shells, Koolohms may be mounted anywhere, even flat against a chassis or against grounded parts. They can safely be used at full wattage ratings, even on the high-resistance values because of the excellent insulation at high temperatures. No danger of shorts

or current leakage! Thanks to their ceramic wire insulation, Koolohms can be wound in layers. This means higher ratings in much smaller physical sizes. Even more important, larger, sturdier wire sizes can be used. Actually, the wire sizes in Koolohm Resistors average 2 1/4 times greater in cross-sectional area than those in ordinary resistors of the same size!

High Insulation Resistance

Also standard Koolohms have the high insulation resistance to ground required for television and other high-voltage uses—10,000 volts from the surface of their sturdy ceramic jackets to their resistance elements!

The following listings include only the Sprague Koolohm Wire-Wound Resistor types commonly supplied for radio repair service and amateur radio applications. Various other types are also regularly produced in large quantities and to the most exacting standard or special applications. All have been thoroughly proved and tested for the most exacting military, naval and aircraft applications.



5 Watts

1 1/2" x 1 1/2" Diameter
CATALOG TYPES 5KT
and 5NIT (Non-Inductive)

List Price	Resistance (Non-Inductive)	Max. Current	Max. Voltage	List Price
5NIT	Ohms	M.A.	Volts	5KT
\$0.78	5	1000	5.00	\$0.52
.78	10	707	7.07	.52
.78	15	587	8.67	.52
.78	20	500	10	.52
.78	25	416	11	.52
.78	30	406	12	.52
.78	40	354	14	.52
.78	50	316	15	.52
.78	75	258	19	.52
.78	100	224	22	.52
.78	150	183	27	.52
.78	200	158	31	.52
.78	250	141	35	.52
.78	300	129	38	.52
.78	400	112	44	.52
.78	500	100	50	.52
.78	600	91	51	.52
.78	700	81	59	.52
.78	800	79	63	.52
.78	900	74	67	.52
.78	1000	70	70	.52
.91	1250	63	79	.52
.91	1500	57	86	.52
.91	1750	53	93	.52
.91	2000	50	100	.52
.98	2500	41	112	.52
.98	3000	35	125	.52
.98	4000	31	158	.52
1.04	5000	28	173	.54
-	7000	26	187	.54
-	7500	25	191	.54
-	8000	25	200	.54
-	10000	22	212	.54
-	10000	22	224	.54
-	12000	20	250	.60
-	14000	18	265	.60
-	15000	18	271	.60
-	20000	15	333	.66
-	25000	14	354	.84
-	30000	13	387	.90
-	40000	11	447	1.02

10 Watts

1 1/2" x 1 1/2" Diameter
CATALOG TYPES 10KT
and 10NIT (Non-Inductive)

List Price	Resistance (Non-Inductive)	Max. Current	Max. Voltage	List Price
10NIT	Ohms	M.A.	Volts	10KT
\$0.78	5	1414	7.07	\$0.59
.78	10	1000	10	.59
.78	15	830	12.3	.59
.78	20	707	14.1	.59
.78	25	630	15.8	.59
.78	30	575	17.4	.59
.78	40	500	20	.59
.78	50	447	22.4	.59
.78	75	365	27.4	.59
.78	100	316	31.6	.59
.78	150	259	38.7	.59
.78	200	223	44.6	.59
.78	250	200	50	.59
.78	300	182	54.7	.59
.78	400	158	63.3	.59
.78	500	141	70.7	.59
.78	600	129	77.6	.59
.78	700	119	81	.59
.78	750	115	86.9	.59
.78	800	112	89.5	.59
.78	900	105	95	.59
.78	1000	100	100	.59
.91	1250	89	112	.59
.91	1500	81	123	.59
.91	1750	75	133	.59
.91	2000	70	143	.59
.98	2500	63	158	.59
.98	3000	57	174	.59
.98	4000	50	200	.59
1.04	5000	41	227	.59
1.04	6000	38	245	.59
1.17	7500	36	275	.59
1.17	8000	35	283	.59
1.17	9000	33	300	.59
1.50	10000	32	316	.59
-	12000	29	346	.65
-	14000	26	384	.65
-	15000	25	400	.65
-	17500	24	419	.72
-	20000	21	475	.72
-	25000	20	500	.84
-	30000	18	555	.90
-	40000	16	632	1.08
-	50000	14	708	1.20
-	60000	13	780	1.50
-	70000	12	810	.68

STANDARD RESISTANCE TOLERANCE ±5%

Type X-T only.

SPRAGUE KOOLOHMS



10 Watts Adjustable† 1 1/8" x 1 1/8" Diameter CATALOG TYPE No.10-AD				25 Watts 2 7/8" x 3/4" Diameter CATALOG TYPES 25KT and 25NIT (Non-Inductive)				50 Watts 4" x 7/8" Diameter CATALOG TYPES 50KT and 50NIT (Non-Inductive)				120 Watts 8 1/4" x 1 1/4" Diameter CATALOG TYPES 120KT & 120NIT (Non-Inductive)						
Resistance Ohms	Maximum Current M.A.	Maximum Volts	List Price	List Price 25NIT (Non-Induc.)	Resistance Ohms	Maximum Current M.A.	Maximum Volts	List Price Type 25KT	List Price 50NIT (Non-Induc.)	Resistance Ohms	Maximum Current M.A.	Maximum Volts	List Price Type 50KT	List Price 120NIT (Non-Induc.)	Resistance Ohms	Maximum Current M.A.	Maximum Volts	List Price Type 120KT
10	1000	10	\$0.98	\$1.98	5	2.23	11	\$1.08	\$2.82	5	3.16	15	1.56	\$6.60	5	4.9	24.5	\$4.80
25	630	15.8	.98	1.98	10	1.78	15	1.08	2.82	10	2.23	22	1.86	6.60	10	3.46	34.6	4.60
50	447	22.4	.98	1.98	25	1.0	25	1.08	2.82	25	1.11	35	1.36	6.60	25	2.18	51.6	4.00
100	316	31.6	.98	1.98	50	.707	35	1.08	2.82	50	1.00	50	1.56	6.60	50	1.54	77.4	4.60
150	259	38.7	.98	1.98	75	.577	43	1.08	2.82	75	.816	61	1.96	6.60	75	1.26	91.8	4.60
200	223	44.6	.98	1.98	100	.500	50	1.08	2.82	100	.707	70	1.56	6.60	100	1.09	109.5	4.60
250	200	50	.98	1.98	150	.408	61	1.08	2.82	150	.577	86	1.86	6.60	150	.884	134	4.60
300	182	51.7	.98	1.98	200	.353	70	1.08	2.82	200	.500	100	1.56	6.60	200	.775	155	4.60
400	158	63.3	.98	1.98	250	.316	79	1.08	2.82	250	.447	111	1.56	6.60	250	.692	173	4.60
500	141	70.7	.98	1.98	500	.223	111	1.08	2.82	500	.316	158	1.56	6.60	500	.490	245	4.60
750	115	86.9	.98	1.98	600	.191	122	1.08	2.82	600	.289	173	1.56	6.60	600	.446	268	4.60
1000	100	100	.98	1.98	750	.182	137	1.08	2.82	750	.258	193	1.56	6.60	750	.400	300	4.60
1500	81	123	.98	1.98	1000	.158	158	1.08	2.82	1000	.223	223	1.56	6.60	1000	.346	346	4.60
2000	70	143	.98	1.98	1300	.129	193	1.08	2.82	1500	.182	274	1.56	6.60	1500	.282	424	4.60
2500	63	158	.98	1.98	2000	.111	223	1.08	2.82	2000	.158	316	1.56	6.60	2000	.245	490	4.60
3000	57	174	.98	1.98	2500	.100	250	1.08	2.82	2500	.141	353	1.56	6.60	2500	.219	548	4.60
4000	50	200	.98	1.98	3000	.091	273	1.08	2.82	3000	.129	387	1.56	6.60	3000	.200	600	4.60
5000	44	227	.98	1.98	4000	.079	316	1.08	2.82	4000	.111	447	1.56	6.60	4000	.174	774	4.60
7500	36	275	.98	1.98	5000	.070	353	1.08	2.82	5000	.100	500	1.56	7.20	5000	.156	918	4.80
10000	32	316	.98	1.98	7500	.057	402	1.26	3.24	7500	.081	612	1.80	7.20	7500	.109	1095	4.80
				1.98	10000	.050	500	1.26	3.24	10000	.070	707	1.80	7.60	15000	.089	1310	5.00
				2.22	12000	.046	548	1.26	3.24	10000	.061	775	1.80	8.00	20000	.077	1550	5.20
				2.22	15000	.041	612	1.26	3.24	10000	.057	870	1.80	8.00	25000	.069	1733	5.20
				2.64	20000	.035	707	1.44	3.24	20000	.050	1000	1.80	8.40	50000	.049	2450	5.60
				2.64	25000	.032	790	1.44	3.24	25000	.041	1120	1.80		75000	.040	3000	6.35
					50000	.022	1118	1.80	3.90	50000	.032	1580	2.15		100000	.031	3160	7.10
					75000	.018	1370	2.15		75000	.026	1936	2.50					
					100000	.016	1580	2.40		100000	.022	2238	2.70					

Extra Band, \$0.10

†Adjustable resistors are not of tropicalized construction.

*Type KT only.

Other types not listed in this catalog include: **Hermetically-Sealed, Ferrule Terminal, Power Wire-Wound Resistors**, with power ratings of 15, 20, 40, 50, 90, 120 and 150 watts. These are the famous Sprague Koolohm "Grade 1, Class 1" resistors that are impervious to salt water, thermal shock, and corrosive atmospheres.

Precision Meter Multiplier Resistors, Wire-Wound, Hermetically-Sealed. Resistance values up to 7.5 megohms per unit. Three types, MFA, MFB, and MFC. Resistance tolerances of $\pm 0.5\%$ and stability of $\pm 0.1\%$. The most rugged meter multipliers in the world!

Voltage Divider Resistors. Wire-wound power resistors with ratings of 10, 15, and 25 watts. Designed for through bolt mounting as individual units, or in multiple sections of any size to provide tapped voltage dividers.

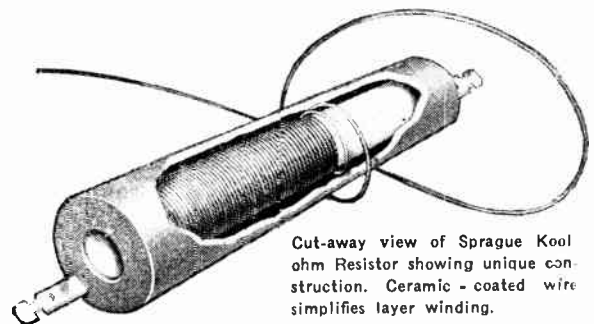
***MEGOMAX. High-resistance, High-Voltage, Resistors.** Ferrule terminal, hermetically-sealed, composition resistors of pressed and sintered ring construction, capable of high-temperature operation to 150° C. Three types with resistance values to 1000 megohms; power ratings of 6, 12 and 25 watts and voltages up to 20,000 volts.

BOBBIN Wire-Wound, Semi-Precision Resistors. Wound with ceramic-insulated wire on high-temperature plastic forms. Five high stability types with

power ratings of 1, 2, 2.5, 3 and 5 watts, and resistance values to 500,000 ohms. Resistance tolerance down to $\pm 0.5\%$.

Complete details on the above and other new types are contained in the Sprague Koolohm Industrial Resistor Catalog No. 100K, copy of which will gladly be sent on request by industrial users. Sprague engineers welcome the opportunity to be of assistance regarding industrial resistor applications.

*Trademark applied for.



Cut-away view of Sprague Koolohm Resistor showing unique construction. Ceramic-coated wire simplifies layer winding.

SPRAGUE FILTEROL



INTERFERENCE FILTERS

Sprague FILTEROL Radio Interference Filters are a direct outgrowth of highly successful Sprague wartime engineering research, and offer for civilian use a war-tested, practical filter that suppresses man-made radio noises and television "scrambles" on practically any application. They are small, completely self-contained, and easily installed. Applicable to any electrical device within their current and voltage ratings, they provide maximum noise suppression on radio broadcast bands. A study of the Attenuation Curve (available on request) illustrating typical FILTEROL noise suppression performance will show that this surpasses anything normally available in the past.

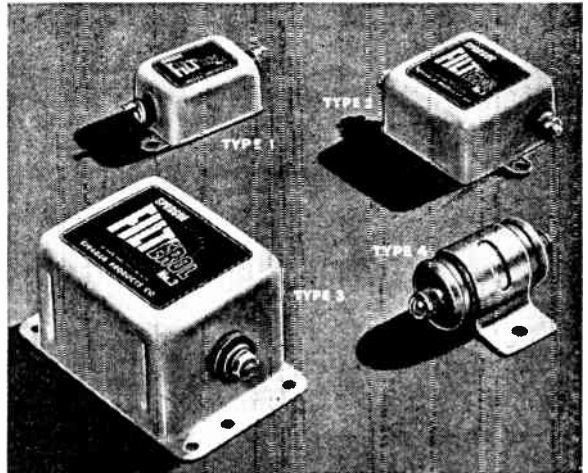
SPRAGUE FILTEROL TYPES 1, 2 and 3 are designed for connection in series with power supply lines to interference-producing devices. Their basic circuit is a special three-terminal network of which the can is one terminal. The filter selected should have a rating higher than the continuous running current of the device. A single FILTEROL connected in one side of the line is usually sufficient. However, in severe interference cases a FILTEROL in each power line may be necessary. For three-or-four wire systems, a FILTEROL in each wire is necessary.

FILTEROL TYPE 4 is a new, exclusive Sprague invention incorporating a Sprague HYPASS capacitor and provides exceptionally high attenuation at frequencies above 5MC. It is effective up to 150 MC or more. Intended for all small devices with continuous current ratings up to 20 amperes. Applied by mounting directly on the frame of the device to be filtered, and connecting the power supply line in series through the filter. In severe cases, a FILTEROL may be necessary in each line wire.

SPRAGUE IF TYPES

IF-15—A TRIPLE-SECTION FILTER for all small motor-operated devices. Especially designed to prevent accidental shocks from discharge of filter capacitors.

IF-21—COMPACT DUAL METAL-ENCASED TUBULAR FILTER for use across brushes of fractional horsepower motors with can grounded to motor frame. Also across line terminals of motors.



IF-11—A DUAL HIGH-CAPACITY FILTER with completely enclosed safety construction. Designed for motors over 1 horsepower and up to 220 volts AC or DC. Also used on high-current arcing or sparking devices.

IF-S1—SINGLE 2-LEAD FILTER SECTION with can completely insulated. For use across make-and-break contacts.

IF-37—3-SECTION DELTA-CONNECTED FILTER. Only one IR-37 required for each fluorescent lamp fixture. Also effective on make-and-break governor-type motors.

*Trademark Reg. U.S. Pat. Off.
†Trademark applied for

SPRAGUE FILTEROL TYPES

RATINGS

SPRAGUE IF TYPES

SPRAGUE FILTEROL TYPES			RATINGS	SPRAGUE IF TYPES		
FILTEROL 1	1 AMP.	115V AC or DC	List Price	IF-15	220V AC or DC	List Price
FILTEROL 2	10 AMP.	115V AC or DC	\$4.75	IF-11	220V AC or DC	\$1.90
FILTEROL 3	35 AMP.	115V AC or DC	9.75	IF-21	220V AC or DC	4.40
FILTEROL 4	20 AMP.	220V AC or DC	12.50	IF-S1	220V AC or DC	1.55
			2.75	IF-37	220V AC or DC	1.15
						1.50

NEW! SPRAGUE TO-3 DELUXE TEL-OHMIKE

Universal Capacitance and Resistor Analyzer with Built-in DC Volt-milliammeter



\$59.70 net

This fast, simplified operation is the keynote of the new TO-3 Deluxe Tel-ohmike. "Speedy check" locates open, intermittent, or shorted condensers WITHOUT REMOVING THEM FROM THE CIRCUIT. One pair of plainly marked binding posts and a total of only five controls assure quick, effective operation on all tests. Dial is of direct-reading, calibrated type, color coded to correspond to selector switch. It is easy to see, easy to read. In addition to all of its uses in radio work, Tel-ohmike checks motor-starting condensers, and measures insulation resistance of motors, transformers, etc.

SPECIFICATIONS

Capacity: 0.0001-2,000 MFD. in 4 ranges. measured with rated polarizing voltage applied.

Power Factor: 0-50% at 60 cycles. Resistance: 2.5 Ohms-25 Megs. in 5 ranges.

Insulation Resistance: 0-2500 Megohms (Direct reading on the meter). D.C. Meter Range: 0-15, 150, 750 volts — 0-1.5, 15, 75 V.A.

Electrolytic Leakage: Measured in M.A. at rated D.C. voltage. Capacity and power factor of electrolytic condensers. Size: 13 1/4" wide, 10 1/2" high, — 5" deep.

Power: 35 watts at 115 volts — 60 cycles. Shipping Weight: 15 lbs.

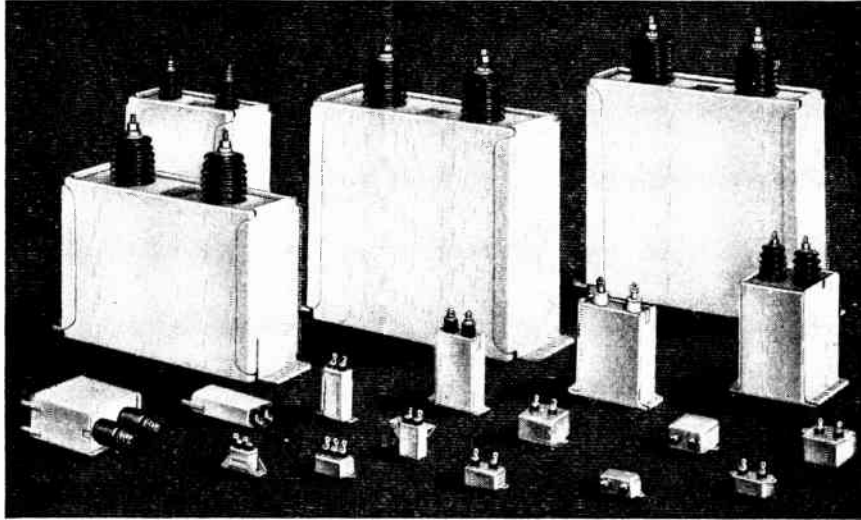
SPRAGUE PRODUCTS COMPANY, NORTH ADAMS, MASS. — CATALOG No. C-603



PYRANOL* CAPACITORS

*Trade-mark reg. U. S. Pat. Off.

In accordance with proposed joint Army-Navy specifications JAN-C-25 Amendment-1.

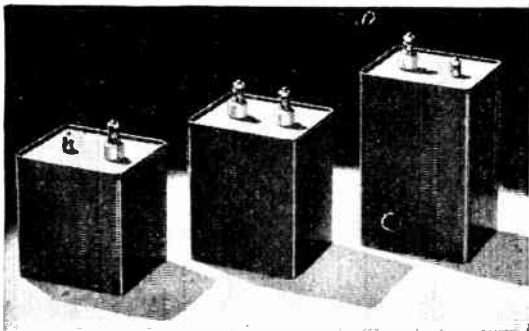


Case styles CP 53, 54, 55—Bathtub Style CP 70—Large Rectangular CP 61, 63, 65—Miniature Rectangular

All case styles are available in characteristic E and F. Single-section units are supplied with a capacitance tolerance of ± 10 per cent (K), and two- and three-section units with a capacitance tolerance of ± 20 per cent. ± 10 per cent (V). Spade-lug and footed mounting brackets are available for use with capacitors on which the mounting bracket is not an integral part.

Write for Bulletin GEA-4357.

Energy-storage discharge capacitors



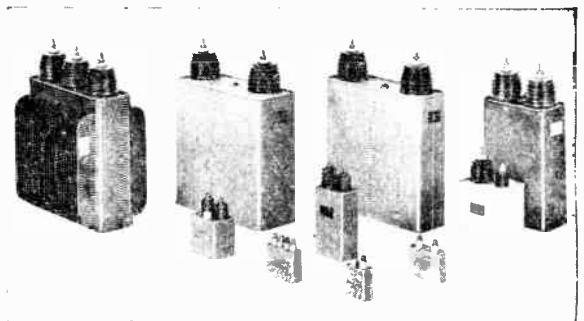
GE light-duty energy-storage capacitors are made in a wide range of ratings to fit practically every requirement of high-speed flash photography, as well as home and industrial welders for light metals. Careful construction, high-quality materials, and skillful design contribute to long life and efficient operation.

Write for Bulletin GEA-4646.

STANDARD RATINGS

Max. D-c volts	Capacitance Microfarads	Max. D-c volts	Capacitance Microfarads
2000	25	4000	12.5
2000	40	4000	25.5
2500	14	4000	100
2500	25.5	5000	25.5
3000	60	6000	55
3350	17.8	6000	25

Capacitor networks



General Electric pioneered in the development of mineral-oil-treated paper dielectric capacitor networks for air, sea, and land radar, and was a prime supplier for the government services. The products supplied varied from the miniature types used with aircraft radar to the large land station designs.

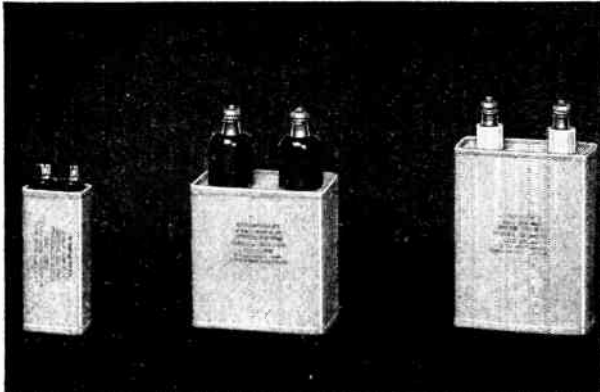
All of the general facilities and the highly specialized test equipment involved are being retained for further work in this field and inquiries on new requirements are solicited.



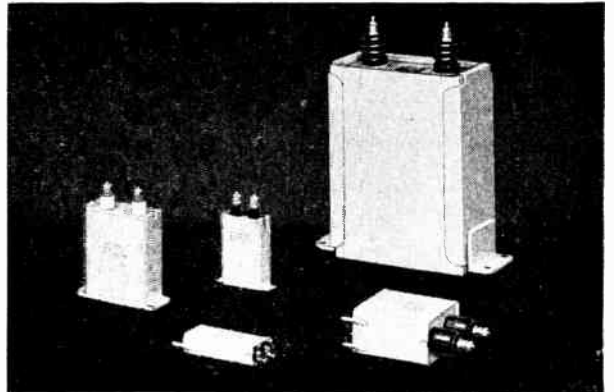
PYRANOL* CAPACITORS

*Trade-mark reg. U. S. Pat. Off.

Case Style 70



Case style 70 units with various types of terminals.



Case style 70 units with various types of removable mounting brackets.

These Pyranol fixed-paper-dielectric capacitors in case style 70 are hermetically sealed in rectangular cases. This line includes standard ratings, ranging from very small units weighing only three ounces to large high-voltage units weighing up to 175 pounds. All are of single-section construction, with a capacitance tolerance of ± 10 per cent. Cases are isolated and the two bushings are brought out through the cover. Units are available with either solder-lug terminals or with pillar-insulator terminals in 690-, 1000-, and 1500-volt ratings. All higher-voltage ratings have pillar-insulator terminals. These units may be operated in altitudes up to 7500 feet.

STANDARD RATINGS

Nominal Direct Voltage Rating	Capacitance Ratings, Microfarads	Type of Terminals
400	4.0, 6.0, 8.0, 10.0	SI* or PI†
600	1.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 15.0, 20.0, 25.0	SI or PI
1000	1.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 15.0	SI or PI
1500	0.10, 0.25, 0.50, 1.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 15.0	SI or PI
2000	0.10, 0.25, 0.50, 1.0, 2.0, 4.0, 5.0, 8.0, 10.0, 12.0, 15.0	PI
2500	0.10, 0.25, 0.50, 1.0, 2.0, 4.0, 6.0, 8.0, 10.0, 12.0, 20.0, 25.0, 55.0, 75.0	PI
3000	0.10, 0.25, 0.50, 1.0, 2.0, 4.0, 6.0, 8.0, 12.0, 20.0, 45.0, 50.0	PI
4000	0.10, 0.25, 0.50, 1.0, 2.0, 4.0, 5.0, 7.0, 13.0, 20.0, 30.0	PI
5000	0.10, 0.25, 0.50, 1.0, 2.0, 4.0, 6.0, 8.0, 14.0, 18.0	PI
6000	0.10, 0.25, 0.50, 1.0, 2.0, 4.0, 5.0, 10.0, 14.0	PI
7500	0.10, 0.25, 0.50, 1.0, 2.0, 3.0, 7.0, 9.0	PI

* Solder lug. † Pillar insulator.

Bushings with solder-lug terminals are made of molded Textolite, and those which have pillar-insulator terminals are of the highest-quality porcelain. All bushings are thoroughly bonded to the container to provide a permanent liquid-tight seal.

All units can be supplied with removable mounting brackets, as illustrated above. In addition to the screw-spade-lug brackets, two types of footed brackets are also available—one with a straight "L"-shaped foot and the other with a "U"-shaped foot that grips the bottom of the unit. The brackets can be attached to either the top or bottom of the unit, permitting either upright or inverted mounting.

Write for Bulletin GEA-2621.

STANDARD RATINGS

Nominal Direct Voltage Rating	Capacitance Ratings, Microfarads	Type of Terminals
10,000	0.10, 0.25, 0.50, 1.0, 1.5, 2.0, 3.5, 5.0	PI
12,500	0.10, 0.25, 0.50, 0.75, 1.0, 1.75, 2.5, 3.3	PI
15,000	0.25, 0.50, 0.75, 0.90, 1.75, 2.25	PI
20,000	0.15, 0.25, 0.50, 1.0, 1.25	PI
25,000	0.10, 0.25, 0.60, 1.0	PI
30,000	0.25, 0.5, 0.75	PI
40,000	0.10, 0.20, 0.25, 0.35	PI
50,000	0.17, 0.25	PI
75,000‡	0.25	PI
100,000‡	0.125	PI

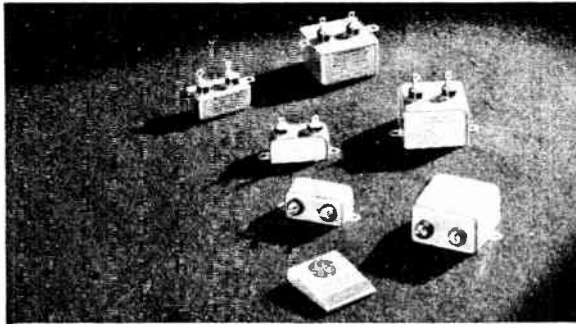
‡ Mid-point connected to case.



PYRANOL* CAPACITORS

*Trade marking, U. S. Pat. Off.

Case styles 50, 51, and 52



These fixed-paper-dielectric "bathtub" capacitors are of small and compact construction, and will fit into very restricted places in radio and electronic equipments.

All three case styles are constructed with solder-lug terminals, and are available in single-section, two-section, or three-section construction for all circuit diagrams.

The hermetically sealed metallic containers are of drawn construction and include two integral mounting lugs.

The only difference in construction of the three case styles is in the location of the bushings, which are brought out through the side for case style 50 units, through the top for case style 51 units, and through the bottom for case style 52 units.

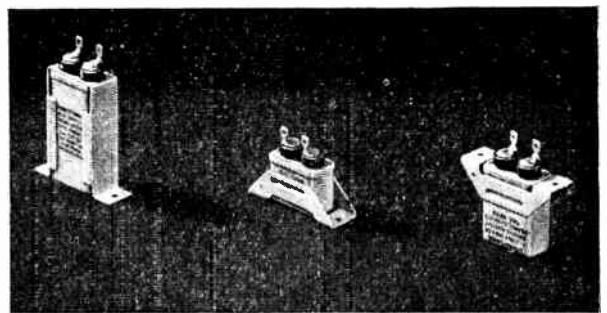
Write for Bulletin GEA-2621.

STANDARD RATINGS

Type of Construction	Nominal Direct Voltage Rating	Capacitance Ratings Microfarads*	Capacitance Tolerance
Single-section units	600	.25, .10, .25, .50, 1.0, 2.0	±10%
	1000	.25, .10, .25, 50, 1.0	
Two-section units	600	.25, .10, .25, .50, 1.0	±20% ±10%
	1000	.25, .10, .25, .50	
Three-section units	600	.25, .10, .25, .50	±20% ±10%
	1000	.25, .10, .25	

* Capacitance per section of two- and three-section units.

Case styles 60, 62, and 64



These small rectangular-case fixed-paper-dielectric units are of narrower width than the "bathtub" units, and will fit into a very restricted panel surface, where case height is not the limiting dimension. Mounting lugs, of either the removable or attached type, are of very sturdy construction.

All three case styles are constructed with solder-lug terminals, and are available in either single-section or two-section construction for all circuit diagrams.

The metallic containers are hermetically sealed, and of deep-drawn construction.

Case style 60 units have no brackets, but removable brackets of either the footed or screw-spade-lug type can be supplied, while the case style 62 and case style 64 units have soldered-on brackets for upright or inverted mounting, respectively.

STANDARD RATINGS

Type of Construction	Nominal Direct Voltage Rating	Capacitance Ratings Microfarads*	Capacitance Tolerance
Single-section units	400	2.0, 4.0, 5.0, 8.0, 10.0	±10%
	600	.25, .10, .25, 50, 1.0	
	1000	.01, .02, .25, .10, 25, 50	
Two-section units	600	.25, .10, .25, .50	±20%
	1000	.01, .02, .25, .10, 25, 50	

* Capacitance per section of two-section units.

Case styles 66-68



Case styles 66 and 68 units are similar to the case style 62 and 64 designs but slightly greater in width to accommodate three terminals.

Both case styles are constructed with solder lug terminals and are available in single-section, two-section, or three-section units. The metallic containers are deep-drawn construction and are hermetically sealed.

Case style 66 units have integral mounting brackets for base mounting, and case style 68 units integral mounting brackets for inverted mounting.

The metallic containers are deep-drawn construction and are hermetically sealed.

STANDARD RATINGS

Type of Construction	Nominal Direct Voltage Rating	Capacitance Ratings Microfarads*	Cap. Tol.
Single-section units	600	0.05, 0.10, 0.25, 0.50, 1.0	±10%
	1000	0.01, 0.02, 0.05, 0.10, 0.25, 0.50	
Two-section units	600	0.05, 0.10, 0.25, 0.50	±20% ±10%
	1000	0.01, 0.02, 0.05, 0.10, 0.25	
Three-section units	600	0.05, 0.10, 0.25	±20% ±10%
	1000	0.01, 0.02, 0.05, 0.10, 0.25	

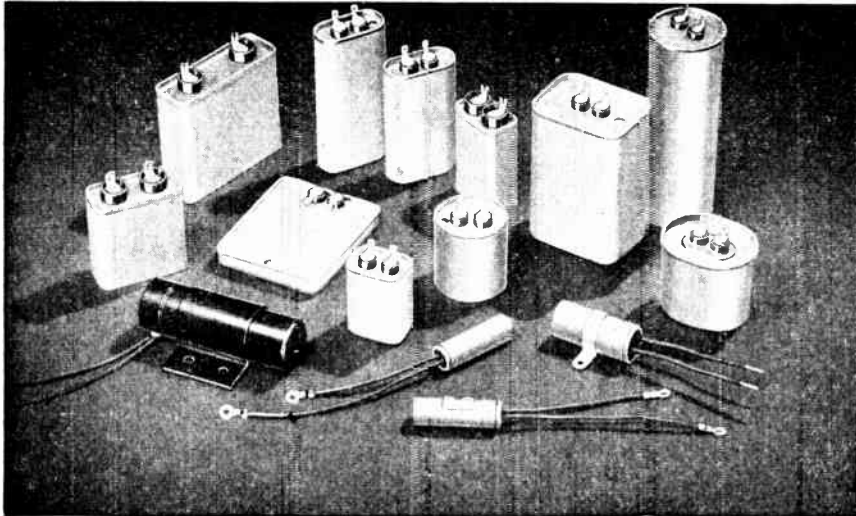
* Capacitance per section of two- and three-section units.



PYRANOL* CAPACITORS

*Trade mark reg. U. S. Pat. Off.

FOR GENERAL-PURPOSE A-C APPLICATIONS



Small size Pyranol capacitors are recommended for use with motors, luminous-tube transformers, industrial control, and other equipment.

The use of Pyranol as a treating material, because of its high dielectric strength, high permittivity, and exceptional stability, has made possible a marked reduction in physical size, as well as a capacitor superior to those formerly available.

Design advantages

- (1) Small and compact units, because of the use of Pyranol.
- (2) Wide range of ratings available in rectangular, cylindrical and oval cases.
- (3) Three styles of mounting brackets are available and supplied separate from the units. Units may be operated in any position.

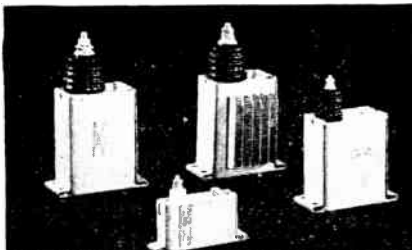
Write for Bulletin GEA-2027

STANDARD RATINGS

Rated Voltage 60 Cycles	Fabricated Rectangular	Drawn Rectangular	Drawn Cylindrical	Shallow Drawn	Oval Drawn
220	1 .15 muf				2 .6 muf
236	1 .20 muf				
250					
330	1 .50 muf	1 17.5 muf	5 5.11 muf	2 3.5 muf	2 3.5 muf
440	1 .28 muf				2 .4 muf
560	1 .15 muf				1 7.5 muf

* Represents only a list of standard ratings. Ratings other than these listed will be supplied when required.

CAPACITORS FOR OSCILLATOR TANK CIRCUITS



This line of fixed-paper-dielectric capacitors has been developed primarily for grid and plate blocking service in the electronic oscillator circuits of high-frequency induction-heating equipments. They can also be used to advantage in other high-frequency oscillator circuits of a similar nature.

GE high-voltage paper-dielectric capacitors are of relatively high capacitance (0.01 mu f) for high-frequency units, and yet they are more economical than conventional high-frequency units of considerably smaller capacitance values. They can, therefore, be applied with savings in cost as well as reduced losses and lower voltage drop across the capacitor.

features

- Hermetically sealed in metallic cases.
- Single-bushing construction for minimum size.
- Removable mounting brackets.
- Internal lead connections arranged for minimum inductance.

Write for Bulletin GEA-4388.

STANDARD RATINGS

D c Voltage Rating	Microfarad Rating
5000	0.01
15 000	0.01
20 000	0.01
20 000*	0.01

* With cooling fins for higher current carrying capacity.
Capacitance tolerance +10%.

EL-MENCO CAPACITORS

TELEVISION — TRANSMITTING — INDUSTRIAL

Designed to meet the requirements for TELEVISION, POWER AMPLIFIERS, LOW POWER TRANSMITTERS and various INDUSTRIAL uses. Moulded in low loss bakelite, tested at double the branded voltage. Tests for dielectric strength, insulation resistance, temperature co-efficient and capacitance

drift, humidity and life tests according to RCM STANDARDS. All units are wax dipped for salt water immersion seal. These capacitors are manufactured in accordance with "B" CHARACTERISTIC requirements. STANDARD TOLERANCE $\pm 10\%$.

Type Designation	Capacity MMFD.	LIST PRICE	
		2000 VDC Test 1000 VDC Wkg.	3000 VDC Test 1500 VDC Wkg.
RCM-20-B-050K to RCM-20-B-300K	5 to 30	\$0.30	\$0.35
RCM-20-B-330K to RCM-20-B-151K	33 to 150	.35	.40
RCM-20-B-181K to RCM-20-B-221K	180 to 220	.40	.50
RCM-20-B-241K to RCM-20-B-331K	240 to 330	.50	.55
RCM-20-B-361K to RCM-20-B-431K	360 to 430	.55	....
RCM-20-B-471K to RCM-20-B-511K	470 to 510	.60	....
RCM-40-B-361K to RCM-40-B-431K	360 to 430	.55	.60
RCM-40-B-471K to RCM-40-B-511K	470 to 510	.60	.65
RCM-40-B-561K to RCM-40-B-751K	560 to 750	.65	.70
RCM-40-B-821K to RCM-40-B-102K	820 to 1000	.70	.75
RCM-40-B-112K to RCM-40-B-152K	1100 to 1500	.75	.80
RCM-40-B-162K to RCM-40-B-182K	1600 to 1800	.85	.90
RCM-40-B-202K to RCM-40-B-222K	2000 to 2200	.90	1.00
RCM-40-B-242K	2400	1.00	....
RCM-40-B-272K	2700	1.10	....
RCM-40-B-302K	3000	1.20	....
RCM-40-B-332K	3300	1.30	....
RCM-40-B-362K	3600	1.40	....
RCM-40-B-392K	3900	1.50	....
RCM-40-B-432K	4300	1.60	....
RCM-40-B-472K	4700	1.70	....
RCM-40-B-512K	5100	1.80	....

For complete listing of all available capacitors, refer to capacities mentioned in our regular receiving mica list on pages P-70 and P-71.

If capacity desired is not listed, figure price of capacity nearest to it.

All above units have the working voltage branded on face, in addition to color code.

All 1000 DCWV listed under RCM-40 CASE can be supplied in RCM-35 CASE at 10% above list price.

For 5% TOLERANCE: ADD 20% to List Price.
For 2% TOLERANCE: ADD 50% to List Price.

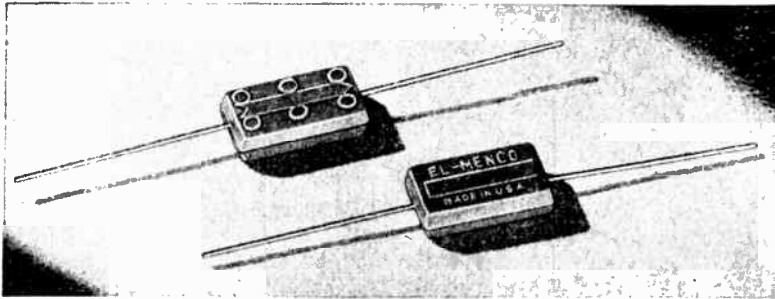
Dimensions:

CM-20 CASE $\frac{7}{16}$ " x $2\frac{25}{32}$ " x $\frac{7}{32}$ ".
CM-35 CASE $1\frac{3}{16}$ " x $1\frac{3}{16}$ " x $1\frac{1}{32}$ ".
CM-40 CASE 1 " x $\frac{5}{8}$ " x $1\frac{1}{32}$ ".

For blue print of these units refer to our regular receiving mica listings on pages P-70 and P-71.

EL-MENCO CAPACITORS

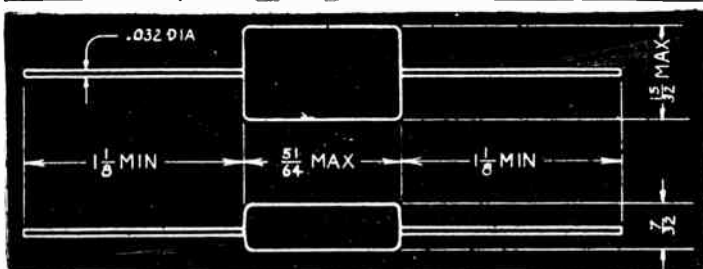
FIXED
MICA
DIELECTRIC
CAPACITORS
•
ALL
IMPREGNATED
AND
JAN-C-5
COLOR
CODED



RCM
COLOR
CODE
and
SPECIFICATIONS
AVAILABLE
IN ALL
CAPACITIES

All units are rated at 500 Volts D.C. working and tested at 1000 Volts D.C. except on capacities higher than 6200 mmf. which are rated at 300 Volts D.C. working and 600 Volts D.C. Test. All are tested for accuracy of capacity according to tolerance requested and voltage breakdown.

Type Designation	Cap. mmf.	DC Wkg. Vtge.	COLOR CODE				LIST PRICE	
			Upper Left Dot	Upper Center Dot	Upper Right Dot	Lower Right Dot	Regular Mica	Silvered Mica
CM-20-050	5	500	black	green	black	gold	\$0.25	\$0.45
CM-20-100	10	500	black	brown	black	black	.25	.40
CM-20-120	12	500	black	brown	red	black	.25	.40
CM-20-150	15	500	black	brown	green	black	.25	.40
CM-20-180	18	500	black	brown	gray	black	.25	.40
CM-20-200	20	500	black	red	black	black	.25	.40
CM-20-220	22	500	black	red	red	black	.25	.40
CM-20-240	24	500	black	red	yellow	black	.25	.40
CM-20-270	27	500	black	red	violet	black	.25	.40
CM-20-300	30	500	black	orange	black	black	.25	.40
CM-20-330	33	500	black	orange	orange	black	.20	.40
CM-20-360	36	500	black	orange	blue	black	.20	.40
CM-20-390	39	500	black	orange	white	black	.20	.40
CM-20-430	43	500	black	yellow	orange	black	.20	.40
CM-20-470	47	500	black	yellow	violet	black	.20	.40
CM-20-510	51	500	black	green	brown	black	.20	.40
CM-20-560	56	500	black	green	blue	black	.20	.40
CM-20-620	62	500	black	blue	red	black	.20	.40
CM-20-680	68	500	black	blue	gray	black	.20	.40
CM-20-750	75	500	black	violet	green	black	.20	.40
CM-20-820	82	500	black	grey	red	black	.20	.40
CM-20-910	91	500	black	white	brown	black	.20	.40
CM-20-101	100	500	black	brown	black	brown	.20	.40
CM-20-111	110	500	black	brown	brown	brown	.20	.45
CM-20-121	120	500	black	brown	red	brown	.20	.45
CM-20-131	130	500	black	brown	orange	brown	.20	.45
CM-20-151	150	500	black	brown	green	brown	.20	.45
CM-20-161	160	500	black	brown	blue	brown	.20	.45
CM-20-181	180	500	black	brown	gray	red	.20	.45
CM-20-201	200	500	black	red	black	brown	.20	.45
CM-20-221	220	500	black	red	red	brown	.20	.45
CM-20-241	240	500	black	red	yellow	brown	.25	.45
CM-20-271	270	500	black	red	violet	brown	.25	.55
CM-20-301	300	500	black	orange	black	brown	.25	.55
CM-20-331	330	500	black	orange	orange	brown	.25	.55
CM-20-361	360	500	black	orange	blue	brown	.25	.55
CM-20-391	390	500	black	orange	white	brown	.25	.65
CM-20-431	430	500	black	yellow	orange	brown	.25	.65
CM-20-471	470	500	black	yellow	violet	brown	.25	.70
CM-20-511	510	500	black	green	brown	brown	.25	.70
CM-20-561	560	500	black	green	blue	brown	.25	.75
CM-20-621	620	500	black	blue	red	brown	.25	.80
CM-20-681	680	500	black	blue	gray	brown	.25	.85
CM-20-751	750	500	black	violet	green	brown	.25	.90
CM-20-821	820	500	black	gray	red	brown	.25	.95
CM-20-911	910	500	black	white	brown	brown	.25	1.00
CM-20-102	1000	500	black	brown	black	red	.30	1.10



NOTE

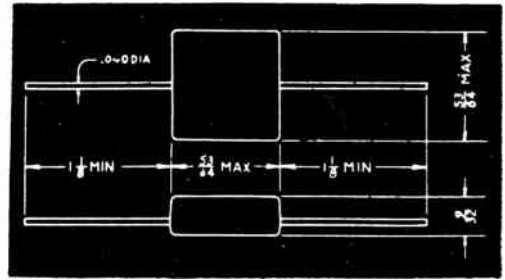
The above capacities can be supplied in our CM-19 Case ($\frac{7}{16}'' \times \frac{1}{16}'' \times \frac{7}{32}''$).
The above capacities can be supplied in our CM-20 Case ($\frac{7}{16}'' \times 2\frac{3}{32}'' \times \frac{7}{32}''$).
Also capacities from 470 mmf to 1500 mmf in CM-25 Case ($\frac{7}{16}'' \times 1\frac{7}{64}'' \times \frac{7}{32}''$).

EL-MENCO CAPACITORS



CM30

Dimensions: 13/16" x 13/16" x 9/32"

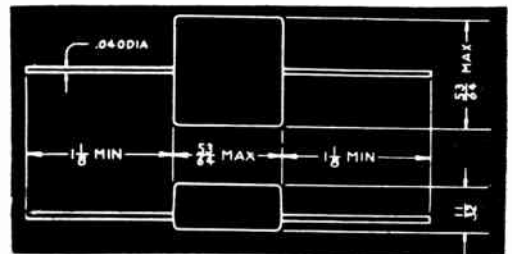


Type Designation	Cap. mmf.	DC Wkg. Vtge.	COLOR CODE				LIST PRICE	
			Upper Left Dot	Upper Center Dot	Upper Right Dot	Lower Right Dot	Regular Mica	Silvered Mica
CM-30-102	1000	500	black	brown	black	red	\$0.30	\$1.10
CM-30-112	1100	500	black	brown	brown	red	.30	1.10
CM-30-122	1200	500	black	brown	brown	red	.30	1.25
CM-30-132	1300	500	black	brown	orange	red	.30	1.25
CM-30-152	1500	500	black	brown	green	red	.30	1.35
CM-30-162	1600	500	black	brown	blue	red	.40	1.35
CM-30-182	1800	500	black	brown	gray	red	.40	1.35
CM-30-202	2000	500	black	red	black	red	.40	1.35
CM-30-222	2200	500	black	red	red	red	.40	1.35
CM-30-242	2400	500	black	red	yellow	red	.45	1.40
CM-30-272	2700	500	black	red	violet	red	.45	1.90
CM-30-302	3000	500	black	orange	black	red	.50	2.05
CM-30-332	3300	500	black	orange	orange	red	.50	2.05



CM35

Dimensions: 13/16" x 13/16" x 11/32"

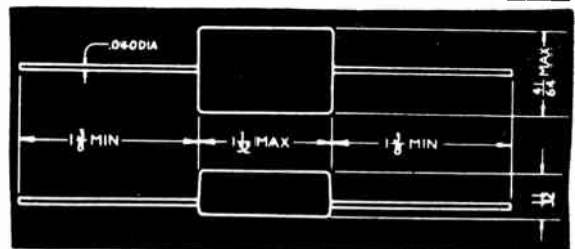


CM-35-362	3600	500	black	orange	blue	red	.50	2.10
CM-35-392	3900	500	black	orange	white	red	.55	2.15
CM-35-432	4300	500	black	yellow	orange	red	.55	2.15
CM-35-472	4700	500	black	yellow	violet	red	.55	2.25
CM-35-512	5100	500	black	green	brown	red	.60	2.25
CM-35-562	5600	500	black	green	blue	red	.60	2.50
CM-35-622	6200	500	black	blue	red	red	.75	2.75
CM-35-682	6800	300	black	blue	gray	red	.80	3.00
CM-35-752	7500	300	black	violet	green	red	.90	3.25
CM-35-822	8200	300	black	gray	red	red	1.00	3.50
CM-35-912	9100	300	black	white	brown	red	1.20	4.00
CM-35-103	10000	300	black	brown	black	orange	1.20	4.00
CM-45-203	20000	600	black	red	black	orange	1.90	



CM40

Dimensions: 1" x 5/8" x 11/32"
Supplied in same capacities and prices as CM35 shown above.



PRICES OF OTHER AVAILABLE TOLERANCES

REGULAR MICA CAPACITORS:

For 20% (Standard).....use List Price
For 10%.....add 10% to List Price
For 5%.....add 20% to List Price

SILVER MICA CAPACITORS:

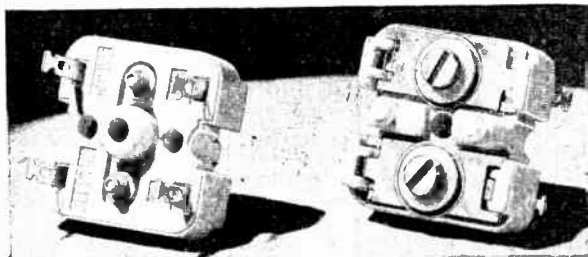
For 5% (Standard).....use List Price
For 3%.....add 10% to List Price
For 2%.....add 15% to List Price
For 1%.....add 25% to List Price

Closest tolerance = 1 MMFD.

Regular Mica supplied in "A" and "B" Characteristic at no extra charge.
Silver Mica supplied in "C," "D" and "E" Characteristic at no extra charge.

EL-MENCO CAPACITORS

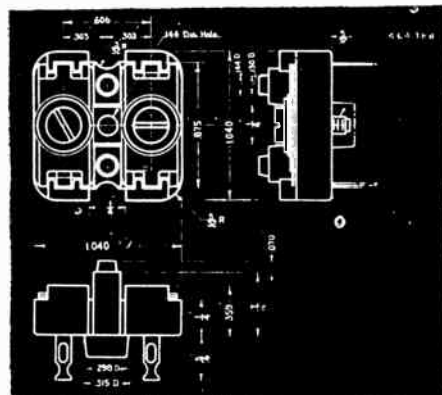
TYPE 50 DUAL PADDER



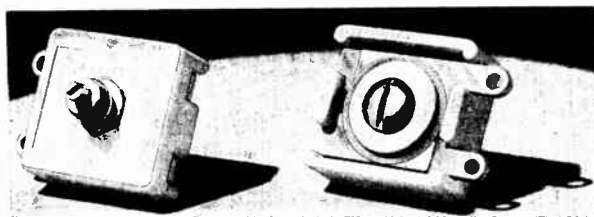
Type 50 Dual Padders provide two variable trimmers mounted on a single base. This unit is designed as a tuning component for I. F. transformers; and as such, may be snap-in mounted along with the transformer coil in any size shield having dimensions exceeding 1-1/16" x 1-1/16".

PRICES, TYPE 50

Part No.	No. of Plates	Guaranteed Range		List Price
		At tight cap. will be more than MMP	At two turns open cap. will be less than MMP	
504	4 Pl.	260	50	\$0.80
503	3 Pl.	170	19	.70
502	2 Pl.	80	7.5	.60



TYPE 30 PADDER



El-Menco Padding Condensers have been acclaimed by engineers as the finest development in adjustable mica condensers.

The construction is such as to completely enclose and protect the delicate edges of the mica films, made of the finest quality clear India ruby mica.

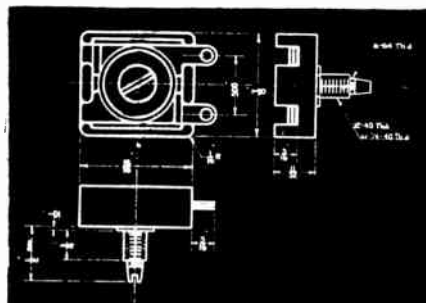
The phosphor bronze adjusting plates assure permanent resilience and freedom from mechanical fatigue. All parts are heavily plated to resist corrosion.

The adjustable screw advances 1/64 inch for one complete rotation thus insuring accurate adjustment of the capacity setting.

PRICES TYPE 30 PADDER

Part No.	No. of Plates	Guaranteed Range		List Price
		At tight cap. will be more than MMP	At 2 1/2 turns open cap. will be less than MMP	
310	10 Pl.	1995	650	\$0.90
309	9 Pl.	1760	540	.85
308	8 Pl.	1525	430	.80
307	7 Pl.	1290	340	.75
306	6 Pl.	1050	280	.70
305	5 Pl.	800	200	.65
304	4 Pl.	560	130	.60
303	3 Pl.	315	85	.55
302	2 Pl.	115	20	.50

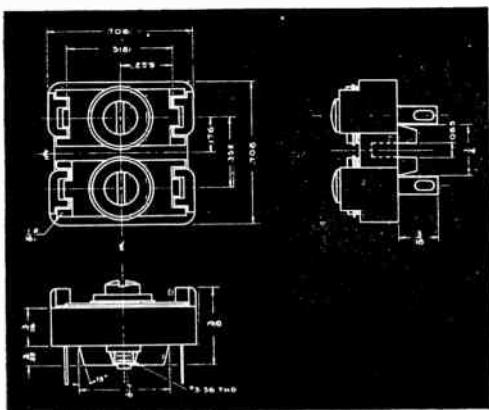
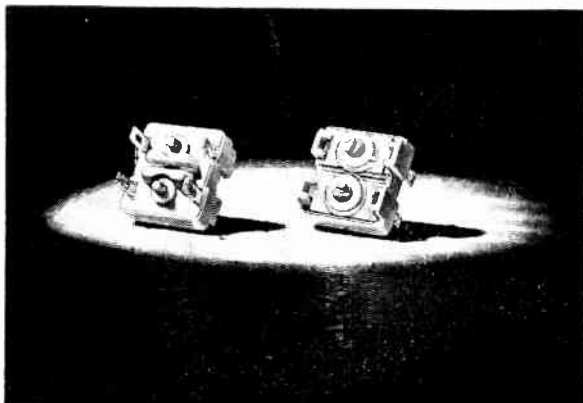
Prices on request in Silvered 1%, 2% & 3%.



EL-MENCO CAPACITORS

TYPE 60 DUAL PADDER

Type 60 Dual Padders provide two variable trimmers mounted on a single base. This unit is designed as a tuning component for I.F. transformers; and as such, may be snap-in mounted along with the transformer coil in any size shield having dimensions exceeding $\frac{3}{4}$ " x $\frac{3}{4}$ ".

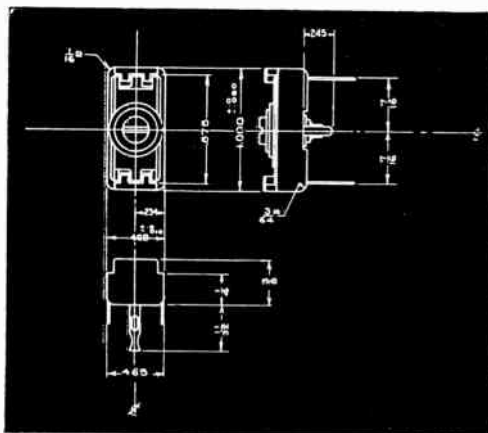
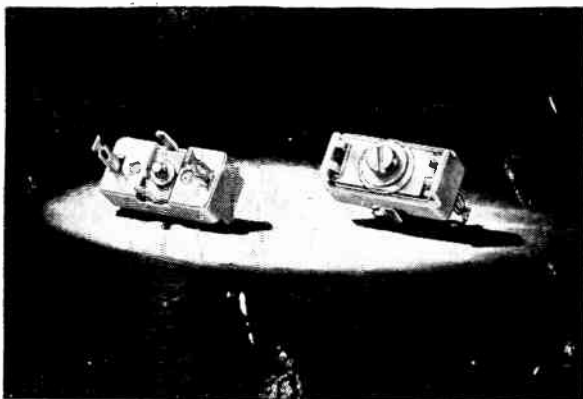


Part No.	No. of Plates	Guaranteed Range		Price List
		At tight cap. will be more than MMF	At 1½ turns open cap. will be less than MMF	
604	4 Pl.	160	35	\$0.70
603	3 Pl.	110	15	.60
602	2 Pl.	55	7	.50

TYPE 58 PADDER

Type 58 Padder is a single variable trimmer section provided with a two pronged staple mounting for attachment to bracket or chassis.

Base is made of lowest loss steatite and the mica is India Ruby.



Part No.	No. of Plates	Guaranteed Range		List Price
		At tight cap. will be more than MMF	At 2 turns open cap. will be less than MMF	
544	4 Pl.	240	50	\$0.50
543	3 Pl.	160	19	.45
582	2 Pl.	80	7.5	.40



AMERICAN CONDENSER CO.

4410 No. RAVENSWOOD AVE.

CHICAGO 40,



Type PPLL

PAPER CAPACITORS IN PLASTIC CONTAINERS



Type PPL

Encased in gleaming plastic with inverted one nut mounting permitting use on top or side of chassis. Condenser unit is oil cooled and molded in oil proof wax. Permanently sealed, moisture proof, wide temperature range.

Working Voltage 600 V.D.C.—Test Voltage 1800 V.D.C.

Cat. No.	Cap. Mfd.	Size	List
PPL62	2	1 3/8 x 3 1/2	\$2.15
PPLL62	2	1 3/8 x 3 1/2	2.50

TYPE GC GENERATOR CONDENSER

For heavy-duty automotive service. Leads hot soldered and swaged to the condenser section and to the can. Thoroughly impregnated and sealed. .5 Generator Condenser 50c



TYPE US UNCASED SECTIONS IDEAL FOR REPLACEMENT WORK



Designed for reliability rather than for appearance. Wound of chemically pure paper and foil, carefully impregnated and sealed with high melting point wax. Long, securely anchored leads.

Working Voltage 600 V.D.C.—Test Voltage 1800 V.D.C.

Cat. No.	Cap. Mfd.	Size	List
US-601	1	1/2 x 2 1/4 x 1 3/4	\$0.90
US-602	2	7/8 x 2 1/2 x 2 1/8	1.35
US-604	4	3/4 x 3 1/8 x 1 7/8	2.70

Working Voltage 1000 V.D.C.—Test Voltage 1800 V.D.C.

Cat. No.	Cap. Mfd.	Size	List
US-1001	1	3/4 x 3 1/8 x 1 7/8	\$1.50
US-1002	2	7/8 x 3 1/8 x 2	2.50



TUBULAR PAPER CAPACITORS

Non-inductively wound with highest quality paper and tinfoil. Pigtail leads hot soldered to sections. Vacuum sealed in thoroughly impregnated cardboard tubes and fully protected against moisture.

WORKING VOLTAGE 600 V.D.C.

Cat. No.	Cap. Mfd.	Size	List
TP60T1	.0001	3/8 x 1 1/8	\$0.15
TP60T25	.00025	3/8 x 1 1/8	.15
TP60T50	.0005	3/8 x 1 1/8	.15
TP60B1	.001	3/8 x 1 1/8	.15
TP60B20	.002	3/8 x 1 1/8	.15
TP60B30	.003	3/8 x 1 1/8	.15
TP60B50	.005	3/8 x 1 1/8	.15
TP60B60	.006	3/8 x 1 1/8	.15
TP6001	.01	3/8 x 1 1/8	.15
TP6002	.02	7/16 x 1 1/8	.15
TP6005	.05	9/16 x 1 5/8	.20
TP6010	.1	11/16 x 1 5/8	.25
TP6025	.25	15/16 x 1 3/4	.30
TP6050	.5	11/16 x 2 3/8	.40
TP6100	1	1 1/8 x 2 3/4	.50

TELEVISION CONDENSERS PLASTIC INVERTED TYPE

Cat. No.	Working Voltage 2500 V.D.C.			List
	Cap. Mfd.	Size		
PPL23	.2	1 3/8 x 3 1/2		\$2.25
PPL253	.25	1 3/8 x 3 1/2		2.55
Working Voltage 3000 V.D.C.				
PLPL033	.03	1 3/8 x 2 1/4		1.65
PLPL053	.05	1 3/8 x 2 1/4		1.65
PPL13	.1	1 3/8 x 3 1/2		2.04

TUBULAR TYPE—Working Voltage 3000 V.D.C.

Cat. No.	Cap. Mfd.	Size	List
TP0013	.001	1/2 x 1 5/8	1.05
TP0023	.002	9/16 x 1 5/8	1.05
TP0053	.005	1 1/4 x 1 5/8	1.05
TP013	.01	7/8 x 1 5/8	1.41
TP033	.03	1 1/8 x 2	1.50
TP053	.05	1 1/8 x 2	1.50
TP13	.1	1 1/2 x 2 3/4	1.77
TP23	.2	1 3/4 x 3 1/2	2.04

TUBULAR UNITS FOR VIBRATOR USE



Sturdy, heavy duty units specifically designed to withstand the high voltage encountered in vibrator duty.

WORKING VOLTAGE 1600 V.D.C.

Cat. No.	Cap. Mfd.	Size	List
TPX005	.005	7/16 x 1 3/4	\$0.30
TPX01	.01	1/2 x 1 3/4	.35
TPX02	.02	5/8 x 1 3/4	.45

TYPE AHB-PAPER DIELECTRIC (BATH-TUB) CAPACITORS



Units are non-inductively wound, wax impregnated, oil cooled, wax sealed and encased in drawn metal container, well tinned to prevent corrosion. Exclusive AMCON Terminals (combination one-piece bushing) give high voltage rating between terminals and can. Tested at three times rated voltage.

600 VOLTS D.C. WORKING

Cat. No.	Cap. Mfd.	Size (ins.)	C to C Mount	List
AHB05	.05	1 1/8 x 1 x 3/4	2 1/8	\$1.70
AHB10	.1	1 1/8 x 1 x 3/4	2 1/8	1.75
AHB25	.25	1 1/8 x 1 x 3/4	2 1/8	1.80
AHB50	.5	1 1/8 x 1 x 3/4	2 1/8	1.95
AHB100	1.0	2 x 1 3/4 x 7/8	2 3/8	2.25
AHB200	2.0	2 x 2 x 1 1/8	2 3/8	3.00
AHB05D	.05x.05	1 1/8 x 1 x 3/4	2 1/8	2.15
AHB10D	.1x.1	1 1/8 x 1 x 3/4	2 1/8	2.20
AHB25D	.25x.25	2 x 1 3/4 x 7/8	2 3/8	2.25
AHB50D	.5x.5	2 x 1 3/4 x 7/8	2 3/8	2.55
AHB10T	.1x.1x.1	1 1/8 x 1 x 3/4	2 1/8	2.50

1000 VOLTS D.C. WORKING

Cat. No.	Cap. Mfd.	Size (ins.)	C to C Mount	List
AHBM05	.05	1 1/8 x 1 x 3/4	2 1/8	\$1.75
AHBM10	.1	1 1/8 x 1 x 3/4	2 1/8	1.85
AHBM25	.25	1 1/8 x 1 x 3/4	2 1/8	1.90
AHBM50	.5	2 x 1 3/4 x 7/8	2 3/8	2.05
AHBM1	1	2 x 2 x 1 1/8	2 3/8	2.75
AHBM05D	.05x.05	1 1/8 x 1 x 3/4	2 1/8	2.15
AHBM10D	.1x.1	1 1/8 x 1 x 3/4	2 1/8	2.30
AHBM25D	.25x.25	2 x 1 3/4 x 7/8	2 3/8	2.50



AMERICAN CONDENSER CO.

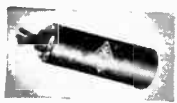
4410 No. RAVENSWOOD AVE.

CHICAGO 40,

AMCON ELECTROLYTIC CAPACITORS

All AMCON Electrolytic Capacitors measure up to the highest standards for consistent uniformity in electrical characteristics and for dependable long life in service. Inquiries for specific needs are invited.

ELECTROLYTIC CAPACITORS IN PLASTIC CONTAINERS



Type PL



Type PLL

Inverted type plastic casing can be used on a top chassis mounting with a nut. 100% moisture proof, withstands extreme heat or cold. Type PL with 4 1/2" insulated wire leads; PLL with soldering lugs.

TYPE PL—WORKING VOLTAGE 450 V.D.C. PEAK 600 V.D.C.

Cat. No.	Cap. Mfd.	Size	List
PL5-8	8	1 3/8 x 3 1/2	\$1.20
PL5-10	10	1 3/8 x 3 1/2	1.50
PL5-12	12	1 3/8 x 3 1/2	1.60
PL5-16	16	1 3/8 x 3 1/2	1.75
PL5-20	20	1 3/8 x 3 1/2	1.95
PL5-24	24	1 3/8 x 3 1/2	2.05
PL5-30	30	1 3/8 x 3 1/2	2.25
PL5-35	35	1 3/8 x 3 1/2	2.35
PL5-40	40	1 3/8 x 3 1/2	2.65
PL5-88	8-8	1 3/8 x 3 1/2	1.90

Condensers listed above are also available with lugs (Type PLL) instead of wire leads.



TYPE LPL

... for ULTRA

TYPE LPLL

COMPACT INSTALLATIONS



The same ease and speed of assembly as the famous AMCON PL Type—the same improved performance and added beauty of plastic cases, plus new compactness!

WORKING VOLTAGE 25 V.D.C.

Cat. No.	Cap. Mfd.	Size	List
LPL25	500	1 3/8 x 2 1/4	\$3.00

WORKING VOLTAGE 150 V.D.C.

LPL2-100	50	1 3/8 x 2 1/4	1.15
LPL2-200	20-20	1 3/8 x 2 1/4	1.50
LPL2-201	30-30	1 3/8 x 2 1/4	1.60
LPL2-202	50-50	1 3/8 x 2 1/4	1.80
LPL2-300	20-20-20	1 3/8 x 2 1/4	1.60
LPL2-301	40-40 (20-25 V.)	1 3/8 x 2 1/4	1.60
LPL2-302	50-30 (50-25 V.)	1 3/8 x 2 1/4	2.05

WORKING VOLTAGE 250 V.D.C.

LPL3-400	30	1 3/8 x 2 1/4	1.75
LPL3-401	40	1 3/8 x 2 1/4	2.00

WORKING VOLTAGE 450 V.D.C.

LPL5-8	8	1 3/8 x 2 1/4	1.20
LPL5-10	10	1 3/8 x 2 1/4	1.50
LPL5-12	12	1 3/8 x 2 1/4	1.60
LPL5-16	16	1 3/8 x 2 1/4	1.75
LPL5-20	20	1 3/8 x 2 1/4	1.95
LPL5-88	8-8	1 3/8 x 2 1/4	1.90

Condensers listed above are also available with lugs (Type LPLL) instead of wire leads.

TYPE IC FILTER BLOCKS

Concentrically wound units with all sections having a common negative. High voltage sections are rated 150 working V., 200 peak V. Low voltage sections are 25 working V., 50 peak V. Also available on special order with separate negatives.

Cat. No.	Cap. Mfd.	Size	List
IC2-101	16-12 & 10-10	1 3/8 x 3 1/2	\$2.15
IC2-102	16-8 & 5-5	1 3/8 x 3 1/2	2.00

TYPE KT CAPACITORS

Kraft tube unit with center mounting bracket for use in assemblies where space is limited. 4 1/2" insulated wire leads. Dual units made with four or three leads and common negative. Other capacity combinations available on request.



THREE LEADS — COMMON NEGATIVE Working Volts*150 D.C. — Peak V. 200 D.C.

Cat. No.	Cap. Mfd.	Size	List
KT3-20-20	20-20	1 x 2 3/8	\$1.25
KT3-30-20	30-20	1 x 2 3/8	1.40
KT3-40-20	40-20	1 x 3	1.60
KT3-40-40	40-40	1 x 3	1.85
KT3-60-30	60-30	1 x 3	2.05

4 LEADS

KT4-20-20	20-20	1 x 2 3/8	\$1.45
KT4-30-30	30-30	1 x 3	2.00
KT4-40-40	40-40	1 x 3	2.10

TYPE AEB ELECTROLYTIC (BATH TUB TYPE)

Constructed to withstand salt water immersion tests—ideal for marine use.

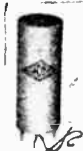


Characteristics remain constant under extreme climatic variations. Engineered to highest standards—hermetically sealed.

Cat. No.	Cap. Mfd.	Volts	C-C Mount	Size	List
AEB10	10	25	1 1/2 x 1 x 1 1/2	2 1/8	\$1.75
AEB25	25	25	1 1/2 x 1 x 1 1/2	2 1/8	1.90
AEB105	10	50	1 1/2 x 1 x 1 1/2	2 1/8	1.80
AEB255	25	50	1 1/2 x 1 x 1 1/2	2 1/8	1.95

TYPE IC CAPACITORS

Standard Amcon quality condensers offered for use where economy is a prime factor. Furnished in kraft cardboard tubes with 1 1/4 inch c-c spade bolt mounting.



WORKING VOLTAGE 450 V. — PEAK 600 V.

Cat. No.	Cap. Mfd.	Size	List
IC5-8	8	1 3/8 x 3 1/2	\$1.00
IC5-48	4-8	1 3/8 x 3 1/2	1.50
IC5-88	8-8	1 3/8 x 3 1/2	1.60
IC5-10	10	1 3/8 x 3 1/2	1.30
IC5-12	12	1 3/8 x 3 1/2	1.40
IC5-16	16	1 3/8 x 3 1/2	1.55
IC5-20	20	1 3/8 x 3 1/2	1.75
IC5-24	24	1 3/8 x 3 1/2	1.90
IC5-30	30	1 3/8 x 3 1/2	2.10
IC5-35	35	1 3/8 x 3 1/2	2.25
IC5-40	40	1 3/8 x 3 1/2	2.40



AMERICAN CONDENSER CO.

4410 No. RAVENSWOOD AVE. CHICAGO 40.

AMCON ELECTROLYTIC CAPACITORS



MIDGET PAPER ELECTROLYTICS

TYPES LP2 - LP3 - LP5

Small and compact, these dry electrolytics are readily wired into almost inaccessible places—are interchangeable in any circuit with standard larger size capacitors. Uniform, dependable characteristics. Dual and multiple type units are of separate sections.

Cat. No.	Cap. Mfd.	Size	List
TYPE LP-2 150 W. V. — 200 P.V. D.C.			
LP2-8	8	23/8 x 3/4 x 3/4	\$0.75
LP2-12	12	23/8 x 3/4 x 3/4	.75
LP2-16	16	23/8 x 3/4 x 3/4	.90
LP2-20	20	23/8 x 3/4 x 3/4	.95
LP2-30	30	23/8 x 3/4 x 3/4	1.10
LP2-40	40	23/8 x 1 1/4 x 3/4	1.25
LP2-12-12	12-12	23/8 x 1 1/4 x 3/4	1.35
LP2-12-16	12-16	23/8 x 1 1/4 x 3/4	1.45
LP2-16-16	16-16	23/8 x 1 1/4 x 3/4	1.50
LP2-30-10	30-10	23/8 x 1 1/4 x 3/4	1.75
LP2-20-10-10 C.N.	20-10-10	23/8 x 1 1/4 x 3/4	2.00
TYPE LP-3 250 W.V. 325 P.V. DC			
LP3-8	8	23/8 x 3/4 x 3/4	\$0.80
LP3-12	12	23/8 x 3/4 x 3/4	.95
LP3-16	16	23/8 x 3/4 x 3/4	1.05
LP3-20	20	23/8 x 1 1/4 x 3/4	1.20
LP3-4-8	4-8	23/8 x 1 1/4 x 3/4	1.15
LP3-8-8	8-8	23/8 x 1 1/4 x 3/4	1.25
LP3-8-16	8-16	23/8 x 1 1/4 x 3/4	1.45
LP3-16-16	16-16	23/8 x 1 1/4 x 3/4	1.65
LP3-8-8-8 CN	8-8-8	23/8 x 1 1/4 x 3/4	1.90
TYPE LP-5 450 W.V. 525 P.V. DC			
LP5-2	2	23/8 x 3/4 x 3/4	\$0.65
LP5-4	4	23/8 x 3/4 x 3/4	.75
LP5-8	8	23/8 x 3/4 x 3/4	.90
LP5-10	10	23/8 x 3/4 x 3/4	1.15
LP5-12	12	23/8 x 1 1/4 x 3/4	1.30
LP5-16	16	23/8 x 1 1/4 x 3/4	1.45
LP5-4-4	4-4	23/8 x 1 1/4 x 3/4	1.20
LP5-4-8	4-8	23/8 x 1 1/4 x 3/4	1.35
LP5-8-8	8-8	23/8 x 1 1/4 x 3/4	1.50
LP5-8-8-8	8-8-8	3 x 1 1/4 x 1	2.20



PLASTIC ENCASED LITTLE AMERICANS

These new PLA AMCONS incorporate all the rugged dependability for which AMCON condensers have long been famous, PLUS the many advantages inherent in their new Plastic Cases.

	Cat. No.	Cap. Mfd.	Size	List
25 VOLT D.C.	PLA0-5	5	1 1/2 x 1 1/2	\$0.40
	PLA0-10	10	1 1/2 x 1 1/2	.40
	PLA0-25	25	1 1/2 x 1 1/2	.50
	PLA25	100	5/8 x 2 1/8	1.20
50 VOLT D.C.	PLA1-5	5	1 1/2 x 1 1/2	.45
	PLA1-10	10	1 1/2 x 1 1/2	.50
	PLA1-25	25	1 1/2 x 1 1/2	.55
	PLA1-5-5	5-5	3/4 x 2 1/8	.65
	PLA1-10-10	10-10	3/4 x 2 1/8	.65
	PLA2-99	4	3/4 x 2 1/8	.40
150 VOLT D.C.	PLA2-100	8	3/4 x 2 1/8	.45
	PLA2-101	10	3/4 x 2 1/8	.48
	PLA2-102	12	3/4 x 2 1/8	.50
	PLA2-103	16	3/4 x 2 1/8	.55
	PLA2-104	20	3/4 x 2 1/8	.60
	PLA2-105	30	1 x 2 1/8	.65
	PLA2-106	40	1 x 2 1/8	.70
	PLA2-107	12-12	1 x 2 1/8	.95
PLA2-108	16-16	1 x 2 1/8	1.05	
250 VOLT D.C.	PLA3-200	4	3/4 x 2 1/8	.45
	PLA3-201	8	3/4 x 2 1/8	.50
	PLA3-202	10	3/4 x 2 1/8	.58
	PLA3-203	12	3/4 x 2 1/8	.65
	PLA3-204	16	3/4 x 2 1/8	.75
350 VOLT D.C.	PLA3-205	20	1 x 2 1/8	.80
	PLA3-206	40	1 x 2 1/8	.95
	PLA4-250	4	3/4 x 2 1/8	.50
	PLA4-251	8	3/4 x 2 1/8	.55
450 VOLT D.C.	PLA4-252	12	1 x 2 1/8	.70
	PLA4-253	16	1 x 2 1/8	.80
500 VOLT D.C.	PLA5-300	4	3/4 x 2 1/8	.55
	PLA5-301	8	3/4 x 2 1/8	.60
	PLA5-302	10	1 x 2 1/8	.68
	PLA5-303	12	1 x 2 1/8	.75
	PLA5-304	16	1 x 2 1/8	.90
PLA5-305	8-8	1 x 2 1/8	1.00	



AMCON TELEPHONE CONDENSERS Type AHT HERMETICALLY SEALED IN METAL CONTAINERS

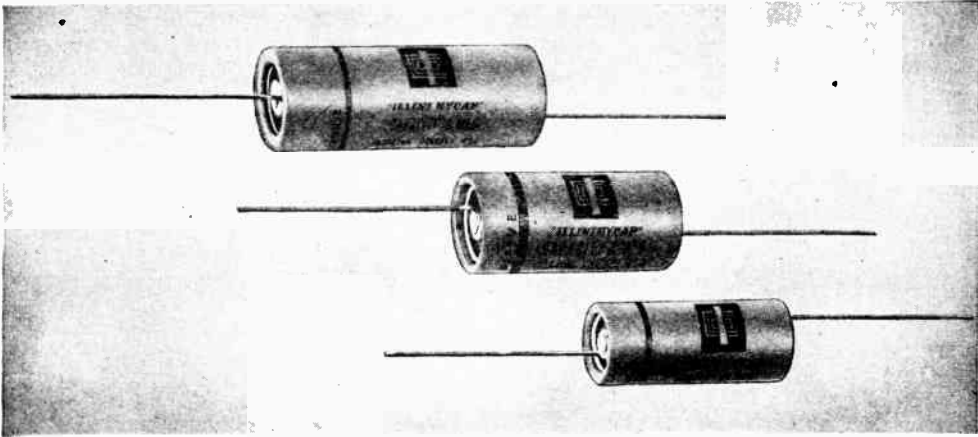
Each unit receives full minute test at flash-test rating—is fully guaranteed as to capacity, insulation and breakdown tests. Heavy-duty, water-tight, all-metal containers, enamel dipped. Minus 10, plus 30 tolerance, standard; others on special order.

No.	Mfd.	FL. Test	Size	Lug. Dis.	List	No.	Mfd.	FL. Test	Size	Lug. Dis.	List
280	1/20	500 V.D.C.	1/2 x 2 1/4	1 1/4 x 3/8	1.00	359	2	400 V.D.C.	1/2 x 4	2 3/4 x 1 1/4	\$1.80
290	1/10	500 V.D.C.	1/2 x 2 1/4	1 1/4 x 3/8	1.00	370	3	500 V.D.C.	7/8 x 4 1/2	3 1/4 x 1 1/4	2.50
310	1/4	500 V.D.C.	1/2 x 3 1/2	1 1/4 x 3/8	1.10	371	3	500 V.D.C.	5/8 x 4 1/2	1 1/4 x 1 1/4	2.50
311	1/4	500 V.D.C.	1/2 x 3 1/2	1 1/4 x 3/8	1.10	372	3	400 V.D.C.	5/8 x 4 3/8	2 3/4 x 1 1/4	2.30
321	1/2	500 V.D.C.	1/2 x 4 1/2	1 3/4 x 3/8	1.20	380	4	500 V.D.C.	7/8 x 4 1/2	2 3/4 x 1 1/4	3.10
322	1/2	500 V.D.C.	1/2 x 4 1/2	1 3/4 x 3/8	1.20	381	4	500 V.D.C.	7/8 x 4 1/2	3 1/4 x 1 1/4	3.10
323	1/2	500 V.D.C.	3/4 x 4	2 1/4 x 3/8	1.10	400	1/20	1000 V.D.C.	1 1/2 x 2 1/4	1 1/4 x 3/8	1.10
324	1/2	500 V.D.C.	3/4 x 4	2 1/4 x 3/8	1.10	410	1/10	1000 V.D.C.	1 1/2 x 2 1/4	1 1/4 x 3/8	1.30
325	1/2	500 V.D.C.	5/8 x 2 1/4	1 1/4 x 3/8	1.10	420	1/4	1000 V.D.C.	3/4 x 2 1/4	1 1/4 x 3/8	1.50
331	1	500 V.D.C.	1/2 x 4 1/2	2 3/4 x 3/8	1.50	430	1/2	1000 V.D.C.	5/8 x 4 1/2	1 3/4 x 3/8	1.50
332	1	500 V.D.C.	1/2 x 4 1/2	2 3/4 x 3/8	1.50	431	1/2	1000 V.D.C.	5/8 x 4 1/2	2 x 3/8	1.50
333	1	500 V.D.C.	1/2 x 4 1/2	2 3/4 x 3/8	1.50	440	1	1000 V.D.C.	5/8 x 4 3/8	2 3/4 x 1 1/4	1.90
334	1	500 V.D.C.	1/2 x 4	2 3/4 x 3/8	1.50	441	1	1000 V.D.C.	5/8 x 4 3/8	2 3/4 x 1 1/4	1.90
337	1	400 V.D.C.	1/2 x 4	2 3/4 x 3/8	1.40	442	1	750 V.D.C.	3/4 x 4 1/2	2 x 3/8	1.80
341	1 1/2	500 V.D.C.	3/4 x 3 3/8	1 5/8 x 3/8	1.80	443	1	750 V.D.C.	3/4 x 4 1/2	2 x 3/8	1.80
342	1 1/2	500 V.D.C.	3/4 x 3 3/8	1 5/8 x 3/8	1.80	450	2	1000 V.D.C.	1 1/4 x 4 1/2	2 3/4 x 1 1/4	2.50
343	1 1/2	500 V.D.C.	3/4 x 3 3/8	1 5/8 x 3/8	1.80	451	2	1000 V.D.C.	1 1/4 x 4 1/2	2 3/4 x 1 1/4	2.50
356	2	500 V.D.C.	3/4 x 4 1/2	2 3/4 x 3/8	1.90	452	2	750 V.D.C.	3/4 x 4 1/2	3 x 1 1/4	2.10
351	2	500 V.D.C.	3/4 x 4 1/2	2 3/4 x 3/8	1.90	453	2	750 V.D.C.	1 1/2 x 4 1/2	3 x 3/8	2.10
355	2	400 V.D.C.	3/4 x 4 1/2	2 3/4 x 3/8	1.90	460	3	1000 V.D.C.	1 1/2 x 4 1/2	3 x 1 1/4	3.10
356	2	500 V.D.C.	1/2 x 4 1/2	2 3/4 x 3/8	1.80	470	4	1000 V.D.C.	1 1/2 x 4 1/2	4 3/8 x 2	3.90
358	2	400 V.D.C.	1/2 x 4 1/2	2 3/4 x 3/8	1.80	471	4	750 V.D.C.	1 1/2 x 4 1/2	3 x 1 1/4	3.60



ILLINOIS CONDENSERS

"TIME TESTED QUALITY"



"ILLINI HYCAPS" are now manufactured in a new and modern plant designed especially for the manufacture of capacitors. Our thorough engineering, plus old manufacturing skills and a rigid policy of quality control enables us to produce a product that is of unexcelled quality.

"ILLINI HYCAPS" are again available, and you will agree after using them that they meet every requirement a superior condenser should have for long life and dependable service.

"ILLINI HYCAPS" are guaranteed unconditionally for a period of one year, from date of purchase.

1. Short proof—ample separation of foils by highest purity cellulose separator plus tough anodic film—will withstand the highest surge voltages.
2. Condenser hermetically sealed and anchored in an aluminum shell. Completely resistant to changes due to temperature and humidity. Built to withstand all kinds of vibrations and shocks.
3. Attractive kraft tube spun over condenser ends . . . prevents shorting of pig tail leads to condenser or other components. Aluminum lock-washers hold leads securely in place, will not loosen or break off.
4. Low power factor, low leakage, excellent shelf life.
5. Extremely longer life—due to our use of C. P. chemicals and highest purity foils and insulation materials available. A balanced non-corrosive electrolyte contributes to quiet stable operation.

TYPE IHT TUBULAR ELECTROLYTIC CONDENSERS IN ALUMINUM CAN SELF SUPPORTING WITH WIRE PIGTAILS

Part No.	Cap. MFD	W. V.	SIZE		LIST PRICE
			Dia.	Length	
LOW-VOLTAGE					
IHT-1025	10	25 WVDC	11/16"	1 1/4"	\$0.75
IHT-1050	10	50 WVDC	11/16"	1 1/4"	.80
IHT-2590	25	90 WVDC	11/16"	1 1/4"	.95
IHT-2525	25	25 WVDC	11/16"	1 1/4"	.85
IHT-10025	100	25 WVDC	11/16"	1 3/4"	1.20
IHT-2550	25	50 WVDC	11/16"	1 3/4"	.90
IHT-8150	8	150 WVDC	11/16"	1 1/4"	.80
IHT-10150	10	150 WVDC	11/16"	1 3/4"	.80
IHT-1215	12	150 WVDC	11/16"	1 3/4"	.85
IHT-1615	16	150 WVDC	11/16"	1 3/4"	.90
IHT-2015	20	150 WVDC	11/16"	1 3/4"	.95
IHT-2415	24	150 WVDC	11/16"	1 3/4"	.95
IHT-3015	30	150 WVDC	13/16"	1 3/4"	1.00
IHT-4015	40	150 WVDC	13/16"	1 3/4"	1.10
IHT-5015	50	150 WVDC	13/16"	1 3/4"	1.20
HIGH-VOLTAGE					
IHT-4450	4	450 W. V.	11/16"	1 3/4"	.90
IHT-6450	6	450 W. V.	13/16"	1 3/4"	.90
IHT-8450	8	450 W. V.	13/16"	1 3/4"	.95
IHT-10450	10	450 W. V.	13/16"	1 3/4"	1.05
IHT-12450	12	450 W. V.	13/16"	2-3/16"	1.15
IHT-16450	16	450 W. V.	13/16"	2-3/16"	1.35



ILLINOIS CONDENSERS

"TIME TESTED QUALITY"

Clamp Mounting Tubulars

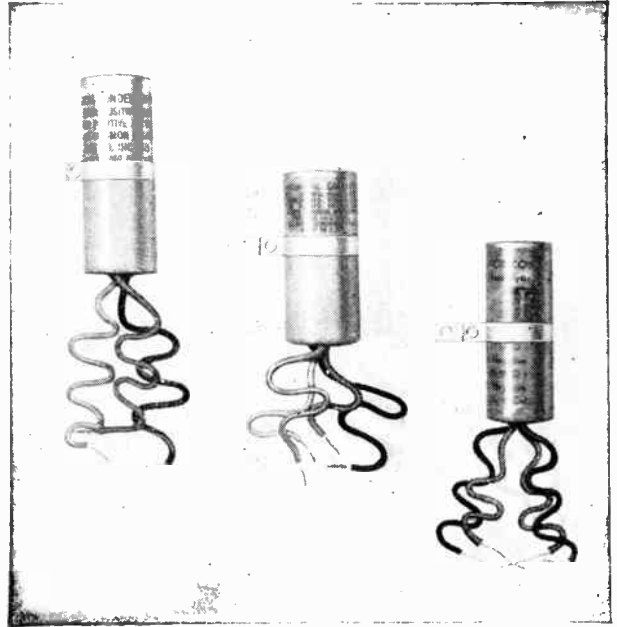
"ILLINI-HYCAPS"

Through careful selection of high temperature sealing compounds and superior engineering design, these completely hermetically sealed, compact tubular electrolytic condensers are the acme of dependability. They operate efficiently under high temperatures and will give long life under all climatic conditions.

The small size and convenient mounting features of our type IHC "ILLINI-HYCAPS" make them popular in both manufacturing and replacement work.

Leads are color coded and securely anchored in the hard wax seal. Dual units have four leads for universal replacement work and are completely insulated.

Clamp may be moved to any position on tube for rapid mounting.



TYPE IHC — LOW VOLTAGE

WAX IMPREGNATED CARDBOARD TUBULARS

POTTED WAXED ENDS—FLEXIBLE WIRE LEADS—CLAMP MOUNTING

Part No.	Cap. MFD	W. V.	SIZE		LIST PRICE
			Dia.	Length	
IHC-161615	16-16	150 Common Negative	3/4"	2 3/8"	\$1.25
IHC-2215	20-20	150 Common Negative	3/4"	2 3/8"	1.30
IHC-d 2215	20-20	150 Separate Negative) 4 Leads	15/16"	2 3/8"	2.00
IHC-3315	30-30	150 Common Negative	15/16"	2 3/4"	1.50
IHC-4215	40-20	150 Common Negative	15/16"	2 3/4"	1.50
IHC-4415	40-40	150 Common Negative	15/16"	2 3/4"	1.70
IHC-5315	50-30	150 Common Negative	15/16"	2 3/4"	1.70
IHC-6215	60-20	150 Common Negative	15/16"	2 3/4"	1.70
IHC-22215	20-20-20	150 Common Negative	1"	2 3/4"	2.10
IHC-5050	50-50	150 Common Negative	1"	3"	1.85
IHC-5520	50-50 }	150 Common Negative			
	-20 }	25 Common Negative			2.25
IHC-53100	50-30 }	150 Common Negative	1"	3"	
	-100 }	25 Common Negative			2.40

HIGH VOLTAGE

IHC-1245	12	450	7/8"	2 3/4"	1.15
IHC-1645	16	450	15/16"	2 3/4"	1.35
IHC-2045	20	450	1"	2 3/4"	1.50
IHC-3045	30	450	1 1/8"	2 3/4"	1.65
IHC-4045	40	450	1-3/16"	2 3/4"	2.00

HIGH VOLTAGE—MULTIPLE UNITS

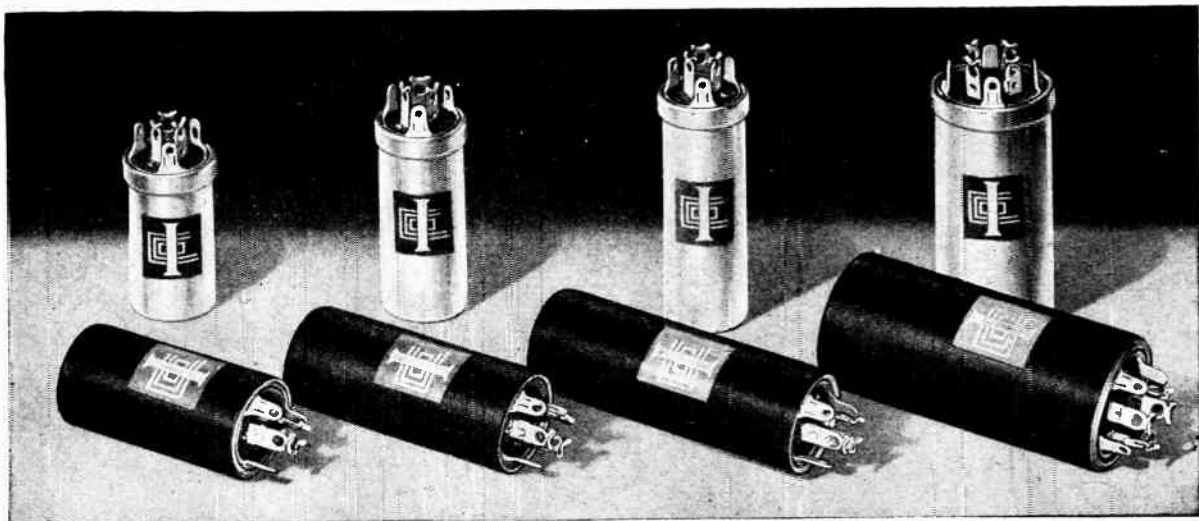
IHC-8845	8-8	450 Common Negative	1 1/8"	2 3/4"	1.70
IHC-d 8845	8-8	450 Separate Negative) 4 Leads	1-3/16"	2 3/4"	2.10
IHC-101045	10-10	450 Common Negative	1 1/8"	2 3/4"	1.85
IHC-16845	16-8	450 Common Negative	1 3/8"	3"	2.00
IHC-161645	16-16	450 Common Negative	1 1/2"	3"	3.00
IHC-88845	8-8-8	450 Common Negative	1 1/2"	3"	2.75



ILLINOIS CONDENSERS

"TIME TESTED QUALITY"

TYPE UMP



Illinois standard, twist prong mounting condensers offer a wider range of voltage and capacity types than have heretofore been possible in units of comparable size. They are designed to give maximum efficiency, both in operating characteristics and ease of mounting and wiring.

The electrical characteristics of our type UMP are superb. Capacities are always plus. This, coupled with low power factor and low leakage, makes them ideal for use in all electronic circuits.

Units are hermetically sealed in seamless drawn aluminum cans. Mounting and soldering lugs are sturdy and heavily tinned. Cathode tabs are electrically welded to mounting ring. Each unit is vibration proof—and they will stand up in any climate.

Arranged in a variety of can sizes and capacity combinations, the attached listing represents the majority of condenser types in use today.

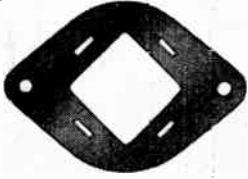
SINGLE UNITS

Part Number	Capacity MFD	Working Voltage DC	Diameter	Size Length	List Price
UMP-13	3000	10	1 3/8"	3"	\$ 4.50
UMP-15	1000	15	1"	3"	3.25
UMP-12	2000	15	1 3/8"	3"	4.70
UMP-21	100	25	1"	2"	1.45
UMP-25	500	25	1"	3"	2.45
UMP-205	1000	25	1 3/8"	3"	3.55
UMP-505	500	50	1 3/8"	3"	3.55
UMP-150	50	150	1"	2"	1.45
UMP-165	100	150	1"	3"	1.85
UMP-400	10	450	1"	2"	1.30
UMP-415	15	450	1"	2"	1.55
UMP-420	20	450	1"	2"	1.75
UMP-430	30	450	1"	2 1/2"	1.90
UMP-440	40	450	1"	3"	2.25
UMP-480	80	450	1 3/8"	3"	3.85

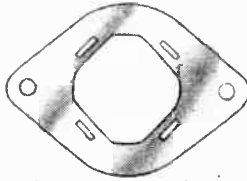


ILLINOIS CONDENSERS

“TIME TESTED QUALITY”



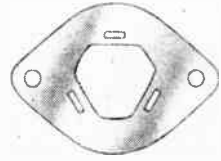
1-3/8" Diameter
BAKELITE Mounting
Plate Part No. MPB-1



1-3/8" Diameter
STEEL Mounting Plate
Part No. MPS-2



1" Diameter
BAKELITE Mounting
Plate Part No. MPB-3



1" Diameter
STEEL Mounting
Plate Part No. MPS-4

DUAL UNITS

Part Number	Capacity MFD	Working Voltage DC	Diameter	Size Length	List Price
UMP-144	40-40	150	1"	2 1/2"	\$ 1.95
UMP-155	50-50	150	1"	2 1/2"	2.10
UMP-411	10-10	450	1"	2"	2.10
JMP-422	20-20	450	1"	3"	2.65
UMP-444	40-40	450	1 3/8"	3"	4.00
JMP-431	80-10	450	1 3/8"	3"	4.20

TRIPLE UNITS

UMP-1332	30-30 20	150 25	1"	2"	2.25
UMP-1425	40-20 25	150 25	1"	2"	2.35
JMP-1531	50-30 100	150 25	1"	2 1/2"	3.10
UMP-3151	15-10 20	350 25	1"	2"	2.55
UMP-3312	30-10 20	350 25	1"	2 1/2"	2.75
UMP-4112	10-10 20	450 25	1"	2"	2.35
UMP-4222	20-20 20	450 25	1"	3"	2.95
UMP-4442	40-40 20	450 25	1 3/8"	3"	4.25
UMP-1222	20-20-20	150	1"	2"	2.30
UMP-1444	40-40-40	150	1"	3"	2.60
UMP-3111	10-10-10	350	1"	2"	2.25
UMP-4111	10-10-10	450	1"	2 1/2"	2.50

QUADRUPLE UNITS

UMP-4432	40-40-30 20	150 25	1 3/8"	2"	3.10
UMP-44312	40-30-10 20	450 25	1 3/8"	3"	4.15
UMP-41111	10-10-10-10	450	1 3/8"	2"	3.25
UMP-42222	20-20-20-20	450	1 3/8"	3"	4.50

NOTE: Outer Insulating sleeves are available upon special order for all of the above can sizes. A metal and bakelite mounting washer is supplied with each unit. Individually packaged in a sturdy, attractive varnished box.



ILLINOIS CONDENSERS

'TIME TESTED QUALITY'



TYPE LN Inverted Screw Mounting ALUMINUM CAN CONDENSERS

Type LN aluminum can condensers are manufactured to operate satisfactorily under the severest conditions. Units are completely sealed in an inner impregnated tube then resealed. Correct design has allowed for maximum heat dissipation with resultant ability of the condensers to operate at higher temper-

atures and higher voltage surges.

Separate negative and positive leads for each section for universal replacement work. Pal Nut furnished with each condenser. Individually packaged in attractive, varnished outer box. These units are ideal for long life and continuous service.

LOCKNUT METAL CANS—STUD SCREW BASE MOUNTING

HIGH VOLTAGE

Part No.	Cap. MFD	W. V.	SIZE		LIST PRICE
			Dia.	Length	
LN-80	8	450	1 3/8"	3 3/8"	\$1.75
LN-120	12	450	1 3/8"	3 3/8"	2.15
LN-160	16	450	1 3/8"	3 3/8"	2.40
LN-200	20	450	1 3/8"	3 3/8"	2.65
LN-250	25	450	1 1/2"	3 3/8"	2.85
LN-300	30	450	1 1/2"	3 3/8"	3.00
LN-400	40	450	1 1/2"	3 3/8"	3.40

HIGH VOLTAGE MULTIPLE UNITS

LN-88	8-8	450 Common Negative	1 3/8"	3 3/8"	2.75
LN-d 88	8-8	450 Separate Negative) 4 Leads	1 3/8"	3 3/8"	2.95
LN-1010	10-10	450 Common Negative	1 3/8"	3 3/8"	3.00
LN-168	16-8	450 Common Negative	1 1/2"	3 3/8"	3.25
LN-3888	8-8-8	450 Common Negative	1 1/2"	3 3/8"	4.25
LN-216	16-16	450 Common Negative	1 1/2"	3 3/8"	3.50

600 VOLT WORKING

LN-460	4	600 WVDC	1 3/8"	3 3/8"	3.00
LN-860	8	600 WVDC	1 1/2"	3 3/8"	4.00
LN-126	12	600 WVDC	1 1/2"	3 3/8"	4.62

INDUSTRIAL

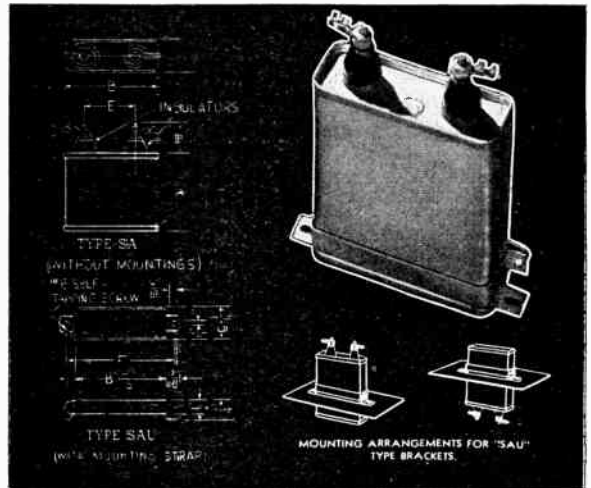


CONDENSER

TYPE "SA" OIL FILLED

1. INCCO OIL "A" IMPREGNATED AND FILLED—permitting efficient operation over widest range of temperatures.
2. HERMETICALLY SEALED CASE—is unaffected by time, humidity, or operating temperatures.
3. Use of HIGHEST GRADE CONDENSER TISSUES insures a long uninterrupted life.
4. HIGH-GLAZE PORCELAIN INSULATORS—insure low moisture absorption and high terminal to case flash over.
5. CONSERVATIVELY RATED—SAFE FOR CONTINUOUS OPERATION AT 10 PER CENT OVER-LOAD.
6. Use of "SPACE SAVER" UNIVERSAL MOUNTING BRACKET provides adjustable capacitor heights.
7. LEAD COATED STEEL CASE—IS NON-CORROSIVE and lacquer finished.
8. TESTED FOUR TIMES BEFORE SHIPMENT—guarantees a 100 per cent perfect product electrically and mechanically.

If riveted terminal construction is wanted in place of porcelain stand-off insulators add "R" to catalog number. For example, 6SA50 changes to 6SAR50. Submersion proof terminal construction to meet Army and Navy Specifications is optional; specify on order. Standard capacity tolerance plus or minus 10 per cent. Mounting brackets supplied in accordance with following catalog designations: TYPE SA—No mounting brackets. TYPE SAU—"Space Saver" universal bracket. TYPE SAJ—Soldered vertical mounting bracket. Type SAL—Reversible mounting foot bracket. TYPE SAH—Re-



versible spade bolt bracket.

For example: The 8mid, 600V, type with "Space Saver" bracket has catalog number 6SAU800.

NOTE: To facilitate delivery we have standardized on container heights. In many cases units can be supplied in shorter containers if required.

600 V.D.C. WORKING										
Cat. No.	Cap. Mfd.	Dimensions in Inches								List Price
		A	B	C	D	E	F	H		
6SA50	.5	2 7/8	1 1/8	1 1/8	7/8	3/4	2 1/4	2 1/4	\$3.61	
6SA100	1.0	2 7/8	1 1/8	1 1/8	7/8	3/4	2 1/4	2 1/4	4.46	
6SA200	2.0	2 7/8	1 1/8	1 1/8	7/8	3/4	2 1/4	2 1/4	5.53	
6SA400	4.0	4 3/8	2 1/2	1 1/8	7/8	1 1/8	3	3	7.01	
6SA600	6.0	4 3/8	2 1/2	1 1/8	7/8	1 1/8	3	3	8.71	
6SA800	8.0	4 3/8	3 3/8	1 1/8	7/8	2	4 3/8	4 3/8	10.41	
6SA1000	10.0	4 3/8	3 3/8	1 1/8	7/8	2	4 3/8	4 3/8	11.69	
1000 V.D.C. WORKING										
10SA10	.1	2 7/8	1 1/8	1 1/8	7/8	3/4	2 1/4	2 1/4	3.19	
10SA25	.25	2 7/8	1 1/8	1 1/8	7/8	3/4	2 1/4	2 1/4	3.61	
10SA50	.5	2 7/8	1 1/8	1 1/8	7/8	3/4	2 1/4	2 1/4	3.83	
10SA100	1.0	2 7/8	1 1/8	1 1/8	7/8	3/4	2 1/4	2 1/4	4.89	
10SA200	2.0	4 1/8	1 1/8	1 1/8	7/8	3/4	2 1/4	2 1/4	6.38	
10SA400	4.0	4 3/8	2 1/2	1 1/8	7/8	1 1/8	3	3	8.08	
10SA600	6.0	4 3/8	3 3/8	1 1/8	7/8	2	4 3/8	4 3/8	10.84	
10SA800	8.0	4 3/8	3 3/8	1 1/8	7/8	2	4 3/8	4 3/8	11.69	
10SA1000	10.0	4 3/8	3 3/8	1 1/8	7/8	2	4 3/8	4 3/8	12.96	
1500 V.D.C. WORKING										
15SA50	.5	2 7/8	1 1/8	1 1/8	7/8	3/4	2 1/4	2 1/4	4.89	
15SA100	1.0	4 1/8	1 1/8	1 1/8	7/8	3/4	2 1/4	2 1/4	5.74	
15SA200	2.0	4 1/8	2 1/2	1 1/8	7/8	1 1/8	3	3	8.08	
15SA400	4.0	4 3/8	3 3/8	1 1/8	7/8	2	4 3/8	4 3/8	10.84	
15SA600	6.0	4 3/8	3 3/8	1 1/8	7/8	2	4 3/8	4 3/8	13.18	
2000 V.D.C. WORKING										
20SA10	.1	2 7/8	1 1/8	1 1/8	7/8	3/4	2 1/4	2 1/4	5.10	
20SA25	.25	2 7/8	1 1/8	1 1/8	7/8	3/4	2 1/4	2 1/4	5.53	

* Where G dimension is given, two spade lugs or mounting holes

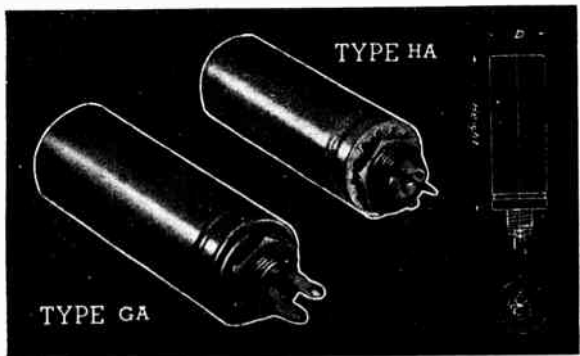
2000 V.D.C. WORKING										
Cat. No.	Cap. Mfd.	Dimensions in Inches								List Price
		A	B	C	D	E	F	*G	H	
20SA50	.5	2 7/8	1 1/8	1 1/8	7/8	3/4	2 1/4	2 1/4	\$5.74	
20SA100	1.0	2 7/8	1 1/8	1 1/8	7/8	3/4	2 1/4	2 1/4	7.01	
20SA200	2.0	4 1/8	1 1/8	1 1/8	7/8	3/4	2 1/4	2 1/4	8.29	
20SA400	4.0	4 3/8	3 3/8	2 1/8	7/8	2	4 3/8	2	11.69	
20SA600	6.0	4 3/8	3 3/8	2 1/8	7/8	2	4 3/8	2 1/4	15.51	
2500 V.D.C. WORKING										
25SA50	.5	4 3/8	3 3/8	1 1/8	7/8	2	4 3/8	4 3/8	8.93	
25SA100	1.0	4 3/8	3 3/8	1 1/8	7/8	2	4 3/8	4 3/8	10.20	
25SA200	2.0	4 3/8	3 3/8	1 1/8	7/8	2	4 3/8	4 3/8	15.58	
25SA400	4.0	4 3/8	3 3/8	4 3/8	1 1/8	2	4 3/8	3 3/8	23.16	
3000 V.D.C. WORKING										
30SA10	.1	2 7/8	1 1/8	1 1/8	7/8	3/4	2 1/4	2 1/4	10.84	
30SA25	.25	2 7/8	1 1/8	1 1/8	7/8	3/4	2 1/4	2 1/4	11.48	
30SA50	.5	2 7/8	1 1/8	1 1/8	7/8	3/4	2 1/4	2 1/4	12.96	
30SA100	1.0	4 1/8	1 1/8	1 1/8	7/8	3/4	2 1/4	2 1/4	15.51	
30SA200	2.0	4 3/8	3 3/8	2 1/8	7/8	2	4 3/8	2	19.34	
4000 V.D.C. WORKING										
40SA10	.1	2 7/8	1 1/8	1 1/8	7/8	3/4	2 1/4	2 1/4	19.34	
40SA25	.25	2 7/8	1 1/8	1 1/8	7/8	3/4	2 1/4	2 1/4	20.40	
40SA50	.5	4 1/8	3 3/8	2 1/8	7/8	2	4 3/8	4 3/8	23.16	
40SA100	1.0	5 3/8	3 3/8	2 1/8	7/8	2	4 3/8	4 3/8	28.48	
5000 V.D.C. WORKING										
50SA50	.5	4 3/8	3 3/8	2 1/8	7/8	2	4 3/8	4 3/8	25.71	
50SA100	1.0	4 3/8	3 3/8	2 1/8	7/8	2	4 3/8	3 3/8	32.30	
6000 V.D.C. WORKING										
60SA50	.5	7 3/8	3 3/8	3 3/8	1 1/8	2	4 3/8	2	51.64	
60SA100	1.0	6 1/2	3 3/8	4 3/8	2 1/8	2	4 3/8	3 3/8	64.60	

are supplied on each bracket.

TYPES "GA" and "HA" OIL FILLED

These inverted mounting capacitors fill a definite need where chassis space is the prime factor.

Types "GA" and "HA" are INCCO Oil "A" impregnated and filled.



The case is a one-piece metal extrusion with a "locked-in" milled neck. This construction meets and surpasses the Army and Navy requirements for a submersion-proof capacitor.

Type "GA" is available in the seven standard rating listed below, but can also be applied in other capacities and/or voltages to manufacturers' specifications.

In the standard "GA" and "HA" types the container is insulated. A grounding lug can be supplied for connecting one terminal to the case. Fiber washer for insulating container from chassis, when case is grounded, and insulating cover for insulating the container from adjacent equipment, can also be supplied on special order.

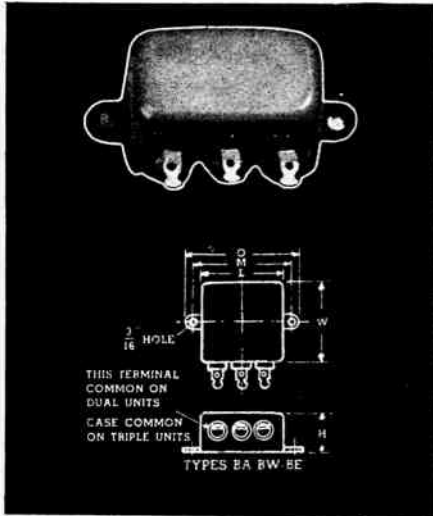
Type "HA" differs from "GA" in container and mounting neck size, and also in the fact that it has three insulated terminals. Primarily, type "HA" is supplied to manufacturers' specifications, to meet special requirement of multiple-section and multiple-terminal capacitors, with either insulated or grounded container.

Cat. No.	Cap. Mfd.	Working Voltage D.C.	Size of Mounting Case		List Price
			Diameter	Neck	
GA — GE	— GW	1 1/2"	3/4"	3/8" x 16 thread	
HA — HE	— HW	1 3/8"	3/8"	3/8" x 16 thread	
6GA200	2	600	3"		\$4.15
6CA300	3	600	4 1/4"		4.95
6CA400	4	600	4 1/4"		5.70
10CA100	1	1000	3"		3.80
10CA200	2	1000	4 1/4"		4.95
15GA50	.5	1500	3"		4.55
15GA100	1	1500	4 1/4"		4.95

INDUSTRIAL

INDUSTRIAL CONDENSER CORPORATION

CONDENSER



DRY ELECTROLYTICS

Type "B" electrolytic capacitor is the first commercially available unit of this type with the reliability of the total submersion type, oil filled capacitors.

Wound with the highest purity aluminum foil and cellulose separators available; impregnated in electrolyte having excellent temperature characteristics, these units will outlive their associated equipment.

Cat. No.	Cap. in Mfds.	Volts	Dimen. in Inches				List Price
			L	W	H	M	
52BE10	10	25	1 1/8	1	2 1/8	\$2.70	
52BE25	25	25	1 1/8	1	2 1/8	2.70	
52BE50	50	25	1 1/8	1	2 1/8	2.80	
05BE10	10	50	1 1/8	1	2 1/8	2.75	
05BE25	25	50	1 1/8	1	2 1/8	2.75	
05BE50	50	50	1 1/8	1	2 1/8	3.00	

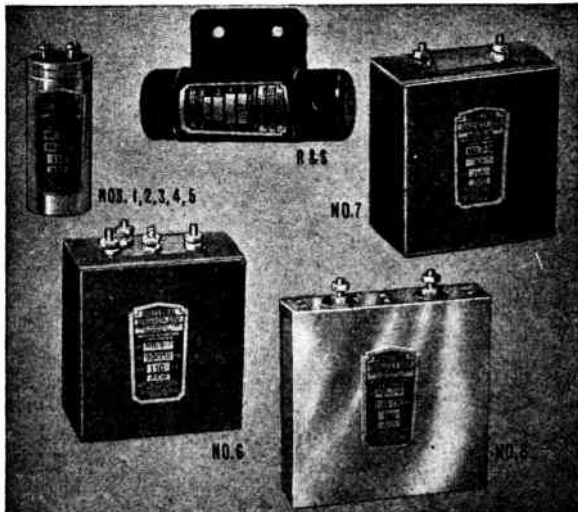
NOTICE—Most units are available with TERMINALS ON TOP, BOTTOM, OR ENDS. When ordering, add "T" for top terminals, "B" for terminals on bottom, or "E" for end terminals, i.e., 6BA100 for terminals on top. Type "B" also available in WAX FILLED. When ordering, change catalog number A to W, i.e., 6BW100. If terminal position is not designated, side terminals are furnished. STANDARD CAPACITY tolerance of plus 20 per cent minus 10 per cent furnished on oil filled and wax filled units unless otherwise specified when ordering. Can be furnished in plus or minus 1 per cent capacity tolerance on special request.

Built to U. S. Signal Corps and Navy Specifications TYPE "BA" OIL FILLED

1. INCCO OIL "A" permits efficient operation of these compact units over the widest range of temperature.
2. The use of the HIGHEST GRADE CONDENSER TISSUE insures greater safety factor and longer life.
3. Specially PROCESSED RIVETED TERMINALS are designed to withstand total submersion in salt water and changes in temperature from 50° below zero Centigrade to 90° above zero Centigrade without loosening or losing their integrity.
4. CONDENSER MOUNTINGS form an integral part of these drawn shell containers insuring permanent and rigid fastenings.
5. All units are NON-INDUCTIVELY WOUND providing efficient operation over the widest range of frequencies.
6. HERMETICALLY SEALED, they are unaffected by time, temperature or humidity.
7. CONSERVATIVELY RATED for safe and continuous uninterrupted operation at 10% above rated voltage for the lifetime of associated equipment.
8. Tested at twice the rated voltage between terminals and twice the rated voltage plus 1000 from each terminal to case.

Cat. No.	Cap. in MFDS.	Dimensions in Inches					List Price
		L	W	H	M	O	
600 V. D. C. WORKING							
6BA05	.05	1 1/8	1	1 3/8	2 1/8	2 1/2	\$2.20
6BA10	.1	1 1/8	1	1 3/8	2 1/8	2 1/2	2.25
6BA25	.25	1 1/8	1	1 3/8	2 1/8	2 1/2	2.40
6BA50	.5	1 1/8	1	1 3/8	2 1/8	2 1/2	2.55
6BA100	1.0	2	1 3/4	7/8	2 3/8	2 3/4	2.90
6BA0505	.05-.05	1 1/8	1	1 3/8	2 1/8	2 1/2	2.80
6BA11	.1-.1	1 1/8	1	1 3/8	2 1/8	2 1/2	2.85
6BA22	.25-.25	2	1 3/4	7/8	2 3/8	2 3/4	2.90
6BA55	.5-.5	2	1 3/4	7/8	2 3/8	2 3/4	3.30
6BA111	.1-.1.1	1 1/8	1	1 3/8	2 1/8	2 1/2	3.25
6BA200	2	2	2	1 1/8	2 3/8	2 1 3/8	3.90
1000 V. D. C. WORKING							
10BA05	.05	1 1/8	1	1 3/8	2 1/8	2 1/2	2.35
10BA10	.1	1 1/8	1	1 3/8	2 1/8	2 1/2	2.40
10BA25	.25	1 1/8	1	1 3/8	2 1/8	2 1/2	2.50
10BA50	.5	2	1 3/4	7/8	2 3/8	2 3/4	2.70
10BA100	1.0	2	2	1 1/8	2 3/8	2 3/4	3.40
10BA0505	.05-.05	1 1/8	1	1 3/8	2 1/8	2 1/2	3.00
10BA11	.1-.1	1 1/8	1	1 3/8	2 1/8	2 1/2	3.10
10BA22	.25-.25	2	1 3/4	7/8	2 3/8	2 3/4	3.25

Above units also available in 200 V. D. C., 400 V. D. C. and 1500 V. D. C. on request.



MOTOR STARTING CONDENSERS

These motor starting condensers are all heavy duty three second start. Built of the finest materials obtainable, these capacitors are engineered to the Nth degree of perfection. They are used by all the leading manufacturers of high quality motors.

The listings shown will take care of 90% of all your replacement requirements.

Number	Size, Inches	Capacity	List Price
MS145	1 3/8 Dia. x 3 1/4	45 - 70	\$1.90
MS170	1 3/8 Dia. x 3 1/4	70 - 85	2.00
MS185	1 3/8 Dia. x 3 1/4	85 - 115	2.05
MS1108	1 3/8 Dia. x 3 1/4	108 - 120	2.05
MS1120	1 3/8 Dia. x 3 1/4	120 - 150	2.15
MS1145	1 3/8 Dia. x 3 1/4	145 - 162	2.70
MS285	1 1/2 Dia. x 3 3/8	85 - 115	2.20
MS2120	1 1/2 Dia. x 3 3/8	120 - 150	2.30
MS390	2 Dia. x 4 1/2	90 - 115	3.05
MS3120	2 Dia. x 4 1/2	120 - 150	3.20
MS3245	2 Dia. x 4 1/2	245 - 300	4.20
MS3161	2 Dia. x 4 1/2	161 - 190	3.50
MS3191	2 Dia. x 4 1/2	191 - 240	3.85
MS485	2 1/2 Dia. x 4 1/2	85 - 115	3.05
MS4120	2 1/2 Dia. x 4 1/2	120 - 150	3.20
MS5100	3 Dia. x 4 1/2	100 - 115	3.10
MS690	3 1/2 x 4 x 2	90 - 115	3.30
MS6124	3 1/2 x 4 x 2	124 - 138	3.70
MS6145	3 1/2 x 4 x 2	145 - 162	4.30
MS780	3 1/2 x 4 x 2	80	3.20
MS750	3 1/2 x 4 x 2	50 - 65	3.05
MS8100	4 1/2 x 4 1/2 x 1 1/4	100 - 120	3.80
MS870	4 1/2 x 4 1/2 x 1 1/4	70 - 90	3.35
R	Mounting Bracket for 1 3/8 x 3 1/4		.75
S	Mounting Bracket for 2 x 4 1/2		.95

SEND FOR BULLETIN No. 1075 WHICH LISTS OUR OIL FILLED MOTOR RUNNING CAPACITORS

CAPACITORS TO 250,000 V.D.C.W.

INCCO OIL "A" IMPREGNATED AND FILLED assures smaller size, low power factor, and widest range of operating temperatures.

ELECTRIC ARC WELDED HEAVY GAUGE HOT TINNED STEEL CASES are non-corrosive—finished in durable lacquer.

GLAZED WET-PROCESS PORCELAIN INSULATORS—low moisture absorption and high terminal to case flash over.

WOUND WITH HIGHEST GRADE CONDENSER TISSUES—insures a long, uninterrupted life.

CONSERVATIVELY RATED—Safe for continuous operation at 10 per cent overload.

HERMETICALLY SEALED STEEL CASE — unaffected by time, humidity or operating temperatures.

AVAILABLE TO MEET U. S. SIGNAL CORPS AND NAVY SALT WATER SUBMERSION REQUIREMENTS.

TYPE "WA" — HIGH VOLTAGE OIL FILLED CAPACITORS

Cat. No.	Cap. Mfd.	Case Dimensions in Inches			List Price
		Width	Length	Ht-height	
6,000 V. D. C. WORKING					
60WA200	2.	4	8	11	\$108.00
60WA400	4.	4	12	11	132.00
60WA500	5.	4	12	11	150.00
60WA600	6.	4	12	13	168.00
60WA1000	10.	6	12	13	210.00
7,500 V. D. C. WORKING					
75WA50	5.	4	8	11	60.00
75WA100	1.	4	8	11	78.00
75WA200	2.	4	8	11	120.00
75WA400	4.	4	12	13	180.00
75WA600	6.	6	12	13	216.00
10,000 V. D. C. WORKING					
100WA100	1.	4	8	11	156.00
100WA200	2.	4	8	13	198.00
100WA400	4.	6	12	13	240.00
100WA500	5.	6	12	13	264.00
12,500 W. D. C. WORKING					
125WA50	5.	4	8	11	132.00
125WA100	1.	4	12	11	168.00
125WA200	2.	6	12	13	210.00
125WA500	5.	9 1/2	12	15	396.00

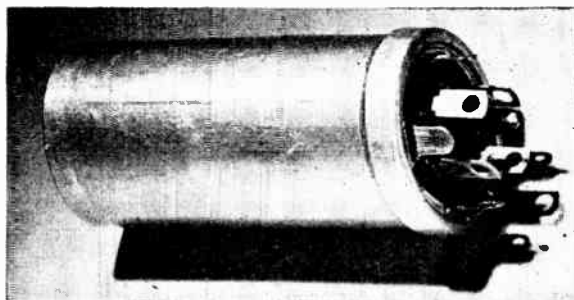


Cat. No.	Cap. Mfd.	Case Dimensions in Inches			List Price
		Width	Length	Height	
15,000 V. D. C. WORKING					
150WA25	.25	4	8	11	\$126.00
150WA50	.5	4	12	11	150.00
150WA100	1.	4	12	13	210.00
150WA200	2.	9 1/2	12	15	276.00
150WA300	3.	9 1/2	12	15	378.00
20,000 V. D. C. WORKING					
200WA25	.25	4	8	11	150.00
200WA50	.5	4	12	11	192.00
200WA100	1.	6	12	13	258.00
200WA150	1.5	9 1/2	12	15	348.00
200WA200	2.0	9 1/2	12	15	414.00
25,000 V. D. C. WORKING					
250WA20	.2	4	12	11	156.00
250WA25	.25	4	12	11	210.00
250WA50	.5	6	12	13	228.00
250WA100	1.	9 1/2	12	15	342.00
50,000 V. D. C. WORKING					
500WA25	.25	6	15 1/2	16 3/4	*
500WA50	.5	7 1/4	18	20	*
80,000 V. D. C. WORKING					
800WA25	.25	7 1/4	18	20	*
100,000 V. D. C. WORKING					
1000WA20	.2	7 1/4	18	20	*

* Prices on application.

Catalog Number	Cap. Mfd.	D.C. Voltage Working	Surge	Dim. in Ins. Diam.	Lg.	List Price
52ET100	100	25	35	1	2	\$1.25
15ET30	30	150	225	1	2	1.10
15ET50	50	150	225	1	2	1.25
45ET10	10	450	550	1	2	1.15
45ET15	15	450	550	1	2	1.35
45ET20	20	450	550	1	2 1/2	1.50
45ET30	30	450	550	1	3	1.75
15ET2x20	20-20	150	225	1	2	1.35
15ET2x30	30-30	150	225	1	2	1.50
15ET2x50	50-50	150	225	1	3	1.80
30ET2x15	15-15	300	400	1	2	1.70
35ET3020	30-20	350	450	1	3	2.25
45ET2x10	10-10	450	550	1	2 1/2	1.80
ET100	30-20/20	150/25	225/35	1	2	1.90
ET101	40-30/20	150/25	225/35	1	2 1/2	2.05
15ET3x20	20-20-20	150	225	1	2	2.00
ET102	40-20-20	150	225	1	2 1/2	2.10
15ET3x40	40-40-40	150	225	1	3	2.20
ET103	10-10/25	450/25	550/35	1	3	2.00
45ET3x10	10-10-10	450	550	1	3	2.15

ET SERIES ELECTROLYTIC CAPACITORS



"ET" series capacitors have been designed for ease in installation and reliability. They are constructed to withstand the most severe operating conditions encountered in industrial and electronic equipment. Especially controlled manufacturing processes insure that the equipment in which these capacitors are used will function without interruption. Capacitors can be supplied for operation at temperatures ranging from minus 40 to plus 85 degrees Centigrade. Mounting is effected by inserting the capacitor through the slots in either the chassis or mounting plate, and twisting the mounting prongs 90 degrees.

INDUSTRIAL



CONDENSER

TELEVISION AND TUBULAR PAPER CONDENSERS



TYPE PT

INDUSTRIAL By-Pass Capacitors are non-inductively wound and designed for maximum efficiency up to the highest frequencies. The units themselves are completely impregnated and sealed with a special non-hygroscopic sealing compound, thus preventing moisture penetration under the most humid conditions.

Catalog Number	Capacity Mfd.	Working Volts D.C.	List Price
PT100	.0001	1000	\$0.20
PT101	.00025	1000	.20
PT102	.0005	1000	.20
PT103	.001	1000	.20
PT104	.002	1000	.20
PT105	.005	1000	.20
PT106	.006	1000	.20
PT107	.01	1000	.25
PT131	.001	600	.20
PT132	.002	600	.20
PT133	.005	600	.20
PT134	.006	600	.20
PT135	.01	600	.25
PT136	.02	600	.25
PT137	.03	600	.30
PT139	.04	600	.30
PT138	.05	600	.30
PT139	.1	600	.35
PT140	.25	600	.45
PT141	.5	600	.65
PT142	1.0	600	1.00
PT170	.01	400	.20
PT171	.02	400	.20
PT172	.05	400	.25
PT173	.1	400	.30
PT174	.25	400	.35
PT175	.5	400	.50
PT176	1.0	400	.75
PT200	.02	200	.20
PT201	.05	200	.20
PT202	.1	200	.25
PT203	.25	200	.35
PT204	.5	200	.45
PT205	1.0	200	.70
PT260*	.005	2000	.45
PT261*	.0075	2000	.45
PT262*	.01	2000	.45
PT263*	.02	2000	.50
PT264	.015-.015	1600	.80
PT268	.0005	6000	.75
PT265	.001	6000	.75
PT266	.005	6000	.75
PT267	.05	6000	1.15

* Vibrator capacitor

RADIO INTERFERENCE ELIMINATORS

INDUSTRIAL CONDENSER CORP. has made a special study of the suppression of noises caused by fluorescent lighting. No. 7249 capacitor is designed with three leads, two leads to be connected across the 110 volt line and the single lead to be grounded. No. 4219 is housed in a metal container and is self grounding. It is supplied with strap mounting for easy installation. No. 4252 and No. 4253 are flat type units designed to mount on the ballast support of circline ballasts. The convenient mounting flap grounds the unit when the stem of the lamp is placed through the mounting hole.

Catalog Number	Dimensions in Inches	List Price
7249	1 1/2 x 1 3/8	\$1.00
4219	3/4 x 2	1.35
4252	2 3/8 x 5/8 x 1 1/4	1.50
4253	2 3/8 x 5/8 x 1 1/4	1.50

DIRECT REPLACEMENT

For Either Dry or Wet Types
No Drilling — No Changes

The "IL" type capacitor is a dry electrolytic assembled in an aluminum container having a threaded mounting neck which is an integral part of the container.

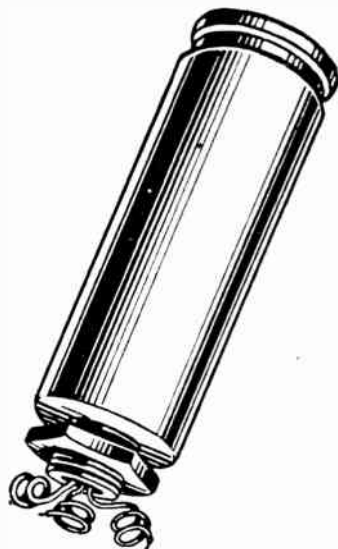
Our "IL" type capacitors may be used as replacements for the old type wet or dry electrolytic capacitors and will mount in the same mounting hole as the part replaced, eliminating the use of adaptors or auxiliary workmanship.

Electrically and mechanically this condenser is designed for heavy duty service. It incorporates the exclusive INDUSTRIAL etched foil process of construction.

Although these capacitors are not hermetically sealed, they are highly superior to the paper type units generally used for this kind of replacement.

These units are supplied with Underwriters Approved 75° C rubber covered leads.

Individually boxed in attractive carton with instructions.



To replace 1 3/8" diameter screw neck type

Cat. No.	Cap. Mfd.	Work Volt	Peak Volt	Dimensions	Mtg. Neck	List Price	
IL649	8	600	725	1 3/8" x 4"	3/4"	\$3.40	
IL650	8	475	600	1 3/8" x 4"	3/4"	1.55	
IL651	12	475	600	1 3/8" x 4"	3/4"	1.83	
IL652	16	475	600	1 3/8" x 4"	3/4"	2.04	
IL653	4 leads	8-8	475	600	1 3/8" x 4"	3/4"	2.50
IL646	20	475	600	1 3/8" x 4"	3/4"	2.25	
IL647	30	475	600	1 3/8" x 4"	3/4"	2.55	
IL648	40	475	600	1 3/8" x 4"	3/4"	2.89	

AUTO GENERATOR CONDENSER

ALSO AVAILABLE IN HERMETICALLY SEALED SUBMERSION-PROOF CONSTRUCTION



TYPE F



TYPE G

Completely enclosed in a metal container to overcome severe operating conditions of temperature and humidity. Sturdily built to withstand constant vibration.

Cat. No.	Cap. Mfd.	List Price	Cat. No.	Cap. Mfd.	List Price
G325	.25	\$0.77	G328	1.0	\$1.15
G326	.5	.89	F330	.5	1.06

DRY ELECTROLYTIC CONDENSERS

MIGHTY MIDGET METAL TUBULAR TYPE "MM"

Cat. No.	Cap. Mfd.	W.V.	Peak Volts	Dimen. Dia. L.	List Price
MM406	100	10	15	1 1/8 x 1 1/8	\$1.15
MM407	250	10	15	1 1/8 x 2 1/8	1.25
MM408	500	10	15	1 1/8 x 2 1/8	2.30
MM409	750	10	15	1 1/8 x 2 1/8	3.00
MM400	5	25	35	1 1/8 x 1 1/8	.70
MM401	10	25	35	1 1/8 x 1 1/8	.70
MM402	25	25	35	1 1/8 x 1 1/8	.75
MT403*†	10-10	25	35	1 1/8 x 2 3/8	.95
MM410	25*	25	35	1 1/8 x 2 1/8	1.70
MM411	50*	25	35	1 1/8 x 2 1/8	2.00
MM404	10	50	75	1 1/8 x 1 1/8	.70
MM405	25	50	75	1 1/8 x 1 1/8	.80
MM412	100	50	75	1 1/8 x 2 1/8	1.30
MM413	200	50	75	1 1/8 x 2 1/8	2.00
MM414	300	50	75	1 1/8 x 2 1/8	2.75
MM360	8	150	225	1 1/8 x 1 1/8	.70
MM368	12	150	225	1 1/8 x 1 1/8	.75
MM361	16	150	225	1 1/8 x 1 1/8	.80
MM362	20	150	225	1 1/8 x 2 1/8	.85
MM369	30	150	225	1 1/8 x 2 1/8	.90
MM363	40	150	225	1 1/8 x 2 1/8	1.00
MM373	60	150	225	1 1/8 x 2 1/8	1.20
MM374	80	150	225	1 1/8 x 2 1/8	1.30
MM370†	20-20	150	225	1 1/8 x 2 1/8	1.20
MM375†	30-30	150	225	1 1/8 x 2 1/8	1.35
MM376†	40-40	150	225	1 1/8 x 2 1/8	1.55
MM364	4	475	600	1 1/8 x 1 1/8	.80
MM365	8	475	600	1 1/8 x 2 1/8	.85
MM371	12	475	600	1 1/8 x 2 1/8	1.05
MM366	16	475	600	1 1/8 x 2 1/8	1.20
MM372	20	475	600	1 1/8 x 2 1/8	1.35
MM367†	8-8	475	600	1 1/8 x 2 1/8	1.50

* In cardboard tube with wax filled ends. † 3 leads.

MIGHTY MIDGET CARTON TYPE "MC"

Cat. No.	Cap. Mfd.	W.V.	Peak Volts	Dimensions W. T. L.	List Price
MC451†	20-20	150	225	2 1/2 x 1 1/2 x 1 1/4	\$2.10
MC452	8	475	600	2 1/2 x 3/4 x 1 1/8	1.45
MC453†	4-4	475	600	2 1/2 x 1 1/2 x 1 1/4	1.90
MC454†	8-8	475	600	3 x 1 x 1 1/4	2.30

† 4 leads.

"SB" AND "SM" TYPE

Cat. No.	Cap. Mfd.	W.V.	Peak Volts	Dimen. Dia. L.	List Price
SB550†	16-12	150	225	1 3/8 x 3 3/4	\$1.90
SB552†	8-8	475	600	1 3/8 x 3 3/4	1.90
SM600*	30-10	150	225	1 1/8 x 3	1.15
SM605*	20-20	150	225	1 1/8 x 2 1/2	1.15
SM606†	20-20	150	225	1 x 2 1/2	1.80
SM601*	30-30	150	225	1 1/8 x 3	1.30
SM608*	40-40	150	225	1 x 3	1.45
SM607*	50-30	150	225	1 x 3	1.45
SM610*	40-20	150	225	1 1/8 x 3	1.30
SM609†	30-20-20	150	225	1 x 3	1.70
SM603	8	475	600	1 1/8 x 3	1.05
SM604*	8-8	475	600	1 x 3	1.65

* SM600, SM605, SM601, SM608, SM607, SM610:

3 leads.

† SM606, SM609, SB550, SB552: 4 leads.

An extremely popular type of condenser due to its exceptional high quality and midget size. Hermetically sealed in a small metal case and scientifically vented, to protect against adverse operating conditions of voltage, temperature and humidity. Container is insulated by a high grade tube which is spun over the ends of the can to eliminate shorts when wires are bent close to container. Easily mounted by their rigid wire leads.



Type MM

All Type "MM" units are available with mounting strap. Recommended in cases of extreme vibration or when advisable to have unit solidly anchored. When ordering add the letter S before the catalog number.



Type MMS

Each unit is completely embedded in a high grade wax and then sealed in an impregnated carton to insure efficient operation under the most adverse conditions. New, high voltage formation, gives complete protection against surges and high peak voltages. Supplied with color coded, Underwriters' Approved, rubber covered leads. Universal lugs permit easy mounting in any position.



Type MC

Spade bolt type "SB" of mounting has been very popular due to its wide use in many radio sets. Each unit is embedded in a high temperature wax and then sealed in a thoroughly impregnated cardboard tube, affording complete immunity to moisture penetration. New high voltage formation gives complete protection against surges and high peak voltages.



Type SB

Type "SM" has identical characteristics as "SB". The addition of the strap mounting bracket has proved favorable in its use due to its wide application in AC-DC and portable sets in the replacement field. The strap can be moved to the best mounting position and then bolted or soldered.



Type SM

Supplied with color-coded, Underwriters' Approved, rubber covered leads.



CHICAGO CONDENSER CORPORATION

3255 WEST ARMITAGE AVENUE
CHICAGO 47, ILLINOIS

TYPE NO.	CAP. MFD.	LENGTH	DIAMETER
200 VOLTS D.C. OPERATING			
25x2	1.0	2 1/2"	1"
2500	.5	2"	3/4"
2250	.25	1 3/4"	5/8"
2100	.1	1 5/8"	1/2"
2050	.05	1 1/4"	7/16"
2040	.04	1 1/4"	7/16"
2030	.03	1 1/4"	3/8"
2020	.02	1 1/4"	3/8"
2010	.01	1 1/4"	3/8"
400 VOLTS D.C. OPERATING			
45x2	1.0	2 1/2"	1"
4500	.5	2"	7/8"
4250	.25	2"	11/16"
4100	.1	1 5/8"	9/16"
4050	.05	1 5/8"	7/16"
4040	.04	1 5/8"	7/16"
4030	.03	1 5/8"	7/16"
4020	.02	1 1/4"	7/16"
4010	.01	1 1/4"	3/8"
600 VOLTS D.C. OPERATING			
6500	.5	2 1/2"	1 1/8"
6250	.25	2"	3/4"
6100	.1	1 7/8"	5/8"
6050	.05	1 5/8"	9/16"
6040	.04	1 5/8"	9/16"
6030	.03	1 5/8"	1/2"
6020	.02	1 5/8"	7/16"
6010	.01	1 1/4"	3/8"
6006	.006	1 1/4"	3/8"
6005	.005	1 1/4"	3/8"
6004	.004	1 1/4"	3/8"
6003	.003	1 1/4"	3/8"
6002	.002	1 1/4"	3/8"
6001	.001	1 1/4"	3/8"

CHICAGO WAX TUBULAR CAPACITORS



- NON-INDUCTIVELY WOUND
- HIGH VACUUM IMPREGNATION
- PAPER TUBES VACUUM WAXED
- TINNED COPPER WAXED
- END FILLED WITH HI-WAX
- FLASH TESTED 3 TIMES

CHICAGO OIL IMPEGNATED VACUUM FILLED CAPACITORS

TYPE NO.	CAP. MFD.	WIDTH	THICK- NESS	HEIGHT	MOUNT.
600 VOLTS D.C.					
9005	.05	1 13/16"	1"	3/4"	2 1/8"
9010	.1	1 13/16"	1"	3/4"	2 1/8"
9025	.25	1 13/16"	1"	3/4"	2 1/8"
9050	.5	1 13/16"	1"	1"	2 1/8"
9100	1.0	2"	1 3/8"	7/8"	2 3/8"
9200	2.0	2"	2"	1 1/8"	2 3/8"
29005	.05-.05	1 13/16"	1"	3/4"	2 1/8"
29010	.1-.1	1 13/16"	1"	3/4"	2 1/8"
29025	.25-.25	1 13/16"	1"	7/8"	2 1/8"
29050	.5-.5	2"	1 3/4"	7/8"	2 3/8"
29100	1.0-1.0	2"	2"	1 1/8"	2 3/8"
39010	.1-.1-1	1 13/16"	1"	7/8"	2 1/8"
39025	.25-.25-.25	2"	1 3/4"	7/8"	2 3/8"
39050	.5-.5-.5	2"	2"	1 1/8"	2 3/8"

BATH TUB TYPE CONDENSER



- BATH TUB TYPE RADIO & MOTORS
- INTERFERENCE
- ELECTRONIC
- SPECIAL TIMING
- HERMETICALLY SEALED
- TESTED AT THREE-TIME VOLTAGE

ALL SINGLE UNITS HAVE 2 TERMINALS—ALL DUAL UNITS HAVE 3 TERMINALS—ALL TRIPLE UNITS HAVE 3 TERMINALS—ONE GROUNDED TO CASE. OTHER UNITS HIGHER OR LOWER VOLTAGES CAN BE SUPPLIED UPON REQUEST.

SOLAR



CAPACITORS



MINICAP* DRY ELECTROLYTICS

The original compact metal-encased tubular dries . . . Kraftboard insulating jackets . . . Hermetically sealed for long life . . . Dials have common negative and assembled mounting strap.

Catalog Number	Mf	Size	List Price	Dealer Net Price
6 WVDC				
M-1000-6	100H	7/8x2 1/16 S	\$2.25	\$1.35
M-1500-6	150H	7/8x2 3/8 S	3.00	1.80
M-2000-6	200H	1x2 3/8 S	3.90	2.34

Catalog Number	Mf	Size	List Price	Dealer Net Price
12 WVDC				
M-100-12	100	5/8x1 9/16 S	1.55	.93
M-250-12	250	3/4x2 1/16 S	1.75	1.05
M-500-12	500	7/8x2 3/8 S	1.90	1.14

Catalog Number	Mf	Size	List Price	Dealer Net Price
15 WVDC				
M-100-15	100	5/8x1 9/16 S	1.70	1.02
M-250-15	250	3/4x2 1/16 S	1.90	1.14
M-500-15	500	7/8x2 3/8 S	2.10	1.26

Catalog Number	Mf	Size	List Price	Dealer Net Price
25 WVDC				
M-10-25	10	1/2x1 9/16	.75	.45
M-25-25	25	1/2x1 9/16	.85	.51
M-50-25	50	5/8x1 9/16	1.00	.60
M-100-25	100	5/8x1 9/16	1.20	.72
M-250-25	250	7/8x2 1/16 S	2.00	1.20
M-500-25	500	1x2 3/8 S	2.25	1.35
M-2x10-25	10+10	3/4x1 9/16 S	1.05	.63

Catalog Number	Mf	Size	List Price	Dealer Net Price
50 WVDC				
M-10-50	10	1/2x1 9/16	.80	.48
M-25-50	25	1/2x1 9/16	.90	.54
M-50-50	50	5/8x1 9/16	1.05	.63
M-100-50	100	3/4x1 9/16	1.50	.90



TINY-SIZED TYPE LB MINIATURE DRIES

Another Solar-pioneered capacitor development are these ultra-small electrolytics for bypass, coupling, audio filters, and other low-ripple applications . . . Stable, high-gain etched foil . . . Hermetically-sealed metal containers.

Catalog Number	Mf	Size	List Price	Dealer Net Price
1.5 WVDC				
LB-100-1.5	10H	3/8x1 1/8	\$1.00	\$0.60
LB-200-1.5	20H	3/8x1 1/8	1.00	.60
LB-300-1.5	30H	3/8x1 5/8	1.00	.60

Catalog Number	Mf	Size	List Price	Dealer Net Price
15 WVDC				
LB-50-15	50	3/8x1 1/8	1.00	.60
LB-100-15	100	3/8x1 5/8	1.00	.60

Catalog Number	Mf	Size	List Price	Dealer Net Price
25 WVDC				
LB-25-25	25	3/8x1 1/8	1.00	.60
LB-50-25	50	3/8x1 5/8	1.00	.60

Catalog Number	Mf	Size	List Price	Dealer Net Price
50 WVDC				
LB-20-50	20	3/8x1 1/8	1.00	.60
LB-30-50	30	3/8x1 5/8	1.00	.60

MINICAP*—continued

Catalog Number	Mf	Size	List Price	Net Price
150 WVDC				
M-8-150	8	1/2x1 9/16	.80	.48
M-10-150	10	5/8x1 1/8	.85	.51
M-12-150	12	5/8x1 9/16	.85	.51
M-16-150	16	5/8x1 9/16	.90	.54
M-20-150	20	5/8x1 9/16	.95	.57

M-24-150	24	5/8x1 9/16	.95	.57
M-30-150	30	3/4x1 9/16	1.00	.60
M-40-150	40	3/4x2 1/16	1.10	.66
M-50-150	50	3/4x2 1/16	1.20	.72

M-2x20-150	20+20	3/4x1 9/16 S	1.30	.78
M-2x30-150	30+30	7/8x1 9/16 S	1.50	.90
M-2x40-150	40+40	7/8x2 1/16 S	1.70	1.02
M-5030-150	50+30	7/8x2 1/16 S	1.70	1.02
M-2x50-150	50+50	1x2 1/16 S	1.85	1.11
M-8040-150	80+40	1x2 3/8 S	2.00	1.20

Catalog Number	Mf	Size	List Price	Net Price
250 WVDC				
M-8-250	8	5/8x1 9/16	.85	.51
M-16-250	16	3/4x1 9/16	1.10	.66

Catalog Number	Mf	Size	List Price	Net Price
450 WVDC				
M-4-450	4	5/8x1 9/16	.90	.54
M-8-450	8	3/4x1 9/16	.95	.57
M-10-450	10	3/4x1 9/16	1.05	.63
M-12-450	12	7/8x1 9/16	1.15	.69

M-16-450	16	7/8x2 1/16	1.35	.81
M-20-450	20	1x2 1/16	1.50	.90
M-30-450	30	1x2 3/8	1.65	.99
M-40-450	40	1x2 1/16	2.00	1.20

M-2x8-450	8+8	7/8x2 1/16 S	1.70	1.02
M-2x10-450	10+10	7/8x2 1/16 S	1.85	1.11
M-2x20-450	20+20	1x3 S	2.40	1.44

Catalog Number	Mf	Size	List Price	Net Price
525 WVDC				
M-8-525	8	7/8x2 1/16	1.30	.78
M-16-525	16	1x2 3/8	2.00	1.20

†—Dimensions are for metal tubes. Add 1/16" to diameter and 1/8" to length for over-all dimensions over cardboard insulating tube.
S—Furnished with mounting strap.
* T. M. Reg. U. S. Patent Office

Catalog Number	Mf	Size	List Price	Net Price
70 WVDC				
LB-15-70	15	3/8x1 1/8	1.00	.60
LB-20-70	20	3/8x1 5/8	1.00	.60

Catalog Number	Mf	Size	List Price	Net Price
100 WVDC				
LB-10-100	10	3/8x1 1/8	1.00	.60
LB-15-100	15	3/8x1 5/8	1.00	.60

Catalog Number	Mf	Size	List Price	Net Price
150 WVDC				
LB-5-150	5	3/8x1 1/8	1.00	.60
LB-10-150	10	3/8x1 5/8	1.00	.60

WET ELECTROLYTICS

"Accordion-stor" anode and film stabilization for extra long life . . . Self-healing under over-voltages . . . Unexcelled for difficult replacement applications.

Catalog Number	Mf	Peak VDC	List Price	Dealer Net Price
TYPE ZD—1 3/8" x 4 3/8" CAN				
ZD-8-500	8	500	\$1.45	\$.87
ZD-12-500	12	500	1.75	1.05
ZD-16-500	16	500	2.10	1.26
ZD-20-500	20	500	2.25	1.35
ZD-24-500	24	500	2.45	1.47

Catalog Number	Mf	Peak VDC	List Price	Dealer Net Price
TYPES Z AND ZV—1 1/2" x 4 3/8" CAN				
Z-30-500	30	500	2.60	1.56
Z-40-500	40	500	2.90	1.74
ZV-8-600	8	600	2.25	1.35
ZV-16-600	16	600	3.05	1.83



CARDBOARD TUBE ELECTROLYTICS

Type DSB dries fit today's service needs for multiple unit capacitors . . . Solar-originated plastic film innerwrap protects against dryouts . . . Long insulated leads . . . Assembled mounting strap.

Catalog Number	Mf	Size	List Price	Dealer Net Price
150 WVDC—COMMON NEGATIVE				
DSB-2x20-150	20+20	3/4x2 1/2	\$1.30	\$.78
DSB-2x30-150	30+30	7/8x2 1/2	1.50	.90
DSB-2x40-150	40+40	1x2 1/2	1.70	1.02
DSB-3030-150	50+30	1x2 1/2	1.70	1.02
DSB-2x50-150	50+50	1x3	1.85	1.11
DSB-8040-150	80+40	1 1/8x3	2.00	1.20
DSB-3x20-150	20+20+20	1x2 1/2	2.00	1.20
DSB-403020-150	40+30+20	1x3	2.15	1.29
DSB-804020-150	80+40+20	1 1/8x3 1/4	2.50	1.50

Catalog Number	Mf	Size	List Price	Dealer Net Price
150 WVDC—SEPARATE SECTIONS				
DSB-2x20-150SS	20+20	1x2 3/8	2.00	1.20

Catalog Number	Mf	Size	List Price	Dealer Net Price
150/25 WVDC—COMMON NEGATIVE				
DSB-301	40+10/20	1x2 1/2	1.95	1.17
DSB-302	30+20/20	1x2 1/2	1.95	1.17
DSB-303	40+30/20	1x3	2.05	1.23
DSB-304	50+50/20	1x3 1/4	2.25	1.35
DSB-305	40+40/40	1x3 3/4	2.20	1.32



TYPE DH "UNIVERSAL REPLACEMENT" DRIES

Cardboard-encased dries with both stud-disc base mounting and wrap-strap . . . Used for replacing ring-clamp, spade-foot, screw-base, and twist-prong units . . . Plastic-film innerwrap for extra long life.

Catalog Number	Mf	Size	List Price	Dealer Net Price
150 WVDC				
DH-20-150	20	7/8x2 1/2	\$1.15	\$.69
DH-2x20-1.0	20+20	7/8x2 1/2	1.50	.90
DH-2x20-1.0SS	20+20	1x3	2.20	1.32
DH-2x50-1.0	50+50	1x2 3/8	2.05	1.23

Catalog Number	Mf	Size	List Price	Dealer Net Price
250 WVDC				
DH-8-250	8	7/8x2 1/2	1.05	.63
DH-16-250	16	7/8x2 1/2	1.30	.78

Catalog Number	Mf	Size	List Price	Dealer Net Price
450 WVDC				
DH-8-450	8	7/8x2 1/2	1.15	.69
DH-16-450	16	7/8x2 1/2	1.55	.93
DH-20-450	20	1x2 3/8	1.70	1.02
DH-30-450	30	1x3 1/2	1.85	1.11
DH-2x8-450	8+8	1x2 3/8	1.90	1.14
DH-2x8-450SS	8+8	1 1/4x3	2.30	1.38
DH-816-450SS	8+16	1 3/8x3	2.70	1.62
DH-2x16-4.0SS	16+16	1 3/8x3 3/8	3.20	1.92
DH-3x8-450SS	8+8+8	1 3/8x4	2.75	1.65

Catalog Number	Mf	Size	List Price	Dealer Net Price
525 WVDC				
DH-8-525	8	1x2 3/8	1.50	.90
DH-16-525	16	1x3 1/2	2.20	1.32

SS—Multiple section units having "SS" suffixes on catalog numbers have separate sections. All others have common negatives.



SCREW-BASE DRYS

Aluminum-encased units for one-hole mounting. Types D and DM have long insulated leads... Type DI has plastic neck with solder tabs.

Catalog Number	Mf	Size	Dealer List Net Price Price	
			Price	Price
250 WVDC				
D-8-250	8	R	\$1.60	\$.96
D-12-250	12	R	1.75	1.05
D-24-250	24	R	2.00	1.20

450 WVDC				
Catalog Number	Mf	Size	Dealer List Net Price Price	Price Price
D-8-450	8	R	1.75	1.05
D1-8-450	8	U	1.75	1.05
DM-8-450	8	S	1.75	1.05
D-12-450	12	R	2.15	1.29
D-16-450	16	R	2.40	1.44
D1-16-450	16	U	2.40	1.44
DM-16-450	16	T	2.40	1.44
D-20-450	20	R	2.65	1.59
D-30-450	30	R	3.00	1.80
D-40-450	40	R	3.40	2.04
D-2x8-450	8+8*	R	2.75	1.65
D1-2x8-450	8+8†	U	2.75	1.65
D-3x8-450	8+8+8*	R	4.25	2.55
D1-3x8-450	8+8+8†	U	4.25	2.55

475 WVDC				
Catalog Number	Mf	Size	Dealer List Net Price Price	Price Price
D-8-475	8	R	2.25	1.55

600 WVDC				
Catalog Number	Mf	Size	Dealer List Net Price Price	Price Price
D-4-600	4	R	3.00	1.80
D-8-600	8	R	4.00	2.40
D-16-600	16	R	5.00	3.00

*Separate Sections
†Common Negative
Size Code:

- R = 1 3/8" D. x 4 1/4" Ht. with 3/4" — 16 threaded base
- S = 1 1/2" D. x 2 1/2" Ht. with 5/8" — 18 threaded base
- T = 1 1/2" D. x 3 1/2" Ht. with 5/8" — 18 threaded base
- U = 1 1/2" D. x 4 1/4" Ht. with 7/8" — 16 threaded base



"TWIST-PRONG" DRY ELECTROLYTICS

New set designs favor these hermetically sealed metal-encased capacitors... Terminal cading clearly stamped... Supplied with both plastic and metal mounting plates.

Catalog Number	Mf	WVDC	Size†	Dealer List Net Price Price	
				Price	Price

SINGLE UNITS					
DY-3000-10	3000	10	G	\$4.50	\$2.70
DY-1000-15	1000	15	C	3.25	1.95
DY-2000-15	2000	15	G	4.70	2.82
DY-25-25	25	25	A	1.05	.63
DY-100-25	100	25	A	1.45	.87
DY-500-25	500	25	C	2.45	1.47
DY-1000-25	1000	25	G	3.55	2.13
DY-500-50	500	50	G	3.55	2.13
DY-20-150	20	150	A	1.20	.72
DY-40-150	40	150	A	1.35	.81
DY-80-150	80	150	A	1.75	1.05
DY-20-350	20	350	A	1.55	.93
DY-30-350	30	350	A	1.70	1.02
DY-50-350	50	350	C	2.05	1.23
DY-125-350	125	350	H	3.55	2.13
DY-10-450	10	450	A	1.30	.78
DY-20-450	20	450	A	1.75	1.05
DY-30-450	30	450	B	1.90	1.14
DY-40-450	40	450	C	2.25	1.35
DY-50-450	50	450	D	2.85	1.71
DY-80-450	80	450	H	3.85	2.31
DY-10-525	10	525	B	1.75	1.05
DY-20-525	20	525	C	2.65	1.59

DUAL UNITS					
DY-2x20-25	20+20	25	A	1.35	.81
DY-2x10-150	10+10	150	A	1.45	.87
DY-2x20-150	20+20	150	A	1.55	.93
DY-3020-150	30+20	150	A	1.65	.99
DY-2x30-150	30+30	150	A	1.75	1.05
DY-4020-150	40+20	150	A	1.75	1.05
DY-4030-150	40+30	150	A	1.85	1.11
DY-2x40-150	40+40	150	A	1.95	1.17
DY-5030-150	50+30	150	A	1.95	1.17
DY-2x50-150	50+50	150	B	2.10	1.26
DY-8040-150	80+40	150	B	2.25	1.35
DY-2x15-350	15+15	350	A	2.10	1.26
DY-2x20-350	20+20	350	B	2.35	1.41
DY-40-150/20-50	40/20	150/50	A	1.70	1.02
DY-20-400/20-25	20/20	400/25	A	1.95	1.17
DY-10-450/25-50	10/25	450/50	A	2.00	1.20
DY-2x10-450	10+10	450	A	2.10	1.26
DY-2x20-450	20+20	450	C	2.65	1.59
DY-2x30-450	30+30	450	F	3.25	1.95
DY-2x40-450	40+40	450	G	4.00	2.40

"TWIST-PRONG"—continued

Catalog Number	Mf	WVDC	Size†	List Net Price Price	
				Price	Price
TRIPLE UNITS					
DY-3x20-25	20+20+20	25	A	\$2.00	\$1.20
DY-3x20-150	20+20+20	150	A	2.30	1.38
DY-3x40-150	40+40+40	150	B	2.60	1.56
DY-402010-150	40+20+10	150	A	2.35	1.41
DY-403020-150	40+30+20	150	A	2.45	1.47
DY-604020-150	60+40+20	150	B	2.65	1.59
DY-804020-150	80+40+20	150	C	2.80	1.68
DY-301	15+15/1200	150/1.5	A	2.80	1.68
DY-302	15+15/40	150/25	A	2.20	1.32
DY-303	30+20/25	150/25	A	2.25	1.35
DY-304	40+20/100	150/25	B	3.00	1.80
DY-305	40+40/40	150/25	A	2.45	1.47
DY-306	50+30/30	150/25	A	2.45	1.47
DY-307	50+50/40	150/25	C	2.60	1.56
DY-308	60+40/10	150/25	B	2.50	1.50
DY-309	30+30/25	300/50	B	2.90	1.74
DY-310	15+15/20	350/25	B	2.55	1.53
DY-311	30+30/50	350/50	F	3.05	1.83
DY-312	20+20/20	450/25	C	2.95	1.77
DY-3x10-450	10+10+10	450	C	2.50	1.50
DY-3x15-450	15+15+15	450	D	3.05	1.83
DY-3x20-450	20+20+20	450	F	3.45	2.07
DY-313	30+30/20	450/25	G	3.15	1.89
DY-314	40+40/40	450/25	H	3.75	2.25
DY-315	40+20/25	450/50	G	3.40	2.04
DY-316	15+10/40	450/25	C	2.55	1.53
DY-317	15+15/10	450/50	C	2.70	1.62

QUADRUPLE UNITS					
DY-418	20+20+20/20	150/25	E	2.85	1.71
DY-419	40+40+40/20	150/25	E	3.15	1.89
DY-401	40+30+20/20	150/25	E	3.00	1.80
DY-4x10-450	10+10+10+10	450	E	3.25	1.95
DY-4x20-450	20+20+20+20	450	H	4.50	2.70
DY-402	10+10+10/20	450/25	E	3.05	1.83
DY-403	30+30+20/20	450/25	H	4.20	2.52
DY-404	20/20/20/20	450/400/350/25	F	3.80	2.28
DY-405	20+20/20/20	450/400/25	F	3.95	2.37
DY-406	40+30+20/20	450/25	H	4.45	2.67

Can is negative terminal for all sections.
†Size Code: Diam. x Ht. E = 1 3/8" x 2 1/2"
A = 1 1/2" x 2 1/2" F = 1 3/8" x 2 1/2"
B = 1 1/2" x 2 1/2" G = 1 3/8" x 3"
C = 1 1/2" x 3" H = 1 3/8" x 3 3/8"
D = 1 1/2" x 3 3/8"

MOUNTING PLATES				
Catalog Number	Description	List Price	Net Price	
HDYP-3	Metal Plate for 1" Cans	\$0.07	\$0.04	
HDYP-4	Insulating Plate for 1" Cans	.07	.04	
HDYP-7	Metal Plate for 1 3/8" Cans	.11	.07	
HDYP-8	Insulating Plate for 1 3/8" Cans	.11	.07	

SMALL MOLDED MICAS

Molded in high-quality phenolic plastic... Excellent "Q"... High insulation resistance... Type MO is 7/32"x15/32"x25/32"... Type MW is 11/32"x25/32"x25/32".

Catalog Number	Mmf	WVDC	Dealer List Net Price Price	
			Price	Price
FOIL-MICA				
MO-5-25	25	500	\$2.25	\$1.15
MO-5-45	50	500	.20	.12
MO-5-31	100	500	.20	.12
MO-5-32	200	500	.20	.12
MO-5-325	250	500	.25	.15
MO-5-33	300	500	.25	.15
MO-5-35	500	500	.25	.15

FOIL-MICA—continued

Catalog Number	Mmf	WVDC	List Price	Dealer Net Price
MW-5-21	1000	500	.30	.18
MW-5-22	2000	500	.40	.24
MW-5-25	5000	500	.60	.36
MW-3-11	.01 mf	300	1.20	.72

SILVERED-MICA

MOS-5-425	25	500	\$4.00	\$2.24
MOS-5-45	50	500	.40	.24
MOS-5-31	100	500	.40	.24
MOS-5-32	200	500	.45	.27
MOS-5-325	250	500	.45	.27
MOS-5-33	300	500	.55	.33
MOS-5-35	500	500	.70	.42
MWS-5-21	1000	500	1.10	.66
MWS-5-22	2000	500	1.35	.81
MWS-5-25	5000	500	2.25	1.35

Standard Tolerances:
Foil-Mica = ±20% Silvered Mica = ±5%

OTHER SOLAR TYPES

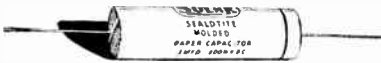
Only an abbreviated listing of the most popular designs of Solar Capacitors is shown in these pages. For a more complete listing of the types in relatively widespread usage in radio service, industrial electronic, and radio amateur applications, see Solar Catalog SC available from your distributor, or directly from:

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SOLAR



CAPACITORS



All-Purpose Molded HI-TEMP* SEALDTITE* PAPER TUBULARS

Stand Up in Hot Spots . . . New Hi-Temp Plastic Compound Housing Resists Heat to 100° C . . . Sealed Tight Against Moisture . . . Will Withstand Long-Term Humidity Cycling Tests . . . Non-Inductive Windings . . . Mineral-Oil Sections for 1000 and 1600 Volt Buffer Units.

Catalog Number	Mf	Size†	Dealer List Price	Dealer Net Price
200 WVDC				
ST-2-1	1	1/2x1 5/8	\$3.35	\$2.21
ST-2-25	.25	9/16x1 5/8	.45	.27
ST-2-5	.5	9/16x2 1/8	.60	.36
ST-2-1M	1.0	3/4x2 1/8	.90	.54

Catalog Number	Mf	Size†	Dealer List Price	Dealer Net Price
400 WVDC				
ST-4-01	.01	3/8x1	.25	.15
ST-4-02	.02	7/16x1 3/16	.25	.15
ST-4-05	.05	7/16x1 5/8	.30	.18
ST-4-1	.1	9/16x1 5/8	.35	.21
ST-4-2	.2	9/16x2 1/8	.40	.24
ST-4-25	.25	9/16x2 1/8	.45	.27
ST-4-5	.5	3/4x2 1/8	.60	.36
SDH-4-1M*	1.0	1x2 1/2	.90	.54

Catalog Number	Mf	Size†	Dealer List Price	Dealer Net Price
600 WVDC				
ST-6-00025	.00025	3/8x1	.25	.15
ST-6-0005	.0005	3/8x1	.25	.15
ST-6-001	.001	3/8x1	.25	.15
ST-6-002	.002	3/8x1	.25	.15
ST-6-003	.003	3/8x1	.25	.15
ST-6-004	.004	3/8x1	.25	.15
ST-6-005	.005	3/8x1	.25	.15
ST-6-006	.006	3/8x1	.25	.15

NEW TYPE TST MOLDED TINY SEALDTITES

Another outstanding Solar development . . . These pioneer miniature molded units end your troubles with hearing-aid and personal radio capacitors.

Catalog Number	Mf	Size	Dealer List Price	Dealer Net Price
200 WVDC MINIATURES				
TST-2-0001	0001	3/16x5/8	\$3.35	\$2.21
TST-2-0003	.0003	3/16x5/8	.35	.21
TST-2-0005	.0005	3/16x5/8	.35	.21
TST-2-001	.001	1/4x7/8	.35	.21
TST-2-002	.002	1/4x7/8	.35	.21
TST-2-003	.003	1/4x7/8	.35	.21
TST-2-006	.006	5/16x7/8	.35	.21
TST-2-01	.01	5/16x7/8	.40	.24
TST-2-02	.02	5/16x7/8	.45	.27
TST-2-05	.05	3/8x1	.50	.30
TST-2-1	.1	7/16x1 3/16	.60	.36

Catalog Number	Mf	Size	Dealer List Price	Dealer Net Price
600 WVDC MINIATURES				
TST-6-0001	.0001	3/16x5/8	.40	.24
TST-6-0003	.0003	3/16x5/8	.40	.24
TST-6-0005	.0005	1/4x7/8	.40	.24
TST-6-001	.001	1/4x7/8	.40	.24
TST-6-002	.002	1/4x7/8	.40	.24
TST-6-003	.003	1/4x7/8	.40	.24
TST-6-006	.006	5/16x7/8	.40	.24
TST-6-01	.01	3/8x1	.45	.27
TST-6-02	.02	3/8x1	.45	.27
TST-6-05	.05	7/16x1 3/16	.55	.33

Catalog Number	Mf	Size†	Dealer List Price	Dealer Net Price
600 WVDC—continued				
ST-6-01	.01	7/16x1 3/16	.30	.18
ST-6-02	.02	7/16x1 5/8	.30	.18
ST-6-03	.03	7/16x1 5/8	.35	.21
ST-6-04	.04	1/2x1 5/8	.35	.21
ST-6-05	.05	1/2x1 5/8	.40	.24
ST-6-06	.06	9/16x1 5/8	.40	.24
ST-6-1	.1	9/16x2 1/8	.45	.27
ST-6-2	.2	3/4x2 1/8	.55	.33
ST-6-25	.25	3/4x2 1/8	.55	.33
SDH-6-5*	.5	7/8x2 1/2	.80	.48
SDH-6-1M*	1.0	1x3 1/8	1.25	.75

Catalog Number	Mf	Size†	Dealer List Price	Dealer Net Price
1000 WVDC				
STM-10-01	.01	7/16x1 5/8	\$.50	\$.30
STM-10-02	.02	1/2x1 5/8	.50	.30
STM-10-05	.05	9/16x2 1/8	.60	.36
STM-10-1	.1	3/4x2 1/8	.75	.45

Catalog Number	Mf	Size†	Dealer List Price	Dealer Net Price
1600 WVDC				
STM-16-001	.001	3/8x1 3/16	.55	.33
STM-16-002	.002	7/16x1 3/16	.55	.33
STM-16-0025	.0025	7/16x1 3/16	.55	.33
STM-16-003	.003	7/16x1 3/16	.55	.33
STM-16-004	.004	7/16x1 5/8	.55	.33
STM-16-005	.005	7/16x1 5/8	.55	.33
STM-16-006	.006	7/16x1 5/8	.55	.33
STM-16-007	.007	7/16x1 5/8	.55	.33
STM-16-008	.008	7/16x1 5/8	.60	.36
STM-16-01	.01	1/2x1 5/8	.60	.36
STM-16-015	.015	9/16x1 5/8	.60	.36
STM-16-02	.02	9/16x1 5/8	.60	.36
STM-16-025	.025	9/16x2 1/8	.60	.36
STM-16-03	.03	9/16x2 1/8	.60	.36
STM-16-04	.04	3/4x2 1/8	.70	.42
STM-16-05	.05	3/4x2 1/8	.70	.42

†Diameter x Length in inches. Leads 2" long minimum
*Capacitors marked * are supplied in Duravolt construction in wax-impregnated Kraft tubes with wax end-seals. These units are given a final over-all wax coating for extra protection.
*Trade Mark



FOR AUTO SETS

Catalog Number	Mf	Size	Dealer List Price	Dealer Net Price
GENERATOR CAPACITORS				
P-2702	.25	11/16x2	\$.60	\$.36
P-2705	.5	11/16x2	.65	.39
P-2708	1.	1x2 1/4	.90	.54

Catalog Number	Mf	Size	Dealer List Price	Dealer Net Price
FORD GENERATOR CAPACITORS				
RF-0132	V-8 to 1936	11/16x2	.85	.51
RF-0133	V-8 after '36	11/16x2	.65	.39

Catalog Number	Mf	Size	Dealer List Price	Dealer Net Price
AMMETER CAPACITORS				
P-2722	.5	3/4x2 1/4	.65	.39
P-2724	1.	15/16x2 3/16	.85	.51

Catalog Number	Mf	Size	Dealer List Price	Dealer Net Price
OVAL TUBULAR CAPACITOR				
S-0286A	.5-120V	7/16x3/4x2 3/16	.65	.39

Catalog Number	Mf	Size	Dealer List Price	Dealer Net Price
SPECIAL VIBRATOR UNIT				
S-0286M	Dual .0008	1/4x11/16x1 1/16	.65	.39



METAL CASE OIL-FILLED TUBULARS

Hermetically sealed metal tubes with Kraft-board outer sleeves . . . Mineral-oil impregnated, non-inductively wound paper sections are insulated from metal case . . . Assembled mounting strap.

Catalog Number	Mf	Size†	Dealer List Price	Dealer Net Price
600 WVDC				
XTT-6-.003	.003	1/2x1 3/16	\$.95	\$.57
XTT-6-.006	.006	1/2x1 3/16	.95	.57
XTT-6-.01	.01	1/2x1 3/16	.95	.57
XTT-6-.02	.02	1/2x1 9/16	1.05	.63
XTT-6-.03	.03	23/32x1 5/16	1.10	.66
XTT-6-.05	.05	23/32x1 5/16	1.10	.66
XTT-6-.06	.06	23/32x1 5/16	1.20	.72
XTT-6-.1	.1	23/32x1 11/16	1.25	.75
XTT-6-.25	.25	13/16x2 3/16	1.70	1.02
XTT-6-.5	.5	1 1/16x2 7/16	2.20	1.32

Catalog Number	Mf	Size†	Dealer List Price	Dealer Net Price
1000 WVDC				
XTT-10-.003	.003	1/2x1 9/16	1.10	.66
XTT-10-.006	.006	1/2x1 9/16	1.10	.66
XTT-10-.008	.008	1/2x1 9/16	1.10	.66
XTT-10-.01	.01	23/32x1 5/16	1.10	.66
XTT-10-.02	.02	23/32x1 5/16	1.20	.72
XTT-10-.05	.05	23/32x1 11/16	1.30	.78
XTT-10-.1	.1	23/32x1 1/16	1.50	.90
XTT-10-.25	.25	1 1/16x2 3/8	2.00	1.20

Catalog Number	Mf	Size†	Dealer List Price	Dealer Net Price
1500 WVDC				
XTT-15-.003	.003	23/32x1 5/16	1.20	.72
XTT-15-.006	.006	23/32x1 5/16	1.20	.72
XTT-15-.01	.01	23/32x1 11/16	1.20	.72
XTT-15-.02	.02	23/32x1 11/16	1.30	.78
XTT-15-.05	.05	23/32x1 1/16	1.40	.84
XTT-15-.1	.1	1 1/16x2 1/16	2.15	1.29

Catalog Number	Mf	Size†	Dealer List Price	Dealer Net Price
2000 WVDC				
XTT-20-.005	.005	13/16x1 11/16	1.25	.75
XTT-20-.003	.003	13/16x1 11/16	1.25	.75
XTT-20-.006	.006	13/16x1 11/16	1.25	.75
XTT-20-.01	.01	13/16x1 11/16	1.25	.75
XTT-20-.02	.02	13/16x2 3/16	1.35	.81
XTT-20-.05	.05	13/16x2 9/16	1.45	.87
XTT-20-.1	.1	1 1/16x2 11/16	2.25	1.35

Catalog Number	Mf	Size	Dealer List Price	Dealer Net Price
3000 WVDC				
XTT-30-.005	.005	1 1/16x1 7/8	1.50	.90
XTT-30-.003	.003	1 1/16x1 7/8	1.50	.90
XTT-30-.006	.006	1 1/16x1 7/8	1.50	.90
XTT-30-.01	.01	1 1/16x1 7/8	1.50	.90
XTT-30-.02	.02	1 1/16x2 3/8	1.65	.99
XTT-30-.05	.05	1 1/16x2 3/4	1.90	1.14

†Diameter x length in inches. Leads 2" long minimum.



VIBRATOR HASH UNITS

Catalog Number	Mf	Size	Dealer List Price	Dealer Net Price
SHH-1	.5-120V	7/8x1 1/4	\$.60	\$.36
SHH-2	.5-120V	3/4x1 1/4	.70	.42
SHH-3	.5-120V	13/16x1 1/8	.70	.42



MINIATURE METAL-ENCASED OIL-PAPER TUBULARS

Ultra-compact design . . . Hermetically sealed in metal containers . . . Insulated sections.

Catalog Number	Mf	Size†	Dealer	
			List Price	Net Price
100 WVDC				
QA1M-1-.0005	.0005	1/4x5/8	\$.85	\$.51
QA1M-1-.001	.001	1/4x5/8	.85	.51
QA1M-1-.003	.003	1/4x3/4	.85	.51
QA1M-1-.006	.006	1/4x7/8	.85	.51
QA1M-1-.01	.01	1/4x1	.85	.51

200 WVDC				
QA1M-2-.001	.001	1/4x5/8	.90	.54
QA1M-2-.003	.003	1/4x3/4	.90	.54
QA1M-2-.006	.006	1/4x7/8	.90	.54
QA1M-2-.01	.01	1/4x1 1/8	.90	.54

600 WVDC				
QA1M-6-.001	.001	1/4x3/4	1.00	.60
QA1M-6-.003	.003	1/4x1	1.00	.60
QA1M-6-.006	.006	1/4x1 1/4	1.00	.60
QA1M-6-.01	.01	1/4x1 1/2	1.00	.60

†Diameter x length in inches.



SUPEREX* TRANSMITTING CAPACITORS

Synthetic, non-flammable Superex impregnant and fill far long life, small size, high insulation resistance, low power factor and stable electrical characteristics . . . Gray-lacquered metal cases with hook-on mounting brackets.

Catalog Number	Mf	Size†	Dealer	
			List Price	Net Price
600 WVDC				
XLXPL-6-2	2	1 13/16x1 1/16x2 7/8	\$6.45	\$3.87
XLXPL-6-4	4	2 1/2x1 3/16x2 7/8	8.35	5.01

1000 WVDC				
XLXPL-10-1	1	1 13/16x1 1/16x2 1/4	5.70	3.42
XLXPL-10-2	2	1 13/16x1 1/16x3 7/8	7.60	4.56
XLXPL-10-4	4	2 1/2x1 3/16x1 1/4	9.50	5.70

2000 WVDC				
XLXPL-20-.5	.5	1 13/16x1 1/16x2 7/8	6.85	4.11
XLXPL-20-1	1	2 1/2x1 3/16x3 1/2	8.35	5.01
XLXPL-20-2	2	3 3/4x1 1/4x3 7/8	9.90	5.94

3000 WVDC				
XLXPL-30-.5	.5	2 1/2x1 3/16x3 1/2	15.20	9.12
XLXPL-30-1	1	3 3/4x1 1/4x3 7/8	18.25	10.95
XLXPL-30-2	2	3 3/4x1 3/4x3 3/4	22.80	13.68

* Trade Mark



TYPE EN-184 ELIM-O-STAT*

This wide-frequency range filter is especially recommended for oil burners, small neon signs, and small machinery requiring that both sides of the line be filtered to remove severe interference to radios and television sets. Underwriters' approved. Maximum current 2.5 amperes, 125 volts a-c/d-c.

List Price: \$3.80 Dealer Net Price: \$2.28
*T. M. Reg. U. S. Patent Office



MODEL CF EXAM-ETER* WITH FAMOUS QUICK-CHECK* CIRCUIT

Most comprehensive of all capacitor analyzers, this sturdy, reliable instrument is designed to simplify electronic servicing.

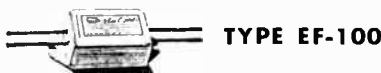
- Has exclusive, patented "Quick-Check" circuit for qualitative tests and intermittent checks without unsoldering capacitor leads
- Capacitance bridge—10 mmf to 2000 mf
- Power Factor range—0 to 50 percent
- Insulation Resistance—3 to 10,000 megohms
- Leakage Current—Reads electrolytic leakage current directly on recessed 4 1/2" meter
- Continuously Adjustable 0-550-volt D-C power supply for electrolytic tests
- 0-600 volt, 3-range D-C vvm
- 5-50 volt, A-C vacuum-tube voltmeter
- 100 ohm to 7.5 megohm A-C resistance bridge
- Clear, step-by-step, 20-page Technical Manual
- Attractive, gray metal case
- Size: 12 3/4" high by 10" wide by 5 1/2" deep
- Weight: Only 12 3/4 lbs. for CF-1-60

MODEL CF CAPACITOR EXAM-ETER

Catalog Number	For use on	Dealer Net Price
CF-1-60	115 volts a-c, 50-60 cycles	\$59.70*
CF-2-U	115-230 volts a-c, 25-60 cycles	70.45†

* Trade Mark

ELIM-O-STAT* FILTERS FOR FLUORESCENT LAMPS



TYPE EF-100

Exceptionally effective over the wide range of frequencies used for radio and television entertainment and communications, the EF-100 is the Elim-O-Stat for fixtures in laboratories, radio salesrooms, rural homes, and wherever else sensitive receivers are used or station signal strengths are weak. Installed in series with the line leads within the fixture at the point where the power leads enter. Only one unit is needed per fixture. Housed in metal container. Rated Voltage: 125 volts A-C. Maximum Current: 2.7 Amperes. Will handle up to six 40-watt tubes. Underwriters' Approved.

List Price: \$3.80 Dealer Net Price: \$2.28



TYPES EF-101 AND EF-102

These Elim O Stats, electrically identical delta-capacitor networks, are about 80% as effective as Type EF-100. Small size and low cost favor them for most applications. Sealed in metal containers. Only one Elim-O-Stat needed for any fixture or lamp. Simply connect across line leads entering fixture. Underwriters' Approved.

Catalog Number	Line Volts	List Price	Dealer Net Price
EF-101	125	\$1.25	\$.75
EF-102	125	1.20	.72



MODEL CBC CAPACITOR ANALYZER

An up-to-the-minute version of the famous Solar Model CB, long-time standard analyzer of the radio service industry.

- "Magic Eye" tube for "Quick As A Wink" bridge balance indication
- Capacitance bridge—10 mmf to 800 mf
- Power Factor range—0 to 50 percent
- Simplified Mean-Lamp circuit for visual check of insulation resistance and leakage
- Resistance Bridge—100 ohms to 7 megohms
- Easy-to-read clear scales.
- Size: 9 1/2"x7 1/8"x6 1/4". Weight: 7 lbs for CBC-1-60
- Portable case with detachable cover has hand-rubbed finish

MODEL CBC CAPACITOR ANALYZER

Catalog Number	For use on	Dealer Net Price
CBC-1-60	115 volts a-c, 50-60 cycles	\$39.80*
CBC-2-U	115-230 volts a-c, 25-60 cycles	46.90†

† Dealer Net Prices for Denver and West of Denver are 5 percent higher.



PLUG-THROUGH ELIM-O-STAT*

This compact, simple plug-through filter is used between set and outlet or appliance and outlet for eliminating low intensity interference.

Type ED 101 List Price: \$1.25 Dealer Net: \$.75



NEW "JUMBO" ELIM-O-STAT*

Standard design capacitive inductive filter in large attractive container. Popular as a merchandising leader. Used with radios or appliances. New high rating of 5 amps. max., 125 volts a-c/d-c. Replaces both old Jumbo and Type RN filters.

Jumbo—List Price \$7.98 Dealer Net Price: \$4.79



PLUG-IN SOCKET ELIM-O-STAT* FILTERS

These efficient twin-pi capacitive-inductive filters effectively attenuate interference on the new television frequencies as well as on the regular and short wave broadcast bands. All incorporate war-time developments in filter design. Solar plug-in Elim-O-Stats are furnished with an exclusive three-wire line cord which incorporates the filter grounding lead. No unsightly extra wire to ground is needed. Each filter is also provided with a binding post for return lead to motor or appliance frame when required. Attractive maroon-wrinkle finish.

Catalog Number	Max. Amps.	Line Volts	List Price	Dealer Net Price
ED-104	3	125	\$5.75	\$3.45
ED-105	5	125	9.75	5.85
ED-106	10	125	13.75	8.25

*T. M. Reg. U. S. Patent Office

"LONG-LIFE" CAPACITORS



"TYNEE-DRY" TYPE TD

D.C. Dry Electrolytic Capacitors in Sealed Metal Tubes with Insulating Cardboard Sleeves; 3" Bare Wire Leads



Part Number	Capacity Mfd.	Outside Dimensions, Inches Diameter Length	List Price
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6 VOLTS WORKING

TD-1000-6	1000	15/16 2 1/8	\$1.60
TD-1500-6	1500	1 1/16 2 1/8	2.00
TD-2000-6	2000	1 1/16 2 5/8	2.45

12 VOLTS WORKING

TD-250-12	250	13/16 1 3/4	1.00
TD-500-12	500	15/16 2 1/8	1.35

15 VOLTS WORKING

TD-100-15	100	11/16 1 3/4	.80
TD-250-15	250	13/16 1 3/4	1.10
TD-500-15	500	15/16 2 1/8	1.60

25 VOLTS WORKING; 40 VOLTS PEAK

TD-10-25	10	11/16 1 3/8	.60
TD-25-25	25	11/16 1 3/8	.70
TD-50-25	50	11/16 1 3/8	.80
TD-100-25	100	11/16 1 3/4	1.20
TD-150-25	150	13/16 1 3/4	1.45
TD-200-25	200	13/16 1 3/4	1.60
TD-250-25	250	15/16 2 1/8	1.85
TD-500-25	500	1 1/16 2 1/8	2.00

50 VOLTS WORKING; 70 VOLTS PEAK

TD-5-50	5	11/16 1 3/8	.60
TD-10-50	10	11/16 1 3/8	.65
TD-25-50	25	11/16 1 3/8	.75
TD-50-50	50	11/16 1 3/8	.90
TD-100-50	100	11/16 1 3/4	1.20

150 VOLTS WORKING; 225 VOLTS PEAK

TD-4-150	4	11/16 1 3/4	.60
TD-8-150	8	11/16 1 3/4	.65
TD-12-150	12	11/16 1 3/4	.70
TD-16-150	16	11/16 1 3/4	.75
TD-20-150	20	11/16 1 3/4	.80
TD-24-150	24	13/16 1 3/4	.80
TD-30-150	30	13/16 1 3/4	.85
TD-40-150	40	13/16 1 3/4	.90
TD-50-150	50	13/16 1 3/4	1.00
TD-80-150	80	15/16 2 1/8	1.30

"TYNEE-DRY" Single Sections, cont'd

Part Number	Capacity Mfd.	Outside Dimensions, Inches Diameter Length	List Price
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250 VOLTS WORKING; 325 VOLTS PEAK

TD-8-250	8	11/16 1 3/4	.65
TD-16-250	16	13/16 1 3/4	.90
TD-20-250	20	13/16 1 3/4	1.00
TD-24-250	24	13/16 1 3/4	1.10
TD-30-250	30	15/16 1 3/4	1.15
TD-40-250	40	15/16 1 3/4	1.20

350 VOLTS WORKING; 425 VOLTS PEAK

TD-8-350	8	11/16 1 3/4	\$.75
TD-16-350	16	13/16 1 3/4	1.00
TD-20-350	20	13/16 1 3/4	1.10
TD-30-350	30	15/16 2 1/8	1.25
TD-40-350	40	1 1/16 2 1/8	1.45

450 VOLTS WORKING; 525 VOLTS PEAK

TD-4-450	4	13/16 1 3/4	.75
TD-8-450	8	13/16 1 3/4	.80
TD-10-450	10	13/16 1 3/4	.90
TD-12-450	12	15/16 2 1/8	.95
TD-16-450	16	15/16 2 1/8	1.15
TD-20-450	20	15/16 2 1/8	1.30
TD-30-450	30	1 1/16 2 1/8	1.40
TD-40-450	40	1 1/16 2 5/8	1.75

525 VOLTS WORKING; 600 VOLTS PEAK

TD-8-525	8	15/16 1 3/4	1.10
TD-16-525	16	1 1/16 2 1/8	1.70

Dual Section Units

Two Positive Bare Wire Leads At One End;
Common Negative At Opposite End

Part Number	Capacity Mfd.	Outside Dimensions, Inches Diameter Length	List Price
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50 VOLTS WORKING; 70 VOLTS PEAK

TD-D10-50	10+10	13/16 1 3/4	.90
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150 VOLTS WORKING; 225 VOLTS PEAK

TD-D8-150	8+8	13/16 1 3/4	1.00
TD-816-150	8+16	13/16 1 3/4	1.05
TD-D16-150	16+16	13/16 1 3/4	1.10
TD-D20-150	20+20	13/16 1 3/4	1.15
TD-D30-150	30+30	15/16 2 1/8	1.30
TD-4020-150	40+20	15/16 2 1/8	1.30
TD-D40-150	40+40	15/16 2 1/8	1.50
TD-5030-150	50+30	15/16 2 1/8	1.50
TD-D50-150	50+50	15/16 2 1/8	1.60
TD-8040-150	80+40	1 1/16 2 1/8	1.75

450 VOLTS WORKING; 525 VOLTS PEAK

TD-D4-450	4+4	15/16 2 1/8	1.30
TD-48-450	4+8	15/16 2 1/8	1.35
TD-D8-450	8+8	15/16 2 1/8	1.40
TD-D10-450	10+10	15/16 2 1/8	1.50
TD-816-450	8+16	1 1/16 2 1/8	1.75
TD-D16-450	16+16	1 1/16 2 5/8	2.05
TD-D20-450	20+20	1 1/16 2 5/8	2.20



"LONG-LIFE" CAPACITORS



"CARTRIJ-DRY" TYPE CDB

D.C. Dry Electrolytic Capacitors in Wax-Filled Impregnated Cardboard Tubes; Terminals Are 6" Flexible Insulated Leads At One End of Tube; Supplied with Assembled Mounting Strap

Part Number Capacity Mfd. Outside Dimensions, Inches Diameter Length List Price

Duals, Common Negative; Three Leads 150 Volts Working; 225 Volts Peak

CDB-D16-150CN	16+16	7/8	2 3/8	\$1.10
CDB-D20-150CN	20+20	7/8	2 3/8	1.15
CDB-D30-150CN	30+30	1	2 3/8	1.30
CDB-4020-150CN	40+20	1	2 3/8	1.30
CDB-D40-150CN	40+40	1	2 3/8	1.50
CDB-5030-150CN	50+30	1	2 3/8	1.50
CDB-D50-150CN	50+50	1	2 3/8	1.60
CDB-8040-150CN	80+40	1	2 3/4	1.75

Duals, Common Negative; Three Leads 450 Volts Working; 525 Volts Peak

CDB-D8-450CN	8+8	1	3	1.40
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Part Number Capacity Mfd. Outside Dimensions, Inches Diameter Length List Price

Duals, Separate Sections; Four Leads 150 Volts Working; 225 Volts Peak

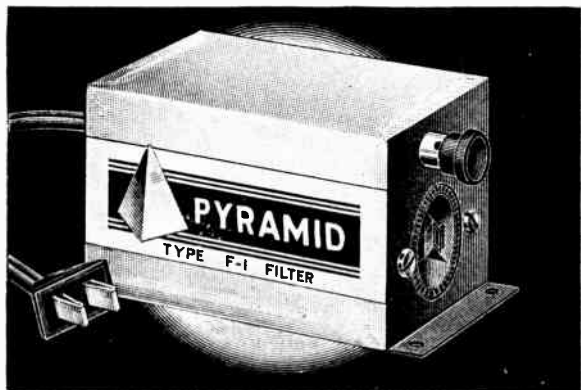
CDB-D16-150SS	16+16	1	2 3/8	\$1.60
CDB-D20-150SS	20+20	1	2 3/8	1.75
CDB-D40-150SS	40+40	1 1/4	3	2.00

Duals, Separate Sections, Four Leads 450 Volts Working; 525 Volts Peak

CDB-D8-450SS	8+8	1	3	1.75
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Triples, Common Negative; Four Leads 150 Volts Working; 225 Volts Peak

Part Number	Capacity Mfd., in Sequence	D.C. Working Voltage in Sequence	Outside Dimensions, Inches Diameter Length	List Price
CDB-T20-150CN	20+20+20	150	1 2 3/8	\$1.75
CDB-404020-150CN	40+40+20	150	1 3	1.90
CDB-T40-150CN	40+40+40	150	1 3	2.00
CDB-21	40+40+25	150-150-25	1 3	1.85
CDB-41	50+30+25	150-150-25	1 3	1.85



TYPE F-1

Capacitive-Inductive Radio-Noise Filter

- High-quality, highly efficient
- Effective with radios or appliances
- Sturdy, attractively-finished container
- Individually packaged

Rated voltage: 110 Volts AC-DC
Maximum current: 5 amperes
List price: \$8.00

"LONG-LIFE" CAPACITORS



"TWIST-MOUNT" TYPE TM

D.C. dry electrolytic capacitors in grounded aluminum containers with lug terminals and mounting ears. . . . Popular ultra-compact replacement type. . . . Excellent electrical characteristics. . . . Legible terminal coding. . . . Each unit supplied with metal and bakelite mounting plates. Individually packaged.



SINGLE CAPACITY UNITS

Part Number	Capacity Mfd.	D.C. Working Voltage	Can Size, Inches Diameter	Inches Height	List Price
TM-100-25	100	25	1	2	\$1.65
TM-250-25	250	25	1	2	1.85
TM-500-25	500	25	1	2 1/2	2.05
TM-20-150	20	150	1	2	1.00
TM-40-150	40	150	1	2	1.10
TM-80-150	80	150	1	2	1.50
TM-10-450	10	450	1	2	1.05
TM-20-450	20	450	1	2	1.50
TM-30-450	30	450	1	3	1.65
TM-40-450	40	450	1	3	1.95
TM-80-450	80	450	1 3/8	3	3.25

DUAL CAPACITY UNITS

Part Number	Capacity Mfd.	D.C. Working Voltage	Can Size, Inches Diameter	Inches Height	List Price
TM-D20-150	20-20	150	1	2	\$1.35
TM-D30-150	30-30	150	1	2	1.50
TM-4020-150	40-20	150	1	2	1.50
TM-D40-150	40-40	150	1	2	1.65
TM-5030-150	50-30	150	1	2	1.65
TM-D50-150	50-50	150	1	2	1.80
TM-8040-150	80-40	150	1	3	2.00
TM-D10-450	10-10	450	1	2	1.75
TM-D16-450	16-16	450	1	3	2.20
TM-D20-450	20-20	450	1	3	2.35
TM-D40-450	40-40	450	1 3/8	3	3.50

TRIPLE CAPACITY UNITS

Part Number	Capacity Mfd., in Sequence	D.C. Working Voltage, in Sequence	Can Size, Inches Diameter	Inches Height	List Price
TM-1	20-20-25	150-150-25	1	2	\$1.50
TM-21	20-20-100	150-150-25	1	2	1.85
TM-41	40-40-25	150-150-25	1	2 1/2	1.85
TM-T20-150	20-20-20	150	1	2	1.85
TM-402020-150	40-20-20	150	1	2 1/2	1.90
TM-404020-150	40-40-20	150	1	2 1/2	2.00
TM-T40-150	40-40-40	150	1	3	2.10
TM-61	50-50-25	150-150-25	1	2 1/2	2.00
TM-81	80-40-25	150-150-25	1	3	2.50
TM-101	10-10-20	450-450-25	1	3	1.75
TM-T10-450	10-10-10	450	1	3	2.10
TM-T16-450	16-16-16	450	1 3/8	3	2.40
TM-T20-450	20-20-20	450	1 3/8	3	2.65

QUADRUPLE CAPACITY UNITS

Part Number	Capacity Mfd., in Sequence	D.C. Working Voltage, in Sequence	Can Size, Inches Diameter	Inches Height	List Price
TM-Q10-450	10-10-10-20	450-450-450-25	1 3/8	2	\$2.25
TM-Q10-450	10-10-10-10	450	1 3/8	2	2.55

NOTE: Each of the units listed above is regularly supplied with a bakelite as well as a metal mounting plate. Where additional hardware is required, order from this listing. →

Part Number	Description	List Price
TMMP-1	Metal grounding plate for 1" dia. cans	\$.06
TMMP-2	Bakelite insulating plate for 1" dia. cans	.06
TMMP-8	Metal grounding plate for 1 3/8" dia. cans	.06
TMMP-9	Bakelite insulating plate for 1 3/8" dia. cans	.06



"LONG-LIFE" CAPACITORS

"METL-CAN" TYPE MC

D.C. Dry Electrolytic Capacitors in Insulated Cylindrical Screw-Base Aluminum Cans with 6" Flexible Insulated Leads; Palnut for Mounting

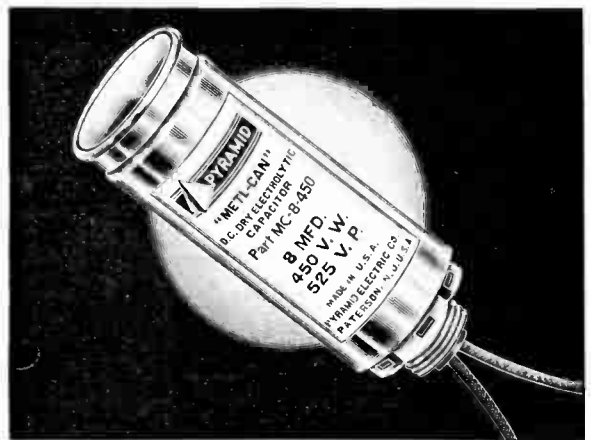
- Popular type for upright mounting
- Maximum protection against humidity
- Individually packaged in attractive container

Single Section Units; Two 6" Flexible Insulated Leads

Part Number	Capacity Mfd.	Can Body Size in Inches		List Price
		Diameter	Height	
450 VOLTS WORKING; 525 VOLTS PEAK				
MC-4-450	4	1 3/8	3 1/8	\$1.15
MC-8-450	8	1 3/8	3 1/8	1.40
MC-12-450	12	1 3/8	3 1/8	1.85
MC-16-450	16	1 3/8	3 1/8	2.05
MC-20-450	20	1 3/8	3 1/8	2.30
MC-30-450	30	1 3/8	3 1/8	2.60
MC-40-450	40	1 3/8	3 1/8	2.90

525 VOLTS WORKING; 600 VOLTS PEAK				
MC-8-525	8	1 3/8	3 1/8	1.95
MC-16-525	16	1 3/8	3 1/8	2.95

600 VOLTS WORKING; HIGHEST QUALITY SERIES-WOUND CONSTRUCTION				
MC-4-600	4	1 3/8	3 1/8	2.60
MC-8-600	8	1 3/8	3 1/8	3.40
MC-12-600	12	1 3/8	3 1/8	3.95
MC-16-600	16	1 3/8	3 1/8	4.40



Dual Section Units; 450 Volts Working; 525 Volts Peak; Separate Section Construction; Four 6" Flexible Insulated Leads

Part Number	Capacity Mfd.	Can Body Size in Inches		List Price
		Diameter	Height	
MC-D4-450SS	4+4	1 3/8	3 1/8	\$1.90
MC-48-450SS	4+8	1 3/8	3 1/8	2.00
MC-D8-450SS	8+8	1 3/8	3 1/8	2.20
MC-816-450SS	8+16	1 3/8	3 1/8	2.50
MC-D16-450SS	16+16	1 3/8	3 1/8	2.95
MC-D20-450SS	20+20	1 3/8	3 1/8	3.10

Dual Section Units; 450 Volts Working; 525 Volts Peak; Common Negative Construction; Three 6" Flexible Insulated Leads

Part Number	Capacity Mfd.	Can Body Size in Inches		List Price
		Diameter	Height	
MC-D4-450CN	4+4	1 3/8	3 1/8	\$1.90
MC-48-450CN	4+8	1 3/8	3 1/8	2.00
MC-D8-450CN	8+8	1 3/8	3 1/8	2.20
MC-816-450CN	8+16	1 3/8	3 1/8	2.50
MC-D16-450CN	16+16	1 3/8	3 1/8	2.95
MC-D20-450CN	20+20	1 3/8	3 1/8	3.10

AEROVOX

Latest Aerovox Items

DURANITE MOLDED TUBULAR CAPACITORS



Type P 88

Toughest capacitors ever offered critical operators of radio-electronic equipment. Not just another plastic tubular. DURANITE capacitors are entirely new — in design, impregnation, processing, and casing. New technique provides glove-fitting contact and seal throughout. No danger of voids.

DURANITE provides a permanent, non-varying, rock-hard casing. Smooth clean surface. DURANITE does not dry out, does not develop cracks or fissures. Pigtail leads firmly imbedded, won't pull out, won't work loose. Pull tests no longer are a problem. Wire will break before it can be loosened.

DURANITE capacitors are really moisture-proof. They stand up at high temperatures. Operation from sub-zero to over 212°F. Exposure to temperatures of 250°F will not impair life or performance. Temperature coefficient of capacitance similar to wax and oil capacitors. The new AEROL-ENE impregnant eliminates necessity of stocking and using both wax and oil capacitors. One impregnant does the work of both. DURANITE capacitors show no deterioration in stock, may be stored in advance of actual use, with corresponding economy and convenience. Smaller dimensions than the usual paper tubulars.

P 288 200 V.D.C.W.			P 488 400 V.D.C.W.		
Cap. Mfd.	List Price	Net Price	Cap. Mfd.	List Price	Net Price
.015	\$0.25a	\$0.15	.006	\$0.25a	\$0.15
.04	.30b	.18	*.0068	.25a	.15
*.047	.30b	.18	.0075	.25a	.15
.05	.30b	.18	.01	.25a	.15
*.068	.35e	.21	.015	.25b	.15
.075	.35e	.21	.02	.25b	.15
.1	.35c	.21	*.022	.30b	.18
.15	.40d	.24	.025	.30b	.18
.33	.50c	.30	.03	.30b	.18
*.47	.60c	.36	*.033	.30b	.18
.5	.60c	.36	.04	.30c	.18
			*.047	.30c	.18
			.05	.30c	.18
			*.068	.35d	.21
			.075	.35d	.21
			.1	.35d	.21
			.15	.40e	.24
			*.22	.45e	.27
			.25	.45e	.27

P 688 600 V.D.C.W.			P 1088 1000 V.D.C.W.		
Cap. Mfd.	List Price	Net Price	Cap. Mfd.	List Price	Net Price
.001	\$0.25a	\$0.15	.001	\$0.50a	\$0.30
.0015	.25a	.15	.0015	.50a	.30
.002	.25a	.15	.002	.50a	.30
*.0022	.25a	.15	*.0022	.50a	.30
.003	.25a	.15	.003	.50b	.30
*.0033	.25a	.15	*.0033	.50b	.30
.004	.25a	.15	.004	.50b	.30
*.0047	.25a	.15	*.0047	.50b	.30
.005	.25a	.15	.005	.50b	.30
.006	.25b	.15	.006	.50b	.30
*.0068	.25b	.15	*.0068	.50b	.30
.0075	.25b	.15	.0075	.50b	.30
.01	.25b	.15	.01	.50b	.30
.015	.25b	.15	.015	.50c	.30
.02	.25b	.15	.02	.50c	.30
*.022	.25b	.15	*.022	.50c	.30
.025	.25c	.15	.025	.50c	.30
.03	.25d	.15	.03	.50d	.30
*.033	.25d	.15	*.033	.50d	.30
.04	.25d	.15	.04	.50c	.30
*.047	.25d	.15	*.047	.50c	.30
.05	.25d	.15	.05	.50c	.30
*.068	.40e	.24	*.068	.70e	.42
.075	.45e	.27			
.1	.45e	.27			

P 1688 1600 V.D.C.W.			Cap. List Net		
Cap. Mfd.	List Price	Net Price	Cap. Mfd.	List Price	Net Price
.001	\$0.55b	\$0.33	*.0068	.60c	.36
.0015	.55b	.33	*.0076	.60d	.36
.002	.55b	.33	.01	.60d	.36
*.0022	.55b	.33	.015	.60d	.36
.003	.55b	.33	.02	.60c	.36
*.0033	.55b	.33	*.022	.60c	.36
.004	.55b	.33	.025	.60c	.36
*.0047	.55c	.33	.03	.60c	.36
.005	.55c	.33	*.033	.65e	.39

TUBE SIZES

- A — 1 1/4" L x 1/2" dia.
- B — 1 1/2" L x 1/2" dia.
- C — 1 3/4" L x 1/2" dia.
- D — 1 7/8" L x 1/2" dia.
- E — 2" L x 1/2" dia.

*Standard marking — Preferred number series — Color coding: Capacitance, tolerance and voltage — All others — standard marking — capacitance and voltage.

HIGH-VOLTAGE TUBULAR PAPER CAPACITORS OIL-IMPREGNATED WAX-SEALED



Type 84

These Type 84 capacitors, rated from 2500 to 10,000 volts D.C. Working, are designed to meet the elevated peaks and transients encountered in television and other cathode-ray tube applications, and to reduce the effects of corona.

This series of high-voltage, oil-impregnated units is an extension of the wax-impregnated, lower-voltage Type 34 line described on Page 9, rated up to 1500 volts d.c. working.

Although these high-voltage units are similar in general appearance — with impregnated capacitor sections encased in tubular paper jackets and supplied with bimetal leads — they have an improved wax end-seal for longer life under the operating conditions to which they are subjected.

Type 84 is obtainable with a radial mounting band at no extra cost.

TYPE 2584—2500 VOLTS D.C. Working			
Cap. Mfd.	Size-Inches D. x L.	List Price	Net Price
.0001	3/8 x 1 1/2	\$.95	\$0.57
.00025	1/2 x 1 1/2	.95	.57
.0005	3/4 x 1 1/2	.95	.57
.001	1 x 1 1/2	.95	.57
.002	1 1/4 x 1 1/2	.95	.57
.005	1 3/4 x 1 1/2	1.00	.60
.01	1 7/8 x 2	1.05	.63
.03	1 7/8 x 2 1/2	1.10	.66
.05	1 7/8 x 2 1/2	1.20	.72

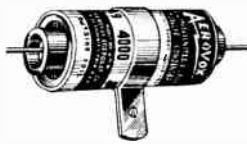
TYPE 3584—3500 VOLTS D.C. Working			
Cap. Mfd.	Size-Inches D. x L.	List Price	Net Price
.0001	1 x 1 1/2	\$1.00	\$0.60
.00025	1 1/4 x 1 1/2	1.00	.60
.0005	1 1/2 x 1 1/2	1.00	.60
.001	1 3/4 x 1 1/2	1.00	.60
.002	1 7/8 x 2	1.00	.60
.005	1 7/8 x 2	1.05	.63
.01	1 7/8 x 2 1/2	1.10	.66
.03	1 7/8 x 2 1/2	1.20	.72

TYPE 5084—5000 VOLTS D.C. Working			
Cap. Mfd.	Size-Inches D. x L.	List Price	Net Price
.0001	1 1/2 x 1 1/2	\$1.05	\$0.63
.00025	1 3/4 x 1 1/2	1.05	.63
.0005	1 7/8 x 1 1/2	1.05	.63
.001	1 7/8 x 2	1.05	.63
.002	1 7/8 x 2	1.05	.63
.005	1 7/8 x 2 1/2	1.10	.66
.01	1 7/8 x 2 1/2	1.15	.69

TYPE 7584—7500 VOLTS D.C. Working			
Cap. Mfd.	Size-Inches D. x L.	List Price	Net Price
.0001	1 3/4 x 2	\$1.10	\$0.66
.00025	1 7/8 x 2	1.10	.66
.0005	1 7/8 x 2	1.05	.63
.001	1 7/8 x 2 1/2	1.10	.66
.002	1 7/8 x 2 1/2	1.15	.69
.005	1 7/8 x 2 1/2	1.15	.69

TYPE 10084—10,000 VOLTS D.C. Working			
Cap. Mfd.	Size-Inches D. x L.	List Price	Net Price
.0001	1 3/4 x 2 1/2	\$1.15	\$0.69
.00025	1 7/8 x 2 1/2	1.15	.69
.0005	1 7/8 x 2 1/2	1.15	.69
.001	1 7/8 x 2 1/2	1.15	.69
.002	1 7/8 x 3	1.20	.72

HIGH VOLTAGE HERMETICALLY SEALED OIL-FILLED TUBULARS



Type 89

Type 89 capacitors are immersion-proof, oil-impregnated, oil filled units in handy space-saving tubular form. They are ideal for use in vibrator applications, coupling and by-pass functions in transmitters, high-voltage amplifiers, in r.f. by-pass circuits, radar, television, sonar, broadcast transmitters, interference eliminators for motors and generators, and in test equipment.

The oil-impregnated paper section is enclosed in a corrosion-proof metal case filled with oil and hermetically sealed against oil leakage or moisture penetration.

For voltages above 3500 to 6000 volts inclusive DCW, special terminals are used to provide the necessary creepage distance without increasing the length.

TYPE 2589M—2500 VOLTS D.C. Working			
Cap. Mfd.	Size-Inches D. x L.	List Price	Net Price
.0005	1 1/2 x 1 1/2	\$1.35	\$.81
.001	1 3/4 x 1 1/2	1.35	.81
.005	1 3/4 x 1 1/2	1.35	.81
.01	1 3/4 x 1 1/2	1.35	.81
.02	1 3/4 x 2 1/2	1.50	.90
.03	1 3/4 x 2 1/2	1.60	.96
.05	1 3/4 x 2 1/2	1.75	1.05
.1	1 3/4 x 3 1/2	2.40	1.44

TYPE 3089M—3000 VOLTS D.C. Working			
Cap. Mfd.	Size-Inches D. x L.	List Price	Net Price
.0005	1 1/2 x 1 1/2	\$1.50	\$.90
.001	1 3/4 x 1 1/2	1.50	.90
.005	1 3/4 x 1 1/2	1.50	.90
.01	1 3/4 x 1 1/2	1.50	.90
.02	1 3/4 x 2 1/2	1.65	.99
.03	1 3/4 x 2 1/2	1.75	1.05
.05	1 3/4 x 2 1/2	1.90	1.14
.1	1 3/4 x 2 1/2	2.65	1.59

TYPE 3589M—3500 VOLTS D.C. Working			
Cap. Mfd.	Size-Inches D. x L.	List Price	Net Price
.0005	1 1/2 x 1 1/2	\$1.75	\$1.05
.001	1 3/4 x 1 1/2	1.75	1.05
.005	1 3/4 x 1 1/2	1.75	1.05
.01	1 3/4 x 1 1/2	1.75	1.05
.02	1 3/4 x 2 1/2	1.90	1.14
.03	1 3/4 x 2 1/2	2.00	1.20
.05	1 3/4 x 2 1/2	2.15	1.29
.1	1 3/4 x 2 1/2	2.90	1.74

TYPE 4089M—4000 VOLTS D.C. Working			
Cap. Mfd.	Size-Inches D. x L.	List Price	Net Price
.0005	1 1/2 x 1 1/2	\$2.00	\$1.20
.001	1 3/4 x 1 1/2	2.00	1.20
.005	1 3/4 x 1 1/2	2.00	1.20
.01	1 3/4 x 1 1/2	2.00	1.20
.02	1 3/4 x 2 1/2	2.15	1.29
.03	1 3/4 x 2 1/2	2.25	1.35
.05	1 3/4 x 2 1/2	2.40	1.44
.1	1 3/4 x 2 1/2	3.15	1.89

TYPE 5089M—5000 VOLTS D.C. Working			
Cap. Mfd.	Size-Inches D. x L.	List Price	Net Price
.0005	1 1/2 x 1 1/2	\$2.25	\$1.35
.001	1 3/4 x 1 1/2	2.25	1.35
.005	1 3/4 x 1 1/2	2.25	1.35
.01	1 3/4 x 1 1/2	2.25	1.35
.02	1 3/4 x 2 1/2	2.40	1.44
.03	1 3/4 x 2 1/2	2.50	1.50
.05	1 3/4 x 2 1/2	2.65	1.59

TYPE 6089M—6000 VOLTS D.C. Working			
Cap. Mfd.	Size-Inches D. x L.	List Price	Net Price
.0005	1 1/2 x 2 1/2	\$2.50	\$1.50
.001	1 3/4 x 2 1/2	2.50	1.50
.005	1 3/4 x 2 1/2	2.50	1.50
.01	1 3/4 x 2 1/2	2.50	1.50
.02	1 3/4 x 3 1/2	2.65	1.59
.03	1 3/4 x 3 1/2	2.75	1.65
.05	1 3/4 x 5 1/2	2.90	1.74

High-Capacitance Low-Voltage Capacitors in Miniature Tubular Aluminum Cases



Type PRS*

These high-capacitance low-voltage units of the Type PRS miniature tubular aluminum-cased line are especially suitable in electric fence control and similar applications.

They are compact units, tightly sealed, and provided with a vent which operates to relieve excessive gas pressure. An external wax-impregnated cardboard insulating tube is supplied.

Type PRS is available with either etched or plain foil, although it is normally constructed with etched foil — Type PRS-EP. High-purity aluminum is used throughout the internal construction to avoid corrosion which may be caused by contacts between dissimilar metals.

Radial or taugible mounting bands for rigidly mounting the capacitor can be supplied.

TYPE PRS 6—6v. D.C. Working			
Cap. Mfd.	Size-Inches	List Price	Net Price
100	1 1/2 x 1 1/2	\$1.40	\$.84
250	1 1/2 x 1 1/2	1.55	.93
500	1 1/2 x 1 1/2	1.70	1.02
1000	1 1/2 x 2 1/2	2.25	1.35
1500	1 1/2 x 2 1/2	3.00	1.80
2000	1 1/2 x 3 1/2	3.50	2.34

TYPE PRS 12—12v. D.C. Working			
Cap. Mfd.	Size-Inches	List Price	Net Price
100	1 1/2 x 1 1/2	\$1.55	\$.95
250	1 1/2 x 1 1/2	1.75	1.05
500	1 1/2 x 2 1/2	1.90	1.14
1000	1 1/2 x 2 1/2	2.75	1.65

TYPE PRS 15—15v. D.C. Working			
Cap. Mfd.	Size-Inches	List Price	Net Price
100	1 1/2 x 1 1/2	\$1.70	\$1.02

AEROVOX

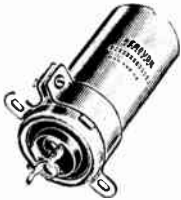
Electrolytic Capacitors

IF IT'S MARKED "AEROVOX" IT'S A QUALITY CAPACITOR

UPRIGHT OR INVERTED MOUNTING CAPACITORS

TYPE E

These units are widely used in highest-quality radio, communications, electronic and similar types of apparatus. Type E capacitors are hermetically-sealed. Ring-type clamp provides rigid and convenient method of mounting unit inverted or upright, beneath, on, or through mounting surface. Available with single or multiple elements. Single unit has two terminals, dual unit has three terminals, and triple unit has four terminals. Cathode connections made through one terminal in cover.



TYPE E
Single Section
(2 terminals)

600v Surge Pk.—475v D.C. Work.
Type E475—Single Section

Cap. Mfds.	Can Size	Ins. Dia.-High	List Price	Net Price
4	1 3/8 x 2 3/4		\$1.90	\$1.14

525v Surge Pk.—450v D.C. Work.
Type E450—Single Section

4	1 3/8 x 2 3/4		\$1.70	\$1.02
8	1 3/8 x 2 3/4		1.75	1.05
10	1 3/8 x 2 3/4		2.00	1.20
12	1 3/8 x 2 3/4		2.15	1.29
16	1 3/8 x 2 3/4		2.40	1.44
20	1 3/8 x 2 3/4		2.65	1.59
30	1 3/8 x 2 3/4		3.00	1.80
40	1 3/8 x 2 3/4		3.40	2.04
80	1 3/8 x 4 3/4		6.00	3.60

75v Surge Pk.—50v D.C. Work.
Type E50—Single Section

10	1 x 1 3/4		\$1.55	\$0.93
25	1 x 1 3/4		1.65	.99

40v Surge Pk.—25v D.C. Work.
Type E25—Single Section

10	1 x 1 3/4		\$1.50	\$0.90
25	1 x 1 3/4		1.55	.93



TYPE E
Dual Element
(3 terminals)

525v Surge Pk.—450v D.C. Work.
Type E450—Dual Element

8-8	1 3/8 x 2 3/4		\$2.75	\$1.65
8-16	1 3/8 x 2 3/4		3.25	1.95
10-10	1 3/8 x 2 3/4		3.00	1.80
12-12	1 3/8 x 2 3/4		3.25	1.95
16-16	1 3/8 x 2 3/4		3.50	2.10
20-20	1 3/8 x 2 3/4		4.00	2.40

Type E450—Triple Element

8-8-8	1 3/8 x 2 3/4		\$4.25	\$2.55
10-10-10	1 3/8 x 2 3/4		5.00	3.00

INSULATED SCREW-MOUNTING CAPACITORS

TYPE G

These capacitors are highest quality hermetically-sealed aluminum can units, used in all quality electronic, radio and communications equipment. Constructed with threaded cover, provided with lock washer and hexagonal nut to provide simple means of mounting capacitor through hole in mounting surface. This capacitor may also be insulated from chassis by use of an insulating washer. Terminals are molded in cover. Single element units have two terminals; dual-element units have three terminals. Cathode connection is made through one terminal in the cover.



TYPE G
Single Element
(2 terminals)

600v Surge Pk.—475v D.C. Work.
Type G475—Single Element

Cap. Mfds.	Can Size	Ins. Dia.-High	List Price	Net Price
4	1 3/8 x 2 3/4		\$1.90	\$1.14
8	1 3/8 x 2 3/4		2.25	1.35

525v Surge Pk.—450v D.C. Work.
Type G450—Single Element

4	1 3/8 x 2 3/4		\$1.70	\$1.02
8	1 3/8 x 2 3/4		1.75	1.05
10	1 3/8 x 2 3/4		2.00	1.20
12	1 3/8 x 2 3/4		2.15	1.29
16	1 3/8 x 2 3/4		2.40	1.44
20	1 3/8 x 2 3/4		2.65	1.59
30	1 3/8 x 2 3/4		3.00	1.80
40	1 3/8 x 2 3/4		3.40	2.04
80	1 3/8 x 4 3/4		6.00	3.60



TYPE G
Dual Element
(3 terminals)

Type G450—Dual Element

8-8	1 3/8 x 2 3/4		\$2.75	\$1.65
8-16	1 3/8 x 2 3/4		3.25	1.95
10-10	1 3/8 x 2 3/4		3.00	1.80
12-12	1 3/8 x 2 3/4		3.25	1.95
16-16	1 3/8 x 2 3/4		3.50	2.10
20-20	1 3/8 x 2 3/4		4.00	2.40

SCREW-MOUNTING WIRE-LEAD CAPACITORS

TYPE GL

These inverted mounting, aluminum can capacitors are made in single, double and triple section units with two separate color-coded leads 3 1/2" long brought out from each section. The threaded neck and palnut provide a simple means of mounting the unit through a hole in the mounting surface. *Suitable for replacement of wet electrolytics.



800v Surge Pk.—600v D.C. Work.
Type GL600—Single Section

Cap. Mfds.	Can Size	Ins. Dia.-High	List Price	Net Price
4	1 3/8 x 4		\$3.00	\$1.80
8	1 3/8 x 4 1/2		4.00	2.40
16	1 3/8 x 4 3/4		5.00	3.00

600v Surge Pk.—475v D.C. Work.
Type GL475—Single Section

4	1 3/8 x 3		\$2.25	\$1.35
12*	1 3/8 x 3		3.15	1.90
16*	1 3/8 x 3		3.50	2.10

Type GL475—Double Section

8-8	1 3/8 x 4		\$3.65	\$2.19
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525v Surge Pk.—450v D.C. Work.
Type GL450—Single Section

4	1 3/8 x 3		\$1.70	\$1.02
8	1 3/8 x 3		1.75	1.05
10	1 3/8 x 3		2.00	1.20
12	1 3/8 x 3		2.15	1.29
16	1 3/8 x 3		2.40	1.44
20	1 3/8 x 3		2.65	1.59
30	1 3/8 x 3		3.00	1.80
40	1 3/8 x 3		3.40	2.04
80	1 3/8 x 4		6.00	3.60

Type GL450—Double Section

8-8	1 3/8 x 4		\$2.75	\$1.65
8-16	1 3/8 x 4		3.25	1.95
10-10	1 3/8 x 4		3.00	1.80
12-12	1 3/8 x 4		3.25	1.95
16-16	1 3/8 x 4		3.50	2.10
20-20	1 3/8 x 4		4.00	2.40

Type GL450—Triple Section

8-8-8	1 3/8 x 4		\$4.25	\$2.55
10-10-10	1 3/8 x 4		5.00	3.00

MIDGET Screw-Mounting WIRE-LEAD CAPACITORS

TYPE GLS

Colored polarity-indicating flexible leads. Inverted screw-mounting. Two 3 1/2-inch leads for each section. 1-inch diameter can and short length make for more compact assemblies, while retaining generous proportions for hard service. Otherwise, similar to Type GL.



525v Surge Pk.—450v D.C. Work.
Type GLS450—Single Section

Cap. Mfds.	Can Size	Ins. Dia.-High	List Price	Net Price
4	1 x 2 3/4		\$1.70	\$1.02
8	1 x 2 3/4		1.75	1.05
12	1 x 3 1/4		2.15	1.29
16	1 x 3 1/4		2.40	1.44

Type GLS450—Double Section

8-8	1 x 3		\$2.75	\$1.65
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300v Surge Pk.—250v D.C. Work.
Type GLS250—Single Section

4	1 x 2 3/4		\$1.55	\$0.93
8	1 x 2 3/4		1.60	.96
12	1 x 2 3/4		1.75	1.05
16	1 x 3 1/4		1.85	1.11

CLEAT-MOUNTING METAL-CAN CAPACITORS TYPE PRVC

Aerovox-originated type. Replaces other electrolytics requiring mounting hole in chassis. Installed in a jiffy by center screw and metal cleat. Separate sections, two leads each section. Coded leads.



Type PRVC 600—Single Section
600v D.C. Working

Cap. Mfds.	Size-Ins. Dia.-High	List Price	Net Price
4	1 3/8 x 4	\$2.60	\$1.56
8	1 3/8 x 4	3.15	2.07
16	1 3/8 x 4 3/4	4.20	2.52

Type PRVC 475—Single & Double
475v D.C. Working

8	1 3/8 x 3	\$1.95	\$1.17
12	1 3/8 x 3	2.60	1.56
16	1 3/8 x 3	3.00	1.80
8-8	1 3/8 x 4	3.30	1.98

Type PRVC 450—Single Section
450v D.C. Working

4	1 3/8 x 3	\$1.10	\$0.84
8	1 3/8 x 3	1.45	.87
10	1 3/8 x 3	1.60	.96
12	1 3/8 x 3	1.75	1.05
16	1 3/8 x 3	1.95	1.17
20	1 3/8 x 3	2.15	1.29
30	1 3/8 x 3	2.40	1.44
40	1 3/8 x 3	2.80	1.68
80	1 3/8 x 4	4.80	2.91

Type PRVC 450—Double Section

8-8	1 3/8 x 4	\$2.50	\$1.50
8-16	1 3/8 x 4	2.95	1.77
10-10	1 3/8 x 4	2.70	1.62
12-12	1 3/8 x 4	2.95	1.77
16-16	1 3/8 x 4	3.35	2.01
20-20	1 3/8 x 4	3.75	2.25

Type PRVC 450—Triple Section

8-8-8	1 3/8 x 4	\$3.50	\$2.10
10-10-10	1 3/8 x 4	4.00	2.40

HIGH-CAPACITY LOW-VOLTAGE CAPACITORS

TYPE HCLV
These high-capacity low-voltage units are used in electric fence control and other applications requiring very high capacitance values at very low voltages. These capacitors are supplied with an outer insulating tube and mounting ring. Sizes given below are over the outside tube.



Type HCLV12—12v D.C. Working

Cap. Mfds.	Size-Ins. Dia.-High	List Price	Net Price
500	1 1/2 x 3	\$2.75	\$1.65
1000	1 1/2 x 3 1/2	2.90	1.74
2000	1 1/2 x 4 1/2	4.80	2.88
3000	2 1/8 x 4 1/2	6.00	3.60
4000	2 1/8 x 4 3/4	7.10	4.26

Type HCLV18—18v D.C. Working

500	1 1/2 x 3	\$3.40	\$2.04
1000	1 1/2 x 4 1/2	4.80	2.91
2000	2 1/8 x 3 1/2	7.20	4.32
3000	2 1/8 x 4 1/2	8.55	5.13
4000	2 1/8 x 4 3/4	9.85	5.91

Type HCLV25—25v D.C. Working

1000	2 1/8 x 4 1/2	\$7.00	\$4.20
2000	2 1/8 x 4 3/4	9.10	5.46



Electrolytic Capacitors

IF IT'S MARKED AEROVOX IT'S A QUALITY CAPACITOR

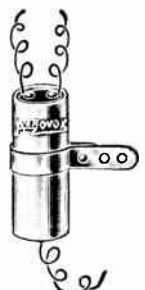
DANDEES

Miniature Tubular Aluminum Can DRY ELECTROLYTICS

TYPE PRS



SINGLE-SECTION Two Leads



DUAL-ELEMENT Three Leads

Tightly sealed aluminum-can dry electrolytics for use where money and space-saving considerations are paramount. Smallest proportions consistent with full-rated capacity and voltage, operating under normal-duty conditions.

Excellent for crowded assemblies. DANDEES are favorites for use in mid-set, AC-DC sets, auto-radios, etc. Also many servicing jobs where low cost is important.

Electrically insulated with special waxed paper jacket. Ends spun over can rim, eliminating possibility of shorts if leads are bent close to unit. Generous length tinned wire leads. DANDEES are thoroughly aged, ready for immediate use. Each unit is thoroughly tested. Individually packed with guaranteed slip. Dual-element units have three leads (common negative).

SINGLE-SECTION UNITS

Type PRS 450
525v Surge Pk.—450v D.C. Work.

Cap. Mlds.	Size—Ins. Dia.—High	List Price	Net Price
4	1 1/8 x 1 3/4	\$0.90	\$0.54
8	1 1/8 x 1 3/4	.95	.57
10	1 1/8 x 1 3/4	1.05	.63
12	1 1/8 x 1 3/4	1.15	.69
16	1 1/8 x 2 1/4	1.35	.81
20	1 1/8 x 2 1/4	1.50	.90
30	1 1/8 x 2 1/4	1.65	.99
40	*1 1/8 x 3 1/4	2.00	1.20

Type PRS 150
200v Surge Pk.—150v D.C. Work.

Cap. Mlds.	Size—Ins. Dia.—High	List Price	Net Price
4	1 1/8 x 1 3/4	\$0.75	\$0.45
8	1 1/8 x 1 3/4	.80	.48
12	1 1/8 x 1 3/4	.85	.51
16	1 1/8 x 1 3/4	.90	.54
20	1 1/8 x 1 3/4	.95	.57
30	1 1/8 x 1 3/4	1.00	.60
40	1 1/8 x 2 1/4	1.10	.66
50	1 1/8 x 2 1/4	1.20	.72

Type PRS 350
400v Surge Pk.—350v D.C. Work.

Cap. Mlds.	Size—Ins. Dia.—High	List Price	Net Price
4	1 1/8 x 1 3/4	\$0.85	\$0.51
8	1 1/8 x 1 3/4	.90	.54
12	1 1/8 x 2 1/4	1.10	.66
16	1 1/8 x 2 1/4	1.25	.75
24	1 1/8 x 2 1/4	1.35	.81

Type PRS 50
75v Surge Pk.—50v D.C. Work.

Cap. Mlds.	Size—Ins. Dia.—High	List Price	Net Price
10	1 1/8 x 1 3/4	\$0.80	\$0.48
25	1 1/8 x 1 3/4	.90	.54
50	1 1/8 x 1 3/4	1.05	.63
100	1 1/8 x 1 3/4	1.30	.79

Type PRS 250
300v Surge Pk.—250v D.C. Work.

Cap. Mlds.	Size—Ins. Dia.—High	List Price	Net Price
4	1 1/8 x 1 3/4	\$0.80	\$0.48
8	1 1/8 x 1 3/4	.85	.51
12	1 1/8 x 1 3/4	1.00	.60
16	1 1/8 x 2 1/4	1.10	.66
20	1 1/8 x 2 1/4	1.20	.72

Type PRS 25
40v Surge Pk.—25v D.C. Work.

Cap. Mlds.	Size—Ins. Dia.—High	List Price	Net Price
10	1 1/8 x 1 1/2	\$0.75	\$0.45
25	1 1/8 x 1 1/2	.85	.51
50	1 1/8 x 1 3/4	1.00	.60
100	1 1/8 x 1 3/4	1.20	.72

*Two leads at one end. Supplied with mounting bracket.

DUAL-ELEMENT UNITS

Type PRS 450
525v Surge Pk.—450v D.C. Work.

Cap. Mlds.	Size—Ins. Dia.—High	List Price	Net Price
8-8	1 1/8 x 2 1/4	\$1.70	\$1.02
8-16	1 1/8 x 2 1/4	2.00	1.20
10-10	1 1/8 x 2 1/4	1.85	1.11

Type PRS 150
200v Surge Pk.—150v D.C. Work.

Cap. Mlds.	Size—Ins. Dia.—High	List Price	Net Price
8-8	1 1/8 x 1 3/4	\$1.15	\$0.69
8-16	1 1/8 x 1 3/4	1.20	.72
20-20	1 1/8 x 1 3/4	1.30	.78
40-40	1 1/8 x 2 1/4	1.70	1.02

Type PRS 200
250v Surge Pk.—200v D.C. Work.

Cap. Mlds.	Size—Ins. Dia.—High	List Price	Net Price
8-8	1 1/8 x 1 3/4	\$1.25	\$0.75
8-16	1 1/8 x 1 3/4	1.30	.78
16-16	1 1/8 x 1 3/4	1.50	.90

Type PRS 50
75v Surge Pk.—50v D.C. Work.

Cap. Mlds.	Size—Ins. Dia.—High	List Price	Net Price
10-10	1 1/8 x 1 3/4	\$1.15	\$0.69

TWIST-PRONG BASE CAPACITORS* TYPE AF

These capacitors are tightly sealed round aluminum can units. They are mounted by means of prongs which extend through the mounting surface and are twisted to hold the unit in place. These are high-quality units especially suitable in compact assemblies where space is limited. All connections, except the cathode, are made through terminals in the cover. The cathode is connected to the container. Base prongs slip into fibre or metal elliptic washer that is riveted or eyeletted on chassis, and are bent over. Fibre washer provides insulated can; metal elliptic washer, grounded can. Metal or fibre washer supplied at 5c each net. The terminal lugs slip through holes in washers for soldered connections.



Type Cap. Mlds. x D.C.W.V. Size D. x H. List Price Net Price

SINGLE-ELEMENT UNITS

AF5A	25x25	1x2	\$1.05	\$0.65
AF5D	25x150	1x2	1.20	.72
AF6D	30x150	1x2	1.25	.75
AF8D	40x150	1x2	1.35	.81
AF10D	50x150	1x2	1.45	.87
AF20D	100x150	1x2 1/2	1.95	1.17
AF4F	20x250	1x2	1.45	.87
AF3G	15x300	1x2	1.40	.84
AF16H	80x100	1 3/8 x 2 1/2	2.95	1.77
AF2J	10x450	1x2	1.30	.78
AF3J	15x150	1x2	1.55	.93
AF4J	20x450	1x2	1.75	1.05
AF6J	30x450	1x2 1/2	1.90	1.14
AF8J	40x450	1x3	2.25	1.35

DUAL-ELEMENT UNITS

AF44D	20-20x150	1x2	1.55	\$0.93
AF66D	30-30x150	1x2	1.75	1.05
AF88D	40-40x150	1x2 1/2	1.95	1.17
AF1010D	50-50x150	1x2 1/2	2.10	1.26
AF22F	10-10x250	1x2	1.75	1.05
AF44F	20-20x250	1x2	2.05	1.23
AF22J	10-10x450	1x2	2.10	1.26
AF44J	20-20x450	1x3	2.65	1.59
AF88J	40-40x450	1 3/8 x 3	4.00	2.40

TRIPLE-ELEMENT UNITS

AF444D	20-20-20x150	1x2	2.30	\$1.38
AF884D	40-20-20x150	1x2 1/2	2.10	1.44
AF888D	40-40-40x150	1 3/8 x 2	2.60	1.56
AF444D4A	20-20x150 + 20x25	1x2	2.20	1.32
AF4440A	20-20x150 + 20x25	1x3	2.65	1.59
AF644D4A	30-20x150 + 20x25	1x2	2.20	1.32
AF844D4A	40-20x150 + 20x25	1x3	2.30	1.38
AF8420A	40-20x150 + 100x25	1x3	3.00	1.80
AF864D4A	40-30x150 + 20x25	1x2 1/2	2.35	1.41
AF88D4	40-40x150 + 20x25	1x2 1/2	2.40	1.44
AF106D20A	50-30x150 + 100x25	1x3	3.10	1.86
AF1010D4A	50-50x150 + 20x25	1x3	2.55	1.53
AF33F4A	15-15x250 + 20x25	1x2	2.45	1.47
AF43F4A	20-15x250 + 20x25	1x2	2.45	1.47
AF32K4A	15-10x350 + 20x25	1x2 1/2	2.40	1.44
AF64K4A	30-20x350 + 20x25	1 3/8 x 2	2.80	1.68

AF222J	10-10-10x150	1x3	2.50	1.50
AF444J	20-20-20x150	1 3/8 x 2 1/2	3.45	2.07
AF22J4A	10-10x150 + 20x25	1x2 1/2	2.35	1.41
AF44J4A	20-20x150 + 20x25	1 3/8 x 2	2.95	1.77
AF88J4A	40-40x150 + 20x25	1 3/8 x 3	3.65	2.15

QUADRUPLE-ELEMENT UNITS

AF4444D4A	20-20-20x150 + 20x25	1 3/8 x 2	\$2.85	\$1.71
AF886D4A	40-40-30x150 + 20x25	1 3/8 x 2	3.10	1.86
AF101010D4A	50-50-50x150 + 20x25	1 3/8 x 2	3.40	2.04
AF2222J	10-10-10-10x450	1 3/8 x 2	3.25	1.95
AF4444J	20-20-20-20x150	1 3/8 x 3	4.50	2.70
AF4444J4A	20-20-20x450 + 20x25	1 3/8 x 2 1/2	4.00	2.40
AF862J4A	40-30-10x450 + 20x25	1 3/8 x 3	4.15	2.49

* Line will be increased as demand warrants.



Electrolytic Capacitors

IF IT'S MARKED "AEROVOX" IT'S A QUALITY CAPACITOR

PLUG-IN ELECTROLYTIC CAPACITORS TYPE AEP

Quick change dry electrolytics. Facilitate testing and replacement in equipment where continuity of service is important. Install merely by plugging into standard octal socket. Unit can be inserted only the right way. Key of octal base fits octal socket. Ultra-compact due to use of etched foil for higher capacities in the small can sizes. Aluminum internal construction. Non-corrosive due to use of similar metals throughout. Fully vented for safety.



Type	Cap. Mfds. x D.C.W.V.	Size D. x H.	List Price	Net Price
SINGLE-ELEMENT UNITS				
AEP5A	25x25	1 1/8 x 2 1/2	\$2.10	\$1.26
AEP4D	20x150	1 1/8 x 2 1/2	2.40	1.44
AEP8D	40x150	1 1/8 x 2 1/2	2.70	1.62
AEP2J	10x450	1 1/8 x 2 1/2	2.40	1.56
AEP3J	15x450	1 1/8 x 2 1/2	3.10	1.86
AEP4J	20x450	1 1/8 x 2 1/2	3.50	2.10
AEP6J	30x450	1 1/8 x 2 1/2	3.80	2.28
AFP8J	40x450	1 1/8 x 2 1/2	4.50	2.70
AEP16J	60x450	1 1/8 x 3 1/2	7.70	4.62
AEP2L	10x600	1 1/8 x 4 1/4	3.75	2.25
DUAL-ELEMENT UNITS				
AEP44D	20-20x150	1 1/8 x 2 1/2	\$3.10	\$1.86
AEP88D	40-40x150	1 1/8 x 2 1/2	3.90	2.34
AEP22J	10-10x450	1 1/8 x 2 1/2	4.20	2.52
AEP44J	20-20x450	1 1/8 x 2 1/2	5.30	3.18
TRIPLE-ELEMENT UNITS				
AEP444D	20-20-20x150	1 1/8 x 2 1/2	\$1.60	\$2.76
AEP884D4	40-40x150+20x25	1 1/8 x 2 1/2	4.80	2.88
AEP222J	10-10-10x450	1 1/8 x 2 1/2	5.00	3.00
AEP224J	10-10x450+20x25	1 1/8 x 2 1/2	4.70	2.82
AEP444J	20-20x450+20x25	1 1/8 x 2 1/2	5.90	3.54
QUADRUPLE-ELEMENT UNITS				
AEPG444D4	20-20-20x150+20x25*	1 1/8 x 2 1/2	\$5.70	\$3.42
AEPG444J4	20-20-20x450+20x25*	1 1/8 x 3	8.00	4.80

*Ground lug provided for cathode connection.

PAPER-WOUND REPLACEMENTS FOR ELECTROLYTICS



TYPE PWP



TYPE PWC

High-grade paper sections in standard inverted screw mounting aluminum can (PWC) or cardboard case (PWP) similar in appearance to electrolytics. Used as replacements for standard electrolytics indicated; applications subjected to high AC component or ripple particularly in first stage of filter circuit; or where excessive surges are encountered. No polarity to be observed. Actual capacity indicated in each case. Capacity is less than electrolytic being replaced but will be found adequate in most filter circuits since filtering capacity in electrolytics is more than generous. PWP has cardboard mounting flanges; PWC similar to the inverted dry electrolytic types.

800v. Surge Pk.—600v. D.C. Work.
Type PWC600

Rep. Fg.	Act. Mfds.	Size-Ins.	List Price	Net Price
1	2	1 1/8 x 1 1/2	\$2.10	\$1.26
8	2.75	1 1/8 x 1 1/2	3.50	2.10
8-8	1.75-1.75	1 1/8 x 1 1/2	4.30	2.58

Type PWP600

4	2	4 1/2 x 1 3/8 x 1 1/2	\$2.00	\$1.20
8	3	4 1/2 x 1 3/8 x 1 1/2	3.25	1.95

CLEAT-MOUNTING CARDBOARD TYPE PRV

Aerovox-originated units. In cardboard tubes for economy. Replaces metal-can electrolytics requiring mounting hole in chassis. Separate sections. Coded leads.



Type PRV 600—Single Section

Cap. Mfds.	Size-Ins.	List Price	Net Price
4	1 1/8 x 4	\$2.25	\$1.35
8	1 1/8 x 4	2.95	1.77
16	1 1/8 x 4	3.45	2.07

Type PRV 450—Single Section

Cap. Mfds.	Size-Ins.	List Price	Net Price
4	1 1/8 x 3	\$1.10	\$0.66
8	1 1/8 x 3	1.15	.69
10	1 1/8 x 3	1.25	.75
12	1 1/8 x 3	1.35	.81
16	1 1/8 x 3	1.55	.93
20	1 1/8 x 3	1.70	1.02
30	1 1/8 x 3	1.85	1.11
40	1 1/8 x 3	2.20	1.32
80	1 1/8 x 4	3.75	2.25

Type PRV 450—Double Section

8-8	1 1/8 x 4	\$2.30	\$1.38
8-16	1 1/8 x 4	2.70	1.62
10-10	1 1/8 x 4	2.45	1.47
12-12	1 1/8 x 4	2.70	1.62
16-16	1 1/8 x 4	3.20	1.92
20-20	1 1/8 x 4 3/4	3.50	2.10

Type PRV 450—Triple Section

8-8-8	1 1/8 x 4 3/4	\$2.75	\$1.65
10-10-10	1 1/8 x 4 3/4	3.05	1.83

Type PRV 350—Double Section

16-16	1 1/8 x 4	\$3.00	\$1.80
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Type PRV 250—Double Section

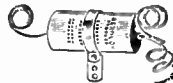
16-16	1 1/8 x 3	\$2.50	\$1.50
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Type PRV 150—Double Section

20-20	1 1/8 x 3	\$2.20	\$1.32
30-30	1 1/8 x 3	2.80	1.68

TUBULAR CARDBOARD CONTAINER CAPACITORS

In wax-sealed cardboard tubes. PRS-A is multiple-element, common-cathode concentrically-wound, with insulated positive leads at one end, and common negative at other. PRS-B, separate-section dual units with separate positive and negative leads for each section. Both types supplied with riveted mounting straps.



TYPE PRS-A Multiple-Element Concentrically-Wound Units with 3 or 4 Leads (One Lead Common)

Type	Cap. Mfds.	Size-Ins.	List Price	Net Price
Type PRS-A 450				
525v Surge Pk.—450v D.C. Work.				
8-8	1 x 2 1/2	1 1/8 x 2 1/2	\$1.70	\$1.02
8-16	1 x 2 1/2	1 1/8 x 2 1/2	2.00	1.20
10-10	1 x 2 1/2	1 1/8 x 2 1/2	1.85	1.11
16-16	1 x 3 1/4	1 1/8 x 3 1/4	2.30	1.38
20-20	1 1/8 x 3 1/4	1 1/8 x 3 1/4	2.40	1.44
Type PRS-A 250				
300v Surge Pk.—250v D.C. Work.				
8-16	1 x 3	1 1/8 x 3	\$1.00	\$0.96
10-10	1 x 3	1 1/8 x 3	1.50	.90
16-16	1 x 3	1 1/8 x 3	1.70	1.02
20-20	1 1/8 x 3 1/4	1 1/8 x 3 1/4	1.80	1.08

Type PRS-A 200

Type	Cap. Mfds.	Size-Ins.	List Price	Net Price
250v Surge Pk.—200v D.C. Work.				
8-8	1 x 2 1/2	1 1/8 x 2 1/2	\$1.25	\$0.75
8-16	1 x 2 1/2	1 1/8 x 2 1/2	1.30	.78
16-16	1 x 2 1/2	1 1/8 x 2 1/2	1.50	.90

Type PRS-A 150

Type	Cap. Mfds.	Size-Ins.	List Price	Net Price
200v Surge Pk.—150v D.C. Work.				
8-8	1 x 2 1/2	1 1/8 x 2 1/2	\$1.15	\$0.69
8-16	1 x 2 1/2	1 1/8 x 2 1/2	1.20	.72
20-20	1 1/8 x 2 1/2	1 1/8 x 2 1/2	1.30	.78
20-30	1 1/8 x 2 1/2	1 1/8 x 2 1/2	1.35	.81
20-40	1 1/8 x 2 1/2	1 1/8 x 2 1/2	1.50	.90
30-30	1 1/8 x 2 1/2	1 1/8 x 2 1/2	1.50	.90
30-40	1 1/8 x 2 1/2	1 1/8 x 2 1/2	1.60	.96
30-50	1 1/8 x 2 1/2	1 1/8 x 2 1/2	1.70	1.02
40-40	1 x 2 1/2	1 1/8 x 2 1/2	1.70	1.02
40-80	1 1/8 x 2 1/2	1 1/8 x 2 1/2	2.00	1.20
50-50	1 x 3 1/4	1 1/8 x 3 1/4	1.85	1.11

Type PRS-A 50

Type	Cap. Mfds.	Size-Ins.	List Price	Net Price
75v Surge Pk.—50v D.C. Work.				
10-10	1 x 2 1/2	1 1/8 x 2 1/2	\$1.15	\$0.69

Type PRS-A 25

40v Surge Pk.—25v D.C. Work.	10-10	1 x 2 1/2	\$1.05	\$0.63
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PRS-A Multiples (Common Negative)

Type	Cap. Mfds.	Size-Ins.	List Price	Net Price
Type PRS-A 302010				
30-20x150	1 x 2 1/2	1 1/8 x 2 1/2	\$2.20	\$1.32
+100x25				
List Price \$2.20			Net Price \$1.32	
PRS-A 503010				
50-30x150	1 x 3 1/4	1 1/8 x 3 1/4	\$2.40	\$1.44
+100x25				
List Price \$2.40			Net Price \$1.44	
PRS-A 40302				
40-30x150	1 x 2 1/2	1 1/8 x 2 1/2	\$2.05	\$1.23
+20x25				
List Price \$2.05			Net Price \$1.23	
PRS-A 50502				
50-50x150	1 x 3 1/4	1 1/8 x 3 1/4	\$2.25	\$1.35
+20x25				
List Price \$2.25			Net Price \$1.35	



TYPE PRS-B Dual-Section Capacitors with 4 Leads (Separate Sections)

Type	Cap. Mfds.	Size-Ins.	List Price	Net Price
Type PRS-B 450				
525v Surge Pk.—450v D.C. Work.				
8-8	1 x 3	1 1/8 x 3	\$2.10	\$1.26
8-16	1 1/8 x 3 1/4	1 1/8 x 3 1/4	2.50	1.50
16-16	1 1/8 x 3 1/4	1 1/8 x 3 1/4	3.15	1.89
Type PRS-B 250				
300v Surge Pk.—250v D.C. Work.				
8-16	1 x 2 1/2	1 1/8 x 2 1/2	\$2.25	\$1.35
16-16	1 x 3	1 1/8 x 3	2.55	1.53
Type PRS-B 150				
200v Surge Pk.—150v D.C. Work.				
20-20	1 x 2 1/2	1 1/8 x 2 1/2	\$2.00	\$1.20
20-40	1 x 3	1 1/8 x 3	2.36	1.41

SPACE-SAVER MIDGET CAPACITORS TYPE PBS



Single Section



Double Section

Units encased in heavy cardboard containers, thoroughly impregnated and fully sealed. Two color-coded wire leads for each section; four leads, double section; six leads, triple section. Units may be mounted flat or upright; also, two or three units may be stacked by overlapping the metal flanges.

800v. Surge Pk.—600v. D.C. Work.

Type PBS600—Single Section

Cap. Mfds.	Size-Ins.	List Price	Net Price
4	1 1/8 x 1 1/2 x 2 1/2	\$2.90	\$1.74
8	1 1/8 x 1 1/2 x 3 1/4	3.25	1.95

525v. Surge Pk.—450v. D.C. Work.

Type	Cap. Mfds.	Size-Ins.	List Price	Net Price
Type PBS450—Single Section				
2	1 1/8 x 1 1/2 x 2 1/2	1 1/8 x 1 1/2 x 2 1/2	\$1.00	\$0.60
4	1 1/8 x 1 1/2 x 2 1/2	1 1/8 x 1 1/2 x 2 1/2	1.10	.66
6	1 1/8 x 1 1/2 x 2 1/2	1 1/8 x 1 1/2 x 2 1/2	1.40	.84
8	1 1/8 x 1 1/2 x 2 1/2	1 1/8 x 1 1/2 x 2 1/2	1.45	.87
10	1 1/8 x 1 1/2 x 3 1/4	1 1/8 x 1 1/2 x 3 1/4	1.75	1.05
12	1 1/8 x 1 1/2 x 3 1/4	1 1/8 x 1 1/2 x 3 1/4	2.00	1.20
16	1 1/8 x 1 1/2 x 3 1/4	1 1/8 x 1 1/2 x 3 1/4	2.20	1.32

Type PBS450—Double Section

8-8	1 1/8 x 1 1/2 x 2 1/2	\$2.25	\$1.35
8-16	1 1/8 x 1 1/2 x 3 1/4	2.90	1.74

Type PBS450—Triple Section

8-8-8	1 1/8 x 1 1/2 x 3 1/4	\$3.35	\$2.01
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DRAWN-CASE "BATHTUB" ELECTROLYTICS



Ideal for applications in compact equipment where space is at a premium, and rigid mounting is necessary. Sturdy immersion-proof construction.

Type BT 500—500v D.C.W.

Cap. Mfds.	Size-Ins.	List Price	Net Price
4	2 x 2 x 1 1/4	\$4.70	\$2.82
8	2 x 2 x 1 1/4	4.85	2.91

Type BT 450—450v D.C.W.

8	1 1/2 x 1 1/4 x 1 1/4	\$4.25	\$2.55
12	1 1/2 x 1 1/4 x 1 1/4	4.75	2.85
1			

AEROVOX

Mica Capacitors

IF IT'S MARKED "AEROVOX" IT'S A QUALITY CAPACITOR

"POSTAGE-STAMP" MOLDED-IN-BAKELITE MICA CAPACITORS

Wide choice of designs, sizes, mountings, terminals offer the correct Aerovox unit for every application, as listed. Units built of selected mica and foil; molded bakelite casing impervious to mois-

ture, heat, mechanical damage. Micrometer test for mica thickness maintains capacity values for long life. Capacity values indicated on units.

Type 1467



Compact, size $\frac{3}{16}$ in. square, provided with wire leads. 1000 volts D.C. Test—500 volts D.C. Working.

Cap. Mfd.	List Price	Net Price	Cap. Mfd.	List Price	Net Price
.0005	\$0.25	\$0.15	.0003	\$0.50	\$0.30
.00075	.25	.15	.004	.55	.33
.001	.30	.18	.005	.60	.36
.0015	.30	.18	.006	.75	.45
.002	.40	.24	.008	1.00	.60
.0025	.45	.27	.01	1.20	.72

*600v D.C. Test—300v D.C. Working.

Type 1468



Midget size $\frac{1}{16}$ x $\frac{1}{16}$ x $\frac{1}{8}$ provided with wire leads. 1000 volts D.C. Test—500 volts D.C. Working.

Cap. Mfd.	List Price	Net Price	Cap. Mfd.	List Price	Net Price
.000001	\$0.25	\$0.15	.00015	\$0.20	\$0.12
.000005	.25	.15	.0002	.20	.12
.00001	.25	.15	.00025	.25	.15
.000025	.25	.15	.00035	.25	.15
.00004	.20	.12	.0004	.25	.15
.00005	.20	.12	.0005	.25	.15
.000075	.20	.12	.00075	.25	.15
.0001	.20	.12	.001	.30	.18

Type 1478



With wire leads. Size $1\frac{1}{8}$ x $\frac{1}{2}$ x $\frac{5}{16}$, 1000 volts D.C. Test—500 volts D.C. Working.

Cap. Mfd.	List Price	Net Price	Cap. Mfd.	List Price	Net Price
.0005	\$0.30	\$0.18	.0015	\$0.45	\$0.27
.00075	.30	.18	.002	.50	.30
.001	.40	.24			

Type 1441W



With wire leads. Size 1 x $\frac{5}{8}$, 1000 volts D.C. Test—500 volts D.C. Working.

Cap. Mfd.	List Price	Net Price	Cap. Mfd.	List Price	Net Price
.0005	\$0.25	\$0.15	.003	\$0.50	\$0.30
.00075	.25	.15	.004	.55	.33
.001	.30	.18	.005	.60	.36
.0015	.30	.18	.006	.75	.45
.002	.40	.24	.008	1.00	.60
.0025	.45	.27	.01	1.20	.72

* $\frac{5}{16}$ " thick. All others $\frac{3}{16}$ " thick.



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MOLDED-IN-BAKELITE MICA CAPACITORS

Type 1460



Popular type molded-in-bakelite mica capacitor. Size $1\frac{1}{2}$ x $\frac{5}{8}$. Two soldering lug terminals. 1000 volts D.C. Test—500 volts D.C. Working.

Cap. Mfd.	List Price	Net Price	Cap. Mfd.	List Price	Net Price
.0001	\$0.20	\$0.12	.00075	\$0.25	\$0.15
.00015	.20	.12	.001	.30	.18
.0002	.20	.12	.0015	.30	.18
.00025	.25	.15	.002	.40	.24
.0003	.25	.15	.0025	.45	.27
.00035	.25	.15	.003	.50	.30
.0004	.25	.15	.004	.55	.33
.0005	.25	.15	.005	.60	.36

*600v D.C. Test—300v D.C. Working; $9/32$ " thick, all others $17/64$ ".

PORCELAIN-CASED MICA CAPACITORS

Ideal for those higher-frequency applications. Encased and hermetically sealed in glazed porcelain case. Heavy-duty terminals. Power loss due to dielectric absorption reduced to a minimum. Units operate at full load without heating up. Dimensions: $3\frac{1}{2}$ " between mounting holes, 4 " overall by 3 " high.



Type 1991—2000v. Max. D.C.

Cap. Mfd.	List Price	Net Price	Cap. Mfd.	List Price	Net Price
.02	\$11.75	\$8.85	.1	\$18.50	\$11.10

Type 1992—3500v. Max. D.C.

Cap. Mfd.	List Price	Net Price	Cap. Mfd.	List Price	Net Price
.001	\$6.50	\$3.90	.005	\$10.50	\$6.30
.0015	6.50	3.90	.01	16.00	9.60
.002	8.00	4.80	.02	16.00	9.60
.003	8.75	5.25	.05	18.50	11.10

Type 1993—5000v. Max. D.C.

Cap. Mfd.	List Price	Net Price	Cap. Mfd.	List Price	Net Price
.002	\$8.75	\$5.25	.05	\$10.50	\$6.30
.003	9.50	5.70	.01	15.25	9.15

Type 1994—7000v. Max. D.C.

Cap. Mfd.	List Price	Net Price	Cap. Mfd.	List Price	Net Price
.0005	\$6.50	\$3.90	.003	\$10.25	\$6.15
.001	7.25	4.35	.005	11.00	6.60
.0015	8.00	4.80	.01	15.25	9.15
.002	9.50	5.70			

Type 1995—10000v. Max. D.C.

Cap. Mfd.	List Price	Net Price	Cap. Mfd.	List Price	Net Price
.002	\$10.25	\$6.15	.005	\$14.50	\$8.70
.003	13.00	7.80			

Type 1996—12500v. Max. D.C.

Cap. Mfd.	List Price	Net Price	Cap. Mfd.	List Price	Net Price
.0005	\$8.00	\$4.80	.001	\$8.00	\$4.80
.001	8.00	4.80	.0015	9.50	5.70
.00025	8.00	4.80	.002	11.00	6.60
.0005	8.00	4.80	.003	15.25	9.15

HIGH-VOLTAGE MOLDED-IN-BAKELITE MICA CAPACITORS



Type 1450

1000v D.C. Test—600v D.C. Work. Intended for the more critical service of low-powered transmitting circuits, buffer stages, power amplifiers, and laboratory equipment, etc. Non-magnetic parts are used to reduce r.f. losses to minimum, and heavy terminals provide minimum r.f. and contact resistance. Intended for point-to-point wiring, being supported entirely by its soldered connections. $1\frac{1}{4}$ x $1\frac{1}{4}$, $\frac{3}{4}$ or $\frac{3}{8}$ " thick (see below).

Cap. Mfd.	List Price	Net Price	Cap. Mfd.	List Price	Net Price
.00025	\$0.45	\$0.27	.005	\$0.70	\$0.42
.0003	.45	.27	.006	.80	.48
.00035	.45	.27	.008	.90	.54
.0004	.45	.27	.01	1.00	.60
.0005	.45	.27	.015	1.35	.81
.001	.50	.30	.02	1.45	.87
.0015	.55	.33	.025	1.75	1.05
.002	.55	.33	.03	2.05	1.23
.0025	.60	.36	.04	2.65	1.59
.003	.70	.42	.05	3.30	2.08
.004	.70	.42			

*600v D.C. Test—300v D.C. Working. $3/4$ " thick. All others $5/16$ ".

Types 1455-57



Size $1\frac{1}{4}$ x $1\frac{1}{2}$ x $\frac{1}{2}$. Types 1455-57, have insulated mounting holes, independent of soldering lugs, for connections. $1\frac{1}{2}$ " spacing between mounting hole centers. It $1\frac{1}{8}$ " spacing is preferred specify Types 1440-47. Large meter-mounting brackets permitting use of this type of unit for shunting meter windings may be obtained at 45c added to list price. Specify by adding suffix (A) to type number. Small brackets are also available at 25c additional. Specify by suffix (E). Both brackets have universal slots for either mounting hole spacing. Standard tolerance $\pm 20\%$; for $\pm 10\%$ add 10% to list price; $\pm 5\%$ add 20%; $\pm 2\%$ add 75%.

Type 1455

Cap. Mfd.	List Price	Net Price	Cap. Mfd.	List Price	Net Price
.00005	\$0.70	\$0.42	.0025	\$0.90	\$0.54
.0001	.70	.42	.003	1.00	.60
.00015	.70	.42	.004	1.00	.60
.0002	.70	.42	.005	1.00	.60
.00025	.70	.42	.006	1.20	.72
.0003	.70	.42	.008	1.40	.84
.00035	.70	.42	.01	1.60	.96
.0004	.70	.42	.015	1.80	1.08
.0005	.70	.42	.02	2.20	1.32
.00075	.70	.42	.025	2.65	1.59
.0015	.70	.42	.03	2.85	1.77
.002	.80	.48			

Type 1456

Cap. Mfd.	List Price	Net Price	Cap. Mfd.	List Price	Net Price
.00005	\$1.00	\$0.60	.0015	\$1.60	\$0.96
.0001	1.00	.60	.002	1.90	1.14
.00015	1.00	.60	.0025	2.00	1.20
.0002	1.00	.60	.003	2.10	1.26
.00025	1.00	.60	.004	2.10	1.26
.0003	1.00	.60	.005	2.40	1.44
.00035	1.00	.60	.006	2.40	1.44
.0004	1.00	.60	.008	3.00	1.80
.0005	1.00	.60	.01	3.90	2.34
.001	1.25	.75			

Type 1457

Cap. Mfd.	List Price	Net Price	Cap. Mfd.	List Price	Net Price
.00005	\$1.25	\$0.75	.0004	\$1.85	\$0.89
.000075	1.25	.75	.0005	1.70	.92
.0001	1.25	.75	.001	2.05	1.23
.00015	1.30	.78	.0015	2.70	1.62
.0002	1.40	.84	.002	3.10	1.86
.00025	1.50	.90	.0025	3.45	2.07
.0003	1.55	.93	.003	3.80	2.28
.00035	1.80	.96			



Types 1650-54

Heaviest-duty molded in bakelite mica capacitors of the AEROVOX line. Provided with threaded holes taking the roundhead screw terminals. Also available with plain holes through which screws or rods may be slipped. Same price as 1650 series, but specify 1650A, etc. when latter is desired. $\frac{1}{2}$ " or $\frac{3}{4}$ " thick (see * below). Types 1650, 1651 and 1652 are supplied in brown bakelite. Types 1653L and 1654L are supplied only in low-loss (yellow) XM Bakelite. Standard tolerance $\pm 20\%$; for $\pm 10\%$ add 10% to list price; $\pm 5\%$ add 20%; $\pm 2\%$ add 75%.

Type 1650

1000v D.C. Test—600v D.C. Working. 700v A.C. Test—350v A.C. Working

Cap. Mfd.	List Price	Net Price	Cap. Mfd.	List Price	Net Price
.00005	\$0.85	\$0.51	.004	\$1.20	\$0.72
.0001	.85	.51	.005	1.20	.72
.00025	.85	.51	.006	1.40	.84
.0003	.85	.51	.008	1.65	.99
.00035	.85	.51	.01	1.95	1.17
.0004	.85	.51	.015	2.25	1.35
.0005	.85	.51	.02	2.60	1.56
.001	.85	.51	.025	3.20	1.92
.0015	.90	.54	.03	3.45	2.07
.002	.90	.54	.04	4.50	2.70
.0025	1.00	.60	.05	5.35	3.21
.003	1.20	.72	.06	6.20	3.72

Type 1651

2500v D.C. Test—1250v D.C. Working. 1750v A.C. Test—875v A.C. Working

Cap. Mfd.	List Price	Net Price	Cap. Mfd.	List Price	Net Price
.00005	\$1.00	\$0.60	.003	\$2.20	\$1.32
.0001	1.00	.60	.004	2.20	1.32
.00025	1.00	.60	.005	2.40	1.44
.0003	1.00	.60	.006	2.40	1.44
.00035	1.00	.60	.008	3.10	1.86
.0004	1.00	.60	.01	3.90	2.34
.0005	1.00	.60	.015	4.65	2.79
.001	1.25	.75	.02	5.45	3.27
.0015	1.60	.96	.025	6.10	3.66
.002	1.90	1.14	.03	6.40	3.84
.0025	2.00	1.20			

Type 1652

5000v D.C. Test—2500v D.C. Working. 3500v A.C. Test—1750v A.C. Working

AEROVOX

Mica Capacitors

IF IT'S MARKED "AEROVOX" IT'S A QUALITY CAPACITOR

SILVERED MICA CAPACITORS

For most critical applications where precise capacity values must be attained and maintained, AEROVOX silvered mica units are generally available. Encased in red molded XM bakelite. Similar in external appearance to standard Dukelite molded mica units.

Unique construction. Only plus .0022 per degree F.—a remarkably low temperature coefficient. Excellent retrace characteristics. Practically no capacity drift with time. Exceptionally high "Q". Mechanically protected against physical damage and changes in electrical characteristics due to varying atmospheric conditions. Wax impregnated externally. Ideal for use in circuits where inductance and capacity product must remain constant under all operating conditions. Specifically designed for use in push-button tuning, oscillator padding circuits, fixed tuned circuits, and as capacitance standards, etc., where accuracy and stability are of prime importance.

Standard tolerance $\pm 5\%$. For $\pm 20\%$ deduct 10% from price. For $\pm 10\%$ deduct 5%. For $\pm 3\%$ add 10%. For $\pm 2\%$ add 15%. For $\pm 1\%$ add 25%.

TYPE 1464—1000v. D.C. TEST
Size $\frac{3}{16}$ in. square. Provided with wire leads. *600v. D.C. test.

Cap. Mfd.	List Price	Net Price	List Price	Net Price
.00075	\$0.30	\$0.34	.002	\$1.35
.0008	.95	.57	.0025	1.80
.0009	1.00	.60	.003*	2.05
.001	1.10	.66	.004*	2.15
.0015	1.35	.81	.005*	2.25

TYPE 1469—1000v. D.C. TEST
Size $\frac{1}{4}$ " x $\frac{1}{4}$ ". Provided with wire leads.

Cap. Mfd.	List Price	Net Price	List Price	Net Price
.000075	\$0.35	\$0.33	.00015	\$0.15
.00001	.40	.24	.0002	.15
.000025	.40	.24	.00025	.15
.00004	.40	.24	.0003	.15
.00005	.40	.24	.00035	.16
.00007	.40	.24	.0004	.16
.000075	.40	.24	.0004	.16
.0001	.40	.24	.0005	.17

TYPE 1479—1000v. D.C. TEST
Size $1\frac{1}{8}$ " x $\frac{1}{2}$ ". Provided with wire leads.

Cap. Mfd.	List Price	Net Price	List Price	Net Price
.0001	\$0.10	\$0.24	.0005	\$0.70
.00015	.45	.27	.0007	.85
.0002	.45	.27	.00075	.80
.00025	.45	.27	.0008	.85
.0003	.45	.33	.0009	1.00
.00035	.60	.36	.001	1.10
.0004	.65	.39		

Commercial Grade MICA TRANSMITTING CAPACITORS

- Extra-heavy-duty Capacitors for Commercial Communication Companies
- Broadcasters
- Builders of Quality Radio and Electronic Equipment
- Amateurs, Experimenters

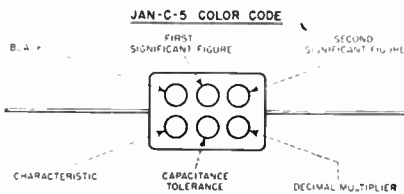
With these capacitors Aerovox is contributing its share towards narrowing still more the small remaining gap between professional and amateur radio practices.

Due to the normally limited demand for these extra-heavy-duty mica capacitors, as well as the considerable number of capacitance and voltage ratings in which they are made, this line is made to special order. However, your Authorized Aerovox Jobber is now able to order these commercial-grade capacitors for you.

Consult your Aerovox Jobber for specifications and quotations.



MICA CAPACITOR COLOR CODES



Color	Figure or Multiplier	Characteristic Letter	Tolerance	Color	Figure or Multiplier	Characteristic Letter	Tolerance
Black	0	A	20% (M)	Blue	6	G	...
Brown	1	B	...	Violet	7	...	...
Red	2	C	...	Gray	8	...	...
Orange	3	D	2% (G)	White	9	...	...
Yellow	4	E	...	Gold	.1	...	...
Green	5	F	...	Silver	.01	...	10% (K)

CHARACTERISTIC LETTERS

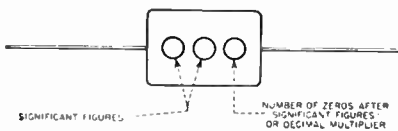
Characteristic	Temperature Coefficient Parts/Million/deg. C	Maximum Capacitance Drift (F-6)	Verification of Characteristics by Production Test
A	Not specified	Not specified	Not required
B	[As specified in D-3c (1)]	Not specified	Not required
C	-200 to +200	0.5 per cent	Not required
D	-100 to +100	0.2 per cent	Not required
E	0 to +100	0.05 per cent	Not required
F	0 to +50	0.025 per cent	Required
G	0 to -50	0.025 per cent	Required

Type No.	AEROVOX No. & Remarks	Type No.	AEROVOX No. & Remarks
CM20	1468, 1469	CM56	1652A thin
CM25	1478, 1479		(up to .0013 mfd., incl.)
CM30	1464, 1467	CM56	1651A thin
CM35	1464, 1467		(.0017 to .013 mfd., incl.)
	(500 v. DCW up to .0002 mfd. incl.)	CM56	1650A thin
CM40	1441W or 1441 WR		(.015 to .003 mfd., incl.)
	(500 v. DCW up to .0002 mfd. incl.)	CM80	1652 thick
CM45	1447 thin		(up to .012 mfd., incl.)
CM45	(up to .0018 mfd., incl.)	CM60	1651 thick
	1446 thin		(.018 to .033 mfd., incl.)
CM45	(.002 to .0036 mfd., incl.)	CM60	1650 thick
	1445 thin		(.036 to .047 mfd., incl.)
CM50	(.0039 to .01 mfd., incl.)	CM61	1652A thick
CM50	1447 thick		(up to .012 mfd., incl.)
CM50	(.002 to .0051 mfd., incl.)	CM61	1651A thick
	1446 thick		(.018 to .033 mfd., incl.)
CM50	(.0056 to .011 mfd., incl.)	CM61	1650A thick
	1445 thick		(.036 to .047 mfd., incl.)
CM55	(.012 to .027 mfd., incl.)	CM65	1570
	1652 thin	CM70	1550
CM55	(up to .0043 mfd., incl.)	CM75	1950
	1651 thin	CM80	1900
CM55	(.0017 to .013 mfd., incl.)	CM85	1970
	1650 thin	CM90	1900
CM55	(.015 to .033 mfd., incl.)	CM95	1900

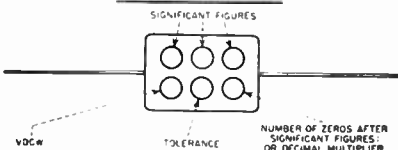
RMA COLOR CODE

THREE DOT RMA COLOR CODE

USED FOR 500 VDCW CAPACITORS WHOSE TOLERANCE IS GREATER THAN 10%



SIX DOT RMA COLOR CODE



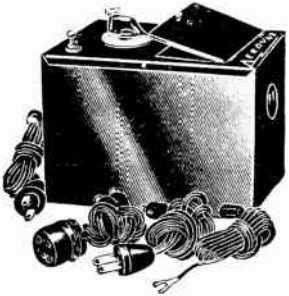
Color	Significant Figure, or No. of Zeros, or Decimal Multiplier	VDCW	Tolerance	Color	Significant Figure, or No. of Zeros, or Decimal Multiplier	VDCW	Tolerance
Black	0	...	...	Violet	7	700	7%
Brown	1	100	1%	Gray	8	800	8%
Red	2	200	2%	White	9	900	9%
Orange	3	300	3%	Gold	.1	1000	5%
Yellow	4	400	4%	Silver	.01	2000	10%
Green	5	500	5%	None	...	500	20%
Blue	6	600	6%				

AEROVOX

Interference Filters and Auto-Radio CONDENSERS

IF IT'S MARKED "AEROVOX" IT'S A QUALITY CAPACITOR

AEROVOX INTERFERENCE FILTER SELECTOR



TYPE ANL-37

Plugs between interfering device and outlet. Selector switch adjusted until noise is eliminated or minimized. Dial indicates which type filter to use. Handsome, sturdy metal cabinet. Compartment contains necessary test leads and attachment plugs and clips. Size 5 1/2 x 5 1/2 x 8 inches.

TYPE ANL-37
Dealers Net Price..... \$17.50

AEROVOX Type IN-23



For elimination of interference caused by neon lamps or fractional horsepower motors. Mounting bracket for attaching to neon fixture cone eliminator needed for each fixture or for attaching to frame of motor. Flexible leads for connecting across motors such as in hair-driers, fans, mixers, etc. 5-5 mfd. 1 x 2 1/2 in.

TYPE IN-23
List Price \$1.50 Net Price \$0.90

AEROVOX Type IN-27



Simple, inexpensive noise filter. Inserted between set and outlet when interference is slight. Also used with appliance causing low-intensity interference. Keeps troublesome noises out of house wiring and power line. Size 1 3/8 x 1 1/2 inches.

TYPE IN-27
List Price \$1.50 Net Price \$0.90

AEROVOX Type IN-28



Intended for cases where ground is considerable distance from point of application. Most efficient when mounted directly on interfering device by bracket. Size 1 3/8 x 2 inches.

TYPE IN-28
List Price \$1.00 Net Price \$1.20

AEROVOX Type IN-29



Provides additional filtering action over IN-27 and IN-28. Especially effective for local sources of interference of variable character but strong intensity. Very effective for electric razor and other vibrating devices. Plugs between device and line. Size 1 3/8 x 3 inches.

TYPE IN-29
List Price \$1.75 Net Price \$1.05

AEROVOX Type IN-30



Similar to IN-29 but with additional inductance. Handles more severe interference. Plugs between set and outlet, or preferably between noisy appliance and outlet. Size 1 3/8 x 3 inches.

TYPE IN-30
List Price \$2.50 Net Price \$1.50

AEROVOX Type IN-31



Plugs in between attachment cord and electric outlet, either of set or preferably at appliance. Additional inductance for better filtering. Works best mounted by bracket directly on interfering appliance. Size 1 3/8 x 3 inches.

TYPE IN-31
List Price \$3.00 Net Price \$1.80



AEROVOX Type IN-42

Designed for use in the more serious cases of radio interference from power lines and appliances. Provided with inductance as well as capacitance for thorough filtering action. Plugs into electric outlet. Radio set or interfering device plugs into receptacle of the filter. Recommended for use between interfering device and power line. Size 2 1/2" x 3 3/4". Provided with mounting ring. Rated at 6 amps. for 110-220v. A.C..

TYPE IN-42
List Price \$7.50 Net Price \$4.50

AUTO-RADIO CONDENSERS

SUPPRESSOR CONDENSERS



Type	Cap. Mfd.	List Price	Net Price
1120	1.0	\$1.35	\$0.81
1140	0.5	1.00	.60

Dual-Section SUPPRESSOR CONDENSERS



Type	Cap. Mfd.	List Price	Net Price
1141	5.0	\$1.50	\$0.90

MOTOROLA Replacement Condenser

For Models 65 and 70 (Part No. 3321)



Consists of two Aerovox Type 1166 Mica Capacitors rated at .0005 mfd., 2500 volts D.C. Test. List Price (complete) \$0.70 Net Price \$0.42

SUPPRESSOR CONDENSERS FOR FORD AUTO RADIOS



Type	Cap. Mfd.	List Price	Net Price
1144	.5	\$1.00	\$0.60



For 1936 Models

Type	Cap. Mfd.	List Price	Net Price
1150	.5	\$1.25	\$0.75

AMMETER CONDENSERS



Type	Cap. Mfd.	List Price	Net Price
1160	.5	\$1.00	\$0.60

Oil-Impregnated Metal-Case

VIBRATOR CONDENSERS



Type 1130 — One Lead		Type 1131 — Two Leads	
Cap. Mfd.	Cap. Mfd.	Cap. Mfd.	Cap. Mfd.
.007	.05	.007	.05
.01	.06	.01	.06
.02	.07	.02	.07
.03		.03	
List \$1.25	Net \$0.75	List \$1.50	Net \$0.90

Oil-Impregnated Vibrator Condensers



Type	Cap. Mfd.	List Price	Net Price
1135	.01	\$1.50	\$0.90
1135	.5	1.50	.90

Oil-Impregnated, Oil-Filled TUBULAR VIBRATOR CONDENSERS



Type 1689—1600v D.C.W. Mechanically sealed oil filled capacitors in metal tubes, with an outer cardboard tube as an insulating cover.

Cap. Mfd.	List Price	Net Price
.005	\$1.20	\$0.72
.006	1.20	.72
.007	1.20	.72
.008	1.20	.72
.01	1.20	.72
.02	1.30	.78
.05	1.40	.84

GAS GAUGE FILTER CONDENSER

Type 1143-G



Cap. Mfd.	List Price	Net Price
.05	\$1.00	\$0.60

DOME LIGHT FILTER CONDENSER

Type 1180
List Price \$1.60 Net Price \$0.96



OIL GAUGE FILTER CONDENSER

Type 1142-0



Cap. Mfd.	List Price	Net Price
.25	\$1.00	\$0.60

AEROVOX

Paper Capacitors

IF IT'S MARKED "AEROVOX" IT'S A QUALITY CAPACITOR

TUBULAR PAPER CAPACITORS



Type 84

Aerovox cartridge capacitors are especially desirable for use where high grade units are required at low cost. They are compact, non-inductively wound and sealed in wax impregnated paper tubes with wax filled ends for longer life and protection against moisture.

Types and D.C.W. Voltages

Type 484 400v.			Type 684 600v.		
Cap. Mfd.	List Price	Net Price	Cap. Mfd.	List Price	Net Price
.001	\$0.20	\$0.14	.001	\$0.25	\$0.14
.002	.25	.14	.002	.30	.14
.005	.35	.14	.005	.40	.14
.01	.45	.14	.01	.50	.14
.02	.55	.14	.02	.60	.14
.05	.75	.14	.05	.80	.14
.1	.90	.14	.1	.95	.14
.2	1.10	.14	.2	1.15	.14
.5	1.40	.14	.5	1.45	.14
1.0	1.70	.14	1.0	1.75	.14
2.0	2.10	.14	2.0	2.15	.14
5.0	2.60	.14	5.0	2.65	.14
10.0	3.10	.14	10.0	3.15	.14
20.0	3.60	.14	20.0	3.65	.14
50.0	4.40	.14	50.0	4.45	.14
100.0	5.20	.14	100.0	5.25	.14
200.0	6.00	.14	200.0	6.05	.14
500.0	7.40	.14	500.0	7.45	.14
1000.0	8.80	.14	1000.0	8.85	.14

Type 1084
1000v.

Type 1084 1000v.			Type 1684 1600v.		
Cap. Mfd.	List Price	Net Price	Cap. Mfd.	List Price	Net Price
.001	\$0.35	\$0.27	.001	\$0.45	\$0.30
.002	.45	.27	.002	.55	.30
.005	.65	.27	.005	.75	.30
.01	.85	.27	.01	.95	.30
.02	1.05	.27	.02	1.15	.30
.05	1.35	.27	.05	1.45	.30
.1	1.65	.27	.1	1.75	.30
.2	1.95	.27	.2	2.05	.30
.5	2.45	.27	.5	2.55	.30
1.0	2.95	.27	1.0	3.05	.30
2.0	3.45	.27	2.0	3.55	.30
5.0	4.15	.27	5.0	4.25	.30
10.0	4.85	.27	10.0	4.95	.30
20.0	5.55	.27	20.0	5.65	.30
50.0	6.65	.27	50.0	6.75	.30
100.0	7.75	.27	100.0	7.85	.30
200.0	8.85	.27	200.0	8.95	.30
500.0	10.65	.27	500.0	10.75	.30
1000.0	12.45	.27	1000.0	12.55	.30

METAL-CASED Ultra-Compact PAPER CAPACITORS

Type 80



Ultra-compact heavy-duty capacitors. Wax-impregnated, wax-sealed. Used as replacements in sound equipment, high power radio receivers, electronic devices, and communication equipment. Housed in a rust-proof container with soldering terminals conveniently located.

Type 1080—1000v. D.C. Work.

Cap. Mfd.	Size-Ins. D. x W. x L.	List Price	Net Price
.5	1 1/4 x 1 1/4 x 2	\$2.25	\$1.35
1.0	1 1/4 x 1 1/4 x 2	3.15	1.89
2.0	2 1/2 x 1 1/4 x 2	4.85	2.91
4.0	2 1/2 x 1 1/4 x 2	7.85	4.71

DRAWN-CASE OIL FILLED "HYVOL" CAPACITORS TYPE 30



For applications requiring a compact superior grade oil-impregnated, oil-filled capacitor. Non-inductive paper sections encased in a one-piece drawn metal case with soldered bottom plate for hermetic seal. Absolutely immersion-proof terminal assembly. Meets severe operating conditions encountered in aircraft, police, broadcast, p.a., and other types of communications equipment.

TYPE 430-400 V.D.C.W.

Cap. Mfd.	1 x W x H	List Price	Net Price
.05	1 1/2 x 1 x 3/4	\$1.75	\$1.05
.1	1 1/2 x 1 x 3/4	2.00	1.20
.25	1 1/2 x 1 x 3/4	2.25	1.35
.5	1 1/2 x 1 x 3/4	2.40	1.44
.75	2 1/4 x 1 1/4 x 3/4	2.70	1.62
1.0	2 1/4 x 1 1/4 x 3/4	2.85	1.71
2.0	2 x 2 x 1 1/4	3.60	2.16
.65-.05	1 1/2 x 1 x 3/4	2.75	1.65
.1-1	1 1/2 x 1 x 3/4	3.00	1.80
.25-.25	1 1/2 x 1 1/4 x 3/4	3.25	1.95
.5-.5	2 x 1 1/4 x 3/4	3.75	2.25
1.0-1.0	2 x 2 x 1 1/4	4.50	2.70
.05-.05-.05	1 1/2 x 1 x 3/4	3.50	2.10
.1-.1-1	1 1/2 x 1 x 3/4	3.65	2.19
.25-.25-.25	2 x 1 1/4 x 3/4	4.00	2.40

Type 630—600v D.C. Working

Cap. Mfd.	1 x W x H	List Price	Net Price
.05	1 1/2 x 1 x 3/4	\$2.60	\$1.56
.1	1 1/2 x 1 x 3/4	2.65	1.59
.25	1 1/2 x 1 x 3/4	2.80	1.68
.5	1 1/2 x 1 x 3/4	3.00	1.80
.75	2 1/4 x 1 1/4 x 3/4	3.20	1.92
1.0	2 x 2 x 1 1/4	3.40	2.04
2.0	2 x 2 x 1 1/4	4.55	2.73
.05-.05	1 1/2 x 1 x 3/4	3.30	1.98
.1-1	1 1/2 x 1 x 3/4	3.35	2.01
.25-.25	2 1/4 x 1 1/4 x 3/4	3.40	2.04
.5-.5	2 x 2 x 1 1/4	3.90	2.34
1.0-1.0	2 x 2 x 1 1/4	4.80	2.88
.05-.05-.05	1 1/2 x 1 x 3/4	3.70	2.22
.1-1-1	1 1/2 x 1 x 3/4	3.80	2.28
.25-.25-.25	2 x 1 1/4 x 3/4	4.30	2.58

Type 1030—1000v D.C. Working

Cap. Mfd.	1 x W x H	List Price	Net Price
.05	1 1/2 x 1 x 3/4	\$2.75	\$1.65
.1	1 1/2 x 1 x 3/4	2.85	1.71
.25	1 1/2 x 1 x 3/4	2.95	1.77
.5	2 1/4 x 1 1/4 x 3/4	3.20	1.92
.75	2 x 2 x 1 1/4	3.80	2.28
1.0	2 x 2 x 1 1/4	4.00	2.40
.05-.05	1 1/2 x 1 x 3/4	3.50	2.10
.1-1	1 1/2 x 1 x 3/4	3.60	2.16
.25-.25	2 1/4 x 1 1/4 x 3/4	3.80	2.28
.5-.5	2 x 2 x 1 1/4	4.95	2.97
.05-.05-.05	1 1/2 x 1 x 3/4	3.85	2.31
.1-1-1	1 1/2 x 1 1/4 x 3/4	4.15	2.49
.25-.25-.25	2 x 2 x 1	5.00	3.00

UNCASED PAPER CAPACITORS Type UC

Non-inductively wound high grade, ultra-compact, uncase sections, neatly shaped and wrapped in black varnished paper with ends sealed with pitch and provided with insulated wire leads, eight inches long. Designed for replacement use in filter block repair work.

TYPE UC200-200 V.D.C.W.

Cap. Mfd.	Size-Ins. L. x W. x D.	List Price	Net Price
.5	2 x 3/4 x 1 1/4	\$0.65	\$0.39
.25	2 x 1 x 1 1/4	.70	.42
.5	2 x 1 x 1 1/4	.75	.45
1.0	2 x 1 3/8 x 1 1/4	1.00	.60

MIDGET TUBULAR METAL-CASED "HYVOL" CAPACITORS Type 38



These units are hermetically-sealed and are exceptionally compact. Originally designed as alternates for mica capacitors but have since become a standard item in the Aerovox oil-filled capacitor line. Not only used as replacements in existing equipment, but are especially suitable for newly-designed equipment particularly where allowable weight of the finished assembly and allotted space is at a minimum. Despite unusual ultra-small size for oil-impregnated, oil-filled capacitors, constructional and electrical characteristics meet many of the exacting conditions to which molded-in-bakelite mica capacitors are normally subjected. Type 38 units are normally supplied with case insulated, and are provided with outer insulating tube.

Type 338T—300v D.C. Working

Cap. Mfd.	Size-Ins. Dia. x High	List Price	Net Price
.001	1/8 x 1 1/8	\$0.85	\$0.51
.002	1/8 x 1 1/8	.85	.51
.003	1/8 x 1 1/8	.85	.51
.005	1/8 x 1 1/8	.85	.51
.0075	1/8 x 1 1/8	.85	.51
.01	1/8 x 1 1/8	.85	.51

Type 538T—500v D.C. Working

Cap. Mfd.	Size-Ins. Dia. x High	List Price	Net Price
.001	1/8 x 1 1/8	\$0.95	\$0.57
.002	1/8 x 1 1/8	.95	.57
.003	1/8 x 1 1/8	.95	.57
.005	1/8 x 1 1/8	.95	.57
.0075	1/8 x 1 1/8	.95	.57
.01	1/8 x 1 1/8	.95	.57

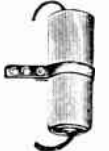
Type 638T—600v D.C. Working

Cap. Mfd.	Size-Ins. Dia. x High	List Price	Net Price
.001	1/8 x 1 1/8	\$0.95	\$0.57
.002	1/8 x 1 1/8	.95	.57
.003	1/8 x 1 1/8	.95	.57
.005	1/8 x 1 1/8	.95	.57
.0075	1/8 x 1 1/8	.95	.57
.01	1/8 x 1 1/8	.95	.57

Type 838T—800v D.C. Working

Cap. Mfd.	Size-Ins. Dia. x High	List Price	Net Price
.001	1/8 x 1 1/8	\$1.05	\$0.63
.002	1/8 x 1 1/8	1.05	.63
.003	1/8 x 1 1/8	1.05	.63
.005	1/8 x 1 1/8	1.05	.63

TUBULAR CAPACITORS OIL-IMPREGNATED OIL-FILLED Type 89



Immersion-proof, oil-impregnated, oil-filled units in handy, space-saving tubular form. Ideal for use in vibrator applications, coupling and by-pass functions in transmitters, high-voltage amplifiers, in r.f. by-pass circuits, interference eliminators for motors and generators, and in test equipment. Fully sealed against oil leakage or moisture penetration. Case is insulated, not connected to the capacitor section. Mounting strap and outer insulating tube are supplied.

Types and D.C.W. Voltages

489-400			689-600		
Cap. Mfd.	List Price	Net Price	Cap. Mfd.	List Price	Net Price
.015	\$0.95b	\$0.57	.015	\$1.00c	\$0.60
.02	1.00b	.60	.02	1.05c	.63
.03	1.05c	.63	.03	1.10c	.66
.04	1.05c	.63	.04	1.10c	.66
.05	1.05c	.63	.05	1.10c	.66
.075	1.10d	.66	.075	1.20f	.72
.1	1.15d	.69	.1	1.25f	.75
.25	1.45f	.87	.25	1.70h	1.02
.5	1.70k	1.02			

Types and D.C.W. Voltages

1089-1000			2089-2000		
Cap. Mfd.	List Price	Net Price	Cap. Mfd.	List Price	Net Price
.006	\$1.10a	\$0.66	.006	\$1.25e	\$0.75
.0075	1.10b	.66	.0075	1.25e	.75
.01	1.10c	.66	.01	1.25e	.75
.015	1.20c	.72	.015	1.30f	.78
.02	1.20c	.72	.02	1.35g	.81
.03	1.20d	.72	.03	1.40g	.84
.04	1.20d	.72	.04	1.40g	.84
.05	1.30d	.78	.05	1.45g	.87
.075	1.40f	.84			
.1	1.50f	.90			

COMPACT ENERGY-STORAGE CAPACITORS TYPE PX



For high-speed flash photography, capacitor discharge welding, flash signaling equipment, pulsing and other energy storage uses requiring extremely high currents during short discharge periods. Compact, minimum weight, solder lug terminals, term plate containers.

22.5 WATT SECONDS

V.D.C. Cap. PEAK	Nominal Mfd.	Type No.	List Price	Net Price
1500	20	PX10D1	\$14.00	\$ 9.80

50.0 WATT SECONDS

2000	28	PX14D3	\$20.00	\$14.00
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75.0 WATT SECONDS

2500	21	PX14D2	\$20.00	\$14.00
3000	16	PX18D1	\$23.00	\$16.10

100.0 WATT SECONDS

2500	30	PX15D1B	\$31.00	\$23.80
4000	12.5	PX20D1	\$22.00	\$15.40

PX10D1 dimensions 2 1/2" x 3 3/4" x 1 1/4"
 PX15D1B dimensions 4 1/8" x 3 3/4" x 1 1/4"
 ALL OTHERS 4 1/8" x 3 3/4" x 1 1/4" high.



Paper Capacitors

IF IT'S MARKED "AEROVOX" IT'S A QUALITY CAPACITOR

AEROVOX "HYVOL" OIL-IMPREGNATED OIL-FILLED CAPACITORS

In Round Aluminum Cans
Type 05



Convenient round can, provided with ring mounting, high-voltage pillar terminals. Hermetically sealed in leak-proof containers. Very conservative ratings for continuous operation.

Type 605-600v. D.C.W.				
Cap. Mfds.	Size-Inch.	List Price	Net Price	
1	2 x 2 3/4	\$3.80	\$2.28	
2	2 x 2 3/4	4.95	2.97	
4	2 x 3 3/4	6.85	4.11	

Type 1005-1000v. D.C.W.				
Cap. Mfds.	Size-Inch.	List Price	Net Price	
1	2 x 4	\$4.20	\$2.52	
2	2 x 4 1/4	5.70	3.42	
4	2 1/2 x 4 3/4	7.25	4.35	

Type 1505-1500v. D.C.W.				
Cap. Mfds.	Size-Inch.	List Price	Net Price	
1	2 x 3 3/4	\$5.30	\$3.18	
2	2 x 4 3/4	7.25	4.35	
4	2 1/2 x 4 3/4	9.50	5.70	

Type 2005-2000v. D.C.W.				
Cap. Mfds.	Size-Inch.	List Price	Net Price	
1	2 x 4 3/4	\$6.85	\$4.11	
2	2 x 5 1/4	7.60	4.56	

Type 2505-2500v. D.C.W.				
Cap. Mfds.	Size-Inch.	List Price	Net Price	
1	2 1/2 x 4 3/4	\$9.15	\$5.49	
2	2 1/2 x 5 1/4	15.00	9.00	

Type 3005-3000v. D.C.W.				
Cap. Mfds.	Size-Inch.	List Price	Net Price	
1	2 1/2 x 4 3/4	\$13.75	\$8.25	
2	3 x 5 1/4	16.75	10.05	

AEROVOX "HYVOL" VERTICAL-MOUNTING HIGH-VOLTAGE CAPACITORS

Type 14



Particularly applicable for use in high-voltage filter circuits such as cathode-ray tube power supplies, high-voltage by-pass circuits in transmitters and high-powered public address equipment. Type 14 units are made in the standard 1 3/8" diameter. Grounded can, with one-piece immersion-proof molded bakelite pillar insulator which provides maximum spacing between live terminal and can. Mounting ring furnished for upright or inverted mounting.

Type 2014-2000v. D.C.W.				
Cap. Mfds.	Size-Inch.	List Price	Net Price	
.01	1 3/8 x 2 1/4	\$6.00	\$3.60	
.05	1 3/8 x 2 3/4	6.65	3.99	
.1	1 3/8 x 2 3/4	7.00	4.20	
.25	1 3/8 x 3 3/4	7.60	4.56	

Type 3014-3000v. D.C.W.				
Cap. Mfds.	Size-Inch.	List Price	Net Price	
.01	1 3/8 x 2 1/4	\$7.50	\$4.50	
.06	1 3/8 x 2 1/4	8.00	4.80	
.1	1 3/8 x 2 3/4	8.60	5.10	
.25	1 3/8 x 3 3/4	9.60	5.70	

AEROVOX "HYVOL" OIL-IMPREGNATED OIL-FILLED CAPACITORS

In Round Aluminum Cans
—Inverted Mounting
Type 10



This is an improved design, replacing the former single terminal type. This new design is physically interchangeable with the old. Ideal for crowded assemblies; a logical choice in filter circuits of power supplies, high-gain high-fidelity amplifiers, and small transmitters. Hermetically-sealed. Has one-piece molded bakelite terminal assembly. Both terminal lugs are insulated from container.

Type 610-600v. D.C.W.				
Cap. Mfds.	Size-Inch.	List Price	Net Price	
2	1 1/2 x 3 1/2	\$4.15	\$2.49	
4	1 1/2 x 5 1/4	5.70	3.42	

Type 1010-1000v. D.C.W.				
Cap. Mfds.	Size-Inch.	List Price	Net Price	
1	1 1/2 x 2 1/2	\$8.50	\$2.28	
2	1 1/2 x 4 1/2	4.95	2.97	

Type 1510-1500v. D.C.W.				
Cap. Mfds.	Size-Inch.	List Price	Net Price	
.5	1 1/2 x 2 1/2	\$4.55	\$2.73	
1	1 1/2 x 4 1/2	4.95	2.97	

AEROVOX "HYVOL" VERTICAL-MOUNTING HIGH-VOLTAGE CAPACITORS OIL-IMPREGNATED OIL-FILLED

Type 12

This is an immersion-proof capacitor designed to meet high-voltage operating requirements. Suitable for such high-voltage circuit applications as in television, cathode-ray tube power supplies, high-voltage rectifiers, or, as a high-voltage by-pass capacitor. Recommended where long leakage path between terminals is required. Barrier in bakelite top increases insulation and creepage path between terminals. For certain applications, the ceramic insulators may be removed if desired. Supplied with adjustable mounting ring for vertical mounting.



Type 2012-2000v. D.C.W.				
Cap. Mfds.	Size-Inch.	List Price	Net Price	
1.0	2 1/4 x 3 1/4	\$7.35	\$4.41	
2.0	2 1/4 x 5 1/4	9.10	5.46	

Type 3012-3000v. D.C.W.				
Cap. Mfds.	Size-Inch.	List Price	Net Price	
.05	2 1/4 x 2 1/4	\$9.50	\$5.70	
.1	2 1/4 x 2 1/4	10.00	6.00	
.25	2 1/4 x 3 1/4	11.00	6.60	
.5	2 1/4 x 3 1/4	12.00	7.20	
1.0	2 1/4 x 5 1/4	15.25	9.15	

Type 4012-4000v. D.C.W.				
Cap. Mfds.	Size-Inch.	List Price	Net Price	
.05	2 1/4 x 2 3/4	\$9.00	\$5.40	
.1	2 1/4 x 3 3/4	9.50	5.70	
.25	2 1/4 x 5 1/4	10.50	6.30	

Type 6012-6000v. D.C.W.				
Cap. Mfds.	Size-Inch.	List Price	Net Price	
.03	2 1/4 x 2 3/4	\$12.00	\$7.20	
.05	2 1/4 x 3 3/4	13.50	8.10	
.1	2 1/4 x 4 3/4	16.50	9.90	

Type 7512-7500v. D.C.W.				
Cap. Mfds.	Size-Inch.	List Price	Net Price	
.01	2 1/4 x 3 3/4	\$12.00	\$7.20	
.02	2 1/4 x 3 3/4	13.00	7.80	
.03	2 1/4 x 3 3/4	14.00	8.40	
.05	2 1/4 x 4 1/4	16.50	9.30	
.1	2 1/4 x 4 1/4	19.00	11.40	

AEROVOX "HYVOL" OIL-IMPREGNATED OIL-FILLED CAPACITORS In Rectangular Metal Cans

Type 09



Type 09 (Basic)



Type 09MB (Mounting Bracket)



Type 09MS (Strap Mounting)

Hermetically-sealed in sturdy can, leakproof and seepage-proof. High tension pillar terminals fitted with locknuts and soldering lugs. Exceptionally compact dimensions for given capacity, working voltage—and safety factor due to use of "Hyvol." Intended for heavy-duty continuous service in transmitters,

amplifiers, etc. Type MB bracket is normally supplied as standard equipment, unless otherwise specified, on all units having base sizes other than 3 3/4" x 3 1/2" and 3 3/4" x 4 1/2". Type MS is normally supplied as standard with these latter base sizes.

Type 609-600v. D.C.W.

Cap. Mfds.	Size-Inch.	List Price	Net Price	
.5	2 1/2 x 1 1/2 x 1 1/2	\$4.15	\$2.49	
1.0	2 1/2 x 1 1/2 x 1 1/2	5.30	3.18	
2.0	2 1/2 x 1 1/2 x 1 1/2	6.45	3.87	
3.0	3 3/4 x 1 1/2 x 1 1/2	7.60	4.56	
4.0	3 3/4 x 2 1/2 x 1 1/2	8.35	5.01	
5.0	4 3/8 x 2 1/2 x 1 1/2	9.50	5.70	
6.0	4 3/8 x 2 1/2 x 1 1/2	10.25	6.15	
8.0	3 3/4 x 3 3/4 x 1 1/2	12.15	7.29	
10.0	4 3/8 x 3 3/4 x 1 1/2	13.65	8.19	
12.0	4 3/8 x 3 3/4 x 1 1/2	15.20	9.12	
15.0	4 3/8 x 3 3/4 x 1 1/2	16.80	10.08	

Type 1009-1000v. D.C.W.

Cap. Mfds.	Size-Inch.	List Price	Net Price	
.1	2 x 1 1/2 x 1 1/2	\$3.80	\$2.28	
.25	2 1/4 x 1 1/2 x 1 1/2	4.15	2.49	
.5	2 1/4 x 1 1/2 x 1 1/2	4.55	2.73	
1.0	2 3/4 x 1 1/2 x 1 1/2	5.70	3.42	
2.0	3 3/4 x 1 1/2 x 1 1/2	7.60	4.56	
3.0	3 1/2 x 2 1/2 x 1 1/2	8.60	5.16	
4.0	4 3/8 x 2 1/2 x 1 1/2	9.50	5.70	
5.0	3 3/4 x 3 3/4 x 1 1/2	11.40	6.84	
6.0	4 3/8 x 3 3/4 x 1 1/2	12.55	7.53	
8.0	4 3/8 x 3 3/4 x 1 1/2	13.65	8.19	
10.0	4 3/8 x 3 3/4 x 1 1/2	15.20	9.12	
12.0	3 3/4 x 3 3/4 x 2 1/2	16.70	10.02	
15.0	4 3/8 x 3 3/4 x 2 1/2	18.25	10.95	

Type 1509-1500v. D.C.W.

Cap. Mfds.	Size-Inch.	List Price	Net Price	
.5	2 1/4 x 1 1/2 x 1 1/2	\$6.05	\$3.63	
1.0	4 x 1 1/2 x 1 1/2	6.85	4.11	
2.0	4 3/8 x 2 1/2 x 1 1/2	9.50	5.70	
3.0	4 3/8 x 2 1/2 x 1 1/2	11.40	6.84	
4.0	4 3/8 x 3 3/4 x 1 1/2	12.90	7.74	
5.0	4 3/8 x 3 3/4 x 1 1/2	13.65	8.19	
6.0	4 3/8 x 3 3/4 x 1 1/2	15.55	9.33	
8.0	4 3/8 x 3 3/4 x 2 1/2	19.00	11.40	
10.0	4 3/8 x 3 3/4 x 2 1/2	22.80	13.68	
12.0	4 3/8 x 3 3/4 x 2 1/2	25.05	15.03	
15.0	4 3/8 x 3 3/4 x 2 1/2	27.35	16.41	

Type 2009-2000v. D.C.W.

Cap. Mfds.	Size-Inch.	List Price	Net Price	
.1	2 x 1 1/2 x 1 1/2	\$6.05	\$3.63	
.25	2 1/4 x 1 1/2 x 1 1/2	6.45	3.87	
.5	2 3/4 x 1 1/2 x 1 1/2	6.85	4.11	
1.0	3 3/8 x 2 1/2 x 1 1/2	8.35	5.01	
2.0	4 x 3 3/4 x 1 1/2	9.90	5.94	
3.0	4 3/8 x 3 3/4 x 1 1/2	12.15	7.29	
4.0	3 3/4 x 3 3/4 x 2 1/2	13.65	8.19	
5.0	4 3/8 x 3 3/4 x 2 1/2	15.20	9.12	
6.0	4 3/8 x 3 3/4 x 2 1/2	17.85	10.71	
8.0	4 3/8 x 3 3/4 x 3 1/2	22.80	13.68	
10.0	4 3/8 x 3 3/4 x 4 1/2	28.10	16.86	
12.0	5 3/8 x 3 3/4 x 4 1/2	30.40	18.24	
15.0	6 3/8 x 3 3/4 x 4 1/2	36.70	22.02	

Type 2509-2500v. D.C.W.

Cap. Mfds.	Size-Inch.	List Price	Net Price	
.5	3 1/2 x 2 1/2 x 1 1/2	\$10.65	\$6.39	
1.0	3 1/2 x 3 3/4 x 1 1/2	12.15	7.29	
2.0	4 3/8 x 3 3/4 x 1 1/2	19.75	11.85	
4.0	4 3/8 x 3 3/4 x 3 1/2	27.35	16.41	
10.0	6 3/8 x 3 3/4 x 3 1/2	68.35	41.01	

Type 3009-3000v. D.C.W.

Cap. Mfds.	Size-Inch.	List Price	Net Price	
.1	2 x 2 1/2 x 1 1/2	\$12.90	\$7.74	
.25	2 1/4 x 2 1/2 x 1 1/2	13.65	8.19	
.5	3 3/8 x 2 1/2 x 1 1/2	15.20	9.12	
1.0	3 3/8 x 3 3/4 x 1 1/2	18.25	10.95	
2.0	4 3/8 x 3 3/4 x 1 1/2	22.80	13.68	
4.0	4 3/8 x 3 3/4 x 2 1/2	33.40	20.04	

Type 4009-4000v. D.C.W.

Cap. Mfds.	Size-Inch.	List Price	Net Price	
.1	2 3/4 x 3 3/4 x 2 1/2	22.80	13.68	
.25	2 3/4 x 3 3/4 x 2 1/2	24.80	14.58	
.5	3 3/8 x 3 3/4 x 2 1/2	27.35	16.41	
1.0	5 1/8 x 3 3/4 x 2 1/2	33.40	20.04	
2.0	5 1/8 x 3 3/4 x 4 1/2	42.55	25.53	
4.0	8 x 3 3/4 x 4 1/2	60.75	36.45	

Type 5009-5000v. D.C.W.

Cap. Mfds.	Size-Inch.	List Price	Net Price	
.1	2 3/4 x 3 3/4 x 2 1/2	24.35	14.61	
.25	3 3/8 x 3 3/4 x 2 1/2	27.55	16.53	
.5	4 1/8 x 3 3/4 x 2 1/2	30.40	18.24	
1.0	4 3/8 x 3 3/4 x 4 1/2	38.00	22.80	
2.0	6 x 3 3/4 x 4 1/2	48.60	29.16	

Type 6009-6000v. D.C.W.

Cap. Mfds.	Size-Inch.	List Price	Net Price	
.1	3 3/			



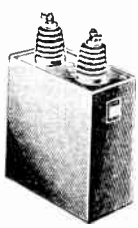
Paper Capacitors

IF IT'S MARKED "AEROVOX" IT'S A QUALITY CAPACITOR

HIGH-VOLTAGE TRANSMITTER TYPE D.C. CAPACITORS

Type 20

6,000v. D.C. Work. to 50,000v. D.C. Work.



These capacitors meet the exacting requirements of radio transmitter service and other applications requiring high-voltage, heavy-duty, transmitter-type oil capacitors. Available in ratings from 6000 volts to 50,000 volts D.C. working. These are single-section or parallel-section capacitors. Type 20 units are critically checked to close standards of physical and electrical perfection. Capacitor sections consist of multi-layered capacitor tissues and high-purity aluminum foil, uniformly and accurately wound under critically-controlled tension, then vacuum-impregnated with Aerovox Hyvol to insure stability of full-rated capacitance, even at zero temperatures. Welded steel containers finished in non-corrosive, dark grey lacquer. Heavy-duty porcelain insulator assembly is cork-gasketed and pressure sealed to prevent leakage of oil or entrance of moisture at the terminals. Single-section units rated at 30 KV or less are normally supplied with capacitor section insulated from ground. Additional information on Type 20 units rated at 37,500 volts and 50,000 volts, as well as voltage-doubler units rated at 25,000 volts output is available on application.

All Type 20 units are built to special order—not carried in stock. Submit full application information when ordering.

Type 6020—6000v. D.C.W.					
Cap. Mfds.	Case Size—H x W x D	Ins.	List Price	Net Price	
2.0	11x 8x1		\$136.00	\$ 82.00	
4.0	11x12x1		167.00	100.00	
5.0	11x12x1		189.00	113.00	
6.0	13x12x1		212.00	127.00	
10.0	13x12x6		265.00	159.00	

Type 7520—7500v. D.C.W.					
Cap. Mfds.	Case Size—H x W x D	Ins.	List Price	Net Price	
0.5	11x 8x1		\$ 75.00	\$ 45.00	
1.0	11x 8x4		98.00	59.00	
2.0	11x 8x4		151.00	91.00	
4.0	13x12x4		227.00	136.00	
6.0	13x12x6		273.00	164.00	

Type 10020—10,000v. D.C.W.					
Cap. Mfds.	Case Size—H x W x D	Ins.	List Price	Net Price	
1.0	11x 8x1		\$197.00	\$118.00	
2.0	11x12x1		250.00	150.00	
1.0	13x12x6		303.00	182.00	
5.0	13x12x6		371.00	200.00	

Type 12520—12,500v. D.C.W.					
Cap. Mfds.	Case Size—H x W x D	Ins.	List Price	Net Price	
0.5	11x 8x1		\$167.00	\$100.00	
1.0	11x12x1		212.00	127.00	
2.0	13x12x6		265.00	159.00	
5.0	15x12x9½		501.00	306.00	

Type 15020—15,000v. D.C.W.					
Cap. Mfds.	Case Size—H x W x D	Ins.	List Price	Net Price	
0.25	11x 8x1		\$159.00	\$ 95.00	
0.5	11x12x1		189.00	113.00	
1.0	13x12x1		265.00	159.00	
2.0	15x12x9½		349.00	209.00	
3.0	15x12x9½		478.00	287.00	

Type 20020—20,000v. D.C.W.					
Cap. Mfds.	Case Size—H x W x D	Ins.	List Price	Net Price	
0.25	11x 8x1		\$189.00	\$113.00	
0.5	11x12x1		243.00	145.00	
1.0	13x12x6		326.00	195.00	
1.5	15x12x9½		410.00	264.00	
2.0	15x12x9½		524.00	314.00	
4.0	15x14x16		919.00	551.00	

Type 25020—25,000v. D.C.W.					
Cap. Mfds.	Case Size—H x W x D	Ins.	List Price	Net Price	
0.2	11x12x1		\$197.00	\$118.00	
0.25	11x12x1		265.00	159.00	
0.5	13x12x6		288.00	173.00	
1.0	15x12x9½		432.00	259.00	

Type 37520—37,500v. D.C.W.
(Information supplied on application.)

Type 50020—50,000v. D.C.W.
(Information supplied on application.)

Type 12520 VD
25,000 Volts Output (12,500—12,500 Volts)—Dual Units
(Information supplied on application.)

COMPACT HERMETICALLY-SEALED OIL-IMPREGNATED, OIL-FILLED "HYVOL" CAPACITORS

Type 16T (Terminals on Top)



Compact, oil-filled, hermetically-sealed units for use where least space and minimum weight are essential. Corrosion-proof metal container. Special immersion-proof terminals designed for equipment subjected to severe atmospheric and climatic conditions. Suitable for by-pass and filter applications in receivers and low-power transmitters.

Type 416T 400v. D.C. Working

Cap. Mfds.	H x W x D	List Price	Net Price
.01	1½x1½x1½	\$2.60	\$1.56
.05	1½x1½x1½	2.65	1.59
.1	1½x1½x1½	2.85	1.71
.25	1½x1½x1½	2.90	1.74
.5	1½x1½x1½	2.95	1.77
1.0	2½x1½x1½	3.30	1.98

Type 616T 600v. D.C. Working

Cap. Mfds.	H x W x D	List Price	Net Price
.01	1½x1½x1½	\$2.65	\$1.59
.05	1½x1½x1½	2.80	1.68
.1	1½x1½x1½	2.90	1.74
.25	1½x1½x1½	2.95	1.77
.5	2½x1½x1½	3.05	1.83
1.0	2½x1½x1½	3.40	2.04

Type 1016T 1000v. D.C. Working

Cap. Mfds.	H x W x D	List Price	Net Price
.01	1½x1½x1½	\$2.80	\$1.68
.05	1½x1½x1½	2.85	1.71
.1	1½x1½x1½	2.95	1.77
.25	1½x1½x1½	3.05	1.86
.5	2½x1½x1½	3.30	1.98

COMPACT HERMETICALLY-SEALED OIL-IMPREGNATED, OIL-FILLED "HYVOL" CAPACITORS

Type 18B (Terminals on Bottom)



Compact, oil-filled, hermetically-sealed units. Type 18 is smaller in height and depth than Type 16. However, greater width makes Type 18 adaptable for applications where small-sized dual- and triple-section capacitors with three terminals are required. Otherwise, similar to Type 16 with respect to construction and application.

Type 418B 400v. D.C. Working Single Section Units

Cap. Mfds.	H x W x D	List Price	Net Price
.05	1 x1½x1½	\$2.85	\$1.71
.1	1 x1½x1½	2.95	1.77
.25	1½x1½x1½	3.05	1.83
.5	1½x1½x1½	3.15	1.89
1.0	2 x1½x1½	3.50	2.10

Dual-Section Units			
Cap. Mfds.	H x W x D	List Price	Net Price
.05-.05	1 x1½x1½	\$3.65	\$2.19
.1-.1	1½x1½x1½	3.75	2.25
.25-.25	1½x1½x1½	3.90	2.34
.5-.5	2 x1½x1½	4.25	2.55

Triple-Section Units			
Cap. Mfds.	H x W x D	List Price	Net Price
.05-.05-.05	1 x1½x1½	\$4.50	\$2.70
.1-.1-.1	1½x1½x1½	4.80	2.88
.25-.25-.25	2 x1½x1½	5.20	3.12

Type 618B 600v. D.C. Working Single Section Units

Cap. Mfds.	H x W x D	List Price	Net Price
.05	1 x1½x1½	\$2.90	\$1.74
.1	1 x1½x1½	3.05	1.83
.25	1½x1½x1½	3.15	1.89
.5	1½x1½x1½	3.25	2.01
1.0	2½x1½x1½	3.65	2.19

Dual-Section Units			
Cap. Mfds.	H x W x D	List Price	Net Price
.05-.05	1 x1½x1½	\$3.80	\$2.28
.1-.1	1½x1½x1½	3.90	2.34
.25-.25	1½x1½x1½	4.15	2.49
.5-.5	2½x1½x1½	4.50	2.70

Triple-Section Units			
Cap. Mfds.	H x W x D	List Price	Net Price
.05-.05-.05	1½x1½x1½	\$4.55	\$2.73
.1-.1-.1	1½x1½x1½	4.95	2.97
.25-.25-.25	1½x1½x1½	5.30	3.18

Type 1018B 1000v. D.C. Working Single Section Units

Cap. Mfds.	H x W x D	List Price	Net Price
.05	1 x1½x1½	\$3.05	\$1.83
.1	1 x1½x1½	3.15	1.89
.25	1½x1½x1½	3.30	1.98
.5	1½x1½x1½	3.50	2.10

Dual-Section Units			
Cap. Mfds.	H x W x D	List Price	Net Price
.05-.05	1½x1½x1½	\$4.15	\$2.49
.1-.1	1½x1½x1½	4.45	2.67
.25-.25	1½x1½x1½	4.55	2.73

Triple-Section Units			
Cap. Mfds.	H x W x D	List Price	Net Price
.05-.05-.05	1½x1½x1½	\$4.95	\$2.97
.1-.1-.1	2½x1½x1½	5.30	3.18

CUSTOM-BUILT PAPER CAPACITORS TO MEET YOUR SPECIAL NEEDS —

If your paper capacitor needs are most unusual, AEROVOX will work with you in designing and producing special types. With many basic types to draw upon—a wide choice of containers, terminals, mountings, sizes, etc.—we can quickly and economically produce out-of-the-ordinary capacitors to meet those extraordinary requirements. Address your inquiry to Aerovox Engineering Department, New Bedford, Mass.

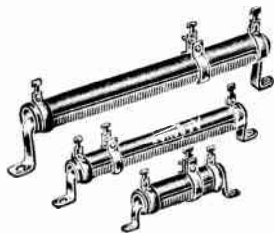


AEROVOX

Vitreous-Enameled and Carbon RESISTORS

IF IT'S MARKED "AEROVOX" IT'S A QUALITY CAPACITOR.

"SLIDEOHM" Wire-Wound Vitreous-Enameled ADJUSTABLE RESISTORS



Adjustable resistors combining adjustment to any resistance value within unit's range, with positive, permanent, non-fluctuating qualities of wire-wound resistor. Each Slideohm Resistor is provided with horizontal mounting brackets and one adjustable contact slider.

Type 952—25 Watts Size 5/8 x 2 inches

Ranges	List	Net
1-5000	each \$1.24	\$0.74
6000-10,000	1.43	.85

Extra Slider Bands—13c ea., Net 7c

Type Resis. Ohms	952 25 Watts Cur. M.A.	954 50 Watts Cur. M.A.	956 75 Watts Cur. M.A.	957 100 Watts Cur. M.A.	958 200 Watts Cur. M.A.
1	5000				
3	2880				
5	2230	3160	3870	4470	6320
10	1580	2240	2740	3160	4470
15	1290		2240	2580	
20	1115				
25	1000	1410	1730	2000	2825
50	710	1000	1220	1410	2000
75	580	815	1000	1150	
100	500	705	865	1000	1400
150	410	575			
200	355	500	610		
250	315	445	550	680	900
300	290	405	500		
400	250	350	430		
500	225	315	385	445	630
750	180	260	315	365	
800		250	305		
850	170				
1000	160	225	275	315	450
1250	140	200	245		
1500	130	180	225	260	365
2000	110	160	195	225	315
2250	105	150			
2500	100	140	173	200	280
3000	90	130	158	180	260
3500	85	120	146	170	240
4000	80	110	137	160	225
4500	74	105	129	150	210
5000	70	100	122	140	200
6000	65	91	111	130	
7000	67	85	103		
7500	63		100	115	165
8000	60	79	97	110	
8500	47				
9000	44	75	91		
10,000	40	71	87	100	140
12,000		64			
15,000		58	71	80	115
20,000		48	61	70	100
25,000		40	55	60	80
30,000		33	50	50	82
35,000			48	43	71
40,000		25	37	37	62
50,000		20	30	30	50
60,000			25	25	42
70,000			21	21	
75,000				20	33
100,000					25
125,000					20
150,000					16

Type 954—50 Watts Size 3/4 x 4 1/2 inches

Ranges	List	Net
5-5000	each \$1.95	\$1.17
6000-25,000	2.15	1.29
30,000-50,000	2.47	1.48

Extra Slider Bands—13c ea., Net 7c

Type 956—75 Watts Size 3/4 x 6 1/2 inches

Ranges	List	Net
5-5000	each \$2.54	\$1.52
6000-25,000	2.86	1.71
30,000-50,000	3.25	1.95
60,000-70,000	3.58	2.14

Extra Slider Bands—20c ea., Net 12c

Type 957—100 Watts Size 1 1/8 x 6 1/2 inches

Ranges	List	Net
5-5000	each \$2.86	\$1.71
6000-25,000	3.25	1.95
30,000-50,000	3.58	2.14
60,000-75,000	3.90	2.34

Extra Slider Bands—20c ea., Net 12c

Type 958—200 Watts Size 1 1/8 x 10 1/2 inches

Ranges	List	Net
5-10,000	each \$4.29	\$2.57
15,000-100,000	5.01	3.00
125,000-150,000	5.33	3.19

Extra Slider Bands—20c ea., Net 12c

"PYROHM JUNIOR"

Wire-Wound Vitreous-Enameled FIXED RESISTORS

Types 931 and 933



Compact, genuine wire-wound units. Covered with vitreous-enamel. Highest quality materials used throughout. Correctly designed. Note these features:

1. Crack-proof refractory tubing for the support. Adequate heat dissipation.
2. Quality resistance wire precisely space wound under tension.

3. Copper terminal band clamped to tubing. Wire ends wrapped about raised ear and brazed to same.

4. Heavy vitreous-enamel coating for permanent seal against moisture, oxidation and mechanical damage.

5. Pre-tail of stiff wire 2 in. long soldered to terminal band for positive, non-breakable connection.

Type 931—10 Watts Size—Ins. 1/8 x 1 3/4

Ranges	List	Net
1-10,000	\$0.59	\$0.35
12,000-50,000 .....	.65	.39

30,000 to 50,000 ohms, rated at 5 watts.

Stock Resistance Ranges

1	200	1750	12,000
2	250	2000	12,500
3	300	2500	13,500
4	350	2750	14,300
5	400	3000	15,000
7.5	450	3500	16,000
10	500	4000	17,500
12	600	4500	18,000
15	650	5000	20,000
20	700	5500	22,500
25	750	6000	25,000
30	800	7000	30,000
35	850	7500	35,000
40	900	8000	40,000
50	1000	8500	45,000
75	1100	9000	50,000
100	1200	10,000	
125	1250		
150	1400		
175	1500		

Type 933—20 Watts Size—Ins. 3/8 x 2

Ranges	List	Net
1-15,000	\$0.91	\$0.59
20,000-50,000	1.11	.66
55,000-100,000	1.43	.85

25,000-100,000 ohms rated at 7 watts.

Stock Resistance Ranges

1	650	8000	35,000
3	700	8500	40,000
5	750	4000	45,000
10	800	4500	50,000
15	850	5000	55,000
25	1000	6000	60,000
50	1200	7000	65,000
75	1250	7500	70,000
100	1500	8000	75,000
150	1750	10,000	80,000
175	1850	12,500	85,000
200	2000	13,000	90,000
250	2250	15,000	95,000
300	2400	20,000	100,000
350	2500	25,000	
500	2750	30,000	

INSULATED MOLDED CARBON RESISTORS

Types 1097 and 1098



Small, noiseless, vibration-proof. Crack-proof molded casing around molded carbon resistance element. Tinned copper pig-tail leads 2 in. long. Resists humidity effects. Ideal for AVC circuits, high-gain amplifiers. RMA color-coded; stamped with resistance value. Precision tested. Standard tolerance 10%. These types may come thru for some time in slightly larger sizes until complete changeover is achieved.

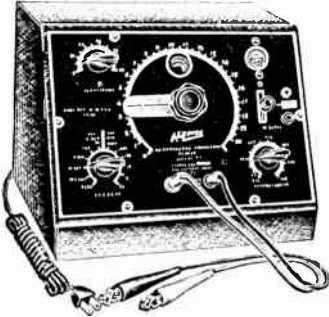
Types	Rating Watt	Size Ins.	List ea.	Net ea.
1098	1	1 1/4 x 3/8	\$1.17	\$1.10
1097	1/2	3/8 x 3/8	.18	.08

Stock Resistance Ranges—Ohms

10	750	11000	150000
15	800	12000	175000
20	900	12500	200000
25	1000	13000	250000
30	1250	14000	300000
40	1500	15000	400000
50	1750	17500	500000
60	2000	20000	600000
75	2250	22500	750000
100	2500	25000	1 Meg.
120	3000	30000	1 1/2 Meg.
150	3500	35000	2 Meg.
200	4000	40000	2 1/2 Meg.
250	5000	50000	3 Meg.
300	6000	60000	4 Meg.
350	7000	65000	5 Meg.
400	7500	70000	6 Meg.
450	8000	75000	7 Meg.
500	9000	100000	10 Meg.
600	10000	125000	20 Meg.

AEROVOX

TEST INSTRUMENTS



AEROVOX CAPACITANCE AND RESISTANCE BRIDGE

AEROVOX MODEL 76 Resistance-Capacitance Bridge is the new post-war general utility instrument combining simplicity of operation, remarkable degree of accuracy, and modest price.

Extreme ruggedness makes it equally suitable out on the job, in the shop, or in the laboratory.

Sloping panel 10" x 6". Aluminum, etched and anodized. Steel cabinet, black crackle finish. All readings taken from main 1" dial. Same calibrated scale eliminates trouble and chances for errors in reading. Linear scale, also an exclusive feature, means no crowding at high end to make readings difficult and inaccurate. Both the resistance and the capacitance readings are covered by six overlapping ranges, as against two or three in usual service instruments, for maximum sensitivity and accuracy. Positive "magic eye" indicator.

Here is what Model 76 bridge does: (1) Measures capacitance from 100 muf. to 200 mfd. in six ranges. (2) Measures resistance from 10 ohms to 20 megohms in six ranges. (3) Measures power factor from 0 to 50%. (4) Provides D.C. polarizing potential for leakage measurements, from 0 to 600 V. D.C., continuously variable and calibrated in volts. (5) Checks leakage or insulation resistance.

Instrument is provided with shockproof, color-coded test leads fitted with banana plugs for panel jacks, and with clips. Instructions. Measures 10" x 7 3/4" x 8 1/4". Weight 8 lbs. 3 oz.

AEROVOX MOTOR-STARTING CAPACITOR SELECTOR

★ Determine the necessary capacitance to replace the worn-out motor-starting capacitor, at the mere flip of a switch or two! That's the idea of the Aerovox Motor-Starting Capacitor Selector. In the absence of label, nameplate or other identification means of the original equipment being serviced, this simple, inexpensive, handy instrument provides the immediate answer.



The Capacitor Selector, by throwing a series of toggle switches, provides a choice of capacitance ratings: 17 1/2, 35, 52 1/2, 65, 70, 82 1/2, 100, 117 1/2, 135 and 152 1/2 mfd. A voltmeter indicates the maintenance of safe starting voltage. The instrument is merely clipped to the motor in place of the defective capacitor. Capacitance readings are made from the total of open switches directly from the selector. The 0-150V AC voltmeter can be used independently.

Complete Kit, Model No. 87, comprising Capacitor Selector and two Emergency Capacitors. Dealer's, servicemen's net cost \$20.95
Capacitor Selector, Model No. 85 \$11.64
Emergency Capacitor, Model No. 86, each \$4.65

EMERGENCY CAPACITORS

★The RIGHT capacity value is determined by the Capacitor Selector in a jiffy. That's half the job.

The other half is to have that RIGHT capacity immediately available. And that's where the Aerovox Emergency Capacitors come in to round out this Aerovox "Jiffy Way" of handling motor-starting capacitor jobs.

The Aerovox Emergency Capacitors are truly universal units. Each provides any capacity value from 17 1/2 to 152 1/2 mfd., simply by cutting in one or more sections. The unit then clips on to the motor. The refrigerator gets going without delay. Later, at the serviceman's convenience, the usual replacement is installed.

Emergency Capacitor, Model No. 86, \$4.65 Net, each

AEROVOX L-C CHECKER

★ This exclusive Aerovox development has no counterpart, much less an equal. Basically, it determines the effectiveness of any capacitance or inductance while actually connected in its circuit. Testing efficiency is greatly increased. Components may be tested singly or in combinations whereby to determine resonant frequency and effectiveness of given circuits. Circuit or systems may be adjusted by this checking means for proper operating efficiency. Certainly a "must" instrument for the radio worker.



HERE'S A PARTIAL LISTING OF WHAT THE AEROVOX L-C CHECKER DOES:

It checks capacitance of capacitors at radio frequencies without removing them from circuit. • It checks alignment of r.f. circuits; also tracking of super-het. oscillator. • It checks alignment of broad or narrow band i.f. amplifiers. • It checks the tuning of wave traps and of image-rejection circuits; frequency ranges of receivers; frequency ranges of signal generators; calibration of wave meters. • Identifies harmonics of frequency standard in precision frequency calibration of radio equipment • It checks natural resonant points of r.f. chokes making sure they are beyond operating range. • It traces resonant absorption trouble in "all-wave" receiver circuits—locating dead spots, etc. • It locates resonant points in shorted windings (coupled coils) in multi-range oscillators, etc. • Locates resonant frequency of r.f. coupling chokes, making certain of placement to secure enough gain balance over tuning range of r.f. stage • It checks natural period of antennae and transmission lines in order to have resonant peaks at certain frequencies. • It checks quartz crystals for frequency, false frequency, operation at harmonics, and for activity. • Checks FM i.f. transformers. • Checks alignment of FM i.f. channels. • Checks leakage of paper capacitors. And it checks many other functions when used with auxiliary equipment. This checker operates from AC or from DC 120 volt source. It has a frequency range from 100 KC to 14 MC as follows:

Range: A — 75 — 225 KC | D — 1.5 — 5 MC
B — 200 — 600 KC | E — 4.5 — 14.5 MC
C — 550 — 1650 KC | F — 13 — 44 MC

Capacitance Range: .00025 mfd. — 1 mfd.

Inductance Range: 0 — 500 MH

Tube Complement: 6J5G, 25Z5, 6E5, VR105

Accuracy: Capacitance and Inductance \pm 10%

Frequency Ranges A, B, C: \pm 1%

Other ranges: \pm 2.5%

Dimensions: 10 1/2 x 7 1/2 x 5 1/2

This new model L-C Checker has provisions for determining the insulation resistance of capacitors in addition to the measurements described in bulletin 995A.

Weight: (shipping) 6 lbs.

Watch for the announcement of the new
model Aerovox L-C Checker!



Standard Universal Electrolytic Motor-Starting Replacement Capacitors

Many of these Standard Universal replacements are also Exact Duplicate replacements. They have the same AEROVOX catalog numbers shown in the special Motor-Starting Capacitor Catalog devoted to the AEROVOX complete line. This list is intended to simplify the selection of required capacitor when manufacturer's part number and AEROVOX catalog number are not known. Information given: capacity range, voltage rating, dimensions and type of container may help determine capacitor required in absence of original unit or name-plate data. This listing also ideal for use with the AEROVOX Capacitor Selector.

110 VOLTS A.C.—ROUND CANS—ULTRA-COMPACT TYPE MSRT—1 3/8" and 2" Cans with Insulating Tube

Aerovox Cat. No.	CAPACITY MFDS. Actual Range Nominal Range	A.C. Voltage	DIMENSIONS D.H. or L.W.D.	Figure	List Price	Net Price
MSRT-217	20-24	20	1 3/8 x 3 1/8	MSRT or 18B	\$1.70	\$1.19
MSRT-218	26-30	25	1 3/8 x 3 1/8	MSRT or 18B	1.70	1.19
MSRT-219	32-36	30	1 3/8 x 3 1/8	MSRT or 18B	1.83	1.28
MSRT-220	38-42	35	1 3/8 x 3 1/8	MSRT or 18B	1.83	1.28
MSRT-168	43-48	40	1 3/8 x 3 1/8	MSRT or 18B	1.83	1.28
MSRT-193	53-60	50	1 3/8 x 3 1/8	MSRT or 18B	1.89	1.32
MSRT-167	64-72	60	1 3/8 x 3 1/8	MSRT or 18B	1.89	1.32
MSRT-176	70-78	65	1 3/8 x 3 1/8	MSRT or 18B	2.02	1.41
MSRT-196	75-84	70	1 3/8 x 3 1/8	MSRT or 18B	2.02	1.41
MSRT-180	86-96	80	1 3/8 x 3 1/8	MSRT or 18B	2.08	1.45
MSRT-194	97-107	90	1 3/8 x 3 1/8	MSRT or 18B	2.15	1.50
MSRT-162	108-120	100	1 3/8 x 3 1/8	MSRT or 18B	2.15	1.50
MSRT-160	124-138	115	1 3/8 x 3 1/8	MSRT or 18B	2.27	1.58
MSRT-171	145-162	135	1 3/8 x 3 1/8	MSRT or 18B	2.78	1.94
MSRT-198	161-180	150	1 3/8 x 4 1/8	MSRT or 18B	3.03	2.12
MSRT-197	161-180	150	2 x 3 1/8	MSRT or 18B	3.03	2.12
MSRT-257	189-210	175	2 x 3 1/8	MSRT or 18B	3.54	2.47
MSRT-192	216-240	200	2 x 3 1/8	MSRT or 18B	4.11	2.87
MSRT-213	243-270	225	2 x 3 1/8	MSRT or 18B	4.55	3.18
MSRT-207	270-300	250	2 x 3 1/8	MSRT or 18B	5.31	3.71
MSRT-210	324-360	300	2 x 4 1/8	MSRT or 18B	6.07	4.24
MSRT-206	378-420	350	2 x 4 1/8	MSRT or 18B	6.83	4.78
MSRT-256	400-480	450	2 x 4 1/8	MSRT or 18B	9.49	6.64



TYPE MSRT

Supplied with insulating tube (not shown). Former AEROVOX designation Fig. 18A or 18B.

110 VOLTS A.C.—ROUND CANS—HEAVY-DUTY TYPE MSRT—2" and 2 1/2" Cans with Insulating Tube

MSRT-221	32-36	30	2 x 4 1/8	MSRT or 18B	\$3.35	\$2.34
MSRT-166	53-60	50	2 x 4 1/8	MSRT or 18B	3.41	2.38
MSRT-149	64-72	65	2 x 4 1/8	MSRT or 18B	3.54	2.47
MSRT-146	86-96	80	2 x 4 1/8	MSRT or 18B	3.60	2.52
MSRT-222	97-107	90	2 x 4 1/8	MSRT or 18B	3.67	2.56
MSRT-147	108-120	100	2 x 4 1/8	MSRT or 18B	3.67	2.56
MSRT-140	124-138	115	2 x 4 1/8	MSRT or 18B	3.79	2.65
MSRT-223	145-162	135	2 x 4 1/8	MSRT or 18B	4.30	3.01
MSRT-224	161-180	150	2 x 4 1/8	MSRT or 18B	4.55	3.18
MSRT-225	189-210	175	2 x 4 1/8	MSRT or 18B	5.19	3.63
MSRT-226	270-300	250	2 x 4 1/8	MSRT or 18B	6.83	4.78
MSRT-227	32-36	30	2 1/2 x 4 1/8	MSRT or 18B	3.35	2.34
MSRT-228	53-60	50	2 1/2 x 4 1/8	MSRT or 18B	3.41	2.38
MSRT-229	64-72	60	2 1/2 x 4 1/8	MSRT or 18B	3.54	2.47
MSRT-107	86-96	80	2 1/2 x 4 1/8	MSRT or 18B	3.60	2.52
MSRT-230	97-107	90	2 1/2 x 4 1/8	MSRT or 18B	3.67	2.56
MSRT-142	108-120	100	2 1/2 x 4 1/8	MSRT or 18B	3.67	2.56
MSRT-110	124-138	115	2 1/2 x 4 1/8	MSRT or 18B	3.79	2.65
MSRT-148	145-162	135	2 1/2 x 4 1/8	MSRT or 18B	4.30	3.01
MSRT-188	161-180	150	2 1/2 x 4 1/8	MSRT or 18B	4.55	3.18
MSRT-231	189-210	175	2 1/2 x 4 1/8	MSRT or 18B	5.19	3.63
MSRT-232	270-300	250	2 1/2 x 4 1/8	MSRT or 18B	6.83	4.78



TYPE MSQT

Supplied with cardboard insulating container (not shown). Former AEROVOX designation Fig. 12.

110 VOLTS A.C.—SQUARE DRAWN CANS TYPE MSQT—3 1/2" x 3 1/2" with Cardboard Insulating Container

MSQT-233	32-36	30	3 1/2 x 3 1/2 x 1 1/4	MSQT or 12	\$3.03	\$2.12
MSQT-159A	53-60	50	3 1/2 x 3 1/2 x 1 1/4	MSQT or 12	3.03	2.12
MSQT-234	64-72	60	3 1/2 x 3 1/2 x 1 1/4	MSQT or 12	3.22	2.25
MSQT-159B	86-96	80	3 1/2 x 3 1/2 x 2	MSQT or 12	3.22	2.25
MSQT-235	97-107	90	3 1/2 x 3 1/2 x 2	MSQT or 12	3.35	2.34
MSQT-157	108-120	100	3 1/2 x 3 1/2 x 2	MSQT or 12	3.35	2.34
MSQT-137	124-138	115	3 1/2 x 3 1/2 x 2	MSQT or 12	3.79	2.65
MSQT-236	145-162	135	3 1/2 x 3 1/2 x 2	MSQT or 12	4.30	3.01
MSQT-255	161-180	150	3 1/2 x 3 1/2 x 2	MSQT or 12	4.55	3.18
MSQT-237	189-210	175	3 1/2 x 3 1/2 x 2	MSQT or 12	5.19	3.63
MSQT-238	270-300	250	3 1/2 x 3 1/2 x 2	MSQT or 12	6.83	4.78



TYPE MSST

Supplied with cardboard insulating container (not shown). Former AEROVOX designation Fig. 15A.

110 VOLTS A.C.—SQUARE DRAWN CANS Type MSST—3 1/2" x 3 1/2" with Terminal Board for Thermostat Connections and Cardboard Insulating Container

MSST-239	32-36	30	3 1/2 x 3 1/2 x 2	MSST or 15A	\$3.03	\$2.12
MSST-240	53-60	50	3 1/2 x 3 1/2 x 2	MSST or 15A	3.03	2.12
MSST-241	64-72	60	3 1/2 x 3 1/2 x 2	MSST or 15A	3.22	2.25
MSST-242	86-96	80	3 1/2 x 3 1/2 x 2	MSST or 15A	3.22	2.25
MSST-243	97-107	90	3 1/2 x 3 1/2 x 2	MSST or 15A	3.35	2.34
MSST-116	108-120	100	3 1/2 x 3 1/2 x 2	MSST or 15A	3.35	2.34
MSST-101	124-138	115	3 1/2 x 3 1/2 x 2	MSST or 15A	3.79	2.65
MSST-200	145-162	135	3 1/2 x 3 1/2 x 2	MSST or 15A	4.30	3.01
MSST-208	161-180	150	3 1/2 x 3 1/2 x 2	MSST or 15A	4.55	3.18
MSST-244	189-210	175	3 1/2 x 3 1/2 x 2	MSST or 15A	5.19	3.63
MSST-245	270-300	250	3 1/2 x 3 1/2 x 2	MSST or 15A	6.83	4.78



Standard Universal Electrolytic Motor-Starting Replacement Capacitors

Many of these Standard Universal replacements are also Exact Duplicate replacements. They have the same AEROVOX catalog numbers shown in the special Motor-Starting Capacitor Catalog devoted to the AEROVOX complete line. This list is intended to simplify the selection of required capacitor when manufacturer's part number and AEROVOX catalog number are not known. Information given: capacity range, voltage rating, dimensions and type of container may help determine capacitor required in absence of original unit or name-plate data. This listing also ideal for use with the AEROVOX Capacitor Selector.

125 VOLTS A.C.—ROUND CANS—ULTRA-COMPACT TYPE MSRT—1 3/8" and 2" Cans with Insulating Tube

(Max. Surge Voltage 120% of Rated Voltage)

Aerovox Cat. No.	CAPACITY MFDS.		A.C. Voltage	DIMENSIONS		List Price	Net Price
	Actual Range	Nominal Range		D.H. or L.W.D.	Figure No.		
MSRT-258	20-24	20	125	1 3/8 x 3 1/8	MSRT or 18B	\$2.08	\$1.45
MSRT-259	26-30	25	125	1 3/8 x 3 1/8	MSRT or 18B	2.08	1.45
MSRT-260	32-36	30	125	1 3/8 x 3 1/8	MSRT or 18B	2.21	1.54
MSRT-261	38-42	35	125	1 3/8 x 3 1/8	MSRT or 18B	2.21	1.54
MSRT-262	43-48	40	125	1 3/8 x 3 1/8	MSRT or 18B	2.21	1.54
MSRT-263	53-60	50	125	1 3/8 x 3 1/8	MSRT or 18B	2.27	1.58
MSRT-264	64-72	60	125	1 3/8 x 3 1/8	MSRT or 18B	2.27	1.58
MSRT-265	70-78	65	125	1 3/8 x 3 1/8	MSRT or 18B	2.46	1.72
MSRT-266	75-84	70	125	1 3/8 x 3 1/8	MSRT or 18B	2.46	1.72
MSRT-267	86-96	80	125	1 3/8 x 3 1/8	MSRT or 18B	2.53	1.77
MSRT-268	97-107	90	125	1 3/8 x 3 1/8	MSRT or 18B	2.59	1.81
MSRT-269	108-120	100	125	1 3/8 x 3 1/8	MSRT or 18B	2.59	1.81
MSRT-270	124-138	115	125	1 3/8 x 3 1/8	MSRT or 18B	2.78	1.94
MSRT-271	145-162	135	125	1 3/8 x 3 1/8	MSRT or 18B	3.35	2.34
MSRT-272	161-180	150	125	1 3/8 x 4 1/8	MSRT or 18B	3.67	2.56
MSRT-273	216-240	200	125	2 x 3 1/8	MSRT or 18B	4.93	3.45
MSRT-274	270-300	250	125	2 x 3 1/8	MSRT or 18B	6.38	4.46
MSRT-275	324-360	300	125	2 x 4 1/8	MSRT or 18B	7.34	5.13
MSRT-276	378-420	350	125	2 x 4 1/8	MSRT or 18B	8.22	5.75
MSRT-277	400-480	450	125	2 x 4 1/8	MSRT or 18B	11.39	7.97



TYPE MSRT

Supplied with insulating tube (not shown). Former AEROVOX designation Fig. 18A or 18B.

125 VOLTS A.C.—ROUND CANS—HEAVY-DUTY TYPE MSRT—1 3/8", 1 3/4" and 2" Cans with Insulating Tube

(Max. Surge Voltage 140% of Rated Voltage)

MSRT-278	32-36	30	125	1 3/8 x 3 1/8	MSRT or 18B	\$5.06	\$3.54
MSRT-279	53-60	50	125	1 3/8 x 3 1/8	MSRT or 18B	5.12	3.58
MSRT-280	64-72	65	125	1 3/8 x 3 1/8	MSRT or 18B	5.31	3.71
MSRT-281	86-96	80	125	1 3/8 x 3 1/8	MSRT or 18B	5.43	3.80
MSRT-282	97-107	90	125	1 3/8 x 3 1/8	MSRT or 18B	5.50	3.85
MSRT-283	108-120	100	125	1 3/8 x 3 1/8	MSRT or 18B	5.50	3.85
MSRT-284	124-138	115	125	1 3/8 x 3 1/8	MSRT or 18B	5.69	3.98
MSRT-285	145-162	135	125	1 3/8 x 3 1/8	MSRT or 18B	6.45	4.51
MSRT-286	161-180	150	125	2 x 3 1/8	MSRT or 18B	6.83	4.78
MSRT-287	189-210	175	125	2 x 3 1/8	MSRT or 18B	7.77	5.43
MSRT-288	216-240	200	125	2 x 3 1/8	MSRT or 18B	8.73	6.11
MSRT-289	243-270	225	125	2 x 4 1/8	MSRT or 18B	9.49	6.64
MSRT-290	270-300	250	125	2 x 4 1/8	MSRT or 18B	10.25	7.17
MSRT-291	324-360	300	125	2 x 4 1/8	MSRT or 18B	13.67	9.56



TYPE MSQT

Supplied with cardboard insulating container (not shown). Former AEROVOX designation Fig. 12.

220 VOLTS A.C.—ROUND CANS—ULTRA COMPACT TYPE MSRT—1 3/8" and 2" Cans with Insulating Tube

MSRT-246	20-24	20	220	1 3/8 x 3 1/8	MSRT or 18B	\$2.91	\$2.03
MSRT-202	26-30	25	220	1 3/8 x 3 1/8	MSRT or 18B	3.35	2.34
MSRT-248	32-36	30	220	2 x 4 1/8	MSRT or 18B	3.79	2.65
MSRT-249	38-42	35	220	2 x 4 1/8	MSRT or 18B	4.30	3.01
MSRT-250	43-48	40	220	2 x 4 1/8	MSRT or 18B	4.55	3.18
MSRT-251	53-60	50	220	2 x 4 1/8	MSRT or 18B	5.19	3.63



TYPE MSTT

Supplied with cardboard insulating container (not shown). Former AEROVOX designation Fig. 15A.

220 VOLTS A.C.—SQUARE DRAWN CANS TYPE MSQT—3 1/2" x 3 1/2" with Cardboard Insulating Container

MSQT-215	26-30	25	220	3 1/2 x 3 1/2 x 2	MSQT or 12	\$4.55	\$3.18
MSQT-253	32-36	30	220	3 1/2 x 3 1/2 x 2	MSQT or 12	5.31	3.71
MSQT-254	43-48	40	220	3 1/2 x 3 1/2 x 2	MSQT or 12	6.07	4.24



Standard Universal Replacement Oil Capacitors

The following Universal Replacement Oil Capacitors are arranged according to types of containers, and capacitance and voltage ratings. The listing is intended to simplify the selection of required capacitors when manufacturers' part numbers and Aerovox catalog numbers are not known. The required standard Aerovox capacitor may be determined from the information given below.

ROUND CAN—Type RR—1 3/8", 2", 2 1/2" and 3" Containers

Aerovox Cat. No.	CAPACITY MFDS.	A.C. Volts	DIMENSIONS D.H. or L.W.D.	Figure	List Price	Net Price
220 VOLTS A.C.						
RR-673	1	220	1 3/8 x 2 3/4	RR or 25	\$ 3.79	\$2.65
RR-661	2	220	1 3/8 x 3 3/4	RR or 25	4.67	3.26
RR-698	3	220	2 x 3 3/4	RR or 25	5.06	3.54
RR-638	4	220	2 x 3 3/4	RR or 25	5.62	3.93
RR-717	5	220	2 x 4 1/4	RR or 25	6.14	4.29
RR-636	6	220	2 x 5 1/4	RR or 25	6.83	4.78
RR-634	8	220	2 1/2 x 4 1/4	RR or 25	7.59	5.31
RR-637	10	220	2 1/2 x 4 3/4	RR or 25	8.66	6.06
RR-635	12	220	2 1/2 x 5 1/4	RR or 25	9.87	6.90
RR-753	15	220	3 x 4 3/4	RR or 25	12.53	8.77
RR-758	18	220	3 x 5 1/4	RR or 25	15.19	10.63



TYPE RR

Former AEROVOX designation Fig. 25.

330 VOLTS A.C.						
RR-639	1	330	1 3/8 x 2 3/4	RR or 25	\$ 4.17	\$ 2.91
RR-658	2	330	2 x 2 1/2	RR or 25	5.19	3.63
RR-640	2	330	2 x 3 1/4	RR or 25	5.19	3.63
RR-641	3	330	2 x 3 3/4	RR or 25	5.66	3.89
RR-642	4	330	2 x 4 1/4	RR or 25	6.19	4.33
RR-643	5	330	2 x 5 1/4	RR or 25	6.77	4.73
RR-644	6	330	2 1/2 x 4 1/4	RR or 25	7.52	5.26
RR-767	8	330	2 1/2 x 5 1/4	RR or 25	8.35	5.84
RR-768	10	330	3 x 4 3/4	RR or 25	9.51	6.67
RR-769	12	330	3 x 5 1/4	RR or 25	10.88	7.61
RR-770	15	330	3 x 5 3/4	RR or 25	13.79	9.65



TYPE RT

Former AEROVOX designation Fig. 21.

440 VOLTS A.C.						
RR-645	1	440	2 x 3 1/2	RR or 25	\$ 4.61	\$ 3.22
RR-646	2	440	2 x 4 1/4	RR or 25	5.75	4.02
RR-647	3	440	2 1/2 x 3 3/4	RR or 25	6.14	4.29
RR-648	4	440	2 1/2 x 4 3/4	RR or 25	6.83	4.78
RR-722	5	440	2 1/2 x 5 1/4	RR or 25	7.46	5.22
RR-738	8	440	3 x 5 3/4	RR or 25	9.23	6.46

660 VOLTS A.C.						
RR-671	1	660	2 x 4 3/4	RR or 25	\$ 5.12	\$ 3.58
RR-693	2	660	2 1/2 x 5 1/4	RR or 25	6.38	4.46

DRAWN CONTAINER—Type RT—3 3/8" Square (Terminals on Side)

220 VOLTS A.C.						
RT-700	3	220	3 3/8 x 3 3/8 x 1 1/4	RT or 21	\$ 5.06	3.54
RT-719	5	220	3 3/8 x 3 3/8 x 1 1/2	RT or 21	6.14	4.29
RT-727	6	220	3 3/8 x 3 3/8 x 1 3/4	RT or 21	6.83	4.78
RT-736	8	220	3 3/8 x 3 3/8 x 2 1/4	RT or 21	7.59	5.31

330 VOLTS A.C.						
RT-688	2	330	3 3/8 x 3 3/8 x 1 1/4	RT or 21	\$ 5.19	\$ 3.63
RT-712	4	330	3 3/8 x 3 3/8 x 1 3/4	RT or 21	6.19	4.3
RT-730	6	330	3 3/8 x 3 3/8 x 2 1/4	RT or 21	7.52	5.26

440 VOLTS A.C.						
RT-691	2	440	3 3/8 x 3 3/8 x 1 1/2	RT or 21	\$ 5.75	\$ 4.02
RT-705	3	440	3 3/8 x 3 3/8 x 2	RT or 21	6.14	4.29

660 VOLTS A.C.						
RT-627	1	660	3 3/8 x 3 3/8 x 1 1/2	RT or 21	\$ 5.12	\$ 3.58

DRAWN CONTAINER—Type RD—3 3/8" Square (Terminals on Bottom)

220 VOLTS A.C.						
RD-675	1	220	3 3/8 x 3 3/8 x 1 1/4	RD or 22	\$ 3.79	\$ 2.65
RD-685	2	220	3 3/8 x 3 3/8 x 1 1/2	RD or 22	4.67	3.26

330 VOLTS A.C.						
RD-677	1	330	3 3/8 x 3 3/8 x 5/8	RD or 22	\$ 4.17	\$ 2.91
RD-522	2	330	3 3/8 x 3 3/8 x 1	RD or 22	5.19	3.63
RD-525	5	330	3 3/8 x 3 3/8 x 2 1/4	RD or 22	6.77	4.73

440 VOLTS A.C.						
RD-680	1	440	3 3/8 x 3 3/8 x 1 1/2	RD or 22	\$ 4.61	\$ 3.22



TYPE RD

Former AEROVOX designation Fig. 22.



Standard Universal Replacement Oil Capacitors

The following Universal Replacement Oil Capacitors are arranged according to types of containers, and capacitance and voltage ratings. The listing is intended to simplify the selection of required capacitors when manufacturers' part numbers and Aerovox catalog numbers are not known. The required standard Aerovox capacitor may be determined from the information given below.

DRAWN CONTAINER—Type RS—4 3/8" Square (Terminals on Side)							
Aerovox Cat. No.	CAPACITY MFDS.	A.C. Volts	DIMENSIONS D.H. or L.W.D.	Figure	List Price	Net Price	
220 VOLTS A.C.							
RS-728	6	220	4 3/8 x 4 3/8 x 1 1/8	RS or 23	\$ 6.83	\$ 4.78	
RS-743	10	220	4 3/8 x 4 3/8 x 1 1/8	RS or 23	8.66	6.06	
RS-749	12	220	4 3/8 x 4 3/8 x 1 1/8	RS or 23	9.87	6.90	
RS-659	15	220	4 3/8 x 4 3/8 x 1 1/8	RS or 23	12.53	8.77	
RS-757	16	220	4 3/8 x 4 3/8 x 2	RS or 23	13.79	9.65	
330 VOLTS A.C.							
RS-529	4	330	4 3/8 x 4 3/8 x 1 1/8	RS or 23	\$ 6.19	\$ 4.33	
RS-530	5	330	4 3/8 x 4 3/8 x 1 1/8	RS or 23	6.77	4.73	
RS-745	10	330	4 3/8 x 4 3/8 x 2 1/2	RS or 23	9.54	6.67	
440 VOLTS A.C.							
RS-714	4	440	4 3/8 x 4 3/8 x 1 1/8	RS or 23	\$ 6.83	\$ 4.78	
RS-732	6	440	4 3/8 x 4 3/8 x 2 1/8	RS or 23	8.28	5.79	
660 VOLTS A.C.							
RS-681	1	660	4 3/8 x 4 3/8 x 1 1/8	RS or 23	\$ 5.12	\$ 3.58	
RS-695	2	660	4 3/8 x 4 3/8 x 1 1/8	RS or 23	6.38	4.46	
DRAWN CONTAINER—Type RB, 4 3/8" Square (Terminals on Bottom)							
220 VOLTS A.C.							
RB-686	2	220	4 3/8 x 4 3/8 x 7/8	RB or 24	\$ 4.67	\$ 3.26	
RB-701	3	220	4 3/8 x 4 3/8 x 7/8	RB or 24	5.06	3.54	
RB-711	4	220	4 3/8 x 4 3/8 x 7/8	RB or 24	5.62	3.93	
RB-720	5	220	4 3/8 x 4 3/8 x 7/8	RB or 24	6.14	4.29	
330 VOLTS A.C.							
RB-689	2	330	4 3/8 x 4 3/8 x 5/8	RB or 24	\$ 5.19	\$ 3.63	
RB-703	3	330	4 3/8 x 4 3/8 x 5/8	RB or 24	5.56	3.89	
440 VOLTS A.C.							
RB-679	1	440	4 3/8 x 4 3/8 x 1 1/8	RB or 24	\$ 4.61	\$ 3.22	
RB-692	2	440	4 3/8 x 4 3/8 x 1 1/8	RB or 24	5.75	4.02	
660 VOLTS A.C.							
RB-707	3	660	4 3/8 x 4 3/8 x 2 1/4	RB or 24	\$ 7.39	\$ 5.17	
RECTANGULAR CASE—Type RY							
220 VOLTS A.C.							
RY-674	1	220	2 x 1 1/2 x 1 1/2	RY or 28	\$ 3.79	\$ 2.65	
RY-684	2	220	3 1/4 x 1 1/2 x 1 1/2	RY or 28	4.67	3.26	
RY-699	3	220	3 7/8 x 1 1/2 x 1 1/2	RY or 28	5.06	3.54	
RY-710	4	220	3 1/4 x 2 1/2 x 1 1/2	RY or 28	5.62	3.93	
RY-718	5	220	3 7/8 x 2 1/2 x 1 1/2	RY or 28	6.14	4.29	
RY-726	6	220	4 5/8 x 2 1/2 x 1 1/2	RY or 28	6.83	4.78	
RY-735	8	220	3 7/8 x 3 3/4 x 1 1/4	RY or 28	7.59	5.31	
RY-742	10	220	4 5/8 x 3 3/4 x 1 1/4	RY or 28	8.66	6.06	
RY-748	12	220	4 1/4 x 3 3/4 x 1 3/4	RY or 28	9.87	6.90	
RY-754	15	220	5 1/8 x 3 3/4 x 1 3/4	RY or 28	12.53	8.77	
RY-759	20	220	5 1/8 x 3 3/4 x 2 1/2	RY or 28	16.39	11.47	
RY-763	25	220	5 1/8 x 3 3/4 x 3 1/2	RY or 28	19.62	13.73	
RY-766	30	220	3 3/4 x 3 3/4 x 4 1/2	RY or 28	22.78	15.94	
330 VOLTS A.C.							
RY-663	1	330	2 1/4 x 1 1/2 x 1 1/2	RY or 28	\$ 4.17	\$ 2.91	
RY-664	2	330	3 7/8 x 1 1/2 x 1 1/2	RY or 28	5.19	3.63	
RY-665	3	330	3 1/2 x 2 1/2 x 1 1/2	RY or 28	5.56	3.89	
RY-666	4	330	4 5/8 x 2 1/2 x 1 1/2	RY or 28	6.19	4.33	
RY-667	5	330	3 7/8 x 3 3/4 x 1 1/4	RY or 28	6.77	4.73	
RY-668	6	330	4 1/8 x 3 3/4 x 1 1/4	RY or 28	7.52	5.26	
RY-669	8	330	3 7/8 x 3 3/4 x 1 3/4	RY or 28	8.35	5.84	
RY-670	10	330	4 5/8 x 3 3/4 x 1 3/4	RY or 28	9.54	6.67	
RY-751	12	330	4 5/8 x 3 3/4 x 2 1/4	RY or 28	10.88	7.61	
RY-755	15	330	4 1/8 x 3 3/4 x 3 1/2	RY or 28	13.79	9.65	
RY-760	20	330	4 5/8 x 3 3/4 x 4 1/2	RY or 28	18.23	12.76	
RY-764	25	330	4 5/8 x 3 3/4 x 4 1/2	RY or 28	22.78	15.94	
440 VOLTS A.C.							
RY-678	1	440	3 7/8 x 1 1/2 x 1 1/2	RY or 28	\$ 4.61	\$ 3.22	
RY-690	2	440	4 1/8 x 2 1/2 x 1 1/2	RY or 28	5.75	4.02	
RY-704	3	440	3 1/2 x 3 3/4 x 1 1/4	RY or 28	6.14	4.29	
RY-713	4	440	3 1/2 x 3 3/4 x 1 3/4	RY or 28	6.83	4.78	
RY-723	5	440	4 1/2 x 3 3/4 x 1 3/4	RY or 28	7.46	5.22	
RY-731	6	440	4 1/2 x 3 3/4 x 1 3/4	RY or 28	8.28	5.79	
RY-739	8	440	3 1/2 x 3 3/4 x 2 1/4	RY or 28	9.23	6.46	
RY-746	10	440	4 5/8 x 3 3/4 x 2 1/2	RY or 28	10.50	7.35	
RY-752	12	440	4 5/8 x 3 3/4 x 3 1/2	RY or 28	12.50	8.40	
RY-756	15	440	4 5/8 x 3 3/4 x 4 1/2	RY or 28	15.31	10.71	
RY-761	20	440	6 x 3 3/4 x 4 1/2	RY or 28	20.05	14.03	
660 VOLTS A.C.							
RY-694	2	660	4 3/4 x 3 3/4 x 1 3/4	RY or 28	\$ 6.38	\$ 4.46	
RY-706	3	660	4 5/8 x 3 3/4 x 2 1/4	RY or 28	7.39	5.17	
RY-715	4	660	4 x 3 3/4 x 4 1/8	RY or 28	8.22	5.75	
RY-724	5	660	4 5/8 x 3 3/4 x 3 1/2	RY or 28	8.98	6.28	
RY-733	6	660	5 1/8 x 3 3/4 x 3 1/2	RY or 28	9.92	6.94	
RY-740	8	660	5 3/8 x 3 3/4 x 4 1/8	RY or 28	10.56	7.39	
RY-747	10	660	6 x 3 3/4 x 4 1/8	RY or 28	12.65	8.85	



TYPE RS
Former AEROVOX designation Fig. 23.



TYPE RB
Former AEROVOX designation Fig. 24.



TYPE RY
Former AEROVOX designation Fig. 28.



Standard Universal Replacement Oil Capacitors

The following Universal Replacement Oil Capacitors are arranged according to types of containers, and capacitance and voltage ratings. The listing is intended to simplify the selection of required capacitors when manufacturers' part numbers and Aerovox catalog numbers are not known. The required standard Aerovox capacitor may be determined from the information given below.

RECTANGULAR CASE—Type RF—4 7/8" x 3 1/8" (Terminals on Cover)

Aerovox Cat. No.	CAPACITY MFDS.	A.C. Volts	DIMENSIONS D.H. or L.W.D.	Figure	List Price	Net Price
220 VOLTS A.C.						
RF-676	1	220	4 7/8 x 3 1/8 x 7/8	RF or 20	\$ 3.79	\$ 2.65
RF-687	2	220	4 7/8 x 3 1/8 x 1 1/8	RF or 20	4.67	3.26
RF-702	3	220	4 7/8 x 3 1/8 x 1 1/4	RF or 20	5.06	3.54
RF-662	4	220	4 7/8 x 3 1/8 x 1 3/8	RF or 20	5.62	3.93
RF-721	5	220	4 7/8 x 3 1/8 x 1 1/2	RF or 20	6.14	4.29
RF-729	6	220	4 7/8 x 3 1/8 x 1 5/8	RF or 20	6.83	4.78
RF-737	8	220	4 7/8 x 3 1/8 x 1 7/8	RF or 20	7.59	5.31
RF-744	10	220	4 7/8 x 3 1/8 x 2 1/8	RF or 20	8.66	6.06
RF-750	12	220	4 7/8 x 3 1/8 x 2 3/8	RF or 20	9.87	6.90
RF-660	20	220	4 7/8 x 3 1/8 x 3 3/8	RF or 20	16.39	11.47
RF-657	30	220	4 7/8 x 3 1/8 x 4 5/8	RF or 20	22.78	15.94



TYPE RF
Former AEROVOX designation Fig. 20.

330 VOLTS A.C.

RF-508	1	330	4 7/8 x 3 1/8 x 1	RF or 20	\$ 4.17	\$ 2.91
RF-509	2	330	4 7/8 x 3 1/8 x 1 1/8	RF or 20	5.19	3.63
RF-510	3	330	4 7/8 x 3 1/8 x 1 1/4	RF or 20	5.56	3.89
RF-511	4	330	4 7/8 x 3 1/8 x 1 1/2	RF or 20	6.19	4.33
RF-649	5	330	4 7/8 x 3 1/8 x 1 3/4	RF or 20	6.77	4.73
RF-512	6	330	4 7/8 x 3 1/8 x 1 7/8	RF or 20	7.52	5.26
RF-513	8	330	4 7/8 x 3 1/8 x 2 1/4	RF or 20	8.35	5.84
RF-561	10	330	4 7/8 x 3 1/8 x 2 5/8	RF or 20	9.54	6.67
RF-562	12	330	4 7/8 x 3 1/8 x 3	RF or 20	10.88	7.61
RF-563	14	330	4 7/8 x 3 1/8 x 3 3/8	RF or 20	12.65	8.85
RF-564	16	330	4 7/8 x 3 1/8 x 4 1/4	RF or 20	15.19	10.63
RF-620	20	330	4 7/8 x 3 1/8 x 4 1/2	RF or 20	18.23	12.76
RF-765	25	330	4 7/8 x 3 1/8 x 5 1/2	RF or 20	22.78	15.94

440 VOLTS A.C.

RF-650	1	440	4 7/8 x 3 1/8 x 1	RF or 20	\$ 4.61	\$ 3.22
RF-586	2	440	4 7/8 x 3 1/8 x 1 1/8	RF or 20	5.75	4.02
RF-584	3	440	4 7/8 x 3 1/8 x 1 3/8	RF or 20	6.14	4.29
RF-652	4	440	4 7/8 x 3 1/8 x 1 1/2	RF or 20	6.83	4.78
RF-653	5	440	4 7/8 x 3 1/8 x 1 3/4	RF or 20	7.46	5.22
RF-654	6	440	4 7/8 x 3 1/8 x 1 7/8	RF or 20	8.28	5.79
RF-655	8	440	4 7/8 x 3 1/8 x 2 1/4	RF or 20	9.23	6.46
RF-600	10	440	4 7/8 x 3 1/8 x 2 5/8	RF or 20	10.50	7.35
RF-599	12	440	4 7/8 x 3 1/8 x 3 1/4	RF or 20	12.01	8.40
RF-762	20	440	4 7/8 x 3 1/8 x 4 1/2	RF or 20	20.05	14.03



TYPE RK
Former AEROVOX designation Fig. 29.

660 VOLTS A.C.

RF-672	1	660	4 7/8 x 3 1/8 x 1 1/2	RF or 20	\$ 5.12	\$ 3.58
RF-696	2	660	4 7/8 x 3 1/8 x 2 1/4	RF or 20	6.38	4.46
RF-708	3	660	4 7/8 x 3 1/8 x 3	RF or 20	7.39	5.17
RF-716	4	660	4 7/8 x 3 1/8 x 3 3/4	RF or 20	8.22	5.75
RF-725	5	660	4 7/8 x 3 1/8 x 4 1/2	RF or 20	8.98	6.28
RF-734	6	660	4 7/8 x 3 1/8 x 5 1/4	RF or 20	9.92	6.94
RF-741	8	660	4 7/8 x 3 1/8 x 6 3/4	RF or 20	10.56	7.39

RECTANGULAR CASE—TYPE RK—4 7/8" x 3 1/8" (Terminals on Side) 330 VOLTS A.C.

RK-612	3	330	4 7/8 x 3 1/8 x 1 1/2	RK or 29	\$ 5.56	\$ 3.89
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660 VOLTS A.C.

RK-548	1	660	4 7/8 x 3 1/8 x 1 1/2	RK or 29	\$ 5.12	\$ 3.58
RK-549	2	660	4 7/8 x 3 1/8 x 2 1/4	RK or 29	6.38	4.46
RK-550	3	660	4 7/8 x 3 1/8 x 3	RK or 29	7.39	5.17
RK-551	4	660	4 7/8 x 3 1/8 x 3 3/4	RK or 29	8.22	5.75
RK-552	5	660	4 7/8 x 3 1/8 x 4 1/2	RK or 29	8.98	6.28
RK-553	6	660	4 7/8 x 3 1/8 x 5 1/4	RK or 29	9.92	6.94



Special-duty Capacitors

IF IT'S MARKED "AEROVOX" IT'S A QUALITY CAPACITOR

P. S.

● This is a postscript. This page contains several new Aerovox products recently introduced and not as yet cataloged. These special-duty capacitors are of particular interest to advanced radio workers, builders of special equipment, experimenters and engineers.

Other new products are being announced from

time to time. Aerovox engineering is keeping abreast of the rapid advances of the radio-electronic art. Therefore, if you do not see what you need in these pages, tell us about your unusual needs. Aerovox either has a type already developed and in production, or will consider an entirely new type if warranted by the anticipated demand.

LOW-INDUCTANCE MICA CAPACITOR

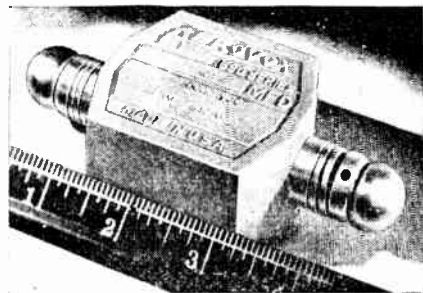
AEROVOX SERIES 1699 is a molded-in-bakelite mica capacitor designed for exceptionally low loss operation at ultra high frequencies. External evidence of its efficiency is offered by the rounded hardware—round nuts, round washers and spherical lock nuts eliminating sharp edges and corners that cause corona losses. The use of fine threads for the terminal studs insures maximum contact and minimum i.f. resistance. Silver plating of all conducting members minimizes skin resistance. The body is of XM or yellow low loss bakelite. Internally, the mica stack is designed for a straight-line path for high frequencies.

This type is several times larger than the conventional molded-in-bakelite transmitting

micas. Body dimensions are 2 3/8" wide x 2 3/16" deep x 1 3/8" high, and 1 3/4" overall between rounded terminal tips.

Units are available in ratings up to 20,000 volts P.C. Test or 10,000 volt operating, and in capacitance values up to .001 mfd. at the highest voltage rating.

This type has been developed specifically for lower i.f. resistance and impedance, thereby providing increased KVA ratings for given size. Such units can be advantageously applied as blocking capacitors in transmission lines, as tank capacitors for high frequency oscillators, as by-pass capacitors for ultra high frequency energy, and as coupling or by-pass capacitors in induction heating circuits.



WATER-COOLED MICA CAPACITOR

AEROVOX SERIES 1780, water-cooled mica capacitor is available for extra heavy duty service, such as high-power transmitters and induction furnaces. The water-cooling feature boosts the KVA rating by a factor of five or more, or conversely, greatly reduces the bulk for given rating.

The higher KVA ratings are obtained in two ways: First, by a structural design such as critical arrangement and location of mica sections; critical selection of materials; specially-plated parts; large cross-section of conductors; attention to details. Second, by the use of a water-cooling system so designed as to provide maximum heat transfer from capacitor to cooling coils.

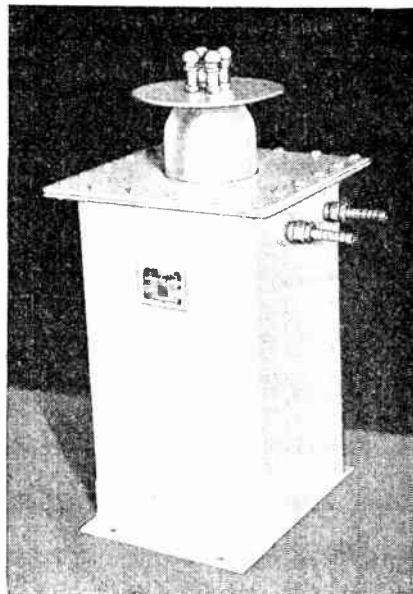
The mica stacks are mounted both. Cooling coils in the oil bath provide for the efficient transfer of heat. When this cooling system means may be judged from the fact that a unit handling 200 KVA for

air-cooled operations steps up to 1000 KVA with water-cooling.

The series-parallel mica stack is designed for uniform current distribution throughout. There is a large factor of safety. Silver-plated hardware minimizes skin resistance. Terminals are furnished with large radii of curvature to minimize and even eliminate corona. The ceramic insulator is shaped to hold gradients below corona limits.

Heavy non-ferrous welded metal case, hermetically sealed and grounded. Side-mounted nipples for connecting water-cooling hose. Sturdy mounting flanges. Provisions for making connections with high current-capacity conductors. Four-lead terminal for low-loss connections.

Available in ratings up to 25,000 V R.S. A.C. Test, and in capacitances up to .01 mfd.



ULTRA-HIGH-FREQUENCY CAPACITORS

AEROVOX SERIES 1860 and 1865 are engineered and especially recommended for use in ultra-high-frequency radio equipment such as television and FM transmitter, as well as other miscellaneous applications in the i.f. field. In such applications they are readily adaptable for use as fixed-tuning capacitors, by-pass, blocking, coupling, neutralizing and antenna-coupling capacitors.

Losses are extremely low, due to the highly refined sulphur dielectric. Corona losses are avoided by the unique construction design, the grounded case and the terminal on each type.

Series 1860 (not illustrated) is the smaller unit in an aluminum can, intended more for the radio amateur and experimenter, and for low-cost assemblies. It has a suitably plated brass terminal mounted on a mica insulating plate. Available in four types: .0001 mfd., 10,000 v.; .000025 mfd., 10,000 v.; .00005, 5000 v.; .00005, 10,000 v. Voltage is Peak Working Volts.

Series 1865 (illustrated) is the larger unit, in a cast aluminum case with ceramic insulator supporting the higher-voltage terminal. Available in capacitances from .00002 to .000125 mfd., at 10,000 v.



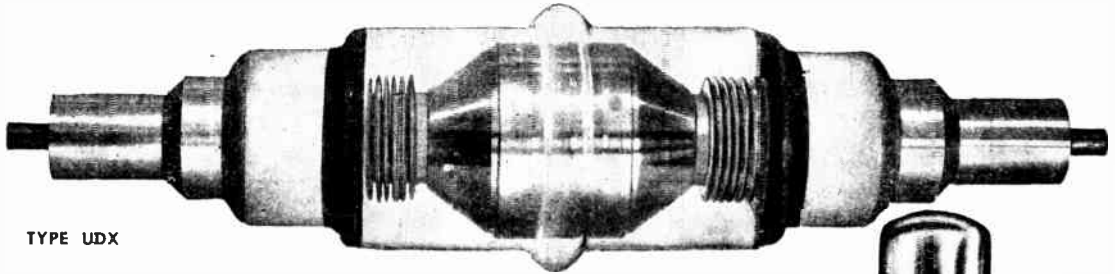
Jennings RADIO

VACUUM ELECTRONIC COMPONENTS

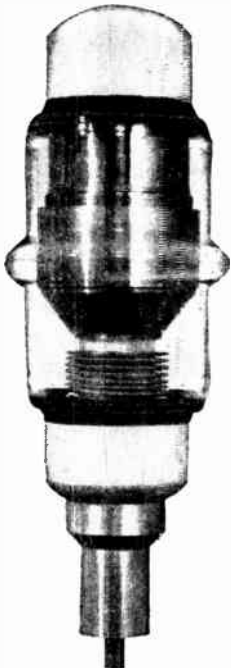
FIXED and VARIABLE HIGH VOLTAGE VACUUM CAPACITORS

Special Characteristics on a to-order basis

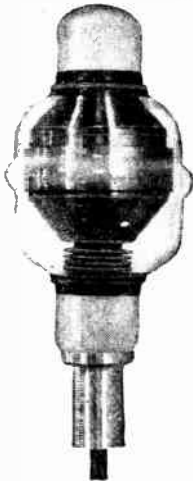
WATCH JENNINGS FOR NEW DEVELOPMENTS IN THE FIELD OF SPECIALIZED VACUUM ELECTRONIC COMPONENTS



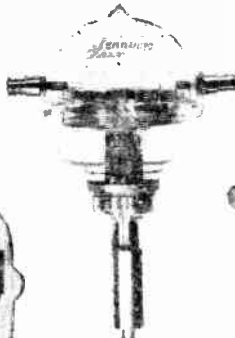
TYPE UDX



TYPE UX
TYPE UXH



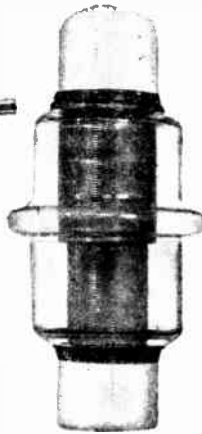
TYPE U
TYPE UH



TYPE S



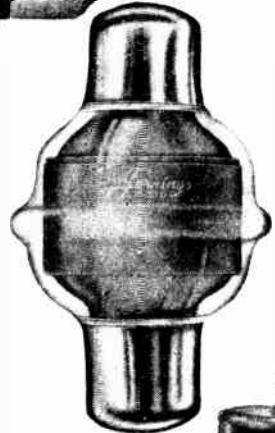
TYPE AT



TYPE JC-3



TYPE JC-2



TYPE M
TYPE MH



TYPE T



TYPE Y



TYPE VC 250
TYPE VC 50

Write for
Bulletin E

VACUUM VARIABLE CAPACITORS

TYPE UDX

Capacity Range, mmfd. Max. 825, Min. 30
Peak Volts, 10KV, L. 19 3/4", D. 4 3/4"

TYPE UX

Capacity Range, mmfd. Max. 560, Min. 40
Peak Volts, 10KV, L. 14 3/16", D. 4 3/4"
(available in 15KV)

TYPE UHX

Capacity Range, mmfd. Max. 150, Min. 25
Peak Volts, 35KV, L. 14 3/4", D. 4 3/4"

TYPE U

Capacity Range, mmfd. Max. 250, Min. 50
Peak Volts, 10KV (available in 15KV)
L. 11 1/4", D. 4 3/4"

TYPE UH

Capacity Range, mmfd. Max. 75, Min. 10
and Max. 150, Min. 75
Peak Volts, 35KV, Dims. same as Type U

TYPE AT

Capacity Range, mmfd. Max. 50, Min. 10
Peak Volts, 10KV and 20KV,
L. 6-9/16", D. 3"

TYPE T

Capacity Range, mmfd. Max. 25, Min. 5
Peak Volts, 10KV and 20KV,
L. 6 3/4", D. 2 3/4"

TYPE TR (Not illustrated)

Capacity Range
mmfd. Max. 7 1/2", Min. 1 1/2"
Dimensions same as Type T

TYPE S (SPLIT STATOR)

Capacity Range per section
mmfd. Max. 30, Min. 10
Peak Volts, 7 1/2 KV per sec.
L. 6 3/4", D. 3"

VACUUM FIXED CAPACITORS

- TUNGSTEN LEADS

TYPE VC-250

Capacities available, mmfd. 200 & 250
Peak Volts, 10 & 20KV, L. 6 1/2", D. 2 3/4"

TYPE VC-50

Capacities available, mmfd. 6 thru 150
Peak Volts, 10, 20, 30KV, L. 6 1/2", D. 2 3/4"

TYPE K (Not illustrated)

Capacity available, mmfd. 50
Peak Volts, 35KV to 50KV,
L. 8 1/2", D. 3"

TYPE W—WALNUT (Not illus.)

Capacities available, mmfd. 6 thru 150
Peak Volts, 10KV, and 20KV
L. 4-3/16", D. 2-5/16"

TYPE X—PEANUT (Not illustrated)

Capacities available, mmfd. 5 thru 25
Peak Volts, 17KV, L. 3 1/4", D. 1-5/16"

TYPE Y—PINENUT

Capacities available, mmfd. 1 thru 5
Peak Volts, 17KV, L. 3-5/16", D. 7/8"

COPPER ANODE

VACUUM FIXED CAPACITORS

(May be internally water or air cooled)

TYPE M—COCONUT

Capacities available,
mmfd. 500, 750 or 1,000
Peak Volts, 10 & 15KV, L. 8 3/4", D. 5"

TYPE MH—COCONUT

Capacities available up to 200 mmfd.
Peak Volts, 35KV,
Dimensions same as Type M

VACUUM FIXED CAPACITORS

HIGH AMPERAGE TYPE

(Constructed entirely of Copper)

TYPE J.C.—1 (Not illustrated)

Capacities available thru 25 mmfd.
Peak Amp. 30, L. 3 3/4", D. 1 1/4"

TYPE J.C.—2

Capacities available thru 100 mmfd.
Peak Amp. 40, L. 3 3/4", D. 3"

Higher voltage available

TYPE J.C.—3

Capacities available thru 50 mmfd.
Peak 35KV, 150 Amp., L. 8 1/2", D. 4"

(Forced draft cooling available)

TYPE J.C.—4

Capacities available thru 100 mmfd.
Peak 35KV, 150 Amp., L. 8 1/2", D. 5"

Current 200 Amp.

JENNINGS RADIO MANUFACTURING COMPANY

Thank You!

When writing for additional
information or when ordering
from sources of supply listed
in this book, please mention

RADIO'S MASTER



ATLAS RESISTORS



Atlas Wire Wound Resistors with Pig-Tails & Lugs

5 AND 10 WATT RATINGS



- MOISTURE PROOF
- TRIPLE INSULATION
- TOLERANCE WITHIN 5%
- 64 STANDARD OHMAGES

5 WATTS—TYPE 1PT—1 1/4" x 5/16"			10 WATT—TYPE 2PT—1 3/4" x 3/8"		
List \$0.35	Ohms	Ohms	List \$0.40	Ohms	Ohms
Ohms	450	3,500	Ohms	600	6,000
5	500	4,000	5	700	7,000
10	600	4,500	10	750	7,500
15	700	5,000	15	800	8,000
20	750	6,000	20	850	8,500
25	800	7,000	25	900	9,000
30	850	7,500	30	1,000	10,000
35	900	8,000	40	1,100	
40	1,000	8,500	50	1,200	List \$0.45
50	1,100	9,000	75	1,250	12,500
75	1,200	10,000	100	1,350	14,000
100	1,250		125	1,400	15,000
125	1,350	List \$0.40	150	1,500	17,500
150	1,400	12,500	175	1,750	20,000
175	1,500	14,000	200	2,000	22,500
200	1,750	15,000	225	2,250	25,000
225	2,000	17,500	250	2,500	
250	2,250	20,000	275	2,750	List \$0.50
275	2,500	22,500	300	3,000	30,000
300	2,750	25,000	350	3,500	35,000
350	3,000		400	4,000	40,000
400			450	4,500	45,000
			500	5,000	50,000

ATLAS HEAVY-DUTY IRON-OXIDE COATED NON-INDUCTIVE TRANSMITTING BLEEDER RESISTORS WITH CENTER TAP

4 or 8 Sections

Ruggedly built, accurately made and procurable in a practical non-inductive winding. Atlas high voltage bleeder resistors are designed to improve the performance of your transmitter by functioning quietly and effectively.

A most important feature found only in Atlas heavy duty bleeder resistors is the non-inductive winding. Each side of the center tap has two to four oppositely wound sections of equal resistance. Therefore should only one section be used, that section will be purely non-inductive as well.



Used for Grid Leaks as Well as for Bleeders by
AMATEUR SHORT-WAVE AND BROADCAST STATIONS
Specify whether you want Inductive or Non-Inductive Bleeders
EQUIPPED WITH HEAVY MOUNTING BRACKETS

100 WATTS—Size 8" x 15/16"			
Type	Ohmage	Resistance	List
IF	5000	2500-0-2500	\$1.95
IFA	10000	5000-0-5000	1.95
IFB	15000	7500-0-7500	2.20
IFC	20000	10000-0-10000	2.20
IFD	30000	15000-0-15000	2.20
IFE	40000	20000-0-20000	2.50
IFF	50000	25000-0-25000	2.50
IFG	100000	50000-0-50000	2.50

150 WATTS—Size 9 1/2" x 1"			
Type	Ohmage	Resistance	List
IG	5000	2500-0-2500	\$2.20
IGA	10000	5000-0-5000	2.20
IGB	20000	10000-0-10000	2.20
IGC	50000	25000-0-25000	2.45
IGD	100000	50000-0-50000	2.90

200 WATTS Size 11" x 1 1/8"			
Type	Ohmage	Resistance	List
IH	5000	2500-0-2500	2.50
IHA	10000	5000-0-5000	2.50
IHB	15000	7500-0-7500	2.50
IHC	20000	10000-0-10000	2.50
IHD	30000	15000-0-15000	2.50
IHE	40000	20000-0-20000	2.70
IHF	50000	25000-0-25000	2.70
IHG	100000	50000-0-50000	3.10

Add 40c for Non-Inductive

CLAROSTAT



SERIES "T" TAPPED CONTROLS

(Formerly Series TCP)

With the Original Ad-A-Switch Feature

★ There are many circuits in which the use of a tapped control affords special functional operation not possible or attainable with any other type of control. These standard units listed herewith permit replacement of tapped units with the assurance that the total overall resistance value as well as the taps satisfactorily substitute for the original.

Cat. No.	Ohms	Tap No. 1	Tap No. 2	Tap No. 3	Cat. No.	Ohms	Tap No. 1	Tap No. 2	Tap No. 3
T-25	50,000		25,000		T-103	1,000,000		100,000	
T-38	200,000			100,000	T-109	1,000,000		225,000	
T-39	250,000		25,000		T-110	1,000,000		170,000	
T-42	250,000		125,000		T-111	1,000,000			200,000
T-43	250,000			50,000	T-112	1,000,000		500,000	
T-44	250,000	60,000			T-95	1,500,000	250,000	at 25% Rotation	500,000
T-45	250,000	30,000	60,000	125,000	T-125	1,500,000		350,000	
T-60	350,000		25,000		T-114	2,000,000		100,000	
T-69	350,000	75,000			T-115	2,000,000		500,000	
T-70	350,000		75,000		T-116	2,000,000		1,000,000	
T-78	500,000		100,000		T-118	2,000,000	20,000		
T-80	500,000			100,000	T-119	2,000,000		200,000	
T-81	500,000	25,000			T-120	2,000,000		400,000	
T-82	500,000			200,000	T-121	2,000,000	250,000		500,000
T-88	500,000		50,000		T-124	2,000,000	5,000	at 25% Rotation	
T-90	500,000		250,000		T-126	2,000,000	200,000		400,000
T-92	500,000	160,000		300,000	T-129	2,000,000		15,000	
T-98	1,000,000	250,000			T-123	2,500,000	250,000		500,000
T-101	1,000,000		50,000		T-128	1,000,000		500,000	
T-102	1,000,000	100,000		500,000					

LIST PRICE \$1.85 (Without Switch)
Standard Packing — 10 (ten) per carton

SERIES "M" COMPOSITION-ELEMENT CONTROLS

★ Compactness—yet without sacrificing operating efficiency and long service life. Only 1 1/8" dia. by 1 1/2" deep (with switch, 7/8" deep).

Utilizes the exclusive Clarostat stabilized element, insuring the control's constancy in all weather and in all climates. Many years of painstaking research and experience are incorporated into the design of Clarostat Series "M" controls, assuring the user of the best results at all times.

The original Clarostat "Ad-A-Switch" feature makes it possible to adapt any of the Series "A" switches quickly to any of the "M" controls. Furthermore, for high-voltage television, oscillograph or other electronic circuits, the new Clarostat Series 55-110 High-Voltage Coupling Unit can be attached to all Clarostat controls (illustrated below) to assure safety at elevated voltages. The cost of this added feature is quite moderate. High-voltage couplers are installed at factory only. List price 3000v. \$1.25; 10000 v. \$1.85.



Cat. No.	Ohms	Curve	Suggested Use	Cat. No.	Ohms	Curve	Suggested Use
M-5-S	500	Z	Std. Pot.	M-45-W	50,000	W	Sc. Grid & Phono.
M-8-S	1000	Z	Std. Pot.	M-46-Z	50,000	Z	Auto Grid & Tone
M-11-S	2000	Z	Std. Pot.	M-47-S	75,000	S	Std. Pot.
M-15-S	3000	Z	Std. Pot.	M-48-V	75,000	V	C Bias Rheo.
M-19-S	5000	Z	Std. Pot.	M-49-S	100,000	S	Std. Pot.
M-20-U	5000	U	Ant. & C — tube	M-51-Z	100,000	Z	Audio & Tone
M-23-S	7500	Z	Std. Pot.	M-52-S	200,000	S	Std. Pot.
M-27-S	10,000	Z	Std. Pot.	M-55-S	250,000	S	Std. Pot.
M-29-U	10,000	U	Ant. & C — tube	M-64-Z	250,000	Z	Audio & Tone
M-30-V	10,000	V	C Bias Rheo.	M-58-S	500,000	S	Std. Pot.
M-31-W	10,000	W	Sc. Grid & Phono.	M-59-Y	500,000	Y	Audio Shunt
M-32-Z	10,000	Z	Ant. Shunt	M-60-Z	500,000	Z	Audio & Tone
M-33-U	15,000	U	Std. Pot.	M-79-Z	750,000	Z	Audio & Tone
M-34-V	15,000	V	Ant. & C — 1 tube	M-61-S	1,000,000	S	Std. Pot.
M-35-W	15,000	W	C Bias Rheo.	M-63-Z	1,000,000	Z	Audio & Tone
M-37-U	20,000	U	Sc. Grid & Phono.	M-66-Z	2,000,000	Z	Tone & AVC
M-40-S	25,000	S	Ant. & C — 1 tube	M-83-S	2,000,000	S	Audio & Tone
M-42-V	25,000	V	Std. Pot.	M-67-Z	3,000,000	Z	Tone & AVC
M-70-S	25,000	S	C Bias Rheo.	M-68-Z	4,000,000	Z	Tone & AVC
M-41-W	25,000	W	Sc. Grid & Phono.	M-69-Z	5,000,000	Z	Tone & AVC
M-44-S	50,000	S	Std. Pot.	M-99-Z	10,000,000	Z	Tone & AVC

LIST PRICE \$1.25
Standard Packing — 10 (ten) per carton



High-voltage coupler fitted to any Clarostat control at the factory, on special order.

THE ORIGINAL "AD-A-SWITCH" FEATURE FOR SERIES "M", "AM", "T" "AT" CONTROLS

Cat. No.	Wiring	List Price
SW-A	Single-Pole Single-Throw	\$0.60
SW-A1	Three-Way, No "OFF" position S.P.D.T.	.60
SW-A2	Double-Pole Single-Throw	.60
SW-A4	Four-wire (to control A, B and C voltages)	.60
SW-A5	S.P.S.T. (closes at full clockwise rotation)	.75
SW-A6	S.P.S.T. with dummy lug	.75

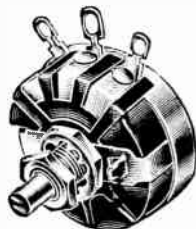


Ad-A-Switch is used in place of usual dust-protection cover, and lugs bent over to hold it in place.

CLAROSTAT

SERIES 58 WIRE-WOUND CONTROLS

★ Sturdy and reliable in construction yet capable of use for delicate control work. Series 58 Controls are without equal. Noiseless in operation, these units are standard equipment in laboratories, fine instruments, electronic equipment, and especially in the control rooms of radio stations and networks.



The switch is located to operate at extreme counter-clockwise rotation of the shaft. Moving element is insulated from mounting bushing and shaft, and is tested at 500 volts A.C. There is no danger of accidental shock or short-circuit.

Cat. No.	Resistance in Ohms	List Price	Cat. No.	Resistance in Ohms	List Price
58-1	1	\$1.25	58-500	500	1.25
58-2	2	1.25	58-750	750	1.25
58-4	4	1.25	58-1000	1000	1.25
58-6	6	1.25	58-2000	2000	1.25
58-10	10	1.25	58-3000	3000	1.25
58-15	15	1.25	58-5000	5000	1.25
58-20	20	1.25	58-7500	7500	1.25
58-25	25	1.25	58-10K	10,000	1.25
58-30	30	1.25	58-15K	15,000	1.25
58-40	40	1.25	58-20K	20,000	1.25
58-50	50	1.25	58-25K	25,000	1.60
58-60	60	1.25	58-30K	30,000	1.60
58-75	75	1.25	58-40K	40,000	1.60
58-100	100	1.25	58-50K	50,000	2.25
58-200	200	1.25	10-75K*	75,000	3.50
58-300	300	1.25	10-100K*	100,000	3.50
58-400	400	1.25			

If power switch is desired, the type of switch must be specified (See page R-4). Order as 58S and add to list the price of switch selected. The S.P.S.T. switch is supplied as standard where no type is specified. All switches are permanently fastened to the control at the factory.

Standard packing — 10 (ten) per carton.

* These units are 1" in depth and are the Clarostat Series 10.

Dual Series DC Controls

The Series DC controls are dual units — Two controls of the same resistance values and tapers, connected in tandem for joint operation.

Cat. No.	Panel Unit	Rear Unit
DC- 5-S	50,000-S	50,000-S
DC- 6-Z	100,000-Z	100,000-Z
DC- 8-Z	250,000-Z	250,000-Z
DC-10-Z	500,000-Z	500,000-Z
DC-11-Z	1,000,000-Z	1,000,000-Z
DC-23-S	10,000-S	50,000-S
DC-29-S	250,000-S	250,000-S
DC-34-S	10,000-S	25,000-S

LIST PRICE \$3.10

Standard packing—Individual carton

Rotary Switches

Compact, positive contact, bakelite molded Underwriter's approved. Rated 1 Amp. 250 volt., 3 Amp. 125 volt. The physical dimensions of the switch are as follows:

Diameter $1\frac{3}{32}$ ", body depth $\frac{9}{16}$ ", lug protrusion $\frac{1}{4}$ ", locking projection on a $\frac{1}{32}$ " radius, rotation for actuation 30 degrees.

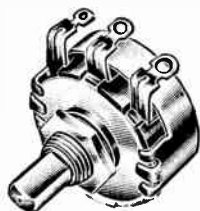
All standard stock numbers have $\frac{3}{8}$ " bushing, $1\frac{1}{2}$ " length shaft, and one locking projection.

Cat. No.	Switch Description	List Price
S590	Single pole Single Throw	\$0.60
S591	Single Pole Bushing Lug	.60
S592	Double Pole Single Throw	.75
S593	Single Pole Double Throw	.75
S594	Single Pole Reversed Action	.60
S595	Four Wire Single Throw	.75

Individual Packing 10 (ten) per carton.

SERIES 43 MIDGET WIRE-WOUND CONTROLS

★ A space-saving control of the wire-wound type. Similar in mechanical details and dimensions to the composition-element Series M control (page R-6). Precision-wound alloy wire on bakelite strip. Rotor sweeps over inside face of winding. Special lubricant for minimized frictional drag and wear. Molded bakelite casing—high resistance to leakage. Protective metal cover (as shown in illustration). Only $1\frac{1}{8}$ " dia. Body Depth, $\frac{3}{16}$ " to $\frac{7}{8}$ " deep with switch, $\frac{3}{8}$ " bushing. Shaft $1\frac{1}{2}$ " long.



Resistance in Ohms	Current-carrying Capacity in Ma.	Type No. Without Switch	Type No. With Switch
10	450	43-10	438-10
20	320	43-20	438-20
30	250	43-30	438-30
40	225	43-40	438-40
50	200	43-50	438-50
75	165	43-75	438-75
100	140	43-100	438-100
150	115	43-150	438-150
200	100	43-200	438-200
300	90	43-300	438-300
500	65	43-500	438-500
750	55	43-750	438-750
1,000	45	43-1000	438-1000
2,000	31	43-2000	438-2000
3,000	26	43-3000	438-3000
4,000	22	43-4000	438-4000
5,000	20	43-5000	438-5000
7,500	16	43-7500	438-7500
10,000	14	43-10000	438-10000

LIST PRICE \$1.25. With switch \$1.85
Standard packing — 10 (ten) per carton.

CLAROSTAT

SERIES "AM" AND "AT" UNIVERSAL PICK-A-SHAFT CONTROLS

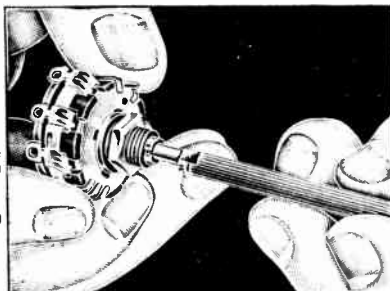
Standard and Tapped for Every Service Need

★ These universal controls are built to the same exacting specifications as Series "M" and "T". However, instead of having the usual integral shaft, these controls include the Clarostat "Pick-A-Shaft" feature whereby a choice of shafts may be used with any of these controls. This ingenious feature eliminates the stocking of special-shaft units. Instead, the Series "AM" or Series "AT" (tapped unit) takes the particular type of shaft desired by merely inserting such a shaft and holding it permanently and firmly in place with a C-washer supplied for the purpose.

Choice of Pick-A-Shafts

★ A choice of four types of Pick-A-Shafts covers all requirements, as follows:

Cat. No.	Description	List Price
FS-3	Flattened shaft, 3" long	\$0.30
RS-3	Round shaft, 3" long	0.30
KSS-3	Knurled, split shaft, 3" long	0.30
DFS-1/2	Double Flattened Philips Type, 1/2" long	0.30
KSS-5	Knurled, split shaft, 5" long	0.30
RS-5	Round shaft, 5" long	0.30
FS-5	Flattened shaft, 5" long	0.30
RS-3/8" dia.	Round shaft, 3" long	0.30
SS-3/8" length	(Male) To take female fitting	0.30



One selected shaft furnished FREE with each Pick-A-Shaft control.

SERIES "AM" OR STANDARD PICK-A-SHAFT CONTROLS

Cat. No.	Ohms	Curve	Suggested Use
AM-5-S	500	S	Std. Pot.
AM-8-S	1,000	S	Std. Pot.
AM-11-S	2,000	S	Std. Pot.
M-15-S	3,000	S	Std. Pot.
AM-13-S	5,000	S	Std. Pot.
AM-20-1	5,000	F	Ant. & C—1 Tube
AM-23-S	7,500	S	Std. Pot.
AM-27-S	10,000	S	Std. Pot.
AM-29-1	10,000	F	Ant. & C—1 Tube
AM-30-V	10,000	V	C Bias Rheo.
AM-31-W	10,000	W	C Bias Rheo.
AM-8-1-Z	10,000	Z	Se. Grid & Phone.
AM-32-S	15,000	S	Std. Pot.
AM-33-1	15,000	F	Ant. & C—1 Tube
AM-34-A	15,000	A	C Bias Rheo.
AM-35-W	15,000	W	Se. Grid & Phone.
AM-37	20,000	F	Ant. & C—1 Tube
AM-40-S	25,000	S	Std. Pot.
AM-41-W	25,000	W	Se. Grid & Phone.
AM-7-1-V	25,000	V	C Bias Rheo.
AM-44-S	50,000	S	Std. Pot.
AM-44-W	50,000	W	Se. Grid & Phone.
AM-16-Z	50,000	Z	Audio Grid & Tone
AM-47-S	75,000	S	Std. Pot.
AM-48-A	75,000	A	C Bias Rheo.
AM-49-S	100,000	S	Std. Pot.
AM-51-Z	100,000	Z	Audio & Tone
AM-52-S	200,000	S	Std. Pot.
AM-53-S	250,000	S	Std. Pot.
AM-64-Z	250,000	Z	Audio & Tone
AM-58-S	500,000	S	Std. Pot.
AM-59-Y	500,000	Y	Audio—Shunt
AM-60-Z	500,000	Z	Audio & Tone
AM-79-Z	750,000	Z	Audio & Tone
AM-61-S	1,000,000	S	Std. Pot.
AM-63-Z	1,000,000	Z	Audio & Tone
AM-66-Z	2,000,000	Z	Tone & AVC
AM-83-S	2,000,000	S	Audio & Tone
AM-67-Z	2,000,000	Z	Tone & AVC
AM-68-Z	4,000,000	Z	Tone & AVC
AM-69-Z	5,000,000	Z	Tone & AVC
AM-99-Z	10,000,000	Z	Tone & AVC

LIST PRICE \$1.25 (Without Switch)

SERIES "AT" OR TAPPED PICK-A-SHAFT CONTROLS

Cat. No.	Ohms	Tap No. 1	Tap No. 3	Tap No. 3
AT-25	50,000		25,000	
AT-38	200,000			100,000
AT-39	250,000		75,000	
AT-42	250,000		125,000	
AT-43	250,000			100,000
AT-44	250,000	60,000		125,000
AT-45	250,000	30,000	60,000	
AT-60	350,000		75,000	
AT-69	350,000	75,000		
AT-70	350,000		75,000	
AT-78	500,000		100,000	
AT-80	500,000			100,000
AT-81	500,000	50,000		
AT-82	500,000			100,000
AT-88	500,000		50,000	
AT-90	500,000		250,000	
AT-92	500,000	100,000		300,000
AT-98	1,000,000	250,000		
AT-101	1,000,000		50,000	
AT-107	1,000,000	100,000		500,000
AT-103	1,000,000		100,000	
AT-109	1,000,000		225,000	
AT-110	1,000,000		170,000	
AT-111	1,000,000			200,000
AT-117	1,000,000		500,000	
AT-95	1,500,000	250,000 or 75%	Rotation	500,000
AT-125	1,500,000		350,000	
AT-114	2,000,000		100,000	
AT-115	2,000,000		500,000	
AT-116	2,000,000		1,000,000	
AT-118	2,000,000	30,000		
AT-119	2,000,000		200,000	
AT-120	2,000,000		400,000	
AT-121	2,000,000	250,000		500,000
AT-124	2,000,000	5,000 or 75%	Rotation	
AT-126	2,000,000	200,000		100,000
AT-129	2,000,000	15,000		
AT-123	2,500,000	250,000		500,000
AT-128	4,000,000		500,000	

LIST PRICE \$1.85 (Without Switch)

Standard Packing—10 (ten) per carton.

For Power Switch, see Series "SW" listings on Page R-1.



Finish: Heavy-gauge metal case finished in frosted gray wrinkle, with etched black-and-aluminum front panel.

Dimensions: 13 in. long; 8 1/2 in. deep; 5 3/4 in. high. Weight, 11 lbs.

Suggested Uses: Resistance determination, Load Resistance, Meter Multiplier, Calibrating Meters, Providing any desired ohmage as a universal power resistor.

NET PRICE **\$90.00***

POWER RESISTOR DECADE BOX

★ A "Must" for Every Laboratory. Power resistance measurements under actual load conditions. Just imagine being able to obtain ANY VALUE OF RESISTANCE from 1 ohm to 999,999 ohms IN STEPS OF ONE OHM, and at a POWER RATING OF 225 WATTS using a maximum of 1000 volts DC (660 volts AC)!

Intended primarily for laboratory use and development engineering. Simplifies and expedites the selection of correct resistance values for given circuits and functions. These instruments are in daily use in laboratories, engineering offices, plants, maintenance and service departments, and in schools.

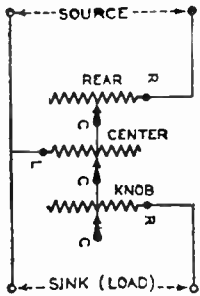
PICK-A-SHAFT SLIP DRIVE CONTROL (Clutch Type)

Available with your choice of Pick-A-Shaft

Cat. No.	Resistance	List
SD-64-Z	250,000	\$1.25
SD-60-Z	500,000	1.25
SD-63-Z	1,000,000	1.25
SD-65-Z	2,000,000	1.25
SD-42	250,000 Tapped	125,000 1.85
SD-78	500,000	250,000 1.85
SD-98	1,000,000	500,000 1.85
SD-115	2,000,000	500,000 1.85

CLAROSTAT

CONSTANT IMPEDANCE CONTROLS



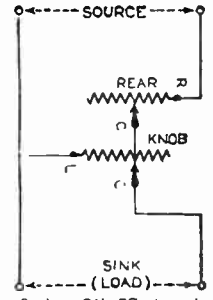
Series CIT-58 T-pads are connected as here shown.

★ To provide for the highest quality of sound reproduction, whether in broadcast transmission, sound recording, or public address systems in which a multiplicity of loudspeakers are employed it is essential that the proper type of self-compensating volume controls or attenuators be used in eliminating the distortion that would arise from the mismatching of impedances.

Therefore, volume controls or attenuators for this purpose must be of the so-called "constant-impedance" type. By the use of these "T" and "L" pads it is possible to keep the input or output impedance of associated equipment in a

circuit within the limits of a constant required value.

Safely rated at a maximum power dissipation of 2.5 watts, these "T" and "L" pads have a continuous range from 0.5 to 30 decibels attenuation in 90% of rotation, the last 10% affording infinite attenuation. Employable at either the source or the load in a circuit, these units are readily mounted by a one-hole mounting, and afford a wide range of use as mixers, faders, multiple-speaker controls, etc. Such controls can be used as individual volume controls for multiple speakers without affecting or changing the source impedance.



Series CIL-58 L-pads are connected as here shown.

SERIES CIT Wire-Wound T-Pads

Cat. No.	Resistance in Ohms	List Price
CIT-6	6	\$4.25
CIT-8	8	4.25
CIT-15	15	4.25
CIT-50	50	4.25
CIT-100	100	4.25
CIT-200	200	4.25
CIT-250	250	4.25
CIT-500	500	4.25
CIT-600	600	4.25
CIT-1000	1000	4.25
CIT-2000	2000	4.25



SERIES CIL Wire-Wound L-Pads

Cat. No.	Resistance in Ohms	List Price
CIL-6	6	\$3.75
CIL-8	8	3.75
CIL-15	15	3.75
CIL-50	50	3.75
CIL-100	100	3.75
CIL-200	200	3.75
CIL-250	250	3.75
CIL-500	500	3.75
CIL-600	600	3.75
CIL-1000	1000	3.75
CIL-2000	2000	3.75

CONSTANT IMPEDANCE OUTPUT ATTENUATORS



db steps are 3, 6, 9, 12, 15, 18, 21, 24 and 30. Absolutely noiseless and distortion.

★ Developed to meet the need for a constant-impedance attenuator capable of handling considerable power without measurable insertion loss, Series CIB attenuators provide linear attenuation with ample power-handling capacity. Compact. Safely dissipate 10 watts at any dial setting. Recommended as output level control for power

amplifiers or as an input attenuator for loudspeakers in P-A system. Unit furnished in black baked-enamel metal casing 2" in dia. by 2 3/4" long, equipped with dial plate and bar knob. Not available with power switch. One-hole mounting. 3/8" dia bushing. Shaft 1" long.

Series CIB—10 Watts

Cat. No.	Resistance in Ohms	List Price
CIB-6	6	\$6.50
CIB-8	8	
CIB-15	15	
CIB-50	50	
CIB-200	200	
CIB-250	250	
CIB-500	500	
CIB-600	600	

Series PW-25—25 Watt

Cat. No.	Total Resis. Ohms	Max. Cur. at		List Price
		Total Res. Amps	Max. Cur. Up to 1/3 Res. Amps.	
PW-25-1	1	5,000	7,500	\$5.85
PW-25-2	2	3,450	5,175	5.20
PW-25-3	3	2,880	4,320	5.20
PW-25-6	6	2,040	3,060	5.20
PW-25-8	8	1,770	2,655	5.20
PW-25-10	10	1,580	2,370	5.20
PW-25-15	15	1,290	1,935	5.20
PW-25-25	25	1,000	1,500	5.20
PW-25-35	35	845	1,317	5.20
PW-25-50	50	707	1,060	5.20
PW-25-75	75	575	862	5.20
PW-25-100	100	500	750	5.20
PW-25-125	125	445	667	5.20
PW-25-175	175	375	562	5.20
PW-25-250	250	316	474	5.20
PW-25-350	350	267	400	5.20
PW-25-500	500	222	333	5.20
PW-25-750	750	182	273	5.20
PW-25-1000	1000	155	232	5.85
PW-25-1500	1500	129	193	5.85
PW-25-2500	2500	100	150	5.85
PW-25-3500	3500	84	126	6.18

Standard Packing—Individual Carton

POWER RHEOSTATS

★ Exceptionally rugged. Trouble-free design. Withstand severe overloading without smoking, burning, charring. Element imbedded in cold-setting cement. Resistance winding supported on insulated metal core for maximum heat conduction and radiation, even at partial rotation settings. Single-hole mounting. Adjustable locking pin firmly anchors unit against bodily rotation. Shaft and bushing insulated from current-carrying arm for safety. 25 and 50 watt sizes.



Series PW-50—50 Watt

Cat. No.	Total Resis. Ohms	Max. Cur. at		List Price
		Total Res. Amps	Max. Cur. Up to 1/3 Res. Amps.	
PW-50-0.5	0.5	10,000	15,000	\$6.50
PW-50-1	1	7,070	10,605	6.50
PW-50-2	2	5,000	7,500	6.50
PW-50-4	4	3,530	5,295	5.85
PW-50-6	6	2,880	5,320	5.85
PW-50-8	8	2,500	3,750	5.85
PW-50-12	12	2,040	3,060	5.85
PW-50-16	16	1,760	2,640	5.85
PW-50-22	22	1,500	2,250	5.85
PW-50-35	35	1,190	1,785	5.85
PW-50-50	50	1,000	1,500	5.85
PW-50-80	80	790	1,185	5.85
PW-50-125	125	630	945	5.85
PW-50-150	150	575	863	5.85
PW-50-225	225	470	705	5.85
PW-50-300	300	400	612	5.85
PW-50-500	500	316	474	5.85
PW-50-800	800	250	375	6.18
PW-50-1000	1000	224	346	6.18
PW-50-1600	1600	176	264	6.18
PW-50-2500	2500	141	212	6.18
PW-50-3500	3500	119	179	6.50
PW-50-5000	5000	100	150	6.50

Standard Packing—Individual Carton

CLAROSTAT

TUBE-TYPE WIRE-WOUND RESISTORS

Standard Resistor Tubes

Cat. No.	Cat. No.
BK-29-B	K-71-B
BK-29-D	K-80-B
BK-32-D	K-82-B
BK-36-B	K-86-B
BK-36-D	K-90-A
BK-36-H	K-90-B
BK-42-B	K-92-B
BK-42-C	L-12-B
BK-49-B	L-12-C
BK-49-C	L-12-D
BK-55-B	L-19-A
BL-42-B	L-19-C
BL-42-D	L-19-D
BM-49-B	L-19-D
BM-55-B	L-19-H
K-26J-218	L-55-B
K-36-D	L-55-CJ
K-41-A	L-55-C
K-42-AJ	L-55-D
K-42-B	M-39-H
K-42-C	M-32-B
K-42-D	M-49-B
K-49-A	M-55-B
K-49-B	M-55-H
K-49-C	M-80-B
K-49-D	M-8689-9
K-49-H	10-610
K-55-A	100-37
K-55-B	100-70
K-55-C	100-76
K-55-PR	100-77
K-55-D	100-79
K-55-H	115-78
K-67-A	5-159
K-67-B	28-609
K-67-BJ	43V106
K-72-B	

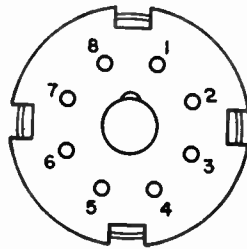
List Price \$1.00
Standard Packing
10 (ten) per carton

★ Clarostat developed and pioneered the tube-type resistor for voltage-reducing purposes, as used in AC-DC radios. Strictly non-flammable. Resistance element wound on mica form encased in metal tube and connected with base prongs.

Clarostat has selected the most popular values for so-called Universal numbers. Also the most popular types of Standard units.

Prefixes: K denotes 0.1 volt 150 ma. No. 49 pilot lamp; L, 0.3 volt 250 ma. No. 16; M, 0.3 volt 200 ma. No. 51. Numerals indicate total voltage drop across resistor tube.

Suffixes: A, no pilot lamp taps;



UNIVERSAL RESISTOR TUBES

Universal Tube No.
10-23-A
10-23-E
10-23-F
23-55-A
23-55-E
23-55-F
60-92-A
60-92-E
60-92-F
92-105-A

Replaces AC-DC Tubes Beginning with Letters
BK, BL, K, L, M
BK, BL, K, L, M
BK, BL, K, L, M
BK, BL, K, L, M
BK, BL, K, L, M
BK, BL, K, L, M
BK, BL, K, L, M
BK, BL, K, L, M
BK, BL, K, L, M
BK, BL, K, L, M

Having Numbers From
10 to 23
10 to 23
10 to 23
23 to 55
23 to 55
23 to 55
60 to 92
60 to 92
60 to 92
92 to 105

Ending in Letter
A, B, C, D
E
F, G, H
A, B, C, D
E
F, G, H
A, B, C, D
E
F, G, H
A, B, C, D

List Price \$1.25
Standard Packing — 10 (ten) per carton

B, 1 pilot lamp tap; C, 1 pilot lamp tap for 2 lamps; D, 2 pilot lamp taps for 2 lamps; E, 3 pilot lamp taps for 3 lamps; F, 1 pilot lamp tap for 3 lamps; G, 1 pilot lamp tap for 1 lamp; H, 1 pilot lamp tap for 2 pilot lamps (tapped sections isolated from main reducing body); I, 2 pilot lamp taps for 2 pilot lamps (tapped sections isolated from main reducing body).



Letter "J" following any suffixes denotes shorted connection between two prongs of tube; i.e., K-49-BJ, the short is located between Nos. 3 and 4 prongs.

GLASOHMS* Glass-Insulated Flexible Resistors

★ This is a new development in resistors which has found instant acceptance in widespread applications.

Glasohms consist of a wire winding on a fibre-glass core, with a covering of braided fibre-glass. Each strand of glass is no thicker than usual

cotton thread and just as flexible, so that the complete units can be bent or twisted and even knotted without breakage or weakening. Clarostat is the only manufacturer of Glasohms. These units are ideal for resistance boxes, attenuators, voltage-dividers, multipliers, step-by-step rheostats, and for use in point-to-point wiring jobs. Handy, inexpensive and very durable, these units can withstand heavy overloads without damage. There is nothing in them to burn or char. Glasohms are also suitable for use as miniature heating elements serving in hair curlers, immersion heaters, soldering irons, electrically-heated ovens for crystal oscillators, etc., especially in longer lengths obtained on special orders.

*Registered trade-mark.

Standard Glasohm Resistors

TYPE FYG — 2-WATT
1" Fabric Length with 2" Prongs
1/2" dia. core, RMA Color-coded

Cat. No.	Ohms	Cat. No.	Ohms
FYG5	5	FYG350	350
FYG10	10	FYG375	375
FYG15	15	FYG400	400
FYG25	25	FYG500	500
FYG40	40	FYG600	600
FYG50	50	FYG700	700
FYG60	60	FYG750	750
FYG75	75	FYG800	800
FYG100	100	FYG850	850
FYG125	125	FYG900	900
FYG150	150	FYG1000	1000
FYG200	200	FYG1250	1250
FYG225	225	FYG1500	1500
FYG250	250	FYG1600	1600
FYG300	300	FYG1750	1750
		FYG2000	2000

List Price \$0.25
Standard Packing—10 (ten) per carton

AUTOMATIC LINE VOLTAGE REGULATORS

★ To maintain constant line voltage and thus prevent burning out the tubes of a radio receiver or other tube-using device, this handy unit, operating effectively on 110-volt A.C. or D.C. by simply plugging into the usual socket or outlet, safeguards against line voltage surges or increases even up to 140 volts. At the normal 110-volt, the resistance of the unit is low and the voltage drop across it is negligible. However, as the line voltage increases the resistance of the unit increases proportionately, with a constant increase in voltage drop across it. This automatic voltage control or ballast action insures a steady, practically constant and always safe operating potential.



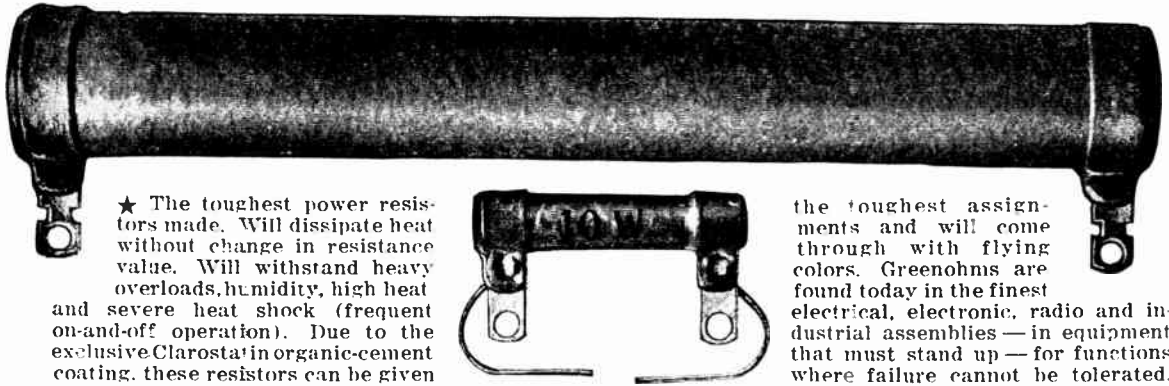
Type No.	Rating Watts	For Use With Sets Consuming	No. of Tubes Used
O	50	Up to 60 watts	4
A	100	60 to 100 watts	5, 6, 7
B	150	100 to 150 watts	8, 9, 10
C	200	150 to 200 watts	11, 12
D	250	200 to 250 watts	2 Type 50
E*	100	60 to 100 watts	

*Note: For use with 220-volt receivers

List Price \$1.25
Standard Packing — 10 (ten) per carton

CLAROSTAT

FAMOUS GREENOHMS — WIRE-WOUND FIXED POWER RESISTORS



★ The toughest power resistors made. Will dissipate heat without change in resistance value. Will withstand heavy overloads, humidity, high heat and severe heat shock (frequent on-and-off operation). Due to the exclusive Clarostat organic-cement coating, these resistors can be given

the toughest assignments and will come through with flying colors. Greenohms are found today in the finest electrical, electronic, radio and industrial assemblies — in equipment that must stand up — for functions where failure cannot be tolerated.

SERIES A-5-F—5-WATT

Dimensions: $\frac{1}{2}$ " dia. x 1" long.

The tiny member of the famous Clarostat Greenohm family. Available in standard resistance values from 1 ohm to 7500 ohms. (See exact values in listings for Series A-10-F up to 7500).

All ohmages — List Price \$0.40
Standard Packing — 10 (ten) per carton.

Series A-10-F—10-Watt

Dimensions: $\frac{3}{8}$ " dia. x 1 $\frac{3}{4}$ " long

Ohms	Ohms	Ohms	Ohms
1	125	1200	10000
2	150	1250	11000
3	200	1500	12000
4	225	1750	12500
5	250	2000	13000
7.5	300	2250	14500
10	350	2500	15000
12	400	3000	16000
15	450	3500	17500
20	500	4000	18000
25	600	4500	20000
30	700	5000	22500
35	750	6000	25000
40	800	7000	30000
50	900	7500	35000
75	1000	8000	40000
100	1200	8500	50000

All ohmages — List Price \$0.45
Standard Packing — 10 (ten) per carton

Series A-25-K—25-Watt

Dimensions: $\frac{1}{2}$ " dia. x 2 $\frac{1}{2}$ " long

Ohms	Ohms	Ohms	Ohms	Ohms
1	150	2250	10000	75000
2	200	2500	12000	80000
3	250	3000	15000	85000
5	300	3500	20000	90000
7.5	400	4000	25000	100000
10	500	4500	30000	
15	750	5000	35000	
20	800	6000	40000	
25	1000	7000	45000	
50	1250	7500	50000	
75	1500	8000	60000	
100	2000	9000	70000	

LIST PRICES:
1 to 5000 ohms \$0.75
6000 to 15000 ohms82
20000 to 50000 ohms 1.01
60000 ohms 1.15
70000 ohms 1.25
75000 ohms 1.30
80000 ohms 1.35
85000 ohms 1.50
90000 ohms 1.60
100000 ohms 1.75

Supplied with Mounting Brackets at No Extra Cost
Standard Packing — 5 (five) per carton

Series A-20-K—20-Watt

Dimensions: $\frac{3}{8}$ " dia. x 2" long

Ohms	Ohms	Ohms	Ohms
1	800	6000	65000
5	850	7000	70000
10	1000	7500	75000
25	1200	8000	80000
50	1250	9000	85000
75	1500	10000	90000
100	1750	12500	95000
150	1850	15000	100000
200	2000	20000	
250	2250	25000	
300	2500	30000	
350	2750	35000	
400	3000	40000	
500	3500	45000	
650	4000	50000	
700	4500	55000	
750	5000	60000	

LIST PRICE:
1 to 15,000 ohms \$0.67
20,000 to 50,000 ohms75
55,000 to 100,000 ohms 1.00
Standard Packing — 10 (ten) per carton

Series K-40-N—40-Watt

Dimensions: $\frac{3}{4}$ " dia. x 3 $\frac{1}{2}$ " long

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms
5	125	1000	7500	35000	125000
10	150	1500	8500	40000	150000
15	200	2000	10000	50000	175000
20	250	2500	12500	60000	200000
25	300	3000	15000	70000	
50	400	4000	20000	80000	
75	500	5000	25000	90000	
100	750	6000	30000	100000	

LIST PRICES:
5 to 5000 ohms \$0.90
6000 to 25000 ohms 1.00
30000 to 100000 ohms 1.20
125000 to 150000 ohms 1.40
175000 ohms 1.50
200000 ohms 1.60

Supplied with Mounting Brackets at No Extra Cost
Standard Packing—Individually Boxed

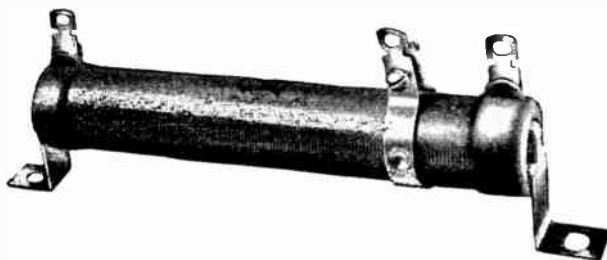
Ohms	Series K-50-N	Series K-80-N	Series K-100-W	Series K-160-W	Series K 200 W
	$\frac{3}{4}$ " dia. x 4 $\frac{1}{2}$ " l.	$\frac{7}{8}$ " dia. x 6 $\frac{1}{2}$ " l.	1 $\frac{1}{2}$ " dia. x 6 $\frac{1}{2}$ " l.	1 $\frac{1}{4}$ " dia. x 8 $\frac{1}{2}$ " l.	1 $\frac{1}{2}$ " dia. x 10 $\frac{1}{2}$ " l.
5	\$1.10	\$1.25	\$1.50	\$2.00	\$2.50
10	1.10	1.25	1.50	2.00	2.50
25	1.10	1.25	1.50	2.00	2.50
50	1.10	1.25	1.50	2.00	2.50
75	1.10	1.25	1.50	2.00	2.50
100	1.10	1.25	1.50	2.00	2.50
150	1.10	1.25	1.50	2.00	2.50
200	1.10	1.25	1.50	2.00	2.50
250	1.10	1.25	1.50	2.00	2.50
300	1.10	1.25	1.50	2.00	2.50
400	1.10	1.25	1.50	2.00	2.50
500	1.10	1.25	1.50	2.00	2.50
750	1.10	1.25	1.50	2.00	2.50
1000	1.10	1.25	1.50	2.00	2.50
1250	1.10	1.25	1.50	2.00	2.50
1500	1.10	1.25	1.50	2.00	2.50
2000	1.10	1.25	1.50	2.00	2.50
2250	1.10	1.25	1.50	2.00	2.50
2500	1.10	1.25	1.50	2.00	2.50
3000	1.10	1.25	1.60	2.00	2.50
3500	1.10	1.25	1.60	2.00	2.50
4000	1.10	1.25	1.60	2.00	2.50
4500	1.10	1.25	1.75	2.00	2.50
5000	1.10	1.25	1.75	2.00	2.50
6000	1.25	1.50	1.75	2.00	2.50
7500	1.25	1.50	1.75	2.00	2.50
8000	1.25	1.50	1.75	2.00	2.50
9000	1.25	1.50	1.75	2.00	2.50
10000	1.25	1.50	1.75	2.00	2.50
12000	1.25	1.50	1.75	2.20	2.75
12500	1.25	1.50	1.75	2.30	2.85
15000	1.25	1.50	1.75	2.40	3.00
20000	1.25	1.50	1.75	2.40	3.00
25000	1.25	1.50	1.75	2.40	3.00
30000	1.45	1.75	2.00	2.40	3.00
35000	1.45	1.75	2.00	2.40	3.00
40000	1.45	1.75	2.00	2.40	3.00
50000	1.45	1.75	2.00	2.40	3.00
60000	1.45	2.00	2.25	2.70	3.00
70000	1.45	2.00	2.25	2.70	3.00
75000	1.45	2.00	2.25	2.70	3.00
80000	1.45	2.10	2.35	2.70	3.00
100000	1.45	2.25	2.50	2.70	3.00
125000	2.00	2.75	3.00	3.00	3.50
150000	2.25	3.00	3.25	3.00	3.50
175000	2.25	3.25			
200000	2.50	3.50			

All resistors furnished with mounting brackets at no extra cost. Standard Packing — Individually Boxed.

CLAROSTAT

FAMOUS GREENOHMS - WIRE-WOUND ADJUSTABLE POWER RESISTORS

★ These power resistors feature the exclusive (Claro-stat inorganic cement coating and are similar in rugged construction to the fixed types on page 11, except for the bared section of the winding contacted at any ohmage by the adjustable slider band. This band is permanently locked in place at the required resistance value by simply tightening a screw with a screwdriver.



DIMENSIONS

★ Fixed and Adjustable Greenohms are of the same dimensions, wattage for wattage, as follows:

Rating	Length	Dia.
10-watt	1 3/4" x	5/16"
20-watt	2 " x	1/2"
25-watt	2 1/2" x	1/2"
40-watt	3 1/2" x	3/4"
50-watt	4 1/2" x	3/4"
80-watt	6 1/2" x	3/4"
100-watt	6 1/2" x	1 1/8"
160-watt	8 1/2" x	1 1/8"
200-watt	10 1/2" x	1 1/8"

SERIES A-10-FA—10-WATT

Dimensions: 1 7/8" dia. x 1 3/4" long

Ohms	Ohms	Ohms	Ohms
1	100	1000	6000
2	150	1250	7000
3	200	1500	7500
5	250	2000	8000
7.5	300	2250	8500
10	350	2500	9000
15	400	3000	10000
20	500	3500	
25	600	4000	
50	750	4500	
75	800	5000	

LIST PRICE: All Sizes: \$0.70

Standard Packing — 10 (ten) per carton

SERIES A-25-KA—25-WATT

Dimensions: 2" dia. x 2 1/2" long

Ohms	Ohms	Ohms	Ohms
1	100	1500	7500
2	150	2000	8000
3	200	2250	9000
5	250	2500	10000
7.5	300	3000	12000
10	400	3500	15000
15	500	4000	20000
20	750	4500	25000
25	800	5000	50000
50	1000	6000	
75	1250	7000	

LIST PRICES:

1 to 5000 ohms	\$0.85
6000 to 15000 ohms	.95
20000 to 25000 ohms	1.10
50000 ohms	1.25

Supplied with Mounting Brackets at No Extra Cost.
Extra Slider Bands \$0.10 each
Standard Packing — 5 (five) per carton

Ohms	Series K-50-NA	Series K-80-NA	Series K-100-WA	Series K-160-WA	Series K-200-WA	Ohms	Series K-50-NA	Series K-80-NA	Series K-100-WA	Series K-160-WA	Series K-200-WA
	3 1/4" dia. x 4 1/2" l.	3 1/4" dia. x 6 1/2" l.	1 1/8" dia. x 6 1/2" l.	1 1/8" dia. x 8 1/2" l.	1 1/8" dia. x 10 1/2" l.		3 1/4" dia. x 4 1/2" l.	3 1/4" dia. x 6 1/2" l.	1 1/8" dia. x 6 1/2" l.	1 1/8" dia. x 8 1/2" l.	1 1/8" dia. x 10 1/2" l.
5	\$1.35	\$1.75	\$2.00	\$2.50	\$3.00	5000	1.35	1.75	2.00	2.50	3.00
10	1.35	1.75	2.00	2.50	3.00	6000	1.50	2.00	2.25	2.50	3.00
15	1.35	1.75	2.00	2.50	3.00	7000	1.50	2.00	2.25	2.50	3.00
20	1.35	1.75	2.00	2.50	3.00	7500	1.50	2.00	2.25	2.50	3.00
25	1.35	1.75	2.00	2.50	3.00	8000	1.50	2.00	2.25	2.50	3.00
50	1.35	1.75	2.00	2.50	3.00	9000	1.50	2.00	2.25	2.50	3.00
75	1.35	1.75	2.00	2.50	3.00	10000	1.50	2.00	2.25	2.50	3.00
100	1.35	1.75	2.00	2.50	3.00	12000	1.50	2.00	2.25	2.65	3.25
150	1.35	1.75	2.00	2.50	3.00	15000	1.50	2.00	2.25	2.90	3.50
200	1.35	1.75	2.00	2.50	3.00	20000	1.50	2.00	2.25	2.90	3.50
250	1.35	1.75	2.00	2.50	3.00	25000	1.50	2.00	2.25	2.90	3.50
300	1.35	1.75	2.00	2.50	3.00	30000	1.70	2.25	2.50	2.90	3.50
400	1.35	1.75	2.00	2.50	3.00	35000	1.70	2.25	2.50	2.90	3.50
500	1.35	1.75	2.00	2.50	3.00	40000	1.70	2.25	2.50	2.90	3.50
750	1.35	1.75	2.00	2.50	3.00	45000	1.70	2.25	2.50	2.90	3.50
1000	1.35	1.75	2.00	2.50	3.00	50000	1.70	2.25	2.50	2.90	3.50
1250	1.35	1.75	2.00	2.50	3.00	60000	2.00	2.50	2.75	3.25	3.50
1500	1.35	1.75	2.00	2.50	3.00	75000	2.00	2.50	2.75	3.25	3.50
2000	1.35	1.75	2.00	2.50	3.00	80000	2.00	2.50	2.75	3.25	3.50
2500	1.35	1.75	2.00	2.50	3.00	100000	2.00	2.50	2.75	3.25	3.50
3500	1.35	1.75	2.00	2.50	3.00	125000			3.00	3.75	
4000	1.35	1.75	2.00	2.50	3.00	150000			3.00	3.75	
4500	1.35	1.75	2.00	2.50	3.00						

All resistors furnished with mounting brackets at no extra cost.
Standard Packing - Individually Boxed.



"CARBOMITE" M-TYPE RESISTORS

(Actual size as illustrated)



M1-1 WATT



M2-2 WATT



M $\frac{1}{2}$ - $\frac{1}{2}$ WATT

- Meet JAN-R-11 Army-Navy Specification
- Low Noise Level; Low Voltage Coefficient
- Stamped With Value
- Extra Small Size
- High Insulation 1000 volt Breakdown

Continental's New "CARBOMITE" bakelite insulated carbon composition resistors are now the standard of Electronic components used in the Radio and Electronic Industries. They meet all specifications of the joint Army-Navy-Jan-R-11 including the toughest of all tests the "Salt water immersion cycling." The "CARBOMITE" M type resistor consists of a solid molded carbon core, outer molded bakelite insulated shell and molded in leads. These resistors being well insulated can be mounted side by side or against any metal surface without shorting or grounding. They are recommended where space limits and insulating quality require a rugged reliable and small resistor capable of withstanding severe service. The lead wires are straight and are tinned with a tin composition heavy enough to give instant soldering with the touch of the heated soldering iron tip. The resistor values are easily identified by the bright non-rubbing off color code bands and the white ink stamped numbers of the value on the body of the resistor.

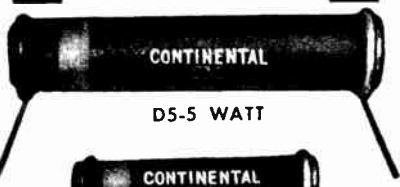
The M2-2 watt, M1-1 watt and the M $\frac{1}{2}$ - $\frac{1}{2}$ watt are made in all the standard preferred RMA values as listed in the table below and are packed in quantities of 10 or 50 of each value to the box. Order in these quantities or multiples thereof.

Type	Size	List Price	Tolerance
M $\frac{1}{2}$	$\frac{3}{16}$ " x $\frac{3}{16}$ " Dia.	\$0.17	5%
M1	$\frac{1}{8}$ " x $\frac{1}{8}$ " Dia.	.23	10%
M2	$\frac{11}{16}$ " x $\frac{1}{8}$ " Dia.	.30	.25

CONTINENTAL D-TYPE



D5ST2-5 WATT



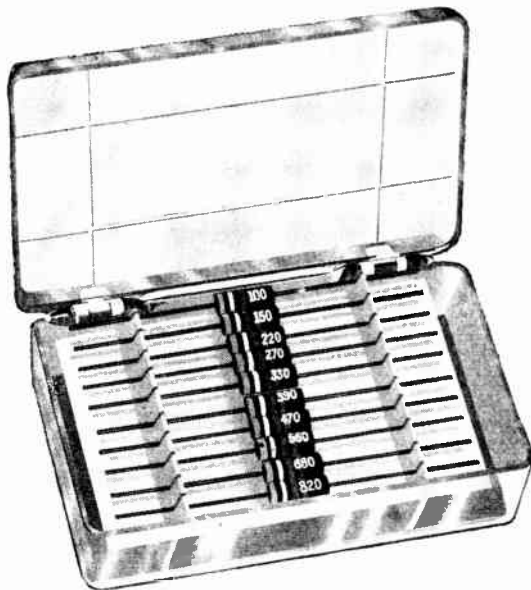
D5-5 WATT



D3-3 WATT

"POCKET-PAC" RESISTOR KITS

- De Luxe Clear Plastic Boxes
- Color Code in Each Kit
- Strongly Hinged Covers
- Values Stamped on Each Resistor



These "Pocket-Pac" Kit-Boxes are made of clear durable plastic. The contents can be easily seen thru the walls of the box. A Color Code Indicator and the Box are furnished free with each Kit.

FORTY RESISTOR "POCKET-PAC" KIT VALUES

Ohms	Ohms	Ohms	Megohms	Megohms
100	1000	10,000	0.1	1.0
150	1500	15,000	.15	
220	2200	22,000	.22	2.2
270	2700	27,000	.27	
330	3300	33,000	.33	
470	4700	47,000	.47	4.7
560	5600	56,000	.56	
680	6800	68,000	.68	
820	8200	82,000	.82	10.0

"Pocket-Pac" Code No.	Quantity and Type	Box Size	List Price
40A	40 M $\frac{1}{2}$ - $\frac{1}{2}$ watt	4 $\frac{1}{2}$ x 2 $\frac{3}{4}$ x 1	\$5.20
40B	40 M1 - 1 watt	4 $\frac{1}{2}$ x 2 $\frac{3}{4}$ x 1	6.80
40C	40 M2 - 2 watt	7 x 3 $\frac{1}{2}$ x 1 $\frac{1}{8}$	10.00
80D	40 M $\frac{1}{2}$ plus 40 M1	7 x 3 $\frac{1}{2}$ x 1 $\frac{1}{8}$	12.00
80E	2 ea. 40 values M $\frac{1}{2}$	7 x 3 $\frac{1}{2}$ x 1 $\frac{1}{8}$	10.40
80F	2 ea. 40 values M1	7 x 3 $\frac{1}{2}$ x 1 $\frac{1}{8}$	13.60

- Heavy Duty Carbon
- Operate safely on overloads
- Non-inductive

The D-Type resistor with radial leads is made with solid molded carbon rods, copper sprayed on the ends to which are soldered No. 18 copper tinned leads. The soldered contact construction insures a noise-free and stable resistor. They are known as the heavy duty type units because of their size—having a larger radiating area they operate safely on overloads. A baked-on insulation is a protection against shorts to subpanel and wiring.

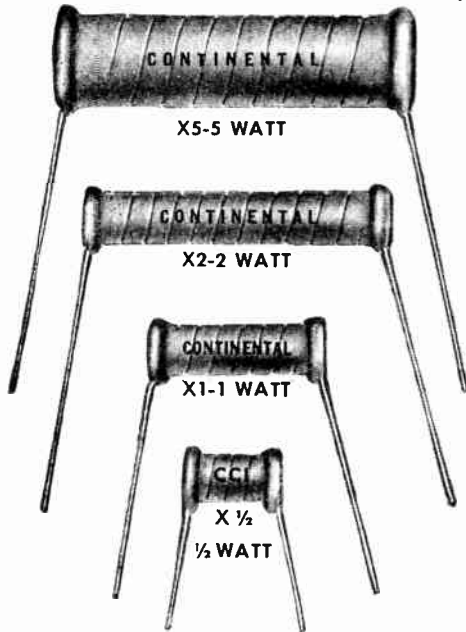
Type	Wattage	Size	List Price	Tolerance
D3	3 Watt	2" x $\frac{3}{8}$ "	\$0.50	$\pm 5\%$ $\pm 10\%$
D5	5 Watt	3" x $\frac{3}{8}$ "	.75	.50
D5ST2	5 Watt	3" x $\frac{3}{8}$ "	1.25	1.00

* D5ST2 units have heavy copper eyeleted and soldered strap terminals $\frac{3}{16}$ " wide with holes of 2 $\frac{1}{8}$ " spacing. The outer holes can be used with either 6-32 screw mounting or solder wire loops, while the inner holes are for 8-32 screw mounting. The outer section of the terminal can be cut off or bent to any angle desired.



"Nobleloy" X-Type Resistors

Trade Mark Reg.



- A new Continental Development!
- Not Wire Wound
- Not carbon!
- Stability of Wire Wound and Equivalent

After several years of research work CONTINENTAL engineers have developed a new resistor involving the metal film principle, having the accuracy of a wire wound unit. Absolutely no carbon whatever is used in the fabrication of these resistors. The metallic resistance film is formed on the surface of a low loss ceramic tube using a patented pyro-chemic process.

The metal film thus formed is hermetically sealed by a layer of vitreous enamel specially developed and patented by CONTINENTAL. The ceramic tube with its associated film is then spiraled to give a long resistance path and to accurately calibrate the unit to value.

Since the ceramic tubes are hollow they allow a larger surface for heat radiation, thus permitting the resistor to withstand overloads of 200% or better.

The copper-tinned lead terminals are soldered to extremely low resistance metal contact films which in turn are integral with the resistance film, thereby reducing contact resistance to a minimum. This type of construction produces a resistor unit having not only excellent resistance stability but also a negligible noise characteristic.

ELECTRICAL CHARACTERISTICS OF CONTINENTAL "NOBLELOY X" TYPE RESISTORS

Voltage

The recommended voltage rating of Continental "NOBLELOY X" type resistors is the maximum r.m.s. voltage which the resistor is expected to withstand in continuous use and is determined from the formula:

$$E = \sqrt{WR} \text{ Where } E = \text{rated D.C. or r.m.s. A.C. Voltage, } W = \text{watts rating, } R = \text{resistance.}$$

In no case shall the D.C. or r.m.s. A.C. voltage be greater than the maximum voltage shown in the table.

Load Characteristics

Irrespective of value, Continental "NOBLELOY X" type resistors will not change more than 5.0% when the load is increased from 2% of rated wattage to 200% of rated wattage, and on cooling to room temperature returns to the original value. This is practically the temperature coefficient effect.

Voltage Characteristics

Voltage coefficient does not exceed 1%.

Normal Load Life Characteristics (All Values)

The permanent change in resistance will not be more than 1.0% when the resistor is subjected to a normal life test of 1000 hours.

Overload Life Characteristics (All Values)

The permanent change in resistance will not be more than 2.0% when the resistor is subject to 200% of rated wattage for a period of 1000 hours.

Temperature Coefficient (All Values)

The temperature coefficient of resistance will not exceed 0.0005 (.05 per degree Centigrade) Negative.

Humidity Characteristics (All Values 1.0 Ohm to 15 Megohms)

Continental "NOBLELOY X" type resistors will not change more than 1.5% when conditioned in an atmosphere of 100% relative humidity at 40° C. ambient, for a period of 1000 hours.

Shelf Life

When stored under normal conditions, the resistance will not change more than 0.1% during a period of 2000 hours. This is a negligible change.

Noise Characteristic

When tested for noise according to standard R.M.A. procedure, the inherent noise level will not exceed 1/4 microvolt per volt, irrespective of resistance value. This level is equal to wire wounds.

Finish

All "X" type resistors possess a smooth, uniform coating of a special rubberized enamel capable of resisting deterioration up to and including 400° F.

Type	Wattage	Size	Values	Recommended		List Prices	
				Voltage	Max. Voltage	1%	5%
X-1/2	1/2 Watt	3/16" x 5/8"	1/2 ohm to 5 megohm	500	700	\$1.00	\$.85
X-1	1 Watt	3/8" x 1"	1 ohm to 10 megohm	700	1000	1.00	.85
X-2	2 Watt	3/8" x 1 1/4"	2 ohm to 20 megohm	1000	1500	1.20	1.05
X-5	5 Watt	1/2" x 2"	3 ohm to 30 megohm	1250	2000	1.40	1.25

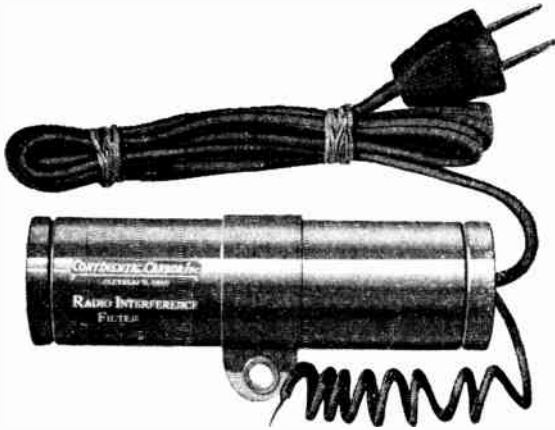
No. 18 tinned copper leads 1 1/2" long.

FILTERNOYS



FILTERNOYS

Filternoys for Direct Mounting on Electrical Appliances such as Fluorescent Lights, Radios, Refrigerators, Small Motors and Appliances



All Rated 115-230 Volts AC or DC 5 amperes

	Plug-In Types		
P02GH	2 1/2" x 1 3/8"	P09GH	5" x 1 3/8"
	Wire-In Types		
G02GH	2 1/2" x 1 3/8"	G09GH	5" x 1 3/8"

Filternoys G02GH, G09GH, P02GH and P09GH are made very compact and have extremely high filtering efficiency for their size. The G09GH and P09GH types have two 70 turn chokes of No. 18 wire and two 0.45 Mfd condensers, one across each end of the chokes. A ground lead connected through a small condenser to the choke system, when properly grounded to the appliance, increases the efficiency.

Filternoys G02GH and P02GH are similarly designed, about one half the size with less turn chokes and lower capacity. These smaller Filternoys are used where space is limited and a lower cost is desired.

Type	Connections	Size	List Price
P02GH	Plug-In	2 1/2" x 1 3/8"	\$2.50
G02GH	Wire-In	2 1/2" x 1 3/8"	2.50
P09GH	Plug-In	5" x 1 3/8"	1.50
G09GH	Wire-In	5" x 1 3/8"	4.50

Oil Burner Suppressor

Filternoys Suppressor OB15, carbon element type, intended for use only with the high tension spark ignition of oil or gas burning heating systems. Must be connected in series with each line to the spark gap. Size of the suppressor 3 1/2" x 1 1/8" diameter. Universal connections at both ends for solderless contact.



OB15 List Price \$1.80

Most Popular and Universal Plug-in Types FOR ELECTRIC RAZORS and RADIOS

Filternoys F01DH

Filternoys F02GH



Size 2 5/8" x 1 3/8"
Without Ground Lead
Filternoys F01DH
List Price \$1.75



Size 2 5/8" x 1 3/8"
With Ground Lead
Filternoys F02GH
List Price \$2.00

Filternoys F01DH and F02GH have two chokes and two 0.1 microfarad condensers, one each across the ends of the chokes. The F02GH Filternoys has a .006 to .01 microfarad condenser in series with the ground lead and connected in the winding of one of the condensers across the chokes. This small capacity to ground allows a very small current to flow and even if the end of the ground wire were touched, no shocking would result. If the electric system is not grounded as required by most codes, the grounded Filternoys connection is necessary in order to get efficient radio interference elimination. The advice is "Use the Filternoys F02GH for very severe interference and make a good ground connection with the ground lead." F01DH and F02GH Filternoys are the best filters made for all plug-in appliances rated at 115 to 230 volts AC or DC and 5 amperes maximum current-carrying capacity.



Filternoys Diverter G01D - Dual capacitors in a grounded container for any size electric motor operating on 120 v. or less. Through making use of the field coils as chokes, this is a most effective method to silence a noisy a.c. or d.c. motor. Size 1 7/8" x 3/4" diameter. Shock Proof.
G01D List Price \$0.75



Filternoys Diverter G14T - Triple capacitors in a circuit which permits its use with all hand-operated motor driven devices without danger of shock. Particularly applicable to vacuum cleaners, flat irons, etc. Size 1 1/2" x 3/4". Flexible leads for direct connection. Shock Proof.
G14T List Price \$0.75

FILTERNOYS F18

Filternoys Diverter F18 is a compact 0.1 mfd capacitor in a conveniently small bakelite plug-in coupler for use across domestic power lines in which the neutral wire is grounded. The capacitor diverts interference from the high potential side of the power line to the grounded neutral side. Use on floor or table lamps, cigarette lighters, and the radio.



F18 List Price \$0.75

SUPPRESSORS



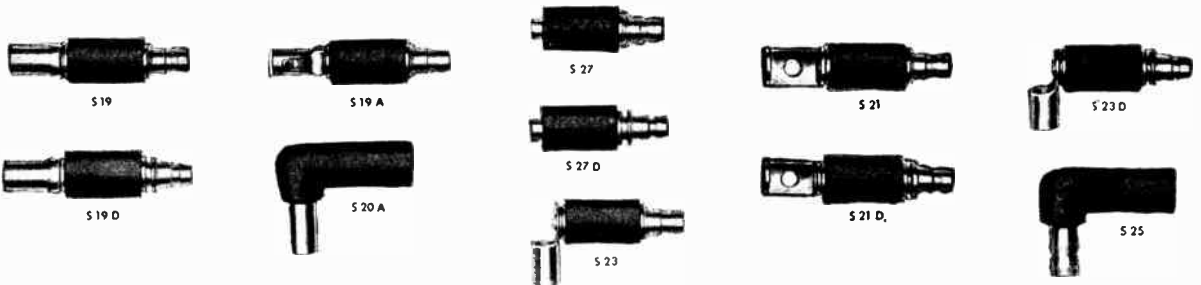
SUPPRESSORS

ALL SPARK PLUG SUPPRESSORS AND DISTRIBUTOR SUPPRESSORS EACH LIST PRICE \$0.30

CONTINENTAL SUPPRESSORS have been subjected to years of laboratory development and actual road service. They effectively remove noise interference from spark discharge at the plugs and high-tension distributor—yet do not in any way affect the motor car ignition system.

They have mechanical strength to stand the most severe service. The resistance value of 10,000 ohms has been scientifically determined. Sparking across the terminals is eliminated by careful shaping of the electrodes and cases.

SPARK PLUG SUPPRESSORS



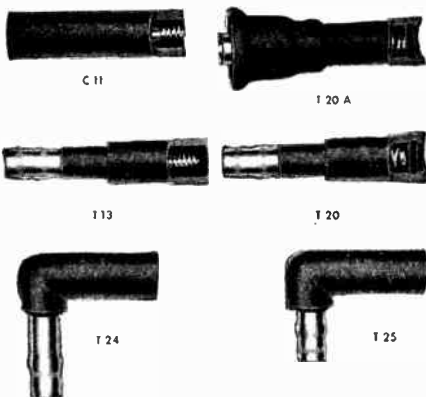
TYPE SPARK PLUG CONNECTION

- S-19 Vertical - Snaps on to spark plug.
- S-19-A Vertical - Rajah special terminal.
- S-19-D Vertical - Snaps on to spark plug same as S-19.
- S-27 Vertical - Screws on.
- S-27-D Vertical - Screws on.
- S-21 "U" bracket type.
- S-21-D "U" bracket type.
- S-23 Elbow - Flexible, snaps on.
- S-23-D Elbow - Flexible, snaps on.
- S-20-A Elbow - Snaps on spark plug.
- S-25 Elbow - Snaps on spark plug and also fits distributor. A universal suppressor.

CABLE CONNECTION

- Cable terminal snaps on.
- Cable terminal snaps on.
- Cable terminal snaps on and with a removable ferrule nut for spade terminal.
- Cable terminal snaps on.
- Cable terminal snaps on and with a removable ferrule nut for spade terminal.
- Cable terminal snaps on.
- Cable terminal snaps on and with a removable ferrule nut for spade terminal.
- Cable terminal snaps on.
- Cable screws into suppressor, making a moisture proof insulated joint.
- Cable screws into suppressor, making a moisture proof insulated joint.

DISTRIBUTOR SUPPRESSORS



FORD DISTRIBUTOR SUPPRESSOR



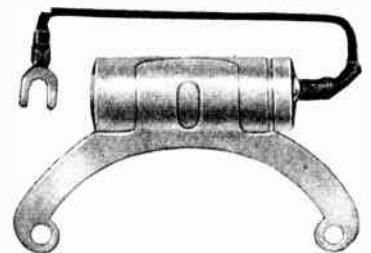
Brush



Sleeve

T-17: Brush and Sleeve Supplied Together
Distributor Type Brush Suppressor of the right resistance to suppress interference from the spark at the rotor.
 Universal Type: the brush can be inserted in the bakelite sleeve to fit models using the larger size brush.

GENERATOR CONDENSERS



GB05F



GB05

ALL SPARK PLUG AND DISTRIBUTOR SUPPRESSORS EACH LIST PRICE \$0.30

Type	Application	Capacity	Size	List Price
GB05	Generator and coil	.5 mfd.	2 1/2" x 3 1/2"	\$0.60
GB05F	Ford V-8 coil	.5 mfd.	2 1/2" x 3 1/2"	.75

TYPE DISTRIBUTOR CONNECTION

- C-11 Vertical - Snaps in distributor well.
- T-13 Vertical - Snaps in distributor well.
- T-20 Vertical - Snaps in distributor well and has a rubber skirt for moisture proof connection.
- T-24 Elbow - Snaps in distributor well.
- T-25 Elbow - Snaps in distributor well and fits both spark plug or distributor on Chevrolet and other makes.

CABLE CONNECTION

- The ignition cable can be cut at any point and the two ends screwed into the suppressor.
- Cable screws into suppressor, making a moisture proof insulated joint.
- Cable with terminal lisp snaps easily into suppressor.
- Cable with terminal lisp snaps easily into suppressor.
- Cable screws into suppressor.
- Cable screws into suppressor.

WIRT

WIRE WOUND FIXED RESISTORS

WIRE WOUND FIXED RESISTORS

To satisfy the most exacting needs of the Radio and Electronic Industries, Wirt Fixed Wire-wound Resistors are regularly furnished in PHENOCOTE protective coatings, developed and steadily improved over a period of many years in the Wirt Laboratories. The resistor wire is space wound on low loss ceramic tubes. The PHENOCOTE covering is an exclusive organic cement coating offering maximum protection to the resistance winding against the detrimental effects of moisture, humidity and electrolysis. Absolutely inert chemically, it will not effect the most delicate windings. It is particularly recommended for fine wire sizes and all applications where the maximum temperature of the unit will not exceed 300° F. These Resistors are universally used in the Radio, Electronic, Instrument, Public Address and Test Equipment fields.

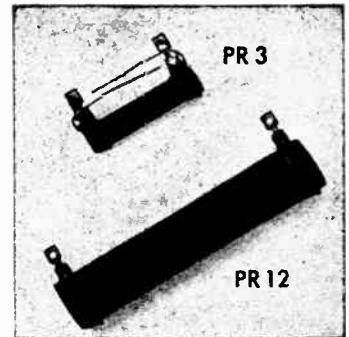


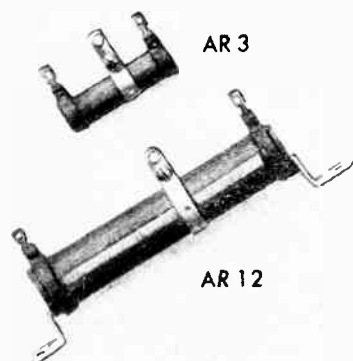
TABLE OF SPECIFICATIONS OF FIXED RESISTORS

Cat. No.	Watts	Sizes Phys.	Resistance Limits (Ohms)	List Price (Ea.)	Accessories Terminals	Mounting Brackets	Mounting Centers	Packing
PR 1	5	3/8"x1"	1 to 10000	\$0.53	Soldering Lugs & Wire Leads	None	.....	10 to a Box
PR 3	10	3/8"x1 3/4"	1 to 10000 11 to 25000	.59 .65	Soldering Lugs & Wire Leads	None	.....	10 to a box
PR 4	20	1/2"x2"	5 to 15000 16000 to 50000 51000 to 100000	.91 1.11 1.43	Soldering Lugs & Wire Leads	None	.....	10 to a box
PR 12	50	3/4"x4"	5 to 5000 5100 to 25000 26000 to 100000	1.56 1.82 2.08	Soldering Lugs	2	5"	Individual
PR 19	100	1 1/8"x6 1/2"	5 to 5000 5100 to 25000 26000 to 50000 51000 to 75000 76000 to 100000	2.15 2.54 2.86 3.25 3.58	Soldering Lugs	2	7"	Individual
PR 22	160	1 1/8"x8 1/2"	5 to 10000 11000 to 50000 51000 to 100000	2.86 3.43 3.86	Soldering Lugs	2	9"	Individual
PR 23	200	1 1/8"x10 1/2"	5 to 10000 11000 to 100000	3.58 4.29	Soldering Lugs	2	11"	Individual

When ordering state: Quantity, Catalogue Number and Resistance Value.

WIRT

WIRE WOUND ADJUSTABLE RESISTORS



WIRE WOUND ADJUSTABLE RESISTORS

WIRT Adjustable Resistors are space wound on low loss ceramic tubes to which the resistance wire is bonded, resulting in dependability and long life. Protection of the windings is afforded by the PHENOCOTE covering which is described fully on the preceeding page. One adjustable Slider Band, screw driver type, is furnished as standard. Bakelite knob type bands can be furnished on special order at slightly higher prices as shown below.

These bands are made with small contact buttons located on the inside of the band so that a number of taps may be made without shorting out excessive resistance.

TABLE OF SPECIFICATIONS OF ADJUSTABLE RESISTORS

Cat. No.	Watts	Sizes Phys.	Resistance Limits (Ohms)	List Price (Ea.)	Accessories			Mounting Centers	Packing
					Terminals	Brackets Mounting	Slider Bands		
AR 3	10	3/8"x1 3/4"	1 to 10000	\$0.98	Soldering Lugs	None	1		Individual
AR 7	25	3/4"x2"	1 to 5000	1.24	Soldering Lugs	2	1	3"	Individual
			6000 to 15000	1.43					
			20000 to 25000	1.56					
AR 12	50	3/4"x4"	5 to 5000	1.95	Soldering Lugs	2	1	5"	Individual
			7000 to 25000	2.15					
			30000 to 50000	2.47					
			60000 to 100000	2.86					
AR 15	75	3/4"x6"	10 to 5000	2.54	Soldering Lugs	2	1	7"	Individual
			7500 to 25000	2.86					
			30000 to 50000	3.25					
			60000 to 100000	3.58					
AR 19	100	1 1/8"x6 1/2"	5 to 10000	2.86	Soldering Lugs	2	1	7"	Individual
			15000 to 50000	3.25					
			75000 to 100000	3.90					
AR 22	160	1 1/8"x8 1/2"	5 to 10000	3.25	Soldering Lugs	2	1	9"	Individual
			15000 to 50000	4.15					
			60000 to 100000	4.65					
AR 23	200	1 1/8"x10 1/2"	5 to 10000	4.29	Soldering Lugs	2	1	11"	Individual
			15000 to 100000	5.01					

Extra Adjustable Slider Bands are obtainable and priced as follows:

Wattage Size	Screw Driver Type	Bakelite Knob Type
10, 25, 50, 75	\$0.26	List Price Each \$0.39
100, 160, 200	.33	List Price Each .50

When ordering state: Quantity, Catalogue Number and Resistance Value.

WIRT

MINIATURE RHEOSTATS and POTENTIOMETERS

MINIATURE RHEOSTATS AND POTENTIOMETERS

General: WIRT Metal Housed Rheostats and Potentiometers are rugged and compact affording high quality and dependability in operation. Due to size and construction these controls are moderately priced. Housings are made of tin-plated steel. Highest quality resistance wire is space wound on specially treated laminated phenolic strips. The Phosphor Bronze contact-arm is grounded to the metal casing and all terminals are silver plated. Switches cannot be furnished. These Rheostats and Potentiometers are adaptable to a wide variety of uses in the Radio Instrument, Electronic and Test Equipment fields. The types available are listed below:

Cat. No. WC801—Two Terminal Rheostat, 2 Watt rating. Resistance Range: 5 ohms to 10,000 ohms with linear winding and standard tolerance of $\pm 15\%$. Diameter is $1\frac{1}{8}$ " and thickness $\frac{1}{2}$ ". Shaft is Cadmium plated steel, grounded to housing. $5/32$ " from end of bushing and slotted for screw driver adjustment. Brass mounting bushings, $\frac{3}{8}$ "- $32 \times \frac{1}{4}$ " long are standard. Each control is equipped with one $9/16$ " hex mounting nut. **List Price**..... \$0.90 Each

Cat. No. WC802—Three Terminal Potentiometer, 2 Watt rating. Resistance Range: 5 ohms to 10,000 ohms with linear winding and standard tolerance $\pm 15\%$. All other specifications are the same as those listed under the WC801 control shown above. **List Price**..... \$1.25 Each

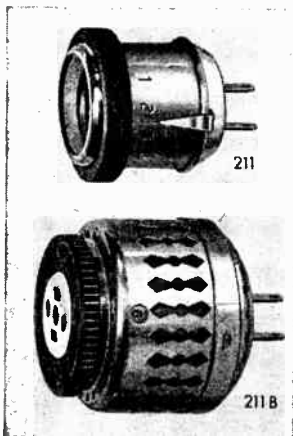
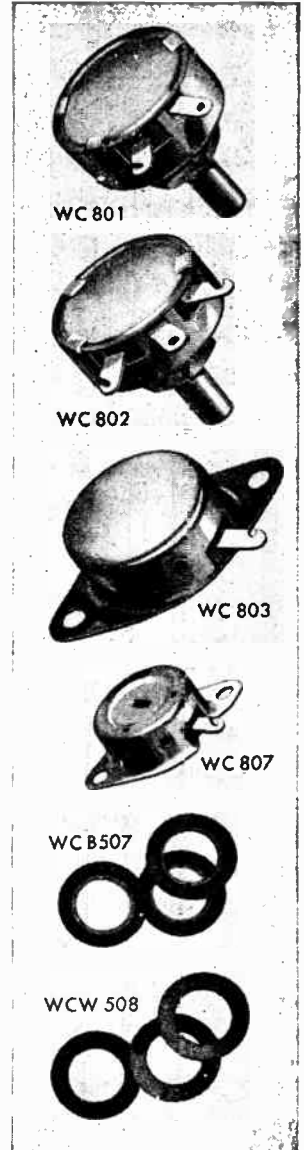
Cat. No. WC803—Sensitivity Control, 2 Watt rating. Resistance Range: 5 ohms to 12,000 ohms with linear winding and standard tolerance of $\pm 15\%$. Diameter is $1\frac{1}{8}$ " and thickness is $\frac{1}{2}$ ". A slot is provided in the Rotor mechanism allowing for screw driver adjustment from front only. **List Price**..... \$0.50 Each

Cat. No. WC804—Sensitivity Control. Identical with WC803 Control, except provided with an opening in back of control to permit screw driver adjustment from either front or back. **List Price**..... \$0.55 Each

Cat. No. WC807—Miniature Sensitivity Control, 1.5 Watt rating. Resistance Range: 5 ohms to 3000 ohms with uniform winding and standard tolerance of $\pm 15\%$. A slot is provided in the Rotor mechanism allowing for screw driver adjustment from either front or back. **List Price**..... \$0.50 Each

Cat. No. WCB507—Insulating Bushing for $\frac{3}{8}$ " Brass bushing and used with Cat. Nos. WC801 and WC802 Controls. **List Price**..... \$0.095 Each

Cat. No. WCW508—Insulating Washer for $\frac{3}{8}$ " Brass bushing and used with Cat. Nos. WC801 and WC802 Controls. **List Price**..... \$0.75 Each



VARIABLE VOLTAGE REGULATOR

Cat. No. 211 — Variable Voltage Regulator is wound with high quality alloy wire on an insulated metal core with the winding encased in Di-El-Itc. It can be used as a Radio Voltage Regulator where the Receiver draws not more than 65 watts. For industrial use it can be wound up to 600 ohms maximum and will dissipate up to 8 watts. It is adjustable to 5 positions.

List Price..... \$3.00 Each

Cat. No. 211-B—Regulator has air-cooling features which promote rapid heat dissipation. When used as a Radio Voltage Regulator the Receiver must not draw more than 150 watts. In industrial use for control of voltage and to regulate speed or heat it can be wound with a maximum resistance of 300 ohms and can dissipate up to 20 watts with maximum resistance setting. It is adjustable to 8 positions. **List**... \$5.00 Each

WCB 507

WCW 508

UTILITY CABINET

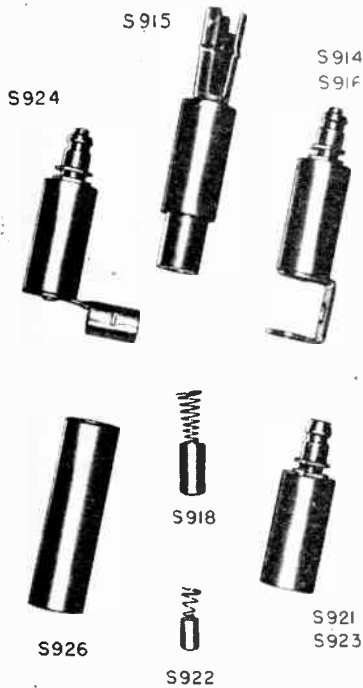
Cat. No. UC—Utility Cabinet is constructed of bass wood with corners dadoed and glued for strength; varnished and rubbed to give a beautiful finish. It has six drawers, each one having three removable partitions. The upper five drawers are 1" deep and the lower one is $1\frac{1}{2}$ " deep. Overall dimensions of the cabinet are 7" wide by $5\frac{5}{8}$ " deep by 9" high. Drawer guides, bottom and partitions are made of three ply laminated wood to prevent warping. Knobs are of wood and securely fastened. It is ideal for the storage of such parts as resistors, condensers, bolts, nuts, washers, small tools, etc. **List**..... \$8.00 Each



WIRT

SUPPRESSORS and SWITCHES

AUTO RADIO IGNITION SUPPRESSORS

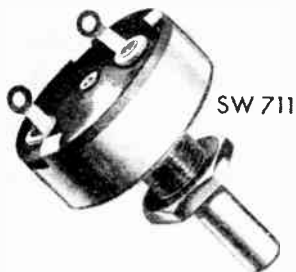


Wirt Suppressors are made with moulded black bakelite housings. All metal parts are made of rugged unfinished brass. Terminals are securely fastened to casings and sealed with special moisture and heat resisting dielectric cement. Resistor pills are sprayed with zinc and then double impregnated with a special moisture-proofing compound. Resistance value of all standard types is 10000 ohms $\pm 20\%$; for FV-8 types 50000 ohms $\pm 20\%$. The distributed capacity is less than 1.5 mmf. Resistance values will not change more than 7% after being submerged in water for 100 hours. Test by sparking 1800 times per minute at 10,000 volts for 100 hours produces resistance change of not more than 3%. Wirt Suppressors are impervious to heat, oil, moisture and mild acids, and will not change in resistance more than 10% in 50,000 miles of operation.

Cat. No.	Type	List Price
S914	—Bracket—Standard	\$0.30 Each
S916	—Bracket—For FV-8	.30 Each
S915	—Distributor—Slip Fitting	.30 Each
S918	—FV-8 Brush—Years 1933-34-35	.30 Each
S922	—FV-8 Brush—Years 1936 to 1940	.30 Each
S921	—Universal Screw—Standard	.30 Each
S923	—Universal Screw—For FV-8	.30 Each
S924	—Snap-on Plug	.30 Each
S926	Cable—Screw Fitting	.30 Each

WIRT ROTARY AND SLIDE SWITCHES

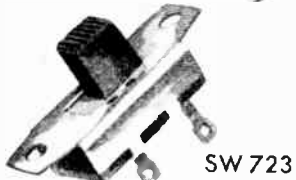
Rotary Switches



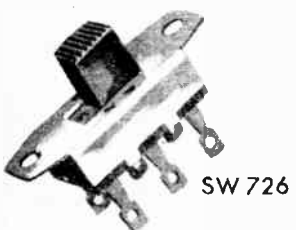
General: Wirt Rotary Switches are of the quick break type, have positive contact, are rugged and neat in appearance. They are constructed with tin plated steel housings. The outside diameter of the switch is $1\frac{1}{8}$ " and thickness $\frac{1}{2}$ ". Standard bushings are of brass, $\frac{3}{8}$ " \times $\frac{3}{8}$ " long. Steel shafts are $\frac{5}{8}$ " from end of bushing, and made with a flat. Wiping contacts and terminals are silver plated. Terminals are securely fastened in place. Activating spring is positive in action. One $\frac{9}{16}$ " hex. nut is furnished. These switches are successfully used in conjunction with Radio, Phonograph, Signal and Instrument Circuits.

Cat. No.	Type	List Price
SW711	—SPST Rotary Switch, 3A-125V-AC-DC 2 Terminals	\$0.50 Each
SW711A	—SPDT Rotary Switch, 3A-125V-AC-DC 3 Terminals	.55 Each

Slide Switches



General: All Wirt Slide Switches are compact and sturdy. Housings are made of steel and are cadmium plated. The physical dimensions of the switches have been standardized, width $\frac{35}{64}$ ", length 1-13 $\frac{32}{64}$ " and mounting centers $1\frac{1}{8}$ ". Standard buttons are of black bakelite. All contacts and terminals are silver plated. Switches SW723 and SW725 are used in the Radio, Signal, Phonograph and Instrument industries.



Cat. No.	Type	List Price
SW723	—SPST Slide Switch, .75A-125V-AC-DC, 2 Terminals	\$0.31 Each
SW724	—SPDT Slide Switch, .75A-125V-AC-DC, 3 Terminals	.37 Each
SW725	—DPST Slide Switch, .50A-125V-AC-DC, 4 Terminals	.44 Each
SW726	—DPDT Slide Switch, .50A-125V-AC-DC, 6 Terminals	.55 Each

MALLORY CONTROLS • LIST PRICES

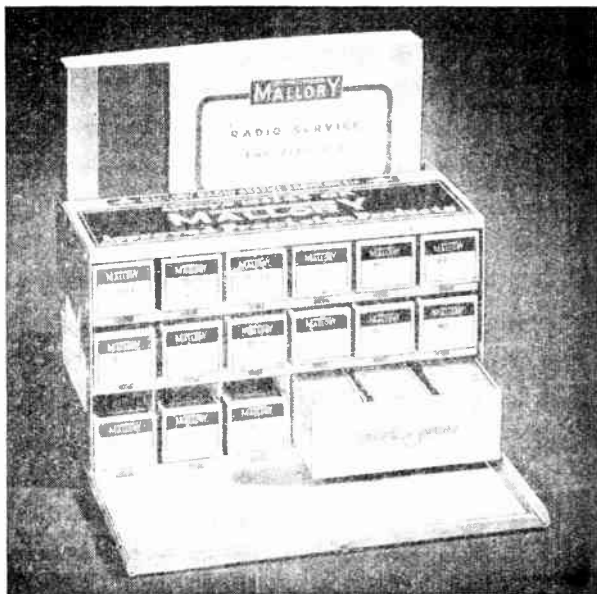
★ Complete descriptions of these parts will be found on the following pages.

Mallory Cat. No.	List Price	Mallory Cat. No.	List Price	Mallory Cat. No.	List Price	Mallory Cat. No.	List Price	Mallory Cat. No.	List Price	Mallory Cat. No.	List Price
<i>Mallory Page 3</i>		<i>Mallory Page 5</i>		<i>Mallory Page 6</i>		<i>Mallory Page 7</i>		<i>Mallory Page 9</i>		<i>Mallory Page 10</i>	
THE MALLORY 1485 CONTROL DEAL		SM Midget Single Controls • Fixed Shaft • Special Applications		TM Midget Control • Plug-in Shafts • Single Tapped		SS25 \$0.30 SS26 .30 SS27 .30 SS28 .65 SS29 .30 SS30 .30 SS31 .30 SS32 .30 SS33 .45 SS34 .65		TRP605 \$1.85 TRP614 1.85 TRP616 1.85 TRP606 1.85 TRP607 1.85 TRP610 1.85 TRP608 1.85 TRP609 1.85 TRP612 1.85 TRP618 1.85 TRP613 1.85 TRP620 1.85 TRP615 1.85 TRP622 1.85 TRP619 1.85 TRP621 1.85 TRP624 1.85		STANDARD Wire-Wound Controls • Fixed Shafts • No Taps	
1485 \$24.75		SM300 \$2.50 SM301 2.50 SM302 2.50 SM303 1.85 SM304 2.50 SM305 2.50 SM306 2.50 SM307 1.85 SM308 1.85 SM309 2.50 SM310 1.85 SM311 2.50 SM312 2.50 SM313 2.50 SM316 1.85 SM317 2.50		TM220 \$1.85 TM221 1.85 TM222 } TM225 } 1.85 TM223 } TM228 1.85 TM226 1.85 TM233 1.85 TM224 1.85 TM227 } TM230 } 1.85 TM231 } 1.85 TM232 } TM234 1.85 TM236 1.85 TM240 1.85 TM241 } TM238 } 1.85 TM239 } TM242 } 1.85 TM243 } TM244 1.85 TM245 1.85 TM246 1.85 TM247 1.85 TM250 1.85 TM248 1.85 TM254 1.85 TM249 1.85 TM251 } TM252 } 1.85 TM259 1.85 TM257 1.85 TM261 1.85		M-26 \$0.60 M-26T .75 M-27 .75 M-28 .75 M-23-24 .75		SRP Standard Single Controls • Fixed Shaft • Special Application		Q \$1.25 R 1.25 S 1.25 T 1.25 U 1.25 V 1.25 W 1.25 X 1.25 A400P 1.25 A 1.25 A650P 1.25 B 1.25 UC500 1.25 A1MP 1.25 C12 1.25 C 1.25 A2MP 1.25 D12 1.25 D 1.25 A3MP 1.25 D7 1.25 A4MP 1.25 E 1.25 A5MP 1.25 E7 1.25 F 1.25 F7 1.25 G 1.25 A10MP 1.25 G7 1.25 H 1.25 H7 1.25 A20MP 1.25	
<i>Mallory Page 4</i>		SMD Midget Dual Controls • Fixed Special Application		<i>Mallory Page 7</i>		ATTACHABLE SWITCHES In Midget Controls		SRP134 \$1.85		<i>Mallory Page 11</i>	
MR Midget Control Fixed Shaft		SMD500 \$3.75 SMD501 3.75 SMD502 3.75 SMD503 3.75 SMD504 3.75 SMD505 3.75 SMD506 3.75 SMD507 3.75 SMD508 3.75 SMD509 3.75 SMD510 3.75 SMD511 3.75 SMD512 3.75		DTM Midget Controls • Plug-in Shaft • Double-Tapped		E12 \$1.25 Y5MP 1.25 F12 1.25 G12 1.25 UC501 1.25 Y10MP 1.25 H12 1.25 Y 1.25 J 1.25 Y25MP 1.25 K12 1.25 K 1.25 Y50MP 1.25 Z12 1.25 Z 1.25 UC510 1.25 Y100MP 1.25 UC502 1.25 Y200MP 1.25 M 1.25 UC511 } UC509 } 1.25 Y250MP } 1.25 N } 1.25 UC512 1.25 UC513 1.25 UC503 1.25 O 1.25 UC514 } Y1000MP } 1.25 P 1.25 UC504 1.25 UC505 1.25 UC506 1.25 UC507 1.25 UC508 1.25		DRP Standard Dual Controls • Special Applications		6-9 \$0.60 6T .75 7 .75 8 .75 13 .75 14 .75	
MR14 \$1.25		<i>Mallory Page 6</i>		DTM282 \$1.85		STANDARD Carbon Controls • Fixed Shaft • No Taps		SRP142 1.85		ATTACHABLE SWITCHES Standard Controls	
MR18 1.25		UM Midget Controls • Plug-in Shaft • No Taps		DTM283 1.85		E12 \$1.25 Y5MP 1.25 F12 1.25 G12 1.25 UC501 1.25 Y10MP 1.25 H12 1.25 Y 1.25 J 1.25 Y25MP 1.25 K12 1.25 K 1.25 Y50MP 1.25 Z12 1.25 Z 1.25 UC510 1.25 Y100MP 1.25 UC502 1.25 Y200MP 1.25 M 1.25 UC511 } UC509 } 1.25 Y250MP } 1.25 N } 1.25 UC512 1.25 UC513 1.25 UC503 1.25 O 1.25 UC514 } Y1000MP } 1.25 P 1.25 UC504 1.25 UC505 1.25 UC506 1.25 UC507 1.25 UC508 1.25		DRP114 \$3.10 DRP115 3.10 DRP116 3.10 DRP117 3.10 DRP119 3.10 DRP122 3.10 DRP169 3.10 DRP221 3.10 DRP222 3.10 DRP232 3.10 DRP239 3.10 DRP240 3.10 DRP244 3.10 DRP246 3.10 DRP250 3.10 DRP301 3.10 DRP302 3.10 DRP304 3.10 DRP306 3.10 DRP308 3.10 DRP311 3.10 DRP314 3.10 DRP315 3.10 DRP317 3.10 DRP318 3.10		CE \$3.10 GE 3.10 GG 3.10 GK 3.10 DRP308 3.10 LL 3.10 LM 3.10 MM 3.10 MN 3.10 NN 3.10	
MR19 1.25		UM114 \$1.25		DTM287 1.85		Y25MP 1.25		SRP152 1.85		ATTACHABLE SWITCHES Standard Controls	
MR20 1.25		UM118 1.25		DTM288 1.85		UC501 1.25		SRP153 1.85		DRP Standard Dual Controls • Special Applications	
MR21 1.25		UM119 1.25		DTM289 1.85		UC502 1.25		SRP154 1.85		DRP114 \$3.10	
MR22 1.25		UM120 1.25		DTM291 1.85		Y200MP 1.25		SRP179 1.85		DRP115 3.10	
MR24 1.25		UM121 1.25		DTM293 1.85		M 1.25		SRP185 1.85		DRP116 3.10	
MR28 1.25		UM122 1.25		DTM295 1.85		UC511 } 1.25		SRP188 1.85		DRP117 3.10	
MR29 1.25		UM124 1.25		DTM296 1.85		UC509 } 1.25		SRP187 1.85		DRP119 3.10	
MR33 1.25		UM128 1.25		DTM298 1.85		Y250MP } 1.25		SRP185 1.85		DRP122 3.10	
MR34 1.25		UM129 1.25		PLUG-IN SHAFTS (Universal & Special) For Types UM, TM, and DTM Controls		N } 1.25		SRP185 1.85		DRP169 3.10	
MR35 1.25		UM133 1.25		SS1 \$0.30		UC512 1.25		SRP185 1.85		DRP122 3.10	
MR36 1.25		UM134 1.25		SS2 .30		UC513 1.25		SRP185 1.85		DRP122 3.10	
MR37 1.25		UM135 1.25		SS3 .45		UC503 1.25		SRP185 1.85		DRP169 3.10	
MR39 1.25		UM137 1.25		SS4 .30		O 1.25		SRP185 1.85		DRP221 3.10	
MR40 1.25		UM139 1.25		SS5 .30		UC514 } 1.25		SRP185 1.85		DRP222 3.10	
MR41 1.25		UM140 1.25		SS6 .30		Y1000MP } 1.25		SRP185 1.85		DRP232 3.10	
MR42 1.25		UM141 1.25		SS10 .30		P 1.25		SRP185 1.85		DRP239 3.10	
MR44 1.25		UM142 1.25		SS11 .45		UC504 1.25		SRP185 1.85		DRP240 3.10	
MR45 1.25		UM143 1.25		SS12 .30		UC505 1.25		SRP185 1.85		DRP244 3.10	
MR48 1.25		UM144 1.25		SS14 .45		UC506 1.25		SRP185 1.85		DRP246 3.10	
MR60 1.25		UM147 1.25		SS15 .45		UC507 1.25		SRP185 1.85		DRP250 3.10	
MR61 1.25		UM150 1.25		SS16 .30		UC508 1.25		SRP185 1.85		DRP301 3.10	
MR63 1.25		UM149 1.25		SS17 .65				SRP185 1.85		DRP302 3.10	
MR65 1.25		UM151 1.25		SS18 .30				SRP185 1.85		DRP304 3.10	
MR67 1.25		UM154 1.25		SS19 .65				SRP185 1.85		DRP306 3.10	
		UM156 1.25		SS20 .65				SRP185 1.85		DRP308 3.10	
		UM157 1.25		SS21 .45				SRP185 1.85		DRP311 3.10	
		UM158 1.25		SS22 .30				SRP185 1.85		DRP314 3.10	
		UM161 1.25		SS23 .30				SRP185 1.85		DRP315 3.10	
		UM162 1.25		SS24 .30				SRP185 1.85		DRP317 3.10	
		UM160 \$1.25						SRP185 1.85		DRP318 3.10	
		UM169 1.25						SRP185 1.85		M1P \$1.25	
		UM181 1.25						SRP185 1.85		M3P 1.25	
		UM163 1.25						SRP185 1.85		M6P 1.25	
		UM165 1.25						SRP185 1.85		M10P 1.25	
								SRP185 1.85		M15P 1.25	
								SRP185 1.85		M20P 1.25	

THE MALLORY 1485 CONTROL DEAL

gives you these advantages

- 15 popular controls—9 switches
- Services 90% of your replacement needs
- Fast-moving controls at your fingertips
- Simplified inventory control
- Handy assortment of AC "off-and-on" switches
- Compact and lightweight for your workbench or wall
- Extra space for flexible inventory
- Built-in rack for your Mallory Radio Service Encyclopedia
- Attractive design helps dress up your shop
- Sturdy cabinet built for long use



and you get the Cabinet FREE with purchase of controls and switches at your regular discount!

APPLICATION—The Mallory 1485 Control Deal Cabinet is designed for workbench accessibility to simplify and speed up your volume control replacement work. It is ideal for more accurate inventory control. The controls and switches included in the cabinet are fast movers; selected to give you maximum coverage with minimum stock.

GENERAL DESCRIPTION—The cabinet contains 15 individual compartments for packaged controls. Twelve of these compartments are clearly labeled with Mallory Catalog numbers. Three compartments are designed to be labeled by you to meet your own individual requirements. A roomy drawer holds 9 AC switches for the entire control selection. There is a special built-in rack attached to the back of the cabinet to hold your Mallory Radio Service Encyclopedia. A hinged lid on the front of the cabinet snaps shut to hold the controls firmly in place during service calls. The cabinet is constructed of 28-gauge sheet steel, attractively finished in white, and labeled in Mallory orange and blue.

USE IN INVENTORY CONTROL—Since each compartment is clearly labeled with a Mallory Catalog

number, you can see at a glance which controls you immediately need to re-order. This assures you of an adequate, up-to-date supply of popular replacement models. Your simplified system of inventory control guarantees that, in more than 9 out of 10 service jobs, you will have **on hand** the control you need. Use of the Mallory cabinet gives you an accurate check on the faster-moving items in your locality.

CONTENTS—(Complete descriptive information on each of the following controls may be found in this catalog.)

- | | |
|------------------|-----------------|
| 4—MR-48 Controls | 1—MR-39 Control |
| 3—MR-53 Controls | 1—MR-41 Control |
| 2—MR-50 Controls | 5—M-26 Switches |
| 2—MR-44 Controls | 3—M-27 Switches |
| 1—MR-18 Control | 1—M-28 Switch |
| 1—MR-33 Control | |

PRICE—When you purchase, at your regular discount, the controls and switches included in the 1485 deal, you get the cabinet **free of charge!** The Mallory Radio Service Encyclopedia is available separately through your Authorized Mallory Distributor.

You will use your MALLORY 1485 CONTROL DEAL for all of these Radio Sets

Admiral	Capehart	Emerson	R.C.A.	Travler
Air King	Chevrolet	Fada	Scott	Truetone
Airline	Colonial	Fairbanks-Morse	Sears-Roebuck	United American Bosch
Allied	Continental	Hallicrafter	Sentinel	Warwick
Atwater Kent	Crosley	Motorola	Sonora	Westinghouse
Belmont	Delco	Patterson	Spiegel	Wilcox-Gay
Brunswick-Mersman	Detrola	Phiico	Stewart-Warner	Zenith
Cadillac	Dewald	Pilot	Stromberg-Carlson	Zephyr

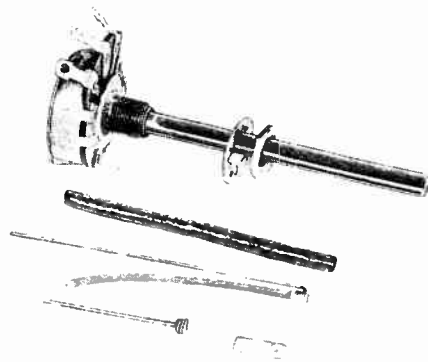
Mallory Page 3 (See Mallory Page 1 for List Prices)

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(See Pages R-19 and R-20 for Mallory List Prices)

R-21

MALLORY MIDGET CARBON CONTROLS



MR Midget Control • Fixed Shaft

APPLICATION—For volume or tone control in audio circuits.

DESCRIPTION— $1\frac{1}{8}$ " carbon control, available in a wide range of resistances and tapers. Has an excellent safety factor in current-carrying capacity. Uses Mallory's special resistance element insuring a long, quiet life.

SHAFT DESCRIPTION—An accurately finished 3" channel shaft is permanently attached.

ACCESSORIES—One hex nut, one lock washer, and one shim is furnished with each control. An external adjustable resistor is furnished where required, as indicated below. AC switches are available as a special item. (See page 8).

PACKAGING—One control, plus accessories and complete instructions per display carton.

Catalog Number	Ohms Resistance	Taper	Mallory Number	Ohms Resistance	Taper
MR14	5M	4	MR39	100M	1
MR18	10M	1	MR40	100M	2
MR19	10M	2	MR41	100M	4
MR20	10M	4	MR42	150M	1
MR21	15M	1	MR44	250M	1
MR22	15M	2	MR45	250M	2
MR24	20M	1	MR48	500M	1
MR28	25M	2	MR50	500M	4
MR29	25M	4	MR51	750M	1
MR33	50M	1	MR53	1 Meg.	1
MR34	50M	2	MR55	2 Meg.	1
MR35	50M	4	MR57	3 Meg.	1
MR36	75M	1			
MR37	75M	2			

§External adjustable resistor included

★ ★ ★

MK Midget Control • Fixed Knurled Shafts • No Taps

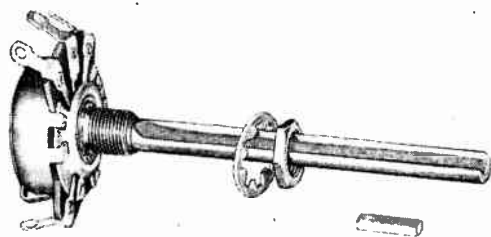
APPLICATION—For volume or tone control in audio circuits.

DESCRIPTION— $1\frac{1}{8}$ " carbon control using same element as type MR.

SHAFT DESCRIPTION—Furnished with a 3" accurately finished, permanently attached knurled shaft for use in replacing original controls of this shaft construction.

ACCESSORIES—One hex nut and one lock washer furnished with each control. AC switches available as a special item. (See page 8).

PACKAGING—One control, plus accessories and complete instructions per display carton.



MRT Midget Control • Fixed Shaft • Single Tapped

APPLICATION—For control of volume with tone compensation in audio circuits.

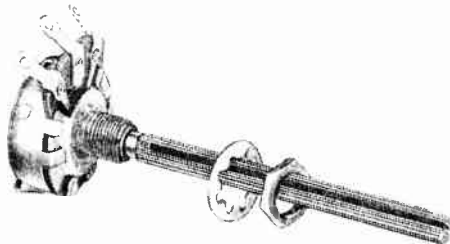
DESCRIPTION— $1\frac{1}{8}$ " carbon controls with a single tap. Available in a wide range of resistances. Taps are accurately located. Uses Mallory's special resistance element insuring quiet, long life and an excellent safety factor in current-carrying capacity.

SHAFT DESCRIPTION—A 3" accurately finished channel shaft is permanently attached.

ACCESSORIES—One hex nut, one lock washer and one shim furnished with each control. AC switches available as a special item. (See page 8).

PACKAGING—One control, plus accessories and complete instructions per display carton.

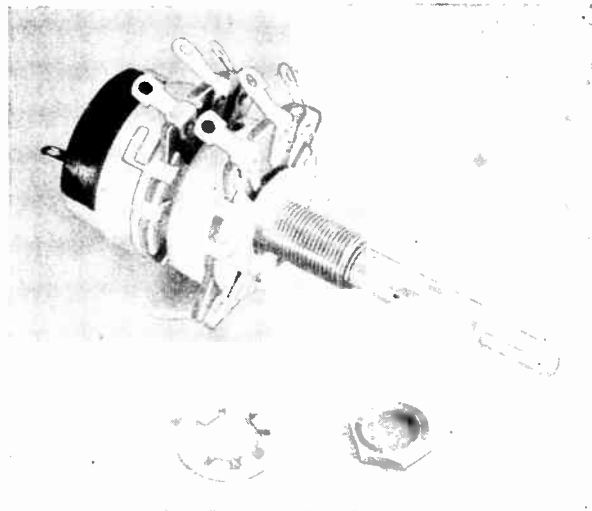
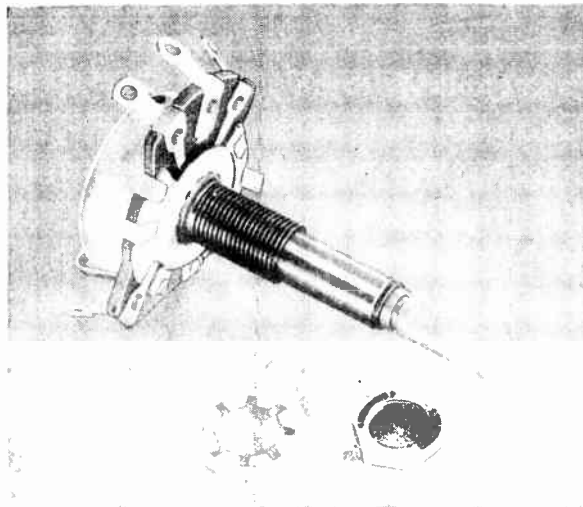
Catalog Number	Overall Resistance	Tap Resistance	Catalog Number	Overall Resistance	Tap Resistance
MRT420	250M	50M	MRT460	1 Meg.	500M
MRT425	350M	70M		1.5 Meg.	200M
MRT428	500M	5M	MRT445	2 Meg.	5M
MRT426	500M	15M	MRT446	2 Meg.	15M
MRT427	500M	100M	MRT447	2 Meg.	60M
MRT430	500M	150M	MRT450	2 Meg.	125M
MRT431	500M	225M	MRT448	2 Meg.	250M
MRT436	1 Meg.	125M	MRT454	2 Meg.	400M
MRT440	1 Meg.	206M	MRT449	2 Meg.	600M
MRT438	1 Meg.	300M	MRT451	2 Meg.	900M
MRT443	1 Meg.	450M			



Catalog Number	Ohms Resistance	Taper
MK400	250M	1
MK401	500M	1
MK402	1 Meg.	1
MK403	2 Meg.	1

Mallory Page 4 (See Mallory Page 1 for List Prices)

MALLORY MIDGET CARBON CONTROLS



SM Midget Single Controls • Fixed Shaft • Special Applications

APPLICATION—Special controls to be used as recommended in the Mallory Radio Service Encyclopedia.

DESCRIPTION— $1\frac{1}{8}$ " carbon controls for use as exact replacements, as recommended in the Mallory Radio Service Encyclopedia. Use is made of Mallory's special resistance element to insure satisfactory service in replacement.

SHAFT DESCRIPTION—A fixed shaft is provided. Each shaft varies according to the requirements of the control and its recommended application.

ACCESSORIES—One hex nut and one lock washer furnished with each control. AC switches available as a special item. (See page 8).

PACKAGING—One control, plus accessories and complete instructions per display carton.

Catalog Number	Resistance Value	Tap at
SM300†	350M	75M
SM301†	2 Meg.	500M
SM302†	500M	No Tap
SM303	6Meg.	No Tap
SM304†	1 Meg.	200M
SM305†	1 Meg.	875M
SM306†	1 Meg.	550M
SM307	2 Meg.	250M
SM308	1 Meg.	200M
SM309†	2 Meg.	600M
SM310	2 Meg.	125M
SM311†	1 Meg.	300M
SM312†	250M	No Tap
SM313†	250M	No Tap
SM316	350M	35M
SM317†	2.25 Meg.	500M & 1 Meg.

SMD Midget Dual Controls • Fixed Shaft • Special Applications

APPLICATION—For special applications as recommended in Mallory Radio Service Encyclopedia.

DESCRIPTION— $1\frac{1}{8}$ " dual carbon controls made in a wide range of resistances and tapers and with taps for special applications. A fixed concentric shaft and switch is provided. They are designed to meet exact physical and electrical requirements for special applications, as recommended in Mallory Radio Service Encyclopedia.

SHAFT DESCRIPTION—Fixed concentric shafts, each of the proper length and contour to duplicate the original installation.

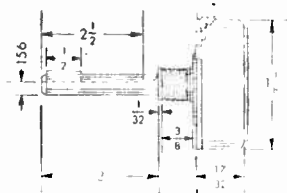
ACCESSORIES—One hex nut and one lock washer furnished with each control.

PACKAGING—One control, plus accessories and complete instructions per display carton.

Catalog Number	Res. Front	Res. Rear	Tap At
SMD500	2 Meg.	2 Meg.	
SMD501	2 Meg.	1 Meg.	Front 500M
SMD502	250M	1 Meg.	Rear 250M
SMD503	2 Meg.	1 Meg.	Front 500M
SMD504	250M	500M	Front 50M
SMD505	250M	1 Meg.	Rear 300M
SMD506	500M	1 Meg.	Rear 200M
SMD507	500M	350M	Rear 70M
SMD508	30M	1 Meg.	Rear 450M
SMD509	2 Meg.	500M	Front 900M
SMD510	1 Meg.	500M	Front 300M
SMD511	1 Meg.	350M	Rear 70M
SMD512	1 Meg.	350M	Rear 70M

†Includes SPST switch permanently attached to control.

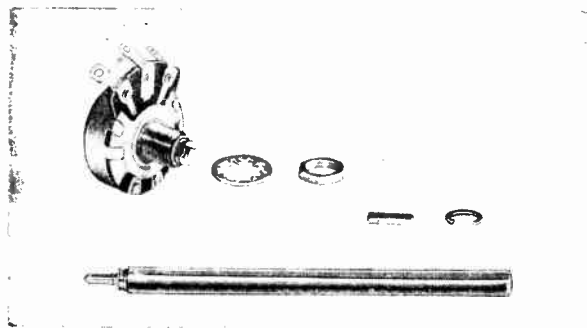
Dimensions of Types MR, MK and MRT Fixed Shaft Controls



MALLORY RADIO SERVICE ENCYCLOPEDIA

Page after page of replacement information for all pre-war and post-war receivers.

MALLORY MIDGET CARBON CONTROLS



UM Midget Controls • Plug-In Shaft • No Taps

APPLICATION—For volume or tone control in audio circuits.

DESCRIPTION—1½" carbon control, available in a wide range of resistances and tapers. Has an excellent safety factor in current-carrying capacity accomplished by the use of Mallory's special resistance element, which also insures a long, quiet life.

SHAFT DESCRIPTION—The control is provided with a socket which will take 30 different types of shafts insuring maximum flexibility of stock. One SS-1 4" channel shaft furnished with each UM control. (See page 7 for other universal and special plug-in shafts available.)

ACCESSORIES—One hex nut, one lock washer, one shim, one lock ring, and one SS-1 shaft furnished with each control. An external variable resistance is furnished where required, as indicated below. AC switches available as a special item. (See page 8.)

PACKAGING—One control, plus accessories and complete instructions per display carton.

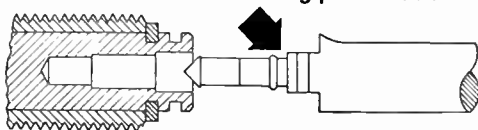
Catalog Number	Ohms Resistance	Taper	Catalog Number	Ohms Resistance	Taper
UM114	5M	4	UM144	150M	1
UM118	10M	1	UM147	250M	1
UM119	10M	2	UM150*		
UM120	10M	4			
UM121	15M	1	UM149	250M	4
UM122	15M	2	UM151	350M	1
UM124	20M	1	UM154	500M	1
UM128	25M	2	UM157*		
UM129	25M	4			
UM133	50M	1	UM156	500M	4
UM134	50M	2	UM158	750M	1
UM135	50M	4	UM161	1 Meg.	1
UM137	75M	1	UM162*		
UM138	75M	2	UM160	1 Meg.	2
UM140	100M	1	UM159	1 Meg.	4
UM143*			UM181†	2 Meg.	Spec.
UM141	100M	2	UM163	2 Meg.	1
UM142	100M	4			
UM180‡	100M	Spec.	UM165	3 Meg.	1

*Clutch type controls—no provision for attachable switch.

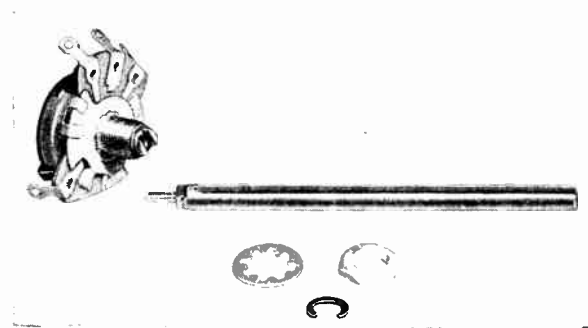
§External adjustable resistor included.

†Right hand switch action.

NO WOBBLE—this ring prevents it!



All Mallory plug-in shafts are now made with a small ring as shown in the drawing above. That's why they can't wobble or work loose—why they fit as securely as a fixed shaft.



TM Midget Control • Plug-In Shaft • Single Tapped

APPLICATION—For use as a volume control with tone compensation in audio circuits.

DESCRIPTION—1½" carbon controls with a single tap. Available in a wide range of resistances. Taps are accurately located. Uses Mallory's special resistance element insuring quiet, long life and an excellent safety factor in current-carrying capacity.

SHAFT DESCRIPTION—The control is provided with a socket which will take 30 different types of shafts insuring maximum flexibility of stock. One SS-1 4" channel shaft furnished with each TM control. (See page 7 for other universal and special plug-in shafts available.)

ACCESSORIES—One hex nut, one lock washer, one lock ring, one shim, and one SS-1 shaft furnished with each control. AC switches available as a special item. (See page 8.)

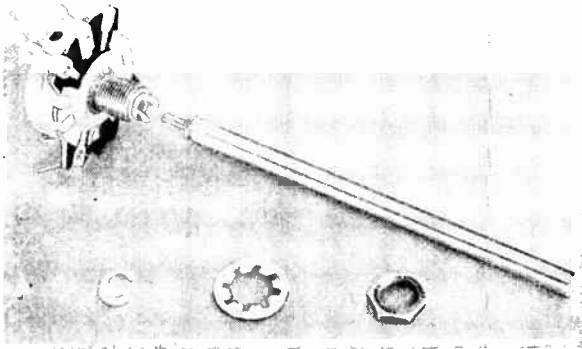
PACKAGING—One control, plus accessories and complete instructions per display carton.

Type TM (Plug-In)	Overall Resistance	Tap Resistance
TM220	250M	50M
TM221	250M	110M
TM222*		
TM225	350M	70M
TM223*		
TM228	500M	5M
TM226	500M	15M
TM233	500M	60M
TM224*	500M	100M
TM227		
TM230	500M	150M
TM231	500M	225M
TM232*		
TM234	1 Meg.	65M
TM236	1 Meg.	125M
TM240	1 Meg.	200M
TM241*		
TM248	1 Meg.	300M
TM238		
TM239*	1 Meg.	450M
TM242*		
TM243	1 Meg.	500M
TM244	1.5 Meg.	200M
TM245	2 Meg.	5M
TM246	2 Meg.	15M
TM247	2 Meg.	60M
TM250	2 Meg.	125M
TM248	2 Meg.	250M
TM254	2 Meg.	400M
TM249	2 Meg.	600M
TM251	2 Meg.	900M
TM252*		
TM259	2 Meg.	1 Meg.
TM257	3 Meg.	900M
TM261	5 Meg.	1 Meg.

*Clutch type controls—no provision for attachable switch.

MALLORY MIDGET CARBON CONTROLS • PLUG IN SHAFTS

Universal and Special Plug-In Shafts for Use with Types UM, TM, and DTM Controls



DTM Midget Controls • Plug-In Shaft • Double Tapped

APPLICATION—For use as a volume control with tone compensation in audio circuits.

DESCRIPTION— $1\frac{1}{8}$ " carbon controls with double taps. The basic resistance element of this control is the same as the element in MR controls. Taps are accurately spaced.

SHAFT DESCRIPTION—The control is provided with a socket which will take 30 different types of shafts insuring maximum flexibility of stock. One SS-1 4" channel shaft furnished with each DTM control. (See this page for other universal and special plug-in shafts available.)

ACCESSORIES—One hex nut, one lock washer, one lock ring, one SS-1 shaft, and one shim furnished with each control. AC switches available as a special item. (See page 8.)

PACKAGING—One control, plus accessories and complete instructions per display carton.

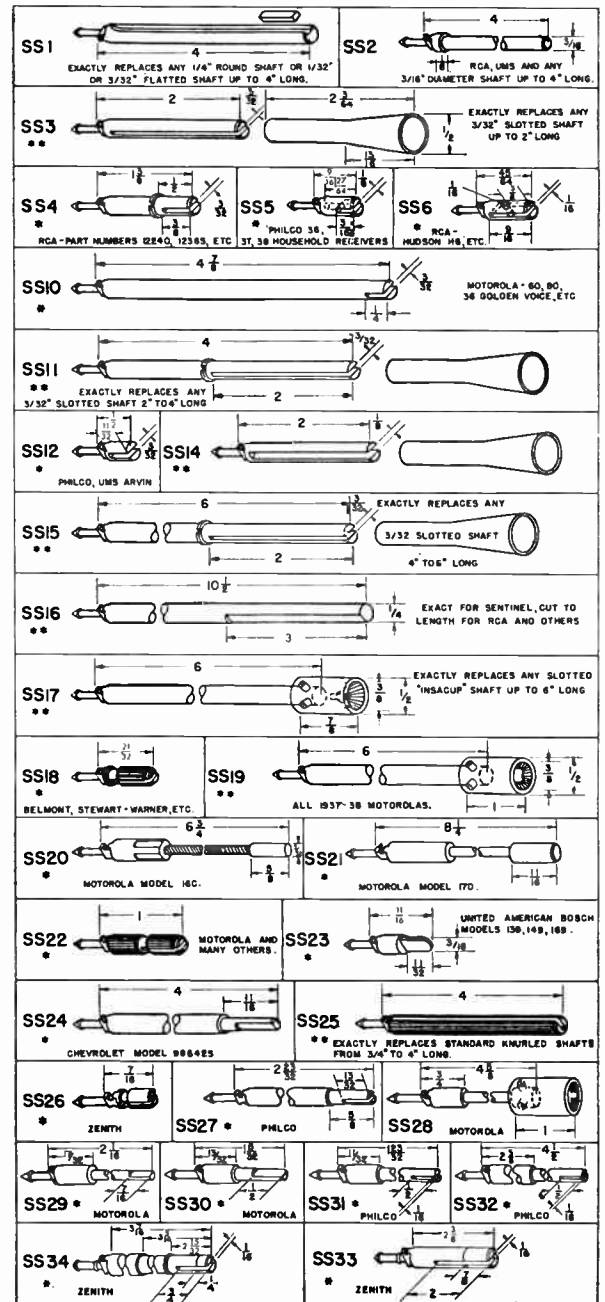
Type DTM ($1\frac{1}{8}$ " dia.) Plug-In	Overall Resistance	Tap Resistance	
		Tap 1	Tap 2
DTM282	250M	50M	100M
DTM283	500M	100M	200M
DTM287	1 Meg.	50M	100M
DTM289	1 Meg.	250M	500M
DTM291	1.5 Meg.	225M	500M
DTM293	2 Meg.	5M	500M
DTM295	2.25 Meg.	250M	500M
DTM296	2.25 Meg.	500M	1 Meg.
DTM298	3 Meg.	100M	1.5 Meg.

KEY TO SHAFT CHART

*These Plug-In Shafts are designed as exact replacements for applications requiring a given predetermined length with special coupling slots or tongue or an insulated coupler. None of these require any cutting or special adjustment.

**These Plug-In Shafts are of universal length and designed for many applications.

Catalog Number	Catalog Number	Catalog Number
SS1	SS15	SS25
SS2	SS16	SS26
SS3	SS17	SS27
SS4	SS18	SS28
SS5	SS19	SS29
SS6	SS20	SS30
SS10	SS21	SS31
SS11	SS22	SS32
SS12	SS23	SS33
SS14	SS24	SS34

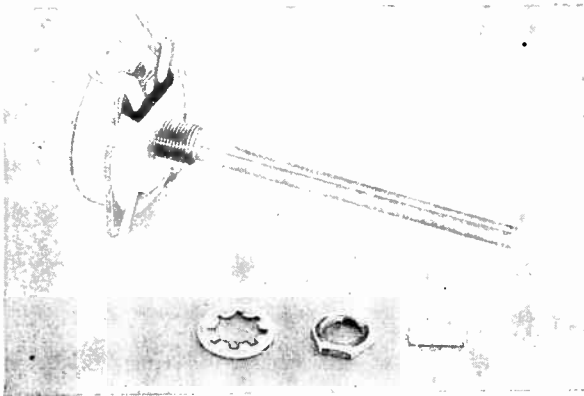


MALLORY STANDARD CARBON CONTROLS

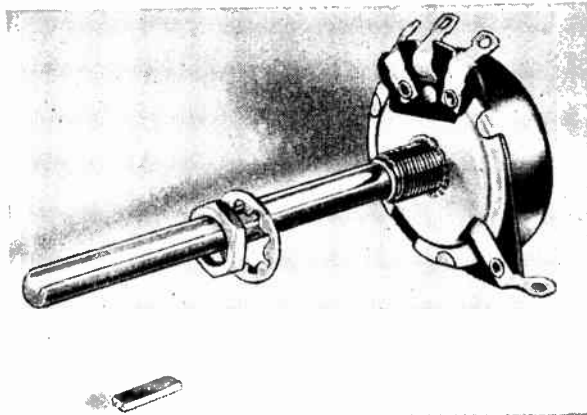
TRP Double Tapped

Catalog Number	Overall Resistances	Tap Resistance	
		Tap 1	Tap 2
TRP622	44M	7M	14M
TRP619	500M	100M	200M
TRP621 ‡	2.25 Meg.	250M	500M
TRP624			

‡No provision for switch.



TRP Double Tapped



TRP Single Tapped

TRP Standard Controls • Fixed Shaft • Single and Double Tapped

APPLICATION—For volume control with tone compensation in audio circuits.

DESCRIPTION—1½" carbon controls made available in a wide range of resistances, single and double tapped as indicated.

SHAFT DESCRIPTION—An accurately finished 3" shaft is permanently attached.

ACCESSORIES—One hex nut, one lock washer, and one shim furnished with each control. AC switches available as a special item. (See page 11.)

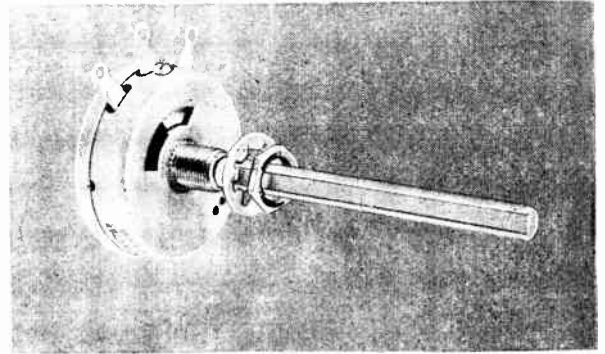
PACKAGING—One control, plus accessories and complete instructions per display carton.

TRP Single Tapped

Catalog Number	Overall Resistance	Tap Resistance	Catalog Number	Overall Resistance	Tap Resistance
TRP601	40M	8M	TRP610	1 Meg.	30M
TRP602	60M	4M	TRP608	1 Meg.	200M
TRP617	60M	12M	TRP609††	1 Meg.	500M
TRP623	250M	50M	TRP612	2 Meg.	15M
TRP603	250M	110M	TRP618	2 Meg.	250M
			TRP613	2 Meg.	400M
			TRP620	2 Meg.	900M
TRP604	350M	20M			
TRP605	350M	70M			
TRP614 ‡			TRP615	3 Meg.	900M
TRP616	500M	60M			
TRP606	500M	100M			
TRP607	500M	225M			

‡Has slotted shaft for automobile receivers.

††Special taper for fader service.



SRP Standard Single Controls • Fixed Shaft • Special Applications

APPLICATION—For special applications, as recommended in Mallory Radio Service Encyclopedia.

DESCRIPTION—1½" carbon or wire-wound controls, as indicated, available in a variety of resistances and constructions to meet the special requirements necessary in replacement, as recommended in Mallory Radio Service Encyclopedia.

SHAFT DESCRIPTION—A special shaft is permanently attached. It is machined to the exact dimensions necessary to meet replacement requirements.

ACCESSORIES—One hex nut, and one lock washer furnished with each control.

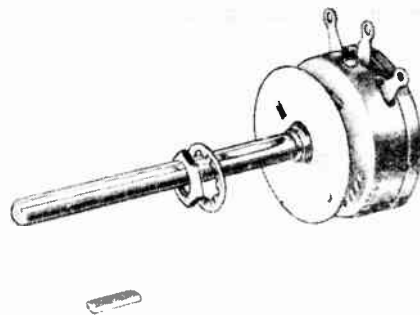
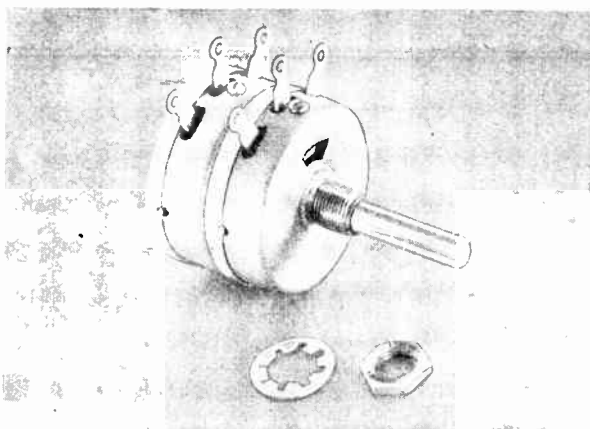
PACKAGING—One control, plus accessories and complete instructions per display carton.

Catalog Number	Ohms Resistance	Type Element
SRP134	4500	W. W.
SRP142	2900	W. W.
SRP152	60	W. W.
SRP153	13M	W. W.
SRP154	50M	Carbon
SRP179	125M	Carbon
SRP185	1500	Carbon
SRP188	32M	Carbon
SRP213	250M	Carbon
SRP239	450	W. W. Strip
SRP241	6M	W. W. Strip
SRP245	32M	Carbon
SRP251	350M	Carbon
SRP261	100M	Carbon
SRP262	1500	W. W.
SRP263	32M	Carbon
SRP269	10M	Carbon
SRP282	350M	Carbon
SRP286 ‡	250M	Carbon
SRP288	100M	Carbon
SRP289	50M	Carbon
SRP290	1 Meg.	Carbon
SRP900	20M	Carbon
SRP901	10M	Carbon
SRP960	800	W. W.
SRP961	10M	Carbon

‡Right hand switch action.

Mallory Page 9 (See Mallory Page 1 for List Prices)

MALLORY STANDARD CARBON AND WIREWOUND CONTROLS



DRP Standard Dual Controls • Special Applications

APPLICATION—For special applications, as recommended in Mallory's Radio Service Encyclopedia.

DESCRIPTION—1½" Standard Controls of wire-wound and or carbon construction available in a range of resistances and types as required by recommendations of Mallory Radio Service Encyclopedia. They are designed to provide exact physical and electrical characteristics of the original control.

ACCESSORIES—One hex nut and one lock washer furnished with each control.

PACKAGING—One control, plus accessories and complete instructions per display carton.

STANDARD Wire-Wound Controls • Fixed Shafts • No Taps

APPLICATION—Used as bias controls and voltage dividers in bridge circuits and test instruments.

DESCRIPTION—Rugged resistance strip and contactor assemblies are completely enclosed in a dust-proof case. Will carry 4 watts of power.

SHAFT DESCRIPTION—Furnished with a 3" fixed channel-type shaft.

ACCESSORIES—Mallory Dial Plate No. 396 is available for use with these controls. One hex nut, one lock washer, and one shim furnished with each control. An external variable resistor is furnished where required, as indicated below. Has adjustable stop plate for bias feature, as indicated below. AC switches available as a special item. (See page 11.)

PACKAGING—One control, plus accessories and complete instructions per display carton.

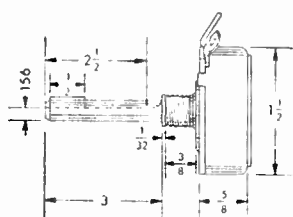
Catalog Number	Ohms Resistance		Type Element	
	Front	Rear	Front	Rear
DRP114	250	5M	W. W.	W. W.
DRP115	3800	3800	Carbon	Carbon
DRP116	25700	10000	W. W.	W. W.
DRP117	500	2500	W. W.	W. W.
DRP119	3M	10M	W. W.	W. W.
DRP122	645	10M	W. W.	W. W.
DRP169	7500	10M	W. W.	W. W.
DRP221	10M	100M	Carbon	Carbon
DRP222	75M	32M	Carbon	Carbon
DRP232	3 Meg.	3 Meg.	Carbon	Carbon
DRP239	25M	25M	Carbon	Carbon
DRP240	250M	10M	Carbon	Carbon
DRP244	25M	6M	Carbon	Carbon
DRP246	32M	50M	Carbon	Carbon
DRP250	50M	1M	Carbon	Carbon
DRP301	5M	2500	Carbon	W. W.
DRP302	10M	250M	Carbon	Carbon
DRP304	1 Meg.	3 Meg.	Carbon	Carbon
*DRP306	5M	10M	W. W.	Carbon
DRP308	50M	50M	Carbon	Carbon
DRP311	150M	250M	Carbon	Carbon
DRP314	500M	tapped 160M	Carbon	Carbon
DRP315	2 Meg.	2500	Carbon	Carbon
DRP317	500M	1M	Carbon	Carbon
DRP318	250M	3 Meg.	Carbon	Carbon

Catalog Number	Ohms Resistance	Taper	Catalog Number	Ohms Resistance	Taper
Q	2	4	D12 §	3000	1
R	6	4	D §	3000	2
S	10	4	A3MP §	3000	4
T	20	4	D7 §	3000	7
U	30	4	A4MP §	4000	4
V	60	4	E §	5000	2
W	100	4	A5MP §	5000	4
X	200	4	E7 §	5000	7
A400P	400	4	F §	7500	2
A	500	1	F7 §	7500	7
A550P	550	4	G §	10000	2
B	1000	1	A10MP §	10000	4
UC500	1000	2	G7 §	10000	7
A1MP	1000	4	H §	15000	2
C12 §	2000	1	H7 §	15000	7
C §	2000	2	A20MP §	20000	4
A2MP §	2000	4			

§Have exclusive Mallory adjustable bias feature, providing 500 ohms in 100 ohm steps in all values over 1,000 ohms.

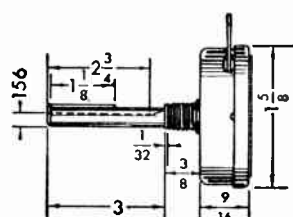
*Includes Switch.

Drawing Showing Dimensions of Standard Carbon Controls



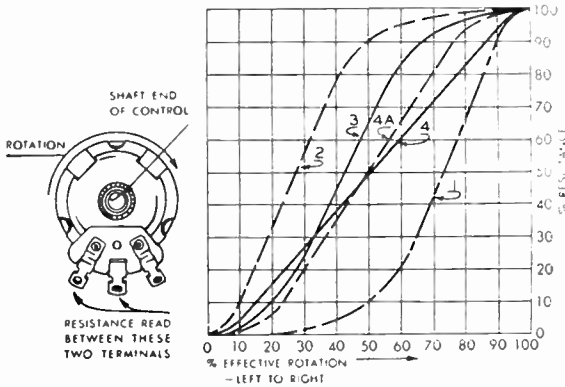
Dimensions—Standard Wire-Wound Controls

NOTE: Controls having taper numbers 1, 2 and 7 are intended primarily for replacement in radio receivers. Be sure to check the taper curve and its effect (see chart at left) before ordering for other uses.



MALLORY STANDARD SWITCHES AND UNIVERSAL CONTROLS

TAPERS for Standard Controls



Explanation of Tapers

● Taper Number 1 is a modified logarithmic left hand taper in the carbon type of control and an approximation to this logarithmic taper in the wire-wound type. This taper should always be used in shunt circuits as in usual antenna and audio circuits, or where only the center and left hand terminals are used.

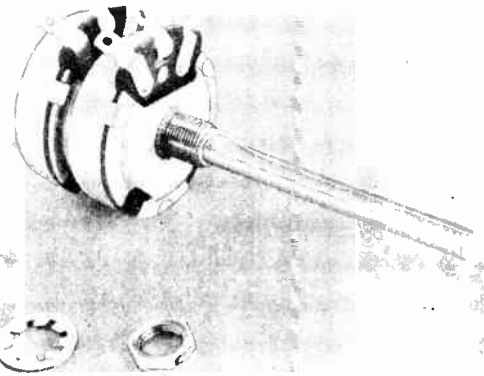
Taper Number 2 is a right hand logarithmic taper in the carbon and an approximation in the wire-wound type. Used in series circuits, as in cathode voltage controls, or where only the center and right hand terminals are used.

Taper Number 3 is a combination left and right hand taper. Has a limited use in circuits where the control must perform both as a shunt and as a series circuit control as in combination antenna shunt plus bias circuits. This is the most common use for such a taper.

Taper Number 4 is a linear taper. Strictly speaking it is not a "taper" although commonly referred to as such. A linear "taper" is used wherever a control should be such that voltage change is proportional to the degree of rotation.

Taper Number 4A is a modification of the regular linear taper Number 4.

Taper Number 7 is made only in the wire-wound type of control and is a form of left hand taper. This taper is desirable for the antenna shunt plus bias control, wherein greater attenuation is obtained by increasing the bias voltage. The slight left taper then suffices to gradually reduce the signal to zero volume by the shunting action in the antenna circuit.



UNIVERSAL Dual Controls

APPLICATION—See "General Use" column below.

DESCRIPTION—Consists of two 1 1/2" wire-wound or carbon controls driven by a single shaft.

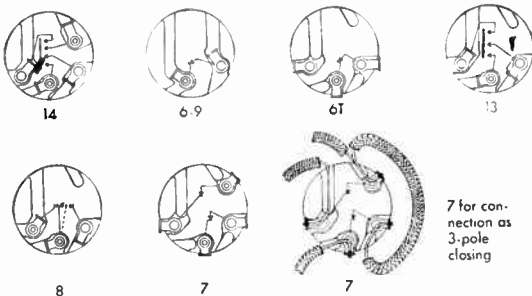
SHAFT DESCRIPTION—Shaft and insert fit all type knobs.

ACCESSORIES—One hex nut and one lock washer furnished with each control. AC switches available as a special item. (See this page.)

PACKAGING—One control, plus accessories and complete instructions per display carton.

Cat. No.	Ohms Resistance		Taper		Type Element		General Use
	Front	Rear	Front	Rear	Front	Rear	
CE	2M	5M	I	IV	W. W.	W. W.	Ant. Shunt and Bias
GE	10M	5M	VII	IV	W. W.	W. W.	Ant. Shunt Bias or Screen
GG	10M	10M	VII	IV	W. W.	W. W.	Ant. Shunt Bias or Screen
GK	10M	50M	I	IV	Carbon	Carbon	Ant. Shunt Bias or Screen
DRP	50M	50M	IV	IV	Carbon	Carbon	Grid Shunt and Cathode Control
308	100M	100M	I	I	Carbon	Carbon	Audio Shunt in Push Pull
LL	100M	250M	I	I	Carbon	Carbon	Audio Shunt, Tone, Screen or RF Shunt
LM	250M	250M	I	I	Carbon	Carbon	Audio Shunt in Push Pull
MM	250M	500M	I	I	Carbon	Carbon	Audio Shunt and Tone Compensation
MN	250M	500M	I	I	Carbon	Carbon	Audio Shunt in Push Pull
NN	500M	500M	I	I	Carbon	Carbon	Audio Shunt in Push Pull

Attachable Switches (Standard)



For use with standard Universal Controls, Carbon and Wire-Wound types, TRP Tapped Controls, and Universal Dual Controls.

- Cat. No. 6-9—Single-Pole—Single-Throw
- *6T—Single-Pole—Single-Throw
- 7—Double-Pole—Single-Throw
- 8—Single-Pole—Double-Throw
- 13—Three-Pole—Single-Throw Shorting
- 14—Four-Pole—Single-Throw Shorting

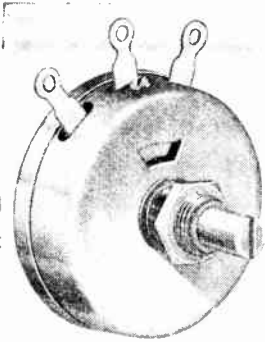
*Has dummy terminal identified by copper rivet.

HERE'S WHAT YOU GET IN YOUR MALLORY TECHNICAL MANUAL:

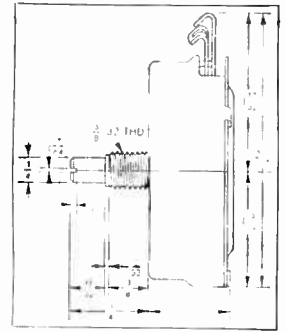
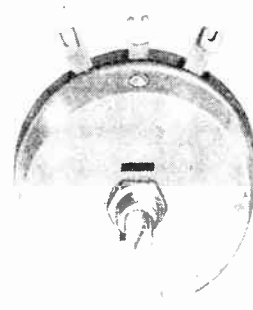
- Loud Speakers and Their Use
- Superheterodyne First Detectors and Oscillators
- Half-Wave and Voltage Doubler Power Supplies
- Vibrators and Vibrator Power Supplies
- Phono-Radio Service Data
- Automatic Tuning
- Frequency Modulation
- Fundamentals of Television
- Dry Electrolytic Capacitors
- Practical Radio Noise Suppression
- Vacuum Tube Voltmeters
- Useful Servicing Information
- Receiving Tube Characteristics

SEE YOUR MALLORY DISTRIBUTOR TODAY.

MALLORY VARIABLE RESISTORS AND POTENTIOMETERS



M Variable
Wire-Wound Resistors •
Stub Shafts



E Wire-Wound Potentiometers • Stub Shaft

APPLICATION—Used on bias controls and voltage dividers in bridge circuits and test instruments.

DESCRIPTION—Precision wire-wound potentiometers and rheostats with a 4-watt rating for use in instruments where reliability is paramount. Rugged construction. Rheostats feature “off” position (no connection) type of construction, saving the cost of a switch. Furnished with insulated contact arm. Potentiometers have three terminals. Rheostats have two terminals. Total rotation 294°; effective electrical rotation 279°.

APPLICATION—Suitable for precision instruments such as resistance bridges and where a control of medium currents or voltages is required.

DESCRIPTION—Supplied with grounded contact arm. 310 total rotation; 299 effective electrical rotation. Will dissipate 7 watts.

SHAFT DESCRIPTION—A short shaft with a milled screw-driver slot is provided for easy adjustment. Shafts will also take standard knobs.

SHAFT DESCRIPTION—A short shaft is provided with a slot for easy screw-driver adjustment. Shafts will take standard knobs.

ACCESSORIES—No. 395 Dial Plate is available for use with these controls. One hex nut and one lock washer furnished with each control.

ACCESSORIES—No. 399 Dial Plate is available for use with these controls. One hex nut and one lock washer is furnished with each control.

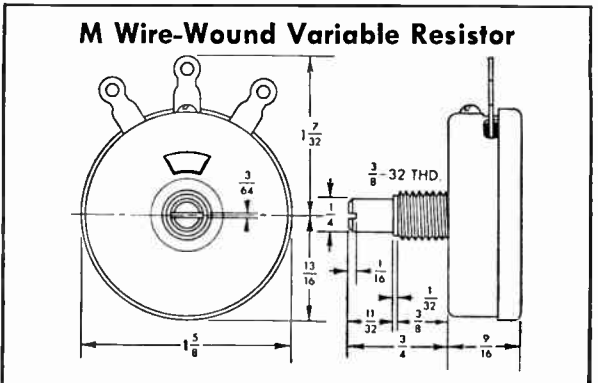
PACKAGING—One control, plus accessories and complete instructions per display carton.

PACKAGING—One control, plus accessories and complete instructions per display carton.

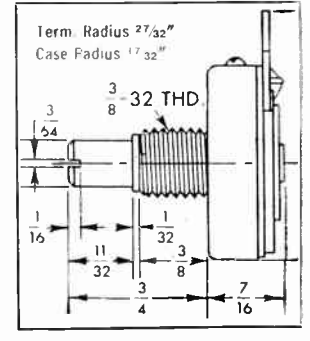
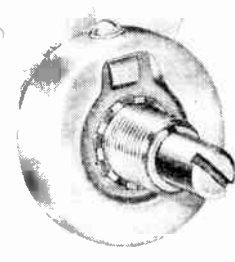
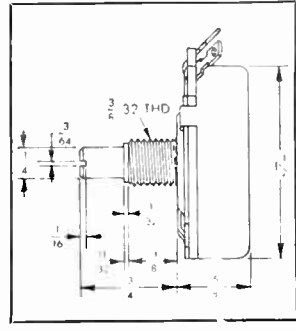
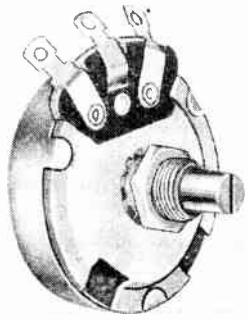
Potentiometer Catalog Number	Rheostat* Catalog Number	Ohms Resistance	Carrying Capacity in Amps.
M1P	M05R	½	2.80
	M1R	1	2.00
	M2R	2	1.4
M3P	M3R	3	1.15
	M4R	4	1.00
M6P	M6R	6	.82
M10P	M10R	10	.63
M15P	M15R	15	.52
M20P	M20R	20	.45
M25P	M25R	25	.40
M30P	M30R	30	.37
M40P	M40R	40	.32
M50P	M50R	50	.28
M60P	M60R	60	.26
M75P	M75R	75	.23
M100P	M100R	100	.20
M200P		200	.14
M400P		400	.10
M500P		500	.09
M600P		600	.082
M1MP		1M	.063
M2MP		2M	.045
M3MP		3M	.037
M4MP		4M	.032
M5MP		5M	.028
M10MP		10M	.020
M15MP		15M	.016
M20MP		20M	.014
M25MP		25M	.013
M50MP		50M	.009
M70MP		70M	.0075

Catalog Number	Ohms Resistance	Carrying Capacity in Amps.
E5MP	5M	.042
E10MP	10M	.03
E20MP	20M	.021
E25MP	25M	.019
E50MP	50M	.0135
E75MP	75M	.011
E100MP	100M	.0095
E125MP	125M	.0085
E150MP	150M	.0078

*“Open” or “Off” position counter-clockwise.



MALLORY VARIABLE RESISTORS • T & L PADS



B Carbon Type Variable Resistors

APPLICATION—For use in test and other instruments, and special applications.

DESCRIPTION—1½" heavy-duty carbon-type control with a nominal one-watt rating. Furnished in linear taper.

SHAFT DESCRIPTION—A short shaft is provided with a milled screw-driver slot for easy and quick adjustment. Shaft will also take standard knobs.

ACCESSORIES—One hex nut and one lock washer furnished with each control.

PACKAGING—One control, plus accessories and complete instructions per display carton.

Catalog Number	Ohms Resistance
B5MP	5,000
B10MP	10,000
B25MP	25,000
B50MP	50,000
B100MP	100,000
B250MP	250,000
B500MP	500,000
B1000MP	1 Meg.

C Wire-Wound Variable Resistors • Small Size

APPLICATION—For use in test and special instruments, bias control and bridge circuits, etc.

DESCRIPTION—1⅛" diameter small resistor that will dissipate 2 watts over the entire element for continuous operation. Available only in linear taper. Contact arm is grounded. Total rotation 284°; effective electrical rotation 266°.

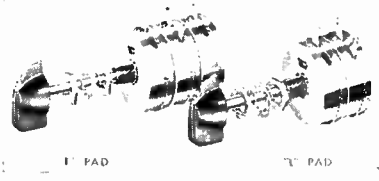
SHAFT DESCRIPTION—A short shaft with a milled screw-driver slot is provided for quick and easy adjustment. Shaft will also take standard knobs.

ACCESSORIES—Dial Plate No. 393 is available for use with these controls. One hex nut and one lock washer furnished with each control.

PACKAGING—One control, plus accessories and complete instructions per display carton.

Potentiometer Catalog Number	Rheostat * Catalog Number	Ohms Resistance	Carrying Capacity in Amps.
C8P	C8R	6	.58
C10P	C10R	10	.45
C15P	C15R	15	.37
C20P	C20R	20	.32
C30P	C30R	30	.26
C40P	C40R	40	.22
C50P	C50R	50	.2
C100P	C100R	100	.14
C200P		200	.1
C400P		400	.07
C1MP		1M	.045
C3MP		3M	.025
C5MP		5M	.02
C6MP		6M	.018
C10MP		10M	.014
C15MP		15M	.011

T AND L PADS ATTENUATORS



APPLICATION—For controlling the level of low impedance audio circuits and for volume control of microphones, talking picture amplifiers, and many varied sound amplifying and audio distribution systems.

DESCRIPTION—A high quality "T" and "L" pad that may be used with audio amplifiers having a peak audio rating of 15 watts. These attenuators have a continuous DC dissipation rating of 4 watts in any position.

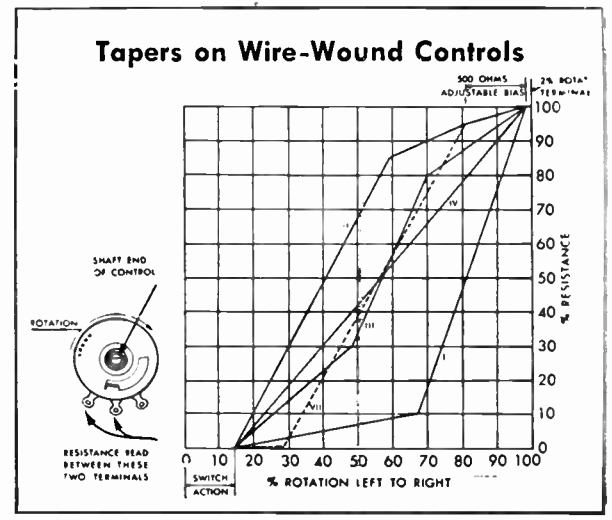
SHAFT DESCRIPTION—Physical dimensions of shaft and bushing specifications are the same as for type M controls in dual and triple unit construction.

ACCESSORIES—No. 366 Bar Knob, No. 395 Dial Plate with matched rotation, one nut and one lock washer furnished with each control.

PACKAGING—One control, plus accessories and complete instructions per display carton.

"T" Pad Attenuators Catalog Number	"L" Pad Attenuators Catalog Number	Ohms Impedance
T6	L6	6
T8		8
T15	L15	15
T50	L50	50
T200	L200	200
T250	L250	250
T500	L500	500
T2000	L2000	2000

*"Open" or "off" position counter-clockwise.



Mallory Page 13 (See Mallory Page 2 for List Prices)

MALLORY CONTROL HARDWARE



WRENCH For Volume Control Nuts

Cat. No.	Description
178	For all standard Volume Control Hexagon Nuts, 1/2-inch and 3/16-inch diameters.

EC · EB · UB Shaft Couplers and Bushings

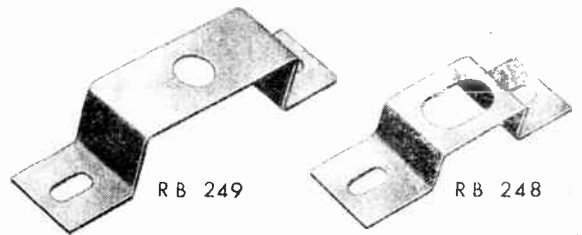
EC240—Universal Combination Extension Shaft Coupling and Reducer:
Will couple two 1/4" shafts or one 1/4" shaft and one 3/16" shaft.

Universal Insulated Shaft Couplers:
Designed to connect fixed shaft controls to remote drive couplings popular in automotive radio equipment.

EC256—Slotted Insacup.
EC257—Square Insert Insacup (Motorola type).

EB247—Universal Extension Bushing:
Designed to screw on the present bushing of Mallory controls and switches, so that the body of the control or switch will be held 5/8" away from the mounting surface. For example, it is used with the correct Universal Control to service Philco Models 28, 29, 45 and 45C.

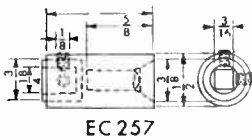
UB241—Universal Bushing and Nut:
Designed to accommodate 1/4" shaft wherever a panel bushing is desired. Includes one No. 232 nut.
Packed 10 in Envelope.



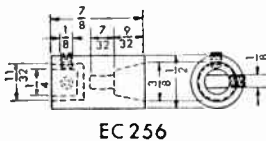
RB Adjustable Mounting Brackets

Cat. No.	Description
RB248†	1 3/4" Mounting Centers
RB249†	2 1/2" Mounting Centers

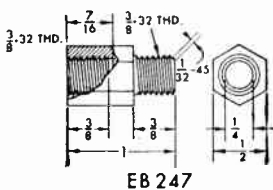
†Packed 5 to Box.



EC 257

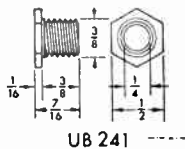


EC 256

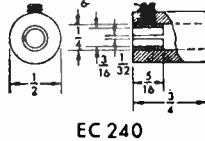


EB 247

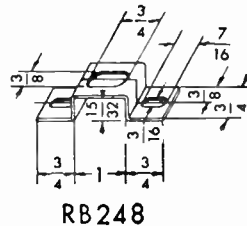
DIMENSIONS—SHAFT COUPLERS AND BUSHINGS



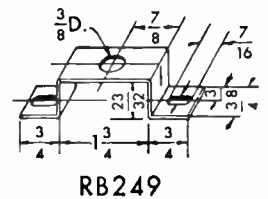
UB 241



EC 240



RB248



RB249

NUTS Hexagon Shoulder Type for Mounting

Cat. No.	Description
255	For 3/4" Panels
A11260-12	For 1/2" Panels
A11260-2	For 1/4" Panels

MALLORY CONTROL HARDWARE



RS 242



FS 250



RS 245



RS 243



FS 251



FS 252



FS 253



RS 246

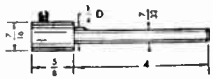


RS 244

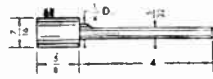
RS Universal Extension Shafts

Cat. No.	Description
RS242*	4" long x 1/4" dia. x 1/32" flat
RS243*	4" long x 1/4" dia. x 3/32" flat
RS244*	4" long x 3/16" dia. x 1/64" flat
RS245*	2" long x 1/4" dia. with 3/32" slot Enclosed in tight-fitting tube) For adapting Universal Controls to automobile receivers when slotted shaft is needed.
RS246*	2" long x 1/4" wide x 3/32" thick (Tongue shape and fitted with tube) For adapting Universal Controls to automobile receivers where tongue-shaped shaft is needed.

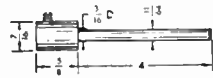
*Packed 5 to Envelope.



No. RS 242

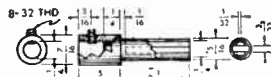


No. RS 243

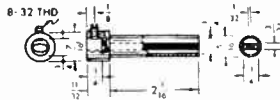


No. RS 244

SHAFT DIMENSIONS



No. RS 245



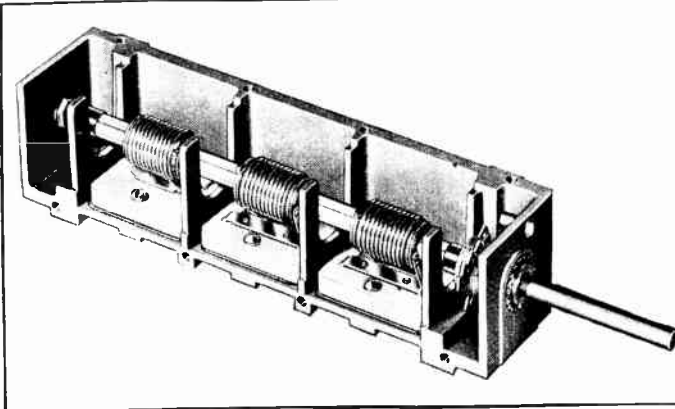
No. RS 246

FS Universal Flexible Coupling Shafts

Cat. No.	Description
FS250	For Universal replacement of all flexible wire shafts, coupling to 1/8" solid shafts.
FS251	Shaft Coupling has 3/32" hole, 1/2" deep, with transverse pin, and is for use (with the correct Mallory control) as a replacement for Philco Models 805, 806, 808, 809 and PHD and PHXD, Studebaker AC266, Pierce-Arrow MT-3, Reo RT-3, etc.
FS252	Shaft Coupling has 3/32" hole, approximately 1/2" deep, and has 2 set screws opposite each other. It is used as a replacement for Philco Model D, Nash AC-989 (Code I22).
FS253	Shaft Coupling has 1/4" dia. hole, 1/2" deep, equipped with 2 screws at 90 degrees. This is to be used with the correct Mallory Control as a replacement for Chevrolet No. 364441.

DIAL PLATES For Controls, Rheostats and Potentiometers

Cat. No.	Marking	For Type of Control	Dia.
398	0 to 10	For Standard Carbon Controls with switch type cover	2 1/4"
397	0 to 10	For Standard Carbon Controls with plain cover	2 1/4"
396	0 to 10	For Standard Wire-Wound Controls with switch type cover	2 1/4"
395	0 to 10	For Standard Wire-Wound Controls with plain cover; also "M" Type Rheostats and Potentiometers	2 1/4"
393	0 to 10	For "C" Type Rheostats and Potentiometers	2 1/4"
399	0 to 10	For "E" Type Potentiometers	2 1/4"
369	0 to 100	All Rheostats and Potentiometers (compromise scale)	2 1/4"
391	Increase Volume	All Rheostats and Potentiometers	1 1/2"



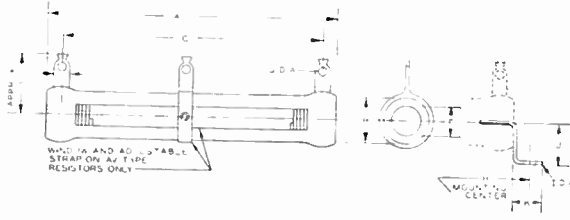
THE MALLORY INDUCTUNER*

A continuously and infinitely variable inductance unit that supplies the need for a method of tuning the wide range of frequencies covered by the television-FM band. Provides unequalled simplicity, performance, and stability in service. For more complete information turn to Page 8, Mallory Special Components, of this catalog.

Inductuner*—Registered trade mark for Mallory variable inductance tuning devices. Manufactured and sold under one or more of the following Paul Ware and Mallory patents: 2,163,644, 2,163,645, 2,163,646, 2,163,647, 2,260,877, 2,377,789, 2,377,790. Other patents applied for.

MALLORY FIXED RESISTORS

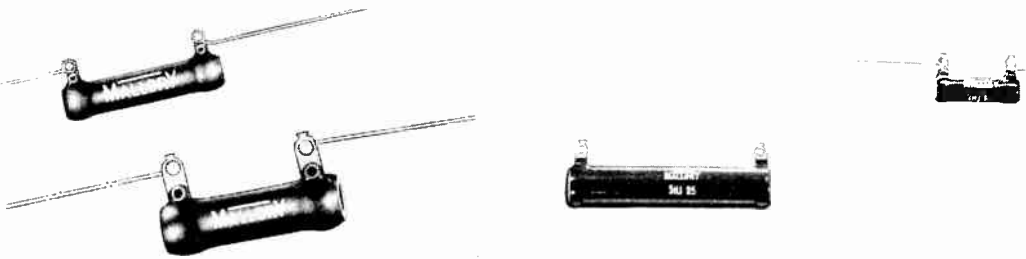
DIMENSIONAL DRAWING OF ALL TYPES OF RESISTORS



Key to Resistor Dimensions

Type	Rtg Watts	A	B	C	D	E	F	G	H	I	J	K
*HHJ	5	1 1/4	5/16	1 1/2	7/16	3/8	3/16	.070				
*1HJ	10	1 3/4	5/16	1 1/2	7/16	3/8	3/16	.070				
2HJ	20	2	1/2	1 1/2	13/16	1/4	5/16	.144				
5HJ	50	4 1/2	3/4	4	1 1/2	1/4	1/2	.144	5	.203	3/4	1 1/2
10HJ	100	6 1/2	1 1/8	5 3/4	1 1/8	1/4	7/8	.144	7 1/4	.265	1 1/4	1 1/8
20HJ	200	10 1/2	1 1/8	9 3/4	1 1/8	1/4	7/8	.144	11 1/4	.265	1 1/4	1 1/8
1AV	10	1 3/4	5/16	1 1/2	7/16	3/8	3/16	.070	2 5/16	.142	5/8	7/16
2AV	25	2 1/2	5/8	2	7/8	1/4	7/16	.144	3	.203	3/4	1/2
5AV	50	4 1/2	3/4	4	7/8	1/4	7/16	.144	5	.203	3/4	1/2
8AV	80	6 1/2	5/8	6	7/8	1/4	7/16	.144	7	.203	3/4	1/2
10AV	100	6 1/2	1 1/8	5 3/4	1 1/8	1/4	7/8	.144	7 1/4	.265	1 1/4	1 1/8
20AV	200	10 1/2	1 1/8	9 3/4	1 1/8	1/4	7/8	.144	11 1/4	.265	1 1/4	1 1/8

*Types HHJ, 1HJ and 2HJ furnished with lugs and wire leads.
Types 5HJ, 10HJ, and 20HJ furnished with lugs.



Type 1HJ — Fixed Vitreous Enamel Resistors—10 Watt Rating on Values to 25,000 Ohms Inclusive— Tube Size 5/16" x 1 3/4"

Catalog Number	Resistance Ohms	Current Milli-amperes	Volts Max.
1HJ1	1	3150	3
1HJ2	2	2200	4.5
1HJ3	3	1800	5.5
1HJ4	4	1580	6.3
1HJ5	5	1400	7
1HJ7.5	7.5	1150	8.5
1HJ10	10	1000	10
1HJ12	12	910	11
1HJ15	15	812	12
1HJ20	20	707	14
1HJ25	25	630	16
1HJ30	30	575	17.3
1HJ35	35	530	19
1HJ40	40	500	20
1HJ50	50	447	22
1HJ75	75	360	27
1HJ100	100	315	31
1HJ125	125	280	35
1HJ150	150	260	39
1HJ200	200	220	44
1HJ225	225	210	47.5
1HJ250	250	200	50
1HJ300	300	180	55
1HJ350	350	170	59
1HJ400	400	158	63
1HJ450	450	150	67
1HJ500	500	141	70
1HJ600	600	130	77
1HJ700	700	120	83.5
1HJ750	750	115	85
1HJ800	800	112	89
1HJ900	900	105	95
1HJ1000	1000	100	100
1HJ1100	1100	95	105
1HJ1200	1200	91	110
1HJ1250	1250	89	111
1HJ1500	1500	81	122
1HJ1750	1750	75.5	132
1HJ2000	2000	70	141
1HJ2250	2250	66.5	150
1HJ2500	2500	63	158
1HJ3000	3000	56	173
1HJ3500	3500	53	185
1HJ4000	4000	50	200
1HJ4500	4500	47	212
1HJ5000	5000	45	224
1HJ6000	6000	40	240
1HJ7000	7000	38	264
1HJ7500	7500	36	270
1HJ8000	8000	35	282

1HJ8500	8500	34	291
1HJ10000	10000	31.6	316
1HJ11000	11000	30	332
1HJ12000	12000	29	346
1HJ12500	12500	28	350
1HJ13500	13500	26	350
1HJ14300	14300	24.5	350
1HJ15000	15000	23	350
1HJ16000	16000	22	350
1HJ17500	17500	20	350
1HJ18000	18000	19.5	350
1HJ20000	20000	17.5	350
1HJ22500	22500	15.5	350
1HJ25000	25000	14	350
1HJ30000	30000*	11.5	350
1HJ35000	35000*	10.5	374
1HJ40000	40000*	10	400
1HJ45000	45000*	9.5	424
1HJ50000	50000*	9	447

Type 2HJ — Fixed Vitreous Enamel Resistor—20 Watt Rating on Values to 35,000 Ohms Inclusive— Tube Size 1/2" x 2"

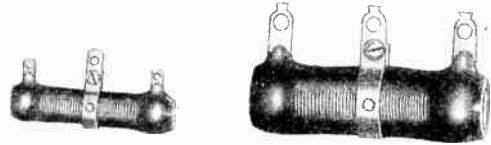
Catalog Number	Resistance Ohms	Current Milli-amperes	Volts Max.
2HJ5	5	2000	10
2HJ10	10	1415	14
2HJ15	15	1153	17
2HJ25	25	895	22
2HJ50	50	633	31
2HJ75	75	517	38
2HJ100	100	447	44
2HJ150	150	365	54
2HJ200	200	316	63
2HJ250	250	283	72
2HJ300	300	258	77
2HJ400	400	224	90
2HJ500	500	200	100
2HJ750	750	163	122
2HJ1000	1000	141	141
2HJ1250	1250	126	157
2HJ1500	1500	115	173
2HJ1750	1750	107	187
2HJ2000	2000	100	200
2HJ2250	2250	94	211
2HJ2500	2500	89	222
2HJ2750	2750	85	235
2HJ3000	3000	81	243
2HJ3500	3500	75	262
2HJ4000	4000	71	284
2HJ4500	4500	66	300
2HJ5000	5000	63	315
2HJ6000	6000	57	345

Type 5HJ — Fixed Vitreous Enamel Resistors—50 Watt Rating— Tube Size 3/4" x 4 1/2"

Catalog Number	Resistance Ohms	Current Milli-amperes	Volts Max.
2HJ7500	7500	51	387
2HJ10000	10000	44	446
2HJ12500	12500	40	500
2HJ15000	15000	33	500
2HJ20000	20000	25	500
2HJ25000	25000	20	500
2HJ30000	30000	16.7	500
2HJ35000	35000	14.3	500
2HJ40000	40000*	13.3	530
2HJ50000	50000*	11.8	590
2HJ75000	75000*	9.7	725
2HJ100000	100000*	8.3	835
5HJ10	10	2240	22
5HJ25	25	1415	35.4
5HJ50	50	1000	50
5HJ100	100	707	70
5HJ250	250	447	111
5HJ500	500	316	158
5HJ750	750	258	192
5HJ1000	1000	224	224
5HJ1500	1500	183	275
5HJ2000	2000	158	316
5HJ2500	2500	141	354
5HJ5000	5000	100	500
5HJ7500	7500	81	610
5HJ10000	10000	70	700
5HJ12500	12500	63	790
5HJ15000	15000	57	850
5HJ20000	20000	50	1000
5HJ25000	25000	40	1000
5HJ30000	30000	33	1000
5HJ40000	40000	25	1000
5HJ50000	50000	20	1000
5HJ75000	75000	13	1000
5HJ100000	100000	10	1000

*We stock these high resistance values only in the more economical low temperature enamel coating because operating voltages normally encountered rarely exceed the values listed.

MALLORY FIXED AND ADJUSTABLE RESISTORS



**Type 10HJ — Fixed Vitreous Enamel Resistors—
100 Watt Rating—Tube Size 1 1/8 x 6 1/2**

Catalog Number	Resistance Ohms	Current Milli-amperes	Volts Max.
10HJ25	25	2000	50
10HJ50	50	1414	70
10HJ75	75	1155	85
10HJ100	100	1000	100
10HJ150	150	815	120
10HJ250	250	632	158
10HJ500	500	447	220
10HJ750	750	365	275
10HJ1000	1000	316	315
10HJ1500	1500	258	385
10HJ2000	2000	223	447
10HJ2500	2500	200	500
10HJ5000	5000	141	700
10HJ7500	7500	115	865
10HJ10000	10000	100	1000
10HJ15000	15000	80	1200
10HJ20000	20000	70	1400
10HJ25000	25000	60	1500
10HJ30000	30000	50	1500
10HJ40000	40000	37	1500
10HJ50000	50000	30	1500
10HJ75000	75000	20	1500
10HJ100000	100000	15	1500

**Type 1AV — Adjustable Vitreous Enamel Resistors—
10 Watt Rating—Tube Size 5/16 x 1 3/4**

Catalog Number	Resistance Ohms	Current Milli-amperes	Volts Max.
1AV1	1	3150	3
1AV2	2	2200	4.5
1AV3	3	1800	5.5
1AV5	5	1400	7
1AV7.5	7.5	1150	8.5
1AV10	10	1000	10
1AV15	15	812	12
1AV20	20	707	14
1AV25	25	630	16
1AV50	50	447	22
1AV75	75	360	27
1AV100	100	315	31
1AV150	150	260	39
1AV200	200	220	44
1AV250	250	200	50
1AV300	300	180	55
1AV350	350	170	59
1AV400	400	158	63
1AV500	500	141	70
1AV600	600	130	77
1AV750	750	115	85
1AV800	800	112	89
1AV1000	1000	100	100
1AV1250	1250	89	111
1AV1500	1500	81	122
1AV2000	2000	70	141
1AV2250	2250	66.5	150
1AV2500	2500	63	158
1AV3000	3000	56	173
1AV3500	3500	53	185
1AV4000	4000	50	200
1AV4500	4500	47	212
1AV5000	5000	45	224
1AV6000	6000	40	240
1AV7000	7000	38	264
1AV7500	7500	36	270
1AV8000	8000	35	282
1AV8500	8500	34	291
1AV9000	9000	33	303
1AV10000	10000	32	316

**Type 20HJ — Fixed Vitreous Enamel Resistors—
200 Watt Rating—Tube Size 1 1/8 x 10 1/2**

Catalog Number	Resistance Ohms	Current Milli-amperes	Volts Max.
20HJ25	25	2830	70
20HJ50	50	2000	100
20HJ75	75	1635	120
20HJ100	100	1414	140
20HJ250	250	894	220
20HJ500	500	632	315
20HJ750	750	515	385
20HJ1000	1000	447	445
20HJ1500	1500	365	547
20HJ2000	2000	316	634
20HJ2500	2500	283	705
20HJ3000	3000	258	770
20HJ5000	5000	200	1000
20HJ7500	7500	163	1200
20HJ10000	10000	141	1400
20HJ20000	20000	100	2000
20HJ30000	30000	80	2400
20HJ40000	40000	62	2400
20HJ50000	50000	50	2500
20HJ75000	75000	33	2500
20HJ100000	100000	25	2500

**Type 2AV — Adjustable Vitreous Enamel Resistors—
25 Watt Rating—Tube Size 5/8 x 2 1/2**

Catalog Number	Resistance Ohms	Current Milli-amperes	Volts Max.
2AV1	1	5000	5
2AV3	3	2890	8.6
2AV5	5	2240	11
2AV10	10	1580	15
2AV15	15	1290	19.3
2AV25	25	1000	25
2AV50	50	707	35
2AV75	75	575	43
2AV100	100	500	50
2AV150	150	400	60
2AV200	200	353	70
2AV250	250	316	79
2AV300	300	288	86
2AV400	400	250	100
2AV500	500	224	112
2AV750	750	182	137
2AV1000	1000	158	158
2AV1250	1250	141	176
2AV1500	1500	129	194
2AV2000	2000	112	224
2AV2500	2500	100	250
2AV3000	3000	91	274
2AV3500	3500	84	296
2AV4000	4000	79	316
2AV5000	5000	71	354
2AV6000	6000	64	384
2AV7500	7500	57	431
2AV10000	10000	50	500
2AV12000	12000	42	500
2AV15000	15000	33	500
2AV20000	20000	25	500
2AV25000	25000	20	500

**Type HHJ — Fixed Vitreous Enamel Resistors—
5 Watt Rating—Tube Size 5/16 x 1**

Catalog Number	Resistance Ohms	Current Milli-amperes	Catalog Number	Resistance Ohms	Current Milli-amperes
HHJ1	1	2230	HHJ350	350	119
HHJ1.5	1.5	1820	HHJ400	400	112
HHJ2	2	1580	HHJ450	450	105
HHJ3	3	1290	HHJ500	500	100
HHJ4	4	1117	HHJ600	600	91
HHJ5	5	1000	HHJ700	700	84
HHJ7.5	7.5	811	HHJ750	750	81
HHJ10	10	707	HHJ800	800	79
HHJ12	12	644	HHJ900	900	74
HHJ15	15	577	HHJ1000	1000	70
HHJ20	20	500	HHJ1100	1100	67
HHJ25	25	450	HHJ1200	1200	64
HHJ30	30	408	HHJ1250	1250	63
HHJ35	35	378	HHJ1500	1500	57
HHJ40	40	353	HHJ1750	1750	53
HHJ50	50	316	HHJ2000	2000	50
HHJ75	75	257	HHJ2250	2250	47
HHJ100	100	223	HHJ2500	2500	45
HHJ125	125	200	HHJ3000	3000	40
HHJ150	150	182	HHJ3500	3500	37
HHJ200	200	158	HHJ4000	4000	35
HHJ250	250	141	HHJ4500	4500	33
HHJ300	300	129	HHJ5000	5000	31

MALLORY ADJUSTABLE RESISTORS

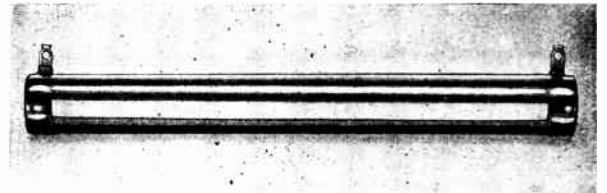
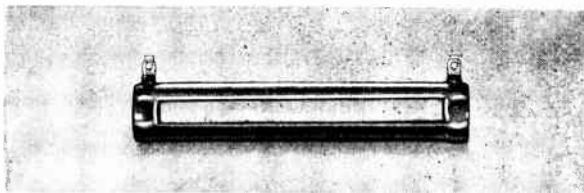


Type 5AV—Adjustable Vitreous Enamel Resistors—
50 Watt Rating—Tube Size $\frac{5}{8}$ x $4\frac{1}{2}$

Catalog Number	Resistance Ohms	Current Milli-amperes	Volts Max.
5AV5	5	3160	15
5AV10	10	2230	22
5AV25	25	1410	35
5AV50	50	1000	50
5AV75	75	816	61
5AV100	100	707	70
5AV150	150	577	86
5AV200	200	500	100
5AV250	250	447	111
5AV300	300	408	122
5AV400	400	354	140
5AV500	500	316	157
5AV750	750	258	192
5AV1000	1000	224	224
5AV1500	1500	182	275
5AV2000	2000	158	315
5AV2500	2500	141	350
5AV3000	3000	129	387
5AV4000	4000	112	448
5AV5000	5000	100	500
5AV7500	7500	81	610
5AV10000	10000	70	700
5AV12000	12000	64	768
5AV15000	15000	57	855
5AV20000	20000	50	1000
5AV25000	25000	40	1000
5AV30000	30000	33	1000
5AV40000	40000	25	1000
5AV50000	50000	20	1000

Type 10AV—Adjustable Vitreous Enamel Resistors—
100 Watt Rating—Tube Size $1\frac{1}{8}$ x $6\frac{1}{2}$

Catalog Number	Resistance Ohms	Current Milli-amperes	Volts Max.
10AV50	50	1413	71
10AV100	100	1000	100
10AV500	500	447	223
10AV1000	1000	316	316
10AV2000	2000	223	447
10AV2500	2500	200	500
10AV3000	3000	182	547
10AV4000	4000	158	633
10AV5000	5000	141	707
10AV7500	7500	115	860
10AV10000	10000	100	1000
10AV15000	15000	80	1200
10AV20000	20000	70	1400
10AV25000	25000	60	1500
10AV30000	30000	50	1500
10AV35000	35000	43	1500
10AV40000	40000	37	1500
10AV50000	50000	30	1500
10AV75000	75000	20	1500
10AV100000	100000	15	1500



Type 8AV—Adjustable Vitreous Enamel Resistors—
80 Watt Rating—Tube Size $\frac{5}{8}$ x $6\frac{1}{2}$

Catalog Number	Resistance Ohms	Current Milli-amperes	Volts Max.
8AV10	10	2830	28.3
8AV15	15	2310	34.6
8AV25	25	1790	44.8
8AV50	50	1265	63.2
8AV100	100	894	89.4
8AV250	250	566	141.5
8AV300	300	517	155
8AV400	400	495	178
8AV500	500	400	200
8AV750	750	327	245
8AV1000	1000	283	283
8AV1500	1500	231	346
8AV2000	2000	200	400
8AV2500	2500	179	448
8AV3500	3500	152	530
8AV5000	5000	126	632
8AV7500	7500	103	775
8AV10000	10000	89	894
8AV15000	15000	73	1092
8AV20000	20000	63	1250
8AV25000	25000	50	1250
8AV30000	30000	42	1250
8AV40000	40000	31	1250
8AV50000	50000	25	1250
8AV60000	60000	21	1250
8AV75000	75000	16.5	1250
8AV80000	80000	15.5	1250
8AV100000	100000	12.5	1250

Type 20AV—Adjustable Vitreous Enamel Resistors—
200 Watt Rating—Tube Size $1\frac{1}{8}$ x $10\frac{1}{2}$

Catalog Number	Resistance Ohms	Current Milli-amperes	Volts Max.
20AV50	50	2000	100
20AV100	100	1414	140
20AV500	500	632	315
20AV1000	1000	447	447
20AV1500	1500	365	547
20AV2000	2000	316	634
20AV2500	2500	283	700
20AV5000	5000	200	1000
20AV10000	10000	141	1414
20AV20000	20000	100	2000
20AV25000	25000	80	2400
20AV30000	30000	62	2500
20AV50000	50000	50	2500
20AV75000	75000	33	2500
20AV100000	100000	25	2500

Extra Adjustable Clips

Type No. 1V — For 10-Watt Variohms*

Type No. 3V — For 25, 50, and 80-Watt Variohms

Type No. 6V — For 100 and 200-Watt $1\frac{1}{8}$ " Variohms

*Reg. U.S. Pat. Off.

Mallory Page 18 (See Mallory Page 2 for List Prices)

(See Pages R-19 and R-20 for Mallory List Prices)

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GENERAL ELECTRIC

CONSTANT IMPEDANCE ATTENUATORS

These rugged controls provide linear attenuation with ample power handling capacity, and will safely dissipate 10 watts power at any setting.

By using a compensated ladder-type network, input and output impedances are practically constant throughout the entire range of the control.

Attenuation is linear up to 30 decibels in ten steps, beginning with absolute zero and progressing in 3 db steps up to 24 db, followed by infinity. Absolute zero insertion loss for the unit.

Construction features include a resistance element of high grade resistance wire wound on a fiber glass core and covered with a braided fiber glass insulation. Circuit elements are insulated from all metal parts to withstand 500 volts. The attenuator switch is the shorting type having 11 steps for selecting the desired attenuation value. "In between" positions have been eliminated with the use of a special detent action.

The unit is designed for single hole mounting by means of its 3/8" diameter bushing which extends 3/8" beyond the mounting surface.

L-PADS AND T-PADS

DESIGNED ESPECIALLY FOR CONTROL OF AUDIO SIGNAL LEVEL IN AMPLIFIERS AND EXTENSION LOUDSPEAKERS

Consisting basically of the G-E Series URC Wire Wound potentiometers, these T-Pads and L-Pads employ proper tapers and combinations to provide the necessary impedance and attenuation characteristics. T-Pads are used as variable attenuators in circuits where the line impedance to and from the control must not be appreciably disturbed with attenuation level changes. L-Pads are employed as attenuation controls when a constant impedance is desired at either the source or the load, but not both. L-Pads are also used as individual volume controls for multiple speakers without effecting the source impedance. Safely rated at a maximum power dissipation of 2.5 watts, these T-Pads and L-Pads have a continuous range from 0.5 to 30 decibels attenuation in 90° of rotation, the last 10% affording infinite attenuation.

G-E T-Pads and L-Pads are available in the following impedances:

T-PADS			L-PADS		
Cat. No.	Ohms	List Price	Cat. No.	Ohms	List Price
URA-012	8	\$4.25	URA-007	8	\$3.75
JRA-013	15	4.25	URA-008	15	3.75
URA-014	200	4.25	URA-009	200	3.75
URA-015	500	4.25	URA-010	500	3.75
URA-016	600	4.25	URA-001	600	3.75

TUBE TYPE RESISTORS

General Electric Tube Type Resistors were developed for voltage-reduction purposes and the supplying of needed voltages for pilot lamp operation in AC*DC receivers. They are noted for many new improvements. Similar in size and appearance to the 25Z6 or 25A6 metal tubes, these tube type resistors plug into a standard octal socket.

Exceedingly high leakage resistance between the resistance element and chassis permits use in the most sensitive circuits without the introduction of AC hum. To insure against overheating of other components beneath the chassis the G-E Tube-Type Resistor provides connections to the "hot" leads under the chassis and yet dissipates the heat above it. The resistance element is composed of a firmly supported high grade mica form on which a helical resistance winding is carefully located. This rugged design insures against shorts and makes the G-E Tube-Type Resistor strictly

non-inflammable. A maximum safe power dissipation of 20 watts exceeds the ordinary power reduction need. Terminal connections and leakage resistance of the G-E Tube-Type Resistor meet Underwriter's requirements.

For ease and simplification in the servicing of receivers using the tube-type resistor, G.E. has selected the most popular values for Universal numbers serving most replacement needs.

G-E Cat. No.	To Replace AC-DC Tubes Beginning with Letters	Having Nos. From	Ending in Letter	List Price
URB001	BK, BL, K, L, M	10 to 23	A, B, C, D	\$1.25
URB002	BK, BL, K, L, M	10 to 23	E	1.25
URB003	BK, BL, K, L, M	10 to 23	F, G, H	1.25
URB004	BK, BL, K, L, M	23 to 55	A, B, C, D	1.25
URB005	BK, BL, K, L, M	23 to 55	E	1.25
URB006	BK, BL, K, L, M	23 to 55	F, G, H	1.25
URB007	BK, BL, K, L, M	60 to 92	A, B, C, D	1.25
URB008	BK, BL, K, L, M	60 to 92	E	1.25
URB009	BK, BL, K, L, M	60 to 92	F, G, H	1.25
URB010	BK, BL, K, L, M	92 to 105	A, B, C, D	1.25

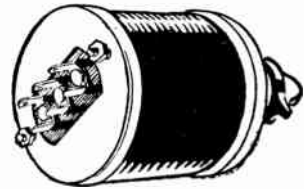
In connection with the above listing, the following nomenclature applies.

PREFIXES:
K—Denotes 6.3 volt 150 ma. No. 40 pilot lamp.
L—Denotes 6.3 volt 250 ma. No. 46 pilot lamp.
M—Denotes 6.3 volt 200 ma. No. 51 pilot lamp.
 The numeral indicates total voltage drop across plug-in resistor tube resistance unit.

SUFFIXES:
A—Denotes no pilot lamp taps.
B—Denotes 1 pilot lamp tap for 1 lamp.
C—Denotes 1 pilot lamp tap for 2 lamps.
D—Denotes 2 pilot lamp taps for 2 lamps.
E—Denotes 3 pilot lamp taps for 3 lamps.

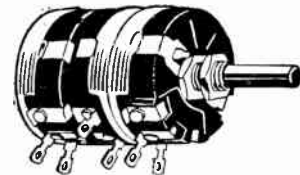
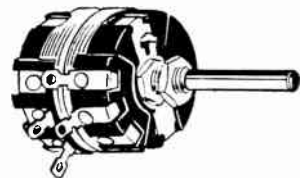
F—Denotes 1 pilot lamp tap for 1 lamp.
G—Denotes 1 pilot lamp tap for 2 pilot lamps. (Tapped sections isolated from main reducing body.)
H—Denotes 2 pilot lamp taps for 2 pilot lamps. (Tapped sections isolated from main reducing body.)

PRICES SUBJECT TO CHANGE WITHOUT NOTICE



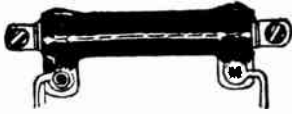
Available in the Following Constant

Cat. No.	Impedances Ohms	List Price
URA001	8	\$10.83
URA002	15	10.83
URA003	50	10.83
URA004	200	10.83
URA005	250	10.83
URA006	500	10.83

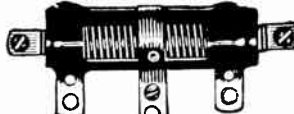


GENERAL ELECTRIC

POWER WIRE WOUND RESISTORS



FIXED



ADJUSTABLE

Cat. No.	Resistance Ohms	List Price
10 WATT FIXED		
URW001	1	\$.59
URW005	2	.59
URW006	3	.59
URW007	4	.59
URW008	5	.59
URW009	7.5	.59
URW010	10	.59
URW011	12	.59
URW012	15	.59
URW013	20	.59
URW014	25	.59
URW015	30	.59
URW016	35	.59
URW017	40	.59
URW018	50	.59
URW019	75	.59
URW020	100	.59
URW021	125	.59
URW022	150	.59
URW023	200	.59
URW024	225	.59
URW025	250	.59
URW026	300	.59
URW027	350	.59
URW028	400	.59
URW029	450	.59
URW030	500	.59
URW031	600	.59
URW033	700	.59
URW034	750	.59
URW035	800	.59
URW037	900	.59
URW038	1,000	.59
URW039	1,100	.59
URW040	1,200	.59
URW041	1,250	.59
URW042	1,500	.59
URW043	1,750	.59
URW045	2,000	.59
URW046	2,250	.59
URW047	2,500	.59
URW050	3,000	.59
URW051	3,500	.59
URW052	4,000	.59
URW053	4,500	.59
URW054	5,000	.59
URW055	6,000	.59
URW056	7,000	.59
URW057	7,500	.59
URW058	8,000	.59
URW059	8,500	.59
URW060	9,000	.59
URW061	10,000	.59
URW062	11,000	.65
URW063	12,000	.65
URW064	12,500	.65
URW065	13,500	.65
URW066	14,300	.65
URW067	15,000	.65
URW068	16,000	.65
URW069	17,500	.65
URW070	18,000	.65
URW071	20,000	.65
URW072	22,500	.65
URW073	25,000	.65
URW074	30,000	.65
URW075	35,000	.65
URW076	40,000	.65
URW077	45,000	.65
URW078	50,000	.65
Cat. No.	Resistance Ohms	List Price
20 WATT FIXED		
URW1008	5	\$.91
URW1010	10	.91
URW1014	25	.91
URW1018	50	.91
URW1019	75	.91
URW1020	100	.91
URW1022	150	.91
URW1023	200	.91

Cat. No.	Resistance Ohms	List Price
ADJUSTABLE		
URW1025	250	\$.91
URW1026	300	.91
URW1027	350	.91
URW1028	400	.91
URW1030	500	.91
URW1032	650	.91
URW1034	750	.91
URW1035	800	.91
URW1036	850	.91
URW1038	1,000	.91
URW1040	1,200	.91
URW1041	1,250	.91
URW1042	1,500	.91
URW1043	1,750	.91
URW1044	1,850	.91
URW1045	2,000	.91
URW1046	2,250	.91
URW1048	2,500	.91
URW1050	3,000	.91
URW1051	3,500	.91
URW1052	4,000	.91
URW1053	4,500	.91
URW1054	5,000	.91
URW1055	6,000	.91
URW1056	7,000	.91
URW1057	7,500	.91
URW1058	8,000	.91
URW1061	10,000	.91
URW1064	12,500	.91
URW1067	15,000	.91
URW1071	20,000	1.11
URW1073	25,000	1.11
URW1074	30,000	1.11
URW1075	35,000	1.11
URW1076	40,000	1.11
URW1077	45,000	1.11
URW1078	50,000	1.11
URW1079	55,000	1.43
URW1080	60,000	1.43
URW1082	70,000	1.43
URW1083	75,000	1.43
URW1088	100,000	1.43
Cat. No.	Resistance Ohms	List Price
10 WATT ADJUSTABLE		
URS001	1	\$.98
URS002	2	.98
URS003	3	.98
URS005	5	.98
URS006	7.5	.98
URS007	10	.98
URS008	15	.98
URS009	20	.98
URS010	25	.98
URS011	50	.98
URS012	75	.98
URS013	100	.98
URS014	150	.98
URS015	200	.98
URS016	250	.98
URS017	300	.98
URS018	350	.98
URS019	400	.98
URS020	500	.98
URS021	600	.98
URS022	750	.98
URS023	800	.98
URS024	1,000	.98
URS025	1,250	.98
URS026	1,500	.98
URS027	2,000	.98
URS028	2,250	.98
URS029	2,500	.98
URS030	3,000	.98
URS031	3,500	.98
URS032	4,000	.98
URS033	4,500	.98
URS034	5,000	.98
URS035	6,000	.98
URS036	7,000	.98
URS038	7,500	.98
URS039	8,000	.98
URS040	8,500	.98
URS041	9,000	.98
URS042	10,000	.98

• General Electric Power Wire-wound Resistors are composed of a winding of special alloy resistance wire, wound on a high-strength ceramic tube. The ends of the winding are welded to sturdy terminals of excellent electrical conductivity. The welded joint at the junction of the resistance element and the terminal insures maximum mechanical strength coupled with low and uniform contact resistance. The ceramic form and resistance winding are coated with vitreous enamel. This enamel coating is fired at high temperature bringing out its excellent mechanical, electrical and thermal characteristics. The terminals are carefully cleaned after firing of the resistor and coated with hot tin to permit easy soldering. This method of construction provides a unit that is inherently capable of long life under conditions of high ambient temperature and humidity. Power ratings of General Electric Resistors are conservative; a generous measure of safety factors has been incorporated in these units. G-E fixed power wire-wound Resistors are supplied in 10- and 20-watt sizes.

General Electric adjustable power wire-wound Resistors are similar to the fixed units with the exception of a narrow path along the side of the resistor which is left free of the vitreous enamel coating. This permits an adjustable contact to make connections at any point along the length of the resistance element. These adjustable resistors, as the name implies, may be adjusted to any value from zero to the maximum value of the unit. It also permits an adjustable tap for use in voltage divider circuits. Adjustable resistors are made in 10, 25, 50, and 100 watt ratings.

Cat. No.	Resistance Ohms	List Price	Cat. No.	Resistance Ohms	List Price
25 WATT ADJUSTABLE					
URS1001	1	\$1.24	URS2016	250	\$1.95
URS1002	2	1.24	URS2017	300	1.95
URS1003	3	1.24	URS2019	400	1.95
URS1005	5	1.24	URS2020	500	1.95
URS1006	7.5	1.24	URS2022	750	1.95
URS1007	10	1.24	URS2023	800	1.95
URS1008	15	1.24	URS2024	1,000	1.95
URS1009	20	1.24	URS2025	1,250	1.95
URS1010	25	1.24	URS2026	1,500	1.95
URS1011	50	1.24	URS2027	2,000	1.95
URS1012	75	1.24	URS2028	2,250	1.95
URS1013	100	1.24	URS2029	2,500	1.95
URS1014	150	1.24	URS2030	3,000	1.95
URS1015	200	1.24	URS2031	3,500	1.95
URS1016	250	1.24	URS2032	4,000	1.95
URS1017	300	1.24	URS2033	4,500	1.95
URS1019	400	1.24	URS2034	5,000	1.95
URS1020	500	1.24	URS2035	6,000	2.15
URS1022	750	1.24	URS2036	7,000	2.15
URS1023	800	1.24	URS2037	7,200	2.15
URS1024	1,000	1.24	URS2038	7,500	2.15
URS1025	1,250	1.24	URS2039	8,000	2.15
URS1026	1,500	1.24	URS2041	9,000	2.15
URS1027	2,000	1.24	URS2042	10,000	2.15
URS1028	2,250	1.24	URS2043	12,000	2.15
URS1029	2,500	1.24	URS2044	15,000	2.15
URS1030	3,000	1.24	URS2045	20,000	2.15
URS1031	3,500	1.24	URS2046	25,000	2.15
URS1032	4,000	1.24	URS2047	30,000	2.47
URS1033	4,500	1.24	URS2048	40,000	2.47
URS1034	5,000	1.24	URS2049	50,000	2.47
URS1035	6,000	1.43	URS2050	60,000	2.86
URS1036	7,000	1.43	URS2052	80,000	2.86
URS1037	7,200	1.43	URS2053	100,000	2.86
URS1038	7,500	1.43	100 WATT ADJUSTABLE		
URS1039	8,000	1.43	URS3001	1	\$2.86
URS1041	9,000	1.43	URS3002	2	2.86
URS1042	10,000	1.43	URS3003	3	2.86
URS1043	12,000	1.43	URS3004	4	2.86
URS1044	15,000	1.43	URS3005	5	2.86
URS1045	20,000	1.56	URS3007	10	2.86
URS1046	25,000	1.56	URS3010	25	2.86
Cat. No.	Resistance Ohms	List Price	URS3011	50	2.86
50 WATT ADJUSTABLE					
URS2001	1	\$1.95	URS3013	100	2.86
URS2002	2	1.95	URS3016	250	2.86
URS2003	3	1.95	URS3020	500	2.86
URS2004	4	1.95	URS3024	1,000	2.86
URS2005	5	1.95	URS3026	1,500	2.86
URS2007	10	1.95	URS3029	2,500	2.86
URS2010	25	1.95	URS3034	5,000	2.86
URS2011	50	1.95	URS3042	10,000	3.25
URS2012	75	1.95	URS3044	15,000	3.25
URS2013	100	1.95	URS3045	20,000	3.25
URS2014	150	1.95	URS3046	25,000	3.25
URS2015	200	1.95	URS3047	30,000	3.58
			URS3048	40,000	3.58
			URS3049	50,000	3.58
			URS3051	75,000	3.90
			URS3053	100,000	3.90

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

GENERAL ELECTRIC

COMPOSITION RESISTORS SMALL IN SIZE — GIANT IN STABILITY

Meeting the rigid B7 characteristics (most exacting requirements) of the Joint Army-Navy specification JAN-R-11, these resistors add that extra "plus" to the servicing of any electronic equipment.

The allowance of a generous safety factor, a combination of small size, sturdy construction, excellent stability, high resistance to humidity, and more than ample insulation, make these General Electric resistors first choice on any list. GE Composition Resistors



may be operated safely at full rating in ambient temperatures up to 70° C (158° F.) 350 volts RMS may be applied to the 1/2 watt unit, 500 volts RMS to the 1 watt unit and 1000 volts RMS to the 2 watt unit, provided the wattage is not exceeded.

AVAILABLE IN THE FOLLOWING STANDARD RMA (RADIO MANUFACTURER'S ASSOCIATION) VALUES, ± 10% TOLERANCE

OHMS						MEG OHMS					
10	30	150	560	2,200	8,200	33,000	0.1	0.39	1.5	5.6	22.0
12	47	180	680	2,700	10,000	39,000	0.12	0.47	1.8	6.8	
15	56	220	820	3,300	12,000	47,000	0.15	0.56	2.2	8.2	
18	68	270	1,000	3,900	15,000	56,000	0.18	0.68	2.7	10.0	
22	82	330	1,200	4,700	18,000	68,000	0.22	0.82	3.3	12.0	
27	100	390	1,500	5,600	22,000	82,000	0.27	1.0	3.9	15.0	
33	120	470	1,800	6,800	27,000		0.33	1.2	4.7	18.0	

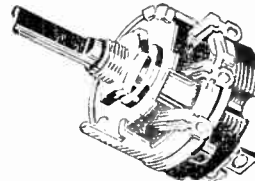
List Price (each)

1/2 Watt \$0.13 1 Watt \$0.17 2 Watt \$0.25

COMPOSITION CONTROLS

RATING CHART

Cat. No.	Resistance Ohms	Taper	Tap	List Price
URC-001	500	0		\$1.25
URC-002	1000	0		1.25
URC-003	2000	0		1.25
URC-005	5000	0		1.25
URC-006	5000	1		1.25
URC-007	7500	0		1.25
URC-008	10000	0		1.25
URC-009	10000	0		1.25
URC-010	10000	1		1.25
URC-011	15000	0		1.25
URC-012	15000	1		1.25
URC-013	20000	0		1.25
URC-014	25000	0		1.25
URC-015	25000	R		1.25
URC-016	50000	0		1.25
URC-017	50000	1		1.25
URC-018	75000	0		1.25
URC-019	75000	R		1.25
URC-020	100000	0		1.25
URC-021	100000	1		1.25
URC-022	200000	0		1.25
URC-023	250000	0		1.25
URC-024	250000	1		1.25
URC-025	250000	T	125,000	1.85
URC-026	250000	T	75,000	1.85
URC-027	500000	0		1.25
URC-028	500000	1		1.25
URC-029	500000	T	100,000	1.85
URC-030	1 Meg.	0		1.25
URC-031	1 Meg.	1		1.25
URC-032	1 Meg.	T	250,000	1.85
URC-033	1 Meg.	T	100,000 and 500,000	1.85
URC-034	2 Meg.	1		1.25
URC-035	2 Meg.	T	500,000	1.85
URC-036	2 Meg.	T	1 Meg.	1.85
URC-037	2 Meg.	T	50,000	1.85
URC-038	2 Meg.	T	250,000 and 500,000	1.85
URC-039	3 Meg.	1		1.25
URC-040	5 Meg.	1		1.25
URC-041	10 Meg.	0		1.25



Drawing with switch attached.

These sturdy, compact composition controls are exceptional for their sturdy and quiet operation qualities. Incorporating a newly improved composition element which provides extreme resistance to temperature and humidity changes insures noiseless operation throughout the life of the control. The resistance coating of the element is a special compound securely bonded to a phenolic ring. Double contact fingers are rounded to insure smooth action and at the same time provide positive control and minimum noise throughout the life of these controls. Resistance values of G-E Composition Controls has been held within ±20% of the nominal value.

POWER SWITCHES for the control are also available as listed. Power switches are Underwriters' approved and rated at 1 amp., 250 volts; 3 amps., 120 volt. SPST switches are mounted to operate at extreme counter clockwise rotation of shaft. Mechanical rotation for these controls with or without switch is 300°; electrical or effective rotation for controls with switch 265°. Linear taper on all controls.

ATTACHABLE POWER SWITCHES are available in the five types listed below.

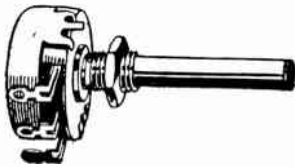


Cat. No.	Description	List Price
USV001	S.P.S.T.	\$.60
USV002	S.P.D.F.	.60
USV003	D.P.S.T.	.60
USV004	Four Point D.P.S.T.	.60
USV005	S.P.S.T. at clockwise position	.75
USV006	S.P.S.T. with Dummy Lug	.75

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

GENERAL ELECTRIC

WIRE-WOUND CONTROLS



These controls are interchangeable mechanically with the G-E type URC Composition Controls, and can be ordered with or without the G-E SPST Power Switch.

The sturdy resistance element of copper nickel or nickel chromium alloy is precision wound on a textolite strip. The contractor sweeps the inside face of the winding, giving smooth positive action. To insure noise-free action, and to prolong the life of these controls, a special lubricant has been applied to the resistance element minimizing frictional drag. A moulded textolite case provides high resistance to leakage. Terminals are hot-tinned for ease of soldering, and so located that molten solder cannot flow to the inside of the casing, causing malfunctions. The center terminals and moving member are insulated from the mounting bushing and case and have been subjected to a 1000-volts a-c breakdown test. Maximum recommended operating voltage 300.

Mechanical rotation for these controls is 300° with or without switch; electrical rotation 280° without switch; 260° with switch. These controls are available in a variety of resistances from 1 ohm to 10,000 ohms, as listed. All total resistance values within ±10% of the specified value. G-E Wire-wound Controls are supplied with linear resistance tapers.

Ruggedness of design enables these controls to withstand extreme vibration and other mechanical abuse. Utilization of a high-grade textolite casing minimizes corrosion and electrolytic action when controls are operated on DC. These controls are available in 3 and 4 watt power ratings dependent upon resistance range, these ratings to apply only to maximum resistance.

4 WATT

With Switch			Without Switch		
G.E. Cat. No.	Ohm Resistance	List Price	G.E. Cat. No.	Ohm Resistance	List Price
URC123	75,000	\$4.10	URC121	75,000	\$3.50
URC124	100,000	4.10	URC122	100,000	3.50

POWER RHEOSTATS

Smooth action and close control, under conditions of high ambient temperature and humidity, are the results of the many new improvements incorporated in the design of these G-E Power Rheostats. These units provide an excellent variable resistor for applications involving dissipation of appreciable power. They are supplied with bakelite knobs.

Elements are carefully wound with a special alloy wire on a sturdy ceramic frame providing for excellent insulation and heat resistance. Winding form and mounting are fused together with vitreous enamel into one integral unit and fired at high temperature. Tempered steel contact arm gives uniform contact pressure at all times. Contact brush rides on a large flat surface thus assuring good contact with minimum wear on the wire. These construction features assure the user of G-E Power Rheostats long lasting service. These G-E Power Rheostats have been thoroughly tested for safety factors and performance against flash-overs or breakdowns from the live parts to bushing or shaft. The range of values supplied is in line with the accompanying rating chart.

25 WATT

Cat. No.	Resistance Ohms	List Price	Cat. No.	Resistance Ohms	List Price
URC1002	1	\$5.85	URC1021	125	5.20
URC1003	2	5.20	URC1023	175	5.20
URC1004	3	5.20	URC1026	250	5.20
URC1007	6	5.20	URC1028	350	5.20
URC1009	8	5.20	URC1030	500	5.20
URC1010	10	5.20	URC1031	750	5.20
URC1012	15	5.20	URC1033	1,000	5.85
URC1015	25	5.20	URC1034	1,500	5.85
URC1016	35	5.20	URC1037	2,500	5.85
URC1017	50	5.20	URC1038	3,500	6.18
URC1018	75	5.20	URC1039	5,000	6.18
URC1020	100	5.20			

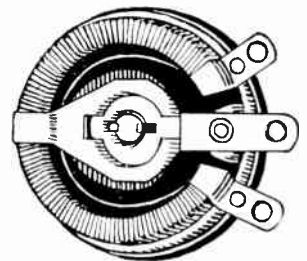
2 WATT

Without Switch			With Switch (S.P.S.T.)		
Cat. No.	Ohms	List Price	Cat. No.	Ohms	List Price
URC042	1	\$1.25	URC133	10	\$1.85
URC043	2	1.25	URC134	20	1.85
URC044	4	1.25	URC135	30	1.85
URC045	6	1.25	URC136	40	1.85
URC046	10	1.25	URC137	50	1.85
URC047	15	1.25	URC138	75	1.85
URC048	20	1.25	URC139	100	1.85
URC049	25	1.25	URC141	200	1.85
URC050	30	1.25	URC142	500	1.85
URC051	40	1.25	URC143	750	1.85
URC052	50	1.25	URC144	1,000	1.85
URC053	60	1.25	URC145	2,000	1.85
URC054	75	1.25	URC146	3,000	1.85
URC055	100	1.25	URC147	4,000	1.85
URC056	200	1.25	URC148	5,000	1.85
URC057	300	1.25	URC149	7,500	1.85
URC058	400	1.25	URC150	10,000	1.85
URC059	500	1.25			
URC060	750	1.25			
URC061	1,000	1.25			
URC062	2,000	1.25			
URC063	3,000	1.25			
URC064	5,000	1.25			
URC065	7,500	1.25			
URC066	10,000	1.25			

3 WATT

Standard over-all resistance and taper tolerance ± 10%

URC094	10	\$1.85	URC067	10	\$1.25
URC095	15	1.85	URC068	15	1.25
URC096	20	1.85	URC069	20	1.25
URC097	25	1.85	URC070	25	1.25
URC098	30	1.85	URC071	30	1.25
URC099	40	1.85	URC072	40	1.25
URC100	50	1.85	URC073	50	1.25
URC101	60	1.85	URC074	60	1.25
URC102	75	1.85	URC075	75	1.25
URC103	100	1.85	URC076	100	1.25
URC104	200	1.85	URC077	200	1.25
URC105	300	1.85	URC078	300	1.25
URC106	400	1.85	URC079	400	1.25
URC107	500	1.85	URC080	500	1.25
URC108	750	1.85	URC081	750	1.25
URC109	1,000	1.85	URC082	1,000	1.25
URC110	2,000	1.85	URC083	2,000	1.25
URC111	3,000	1.85	URC084	3,000	1.25
URC112	5,000	1.85	URC085	5,000	1.25
URC113	7,500	1.85	URC086	7,500	1.25
URC114	10,000	1.85	URC087	10,000	1.25
URC115	15,000	1.85	URC088	15,000	1.25
URC116	20,000	1.85	URC089	20,000	1.25
URC117	25,000	2.10	URC090	25,000	1.60
URC118	30,000	2.10	URC091	30,000	1.60
URC119	40,000	2.10	URC092	40,000	1.60
URC120	50,000	2.85	URC093	50,000	2.25



50 WATT

Cat. No.	Resistance Ohms	List Price	Cat. No.	Resistance Ohms	List Price
URC2001	0.5	\$6.50	URC2022	150	5.85
URC2002	1	6.50	URC2025	225	5.85
URC2003	2	6.50	URC2027	300	5.85
URC2005	4	5.85	URC2030	500	5.85
URC2007	6	5.85	URC2032	800	6.18
URC2009	8	5.85	URC2033	1,000	6.18
URC2011	12	5.85	URC2035	1,600	6.18
URC2013	16	5.85	URC2037	2,500	6.18
URC2014	22	5.85	URC2038	3,500	6.50
URC2016	35	5.85	URC2039	5,000	6.50
URC2017	50	5.85	URC2041	8,000	6.50
URC2019	80	5.85	URC2042	10,000	6.50
URC2021	125	5.85			

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

INSULATED RESISTORS

Preferred for Performance



TYPE BTS INSULATED FILAMENT RESISTOR

(1/2 watt)

13/32" x 1/8" - 470 ohms to 22 meg
350 volts max.

List 13¢

TYPE BTA INSULATED FILAMENT RESISTOR

(1 watt)

23/32" x 1/4" - 330 ohms to 22 meg
500 volts max.

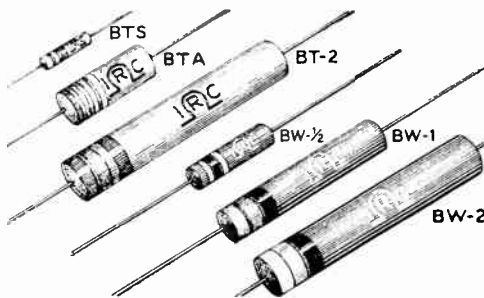
List 17¢

TYPE BT-2 INSULATED FILAMENT RESISTOR

(2 watt)

1 3/4" x 21/64" - 470 ohms to 22 meg
500 volts max.

List 25¢



Type BW-1/2 Insulated Wire Wound Resistor

(1/2 watt)

5/8" x 3/16" - 0.47 to 820 ohms

List 15¢

Type BW-1 Insulated Wire Wound Resistor

(1 watt)

1 1/4" x 1/4" - 0.47 to 4,700 ohms

List 17¢

Type BW-2 Insulated Wire Wound Resistor

(2 watt)

1 3/4" x 21/64" - 1.0 to 6,800 ohms

List 25¢

TYPE BT INSULATED FILAMENT RESISTORS are completely insulated with bakelite and unexcelled for stability, low-noise level, low voltage coefficient and mechanical strength. Insulation breakdown of Type BT's, 1000 volts. Standard tolerance $\pm 10\%$. Special tolerance $\pm 5\%$ at slightly higher cost.

TYPE BW INSULATED WIRE WOUND RESISTORS are furnished with the same bakelite insulation as BT resistors. The wire resistance element is wound tightly around a special insulated core. Standard tolerance $\pm 10\%$. Special tolerance $\pm 5\%$ at slightly higher cost.

STANDARD RANGES

Standardization pays dividends! It can be an important profit factor for you, too.

The great majority of radio parts manufacturers were quick to see the advantages in standardization and adopted the RMA Preferred Ranges some years ago. IRC has pioneered standardization of resistors because close contact with the radio industry has convinced us that such standardization is not only desirable but absolutely essential to carry out the tremendous development and production program of the industry.

This IRC policy will help servicemen prepare for better, faster and more profitable business.

Type BT and BW Resistors, in 10% tolerance, are carried in stock in the RMA ranges listed below. Figures in heavy type are the standard RMA 10% tolerance values. Using 10% tolerance BT's and BW's, these 93 ranges give complete coverage of all values with the smallest resistor stock. Standardization of your stock on these values is recommended for economical, complete coverage, faster turnover . . . more profit for you!

However, the intermediate values listed below also are carried in the IRC stockroom, so that every RMA value is available to servicemen when desired.

JOBBERS' STOCK IN PREFERRED RMA RANGES

Subject to the minimum and maximum values for each of the various types of BT and BW Resistors.

Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Ohms	Megs	Megs	Megs
0.47	3.0	18	110	680	1,000	27,000	0.1	0.62	3.9
0.51	3.3	20	120	750	1,100	30,000	0.11	0.68	4.3
0.56	3.6	22	130	820	1,200	33,000	0.12	0.75	4.7
0.62	3.9	24	150	910	1,300	36,000	0.13	0.82	5.1
0.68	4.3	27	160	1,000	1,400	39,000	0.15	0.91	5.6
0.75	4.7	30	180	1,100	1,500	43,000	0.16	1.0	6.2
0.82	5.1	33	200	1,200	1,600	47,000	0.18	1.1	6.8
0.91	5.6	36	220	1,300	1,700	51,000	0.20	1.2	7.5
1.0	6.2	39	240	1,500	1,800	56,000	0.22	1.3	8.2
1.1	6.8	43	270	1,600	1,900	62,000	0.24	1.5	9.1
1.2	7.5	47	300	1,800	2,000	68,000	0.30	1.8	10.0
1.3	8.2	51	330	2,000	2,200	75,000	0.33	2.0	11.0
1.5	9.1	56	360	2,200	2,400	82,000	0.36	2.2	12.0
1.6	10	62	390	2,400	2,700	91,000	0.39	2.4	13.0
1.8	11	68	430	2,700	3,000	10,000	0.43	2.7	14.0
2.0	12	75	470	3,000	3,300	11,000	0.47	3.0	15.0
2.2	13	82	510	3,300	3,600	12,000	0.51	3.3	16.0
2.4	15	91	560	3,600	3,900	13,000	0.56	3.6	18.0
2.7	16	100	620	3,900		14,000			20.0
									22.0



INSULATED RESISTORS

Preferred for Performance

BASIC KIT

Designed to meet your day-to-day resistor requirements, the IRC Basic Kit provides a wide variety stock in carefully selected values. Assortments are so arranged that a shortage of stock in one range can usually be compensated for by using two other ranges in series or parallel. Additional adjustable bands are included for use in making up bleeder sections.

The Basic Kit is sturdily constructed of heavy-gauge steel, and beautifully finished in blue and yellow. Hung on your wall or set on your service bench, the Basic Kit saves countless trips for supplies and provides your shop with a neat, carefully selected general purpose resistor stock.

The IRC Basic Kit is factory-packed with the following wide-variety resistor stock:

- BTS —10 each—1,000, 2,200, 4,700, 10,000, 15,000, 22,000, 27,000, 47,000, 75,000 ohm; 0.1 meg, 0.22 meg, 0.47 meg, 1.0 meg, 2.2 meg, 10.0 meg, 5.0 meg.
- BTA —5 each—470, 1,000, 1,500, 2,200, 3,600, 4,700, 22,000, 36,000, 75,000 ohm.
10 each—10,000, 15,000, 47,000 ohm; 0.1 meg, 0.24 meg, 0.47 meg, 1 meg.
- BW- $\frac{1}{2}$ —10 each—100, 150, 220, 330, 470, 560 ohm.
- BT-2 —5 each—1,000, 2,200, 4,700, 10,000, 22,000, 47,000 ohm; 0.1 meg.
- BW-1 —5 each—47, 82, 100, 270 ohm.
- BW-2 —5 each—47, 82, 100, 270 ohm.
- AB —2 each—100, 250, 500, 750, 1,000, 1,500, 2,500, 5,000, 10,000 ohm.
2 each—15,000, 25,000 ohm.
- ABA —2 each—100, 250, 500, 1,000, 1,500, 2,500, 5,000, 10,000 ohm.
- EPA —1 each—1,000, 1,500, 2,500, 5,000 ohm.
1 each—10,000, 25,000 ohm.
- ESA —1 each—1,000, 1,500, 2,500, 5,000 ohm.
1 each—10,000, 25,000, 50,000 ohm,
6 "X-3" Bands.
- MW-2J —2 each—10, 20, 50, 100 ohm.
- M1034 —2 each.

All-Metal Cabinet Furnished at No Extra Cost
List Price: \$138.68



Serviceman's Special Assortment Available in Basic Kit

The Basic Kit is also available stocked with a special "Serviceman's Assortment." This assortment contains a complete stock of $\frac{1}{2}$, 1 and 10 watt resistors, plus a selection of controls, shafts and switches. The heavy-duty power wire-wound resistors are not furnished in this assortment—leaving space in the compartments and drawers for capacitors, lamp bulbs, solder, small tools and spare parts.

The "Serviceman's Assortment" is factory-packed with the following:

- 160—BTS resistors
- 115—BTA resistors
- 60—BW- $\frac{1}{2}$ resistors
- 20—BW-1 resistors
- 22—AB power resistors
- 2—# 41 switches
- 1—# 42 switch
- 4—D13-133 controls
- 1—D13-133X control
- 1—D13-137 control
- 1—D13-137X control
- 1—D13-139 control
- 2—"E" shafts
- 1—"H" shaft

List Price: \$83.21

RESIST-O-CABINET



**End Cigar Box Confusion—
Keep Your Resistors in Order!**

The sturdy, IRC Resist-O-Cabinet is specifically designed to hold resistors systematically and safely without the bending of leads. It puts an end to "cigar box confusion!" Its four "non-spill" drawers have seven ample-sized compartments in each which readily accommodate resistor sizes from $\frac{1}{2}$ to 10 watts.

Attractively finished in blue, yellow and silver. Ohm's Law formulas neatly and permanently lithographed on top of cabinet for handy reference. Cabinet measures 11" long, 5 $\frac{1}{2}$ " high and 5 $\frac{1}{2}$ " deep. Bases of Resist-O-Cabinets are arranged for stacking so that several cabinets may be used to increase stock capacity. This handy Resist-O-Cabinet is FREE with the purchase of any of the three well-balanced IRC resistor assortments listed. (Cabinet is not sold separately.)

ASSORTMENT No. 1—59 Resistors

Type BTS—One each 1,000, 4,700, 10,000, 27,000, 47,000 ohms; 0.1 meg, 0.27, 0.47 meg.

Type BTA—One each 39,000, 68,000 ohms; 0.15, 0.22 megs. Two each 1,000, 1,500, 2,200, 2,700, 4,700, 15,000, 27,000 ohms; 1.0, 2.2 megs. Three each 10,000, 47,000 ohms; 0.1 meg, 0.27, 0.47 megs.

Type AB 10 Watt—One each 1,000, 1,500, 2,500, 5,000 ohms. Two each 10,000 and 25,000 ohms.

Type ABA, 10 Watt Adjustable—One each 1,000, 2,500, 5,000, 10,000.

List price of Resistors, \$16.91
(Cabinet furnished at no extra charge)

ASSORTMENT No. 2—100 Resistors

Type BW- $\frac{1}{2}$ —Two each 47, 100, 270 ohms.

Type BTS—Two each 3,300, 6,800, 33,000, 68,000, 82,000 ohms; 0.22, 0.33 megs. Three each 470, 1,500, 15,000, 22,000, 39,000 ohms; 0.15, 1.0, 2.2 megs. Five each 2,200, 2,700, 27,000 ohms; 0.27 megs. Six each 1,000, 4,700, 10,000, 47,000 ohms; 0.1, 0.47 megs.

List price of Resistors, \$13.12
(Cabinet furnished at no extra charge)

ASSORTMENT No. 3—83 Resistors

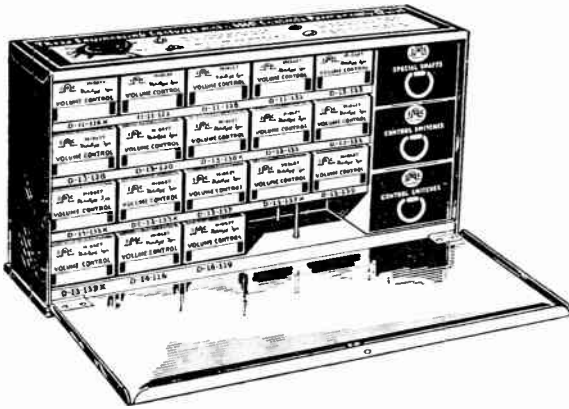
Type BW-1—Two each 47, 100, 270 ohms.

TYPE BTA—Two each 470, 1,500, 2,700, 3,300, 6,800, 33,000, 39,000, 68,000, 82,000 ohms; 0.15, 0.22, 0.33, 1.0, 2.2 megs. Three each 15,000, 22,000, 27,000 ohms. Five each 1,000, 2,200, 4,700, 10,000, 47,000 ohms; 0.1, 0.27, 0.47 megs.

List price of Resistors, \$14.11
(Cabinet furnished at no extra charge)

VOLUME CONTROLS

Preferred for Performance



IRC VOLUME CONTROL CABINET

For the Modern Service Shop

This handy stock of IRC Type D Universal Controls, quickly attached switches and easily installed shafts is factory-packed in an attractive all-metal cabinet. Proved by IRC Service Records to be a selection of the most popular controls—you can actually service over 87% of all replacements right from this cabinet. Here is your answer to speedier, more efficient servicing—reduction of costly exact-duplicate inventories and modern appearance for your shop.

Cabinet measures 14½" long, 7¾" high and 4½" wide. It is handsomely finished in yellow, blue and silver and provides separate compartments for controls and three handy drawers for switches, special shafts and spare parts. Each compartment and drawer is individually marked for identification. The hinged front cover snaps securely shut. The cabinet is furnished at no extra charge when factory-packed with the IRC controls, switches and shafts listed on the left. It is not sold separately.

Check this fast-selling stock!

The IRC Volume Control Cabinet is factory-packed with the following 18 Type D All-Purpose Controls, switches and special shafts.

IRC Control Type No.	Resistance	Purpose	IRC Control Type No.	Resistance	Purpose
2 D13-133	500,000	A	1 D13-133X	500,000	F
1-D11-116	10,000	B	1-DC13-133X	500,000	G
1-D11-123	50,000	C	1-D13-137	1.0	A
1-D11-128	100,000	C	1-D13-137X	1.0	F
1-D11-133	500,000	C	1-D13-139	2.0	A
1-D13-123	50,000	D	1-D13-139X	2.0	F
1-D13-128	100,000	A	1-D14-116	10,000	H
1-D13-130	250,000	A	1-D16-119	20,000	B
1-D13-130X	250,000	E			

- A—Tone or Audio Circuit Control
- B—Antenna Grid Bias Control
- C—Potentiometer Voltage Divider
- D—Tone Control

- E—Tapped for A. V. C.
- F—Tapped for Tone Compensation
- G—Friction Clutch Auto Radio Type
- H—Antenna Grid Bias of 2 Tubes

Switches: 5—No. 41 S.P.S.T.; 1—No. 42 D.P.S.T.
 Shafts: 1—Type B Auto Radio; 4—Type E knurled and slotted—with thin web

ORDER YOUR IRC VOLUME CONTROL CABINET TODAY

List Price: \$30.90

NEW IRC ALL-PURPOSE KIT

Here's how to sharpen the appearance of your shop without an additional outlay of cash! 9 "hot-number" IRC ½, 1 and 2 meg. controls are available pre-packed in the All-Purpose Kit with 4 switches and 4 special shafts. Every one a fast mover . . . and you pay only the standard net cost of the merchandise. At no extra cost you receive this attractive 12 compartment utility cabinet.

Buy your "hot-number" controls this way each week and accumulate a shelf of these neat cabinets—each pre-packed with the following IRC merchandise:

IRC Control Type No.	Resistance	Purpose
5 D13-133	500,000	A
1 D13-133X	500,000	B
1 D13-137	1.0	A
1 D13-137X	1.0	B
1 D13-139	2.0	A

SWITCHES

- 3 = 41 S.P.S.T.
- 1 = 42 D.P.S.T.

SHAFTS

- 1 Type "A" double-flatted tap-in shaft is included with each control—plus:
- 3 Type "E" with universal knurl for special type push-on knobs,
- 1 Type "H" with universal groove for many Decca, RCA, Sears-Roebuck and Westinghouse models.

Purpose: A—Tone or Audio Circuit control; B—Tapped for tone compensation.

Sturdy utility card-board cabinet measures 7¾"x7¾"x4½". It is attractively finished in yellow, blue and silver, and provides 4 drawers with 12 compartments. Ideal stocking arrangement for miscellaneous parts—hardware, knobs, capacitors, shafts and dial fittings.



Cabinet furnished at no extra cost.

List Price \$16.20

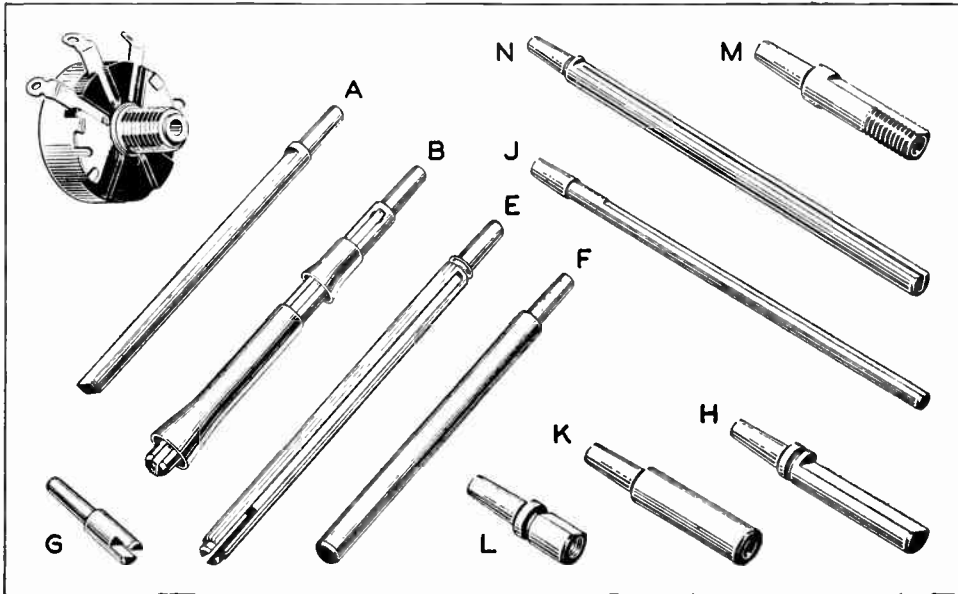


VOLUME CONTROLS

Preferred for Performance

THE IRC "CENTURY" LINE

114 IRC CONTROLS THAT SOLVE 90% OF YOUR REPLACEMENT PROBLEMS



For miscellaneous service needs, 71 all-purpose controls are available for use with the popular IRC tap-in shafts. An A shaft is included with each control and shafts B, E, F, G, H, J, K, L, M and N may be had at slight extra cost. Each D Control accommodates any of the eleven Tap-in Shaft types shown. Shaft flats may be located in any position. A few extra shafts greatly increase the utility of your D Control stock at a small investment. Of unusual convenience is the "Double-Flatted" A shaft, included with each D Control. Accommodates popular push-on knobs

requiring either $\frac{1}{8}$ " or $\frac{3}{16}$ " flats and all set-screw knobs without filing of shaft or use of inserts. Dimensions: $1\frac{1}{4}$ " x $\frac{1}{16}$ ".
 Single Control—Without switch List \$1.25
 Tapped Control—Without switch List 1.85
 Prices include Shaft A packed with each control

Easily Installed "Tap-in" Shafts

Type B, M—List \$0.45
 Types E, F, G, H, J, K, L, N—List \$0.30

70 UNIVERSAL TYPE D CONTROLS with 11 easily installed Tap-In Shafts

Resistance Ohms	Tap	IRC Stock No.	Taper	Usual Application	Resistance Ohms	Tap	IRC Stock No.	Taper	Usual Application
500	—	D11-103	A	Potentiometer Voltage Divider	250M	60M-120M	D18-130XX	Spec.	Audio Control with 2 Tone Taps
1M	—	D11-108	A	Potentiometer Voltage Divider	350M	—	D13-132	C	Tone or Audio Circuit Control
2M	—	D11-110	A	Potentiometer Voltage Divider	350M	35M	D17-132X	Spec.	Audio Control with Tone Tap
3M	—	D11-112	A	Potentiometer Voltage Divider	350M	75M	D18-132X	H	Audio Control with Tone Tap
4M	—	D11-113	A	Potentiometer Voltage Divider	500M	—	D11-133	A	Potentiometer Voltage Divider
5M	—	D11-114	A	Potentiometer Voltage Divider	500M	—	D13-133	C	Tone or Audio Circuit Control
5M	—	D13-114	C	Antenna Control	500M	125M	D13-133X	H	Audio Control with Tone Tap
5M	—	D14-114	D	*Antenna C Bias Control	500M	—	D14-133	D	R.F. Plate Control
7,500	—	D11-115	A	Potentiometer Voltage Divider	500M	25M	D17-133X	Spec.	Audio Control with Tone Tap
10M	—	D11-116	A	*Antenna Grid Bias Control	500M	50M	D18-133X	Spec.	Audio Control with Tone Tap
10M	—	D13-116	C	Antenna Control	500M	250M	D18-133X	Spec.	Audio Control with Tone Tap
10M	—	D14-116	D	*Antenna Grid Bias of 2 Tubes	500M	100M-200M	D18-133XX	Spec.	Audio Control with 2 Tone Taps
10M	—	D16-116	F	*Antenna Grid Bias of 1 Tube	1.0 meg.	—	D11-137	A	Potentiometer Voltage Divider
13M	3M	D18-117X	H	I. F. Shunting Control	1.0 meg.	—	D13-137	C	Tone or Audio Circuit Control
15M	—	D14-118	D	*Antenna Grid Bias Control	1.0 meg.	250M	D13-137X	H	Audio Control with Tone Tap
15M	—	D16-118	F	*Antenna Grid Bias Control	1.0 meg.	—	D14-137	D	Tone Control
20M	—	D16-119	F	*Antenna Grid Bias Control	1.0 meg.	35M	D17-137X	Spec.	Audio Control with Tone Tap
25M	—	D11-120	A	Potentiometer Voltage Divider	1.0 meg.	50M-100M	D17-137XX	Spec.	Audio Control with 2 Tone Taps
25M	—	D14-120	D	*Grid Bias Control	1.0 meg.	160M	D18-137X	Spec.	Audio Control with Tone Tap
25M	—	D16-120	F	Antenna Control	1.0 meg.	250M-500M	D18-137XX	Spec.	Audio Control with 2 Tone Taps
30M	6M	D18-122X	H	Audio Control with Tone Tap	1.0 meg.	500M	D19-137X	Spec.	Audio Control with Tone Tap
44M	7M-14M	D18-123XX	Spec.	Audio Control with 2 Tone Taps	1.0 meg.	500M	DVC-539X	Spec.	Fader control for fading one circuit into another
50M	—	D11-123	A	Potentiometer Voltage Divider	2.0 meg.	—	D13-139	C	Tone or Audio Circuit Control
50M	—	D13-123	C	Tone Control	2.0 meg.	500M	D13-139X	H	Audio Control with Tone Tap
50M	—	D14-123	D	*Antenna Grid Bias Control	2.0 meg.	5M	D15-139X	Spec.	Audio Control with Tone Tap
75M	—	D13-125	C	Tone Control	2.0 meg.	500M-1.0 meg.	D13-139XX	Spec.	Audio Control with 2 Tone Taps
75M	—	D14-125	D	*Grid Bias Control	2.0 meg.	150M	D17-139X	Spec.	Audio Control with Tone Tap
100M	—	D11-128	A	Potentiometer Voltage Divider	2.0 meg.	1.0 meg.	D18-139X	Spec.	Audio Control with Tone Tap
100M	—	D13-128	C	Tone or Audio Circuit Control	2.0 meg.	250M-500M	D18-139XX	Spec.	Audio Control with 2 Tone Taps
200M	—	D11-129	A	Potentiometer Voltage Divider	2.0 meg.	50M	D19-139X	Spec.	Audio Control with Tone Tap
200M	—	D14-129	D	*Grid Bias Control	3.0 meg.	—	D13-140	C	Audio Control
250M	—	D11-130	A	Potentiometer Voltage Divider	5.0 meg.	—	D11-141	A	Potentiometer Voltage Divider
250M	—	D13-130	C	Tone or Audio Circuit Control	7.0 meg.	—	D11-142	A	Potentiometer Voltage Divider
250M	125M	D13-130X	Spec.	Audio Control with A.V.C. Tap	10.0 meg.	—	D11-143	A	Potentiometer Voltage Divider
250M	—	D14-130	D	*Grid Bias Control					
250M	25M	D17-130X	Spec.	Audio Control with Tone Tap					
250M	60M	D18-130X	Spec.	Audio Control with Tone Tap					

* Supplied with 270 ohm BW $\frac{1}{2}$ ($\frac{1}{2}$ Watt) Insulated Wire Wound Resistor.

VOLUME CONTROLS

Preferred for Performance



THE IRC "CENTURY" LINE

113 QUALITY CONTROLS THAT OFFER YOU THESE EXCLUSIVE FEATURES

- METALLIZED ELEMENT — harder, smoother, moisture-proof, permanent.
- FIVE FINGER CONTACTOR — assures positive, more uniform contact.
- SILENT SPIRAL CONNECTOR — a positive connection between contactor and its terminal.
- STEEL COIL SPRING THRUST WASHER — eliminates shaft wobble and end-play.

16 POPULAR DS TYPES

With Fixed Shafts

These sixteen numbers have been the most frequently called for and are furnished with fixed shaft for convenient, easy use. Dimensions: 1 1/8" x 1 1/4".



Single Control—Without switch..... List \$1.25
Tapped Control—Without switch..... List \$1.85

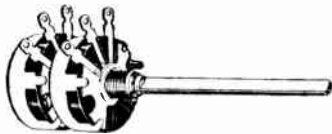
Resistance Ohms	Tap	IRC Stock No.	Taper	Usual Application
10M	—	DS11-116	A	Antenna Grid Bias Control
10M	—	DS14-116	D	*Antenna Grid Bias of 2 Tubes
25M	—	DS14-120	D	*Grid Bias Control
50M	—	DS11-123	A	Potentiometer Voltage Divider
100M	—	DS11-128	A	Potentiometer Voltage Divider
100M	—	DS13-128	C	Tone or Audio Circuit Control
250M	—	DS11-130	A	Potentiometer Voltage Divider
250M	—	DS13-130	C	Tone or Audio Circuit Control
250M	125M	DS13-130X	Spec.	Audio Control with AVC Tap
250M	60M	DS18-130X	H	Audio Control with Tone Tap
500M	—	DS13-133	C	Tone or Audio Circuit Control
500M	125M	DS13-133X	H	Audio Control with Tone Tap
1.0 meg.	—	DS13-137	C	Tone or Audio Circuit Control
1.0 meg.	250M	DS13-137X	H	Audio Control with Tone Tap
2.0 meg.	—	DS13-139	C	Tone or Audio Circuit Control
2.0 meg.	500M	DS13-139X	H	Audio Control with Tone Tap

*Supplied with 270 ohm BW-1/2 (1/2 Watt) Insulated Wire Wound Resistor.

9 TYPE J CONTROLS FOR SPECIAL APPLICATIONS

For a wide variety of sets with specific requirements, you'll find these nine numbers extremely useful. To play safe your stock should include at least one of each.

8 DUAL CONTROLS



Eight popular Dual Controls are included in IRC's new Century Line. Here is a small but carefully selected group of "duals" that will speed many an important repair job! Standard No. 20 series switches can be attached. 1 1/4" x 1 1/4".

List Price \$3.10 each

IRC Stock No.	Unit	Resistance Ohms	Taper
35-1620	Panel	10,000	C
	Rear	25,000	E
61-1623	Panel	10,000	F
	Rear	50,000	A
33-2828	Panel	0.1 meg.	C
	Rear	0.1 meg.	C
33-3030	Panel	0.25 meg.	C
	Rear	0.25 meg.	C
33-3333	Panel	0.5 meg.	C
	Rear	0.5 meg.	C
33-3737	Panel	1.0 meg.	C
	Rear	1.0 meg.	C
33-3939	Panel	2.0 meg.	C
	Rear	2.0 meg.	C
31-4141	Panel	5.0 meg.	A
	Rear	5.0 meg.	A

8 CLUTCH-TYPE DC CONTROLS

With Tap-in Shafts



Practical for auto radio use and many other applications. Controls have friction clutch drive-arm and are equipped with a special shaft for use where either a slotted or tongued type shaft is required. Instructions tell how to cut shaft for either application. Switches cannot be used with friction clutch controls. Size same as Type D.

List Price \$1.85 each

IRC Stock No.	Resistance Ohms	Resistance to Tap
DC13-130	250M	—
DC18-130X	250M	Tap 50M
DC13-133	500M	—
DC13-133X	500M	Tap 125M
DC13-137	1.0 meg.	—
DC13-137X	1.0 meg.	Tap 250M
DC13-139	2.0 meg.	—
DC13-139X	2.0 meg.	Tap 500M

2 TYPE S SPECIAL POWER CONTROLS

With Tap-in Shafts

Designed for power requirements of plate circuit tone controls, Type S Controls should be used where the audio output exceeds 2 watts. 1 1/4" in diameter, they employ the Tap-in Shaft feature. Use No. 20 series switches listed below.

List Price \$1.25 each

IRC Stock No.	Resistance Ohms	Taper
S11-128	0.1 meg.	A
S13-128	0.1 meg.	C

QUICKLY ATTACHED SWITCHES

	For D and DS Controls	For S and Dual Controls	List
SP, ST.....	No. 41	No. 21	\$0.60
DB, ST.....	No. 42	No. 22	0.75
SP, DT.....	No. 43	No. 23	0.75
Three Point.....	—	No. 24	0.75
Four Point.....	No. 45	No. 25	0.75
SP, DT, at clockwise position.....	—	No. 26	0.75
SP, ST, with dummy lug.....	No. 47	No. 27	0.75

8 STANDARD TAPERS

A—Used as potentiometer or rheostat in any circuit where uniform resistance change is required.

B—A semi-logarithmic curve used as tone control or audio circuit control.

C—A logarithmic curve. Used as audio circuit control or antenna shunt control.

D—Tapered at both ends to provide control of grid bias and antenna circuit.

Used where control of grid bias is of prime importance in controlling volume.

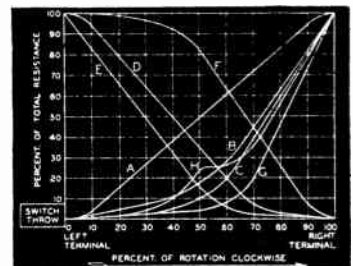
E—Used as a rheostat in cathode circuit to control grid bias.

F—Tapered at both ends to provide control of grid bias and antenna circuit. Used where control of grid bias is essential in controlling volume. Generally used where the control changes the

grid bias of only one or two tubes. Must not be used with heavy currents.

G—A logarithmic curve with very gradual change in resistance from left terminal. Used as audio circuit control or antenna shunt control.

H—A tapped logarithmic curve used as audio level control for automatic bass compensation.

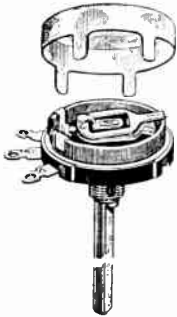




VOLUME CONTROLS

Preferred for Performance

TYPE W WIRE WOUND CONTROLS



A dependable wire wound control of uniform resistance change for power requirements up to 2 watts. Tight, uniform windings assure utmost accuracy. Spiral Spring Connector between rotor arm and center terminal eliminates noise. Diameter $1\frac{1}{4}$ " ; depth behind panel $\frac{3}{16}$ " ; shaft length $2\frac{15}{16}$ " from control face. Illustration shows cover removed, although covers are supplied with controls.

List without switch, \$1.25

IRC Control No.	Resistance Ohms	Max. Current (Amps.)	IRC Control No.	Resistance Ohms	Max. Current (Amps.)
W-2	2	1.000	W-100	100	.142
W-3	3	.815	W-200	200	.100
W-5	5	.630	W-300	300	.083
W-6	6	.560	W-400	400	.071
W-8	8	.500	W-500	500	.063
W-10	10	.450	W-750	750	.052
W-15	15	.370	W-1000	1000	.045
W-20	20	.320	W-2000	2000	.032
W-25	25	.285	W-3000	3000	.028
W-30	30	.260	W-4000	4000	.022
W-40	40	.225	W-5000	5000	.020
W-50	50	.200	W-7500	7500	.016
W-60	60	.183	W-10000	10000	.014
W-75	75	.164			

Television Focusing Controls

W20X10	20 ohms—center tap	List
W10X5	10 ohms—center tap	\$1.85

Type W Switches

No. 51—S. P., S. T.	List
No. 52—D. P., S. T.	\$0.60
No. 53—S. P., D. T.	.75
No. 54—Three Point	.75
No. 55—Four Point	.75
No. 56—S. P., D. T. at clockwise position	.75
No. 57—S. P., S. T., with dummy lug	.75

Plain and Insulated Shaft Couplers

For use with standard controls to meet special shaft requirements. Two set screws give rigid connection.

TYPE C2—Insulated coupler for use with square type shaft used by Motorola. List \$0.30

TYPE C3—Plain coupler to couple $\frac{1}{4}$ " shafts; insert allows coupling of $\frac{1}{4}$ " shaft to $\frac{3}{8}$ " shaft. List \$0.30

INDUSTRY RED BOOK

IRC control replacements are fully listed in the new "Radio Industry Red Book of Replacement Parts." The correct IRC control replacement for any receiver manufactured from 1933 to 1948 is included. Installation notes are given where necessary.



9 IRC TYPE J CONTROLS FOR MANY SPECIAL REQUIREMENTS!

IRC sales records show that these 9 most popular special controls will handle nearly one-third of your requirements for exact duplicate controls. The group includes concentric duals, and special shaft units. For a more complete stock, carry at least one of each:

DJ-4—2.0 meg (tap 500M ohms)/1.0 meg. RCA: RC-351, A, B, C, D, E, F, M, R, RC-352, A, B, C, RC-356, B ch. Sears-Roebuck: 126,208 Ch. Westinghouse Elec. Supply: WR-264. List \$3.75

DJ-5—2.0 meg/1.0 meg. Zenith: 5637, 5803 Chassis (Dual Control). List \$3.75

J-15—32M ohms. Stewart-Warner: R-100A, B, E, (AC), 950 series (AC). List \$1.85

J-107—10M/50M ohms. General Electric: T-41, Graybar: GB-678, Pilot: K-117, RCA: R14, R15, RE17, 42 (Radiola), 48 (Radiola), Westinghouse Elec. & Mfg.: WR-4. List \$3.10

J-127—3890/3800 ohms. RCA: R32, RE45, R52, RE75, 145. List \$3.10

J-296—225M/5M ohms. Philco: 70, 70A below B22,000, 90, 90A (Two 45's), 270, 270A, 370, 470, 470A, 570. List \$3.10

J-777—350M ohms. Chrysler: C1423, Ford: T9, FT9, FT9X, F1440, F1442, Graham: G1418, G1435, Lincoln: L1420, L1424, L1425, L1427, L1429, L1460, Nash: T12-NT 12X, NT 12 X2, T15 NT 15, NT15X, N1418, N1433 H, N1434 H, N1514, Packard: P1417, P1517, Philco: 811 PA, PB, PV, 816, 817, 818, 821P, 821PV, 826, 827, 827K, 828, 828K, Reo: R1415, Studebaker: T12-ST12, T15-ST15, S1431, S1437, S1516, Willys Overland: W1419. List \$1.85

J-823—150M/250M ohms (Tap 125M ohms). General Elec.: A-82, A-86, A-87. List \$3.10

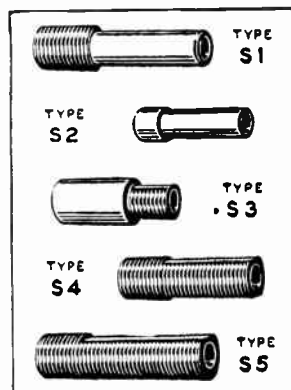
J-843—350M ohms (tap 75M ohms). Chrysler T10-CT10, T11-CT11, C1450, C1452, DeSoto: T10-CT10, T11-CT11, Dodge: T11-CT11, Hupmobile: HT11X, Lincoln: LT 14X3, Packard: T14-PT14, P1422, P1430, P1432 H, P1439, Pierce-Arrow: T14-MT14X4, Reo: T11-CT11, T11-R14X. List \$1.85

EXTENSION SHAFTS

These shafts attach to regular shafts, thus extending length to any needed size, and frequently make it possible to use standard controls for "special" jobs.

Shaft No.	Dimensions	List
Shaft No. 441	—4" x $\frac{1}{4}$ " dia. x $\frac{1}{32}$ " flat	\$0.40
Shaft No. 442	—4" x $\frac{1}{2}$ " dia. x $\frac{1}{32}$ " flat	.40
Shaft No. 443	—4" x $\frac{3}{8}$ " dia. x $\frac{1}{32}$ " flat	.40
Shaft No. 444	—x $\frac{1}{4}$ " dia. x $\frac{1}{32}$ " flat for 4" length	.40

SLEEVE BUSHINGS



TYPE S1—For use with standard controls.

TYPE S2—To provide bearing for switching mechanism.

List \$0.45 \$0.30

TYPE S3—For use with standard controls to set control back from chassis or mounting bracket. $1\frac{1}{2}$ "— $\frac{1}{8}$ " dia. for 1" unthd— $\frac{3}{8}$ " dia. for $\frac{1}{2}$ " 32 thd—.344 flat. List \$0.60

TYPE S4—For use with standard controls to provide $\frac{1}{8}$ " dia. bushing. $1\frac{5}{8}$ "—thd $\frac{1}{8}$ "—28 full length—1.375 dbl flat. List \$0.60

TYPE S5—For use with standard controls to provide $\frac{1}{2}$ " dia. bushing. $2\frac{1}{4}$ "— $\frac{1}{2}$ "—28 full length—.437 flat. List \$0.60

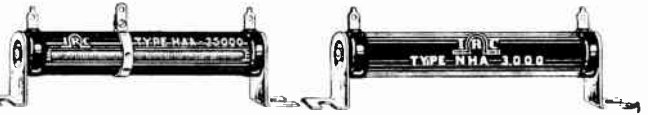
POWER RESISTORS

Preferred for Performance



"PREFERRED FOR PERFORMANCE"

Not only do these famous resistors excel electrically, but their "eli-mate-proofed" cement coating provides the most dependable protection yet devised for resistors for heavy duty work. Both fixed and adjustable types are available. Mounting Brackets are packed with all resistors from 25 watts and up. One Adjustable Band is furnished with each adjustable resistor. The new Type X Band (described below) is included as standard on units of 25 watts and above. Extra bands supplied at prices indicated.



ADJUSTABLE TYPES

10 WATTS Type A8A 1 3/4" x 5/16" List \$1.20		25 WATTS Type DHA (Continued)		50 WATTS Type EPA (Continued)		100 WATTS Type HAA 6 1/2" x 1 1/8" Max. m. a.	
Ohms	Max. m. a.	Ohms	Max. m. a.	Ohms	Max. m. a.	Ohms	Max. m. a.
1	3150	300	300	12,000	63	100	1000
2	2210	400	250	15,000	56	200	710
3	1830	500	224	20,000	48	400	500
5	1420	750	182	List \$2.55	48	500	447
7.5	1150	800	177	25,000	43	750	365
10	1000	1,000	158	30,000	39	1,000	316
15	820	1,250	141	40,000	34	List \$3.05	
20	720	1,500	129	List \$2.75	30	1,500	260
25	640	1,750	112	50,000	28	2,000	220
50	440	2,000	105	60,000	25	2,500	200
75	360	2,250	100	List \$3.06	25	3,000	180
100	315	2,500	91	75,000	21	4,000	155
150	260	3,000	84	List \$3.25	21	5,000	140
200	220	3,500	79	0.1 meg.		List \$3.22	
250	190	4,000	71			6,000	130
300	175	4,500	64	List \$1.70		7,500	116
350	160	5,000	58	6,000		8,000	110
400	145	6,000	53	7,500		10,000	100
450	130	8,000	50	8,000		List \$3.42	
500	115	9,000	45	10,000		10,000	90
550	100	10,000	41	List \$1.75		15,000	70
600	85	11,000	35	12,000		20,000	55
650	70	12,000	32	15,000		25,000	45
700	55	15,000	28	20,000		30,000	35
750	40	20,000	25	25,000		40,000	25
800	25	25,000	21	30,000		50,000	18
850	10	30,000	17	35,000		60,000	14
900	5	40,000	15	4,000		75,000	11
950	5	50,000	13	5,000		100,000	8
1,000	5	60,000	11	6,000		List \$3.97	
1,250	3	75,000	9	7,000		150,000	5
1,450	2	100,000	8	8,000		List \$4.13	
1,500	2	150,000	7	9,000		0.1 meg.	31
2,000	1	200,000	6	10,000			
2,250	1	250,000	5	11,000			
2,500	1	300,000	4	12,000			
3,000	1	400,000	3	13,000			
3,500	1	500,000	2	14,000			
4,000	1	600,000	1	15,000			
4,500	1	750,000	1	16,000			
5,000	1	1,000,000	1	17,000			
List \$0.63				18,000			
90	6,000			20,000			
83	7,000			22,000			
82	7,500			23,000			
71	8,000			24,000			
67	8,500			25,000			
63	9,000			26,000			
57	10,000			27,000			
53	List \$0.94			28,000			
50	11,000			29,000			
47	12,000			30,000			
45	12,500			31,000			
List \$0.72	15,000			32,000			
41	20,000			33,000			
37	List \$1.08			34,000			
36	25,000			35,000			
35	30,000			36,000			
34	35,000			37,000			
33	40,000			38,000			
31	List \$1.25			39,000			
List \$0.80	50,000			40,000			
30				41,000			
28				42,000			
28				43,000			
26				44,000			
25				45,000			
25				46,000			
22				47,000			
List \$0.86				48,000			
20				49,000			
				50,000			
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				99,000			
				100,000			

FIXED TYPES

10 WATTS Type AB 1 3/4" x 5/16" List \$0.58		20 WATTS Type DG (Continued)		50 WATTS Type EP (Continued)		100 WATTS Type HA 6 1/2" x 1 1/8" List \$2.03	
Ohms	Max. m. a.	Ohms	Max. m. a.	Ohms	Max. m. a.	Ohms	Max. m. a.
1	3150	150	365	3,000	120	25	2000
2	2210	200	316	4,000	105	50	1414
3	1830	250	282	5,000	95	75	1155
5	1420	300	258	List \$1.58	85	100	1000
7.5	1150	400	238	6,000	78	150	815
10	1000	500	224	7,000	77	250	632
15	820	750	163	7,500	75	500	447
20	720	800	158	8,000	75	750	365
25	640	850	153	List \$1.75	66	1,000	315
50	440	1,000	141	12,000	63	List \$2.08	
75	360	List \$0.78		12,500	60	1,250	280
100	315	1,200	129	15,000	56	1,500	250
150	260	1,250	126	20,000	48	2,000	220
200	220	1,500	115	List \$1.95	48	2,500	200
250	200	1,750	107	25,000	43	3,000	180
300	175	1,850	104	30,000	39	5,000	140
350	169	2,000	100	40,000	34	List \$2.25	
400	157	2,250	94	List \$2.14	34	7,500	115
500	140	2,500	89	50,000	30	10,000	100
600	125	3,000	81	60,000	28	List \$2.47	
750	115	3,500	75	List \$2.45	25	15,000	80
800	112	4,000	70	75,000	25	20,000	70
1,000	100	4,500	66	List \$2.65	21	List \$2.67	
List \$0.63		5,000	63	0.1 meg.		25,000	63
1,250	90	List \$0.88				30,000	58
1,450	83	6,000	57			40,000	50
1,500	82	7,000	53			List \$2.81	
2,000	71	7,500	51			50,000	44
2,250	67	8,000	50			60,000	41
2,500	63	8,500	48			List \$3.00	
3,000	57	9,000	46			List \$3.17	
3,500	53	10,000	43			75,000	36
4,000	50	List \$0.94				0.1 meg.	31
4,500	47	11,000	41				
5,000	45	12,000	40				
List \$0.72		12,500	39				
6,000	41	15,000	35				
7,000	37	20,000	30				
7,500	36	List \$1.08					
8,000	35	25,000	28				
8,500	34	30,000	25				
9,000	33	35,000	23				
10,000	33	40,000	22				
List \$0.80		List \$1.25					
11,000	30	50,000	20				
12,000	28						
12,500	28						
14,300	25						
15,0							



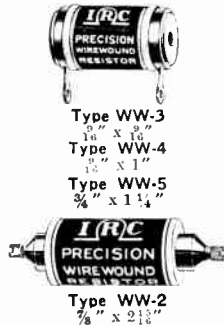
RESISTORS

Preferred for Performance

PRECISION Wire Wound RESISTORS

IRC Precision Wire Wound Resistors are scientifically designed and constructed of highest quality materials to combine the utmost in accuracy with dependability. Winding forms are of a non-hygroscopic ceramic having high insulation qualities, high mechanical strength and low-coefficient of expansion. Because of the special sectional construction which permits the winding of adjacent sections in opposite directions, a noninductive winding is made possible. Minimum temperature coefficient of .002% per degree C. now available on all IRC Resistors at no extra cost.

These units are used by the leading instrument manufacturers for dependable precision meter multipliers and shunts, decade boxes and calibrated gain controls. 1% accuracy is standard. Closer tolerances available at slightly higher prices as follows: for 1/2% tolerance, add 10%; for 1/4% accuracy, add 15%; and for 1/10 of 1%, add 25% to list prices. Tolerances of 1/10 of 1% are measured to new International Ohm, and so indicated on label.



TYPES WW3, WW4, WW5

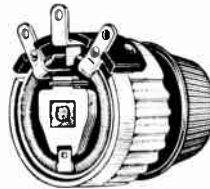
	List Price
0.1, 0.2 and 1. ohm	\$1.75
10, 25, 50, 100, 200, 250, 300, 500, 1,000, 1,500, 2,000 and 2,500 ohms	1.70
4,000, 5,000, 7,500, 10,000, 12,500 and 15,000 ohms	1.75
20,000, 22,500, 25,000, 30,000, 40,000 and 50,000 ohms	1.90
60,000 and 75,000 ohms	2.25
0.1 megohm	2.45
0.125 and 0.15 megohms	2.80
0.175 and 0.2 megohms	3.20
0.225 and 0.25 megohms	3.50
0.3 megohms	3.80
0.4 megohms	4.70
0.5 megohms	5.00
0.6 megohms	6.35
0.75 megohms	7.50
0.9 megohms	8.65
1.0 megohms	9.35

Note—Minimum stock range: WW3—1 ohm WW5—0.6 megohms.
Maximum stock range: WW3—0.15 megohms;
WW4—0.5 megohms.

TYPE WW2

	List Price
0.6 megohms	\$ 7.00
0.75 megohms	7.65
0.9 megohms	9.00
1.0 megohms	9.65
1.5 megohms	15.35
2.0 megohms	20.00
2.5 megohms	24.20

ALL-METAL RHEOSTATS



PR-25 (25 Watts)
1 1/2" diam. Depth
behind panel, 3/4"

PR-50 (50 Watts)
2 3/8" diam. Depth
behind panel, 1 3/8"

Operating temperatures are cut almost in half by the unique, all-metal aluminum construction of these new IRC Rheostats. They dissipate heat more rapidly—give ample safety factor. Ratings based on hottest spot temp. rise of only 140 degrees C. with max. load distributed over entire element. With full load applied to as little as 25% of element, rise is only 160 degrees C. Exclusive IRC Spiral Connector gives positive contact between rotor arm and center terminal.

PR-25—25 Watts

Ohms	Max. m.a.	List Price
1	5,000	\$5.85
2	3,450	5.20
3	2,880	5.20
6	2,040	5.20
8	1,770	5.20
10	1,580	5.20
15	1,290	5.20
25	1,000	5.20
35	845	5.20
50	709	5.20
75	575	5.20
100	500	5.20
125	445	5.20
175	375	5.20
250	315	5.20
350	267	5.20
500	222	5.20
750	173	5.20
1,000	155	5.85
1,500	129	5.85
2,500	100	5.85
3,500	84	6.18
5,000	70	6.18

PR-50—50 Watts

Ohms	Max. m.a.	List Price
0.5	10,000	\$6.50
1	7,070	6.50
2	5,000	5.85
4	3,520	5.85
6	2,880	5.85
8	2,500	5.85
12	2,040	5.85
16	1,770	5.85
22	1,500	5.85
35	1,190	5.85
50	1,000	5.85
80	790	5.85
125	650	5.85
150	575	5.85
225	470	5.85
300	407	5.85
500	315	5.85
800	250	6.18
1,000	223	6.18
1,500	177	6.18
2,500	140	6.18
3,500	120	6.50
5,000	100	6.50
8,000	79	6.50
10,000	70	6.50

Type NAB Parasitic Suppressors

IRC Type NAB Non-Inductive Wire Wound Resistors are designed for use, one in each grid of audio driver or power amplifier tubes when paralleled, to prevent parasitic oscillations. 10 watts.



Type NAB—50 ohms.
List \$1.20 each

Bleeder Resistor

Type M-1034—25,000 ohms, overall resistance, tapped at 7,500, 10,000, 12,500 and 15,000 ohms. 18 watts rating attached flat to chassis, 9 watts free air rating. Used as bleeder in any power supply up to 500 volts. Sealed in bakelite and insulated for 1,000 volts to ground. Bracket supplied.



M-1034—IRC Bleeder Resistor..... List \$1.25 each

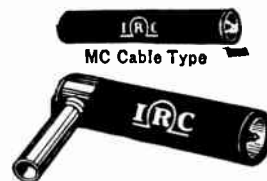
Center Tap Insulated Wire Wounds

Completely enclosed in molded bakelite and capable of standing high temperatures. Due to high power rating, these resistors may be used in balancing circuits for radio receivers or transmitters. They will carry up to five watts if mounted on chassis, using the detachable mounting bracket and heat-dissipating metal strip; or two and one-half watts if mounted in open air. May be mounted anywhere without danger to units from heat or grounding. Dimensions: Length of molded unit 2". With bracket mounting centers 2 1/2". Six standard ranges: 10 ohms, 20 ohms, 50 ohms, 75 ohms, 100 ohms and 200 ohms.



Type MW-2J—Center Tap Resistors..... List 35c each

Type MC and MCB Suppressors



IRC Suppressors are designed for the elimination of ignition noise in automobile and motorboat radio installations—and oil burner interference in home receivers.

Either Type List 30c

Printed in U.S.A.

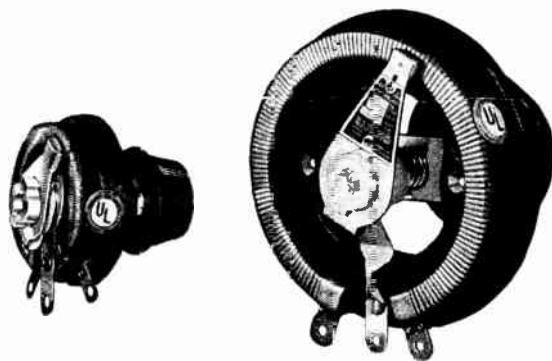
BE RIGHT WITH OHMITE

RHEOSTATS
RESISTORS
SWITCHES
CHOKES

OHMITE RHEOSTATS

All-Porcelain — Vitreous-Enameled

The design and construction of these sturdy, compact Ohmite Rheostats insure permanently smooth, gradual, close control. The wire is wound over a porcelain core, bonded to porcelain base, and permanently locked in place by special Ohmite Vitreous Enamel. Nothing to smoke, char, shrink, or shift. Dissipates heat rapidly. Insulated shafts and bushings. Copper graphite contacts. Ratings are for "free air" use. Time-proved through long trouble-free service in countless installations the world over. Underwriters' Laboratories Listed.



MODEL "H" 25 Watt
Diameter 1 3/8". Depth behind panel 1 3/8"

Stock No.	Ohms	Max. Mils.	List Price	Stock No.	Ohms	Max. Mils.	List Price
0140	1	5,000	\$5.85	0152	125	445	\$5.20
0141	2	3,540	5.20	0153	175	375	5.20
0142	3	2,880	5.20	0154	250	316	5.20
0143	6	2,040	5.20	0155	350	267	5.20
0144	8	1,770	5.20	0156	500	222	5.20
0145	10	1,580	5.20	0157	750	182	5.20
0146	15	1,260	5.20	0158	1,000	155	5.85
0147	25	1,000	5.20	0159	1,500	129	5.85
0148	35	845	5.20	0160	2,500	100	5.85
0149	50	707	5.20	0161	3,500	84	6.18
0150	75	575	5.20	0162	5,000	70	6.18
0151	100	500	5.20				

MODEL "K" 100 Watt
Diameter 3 3/8". Depth behind panel 1 3/4"

Stock No.	Ohms	Max. Mils.	List Price	Stock No.	Ohms	Max. Mils.	List Price
0440	0.5	14,100	\$9.75	0452	200	707	\$9.10
0441	1	10,000	9.75	0453	300	575	9.10
0442	2	7,070	9.75	0454	400	500	9.10
0443	3	5,750	9.75	0455	500	447	9.10
0444	5	4,470	9.75	0456	750	365	9.10
0445	7.5	3,650	9.10	0457	1,000	316	9.75
0446	10	3,160	9.10	0458	1,500	258	9.75
0447	16	2,500	9.10	0459	2,000	224	9.75
0448	25	2,000	9.10	0460	2,500	200	9.75
0449	50	1,410	9.10	0461	5,000	141	10.40
0450	75	1,150	9.10	0462	7,500	115	11.05
0451	100	1,000	9.10	0463	10,000	100	11.70

MODEL "J" 50 Watt
Diameter 2 3/8". Depth behind panel 1 3/8"

Stock No.	Ohms	Max. Mils.	List Price	Stock No.	Ohms	Max. Mils.	List Price
0308	0.5	10,000	\$6.50	0321	150	575	\$5.85
0309	1	7,070	6.50	0322	225	470	5.85
0310	2	5,000	6.50	0323	300	408	5.85
0311	4	3,530	5.85	0324	500	316	5.85
0312	6	2,880	5.85	0325	800	250	6.18
0313	8	2,500	4.85	0326	1,000	224	6.18
0314	12	2,040	5.85	0327	1,600	176	6.18
0315	16	1,730	5.85	0328	2,500	141	6.18
0316	22	1,500	5.85	0329	3,500	119	6.50
0317	35	1,190	5.85	0330	5,000	100	6.50
0318	50	1,000	5.85	0331	8,000	79	6.50
0319	80	790	5.85	0332	10,000	70	6.50
0320	125	630	5.85				

MODEL "L" 150 Watt
Diameter 4". Depth behind panel 2"

Stock No.	Ohms	Max. Mils.	List Price	Stock No.	Ohms	Max. Mils.	List Price
0524	0.5	17,300	\$12.35	0537	150	1,000	\$11.70
0525	1	12,300	12.35	0538	200	865	11.70
0526	2	8,650	12.35	0539	250	775	11.70
0527	3	7,070	12.35	0540	350	655	11.70
0528	5	5,180	12.35	0541	500	548	11.70
0529	7.5	4,170	12.35	0542	750	447	12.35
0530	10	3,880	11.70	0543	1,250	316	12.35
0531	15	3,163	11.70	0544	1,800	288	13.00
0532	25	2,450	11.70	0545	2,250	259	13.00
0533	35	2,070	11.70	0546	3,000	224	13.00
0534	50	1,735	11.70	0547	4,500	182	13.65
0535	75	1,415	11.70	0548	7,500	141	14.30
0536	100	1,225	11.70	0549	10,000	122	15.60

DIRECTION INDICATOR POTENTIOMETER—MODEL RB-2



A compact, low cost unit which is used in a simple 6 volt potentiometer circuit as a transmitting element, to indicate, remotely the position of a rotary beam antenna, or other device. The indicating meter can be any ordinary 0-1 M.A., 0-1.5 M.A., or 0-2 M.A. direct current milliammeter (with marked scale). The potentiometer is 2-5/16" in diameter and extends 1 3/8" behind the mounting surface. Single hole mounted by means of a 3/8-32 threaded bushing. Complete 360° rotation.

Stock No. RB-2, Potentiometer

List Price\$8.13

For more complete information on OHMITE PRODUCTS, ask for Ohmite Stock Catalog.

OTHER OHMITE RHEOSTATS

Ohmite Rheostats are also available in Model G, 75 Watt; Model P, 225 Watt; Model R, 500 Watt; Model T, 750 Watt; and Model U, 1,000 Watt units, in many resistance values. Special Rheostats with tapered windings, etc., can be supplied; also Special Rheostats for Model Train Control. Cages and other accessories also available.

RHEOSTATS ♦ RESISTORS ♦ TAP SWITCHES

OHMITE DIVIDOHM RESISTORS



All-Porcelain
Vitreous-Enameled

OHMITE FIXED RESISTORS



You can adjust the resistance or secure odd resistance values quickly with these Dividohms; easily put on more taps where needed. Ideal voltage dividers. With one adjustable lug and with mounting brackets.

Extra-sturdy, wire-wound, all-porcelain resistors with the permanent protection of Ohmite Vitreous Enamel. Widely used for heavy duty applications to assure continuous trouble-free service. With mounting brackets.

10 WATTS					
Core Size 1 3/4" x 3/8"			Mounting Centers 2 1/4"		
Adjustable Res.			Fixed Resist.		
Res. Ohms	Max. Mils.	Stock No.	Res. Ohms	Max. Mils.	Stock No.
1	3,150	1001	750	115	1021
2	2,235	1002	800	111	1022
3	1,825	1003	1,000	100	1023
5	1,415	1004	1,250	89	1024
7.5	1,155	1005	1,500	79	1025
10	1,000	1006	2,000	69	1026
15	816	1007	2,250	64	1027
20	707	1008	2,500	63	1028
25	632	1009	3,000	56	1029
50	447	1010	3,500	51	1030
75	365	1011	4,000	47	1031
100	316	1012	4,500	45	1032
150	258	1013	5,000	43	1033
200	223	1014	6,000	38	1034
250	200	1015	7,000	34	1035
300	182	1016	7,500	33	1036
350	169	1017	8,000	31	1037
400	158	1018	8,500	29	1038
500	141	1019	9,000	28	1039
600	129	1020	10,000	26	1040

List Price, 1 to 1000 ohms \$1.20
List Price, 1,250 to 5,000 ohms 1.25
List Price, 6,000 to 10,000 ohms 1.33

25 WATTS					
Core Size 2" x 3/8"			Mounting Centers 2 3/4"		
Adjustable Res.			Fixed Resist.		
Res. Ohms	Max. Mils.	Stock No.	Res. Ohms	Max. Mils.	Stock No.
1	5,000	0200J	0.80	0360	1.56
2	3,535	0200K	.80	0360B	1.56
3	2,885	0200L	.80	0361	1.56
5	2,235	0200A	.80	0362	1.56
7.5	1,825			0362B	1.56
10	1,580	0200B	.80	0363	1.56
15	1,290	0200R	.80	0364	1.56
20	1,117			0364B	1.56
25	1,000	0200C	.80	0365	1.56
50	707	0200D	.80	0366	1.56
75	577	0200E	.80	0367	1.56
100	500	0200F	.80	0368	1.56
150	408	0200G	.80	0369	1.56
200	353	0200H	.80	0370	1.56
250	316	0201	.80	0371	1.56
300	288			0371B	1.56
400	250			0371C	1.56
500	223	0202	.80	0372	1.56
750	182	0203	.80	0373	1.56
800	176	0204	.80	0374	1.56
1,000	158	0205	.80	0375	1.56
1,250	141			0375B	1.58
1,500	129	0206	.86	0376	1.58
2,000	111	0207	.86	0377	1.58
2,250	105			0377B	1.58
2,500	100	0208	.86	0378	1.58
3,000	91	0209	.86	0379	1.58
3,500	84	0210	.86	0380	1.58
4,000	79	0211	.86	0381	1.58
4,500	74			0381B	1.58
5,000	70	0212	.86	0382	1.58
6,000	64	0213	.94	0383	1.70
7,000	60			0383B	1.70
7,200	59			0383C	1.70
7,500	57	0214	.94	0384	1.70
8,000	55			0384B	1.70
9,000	52			0384C	1.70
10,000	50	0215	.94	0385	1.70
12,000	42	0216	1.00	0386	1.75
15,000	34	0217	1.00	0387	1.75
20,000	26	0218	1.00	0388	1.75
25,000	21	0219	1.13	0389	1.89
10,000	14	0222	1.13		
50,000	12	0224	1.30		
100,000	7	0229	1.74		

50 WATTS					
Core Size 4" x 3/8"			Mounting Centers 4 3/4"		
Adjustable Res.			Fixed Resist.		
Res. Ohms	Max. Mils.	Stock No.	Res. Ohms	Max. Mils.	Stock No.
5	3,160	0400A	\$1.37	0560	\$1.97
10	2,235	0400B	1.37	0561	1.97
25	1,414	0400C	1.37	0562	1.97
50	1,000	0400D	1.37	0563	1.97
75	816	0400E	1.37	0564	1.97
100	707	0400F	1.37	0565	1.97
150	577	0400G	1.37	0566	1.97
200	500	0400H	1.37	0567	1.97
250	447	0401	1.37	0568	1.57
300	408			0568B	1.97
400	353			0568C	1.97
500	316	0402	1.37	0569	1.97
750	258	0403	1.37	0570	1.97
1,000	223	0405	1.37	0572	1.97
1,250	200			0572B	2.05
1,500	182	0406	1.45	0573	2.05
2,000	158	0407	1.45	0574	2.05
2,500	141	0408	1.45	0575	2.05
3,000	129	0409	1.45	0576	2.05
3,500	119			0576B	2.05
4,000	111	0410	1.45	0577	2.05
4,500	105			0577B	2.05
5,000	100	0411	1.45	0578	2.05
6,000	91			0578B	2.19
7,000	84			0578C	2.19
7,500	81	0412	1.58	0579	2.19
8,000	79	0413	1.58	0580	2.19
9,000	74			0580B	2.19
10,000	70	0414	1.58	0581	2.19
12,000	64	0415	1.75	0582	2.36
15,000	57	0416	1.75	0583	2.36
20,000	48	0417	1.75	0584	2.36
25,000	41	0418	1.95	0585	2.55
30,000	36			0586	2.55
35,000	32	0419	1.95		
40,000	28			0587	2.55
50,000	23	0420	2.14	0588	2.75
60,000	19			0589	2.75
75,000	16	0421	2.45		
80,000	15			0590	3.06
100,000	12	0422	2.65	0591	3.25

75 WATTS					
Core Size 6" x 3/8"			Mounting Centers 6 3/4"		
Adjustable Res.			Adjustable Res.		
Res. Ohms	Max. Mils.	Stock No.	Res. Ohms	Max. Mils.	Stock No.
5	3,870	0769	5,000	122	0783
10	2,735	0770	6,000	111	0783B
15	2,236	0771	7,000	103	0783C
25	1,732	0772	7,500	100	0784
50	1,224	0773	8,000	96	0784B
100	866	0774	9,000	91	0784C
200	612	0774B	10,000	86	0785
250	547	0775	12,000	79	0785B
300	500	0775B	15,000	70	0786
400	433	0775C	20,000	61	0787
500	387	0776	25,000	49	0788
750	316	0777	30,000	42	0789
1,000	273	0778	35,000	36	0790
1,250	245	0778B	40,000	32	0791
1,500	223	0779	45,000	29	0792
2,000	193	0780	50,000	26	0793
2,500	173	0781	60,000	22	0794
3,000	158	0781B	80,000	17	0795
3,500	146	0782	100,000	13	0796
4,000	136	0782B			

List Price, 5 to 1,000 ohms \$2.27
List Price, 1,250 to 5,000 ohms 2.36
List Price, 6,000 to 10,000 ohms 2.50
List Price, 12,000 to 20,000 ohms 2.65
List Price, 25,000 to 40,000 ohms 2.92
List Price, 45,000 to 60,000 ohms 3.00
List Price, 80,000 ohms 3.28
List Price, 100,000 ohms 3.61

100 WATTS					
Core Size 6 1/2" x 3/8"			Mounting Centers 7 3/4"		
Adjustable Res.			Fixed Resist.		
Res. Ohms	Max. Mils.	Stock No.	Res. Ohms	Max. Mils.	Stock No.
5	4,470	0600A	\$2.03	0956	\$2.97
10	3,160	0600B	2.03	0957	2.97
25	2,000	0601	2.03	0958	2.97
50	1,414	0602	2.03	0959	2.97
75	1,153	0603	2.03		
100	1,000	0604	2.03	0960	2.97
150	816	0605	2.03		
250	632	0606	2.03	0960B	2.97
500	447	0607	2.03	0961	2.97
750	365	0608	2.03		
1,000	316	0609	2.03	0962	2.97
1,500	258	0610	2.08	0962B	3.05
2,000	223	0611	2.08		
2,500	200	0612	2.08	0963	3.05
3,000	182	0613	2.08		
5,000	141	0614	2.08	0964	3.05
7,500	115	0615	2.25		
10,000	100	0616	2.25	0965	3.22
15,000	81	0617	2.47	0966	3.42
20,000	70	0618	2.47	0967	3.42
25,000	53	0619	2.67	0968	3.64
30,000	47	0620	2.67	0969	3.64
40,000	36	0621	2.67	0970	3.64
50,000	29	0622	2.81	0971	3.78
60,000	24	0623	2.81		
75,000	19	0624	3.00	0972	3.97
100,000	15	0625	3.17	0973	4.13

160 Watt Resistors—Core Size 8 1/2" x 1 1/4"
Mounting Centers 9 3/4" available in same resistances as the 200 Watt Resistors.

Ohms	Fixed Res. List Price	Adj. Res. List Price
5	\$3.47	\$4.45
10 to 1,000	2.48	3.45
1,500 to 5,000	2.53	3.50
7,500 & 10,000	2.75	3.70
15,000 & 20,000	2.95	3.92
20,000 to 40,000	3.03	4.00
50,000 & 60,000	3.13	4.12
75,000	3.36	4.30
100,000	3.55	4.53

200 WATTS					
Core Size 10 1/2" x 1 1/8"			Mounting Centers 11 3/4"		
Adjustable Res.			Adjustable Res.		
Res. Ohms	Max. Mils.	Stock No.	Res. Ohms	Max. Mils.	Stock No.
5	6,320	0900A	\$3.75	1356	\$4.72
10	4,470	0900B	2.70	1357	3.64
25	2,828	0901	2.70	1358	3.64
50	2,000	0902	2.70	1359	3.64
75	1,635	0903	2.70		
100	1,414	0904	2.70	1360	3.64
150	1,153	0905	2.70		
250	894	0906	2.70	1360B	3.64
500	632	0907	2.70	1361	3.64
750	516	0908	2.70		
1,000	447	0909	2.70	1362	3.64
1,500	365	0910	2.75	1362B	3.70
2,000	316	0911	2.75		
2,500	283	0912	2.75	1363	3.70
3,000	258	0913	2.75		
5,000	200	0914	2.75	1364	3.70
7,500	163	0915	2.95		
10,000	141	0916	2.95	1365	3.92
15,000	115	0917	3.13	1366	4.12
20,000	100	0918	3.13	1367	4.12
25,000	80	0919	3.25	1368	4.20
30,000	81	0920	3.25	1369	4.20
40,000	61	092			

Popular OHMITE "BROWN DEVIL" RESISTORS



5 Watt—1" x 5/16" Core Size

Ohms	Mils.	Ohms	Mils.	Ohms	Mils.
1	2,236	125	200	1,250	63
1.5	1,820	150	182	1,500	57
2	1,580	200	158	1,750	53
3	1,290	225	149	2,000	49
4	1,120	250	141	2,250	46
5	1,000	300	129	2,500	44
7.5	818	350	120	3,000	39
10	707	400	112	3,500	36
12	645	450	105	4,000	33
15	575	500	100	4,500	31
20	500	600	91	5,000	29
25	447	700	84	6,000	26
30	408	750	81	7,000	24
35	378	800	79	7,500	22
40	353	900	74	8,000	21
50	316	1,000	70	9,000	19
75	258	1,100	67	10,000	18
100	224	1,200	64		

List Price, 1 to 1,000 ohms \$0.53
 List Price, 1,100 to 5,000 ohms57
 List Price, 6,000 to 10,000 ohms61

10 Watt—1 3/4" x 5/16" Core Size

Ohms	Mils.	Ohms	Mils.	Ohms	Mils.
1	3,160	350	169	6,000	38
2	2,235	400	158	7,000	34
3	1,825	450	149	7,500	32
4	1,580	500	141	8,000	31
5	1,414	600	129	8,500	29
7.5	1,155	700	119	10,000	26
10	1,000	750	115	11,000	24
12	910	800	111	12,000	23
15	816	900	105	12,500	22
20	707	1,000	100	13,500	21
25	632	1,100	95	14,300	20
30	575	1,200	91	15,000	19
35	535	1,250	89	16,000	18
40	500	1,500	79	17,500	17
50	447	1,750	74	18,000	17
75	365	2,000	69	20,000	16
100	316	2,250	64	22,500	15
125	283	2,500	63	25,000	14
150	258	3,000	56	*30,000	7
200	223	3,500	51	*35,000	7
225	217	4,000	47	*40,000	7
250	200	4,500	45	*45,000	6
300	182	5,000	43	*50,000	6

List Price, 1 to 1,000 ohms \$0.58
 List Price, 1,100 to 5,000 ohms63
 List Price, 6,000 to 10,000 ohms72
 List Price, 11,000 to 20,000 ohms80
 List Price, 22,500 & 25,000 ohms86
 List Price, 30,000 to 50,000 ohms97

*The units marked with an asterisk are coated with a low temperature enamel.

RITEOHM SERIES "84" PRECISION RESISTORS

Ohms	Max. Voltage	Ohms	Max. Voltage	Ohms	Max. Voltage
0.1	.316	1,000	44.70	.125 Meg.	200
0.5	.500	5,000	50.00	.150 Meg.	200
1	.707	7,500	61.29	.175 Meg.	200
10	2.24	10,000	70.00	.200 Meg.	200
25	3.54	12,500	79.00	.225 Meg.	100
50	5.00	15,000	86.60	.250 Meg.	100
100	7.07	20,000	100	.300 Meg.	100
200	10.00	22,500	106	.360 Meg.	100
250	11.20	25,000	112	.500 Meg.	100
300	12.20	30,000	122	.600 Meg.	100
500	15.81	40,000	141	.750 Meg.	100
1000	22.40	50,000	158	.900 Meg.	100
1500	27.40	60,000	173	1.1 Meg.	100
2000	31.60	75,000	194	1.3 Meg.	100
2500	35.40	1 Meg.	200		

*Type 84-A 4 Pie—1 Watt Size 3/8" x 1/4"
 †Type 84-B 4 Pie—1 Watt Size 3/4" x 1/4"
 All others Type 842-A 2 Pie—1/2 Watt Size 3/8" x 3/8"

High quality, small size, wire-wound resistors ideal for voltage dropping, bias units, bleeders, etc. They're extra-sturdy, all-ceramic, vitreous enameled. They give time-proved protection against shock, vibration, heat and humidity. Their long record of continuous trouble-free service—their wide use in all climates of the world—prove their complete reliability and economy. All units can be conveniently mounted by means of their 1 1/2" tinned wire leads. The standard resistance tolerance is ±10%.

The all-welded construction of the 5 watt unit makes it possible to extend the resistance range to 10,000 ohms, an unusually high value for a vitreous enameled stock unit.

20 Watt—2" x 7/16" Core Size

Ohms	Mils.	Ohms	Mils.	Ohms	Mils.
5	2,000	1,250	126	15,000	30
10	1,414	1,500	115	20,000	24
25	894	1,750	107	25,000	20
50	632	1,850	104	30,000	17
75	516	2,000	100	35,000	15
100	447	2,250	94	40,000	14
150	365	2,400	91	45,000	13
200	316	2,500	89	50,000	12
250	283	2,750	85	*55,000	8.0
300	258	3,000	81	*60,000	8.0
350	239	3,500	75	*65,000	7.0
400	223	4,000	70	*70,000	7.0
500	200	4,500	66	*75,000	7.0
650	175	5,000	63	*80,000	7.0
700	169	6,000	57	*85,000	6.0
750	163	7,000	53	*90,000	6.0
800	158	7,500	51	*95,000	6.0
850	153	8,000	50	*100,000	6.0
1,000	141	10,000	43		
1,200	129	12,500	35		

List Price, 5 to 1,000 ohms \$0.75
 List Price, 1,200 to 5,000 ohms78
 List Price, 6,000 to 10,000 ohms88
 List Price, 12,500 to 20,000 ohms94
 List Price, 25,000 to 40,000 ohms 1.08
 List Price, 45,000 to 60,000 ohms 1.25
 List Price, 65,000 to 80,000 ohms 1.46
 List Price, 85,000 to 100,000 ohms 1.69



High quality, 1% tolerance, 1 watt, non-inductive, pie-wound units for meter multipliers, lab. equipment, etc.

Ohms	List Price	Ohms	List Price
0.1 to 500	\$1.11	.225 to .25 Meg.	\$3.38
1,000 to 2,500	1.17	.3 megohm	3.71
4,000 to 10,000	1.30	.4 megohm	3.90
12,500 to 15,000	1.43	.5 megohm	4.42
20,000 to 50,000	1.76	.6 megohm	5.53
60,000 to 75,000	2.08	.75 megohm	5.85
.1 megohm	2.41	.9 megohm	6.18
.125 megohm	2.73	1.0 megohm	6.73
15 to .2 megohm	3.06	1.5 megohm	9.75

Complete Listings in stock catalog.

OHMITE "LITTLE DEVIL" RESISTORS INDIVIDUALLY MARKED



Ohmite "LITTLE DEVILS" are full 1/2 Watt, 1 Watt and 2 Watt Insulated Composition Resistors and can be used at their full wattage ratings at 70° C. (158° F.) ambient temperature. They meet requirements of specification JAN-R-11. All units are color coded. Each resistor is marked with the resistance value, wattage rating and the Ohmite trade-mark. "LITTLE DEVILS" are available from stock in 1/2 and 1 watt sizes with ±5% tolerance and 1/2, 1 and 2 watt sizes with ±10% tolerance. The standard RMA values, 10 ohms to 22 megohms can be furnished. In the 1 watt size, ±10% tolerance, values as low as 2.7 ohms are available from stock.

Stocked in RMA Values ±10% Tolerance

Ohms	Ohms	Ohms	Megohms
*2.7	150	8,200	0.17
*3.3	180	10,000	0.66
*3.9	220	12,000	0.68
*4.7	270	15,000	0.82
*5.6	330	18,000	1.00
*6.8	390	22,000	1.2
*8.2	470	27,000	1.5
10	560	33,000	1.8
12	680	39,000	2.2
15	820	47,000	2.7
18	1,000	56,000	3.3
22	1,200	68,000	3.9
27	1,500	82,000	4.7
33	1,800	0.1 Meg.	5.6
39	2,200	0.12 Meg.	6.8
47	2,700	0.15 Meg.	8.2
56	3,300	0.18 Meg.	10.0
68	3,900	0.22 Meg.	12.0
82	4,700	0.27 Meg.	15.0
100	5,600	0.33 Meg.	18.0
120	6,800	0.39 Meg.	22.0

1 Watt Size Only.

Type	Size Length	Diam.	Maximum Volts	List Price
1/2 Watt	1"	3/8"	350	13c
1 Watt	1 1/2"	3/8"	500	17c
2 Watt	1 3/4"	3/8"	1000	25c

For more complete information on OHMITE PRODUCTS, ask for Ohmite Stock Catalog.

BE RIGHT WITH OHMITE

RHEOSTATS
RESISTORS
SWITCHES
CHOKES

2 WATT MOLDED COMPOSITION POTENTIOMETER—TYPE AB

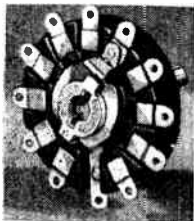


The Type AB Potentiometer is an exceptionally high quality unit designed especially for industrial, laboratory, radio service and other uses where reliability is particularly important. Because the resistor element is molded, the unit has an exceptionally large safety factor. The power rating of 2 watts is unusual for a unit of such small size. The unit has a very low noise level and low voltage coefficient. It will pass the Army-Navy 200 hour salt spray test, specification AN-QQ-S-91. The unit is 1 1/16" diameter and extends 9/16" behind the panel. The standard shaft length is 2" including the 3/8" long mounting bushing. A SPST switch, to be attached to the back of the control, can be supplied extra.

Total Resistance—±10% Except as Noted	Resistance-Rotation Characteristics (Taper)		
	Type U Linear Stock No.	Type A Clockwise Log. Stock No.	Type B Counterclock. Log. Stock No.
50 Ohms	CU 5001		
100 Ohms	CU 1011		
250 Ohms	CU 2511		
500 Ohms	CU 5011		
1,000 Ohms	CU 1021		
2,500 Ohms	CU 2521		
5,000 Ohms	CU 5021		
10,000 Ohms	CU 1031		CB 1031
25,000 Ohms	CU 2531		CB 2531
50,000 Ohms	CU 5031		CB 5031
.10 Meg.	CU 1041	CA 1041	
.25 Meg.	CU 2541	CA 2541	
.5 Meg.	CU 5041	CA 5041	
1.0 Meg. ±20%	CU 1052	CA 1052	
2.5 Meg. ±20%	CU 2552	CA 2552	
5.0 Meg. ±20%	CU 5052		

Type AB Potentiometer **List Price \$3.00**
 Stock No. CS-1, Switch only for above unit (supplied unmounted) **List Price .90**

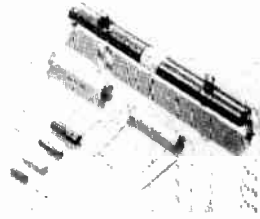
NON-SHORTING TYPE ROTARY POWER TAP SWITCH



Single-pole, multi-position switch with all-ceramic insulation, silver-to-silver contacts and "slow-break" action designed especially for alternating current. Switch shaft is electrically "dead". A.C. rating 10 amps., 150 volts. Diameter 1 3/4" —Depth behind panel 1 1/8" —Shaft diameter 1/4" —Recommended knob, stock number 4500 (round type) or 4516 (bar type).

Number of Taps	Total Rotation	Stock Number	List Price Less Knob
11	300°	111-11	3.90
10	270°	111-10	3.77
9	240°	111-9	3.77
8	210°	111-8	3.64
7	180°	111-7	3.64
6	150°	111-6	3.51
5	120°	111-5	3.51
4	90°	111-4	3.38
3	60°	111-3	3.38
2	30°	111-2	3.38

OHMITE R.F. PLATE CHOKES



The new series of seven Ohmite single layer wound solenoid radio frequency plate chokes covers the entire frequency range of 3 to 520 megacycles. The new chokes replace the former series of chokes, Z-0, Z-1, Z-2, and Z-3 with units that accomplish

the same results but are much smaller in physical size with one exception, the new Z-7 choke, which is identical to the former Z-3, the number only having been changed.

The four highest frequency chokes are wound on low power factor plastic cores while the other three units are wound on steatite tubes. Windings are insulated and protected by a moisture-proof coating. The single layer winding is designed to avoid adverse harmonic effects within the recommended operating range and also prevents breakdown from high r.f. potentials.

Stock Number	Operating Range Megacycles	Micro-henries	Core Dimension	List Price
Z-7	3 to 20 Mc.	84.0	6" x 9/16"	\$1.56
Z-14	7 to 35 Mc.	14.0	2" x 1 1/2"	.68
Z-28	20 to 60 Mc.	21.0	1 3/4" x 3/8"	.44
Z-50	35 to 110 Mc.	7.0	1 3/4" x 3/8"	.33
Z-144	80 to 200 Mc.	1.8	3/4" x 3/8"	.33
Z-235	160 to 350 Mc.	0.84	3/4" x 3/8"	.33
Z-460	320 to 520 Mc.	0.20	1 1/2" x 5/8"	.33

Non-magnetic Brackets Furnished with Z-7. All chokes 1000 ma. rating except Z-14 and Z-28. These are rated at 600 ma.

OHMITE POWER LINE CHOKES



Prevents high-frequency currents of radio transmitters, diathermy and therapeutic equipment from going out over the power lines and interfering with nearby radio receiving sets. Used as a filter in connection with two grounding condensers of 0.1 microfarad capacity each. The Z-20 Choke is also used at radio receivers to keep out interference. All chokes consist of two single-layer windings on a single ceramic core—insulated and protected by moisture-proof coating. Recommended for use in suppressing radio (not audio) frequency interference.

Stock No.	Micro-henries	Current Rating	Total D.C. Resistance Ohms	Length	Tube Dia.	List Price
Z-20	14	5 Amperes	0.15	4"	3/8"	\$2.15
Z-21	15	10 Amperes	0.07	6 1/2"	3/4"	3.58
Z-22	18	20 Amperes	0.045	8 1/2"	1 1/4"	5.20

NEW OHM'S LAW CALCULATOR

Pocket Size



Solves Ohm's Law problems with only one setting of the slide. No decimal points to cause confusion—all values are direct reading. Requires no slide rule knowledge.

Ohmite Ohm's Law Calculator...NET Price \$0.25

For more complete information on OHMITE PRODUCTS, ask for Ohmite Stock Catalog.

**ELECTRICAL
INSTRUMENTS**

RESISTORS

**VARIABLE
ATTENUATORS**

SWITCHES

SHALLCROSS MANUFACTURING CO.

COLLINGDALE, PENNSYLVANIA

SHALLCROSS AUDIO ATTENUATORS

**These Shallcross Features Mean
BETTER PERFORMANCE — BIGGER VALUE!**

- ✓ Off position attenuation well in excess of 100 db.
- ✓ 25% to 50% fewer soldered joints.
- ✓ Noise level ratings that are factual. (130 db or more below zero level).
- ✓ Non-inductive Shallcross precision resistors used throughout assure flat attenuation to and beyond 30 kc.
- ✓ Types and sizes engineered for all needs. Attenuation accuracies of 1%; Resistor accuracies of 0.1% on special order.

Shallcross Audio Attenuators are available in either variable or fixed units, the former often being referred to as a "control" and the latter, as a "pad".

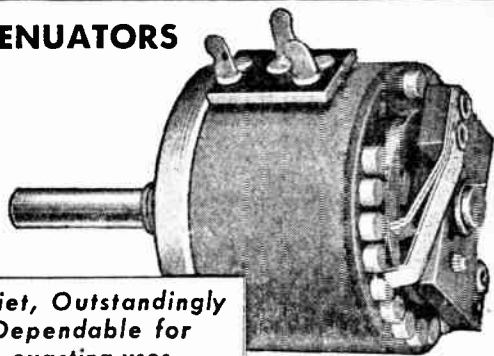
The variable attenuator or control consists of a rotary switching device so designed that the element or elements in a resistance network can be simultaneously varied in steps to provide known steps of attenuation in decibels. These controls are as small as is consistent with good design and are provided with removable shields for mechanical inspection and servicing.

Although an attenuation network usually has four terminals, it is common practice to use only three, the design being such that there exists no difference in potential between the input and output ground terminals.

Controls are available with as few as 5 steps or as many as 52 steps with an attenuation as small as 0.1 db per step. The total attenuation for a single control does not exceed about 125 db since such high attenuation approaches the noise level of the switching mechanism.

The "pad" or "fixed pad" consists of a resistance network of wirewound or composition resistors in as small a shielding container as is practical, with three terminals for input, output, and ground, the latter being designated in most cases as "C".

Most attenuators are designed for 1:1, or 1:2 impedance ratio use but special controls and fixed pads are available for any impedance ratio. A variation of the usual control is the multi-impedance matching attenuator which is designed to match an input impedance to any of several output impedances depending upon the control setting, with either minimum loss or constant 20 db loss. Other special units available include zero insertion loss ladder circuits, cueing attenuators, and dual turntable faders.



**Quiet, Outstandingly
Dependable for
exacting uses**

Specifications and prices are given below for a few of the most popular variable attenuators. The complete story of Shallcross attenuators may be found in Shallcross Interim Attenuator Catalog #3, copies of which are available on request.

IMPEDANCE: 150, 500, 250/500, 600 ohms, except potentiometers, which are 100,000 and 250,000 ohms.

RESISTORS: All non-inductively wirewound. $\pm 5\%$ tolerance except types preceded with "C" which are composition selected to $\pm 5\%$.

ATTENUATION: Increases for counter-clockwise rotation of shaft (knob end).

FREQUENCY RESPONSE: Flat over entire audio range.

SWITCH MECHANISM: Multi-leaf wiper arms collector rings and contacts available in tarnish resistant silver alloy or brass. Noise level -130 db.

DETENT: Indexing mechanism available on any unit for \$0.50 list. Back of panel depth is then increased 5/16".

KNOBS AND DIALS: \$0.80 list each additional.

- 120-2A3** Ladder attenuator, 20 steps, 2 db per step, tapered on last 3 steps to off. *Mounting:* single hole, 3/8" .32 threaded bushing or two-hole, 6-32 screws, 1 1/4" centers. *Dimensions:* 1 3/4" diameter, 1 3/4" back of panel depth. *Contact spacing:* 15°.
\$8.00 silver
7.00 brass
- C720-2A3** Potentiometer, 20 steps, 2 db per step, tapered on last 3 steps to off. *Mounting:* single hole, 3/8" .32 threaded bushing or two hole, 6-32 screws, 1 1/4" or 1 1/2" centers. *Dimensions:* 1 3/4" diameter, 1 3/4" back of panel depth. *Contact spacing:* 15°.
\$8.00 silver
7.00 brass
- 132-1.5B3** Ladder attenuator, 32 steps, 1.5 db per step, tapered on last 3 steps to off. *Mounting:* two hole, 6-32 or 8-32 screws, 1 1/4" or 1 1/2" centers. *Dimensions:* 2 1/8" diameter, 1 3/4" back of panel depth. *Contact spacing:* 10°.
\$13.50 silver
12.00 brass
- 432-1.5C3** Bridged T attenuator, 32 steps, 1.5 db per step, tapered on last 3 steps to off. *Mounting:* two hole, 6-32 or 8-32 screws, 1 1/4" or 1 1/2" centers. *Dimensions:* 2 1/2" diameter, 2.5/16" back of panel depth. *Contact spacing:* 10°.
\$21.00 silver
19.00 brass
- 420-2C2** Bridged T attenuator, 20 steps, 2 db per step, attenuation linear with off on last step. *Mounting:* two hole, 8-32 or 6-32 screws; 1 1/4" or 1 1/2" centers. *Dimensions:* 2 1/2" diameter, 1 3/4" back of panel depth. *Contact spacing:* 10°.
\$16.00 silver
14.00 brass
- C320-2C2** Dual potentiometer, each section 20 steps, 2 db per step, attenuation linear with off on last step. *Mounting:* two hole, 6-32 or 8-32 screws, 1 1/4" or 1 1/2" centers. *Dimensions:* 2 1/2" diameter, 1 3/4" back of panel depth. *Contact spacing:* 10°.
\$16.00 silver
14.00 brass

SHALLCROSS MANUFACTURING CO.

COLLINGDALE, PENNSYLVANIA

ELECTRICAL INSTRUMENTS
RESISTORS
VARIABLE ATTENUATORS
SWITCHES

SHALLCROSS AKRA-OHM RESISTORS

LIST PRICES—Standard Types, ±1% Tolerance

Resistance Range	Types			
	119, 116, 160	196	183	100, 140, 193
0.5 ohms to 1000 ohms	\$1.75	\$1.40	\$.85	\$1.15
Up to 2000 ohms	1.90	1.50	.90	1.25
Up to 5000 ohms	1.90	1.50	.90	1.25
Up to 10,000 ohms	2.00	1.60	1.00	1.35
Up to 15,000 ohms	2.10	1.60	1.10	1.35
Up to 30,000 ohms	2.20	1.75	1.25	1.50
Up to 50,000 ohms	2.30	1.75	1.40	1.50
Up to 75,000 ohms	2.50	2.00	1.60	1.75
Up to 100M	2.80	2.25	1.85	2.00
Up to 125,000	2.95	2.35	2.00	2.10
Up to 150,000	3.15	2.50	2.00	2.25
Up to 200,000	3.45	2.80	2.25	2.50
Up to 250,000	3.75	3.10	2.50	2.75
Up to 300,000	4.05	3.40	2.75	3.00
Up to 400,000	4.70	3.95	3.00	3.50
Up to 500,000	5.30	4.50	3.50	4.00
Up to 600,000	5.60	4.80		4.25
Up to 700,000	5.75	4.95		4.35
Up to 750,000	5.95	5.15		4.50
Up to 900,000	6.25	5.45		4.75
Up to 1 megohm	6.55	5.75		5.00
Up to 1.5 megohms	9.40	8.00		
Up to 2 megohms	13.75	11.00		
Up to 2.5 megohms	16.00	13.75		
Up to 3 megohms	18.00	16.50		
Up to 4 megohms	22.00			
Up to 5 megohms	26.00			
Up to 6 megohms	30.00			
Up to 7 megohms	35.00			
Up to 8 megohms	40.00			
Up to 9 megohms	45.00			
Up to 10 megohms	50.00			
For BX Process up to 101,000 Ohms—add	.40	.40	.15	.25

SPECIAL TOLERANCE
 Resistors to closer tolerances can be supplied at higher prices. Add to list prices as follows:
 ± 1/2%, add 5% ± 1/10%, add 25%
 ± 1/4%, add 10% ± .05%, add 50%
 ± 2-10%, add 15%

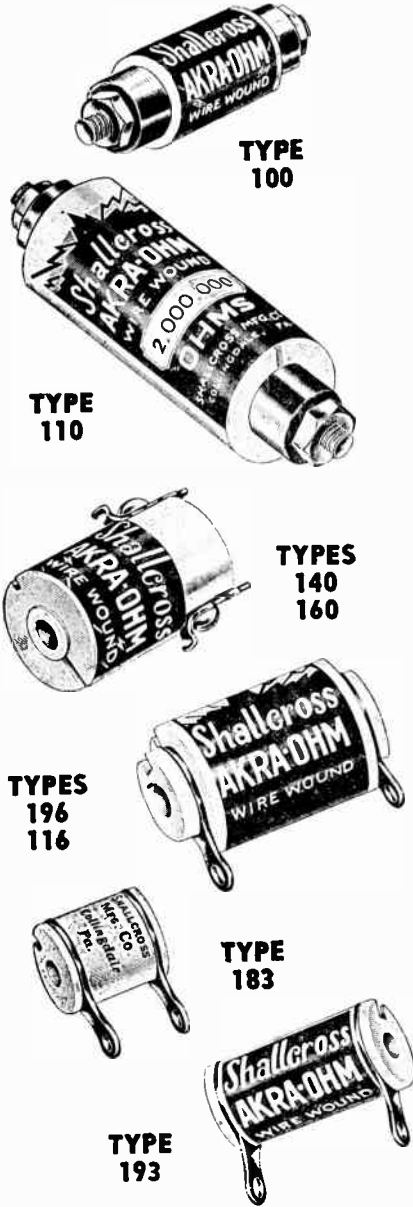
Prices shown are for Manganin Wire used in resistances to 1,000 ohms and for Nickel-Chromium-Iron Wire used in resistances above 1,000 ohms.

TYPES 183 AND 193 - ±1% IN COMMON VALUES—IN STOCK

In addition to the popular standard types listed here, Shallcross Akra-Ohm Resistors are made in a complete line of standard and special designs for precise electronic equipment demanding great stability and long life even under difficult conditions of temperature and humidity.

Shallcross achievements include the development of really practical hermetically-sealed

units; BX processed resistors "tropicalized" against moisture and fungus; the use of spun glass insulated wire for applications where considerable power must be dissipated; bifilar wound resistors, 1000 ohms or less, for exacting instrument use; heavy-duty surge resistors; accurate heavy-duty power resistors, and various others. Write for the Shallcross "Engineering Data" wall and file Chart.



ACCURATE FIXED WIRE-WOUND TYPES (JAN R93) PRICES ON REQUEST.

Shallcross Type	** JAN Style	Wattage	* Maximum Ohms	Std. Terminal	Mounting	Dimensions Length—Diam.
100	RB21	1	750,000	#8 screw	5 amp. fuse clip	2 1/16" x 9/16"
110	RB22	2	2 Meg.	#8 screw	5 amp. fuse clip	2 7/8" x 3/8"
116	RB14	1	2 Meg.	Solder lugs	#6 screw	2 5/8" x 3/8"
140	RB41	0.5	350,000	Solder lugs	#6 screw	1 1/2" x 11/16"
160	RB42	1	500,000	Solder lugs	#6 screw	1 9/16" x 11/16"
183	RB11	0.5	300,000	Solder lugs	#6 screw	5/8" x 1 1/2"
193	RB12	1	400,000	Solder lugs	#6 screw	1" x 1 1/2"
196	RB13	1	1 Meg.	Solder lugs	#6 screw	1 1/2" x 3/4"
Δ1196	RB13	1	1 Meg.	Solder lugs	#6 screw	1 1/2" x 7/8"

* Based on use of .0014" diameter nickel chromium wire. Smaller wire sizes will greatly increase maximum allowable resistance on any form.
 ** JAN style refers to Joint Army-Navy Specification R93. Price depends on wire size and specification.
 Δ Hermetically sealed. Other sizes available.

SEND FOR RESISTOR ENGINEERING CHART FOR COMPLETE DATA

SHALLCROSS MANUFACTURING CO.

COLLINGDALE, PENNSYLVANIA

**ELECTRICAL
INSTRUMENTS
•
RESISTORS
•
VARIABLE
ATTENUATORS
•
SWITCHES**

SHALLCROSS DECADE RESISTANCE BOXES

The large assortment and wide range of resistance available makes the Shallcross line of Resistance Boxes unique in the instrument

field. They are used extensively as laboratory standards, AC and DC Bridge and ratio arms, voltage dividers, etc.

Accuracy adjustment of Resistors as follows:
0.1 ohm..... 1%
1 ohm..... 0.25%
all others..... 0.1%

No.	No. Dials	Ohm Steps	Ohms Total Resistance	Price	No.	No. Dials	Ohm Steps	Ohms Total Resistance	Price
543	1	0.1	1	\$13.50	821	3	10	11,100	\$39.50
544	1	1.0	10	13.50	822	3	100	111,000	44.50
545	1	10	100	13.50	823	3	1,000	1,110,000	58.00
546	1	100	1,000	13.50	824	3	10,000	11,100,000	91.00
547	1	1,000	10,000	16.50	825	4	1	11,110	51.00
548	1	10,000	100,000	19.50	826	4	10	111,100	56.00
549	1	100,000	1,000,000	27.00	827	4	100	1,111,000	69.50
550	1	1,000,000	10,000,000	50.00	828	4	1,000	11,110,000	105.50
817	3	.01	11.1	45.00	8285	5	0.1	11,111	62.50
817A	4	.01	111.1	56.50	829	5	1	111,110	67.50
817B	5	.01	1,111.1	71.00	830	5	10	1,111,100	81.00
818	3	0.1	111	36.50	831	5	100	11,111,000	117.00
819	4	0.1	1,111	48.00	832	6	1	1,111,110	91.50
820	3	1	1,110	36.50	833	6	10	11,111,100	127.50



UNMOUNTED DECADE RESISTANCES



In response to a demand from engineers, manufacturers and physicists who design and construct their own electrical measuring instruments, we have made the Shallcross Unmounted Decade Resistances available. They are of the same construction as those used in the popular Shallcross Resistance Decades described above and consist of ten Shallcross Resistors mounted on a ceramic instrument switch.

SPECIFICATIONS

Type No.	Total Resistance Ohms	Unit Resistance Ohms	Switch No.	Accuracy	Price
435	1.0	1	536	1.0%	\$9.00
436	10	1.0	531	0.25%	9.00
437	100	10	531	0.1	9.00
438	1,000	100	531	0.1	9.00
439	10,000	1,000	531	0.1	12.00
440	100,000	10,000	531	0.1	14.00
441	1 Meg.	100,000	531	0.1	22.50
442	10 Meg.	1 Meg.	531	0.1	45.00

Mounting: Single 3/8" Hole Mounting—Panels Up to 3/16" Thick. Any of the above may be obtained with aluminum dust cover and shield at \$1.50 additional cost.

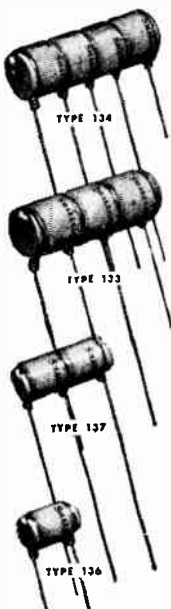
SHALLCROSS AKRA-OHM PRECISION RESISTORS

for "Miniaturization" applications

UNUSUAL ACCURACY IN SMALL SPACE

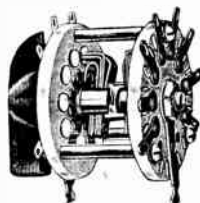
These new Shallcross Okra-Ohm Wire-Wound Precision Resistors have been designed to meet the needs of modern, miniature equipment. Standard tolerance is 1%. Closer tolerances can be furnished on special order.

The units offer unusually high and accurate resistance values in small space and are light enough to be suspended by their own tinned copper leads, or may be secured with mounting screw.



Type	Sections	Size	Watts	Maximum Resistance per section Ohms	Minimum Resistance per section Ohms
136	1	13/32" x 1/4"	0.25	150,000	1.
137	2	45/64" x 3/8"	0.25	150,000	1.
133	3	15/32" x 3/8"	0.25	550,000	1.
134	4	1 1/2" x 3/8"	0.25	375,000	1.

Prices on application.



SHALLCROSS ROTARY SELECTOR SWITCHES

Like other Shallcross instrument components, these Rotary Selector Switches are designed to cover a very wide field of application in both shorting and non-shorting types, and can be modified to control a variety of circuits. Details on any type for practically any application on request. Suffixes B and S denote Brass and Silver contacts and contact arms.

SWITCH PRICES

Poles	Positions	Contact Plate Material	Shorting	Non-Shorting	List Price
1	11	Stearite	4605-B	4610-B	\$2.25
2	11	Stearite	4620-B	4615-B	5.25
1	11	Stearite	4605-S	4610-S	3.50
2	11	Stearite	4620-S	4615-S	7.75
1	12	Bakelite	5550-B	5620-B	2.75
1	12	Bakelite	5550-S	5620-S	4.00
1	15	Stearite	5610-B	4225-B	3.00
2	15	Stearite	5615-B	4980-B	6.75
1	15	Stearite	5610-S	4225-S	4.00
2	15	Stearite	5615-S	4980-S	8.75
1	18	Bakelite	5155-B	5625-B	3.75
1	18	Bakelite	5155-S	5625-S	5.55
1	24	Bakelite	5630-B	5570-B	5.00
1	24	Bakelite	5630-S	5570-S	7.00
1	36	Bakelite	4815-B	4850-B	•
1	36	Bakelite	4815-S	4850-S	•
1	48	Bakelite	4640-B	•	•
1	48	Bakelite	4640-S	•	•
1	60	Bakelite	•	5935-B	•
1	60	Bakelite	•	6935-S	•

Large Rotating Tap Switch—12 Brass Contacts—number 2240-2 Shorting only \$15.00

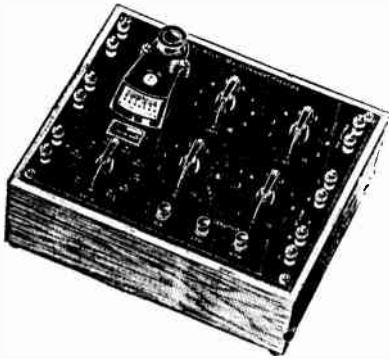
* Prices on application.

ELECTRICAL INSTRUMENTS

**RESISTORS
VARIABLE
ATTENUATORS
SWITCHES**

**SHALLCROSS MANUFACTURING CO.
COLLINGDALE, PENNSYLVANIA**

SHALLCROSS D-C BRIDGES



**No. 638-2
KELVIN
WHEATSTONE
BRIDGE**

Resistance range 0.0001 ohm to 11.11 megohms

SPECIFICATIONS

ACCURACY—0.3% between 1.0 ohm and 11.11 megohms. Below 0.1 ohm, 3%.
GALVANOMETER—Built-in—sensitivity 0.25 micro-ampere per millimeter division.
RHEOSTAT ARM—Four decades—1.0 ohm steps in Wheatstone and 1.0 micro-ohm steps in Kelvin ranges.
RESISTANCE BOX—Binding posts allow using rheostat as Resistance Box.
SEPARATE KEYS—Provided for battery and galvanometer circuits.
CASE—Carrying type with removable cover (not illustrated) and compartment for 4½ volt battery (not supplied) for Wheatstone range measurements.
DIMENSIONS—Length 12¼", width 10¼", height 6¼".
WEIGHT—Approx. 9 lbs. Price \$175.00.



**No. 630
WHEATSTONE
BRIDGE**

Resistance range from 0.1 ohm to 11.1 megohms

SPECIFICATIONS

ACCURACY—1.0% between 10 ohms and 1.0 megohm—2% over 1 megohm.
COMPONENT RESISTORS—0.1% accurate except 1 ohm, which are 0.25%.
RHEOSTAT ARM—Three decades—variable in 10.0 ohm steps.
RESISTANCE BOX—Binding posts allow using rheostat as Resistance Box.
CAM SWITCH—Provided for battery and galvanometer circuits.
CASE—Carrying type with removable cover and compartment for batteries and leads (not supplied).
DIMENSIONS—Length 10", width 9¾", height 5¼".
WEIGHT—Approx. 6 lbs. Price \$90.00.



**No. 637
KELVIN
WHEATSTONE
BRIDGE**

Resistance range 0.001 ohm to 11.1 megohms

SPECIFICATIONS—Same as No. 638-2 except:
ACCURACY—1.0% between 1.0 ohm and 1.0 megohm; 2.0% above 1.0 megohm; and 3.0% below 0.1 ohm.
GALVANOMETER—Sensitivity 1.0 micro-ampere per millimeter division. Built-in.
RHEOSTAT ARM—Three decades—10 ohm steps in Wheatstone, and 10 micro-ohm steps in Kelvin ranges.
CANNOT be used as Resistance Box.
DIMENSIONS—Length 10", width 9¾", height 5¼".
WEIGHT—Approx. 7 lbs. Price \$120.00.

**No. 629
FAULT
LOCATION
BRIDGE**



Resistance range 0.1 ohm to 11.11 megohms

SPECIFICATIONS

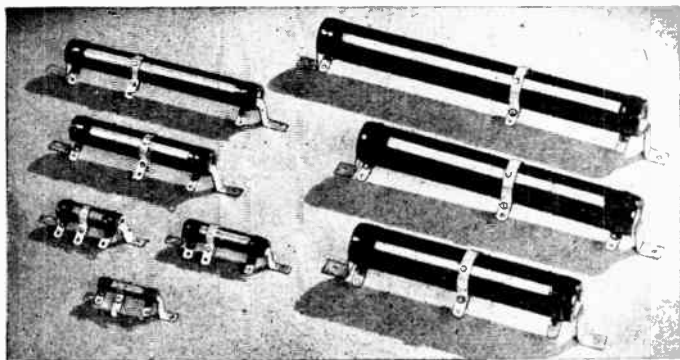
ACCURACY—**COMPONENT RESISTORS**—0.1% accurate except 1.0 ohm, which are 0.25%.
GALVANOMETER—Built-in—sensitivity 1.0 micro-ampere per mm. division.
RHEOSTAT ARM—Four decades—11,110 ohms—variable in 1 ohm steps.
RATIO DIAL—Marked 0.001, 0.01, 0.1, 1.0, 10.0, 100 and 1000 for resistance measurements and Varley tests. M1, M 10, M 100 and M 1000 for Murray tests.
SEPARATE KEYS—Provided for battery and galvanometer circuits.
CASE—Carrying type with removable cover, concealed compartment for 4½ volt battery (not supplied).
BINDING POSTS—Provided for use of external galvanometer where required.
DIMENSIONS—Length 10¾", width 8¾", height 5¾".
WEIGHT—Approx. 7 lbs. Price \$110.00.

VOLTAGE DIVIDERS (DECADE POTENTIOMETERS)

No.	Dials	Total Resistance	Price	No.	Dials	Total Resistance	Price
835	4	10,000 ohms	\$ 90.00	845	3	1,000 ohms	\$64.00
836	4	100,000 ohms	100.00	846	3	10,000 ohms	69.50
837	4	1,000 ohms	84.00	850	3	100,000 ohms	79.50

LECTROHM *Vitreous Enameled* RESISTORS

Quality—Accuracy—Dependability—Long Life



WIRE WOUND ADJUSTABLE TYPES

The same high quality and construction are used for LECTROHM Adjustable Resistors as are incorporated in LECTROHM fixed units.

These resistors are used for replacing voltage dividers in radio receivers, for radio transmitter power supply, and for general experimental work.

TYPE 1 1/4 EV—10-WATT

DIMENSIONS 1 1/8" x 1 1/2" x 1 3/4"
 TERMINALS Lug Type
 MAXIMUM RESISTANCE 10,000 ohms
 MOUNTING BRACKET Centers 2 1/4"

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
1	3150	\$0.98	750	115	\$0.98
2	2230	.98	800	111	.98
3	1825	.98	1000	100	.98
5	1415	.98	1250	89	.98
7.5	1155	.98	1500	79	.98
10	1000	.98	2000	69	.98
15	815	.98	2250	64	.98
20	707	.98	2500	61	.98
25	630	.98	3000	56	.98
50	447	.98	3500	51	.98
75	365	.98	4000	47	.98
100	315	.98	4500	44	.98
150	258	.98	5000	40	.98
200	223	.98	6000	36	.98
250	200	.98	7000	33	.98
300	182	.98	7500	32	.98
350	169	.98	8000	31	.98
400	158	.98	8500	30	.98
500	141	.98	10000	24	.98
600	129	.98			

TYPE 2SV—25-WATT

DIMENSIONS 1 1/8" x 1 1/2" x 2"
 TERMINALS Solder Lugs
 MAXIMUM RESISTANCE 25,000 ohms
 MOUNTING BRACKET Centers 2 7/8"

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
1	5000	\$1.24	1000	158	\$1.24
3	2890	1.24	1250	141	1.24
5	2240	1.24	1500	129	1.24
10	1580	1.24	2000	112	1.24
15	1290	1.24	2500	100	1.24
25	1000	1.24	3000	92	1.24
50	707	1.24	3500	84	1.24
75	575	1.24	4000	78	1.24
100	500	1.24	5000	71	1.24
150	400	1.24	6000	64	1.43
200	353	1.24	7500	57	1.43
250	316	1.24	10000	50	1.43
300	288	1.24	12000	44	1.43
400	250	1.24	15000	26	1.43
500	224	1.24	20000	27	1.56
750	182	1.24	25000	20	1.56

TYPE 4 1/2 MV—50-WATT

DIMENSIONS 3/4" x 1 1/2" x 4 1/2"
 TERMINALS Solder Lugs
 MAXIMUM RESISTANCE 100,000 ohms
 MOUNTING BRACKET Centers 5 1/2"

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
5	2160	\$1.95	3000	129	\$1.95
10	2230	1.95	4000	112	1.95
25	1410	1.95	5000	100	1.95
50	1000	1.95	7500	81	2.15
75	816	1.95	10000	70	2.15
100	707	1.95	12000	64	2.15
150	577	1.95	15000	57	2.15
200	500	1.95	20000	50	2.15
250	447	1.95	25000	44	2.15
300	408	1.95	30000	41	2.47
400	354	1.95	40000	35	2.47
500	316	1.95	50000	29	2.47
750	258	1.95	60000	18	2.86
1000	224	1.95	75000	17	2.86
1500	182	1.95	80000	16	2.86
2000	158	1.95	100000	14	2.86
2500	141	1.95			

TYPE 6 1/2 MV—80-WATT

DIMENSIONS 3/4" x 1 1/2" x 6 1/2"
 TERMINALS Solder Lugs
 MAXIMUM RESISTANCE 100,000 ohms
 MOUNTING BRACKET Centers 7 1/2"

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
10	2830	\$2.54	3500	152	\$2.54
15	2310	2.54	5000	126	2.54
25	1790	2.54	7500	103	2.86
50	1265	2.54	10000	89	2.86
100	894	2.54	15000	73	2.86
250	566	2.54	20000	63	2.86
300	517	2.54	25000	57	2.86
400	495	2.54	30000	51	3.25
500	400	2.54	40000	44	3.25
750	327	2.54	50000	25	3.25
1000	283	2.54	60000	23	3.58
1500	231	2.54	75000	21	3.58
2000	200	2.54	80000	20	3.58
2500	179	2.54	100000	18	3.58

TYPE 6 1/2 KV—100-WATT

DIMENSIONS 1 1/8" x 3/4" x 6 1/2"
 TERMINALS Solder Lugs
 MAXIMUM RESISTANCE 100,000 ohms
 MOUNTING BRACKET Centers 7 1/2"

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
50	1413	\$2.86	15000	81	\$3.25
100	1000	2.86	20000	70	3.25
500	447	2.86	25000	63	3.25
1000	316	2.86	30000	57	3.58
2000	223	2.86	35000	53	3.58
3000	182	2.86	40000	50	3.58
4000	158	2.86	50000	44	3.58
5000	141	2.86	75000	23	3.90
7500	115	3.25	100000	20	3.90
10000	100	3.25			

TYPE 8 1/2 KV—160-WATT

DIMENSIONS 1 1/8" x 3/4" x 8 1/2"
 TERMINALS Solder Lugs
 MAXIMUM RESISTANCE 100,000 ohms
 MOUNTING BRACKET Centers 9 1/2"


Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
5	5660	\$3.58	10000	126	\$3.58
10	4000	3.58	15000	103	4.16
25	2530	3.58	20000	89	4.16
50	1788	3.58	25000	80	4.16
100	1266	3.58	30000	73	4.16
500	566	3.58	40000	55	4.16
1000	400	3.58	50000	43	4.16
2500	253	3.58	75000	27	4.55
5000	179	3.58	100000	18	4.55

TYPE 10 1/2 KV—200-WATT

DIMENSIONS 1 1/8" x 3/4" x 10 1/2"
 TERMINALS Solder Lugs
 MAXIMUM RESISTANCE 100,000 ohms
 MOUNTING BRACKET Centers 11 1/2"

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
50	2000	\$4.29	10000	141	\$4.29
100	1414	4.29	20000	100	5.00
500	632	4.29	25000	89	5.00
1000	447	4.29	30000	81	5.00
1500	361	4.29	50000	63	5.00
2000	316	4.29	75000	51	5.00
2500	283	4.29	100000	28	5.00
5000	200	4.29			

ADJUSTABLE LUGS

Screw-Driver Type	Diameter of Resistor	List Price
		3/8"	$0.13
5/8"		.13
7/8"		.20
1 1/4"		.20

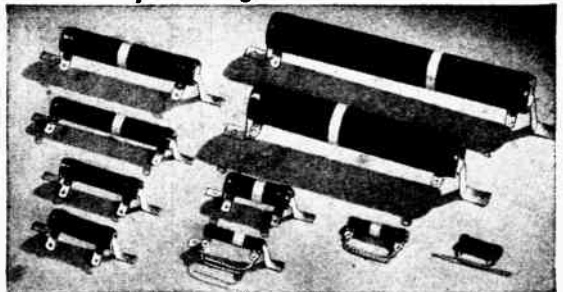
Mounting brackets and one band are furnished with all adjustable types.

LECTROHM Enameled Vitreous RESISTORS

Quality—Accuracy—Dependability—Long Life

WIRE WOUND—FIXED TYPES

LECTROHM Resistors are manufactured from the highest quality materials obtainable and are rated according to R.M.A. standards. LECTROHM Resistors are rugged—dependable—accurate—quality components that will give long trouble-free service. (Mounting brackets available for 20, 50, 80, 100, 160 and 200 watt units.)



TYPE 1/4L—5-WATT

DIMENSIONS..... $\frac{1}{4}$ " x $\frac{3}{8}$ " x $\frac{1}{4}$ "
TERMINALS..... Pig Tail
MAXIMUM RESISTANCE.....10,000 ohms
No Mounting Brackets

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
1	2210	\$0.52	300	129	\$0.52
2	1380	.52	350	119	.52
3	1290	.52	400	111	.52
4	1110	.52	500	100	.52
5	1000	.52	600	91	.52
10	707	.52	700	81	.52
15	575	.52	750	81	.52
20	500	.52	800	79	.52
25	447	.52	900	74	.52
30	408	.52	1000	70	.52
35	374	.52	1100	64	.52
40	346	.52	1200	60	.52
50	316	.52	1250	59	.52
75	258	.52	1500	54	.52
100	229	.52	1750	50	.52
125	200	.52	2000	44	.52
150	182	.52	2500	40	.52
200	158	.52	3000	36	.52
225	149	.52	4000	31	.52
250	141	.52	5000	28	.52

TYPE 1 3/4—10-WATT

DIMENSIONS..... $\frac{1}{2}$ " x $\frac{3}{8}$ " x $\frac{1}{4}$ "
TERMINALS..... Pig Tail
MAXIMUM RESISTANCE.....40,000 ohms
No Mounting Brackets

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
1	3150	\$0.59	1500	79	\$0.59
2	2230	.59	1750	71	.59
3	1825	.59	2000	69	.59
5	1115	.59	2500	64	.59
7.5	1155	.59	2500	61	.59
10	1000	.59	3000	56	.59
15	815	.59	3500	51	.59
20	707	.59	4000	47	.59
25	630	.59	4500	44	.59
50	447	.59	5000	40	.59
75	365	.59	6000	36	.59
100	315	.59	7000	32	.59
150	258	.59	7500	32	.59
200	223	.59	8000	31	.59
250	200	.59	8500	30	.59
300	182	.59	10000	24	.59
350	169	.59	12000	20	.65
400	158	.59	12500	20	.65
500	141	.59	15000	17	.65
600	129	.59	17500	17	.65
700	119	.59	18000	16	.65
750	115	.59	20000	15	.65
800	111	.59	22500	15	.65
900	105	.59	25000	14	.65
1000	100	.59	30000	8	.65
1200	91	.59	40000	7	.65
1250	89	.59			

LECTROHM

R. F. PLATE CHOKES

(1000 Milliamperes.)



Type	RFC-1	RFC-2	RFC-3	RFC-4
Amateur				20, 40
Band Meters	5	10 & 20	20 & 40	20, 40
Microhenries	5.4	35	95	220 & 160
D. C. Ohms	0.85	2	5	9
Lgth. Overall	1 3/4"	3"	6"	6 1/2"
Diameter	3/8"	3/8"	3/8"	3/8"
List Price	\$0.33	\$1.04	\$1.56	\$2.15

TYPE 2R—20-WATT

DIMENSIONS..... $\frac{1}{2}$ " x $\frac{3}{8}$ " x 2"
TERMINALS..... Solder Lug
MAXIMUM RESISTANCE.....100,000 ohms
MOUNTING BRACKET.....Centers 2 7/8"

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
5	2000	\$0.91	1100	131	\$0.91
15	1411	.91	1250	126	.91
20	1153	.91	1500	115	.91
25	1000	.91	2000	100	.91
35	891	.91	2500	89	.91
40	707	.91	3000	81	.91
50	633	.91	4000	70	.91
60	574	.91	5000	63	.91
75	517	.91	6000	57	.91
100	448	.91	7000	53	.91
125	400	.91	7500	51	.91
150	365	.91	8000	50	.91
200	316	.91	10000	43	.91
250	283	.91	12500	39	.91
300	258	.91	15000	30	.91
350	238	.91	20000	21	1.11
400	223	.91	25000	21	1.11
500	200	.91	30000	21	1.11
600	182	.91	35000	18	1.11
700	169	.91	40000	17	1.11
750	163	.91	45000	13	1.11
800	158	.91	50000	11	1.11
1000	141	.91			

TYPE 4 1/2M—50-WATT

DIMENSIONS..... $\frac{3}{4}$ " x $\frac{1}{2}$ " x 4 1/2"
TERMINALS..... Solder Lugs
MAXIMUM RESISTANCE.....100,000 ohms
MOUNTING BRACKET.....Centers 5 1/2"

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
5	3165	\$1.56	6000	85	\$1.82
10	2230	1.56	7000	78	1.82
25	1390	1.56	7500	77	1.82
50	1000	1.56	8000	73	1.82
100	700	1.56	10000	66	1.82
200	500	1.56	12000	63	1.82
250	440	1.56	12500	60	1.82
500	300	1.56	15000	56	1.82
750	250	1.56	20000	48	1.82
1000	215	1.56	25000	43	1.82
1500	175	1.56	30000	39	2.08
2000	155	1.56	40000	34	2.08
2500	135	1.56	50000	30	2.08
3000	120	1.56	60000	28	2.08
4000	105	1.56	75000	25	2.08
5000	95	1.56	100000	21	2.08

TYPE 6 1/2M—80-WATT

DIMENSIONS..... $\frac{3}{4}$ " x $\frac{1}{2}$ " x 6 1/2"
TERMINALS..... Solder Lugs
MAXIMUM RESISTANCE.....100,000 ohms
MOUNTING BRACKET.....Centers 7 1/2"

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
5	4000	\$2.04	5000	122	\$2.04
10	2730	2.04	6000	112	2.41
25	1730	2.04	7500	100	2.41
50	1220	2.04	8000	98	2.41
100	865	2.04	10000	86	2.41
200	612	2.04	15000	70	2.41
250	545	2.04	20000	61	2.41
500	387	2.04	25000	55	2.41
750	316	2.04	30000	50	2.72
1000	274	2.04	50000	43	2.72
1500	223	2.04	50000	39	2.72
2000	183	2.04	60000	35	3.09
2500	173	2.04	75000	31	3.09
3000	158	2.04	100000	27	3.40
4000	137	2.04			



LECTROHM INSULATED WIRE-WOUND RESISTORS—1 WATT		Max. Current	Max. Current	Max. Current	Max. Current
Ohms	Current	Ohms	Current	Ohms	Current
100	100	750	36	2,500	20
125	89	800	35	3,000	18
150	81	900	33	3,500	16
200	70	1,000	31	4,000	15
250	63	1,100	30	4,500	14
300	57	1,200	28	5,000	14
350	53	1,250	28	6,000	12
400	50	1,500	25	7,000	11
500	44	1,750	23	7,500	11
600	40	2,000	22	8,000	11
700	37	2,250	21		
List Price, Each					\$0.33

TYPE 6 1/2K—100-WATT

DIMENSIONS..... $1\frac{1}{2}$ " x $\frac{3}{4}$ " x $6\frac{1}{2}$ "
TERMINALS..... Solder Lugs
MAXIMUM RESISTANCE.....100,000 ohms
MOUNTING BRACKET.....Centers 7 1/2"

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
25	2000	\$2.15	3000	180	\$2.15
50	1114	2.15	5000	110	2.15
75	1155	2.15	7500	115	2.54
100	1100	2.15	10000	100	2.54
150	817	2.15	15000	80	2.54
250	632	2.15	20000	70	2.54
500	447	2.15	25000	63	2.54
750	365	2.15	30000	58	2.86
1000	315	2.15	40000	50	2.86
1250	280	2.15	50000	44	2.86
1500	250	2.15	60000	41	3.25
2000	229	2.15	75000	36	3.25
2500	200	2.15	100,000	31	3.58

TYPE 8 1/2K—160-WATT

DIMENSIONS..... $1\frac{1}{2}$ " x $\frac{3}{4}$ " x $8\frac{1}{2}$ "
TERMINALS..... Solder Lugs
MAXIMUM RESISTANCE.....100,000 ohms
MOUNTING BRACKET.....Centers 9 1/2"

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
5	5660	\$2.86	4500	185	\$2.86
10	4000	2.86	5000	180	2.86
25	2530	2.86	7500	145	2.86
50	1788	2.86	10000	125	2.86
75	1460	2.86	15000	105	3.45
100	1260	2.86	20000	90	3.45
200	900	2.86	25000	80	3.45
500	570	2.86	30000	67	3.45
1000	400	2.86	35000	67	3.45
1500	330	2.86	40000	50	3.45
2000	280	2.86	50000	40	3.45
2500	250	2.86	60000	33	3.90
3000	230	2.86	70000	28	3.90
3500	215	2.86	80000	25	3.90
4000	200	2.86	100000	20	3.90

TYPE 10 1/2K—200-WATT

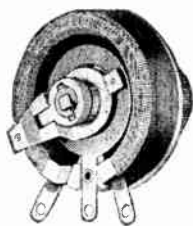
DIMENSIONS..... $1\frac{1}{2}$ " x $\frac{3}{4}$ " x $10\frac{1}{2}$ "
TERMINALS..... Solder Lugs
MAXIMUM RESISTANCE.....100,000 ohms
MOUNTING BRACKET.....Centers 11 1/2"

Res. Ohms	Max. M.A.	List Price	Res. Ohms	Max. M.A.	List Price
5	6310	\$3.58	4500	210	\$3.58
10	4470	3.58	5000	200	3.58
25	2830	3.58	7500	165	3.58
50	2000	3.58	10000	140	3.58
75	1635	3.58	15000	115	4.29
100	1400	3.58	20000	100	4.29
250	900	3.58	25000	90	4.29
500	630	3.58	30000	82	4.29
1000	450	3.58	35000	71	4.29
1500	365	3.58	40000	62	4.29
2000	315	3.58	50000	50	4.29
2500	280	3.58	60000	42	4.29
3000	260	3.58	75000	33	4.29
3500	240	3.58	100000	25	4.29
4000	225	3.58			



WARD LEONARD • VITROHM RESISTORS and RHEOSTATS

VITROHM RING TYPE RHEOSTATS



The core and base of Ward Leonard Ring Type Rheostats are made of the highest grade ceramic materials. The resistance wire is wound toroidally on the core, and is coated with a tough, heat resistant, acid resistant, crazeless vitreous enamel.

The contact is a special alloy and is of large area to avoid sticking, pitting, local heating, or oxidation when setting remains fixed for a long period of time.

Watt Ratings

Based on continuous operation in free air with a temperature rise not to exceed 300° C., which is within the limits specified by Underwriters' Laboratories and NEMA.

25 WATTS Type 25R

Dimensions
A — 1³/₁₆"
B — 1¹/₁₆"
C — 1³/₁₆"
D — 1¹/₈"

50 WATTS Type 50R

Dimensions
A — 2¹/₁₆"
B — 1⁵/₁₆"
C — 1¹/₁₆"
D — 1¹/₂"

100 WATTS Type 100R

Dimensions
A — 3³/₃₂"
B — 1³/₄"
C — 1¹/₂"
D — 1¹/₂"

150 WATTS Type 150R

Dimensions
A — 3¹¹/₁₆"
B — 2¹/₁₆"
C — 1¹/₂"
D — 1¹/₂"

Ohms	Current m. a.	Approx. No. of Steps	List Price
0.5	7070	27	\$5.85
1	5000	27	5.85
2	3540	27	5.20
3	2880	27	5.20
6	2040	81	5.20
8	1770	90	5.20
10	1580	90	5.20
15	1280	103	5.20
25	1000	103	5.20
35	840	108	5.20
50	707	137	5.20
75	574	137	5.20
100	500	171	5.20
150	407	171	5.20
250	316	240	5.20
350	267	274	5.20
500	223	308	5.20
750	181	308	5.20
1000	158	390	5.85
1500	128	376	5.85
2500	100	520	6.18
3500	84	520	6.18
5000	70	520	6.18

Ohms	Current m. a.	Approx. No. of Steps	List Price
0.5	10000	30	\$6.50
1	7070	49	6.50
2	5000	49	6.50
4	3540	59	5.85
6	2880	108	5.85
8	2500	113	5.85
10	2230	150	5.85
15	1810	150	5.85
25	1415	188	5.85
35	1190	119	5.85
50	1000	188	5.85
75	812	188	5.85
100	707	225	5.85
150	574	225	5.85
250	447	300	5.85
350	374	338	5.85
500	316	375	5.85
750	256	450	6.18
1000	223	450	6.18
1500	181	570	6.18
2500	141	570	6.18
3500	119	713	6.50
5000	100	713	6.50
7500	81	856	6.50
10000	70	998	6.50

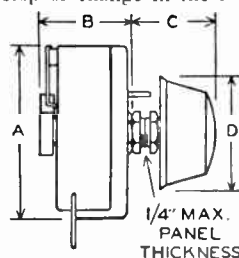
Ohms	Current m. a.	Approx. No. of Steps	List Price
0.5	14100	41	\$9.75
1	10000	41	9.75
2	7070	41	9.75
3	5740	72	9.75
5	4470	82	9.75
7.5	3640	82	9.10
10	3160	72	9.10
15	2560	156	9.10
25	2000	196	9.10
50	1415	274	9.10
75	1150	313	9.10
100	1000	274	9.10
200	707	313	9.10
300	574	353	9.10
400	500	392	9.10
500	447	392	9.10
750	364	464	9.10
1000	316	470	9.75
2000	223	595	9.75
2500	200	744	9.75
5000	141	893	10.40
7500	115	893	11.05
10000	100	1041	11.70

Ohms	Current m. a.	Approx. No. of Steps	List Price
0.5	17320	43	\$12.35
1	12240	43	12.35
2	8660	43	12.35
3	7070	54	12.35
5	5470	107	12.35
7.5	4470	107	12.35
10	3870	107	11.70
15	3160	107	11.70
25	2440	204	11.70
50	1730	245	11.70
75	1415	286	11.70
100	1224	367	11.70
200	866	326	11.70
300	707	408	11.70
400	612	408	11.70
500	547	489	11.70
750	447	489	12.35
1000	387	620	12.35
2000	273	775	13.00
2500	244	775	13.00
5000	173	930	13.65
7500	141	1240	14.30
10000	122	1240	15.60

Number of Steps

Each turn of resistance wire on the core of a Vitrohm Ring Type Rheostat constitutes a step of change in the resistance value.

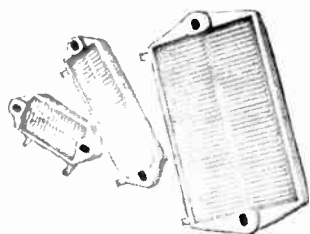
Vitrohm Ring Type Rheostats are made with three terminals with no "off" position, and can be used as potentiometers or rheostats, as desired. Rheostats with an "off" position can be furnished on special order.



Heavy Duty Rheostats Pressed steel plate type.

300 watts — 1 to 2500 ohms, 20 steps, 6" diameter.
500 watts — 1 to 5000 ohms, 33 steps, 8" diameter.

VITROHM PLAQUE RESISTORS



Vitrohm Plaque Resistors are flat in form. The resistance wire is arranged on a rectangular ceramic base to give the lowest obtainable values of inductance and distributed capacitance. Inductance at frequencies up to 1000 kilocycles and distributed capacitance up to 5 megacycles are so low in value that they are negligible.

Vitrohm Plaque Resistors are rated 20, 40, and 125 watts with full ventilation. Since full ventilation is usually impossible to attain, the watt rating should be decreased to compensate for the reduction in ventilation. A single plaque resistor mounted on a panel should operate safely about 80% of the full watt rating.

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20 WATTS TYPE 20P 40 WATTS TYPE 40P 125 WATTS TYPE 125P

Ohms	20 WATTS TYPE 20P		40 WATTS TYPE 40P		125 WATTS TYPE 125P	
	Current m. a.	List Price	Current m. a.	List Price	Current m. a.	List Price
0.64	5590	\$1.95	7910	\$2.60	14000	\$3.90
1.00	4470	1.95	6320	2.60	11200	3.90
1.6	3540	1.95	5000	2.60	8800	3.90
2.5	2830	1.95	4000	2.60	7050	3.90
4.0	2240	1.95	3160	2.60	5600	3.90
6.4	1770	1.95	2500	2.60	4400	3.90
10	1415	1.95	2000	2.60	3500	3.90
16	1120	1.95	1580	2.60	2800	3.90
25	895	1.95	1260	2.60	2200	3.90
40	705	1.95	1000	2.60	1770	3.90
50	630	1.95	895	2.60	1580	3.90
64	560	1.95	790	2.60	1400	3.90
100	445	1.95	630	2.60	1120	3.90
160	355	1.95	500	2.60	880	3.90
250	285	1.95	400	2.60	705	3.90
400	225	1.95	315	2.60	560	3.90
640	175	1.95	250	2.60	440	3.90
1,000	140	1.95	200	2.60	350	3.90
1,600	110	1.95	160	2.60	280	3.90
2,500	90	1.95	125	2.60	220	3.90
4,000	70	1.95	100	2.60	177	3.90
5,000	65	1.95	90	2.60	158	3.90
6,400			80	2.60	140	3.90
10,000			65	2.60	112	3.90



WARD LEONARD • VITROHM RESISTORS and RHEOSTATS

VITROHM FIXED RESISTORS

5 WATTS

Type 5F

Size 1" x 5/16" No Mounting Brackets

Ohms	Current m. a.	List Price	Ohms	Current m. a.	List Price
1	2230	\$0.52	350	119	\$0.52
1.5	1820	.52	400	112	.52
2	1580	.52	450	105	.52
3	1290	.52	500	100	.52
4	1117	.52	600	91	.52
5	1000	.52	700	84	.52
7.5	811	.52	750	81	.52
10	707	.52	800	79	.52
12	644	.52	900	74	.52
15	577	.52	1000	70	.52
20	500	.52	1100	67	.52
25	450	.52	1200	64	.52
30	408	.52	1250	63	.52
35	378	.52	1500	57	.52
40	353	.52	1750	53	.52
50	316	.52	2000	50	.52
75	257	.52	2250	47	.52
100	223	.52	2500	45	.52
125	200	.52	3000	40	.52
150	182	.52	3500	37	.52
200	158	.52	4000	35	.52
250	141	.52	4500	33	.52
300	129	.52	5000	31	.52



5-watt, 10-watt, 20-watt

Types 5F, 10F, and 20F are furnished with wire terminal leads — no brackets.

Order by Type Number and Resistance Value.

10 WATTS

Type 10F

Size—1 3/4" x 5/16" No Mounting Brackets

Ohms	Current m. a.	List Price	Ohms	Current m. a.	List Price	Ohms	Current m. a.	List Price
1	3160	\$0.59	150	258	\$0.59	4500	47	\$0.59
1.5	2580	.59	200	224	.59	5000	45	.59
2	2235	.59	225	211	.59	6000	41	.59
3	1825	.59	250	200	.59	7000	38	.59
4	1580	.59	300	182	.59	7500	36	.59
5	1415	.59	350	169	.59	8000	35	.59
7.5	1155	.59	400	158	.59	8500	34	.59
10	1000	.59	450	149	.59	9000	33	.59
12	913	.59	500	142	.59	10000	30	.59
15	815	.59	600	129	.59	11000	27	.65
20	707	.59	700	120	.59	12000	25	.65
25	630	.59	750	115	.59	12500	24	.65
30	577	.59	800	110	.59	13500	22	.65
35	534	.59	900	105	.59	14300	21	.65
40	500	.59	1000	100	.59	15000	20	.65
50	450	.59	1100	95	.59	16000	19	.65
75	365	.59	1200	91	.59	17500	17	.65
100	316	.59	1250	89	.59	18000	16	.65
125	283	.59	1500	81	.59	20000	15	.65
			1750	75	.59	22500	13	.65
			2000	70	.59	25000	12	.65
			2250	66	.59	30000*	13	.65
			2500	63	.59	35000*	12	.65
			3000	58	.59	40000*	11	.65
			3500	53	.59	45000*	10.5	.65
			4000	50	.59	50000*	10	.65

*Operated at Low Temperature. Rated 5 Watts.

20 WATTS

Type 20F

Size 2" x 3/16" No Mounting Brackets

Ohms	Current m. a.	List Price	Ohms	Current m. a.	List Price
1	4480	\$0.91	2500	90	\$0.91
3	2580	.91	2750	85	.91
5	2000	.91	3000	80	.91
10	1410	.91	3500	76	.91
15	1150	.91	4000	70	.91
25	900	.91	4500	67	.91
50	630	.91	5000	63	.91
75	510	.91	6000	55	.91
100	450	.91	7000	53	.91
150	365	.91	7500	51	.91
175	340	.91	8000	50	.91
200	320	.91	10000	40	.91
250	285	.91	12500	32	.91
300	258	.91	15000	27	.91
350	240	.91	20000	20	1.11
400	220	.91	25000	16	1.11
500	200	.91	30000	13	1.11
650	175	.91	35000	11	1.11
700	169	.91	40000	10	1.11
750	160	.91	45000	9	1.11
800	155	.91	50000	8	1.11
850	153	.91	55000	7	1.43
1000	141	.91	60000*	10.8	1.43
1200	130	.91	65000*	10.5	1.43
1250	125	.91	70000*	10.0	1.43
1500	115	.91	75000*	9.5	1.43
1750	107	.91	80000*	9.3	1.43
1850	104	.91	85000*	9.1	1.43
2000	100	.91	90000*	8.8	1.43
2250	94	.91	95000*	8.6	1.43
2400	91	.91	100000*	8.4	1.43

*Operated at Low Temperature. Rated 7 Watts.

100 WATTS

Type 100F

Size—6 1/2" x 1 1/8" Mounting Centers—7 1/4"

Ohms	Current m. a.	List Price	Ohms	Current m. a.	List Price
1	10000	\$2.15	2500	200	\$2.15
2	7070	2.15	3000	180	2.15
3	5770	2.15	3500	170	2.15
4	5000	2.15	4000	160	2.15
5	4470	2.15	4500	150	2.15
10	3160	2.15	5000	141	2.15
25	2000	2.15	7500	115	2.54
50	1410	2.15	10000	100	2.54
75	1150	2.15	15000	80	2.54
100	1000	2.15	20000	70	2.54
125	895	2.15	25000	60	2.54
150	815	2.15	30000	50	2.86
250	630	2.15	35000	43	2.86
500	447	2.15	40000	37	2.86
750	365	2.15	50000	30	2.86
1000	316	2.15	60000	25	3.25
1250	285	2.15	70000	21	3.25
1500	260	2.15	75000	20	3.25
2000	225	2.15	100000	15	3.58

Mounting brackets and lug type terminals



25 WATTS

Type 25F

Size—2" x 5/8" Mounting Centers—2 5/8"

Ohms	Current m. a.	List Price	Ohms	Current m. a.	List Price
1	5000	\$1.04	2000	112	\$1.04
2	3535	1.04	2500	100	1.04
3	2890	1.04	3000	90	1.04
4	2500	1.04	3500	85	1.04
5	2235	1.04	4000	80	1.04
10	1580	1.04	5000	70	1.04
15	1290	1.04	6000	65	1.17
25	1000	1.04	7500	53	1.17
50	710	1.04	8500	47	1.17
75	580	1.04	10000	40	1.17
100	500	1.04	12000	33	1.17
150	410	1.04	15000	27	1.17
200	354	1.04	20000	20	1.43
250	315	1.04	25000	16	1.43
300	289	1.04	30000	13	1.43
400	250	1.04	35000	11	1.43
500	224	1.04	40000	10	1.43
750	182	1.04	50000	8	1.43
800	177	1.04	60000	6.7	1.63
850	170	1.04	70000	5.7	1.76
1000	158	1.04	75000	5.3	1.95
1250	140	1.04	80000	5	1.95
1500	129	1.04	100000	4	2.47

50 WATTS

Type 50F

Size—3 1/2" x 3/4" Mounting Centers—4 1/4"

Ohms	Current m. a.	List Price	Ohms	Current m. a.	List Price
1	7070	\$1.56	5000	100	\$1.56
2	5000	1.56	6000	91	1.82
3	4080	1.56	7500	82	1.82
4	3535	1.56	8000	79	1.82
5	3160	1.56	10000	70	1.82
10	2235	1.56	12000	64	1.82
25	1415	1.56	12500	56	1.82
50	1000	1.56	15000	47	1.82
75	815	1.56	20000	35	1.82
100	707	1.56	25000	28	1.82
150	575	1.56	30000	23	2.08
300	500	1.56	35000	20	2.08
250	445	1.56	40000	18	2.08
300	408	1.56	45000	17	2.08
400	353	1.56	50000	14	2.08
500	316	1.56	75000	9	2.08
750	258	1.56	100000	7	2.08
800	250	1.56	125000	5	2.86
1000	224	1.56	150000	4.6	3.25
1500	180	1.56	175000	4.0	3.25
2000	160	1.56	200000*	3.5	3.58
2500	141	1.56	225000*	3.1	3.58
3000	130	1.56	250000*	2.8	3.90
4000	110	1.56			

*Operated at Low Temperature. Rated 17 Watts.

160 WATTS

Type 160F

Size—8 1/2" x 1 1/8" Mounting Centers—9 1/4"

Ohms	Current m. a.	List Price	Ohms	Current m. a.	List Price
1	12650	\$3.77	2500	252	\$2.86
2	8940	3.45	3000	230	2.86
3	7300	3.25	3500	215	2.86
4	6320	3.06	4000	200	2.86
5	5650	2.86	4500	185	2.86
10	4000	2.86	5000	178	2.86
15	3265	2.86	7500	146	2.86
25	2525	2.86	10000	126	2.86
50	1785	2.86	15000	105	3.45
75	1460	2.86	20000	90	3.45
100	1265	2.86	25000	80	3.45
150	1035	2.86	30000	67	3.45
200	894	2.86	35000	57	3.45
250	800	2.86	40000	50	3.45
500	565	2.86	50000	40	3.45
750	460	2.86	60000	33	3.90
1000	400	2.86	75000	26	3.90
1500	326	2.86	80000	25	3.90
2000	280	2.86	100000	20	3.90

200 WATTS

Type 200F

Size—10 1/2" x 1 1/8" Mounting Centers—11 1/4"

Ohms	Current m. a.	List Price	Ohms	Current m. a.	List Price
1	14140	\$4.68	3500	240	\$3.58
2	10000	4.36	4000	225	3.58
3	8162	4.03	4500	210	3.58
4	7070	3.77	5000	200	3.58
5	6325	3.58	7500	163	3.58
10	4470				

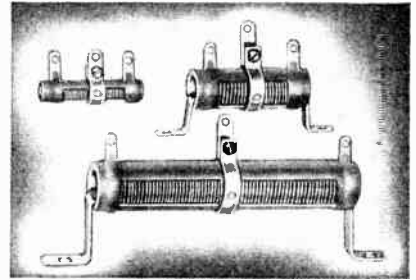


WARD LEONARD • VITROHM RESISTORS and RHEOSTATS

ADJUSTABLE RESISTORS -- ADJUSTOHMS

Adjustohm Resistors are for use in any application where it is necessary or desirable to have one or more intermediate resistance values; or in circuits that need to be changed from time to time to meet varying electrical conditions.

Adjustohm Resistors are built of the highest grade low temperature coefficient materials, and are coated with Ward Leonard's tough crazeless Vitreous Enamel.



10 WATTS Type 10A

Size—1 3/4" x 5/8" No Mounting Brackets

Ohms	Current m. a.	List Price	Ohms	Current m. a.	List Price
1	3160	\$0.98	750	115	\$0.98
2	2235	.98	300	110	.98
3	1825	.98	1000	100	.98
5	1415	.98	1250	89	.98
7.5	1155	.98	1500	81	.98
10	1000	.98	2400	70	.98
15	815	.98	2500	63	.98
20	707	.98	3000	58	.98
25	630	.98	3500	53	.98
50	450	.98	4000	50	.98
75	365	.98	4500	47	.98
100	316	.98	5000	45	.98
150	258	.98	6000	41	.98
200	224	.98	7000	38	.98
250	200	.98	7500	36	.98
300	182	.98	8000	35	.98
350	169	.98	8500	34	.98
400	158	.98	9000	33	.98
500	142	.98	10000	30	.98
600	129	.98			

25 WATTS Type 25A

Size—2" x 5/8" Mounting Centers—2 3/8"

Ohms	Current m. a.	List Price	Ohms	Current m. a.	List Price
1	5000	\$1.24	1250	140	\$1.24
2	3535	1.24	1500	129	1.24
3	2890	1.24	2000	112	1.24
5	2230	1.24	2250	105	1.24
7.5	1825	1.24	2500	100	1.24
10	1580	1.24	3000	90	1.24
15	1290	1.24	3500	85	1.24
20	1115	1.24	4000	80	1.24
25	1000	1.24	4500	74	1.24
50	710	1.24	5000	70	1.24
75	580	1.24	6000	65	1.43
100	500	1.24	7000	57	1.43
150	410	1.24	7200	56	1.43
200	354	1.24	7500	53	1.43
250	315	1.24	8000	50	1.43
300	289	1.24	8500	47	1.43
400	250	1.24	9000	44	1.43
500	224	1.24	10000	40	1.43
750	182	1.24	12000	33	1.43
800	177	1.24	15000	27	1.43
850	170	1.24	20000	20	1.56
1000	158	1.24	25000	16	1.56

WATT RATINGS

Nominal watt ratings for Adjustohm Resistors apply when the entire resistor is in the circuit. For most practical purposes the watt rating for each part of the resistor is approximately proportional to the amount of the resistance that is in the circuit.

Mounting brackets are furnished with all Adjustohm Resistors, except the 10-watt size, Type 10A.

Price of resistor includes brackets and one adjustable band.

50 WATTS Type 50A

Size—4 1/2" x 3/4" Mounting Centers—5 1/4"

Ohms	Current m. a.	List Price	Ohms	Current m. a.	List Price
1	7070	\$1.95	3000	130	\$1.95
2	5000	1.95	3500	120	1.95
3	4080	1.95	4000	110	1.95
4	3535	1.95	4500	105	1.95
5	3160	1.95	5000	100	1.95
10	2235	1.95	6090	91	2.15
25	1415	1.95	7010	85	2.15
50	1000	1.95	7210	83	2.15
75	815	1.95	7500	82	2.15
100	707	1.95	8060	79	2.15
150	575	1.95	9000	75	2.15
200	500	1.95	10000	71	2.15
250	445	1.95	12000	64	2.15
300	408	1.95	15000	58	2.15
400	353	1.95	20000	48	2.15
500	316	1.95	25000	40	2.15
750	258	1.95	30000	33	2.47
800	250	1.95	40000	25	2.47
1000	224	1.95	50000	20	2.47
1250	200	1.95	60000	17	2.86
1500	180	1.95	75000	13	2.86
2000	160	1.95	80000	12	2.86
2250	150	1.95	100000	10	2.86
2500	141	1.95			

75 WATTS Type 75A

Size—6 1/2" x 3/4" Mounting Centers—7 1/4"

Ohms	Current m. a.	List Price	Ohms	Current m. a.	List Price
1	8660	\$2.54	3000	158	\$2.54
2	6120	2.54	3500	146	2.54
3	5000	2.54	4000	137	2.54
4	4330	2.54	4500	129	2.54
5	3870	2.54	5000	122	2.54
10	2740	2.54	6000	111	2.86
15	2235	2.54	7000	103	2.86
25	1730	2.54	7200	102	2.86
50	1220	2.54	7500	100	2.86
75	1000	2.54	8000	97	2.86
100	866	2.54	9000	91	2.86
200	612	2.54	10000	87	2.86
250	550	2.54	15000	71	2.86
300	500	2.54	20000	61	2.86
400	433	2.54	25000	55	2.86
500	387	2.54	30000	50	3.25
750	315	2.54	35000	43	3.25
800	305	2.54	40000	37	3.25
1000	274	2.54	45000	33	3.25
1250	245	2.54	50000	30	3.25
1500	224	2.54	60000	25	3.58
2000	195	2.54	70000	21	3.58
2250	183	2.54	80000	19	3.58
2500	173	2.54	100000	15	3.58

100 WATTS Type 100A

Size—6 1/2" x 1 1/8" Mounting Centers—7 1/4"

Ohms	Current m. a.	List Price	Ohms	Current m. a.	List Price
1	10000	\$2.86	2500	200	\$2.86
2	7070	2.86	3000	180	2.86
3	5770	2.86	4000	160	2.86
4	5000	2.86	4500	150	2.86
5	4470	2.86	5000	144	2.86
10	3160	2.86	6000	130	3.25
25	2000	2.86	7500	115	3.25
50	1410	2.86	10000	100	3.25
100	1000	2.86	15000	80	3.25
200	707	2.86	20000	70	3.25
250	630	2.86	25000	60	3.25
400	500	2.86	30000	50	3.58
500	447	2.86	40000	37	3.58
750	365	2.86	50000	30	3.58
1000	316	2.86	60000	25	3.91
1500	260	2.86	75000	20	3.91
2000	225	2.86	100000	15	3.91

ADJUSTABLE BANDS

Each Adjustohm Resistor is furnished with one Screw-Driver Type Adjustable Band Terminal (at right in illustration).



Additional band terminals are available. See list in the accompanying table.

Size of Resistor	Screw Driver Type		Bakelite Knob Type	
	Cat. No.	Price	Cat. No.	Price
10 Watts	507-685	\$0.13		
25 Watts	507-686	.13	507-691	\$0.20
50 Watts	507-688	.13	507-693	.20
75 Watts	507-688	.13	507-693	.20
100 Watts	507-690	.20	507-695	.33
160 Watts	507-690	.20	507-695	.33
200 Watts	507-690	.20	507-695	.33

160 WATTS Type 160A

Size—8 1/2" x 1 1/8" Mounting Centers—9 1/4"

Ohms	Current m. a.	List Price	Ohms	Current m. a.	List Price
1	12650	\$4.68	3000	230	\$3.58
2	8940	4.36	3500	215	3.58
3	7300	4.03	4000	200	3.58
4	6320	3.77	4500	185	3.58
5	5650	3.58	5000	178	3.58
10	4000	3.58	7500	146	3.58
15	3265	3.58	10000	126	3.58
25	2525	3.58	15000	105	4.16
50	1785	3.58	20000	90	4.16
100	1265	3.58	25000	80	4.16
200	894	3.58	30000	67	4.16
250	800	3.58	40000	50	4.16
500	565	3.58	50000	40	4.16
1000	400	3.58	60000	33	4.55
1500	326	3.58	75000	26	4.55
2000	280	3.58	80000	25	4.55
2500	259	3.58	100000	20	4.55

200 WATTS Type 200A

Size—10 1/2" x 1 1/8" Mounting Centers—11 1/4"

Ohms	Current m. a.	List Price	Ohms	Current m. a.	List Price
1	14140	\$5.59	4000	225	\$4.29
2	10000	5.20	4500	210	4.29
3	8160	4.88	5000	200	4.29
4	7070	4.55	7500	163	4.29
5	6320	4.29	10000	141	4.29
10	4470	4.29	15000	115	5.01
25	2825	4.29	20000	100	5.01
50	2000	4.29	25000	90	5.01
100	1414	4.29	30000	82	5.01
250	900	4.29	40000	62	5.01
500	632	4.29	50000	50	5.01
1000	447	4.29	60000	42	5.01
1500	365	4.29	75000	33	5.01
2000	315	4.29	100000	25	5.01
2500	282	4.29	125000	20	5.33
3000	266	4.29	150000	16	5.33
3500	240	4.29			

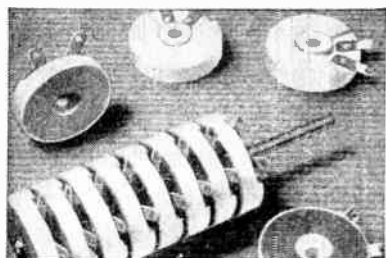


WARD LEONARD • VITROHM RESISTORS and RHEOSTATS

DISCOHM RESISTORS

18 WATTS

Type 18D



Discohms are flat refractory discs having resistance wire arranged to minimize the values of inductance and distributed capacitance.

Discohm Resistors are especially useful in equipments where space is limited and where a power resistor having low value of inductance and distributed capacitance is required.

They are mounted by means of $\frac{1}{8}$ No. 8 wood screw or bolt through the counter-bank hole cast in the refractory base. Two or more units can be mounted together to obtain various resistance values and watt ratings.

Discohm Resistors are rated at 18 watts with free ventilation. A single Resistor mounted on a panel should operate safely at 80% of the full watt rating or 90% of the full current rating.

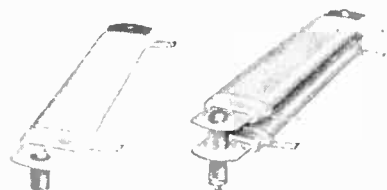
Ohms	Current m. a.	List Price
1.0	4240	\$1.95
1.6	3350	1.95
2.5	2680	1.95
4.0	2120	1.95
6.4	1680	1.95
10	1340	1.95
16	1060	1.95
25	850	1.95
40	670	2.21
64	530	2.21
100	420	2.21
160	335	2.34
250	268	2.34
400	212	2.34
640	168	2.34
1000	134	2.34
1600	106	2.34
2500	85	2.34
4000	67	2.34

VITROHM STRIP RESISTORS

Vitrohm Strip Resistors lend themselves readily to applications where space is limited, such as aircraft control circuits, radio instruments, and similar apparatus.

Vitrohm Strip Resistors are built on a strong flat reinforced core that has no sharp angular surfaces, providing a smooth continuous form of the resistance winding. The resistors are vitreous enamel coated.

Each unit is fitted with a self-sustained mounting bracket and spacer, the end pieces being riveted to a metal strip that passes through the core and serves as a conductor for the internal heat generated while the resistor is in service.



LENGTH (Inches)		RESISTANCE		Watt Rating
Resistor Body	Mounting Holes	Min. Ohms	Max. Ohms	
1 1/4	2	0.45	6,300	30
2	2 3/4	0.50	15,800	40
3 1/2	4 1/4	0.70	35,000	55
4 3/4	5 1/2	1.00	50,000	65
6	6 3/4	1.40	66,000	75

FLUORESCENT LAMP RESISTORS



by the Underwriters' Laboratories, Inc., and by the New York City Department of Water Supply, Gas and Electricity.

Ward Leonard Fluorescent Lamp Resistors are mounted in well-ventilated metal enclosures for installation on standard fixtures. They are made for use on 115-volt, 120-volt and 220-volt circuits and in various resistance values to meet the requirements of the lamps with which they are to be used.

Ward Leonard Fluorescent Lamp Resistors are designed for use in fluorescent lamps operating on direct current. They meet the requirements of lamp and fixture manufacturers and are listed as standard

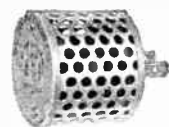
Long, flexible asbestos covered leads facilitate connections.

Plug-In Type

For Portable Fixtures

Ward Leonard also provides a Fluorescent Lamp Resistor in a metal enclosure for use with portable lamps operating on 120-volt circuits. It is fitted with a plug on one end for inserting into the line receptacle and a receptacle on the other end into which the plug on the figure is placed.

The Plug-In Resistor is made for use on 15-watt and 20-watt lamp fixtures.

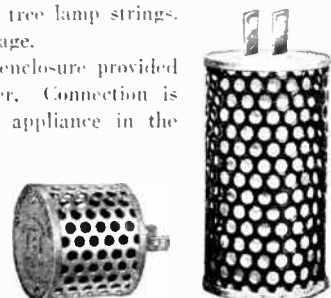


LINE VOLTAGE REDUCERS

Ward Leonard Line Voltage Reducers protect radio sets, soldering irons, Christmas tree lamp strings, and other electrical appliances within the ratings of the Reducers, from high line voltage.

Line Voltage Reducers consist of a resistor network encased in a perforated metal enclosure provided with standard parallel prongs on one end and a standard receptacle on the other. Connection is made by plugging the Reducer into a receptacle and then inserting the plug on the appliance in the receptacle on the enclosure.

Catalog Number	Length Inches	Resis. Ohms	Load	List Price
507-109	1 1/2	25.	For 35-65 watt 115 volt radio set on 115-140 volts . . .	\$2.28
507-109A	1 1/2	10.	For 65-130 watt 115 volt radio set on 115-140 volts . . .	2.28
507-109B	2 1/4	4.5	For 130-285 watt 115 volt radio set on 115-140 volts . . .	2.73
507-109H	5 1/4	300.	For 60-watt 115 volt radio set on 230 volts	3.58



AUTOMATIC

AMPERITE

REGULATOR



BALLAST TUBE FOR AUTOMATIC REGULATION OF CURRENT AND VOLTAGE



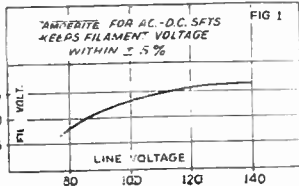
AMPERITE is an automatic rheostat designed to keep the current in a circuit at a definite value, for example, 0.5 amps. Should the supply voltage increase, the Amperite will automatically increase in resistance enough to take up the increase in supply voltage — keeping the voltage on the load constant.

PRICES: The proper AMPERITE Replacement may be determined by looking up the number under column "FOR" and noting corresponding Amperite in the column "USE AMPERITE". Numbers in "FOR" column run consecutively and then alphabetically.

★The letter code in the center column is interpreted as follows:

- a—For 110V. A.C.-D.C. Sets.....List Price \$1.25
- b—For 2V. Battery Sets..... 2.25
- c—For 110V. A.C. Sets..... 2.25
- h—For 220V. A.C.-D.C. Sets..... 2.25
- r—For 110V. A.C. Sets having 70-95V. Primary..... 1.25
- s—For special apparatus..... 3.00

A. C. - D. C. SETS

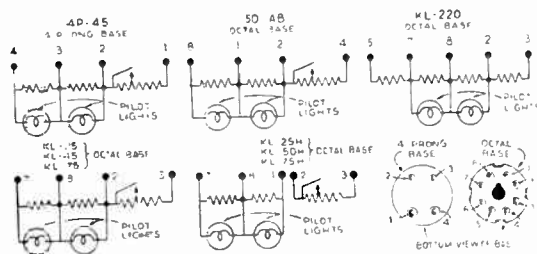


For A.C.-D.C. Sets
The Amperite Regulators are designed to pass only 0.3A through tube filaments. Filament voltages will be kept within $\pm 5\%$ with line voltage variations of 85 to 110 volts. Due to the fact that Amperite is a real regulator, 2 types of Amperite with four prongs and 2 with octal bases will replace 150—90% of all

so-called ballasts or resistors used in AC-D.C. sets. No extra resistor required.

Pilot Lights—None, one or two of either 0.150A or 0.250A can be used with same Amperite. Should a pilot light burn out, the set will continue to operate properly without any damage to the Amperite tubes or other parts. The patented starting resistor in the Amperite prevents overloading and premature burning-out of tubes and pilot lights. In some sets the ballast socket is purposely wired in such a way that the Pilot Light Resistors of standard ballasts would be burned out if inserted. In such sets special Amperites are required, as shown in table. Avoid burnouts—use proper Amperite.

BASE WIRING OF AMPERITES FOR A.C.-D.C. SETS



AMPERITES FOR 2-VOLT BATTERY SETS

Two-volt tube filaments are delicate and easily overloaded. Keeping the tube filaments at their proper voltage with a real regulator like Amperite invariably results in considerably more battery and tube life. The same Amperite can be used for dry-cell, air cell, or 2 volt storage battery operation. The proper Amperite is determined by the total filament-current drain of the set, e.g.—for 0.5A use Amperite 5E1, etc.

REPLACEMENT REGULATORS—A.C.-D.C. SETS. List \$1.25

Amperite No.	Amperite Numbers Starting With Letter	Numbers Shown To Replace With Numbers From	Ending In
KL 25 KL 45 KL 75	K, L, M or BK BL or BM	10 to 36 36 " 67 67 " 105	A, B, C, or D
KL 25H KL 50H KL 75H	K, L, M, or Lvk	11 to 26 36 " 67 67 " 105	F, G, or H
KL 50S1 KL 50S2 KL 50S3	K or L	40 to 100 " " " " " " " "	S1 S2 S3
KL 50E		36 " 67	E

Except K15B, use Amperite K15B—1-Prong Base.

For	Use Amperite	For	Use Amperite	For	Use Amperite	For	Use Amperite
6C2	a 1500	3M2-419	a 3M2-419	9A10	e 9A10	10	a 3 40
6C3	a 63G	3M2419A	a 3M2419A	9-20	r 9 20	40W	a 3 10
6C8	r 11 20			9-150	e 9 150	40B2	a 4P45
6I2	b 5E1	4	4	9-220	e 9 220	10B2	a 4P45
1 1	r 1 1	4 1	a 1G1	9V10	e 9A5	40N300	a 4P45
1A1	b 5E1	4A1	b 4A1			41 7E	s 11 7E
1A2	b 50	4A 10	b 4A10	10 1	b 10 1		
1A5	e 1A5	4-20	e 4-20	10-4	s 10 4	42A	a 3 40
1B1	b 3H1	4 150	r 4-150	10A 10	c 10A10	42A1	a 5E-AB
1B2	b 31			10A	a 10A	42A2	a 5E-AB
1C1	b 7H1	4 220	c 4-220	10AB	b 5H-1	42B2	a 50AB
1C2	b 52	4H-1	b 4H-1	10-10	r 10-10	42HA	a
1D1	b 2H-1	4H-10	c 4H-10	10V10	c 10V10		
1D2	b 1D2	4H-10	r 4H-10	10-20	r 10-20	45W	a 4P45
1E1	b 5E1	4H-20	c 4H-20	10-23A	a KL-25		
1E2	b 1E2	4H-150	c 4H-150	10-25	r 10-25	46A1	a 46A1
1F1	b 7 1			10 150	c 10 150	46B1	a 46B1
1G1	b 1 1	4H-220	c 4H-220	10-220	e 10-220	49A	a 4P45
1H 1	b 1H-1	4SR311	a 4SR311	10-610	a 10-610	49A1	a 50AB
1H 5	e 1H 5	4 T1-9	a KL-45	10-500	10-500	49A2	a 50AB
1J1	b 6-1			10 800		49B2	a 50AB
1K1	b 5H-1	5	a 5			50MG	a K 50S1
1L1	b 1L1	5B	a 3-40	11A10	c 11A10	50W	a 4P45
1N1	b 1N1	5-1	b 5E1	11-20	r 11-20	50A2	a 4P45
1P1	b 1P1	5A10	c 5A10	11-150	c 11-150	50A2MG	a K 50S2
1Q1	b 1Q1	5-10	r 5-10	11-220	e 11-220	50B2	a 4P45
1R1	b 1R1	5-16	e 5-16			50B2MG	a K 50S1
1S1	b 1S1	5-20	r 5-20	12A10	e 12A10	50X3	a 4E45
1T1	b 1T1	5-150	e 5-150	12-20	r 12-20	50X3T	a 4E45
1U1	b 1U1	5-220	e 5-220	12-150	e 12-150	50X300	a 4P45
1V1	b 5H-1	5E1	b 5E1	12-220	e 12-220		
1W1	b 1W1	5H-1	b 5H-1	13-4	s 13-4	52	b 11 2
1Y1	b 5	5H-3	c 5H-3	13A10	e 13A 10		
1Z1	b 9-1	5H 10	c 5H-10	13-20	r 13-20	55A	a KL-45
2 1	a 2	5H-20	r 5H-20	14A10	e 14A10	55B	a KL-50H
2 2	a 2	5H-150	e 5H-150	14-20	r 14-20	55KB	a L 5B
2A10	c 2A10	5H-220	c 5H-220			55KB	a KL-45
2 10	r 2-10			6	b 1E1		
2 20	r 2-20	6-1	b 11	15A10	e 15A10	60-92A	a K-75
2C R-241	a KL-45	6 3	s 6 3	15-10	r 15-10	60R30	a 6R30K
2L R-212	a 50AB	6-4	s 6 4	15-20	r 15-20	60R30K	a 6R30K
2M2	c 2M2	6T4	s 6T4	16A10	e 16A10	64 23	a 64 23
2R-215	a KL-45	6H6	s 6H6	17-2	s 17 2	67A	a K 45
2R-224	a KL-45	6A10	c 6A10	17 3	s 17 3		
2H 1	b 1D1	6-11	s 6-11	17A470	e 17A470	69 2027	a 3-40
2H-2E	b 2H-2E	6-20	c 6-20	303	303	69-2028	b 3-220
2H 10	c 2H-10	6-150	c 6-150	17A10	e 17A10	69-2033	a KL-45
2H 10	r 2H-10	6-220	c 6-220	18	r 18	66-2037	a K-45
2H-20	r 2H-20	6A	b 5E1	18-10	r 18 10		
2R67	b 2R67	6B	a 4P45			70	r 70
3	a 4P45	6 125	a KL-45J	20-1	s 20-1	75	a KL-75
3 1	b 3-1	6 126	a KL-45J	20-4	s 20-4	77-109	a 77-109
3 4	s 3-4	6-128	a KL-45J	20A5	e 20A5	77-126	a 77-126
3T4	s 3T4	6-129	a KL-45J	20 10	r 20-10	77-127	a 77-127
3A10	c 3A10	6-130	b 15-10	22-10	r 22-10	77-128	a 77-128
3 16	s 3-16	6-133	a KL-45J	23-55A	a KL-45	77-181	a 77-181
3A20	c 3A20	6-134	a 23-55F	23-55F	a KL-50H	80	a 41 45
3 25	a 3-25	6-135	a KL-45J	23-3	s 23-3	80R	a 80R
3 40	a 3-40	7	a 7	23-55A	a KL-25	81.75CC	b 81.75CC
3 150	a 3-150	7-1	b 1F1	23-55B	a KL-45		
3-220	c 3-220	7A10	c 7A10	23-55C	a KL-45	90	r 90
3C R-241	b KL-45	7-20	r 7-20	23-55D	a KL-45	92A	a 41-45
3ER-248	a KL-45J	7-150	c 7-150	24-4	s 24-4	95K2	a K-45
3HR-249	b 3ER-249	7-226	c 7-226			98	r 9-20
3H-1	b 1H1	8	a 4P45	30	b 1A2		
3H-2E	b 3H-2E	8-1	b 8-1	30A	a 3 25	100	r 9-20
3H-5	c 3H-5	8A10	c 8A10	31	b 1B2	100 RS	a 41-45
3H-10	c 3H-10	8-20	r 8-20	32	a KL-50H	100-33	a KL-45
3H-20	c 3H-20	8-150	c 8-150	33AG	a KL-25	100-37	a KL-45J
3A-150	c 3H-150	8-220	c 8-220	33-310		100-38	a K-45J
3H-220	c 3H-220	9	a 4P45	3A0D5	a 3A0D5	100-46	a 100-46
3MR-253	a 3MR-253	9-1	b 1Z1	36A	a KL-25	100-47	a 100-47

(Continued on next page)

PRICES

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- s For special apparatus. 3.00

For	Use Amperite	For	Use Amperite	For	Use Amperite	For	Use Amperite	For	Use Amperite
K11H	a KL-25H	K55J	a KL-50J	KN42A	a 4P45	L42DJ	a KL-45J	L87J	a KL-50J
K11J	a KL-25J	K55S1	a KL-50S1	KN42B	a 4P45	L42E	a KL-50E		
K17AJ	a K17AJ	K55S2	a KL-50S2	KN42C	a 4P45	L42E1	a KL-50E	L90CC	a L90CC
K17BJ	a K17BJ	K55S3	a KL-50S3	KN46A	a 4P45	L42F	a KL-50H	L90S1	a KL-50S1
K17E	a KL-25E			KN46C	a 4P45	L42G	a KL-50H	L90S2	a KL-50S2
K17R	a K17R	K67A	a KL-45	KN55A	a 4P45	L42H	a KL-50H	L90S3	a KL-50S3
K18A	a KL-25	K67B	a KL-45	KN55B	a 4P45	L42I	a KL-50J		
K18B	a K18B	K67B2	a 50AB	KN55C	a 4P45	L42J	a KL-50L	L92A	a KL-75
K18H2	a 25B2	K67BJ	a K67BJ	KN55D	a 4P45	L42K	a KL-50R	L92B	a KL-75
K18C	a KL-25	K67D	a KL-45	KN74A	a 4P45	L42L	a KL-50S3	L92C	a KL-75
K18D	a KL-25	K67E	a KL-50E	KN74B	a 4P45	L42M	a KL-50S3	L92E	a KL-75E
K18E	a KL-25E	K67F1	a KL-50F	KN74C	a 4P45	L42N	a KL-45	L92F	a KL-75H
K18F1	a KL-25E	K67F2	a KL-50F			L42O	a KL-45	L92G	a KL-75H
K18F	a KL-25E	K67G	a KL-50H	KV42A	a 50AB	L42P	a KL-45	L92H	a KL-75H
K18G	a KL-25H	K67H	a KL-50H	KV42B	a 50AB	L42Q	a 50AB	L92I	a KL-75H
K18H	a KL-25H	K67J	a KL-50J	KV42C	a 50AB	L42R	a 50AB	L92J	a KL-75J
K18J	a KL-25J	K67K1	a KL-50K1	KV55A	a 50AB	L42S	a 50AB		
		K67K2	a KL-50K2	KY55A	a 50AB	L42T	a 50AB		
		K67K3	a KL-50K3	KY55C	a 50AB	L42U	a KL-45J	L100D	a KL-75
K22A	a KL-25	K72B	a KL-75	KZ49A	a KL-50R1	L42V	a KL-45	L100E	a KL-45
K22B	a KL-25	K74A	a KL-45	KZ49B	a KL-50R1	L42W	a KL-45J	L122B	a KL-75
K22B2	a K22B2	K74B	a KL-45	KZ49C	a KL-50R2	L42X	a KL-50H	L122C	a KL-75
K22C	a KL-25	K74B2	a KL-45	KZ49D	a KL-50R2	L42Y	a KL-50H	L122D	a KL-75
K22D	a KL-25	K74B3	a 50AB			L42Z	a KL-50H	L122E	a KL-75
K22E	a KL-25E	K74C	a KL-45	L11A	a KL-25	L4954A	a KL-50E	L122F	a KL-75
K22F	a KL-25E	K74D	a KL-45	L11B	a KL-25	L4954B	a KL-50E	L122G	a KL-75
K22F1	a KL-25E	K74E	a KL-50E	L11C	a 25B2	L4954C	a KL-50H	L122H	a KL-75
K22G	a KL-25H	K74F1	a KL-50F	L11D	a KL-25	L4954D	a KL-50H	L122I	a KL-75
K22H	a KL-25H	K74F2	a KL-50F	L11E	a KL-25E	L4954E	a KL-50R	L122J	a KL-75
K22J	a KL-25J	K74G	a KL-50H	L11F	a KL-25E	L4954F	a KL-50R	L122K	a KL-75
K23E	a KL-25E	K74H	a KL-50H	L11G	a KL-25H	L4954G	a KL-50S3	L122L	a KL-75
K23AJ	a KL-45J	K74J	a KL-50J	L11H	a KL-25H	L4954H	a KL-50S3	L122M	a KL-75
K23C	a KL-25	K74S1	a KL-50S1	L11I	a KL-25H	L4954I	a KL-50S3	L122N	a KL-75
K26J21S	a K26J21S	K74S2	a KL-50S2	L11J	a KL-25H	L4954J	a KL-50S3	L122O	a KL-75
K30B	a KL-25	K74S3	a KL-50S3	L15A	a KL-45	L55A	a KL-45	L151HG	a KL-25H
K30B2	a 25B2	K75B	a KL-75	L15B	a KL-25	L55B	a 50AB	L152HG	a KL-25H
K30C	a KL-25	K75B2	a KL-75	L15C	a KL-25	L55C	a KL-45	L153HG	a KL-25H
K30D	a KL-25	K75B3	a KL-75	L15D	a KL-25	L55D	a KL-45	L154HG	a KL-25H
K30E	a KL-25E	K75B4	a KL-75	L15E	a KL-25	L55E	a KL-45	L155HG	a KL-25H
K30F1	a KL-25E	K75B5	a KL-75	L15F	a KL-25	L55F	a KL-45	L156HG	a KL-25H
K30F2	a KL-25E	K75B6	a KL-75	L15G	a KL-25	L55G	a KL-45	L157HG	a KL-25H
K30F3	a KL-25E	K75B7	a KL-75	L15H	a KL-25	L55H	a KL-45	L158HG	a KL-25H
K30G	a KL-25H	K75B8	a KL-75	L15I	a KL-25	L55I	a KL-45	L159HG	a KL-25H
K30H	a KL-25H	K75B9	a KL-75	L15J	a KL-25	L55J	a KL-45	L160HG	a KL-25H
K30J	a KL-25J	K75B10	a KL-75	L15K	a KL-25	L55K	a KL-45	L161HG	a KL-25H
K36A	a KL-45	K80F1	a KL-50F	L15L	a KL-25	L55L	a KL-45	L162HG	a KL-25H
K36B	a KL-45	K80F2	a KL-50F	L15M	a KL-25	L55M	a KL-45	L163HG	a KL-25H
K36B2	a 50AB	K80F3	a KL-50F	L15N	a KL-25	L55N	a KL-45	L164HG	a KL-25H
K36C	a KL-45	K80G	a KL-75H	L15O	a KL-25	L55O	a KL-45	L165HG	a KL-25H
K36D	a KL-45	K80H	a KL-75H	L15P	a KL-25	L55P	a KL-45	L166HG	a KL-25H
K36E	a KL-50E	K80I	a KL-75H	L15Q	a KL-25	L55Q	a KL-45	L167HG	a KL-25H
K36F1	a KL-50H	K80J	a KL-75H	L15R	a KL-25	L55R	a KL-45	L168HG	a KL-25H
K36F2	a KL-50H	K80K	a KL-75H	L15S	a KL-25	L55S	a KL-45	L169HG	a KL-25H
K36G	a KL-50H	K80L	a KL-75H	L15T	a KL-25	L55T	a KL-45	L170HG	a KL-25H
K36H	a KL-50H	K80M	a KL-75H	L15U	a KL-25	L55U	a KL-45	L171HG	a KL-25H
K36J	a KL-50J	K80N	a KL-75H	L15V	a KL-25	L55V	a KL-45	L172HG	a KL-25H
K38B2	a K38B2	K80O	a KL-75H	L15W	a KL-25	L55W	a KL-45	L173HG	a KL-25H
K40B	a KL-45	K80P	a KL-75H	L15X	a KL-25	L55X	a KL-45	L174HG	a KL-25H
K40X	a 4P45	K80Q	a KL-75H	L15Y	a KL-25	L55Y	a KL-45	L175HG	a KL-25H
K40Y	a 4P45	K80R	a KL-75H	L15Z	a KL-25	L55Z	a KL-45	L176HG	a KL-25H
K42A	a KL-45	K80S1	a KL-50S1	L22A	a KL-25	L66A	a KL-45	L177HG	a KL-25H
K42B	a KL-45	K80S2	a KL-50S2	L22B	a KL-25	L66B	a KL-45	L178HG	a KL-25H
K42B2	a 50AB	K80S3	a KL-50S3	L22C	a KL-25	L66C	a KL-45	L179HG	a KL-25H
K42B-K4	a K42B-K4	K80S4	a KL-50S4	L22D	a KL-25	L66D	a KL-45	L180HG	a KL-25H
K42C	a KL-45	K80S5	a KL-50S5	L22E	a KL-25	L66E	a KL-45	L181HG	a KL-25H
K42D	a KL-45	K80S6	a KL-50S6	L22F	a KL-25	L66F	a KL-45	L182HG	a KL-25H
K42E	a KL-50E	K80S7	a KL-50S7	L22G	a KL-25	L66G	a KL-45	L183HG	a KL-25H
K42E1	a KL-50E	K80S8	a KL-50S8	L22H	a KL-25	L66H	a KL-45	L184HG	a KL-25H
K42F	a KL-50H	K80S9	a KL-50S9	L22I	a KL-25	L66I	a KL-45	L185HG	a KL-25H
K42G	a KL-50H	K80S10	a KL-50S10	L22J	a KL-25	L66J	a KL-45	L186HG	a KL-25H
K42H	a KL-50H	K80S11	a KL-50S11	L22K	a KL-25	L66K	a KL-45	L187HG	a KL-25H
K42I	a KL-50H	K80S12	a KL-50S12	L22L	a KL-25	L66L	a KL-45	L188HG	a KL-25H
K42J	a KL-50H	K80S13	a KL-50S13	L22M	a KL-25	L66M	a KL-45	L189HG	a KL-25H
K42K	a KL-50H	K80S14	a KL-50S14	L22N	a KL-25	L66N	a KL-45	L190HG	a KL-25H
K42L	a KL-50H	K80S15	a KL-50S15	L22O	a KL-25	L66O	a KL-45	L191HG	a KL-25H
K42M	a KL-50H	K80S16	a KL-50S16	L22P	a KL-25	L66P	a KL-45	L192HG	a KL-25H
K42N	a KL-50H	K80S17	a KL-50S17	L22Q	a KL-25	L66Q	a KL-45	L193HG	a KL-25H
K42O	a KL-50H	K80S18	a KL-50S18	L22R	a KL-25	L66R	a KL-45	L194HG	a KL-25H
K42P	a KL-50H	K80S19	a KL-50S19	L22S	a KL-25	L66S	a KL-45	L195HG	a KL-25H
K42Q	a KL-50H	K80S20	a KL-50S20	L22T	a KL-25	L66T	a KL-45	L196HG	a KL-25H
K42R	a KL-50H	K80S21	a KL-50S21	L22U	a KL-25	L66U	a KL-45	L197HG	a KL-25H
K42S	a KL-50H	K80S22	a KL-50S22	L22V	a KL-25	L66V	a KL-45	L198HG	a KL-25H
K42T	a KL-50H	K80S23	a KL-50S23	L22W	a KL-25	L66W	a KL-45	L199HG	a KL-25H
K42U	a KL-50H	K80S24	a KL-50S24	L22X	a KL-25	L66X	a KL-45	L200HG	a KL-25H
K42V	a KL-50H	K80S25	a KL-50S25	L22Y	a KL-25	L66Y	a KL-45	L201HG	a KL-25H
K42W	a KL-50H	K80S26	a KL-50S26	L22Z	a KL-25	L66Z	a KL-45	L202HG	a KL-25H
K42X	a KL-50H	K80S27	a KL-50S27	L22AA	a KL-25	L66AA	a KL-45	L203HG	a KL-25H
K42Y	a KL-50H	K80S28	a KL-50S28	L22AB	a KL-25	L66AB	a KL-45	L204HG	a KL-25H
K42Z	a KL-50H	K80S29	a KL-50S29	L22AC	a KL-25	L66AC	a KL-45	L205HG	a KL-25H
K49A	a KL-45	K80S30	a KL-50S30	L22AD	a KL-25	L66AD	a KL-45	L206HG	a KL-25H
K49B	a KL-45	K80S31	a KL-50S31	L22AE	a KL-25	L66AE	a KL-45	L207HG	a KL-25H
K49B2	a 50AB	K80S32	a KL-50S32	L22AF	a KL-25	L66AF	a KL-45	L208HG	a KL-25H
K49C	a KL-45	K80S33	a KL-50S33	L22AG	a KL-25	L66AG	a KL-45	L209HG	a KL-25H
K49D	a KL-45	K80S34	a KL-50S34	L22AH	a KL-25	L66AH	a KL-45	L210HG	a KL-25H
K49D-10	a K49D-10	K80S35	a KL-50S35	L22AI	a KL-25	L66AI	a KL-45	L211HG	a KL-25H
K49E	a KL-50E	K80S36	a KL-50S36	L22AJ	a KL-25	L66AJ	a KL-45	L212HG	a KL-25H
K49F	a KL-50E	K80S37	a KL-50S37	L22AK	a KL-25	L66AK	a KL-45	L213HG	a KL-25H
K49G	a KL-50H	K80S38	a KL-50S38	L22AL	a KL-25	L66AL	a KL-45	L214HG	a KL-25H
K49H	a KL-50H	K80S39	a KL-50S39	L22AM	a KL-25	L66AM	a KL-45	L215HG	a KL-25H
K49I	a KL-50H	K80S40	a KL-50S40	L22AN	a KL-25	L66AN	a KL-45	L216HG	a KL-25H
K49J	a KL-50H	K80S41	a KL-50S41	L22AO	a KL-25	L66AO	a KL-45	L217HG	a KL-25H
K49K	a KL-50H	K80S42	a KL-50S42	L22AP	a KL-25	L66AP	a KL-45	L218HG	a KL-25H
K49L	a KL-50H	K80S43	a KL-50S43	L22AQ	a KL-25	L66AQ	a KL-45	L219HG	a KL-25H
K49M	a KL-50H	K80S44	a KL-50S44	L22AR	a KL-25	L66AR	a KL-45	L220HG	a KL-25H
K49N	a KL-50H	K80S45	a KL-50S45	L22AS	a KL-25	L66AS	a KL-45	L221HG	a KL-25H
K49O	a KL-50H	K80S46	a KL-50S46	L22AT	a KL-25	L66AT	a KL-45	L222HG	a KL-25H
K49P	a KL-50H	K80S47	a KL-50S47	L22AU	a KL-25	L66AU	a KL-45	L223HG	a KL-25H
K49Q	a KL-50H	K80S48	a KL-50S48	L22AV	a KL-25	L66AV	a KL-45	L224HG	a KL-25H
K49R	a KL-50H	K80S49	a KL-50S49	L22AW	a KL-25	L66AW	a KL-45	L225HG	a KL-25H
K49S	a KL-50H	K80S50	a KL-50S50	L22AX	a KL-25	L66AX	a KL-45	L226HG	a KL

RESISTORS by RESISTORS, INC.



Chicago 16, Illinois

Resistors by RESISTORS, INC. — the choice of engineers and hams alike — enjoy wide acceptance because they are wound right — rated right — merchandised right. The complete range of fixed and adjustable resistors assures you maximum profits and service. Resistors are attractively

packaged for eye appeal, a decided sales aid. Silver soldered connections — selected materials — precision fabrication. RESISTORS' Resistors are designed and produced under close personal supervision.

FIXED RESISTORS



5 WATT
TYPE 1 1/4 F - FIXED
 1 thru 10,000 Ohms
 \$.50

10 WATT
TYPE 1 1/4 M - FIXED
 1 thru 50,000 Ohms
 \$.56



10 WATT
TYPE 1 1/4 M - CENTER TAPPED
 10 to 200 Ohms
 \$.72

Prices do not include mounting brackets



20 WATT - TYPE 2K - FIXED
 1 thru 15,000 Ohms..... \$.91
 20,000 thru 50,000 Ohms..... 1.07
 *60,000 thru 100,000 Ohms..... 1.42

25 WATT - TYPE 2B - FIXED
 1 thru 5,000 Ohms..... \$1.04
 6,000 thru 15,000 Ohms..... 1.17
 20,000 thru 50,000 Ohms..... 1.42
 *60,000 Ohms..... 1.53
 *70,000 thru 80,000 Ohms..... 1.82
 *100,000 Ohms..... 2.47

50 WATT - TYPE 4 1/2 C - FIXED
 1 thru 5,000 Ohms..... \$1.56
 6,000 thru 25,000 Ohms..... 1.77
 30,000 thru 80,000 Ohms..... 2.05
 100,000 Ohms..... 2.08

80 WATT - TYPE 6 1/2 C - FIXED
 1 thru 5,000 Ohms..... \$1.95
 6,000 thru 25,000 Ohms..... 2.28
 30,000 thru 50,000 Ohms..... 2.60
 60,000 thru 100,000 Ohms..... 2.93

100 WATT - TYPE 6 1/2 R - FIXED
 1 thru 5,000 Ohms..... \$2.13
 6,000 thru 25,000 Ohms..... 2.48
 30,000 thru 50,000 Ohms..... 2.85
 60,000 thru 80,000 Ohms..... 3.20
 100,000 Ohms..... 3.55

160 WATT - TYPE 8 1/2 R - FIXED
 1 Ohm..... \$3.77
 2 Ohm..... 3.41
 3 Ohm..... 3.02
 4 Ohm..... 3.06
 5 thru 10,000 Ohms..... 2.85
 12,000 thru 50,000 Ohms..... 3.41
 60,000 thru 100,000 Ohms..... 3.84

200 WATT - TYPE 10 1/2 R - FIXED
 1 Ohm..... \$4.68
 2 Ohm..... 4.33
 3 Ohm..... 3.98
 4 Ohm..... 3.77
 5 thru 10,000 Ohms..... 3.58
 12,000 thru 100,000 Ohms..... 4.26

*Supplied with low temperature coating. Vitreous enamel coating at higher prices.

20 WATT to 200 WATT inclusive, listed above, supplied with mounting brackets.

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

ADJUSTABLE RESISTORS

(Supplied with mounting brackets)



100 WATT - TYPE 6 1/2 RA - ADJUSTABLE	
1 thru 5,000 Ohms.....	\$2.85
6,000 thru 25,000 Ohms.....	3.20
30,000 thru 50,000 Ohms.....	3.55
60,000 thru 100,000 Ohms.....	3.90

10 WATT - TYPE 1 3/4 MA - ADJUSTABLE	
1 thru 10,000 Ohms.....	\$.85

25 WATT - TYPE 2BA - ADJUSTABLE	
1 thru 5,000 Ohms.....	\$1.21
6,000 thru 15,000 Ohms.....	1.35
20,000 thru 25,000 Ohms.....	1.56

50 WATT - TYPE 4 1/2 CA - ADJUSTABLE	
1 thru 5,000 Ohms.....	\$1.91
6,000 thru 25,000 Ohms.....	2.13
30,000 thru 50,000 Ohms.....	2.42
60,000 thru 100,000 Ohms.....	2.86

80 WATT - TYPE 6 1/2 CA - ADJUSTABLE	
1 thru 5,000 Ohms.....	\$2.48
6,000 thru 25,000 Ohms.....	2.85
30,000 thru 50,000 Ohms.....	3.20
60,000 thru 100,000 Ohms.....	3.55

160 WATT - TYPE 8 1/2 RA - ADJUSTABLE	
1 Ohm.....	\$4.68
2 Ohm.....	4.33
3 Ohm.....	3.98
4 Ohm.....	3.77
5 thru 10,000 Ohms.....	3.55
12,000 thru 50,000 Ohms.....	4.12
60,000 thru 100,000 Ohms.....	4.55

200 WATT - TYPE 10 1/2 RA - ADJUSTABLE	
1 Ohm.....	\$5.47
2 Ohm.....	5.19
3 Ohm.....	4.84
4 Ohm.....	4.55
5 thru 10,000 Ohms.....	4.26
12,000 thru 100,000 Ohms.....	4.98

STANDARD ADJUSTABLE LUG — SCREW DRIVER TYPE



For 10 Watt.....	\$.13
For 25 Watt.....	.13
For 50 and 80 Watt.....	.20
For 100, 160 and 200 Watt.....	.20

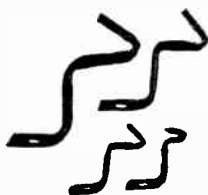
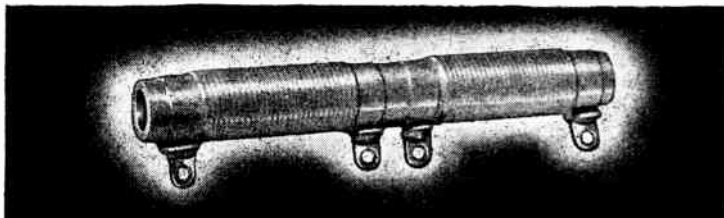


R. F. PLATE CHOKES

Type L-1.....	\$.33
Type L-2.....	1.04
Type L-3.....	1.56
Type L-4.....	2.15

POWER LINE CHOKES

Type L-10.....	\$2.15
Type L-11.....	3.58
Type L-12.....	5.20



MOUNTING BRACKETS

No.	Use with Resistor Type	I. D. of Tube
2	M	3/16"
4	E, K, B, BG	5/16"
6	C	1/2"
8	H. R	3/4"



CENTERING WASHERS

Type No.	I. D. of Tube
1	3/16"
2	5/16"
3	1/2"
4	3/4"

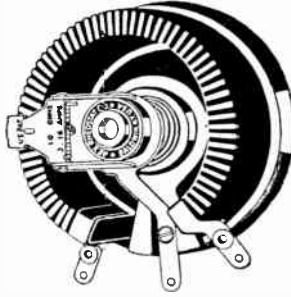
Manufactured by RESISTORS, INC., Chicago 16, Illinois

Rex Rheostat Co.

BALDWIN, L. I., N. Y.

VITREOUS ENAMELED ROUND RHEOSTATS 7 SIZES FROM 50 TO 500 WATT

- Rigid **SPRING HINGED CONTACT ARM** assures unchangeable, constant contact pressure and makes the **REX ROUND RHEOSTAT** easy and smooth to operate.
- Self-adjusting **CONTACT BLOCK** is of copper graphite, and for higher currents, of silver graphite. A pigtail connects it directly to the center of the arm.
- Self-lubricating **POWDERED METAL WASHER** between the stationary and the movable part of the center contact, prevents "freezing" of these parts. This feature preserves continual smoothness of operation during the entire life of the Rheostat.



- **RESISTANCE WINDING** is uniformly distributed around its ceramic core and is kept securely in position by a protective coat of **VITREOUS ENAMEL**.
- All parts are of heat-resisting **CERAMIC** and **METAL** eliminating any possible shrinkage and loss of insulation. **SHAFT** and **MOUNTING** parts are insulated from the live parts in accordance with **UNDERWRITERS LABORATORIES** standard requirements.
- **COOLING** of all types is improved by recessing the base so that air can circulate freely on all sides of Rheostat. Listed maximum current values are applicable only with free air circulation.

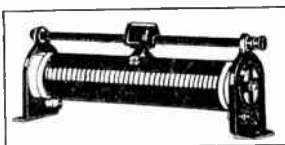
Total Resistance Ohms	50 WATT				75 WATT				100 WATT				150 WATT			
	Type K-50				Type K-75				Type K-100				Type K-150			
	Outside Diameter: 2 1/2" Angle of Rotation: 300°				Outside Diameter: 2 3/4" Angle of Rotation: 300°				Outside Diameter: 3 1/2" Angle of Rotation: 300°				Outside Diameter: 4 1/2" Angle of Rotation: 305°			
	Max. Amps.	Steps app.	Cat. No.	Price	Max. Amps.	Steps app.	Cat. No.	Price	Max. Amps.	Steps app.	Cat. No.	Price	Max. Amps.	Steps app.	Cat. No.	Price
.5	10.00	25	1001	\$6.50	12.20	26	1101	\$7.80	14.20	30	1201	\$9.75	17.30	28	1301	\$12.35
.75	8.17	26	1002	6.50	10.00	34	1102	7.80	11.55	32	1202	9.75	14.20	29	1302	12.35
1	7.07	42	1003	6.50	8.66	35	1103	7.80	10.00	40	1203	9.75	12.30	38	1303	12.35
1.5	5.76	40	1004	6.50	7.06	40	1104	7.80	8.18	42	1204	9.75	10.00	41	1304	12.35
2	5.00	42	1005	6.50	6.12	42	1105	7.80	7.07	42	1205	9.75	8.66	51	1305	12.35
2.5	4.47	42	1006	5.85	5.50	42	1106	7.80	6.32	59	1206	9.75	7.75	51	1306	12.35
3	4.08	41	1007	5.85	5.00	45	1107	7.80	5.77	56	1207	9.75	7.07	73	1307	12.35
4	3.54	66	1008	5.85	4.34	64	1108	7.80	5.00	60	1208	9.75	6.12	77	1308	12.35
5	3.16	66	1009	5.85	3.87	64	1109	7.15	4.47	59	1209	9.75	5.48	77	1309	12.35
6	2.89	79	1010	5.85	3.54	77	1110	7.15	4.08	62	1210	9.10	5.00	89	1310	12.35
8	2.50	84	1011	5.85	3.06	81	1111	7.15	3.53	80	1211	9.10	4.33	94	1311	11.70
10	2.24	105	1012	5.85	2.74	81	1112	7.15	3.16	101	1212	9.10	3.87	92	1312	11.70
12	2.04	125	1013	5.85	2.50	97	1113	7.15	2.89	96	1213	9.10	3.54	111	1313	11.70
15	1.83	125	1014	5.85	2.24	96	1114	7.15	2.58	120	1214	9.10	3.16	138	1314	11.70
25	1.41	130	1015	5.85	1.73	126	1115	7.15	2.00	125	1215	9.10	2.45	145	1315	11.70
35	1.19	145	1016	5.85	1.46	139	1116	7.15	1.69	139	1216	9.10	2.07	161	1316	11.70
50	1.00	163	1017	5.85	1.22	159	1117	7.15	1.41	158	1217	9.10	1.73	182	1317	11.70
75	.82	190	1018	5.85	1.00	188	1118	7.15	1.15	186	1218	9.10	1.41	218	1318	11.70
100	.71	206	1019	5.85	.87	200	1119	7.15	1.00	200	1219	9.10	1.22	229	1319	11.70
150	.58	244	1020	5.85	.71	236	1120	7.15	.82	235	1220	9.10	1.00	276	1320	11.70
200	.50	264	1021	5.85	.61	249	1121	7.15	.71	248	1221	9.10	.87	289	1321	11.70
250	.45	260	1022	5.85	.55	252	1122	7.15	.63	250	1222	9.10	.77	360	1322	11.70
350	.38	286	1023	5.85	.46	277	1123	7.15	.54	275	1223	9.10	.66	400	1323	11.70
500	.32	300	1024	5.85	.39	312	1124	7.15	.45	312	1224	9.10	.55	461	1324	11.70
750	.26	390	1025	6.18	.32	330	1125	7.15	.37	326	1225	9.10	.45	546	1325	12.35
1000	.22	410	1026	6.18	.27	365	1126	7.48	.32	345	1226	9.75	.39	572	1326	12.35
1500	.18	350	1027	6.18	.22	407	1127	7.48	.26	406	1227	9.75	.32	475	1327	12.35
2500	.14	455	1028	6.18	.17	428	1128	7.48	.20	535	1228	9.75	.25	495	1328	13.—
3500	.12	500	1029	6.50	.15	485	1129	7.80	.17	600	1229	10.40	.21	550	1329	13.—
5000	.10	550	1030	6.50	.12	550	1130	7.80	.14	692	1230	10.40	.17	635	1330	13.65
8000	.08	690	1031	6.50	.10	670	1131	8.45	.11	670	1231	11.05	.14	840	1331	14.30
10000	.07	680	1032	6.50	.09	660	1132	8.45	.10	840	1232	11.70	.12	1050	1332	15.60

STANDARD MOUNTING for panels up to 1/4" thick—SINGLE HOLE MOUNTING with NON-TURN WASHER; Mounting Bushing externally threaded with 3/8-32 thread.

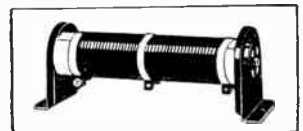
Total Resistance Ohms	225 WATT		300 WATT		500 WATT	
	Type K-225		Type K-300		Type K-500	
	Outside Diameter: 5 1/8" Angle of Rotation: 310°		Outside Diameter: 6 1/4" Angle of Rotation: 315°		Outside Diameter: 8" Angle of Rotation: 325°	
	Max. Current Amps.	Price	Max. Current Amps.	Price	Max. Current Amps.	Price
1 to 2500	15.0 to .30	\$15.60	17.3 to .35	\$17.55	22.4 to .45	\$25.35

STANDARD MOUNTING for panels up to 1 1/4" thick—THREE HOLE MOUNTING; two 1/4-20 x 1 1/2" Flat Head Machine Screws are furnished.

Rheostats of different ohmic values, with graded winding or with special features will be furnished on request.



We also manufacture **TUBULAR SLIDE-CONTACT RHEOSTATS** and **POWER RESISTORS** from 220 to 1000 watt.



Ask for our literature giving complete information.

Thank You!

When writing for additional
information or when ordering
from sources of supply listed
in this book, please mention

RADIO'S MASTER

ALPHA WIRE PRODUCTS



CONSTRUCTION: Single conductor, extra flexible stranded tinned copper, cotton serve, insulated with special low loss SIC rubber compound, braided tinned copper shield, cotton serve, tough black rubber jacket overall.

CRYSTAL MICROPHONE CABLE

GENERAL PURPOSE: Low loss design for use with crystal, ribbon, dynamic and velocity microphones, photo-electric cells. Use No. 1248 FOR LAPEL MICROPHONES and phonograph pick ups.

No.	Put-up	Size	Mox. Copocity Per Ft. Between Cond. & Shield	O.D.
1248	100 Ft. Spool	20 Flexible Stranded	40 mmf.	.175"
1249	100 Ft. Spool	20 Flexible Stranded	30 mmf.	.245"

Longer Lengths Available.



CONSTRUCTION: Each conductor flexible stranded tinned copper, cotton wrap, 1/64" "Hi-Tension" low capacity rubber, color coded, conductors twisted, cushioned with cotton fillers, braided tinned copper shield, cotton wrap, tough black rubber jacket overall.

SHIELDED MICROPHONE CABLE

GENERAL PURPOSE: Adaptable for all indoor and outdoor crystal, carbon and condenser microphones as well as public address systems.

No.	Put-up	Size	Conduc- tors	Mox. Copocity Per Ft. Between Cond. & Shield	Conds.	O.D.
1250	100 Ft. Spool	20	2	70 mmf.	38 mmf.	.270"
1250 18	100 Ft. Spool	18	2	75 mmf.	40 mmf.	.300"
1251	100 Ft. Spool	20	3	65 mmf.	38 mmf.	.305"
1252	100 Ft. Spool	20	4	65 mmf.	36 mmf.	.345"
1253	100 Ft. Spool	20	5	60 mmf.	32 mmf.	.380"
1254	100 Ft. Spool	20	6	60 mmf.	30 mmf.	.405"
1255	100 Ft. Spool	20	7	60 mmf.	30 mmf.	.480"

Longer Lengths Available.



CONSTRUCTION: Each conductor No. 20-10.30 stranded tinned copper, 1/64" rubber, color coded cotton braid, conductors twisted, tinned copper shield overall.

SHIELDED MULTIPLE CONDUCTOR CABLE

GENERAL PURPOSE: For indoor permanent or portable P.A. systems, photo electric cell circuits, sound recording and auto radios.

No.	Put-up	Conduc- tors	Moximum Copocity Per Ft. Between Cond. & Shield	Conds.	O.D.
1256	100 Ft. Spool	2	60.5 mmf.	32 mmf.	.215"
1257	100 Ft. Spool	3	54.0 mmf.	29 mmf.	.240"
1258	100 Ft. Spool	4	48.0 mmf.	26 mmf.	.270"

COTTON BRAID OVER SHIELD

1262	100 Ft. Spool	2	60.5 mmf.	32 mmf.	.225"
1263	100 Ft. Spool	3	54.0 mmf.	29 mmf.	.245"
1264	100 Ft. Spool	4	48.0 mmf.	26 mmf.	.275"

Longer Lengths Available.

1262—1263—1264—Same specifications except with cotton braid over shield.



CONSTRUCTION: Two conductors twisted, each No. 20 solid tinned copper, insulated, color coded, shielded braid overall.

SHIELDED TRANSMISSION LINE

GENERAL PURPOSE: For inter-communication, short wave, P.A. systems, etc.

No.	Put-up	Mox. Copocity Per Ft.	O.D.
1267	500 Ft. Spool	25 mmf.	.135"

Surge impedance is one-half the above when using shield as common conductor in dual transmission line.

Longer Lengths Available.

ALL PRICES AND SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

ALPHA WIRE PRODUCTS



CONSTRUCTION: Two conductors twisted, each No. 18-16/30 stranded tinned copper, 1/32" "Hi-Tension" rubber, color coded, paper wrap over both conductors, close tinned copper shield overall.

SHIELDED DUPLEX SPEAKER CABLE

GENERAL PURPOSE: For P.A. systems, photo-electric cell circuits, master control sound systems, etc.

No.	Put-Up	Conductors	Maximum Capacity Per Ft.		O.D.
			Cond. & Shield	Between Conds.	
1265	500 Ft. Spool	2	65 mmf.	23 mmf.	.250"

Longer Lengths Available.



CONSTRUCTION: Two conductors parallel, each No. 18-16/30 stranded tinned copper, rubber insulated, color coded, lacquered cotton braid, galvanized steel armor overall.

ARMORED DUPLEX SPEAKER CABLE

GENERAL PURPOSE: For P.A. systems, oil burner installations, automotive wiring, etc.

No.	Put-up	O.D.
1272	500 Ft. Spool	.132" x .182"

Longer Lengths Available.



CONSTRUCTION: Three conductors, each conductor No. 22 stranded tinned copper wire, vinyl plastic insulation, color coded; one conductor tinned copper shield and two conductors unshielded; cotton braid overall.

INTER-COMMUNICATION CABLE 3 CONDUCTORS

(1 SHIELDED — 2 UNSHIELDED)

GENERAL PURPOSE: This cable is ideal for general wiring from station to station where a shielded single conductor is essential to eliminate cross talk.

No.	Put-up	O.D.
1242	500 Ft. Spool	.155"

Longer Lengths Available.



CONSTRUCTION: Two conductors twisted, each No. 19 solid tinned copper, 1/32" "Hi-Tension" rubber, color coded; overall is a pure lead sheath.

LEAD SHEATHED CABLE

GENERAL PURPOSE: For P.A. systems, communications, traffic control, mines, railroads and many other uses where severe moisture conditions are encountered. For all outdoor use including underground and underwater.

No.	Put-up	O.D.
1271	1,000 Ft. Reel	.325"



CONSTRUCTION: Two conductors twisted, each No. 20 solid tinned copper, insulated, color coded.

UNSHIELDED TRANSMISSION LINE

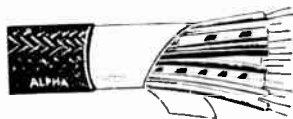
GENERAL PURPOSE: For short wave, inter-communication, annunciator systems, etc., where shielding is not required.

No.	Put-up	O.D.
1269	500 Ft. Spool	.125"

Longer Lengths Available.

ALL PRICES AND SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

ALPHA WIRE PRODUCTS



CONSTRUCTION: Each conductor solid tinned copper wire, two cotton reverse serves paraffined, color coded, conductors twisted into pairs, then covered with an impregnated double paper wrap, and overall a cotton braid saturated with a moisture-proof, flame retarding, rodent-proof compound.

BRAIDED COMMUNICATION CABLE (TWISTED PAIRS)

GENERAL PURPOSE: For interior use designed for connecting inter-communication systems, annunciators, telephones, etc.

No.	Put-up	Size	Pairs	O.D.
1276/2	1,000 Ft. Reel	22	2 (4 Conductors)	.185"
1276/3	1,000 Ft. Reel	22	3 (6 Conductors)	.210"
1276	1,000 Ft. Reel	22	6 (12 Conductors)	.240"
1277	1,000 Ft. Reel	22	10 (20 Conductors)	.300"
1277/15	1,000 Ft. Reel	22	15 (30 Conductors)	.380"
1277/25	1,000 Ft. Reel	22	25 (50 Conductors)	.445"



CONSTRUCTION: Similar to Communication System Cable above, but with lead antimony sheath instead of cotton braid over the twisted pairs.

LEAD-COVERED COMMUNICATION CABLE (TWISTED PAIRS)

GENERAL PURPOSE: For use indoors, outdoors, underground and in pipes for connecting inter-communication systems, annunciators, telephones, etc.

No.	Put-up	Size	Pairs	O.D.
1289	1,000 Ft. Reel	22	6 (12 Conductors)	.375"
1291	1,000 Ft. Reel	22	10 (20 Conductors)	.450"
1293	1,000 Ft. Reel	22	15 (30 Conductors)	.510"
1295	1,000 Ft. Reel	22	25 (50 Conductors)	.560"

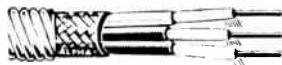


CONSTRUCTION: Each conductor solid bare copper wire, thermo-plastic insulation, color coded, conductors twisted, waxed cotton braid overall.

INTER-COMMUNICATION CABLE (BRAIDED)

GENERAL PURPOSE: Designed for interior use for connecting inter-communication systems, annunciators, thermostat controls of oil burners, air conditioners, etc.

No.	Put-up	Size	Conductors	O.D.
1274	500 Ft. Spool	18	2	.150"
1275	500 Ft. Spool	18	3	.165"
1275/4	500 Ft. Spool	18	4	.180"
1275/5	500 Ft. Spool	18	5	.200"
1275/6	500 Ft. Spool	18	6	.220"



CONSTRUCTION: Same specifications as 1274 through 1275/6 series shown above, except galvanized steel armor overall.

INTER-COMMUNICATION CABLE (ARMORED)

GENERAL PURPOSE: Similar to 1274 through 1275/6 series shown above, but armored for heavy duty and grounding.

No.	Put-up	Size	Conductors	O.D.
1278/2	500 Ft. Spool	18	2	.170"
1278/3	500 Ft. Spool	18	3	.180"
1278/4	500 Ft. Spool	18	4	.200"



CONSTRUCTION: Each conductor 19 solid tinned copper, 1/64" telephone compound rubber, heavy cotton braid with specially treated compound to make it weather-proof for resistance against rain, snow, hail and cold.

OUTDOOR INTER-COMMUNICATION WIRE

GENERAL PURPOSE: For outdoor and indoor use or in any damp location, for connecting communication systems, telephones, etc.

No.	Put-up	Size	Conductors	O.D.
1279	500 Ft. Spool	19	2	.200"
1280	500 Ft. Spool	19	3	.300"

Longer Lengths Available.

ALL PRICES AND SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

ALPHA WIRE PRODUCTS



CONSTRUCTION: Each conductor flexible stranded tinned copper, cotton wrap, 1/32" "Hi-Tension" rubber, color coded, conductors twisted, cushioned with cotton fillers, cotton wrap, tough black rubber jacket overall.

MULTI-CONDUCTOR FLEXIBLE CABLE (RUBBER JACKETED)

GENERAL PURPOSE: For indoor and outdoor speakers, permanent or portable P.A. systems, sound recording and auto radios.

No.	Put-up	Conductors	Capacity Per Ft. Between Conductors	O.D.
1244	100 Ft. Spool	2	22 mmf.	.250"
1245	100 Ft. Spool	3	20 mmf.	.300"
1246	100 Ft. Spool	4	18 mmf.	.320"
1247	100 Ft. Spool	5	17 mmf.	.370"
1247 6	100 Ft. Spool	6	16 mmf.	.400"
1247 8	100 Ft. Spool	8	16 mmf.	.460"

Longer Lengths Available.



CONSTRUCTION: Each conductor No. 20-10 30 stranded copper, 1/64" thermoplastic insulation, color coded, conductors twisted, glazed brown cotton braid overall.

MULTI-CONDUCTOR FLEXIBLE CABLE (COTTON BRAID)

GENERAL PURPOSE: For connecting speakers, analyzers, remote control units, P.A. systems or wherever a multiple circuit hook-up is required.

No.	Put-up	Conductors	Capacity Between Conductors	O.D.
1182	100 Ft. Spool	2	31.5 mmf.	.135"
1183	100 Ft. Spool	3	31.0 mmf.	.170"
1184	100 Ft. Spool	4	30.0 mmf.	.180"
1185	100 Ft. Spool	5	29.5 mmf.	.205"
1186	100 Ft. Spool	6	29.2 mmf.	.225"
1187	100 Ft. Spool	7	28.8 mmf.	.240"
1188	100 Ft. Spool	8	28.5 mmf.	.255"
1189	100 Ft. Spool	9	27.9 mmf.	.275"
1190	100 Ft. Spool	10	27.6 mmf.	.310"
1192	100 Ft. Spool	12	27.0 mmf.	.340"

Longer Lengths Available.



CONSTRUCTION: Each conductor stranded bare copper, cotton separator, 1/32" "Hi-Tension" rubber, color coded, conductors twisted, cushioned with jute fillers, 40% tough rubber jacket overall.

RUBBER SHEATHED SERVICE CORD (UNDERWRITERS APPROVED)

GENERAL PURPOSE: For amplifiers, sound systems, speakers, vacuum cleaners, electric tools, washing machines, refrigerators, appliances, trouble lights, garage lamps or wherever a rough usage power line is required.

No.	Put-up	Size	Conductors	Type	Current Carrying Capacity	Voltage Rating	O.D.
1951	250 Ft. Spool	18	2	SV	5 amps	300	.250"
1952	250 Ft. Spool	18	2	SJ	5 amps	300	.310"
1953	250 Ft. Spool	16	2	SJ	7 amps	300	.340"
1954	250 Ft. Coil	18	2	S	5 amps	600	.390"
1955	250 Ft. Coil	16	2	S	7 amps	600	.410"
1956	250 Ft. Coil	14	2	S	15 amps	600	.540"
1957	250 Ft. Coil	12	2	S	20 amps	600	.605"
1958	250 Ft. Coil	10	2	S	25 amps	600	.640"

Also Available with Additional Conductors.



CONSTRUCTION: Two conductors parallel, each conductor No. 18-41/34 extra flexible bare copper, color coded cotton serve, 40% tough rubber jacket overall. Slit in jacket to permit "E-Z" separation.

TYPE POSJ-E-Z STRIP LAMP CORD (UNDERWRITERS APPROVED)

GENERAL PURPOSE: For line cord on radios, lamps, electric clocks, food mixers and other small devices.

No.	Put-up	O.D.
1966	100 Ft. Spool	.235" x .130"
1967	250 Ft. Spool	.235" x .130"

Standard Colors: Brown, Black, Ivory and Green
Longer Lengths Available.

ALL PRICES AND SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

ALPHA WIRE PRODUCTS



CONSTRUCTION: Very flexible tinned soft annealed copper, concentric strand, cotton wrap, 3/64" "Super Hi-Tension" rubber, satin finish.

KINKLESS TEST LEAD WIRE

GENERAL PURPOSE: As test leads in analyzers, oscillators and all other types of testing apparatus or wherever an EXTRA FLEXIBLE insulated wire is required.

No.	Put-up	Size	Strand	Voltage Breakdown (60 Cycles)	D.C. Insulation Resistance Per Ft. (Megohms)	O.D.
1633	100 Ft. Spool	20	41 36	10,000 V.	710	.140"
1635	500 Ft. Spool	20	41 36	10,000 V.	710	.140"
1636	500 Ft. Spool	18	65 36	12,000 V.	800	.150"



CONSTRUCTION: No. 18 - 65/36 tinned soft annealed copper, concentric strand, cotton wrap, 7/64" "Super Hi-Tension" rubber, satin finish.

Heavy Duty Type

GENERAL PURPOSE: For television, therapeutic equipment, analyzers, oscillators, etc., or wherever a heavy duty EXTRA FLEXIBLE high voltage line is required.

No.	Put-up	Voltage Breakdown (60 Cycles)	D.C. Insulation Resistance Per Ft. (Megohms)	O.D.
1637	100 Ft. Spool	22,000 V.	Over 1,000	.245"
1638	500 Ft. Spool	22,000 V.	Over 1,000	.245"

Stock Colors: Red and Black
Longer Lengths Available.



CONSTRUCTION: Composed of very fine soft annealed tinned copper wires braided and rolled flat.

TINNED COPPER SHIELDING

GENERAL PURPOSE: For shielding speaker leads, lead-ins, amplifier wires, auto radio installations. Also for bonding.

No.	Put-up	I.D.
1229	50 Ft. Spool	1/8"
1230	50 Ft. Spool	3/16"
1231	50 Ft. Spool	1/4"
1232	50 Ft. Spool	3/8"
1233	50 Ft. Spool	5/8"
1234	50 Ft. Spool	3/4"
1235	50 Ft. Spool	1"

Longer Lengths Available.



CONSTRUCTION: 24 gauge flexible stranded copper conductor, vinyl plastic insulation, close tinned copper shielded braid overall.

No. 1202 Same as above except 2-conductor with shield overall.

SHIELDED PHONO AND GRID WIRE

GENERAL PURPOSE: Extreme flexibility and limppness make this an ideal wire for phonograph pick-up arm cable and grid wire.

No.	Put-up	Insulation	O.D.
1200	1000 Ft. Spool	.010"	.080"
1202	1000 Ft. Spool	.010"	.080" x .115"



CONSTRUCTION: Single conductor No. 20 - 10/30 stranded tinned copper, insulated with low loss rubber compound, white silk braid, tinned copper shield overall.

SHIELDED LOW LOSS CABLE

GENERAL PURPOSE: For auto radios, lead-ins, short wave receivers and for grid leads in the input stages of P.A. amplifiers.

No.	Put-up	Capocity Per Ft.	O.D.
1241	100 Ft. Spool	26.6 mmf.	.225"

Longer Lengths Available.



CONSTRUCTION: Stranded tinned copper, low loss insulation, highly lacquered braid, close tinned copper shield overall.

SHIELDED HOOK-UP AND LEAD-IN WIRE

GENERAL PURPOSE: To reduce interference caused by motors, high tension wires, x-ray machines or other apparatus that radiates electrical impulses. Ideal for grid-lead use.

No.	Put-up	Size	Strand	O.D.
1194 22	1000 Ft. Spool	22	7/30	.105"
1194	1000 Ft. Spool	20	10/30	.110"
1196	1000 Ft. Spool	18	16/30	.145"
1197	1000 Ft. Spool	16	26/30	.160"
1198	1000 Ft. Spool	14	41/30	.180"

Longer Lengths Available.

ALL PRICES AND SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

NOTE: See Page S-10 for ALL ALPHA Prices and Other Information.

ALPHA WIRE PRODUCTS

"CL" PUSHBACK WIRE

GENERAL PURPOSE: Pushback hook-up wire in various bright colors for circuit identification; radio, radar, electronics, electrical toys, etc.



STRANDED



SOLID

CONSTRUCTION: Single conductor, stranded and solid tinned copper, heavy wrap of cellulose acetate, cotton braid with flame-retarding lacquer.

Standard Colors: Black, Red, Green, Yellow, Blue, Brown, White and Orange

No.	Put-up	Size	Strand	Volt. Break-down (60 cycles)	D.C. Insulation Resistance per ft. (Megohms)	O.D.
1460	1000 Ft. Spool	22	7/30	1000	200	.065"
1460Q	100 Ft. Spool	22	7/30	1000	200	.065"
1461	1000 Ft. Spool	20	10/30	1000	200	.070"
1461Q	100 Ft. Spool	20	10/30	1000	200	.070"
1462	1000 Ft. Spool	18	16/30	1000	200	.082"
1462Q	100 Ft. Spool	18	16/30	1000	200	.082"
1463	1000 Ft. Spool	16	26/30	1000	200	.093"
1463Q	100 Ft. Spool	16	26/30	1000	200	.093"
1464	1000 Ft. Spool	14	41/30	1000	200	.105"
1464Q	100 Ft. Spool	14	41/30	1000	200	.105"
1465	1000 Ft. Spool	22	Solid	1000	200	.060"
1465Q	100 Ft. Spool	22	Solid	1000	200	.060"
1466	1000 Ft. Spool	20	Solid	1000	200	.065"
1466Q	100 Ft. Spool	20	Solid	1000	200	.065"
1467	1000 Ft. Spool	18	Solid	1000	200	.075"
1467Q	100 Ft. Spool	18	Solid	1000	200	.075"
1468	1000 Ft. Spool	16	Solid	1000	200	.085"
1468Q	100 Ft. Spool	16	Solid	1000	200	.085"
1469	1000 Ft. Spool	14	Solid	1000	200	.095"
1469Q	100 Ft. Spool	14	Solid	1000	200	.095"

Longer Lengths Available



STRANDED



SOLID

CONSTRUCTION: Single conductor, stranded and solid tinned copper wires with thermoplastic (Vinylite) insulation. High dielectric strength; 80 C (176 F) acid, alkali, oil and moisture resistant. Underwriters approved.

Standard Colors: Black, Red, Green, Yellow, Light Blue, Brown, White, Orange, Slate, Purple, Tan, Pink and Dark Blue

PLASTIC SRIR HOOK-UP WIRE

GENERAL PURPOSE: For radio, radar, electronic devices, transmitters, aircraft instruments, fluorescent fixtures, rectifiers, electrical toys, etc.

No.	Put-up	Size	Strand	Insulation (60 cycles)	Volt. Break-down (60 cycles)	D.C. Insulation Resistance per ft. (Megohms)	O.D.
1551	1000 Ft. Spool	22	7/30	1/64"	8000	5000	.065"
1552	100 Ft. Spool	22	7/30	1/64"	8000	5000	.065"
1553	1000 Ft. Spool	20	10/30	1/64"	8000	5000	.072"
1554	100 Ft. Spool	20	10/30	1/64"	8000	5000	.072"
1561	1000 Ft. Spool	22	Solid	1/64"	8000	5000	.060"
1562	100 Ft. Spool	22	Solid	1/64"	8000	5000	.060"
1563	1000 Ft. Spool	20	Solid	1/64"	8000	5000	.066"
1564	100 Ft. Spool	20	Solid	1/64"	8000	5000	.066"

Longer Lengths Available

LACQUERED HOOK-UP AND LEAD-IN WIRE (HIGH GLOSS LACQUERED BRAID)

GENERAL PURPOSE: For point to point soldering connections on transformers, amplifiers, panel hook-up, etc., where a low loss dielectric is required. It is not a pushback wire but will strip easily.

No.	Put-up	Size	Strand	Insulation (60 cycles)	Volt. Break-down (60 cycles)	D.C. Insulation Resistance per ft. (Megohms)	O.D.
1513	100 Ft. Spool	20	10/30	1/64"	7000	290	.090"
1515	500 Ft. Spool	20	10/30	1/64"	7000	290	.090"
1523	100 Ft. Spool	18	16/30	1/64"	7000	300	.110"
1525	500 Ft. Spool	18	16/30	1/64"	7000	300	.110"
1533	100 Ft. Spool	18	16/30	1/32"	8500	460	.125"
1535	500 Ft. Spool	18	16/30	1/32"	8500	460	.125"
1543	100 Ft. Spool	16	26/30	1/32"	8500	460	.140"
1545	500 Ft. Spool	16	26/30	1/32"	8500	460	.140"

Longer Lengths Available

ALL PRICES AND SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

ALPHA WIRE PRODUCTS



CONSTRUCTION: Stranded soft annealed tinned copper, insulated with rubber, over which is a highly lacquered braid. Oil, heat, and moisture resistant.

LACQUERED PRIMARY WIRE

GENERAL PURPOSE: For automobile head, tail, side, dashboard lamps, horn, spotlight, instrument leads and general high voltage and primary voltage applications.

No.	Put-up	Size	Strand	Rubber	O.D.
1989	100 Ft. Spool	18	16/30	1/64"	.110"
1991	100 Ft. Spool	18	16/30	1/32"	.125"
1995	100 Ft. Spool	16	26/30	1/32"	.140"
1997	100 Ft. Spool	14	41/30	1/32"	.170"
1999	100 Ft. Spool	12	19/25	1/32"	.190"
1983	100 Ft. Spool	10	19/23	1/32"	.208"

Longer Lengths Available.



CONSTRUCTION: Single conductor No. 16-19/29 stranded tinned copper, rubber insulated, cotton braid highly lacquered.

7 MM LACQUERED CABLE

GENERAL PURPOSE: For high voltage leads in television receivers, cathode-ray tubes, oscilloscopes, etc.

No.	Put-up	O.D.
1981	100 Ft. Spool	.275"

Longer Lengths Available.



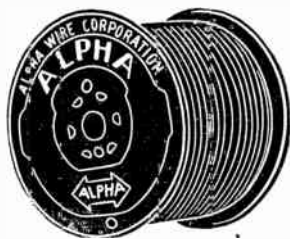
CONSTRUCTION: Single conductor No. 14-41/30 stranded tinned copper, celanese serve, lacquered braid. Colors: red and black.

FILAMENT AND HOOK-UP WIRE

GENERAL PURPOSE: Point to point wiring for all radio and electrical uses.

No.	Put-up	Volt Breakdown (60 cycles)	D.C. Insulation Per Ft. (Megohms)	O.D.
1643	100 Ft. Spool	1000	200	.105"
1645	500 Ft. Spool	1000	200	.105"

Longer Lengths Available.



SOLID TINNED COPPER WIRE

GENERAL PURPOSE: Winding of coils, antennas, point to point, bus bar, etc.

No.	Put-up	Size	O.D.
292	1000 Ft. Spool	10	.103"
289	1000 Ft. Spool	12	.082"
286	1000 Ft. Spool	14	.065"
295	1000 Ft. Spool	16	.051"
296	1000 Ft. Spool	18	.040"
297	1000 Ft. Spool	20	.033"
298	1000 Ft. Spool	22	.025"

Longer Lengths Available.

FLEXIBLE VARNISHED TUBING AND SLEEVING

RADIO VARNISHED TUBING — (Spaghetti). A sleeving with a heavy coat of varnish, in high gloss vivid colors. Average dielectric strength: 5,000 volts.

SATURATED SLEEVING — A fibre yarn sleeving saturated with high grade insulating varnish. Cuts clean and has a smooth interior wall. Average dielectric strength: 2,000 volts.

MAGNETO VARNISHED TUBING—The production of this type of tubing is under rigid control so as to insure a maximum in quality. It is thoroughly impregnated with a varnish of maximum insulating value. It is resistant to heat, oil, gas and acids. Colors are bright and vivid. Average dielectric strength: 7,000 volts.



Tolerances: Sizes:

0 to 2—plus or minus .005"
3 to 13—plus or minus .004"
14 to 20—plus or minus .002"

Lengths—Standard 36"
* Lengths—30"

No.	Approx. I.D.
*12	.085"
.11	.095"
10	.106"
9	.118"
8	.133"
7	.148"
6	.166"
5	.186"
4	.208"

No.	Approx. I.D.
3	.234"
2	.263"
1	.294"
0	.330"
3/8"	.375"
7/16"	.438"
1/2"	.500"
5/8"	.625"

No.	Approx. I.D.
20	.034"
19	.038"
18	.042"
17	.047"
16	.053"
15	.059"
*14	.066"
*13	.076"

Standard Colors: Black, Red, Yellow, Green and Brown
Sizes follow the B & S System of gauging wires. For instance, a No. 10 tubing will fit over a No. 10 bore wire or any wire with an insulation of which the O.D. is equivalent to No. 10 B & S gauge. If in doubt, it is best to submit a sample of the wire or product to be covered.

SPAGHETTI TUBING



A superior varnished tubing for radio work. It will retain its dielectric and flexibility indefinitely. Takes up to No. 14 wire.

Colors: Black, Red, Yellow, Green and Brown

No. 2091 — 30" Lengths

ALL PRICES AND SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

ALPHA WIRE PRODUCTS



TWISTED PAIR TRANSMISSION LINE (WEATHERPROOF BRAID)

CONSTRUCTION: Two conductors No. 22-7/30 stranded tinned copper, 1/32" "Hi-Tension" rubber, color coded, conductors twisted, cotton braid overall, saturated weather-proof finish.

CONSTRUCTION—1135: Two conductors No. 18-16 30 stranded tinned copper, 1/32" "Hi-Tension" rubber, color coded, conductors twisted, cotton braid overall, saturated weather-proof finish.

GENERAL PURPOSE: For inter-com. hook-up. Also suitable for low loss coupling between antenna and receiver as doublet style twisted lead-in.

No.	Put-up	Capacity Bet. Conds. Per Ft.	Frequency (KC)	Surge Impedance (Ohms)	Power Factor Per Cent	O.D.
1146	500 Ft. Spool	21.8 mmf.	3,500	90.2	3.75	.175"
1148	100 Ft. Coil					
1149	50 Ft. Coil					
1135	500 Ft. Spool	21.8 mmf.	3,500	90.2	3.75	.190"

Longer Lengths Available.



CONSTRUCTION: Two conductors parallel, each conductor 7 28 bare copper flexible stranding, low loss polyethylene plastic insulation, smooth satin finish. Standard color: brown.

TELEVISION AND FM TWIN-LEAD CABLE

GENERAL PURPOSE: For use especially in television and FM as the lead-in from the antenna to the receiver.

No.	Put-up	Impedance (Ohms)	Capacity Per Ft.	O.D.
1150	1000 Ft. Spool	300	4.5 mmf.	.070" x .395"
1151	1000 Ft. Spool	150	9.5 mmf.	.060" x .190"
1152	1000 Ft. Spool	75	20.0 mmf.	.070" x .120"

Longer Lengths Available.



CONSTRUCTION: Single conductor No. 22 solid copperweld, polyethylene insulation, bare copper shield, black vinyl plastic jacket overall.

CO-AXIAL CABLE (RG-59U)

GENERAL PURPOSE: Co-axial cable is ideal for television, FM and facsimile reception. Is suitable for very high frequency and ultra high frequency ranges.

No.	Put-up	Nom. Imp. (Ohms)	Nom. Cap.	Max. Oper. Volts RMS	O.D.
1157	1000 Ft. Reel	73	21 mmf./F+	2300	.242"



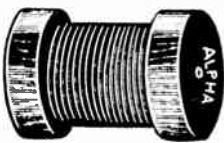
CONSTRUCTION: Single conductor extra flexible No. 14-104 34 copper, paper serve, 3/64" ASTM performance grade rubber, double cotton braid, .040" oil resistant neoprene rubber jacket.

DIATHERMY CABLE

GENERAL PURPOSE: Its extreme flexibility and tough rubber jacket give it long life. This cable is used as a lead on therapy apparatus, charging cable, battery lead, underground cable, etc.

No.	Put-up	O.D.
1623	100 Ft. Spool	.300"
1625	1000 Ft. Reel	.300"

PHOSPHOR BRONZE DIAL CABLE

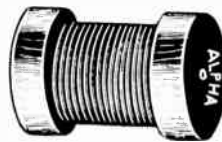


CONSTRUCTION: Made of 42 strands (6 x 7 x .004) genuine phosphor bronze wire with a linen center for extra flexibility. Is guaranteed not to warp or stretch.

No.	Put-up	Tensile Strength	O.D.
1689	25 Ft. Spool	50 lbs.	.036"
1691	100 Ft. Spool	50 lbs.	.036"
1692	500 Ft. Spool	50 lbs.	.036"

Longer Lengths Available.

BRAIDED LINEN DIAL CABLE



CONSTRUCTION: Made of the finest linen obtainable. Composed of a very strong linen center over which is a smooth black braid.

HEAVY

No.	Put-up	Tensile Strength	O.D.
1694	25 Ft. Spool	40 lbs.	.057"
1695	100 Ft. Spool	40 lbs.	.057"
1696	500 Ft. Spool	40 lbs.	.057"

Longer Lengths Available.

LIGHT

No.	Put-up	Tensile Strength	O.D.
1697	25 Ft. Spool	22.5 lbs.	.036"
1698	100 Ft. Spool	22.5 lbs.	.036"
1699	500 Ft. Spool	22.5 lbs.	.036"

Longer Lengths Available.

EXTRA-THIN

No.	Put-up	Tensile Strength	O.D.
1700	25 Ft. Spool	18 lbs.	.027"

Longer Lengths Available.

ALL PRICES AND SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

NOTE: See Page S-10 for ALL ALPHA Prices and Other Information.

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ALPHA WIRE PRODUCTS



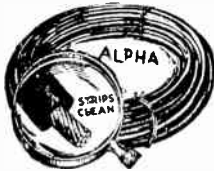
CONSTRUCTION: Single conductor No. 23-20/36 stranded bare copper, extra flexible, covered with a dark brown cotton braid overall.

AC-DC ANTENNA WIRE

GENERAL PURPOSE: Ideal replacement wire for universal midjets, indoor aeriels and loop antennas.

No.	Put-up
1281	25 Ft. Disc
1282	100 Ft. Spool
1283	500 Ft. Spool
1284	1000 Ft. Spool

Longer Lengths Available.



CONSTRUCTION: Stranded tinned or solid tinned copper conductor, insulated with live free stripping rubber, jet black waxed finish overall.

LEAD-IN AND GROUND WIRE

GENERAL PURPOSE: Lead-in, ground, hook-up, all purpose wire.

No.	Put-up	Size	Strand	Insulation	O.D.
1113	1000 Ft. Spool	20	Solid	3/64"	.130"
1114	1000 Ft. Spool	20	10/30	1/32"	.105"
1114E	500 Ft. Spool	20	10/30	1/32"	.105"
1131	500 Ft. Spool	18	16/30	1/32"	.125"

Longer Lengths Available.



All Alpha Aerial Wire is pure electrolytic copper properly annealed to assure required flexibility and tensile strength.

COPPER AERIAL WIRE

STRANDED — BARE

No.	Put-up
101	7/20 100 Ft. Coil
104	7/20 75 Ft. Coil
105	7/20 50 Ft. Coil
106	7/20 1000 Ft. Spool
107	7/22 100 Ft. Coil
110	7/22 75 Ft. Coil
111	7/22 50 Ft. Coil
112	7/22 1000 Ft. Spool
131	7/24 100 Ft. Coil
134	7/24 75 Ft. Coil
135	7/24 50 Ft. Coil
136	7/24 1000 Ft. Spool

SOLID — ENAMEL

No.	Put-up
269	14 100 Ft. Coil
274	14 1000 Ft. Spool
275	12 100 Ft. Coil
280	12 1000 Ft. Spool
281	10 100 Ft. Coil
283	10 1000 Ft. Spool

SOLID — TINNED

STRANDED — TINNED

No.	Put-up
161	7/22 100 Ft. Coil
164	7/22 75 Ft. Coil
165	7/22 50 Ft. Coil
166	7/22 1000 Ft. Spool

No.	Put-up
284	14 100 Ft. Coil
286	14 1000 Ft. Spool
287	12 100 Ft. Coil
289	12 1000 Ft. Spool
290	10 100 Ft. Coil
292	10 1000 Ft. Spool

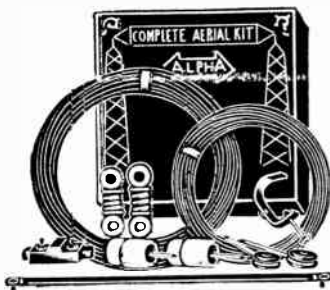


CONSTRUCTION: 7 strands No. 18 Phosphor Bronze.

PHOSPHOR BRONZE AERIAL WIRE

GENERAL PURPOSE: Recommended especially for ship, short wave and transmitting aeriels where high tensile strength is required.

No.	Put-up	Tensile Strength	O.D.
1162	100 Ft. Coil	1000 lbs.	.122"
1163	500 Ft. Spool	1000 lbs.	.122"



AERIAL KITS

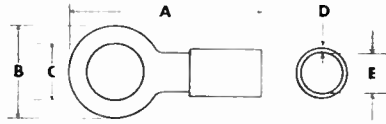
Alpha Aerial Kits are designed to meet the requirements of the various types of radio installations. Each kit is complete and boxed attractively.

No. 301	
50 Ft.	7 Strand Copper Aerial
25 Ft.	Lead-in Wire
2 No.	2022 Insulators
2 No.	2031 Nail Knobs
1 No.	2012 Ground Clamp
1 No.	2002 Lead-in Strip

No. 304	
75 Ft.	7/24 Copper Aerial Wire
25 Ft.	Lead-in Wire
1 No.	2001 Lightning Arrestor
1 No.	2002 Lead-in Strip
2 No.	2031 Nail Knobs
1 No.	2012 Ground Clamp
2 No.	2022 Insulators

ALL PRICES AND SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

Belden Radio WIRE



terminals

Tinned; easy to solder

ILLUSTRATION	Trade Number	Quantity and Package	For Screw Size	DIMENSIONS INCHES		
				Hole Size or Space Opening	Over-all Width	Over-all Length
	8989	*25c pkg. 100 K 1000 K	12	.219	3/8	1 13/16
	8992	*25c pkg. 100 K 1000 K	8	.165	11/32	25/32
	8993	*25c pkg. 100 K 1000 K	10	.191	5/16	9/16
	8995	*25c pkg. 100 K 1000 K	8	.165	5/16	9/16
	8996	*25c pkg. 100 K 1000 K	10	.191	5/16	9/16
	8997	*25c pkg. 100 K 1000 K	8	.165	11/32	11/16
	8998	*25c pkg. 100 K 1000 K	8	.172	3/4	3/2
	8999	*25c pkg. 100 K 1000 K	8	.172	5/16	3/4

100 K

8994 100 Assorted Belden Terminals, including 20-8995, 25-8997, 10-8996, 10-8998, 35-8999

*25c package — Sealed Cellophane Envelopes
20 Envelopes in carton

magnet wire

BELDENAMEL

Size	Turns Per Linear Inch	Turns Per Square Inch	APPROX. LENGTH IN FEET	
			1/4-Lb Spool	1/2-Lb Spool
14	15.2	231	....	40
16	19.1	365	....	62
18	23.9	571	....	100
20	29.9	894	....	160
22	37.4	1399	....	250
24	46.9	2200	....	400
26	59.0	3481	....	638
28	73.8	5446	505	1010
30	92.2	8501	806	1610
32	114.0	12996	1270	2540
34	144.0	20736	2015	4030
36	180.0	32400	3200	6400
38	225.0	50625	5070	....
40	290.0	84100	8050	....

SINGLE COTENAMEL

14	14.1	199	....	39
16	17.4	303	....	61
18	21.4	458	....	97
20	26.1	681	....	154
22	31.9	1018	....	241
24	38.6	1490	....	376
26	46.4	2153	295	590
28	55.1	3036	458	916
30	64.7	4186	710	1420
32	74.6	5565	1090	2180
34	86.6	7500	1606	....
36	97.6	9526	2425	....

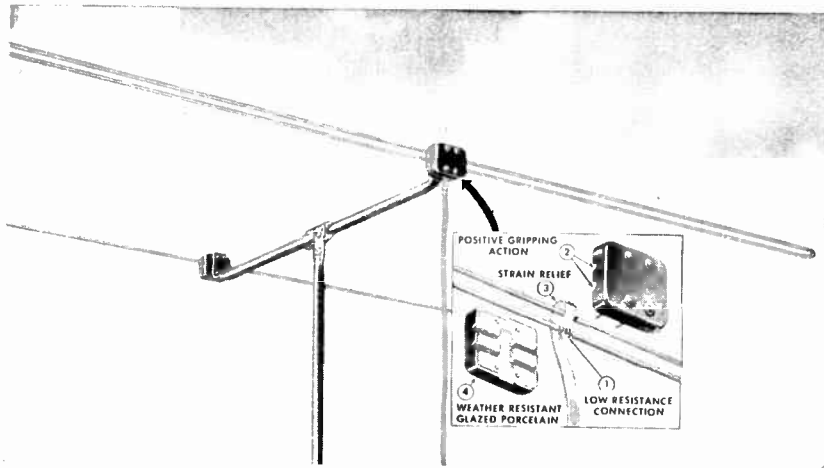
SINGLE NYLTENAMEL

22	34.9	1218	....	248
24	43.1	1857	....	390
26	52.9	2798	309	618
28	64.5	4160	487	974
30	78.1	6059	770	1540
32	93.4	8723	1202	2404
34	113.0	12769	1892	....
36	134.2	18009	2854	....

†CK—Coiled in carton K—Carton CR—Crate reel S—Spool C—Coil SK—Spooled in carton

Belden Manufacturing Company • Chicago, Illinois

Belden FM antenna systems



- Highly efficient
- Broad response
- Low standing wave ratio
- Perfect matching
- Mechanically strong
- Light in weight
- Factory assembled
- Weather resistant
- Wind resistant

Trade Number	†Pkg.	Description	Net Weight in Lb	Contents
FM DIPOLE ANTENNA				
8320	1K	The Belden FM Dipole Antenna System is scientifically engineered and may be used on all FM radios. It can be used for Standard Broadcast as well as FM reception. Its performance has been proven in laboratory and field service tests. Careful electrical design has resulted in excellent response over the entire FM band. Maximum signal and trouble-free reception are assured.	2.5	1 - 65' 300-OHM Transmission Line 8225 1 - Aluminum Antenna Element 1 - Porcelain Junction Block 1 - 5' Aluminum Standard 2 - Stand-off Insulators 8126 2 - Mounting Straps 1 - Instruction Sheet
FM REFLECTOR				
8321	1K	For greater radio signal strength, use the Belden FM Reflector with the No. 8320 Belden FM Dipole Antenna to form an antenna-reflector array. The addition of a reflector improves FM reception for any installation and is necessary in locations where the radio signal is weak, for example, due to its distance from radio stations or its location among buildings. Also, a reduction in interference may be effected to the rear or reflector side of the antenna.	.8	1 - Aluminum Reflector Element 1 - Porcelain Junction Block 1 - Aluminum Cross Member 1 - Instruction Sheet

*Complete installation instructions accompany each Belden System.

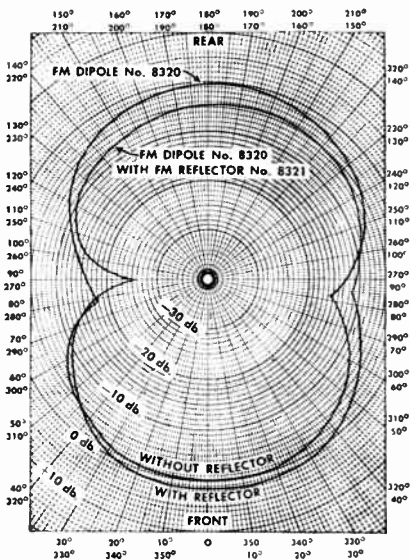


Fig. 1

FIGURE 1. FIELD PATTERNS. Using the field pattern for the dipole antenna as a reference, the gain and attenuation are shown with the reflector added. The forward gain is 1.8 db., and the attenuation to the rear is 4.2 db. or a directivity improvement of 6 db. over the dipole antenna alone.

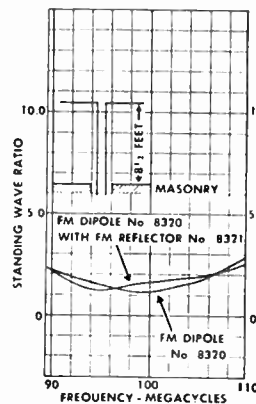


Fig. 2

FIGURE 2. STANDING WAVE RATIOS. The graph indicates that almost perfect impedance matching exists between the dipole antenna and the transmission cable. The minimum standing wave ratio for both the dipole antenna alone and the dipole an-

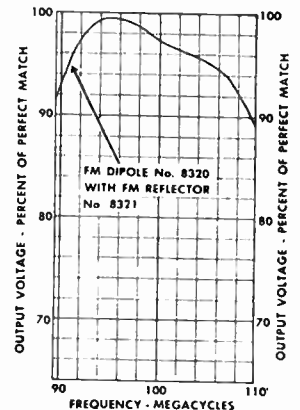
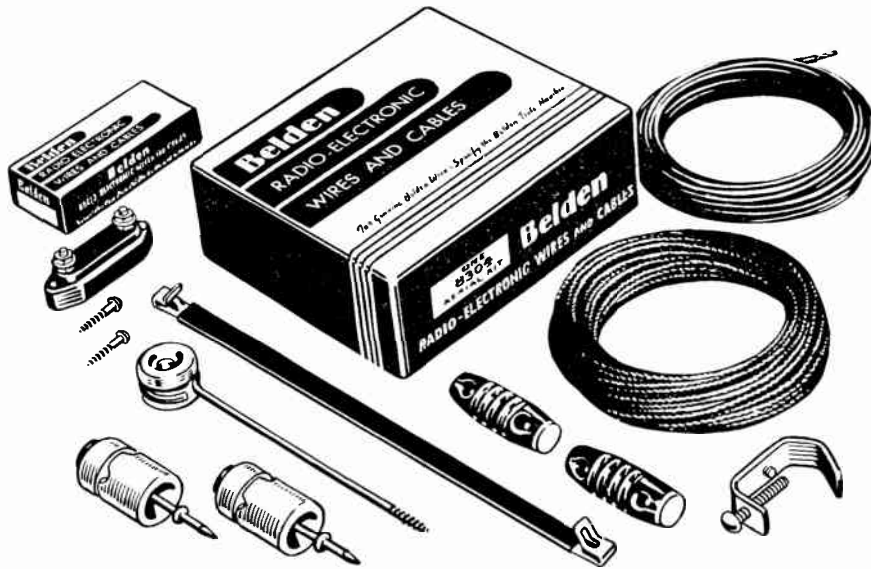


Fig. 3

tenna with reflector lies between 1.1 and 1.2. **FIGURE 3. OUTPUT VOLTAGE - PER CENT OF PERFECT MATCH.** The output voltage is expressed as per cent of perfect match. The graph indicates a high order of efficiency over the entire FM band.

†CK—Coiled in carton K—Carton CR—Crate reel S—Spool C—Coil SK—Spooled in carton

Belden • antenna kits • accessories



Trade Number	†Pkg.	DESCRIPTION
8304	1 K	1—75' 7x22 Beldenamel Antenna Wire 8005
		1—35' 16 Stranded Lead-in Wire 8201
		1—Arrestor 8896
		1—Type "C" Ground Clamp 8897
		1—12" Lead-in Strip 8890
		2—Antenna Insulators 8103
		2—Porcelain Nail-on-knobs 8102
		1—Stand-off Insulator 8104
1—Instruction Sheet		
8305	1 K	1—75' 7x22 Bare Copper Antenna Wire 8000
		1—35' 16 Stranded Lead-in Wire 8201
		1—Arrestor 8896
		1—Type "C" Ground Clamp 8897
		1—12" Lead-in Strip 8890
		2—Antenna Insulators 8103
		2—Porcelain Nail-on-knobs 8102
		1—Stand-off Insulator 8104
1—Instruction Sheet		
8309	1 K	1—50' 7x24 Bare Copper Antenna Wire 8002
		1—25' 18 Stranded Lead-in Wire 8200
		1—Arrestor 8896
		1—Type "C" Ground Clamp 8897
		2—Antenna Insulators 8103
		1—Porcelain Nail-on-knob 8102
		1—Stand-off Insulator 8104
		1—Instruction Sheet

litz wire

8817 100' S For rewinding antenna primaries and for hand-wound r-f coils. 7x41 Beldenamel with 2 wraps of nylon.


arresters • ground clamps • lead-in strips • insulators

ILLUSTRATION	Trade Number	DESCRIPTION
	8895 1 K	Belden doublet-type bakelite arrester. Listed as approved by Underwriters
	8896 1 K	Belden single-type bakelite arrester. Listed as approved by Underwriters
	8892 25 K	Ground clamp—8 1/4" long
	8897 25 K	"C" type ground clamp. Fits pipe up to 1 3/8" O.D.
	8104 10 K	7" Stand-off insulator
	8890 1 K	12" Single lead-in strip—rubber insulated—clips both ends
	8216 10 K	3" Stand-off insulator for flat transmission line
	8102 10 K	Porcelain nail-on-knobs
	8103 10 K	Porcelain insulators, 2 1/2" over-all length


†CK—Coiled in carton K—Carton CR—Crate reel S—Spool C—Coil SK—Spooled in carton

Belden • aerial wire • lead-in wire

shielded lead-in wire

ILLUSTRATION	Trade Number	Length and †Package	Size	DESCRIPTION	Stranding	Insulation Thickness (inches)	Finished O D (inches)
	8206	250' S	18	Tinned copper, flexible stranding; rubber insulation; tinned copper braid shield	7x27	.040"	.155

lead-in wire

	8200	100' S 500' S 1000' S	18	Tinned copper, flexible stranding; rubber insulation	7x27	.040	.126
	8201	50' CK 100' S 250' S 500' S 1000' S	16	Tinned copper, flexible stranding; rubber insulation	7x25	.040	.135

voice coil lead wire



8127	10***	25	Bare copper wire braided	32x40	.024
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***Packaged 10 ft on card, 5 cards in carton.

indoor aerial wire—EXTRA FLEXIBLE



8014	25'* 500' SK	25	Tinned copper, flexible stranding; chrome vinyl plastic insulation	13x36	.010	.044
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*Packaged 25 ft on card, 5 cards in carton.

aerial wire (FULL GAUGE AND WEIGHT) STRANDED BARE COPPER

Trade Number	Length and †Package	Size
8000	50' C 75' C 100' C 1000' S	7x22

8002	50' C 75' C 100' C 1000' S	7x24
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STRANDED BELDENAMEL

8005	75' CK 100' CK 1000' S	7x22
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8006	100' CK 1000' S	7x20
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SOLID TINNED COPPER (Bus Bar Wire)

Trade Number	Length and †Package	Size
8011	100' CK	12

8012	100' CK	14
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8013	100' CK	16
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SOLID BELDENAMEL

8008	100' CK 200' S 500' S	12
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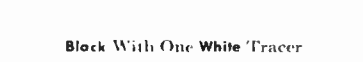

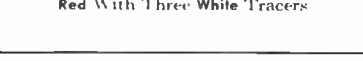






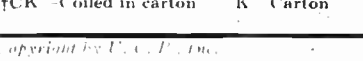

8009	100' CK 500' S	14
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†CK Coiled in carton K—Carton CR—Crate Reel S—Spool C—Coil SK—Spooled in carton

Belden • auto and aircraft radio wires and shielding

Belden supplies a complete line of auto radio wires and shielding to handle every wire requirement in installation and servicing.

In installations of this type, the use of the correct wire is particularly important. Applications are indicated in the listings below.

ILLUSTRATION AND COLOR	Trade Number	Lengths and Package	A.W.G.	GENERAL CONSTRUCTION	Stranding	Finished Cable OD (inches)	Nominal Capacitance Per Ft (mmf)
 Black	8664	100' S	28	.013" Tinned steel wire, solid; cellulose yarn braid; polyethylene insulation; tinned copper braid shield; black vinyl plastic jacket	solid	.250	14.5
 Black	8667	100' S	16	Tinned copper, flexible stranding; rubber insulation; cotton braid; lacquer coating	19x29	.280	
 Black	8665	100' S	19	Stainless steel alloy, flexible stranding; rubber insulation; glass yarn web braid; neoprene jacket; tinned copper braid shield; neoprene jacket	6x.013"+ 1x.011" steel alloy	.365	
 Black, Blue, Green, Red, Yellow, White	8833	100' S 1000' S	18	Tinned copper, flexible stranding; paper wrap; rubber insulation; cellulose acetate yarn braid; lacquer coating	16x30	.136	
 Black With One White Tracer	8652	100' S	16	Tinned copper, flexible stranding; cellophane wrap; rubber insulation; black cotton braid with one white tracer; lacquer coating	19x29	.140	
 Green With Two White Tracers	8651	100' S	14	Same as 8652 except green cotton braid with two white tracers	19x27	.165	
 Red With Three White Tracers	8650	100' S	12	Same as 8652 except red cotton braid with three white tracers	19x25	.195	
 Black	8656	100' S	16	Tinned copper, flexible stranding; cellophane wrap; rubber insulation; cotton braid; blue lacquer coating; tinned copper braid shield	19x29	.170	
 Black	8655	100' S	14	Tinned copper, flexible stranding; cellophane wrap; rubber insulation; cotton braid; blue lacquer coating; tinned copper braid shield	19x27	.195	
 Black	8654	100' S	12	Tinned copper, flexible stranding; cellophane wrap; rubber insulation; cotton braid; blue lacquer coating; tinned copper braid shield	19x25	.225	
 Black	8660	50' SK 250' S		Tinned copper braid in form of tubing	96x34	13/64 I D	
 Black	8668	50' SK 250' S		Tinned copper braid in form of tubing	120x34	1 8 I D	
 Black	8661	50' SK 250' S		Tinned copper braid in form of tubing	192x34	3 8 I D	
 Black	8669	50' S 250' S		Tinned copper braid in form of tubing	336x34	1 2 I D	
 Black	8662	50' S 250' S		Tinned copper braid in form of tubing	576x34	25 32 I D	
 Black	8657	50' CK		Tinned copper braid shield over fabric loom		3 16 I D	
 Black	8658	50' CK		Tinned copper braid shield over fabric loom		5 16 I D	




†CK - Coiled in carton K - Carton CR - Crate reel S - Spool C - Coil SK - Spooled in carton

Belden • microphone cables


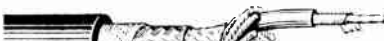
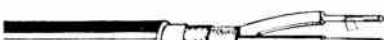
Performance and appearance are the outstanding features built into Belden microphone cables. Polyethylene insulation is used for outstanding dielectric properties and vinyl plastic jackets for protection.

Dielectrically, Belden microphone cables have low capacitance, high insulation resistance, and low attenuation at audio frequencies. In addition, they provide resistance to physical abuse, aging, and moisture.

plastic microphone cable

ILLUSTRATION AND APPLICATION	Trade Number	Lengths †Package and Color	A. W. G. and No. Con- dr s.	GENERAL CONSTRUCTION	Stranding	Fin- ished Cable O D (inches)	Nom. Capaci- tance Per Ft (mmf)
 For lapel microphones	8411	25' CK 100' S 500' S Chrome	25-1	Tinned copper and tinned steel, flexible stranding; cellulose yarn braid; polyethylene insulation; tinned copper braid shield; chrome vinyl plastic jacket	3x33 copper plus 4x33 steel	.140	40.
 For crystal, ribbon and carbon microphones	8401	25' CK 50' CK 100' S 500' S Chrome	25-1	Tinned copper and tinned steel, flexible stranding; cellulose yarn braid; polyethylene insulation; tinned copper braid shield; chrome vinyl plastic jacket	3x33 copper plus 4x33 steel	.200	25.
 For carbon microphones	8422	25' CK 50' CK 100' S 500' S Chrome	22-2	Tinned copper, flexible stranding; polyethylene insulation, color coded; conductors cabled with fillers; rayon braid; tinned copper braid shield; chrome vinyl plastic jacket	16x34	.235	**28.

rubber microphone cable

 For crystal, ribbon and carbon microphones	8410	25' CK 50' CK 100' S 500' S Black	25-1	Tinned copper and tinned steel, flexible stranding; cellulose yarn braid; waxed; rubber insulation; rayon braid; tinned copper braid shield; rayon wrap; black rubber jacket	3x33 copper plus 4x33 steel	.245	33.
 For carbon microphones	8412	25' CK 50' CK 100' S 500' S Black	20-2	Tinned copper, flexible stranding; cotton wrap; rubber insulation, color coded; conductors cabled with fillers; rayon braid; tinned copper braid shield; cotton wrap; black rubber jacket	26x34	.280	**63.
 For carbon microphones	8423	50' CK 250' S Black	20-3	Tinned copper, flexible stranding; cotton wrap; rubber insulation, color coded; conductors cabled; rayon braid; tinned copper braid shield; cotton wrap; black rubber jacket	26x34	.280	††54.

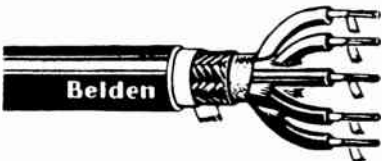
**Between one conductor and other conductor connected to shield. Nominal capacitance between conductors only, 16 mmf per foot.

***Between one conductor and other conductor connected to shield. Nominal capacitance between conductors only, 36 mmf per foot.

††Between one conductor and other conductors connected to shield. Nominal capacitance between conductors only, 41 mmf per foot.

shielded multiple conductor cables

Belden multiple conductor cables are developed for long service life, excellent mechanical and electrical characteristics, and uniform quality. These cables are used for a multitude of applications including power and interconnecting cords on radio receivers, electronic devices, speakers, analyzer test equipment, remote control circuits, and press-to-talk microphone circuits.







ILLUSTRATION	Trade Number	Lengths †Package and Color	A. W. G. and No. Con- dr s.	GENERAL CONSTRUCTION	Stranding	Nom. Insula- tion Thick. (inches)	Nom. Jacket Thick. (inches)	Fin- ished Cable O D (inches)
	8424	50' CK 250' S Black	20-4	Tinned copper, flexible stranding; cotton wrap; rubber insulation, color coded; conductors cabled; rayon braid; tinned copper braid shield; cotton wrap; black rubber jacket	26x34	.020	.040	.305
	8425	50' CK 250' S Black	20-5	Same as 8424 except five conductors	26x34	.020	.040	.335
	8426	100' S Black	20-6	Same as 8424 except six conductors	26x34	.020	.040	.355
	8427	100' S Black	20-7	Same as 8424 except seven conductors	26x34	.020	.040	.370

*Also used as microphone cable.

†CK—Coiled in carton K—Carton CR—Crate reel S—Spool C—Coil SK—Spooled in carton

Belden • multiple conductor cables






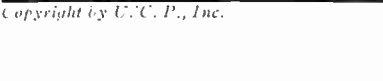

RUBBER-JACKETED PORTABLE CORD

ILLUSTRATION	Trade Number	Lengths of Package and Color	A. W. G. and No. Condrs.	GENERAL CONSTRUCTION	Stranding	Insulation Thick. (inches)	Jacket Thick. (inches)	Finished Cable O. D. (inches)
 Underwriters' Approved Type SV	8452	100' S 500' S Black	18-2	Bare copper, flexible stranding; cotton wrap; rubber insulation, color coded; conductors cabled with fillers; cotton wrap; black rubber jacket	41x34	1/64	1/32	.245
 Underwriters' Approved Type POSJ-64	8453	100' S 500' S Black	18-3	Bare copper, flexible stranding; cotton wrap; rubber insulation, color coded; conductors cabled with fillers; cotton wrap; black rubber jacket	41x34	1/64	1/32	.275
 Underwriters' Approved Type POT-64	8454	100' S 500' S Black	18-4	Same as 8453 except four conductors	41x34	1/64	1/32	.265
 Belden	8455	100' S 250' S Black	20-3 18-2	Bare copper, flexible stranding; cotton wrap; rubber insulation, color coded; conductors cabled with fillers; cotton wrap; black rubber jacket	26x34 41x34	1/64	1/32	.285
 Underwriters' Approved Type POSJ-64	8462	100' S 250' S Brown	18-2	Bare copper, flexible stranding; cotton wrap, color coded; parallel conductors with rubber insulation and jacket integral	41x34	1/32		.123x .223
 Underwriters' Approved Type POT-64	8888	250' S Black	18-2	One bare and one tinned copper conductor, flexible stranding; parallel conductors with vinyl plastic insulation and jacket integral	41x34	1/32		.114x .231

Flexible, light weight and small diameter.
Applications include control, annunciator, and communications circuits.

BRAIDED PLASTIC-INSULATED CABLE





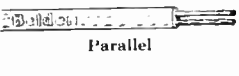
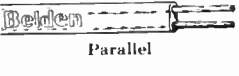
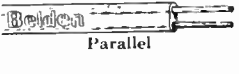







(See intercommunications cables, page 12, for shielded types.)

 Braid	8443	100' S 500' S Brown	22-3	Tinned copper, flexible stranding; vinyl plastic insulation, color coded; conductors cabled; over-all brown cotton braid	7x30	.010		.140
 Braid	8444	100' S 500' S Brown	22-4	Same as 8443 except four conductors	7x30	.010		.153
 Braid	8445	100' S 500' S Brown	22-5	Same as 8443 except five conductors	7x30	.010		.167
 Braid	8446	100' S Brown	22-4 16-2	Tinned copper, flexible stranding; vinyl plastic insulation, color coded; conductors cabled; over-all brown cotton braid	7x30 19x29	.010 .018		.218
 Braid	8447	100' S Brown	22-5 16-2	Same as 8446 except seven conductors	7x30 19x29	.010 .018		.235
 Braid	8448	100' S Brown	22-6 16-2	Same as 8446 except eight conductors	7x30 19x29	.010 .018		.240
 Braid	8449	100' S Brown	22-7 16-2	Same as 8446 except nine conductors	7x30 19x29	.010 .018		.260

†CK—Coiled in carton K—Carton CR—Crate reel S—Spool C—Coil SK—Spooled in carton

Belden • transmission line cables

NOMINAL ELECTRICAL PROPERTIES

ILLUSTRATION AND TYPE	Trade Number	Lengths and Package	A.W.G.	GENERAL CONSTRUCTION	Stranding	Finished Cable O.D. (inches)	Frequency (mc)	Attenuation Per 100 Ft (decibels)	Impedance (ohms)	Velocity of Propagation (per cent)	Capacitance Per Ft (mmf)	Puncturing Voltage (volts)
 Coaxial	8216	50' S 250' S	14	Tinned copper, flexible stranding; low-loss rubber insulation; tinned copper braid shield; rubber jacket	19x27	.460	.5 1.0 5.0 10. 50. 100.	.30 .51 1.8 2.9 10.0 17.0	72.	56.	37.	30000
 Twisted Pair	8204	500' S	18	Tinned copper, flexible stranding; cotton wrap; low-loss rubber insulation, color coded; two conductors cabled; white cotton braid treated with weather-resistant compound	7x26	.190	.5 1.0 5.0 10. 50. 100.	.37 .53 1.4 2.3 7.4 12.3	72.	61.	21.	
 Twisted Pair (Shielded)	8209	500' S	18	Tinned copper, flexible stranding; cotton wrap; low-loss rubber insulation, color coded; two conductors cabled; paper wrap; tinned copper braid shield; white cotton braid, treated with weather-resistant compound	7x26	.235	.5 1.0 5.0 10. 50. 100.	.91 1.1 2.1 3.2 9.5 14.9	72.	57.	32.*	
 Twisted Pair	8205	500' S	22	Tinned copper, flexible stranding; paper wrap; rubber insulation, color coded; two conductors cabled; black cotton braid, treated with weather-resistant compound	7x30	.175						
 Parallel	8222	100' S 500' S	20	One bare and one tinned copper conductor, flexible stranding; conductors parallel; polyethylene plastic insulation	7x28	.075 x.128	50. 100. 200. 300. 400. 500.	5.3 7.7 11.0 13.6 15.9 17.8	72.	84.	20.7	
 Parallel	8223	100' S 500' S	20	Same as 8222	7x28	.075 x.143	50. 100. 200. 300. 400. 500.	3.5 5.1 7.2 8.9 10.3 11.5	100.	86.	16.3	
 Parallel	8224	100' S 500' S	20	Same as 8222	7x28	.075 x.182	50. 100. 200. 300. 400. 500.	1.9 2.8 4.2 5.4 6.4 7.3	150.	91.	9.8	
 Parallel	8225	100' S 500' S 1000' S	20	Same as 8222	7x28	.075 x.390	50. 100. 200. 300. 400. 500.	.72 1.1 1.7 2.2 2.7 3.1	300.	98.	4.6	
 Parallel	8235	100' S 500' S	18	Bare copper, flexible stranding; conductors parallel; polyethylene plastic insulation	7x26	.200 x.530	50. 100. 200. 300. 400. 500.	.70 1.10 1.73 2.28 2.74 3.18	300.	82.	5.8	35000
 Parallel	8210	100' S 500' S	13	Bare copper, flexible stranding; conductors parallel; polyethylene plastic insulation	7x21	.166 x.278	50. 100. 200. 300. 400. 500.	2.2 3.1 4.4 5.5 6.3 7.0	72.	85.	22.	15000
 Parallel (Shielded)	8226	100' S 500' S	20	One bare and one tinned copper conductor, flexible stranding; conductors parallel; polyethylene plastic insulation; tinned copper braid shield; black vinyl plastic jacket	7x28	.190 x.310	50. 100. 200. 300. 400. 500.	5.8 8.3 12.0 14.8 17.2 19.4	100.	64.	18.2*	
 Twisted Pair (Shielded)	8227	100' S 250' S	20	One bare and one tinned copper conductor; flexible stranding; polyethylene plastic insulation; two conductors cabled; polyethylene plastic jacket; tinned copper braid shield; black vinyl plastic jacket	7x28	.335	50. 100. 200. 300. 400. 500.	2.6 4.1 6.4 8.4 10.2 11.8	100.	62.	22.*	
 Coaxial	8229	100' S 500' S	22	Bare copper, solid; polyethylene plastic insulation; tinned copper braid shield; black vinyl plastic jacket	solid	.242	50. 100. 200. 300. 400. 500.	3.2 5.0 7.7 10.0 12.1 14.1	72.	67.	20.5	20000
 Coaxial	8228	100' S 500' S	20	Bare copper, solid; polyethylene plastic insulation; tinned copper braid shield; black vinyl plastic jacket	solid	.195	50. 100. 200. 300. 400. 500.	2.75 4.45 7.2 9.6 11.8 13.6	52.	66.	28.5	20000

*Capacitance between conductors.

†CK—Coiled in carton

K—Carton

CR—Crate reel

S—Spool

C—Coil



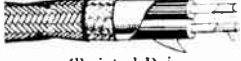

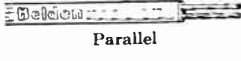

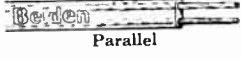







SK—Spooled in carton

Belden transmission cables are available for every receiving and low power transmitting antenna application. Coaxial, twisted pair, and parallel type lines are represented.

These cables are designed to meet exacting electrical requirements and are mechanically strong, weather re-

sistant, and give long service life. Cables constructed with polyethylene insulation are especially suitable for very high frequency (VHF) and ultra high (UHF) ranges where the losses in ordinary types of transmission line cables are excessive.

TRANSMISSION LINE CABLE APPLICATIONS

	Lengths and Package	A W G.	Trade Number	ILLUSTRATION AND TYPE
72-Ohm cable for use with receiving and low power transmitting antenna at low frequencies. Also for heavy-duty high-voltage leads.	50' S 250' S	14	8216	 Coaxial
72-Ohm cable for use with doublet receiving antenna at low frequencies.	500' S	18	8204	 Twisted Pair
72-Ohm shielded cable for use with doublet receiving antenna at low frequencies to reduce noise pick-up. Also used for long runs in extension speaker installations.	500' S	18	8209	 Twisted Pair (Shielded)
Inexpensive cable for use with doublet receiving antenna at low frequencies. Also used for extension speaker and control circuits.	500' S	22	8205	 Twisted Pair
72-Ohm cable for use with receiving antenna at high frequencies.	100' S 500' S	20	8222	 Parallel
100-Ohm cable for use with receiving antenna, matching transformer, connecting link between electronic units, and experimental applications at high frequencies.	100' S 500' S	20	8223	 Parallel
150-Ohm cable for use with receiving antenna, matching transformer and experimental applications at high frequencies.	100' S 500' S	20	8224	 Parallel
300-Ohm cable especially recommended for use with television and FM receiving antenna. Exceptionally low losses at high frequencies.	100' S 500' S 1000' S	20	8225	 Parallel
300-Ohm heavy-duty cable especially recommended for use with television and FM receiving antenna. Also for low power transmitting antenna. Exceptionally low losses at high frequencies.	100' S 500' S	18	8235	 Parallel
72-Ohm cable for use with low power transmitting antenna at high frequencies.	100' S 500' S	13	8210	 Parallel
100-Ohm shielded cable for use with television and FM antenna to reduce noise pick-up.	100' S 500' S	20	8226	 Parallel (Shielded)
100-Ohm shielded cable for use with television and FM antenna in extremely noisy locations.	100' S 250' S	20	8227	 Twisted Pair (Shielded)
72-Ohm cable for use with television antenna.	100' S 500' S	22	8229	 Coaxial
52-Ohm cable for radio frequency transmission, video, test equipment, and pulse transmission.	100' S 500' S	20	8228	 Coaxial

Belden • hook-up and lead wires


There is a Belden hook-up and lead wire construction for every service requirement—for receivers, transmitters,

amplifiers, rectifiers, aircraft radio, geophysical instruments, and in all other types of electric equipment.

PLASTIC INSULATED

General-use hook-up wire and as leads for radio components such as transformers, chokes, and controls. Furnished in the eight following colors: **Black, Blue, Green, Red, Yellow, White, Brown, and Orange. SPECIFY COLOR.**

Wires with $\frac{1}{16}$ " plastic insulation are designed for use within the chassis of radio receivers, amplifiers, instruments, controls, and other electronic devices. Wires with .025" plastic insulation are designed for use inside or outside the chassis but within the radio cabinet. The operating temperature limit for these wires is 80 C (176 F).

ILLUSTRATION	Trade Number	Lengths and Package	A.W.G.	GENERAL CONSTRUCTION AND COLORS	Stranding	Insulation Thick. (inches)	Finished O.D. (inches)	Nominal *D-C Ins. Res. per Ft. (meg-ohms)	Nominal **Break-down Voltage (volts)
	8902	25' CK 100' SK 1000' S	24	Tinned copper, solid; vinyl plastic insulation	solid	.015	.054	5000	8000
	8900	25' CK 100' SK 1000' S	22	Colors: Black, Yellow, Blue, White, Green, Brown, Red, Orange	solid	.015	.059	5000	8000
	8901	25' CK 100' SK 1000' S	20		solid	.015	.066	5000	8000
	8907	25' CK 100' SK 1000' S	24	Tinned copper, solid; vinyl plastic insulation	solid	.025	.074	5000	12000
	8908	25' CK 100' SK 1000' S	22	Colors: Black, Yellow, Blue, White, Green, Brown, Red, Orange	solid	.025	.079	5000	12000
	8909	25' CK 100' SK 1000' S	20		solid	.025	.086	5000	12000



8858



Black, Blue, Green, Red, Yellow, White, Brown, Orange



8859

DISPLAY ASSORTMENT

Contents: 6 Rolls 8908. Size 22 solid vinyl plastic. One each **Black, Blue, Green, Red, Yellow, and White.**

8903	25' CK 100' SK 1000' S	24	Tinned copper, flexible stranding; vinyl plastic insulation	7x32	.015	.058	5000	8000
8904	25' CK 100' SK 1000' S	22	Colors: Black, Yellow, Blue, White, Green, Brown, Red, Orange	7x30	.015	.064	5000	8000
8905	25' CK 100' SK 1000' S	20		10x30	.015	.075	5000	8000
8911	25' CK 100' SK 1000' S	24	Tinned copper, flexible stranding; vinyl plastic insulation	7x32	.025	.078	5000	12000
8912	25' CK 100' SK 1000' S	22	Colors: Black, Yellow, Blue, White, Green, Brown, Red, Orange	7x30	.025	.084	5000	12000
8913	25' CK 100' SK 1000' S	20		10x30	.025	.093	5000	12000

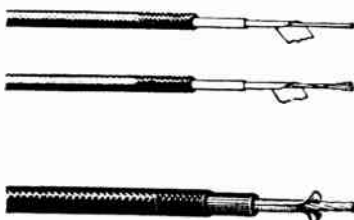
DISPLAY ASSORTMENT

Contents: 6 Rolls 8912. Size 22 flexible; vinyl plastic. One each **Black, Blue, Green, Red, Yellow, and White.**

General-use hook-up wire and as leads for transformers, speakers, and controls, in audio and power circuits. Furnished in the following 6 colors: **Black, Blue, Green, Red, Yellow, and White. SPECIFY COLOR.**

RUBBER-INSULATED PUSH-BACK

Colors: **Black, Blue, Green, Red, Yellow, White**



8836	25' CK 100' SK 1000' S	22	Tinned copper, solid; cotton wrap; unvulcanized rubber insulation; cellulose acetate yarn braid; fungus-resistant lacquer coating	solid	.010	.068	2000	2000
8837	25' CK 100' SK 1000' S	20		solid	.010	.075	2000	2000
8835	25' CK 100' SK 1000' S	22	Tinned copper, flexible stranding; cotton wrap, unvulcanized rubber insulation; cellulose acetate yarn braid; fungus-resistant lacquer coating	7x30	.010	.073	2000	2000
8838	25' CK 100' SK 1000' S	20		10x30	.010	.081	2000	2000
8834	100' S 1000' S	20	Tinned copper, flexible stranding; paper wrap, rubber insulation; cellulose acetate yarn braid; fungus-resistant lacquer coating	10x30	.031	.127	10000	8000
8833	100' S 1000' S	18		16x30	.031	.136	10000	8000

*Measurements for d-c insulation resistance were made by means of a megohm bridge at 300 volts on specimens in mercury after subjection to 90% relative humidity and 100 F for 24 hours.



**Measurements for insulation breakdown were made on specimens in mercury by application of gradually increasing 60-cycle a-c potential.

†CK—Coiled in carton K—Carton CR—Crate reel S—Spool C—Coil SK—Spooled in carton

Belden • hookup and lead wires

R-F PUSH-BACK WIRE CELLULOSE ACETATE BRAID WAXED

Used on r-f circuits where low-loss properties are required. Furnished in following colors: **Black, Blue, Green, Red**, each with **White Tracer**, and **Yellow** and **White**, each with **Black Tracer**. SPECIFY COLOR.


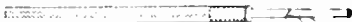

ILLUSTRATION AND COLORS	Trade Number	Lengths and Package	A.W.G.	GENERAL CONSTRUCTION AND COLORS	Stranding	Insulation Thick. (inches)	Finished OD (inches)	Nominal *D-C Ins. Res. Per Ft. (meg-ohms)	Nominal **Break-down Voltage (volts)
	8843	25' CK 100' SK 1000' S	24	Tinned copper, solid; two cellulose acetate yarn braids, waxed	solid		.055	1000	1000
	8842	25' CK 100' SK 1000' S	22	Colors: Black —White Tracer Blue —White Tracer Green —White Tracer Red —White Tracer Yellow —Black Tracer White —Black Tracer	solid		.060	1000	1000
	8841	25' CK 100' SK 1000' S	20	Colors: Black —White Tracer Blue —White Tracer Green —White Tracer Red —White Tracer Yellow —Black Tracer White —Black Tracer	solid		.067	1000	1000
	8861	25' CK 100' SK 1000' S	18		solid		.075	1000	1000
	8863	25' CK 100' SK 1000' S	16		solid		.086	1000	1000

DISPLAY ASSORTMENT

8860	Contents: 2 Rolls 8941, Size 20 solid; cellulose acetate wrap and braid lacquered, Black and Red ; 2 rolls 8943, Size 20 flexible; cellulose acetate wrap and braid lacquered, Blue and Green ; 2 rolls 8912, Size 22 flexible; vinyl plastic, Yellow and White .						
8808	25' CK 100' SK 1000' S	24	Tinned copper, flexible stranding; two cellulose acetate yarn braids, waxed	7x32	.059	1000	1000
8810	25' CK 100' SK 1000' S	22	Colors: Black —White Tracer Blue —White Tracer Green —White Tracer Red —White Tracer Yellow —Black Tracer White —Black Tracer	7x30	.065	1000	1000
8839	25' CK 100' SK 1000' S	20	Colors: Black —White Tracer Blue —White Tracer Green —White Tracer Red —White Tracer Yellow —Black Tracer White —Black Tracer	10x30	.072	1000	1000
8844	25' CK 100' SK 1000' S	18		16x30	.092	1000	1000
8862	25' CK 100' SK 1000' S	16		26x30	.095	1000	1000

HOOKUP WIRE CELLULOSE BRAID LACQUERED

Furnished in following colors: **Black, Blue, Green, Red, Yellow**, and **White**. (Nos. 8941 and 8943 also furnished in **Brown** and **Orange**.) SPECIFY COLOR.

	8941	25' CK 100' SK 1000' S	20	Tinned copper, solid; heavy cellulose acetate yarn wrap; cellulose acetate yarn braid; fungus-resistant lacquer coating	solid		.072	200	1000
Black, Blue, Green, Red, Yellow, White, Brown, Orange	8945	25' CK 100' SK 1000' S	18		solid		.080	200	1000
Black, Blue, Green, Red, Yellow, White	8943	25' CK 100' SK 1000' S	20	Tinned copper, flexible stranding; heavy cellulose acetate yarn wrap; cellulose acetate yarn braid; fungus-resistant lacquer coating	10x30		.077	200	1000
	8947	25' CK 100' SK 1000' S	18		16x30		.087	200	1000
Black, Blue, Green, Red, Yellow, White	8942	25' CK 100' SK 1000' S	16		26x30		.099	200	1000
	8938	25' CK 100' SK 500' S	14	(2 colors only; Red or Black)	41x30		.115	200	1000




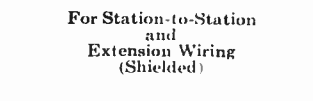

DISPLAY ASSORTMENT

8864	Contents: 6 Rolls 8941, Size 20 solid; cellulose acetate wrap and braid lacquered. One each Black, Blue, Green, Red, Yellow , and White .							
8865	Contents: 6 Rolls 8943, Size 20 flexible; cellulose acetate wrap and braid lacquered. One each Black, Blue, Green, Red, Yellow , and White .							
8885	Used in circuits where shielded grid return is required and to shield a circuit conductor from stray fields. 25' CK 100' SK 500' S	20	Tinned copper, flexible stranding; rubber insulation; cellulose acetate yarn braid; fungus-resistant lacquer coating; tinned copper braid shield	10x30	.015	.117	5000	4000

SHIELDED HOOKUP WIRE

*Measurements for d-c insulation resistance were made by means of a megohm bridge at 300 volts on specimens in mercury after subjection to 90% relative humidity and 100 F for 24 hours.

**Measurements for insulation breakdown were made on specimens in mercury by application of gradually increasing 60-cycle a-c potential.


ILLUSTRATION AND APPLICATION	Trade Number	Lengths and Package	A. W. G. and No. Condrs.	No. Pairs	GENERAL CONSTRUCTION	Tinned Copper Shielding	Stranding	Condr. Insulation Thickness (inches)	Finished Cable O D (inches)
 <p>For Station-to-Station and Extension Wiring (Unshielded)</p>	8740	100' S 500' S	22-2	1	Bare copper, solid; heavy formvar enamel coating; cotton braid; waxed; color coded; conductors cabled; over-all brown cotton braid	None	solid		.130
	8741	100' S 500' S	22-4	2		None	solid		.200
	8742	100' S 500' S	22-6	3		None	solid		.225
	8743	100' S 500' S	22-12	6	Tinned copper, solid; vinyl plastic insulated, color coded; conductors cabled in pairs; over-all brown cotton braid	None	solid	.010	.275
	8744	100' S 500' S	22-18	9		None	solid	.010	.320
	8745	100' S 500' CR	22-30	15		None	solid	.010	.415
 <p>For Station-to-Station and Extension Wiring (Shielded)</p>	8734	100' S 500' S	22-3	Not paired	Tinned copper, flexible stranding; vinyl plastic insulation, color coded; three conductors cabled, one conductor tinned copper braid shield, and two conductors unshielded; over-all brown cotton braid	Over 1 conductor	7x30	.010	.155
	8735	100' S 500' S	22-3	Not paired	Tinned copper, flexible stranding; vinyl plastic insulation, color coded; three conductors cabled; tinned copper braid shield; over-all brown cotton braid	Over 3 cabled conductors	7x30	.010	.170
	8737	100' S 500' S	22-2	1	Tinned copper, flexible stranding; vinyl plastic insulation, color coded; conductors cabled; tinned copper braid shield; over-all brown cotton braid	Over 2 cabled conductors	7x30	.010	.155
	8738	100' S 500' S	22-2	1	Bare copper, solid; heavy formvar enamel coating; cotton braid; waxed; color coded; conductors cabled; tinned copper braid shield	Over 2 cabled conductors	solid		.125
	8739	100' S 500' S	22-2	1	Same as 8738 plus over-all brown cotton braid	Over 2 cabled conductors	solid		.160
	8747	100' S	22-12	6	Tinned copper, flexible stranding; vinyl plastic insulation, color coded; conductors cabled in pairs; over-all brown cotton braid	None	7x30	.010	.305
 <p>For Station-to-Terminal Wiring (Unshielded)</p>	8748	100' S	22-18	9		None	7x30	.010	.350
	8749	100' S	22-30	15		None	7x30	.010	.445
	8750	100' S	22-54	27		None	7x30	.010	.565
	8751	100' S	25-12 16-2	Not paired	Bare copper, flexible stranding; vinyl plastic insulation, parallel thread for color coding; 12 conductors 25-ga individually shielded, cabled (not paired) with 2 conductors 16-ga unshielded; over-all brown cotton braid	Over each 25-ga conductor only	7x33 19x29	.015 .012	.335
 <p>For Station-to-Terminal Wiring (Shielded)</p>	8752	100' S	25-22 16-2	Not paired	Same construction as 8751 except 22 conductors 25-ga individually shielded	Over each 25-ga conductor only	7x33 19x29	.015 .012	.485
	8799	100' S 500' S	18-2	1	Bare copper, solid; heavy formvar enamel coating; cotton wrap; cotton braid; waxed; color coded; conductors cabled; tinned copper braid shield	Over 2 cabled conductors	solid		.165
 <p>P. A. Cable Amplifier-to-Speaker</p>	8432	100' S 500' S	20-2	Not paired	Tinned copper, flexible stranding; paper wrap; rubber insulation; cotton braid; lacquer coating; color coded; conductors cabled; tinned copper braid shield	Over-all	10x30	.015	.215
	8433	100' S 500' S	20-3	Not paired		Over-all	10x30	.015	.230

†CK—Coiled in carton K—Carton CR—Crate reel S—Spool C—Coil SK—Spooled in carton

Belden • instrument and lead wires



photoelectric cell cable

Used for various photo-cell circuit applications where low-capacitance, maximum shield coverage, flexibility, and resistance to aging are important requirements.

ILLUSTRATION	Trade Number	Lengths Package and Color	A.W.G.	GENERAL CONSTRUCTION	Stranding	Finished Cable O. D. (inches)	Nominal Capacitance Per Ft (inmf)
	8221	100' S Black	25	Tinned copper and tinned steel, flexible stranding; cellulose yarn braid, polyethylene insulation; tinned copper braid shield; black vinyl plastic jacket	3x33 copper 4x33 steel	.240	20



phonograph pickup arm cable

Especially designed for use as phonograph pickup arm cable. Extreme flexibility and limpness with small diameter are very important features of this cable.

ILLUSTRATION	Trade Number	Lengths Package and Color	A.W.G.	GENERAL CONSTRUCTION	Stranding	Insulation Thickness (inches)	Finished Cable O. D. (inches)
	8431	100' S Brown	24	Tinned copper, flexible stranding; rubber insulation; tinned copper braid shield; fine brown cotton braid	16x36	.010	.085
	8014	25' ** 500' S K Chrome	25	Tinned copper, flexible stranding; chrome vinyl plastic insulation <i>**Packaged 25 ft on card, 5 cards in carton</i>	13x36	.010	.044



cathode-ray tube lead cable

Designed for high-voltage leads to cathode-ray tubes in television receivers, oscilloscopes, and other applications where this type of tube is employed. High dielectric strength and resistance to the effects of corona are very important features of these cables.

ILLUSTRATION	Trade Number	Lengths Package and Color	A.W.G.	GENERAL CONSTRUCTION	Stranding	Insulation Thickness (inches)	Finished Cable O. D. (inches)	Voltage* Rating (volts)
	8869	25' S 100' S Red with Two White Tracers	20	Tinned copper, flexible stranding; polyethylene plastic insulation, red cotton braid with 2 white tracers; lacquer coating	7x2R	.035	.145	10000
	8868	25' S 100' S Red	20	Same as 8869 except heavier insulation and solid red braid	7x28	1/16	.205	20000

test prod wire

High-voltage lead wire for use with portable testing equipment, instruments, and other radio units where excellent dielectric properties of the insulation and extreme flexibility and limpness of the cable are essential considerations. Furnished in either red or black.

ILLUSTRATION	Trade Number	Lengths Package and Color	A.W.G.	GENERAL CONSTRUCTION	Stranding	Insulation Thickness (inches)	Finished Cable O. D. (inches)	Voltage* Rating (volts)
	8899	††14' C K 100' S 1000' S Red Black	18	Tinned copper, extra flexible stranding; cotton wrap; rubber insulation	65x36	.043	.140	5000
	8898	100' S 500' S Red Black	18		65x36	.088	.230	10000





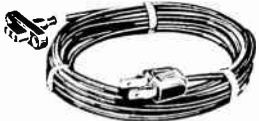

*Suggested values.

††7' Red and 7' Black


†CK—Coiled in carton K—Carton CR—Crate reel S—Spool C—Coil SK—Spooled in carton

Belden • replacement and extension cords

each cord bears Underwriters' label of approval

ILLUSTRATION AND APPLICATION	Trade Number	Package	Length and Color	DESCRIPTION
 <p>Extension Cord</p>	1701	1 K	10 Ft Brown	Extension Cord—Size 18, Type POSJ-64. Extra-flexible all-rubber parallel lamp cord. Both ends unbreakable rubber. Does not mar floors or furniture. Safe for use on table tops.
	1702	1 K	15 Ft Brown	
	1705	1 K	6 Ft Brown	
 <p>Extension Cord</p>	1751	1 K	25 Ft Black	Extension Cord—Size 18, Type SV. All-rubber portable cord with Belden molded-on all-rubber connector and Belden unbreakable soft rubber plug.
 <p>Replacement Cord</p>	1725	1 K	7 Ft 6 In. Brown	Replacement Cord—Size 18, Type POSJ-64. Extra-flexible all-rubber parallel lamp cord with Belden unbreakable soft rubber plug; opposite end stripped and tinned—ready for easy attachment. For lamps, radios, small appliances.
 <p>Replacement Cord</p>	1749	1 K	6 Ft 3 In. Black	Replacement Cord—Size 18, Type SV. All-rubber portable cord with Belden unbreakable soft rubber plug; opposite end stripped and tinned—ready for easy attachment. For amplifiers, test equipment and small appliances.
 <p>Connector Cord</p>	8874	1 K	6 Ft Brown	Television Power Supply Connector Cord. Original equipment on most television sets. Size 18, Type POSJ-64. Extra-flexible all-rubber parallel lamp cord with Belden molded-on all-rubber connector and Belden unbreakable soft rubber plug.
 <p>Male Connector</p>	8125	10 K		Male Connector—Flush mounting for use with 8874 cord connector set.



portable outlets

ILLUSTRATION AND APPLICATION	Trade Number	Package	Under-Rug Length and Color	DESCRIPTION
	1706	1 K	6 Ft 4 In. Brown	Replace dangerous and unsightly temporary extensions with this neat, practical method of locating appliances wherever wanted about the room. Consists of length of flat rubber-sheathed strip with outlets at each end; Belden soft rubber plug and 3 feet of size 18, Type POSJ-64 brown all-rubber parallel lamp cord at one end for quick attachment to wall outlet.
	1709	1 K	9 Ft 4 In. Brown	
	1712	1 K	12 Ft 4 In. Brown	
	1715	1 K	15 Ft 4 In. Brown	

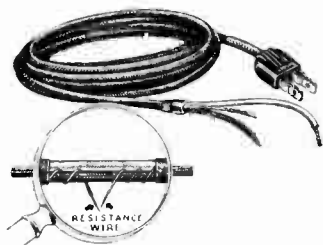
CK—Coiled in carton K—Carton CR—Crate reel S—Spool C—Coil SK—Spooled in carton

Belden • cords • soldering irons

headphone cords

ILLUSTRATION AND APPLICATION	Trade Number	Package	Length and Color	DESCRIPTION
	8872	1 K	5 Ft Brown	Headphone Set, Pin tips all ends. 5 Ft of extra-flexible moisture-resistant rubber insulated tinsel cord. Over-all durable brown cotton braid. "Y" arm sections 15", coupled in series.
	8873	1 K	5 Ft Brown	Headphone Set, Spade tips 4 phone ends. Pin tips plug end. 5 Ft of extra-flexible moisture-resistant rubber insulated tinsel cord; over-all durable brown cotton braid. "Y" arm sections 15", coupled in series.

AC•DC resistance cord



To determine the proper ac-dc line cord, add the filament voltages of the individual tubes in the receiver. From the chart at right, select the nearest figure under the heading SUM OF TUBE VOLTAGES in the column headed by the available power supply. Length 6 ft. Size 18.

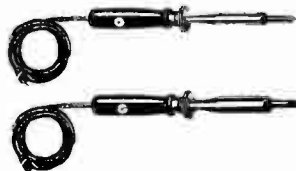
Trade Number	Resistance (ohms)	Color Marker	Voltage Drop at 0.3 Amps	*Sum of Tube Voltages for		
				110 Volt Line	115 Volt Line	120 Volt Line
8920	1K	Green	40.5	69.5	74.5	79.5
8921	1K	Yellow	49.5	60.5	65.5	70.5
8976	1K	Orange	54	56	61	66
8929	1K	Blue	66	44	49	54
8977	1K	Grey	75	35	40	45
8922	1K	Black	87	23	28	33
8923	1K	Brown	99	11	16	21
8924	1K	White	**84	26	31	36
8925	1K	Red	***72	38	43	48

*When line voltages other than those shown must be used, subtract sum of tube voltages from available line voltage to obtain voltage drop. The nearest figure in "Voltage Drop" column gives proper ac-dc cord to use.

**Voltage drop at 0.175 amps.

***Voltage drop at 0.75 amps.

soldering irons



Belden soldering irons take care of practically all radio service and communications work. Sturdy construction throughout assures long service life.

Features include:

1. High-quality Nichrome heating element.
2. Machined copper tips extend into element for faster heating.

3. A 6-ft Belden "Corditis-free" 3000-cycle heater cord.

4. Easy replacement of tips or elements.

5. "Easy-Grip" handle.

6. Hexagonal baffle plate prevents rolling.

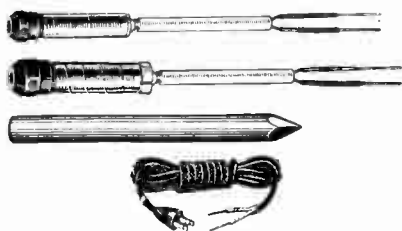
7. Portable soldering iron stand as indicated.

8. Approved by Underwriters' Laboratories, Inc.



8110	1K	80-Watt iron with $\frac{3}{8}$ " tip. For light work. Complete with stand including tip cleaner.
8113	1K	100-Watt iron with $\frac{3}{8}$ " tip. For medium light service. Complete with stand including tip cleaner.

soldering iron replacement parts



8111	1K	80-Watt element for 8110
8114	1K	100-Watt element for 8113
8112	5K	Tip ($\frac{1}{4}$ ") for 8110 or 8113
8119	1K	Heater cord only. 6-Ft Belden 3000-cycle heater cord with Belden Unbreakable Soft Rubber Plug. Opposite end stripped and tinned.

10K - Coiled in carton K - Carton CR - Crate reel S - Spool C - Coil SK - Spooled in carton



BROADCAST ANTENNA KITS

These are popular priced broadcast kits of the "L" type. Each kit contains the necessary parts for the installation of the complete antenna. They are furnished in an attractive two-color box.

KIT No. 7 "THE BRIGADIER"

75 ft. No. 7 25 stranded aerial wire; 35 ft. No. 18 stranded rubber covered lead-in wire; 1 No. 825 lightning arrester; 2 glass insulators; 2 glazed porcelain nail knobs; 1 No. 761 high gloss lead-in strip; 1 ground clamp; 2 galvanized screw eyes; 2 wood screws.

KIT No. 7..... **\$1.95**

KIT No. 8 "THE COLONEL"

50 ft. 7/26 stranded aerial wire; 25 ft. rubber-covered lead-in wire; 1 No. 825 lightning arrester; 2 porcelain insulators; 2 glazed porcelain nail knobs; 1 No. 761 high gloss lead-in strip; 1 ground clamp; 2 wood screws.

KIT No. 8..... **\$1.60**

AERIAL WIRE

STRANDED BARE WIRE

No.	Ft.	Size	List Price
40A	75-ft. coil	7 22	\$ 1.07
40	100-ft. coil	7 22	1.40
40B	1000-ft. spool	7 22	14.00
42A	75-ft. coil	7 24	.75
42	100-ft. coil	7 24	.95
42B	1000-ft. spool	7 24	9.50

LEAD-IN WIRE

STRANDED—Rubber Covered



No.	Ft.	Size	List Price
300	50 coil	18-1/2"	\$.60
301	100 spool	18-1/2"	1.10
302	500 spool	18-1/2"	5.50
303	1000 spool	18-1/2"	10.50
310	50 coil	16-1/2"	.83
311	250 spool	16-1/2"	4.15
312	500 spool	16-1/2"	7.75
313	1000 spool	16-1/2"	15.00

SOLID—Rubber Covered



No.	Ft.	Size	List Price
320	25 coil	18-1/2"	\$.32
321	50 coil	18-1/2"	.57
322	500 spool	18-1/2"	5.25
323	1000 spool	18-1/2"	10.00
330	25 coil	20-1/2"	.28
331	50 coil	20-1/2"	.51
332	500 spool	20-1/2"	4.75
333	1000 spool	20-1/2"	9.00

COLORED RUBBER LEAD-IN AND GROUND WIRE

Colors: Red, Black, Green, White

No.	List Price Each
215	No. 16 str., 25-ft. \$.57
216	No. 16 str., 50-ft. .95
217	No. 16 str., 100-ft. 1.85
218	No. 16 str., 1000-ft. 18.00

TWISTED PAIR DOWNLOADS

This is a popular-priced twisted pair down lead consisting of two conductors, each No. 22 stranded copper, 1/32" rubber covered (one black, one red), twisted and covered with overall black weatherproof braid. No. 122—List Mft..... **\$30.00**

ANTENNA ACCESSORIES

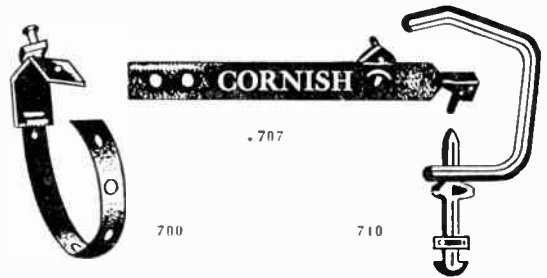
LEAD-IN STRIPS



All Strips 12" Long—Packed 50 to a Carton.

No.	List per C
760 1/4" Zinc, High Gloss, Soldered Terminals.....	\$10.00
761 1/2" Zinc, High Gloss, not Soldered Terminals.....	8.00

GROUND CLAMPS



We manufacture a complete line of ground clamps of all types, for every purpose.

"C" Type Ground Clamp

Hardened steel point assures positive ground connection. Opening 1 3/4". Packed 50 to a carton.

No. 710—Cadmium Plated.....	List per C \$11.00
No. 713—Plain Finish.....	List per C 9.75

Saddle Type Ground Clamp

Hardened steel point assures positive contact. Easily applied to any pipe or rod from 1/2" to 2 1/2" in diameter. Cadmium Plated. Packed 50 to a carton.

No. 700—Saddle Type.....	List per C \$8.00
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Strap Type Ground Clamp

Packed 50 to a carton. The No. 708 Clamps have a copper finish.

No. 707—Copper Strap Clamp.....	List per C \$7.00
No. 708—Steel Strap Clamp.....	List per C 6.00

LIGHTNING ARRESTERS



Extreme care has been given to the design of these arresters to produce low-priced products of greatest possible value.

No.	List Price
No. 825—2 Pole.....	\$.50
No. 827—3 Pole (Doublet).....	.85



RADIO WIRE *products*

P-A WIRES and CABLES

HOLLYWOOD MICROPHONE CABLES (Shielded-Jacketed)

Substantially made to withstand rough usage. Special low capacity color coded conductors. Braided with tinned copper shield. Tough weatherproof polished jacket overall.

Single conductor — unusually low capacity. Can be used up to 100 ft. with high impedance ribbon microphones and up to 50 ft. with crystal microphones.



Cat. No.	Conductors	Approx. Feet on Spool	Approx. Outside Diam.	List Price M. ft.
1105	1	100	9/32"	\$85.00
2104	1	500	3/16"	82.00
2101	1	1000	3/16"	80.00



Two conductor, for low impedance microphones and transmission lines.

1152	2	100	11/32"	\$105.00
1153	2	250	11/32"	102.00
2152	2	500	11/32"	100.00
1154	3	100	11/32"	130.00
1155	3	250	11/32"	127.00
2153	3	500	11/32"	125.00
1156	4	100	3/8"	160.00
1157	4	250	3/8"	157.00
2154	4	500	3/8"	155.00

LAPEL MICROPHONE CABLE



Similar to No. 2101 except smaller in diameter.

1160	1	100	.175"	\$75.00
1161	1	500	.175"	72.00
2160	1	1000	.175"	70.00

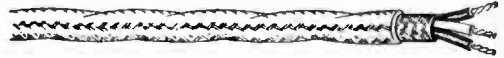
SHIELDED CABLES



These cables are recommended for sound recording equipment and P.A. systems where a flexible shielded cable is necessary. Each conductor consists of multi-strand copper wire cotton served, rubber covered and braided with color-coded cotton. Conductors No. 20 gauge unless otherwise specified.

Cat. No.	Put-Up	List Price per M. ft.
1114	100 Spool 2 Conductor	\$ 78.00
1115	250 Spool 2 Conductor	75.00
1116	100 spool 3 Conductor	108.00
1117	250 Spool 3 Conductor	105.00
1118	100 Spool 4 Conductor	135.00
1119	250 Spool 4 Conductor	132.00
1120	100 Spool 5 Conductor	161.00
1121	250 Spool 5 Conductor	158.00
1122	100 Spool 6 Conductor	183.00
1123	250 Spool 6 Conductor	180.00

SHIELDED CABLES—COTTON BRAID OVERALL



Cat. No.	Put-Up	List Price per M. ft.
1124	100 Spool 2 Conductor	\$ 93.00
1125	250 Spool 2 Conductor	95.00
1126	100 Spool 3 Conductor	135.00
1127	250 Spool 3 Conductor	132.00
1128	100 Spool 4 Conductor	163.00
1129	250 Spool 4 Conductor	160.00
1130	100 Spool 5 Conductor	193.00
1131	250 Spool 5 Conductor	190.00
1132	100 Spool 6 Conductor	223.00
1133	250 Spool 6 Conductor	220.00

BATTERY CABLE AND DYNAMIC SPEAKER EXTENSION CABLE

Multi-conductor cables having flexible conductors with overall heavy cotton braid. Individual conductors consist of stranded copper, rubber covered with color-coded cotton braid. Suitable to all types of P.A. systems.

Cat. No.	Put-Up	List Price per M. ft.
228	3 Wire-100 Ft. Spool	\$ 70.00
219	4 Wire-100 Ft. Spool	85.00
221	5 Wire-100 Ft. Spool	100.00
231	6 Wire-100 Ft. Spool	120.00
241	7 Wire-100 Ft. Spool	137.00
222	8 Wire-100 Ft. Spool	153.00
223	9 Wire-100 Ft. Spool	170.00
224	10 Wire-100 Ft. Spool	188.00

SHIELDED LEAD-IN AND GROUND WIRE



These products are made of flexible stranded copper conductors insulated with a substantial wall of high grade rubber with an overall of close tinned copper shield. They are frequently used as a shielded down lead to ground out interference noises.

No. 20 Flexible 1/32" R.C.

Cat. No.	List Price Each
1143— 50 Ft. Coil	\$ 1.80
1144— 250 Ft. Spool	8.00
1145—1000 Ft. Spool	30.00

No. 18 Flexible 1/32" R.C.

1146— 50 Ft. Coil	\$ 2.10
1147— 250 Ft. Spool	9.25
1148—1000 Ft. Spool	35.00

No. 16 Flexible 1/32" R.C.

1149— 50 Ft. Coil	\$ 2.80
1150— 250 Ft. Spool	12.75
1151— 500 Ft. Spool	24.00



RADIO WIRE *products*

INTERCOMMUNICATION CABLES

Specially manufactured for indoor use to meet every requirement, for all types of inter-communicating systems.

MULTI-PAIRED CABLES



Conductors are No. 22 solid tinned copper insulated with either vinyl plastic or double cotton impregnated braid—cabled in color-coded twisted pairs—with over-all cotton braid.

Cat. No.	Put-Up	Width	List Price per M ft.
1225	2 Pair (O.D. approx. $\frac{3}{16}$ "		\$ 54.00
1226	6 Pair (O.D. approx. $\frac{9}{16}$ "		153.00
1227	13 Pair (O.D. approx. $\frac{1}{2}$ "		325.00
1228	26 Pair (O.D. approx. $\frac{5}{8}$ "		640.00

THREE CONDUCTOR CABLE

3 Conductors are No. 20 solid tinned copper, plastic insulated, color-coded, twisted, with overall treated cotton braid.

No. 1231\$42.00

THREE CONDUCTOR (One Shielded)

Consists of a twisted pair of No. 20 solid tinned copper plastic insulated wires, and a single No. 20 solid tinned copper plastic insulated and shielded, all twisted, with over-all dry cotton braid.

No. 1232\$75.00
 No. 1233—Same as No. 1232 except conductors are No. 22 solid\$63.00

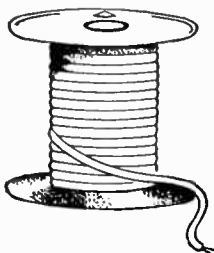
TWO CONDUCTOR SHIELDED CABLE



Consists of two No. 20 stranded tinned copper plastic insulated conductors, color-coded and twisted with overall close tinned copper shield.

No. 1230\$46.00

FLEXIBLE CORDS (Fixture Wires — Lamp Cords)



Fixture wires often used as all-purpose radio and lead-in wire. Lamp cords used for power supply and extension cords. Colors: Brown, Black, Ivory.

Cat. No.	Put-Up	List Price per M ft.
*3050—No. 18 Single, Type F, Cotton.....	1000 ft.....	\$17.50
*3020—No. 18 Parallel, Type PO, Rayon.....	250 ft.....	40.00
*3000—No. 18 Parallel, Type POSJ, All Rubber..	250 ft.....	32.50
*3300—No. 18 All Rubber Service Cord, Type S.J..	250 ft.....	60.00
3500—Replacement Cord Set—6 ft. 18/2, POSJ, 1/64 with Molded Rubber Plug.....		.40 ea.

*Has Underwriter's Labels.

RADIO HOOK-UP WIRE

"CORLAC" HOOK-UP WIRE



For the discriminating service man who knows the importance of voltage break down and insulation resistance. Special under-insulation makes this hook-up wire moisture-proof and gives voltage break-down of 3100 volts (as per certified report of Electrical Testing Laboratory, N. Y. C.). Excellent push-back in waxed finish. Tinned copper conductors.

WAXED		LACQUERED			
Cat. No.	Put-Up	List Each	Cat. No.	Put-Up	List Each
No. 22 SOLID					
434—	25 Ft. Cartons...	\$.40	452—	25 Ft. Cartons...	\$.46
436—	1000 Ft. Spools....	10.60	454—	1000 Ft. Spools....	12.50
No. 20 SOLID					
437—	25 Ft. Cartons...	.48	455—	25 Ft. Cartons...	.56
439—	1000 Ft. Spools....	13.00	457—	1000 Ft. Spools....	16.00
No. 22 STRANDED					
443—	25 Ft. Cartons...	.44	461—	25 Ft. Cartons...	.50
445—	1000 Ft. Spools....	12.00	463—	1000 Ft. Spools....	14.00
No. 20 STRANDED					
446—	25 Ft. Cartons...	.52	464—	25 Ft. Cartons...	.58
448—	1000 Ft. Spools....	14.50	466—	1000 Ft. Spools....	17.00
No. 18 STRANDED					
449—	25 Ft. Cartons...	.64	467—	25 Ft. Cartons...	.72
451—	1000 Ft. Spools....	19.00	469—	1000 Ft. Spools....	22.50

BRAIDED TINNED COPPER TUBULAR SHIELDING



Recommended for wires up to 3/16" O.D.

Cat. No.	Put-Up	Width	List Price Each
1108	50 Ft. Spool	$\frac{1}{4}$ "	\$ 3.25
1109	100 Ft. Spool	$\frac{1}{4}$ "	6.25
1110	250 Ft. Spool	$\frac{1}{4}$ "	14.00

AC-DC ANTENNA WIRE

Flexible bare copper conductor with brown cotton braid.

661	1000 Ft. Spools	\$10.00
661A	25 Ft. on Fibre	.33

TEST LEAD WIRE

A super flexible conductor covered with heavy live rubber. Will not wear, kink or crack. Made in Black and Red. Mention color when ordering. O.D.—.140".

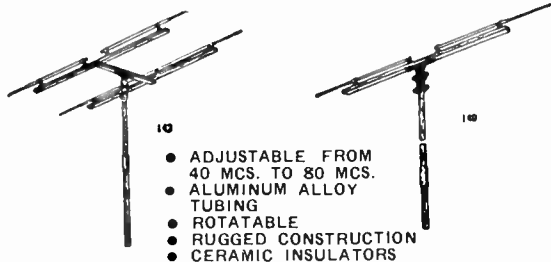
1140	100 Ft. Spools	\$ 3.00
1141	500 Ft. Spools	13.00
1142	1000 Ft. Spools	25.00

Birnbach

F-M and TELEVISION ANTENNAS



F-M and TELEVISION DOUBLET ANTENNAS



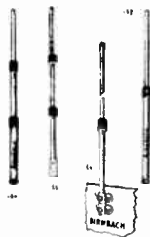
- ADJUSTABLE FROM 40 MCS. TO 80 MCS.
- ALUMINUM ALLOY TUBING
- ROTATABLE
- RUGGED CONSTRUCTION
- CERAMIC INSULATORS

A superior antenna construction for television reception. Consist of corrosion proof aluminum alloy tubes adjustable to all frequencies between 80 mcs. and 10 mcs. mounted on high grade low absorption glazed porcelain stand-off insulators which maintains its efficiency under all weather conditions. Strong wooden supports. Adjustments can be made in the horizontal planes. This will permit the antenna to be properly adjusted in respect to the transmitted wave and the signal strength. There are two types available; No. 110 Doublet and the No. 112 Doublet with reflector to eliminate interference. Complete with mounting poles and steel coupling.

No.	List Price
140-B—Doublet	\$12.50
142-B—Doublet with reflector	22.50

ULTRA HIGH FREQUENCY ANTENNAS (VERTICAL RODS)

They are constructed of hard drawn aluminum alloy tubing, telescoped together and adjusted by forcing down with a turning motion a specially designed brass nickel-plated taper lock bushing. They cover all requirements for stationary or portable use. Two types of mountings are available; stand-off mounting having 1/4-20 threaded bushing on No. 151 and 10-32 threaded bushing on No. 157, and binding post mounting consisting of a reinforced flattened end with two holes drilled 1" between centers. The frequency range listed is for 1/4 wave-length antenna.



Frequency Range in Mcs.

No.	Sections	Open	Telescoped	List Price
154	3	55	115	\$4.75
155	3	55	145	4.75
156	2	112	200	3.00
157	2	112	200	3.00
161	2	40	75	3.10
164	Taper Lock Bushings 5/8 and 3/8			.25

MAST AERIAL

The Birnbach Mast Antenna is made of four tempered carbon steel tube sections which will instantly go back to an erect position when flexed by the wind. They make an actual height of 12 ft. and are treated to prevent corrosion. Two heavy duty ceramic mounting insulators permit every type of installation to be made with ease.

The Safety Lightning Arrestor protects the antenna from excessive static charges of atmospheric electricity. The accumulated charges bypasses the receiver and discharges to the ground.

No. 169—Includes: 1 12 ft. 4 section Mast Aerial and Clamps, 2 porcelain mounting insulators and securing clamps; 1 nutit knob; 1 safety lightning arrester; 35 ft. leadin wire; 1-6" insulated screw eye; 1 ground clamp; mounting screws; and directions. List \$7.00

No. 170—Includes: Everything contained in the No. 169 with the exception of 1 Safety lightning arrester. List. . \$6.75

WOODEN MOUNTING POLES



Made of straight grain ash and finished with a weatherproof varnish. With the use of the couplings several poles can be joined together. The couplings are made of steel tubing and are cadmium plated.

No.	Std. Pkg. List
144—Coupling 10	\$1.40
145—1 ft. Wooden Pole 10	1.40

SEE PAGE S-32 for complete line of TRANSMISSION CABLE suitable for FM and TELEVISION

FLEXIBLE FOLDED DIPOLE ANTENNAS

For Television (TV)

The flexible folded dipole antenna for Television is perfect for indoor use. This antenna can be placed in attics or in apartment houses; it can be placed under rugs, behind large couches, behind drapes covering windows, etc. This aerial can be oriented for best reception over all television stations. The new Birnbach indoor Television Antenna should prove a real seller for you.

Transition loss measures 2.85 DB in television band.

No. 7027—Flexible Folded Dipole Antenna for Television (TV).	List Price (Individually Boxed) \$1.75 ea.
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For Frequency Modulation (FM)

The flexible folded dipole antenna for FM is excellent for all FM receivers. With the new FM Converters and Timers now on the market you can enjoy a very lucrative sale on this low-priced antenna. Losses in line measure .85 DB per 100 feet at 100MC.

No. 7026—Flexible Folded Dipole Antenna for Frequency Modulation (FM).	List Price (Individually Boxed) \$1.50 ea.
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For above antennas with 50 ft. lengths of 300 ohm Transmission Line add \$2.00 to the list price.

An attractive display card furnished to aid you in the sale of our two new products.

ADJUSTABLE DIPOLE ANTENNA For Television or Frequency Modulation

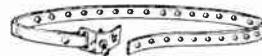


An adjustable antenna that can be used as a vertical or horizontal doublet. Can be rotated to any angle for any degree of polarization. Impedance at center 72 ohms, matched by 50Ω Cable. Aluminum alloy tubing permits outdoor mountings. Special tapered lock bushings hold each section in place simply by turning and pushing down. The center mounting insulator is 4 1/2" high.

No.	Open	Frequency Range in Mcs.	Telescoped	List Price
158	82	155		\$8.00
160	40	75		9.50

MOUNTING STRAP

A very useful aid in securing poles of television or mast antennas to vent pipes. It is made of cadmium plated steel and is 21" long.



No. 626—Mounting Strap. Std. Pkg. 25. \$0.45 List

GUY WIRE

Constructed of high tensile strength galvanized steel wires. Ideal for guying up transmitter and receiver towers and poles.



No. 19—Guy Wire, 25 ft. Coil each	\$0.40 List
No. 20—Guy Wire, 50 ft. Coil each	.80 List
No. 220—Guy Wire, 500 ft. Spool	7.50 List

No. 148 UNIVERSAL WAVE ANTENNA (FOR EVERY TYPE OF RECEIVER)

The No. 118 All Wave Antenna is the same as the No. 150, but is packed in a special attractive two color box imprinted to customer's specifications. This kit is designed for efficient operation with all types of receivers. Standard cartons of 20 kits.



No. 149—All Wave Kit without Receiver Coupler. each	\$5.00
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Birnbach AERIAL ACCESSORIES

LEADIN STRIPS



Covered with a heavy cotton braid, weather-proofed, with numerous coats of lacquer. The Clips are riveted and soldered at both ends. List Price—No. 611—Black 12".....50.....\$0.11
612—Black 16".....25......25
613—White 12".....50......12

DOUBLET LEADIN STRIPS

Two strips held parallel to each other by a piece of bakelite prevents them from moving back and forth. Available in black or white. No. 2611—Std. Pkg. 25 Ea. \$0.25 List



Screw Terminal Leadin Strip



Locks the wire together with the strip in a secure connection assuring perfect contact. Has weather-proof covering over a copper strip with cadmium plated terminals. Available in white or black. List Price—No. 617—Leadin Strip.....50.....\$0.17
2617—Doublet Leadin Strip.....25......35

COPPER STRAP CLAMP



Will take 1/2" to 1" pipe. Made of copper with Birnbach clip riveted and soldered to strap, complete with nut and bolt. List Price—No. 600—Std. pkg. 50. Ea. \$0.10 List

C-CLAMP



Attaches easily to a water or radiator pipe. The cone pointed screw cuts through and makes positive contact. Cadmium finish prevents rusting. List Price—No. 615—Std. Pkg. 25 Ea. \$0.25 List

SADDLE GROUND CLAMPS



These ground clamps have a hard pointed screw which digs through rust and makes a positive contact. Fits a 1/2" to 2" pipe. List Price—No. 625—Heavy Saddle Clamp.....50.....\$0.18
630—Light Saddle Clamp.....50......15

GLASS INSULATORS



Made of crystal clear glass and have a smooth surface which prevents dirt or ice to collect. Std. List Price—No. 600.....100.....\$8.00
660.....100.....11.50
661—Flat Type.....100.....12.50
612.....100.....13.50
650.....100.....25.00

PORCELAIN INSULATORS AND NAIL-IT KNOBS



Std. List Price—No. 606—Brown or White.....100.....\$8.75
609—Nail It Knobs.....100.....7.50

GROUND RODS



The Ground Rod when driven into the ground will afford a highly efficient ground. Std. List Price—No. 616—1 Ft.....12.....\$1.25
818—6 Ft.....12.....2.00

AERIAL SPRING ADJUSTER



Prevents swaying and swaying of antennas and eliminates the resultant fading of signals. Consists of two hooks with porcelain rings interlocking with a powerful compression spring. Cadmium plated throughout. List Price—No. 765—Birnbach Aerial Spring Adjuster.....each \$0.80

PORCELAIN TUBES



To bring a lead-in into a building, we advise our Porcelain Tubes, which require a 1/2" dia. hole. Std. List Price—No. 42.....100.....\$5.00
43.....100.....6.00
44.....100.....7.50
46.....100.....10.50
48.....100.....15.00

PHOSPHOR BRONZE

It has about twice the strength of copper. It is used extensively on Master Antenna Systems where strength and reliability are demanded. List Price—No. 499.....100.....\$8.50
524.....100.....5.00
526.....100.....4.75



ANTENNA KITS

No. 1101 Aerial Kit..... Each \$3.00
75 ft. 7/23 Tinned Copper Wire
10 ft. No. 16 R.C. Lead-in Wire
15 ft. Flexible R.C. Wire
1—No. 650 Lightning Arrestor
2—No. 600 Glass Insulators
1—No. 615 Pipe Clamp
1—No. 611 Lead-in Strip
2—No. 665 Galvanized Screw Eyes
2—No. 669 Glazed Nail-It Knobs
5 Insulated Staples Weight 32 lbs.

Special Aerial Kit..... Each \$2.12
75 ft. 7/23 Copper Wire
40 ft. R.C. Lead-in Wire
15 ft. Flexible R.C. Wire
1—No. 611 Lead-in Strip
1—No. 650 Lightning Arrestor
1—No. 600 Ground Clamp
2—No. 665 Porcelain Insulators
2—No. 669 Glazed Nail-It Knobs
Std. Pkg. 25 Weight 64 lbs.

AERIAL WIRE

STRANDED—BARE

No.	Size	Length	List Price
493	7/20	100 ft. coil	\$2.50
1640	7/22	75 ft. coil	1.13
1670	7/22	100 ft. coil	1.50
1639	7/22	1000 ft. spool	14.25
1643	7/23	75 ft. coil	.90
1673	7/23	100 ft. coil	1.20
1634	7/23	1000 ft. spool	12.00
1646	7/24	75 ft. coil	.75
1640	7/24	100 ft. coil	.97
1647	7/24	1000 ft. spool	9.75
647	7/24	75 ft. coil	.55
681	7/26	100 ft. coil	.65
1648	7/26	1000 ft. spool	7.15
740	7/27	75 ft. coil	.53
700	7/27	100 ft. coil	.68
1741	7/27	1000 ft. spool	6.60

STRANDED—TINNED

No.	Size	Length	List Price
495	7/20	100 ft. coil	\$3.25
1641	7/22	75 ft. coil	1.38
1671	7/22	100 ft. coil	1.85
1638	7/22	1000 ft. spool	16.50
1644	7/23	75 ft. coil	1.05
1674	7/23	100 ft. coil	1.45
1633	7/23	1000 ft. spool	14.25
1697	7/24	75 ft. coil	.90
1696	7/24	100 ft. coil	1.13
1628	7/24	1000 ft. spool	11.25

STRANDED—ENAMEL

No.	Size	Length	List Price
494	7/20	100 ft. coil	\$3.75
1642	7/22	75 ft. coil	1.50
1672	7/22	100 ft. coil	1.95
1637	7/22	1000 ft. spool	18.75
1645	7/23	75 ft. coil	1.20
1675	7/23	100 ft. coil	1.50
1631	7/23	1000 ft. spool	15.00
1683	7/24	75 ft. coil	1.00
1682	7/24	100 ft. coil	1.15
1627	7/24	1000 ft. spool	12.30

LIGHTNING ARRESTERS

Made of a brown glazed porcelain body with nickel plated hardware. Suitable for outdoor or indoor use. Complete with mounting screws and instructions. List Price—No. 650—Lightning Arrestor.....50.....\$0.45



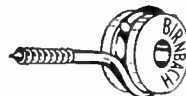
DOUBLET LIGHTNING ARRESTERS



This Arrester is of the air gap type which is the accepted means of protecting doublet antennas from lightning. Installation instructions are printed on the box. List Price—No. 2650—Doublet Lightning Arrestor Std. Pkg. 25.....\$0.50

SCREW EYES

Heavy rustproof cadmium plated steel screws hold the blue glaze porcelain eyes firmly. The bakelite insulated eye is specially molded for outdoor use.



Porcelain Eyes

No.	Size	Std. Pkg.	List Price
663	3 in.	100	\$11.25
664	7 in.	50	17.75
667	12 in.	25	37.50

Bakelite Eyes

No.	Size	Std. Pkg.	List Price
963	3 in.	100	\$11.25
964	7 in.	50	17.75
967	12 in.	25	37.50

COPPERWELD ANTENNA WIRE (STRETCHLESS)



Has a steel core covered with copper and heavily enameled. It will not elongate because of its high tensile strength—which is several times that of enameled copper wire. It has low R.F. resistance and is ideal for transmitting doublet and directional antenna systems as it will maintain the frequency characteristics of the antenna because of its stretchless qualities.

LIST PRICES

Feet	No. 10	No. 12	No. 14
100	\$ 4.50	\$ 3.15	\$ 1.90
250	11.25	7.75	5.25
500	22.50	15.50	10.25
1000	43.75	30.50	20.00
2500	108.00	76.00	49.50

TENSILE STRENGTH

No. 10	1130 lbs.
No. 12	720 lbs.
No. 14	400 lbs.

SPECIAL LENGTHS AVAILABLE ON ORDER

SOLID TINNED WIRE

SOFT DRAWN		No. 18	
No.	List Price	No. 18	List Price
1400	25 ft. coil \$1.10	1416	25 ft. coil \$0.33
1401	50 ft. coil 2.20	1417	50 ft. coil .69
1402	100 ft. coil 4.00	1418	100 ft. coil 1.10
1403	1000 ft. spool 40.00	1419	1000 ft. spool 11.00
No. 20			
1404	25 ft. coil .68	1420	25 ft. coil .30
1405	50 ft. coil 1.20	1421	50 ft. coil .59
1406	100 ft. coil 2.25	1422	100 ft. coil 1.00
1407	1000 ft. spool 22.50	1423	1000 ft. spool 10.00
No. 22			
1408	25 ft. coil .50	1424	1 lb. spool .75
1409	50 ft. coil .83	1425	1 lb. spool 1.20
1410	100 ft. coil 1.50	1426	1 lb. spool 2.25
1411	1000 ft. spool 15.00	1427	1 lb. spool .82
No. 14			
1412	25 ft. coil .42	1428	1 lb. spool 1.50
1413	25 ft. coil .68	1429	1 lb. spool 2.65
1414	100 ft. coil 1.10	1430	1 lb. spool .90
1415	1000 ft. spool 11.00	1431	1 lb. spool 1.65
1432	1 lb. spool 3.00	1432	1 lb. spool 3.00

SOLID ENAMEL WIRE

No.	List Price	No. 10	List Price
597	25 ft. coil \$1.50	192	25 ft. coil .85
697	50 ft. coil 2.50	292	50 ft. coil 1.70
497	100 ft. coil 4.49	492	100 ft. coil 2.75
1497	1000 ft. spool 44.00	492A	150 ft. coil 4.15
No. 12			
192	25 ft. coil .85	492B	200 ft. coil 5.50
292	50 ft. coil 1.70	492	1000 ft. spool 27.50
492	100 ft. coil 2.75	No. 14	
492A	150 ft. coil 4.15	190	25 ft. coil .50
492B	200 ft. coil 5.50	290	50 ft. coil 1.00
492	1000 ft. spool 27.50	490	100 ft. coil 1.80
No. 14			
190	25 ft. coil .50	490A	150 ft. coil 2.70
290	50 ft. coil 1.00	490B	200 ft. coil 3.60
490	100 ft. coil 1.80	1490	1000 ft. spool 18.00
490A	150 ft. coil 2.70	No. 15	
490B	200 ft. coil 3.60		
1490	1000 ft. spool 18.00		

Birnbach HOOK-UP WIRE



SPECIAL SPOOL ASSORTMENT \$1.10 LIST PRICE

No.	Ft.	Size	Type	No.	Ft.	Size	Type
3000	65	22	Solid Pushback	3013	60	18	Solid Leadin
3001	55	20	Solid Pushback	3014	65	18	Stranded Leadin
3002	45	18	Solid Pushback	3015	35	18	Stranded Lacquered
3003	35	16	Solid Pushback	3016	75		Brown & White AC-DC Wire
3004	30	14	Solid Pushback	3017	30		Kinkless Wire
3005	55	22	Stranded Pushback	3018	20	18	Twisted Lamp Cord
3006	45	20	Stranded Pushback	3019	45	18	Single Fix. Wire
3007	40	18	Stranded Pushback	3020	25	18	Parallel Sdk
3008	30	16	Stranded Pushback	3021	15	18	Blk., Whlt., Brn. Zip Cord
3009	20	14	Stranded Pushback	3022	100	18	Solid Tinned
3010	50	18	Colored Rubber	3023	75	18	Bell Wire
3011	35	16	Colored Rubber	3024	15	18	Shielded Wire
3012	30	14	Stranded Leadin				

FREE DISPLAY

One Display is given with each initial order for 100 spools. Each Display made of strong, re-inforced steel, mahogany crackle finish with attractive 3 color Display at top. Space provided to indicate YOUR resale price.

EXTRA DISPLAY RACKS AVAILABLE AT \$3.25 EACH, NET

Height — 24" Width — 12 1/2"



Thermoplastic Synthetic Insulated Radio and Electronic Hook-up Wire (Fungus Proof)

★ SPECIFICATION JAN - C - 76 ★

Type SRIR—1000 Volt



COLORS:

- Black Red
- Gray Yellow
- Brown Purple
- White Green
- Blue Orange
- Dk. Blue Pink
- Tan Tan

Note: For 25,000 feet of on color, deduct 10% of list prices above.

Approx. AWG Cat. No.	Navy Standard Conductor Designation	Conductor Construction	Nom. Wall	Max. O.D.	List Price Per M Ft.
7024-24 Stranded	(16)	16 wires .005"	.012"	.072"	\$16.50
7000-22 Solid	3.5 (1)	.253 solid	.015"	.062"	12.50
7001-22 Stranded	3.5 (7)	7 wires .010	.015"	.066"	16.00
7002-20 Solid	1 (1)	.032 solid	.015"	.068"	15.00
7003-20 Stranded	1 (10)	10 wires .010	.015"	.071"	19.50
7004-18 Solid	1 1/2 (1)	.0403 solid	.015"	.071"	19.00
7005-18 Stranded	1 1/2 (16)	16 wires .010	.015"	.083"	22.50
7007-16 Stranded	2 1/2 (26)	26 wires .010	.015"	.096"	37.50
7009-14 Stranded	4 (41)	41 wires .010	.018"	.120"	55.00
7011-12 Stranded	6 (65)	65 wires .010	.018"	.110"	80.00

The above items meet all requirements of Army-Navy joint specification JAN-C-76. Type SRIR for plain resin construction where highest resistance to fungus growth is required.

SPECIFICATIONS FOR THE JAN-C-76

- I—Electrical Properties:
 - A—Dielectric strength
 - B—Insulation resistance
 - C—Creepage resistance
- II—Mechanical Properties:
 - A—Low temperature flexibility
 - B—High temperature stability
 - C—Resistance to heat deformation
 - D—Abrasion resistance
 - E—Low moisture absorption
- III—Chemical and Other Properties:
 - A—Resistance to common solvents
 - B—Flame resistance
 - C—Fungus resistance

SHIELDED LEAD-IN WIRE



Used to prevent the pickup of interference or man-made static. Consists of a stranded tinned copper conductor with a wall of live rubber over which a tinned copper braid is woven.

No. 20—1/64"

No.	Ft.	Cap. mmfd. per Ft.	O.D.	List Price
810	500 Spool	.105	.090	\$25.00

No. 18—1/64"

807	25 Coil	.125	.100	\$ 1.30
809	100 Spool	.125	.100	5.00
803	250 Spool	.125	.100	12.50

No. 16—1/32"

825	25 Coil	.90	.145	\$ 1.75
851	100 Spool	.90	.145	6.50
802	250 Spool	.90	.145	15.00

No. 14—3/64"

804	25 Coil	.95	.185	\$ 2.25
806	100 Spool	.95	.185	8.50
801	250 Spool	.95	.185	22.50

RADEX SLIPBACK HOOKUP WIRES

It has a covering of rubber over a cotton wrap and is then covered with a bright color cotton braid and dipped into paraffin. This construction will not cause the cotton insulation to fray or bunch up when pushed back. It has a high dielectric strength and will withstand all climatic changes without breakdown.

25 FT. COILS

Size	Solid		Stranded	
	No.	List Price	No.	List Price
20	280	\$0.56	281	\$0.63
18	282	.63	283	.70
16	284	.77	285	.84
14	286	1.05	287	1.26
12	288	1.61	289	1.75

100 FT. SPOOLS

Size	Solid		Stranded	
	No.	List Price	No.	List Price
20	380	\$2.25	381	\$2.50
18	382	2.50	383	2.80
16	384	3.10	385	3.40
14	386	4.20	387	5.00
12	388	6.50	389	7.00

500 FT. SPOOLS

Size	Solid		Stranded	
	No.	List Price	No.	List Price
20	480	\$11.20	481	\$12.60
18	482	12.60	483	14.00
16	484	15.50	485	17.30
14	486	19.00	487	22.50
12	488	32.25	489	35.00

1000 FT. SPOOLS

Size	Solid		Stranded	
	No.	List Price	No.	List Price
20	580	\$21.00	581	\$23.25
18	582	24.50	583	26.00
16	584	28.00	585	31.50
14	586	35.00	587	39.50
12	588	65.00	589	70.00

SOLID WIRE PUNCTURE VOLTAGE

No.	60 Cycle A.C.	
	2000	1800
No. 16	2100	2100
No. 12	2200	2200

STRANDED WIRE PUNCTURE VOLTAGE

No.	60 Cycle A.C.	
	2000	1800
No. 20	2100	2200
No. 18	2200	2200
No. 16	2200	2200

COLORS—Black, Red, Blue, Yellow, Green, White, Brown



BIRNTEX SLIPBACK WIRE

This wire is constructed of quality materials and carefully insulated with a cotton wrap over which a cotton braid is closely woven, and then saturated with paraffin.

SOLID COLORS—Red, Black, Green, Blue, Yellow, White.

TRACER COLORS—Red, Black, Green, Blue, Yellow, Brown.

25 FT. COILS

Size	Solid		Stranded	
	No.	List Price	No.	List Price
22	70	\$0.42	71	\$0.49
20	80	.50	81	.56
18	82	.56	83	.63

100 FT. COILS

Size	Solid		Stranded	
	No.	List Price	No.	List Price
22	70	\$1.70	72	\$1.70
20	80	2.00	83	2.15
18	82	2.25	87	2.55

500 FT. SPOOLS

Size	Solid		Stranded	
	No.	List Price	No.	List Price
22	74	\$8.50	75	\$10.00
20	88	10.00	89	11.20
18	90	11.20	91	12.60

1000 FT. SPOOLS

Size	Solid		Stranded	
	No.	List Price	No.	List Price
22	74	\$15.50	77	\$17.50
20	88	17.50	92	19.60
18	90	21.00	93	24.00

Puncture Voltage 60 Cycle A.C. 1500





Birnbaach

CABLE and TRANSMISSION LINE — COAXIAL CABLE —

PA and COMMUNICATING SYSTEM CABLES



Shielded Twisted Pair

Constructed of solid enameled wire with a cotton wrap color coded cotton braid twisted pair waxed, and bare copper braid woven overall.

No.	Size	O.D.	List Price
821—100 Ft.	22	.125	\$ 6.75
822—500 Ft.	22	.125	32.00
823—100 Ft.	19	.115	8.00
824—500 Ft.	19	.115	37.50



Armored Speaker Cable

Constructed of 2 No. 18 stranded parallel conductors $\frac{1}{8}$ rubber color coded cotton braid waxed, paper wrap and closely armored.

No.	Size	O.D.	List Price
910—100 Ft.	18 $\frac{1}{4}$	.155 x .260"	\$10.00
1111—250 Ft.	18 $\frac{1}{4}$	.155 x .260"	20.00
1112—500 Ft.	18 $\frac{1}{4}$	.155 x .260"	40.00
1113—1000 Ft.	18 $\frac{1}{4}$	.155 x .260"	80.00

Rubber Shielded Microphone Cable



Consists of individual flexible tinned copper conductors, each insulated with a heavy wall of colored rubber for easy identification. A tinned copper shield is woven over all conductors, and then cotton wrapped. It is a weatherproof cable, ideal for outdoor use, and will withstand hard and rough usage.

No.	No. Conds.	Ft.	Size	Cap. bet. Shield & Cond.	Cap. bet. Conds.	List Price
772	2	100	20	.55	.31	\$15.00
772	2	250	20	.55	.31	35.00
773	2	100	20	.58	.33	19.50
773	2	250	20	.58	.33	48.75
774	4	100	20	.18	.28	22.50
774	4	250	20	.18	.28	59.75
775	5	100	20	.51	.29	27.50
775	5	250	20	.51	.29	68.75
776	6	100	20	.45	.27	32.00
776	6	250	20	.45	.27	80.00
777	7	100	20	.49	.27	35.00
777	7	250	20	.49	.27	87.50



RUBBER S. J. CABLE

Consists of individual flexible tinned copper conductors, each insulated with a heavy wall of colored rubber for easy identification. A 1/32 wall of tough polished rubber is placed overall. It is a weatherproof cable, ideal for outdoor use, and will withstand hard and rough usage.

Cat. No.	No. Conds.	Ft. on Spool	O.D.	List Price
788	2	100	.250	\$12.00
789	2	250	.250	28.25
790	3	100	.300	15.25
791	3	250	.300	35.00
792	4	100	.325	19.50
793	4	250	.325	45.00
794	5	100	.370	24.00
796	6	100	.400	30.00
797	6	250	.400	70.00
798	7	100	.460	35.00
749	8	100	.460	40.00

FM and TELEVISION TWIN LEAD 300 OHM TRANSMISSION WIRE



This transmission line is designed to maintain top performance for FM and Television Receivers under the most rigorous conditions. Has full thickness insulation

throughout the cable. Smooth solid polyethylene insulation resists water, alkalies, oil, acids and abrasion—will not get brittle or age in sunlight.

The Birnbaach 300 ohm line minimizes the effects of attenuation and impedance mismatch—providing maximum freedom from distortion. **R.M.A. STANDARD:** Conductors: 2 C Bare Copper 7 #28 Awg—Insulating Material: Polyethylene—Weight: 17 lbs. per 1000 ft. Mutual Capacitance: 4.8 mmfd. per ft.—Characteristics: Impedance: 300 ohms—Attenuation 50 MC: 0.68 Decibels per 100 ft.—Attenuation 100 MC: 0.85 Decibels per 100 ft.

No.	List Price
7028—50 ft. Coil, indiv. boxed	\$2.50
7029—100 ft. Coil, indiv. boxed	4.50
7030—1000 ft. Spool	42.00

(* Also available in 75 ohm and 150 ohm impedances—prices on request.)



EOI Transmission Cable (GENUINE)

This cable has a surge impedance of 72 ohms which accurately matches the impedance at the center of the half wave Hertz Antenna. It is constructed of 2 No. 12 Bare Copper conductors having a paper wrap. A special high frequency rubber insulates each side of the line and accurately maintains the impedance. It has a special weatherproofed cotton braid overall with a mica finish.

No.	Ft.	List Price	Surge Imp.	D.B. Loss per 100'
956—100 Spool	\$15.00	10 Mes.	73	...1.5
955—250 Reel	32.00	20 Mes.	73.7	...3.2
954—500 Reel	63.00	40 Mes.	73.7	...5.9
953—1000 Coil	125.00			



Crystal Microphone Cable

For use with crystal and ribbon microphones. They are designed for low capacity and low losses. Constructed of tinned stranded conductor with a wall of low capacity rubber and closely woven shield and tough rubber wall overall.

No.	Ft.	Size	Cap. per Ft.	O.D.	List Price
872	100	Crystal	20	.37	\$12.00
872	250	Crystal	20	.37	28.50
870	100	Label	20	.69	9.00
870	250	Label	20	.69	22.50
871	100	Label	20	.50	9.00
871	250	Label	20	.50	22.50



Shielded Battery Cable

Constructed of flexible stranded conductors covered with quality rubber compound and cotton shield is woven overall. Used to prevent interference from being picked up.

No.	No. Conds.	Ft.	Size	Cap. bet. Shield & Cond.	Cap. bet. Conds.	O.D.	List Price
972	2	100	20	.76	.61	.295	\$9.50
973	3	100	20	.90	.50	.210	11.00
974	4	100	20	.62	.35	.285	14.00
975	5	100	20	.61	.13	.290	17.00
976	6	100	20	.95	.48	.300	20.00
977	7	100	20	.87	.41	.340	25.00
978	8	100	20	1.03	.61	.345	29.00
979	9	100	20	1.00	.57	.360	32.50
980	10	100	20	1.07	.80	.375	37.00

HEAVY DUTY S. J. CABLE

Cat. No.	No. Conds.	Ft.	Gauge	O.D.	List Price each
574	2	500	No. 18	.300	\$45.50
578	2	500	No. 16	.325	54.00

73 OHM COAXIAL CABLE RG-59/U

Constructed of No. 22 solid plain copperweld with .146 O.D. Dielectric insulation, then with copper inner shield and Black Vinyl jacket. Overall O.D. is .242. Nominal impedance 73 ohms. Nominal capacitance 21 mmf. per ft. These characteristics permit peak receiver performance without distortion from locally induced interference—will meet all requirements for all frequencies including the Television and FM range.

Attenuation (Mc)	10	30	100	300	400
DB per 100 ft.	1.0	2.0	3.8	7.0	7.9

No.	List Price
907—100 ft. Spool	\$15.00
908—250 ft. Spool	36.00
909—500 ft. Spool	70.00
910—1000 ft. Reel	137.50

Commercial Type Twisted Pair (No. 22 STRANDED)



This cable is used extensively for placement on all antenna systems. Consists of 2 No. 22 tinned stranded conductors rubber covered and weatherproof braid overall. Available in black or white.

No.	Ft.	List Price
950—50 Coil		\$ 1.75
951—100 Coil		3.50
952—500 Spool		17.50

Commercial Type Twisted Pair (No. 18 STRANDED)



This cable is used extensively as original equipment of master antenna systems. It is constructed of 2 No. 18 tinned stranded conductors insulated with a special grade of rubber color coded and covered with a white weatherproof cotton braid.

No.	Ft.	List Price	Surge Imp.	D.B. Loss per 100'
916—50 Spool	\$3.25	10 Mes.	82	...2.1
917—100 Spool	6.00	20 Mes.	82.5	...3.9
918—250 Spool	12.00	40 Mes.	82.3	...6.3
919—500 Spool	23.75			
920—1000 Spool	47.50			



BATTERY CABLE

Constructed of individual rubber insulated stranded conductors, cotton braided and color coded. A closely woven cotton braid overall.

No.	No. Conds.	Ft.	Size	O.D.	List Price
172	2	100	20	.200	\$6.00
173	3	100	20	.205	8.00
174	4	100	20	.240	10.00
175	5	100	20	.260	12.50
176	6	100	20	.290	14.50
177	7	100	20	.340	17.50
178	8	100	20	.370	20.50
179	9	100	20	.400	23.00
180	10	100	20	.440	25.00
182	12	100	20	.430	30.00



Shielded Battery Cable (Cotton Braid Overall)

Constructed of individual tinned stranded copper with a wall of rubber and covered with a colored cotton braid.

No.	No. Conds.	Ft.	Size	Cap. bet. Shield & Cond.	Cap. bet. Conds.	O.D.	List Price
1972	2	100	20	.65	.49	.210	\$10.50
1973	3	100	20	.86	.49	.210	15.00
1974	4	100	20	1.03	.46	.245	18.00
1975	5	100	20	.73	.38	.312	21.00
1976	6	100	20	.70	.36	.330	25.00
1977	7	100	20	.68	.35	.350	28.00



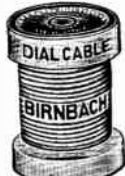
Diathermy Cable

Specially designed for use with electrotherapy apparatus. It is extremely flexible with a special grade of tough live flexible jacket to withstand the exacting service required.

No.	Ft.	Breakdown Voltage	O.D.	List Price
756	100	60 Cycles A.C.	.300	\$14.00
757	1000	60 Cycles A.C.	.300	126.00

Birnbach

BIRACO TUBING DIAL and MAGNET WIRE



DIAL CABLE 42 Strand Phosphor Cable

Constructed of the finest phosphor bronze wire over a linen thread center. Due to its high tensile strength, it will not stretch.

- No. 1025—25' Spool List Price \$1.20 each
- No. 1050—50' Spool List Price 2.25 each
- No. 1051—100' Spool List Price 4.00 each
- No. 1052—1000' Spool List Price 33.00 each

Phosphor Bronze (Light Cable)

A lower quality cable than No. 1025, but a cable that will give good service. This is a braided Phosphor Bronze cable.

- No. 1053—25' Spool List Price \$0.66 each
- No. 1054—50' Spool List Price 1.25 each
- No. 1055—100' Spool List Price 2.50 each
- No. 1056—1000' Spool List Price 18.50 each

Extra Heavy Linen Dial Cable

Made of the finest linen for replacement on all receivers, same as used for Philco. It is extra heavy for exceptional long service.

- No. 1057—25' Spool List Price \$1.30 each
- No. 1058—50' Spool List Price 2.50 each
- No. 1059—100' Spool List Price 4.50 each
- No. 1060—1000' Spool List Price 36.00 each

Heavy Linen Cable

This braided cable is used for replacement for all Philco Receivers.

- No. 2025—25' Spool List Price \$1.30 each
- No. 2050—50' Spool List Price 2.50 each
- No. 2051—100' Spool List Price 4.50 each
- No. 2052—1000' Spool List Price 36.00 each

Light Linen Dial Cable (Silk Core)

High quality linen cable used on many receivers specially treated to prevent slipping.

- No. 3025—25' Spool List Price \$1.20 each
- No. 3050—50' Spool List Price 2.25 each
- No. 3051—100' Spool List Price 4.00 each
- No. 3052—1000' Spool List Price 25.00 each

Extra Light Linen Cable

It is a strong extra thin linen cable for replacement. Braided of the finest black linen.

- No. 4025—25' Spool List Price \$0.75 each
- No. 4050—50' Spool List Price 1.40 each
- No. 4051—100' Spool List Price 2.50 each
- No. 4052—1000' Spool List Price 18.50 each



SPRING WIRE CLIPS

They will hold a wire, up to No. 10 B&S Gauge, in a secure contact. All clips are brass nickel-plated.

- | No. | Length | Std. Pkg. | List Price |
|-----|----------------|-----------|------------|
| 32 | Spring Clip 1" | 100 | \$2.00 |
| 33 | Twin Clip .13" | 100 | 8.50 |

ALL RUBBER LAMP CORD

This cord is an all rubber covered insulated parallel cord which can be separated by starting with a knife. Connects easily and cannot get hot. Sanitary and neat.

COLORS: Black, White, Brown

- 570—100 Spool.....18.....\$ 4.25
- 572—250 Spool.....18.....10.00
- 573—500 Spool.....18.....20.00

BUS BAR WIRE

Used to hook up all types of transmitters, especially ultra short wave equipment. Made of hard drawn copper, tinned, straightened, and cut 2 ft. lengths.

- | No. | per 100 lengths | List Price |
|---------------------------|-----------------|------------|
| 2010—No. 10 Round Tinned | | \$8.50 |
| 2012—No. 12 Square Tinned | | 6.75 |
| 2013—No. 12 Round Tinned | | 6.00 |
| 2014—No. 14 Square Tinned | | 5.10 |
| 2015—No. 14 Round Tinned | | 4.30 |

MAGNET WIRE

Special Spools — \$0.56 List Price

On attractive spools, even sizes from 14 to 40 inclusive, in Double Cotton, Plain Enamel, and Double Silk. Here is a really sensational seller for the dealer who will put this display on the counter. It is a Silent Salesman which will bring you real profit the year around! FREE DISPLAY: One Display is given with each initial order for 100 spools. Each Display made of strong, re-inforced steel, molybdenum crackle finish with attractive 3 color Display at top. Space provided to indicate YOUR resale price.

Extra Display Racks available at \$3.50 each, Net.

LENGTH OF WIRE OF SPECIAL SPOOLS

Size B&S	Plain Enamel	Double Cotton	Double Silk	Size B&S	Plain Enamel	Double Cotton	Double Silk	Size B&S	Plain Enamel	Double Cotton	Double Silk
12	15 ft.	9 ft.	11 ft.	22	112 ft.	75 ft.	37 ft.	32	675 ft.	180 ft.	124 ft.
14	26 ft.	20 ft.	11 ft.	24	181 ft.	97 ft.	56 ft.	34	900 ft.	195 ft.	131 ft.
16	34 ft.	31 ft.	19 ft.	26	211 ft.	116 ft.	71 ft.	36	1275 ft.	296 ft.	142 ft.
18	56 ft.	44 ft.	23 ft.	28	401 ft.	131 ft.	90 ft.	38	1725 ft.	210 ft.	116 ft.
20	86 ft.	56 ft.	29 ft.	30	525 ft.	158 ft.	112 ft.	40	1950 ft.	295 ft.	125 ft.

1/4 LB., 1/2 LB., 1 LB.,

MAGNET WIRE—Approximate Feet and List Prices

Double Cotton (White)				Plain Enamel				Double Silk (Green)			
1/4 lb Spool	1/2 lb Spool	1 lb Spool	List	1/4 lb Spool	1/2 lb Spool	1 lb Spool	List	1/4 lb Spool	1/2 lb Spool	1 lb Spool	List
12	12 \$0.40	24 \$0.70	48 \$1.27	12	12 \$0.33	25 \$0.63	50 \$1.08	12	12 \$0.57	24 \$1.12	49 \$2.12
14	19 .41	39 .71	78 1.30	14	20 .35	40 .65	80 1.10	14	19 .60	39 1.15	78 2.15
16	31 .44	62 .73	123 1.33	16	32 .36	63 .66	126 1.12	16	31 .65	62 1.25	125 2.27
18	48 .45	97 .81	191 1.37	18	50 .37	100 .67	201 1.16	18	49 .72	99 1.31	198 2.50
20	78 .49	157 .90	304 1.54	20	80 .40	160 .68	320 1.24	20	78 .83	157 1.62	314 3.05
22	119 .55	238 1.02	477 1.75	22	127 .41	254 .72	508 1.27	22	123 .96	247 1.87	495 3.35
24	131 .64	269 1.21	538 1.84	24	201 .43	403 .77	806 1.33	24	195 1.06	390 2.06	781 4.00
26	281 .77	568 1.44	1136 2.54	26	320 .52	640 .92	1280 1.66	26	303 1.28	606 2.50	1212 4.90
28	435 .91	871 1.75	1742 2.97	28	507 .55	1015 .97	2030 1.77	28	478 1.43	956 2.81	1912 5.31
30	611 1.09	1224 2.06	2596 3.53	30	805 .60	1610 1.10	3220 2.00	30	739 1.62	1479 3.12	2958 6.25
32	976 1.35	1953 2.55	3906 4.85	32	1282 .66	2564 1.18	5128 2.16	32	1136 2.18	2272 4.25	1545 8.50
34	1365 1.90	2731 3.60	5460 6.80	34	1937 .75	3875 1.36	7750 2.73	34	1712 2.81	3424 5.50	6849 10.50
36	1827 2.60	3654 4.98	7309 9.35	36	3221 .87	6442 1.59	12884 2.98	36	2711 4.37	5422 8.50	10204 16.25
38	2738 5.00	5476 9.35	10952 17.50	38	5132 1.00	10264 1.85	20528 3.47	38	3770 6.25	7541 11.85	15082 22.50
40	3405 7.50	6811 14.00	13622 26.00	40	8143 1.50	16286 2.77	32573 5.25	40	5010 9.35	10020 17.75	20161 33.50

BIRACO TUBING (Extruded)



It is an extruded tubing made of the new synthetic plastic material. Extremely flexible and when stretched returns to its original form. Withstands the effects of heat and will not support combustion. Will only soften at 300°F and will not flow at 425°F. Its dielectric strength—750 volts per mil, when dry and 350 volts when wet. It is not affected by oil and is resistant to most coal tar solvents and petroleum solvents. Resists acids, alkalies in concentrations up to 30% by weight. Available in continuous lengths. Dielectric strength—10,000 volts.

COLORS: Black, Red, Green, White and Yellow

No.	Size	I.D.	per 30' lengths	List Price
313	20	.034		\$0.17
314	18	.042		.17
315	16	.053		.18
316	14	.066		.17
317	12	.085		.19
318	8	.135		.50
319	4	.208		.55
320	2	.263		.60
321	5/16	.3125		.70
322	3/8	.375		.75
323	1/2	.500		1.20
324	3/4	.625		1.37



SERVICE CORDS

Constructed of all rubber Underwriters Approved lamp cord and plug on one end and with the other end stripped and tinned all ready for use.

COLORS: Black or Brown

No.	Size	List Price
816-B	1/2"	\$0.50
817-B	3/4"	.60
819-B	1"	.65

VARNISHED TUBING

Provides quality insulation for wires used on radio sets, small electrical equipment and instruments. The outside is impervious to oil, acid and water. It is highly flexible and will not crack after aging. Average dielectric strength 5000 volts.

COLORS: Black, Red, Green, White and Yellow

No.	Size	I.D.	per 30' lengths	List Price
291	20	.034		\$0.17
292	18	.042		.17
293	16	.053		.17
294	14	.066		.17
295	12	.085		.17
296	8	.135		.17
297	4	.208		.50
298	2	.263		.50
299	5/16	.3125		.65
300	3/8	.375		.70
301	1/2	.500		.75
302	3/4	.625		1.50
303	1"	.750		1.50

BIRACO & VARNISHED TUBING IN HANDY PACKAGES

Both BIRACO Extruded TUBING and VARNISHED TUBING are also available on convenient paper spools in a variety of lengths to meet practically every demand. Put up in handy packages to fill the requirements of servicemen and manufacturers. Wide assortment of colors.

BIRACO TUBING				VARNISHED TUBING					
Cat. No.	Gauge Size	Approx. I. D.	Length Package	List Price Package	Cat. No.	Gauge Size	Approx. I. D.	Length Package	List Price Package
314B	18	.042	25 ft.	\$0.75	293V	18	.042	25 ft.	\$ 1.50
315B	16	.053	25 ft.	.75	294V	16	.053	25 ft.	1.50
316B	14	.066	25 ft.	.75	295V	14	.066	25 ft.	1.50
317B	12	.085	25 ft.	.75	300V	12	.085	25 ft.	1.50
325B	10	.106	15 ft.	.75	307V	10	.106	20 ft.	1.50
318B	8	.135	15 ft.	.75	301V	8	.135	15 ft.	1.50
326B	6	.166	15 ft.	.75	302V	6	.166	10 ft.	1.50
319B	4	.208	10 ft.	.75	305V	4	.208	10 ft.	1.50
320B	2	.263	10 ft.	.75	306V	2	.263	10 ft.	1.50
314BC	18	.042	100 ft.	2.75	293VC	18	.042	100 ft.	5.25
315BC	16	.053	100 ft.	2.75	294VC	16	.053	100 ft.	5.25
316BC	14	.066	100 ft.	2.75	295VC	14	.066	100 ft.	5.25
317BC	12	.085	100 ft.	2.75	300VC	12	.085	100 ft.	5.25
318BC	8	.135	100 ft.	4.40	307VC	10	.106	100 ft.	9.00
326BC	6	.166	100 ft.	4.40	301VC	8	.135	100 ft.	9.00
319BC	4	.208	100 ft.	6.75	302VC	6	.166	100 ft.	9.00
320BC	2	.263	100 ft.	6.75	305VC	4	.208	100 ft.	15.00
					306VC	2	.263	100 ft.	15.00





Birnbach

TEST LEADS and ACCESSORIES

High Voltage Test Leads

The high dielectric strength and low leakage resistance of these test leads recommend them for testing high voltage high sensitivity devices such as Meggers and Megohmmeters. They are particularly well suited for use in testing breakdown voltages up to 1200 volts. The prods and the tip handles are made of black and red bakelite with special designed tips for application. The prods are 6" long and 1/2" dia. and have a guard ring near the metal tip to prevent accidental touching of the exposed metal part. Extra heavy knickless test lead wire 7 3/4" dia. is used throughout. The leads are 60" long.

No. List Price
562—High Voltage Test Leads \$5.00

DeLuxe Test Leads

Constructed with 5" long cast phenolic red and black handles with removable needlepoint or solderless tips. Black and red heavy knickless instrument 18" long is used to connect the prods with the insulated red and black cast phenolic solderless tip. Either needlepoint or solderless tip available.

No. List Price
560—Solderless prod test leads...\$1.75
561—Needlepoint prod test leads 1.75

Bakelite Pencil Type Test Leads

Red and black bakelite handles, 6" long and 5/16" in dia. and red and black bakelite insulated phone tips. Heavy knickless wire is used together with the Birnbach Serulok system of solderless wire connection. The Universal needle and phone tip prod have the same dimensions as the standard phone tip and are useful for piercing insulation without damage. The needlepoint is extra heavy to prevent breakage and should it become broken can be readily replaced. Available only in combination of needlepoint prods and insulated phone tips. Length overall 60".

No. List Price
408—Bakelite Pencil Type Test Lead...\$2.50
439—Needlepoint Prod Tip for Replacement...25

Test Leads (Bakelite Handles)

Have 4" red and black insulated handles. Needles can be replaced when broken simply by loosening the knurled collar. Available with either phone tips or spade lugs. Length overall 50".

No. List Price
4420—Phone Tip Test Leads...\$1.12 1/2
4421—Spade Lug Test Leads...1.12 1/2

Standard Test Leads

Same as above with a Sr. solderless phone tip.

No. List Price
422—Phone Tip Test Leads...\$1.00
423—Spade Lug Test Leads...1.00

Insulated Solderless Phone Tips

Insulated handles 3/4" dia. by 1" long fitted to solderless phone tips. The wire can be easily attached by threading through the hole in the handle and tightening the knurled nut. Colors:—red, black, green, and yellow.

No. List Price
409—Insulated Sr. Solderless Tip—2 1/4" Long...each \$0.20
415—Insulated Jr. Solderless Tip—1 1/2" Long...each .18

Insulated Phone Tip

The insulated handle is 1" long, 3/8" dia. Connection is made by threading the Serulok threaded bushing (see drawing). Colors: red, black, green and yellow.

412—Serulok 1 1/4" Tip, 1 1/8" Long...each \$0.24
419—Serulok 1 1/4" Tip, 1 1/8" Long...each .30

Phone Tip

Ideal for replacement on headset, speaker and extension cords. No. 402—Std. Pkg. 100 List Price \$2.25 per C

Solderless Phone Tips

Milled of solid brass and nickel-plated. Designed for easy insertion of the wire.

No. List Price per C
24—Junior...\$11.50
24—Senior...12.50
Std. Pkg. 100.

No. 26 Phone Tip Jack

Milled of brass and nickel plated. The bronze springs are specially made to hold the phone tip tight and straight. Mounts in a 3/8" dia. hole.

No. 26—Std. Pkg. 100. List Price \$12.50 per C

No. 407 Insulated Tip Jack

Has a 3/8" insulated top and mounts in a 3/8" dia. hole. The specially designed bronze springs hold the phone tip tight and straight. Colors:—red, black, yellow, and green. Std. Pkg. 100.

407—Insulated Phone Tip Jack...\$0.18

Knickless Test Lead Wire

Abrasion resisting live rubber that will not kink or break down in service. No. 20 has 41 strands and No. 18 has 66 strands of No. 36 tinned annealed copper wire.

No.	Ft.	Price	Size	Rubber Wall Thicknesses	Puncture Voltage 60 C/A.C.	O.D.
60	25	\$0.75	20 3/4			
61	100	3.75		0.45	12,000	.140
62	500	17.00				
64	25	1.35	18 3/4	.045	12,000	.155
66	100	4.55				
67	500	21.00				
HIGH VOLTAGE TEST LEAD WIRE						
63	25	\$2.60	18 3/4	.076	16,500	.218
68	100	7.00				
69	500	.42				

COLORS:—Red and Black.

No. 411 Bakelite Pencil Test Prods

These prods have the Birnbach Serulok solderless needlepoint tips. They are made of bakelite and are 6" long and 1/4" dia. The connection is made by threading the wire through the handle and securing to the needlepoint tip by locking the Serulok. The tip is then screwed into the handle. Available in red or black only.

No. List Price
411—Bakelite Pencil Test Prods...\$1.10

Solderless Tip Prod

Made of highly polished cast phenolic resin. A solderless phone tip is threaded at end permitting replacement of tip. Available in red or black.

No. List Price
410—...4" Handle...\$0.50
343—...5" Handle...50

Needlepoint Test Prod

A threaded shank needlepoint chuck is threaded into the end of handle. Made of highly polished cast phenolic handle. Available in red or black.

No. List Price
344—Needlepoint Test Prod, 4" Handle...\$0.45
345—Needlepoint Test Prod, 5" Handle...50

SCRULOK Needlepoint Test Prods

These insulated prods have the Serulok solderless system of wire connection. Wire is easily attached without soldering. An extra heavy needle is fitted into the tip. Colors:—black or red.

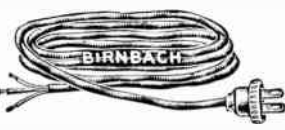
No. List Price
417—Needlepoint Test Prod, 3" Handle...\$0.45
418—Needlepoint Test Prod, 5" Handle...50

Headset Phone Cords

These cords are closely woven and are very durable and strong. They are used for replacement of worn headset cords. Standard cords are listed which will match practically all headsets manufactured. We will be glad to quote on cords having special terminal requirements.

No. List Price
ends...\$0.75
104—5 ft. Pin & Spade Tips...\$1.15
105—5 ft. Pin & Spade Tips...1.15
107—5 ft. Pin & Eye Tips...1.15
108—8 ft. Pin & Eye Tips...1.50
109—10 ft. Pin & Eye Tips...2.15

AC-DC Resistance Cords



Designed for replacement of the internal voltage dropping resistor on the present and older type of AC DC set. It consists of a line cord into which a third element has been incorporated. The voltage dropping resistor reduces the voltage to that needed for the filament of the tubes.

No.	Cord Rating	Sets Having Following Tubes	List Price Each
35	135 ohm	25Z5-43-47	\$1.15
36	160 ohm	25Z5-43-49	1.15
34	180 ohm	12Z3-43-49	1.15
49	200 ohm	25Z5-43-27	1.15
37	220 ohm	12Z3-13-3	1.15
41	250 ohm	12Z3-43-27	1.15
		25Z5-3	1.15
38	290 ohm	12Z3-3	1.15
45	300 ohm	12Z3	1.15
39	330 ohm		1.15
40	350 ohm	12Z3	1.15
		12Z3	1.15
47	390 ohm		1.15
125	220 110 Volt Voltage	reducing cord	2.25
126	280 ohm	4 Wire	2.60
127	190 ohm	4 Wire	2.00
128	165 ohm	4 Wire	2.00

* 6.3 volt tubes. † For Emerson Radio.

Speaker Extension Cords



Constructed of stranded annealed copper wire insulated with rubber over which a brown mercerized cotton braid is closely woven. Complete with easily attached bakelite connector.

No. List Price
16—10 ft. Cord...each \$1.50
120—50 ft. Cord...each 2.00
121—30 ft. Cord...each 2.75
122—40 ft. Cord...each 3.10
123—50 ft. Cord...each 3.50
124—100 ft. Cord...each 6.50
151—Bakelite Extension Cord, Connector only...each .60

Alligator Clips

Made of steel nickel plated. The jaws match accurately permitting them to grip all kinds of wire securely. The insulated handle is 3/8" dia. and 3/4" long and comes in red or black.

No. Std. Length Pkg. List Price
31—Alligator clip 2"...50...\$0.89
310—Insulated Alligator clip 2 1/4"...50...23

Test Clips



The teeth mesh correctly permitting good contact to be made. The No. 27 S is a solid copper clip with a brass screw designed for high frequency work. Sturdily constructed. Standard Package 50.

Jaw Price Lgth. Spread ea.
27—Pee Wee...1 1/2"... 3/8"... \$0.09
28—Midgot...2"... 1/2"... .09
29—Medium...2 1/2"... 1"... .11
30—Large...4"... 1 1/4"... .20
27C—Pee Wee Copper...1 1/2"... 3/8"... .17
27R—Rubber Sleeve...red or black... .16

Birnbach

AUTO CABLE and ACCESSORIES



SHIELDED FABRIC LOOM



Is made of a tinned copper braid over a weatherproof loom. Used to shield auto antenna leads and grouped leads against interference; also in shielding the output of signal generators.

No.	Inside Dia.	List Price
1316—100 ft. Spool	1 1/2"	\$14.00
1516—100 ft. Spool	1 3/4"	21.00
1038—100 ft. Spool	3/8"	23.25
1716—100 ft. Spool	1 1/2"	30.00
1012—100 ft. Spool	1 1/2"	33.00

Ford V-8 Distributor Suppressor



Designed to be inserted in the distributor of Ford V-8. Unit consists of a resistor brush which replaces the regular brush.

No. 365 List Price \$0.35

AUTO ANTENNA CONNECTOR

Permits quick connection of the auto antenna lead-in to the receiver.



No. 366—Auto Connector per C \$20.00

FUSED ANTENNA CONNECTOR



This connector takes a standard 3 AG automobile fuse. Used in auto radio power supply cables.

No. 367—Fused Connector per C \$25.00

HIGH VOLTAGE LACQUERED WIRE

Recommended for use as leads for wiring high voltage devices, and transmitter power supplies. Constructed of tinned stranded copper conductor with a wall of rubber covered with a highly lacquered cotton braid.



Constructed of tinned stranded copper conductor with two layers of varnished cambric and a lacquered cotton braid which is woven over which a lacquered cotton braid is woven.

No.	Ft.	Size	Puncture Voltage	O.D.	List Price
2810—100	10 1/2	16	9500	2.25	\$10.50
2812—100	12 1/2	18	9500	1.92	7.00
2814—100	14 1/2	20	9500	1.67	4.75
2816—100	16 1/2	22	9500	1.53	4.00
2818—100	18 1/2	24	9500	1.45	3.50

Shielded Varnished Cambric Wire

Used where an oil and water resistant wire with a shielded covering is required. Constructed of tinned stranded conductor with 2 layers of varnished cambric and a lacquered cotton braid with a tinned copper shield overall.



Constructed of tinned stranded conductor with a rubber insulation, waxed cotton braid with closely woven shield overall.

No.	Ft.	Size	Capacity per Ft. mmfds.	O.D.	List Price
1800—100	16	142	1.145		\$10.50
1818—100	18	102	1.131		9.50
1820—100	20	100	1.125		8.75

SHIELDED GRID LEAD WIRE



High insulation of this wire will reduce the loss in shielded grid circuits.

Constructed of tinned stranded conductor with a rubber insulation, waxed cotton braid with closely woven shield overall.

No.	Ft.	Size	Capacity per Ft. mmfds.	O.D.	List Price
818—100	18 1/2	75	1.180		\$8.50
820—100	20 1/2	70	1.150		7.50

AUTO RADIO SHIELDED LEAD-IN



Consists of a stranded tipped copper conductor, insulated with rubber and filled with hemp and a tinned copper braid overall.

No.	Ft.	Capacity mmfd per ft.	O.D.	List Price
799—100	49	2.75		\$10.00
800—100	34	5.00		20.00

7 MM HIGH TENSION CABLE



Useful in reducing interference from auto secondary circuits. Also used as photo electric cell leads and wherever a low loss shielded lead is required.

No.	List Price Per 100'
1600—7 MM. High Tension Cable	\$10.00
781—7 MM. Shielded Secondary Wire	16.00

RAYON BRAID LACQUERED WIRE

Constructed of stranded tinned copper conductor for easy soldering, with heavy wall of live rubber over which a rayon braid is woven. A high gloss lacquered finish over braid. Conductor consists of 16 strands of No. 30.



No.	Ft.	Puncture Voltage	Size	List Price
3425—25 Coil	9000	18 1/2		\$1.00
3450—50 Coil	9000	18 1/2		2.00
3460—100 Coil	9000	18 1/2		4.00
3600—500 Spool	9000	18 1/2		18.00

Colors: Black, red, green, yellow, brown, blue

VARNISHED CAMBRIC WIRE

Widely used in automotive wiring because of oil and waterproof construction.



Consists of tinned stranded conductor with two layers of varnished cambric over which a lacquered cotton braid is woven.

No.	Ft.	Size	Puncture Voltage	O.D.	List Price
3416—100	16	1000	1.08		\$6.75
3418—100	18	1000	1.07		5.75
3420—100	20	1000	0.94		4.50

No. 340 Wheel Static Eliminator

An effective means of reducing static created by the front wheels. Installation is made by placing the broad base of the spring against the hub cap and the cone point into the hole of the axle.



No. 340—Std. Pkg. 50
List Price \$10.00 per 100

PHONO-PICKUP WIRE

Small diameter—ideally suited for replacement in pickup arms of any make.

No.	Ft.	Size	List Price
1822A	100 ft. Spool	22	\$ 6.00
1822B	500 ft. Spool	22	28.00
1822C	1000 ft. Spool	22	52.50

AUTO RADIO SHIELDING



Used for shielding leads of interference creating circuits; and for bonding motor block and other parts of the automobile to the chassis.

No.	Inside Dia.	List Price
858—50 ft. Spool	1 1/8"	\$ 2.45
859—50 ft. Spool	1 1/4"	2.65
863—50 ft. Spool	1 1/2"	3.25
864—50 ft. Spool	1 3/4"	3.80
865—50 ft. Spool	1 7/8"	7.70
857—50 ft. Spool	2"	12.25

B A R E

860—50 ft. Spool	1 1/4"	2.80
861—50 ft. Spool	1 1/2"	3.20
862—50 ft. Spool	1 3/8"	7.00

AVAILABLE IN SPECIAL LENGTHS



BIRNBACH IGNITION FILTERS

These Ignition Filters completely eliminate all ignition and high tension circuit interference, making clear auto radio reception a certainty. The only ignition filters having a copper wound inductance, which accounts for the low resistance of 120 ohms for the Ignition Filter. Less gasoline is consumed than when high resistance filters are used.

No.	List Price each
350—Ignition Filter—Bracket Type	\$0.85
351—Ignition Filter—Cable Type	.85
352—Distributor Filter	.85
353—Ignition Filter—Screw Type	.85
359—Ignition Filter—Slip-on Type	.85

BIRNBACH MASTER FILTER

Eliminates all ignition interference and does away with the necessity of having a separate filter for each spark plug. Available in two types, namely, the Distributor type for easy insertion into distributor head, and the Cable type to be placed into the distributor lead where it is impossible to insert it into the distributor head.



No.	List Price each
354—Cable or Distributor Type	\$3.50

AUTO NOISE FILTER

These are especially designed for the elimination of noise created by generator commutator, electrical windshield wiper, horn, and especially dome, tail, and stop light cables. Connections made by bolting down the flange of container to chassis. The long insulated lead with a convenient screw lug is connected to the source of interference.



No.	List Price
355—Auto Noise Filter—1/2 Mfd.	ea. \$0.75
356—Auto Noise Filter—1 Mfd.	ea. .75



Birnbach PLUGS and JACKS

GIANT PLUGS



Used for heavy current, they are rated at 25 amps. The long life nickel silver alloy spring is secured over a pin preventing a collapse of the spring and also maintaining the full action of the spring when inserted into the jack. The No. 398A plug has a hole in the threaded shank to permit soldering to it. It is used extensively on diathermy electrode pad cables. Standard Package 25.



No.	A	B	C	List Price
396 Plug	1 1/2"	—	10-32	each \$0.30
397 Plug	1 1/2"	—	1/4-20	each .35
398 Plug	1 1/2"	5/8"	1/4-28	each .30
398A Plug	1 1/2"	5/8"	1/4-28	each .30



Large area of contact is one of the outstanding features of these jacks and plugs. The No. 400 series of packages have a nickel silver contact spring secured over a full length central pin, making these plugs non-collapsible and assuring a low resistance contact. Capacity 5 amperes. Standard Package 100.



No.	A	B	C	List Price
400 Plug	3/4"	1/2"	6-32	each \$0.12
401 Plug	3/4"	—	6-32	each .13
404A Plug	3/4"	5/8"	1/4-28	each .18

BANANA PLUGS

No. 403 BANANA JACK



Accurately milled and has a precision reamed hole to help maintain the tight and smooth action of the plug. It is made of brass nickel plated and comes complete with nut and lug. Standard Package 100.

No.	A	B	C	List Price
403 Jack	1/2"	3/8"	1/4-28	\$0.12

INSULATED BANANA JACKS



The No. 391 Jack is very popular with the electric therapeutic manufacturers. The 1/2" dia. insulated head admits all of the exposed metal part of the metal plug when inserted. Mounts in a 3/8" dia. hole on a panel up to 3/8" thick. The No. 406 Jack has a 3/8" dia. insulated top. It fits into a 3/8" dia. hole and takes up to a 3/8" panel. Both come complete with insulating shoulder washer, nut and lug.

No.	Std. Pkg.	List Price
391—Insulated Jack—red or black.	50	\$0.19
406—Insulated Jack—red, black, yellow, or green.	50	.18

SHAFT COUPLINGS, REDUCERS AND EXTENDERS

By the use of these units all 1/4" and 3/8" dia. shafts and knobs can be assembled together. The insulated units are for use where electrical isolation is desired. Furnished complete with set screws shown. Be sure to specify whether Brass or Insulated is desired.

Brass No.	Insulated No.	Shaft A	Hole B	List Price
534	634	1/4"	1/4"	each \$0.16
535	635	1/4"	3/8"	each .16
536	636	3/8"	1/4"	each .16
537—Reducer for 3/8" Dia. Hole to 1/4" Dia. Shaft.				each .10

Brass No.	Insulated No.	Shaft A	Hole B	List Price
531	631	1/4"	3/8"	each \$0.16
532	632	1/4"	3/8"	each .16
533	633	3/8"	3/8"	each .16

No.	Length	Hole I.D.	Shaft O.D.	List Price
538—Brass	1 3/4"	1/4"	1/4"	each \$0.25
539—Insulated	1 3/4"	1/4"	1/4"	each .25

BRASS SHAFTING

No.	Dia.	Length	List Price
540	1/4"	6"	each \$0.20
541	1/4"	12"	each .40
542	3/8"	8"	each .35

FIBRE SHAFTING

No.	Dia.	Length	List Price
543	1/4"	6"	each \$0.25
544	1/4"	12"	each .50
545	3/8"	8"	each .60

GIANT JACKS



Milled with the central hole being reamed to size to insure a tight fit with all Giant Plugs. The No. 391 and No. 399A have a 10-32 thread tapped at the end permitting connection to be made. They are all made of brass and nickel plated and come complete with nut and lug.



No.	Std. Pkg.	A	B	C	List Price
399A...Jack	25	1 3/8"	—	5/8-24	each \$0.30
394...Jack	25	1 1/8"	1/2"	1/2-20	each .25
395...Jack	25	1 1/8"	1/2"	1/4-20	each .30
399...Jack	25	7/8"	5/8"	3/8-24	each .35

No. 392 INSULATED GIANT PLUG



Made so that no projecting edges are exposed, thereby protecting the user from unnecessary contact. Connection is made by soldering into the hole at the end of the threaded shank of the plug. Handle is 1 5/8" long by 3/8" dia.; length over all 3". Colors: red or black.

No. 392—Insulated Giant Plug..... List Price \$0.50

No. 393 INSULATED GIANT JACK



Designed to leave no metal part exposed on the panel. The 5/8-24 brass nickel plated sleeve has a 10-32 threaded hole at the end permitting a connection at the end of the jack on to the lug under the head. Either assembly available complete with nut, insulating shoulder washer, lock washer and lug. Length overall 1 1/2". Colors: red or black.

No.	List Price
393—Insulated Giant Jack under head lug.....	\$0.45
393A—Insulated Giant Jack end lug.....	.45

HARD RUBBER INSULATED GIANT PLUG



Especially designed for use with diathermy cables. It has a 3/8" dia. hole in the handle to take the largest cable. It is made of polished black hard rubber. The handle is 3" long by 3/8" dia. Overall length is 4 1/2".

No. 342—Hard Rubber Insulated Plug..... List Price \$2.00

No. 341 Insulated Banana Plug



This plug consists of our No. 404A plug with a tapered handle 1 3/4" long by 1/2" dia. Used on a therapeutic apparatus and test equipment. Overall length 2 5/8". Colors: red or black.

No. 341—Insulated Banana Plug..... List Price \$0.45

No. 404 Insulated Banana Plug



The plug is for experimental test leads because of its Serulok solderless connection and the non-collapsible special alloy springs assembled on a pin preventing collapse of the plug spring. The handle is made of phenolic resin and is 3/8" by 1" long. Colors: red, black, yellow and green.

No. 404—Insulated Banana Plug..... Std. Pkg. 50..... List Price \$0.20

No. 604 BANANA PLUG



Made of solid brass nickel-plated, with the end being slotted. The cast phenolic handle is 1" long by 3/8" dia. and is held on by the screw that secures the wire to the plug. Colors: red, black, yellow and green.

No. 604—Plug..... Std. Pkg. 50..... List Price \$0.19

No. 605 HANDLE JACK



Consists of a banana jack inside an insulated sleeve. Connection is made by soldering to the end of the jack. Handle is made of cast phenolic resin 3/8" dia. by 1 1/4" long. Colors: red, black, yellow and green.

No. 605—Handle Jack..... Std. Pkg. 50..... List Price \$0.25

TINNED LUGS



No.	Hole for Screw	Length	List Price Per M
1	6	1/8"	\$ 4.75
2	10	5/8"	4.75
3	1/4"	3/4"	4.75
4	3/8"	3/4"	4.75
5	1/2"	1 1/8"	27.00
21	10	1 1/8"	34.50
22	1/4"	1 1/8"	8.50
201	8	1 1/8"	21.00
96	8-8-10	1 1/8"	8.50
97	8	7/8"	7.00
98	8	5/8"	7.00
99	6-8	1 1/8"	8.50
	4-6-8	1 1/8"	8.50

Birnbach

INSULATORS



STEATITE CONE STANDOFF INSULATORS

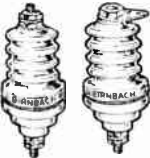
Made of low absorption high tensile strength porcelain with a smooth glaze. All heights except the No. 430 are available with a Jack or a threaded hole top. Range of sizes are adequate for all needs. They are available only in a white glaze and come complete with screws, metal and cork washers.



No.	Height A	Std. Pkg.	B	C	Threaded Holes D	E	Mounting Hole	List Price each
430	5/8"	100	3/8"	1/2"	6-32	6-32		\$0.20
431	1"	50	1/2"	3/4"	8-32	8-32		.30
431J	1"	50	1/2"	3/4"	8-32	No. 130 Jack		.35
432	1 1/4"	50	3/4"	1"	10-32	10-32		.55
432J	1 1/4"	50	3/4"	1"	10-32	No. 103 Jack		.75
433	2 1/4"	25	1 1/4"	1 3/4"	1 1/2-20	1 1/2-20		1.00
433J	2 1/4"	25	1 1/4"	1 3/4"	1 1/2-20	No. 395 Jack		1.20

CORRUGATED FEEDTHRU INSULATORS

The six new corrugated type feedthru insulators have more than twice the leakage path of the straight type because of increased surface of the corrugations and recommends itself where a straight side insulator of equal height is not satisfactory because of its shorter leakage path. Brass nickel-plated hardware and cork mounting washers supplied.



No.	Height A	Std. Pkg.	B	C	Mounting Hole	Hardware	List Price
479	1 1/4"	25	1 1/4"	1 1/2"	1"	10-32	ea. \$0.55
479J	1 1/4"	25	1 1/4"	1 1/2"	1"	No. 103 Jack	ea. .65
4276	2 3/4"	10	1 3/4"	2 1/4"	1 1/2"	1 1/2-20	ea. 1.00
4276J	2 3/4"	10	1 3/4"	2 1/4"	1 1/2"	No. 394 Jack	ea. 1.20
4452	4 1/2"	5	2 1/4"	3 1/2"	1 3/4"	1 1/2-20	ea. 1.50
4452J	4 1/2"	5	2 1/4"	3 1/2"	1 3/4"	No. 394 Jack	ea. 1.80

HIGH VOLTAGE FEEDTHRU INSULATOR

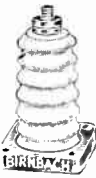
This insulator has been designed to meet the demand for an insulator having high dielectric and mechanical strength. The extra long leakage path is made possible by the corrugations on the top insulator. The bottom sleeve taper from a base dia. of 1 1/2" where the electric stress is greatest.



Height 1 5/8" Base Dia. 2" Mounting Hole 1 1/4" Hardware 1 1/2-20 No. 4233 List Price \$0.80

METAL BASE INSULATORS

Designed to replace conventional porcelain insulators where failure of the base is due to cracking when stressed down. Extremely long leakage paths due to the corrugated surface is one of the important characteristics. They are made from high tensile strength low absorption porcelain smoothly glazed all over. Supplied with nickel-plated brass screws and nuts and cadmium plated drawn steel bases.



Cat. No.	Height A	Std. Pkg.	Base Dimen. B	C	Mounting Screw D	Hardware	List Price
867	1 3/8"	25	1 1/2" x 1 1/2"	1 1/2"	2 No. 8	10-32	ea. \$0.30
867J	1 3/8"	25	1 1/2" x 1 1/2"	1 1/2"	2 No. 8	No. 103 Jack	ea. .40
4176	2 3/4"	10	1 3/4" x 1 3/4"	1 3/4"	1 No. 10	1 1/2-20	ea. .55
4176J	2 3/4"	10	1 3/4" x 1 3/4"	1 3/4"	1 No. 10	No. 103 Jack	ea. .70
4451	4 1/2"	5	2 1/4" x 2 1/4"	1 3/4"	1 No. 10	1 1/2-20	ea. .82
4451J	4 1/2"	5	2 1/4" x 2 1/4"	1 3/4"	1 No. 10	No. 395 Jack	ea. 1.15

"LUCITE" FEEDTHRU INSULATORS

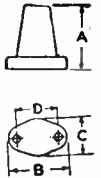
These feedthru insulators are ideal for bringing high frequency leads thru a panel. They are made of genuine Dupont Lucite. Because of its low loss at high frequency, it is well adapted to insulated elements of high frequency circuits. The 1/2" dia. insulators have brass nickel plated 6-32 hardware and the 3/4" base 10-32 hardware.



No.	Height above Panel	Insulator Dia.	Mtg. Hole	Bottom Height	List Price
377	1 1/4"	1/2"	1"	1 1/4"	\$0.35
378	1 1/2"	1/2"	1"	1 1/2"	.45
379	1"	3/4"	1 1/4"	1 1/4"	.50
475	1 1/2"	3/4"	1 1/4"	1 1/2"	1.00
476	2"	3/4"	1 1/4"	1 1/2"	1.25

STANDOFF INSULATORS

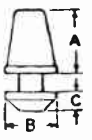
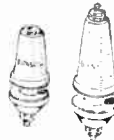
The sizes range from 5/8" to 4 1/2" high in five properly graduated heights. Made of highly vitrified low absorption glazed porcelain. No washers are necessary for mounting as the mounting surface is ground flat; but for the No. 405 and No. 966 Standoff Insulators, it is advisable to use cork washers which are available as they will permit mounting securely without breakage. All brass nickel-plated hardware is supplied. Available in white or brown glaze.



No.	Height A	Std. Pkg.	B	C	D	Mounting Holes	Hardware	List Price each
405	5/8"	100	1/2"	1/2"	1/2"	6-32		\$0.11
965	1"	50	1 1/4"	1 1/4"	1 1/4"	8-32		.15
966	1"	50	1 1/4"	1 1/4"	1 1/4"	8-32		.15
966J	1"	50	1 1/4"	1 1/4"	1 1/4"	8-32	No. 103 Jack	.20
866	1 1/2"	25	1 1/2"	1 1/2"	1 1/2"	10-32		.20
866J	1 1/2"	25	1 1/2"	1 1/2"	1 1/2"	10-32	No. 103 Jack	.25
866SJ	1 1/2"	25	1 1/2"	1 1/2"	1 1/2"	10-32	No. 395 Jack	.60
4275	2 1/4"	10	2 1/4"	2 1/4"	2 1/4"	1 1/2-20		.52
4275J	2 1/4"	10	2 1/4"	2 1/4"	2 1/4"	1 1/2-20	No. 394 Jack	.90
4450	4 1/2"	5	2 1/4"	2 1/4"	2 1/4"	1 1/2-20		1.00
4450J	4 1/2"	5	2 1/4"	2 1/4"	2 1/4"	1 1/2-20	No. 394 Jack	1.35

FEEDTHRU INSULATORS

Made of highly vitrified, low absorption porcelain smoothly glazed to prevent accumulation of dust or dirt. Maximum strength is achieved by the proper proportions and flat mounting surfaces. Long insulating sleeves on the lower part of the insulator contribute much to their performance on high voltages. Brass nickel-plated hardware.



to their performance on high voltages. Brass nickel-plated hardware.

No.	Height A	Std. Pkg.	B	C	Mounting Hole	Hardware	List Price
458	5/8"	50	1/2"	1/2"	6-32		ea. \$0.22
478	1"	25	1 1/4"	1 1/4"	10-32		ea. .30
478J	1"	25	1 1/4"	1 1/4"	10-32	No. 103 Jack	ea. .38
4125	1 1/4"	25	1 1/4"	1 1/4"	10-32		ea. .35
4125J	1 1/4"	25	1 1/4"	1 1/4"	10-32	No. 103 Jack	ea. .40
4234	2 3/4"	10	2 3/4"	2 3/4"	1 1/2-20		ea. .90
4175	2 3/4"	10	1 1/4"	1 1/4"	1 1/2-20		ea. .80
4175J	2 3/4"	10	1 1/4"	1 1/4"	1 1/2-20	No. 394 Jack	ea. 1.15

BEE-HIVE STANDOFF

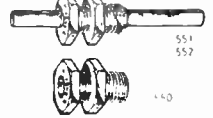
Base measures 2" dia. with 3 holes on a 1 1/2" circle for No. 6 screws. Supplied complete with 12-24 nickel-plated brass screw and nuts. The No. 766J has a No. 103 Jack. Available white or brown glaze.



No.	Hardware	Std. Pkg.	List Price
766	Standoff Insulator, 12-24 screw and nuts	10	\$0.30
766J	Jack Type	No. 103 Jack	10 35

FRONT PANEL BEARING

The No. 550 Front Panel Bearing is cadmium plated brass for panels up to 3/8" in thickness and for 1/4" dia. shafts. The No. 551 and No. 552 are complete assemblies of the No. 550 and 1/4" dia. brass shaft cadmium plated.



Cat. No.	Hardware	Std. Pkg.	List Price
550	Front Panel Bearing	10	each \$0.16
551	Front Panel Bearing, 1/4" shaft, 3" long	10	each .45
552	Front Panel Bearing, 1/4" shaft, 6" long	10	each .55

FLEXIBLE COUPLINGS

These flexible couplings cover all needs of the constructor. Tandem operation of two or more units is possible without having the shafts in exact alignment. Flexibility without backlash is obtained by the cadmium plated phosphor bronze springs, which are rigidly riveted to the insulation. All units fit 1/4" dia. shafts.



No.	Dia.	Insulation	List Price
360	1 1/4"	Filow	each \$0.35
361	1 1/4"	Bakelite	each .50
362	1 1/4"	Steatite	each .60

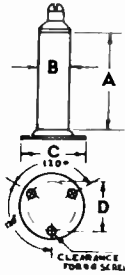


Birnbach INSULATORS

STEATITE PILLARS



These (steatite) pillar insulators have great tensile strength with extremely low losses at very high frequencies and are glazed on the outside to decrease surface leakage. They are tapped on both ends and are supplied complete with nickel-plated mounting base and top hardware.



No.	Height		B	Hardware	Base Dia.		List Price each
	A	Std. Pkg.			C	D	
450	1"	10	1/2"	6-32	1 1/8"	7/8"	\$0.50
450J	1"	10	1/2"	No. 403 Jack	1 1/8"	7/8"	.60
451	1 1/2"	10	1/2"	6-32	1 1/8"	7/8"	.60
451J	1 1/2"	10	1/2"	No. 403 Jack	1 1/8"	7/8"	.65
452	2 1/2"	10	1/2"	6-32	1 1/8"	7/8"	.65
452J	2 1/2"	10	1/2"	No. 403 Jack	1 1/8"	7/8"	.85
453	2 1/2"	5	3/4"	1/4-20	1 1/2"	1 1/8"	1.15
453J	2 1/2"	5	3/4"	No. 395 Jack	1 1/2"	1 1/8"	1.35
454	4"	5	3/4"	1/4-20	1 1/2"	1 1/8"	1.50
454J	4"	5	3/4"	No. 395 Jack	1 1/2"	1 1/8"	1.60



LUCITE SPREADERS

They are made of Dupont Lucite rod which has a very low loss at radio frequencies. It is water clear and has very low water absorption. The holes are drilled to take a No. 12 wire. A screw at the end of the spreader locks the wire in position.

LUCITE SPREADERS

No.	Wire Spacing	Std. Pkg.	List Price Each
436	2"	25	\$0.45
437	1"	25	.50
438	6"	25	.60

LUCITE RODS

No.	Dia.	List Price per Ft.
455	1/4"	\$0.75
459	3/8"	.90
460	1/2"	1.50
461	3/4"	2.75

Available in lengths up to 48 inches

FEEDER SPREADERS

They have a cross section of 3/4" x 1/2". Made of highly vitrified, low absorption, high tensile strength porcelain with a smooth white glaze overall.

No.	Std. Pkg.	List Price
462—Spreader, 2" long	25	each \$0.22
464—Spreader, 4" long	25	each .30
469—Spreader, 6" long	25	each .40

ANTENNA INSULATORS

These Antenna Insulators have exceptional low moisture absorption. The leakage path is long and the cross section is small and is consistent with the strength required. A smooth white glaze overall prevents the accumulation of dirt or ice.

No.	Std. Pkg.	List Price
668—4 1/4" long	25	each \$0.30
470—7" long	10	each .90
471—12" long	5	each 1.25
468—4 1/2" long Center Insulator	10	each .40

LEADIN INSULATORS

Each cone is 2 3/4" high and made of low absorption, highly vitrified glazed porcelain. The Nos. 4237 and 4238 Leadin Insulators have sufficient insulating bushings to insulate the rod that goes through the wall. In addition, 2 bushings are included, 1/4" and 1/2" long, allowing complete insulation of the threaded rod of any length in multiples of 1/4". They come complete with brass nickel-plated hardware and lead and cork washers to permit a water-tight seal.

No.	Description	List Price
4235	—10" Rod	\$1.75
4236	—15" Rod	2.00
4237	—10" Rod with bushings	2.25
4238	—15" Rod with bushings	2.85

STEATITE BUTTON



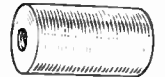
These specially designed steatite buttons are intended for use to simplify wiring and to be used as a binding post or a binding post insulator, or as a standoff insulator. Attention is called to the uniqueness of the design which prevents either section of the insulator from turning in respect to the special screw. The specially designed screw locks both sections.



A 1/2"	B 1/2"	C 3/4"	D 1 1/2"	E 6-32
No. 457		Std. Pkg. 25		List Price \$0.30

STEATITE PILLARS

(Without Hardware)



In many constructions, these unmounted threaded steatite pillars will facilitate assembly because of the one-hole mounting and parallel mounting surfaces. They are made of glazed Steatite with threaded holes on both sides.

No.	Height	Dia.	Threaded Hole	List Price
443	1 1/2"	1 1/2"	6-32	\$0.10
444	2"	1 1/2"	6-32	.10
445	1"	1 1/2"	6-32	.30
446	1 1/2"	1 1/2"	6-32	.35
447	2 1/2"	1 1/2"	6-32	.40
448	2 1/2"	3/4"	1/4-20	.60
449	4"	3/4"	1/4-20	.95

AIRPLANE INSULATORS

Used on mobile antenna installations, particularly on aircraft, as they are shaped for the least air resistance. They are made of white glazed low absorption porcelain.



No.	Length	Std. Pkg.	List Price
473	2"	100	each \$0.15
474	1 1/2"	100	each .21

STEATITE AIRPLANE INSULATORS

A very small compression type insulator with small wind resistance. It is 1 1/2" long and 1/2" dia.

No. 463—Std. Pkg. 25, List Price \$0.35

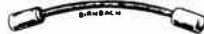


TUBE CLAMPS

These tube clips will be found extremely desirable when mounting resonant lines or elements of directive beam antennas. They are made of hand drawn aluminum and are available for 1/4", 3/8", 1/2", 3/4" and 1" dia. tubes. The 1/4", 3/8", and 1/2" have a clearance hole for No. 10 screw and the 3/4" and 1" dia. clamps have holes for 1/4" bolts.



Cat. No.	To Fit Tube	List Price
51—Clamp	1/4" Dia.	each \$0.18
52—Clamp	3/8" Dia.	each .18
53—Clamp	1/2" Dia.	each .18
54—Clamp	3/4" Dia.	each .18
55—Clamp	1" Dia.	each .30
56—Clamp	1" Dia.	each .40
57—Clamp	7/8" Dia.	each .40



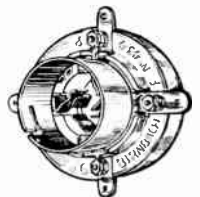
FLEXIBLE SHAFTS

At times there is difficulty getting the controls to the proper position on the panel. With couplings and these flexible shafts, locations can be made with ease on an offset and angles up to 90 degrees. The flexible shafts are made of phosphor bronze and fitted into 1/4" dia. hubs.

Cat. No.	List Price
553—Flexible Shaft, 3" long	each \$0.60
554—Flexible Shaft, 6" long	each .85

TRANSMITTING TUBE SOCKETS

Improved design and additional features of the Birnbach transmitting sockets has increased their popularity and are accepted as standard. The 50 watt socket has extra heavy side-wiping phosphor bronze contact spring with the filament spring having a double contact to safely carry the heavy current. The tube base is supported by the highly polished nickel-plated brass shell set in a highly vitrified low absorption porcelain base which is ground flat to prevent breakage. All brass nickel-plated screw and milled nuts are used.



Cat. No.	List Price
434—50 Watt Socket	each \$1.70
435—10 Watt Socket	each 1.25

RCA ELECTRONIC COMPONENTS



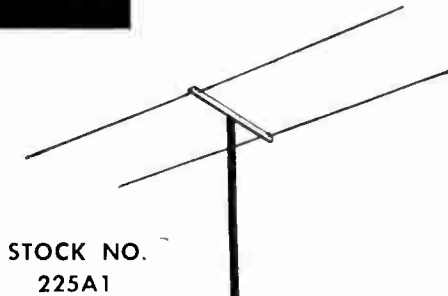
TELEVISION AND FM ANTENNAS

Bright Picture Antenna

For TV Sight and Sound reception on all 13 channels (44-88 and 170-216 Mc) as well as on FM.

Available with or without reflector. Tubular steel, non-sagging elements are plated with zinc. Water-resistant wooden cross-arms. Antenna rods cut to exact length; no trimming necessary regardless of frequency used.

Stock # 226A1 (bi-directional). Sugg'd List Price: \$10.00
Stock # 225A1 (uni-directional). Sugg'd List Price: \$13.50



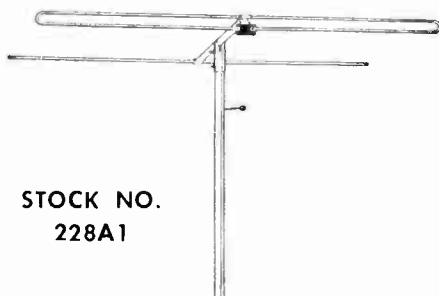
STOCK NO.
225A1

FM Folded Dipole & Reflector

Signal response unusually flat over entire 88-108 Mc FM band with standing-wave ratio of less than 3. Ideal for use in areas of weak signals.

Price includes 5' wooden mast and coated-steel mounting brackets.

Elements made of lightweight, durable aluminum. No special tools required for installation. Complete instructions included with each assembly. Stock # 228A1. Sugg'd List Price: \$13.50.

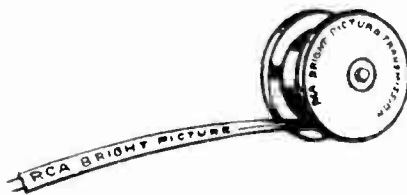


STOCK NO.
228A1

ANTENNA ACCESSORIES

Bright Picture Transmission Line

Especially designed for Television and FM. Special chemical-resistant plastic finish insures continued flexibility even in extreme heat or cold. Ultralow loss—less than 0.8 db per 100' at 50 Mc; less than 1.2 db per 100' at 100 Mc. 4.5 μ mf per foot capacitance. Propagation velocity 83%. Extra strong—supports a mile of its own weight (75 lbs.) before breaking. Stock No. 201A1. Sugg'd List Price: \$47.50 per 1000'.

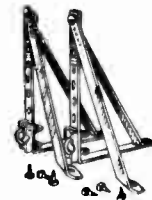


STOCK NO. 201A1

Antenna Mounting Brackets

For use with RCA Antennas Stock # 225A1 and # 226A1. Readily adjustable to permit mounting on any roof—regardless of overhang. Can be attached to brick, stone or wood. Entire bracket is plated with bright zinc, preventing rusting and subsequent staining of building surfaces. Special angular supports eliminate sagging. Stock No. 227A1. Sugg'd List Price: \$7.50 per pair.

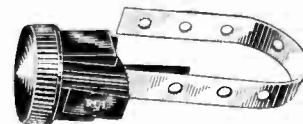
STOCK NO.
227A1



Twin-Lead Lightning Arrester

For use with FM and TV antennas. Easy to install—cutting or stripping of transmission line is unnecessary. Fits any 1/2"-2" pipe. Continually dissipates static surges. Does not unbalance line. Brown plastic case. Stock No. 206X1. Sugg'd List Price: \$1.50.

STOCK NO.
206X1



All prices in effect 6-1-48.

GENERAL ELECTRIC

FM AND TELEVISION ANTENNAS

Designed to Match 300 OHM Impedance

Extremely light in weight, General Electric FM and Television Antennas are mechanically rugged, directional both front and rear broadside to transmitter and prove very effective in areas of low signal strength. Both antennas are easy to erect and orient in the desired direction, to obtain maximum signal strength.

The dipoles are constructed of high quality reinforced aluminum tubing. A terminal block of textolite, formed under pressure to insure uniform structure throughout, is supported on sturdy mast with suitable clamps for mounting the complete assembly. All metal parts are either painted or electroplated to insure all weather protection.

FM Antenna UKA-001 List \$ 9.00
Television Antenna UKA-002 List 14.95

LOW LOSS LEAD-IN CABLES

Polyethylene—insulated twin conductor cable designed to RMA standards. Gives years of service with minimum electrical loss and generous resistance to various forms of deterioration.

Standard 300 ohm Transmission Cable—UWT-002: Lightweight, easy-to-install cable, intended particularly for home or indoor installations where runs extend under carpets or windows. May be used outdoors for vertical, protected runs of 20 feet or less.

Deluxe 300 ohm Transmission Cable—UWT-003: This line of heavy construction is designed for long spans indoors or outdoors such as is required in showrooms, hotel, etc. Because of the extra-thick insulation against the effects of rain or moisture, it is especially fine for outdoor use.

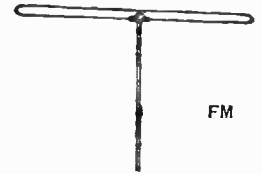
Dielectric constant of polyethylene 2.30
 Capacitance 5.8 mmf per ft.
 Velocity of propagation 82% (approx.)
 Power factor of polyethylene 0.0003—0.00045
 List—UWT-002—1000 ft. reel \$48.50
 UWT-003— 500 ft. coil \$82.45

ATTENUATION CHARACTERISTICS IN DB PER 100 FT.

Megacycles	300 OHM	
	Deluxe	Standard
40	.88	1.1
60	1.05	1.3
80	1.20	1.5
100	1.35	1.7
200	2.00	2.3



TELEVISION



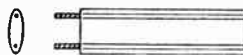
FM

Antenna Replacement Parts and Accessories

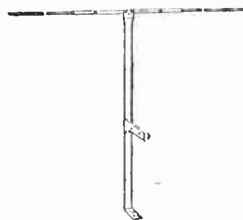
Catalog No. and Description	List Price
SZF-001	Folded Dipole (FM) \$1.65 ea.
SZT-001	Folded Dipole (TEL) 4.15 ea.
SJB-012	Terminal Block (FM) ..... .40 ea.
SJB-013	Terminal Block (TEL) ..... .75 ea.
SAM-001	Five Foot Mast 1.65 ea.
SAD-015	Mounting Strap and Screws ..... .40 pr.
SAD-019	Bracket (For FM only) ..... .40 ea.
REM-001	Lightening Arrester 1.00 ea.
SAD-018	Stand-off Bracket 3.50 pr.
UKR-001	Reflector (FM)—for wooden mast only 5.00 ea.
UKR-002	Reflector (TEL) 7.50 ea.
UKR-003	Reflector (FM) for metal mast only 5.25 ea.
RWD-001	Lead-In Cable (ANRG 22/U 95 ohm) 205.50 per 500' reel
UWT-002	Standard 300 ohm Lead-In Cable 48.50 per 1000' reel
UWT-003	Deluxe 300 ohm Lead-In Cable 82.45 per 500' reel
UII-001	Clamping Screw Eye ..... .15 ea.



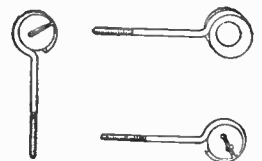
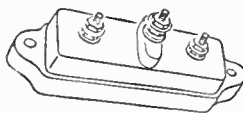
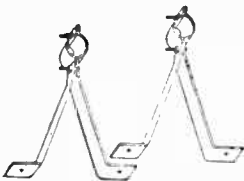
300 OHM



300 OHM DELUXE



ANTENNA ACCESSORIES



PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE

TELEVISION ANTENNAE

The selection of the right antenna for any television installation is of utmost importance and usually requires the experience of a trained service engineer. After all, without a good strong clear signal, the entire television program will fail to provide the enjoyment and entertainment of which it is capable. Outlined below are the general rules:

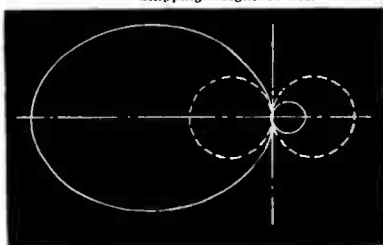
Single Dipole Antennae with or without reflector, in the immediate vicinity of the transmitter; Folded Dipole Antennae with or without reflector, within the normal service area; Double-Doublet Antenna with reflector, is a "must" in the outlying areas 25-75 miles away from the transmitters, the distance depending on the power of the transmitter and local conditions.

For fringe areas or in poor reception areas, Stacked Dipoles, such as the No. 490 Stacked Folded Dipole or an array constructed by stacking two No. 435 Double Dipole Antennae, are the only reliable answer to a satisfactory television installation.

Impedance matching and the selection of the proper transmission lines are solved automatically with TACO laboratory and field-tested antennae. If in doubt, our engineers will help out with free advice. TACO antennae cover all 13 channels. They are shipped from the factory, complete with all parts for a quick, satisfactory field installation. Complete installation instructions, containing many time-saving hints, are packed with each antenna. Mounting brackets for attachment to the side of a building as well as a swivel base mounting socket is standard equipment with all TACO television antenna.

STACKED FOLDED DIPOLE ANTENNA

Catalog No. 490 Stacked Folded Dipole Antenna with reflectors is a high-gain, highly-directive array designed for low-signal-strength areas. It has a gain over a single dipole of $3\frac{1}{2}$ to 1, and front-to-back ratio of about 15 to 1. The general horizontal field pattern is shown in the graph, the dotted line giving the pattern of a single dipole antenna for comparison purposes. The vertical pattern of a stacked array is also flat or same as the horizontal pattern shown in graph. This flat field eliminates many bothersome ground reflections. The high-noise-rejection factor of this antenna, combined with its high gain, makes it the ideal type in hard-to-receive localities. The antenna must be placed high above the ground for best result. The antenna is designed for channels 3, 4, 5. Covers channels 7 - 13 equally well. See separate catalog for details.



CAT. No. 490-3 is designed for maximum reception in the three lower channels. Complete less mast and transmission line. Shipping weight 11 lbs. List Price \$39.50.

CAT. No. 490-4 tuned for channel 4. List Price \$39.50.

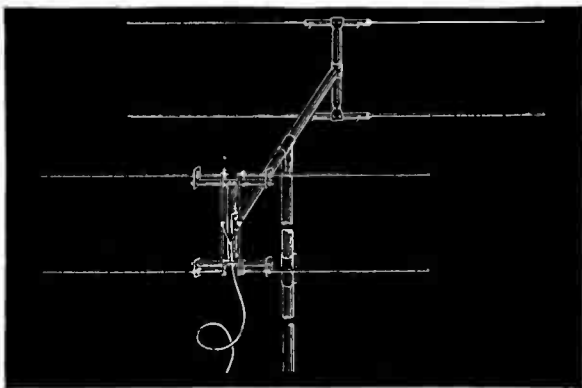
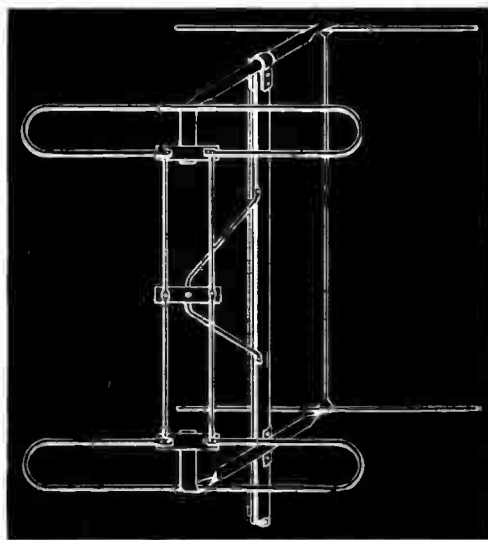
CAT. No. 490-5 tuned for channel 5. List Price \$39.50.

Same as above antenna but including 3 section 15 ft. aluminum mast and one pair No. 190 mast bracket.

CAT. No. 495-3. ANTENNA. List Price \$47.00.

CAT. No. 495-4. ANTENNA. List Price \$47.00.

CAT. No. 495-5. ANTENNA. List Price \$47.00. Shipping weight 17 lbs.



DOUBLE-DOUBLET ANTENNA

The Double-Doublet Antenna is probably the best known and undoubtedly the most dependable television antenna developed to date. It covers both the low and the high television band equally well. Due to its high directivity in the horizontal as well as the vertical plane, it has a high discrimination factor giving a cleaner picture than is possible with single-dipole antennae. Its flat vertical field practically eliminates ground reflections and troublesome ghosts.

For reception beyond the normal service range of the television station, a couple of No. 435 antennae, stacked one above the other, similar to No. 490 antennae, will increase the gain further and improve the discrimination factor. A Transmission Line Adapter (Cat. No. 448) will assist in this stacking. Specify the channels to be received. Order 193-(3) for reception of channels 2-3-4 and order 448-(5) for reception of channels 4-5-6.

CAT. No. 435. DOUBLE-DOUBLET ANTENNA-REFLECTOR. Combination of Double-Doublet Antenna with reflector. Consists of four high-strength aluminum dipole rods; four reflector rods; two reflector extender rods; two jumpers with terminal posts; two dipole supports with terminals and neoprene grommets; 60 ft. 300-ohm ribbon type transmission line; 5 ft. aluminum mast, three stand-offs mounting hardware, complete instructions. Shipping weight 10½ lbs. List Price \$27.00.

CAT. No. 435L. DOUBLE-DOUBLET ANTENNA-REFLECTOR. For channels 2 - 13. Same as above but less the 60 ft. transmission line. Shipping weight 10 lbs. List Price \$24.00.

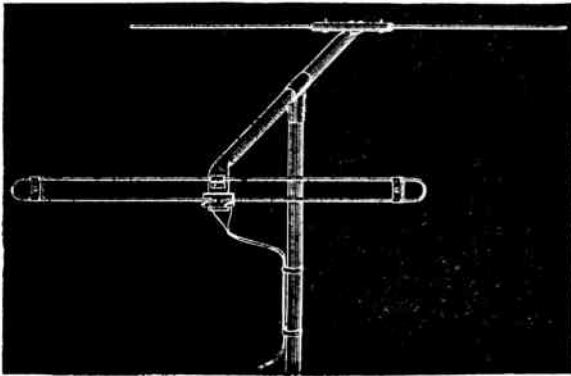
CAT. No. 436. H-TYPE ANTENNA. Consists of 4 aluminum dipole rods; 2 rod supports with terminals and neoprene grommets; a spacer post with mounting clamps for mast; 60 ft. of 300-ohm high-frequency transmission line; 2 jumpers with terminal screws; 5-ft. aluminum mast; 3 special standoffs; mounting hardware; complete instructions. Shipping weight 6½ lbs. List Price \$18.50.

CAT. No. 436L. H-TYPE ANTENNA, LESS TRANSMISSION LINE. List Price \$15.50.

CAT. No. 437. H-TYPE REFLECTOR. Consists of 4 dipole rods with connectors; 1 crossarm (heavily enameled steel); 1 spacer post; mounting hardware. Shipping weight 5 lbs. List Price \$10.50.

CAT. No. 448-(). STACKING ADAPTER for stacking two No. 435 antennae for increased gain in low signal areas. Consists of two transmission line rods; 1 bakelite terminal panel; 1 brace for terminal panel; hardware; complete instructions. Specify channel when ordering. List Price \$5.75.

Prices will be those in effect at date of shipment



TELEVISION FOLDED ANTENNA-REFLECTOR

This combination provides a natural impedance match for the 300-ohm transmission line. Recommended in areas with medium to strong signal strength. Adjusting bars permit split-hair tuning to eliminate ghosts in difficult installations. Packed complete with hardware and 5 ft. aluminum mast as well as TACO strain insulator for securing ribbon type transmission line.

CAT. No. 440. FOLDED DIPOLE ANTENNA-REFLECTOR: For unidirectional reception. Complete with aluminum mast, 60 ft. 300-ohm transmission line; folded dipole elements; reflector elements; crossarm; standoff insulators; mounting clamps and hardware. Shipping Weight 8 lbs. List Price \$19.50.

CAT. No. 440L. FOLDED DIPOLE ANTENNA-REFLECTOR: Same as above less transmission line. List Price \$16.50.

CAT. No. 441. FOLDED DIPOLE ANTENNA, without reflector, including 60 ft. transmission line, 5 ft. aluminum mast and all hardware. Shipping Weight 5 lbs. List Price \$13.50.

CAT. No. 442. REFLECTOR FOR ABOVE: Complete with crossarm; reflector rods; hardware; instructions. Shipping Weight 4 lbs. Price List \$7.50.

SINGLE DIPOLE ANTENNA-REFLECTOR

CAT. No. 455. ANTENNA-REFLECTOR COMBINATION is a packaged unit complete with 5 ft. aluminum mast; 60 ft. 300-ohm transmission line; 3 standoff insulators; mounting hardware; instructions. Shipping Weight 8 lbs. List Price \$17.50.

CAT. No. 455L. ANTENNA-REFLECTOR COMBINATION same as above less transmission line. List Price \$14.50.

CAT. No. 453. ANTENNA—LESS REFLECTOR for areas free from ghosts where pickup from two directions is not objectionable. Complete, including 60 ft. transmission line; 5 ft. aluminum mast; hardware; instructions. List Price \$12.50.

CAT. No. 454. REFLECTOR FOR ABOVE. Complete with crossarm and hardware. List Price \$7.00.

Other types of television antennae are designed for specific purposes. The X-type antenna has a very flat response curve with the other general features similar to Cat. No. 455 described above. Completely packaged with aluminum elements, 5 ft. aluminum mast and 60 ft. transmission line.

CAT. No. 459 X-TYPE ANTENNA-REFLECTOR complete with 60 ft. transmission line, mast, mounting hardware. List Price \$19.00.

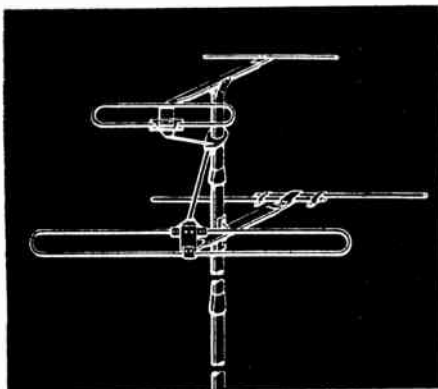
CAT. No. 457 X-TYPE ANTENNA, LESS REFLECTOR complete with 60 ft. transmission line, mast mounting hardware. List Price \$15.50.

CAT. No. 458. REFLECTOR FOR ABOVE complete with hardware. List Price \$7.00.

HI-LO BAND ANTENNA

The Type 465 HI-LO Band Television Antenna handles Television Channels 7 to 13, as well as the easier 1 to 6. Separate top section adjustable for any direction does the trick. Reliable tapered coupling joint employed. Includes 9 foot mast for necessary clearance over obstacles. Connecting link designed to eliminate interference between the two elements.

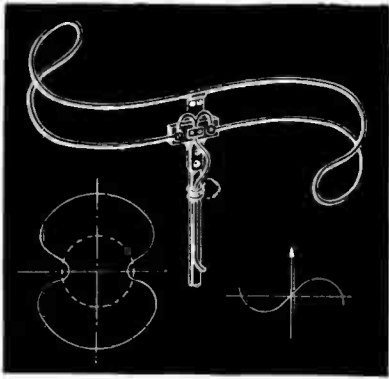
CAT. No. 465. HI-LO ANTENNA. Complete with 9' mast and connecting link. List Price \$26.00.



CAT No. 445. ADAPTER. For high-band reception when reflections prevent directing the low-band antenna for best results. Attachable to any make antenna. Complete with 4' mast section and connecting link. May be used as antenna proper in areas with high-band stations only. List Price \$8.75.

CAT. No. 444. STACKED HIGH-BAND ANTENNA. Stacked High-Band Antenna for use in low signal areas as the antenna. Usable as High-Band adapter in conjunction with No. 495 antenna or with any make antenna. List Price \$17.75.

Prices will be those in effect at date of shipment



FM OMNIDIRECTIONAL ANTENNA

TACO Omnidirectional Antenna or "S" design folded dipole, is another form of a circular field pattern antenna at a lower cost. The folded dipole type insures a correct impedance match to the 300-ohm ribbon-type transmission line over the FM band. The antenna is intended for communities which have stations located in several directions and where the signal level is fair. It can be erected on any roof and no special orientation is needed.

CAT. No. 624. OMNIDIRECTIONAL ANTENNA. Complete with 5 ft. aluminum mast; corrosion-resistant aluminum antenna element, 60 ft. transmission line; 3 stand-off insulators for ribbon type line; mounting hardware; instructions. Shipping Weight 5 lbs. List Price \$11.50.

CAT. No. 624ST. STACKED OMNIDIRECTIONAL ANTENNA. For increased gain in low signal areas. Complete with 10' mast, less transmission line. List Price \$20.00.

FOLDED DIPOLE ANTENNAE

CAT. No. 620. FOLDED DIPOLE ANTENNA-REFLECTOR combination for unidirectional reception of FM. Corrosion-resistant aluminum elements with enameled steel crossarm; 60 ft. 300-ohm transmission line; 5 ft. aluminum mast. Complete mounting hardware and instructions. Shipping Weight 6 lbs. List Price \$14.00.

CAT. No. 620L. FOLDED DIPOLE ANTENNA-REFLECTOR same as above less transmission line. List Price \$11.00.

CAT. No. 621. FOLDED DIPOLE ANTENNA LESS REFLECTOR same as above. List Price \$11.00.

CAT. No. 622. REFLECTOR FOR ABOVE to make up antenna-reflector combination. List Price \$5.50.

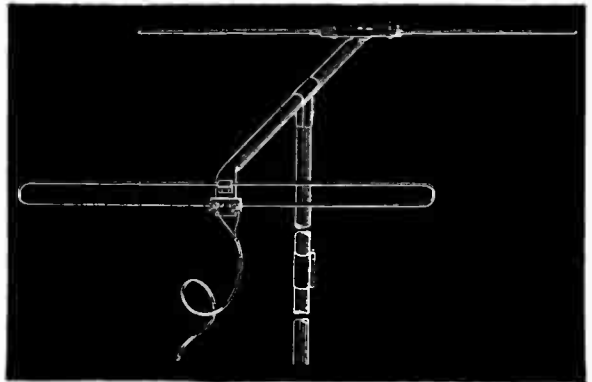
SINGLE DIPOLE ANTENNA-REFLECTOR

The single dipole antenna-reflector combination is a unidirectional antenna of same general characteristics as the folded dipole. TACO unique matching circuit for dipole termination insures perfect impedance match over the entire FM band.

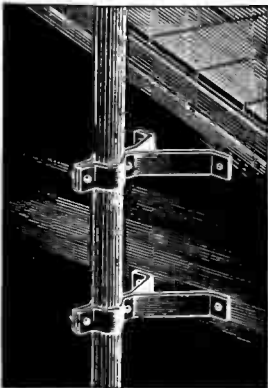
CAT. No. 650. SINGLE DIPOLE ANTENNA-REFLECTOR COMBINATION: Complete with 5 ft. aluminum mast; 60 ft. transmission line; accessories. List Price \$17.00.

Complete with transmission line and mast. List Price \$11.00.

CAT. No. 652. REFLECTOR FOR ABOVE ANTENNA. List Price \$6.00.



ACCESSORIES and SUPPLIES



***CAT. No. 625. FM-AM SET TRANSFORMER.** Provides both FM and AM reception with usual FM antenna. Normally, this is impractical since most FM-AM receivers have separate terminals for both bands. With this transformer both bands are automatically available to the receiver. Shipping Weight 1½ lbs. List Price \$3.25.

CAT. No. 196. MAST SECTION. 5 Foot heavy wall aluminum tubing with one No. 189 mast coupling. Also acts as guy anchor. List Price \$4.50.

CAT. No. 851. RIBBON TRANSMISSION LINE. Especially for FM and television use. 300-ohm surge impedance. Two stranded conductors insulated with polyethylene ribbon between. 500 ft. coil. List Price \$45.00/mft.

CAT. No. 853. HIGH-FREQUENCY SPLICING TAPE. Indispensable for splicing high-frequency transmission lines. Ordinary tape may actually short-circuit such conductors. 12" length in envelope. List Price \$0.35.

CAT. No. 189. MAST COUPLING. Joins together two sections of 1¼" dia. List Price \$1.00.



CAT. No. 195. MAST 12' ALUMINUM MAST: Three telescoping 4' sections. Sturdy and light. Fulfills all fire and building department regulations for height. Guy anchor and base mounting bracket included. Retatable for television. List Price \$8.00.

CAT. No. 854. GUY WIRE: High-tensile strength steel wire, hot galvanized for long outdoor service life. 100 ft. coil. List Price \$1.30.

CAT. No. 855. TURN BUCKLE: High-tensile strength, galvanized for outdoor use. Screw-eye on both ends. 4" takeup. Packed three to one package. List Price \$0.90 for 3.

CAT. No. 856. STRAIN INSULATOR: Heavy-duty, interlocking type eliminates danger from broken insulator. Used for guys on television antenna installations. List Price \$9.00/c.

CAT. No. 380. ANTENNA INSULATOR: Solid porcelain, glazed low-loss. List Price \$10.50/c. **PORCELAIN NAIL KNOBS:** Used for anchoring antenna transmission line or securing electric fences. Complete with nail.

CAT. No. 375. SOLID PORCELAIN NAIL KNOB. List Price \$10.00/c.

CAT. No. 376. SPLIT PORCELAIN NAIL KNOB. List Price \$10.00/c.

CAT. No. 190-7. MAST BRACKETS (shown at left). For mounting 1½" dia. mast on side of house or parapet, where clearance is not over 7". Heavy steel, galvanized. Pair. List Price \$3.00.

CAT. No. 190-14. MAST BRACKET. Same as above except with 14" clearance for mast. List Price \$3.75.

CAT. No. 409. LIGHTNING ARRESTER. Carbon-pile type Double-pole, Underwriters' Labs. approved. List Price \$1.25.

CAT. No. 383. C-TYPE GROUND CLAMP. For pipes from ¾" to 1½" dia. Hard screw point makes positive contact. Cadmium-plated to resist corrosion. List Price \$16.00/c.

CAT. No. 392-3. STANDOFF FOR RIBBON TYPE LINES. (Illustrated). Slotted low-loss rubber insulator with metal screweye. List Price \$13.50/c.

CAT. No. 392-7. STANDOFF FOR RIBBON TYPE LINES. Same as above except 7" long metal screw eye. List Price \$17.50/c.

CAT. No. 384. SINGLE WINDOW-STRIP LEAD-IN. Readily bends to accommodate closed window. Fully insulated. List Price \$11.50/c.

CAT. No. 377. SCREW-EYE 3" with round hole bakelite insulator. List Price \$3.00/c.

CAT. No. 378. SCREW-EYE 7". List Price \$16.50/c.

CAT. No. 394. DIPOLE RODS. For replacement use. Supplied in pairs for any antenna replacement. Specify antenna type. List Price \$2.00.

Prices will be those in effect at date of shipment

BETTER ANTENNAE for BETTER RADIOS

TACO antenna systems provide the most favorable signal-to-noise ratios. The selection of any one of the several types depends on these considerations:

(1) If standard broadcast and shortwave are to be received; (2) If combination of standard broadcast AM and FM must be received; (3) If the location is quiet; and (4) If the location is noisy.

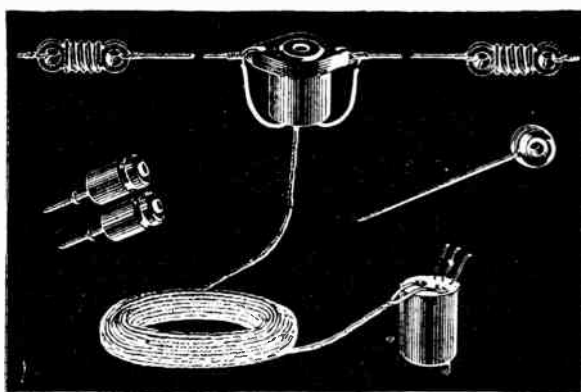
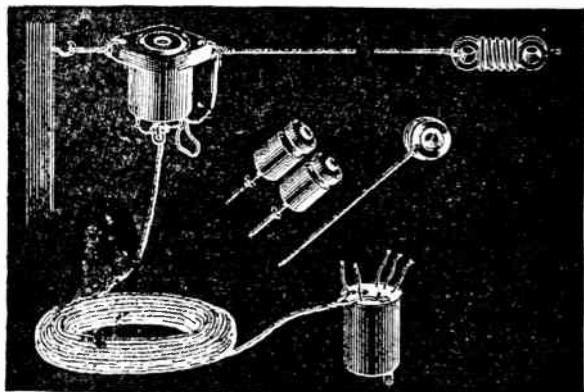
For condition (1), any one of the kits listed is recommended. For (2) or AM-FM reception, kits Nos. 220-V-FM, 220-FM or 228 FM.

In quiet localities, any one of the kits is recommended. But regardless how quiet the location may be, the TACO noise-reducing antenna system,

due to its impedance matching transformers, will always improve signal-to-noise ratio.

TACO transformers match recommended standards for receiving set input circuits. Such standards are 2000 ohm impedance, with tap for 50 ohms, which is a common input where external antenna impedances or supplements the loop. For FM, the input impedance is 300 ohms.

All TACO kits are attractively packaged and include all components, insulators, antenna wire, downlead cable, and complete instructions.



NOISE-REDUCING ANTENNA SYSTEMS

CAT. No. 228 FM. L-type antenna system (above left). Recommended where inconspicuous installation is desired. Full noise reduction. Covers standard broadcast, shortwave and FM bands. Shpg. Wt. 4 lbs. **List Price \$13.00.**

CAT. No. 228. Broadband and shortwave only. Shpg. Wt. 4 lbs. **List Price \$12.50.**

CAT. No. 520. Economy system (above right). Broadcast and shortwave only. Ideal for low-noise level locations. Set transformer has leads for both hi- ω and low impedance input for standard broadcast band. Shpg. Wt. 4 lbs. **List Price \$10.25.**

CAT. No. 520L. Same as foregoing but less set transformer. Shpg. Wt. 4 lbs. **List Price \$7.50.**

CAT. No. 220-V-FM. Covers standard broadcast AM and FM bands, and shortwave. Noise-reducing all bands. Automatic frequency selection. Doublet antenna rig, high frequency transmission line, antenna and set transformers. Shpg. Wt. 5 lbs. **List Price \$15.00.**

CAT. No. 220-V-L. Same as foregoing but less set transformer. Used with communication receivers having 100-200 ohm input. Shpg. Wt. 5 lbs. **List Price \$12.00.**

CAT. No. 220-FM. Balanced doublet covering broadcast, shortwave and FM. Set transformer has FM terminals; also high and low impedance AM input. Fully noise-reducing in all bands. Shpg. Wt. 4 lbs. **List Price \$13.50.**

CAT. No. 220. Doublet. Same as foregoing but for broadcast and shortwave only. Shpg. Wt. 4 lbs. **List Price \$12.75.**

CAT. No. 85. Farm special. Built for service. Recommended for rural installations where noise level is low. Antenna wire, lead-in wire, storm clamps, window strip, nail knobs, insulators, lightning arrester. **List Price \$2.00.**

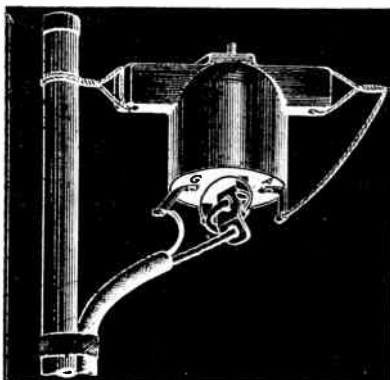
ANTENNA AND SET TRANSFORMERS. Unless system includes both antenna and set transformers, it cannot be true noise-reducing system. Therefore these components are made available separately for addition to any system, at list prices ranging from \$2.50 to \$4.00. Also for concentric cable lines.

TACO MASTER ANTENNA SYSTEM

For apartment houses, hotels, radio stores and other installations calling for simultaneous operation of several sets on single aerial. Because of wartime developments, the TACO post-war system now attains a high degree of noise reduction and covers a frequency range heretofore not believed possible in the standard broadcast, shortwave and FM bands.

System consists of roof kit, transmission line, and a coupler for each connected radio. Single antenna and transmission line can feed 15 to 20 radios, depending on height of antenna and reception conditions.

Installation guide furnished with each roof kit. TACO engineers are ready to provide engineering aid for any particular layout.



ROOF KIT

CAT. No. 345. Basic kit for Master Antenna System. Takes care of aerial or roof installation. To this antenna transformer (left) should be connected one or several transmission lines, depending on layout of building to be wired. The Underwriters' Labs. approved lightning arrester built into transformer shell requires grounding of the ground wire connected to the transformer. Kit comprises 17 ft. transmission line, 2 ft. aerial wire, 80 ft. aerial wire, 2 heavy duty insulators. Shpg. Wt. 10 lbs. **List Price \$12.75.**

CAT. No. 850. TWISTED-PAIR TRANSMISSION LINE. Two No. 22 stranded twisted pair conductors. Surge impedance 100 ohms. **List Price \$38.00/m ft.**

CAT. No. 305. BUFF TRANSMISSION LINE. Two No. 18 stranded conductors, twisted. Surge impedance 100 ohms. **List Price \$50.00 m ft.**

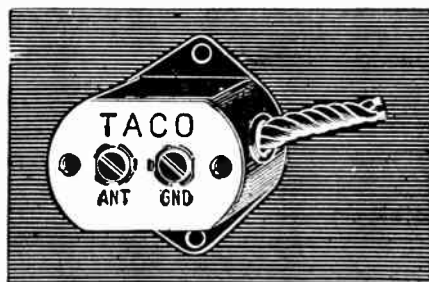
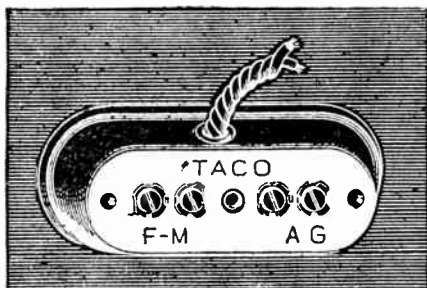
CAT. No. 306. BLACK TRANSMISSION LINE. Same as No. 305 but with black braid for use against dark walls. **List Price \$50.00 m ft.**

Other Components

CAT. No. 346. Master Antenna Transformer as used in roof kit. Shpg. Wt. 2 lbs. **List Price \$5.75.**

CAT. No. 347. Master Coupler (left) covering standard broadcast, shortwave and FM bands. **List Price \$3.50.**

CAT. No. 348. Master Coupler (right) covering broadcast and shortwave only. **List Price \$3.00.**
For other needs, see Accessories and Supplies.



Licensed under AAK, Inc. Patents.

Prices will be those in effect at date of shipment



Telescoping Vertical Antennas

Premax Adjustable Tubular Antennas have been widely used in radio fields for a long period of years and have shown exceptionally efficient, dependable performance under most severe climatic and shock conditions, both in continental United States and abroad. They are available in various lengths to meet all requirements, in monel, aluminum and steel. Mountings and insulators will be found on page S-48.

MONEL ANTENNAS

Premax Monel Antennas have an outstanding combination of strength and corrosion resistance that is vital to trouble-free communications, whether at land or at sea . . . in the tropics or the arctic. The monel used in these Premax Antennas . . . two-thirds nickel and one-third copper . . . is twice as stiff as bronze, strong as structural steel. Yet it will not corrode or lose its strength in salt-water installations. The toughness and stiffness of these Antennas minimizes the danger of breaking or permanent bending when the Antenna is extended to its maximum height . . . either in a stiff, gusty gale or on a pitching boat at sea. Being corrosion-proof, they have excellent transmission and reception qualities. Polished chrome-plated finish on all sizes.

Premax Monel Antennas are built up of multiple sections of hard-drawn monel tubing of a tensile strength exceeding 125,000 pounds per square inch. They are available in five standard units, fully telescoping and adjustable to any height between the minimum and maximum shown. The locking device employs a special knurled thimble and split friction clutch sleeve and holds the sections firmly at any desired height, also providing perfect electrical contacts.

SPECIFICATIONS

No.	Description	Ext'd. Lgth.	Claps'd. Lgth.	Base O.D.	Base I.D.	Wgt. ea. lbs.
MM-313	2-Sec. Tele.	about 13'	6'9"	1.615"	1.515"	2.3
MM-419	3-Sec. Tele.	about 19'	6'9"	1.747"	1.667"	5
MM-425	4-Sec. Tele.	about 25'	6'9"	1.893"	1.799"	8
MM-825	5-Sec. Tele.	about 25'	5'8"	1.893"	1.799"	7 1/2
MM-130	5-Sec. Tele.	about 30'	6'9"	1.965"	1.945"	13
MM-435	5-Sec. Tele.	about 35'	7'8"	1.965"	1.945"	15
MM-635	5-Sec. Tele. H.D.	about 35'	7'8"	1.250"	1.120"	21

(For Base Insulators and Mountings. See Page S-48)

ALUMINUM ANTENNAS

Premax Adjustable Type Aluminum Antennas are designed to provide light-weight with corrosion resistance and adequate strength to meet the most exacting conditions, for marine, mobile and commercial installations where convenience in erection and dependable performance are important considerations. They are ideally adapted for use in radio telephone installations on fresh water craft and commercial installations where convenience in extending and collapsing are important considerations.

These Antennas are built up of tubing that is specially drawn seamless tempered aluminum with diameters, gauges and temper engineered to withstand wind velocities up to 60 m.p.h. The locking device is simple and positive and provides low-resistance contact between sections. Six units are available, all fully telescoping.

SPECIFICATIONS

No.	Description	Ext'd. Lgth.	Claps'd. Lgth.	Base O.D.	Base I.D.	Wgt. ea. lbs.
AL-106	1-Pc. Taper Rod	6'9"	6'3"	1.313"	.....	1 1/4
AL-312	2-Sec. Tele.	12'11"	6'4"	1.500"	1.334"	1 1/2
AL-518	3-Sec. Tele.	18'5"	6'4"	1.750"	1.584"	3
AL-324	4-Sec. Tele.	24'5"	6'4"	1.900"	1.811"	5
AL-530	5-Sec. Tele.	30'0"	6'5"	1.250"	1.084"	7
AL-535	6-Sec. Tele.	35'8"	6'5"	1.500"	1.310"	12

HEAVY-DUTY, NON-ADJUSTABLE

AM-017	1-Pc. Taper Tube	17'9"	17'9"	1.969"	1.689"	5 1/2
AM-035	2-Sec. Taper	17'9"	17'9"	2.000"	1.732"	19

(For Base Insulators and Mountings. See Page S-48)

STEEL ANTENNAS

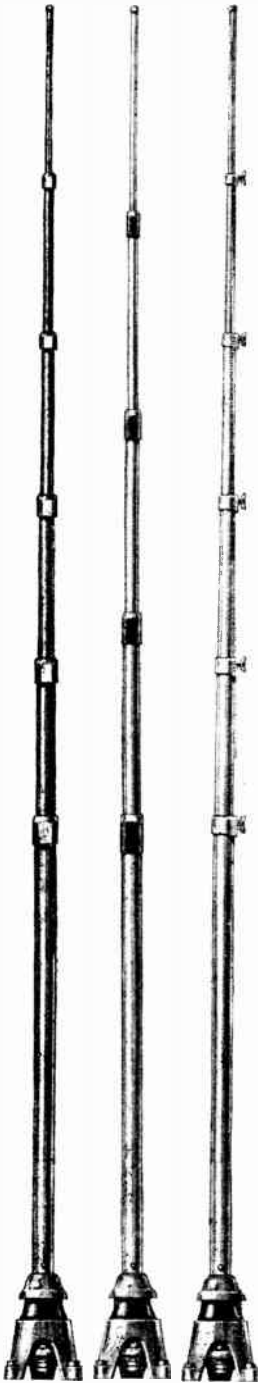
The low initial cost and general satisfaction of Premax Tubular Steel Antennas have made this equipment within all budget requirements for commercial, municipal, amateur and other types of installations. In construction these Antennas are made of high-tensile, copper-nickel steel tubing of carefully engineered diameters and wall thicknesses, heavily cadmium plated and highly resistant to corrosion. When properly mounted, they will withstand all ordinary stresses without guying, but it is generally advisable to support them by guys or standoff insulators against abnormal winds or extreme strains.

Standard Premax Adjustable Tubular Steel Antennas are available in two, three, four, five and six-section models as shown in the specifications at the right. All units are fully telescoping and adjustable within the lengths shown for the particular type. The locking device is simple in operation, positive in action and provides a secure and efficient electrical contact between the sections. While these Antennas possess unusual tensile strength, they are light in weight and easily portable. They have widespread use in fixed and mobile installations. NOT recommended for marine use on salt water.

SPECIFICATIONS

No.	Description	Ext'd. Lgth.	Claps'd. Lgth.	Base O.D.	Base I.D.	Wgt. ea. lbs.
112-M	2-Sec. Tele.	11'8"	6'1"	1.650"	1.556"	4
318-M	3-Sec. Tele.	17'3"	6'2"	1.875"	1.775"	7
224-M	4-Sec. Tele.	22'9"	6'3"	1.963"	1.963"	11
130-M	5-Sec. Tele.	28'3"	6'4"	1.250"	1.150"	15
136-M	6-Sec. Tele.	33'9"	6'5"	1.500"	1.400"	20

(For Base Insulators and Mountings. See Page S-48)



Aluminum Monel Steel

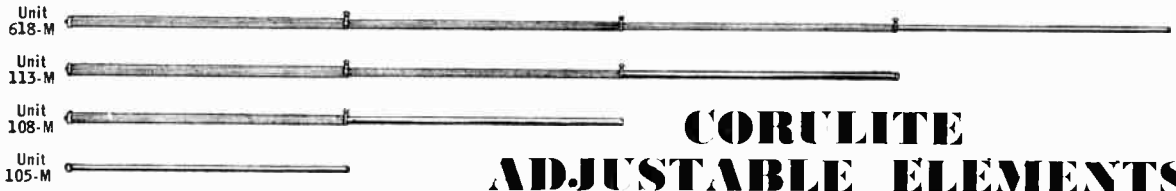
PREMAX PRODUCTS, DIVISION OF CHISHOLM-RYDER COMPANY, INC., NIAGARA FALLS, N. Y.

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S-45



Rotary Beams—FM and TV



CORULITE ADJUSTABLE ELEMENTS

Premax Corulite Elements are designed to meet the need for lightweight but sturdy elements for use in horizontal arrays and similar applications. They are unusually light in weight and their special corrugated or reeded design provides exceptional strength and rigidity so essential in horizontal types of installations. All parts are heavily electro-plated to provide corrosion resistance and high electrical conductivity. A positive clamp, spot-welded to the tubing, permits adjustment in length and assures rigid joints and positive electrical contact between the telescoping sections. Ease of adjustment between the two halves of each component element is provided by the Premax "Hairpin" Tuning Bar. By its use it is possible to have all of the elements set at a single physical length and the variation in their electrical length may be accomplished by the "Hairpin."

Corulite Elements are available in one, two, three or four-section units as shown in the specifications at the right. These elements meet all requirements for the various five to twenty-meter arrays in general use and are ideal for combinations in commercial, FM, television or amateur bands.

ALSO AVAILABLE IN COMPLETE KITS

Premax Corulite Elements are also available in kits containing Elements, Hairpin Tuning Bars, Porcelain Mounting Clamps and complete bill of materials and detailed working drawings for wood frame and support. Four types are provided, as listed at the right.

SPECIFICATIONS

No.	Description	Extended Length	Collapsed Length	Base O.D.	Recommended For	Weight Per Pr.
105-M	1-Section	5'0"	5'0"	.625"	6-meter	1 lb.
108-M	2-Section	8'2"	4'7"	.750"	10-meter	2 lbs.
113-M	3-Section	12'1"	4'8"	.875"	.....	3½ lbs.
618-M	4-Section	17'0"	5'3"	1.000"	20-meter	5½ lbs.

COMPLETE KITS

- RB-6108 3-Element 10-Meter, 3 prs. No. 108-M, 12 Mounting Clamps
- RB-8108 4-Element 10-Meter, 4 prs. No. 108-M, 16 Mounting Clamps
- RB-6618 3-Element 20-Meter, 3 prs. No. 618-M, 12 Mounting Clamps
- RB-8618 4-Element 20-Meter, 4 prs. No. 618-M, 16 Mounting Clamps

COVERS ALL TELEVISION & FM CHANNELS



FM-130

FM and TV ADJUSTABLE "V" ANTENNAS

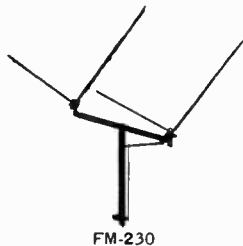
Designed for maximum response for FM and TV bands. Dipole arms of heat-treated aluminum with wire terminals for lead-in connections. 50" tubular steel support mast. Arms may be locked at any designed angle. Simple, light-weight design is simple to erect and install. Provides better reception than any straight dipole in congested areas.

No. FM-130—FM Antenna complete with mounting, less transmission line.

No. FML-130—Same as FM-130 but with 75' 300-ohm twin-lead transmission line.

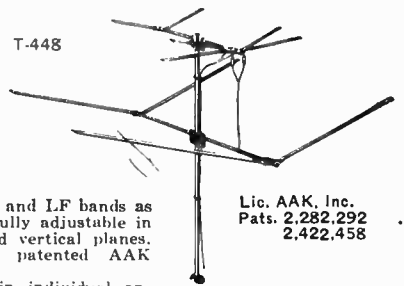
No. FM-230—Same as FM-130 but with reflector, less transmission line.

No. FML-230—Same as FM-230 but with 75' 300-ohm twin-lead transmission line.



FM-230

Simpler! Lower in cost! Easy to erect! Oversize elements! Adjustable V Dipole design! Two completely separate arrays on one mast, each of dipole and reflector. Provides maximum signal pickup for all channels in HF and LF bands as well as for FM. Fully adjustable in both horizontal and vertical planes. Interconnected by patented AAK divider coil system. Can also be had in individual antennas for either HF or LF. Then, at any time, the other array may be added to give full two-hand coverage.



T-448

Lic. AAK, Inc.
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2,422,458

T-448—LF-HF Antenna complete, less transmission line.

TL-448—LF-HF Antenna complete with 75' 300-ohm transmission line.

TA-4481—LF Antenna and reflector only, including mast, less transmission line.

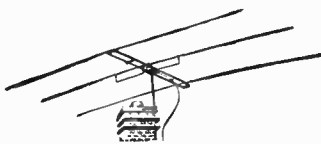
TAL-4481—Same as TA-4481 but with 75' 300-ohm transmission line.

TB-4481—HF Antenna and Reflector only, including mast, less transmission line.

TBL-4482—HF Antenna and Reflector only, including mast and 75' line.

TC-4483—HF Conversion Unit, less mast, less transmission line.

ROTARY BEAM ANTENNA FOR 6-10-11 METER BANDS



RB-6309

A high-gain directive Antenna with many distinctive features and high degree of flexibility for use on 6, 10 or 11 meter bands. Aluminum supporting frame finished. Seamless duraluminum tubing elements readily adjust-

able in length for operation at optimum efficiency in any band listed. Light in weight with slight wind resistance.

RB-6309 Kit includes frame, 3 pr. Elements with necessary insulators and hardware including T-match accessories but no transmission line. Weight 30 pounds.

309-A Extra Elements only, no frames, insulators or hardware included. Packed in pairs. Weight 2 lbs. per pair.

HAND-OPERATED TURNTABLE

Will support the largest type of Rotary Beam Assembly and permits rotation for full 360° in either direction. Formed of heavy sheet steel, spot welded. Steel angles spot-welded inside housing for additional strength. Platform or turntable is 10" x 12" formed of extra heavy sheet steel, is supported by 7" ball thrust bearing. Main shaft supported by two bearings to prevent side-play. 5/8" opening through center shaft for lead-in wires. Duraluminum control cable pulleys and 6' galvanized flexible steel cable. Shipping weight 17 pounds.



BM-46

CENTER-LOADED TUBULAR TELESCOPING MARINE ANTENNA

Gives a remarkable gain over the signal produced by a base-loaded type of same overall length. At high-frequency end of its 2000 to 3000 kc range it gives a measured effective signal power of 6 decibels when compared with a base-loaded antenna of similar length. This is equivalent to that produced by quadrupling the transmitter power output. For example, with this new Antenna, a 10w transmitter will produce a signal equal to that of a 40w transmitter using a base-loaded antenna and tuning system.

The base of this Antenna presents such a low impedance that less loss is experienced with leaky base insulators due to icing, wet weather or water spray. The line feeding the base is a low impedance line and is not critical as to length and body-capacity effects as is the case of the base-loaded antenna where the loading coil is housed in the transmitter cabinet.

The Antenna consists of two telescoping, adjustable base sections on which the loading coil is mounted, with a tapered top whip section. Each tubular section and the top whip is approximately 6½' long, providing a total extended length of about 19'. The base sections collapse to a single unit and the top whip section telescopes through the coil into the lower sections, making a collapsed length of only about 7½'.

Available in monel for salt-water installations or in aluminum for fresh water use.

CLM-519—Monel type

Base O.D. .893" I.D. .799"

CLA-619—Aluminum type

Base O.D. 1.000" I.D. .834"

Solid Stainless Steel Tapered Antennas

Recommended for use where extreme durability and great corrosion resistance are necessary. One-piece solid hard-drawn stainless steel rod, swaged or step-tapered from ¼" base to ½" top. A tough, durable Antenna that will take it. Available in three standard lengths, to fit all standard mountings shown on page S-48.

No. SP-472—Stainless Steel Tapered Antenna, 72" long.

No. SP-484—Stainless Steel Tapered Antenna, 84" long.

No. SP-496—Stainless Steel Tapered Antenna, 96" long.

Solid Steel "Whip Type" Graduated Diameter Antennas

Made of solid steel of extremely high carbon content, heat-treated and oil-tempered to carefully develop physical properties. Rods of varying diameters cold-drawn to rigidly-held tolerances, are joined securely and permanently into a single graduated length Antenna of high flexibility, minimum wind resistance and long life. Available in cadmium-plated with plain ¼" end (Style A) or ⅝" threaded stud end complete with hexagon nuts and lock washers (Style B). Also available in stainless steel.

CADMIUM-PLATED STEEL

Length	Style A	Style B
72"	AC-172	BC-172
78"	AC-178	BC-178
84"	AC-184	BC-184
90"	AC-190	BC-190
96"	AC-196	BC-196

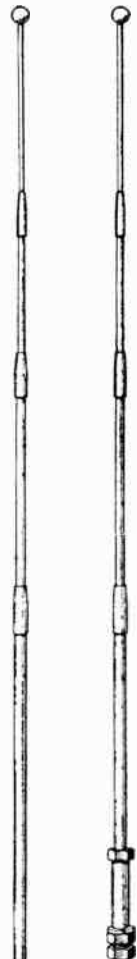
STAINLESS STEEL

Length	Style A	Style B
72"	AS-172	BS-172
78"	AS-178	BS-178
84"	AS-184	BS-184
90"	AS-190	BS-190
96"	AS-196	BS-196

(Mountings for Mobile and Police Antennas Shown on Page S-48)



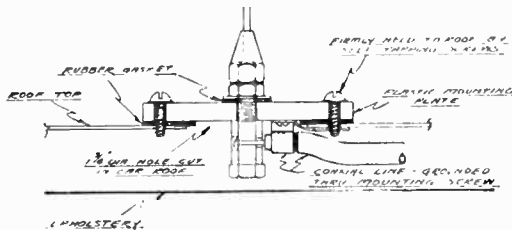
Center Loaded Antenna



Type A

Type B

160 Mc. Roof Antenna—1 Man Mount



The most improved, easiest to install Roof Antenna made! One man makes the installation without cutting or ripping car upholstery. Single hole 1 3/4" diameter in metal roof is all that is necessary. Mounting grounds coaxial sheathing of lead-in line. Rubber gasket insures against leakage. Transparent plastic insulator makes inspection easy. The antenna is stainless steel wire, 18" long with ball-tip and threaded fitting. Suitable for all frequencies in the 152 to 162 megacycle band.

No. DSH-118—Complete Assembly, less transmission line.

No. DS-118—Antenna only.

No. DSJ-118—Antenna with one-hole mounting and porcelain insulator.

Motorcycle Antennas and Mounts

Overcomes weaknesses and defects commonly found in other types! In this Premax, the coaxial line is grounded to same portion of mounting bracket that carries the antenna support itself. Hence no flexing of cable between ground and antenna connection. A spring-tension joint permits entire antenna including insulator support and grounded cable to be deflected 90° without injury. Spring tension is sufficient to prevent accidental deflection. Cadmium-plated steel bracket fits 3/4" tubing frame in either vertical or horizontal position as shown at right. Antenna is high-carbon, heat-treated tempered steel 34" long mounted in high-strength porcelain cone insulator. Antenna may be changed without disturbing insulator assembly.

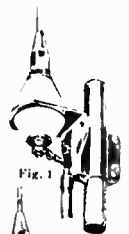


Fig. 1

No. CCY-134—Complete Assembly, Antenna and Mounting, less cable.

No. CC-134—Antenna only with Adaptor.

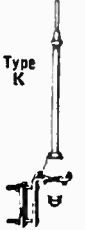


Fig. 2



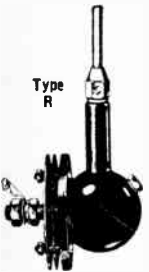
Type NA

TYPE NA Insulated Bumper Mounting. Plates heavily cadmium-plated steel; insulation white glazed ceramic cones. Fits Style A or 1/4" antenna.



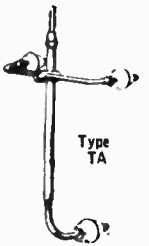
Type K

TYPE K Insulated Bumper Mounting. Antenna rod fits into section of heavy brass tubing attached to the insulator and permits 10" adjustment in height of antenna. Nut and compression sleeve lock antenna in place. Fits Style A or 1/4" antenna. White glazed ceramic insulator.



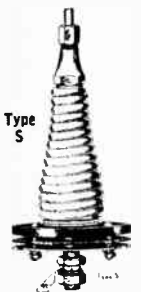
Type R

TYPE R Insulated Universal Mounting of split-ball type. Solid cast bronze, which bolts directly to car panel or other surface thru heavy plastic disc insulation with waterproof gasket and steel backplate. Baked black enamel finish. Fits Style A or any 1/4" antenna.



Type TA

TYPE TA Trunk or Panel Mounting. for Premax Style A or any 1/4" Antenna. Fastens to car body or trunk or to any horizontal surface such as roof. Lower support is solid brass rod joined to 12" brass tube carrying antenna. Upper support is 24" brass rod adjustable on antenna tube and also in insulator assemblies to fit contour of car. High-tension white-glazed ceramic cone insulators. Maximum 10" antenna adjustment. All metal parts heavily cadmium plated.



Type S

TYPE S Insulated Roof Mounting for auto or any flat surface. Special plastic insulation disc carrying heavy tempered steel spring with retaining nut and tapered split bushing to fit Premax Style A or any 1/4" antenna. Overall height about 5"; diameter of base about 3". Fittings are solid brass electroplated.



Type SA

TYPE SA Spring Adaptor Mounting, similar to Type S described above except that a base plug is provided with an adaptor stud to fit any Premax Mounting shown in this column. Fits Premax Type A or any 1/4" Antenna. Overall height about 4 3/4"; base diameter about 1 3/4".



Type 1 Base Insulator; heavy-duty with compression rating up to 10,000 lbs. Galvanized malleable iron or bronze. Available in three styles:

Type 1

RIGID POST TYPE (illustrated)			
Galv. No.	Bronze No.	Dia. Top Post	Fits Antennas Nos.
1PG-24	1PB-24	3/8"	318-M
1PG-25	1PB-25	1/2"	MM-425-825
1PG-26	1PB-26	5/8"	AL-324
1PG-30	1PB-30	1 1/8"	224-M, MM-430.
1PG-34	1PB-34	1 1/2"	MM-435
1PG-41		1 3/4"	AL-530
1PG-44		1 3/4"	AL-535
1PG-55		1 3/4"	136-M AM-035

HINGED TYPE

Galv. No.	Bronze No.	Dia. Top Post	Fits Antennas Nos.
1HG-24	1HB-24	3/8"	318-M
1HG-25	1HB-25	1/2"	MM-425-825
1HG-26	1HB-26	5/8"	AL-324
1HG-30	1HB-30	1 1/8"	224-M, MM-430.
1HG-34	1HB-34	1 1/4"	MM-435
1HG-41		1 1/2"	AL-530
1HG-44		1 3/4"	AL-535
1HG-55		1 3/4"	136-M AM-035

TYPE 1X—SOCKET TOP

No. 1-XG	Galvanized	Top tapped standard 3/4" 16-thread
No. 1-XB	Bronze	Top tapped standard 3/4" 16-thread



Type 2
No. 2P-24 3/4" Top Post Fits 318-M

Type 2 Base Insulator; light design for masts up to 18' or higher if guyed or supported by standoff insulators. 3/4" top post but with use of adaptors will fit other size masts. Brown-glazed porcelain with galvanized malleable iron top post and base support cemented into insulator.



Deck Bushing of brown glazed porcelain with galvanized malleable flange which bolts thru rubber gasket to roof or deck.

Bushing No.	I.D.	Total Length	Above Deck	Flange Diameter
5D-24	3/8"	6"	3"	4"
5D-40	1 1/4"	8"	4 1/4"	4 1/4"
5D-56	1 3/4"	8 1/2"	4 1/2"	5 3/4"



Type 6

Galv. No.	Bronze No.	Dia. Top Post	Fits Antennas Nos.
6PG-24	6PB-24	3/8"	318-M
6PG-25	6PB-25	1/2"	MM-425-825
6PG-26	6PB-26	5/8"	AL-324
6PG-30	6PB-30	1 1/8"	224-M, MM-430.
6PG-34	6PB-34	1 1/2"	MM-435
6PG-41	6PB-41	1 3/4"	AL-530
6PG-44	6PB-44	1 3/4"	AL-535 136-M

Type 6 Base Insulator for tower platform, rooftops or Marine. Lead-thru construction permits antenna connections below roof or deck. Flanges 6" diameter with stud and bolts for 1/2" to 3" deck. In galvanized malleable iron or bronze.



Wall Bracket

Wall Bracket of heavy formed steel for mounting vertical antennas on side walls, parapets, etc. Drilled to fit Premax Type 1 and 2 Base Insulators. Baked black enamel finish. No. WB-1.



Type 3

Type 3 Standoff Insulator for supporting verticals or for use in pairs as complete antenna or element mounting. Galvanized iron or bronze with porcelain body. 3" in diameter.

Galv. No.	Bronze No.	Fits Tube O.D.
3SG-16	3SB-16	1 1/2"
3SG-20	3SB-20	5/8"
3SG-24	3SB-24	3/4"
3SG-28	3SB-28	7/8"
3SG-32	3SB-32	1"
3SG-34	3SB-34	1 1/8"
3SG-40	3SB-40	1 1/4"
3SG-42	3SB-42	1 1/2"
3SG-48	3SB-48	1 3/4"
3SG-52	3SB-52	1 5/8"

Type 4 Standoff Insulator is similar to Type 3 excepting it is provided with two ringed clamps instead of the bottom plate. In galvanized iron or bronze in same sizes as the No. 3.



Type 7 Standoff Insulator is a low-priced substantial mounting with wide application. Galvanized malleable frame enclosing white split porcelain bushing. Height 6".

No.	Fits Tube O.D.
7S-20	3/4"
7S-24	7/8"
7S-28	1"
7S-32	1 1/8"



No.	Fits Tube O.D.
8C-20	3/4"
8C-24	7/8"
8C-28	1"
8C-32	1 1/8"

Type 8-C Insulated Mounting Clamp for horizontal arrays, verticals, etc. Galvanized iron frame with white split porcelain bushing. Width 3 1/2".



No.	Fits Tube O.D.
9C-20	3/4"
9C-24	7/8"
9C-28	1"
9C-32	1 1/8"

Type 9C Insulated Mounting Clamp for horizontal elements, verticals, etc. Gray iron galvanized frame with white porcelain split bushing. Height to center 2"



No.	Fits Tube O.D.
10C-20	5/8"
10C-24	3/4"
10C-28	7/8"
10C-32	1"

Type 10-C Insulated Mounting Clamp. Stamped steel electroplated frame, white porcelain split bushing; light-weight. 2" to center.

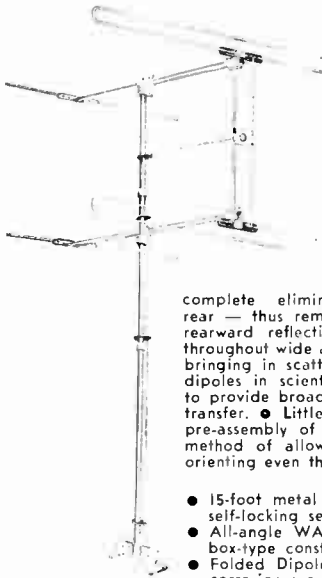


Solid Clamp No.	Hinged Clamp No.	Fits Tube O.D.	Height to Center
10S-28	10SH-28	7/8"	4 1/8"
10S-32	10SH-32	1"	4 1/4"
10S-34	10SH-34	1 1/8"	4 1/2"
10S-40	10SH-40	1 1/4"	4 3/4"

Type 10-S Insulated Mounting Clamp, heavy-duty type. Chrome-plated bronze base and head-caps, porcelain insulator. Has solid clamp or hinged clamp for use with hinged-base insulator.

WARD **Magic Wand* Antennas for FM and Television

TV STACKED ARRAY MODEL TVS-6



Two of WARD'S finest assemblies stacked one above the other to produce the extra forward gain needed for good TV reception in remote installations and poor signal locations.

FEATURES

- Sturdy design and extra-strong construction assures permanently secure mounting in worst weather.
- Correct $\frac{1}{2}$ wave spacing proven by exhaustive tests to achieve greater forward gain, much more than with the $\frac{1}{8}$ or $\frac{1}{4}$ wave spacing of ordinary "stacked arrays."
- Almost

complete elimination of signals from the rear — thus removing ghost images caused by rearward reflections.

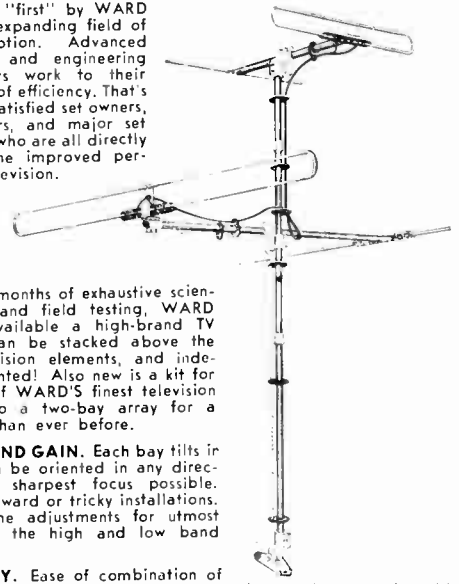
- Strong signal pick-up throughout wide angle of acceptance to the front, bringing in scattered stations.
- Use of folded dipoles in scientifically calculated arrangement to provide broad response and maximum energy transfer.
- Little assembly time required due to pre-assembly of component parts.
- Ingenious method of allowing complete adjustability for orienting even though bays are stacked.

CONTENTS

- 15-foot metal mast in three weather-resistant self-locking sections.
- All-angle WARD mounting base of exclusive box-type construction.
- Folded Dipole and reflector assemblies with corrosion-proof aluminum elements.
- Re-inforced aluminum tubes connecting the two bays.
- 2 guy wire rings for attachment of guy wires.
- 4 rubber stand-off rods and 6 plastic stand-off insulators of exclusive WARD design to guide transmission line and prevent losses on the line.
- Solder lug for attachment of ground wire to insure protection against lightning.

Model TVS-6 — 54-88 mc. List Price \$42.50
Individually boxed, 22 lbs.

NEW TV HIGH-LOW ARRAY MODEL TVH-9



Here's another "first" by WARD in the rapidly expanding field of television reception. Advanced WARD design and engineering makes receivers work to their highest degree of efficiency. That's the opinion of satisfied set owners, service installers, and major set manufacturers, who are all directly interested in the improved performance of television.

As a result of months of exhaustive scientific research and field testing, WARD now makes available a high-brand TV array which can be stacked above the standard television elements, and independently oriented! Also new is a kit for stacking two of WARD'S finest television assemblies into a two-bay array for a greater gain than ever before.

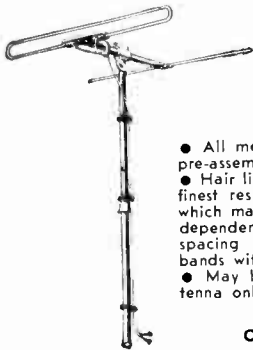
ORIENTING AND GAIN. Each bay tilts in any plane, can be oriented in any direction to give sharpest focus possible. Eliminates awkward or tricky installations. Permits hairline adjustments for utmost gain on both the high and low band stations.

ADAPTABILITY. Ease of combination of assemblies in basic kits makes "Magic Wand" Aerials more adaptable than ever to the varying requirements of each installation.

All major parts pre-assembled. Saves costly installation time.

Model TVH-9 Range: 54-88 mc.; 174-216 mc. List Price \$26.50

TV HIGH-BAND ADAPTER MODEL TV-28



Can be easily applied to any WARD antenna, or any standard dipole using a one-inch O.D. mast. This combination makes possible high signal reception in the 174-216 mc. band.

FEATURES

- All metal rust-proof construction.
- Partially pre-assembled for easy and quick application.
- Hair line adjustments can be made to produce finest results from high and low band stations, which may not be in the same direction, by independent orienting.
- Carefully engineered spacing insures maximum signal gain on both bands with negligible inter-action between bays.
- May be used separately as a high-band antenna only.

CONTENTS

- Aluminum folded dipole element with bakelite insulator.
- Corrosion-proof aluminum spacer arm and reflector.
- 5' metal mast, completely weatherproof — inside and out.
- Guy wire ring, polarizer bracket and wrap around clamp.
- Connecting stub of 300-ohm colinear line.

Model TV-28 — 174-216 mc. List Price \$9.50
Individually boxed, 5 1/4 lbs.

TV HIGH-BAND KIT MODEL TV-A-28

Compact kit for close spaced high and low band antenna providing best TV reception. Mounts on the same mast with a low-band dipole or array.

FEATURES

- All metal rust-proof construction.
- Partially pre-assembled for easy and quick application.
- Independent orienting.
- Mounts easily on any 1" O.D. mast.

CONTENTS

- Reinforced aluminum folded dipole element.
- Aluminum spacer arm and reflector.
- Scientifically determined connecting stub.

Model TV-A-28 — 174-216 mc. List Price \$6.95
Individually boxed, 2 1/4 lbs.

FM FOLDED TURNSTILE MODEL FMT-56

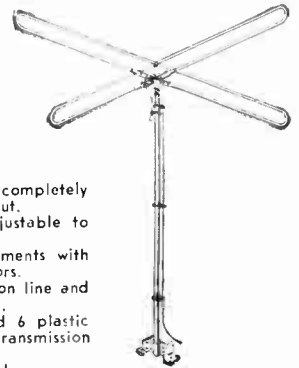
FEATURES

- Exceptional signal gain from ALL DIRECTIONS.
- Requires absolutely no orienting.
- Packed complete, partially pre-assembled components for quick and simple installation.

CONTENTS

- Five-foot vertical mast completely weatherproofed inside and out.
- Universal mounting base adjustable to any angle.
- Folded aluminum dipole elements with two molded bakelite insulators.
- 60 feet of colinear transmission line and $\frac{1}{4}$ wave length phasing loop.
- 4 rubber stand-off pads and 6 plastic stand-off insulators to guide transmission line to set.
- Guy wire ring and conduit clamp.

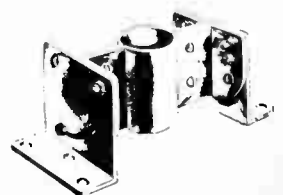
Model FMT-56 — 88-106 mc. List Price \$18.50
Individually boxed, 8 lbs.



SELF-SUPPORTING BASE MODEL C-11

Heavy, weather-proofed metal base for sturdy installation on any angle. The self-supporting base eliminates the need for guy wires on most installations.

Model C-11 List Price \$1.95
Individually boxed,
1 lb. 10 oz.





WARD AERIALS

WORLD'S FINEST FOR CAR AND HOME

Feature

- ✓ SIMPLIFIED ONE MAN INSTALLATION
- ✓ UNIVERSAL DESIGNS TO FIT EVERY CAR
- ✓ RUGGED, LASTING CONSTRUCTION with —
 - Heavy wall brass tubing
 - Weather resistant triple chrome
- ✓ GREATEST SIGNAL PICKUP with —
 - High "Q" low loss lead cables
 - Positive coaxial connections
 - 100% shielding
- ✓ PATENTED FLUID TYPE ANTI-RATTLE
- ✓ HEAVY CARTONS READY FOR RESHIPMENT

SIDE COWL MOUNTS

Two stanchions for sturdy installation. Smartly designed insulators with chrome caps. Conversion kit for torpedo bodies included.

LONG RANGER

4 section, 100 inch, EZ-on installation. A favorite in low signal areas where its extra length provides fine reception.

Model SC-8.....List Price \$6.95
Ind. boxed 1 lb. 10 oz.—12 to a master carton 22 lbs.

AIR KING

3 section, 66 inch, EZ-on installation.

Model SC-6.....List Price \$4.95
Ind. boxed 1 lb. 5 oz.—12 to a master carton 17 lbs.



SIDE COWL OR FENDER

FLEX-ANGLE

3 section, 68 inch, EZ-on installation.

Model CF-6.....List Price \$5.45

Ind. boxed 1 lb. 8 oz.—12 to a master carton 18½ lbs.



CHALLENGER

3 section, 66 inch, shield can type installation. Two smart, bakelite stanchions, coaxial lead without vinylite jacket.

Model SB-3.....List Price \$2.95
Ind. boxed 1 lb. 4 oz.—12 to a master carton 15 lbs.

Tops in popularity because of trim styling and a flexible adjustment so rod can be locked in a vertical position, regardless of body contour. Ideal design for new revolutionary body styles.

TOP COWL OR FENDER

8 BALL

3 section, 56 inch, collapses to 22 inches.

Model TCF-3.....List Price \$5.35

Ind. boxed 1 lb.—12 to a master carton 14 lbs.

Smart looking "8 Ball" design developed and engineered by WARD in answer to every installer's dream. Secure installation! Easy to mount! Perfect fit on every car!



DISAPPEARING, Cowl or Fender PHANTOM

3 section, 56 inch, 3/2" exposed when collapsed.

Model DCF-3.....List Price \$6.95

Ind. boxed 1 lb. 4 oz.—12 to a master carton 17 lbs.

At last—a disappearing antenna that is 100% shielded from engine noises and completely water sealed. Unique universal split ball design plus popular disappearing feature gives that smart built-in appearance.



EACH MODEL COMPLETE WITH A WARD COAXIAL LEAD CABLE



Made of the finest insulating materials—Polyethylene, wire shield braid, oil and abrasion proof Vinylite.

WARD'S exclusive lead connector fitting provides an easy coaxial connection 100% shielded. Bayonet adapter for pin plug included so lead will fit every car radio.

For models mounted on fender a 12 inch lead extension is required.



Model C-8 List \$0.75

A WARD Development to fit every antenna need !

WARD ANTENNAS FOR SPECIAL COMMUNICATION

UNIVERSAL SWIVEL MOUNT

This popular short wave and FM antenna withstands hardest mobile use. Separate components may be combined to meet all operating requirements.



SPP-3

Cast iron SWIVEL BASE may be mounted on any car at point desired and rod locked permanently in a vertical position. Ind. packed 3 lb. 4 oz. List Price \$13.25



SPP-3A

SHOCK MOUNTING SPRING provides rod with fullest protection against impact damage at high speeds.

Ind. packed 2 lb. 12 oz. List Price \$7.90 WHIP ROD is made of special alloys developed by WARD engineers for maximum resilience, greatest durability and finest weather proofing. There are two types:

SPP-3B SINGLE ROD List \$11.50

Length 84" Ind. packed 2 lbs.

SPP-12 ADJUSTABLE 2 SECTION ROD List \$22.50

Length 85 to 103"

Ind. packed 2 lbs. 10 oz.

WARD SILENT SALESMAN

Striking, colorful display board comes completely assembled, ready to go to work bringing in easy, extra sales.

Model CD-4

Packed one to a carton 11 lbs.

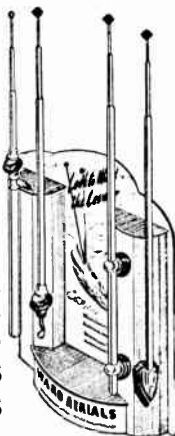
DISPLAY FREE!

You pay only for the four fast moving models mounted on the board.

- 1 SC-6 . . . \$4.95
- 1 CF-6 . . . \$5.45
- 1 TCF-3 . . \$5.35
- 1 DCF-3 . . \$6.95

Total Price. \$22.70

BOOST YOUR PROFITS! . . .



ROOF TOP MOUNT

Revolutionary design for inter-communication on 140-165 Mc band. Only one hole to drill and one screw to tighten. No cutting of car upholstery. Smartly streamlined base with attached 12' coaxial 50 ohm. cable and positive ground connection removable 21" whip rod.

Model SPP-18 . . List \$6.60
Ind. packed 1 lb.



Pat. Applied For

MOTORCYCLE MOUNT

This flexible and durable antenna gives outstanding performance. 42" whip rod is made of special alloys and mounted in a heavy rubber shack mounting base.

Model SPP-6

Ring Tip (Illustrated)

List \$9.25

Ind. packed 1 lb.

Model SPP-6A

Ball Tip (Nat Shawn)

List \$9.25

Ind. packed 1 lb.



WARD ANTENNAS FOR THE HOME

Are vertical, the same as broadcasting antennas, for greatest signal pick-up, finest reception.

HOUSE MAST

4 SECTION, 12 FOOT, COLLAPSIBLE TO 47 INCHES.

FEATURES . . . Easy installation. Universal mounting brackets, Heavy weather-proof cadmium plating, Built-in lightning arrester.

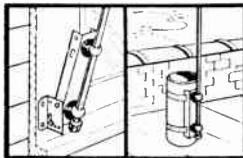
Model HM-4 List \$7.45

Ind. boxed 4 lbs.—12 to a master carton 51 lbs.



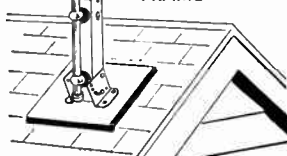
Complete Installation Fittings Included

- 60' Lead Wire — Ground Clamp — 4 Wood Screws — 2 Nail-it-Knobs — 1 Porcelain Tube — 1 Lead-in Strap — 2 Soil Pipe Straps.



WINDOW FRAME

SOIL PIPE



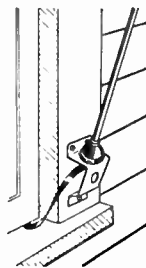
WINDOW MAST

3 SECTION, 8 FOOT, COLLAPSIBLE TO 42 INCHES.

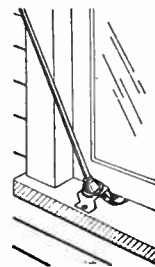
FEATURES . . . Simple 3 part, 3 minute installation for apartments, homes, office buildings. Two way mounting bracket, 12 inch lead-in strap, and heavy weather proof cadmium plating.

Model WM-3 List \$3.25

Ind. boxed lbs.—12 to a master carton 14 lbs.



WINDOW FRAME INSTALLATION



WINDOW SILL INSTALLATION

THE WARD PRODUCTS CORPORATION

EXPORT DEPT.: G. O. Brandes, Mgr.
4900 Euclid Ave., Cleveland 3, Ohio.
IN CANADA: Atlas Radio Corp.
560 King St. W., Toronto 1, Ont., Can.
MADE IN U.S.A.

1523 EAST 45th STREET

CLEVELAND 3, OHIO



**STRAIGHT
DI-POLE**

**FOLDED
DI-POLE**

**ALL WARD *Magic Wand
ANTENNAS CONTAIN:**

- Sixty feet of dielectric 300 ohm transmission line.
- Low-loss rubber stand-offs to guide transmission line down mast.
- Six low-loss plastic stand-offs of exclusive Ward design.
- Guy wire ring for secure installation.
- Universal base to mount on any angle.
- Sturdy vertical element revolves or tilts, allowing complete flexibility in orienting for maximum gain.
- Di-Pole element constructed of corrosion-preventive aluminum. Other parts completely weather-proofed.

* T. M. Registered
COMPLETELY ADAPTABLE TO ALL REQUIREMENTS

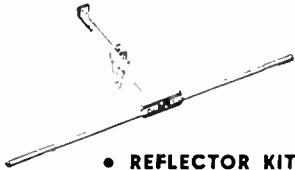
- For extra saleability these FM and Television antennas are completely adaptable to the varying requirements of each installation. They provide maximum electrical efficiency needed for finest reception. The ease with which they may be securely installed, plus strong weather-proof construction insures trouble-free operation.
- **STRAIGHT DI-POLE**
FM for 88-106 Mc. Range Model FM-60
List \$9.00
Television for 44-88 Mc. Range Model TV-88
List \$12.50
- **FOLDED DI-POLE**
Especially designed for broader antenna tuning and matched impedance to the 300 ohm transmission line for maximum response and energy transfer.
FM for 88-106 Mc. Range Model FM-55
List \$10.95
Television for 44-88 Mc. Range Model TV-94
List \$14.50
- **MAST EXTENSION**
Sixty inch, weather proofed extension to increase height of vertical mast on both FM and Television models Model ME-60
List \$2.60



TURN-STILE DI-POLE

Non-directional di-pole easy to install. High gain signal pick-up from all directions eliminates need for orienting. Weatherproof fittings for complete installation included.

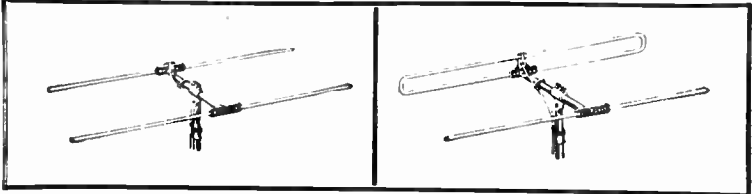
Model FMT-61 List \$15.50



REFLECTOR KIT

Ward's Reflector Kit combined with either the Straight or Folded Di-Poles provides maximum directional gain of the desired signal and eliminates undesirable and interfering reflections. Consists of cross member, reflector, and swivel bracket.

FM Reflector Kit—Model FMR-63 List \$5.25
Television Reflector Kit—Model TVR-92 List \$6.45



Illustrations show possible combination of reflector kit with either straight or folded di-pole.



STAND-OFF INSULATORS
Unique plastic design. Holds transmission line completely captive, yet cannot pinch line to change impedance. Sold in quantities of 144 in display container.
Model SO-144 List \$21.60
Each Stand-off — List 15c

COLINEAR TRANSMISSION LINE
Parallel line of 300 ohm impedance is insulated with polyethylene for highest quality reception. Comes on handy reel.
Model WR-1000—1,000 Feet List \$48.50
Model WR-500 — 500 Feet List \$24.25



THE WARD PRODUCTS CORPORATION
1523 EAST 45th STREET CLEVELAND 3, OHIO

EXPORT DEPT.: C. O. Brandes, Mgr.
4900 Euclid Ave., Cleveland 3, Ohio.
IN CANADA: Atlas Radio Corp.
540 King St. W., Toronto 1, Ont., Can.
MADE IN U.S.A.

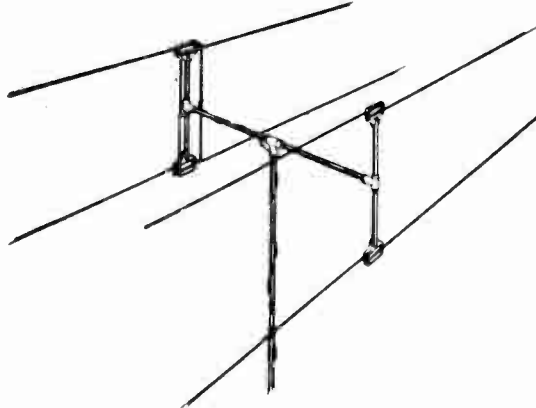
SHUR-ANTENNA-MOUNT, INC.

EASTERN DIVISION • SEA CLIFF, NEW YORK

Shur

"H" TYPE TELEVISION INTERCEPTOR*

MODEL #SH-62



The Shur "H" type antenna has a higher gain than a two element array with the additional feature of broad response.

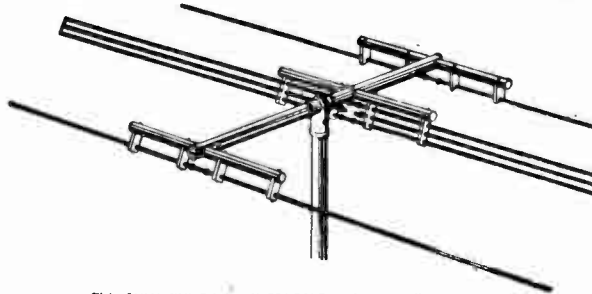
IT IS COLOR CODED FOR QUICK ASSEMBLY.

Less Transmission Line **\$23⁰⁰** LIST PRICE

Shur

"HI-GAIN" TELEVISION INTERCEPTOR* Model 3 E-62

"HI-GAIN" FM INTERCEPTOR* Model 3 E-98



This SHUR "HI-GAIN" INTERCEPTOR has a 9db gain—excellent for low signal area—center impedance of 81 ohms—suitable match to RG59U coax cable or 72 ohm spaced line—easily matched to 300 ohms with "matching section" as described in assembly sheet—COLOR-CODED FOR QUICK ASSEMBLY.

Model 3E-98—FM Band
Model 3E-62—Television Band
Model 3E-52—Amateur 6-Meter Band
Model 3E-146—Amateur 2-Meter Band

**This Interceptor is Custom-Built Only
Made for Any Frequency or Channel**

Less Transmission Line **\$24⁰⁰** LIST PRICE

*TRADE MARK

* PATENTS PENDING

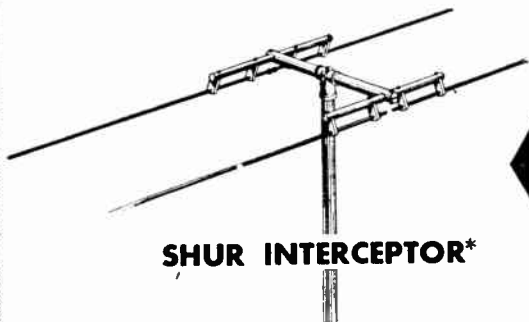
Scientifically Designed
SIMPLE • STURDY • EFFICIENT

SHUR-ANTENNA-MOUNT, INC.

EASTERN DIVISION • SEA CLIFF, NEW YORK

STANDARD INTERCEPTORS*

Each individually packed complete with instructions.



SHUR INTERCEPTOR*

TUNABLE FACTORS EASILY ADJUSTABLE

FRONT TO BACK RATIO ADJUSTABLE.
RECEPTION PATTERN ADJUSTABLE.
SPACING VARIABLE .1 TO .15 WAVE LENGTH.
VARIABLE MODE OF RECEPTION.
BECAUSE OF WOOD CONSTRUCTION LINE IMPEDANCE NOT AFFECTED.

Model I-98—FM Band
Model I-62—Television Band
Model I-52—Amateur 6-Meter Band
Model I-146—Amateur 2-Meter Band

Model IL-98—FM Band
Model IL-62—Television Band
Model IL-52—Amateur 6-Meter Band
Model IL-146—Amateur 2-Meter Band

\$9⁵⁰

\$12⁵⁰

Less Transmission Line

LIST PRICE

With "Matching Section" and 75 feet, 300 Ohm Spaced Line

LIST PRICE

A "BROAD RESPONSE" ANTENNA

MAXIMUM PERFORMANCE OVER WIDE RANGE OF FREQUENCIES.
LIGHT WEIGHT, STURDY CONSTRUCTION.

Excellent Match for 300 Ohm Line

Model FI-98—FM Band
Model FI-62—Television Band
Model FI-52—Amateur 6-Meter Band
Model FI-146—Amateur 2-Meter Band

\$8⁵⁰

Less Transmission Line

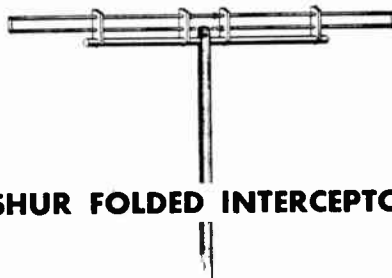
LIST PRICE

Model FIL-98—FM Band
Model FIL-62—Television Band
Model FIL-52—Amateur 6-Meter Band
Model FIL-146—Amateur 2-Meter Band

\$11⁵⁰

With 75 feet, 300 Ohm Spaced Line

LIST PRICE



SHUR FOLDED INTERCEPTOR*

DESIGNED FOR WIDER BAND TUNING

SCIENTIFICALLY DESIGNED.
SPACING VARIABLE .1 TO .15 WAVE LENGTH.
"MARKED" FOR MIDDLE OF BAND.
TUNABLE FACTORS EASILY ADJUSTABLE.
FRONT TO BACK RATIO ADJUSTABLE.
BECAUSE OF WOOD CONSTRUCTION LINE IMPEDANCE NOT AFFECTED.

Model ID-98—FM Band
Model ID-62—Television Band
Model ID-52—Amateur 6-Meter Band
Model ID-146—Amateur 2-Meter Band

Model IDL-98—FM Band
Model IDL-62—Television Band
Model IDL-52—Amateur 6-Meter Band
Model IDL-146—Amateur 2-Meter Band

\$12⁵⁰

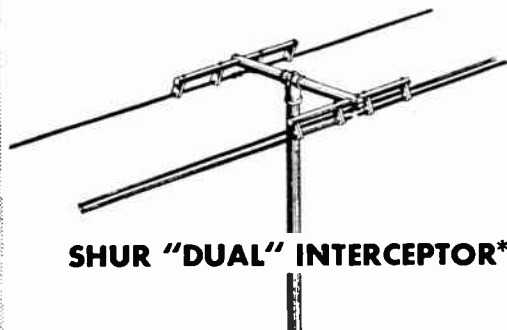
\$15⁵⁰

Less Transmission Line

LIST PRICE

With "Matching Section" and 75 feet, 300 Ohm Spaced Line

LIST PRICE



SHUR "DUAL" INTERCEPTOR*

Excellent Match to 72 Ohm Coaxial Line

SHUR ANTENNA MOUNT

FITS ANYWHERE!

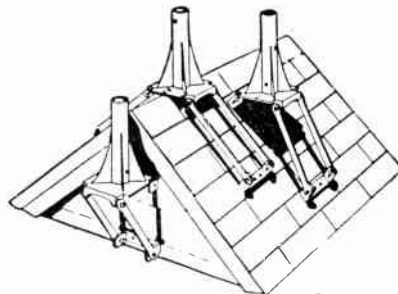
CAST ALUMINUM—WILL SUSTAIN WEIGHT OF ANY FIXED STANDARD FM OR TELEVISION ANTENNA.

ECONOMICAL—PERMANENT—VERSATILE.
AVAILABLE FOR 1 1/2 INCH POLES.

MODEL "MC"
Packed Complete In Single Carton With Instructions

\$8⁷⁵

LIST PRICE



Shur-Antenna-Mount can be installed on any roof top—sloping side—ony surface.

* TRADE MARK

FM OR TELEVISION SET IS ONLY AS GOOD AS ITS ANTENNA

SHUR-ANTENNA-MOUNT, INC.

EASTERN DIVISION • SEA CLIFF, NEW YORK

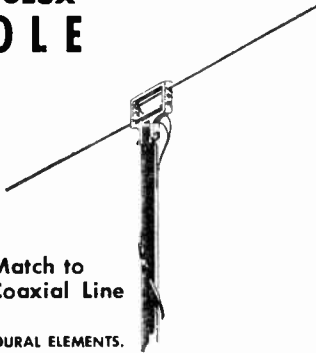


**Pre-assembled
Time Saver**

**Just Screw On
Elements**

Each individually packed complete with instructions.

Shur "DeLux" DIPOLE



**Excellent Match to
72 Ohm Coaxial Line**

HEAVY DUTY DURAL ELEMENTS.

Model DD-98—FM Band
Model DD-62—Television Band
Model DD-52—Amateur 6-Meter Band
Model DD-146—Amateur 2-Meter Band

Model DDL-98—FM Band
Model DDL-62—Television Band
Model DDL-52—Amateur 6-Meter Band
Model DDL-146—Amateur 2-Meter Band

\$8⁰⁰

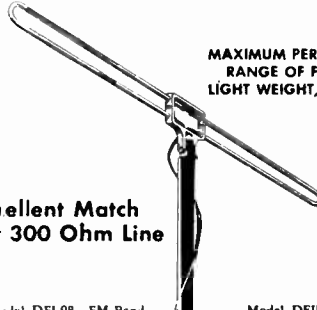
With "Matching Section" and 75 feet, 300 Ohm Spaced Line

\$11⁰⁰

Less Transmission Line LIST PRICE

LIST PRICE

Shur "DeLux" FOLDED INTERCEPTOR*



MAXIMUM PERFORMANCE OVER WIDE RANGE OF FREQUENCIES. LIGHT WEIGHT, STURDY CONSTRUCTION.

**Excellent Match
for 300 Ohm Line**

Model DFI-98—FM Band
Model DFI-62—Television Band
Model DFI-52—Amateur 6-Meter Band
Model DFI-146—Amateur 2-Meter Band

Model DFIL-98—FM Band
Model DFIL-62—Television Band
Model DFIL-52—Amateur 6-Meter Band
Model DFIL-146—Amateur 2-Meter Band

\$11⁵⁰

Less Transmission Line LIST PRICE

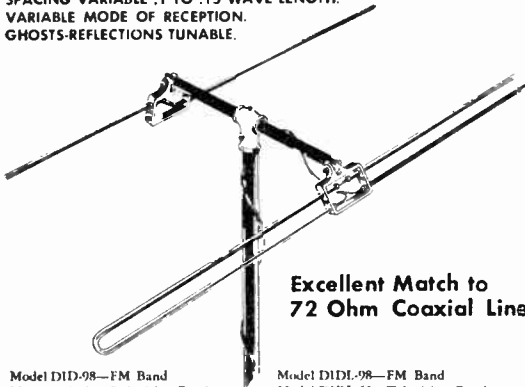
With 75 feet, 300 Ohm Spaced Line

\$14⁵⁰

LIST PRICE

Shur "DeLux" DUAL INTERCEPTOR*

TUNABLE FACTORS SIMPLY AND EASILY ADJUSTABLE. SPACING VARIABLE .1 TO .15 WAVE LENGTH. VARIABLE MODE OF RECEPTION. GHOSTS-REFLECTIONS TUNABLE.



**Excellent Match to
72 Ohm Coaxial Line**

Model DID-98—FM Band
Model DID-62—Television Band
Model DID-52—Amateur 6-Meter Band
Model DID-146—Amateur 2-Meter Band

Model DIDL-98—FM Band
Model DIDL-62—Television Band
Model DIDL-52—Amateur 6-Meter Band
Model DIDL-146—Amateur 2-Meter Band

\$16⁵⁰

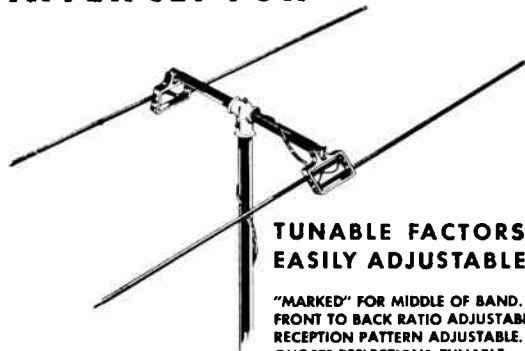
With "Matching Section" and 75 feet, 300 Ohm Spaced Line

\$19⁵⁰

Less Transmission Line LIST PRICE

LIST PRICE

Shur "DeLux" INTERCEPTOR*



**TUNABLE FACTORS
EASILY ADJUSTABLE**

"MARKED" FOR MIDDLE OF BAND. FRONT TO BACK RATIO ADJUSTABLE. RECEPTION PATTERN ADJUSTABLE. GHOSTS-REFLECTIONS TUNABLE. VARIABLE MODE OF RECEPTION.

Model DI-98—FM Band
Model DI-62—Television Band
Model DI-52—Amateur 6-Meter Band
Model DI-146—Amateur 2-Meter Band

Model DIL-98—FM Band
Model DIL-62—Television Band
Model DIL-52—Amateur 6-Meter Band
Model DIL-146—Amateur 2-Meter Band

\$14⁰⁰

Less Transmission Line LIST PRICE

With "Matching Section" and 75 feet, 300 Ohm Spaced Line

\$17⁰⁰

LIST PRICE

* PATENTS PENDING

**HARDWOOD—BIRCH OR MAPLE POLE FEATURES IMPREGNATED (WAR TESTED)
LIGHT WEIGHT FOR EASY HANDLING • WIND TUNNEL TESTED • TREATED FOR WEATHER ENDURANCE**

THE EASIEST OF ALL AERIALS TO INSTALL!



MONARCH Cowl-Fender

Ball-joint metal mounting base, adjustable from flat to 30°. Sufficiently large to cover largest holes. Lovely chrome finish. Waterproof construction. Holds angular adjustment permanently. 36" cable.

Model List Sec. Lth.
MH-3 \$5.45 3 57"



ADJUSTABLE Side Cowl

Improved for side mounting on sloping or vertical surfaces of cowl or fender. Two 1/2" hole mounting. Mast swing of 35° to match body angle. Set screw locking. Complete with 36" Radar type cable.

Model List Sec. Lth.
DA-3 \$5.45 3 72"



DE LUXE Side Cowl

Type RAD for vertical surfaces. Type EL with long top insulator for sloping surfaces. Aircraft connectors on 36" cable.

Model	List	Sec.	Lth.
RAD-3	\$4.95	3	70"
EL-3	4.95	3	70"
RAD-4	5.95	4	92"
EL-4	5.95	4	92"
RAD-5	6.95	5	112"



ROTO LOK Cowl-Fender

Easy mounting, all tightening outside. Half inch mounting hole. Chrome Plated mounting base. Exclusive VISE-LOCK eliminates clumsy braces. Fits all fender or top cowl contours. 48" Radar type cable.

Model List Sec. Lth.
CO-3A \$5.95 3 57"



CHAMPION Side Cowl

A competitively priced Aerial built to Rad-El-Co's high quality standards. Chrome Plated brass tubing. Shielded polyethylene cable with black vinylite cover. Screw-in connectors and metal capped ceramic insulators.

Model List Sec. Lth.
CS-3 \$2.95 3 66"



CONCEALED TYPE Aerial

The finest of all aeriels. All visible parts in glistening chrome. Longer aerial length provides stronger signal. 1" seamless Shield Tube reduces capacity losses. 48" Radar Type Cable with screw-on connectors. Waterproof construction.

Model	List	Sec.	Lth.
FM-3	\$6.95	3	5'-55"
FM-4	8.25	4	6'-72"



FORD Replacement Mast

For 1941-42-46-47 Ford-Mercury Roof Antenna that operates behind dividing post of windshield. Assembly is packed in paper tubes, complete with knob. 10 tubes to a master carton.

Model List Sec. Lth.
F-254 \$2.00 2 54"



BUICK Replacement Mast

Replacement mast only for roof aerial on Buick cars 1940 thru 1948 models. Replacement is made by loosening a set screw—easily, quickly done. Packed in paper tubes, 10 tubes to a master carton.

Model List Sec. Lth.
B-448 \$2.50 4 45"

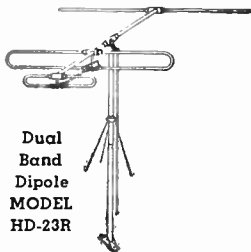
RADAR LEAD CABLES

Radar type ultra high "Q" coaxial cables with polyethylene insulation and 100 per cent shielding. Type L has aircraft connector to aerial and pin plug. Extension type LE has male and female pin plug fittings.

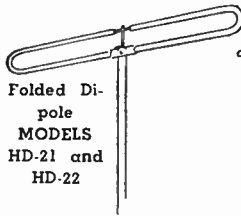
MODEL	LIST	LENGTH
LE-12	\$0.75	12"
LE-24	1.10	24"
LE-36	1.35	36"
L-36	1.35	36"
L-48	1.60	48"
L-60	1.80	60"

SPARE PARTS LIST

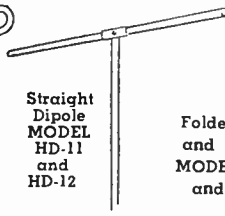
P-118	Bayonet Adapter (Delco)	LIST	\$.10
P-119	Plastic Ball Tip	LIST	.05
P-120	Male Pin Plug	LIST	.20
P-301	Mast for RAD-3, EL-3	LIST	2.25
P-304	Mast for CO-3A	LIST	2.50
P-307	Mast for MH-3	LIST	2.50



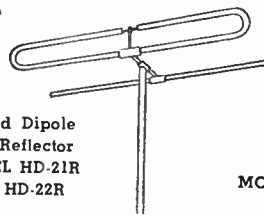
Dual Band Dipole MODEL HD-23R



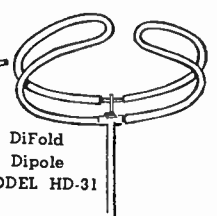
Folded Dipole MODELS HD-21 and HD-22



Straight Dipole MODEL HD-11 and HD-12



Folded Dipole and Reflector MODEL HD-21R and HD-22R



DiFold Dipole MODEL HD-31

DOUBLE STAR DIPOLES

Provide Improved FM or Television Reception for Any Set

Highest Quality at Lowest Cost. Half-inch diameter dipole elements and sturdy two section, 6' mast are made of aluminum tubing. Mounting base fits vertical, horizontal or sloping surfaces. Comes with 50 ft. 300 ohm line.

★ TELEVISION DIPOLES ★

HD-12 PLAIN DIPOLE. Elements of 1/4" tubing provide good frequency response. 54-88Mc. List: \$8.45
HD-22 FOLDED DIPOLE. Covers a wider band more efficiently than plain dipole. 54-88 Mc. List \$9.95
HD-22R FOLDED DIPOLE — REFLECTOR. Recommended for noisy locations and remote areas. 54-88 Mc. List: \$13.90
HD-23R ALL CHANNEL DIPOLE — REFLECTOR. Provides high gain on both television bands. 54-88 Mc and 174-216 Mc. List: \$16.75
HR-2 REFLECTOR KIT. Made for models HD-12 and HD-22. List: \$3.95

★ FM DIPOLES ★

HD-11 PLAIN DIPOLE. Recommended where an inexpensive dipole is desired. 88-108 Mc. List: \$7.95
HD-21 FOLDED DIPOLE. Better frequency response than plain dipole. 88-108 Mc. List: \$9.25
HD-21R FOLDED DIPOLE — REFLECTOR. Recommended for noisy locations and remote areas. 88-108 Mc. List: \$12.70
HD-31 DIFOLD DIPOLE. A non-directional antenna for reception of stations in varying directions. 88-108 Mc. List: \$9.95
HR-1 REFLECTOR KIT. Made for models HD-11 and HD-21. List: \$3.45

DOUBLE STAR DIPOLE ACCESSORIES

CT-300 Colinear Trans. Line-300 ohm. List \$40 M ft.

ME-36	Mast Extension—3 ft.	LIST	\$1.25
IN-1	Stand-offs—300 ohm line	LIST	.15
MR-1	Mast Guy Ring	LIST	.30

Camco

AUTO ANTENNAS

"for top performance"

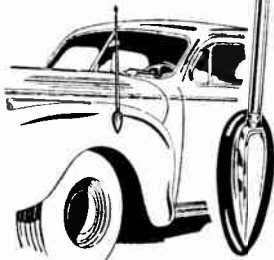
Camco antennas are rattle proof, rustproof and precisely engineered to prevent moisture and dirt from entering tubes. Tested for perfect mechanical performance.

"Swivel" FENDER OR SIDE COWL MOUNT

Fits all body contours by simple adjustment. Beautifully designed chromed casting, nested in a special compound rubber cushion . . . (NOT breakable porcelain). Installation therefore is made moisture and rain proof. Two-hole mounting.

Cat. No. List Price
S-683—3 Section Extends
o 68" \$6.25

Packed 12 to a carton.



SIDE COWL MOUNT

Insulators—Bakelite and Brass Chromed Combination. Individual in design.

Low Loss Lead—Last word in science and plastics. Vinylite jacketed moisture and corrosion proof. Aircraft type fittings insuring positive ground of lead, shield prevents shorts to car body. Installation simplified.

Conversion Kit—Adaptor supplied for curved cowls.

Construction — Rattle Proof. Swaged part of tube prevents entry of dust and moisture.

Cat. No	List Price
C-663—3 Section Extends from 26" to 66"	\$4.95
C-104—1 Section Extends from 30" to 100"	\$6.95

LEADER AERIAL

3-section with silver low-loss lead. Two Bakelite insulators. Streamlined design.

C-660—Extends to 66" \$2.95

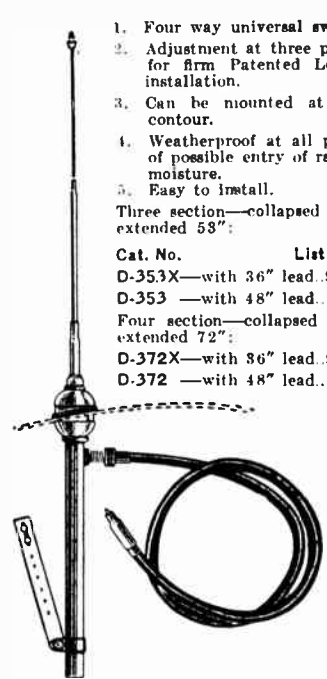
Packed 12 to a carton.

TOP FENDER OR COWL MOUNT

1. Four way universal swivel.
2. Adjustment at three points for firm Patented Locked installation.
3. Can be mounted at any contour.
4. Weatherproof at all points of possible entry of rain or moisture.
5. Easy to install.

Three section—collapsed 4½", extended 53";

Cat. No.	List Price
D-353X—with 36" lead	\$6.25
D-353 —with 48" lead	7.00
Four section—collapsed 5½", extended 72";	
D-372X—with 36" lead	\$7.50
D-372 —with 48" lead	8.25



TO COWL AND TOP FENDER MOUNT

A brand new innovation in auto antenna design. This Camco model fills a great need for a top cowl and top fender mount antenna for the modern auto.

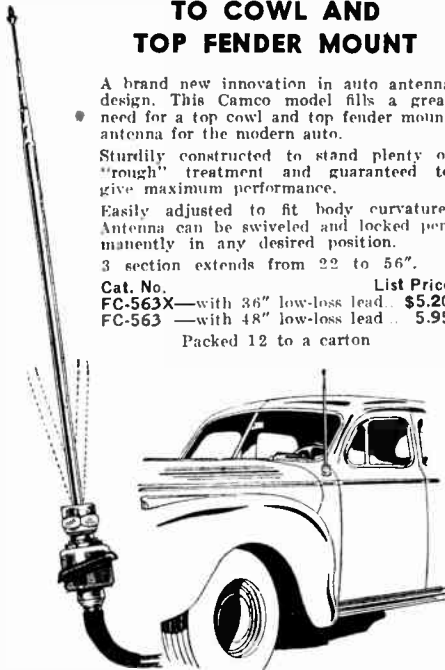
Sturdily constructed to stand plenty of "rough" treatment and guaranteed to give maximum performance.

Easily adjusted to fit body curvature. Antenna can be swiveled and locked permanently in any desired position.

3 section extends from 22 to 56".

Cat. No.	List Price
FC-563X—with 36" low-loss lead	\$5.20
FC-563 —with 48" low-loss lead	5.95

Packed 12 to a carton



FREE . . . FIVE COLOR SALES DISPLAY

One of the most attractive antenna displays made, a real "sales-getter". A perfect combination . . . a self-selling antenna sales display and "top performance" Camco antennas.

Display consists of:

- One Model C663
- One Model D353
- One Model S683
- One Model FC563

You pay for antennas only

Cat. No. 14
List Price

\$24.15

All leads supplied with Pin Tip and Delco Fitting.



Manufactured by **CAMBURN, Inc.**

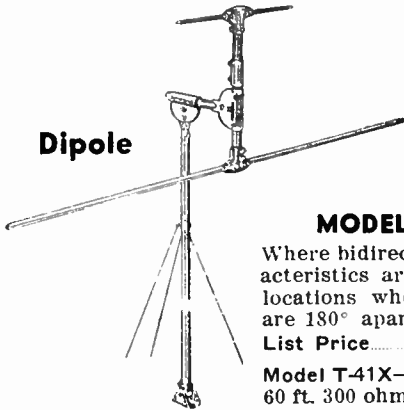
Camco Featherlite 13-1 ALL CHANNEL TELEVISION ANTENNAS

Scientifically designed to provide the ultimate in television reception on all channels. The 13-1 series permit the utmost flexibility of installation, regardless of the geographic location of the television transmitters or the channel upon which they operate. The electrical and mechanical features permit optimum adjustment for both low and high bands individually. By proper choice of antenna, either bidirectional or unidirectional characteristics are obtained.

OUTSTANDING FEATURES

- Covers complete television and F.M. bands from 44 to 216 Mc.
- Only one forward or rear lobe of response.
- High and low frequency elements individually adjustable—eliminates ghosts.
- Pre-tuned, pre-assembled, reduces installation time.
- Can use 72 to 300 ohm transmission lines.
- No standing waves on transmission line with properly terminated receiver.
- All metal construction.
- Low loss dielectric — high impact strength.
- Will withstand high winds, snow, ice and rain without deformation or water absorption.
- Equipped with guy wire supports and rubber stand-offs for transmission line.
- High gain on both high and low bands.
- Universal mounting bracket supplied — mounts anywhere.
- Mast extensions available for versatile installation.

Dipole



MODEL T-41

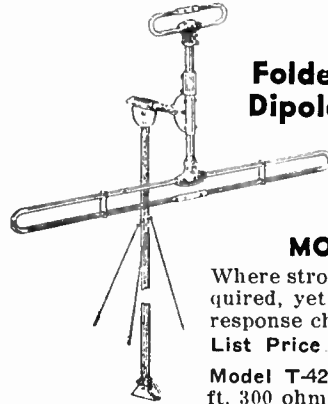
Where bidirectional characteristics are indicated, locations where stations are 180° apart.

List Price \$15.00

Model T-41X—Above with 60 ft. 300 ohm Twin-Lead.

List Price \$18.00

Folded Dipoles



MODEL T-42

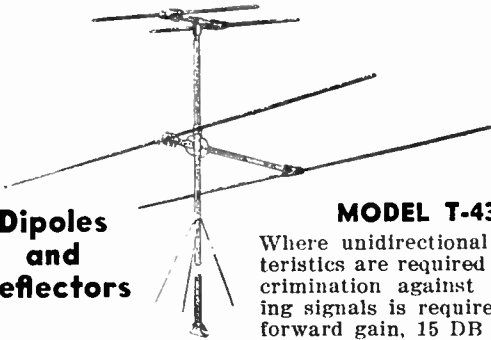
Where stronger signals are required, yet with bidirectional response characteristics.

List Price \$17.00

Model T-42X—Above with 60 ft. 300 ohm Twin-Lead.

List Price \$20.00

Dipoles and Reflectors

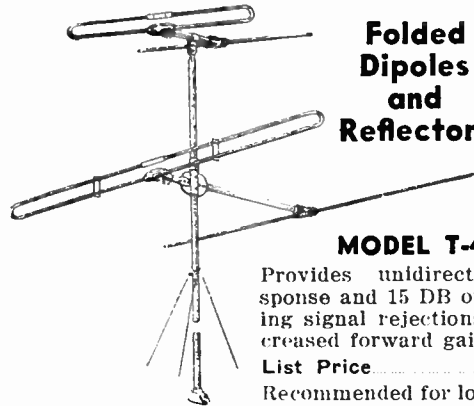


MODEL T-43

Where unidirectional characteristics are required and discrimination against interfering signals is required. 5 DB forward gain, 15 DB front to back ratio. List Price \$24.00

Model T-43X—Above with 60 ft. 300 ohm Twin-Lead. List Price \$27.00

Folded Dipoles and Reflectors



MODEL T-44

Provides unidirectional response and 15 DB of interfering signal rejections with increased forward gain.

List Price \$25.00

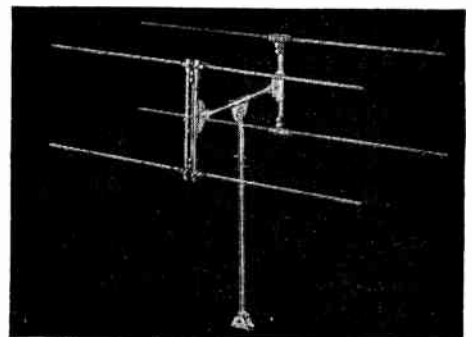
Recommended for locations at the limits of the service range.

Model T-44X—Above with 60 ft. 300 ohm Twin-Lead. List Price \$28.00

OTHER CAMCO TELEVISION ANTENNAS

Model	Description	List Price
Model T-31	Dipole, 44 - 216 Mc.	\$8.50
Model T-32	Folded Dipole, 44 - 216 Mc.	10.00
Model T-33	Dipole & Reflector, 44 - 216 Mc.	14.50
Model T-34	Folded Dipole & Reflector, 44 - 216 Mc.	16.50
Model T-35	Double Decker (illustrated, right), 44 - 216 Mc.	25.00

Above Models also available with 60 ft. 300 ohm Twin-Lead. Add "X" to Model Numbers and \$3.00 to list price.



MODEL T-35

Manufactured by
CAMBURN, INC.,



ELECTRONIC INDICATOR CORP.

BROOKLYN, NEW YORK

AUTOMATIC SELECTING • NOISE REDUCING • ALL WAVE RECEIVING ANTENNAS

Models 80, 100, and 500 shown below are furnished with multi-winding *patented transformer couplers which automatically tune the antenna to the same frequency as the receiver. The antenna coupler is mounted in a porcelain transformer housing which acts as the center insulator of the doublet antenna. The radio energy is picked up by the antenna, passed through the antenna trans-

former and down the transmission line, through the receiver coupler to the receiver. This balanced 2 wire isolated transmission system reduces noise pickup to a minimum. Each antenna is furnished complete with tested transformer couplers, antenna wire, transmission line, nail it knobs antenna insulators, lead strips and easy to understand instructions.

*Model 100 ALL WAVE. Covers Standard Broadcast Band and Shortwave Bands. Freq. Range 540 kc. to 20 Mc. Consists of 2-30 ft. coils 7/22 antenna wire—50 ft. Twinax transmission line—2 transformer couplers. Wt. 3 lbs. List \$10.00

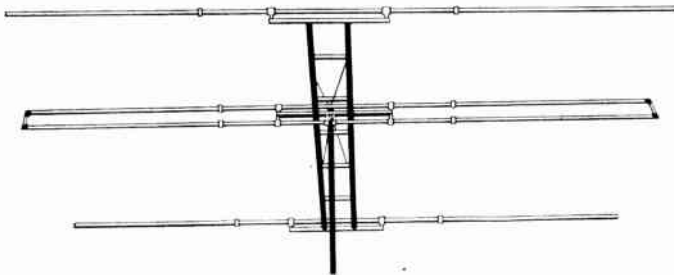
*Model 80 ALL WAVE Amateur Communications. Freq. Range 540 kc. to 30 Mc. Consists of 2-30 ft. coils 7/22 antenna wire—60 ft. twinax transmission line. The transformer couplers in this kit are designed to work into a communications type receiver. Wt. 3 lbs. 4 ozs. List \$13.50

*Pat. under license A. A. & K.

*Model 500 ALL WAVE. Covers Broadcast Band—Shortwave—Frequency Modulation Band. Uses 7/22 copper wire for antenna and twinax high frequency low loss transmission line for maximum efficiency. Furnished with 2 transformer couplers plus specially designed frequency dividing network for FM reception. Wt. 3 lbs. 8 ozs. List \$14.00

Model 1000 All Wave Doublet—Covers Broadcast and Shortwave. Consists of 2-30 ft. coils 7/24 copper antenna wire—50 ft. twisted pair transmission line—For use in noise free locations. Wt. 2 lbs. 4 ozs. List \$3.50

AMATEUR BEAM ANTENNAS



MODEL 400-EA

Model 400 Series

The 400 Series of antennas are designed for the amateur 10 meter band. They are rigidly constructed of 3/4" aluminum tubing telescoping to 5/8". The elements are mounted on 1" aluminum angle and supported by 2 1/2" seatite standoff insulators. Elements are adjustable over a range of several feet

Model 400-EA 3 element 10 meter beam with folded di-pole driven element. Uses .1 wavelength spacing for the director and .15 wavelength spacing for the reflector. Furnished complete with aluminum ladder. The folded di-pole gives a much broader response than the regular single di-pole beams and allows this beam to be fed directly with 50 ohm coaxial cable. Weight 19 lbs. 3 ozs. List \$52.00

Model 400-RA 3 element 10 meter beam using .1 wavelength spacing for the director and .15 wavelength spacing for the reflector. Designed to be fed with 300 ohm twinax. Furnished complete with all aluminum ladder. Elements are 3/4" aluminum tubing telescoping to 5/8". Adjustable from 14 to 18 ft. Weight 16 lbs. List \$15.00

Model 400-BA 2 element 10 meter beam with .2 wavelength spacing. Furnished complete with 7 ft. aluminum ladder. Designed to be fed directly with 50 ohm coaxial cable, RG8/U or equivalent. Weight 13 lbs. List \$34.00

Model 400-AA 10 meter di-pole with adjustable elements. All aluminum with seatite insulators. Weight 5 lbs. List \$13.00

Model 405-CA 10 meter folded di-pole .5 inch spacing. Aluminum supporting angle and adjustable elements. Designed to be fed directly with 300 ohm twinax line. Weight 6 lbs. 13 ozs. List \$22.00

Model 401-AA Set of 10 meter director and reflector elements with aluminum supporting angles. Elements are adjustable over a range of several feet. Can be used with either the 405-CA or the 400-AA to make up a 3 element beam. Ideal for the ham who wants to build his own ladder. Weight 6 lbs. 12 ozs. List \$22.00

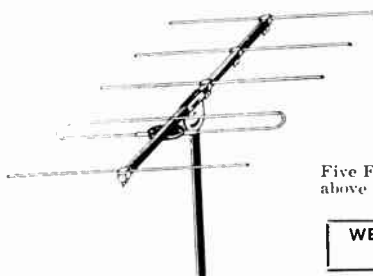
FIVE ELEMENT FOLDED DI POLE BEAMS

These Hi-Gain Broad Band parasitic arrays use a folded di-pole driven element with 3 directors and 1 reflector. The directors are spaced .1 wavelength while the reflector is spaced .15 wavelength. Furnished with the standard Elincor swivel bracket these beams can be mounted either in the vertical or horizontal plane. Both beams may be fed with RG8/U 52 ohm coaxial cable. Furnished complete with hardware and instructions.

Model 200 EA for 2 Meters

The 2 meter beam is precut for the middle of the 144 to 148 mc. band. The boom is 1" aluminum tubing. All the elements are 3/8" tubing.

Shipping weight 3 lbs. List \$14.00



Model 300 EA for 6 Meters

All elements and spacings on the 6 meter beam are adjustable to cover the 50 to 54 mc. band. The boom is 1" aluminum tubing. All elements are 5/8" aluminum tubing telescoping to 1/2"

Shipping weight 12 lbs. List \$41.50

Five Foot heavily enameled steel mast for either of the above antennas. Shipping weight 2 lbs. List \$3.50

**A Leader in Price!
A Leader in Quality!**

WE ALSO MANUFACTURE
BRAND NAME ANTENNAS



ELECTRONIC INDICATOR CORP.

BROOKLYN, NEW YORK

QUALITY TELEVISION & FM ANTENNAS

CHECK THESE FEATURES!

- 5 foot steel mast — heavily enameled.
- Corrosion resistant — aluminum di-pole elements supported on black glazed ceramic.
- All elements reinforced with aluminum sleeve at point of maximum strain.
- Transmission lines supported by low loss rubber standoff insulators.
- Mast mounting allows antenna to be rotated in any direction to improve reception.

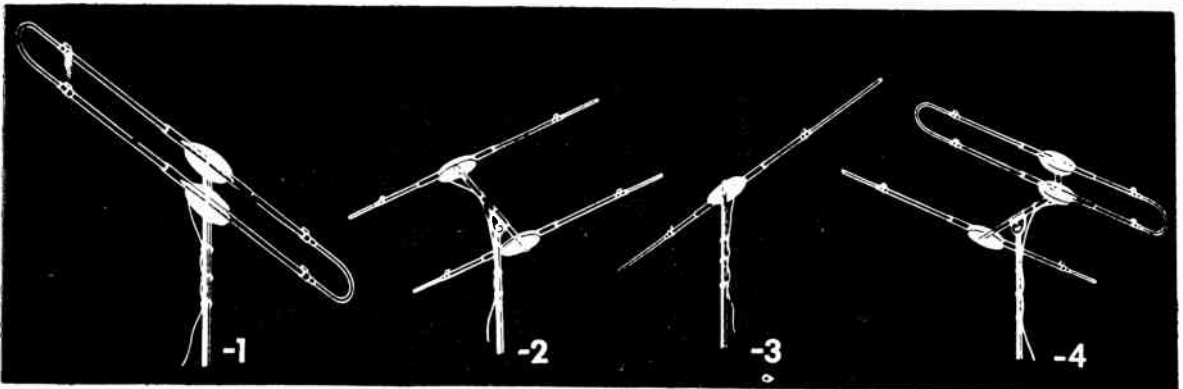
- Extra strong clamping bracket on all reflector models to tilt antenna to any angle.
- Furnished with or without 60 ft. of 300 ohm low loss polyethylene dielectric transmission line.
- Provision for guy wires.
- Each antenna packed individually with complete set of hardware and "easy to understand" instructions.

ALL FM MODELS IN 200 SERIES

Di-pole elements $\frac{3}{8}$ " aluminum tubing — non-adjustable

ALL TELEVISION MODELS IN 300 SERIES

Di-pole elements $\frac{5}{8}$ " aluminum tubing telescoping to $\frac{1}{2}$ " adjustable to improve reception from the weaker stations.
Model 310-FDR—Di-pole Elements— $\frac{1}{2}$ " aluminum tubing non-adjustable.

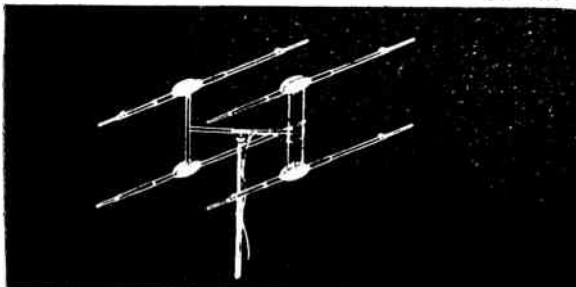


FOR F.M.

FOR TELEVISION

Picture RNo.	Model	Type	Ship.Wt.	List
1	200-FD	Folded Di-pole	4 lbs. 6 ozs.	\$ 7.20
2	X200-FD	200-FD, 60' 300 ohm twinnax	5 lbs. 4 ozs.	10.20
	200-DR	Di-pole and Reflector	6 lbs. 2 ozs.	10.95
3	X200-DR	200-DR, 60' 300 ohm twinnax	7 lbs.	13.95
	200-D	Straight Di-Pole	4 lbs. 1 oz.	5.95
4	X200-D	200-D, 60' 300 ohm twinnax	4 lbs. 15 ozs.	8.95
	200-FDR	Folded Di-pole and Reflector	6 lbs. 8 ozs.	12.20
	X200-FDR	200-FDR, 60' 300 ohm twinnax	7 lbs. 6 ozs.	15.20
	300-TR	300 ohm Twinnax Line	M Ft.	48.50
		less than 1000 Ft.		.05

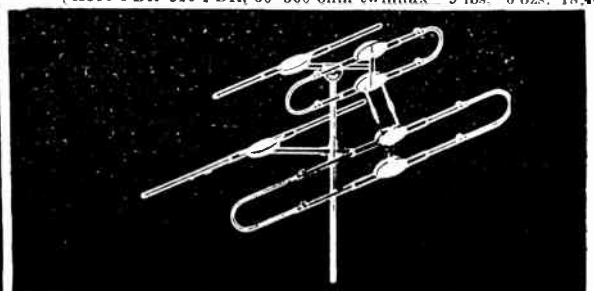
Picture RNo.	Model	Type	Ship.Wt.	List
1	300-FD	Folded Di-pole	6 lbs.	\$11.00
	X300-FD	300-FD, 60' 300 ohm twinnax	6 lbs. 14 ozs.	14.00
2	300-DR	Di-pole and Reflector	7 lbs. 8 ozs.	15.00
	X300-DR	300-DR, 60' 300 ohm twinnax	8 lbs. 6 ozs.	18.00
3	300-D	Straight Di-pole	4 lbs. 10 ozs.	8.00
	X300-D	300-D, 60' 300 ohm twinnax	5 lbs. 8 ozs.	11.00
4	300-FDR	Folded Di-pole and Reflector	9 lbs. 2 ozs.	18.00
	X300-FDR	300-FDR, 60' 300 ohm twinnax	10 lbs.	21.00
	310-FDR	Folded Di-pole and Reflector	8 lbs. 8 ozs.	15.40
	X310-FDR	310-FDR, 60' 300 ohm twinnax	9 lbs. 6 ozs.	18.40



"H" TYPE STACKED ARRAY

The Elincor H type stacked array gives very high gain and is especially recommended where television signals are weak. This antenna incorporates all of the mechanical features of our standard television antennas and is made in 2 models. The di-pole elements of the 350-SA are constructed of $\frac{5}{8}$ " aluminum tubing telescoping to $\frac{1}{2}$ " and are adjustable to improve the picture from the weaker stations. The 310-SA uses $\frac{3}{8}$ " aluminum tubing elements and is non-adjustable.

- Model 350-SA—ADJUSTABLE—Weight 13 lbs. 2 ozs. List \$30.00
- X350-SA—with 60' 300 ohm Twinnax—Weight 14 lbs. List \$33.00
- Model 310-SA—NON-ADJUSTABLE—Weight 11 lbs. 5 ozs. List \$21.50
- X310-SA—with 60' 300 ohm Twinnax—Weight 12 lbs. 3 ozs. List \$24.50



ALL CHANNEL ANTENNA!

The Elincor Model 250 is designed to receive all 13 television channels plus FM. It is without a doubt the best television antenna available today. Consists of 2 di-pole and reflector combinations, one for TV channels 1 to 6 and the other for channels 7 to 13. The upper and lower di-poles are electrically separated by built in dividing networks. These networks automatically select the group of channels to which your receiver is tuned.

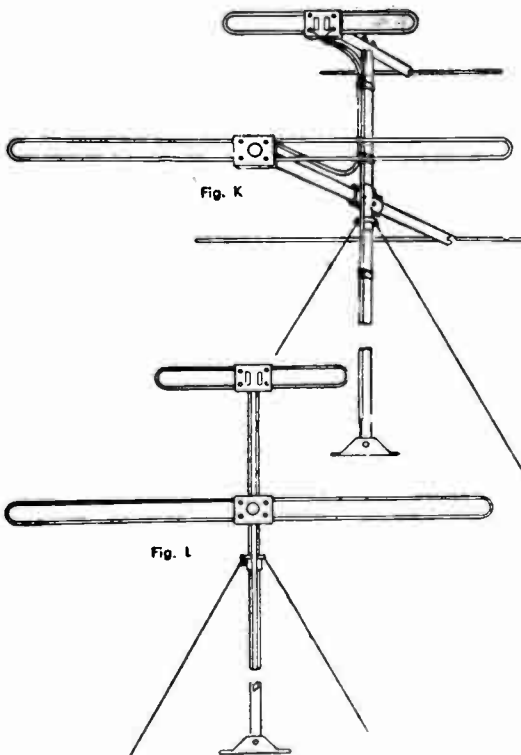
- This antenna incorporates all the mechanical features of our standard television antennas. The di-pole elements are ruggedly constructed of $\frac{5}{8}$ " aluminum tubing telescoping to $\frac{1}{2}$ ".
 - Model 250-DR—13 Channel—FM & TV Straight Di-Pole & Reflector—Shipping Weight 12 lbs. 8 ozs. List \$30.00
 - X250-DR—with 60' 300 ohm Twinnax—13 lbs. 6 ozs. List 31.00
 - Model 250-FDR—13 Channel—FM & TV Folded Di-Pole & Reflector—Shipping Weight 15 lbs. List \$30.00
 - X250-FDR—with 60' 300 ohm Twinnax—15 lbs. 14 ozs. List 33.00
- *Pat. under license A. A. & K.

WE ALSO MANUFACTURE BRAND NAME ANTENNAS

Antennas

AM · FM · AND TELEVISION

13 CHANNELS



RECEIVE ALL 13 CHANNELS OF TELEVISION PLUS FM ON ONE ANTENNA

Frequency Range for Vertrud Models TF and TFR:
44-108 MC on Low Frequency Array
174-220 MC on High Frequency Array

Average Gain of 2.5 D.B. — Low Frequency Array,
Average Gain of 1.5 D.B. — High Freq. Array above a tuned dipole.

Model TF 13 Channel FM-TV antenna less reflector. List Price . \$22.85
Model TFR 13 Channel FM-TV antenna with reflector. List Price . \$33.50

Licensed: Amy, Aceves and King Inc.

as new as
to-morrow!!

After long years of intensive research, Vertrud Corporation announces, in addition to its standard antennas, its newest developments in the field of AM, FM and Television antennas.

All Vertrud antennas are constructed of tempered aluminum alloy parts, resistant to the most adverse weather conditions. Maintenance costs are virtually non-existent and the life of the antenna for practical purposes, is unlimited.

Costly experimentation is eliminated when an antenna is available for every specific requirement. Whether it is AM, FM or Television, Vertrud has the antenna which will most efficiently do the job.

VERTROD'S 13 CHANNEL FM-TV ANTENNAS These models are available with and without reflectors. The high frequency and low frequency arrays are electrically separated by a patented divider network which eliminates any interaction between the two arrays. The high frequency and low frequency sections are individually rotatable for maximum signal from stations regardless of direction. Each element may be oriented to eliminate ghosts, images and interference. These models are constructed of tempered aluminum alloy cutting down on weight and retaining maximum rigidity. The smaller assembly offers higher resistance to wind and accumulation of snow.

ALL VERTROD ANTENNAS ARE DESIGNED FOR SIMPLICITY AND EASE REQUIRING ONLY A MATTER OF MINUTES FOR ASSEMBLY



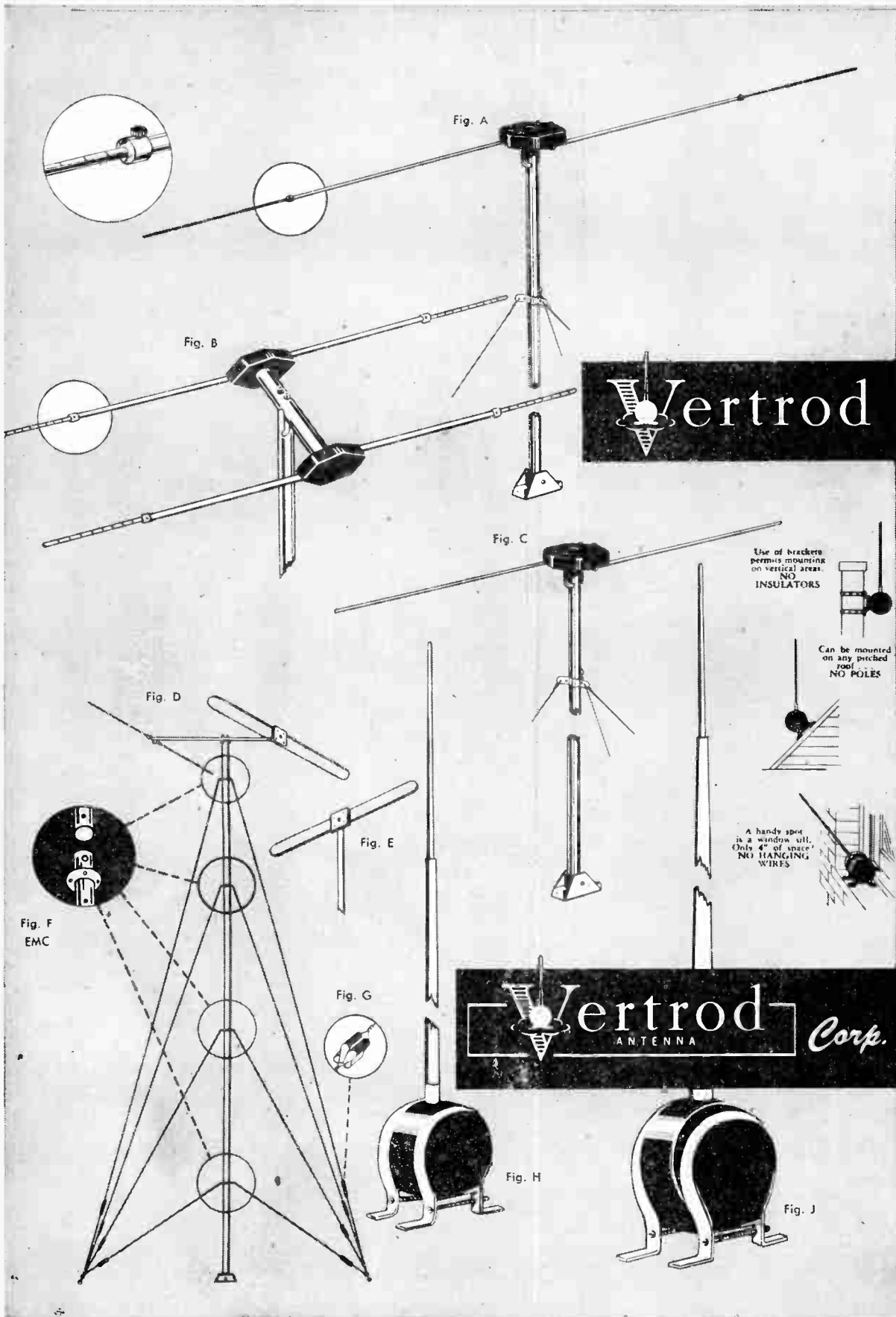


Fig. A

Fig. B

Fig. C

Fig. D

Fig. E

Fig. G

Fig. F
EMC

Fig. H

Fig. J

Vertrod

Vertrod
ANTENNA Corp.

Use of brackets
permits mounting
on vertical areas.
NO
INSULATORS

Can be mounted on
any pitched
roof.
NO POLES

A handy spot
is a window sill.
Only 4" of space.
NO HANGING
WIRES

makes an antenna for every purpose!!!

Vertrud antennas are carefully designed for noise-free reception on FM, TV, Standard Broadcast and Communications Frequencies. All models are engineered for maximum efficiency, meeting requirements for any specific application. All Vertrud antennas are packed complete with all necessary hardware and full instructions.

VERTROD STANDARD SERIES: AM antennas recommended for noise-free areas. Mounted on a patented Rotatory base. Can be rotated in an arc of 180 degrees. All Standard models may be used alone or in conjunction with a loop aerial already built into a radio set. The Standard Series antennas are available in three models, all covering the entire broadcast bands.

VERTROD NOISE REDUCER SERIES: This antenna covers the entire broadcast and short wave bands. Frequency range: 500 KC to 30 MC. Vertical antennas similar to Standard series models. Antenna transformer is hermetically sealed in the rotatory base of these models. The radio set coupler, another transformer, sealed in a plastic shell, matches the impedance of the transmission cable to that of the radio set in-put. Available in models with or without 35' of transmission cable.

VERTROD SENTINEL SERIES: FM-TV antennas, pre-tuned to the middle of the band, assuring strong, noise-free reception on either side of the band. The dipole series are recommended for non-directional reception in areas free from shadows and interference from adjacent stations. The dipole reflector arrays are recommended where stronger directional signals are required. Dipole reflector arrays may be oriented to eliminate ghosts and interference. Vertrud Sentinel models are mounted on Universal, adjustable angle brackets.

FOLDED DIPOLE SERIES: Folded dipole and dipole reflector arrays are similar in performance to the straight dipole series with the exception that these provide for broader band response with 300 ohm impedance at its junction. Folded dipole models are mounted on Universal, adjustable angle brackets.

VERTROD CONTINENTAL SERIES: The only adjustable antenna calibrated directly in megacycles and adjustable to any frequency in the FM and TV bands. This series is available in dipole and dipole reflector arrays.



Your Antenna Requirements Met Precisely By Vertrud

STANDARD SERIES:

- MODEL 10 — Equipped with 9-foot rod in three 3-foot sections of tempered aluminum alloy. Recommended for noise-free areas close to broadcast stations. (Fig. H) List Price \$5.30
- MODEL 210 — Equipped with 12-foot rod similar to Model 10. Recommended for areas further removed from broadcast-stations. (Fig. H) List Price \$6.30
- MODEL 810 — Heavy duty antenna for maximum sensitivity. Equipped with heavy duty 18-foot mast and heavy duty rotory base for greatest rigidity in high winds. (Fig. J) List Price \$17.00

NOISE REDUCER SERIES:

- MODEL 102 — Equipped with 9-foot rod and matched transformers to eliminate noise and static. Less transmission cable (Fig. H) List Price \$11.75
- MODEL 122 — Equipped with 12-foot rod and matched transformers to eliminate noise and static. Less transmission cable. (Fig. H) List Price \$13.00
- MODEL 182 — Equipped with 18-foot heavy duty mast with matched transformers to eliminate static and noise. Less transmission cable. (Fig. J) List Price \$24.25
- MODEL 103 — Equipped with 9-foot rod and matched transformers to eliminate noise and static. Including 35 feet of transmission cable. (Fig. H) List Price \$14.75
- MODEL 123 — Equipped with 12-foot rod and matched transformers to eliminate noise and static. Including 35 feet of transmission cable. (Fig. H) List Price \$16.00
- MODEL 183 — Equipped with 18-foot heavy duty mast with matched transformers to eliminate noise and static. Including 35 feet of transmission cable. (Fig. J) List Price \$27.25

SENTINEL SERIES:

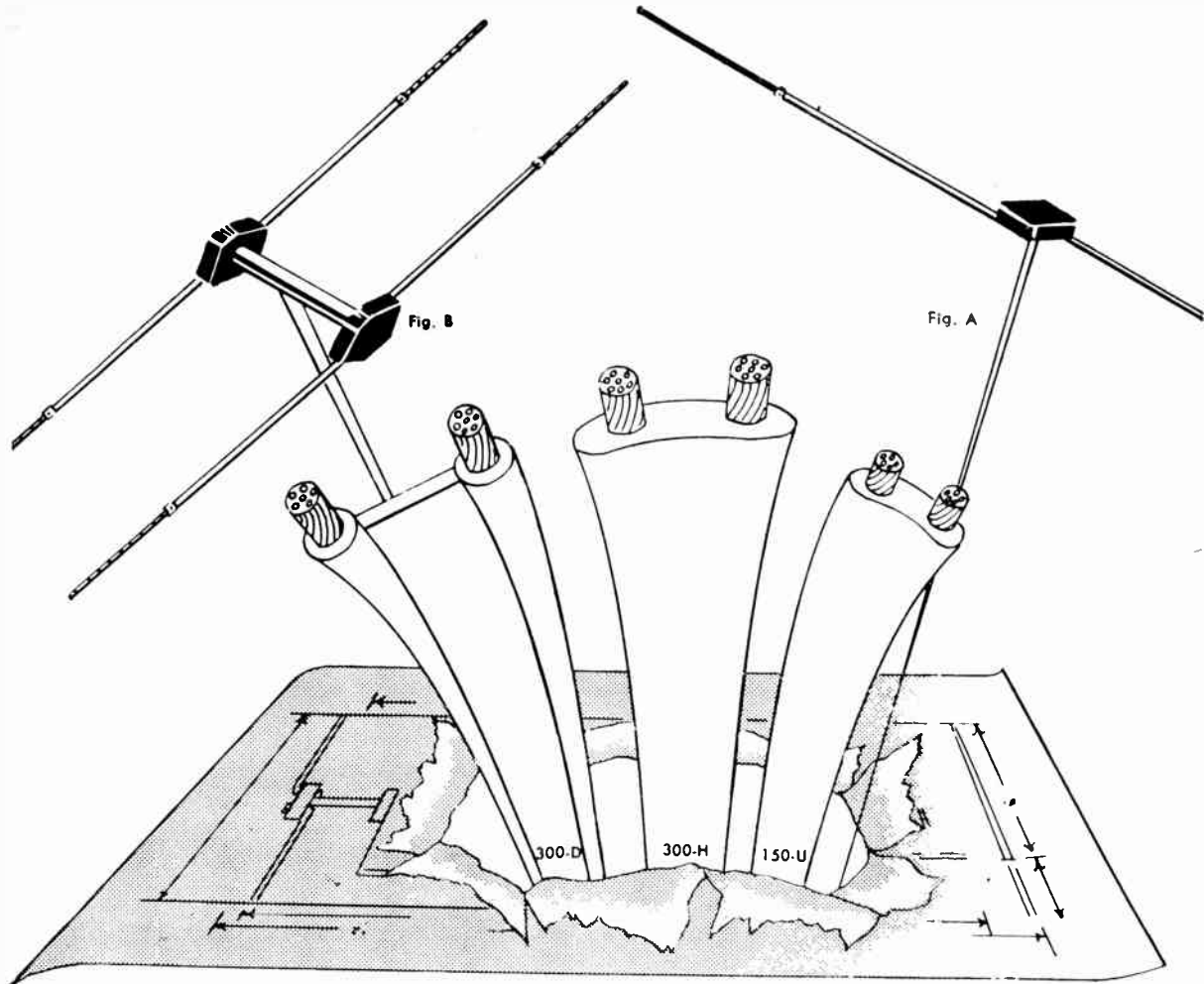
- MODEL 632 — FM, Frequency range 88-106 MC Pre-tuned dipole antenna. (Fig. C) List Price \$7.90
- MODEL 642 — TV, Frequency range 44-88 MC Pre-tuned dipole antenna. (Fig. C) List Price \$8.50
- MODEL 744 — FM, Frequency range 88-106 MC Pre-tuned dipole reflector array. List Price \$12.10
- MODEL 764 — TV, Frequency range 44-88 MC Pre-tuned dipole reflector array. List Price \$13.25

FOLDED DIPOLE SERIES:

- MODEL FD — FM, Frequency range 88-106 MC. (Fig. E) List Price \$10.50
- MODEL TD — TV, Frequency range 44-88 MC. (Fig. E) List Price \$12.00
- MODEL FDR — FM, Frequency range 88-106 MC. With reflector. (Fig. D) List Price \$13.75
- MODEL TDR — TV, Frequency range 44-88 MC. With reflector (Fig. D) List Price \$16.50

CONTINENTAL SERIES:

- MODEL 332 — FM-TV Dipole, Frequency range 44-106 MC. (Fig. A) List Price \$10.40
- MODEL 444 — FM-TV Dipole reflector combination. Frequency range 44-106 MC. (Fig. B) List Price \$14.80



VERTROD — MEANS SKILLED ANTENNA ENGINEERING



- 300-D:** 300 ohm clear polyethylene covered parallel twin lead, "Dumb-Bell" shaped. Has the lowest losses of all 300 ohm transmission lines, containing the least amount of dielectric material. This type approaches the ideal condition of two conductors separated by air. Specially designed for FM and TV. List Price \$44.00 M
- 300-H:** 300 ohm brown polyethylene covered parallel twin lead. Heavy duty recommended for use where greatest tensile strength is required. Has a slightly larger capacity than type 300-D. Specially designed for FM and TV. List Price \$48.50 M
- 150-U:** 150 ohm clear polyethylene covered parallel twin lead for special purposes in addition to FM and TV use. Recommended for use where this different impedance is required. List Price \$34.00 M
- 75-U:** 75 ohm clear polyethylene covered parallel twin lead for special use where particular impedance characteristics are required in high frequency work. List Price \$32.00 M
- RG 59/U:** 72 ohm coaxial type cable using #22 AWG plain copperweld inner conductor in polyethylene cone. Bare copper single braid outer conductor with black polyvinyl chloride outer jacket. This coaxial cable is specially designed for use in television where interference, due to power disturbances, is to be subdued. The copper braid outer conductor produces a perfect shield for signals in the 100 megacycle range, ideal for interference-free television pictures. Manufactured in conformance with latest JAN-C-17 specifications. List Price \$160.00 M
17.50 C

VERTROD ACCESSORIES

- | | | | |
|---|------------|--|-----------|
| Extension mast and coupler (EMC — Fig. F.) List Price | \$4.25 eo. | Guy Wire 3/32" Diameter, galvanized steel wire. Breaking | |
| Strain insulator. List Price | .15 eo. | Strength 300 lbs. List Price | \$ 4.75 C |
| Turnbuckle. List Price | .27 eo. | | 42.50 M |

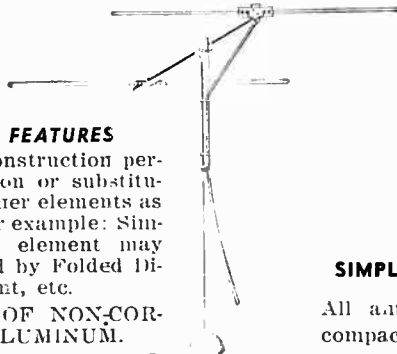
VERTROD CORPORATION • FACTORY: 17 WILLIAMS AVE., BROOKLYN, N. Y. • OFFICE: 11 PARK PLACE, N. Y. C. PHONE: DIGBY 9-1240

ICA INSULINE RADIO PRODUCTS ICA

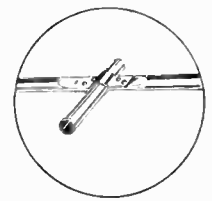
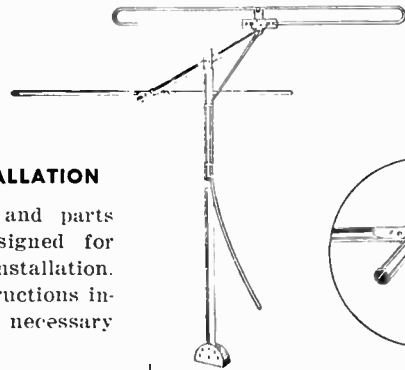
ICA PRECISION TELEVISION AND FM ANTENNAS

Featuring the most advanced engineering research — emphasizing complete interchangeability of principal elements.

Simple Dipole with Reflector



Folded Dipole with Reflector



SPECIAL FEATURES

- ★ Uniform construction permits addition or substitution of further elements as desired; for example: Simple Dipole element may be replaced by Folded Dipole element, etc.
- ★ DIPOLES OF NON-CORROSIVE ALUMINUM.
- ★ 5-FOOT STURDY STEEL MAST TO WITHSTAND EXTREME WEATHER CONDITIONS.
- ★ Adjustable swivel base for flat or angular mounting.
- ★ Provision for attaching guy wires.
- ★ Stand-off insulators.

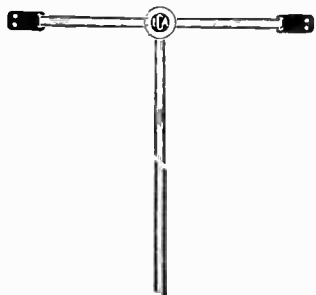
SIMPLE INSTALLATION

All antennas and parts compactly designed for simple, easy installation. Complete instructions included with necessary hardware.

300 ohm twin lead transmission line (60 feet) included with each antenna

INDOOR FM AND TELEVISION ANTENNAS

(Consists of two folded dipole elements, spliced to standard 300 ohm twin lead transmission line. (Length of lead-in: 10 feet.) Designed especially for INDOOR use. flattened end insulators permit use under carpet; on room molding, etc. Insulator to insulator: 55". Losses in line measure only .85 DB per 100 ft. at 100 MC. Easy installation instructions included.



REFLECTOR KIT

For increase in signal gain. Can be easily added to the Folded or Simple Dipole (FM or Television). Completely adjustable along mast for further signal gain. May be located up to quarter wave length of lowest frequency used in Television band. Illustration shows enlarged view of adjustable bracket.

FM AND TELEVISION WIRE

Quality 300 ohm twin-lead transmission line . . . 2 conductors each composed of 7 strands No. 29 copper wire, separated by low loss polyethylene insulation. Losses only .85 DB per 100 ft. at 100 MC. Mutual capacitance: 4.8 mmfd per foot. Supplied in 100-foot coils.

Catalog Number 6020

Dipoles:	For Television	For FM
Insulation:	94 Inches	57 Inches
Frequency Range:	Polyethylene	Polyethylene
Catalog No.	44-88 MC	88-108 MC
	6005	6008

Note: The 6008 Antenna is also recommended for the new FM-Tuners

Catalog Descriptions For FM Reception

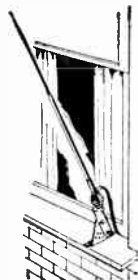
Cat. No.	Description	List
6008	Indoor Antenna	\$1.95
6072	Reflector Kit (58")	4.95
6075	Simple Dipole (55")	8.95
6076	Folded Dipole (55")	9.95

For Television Reception

6009	Indoor Antenna	2.45
6052	Reflector Kit (99")	5.95
6055	Simple Dipole (94")	9.95
6056	Folded Dipole (94")	12.45
6020	FM and Television Wire	5.25 C ft.
6040	Mast Extension Complete	2.95

MAST ANTENNAS FOR STANDARD RECEPTION

DE LUXE WINDOW ANTENNAS 3 Feet—12 Feet



Made of Admiralty Brass with Beautiful Nickel-Plated Finish

- For Homes, Apartments, Hotels, Office Buildings, and places where it is inconvenient to install outdoor aerials or to improve reception on indoor installations.
- Quickly and easily installed.
- Adjustable Bracket at base, permits the antenna to be rotated in any position for best reception.
- Furnished completely assembled with mounting flange, insulator and lead-in strip.

Individually boxed.

3 Section Telescopic Antenna Opens to 96" No. 4527B List \$4.45
No. 4529—3 Sec., Opens to 75" List \$3.25
to a Standard Carton—Weight 14 lbs.

4 Section Extra Long Window Antenna 12 Feet Long

Ideal for DX Reception and Rural Sections where extra length is needed for best results.
No. 4513 List \$6.75
to a Standard Carton—Weight 33 lbs.

HOME ANTENNAS 12 Feet—4 Sections

Made of Admiralty Brass—Guaranteed Rust Proof

- The Latest Type Home Antenna suggested by leading Radio Set Manufacturers for best results.
- Eliminates unsightly and dangerous wires.
- Clear, noise-free reception with no power line interference.
- Very sturdy construction—made of Admiralty Brass with Beautiful Nickel-Plated Finish.
- Guaranteed Rust-proof for the Life of Antenna.
- Universal Bracket allows permanent and convenient installation on soil pipe, window pipe, chimney, roof, gables, cornices, wall copings, etc.
- Individually boxed.

Vertical Mast with all accessories for Universal Mounting — including Lead-in Wire, Ground Wire, Brackets, Lightning Arrester, Screws, Insulators, etc.

No. 4516 List \$6.95
to a Standard Carton—Weight 33 lbs.

ICA INSULINE RADIO PRODUCTS ICA

ICA "DE LUXE" AUTO RADIO ANTENNAS

The Latest, Improved ICA Auto Antennas

For over a quarter-century, ICA has pioneered in the field of radio-electronics. A leading manufacturer of receiving antennas of all types since the industry's earliest days, ICA now presents its newest, improved, complete line of auto radio antennas, incorporating extensive precision manufacturing facilities with the latest engineering features, including:

- Noiseless Performance
- Rattleproof Engineering
 - Lifetime Rustproof Guarantee
 - Triple-Chrome-Plated Admiralty Brass
- Vinylite Insulated Lo-Loss Cable
 - Weatherproof, Dustproof Joints
 - Easy, One-Man Installation
- Equipped with BOTH Delco and Motorola Fittings

ICA Disappearing ANTENNAS

For Fender and Cowl Mount
Suitable for all cars, old and new

56" of exposed antenna telescopes to 57".
Does not obstruct vision.
Plastic and chrome-plated insulator
hugs flat or convex surfaces.

Generous length cable . . . 48"

No. 4570 List \$6.45

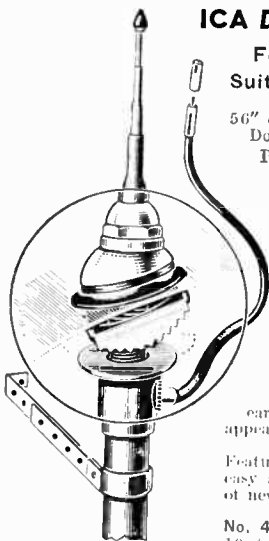
Three-Section
Packed 10 to a standard carton
Weight 11 lbs.

PEERLESS MODEL

Designed especially for 1948 and
earlier model cars. Improved streamlined
appearance.

Features unique swivel base permitting
easy angle adjustment to match contours
of new cars.

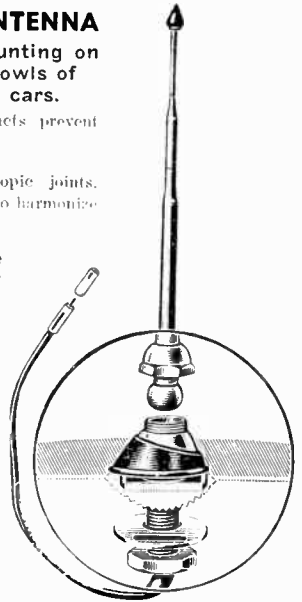
No. 4571—Three-Section . . . List \$6.95
10 to standard carton—Weight 11 lbs.



ICA "TOPPER" ANTENNA

For variable angle mounting on
tops of fenders and cowls of
newest streamlined cars.

- Patented brass shim contacts prevent rattling or vibration.
 - Dust and Moisture-Proof.
 - Snug-fitting tapered telescopic joints.
 - Varied mounting positions to harmonize with contour of car.
 - Generous length (48") shielded loom Lo-Loss cable . . . Vinylite covered insulation.
- No. 4575 List \$5.45
Three-Section
Extends from 20" to 63"



"PIVOT TOPPER"

New development in variable
angle mountings. Special type
pivot permits universal angle
mounts. Easily installed. Merely
set rod to desired angle and
tighten securing nut. III-Q loss
cable. 48" lead-in.

No. 4576 List \$4.95

Three-Section
Extends from 20" to 63"
10 to stand. carton. Wt. 10 lbs.

NEW ANTENNA DISPLAY

FREE . . . Ready to Use

A sales stimulating display.
Colorful . . . Neatly
styled. Suitable for win-
dow or counter. (Size 20"
x 20".) Display is FREE,
you pay only for the fol-
lowing fully-mounted An-
tennas:

- | | |
|--------------------|---------|
| No. 4541—"Rocker" | Cat No. |
| No. 4801—Uni-Mount | 4500 |
| No. 4568—Side Cowl | List |
| No. 4575—Topper | \$19.90 |



"ROCKER" ANTENNA

A Variable Angle Antenna
to Fit the Contours of
All Car Bodies

- Suitable for all cars.
 - Easily adjusted to desired angle.
 - Weatherproof joint construction.
 - Easy, one-man installation.
 - Streamlined design to harmonize with latest cars.
 - High-luster bakelite insulator tamper-proof.
 - 48" Lo-Loss cable.
 - Completely assembled, ready for installation.
- No. 4541 List \$5.25

Three-Section
Extends from 23½" to 72"
10 to standard carton.
Weight 16 lbs.



UNI-MOUNT ANTENNAS

The Universal Aerial. Fits All
Types of Cars . . . Old and New.
For Underhood Mounting

- Streamlined modern design.
- Equipped with inter-changeable brackets for either side-hood or alligator hood mountings.
- No drilling of holes into car body necessary.
- Sturdy bakelite and chrome-plated brass insulator.
- Shielded loom Lo-Loss cable . . . vinylite insulated.

No. 4801 List \$4.45

Three-Section
Extends from 20" to 63"
10 to standard carton. Wt. 11 lbs.

No. 4803 List \$5.45

Three-Section
Extends from 31½" to 96"
10 to standard carton. Wt. 14 lbs.



SIDE COWL ANTENNA

A Series of Side Cowl Antennas
for Wide Application

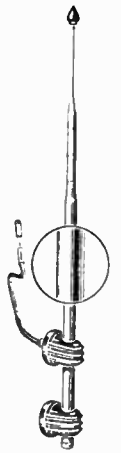
- Includes patented brass shim
contacts for noiseless performance;
brass swivel coupling for
easy installation; shielded Lo-
Loss cable.
- No. 4566 (10 lbs. *) List \$4.45
3-Section, Extends 20" to 63"
No. 4553 (11 lbs. *) List \$5.45
3-Section, Extends 31½" to 93"

HEAVY DUTY AERIAL

- Made of extra large diameter
brass tubing. Ideal for long dis-
tance reception and rugged
wear.
- No. 4568 (14 lbs. *) List \$4.75
3-Section, Extends 29" to 68"
No. 4569 (15 lbs. *) List \$4.95
4-Section, Extends 30" to 80"
No. 4559 (15½ lbs. *) \$6.45
4-Section, Extends 36" to 110"

"PACEMAKER"

- Has most of the features of
above antennas but priced low
for quick sales.
- No. 4567 (10 lbs. *) List \$3.35
3-Section, Extends 25" to 62"
*10 antennas in standard pkg.



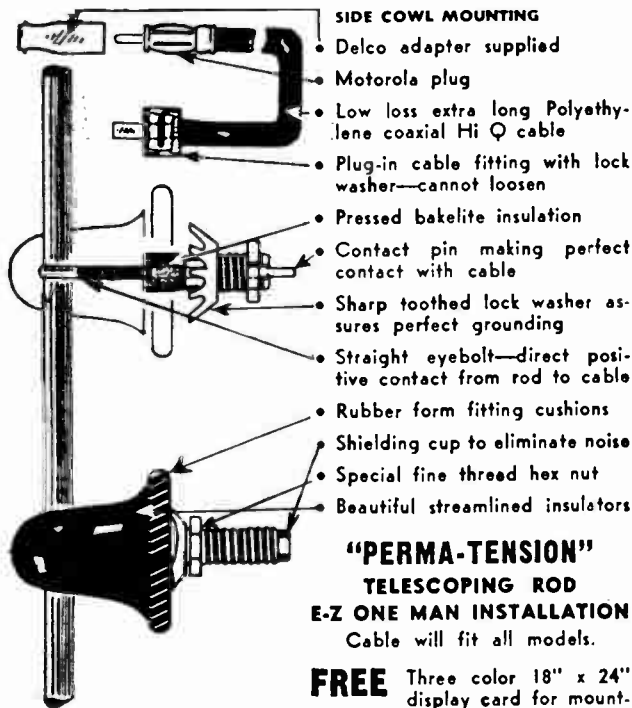
Spirling NEW PERMA-TENSION

PAT. PENDING

TELESCOPING

AUTO RADIO ANTENNAE

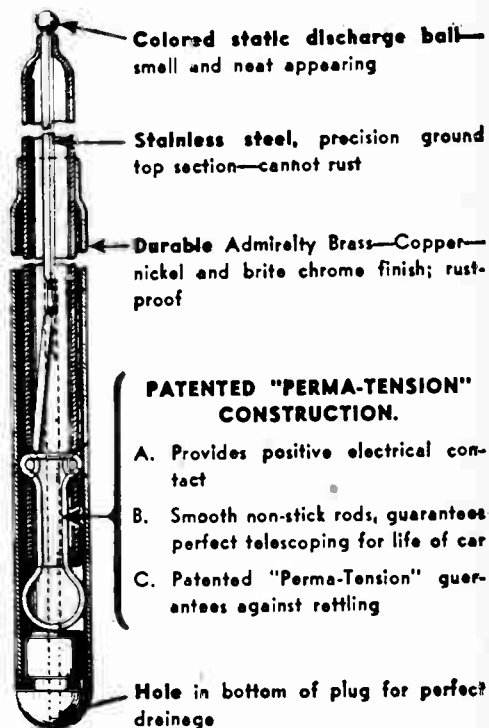
In Antennae its "SPIRLING"— In Silver its "Sterling"



- SIDE COWL MOUNTING**
- Delco adapter supplied
 - Motorola plug
 - Low loss extra long Polyethylene coaxial Hi Q cable
 - Plug-in cable fitting with lock washer—cannot loosen
 - Pressed bakelite insulation
 - Contact pin making perfect contact with cable
 - Sharp toothed lock washer assures perfect grounding
 - Straight eyebolt—direct positive contact from rod to cable
 - Rubber form fitting cushions
 - Shielding cup to eliminate noise
 - Special fine thread hex nut
 - Beautiful streamlined insulators

"PERMA-TENSION"
TELESCOPING ROD
E-Z ONE MAN INSTALLATION
Cable will fit all models.

FREE Three color 18" x 24" display card for mounting 4 antennae.



- Colored static discharge ball—small and neat appearing
- Stainless steel, precision ground top section—cannot rust
- Durable Admiralty Brass—Copper-nickel and brite chrome finish; rust-proof

PATENTED "PERMA-TENSION" CONSTRUCTION.

- A. Provides positive electrical contact
- B. Smooth non-stick rods, guarantees perfect telescoping for life of car
- C. Patented "Perma-Tension" guarantees against rattling

Hole in bottom of plug for perfect drainage

MODEL UMC 3

Streamlined Upper Mount Top Cowl or Fender Antennae



Perma-Tension Telescoping, self-aligning rocker which insures a snug fit with either flat or convex surface with a wide variation of angle. Easily installed, waterproof, Vinyl-Plasticized, Polyethylene, Lo-Loss shielded coaxial Cable. Individually packed in carton.

Three sections, extending 25" to 66", including 48" cable.

List Price \$6.95
MODEL UMC 3A — Three sections, extending 21" to 56", including 36" cable.
List Price \$5.95

SIDE COWL ANTENNAE

Perma-Tension Telescoping



Model	List Price
Model 1366	\$3.45
3 section, extends 25" to 66"	
Model SC-366	\$4.95
Extends from 25" to 66"	
Model SC-396	\$5.95
Extends from 35" to 96"	
Model SC-460	\$5.45
Extends from 20" to 60"	
Model SC-480	\$6.45
Extends from 25" to 80"	
Model SC-4100	\$6.95
Extends from 30" to 100"	

Chrome cups available.

MODEL DFC 4

Streamlined Concealed Fender or Top Cowl Mount Antennae



Perma-Tension Telescoping, self-aligning rocker which assures a snug fit with either flat or convex surface. Easily installed, WATERPROOF, VINYL - PLASTICIZED, Polyethylene, Lo-Loss shielded HI-Q coaxial cable. Individually packed in carton.

Four sections, showing only 3" when closed. Extending to 60". Including 48" cable.

List Price \$7.25

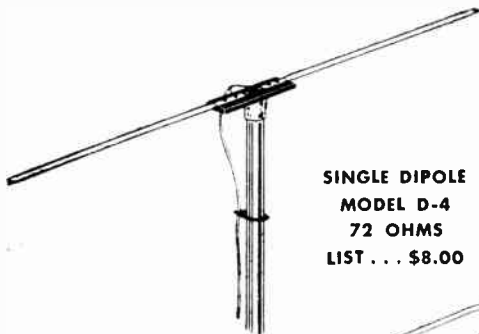
All Prices Subject to Change Without Notice.

SPIRLING PRODUCTS CO., INC. New York City

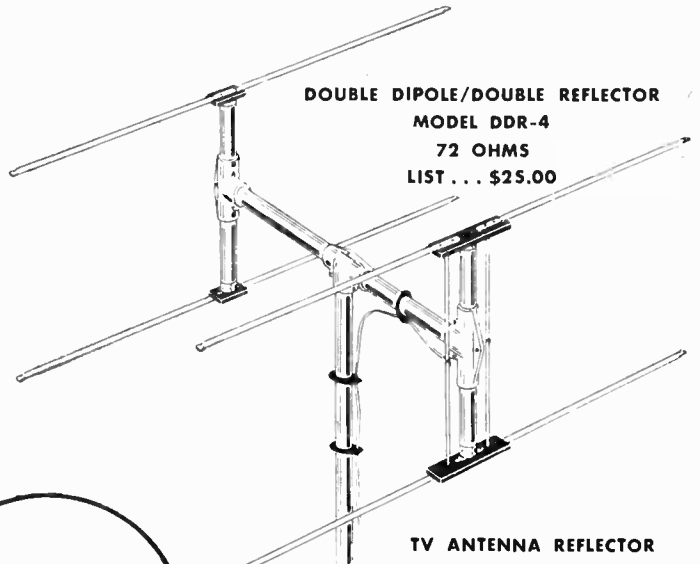
NOISELESS...RATTLE-PROOF...RUST-PROOF...DURABLE

Rig-Fast ANTENNAS

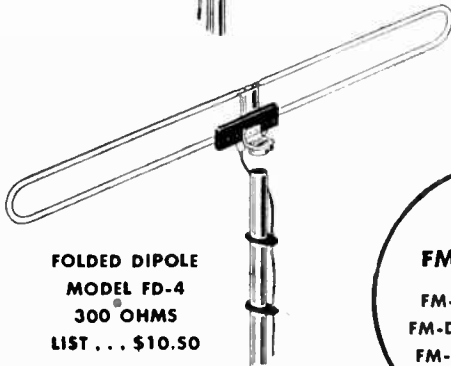
ALL ALUMINUM TELEVISION AND FM ANTENNAS
HIGH GAIN RECEPTION — BROAD RESPONSE



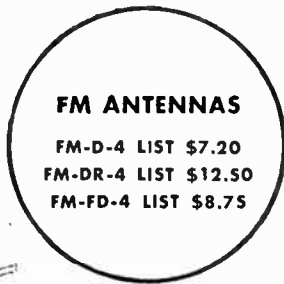
SINGLE DIPOLE
MODEL D-4
72 OHMS
LIST . . . \$8.00



DOUBLE DIPOLE/DOUBLE REFLECTOR
MODEL DDR-4
72 OHMS
LIST . . . \$25.00



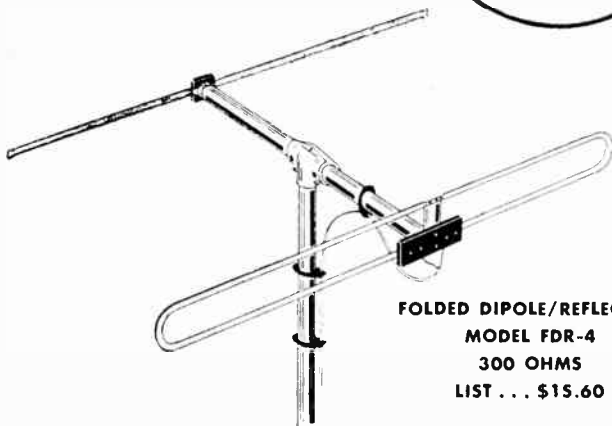
FOLDED DIPOLE
MODEL FD-4
300 OHMS
LIST . . . \$10.50



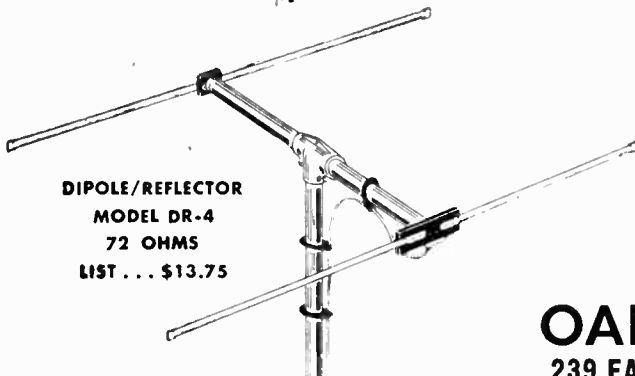
FM ANTENNAS
FM-D-4 LIST \$7.20
FM-DR-4 LIST \$12.50
FM-FD-4 LIST \$8.75



TV ANTENNA REFLECTOR
MODEL CVS
Converts Model D-4 to DR-4
or Model FD-4 to FDR-4
LIST . . . \$6.45



FOLDED DIPOLE/REFLECTOR
MODEL FDR-4
300 OHMS
LIST . . . \$15.60



DIPOLE/REFLECTOR
MODEL DR-4
72 OHMS
LIST . . . \$13.75

FEATURES

- All aluminum (TV antennas all 94" long).
- 1/2" weather-proofed elements.
- Element ends pressure-sealed to insure long life, prevent interior corrosion.
- Terminal ends of elements are reinforced with pressure-sealed aluminum insert.
- Standardized components permit interchangeability of models from single dipole to any other "Rig-Fast" model.
- "Rig-Fast" collar clamp assures quick, automatic alignment of elements on crossarm or mast.
- Self connecting reflector elements.
- All antennas complete with heavy duty rubber lead-in standoffs, guy ring and mounting brackets. Same rubber standoffs are designed for use with RG 59-U or 300 ohm lead-in cable.
- Individually boxed, with instructions.

OAK RIDGE ANTENNAS
239 EAST 127th STREET • NEW YORK 35, N. Y.

WORKSHOP TELEVISION ANTENNAS and ACCESSORY EQUIPMENT

In many locations, the ordinary television antenna does not provide enough "signal strength" for even the finest receivers. Workshop custom-designed Receiving Systems, because of their "high-gain," will bring you pictures with brilliant clarity — even at places far beyond the normal range.

Features of the Workshop Receiving System

Choice of 8 different 3-element high-gain arrays to cover all channels and FM.
Each array can be independently oriented for maximum gain and minimum ghosting.
Rugged construction throughout — elements of one-half inch aluminum tubing.

Never becomes obsolete! As new stations go on the air, additional arrays can be added.

Each 3-element array is matched to its own low-loss coaxial transmission line — man-made static and noise pickup are negligible. Simple coaxial switch changes from one channel to another conveniently at the receiver.

HOW TO CHOOSE THE WORKSHOP RECEIVING SYSTEM FOR YOUR AREA

Two or three arrays properly chosen will normally take care of most situations. However, the system is designed to ordinarily accommodate up to four arrays and more if necessary when properly spaced.

Select the antenna array (specifying model numbers) for the channels to be received in your area.

For example: Suppose channels 2, 4, 5, 8 and 9 are active in your area, with channel 4 the weakest. From Table A you would select a 57LM for channel 2, a 69LM for channels 4 and 5, and a 183LM for channels 8 and 9. This system would be designated as Model No. TVS-3, with arrays as selected above.

RECEIVING SYSTEMS

(less transmission line and accessories)

Model No. TVS-2—Workshop Antenna Receiving System with any 2 arrays selected from Table A, complete with Mast and Mounting Brackets. Approximate shipping weight 15 lbs.

List Price\$55.00

Model No. TVS-3 Workshop Antenna Receiving System with any 3 arrays selected from Table A, complete with Mast and Mounting Brackets. Approximate shipping weight 20 lbs.

List Price\$80.00

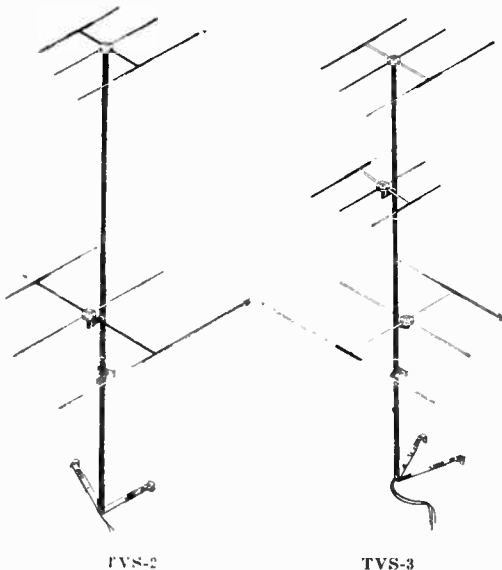
Please specify Model No. of antennas desired when ordering Models No. TVS-2 and -3.

Table A—Single 3-element Television and FM Antenna Arrays less mast

Model No.	TV Channel No.	List Price	Shipping Wt.
57LM	2*, 3	\$18.50	10½ lbs.
63LM	2, 3*, 4		
69LM	3, 4*, 5		
79LM	4, 5*, 6		
85LM	5, 6*		
183LM	7, 8*, 9		
195LM	9, 10*, 11	\$32.50	13 lbs.
207LM	11, 12*, 13		

FM3-LM Non-directional FM Array complete with *Directional Conversion Kit*.

*Optimum performance on this channel.



SINGLE ARRAY TELEVISION ANTENNAS

Complete 3-element, high-gain, directional antenna, with 7½-ft. mast and tri-point universal mounting brackets and hardware — less coaxial transmission line.

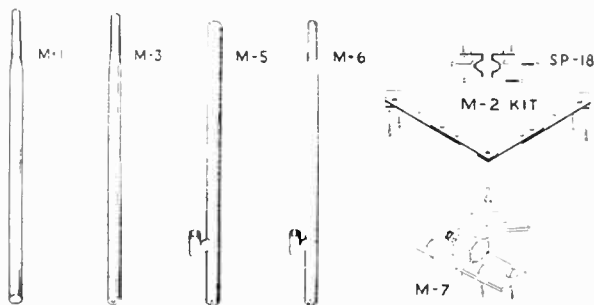
Model No.	TV Channel No.	List Price	Shipping Weight
TV57	2*, 3	\$32.50	13 lbs.
TV63	2, 3*, 4		
TV69	3, 4*, 5		
TV79	4, 5*, 6		
TV85	5, 6*		
TV183	7, 8*, 9		
TV195	9, 10*, 11	\$32.50	13 lbs.
TV207	11, 12*, 13		

*Optimum performance on this channel.



WORKSHOP MAST EQUIPMENT AND ACCESSORIES

Model No.	Description	Shpg. Wt. Lbs.	List Price
M-1	Mast Extension (length 4 ft.). For insertion between existing mast sections	2 lbs.	\$2.25
M-3	Bottom Mast Section (length 4 ft.). Cable port at bottom.	3 lbs.	3.25
M-5	Special Top Mast Section (length 4 ft.). For mounting 2 arrays from Table A. Used with M-3.	3½ lbs.	7.00
M-6	Special Middle Section (length 4 ft.). For mounting 3 arrays from Table A. Used with M-3 and M-5	3½ lbs.	7.50
M-7	Base Mounting Bracket. Designed to attach M-3 to flat or inclined surface. Hardware furnished.	1 lb.	1.75
M-2	Tri-Point Mast Mount. Bolts to M-3 and attaches to side of wood structures. Heavy gauge galvanized steel. Supplied with complete hardware including clamp brackets	5½ lbs.	8.50



SP-18 Clamp Brackets. Additional clamp brackets, complete with hardware and wood screws for attaching to wood surfaces. Made of galvanized steel. 1 lb. \$2.25

G-3 Guy Wire Plate. Slips over mast. Permits guying in cases where elevation with rigidity is a prerequisite for good signals. ¼ lb. .50



ANTENNA DEALERS

In addition to its primary use, this new switch is the answer to the television sales demonstration problem. By simply using additional switches any number of television sets can be demonstrated from one convenient location.

THE NEW WORKSHOP COAXIAL SWITCH

This unit is designed for use with Workshop Television Receiving Systems. It switches any one of four arrays to a receiver.

Model No. R-4 Four-position switch. List Price \$15.00
(Additional positions available on special order; price on request.)

ACCESSORIES

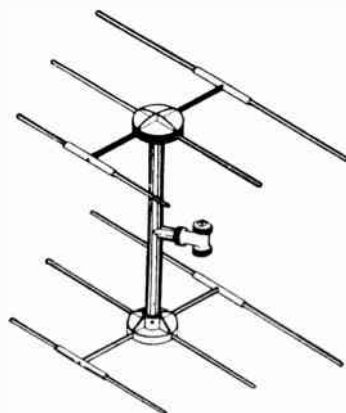
Model No.	Description	List Price
W-50	Silver-plated Solderless Cable Plug for use with RG-59 U coaxial cable. Mates directly with coaxial switch.	\$.60
W-60	Silver-plated Receptacle for chassis mounting. Mates with W-50.	1.00
W-80	Silver-plated Cable Junction. Both ends mate with Cable Plug W-50.	1.50
RG-59/U	72 Ohm Coaxial Cable. Matches Workshop 3-element arrays directly. Neutral color with convenient marks indicating five foot intervals. . . . .	.12 per ft.
W-100	Adapts RG-11 U or RG-8 U to small coaxial cable connectors	2.50
T-72	Broad-band Impedance Matching Transformer. Matches 72 ohm unbalanced coaxial line to 300 ohm balanced line.	3.50

WORKSHOP "100-MILE" HIGH-GAIN TELEVISION ANTENNA

A 6-element, high-gain highly directional antenna for use in low signal strength localities adjacent to fringe areas. Forward gain is 7.6 db., ½ power angle in the vertical plane is 68 degrees, ½ power angle in the horizontal plane is 64 degrees. Negligible response at rear and sides. Three-way connector available on special order for RG-59 U. Mounts on standard 1" threaded pipe (not supplied). Should not be used with Workshop mast equipment.

Model No.	low band	high band	For Channel	List Price
TV57-2	}		2*, 3	\$45.00
TV63-2			2, 3*, 4	
TV69-2			3, 4*, 5	
TV79-2			4, 5*, 6	
TV85-2	}	}	5, 6*	
TV183-2			7, 8*, 9	
TV195-2			9, 10*, 11	
TV207-2			11, 12*, 13	Shipping Weight 15 lbs.

*Optimum performance on this channel.

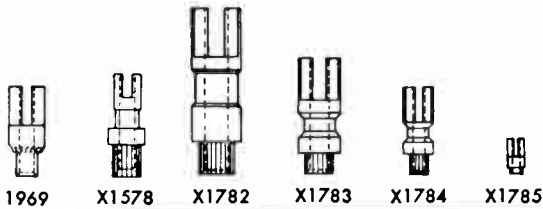


CTC Expands Line of Electrical and Electronic Components and Hardware

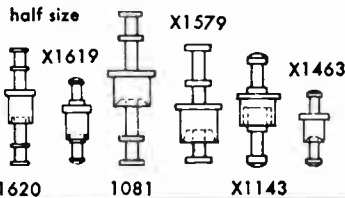
TURRET LUGS (All Lugs silver-plated brass). With 2 soldering spaces for 2 or more connections. Stocked in $\frac{1}{32}$ ", $\frac{1}{16}$ ", $\frac{3}{32}$ ", $\frac{1}{8}$ ", $\frac{3}{16}$ " sizes for standard phenolic terminal board thicknesses.



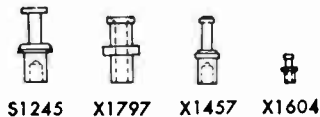
SPLIT LUGS (Knurled). For potted units where later soldering is advisable, as well as standard applications. Hole through shaft allows top or bottom wiring. To fit $\frac{3}{32}$ " or $\frac{1}{32}$ " boards.



DOUBLE END LUGS
Provide terminal posts on both sides of board with through connection for easy wiring. For board thicknesses from $\frac{3}{32}$ " to $\frac{1}{4}$ ".

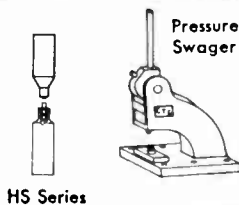


SHORT LUGS
For low "headroom" applications. Available in shank lengths for 6 board thicknesses, starting with $\frac{1}{64}$ ".

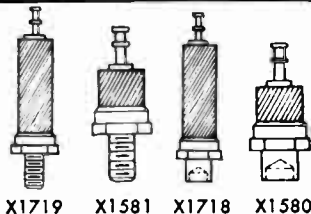


SWAGERS
H.S. (Hand) Swagers are sold outright in sizes for any CTC Terminal lug.

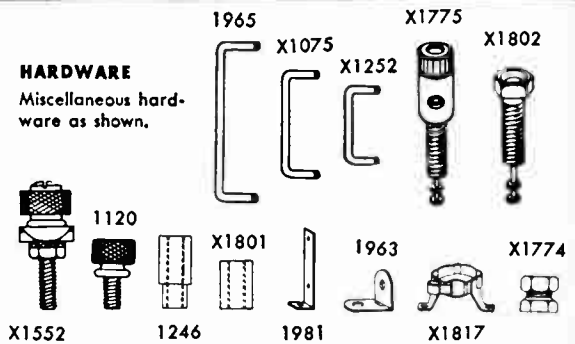
Pressure Swagers. Supplied with dies for one type terminal on loan basis. Extra dies or unit with dies may be bought outright.



INSULATED TERMINALS
Two sizes in rivet or stud type, for high electrical stresses over broad humidity range. Phenolic insulator with midjet single or double lug. Voltage breakdown X1719, X1718, 11,000V at 60 cycles RMS. X1581, X1580, 6000V.

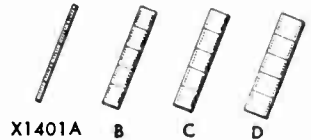


HARDWARE
Miscellaneous hardware as shown.



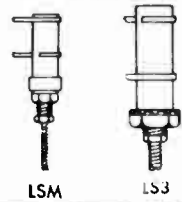
TERMINAL BOARDS

Of approved laminated phenolic, $\frac{3}{32}$ ", $\frac{1}{8}$ ", $\frac{3}{16}$ " thick in 4 widths — $\frac{1}{2}$ ", 2", 2 $\frac{1}{2}$ ", 3". Five-section, separable units with each section drilled for 14 lugs.



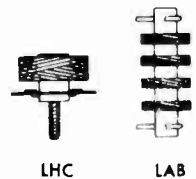
SLUG TUNED COILS

Miniature variable inductors. LSM $2\frac{7}{32}$ " high, LS3 $1\frac{1}{4}$ " high when mounted. Both in 5 standard windings (1, 5, 10, 30, 60 mc) also special windings or as unwound high quality phenolic coil forms. Performance charts available.



R.F. CHOKES

LHC — high Q iron core choke with 6-32 mounting stud, in 8 standard values from 2.5 mh to 125.0 mh.
LAB — Pie wound on phenolic core with cotter pin terminals in 8 windings from .75 mh to 15.0 mh. Current rating for both — 125 ma.



*Custom or Standard
The Guaranteed
Components*

CUSTOM ENGINEERING

CTC Engineers will design Boards, Coils and Terminal Lugs for production in quantity to fulfill whatever need may arise.

WRITE FOR CATALOG NO. 200

for complete information on these and other CTC Electrical and Electronic Components and Hardware. No obligation, of course.

CAMBRIDGE THERMIONIC CORPORATION • 436 CONCORD AVE., CAMBRIDGE 38, MASS.



AMERICAN PHENOLIC CORPORATION

1830 SOUTH 54TH AVENUE, CHICAGO 50, ILLINOIS

ZIP-IN Sockets, Ethylon-A

Easy Mounting . . . High Electrical Efficiency . . . No Breakage



Loktal

Molded of low-loss Ethylon-A, ZIP-INS are rated for operation with R.F. and A.F. amplifier tubes, mixers and detectors. ZIP-INS can be easily pushed or pressed in place and the design is such that the socket is then firmly locked in the chassis. No screws, rivets or retainer rings are required. ZIP-IN Sockets have a "Q" factor many times higher than sockets of conventional dielectrics. Tools for chassis hole in next column.



Octal

Number	Description	List
59-302	Loktal	\$.24
59-305	Octal	.20
59-307	Miniature 7 Pin	.18
59-377	Miniature 7 Pin. With tube shield base	.24
59-309	Miniature 9 Pin	.38
59-379	Miniature 9 Pin. With tube shield base	.48

Retainer Ring "S" Type Sockets

Extremely compact sockets, furnished complete with retainer rings. Mount in 1-11/64" keyed hole. Use Amphenol No. 25-LD-1 or 25-PP-1 Punch and Die. Mating plugs listed on page 6.



Black Bakelite

Black Bakelite	List	Contacts	Steatite	List
78-S4	\$.13	4 Contacts	49-SS4	\$.47
78-S5	.13	5 Contacts	49-SS5	.47
78-S6	.13	6 Contacts	49-SS6	.47
78-S7C*	.17	7 Comb. for 7L, 7S		
78-S7L*	.13	7 Large	49-SS7L*	.59
78-S7S	.13	7 Small	49-SS7S	.47
78-S8	.17	8 Octal	49-SS8	.47
78-8L	.21	8 Loktal		
78-S9	.21	9 Octal Style		
78-S11	.29	11 Octal Style		
78-A7P†	.30	7 for Miniatures		
78-A9P†	.45	9 for Miniatures		
78-B	.07	Blank		



Steatite

* Mounts in 1-21/64" keyed hole. Use 25-LD-2 or 25-PP-2 Punch and Die.
† Mounts in standard socket hole. Has miniature socket in center.

Magnal Socket Has 1-1/16" pin circle for cathode ray and television tubes. Mounts in 1-5/8" hole. Steatite.
No. 49-SS11L 11 Contact, Magnal. List \$1.21

Miniature Retainer Ring Type Sockets

Mount in 5/8" round or "D" shaped hole with No. 2-9 retainer rings except No. 78-5P which mounts in 1/2" hole with No. 2-10 ring. Mating plugs are on pages 6 and 8.

Black Bakelite



Number	Description	List
78-S3S	For 3 prong min. photo cells	\$.17
78-S4S	4 Contact	.17
78-S5S	5 Contact	.21
78-S6S	6 Contact	.21
78-5P	5 Contact. Miniature	.21
78-7P	7 Contact. Miniature	.21

Polystyrene—Extremely Low-Loss

54-7P 7 Contact. Miniature. 42

Mica-Filled Bakelite

78-7PT 7 Contact. Miniature. 28

Tube Shield and Spring Assemblies

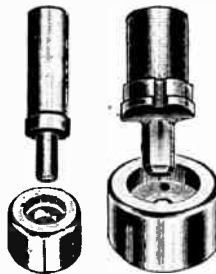
Number	Height	Description	List
5-401	1-3/8"	For 7 Pin Miniature Sockets (page 5)	\$.14
5-402	1-3/4"	For 7 Pin Miniature Sockets (page 5)	.14



Tube Shields No. 5-401 and 5-402 are used with Sockets No. 59-367, 147-905, 147-913, 147-925, 147-955 and 147-963.
5-405 1-1/2" For Noval Sockets (page 5) . . . 20
5-408 1-15/16" For Noval Sockets (page 5) . . . 24
5-409 2-3/8" For Noval Sockets (page 5) . . . 24
Tube Shields No. 5-405, 5-408 and 5-409 are used with Sockets No. 59-369, 59-406 and 59-407.

Laboratory Punch and Dies

For punching mounting holes for Amphenol connectors, plugs and receptacles. Made of tool steel, properly hardened. For regular production of chassis use the Punch Press Dies listed below.



For Amphenol Retainer Ring Mounting Tube Sockets, Radio Plugs, etc.

Drill 1/2" hole for pilot punch.

No.	Size of Hole	List
25-LD-1	1-11/64" keyed	\$12.00
25-LD-2	1-21/64" keyed	12.00

For Miniature Sockets and Microphone Connectors

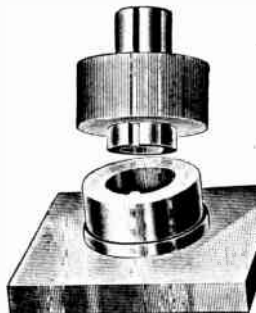
Drill 3/8" pilot hole for 25-LD-3, 5 and 6 and 1/4" hole for 25-LD-4.

25-LD-3	13/16" round	\$3.60
25-LD-4	5/8" round	3.60
25-LD-5	5/8" "D" hole	6.00
25-LD-6	1/2" "D" hole	6.00

For Amphenol ZIP-IN Sockets

25-101	.687" keyed for Miniature 7 Pin	\$27.00
25-102	1.062" keyed for Loktal and Octal	27.00
25-103	.796" keyed for Miniature 9 Pin	27.00

Punch Press Production Dies



Oil-hardened tool steel dies for heavy service. Die ring is accurate on outside diameter; dowel holes and threaded screw holes in the bottom make its inclusion into a die block simple and inexpensive.

Punch has a 1" shank to fit small presses. When necessary to fit into larger presses a split shave should be used. Rubber stripper fitted over punch strips chassis from punch after piercing operation.

Number	Description	List
25-PP-1	For 1-11/64" keyed hole	\$40.00
25-PP-2	For 1-21/64" keyed hole	40.00

Retainer Ring Hand Tools



51-5

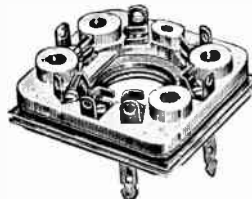


51-1

Convenient for assembling miniature sockets, plugs and tip jacks to panels or chassis. Designed for hand operation.

Number	Description	List
51-5	For No. 2-9 Rings	\$1.20
51-6	For No. 2-11 Rings	1.20
51-7	For No. 2-10 Rings	1.20
51-1	For "S" type sockets and "CP" type plugs except 7C and 7L sizes. Required where socket spacing is very close.	6.66
51-2	For "S" type sockets 7-large and 7-combination	6.66
51-3	For "SS" steatite sockets and "60" and "61" receptacles. Of two-piece construction . . . somewhat easier but slower to use than 51-1 (above) for "S" sockets and "CP" plugs	6.66

Acorn Tube Sockets



Positive contact . . . designed for minimum losses at ultra-high frequencies. Base is silicone treated, unglazed steatite. Amphenol's exclusive design eliminates most tube insertion and withdrawal pressure, reducing cracking and breaking of glass.

Number	Description	List
151-001	5 Contact. Complete with cathode and by-pass assembly for mounting directly on chassis. Bronze contacts. Size 1 x 1-3/8"	\$2.20

COAXIAL CABLES AND CONNECTORS • INDUSTRIAL CONNECTORS, FITTINGS AND CONDUIT • ANTENNAS • RADIO COMPONENTS • PLASTICS FOR ELECTRONICS



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ZIP-IN, Ethylon-A

ZIP-IN Sockets, molded of low-loss Ethylon-A are used for R.F. and A.F. amplifier tubes, mixers and detectors. "Q" factor is many times higher than sockets of conventional dielectric and ZIP-INS won't chip or break. Sturdy steel mounting plate cannot come loose or vibrate. Mounts above or below chassis in 1-3/16" round hole. Mounting plate has 5/32" holes on 1-1/2" centers.

Number	Description	List Price
59-352	8 Contact, Loktal	\$.27
59-355	8 Contact, Octal	\$.23



MIP Molded-In-Plate Sockets

Molded of high dielectric black Bakelite, sturdy, steel mounting plate molded directly into the solid body, cannot come loose or vibrate. Contacts grip tube prongs firmly and retain their resiliency indefinitely. Mount in 1-5/32" round hole. Two 5/32" screw holes on 1-1/2" centers.

Number	Contacts	List	Number	Contacts	List
77-MIP-4	4 Contacts	\$.12	77-MIP-8	8, Octal	\$.14
77-MIP-5	5 Contacts	.12	77-MIP-9	9, Octal-style	.18
77-MIP-6	6 Contacts	.12	77-MIP-11	11, Octal style	.24
77-MIP-7L	7 Large	.14	77-MIP-12	12, Octal style	.30
77-MIP-7S	7 Small	.12	77-MIP-20	20 Contacts	.61

77-MIP-20 is for speaker or shielded cable plugs in intercomm. systems, etc. Mating plug is 86-PM-20 on page 6.

77-MIP-7L and 77-MIP-20 mount in 1-9/32" D. round holes.

Compact MIP Sockets

Same as MIP series above but smaller in diameter. Mount in 1-1/8" round hole. Two 5/32" diameter mounting holes on 1-5/16" centers. Black Bakelite dielectric.

Number	Contacts	List
88-8	8 Contacts	\$.14
88-8X	8, Loktal	.21

Saddle Type Sockets

Sharp ribs on mounting plate score chassis during riveting, breaking thru any oxidation for a perfect ground. Designed for bottom mounting in 1-1/8" round hole. Two 5/32" diameter mounting holes on 1-1/2" centers.

Black Bakelite	List	Poly-styrene	List
74-8	\$.14	54-8	\$.48
		54-8L	.54

ZIP-IN, Ethylon-A



Molded of Ethylon-A with high "Q" factor. Mounting plate has .136" diameter holes on 1-5/16" centers. Round chassis holes are 27/32" for 7 pin and 15/16" for 9 pin.

Number	Description	List
59-357	7 Pin, Without tube shield base	\$.21
59-367	7 Pin, With tube shield base	.27
59-359	9 Pin, Without tube shield base	.51
59-369	9 Pin, With tube shield base	.61



Above Bottom Mounted
Right—Top Mounted with Tube Shield Base



Above Rubber Mounted



Right—Rubber Mounted with Tube Shield Base



Replacement Sockets

Regular "S" sockets, assembled with No. 4 retainer ring to steel mounting plate with spotted holes to fit mounting centers from 1-1/4" to 1-7/8".

Black Bakelite	List	Contacts	Stearite	List
78-RS4	\$.14	4 Contacts	49-RSS4	\$.48
78-RS5	.14	5 Contacts	49-RSS5	.48
78-RS6	.14	6 Contacts	49-RSS6	.48
78-RS7C	.18	7 Comb.		
78-RS7L	.14	7 Large	49-RSS7L	.61
78-RS7S	.14	7 Small	49-RSS7S	.48
78-RS8	.18	8 Octal	49-RSS8	.48
78-RS8L	.22	8 Loktal		
78-RS9	.22	9 Octal style		
78-RS11	.30	11 Octal style		



Floating Octal Sockets

Five rubber grommets fit into mounting holes to cushion this socket for vibration-free operation. Black bakelite dielectric. Mounts in 1-3/16" round hole above or below chassis. Two 1/4" screw holes on 1-1/2" centers.

Number	Description	List
77-MIP-8FK	Octal, Complete with 4 rubber grommets, 2 mounting screws, nuts and washers	\$.39
11-3K	Kit for making floating connections using AmphenoL MIP Sockets, 4 grommets, 2 mounting screws, nuts and washers only	.24

Rubber Cushions for inserting in chassis or panel riveting holes to lessen vibration of an assembled part such as a tube socket.

Number	Description	List Per C.
22-6	for 3/8" hole	\$3.60
22-10	for 1/4" hole	1.80

High Voltage Safety Sockets

For rectifier and other tubes with base diameter of 1.156". Socket is set at the bottom of a deep molded Bakelite shell. Heavy steel mounting plate molded into shell has 5/32" diam. mounting holes on 1-1/8" centers. Socket mounts from above or below in 1-1/2" round hole.

Black Bakelite	List	Mica-Filled Bakelite	List
77A-4	\$1.21	77A-4T	\$1.51
77A-8	1.21	77A-8T	1.51

MINIATURE 7 AND 9 PIN SOCKETS

Bakelite and Steatite Sockets

Used for television, FM, auto radios, portables, etc. 147 Series mount in 5/8" chassis hole; mounting centers 7/8"; screw holes 1/8". 59 Series mount in 3/4" chassis hole; mounting centers 1-1/8"; rivet holes .095".

Bottom Mounting—No Tube Shield Base

Number	Contacts	Dielectric	List
147-500	7	Black Bakelite	\$.24
147-501	7	Steatite	.51
59-409	9	Black Bakelite	.38
59-410	9	Mica-Filled Bakelite	.40

Top Mounting—With Tube Shield Base

147-905	7	Black Bakelite	.39
147-913	7	Mica-Filled Bakelite	.40
147-925	7	Steatite	.63
59-406	9	Black Bakelite	.56
59-407	9	Mica-Filled Bakelite	.57

Rubber Mounted—No Tube Shield Base

147-502	7	Black Bakelite	.25
147-503	7	Mica-Filled Bakelite	.26

Rubber Mounted—With Tube Shield Base

147-955	7	Black Bakelite	.50
147-963	7	Mica-Filled Bakelite	.51



AMPHENOL CORPORATION

1830 SOUTH 54TH AVENUE, CHICAGO 50, ILLINOIS

Shielded Cable Connectors, 110—250 Volt

End Cable Outlet—For cables up to 1/2" diameter



Fully shielded cable terminals with black Bakelite connector units encased in a tight cap that fits securely and is easily removed. Available with cable clamp that relieves soldered connections of strain, or with rubber grommets for protection against abrasion. (Like plug cap 3-13, page 7).

With Cable Clamp

List	Description
60-F11 \$.66	3 Pole Receptacle
60-M11 .66	3 Pole Polarized Plug
61-F11 .54	2 Pole Universal Receptacle
61-M11 .54	2 Pole Standard Plug
61-MP11 .54	2 Pole Polarized Plug

With Grommet

List	Description
60-F4 \$.60	3 Pole Receptacle
60-M4 .60	3 Pole Polarized Plug
61-F4 .48	2 Pole Universal Receptacle
61-M4 .48	2 Pole Standard Plug
61-MP4 .48	2 Pole Polarized Plug

Flush Motor Plug, 110—250 Volt

Neat, compact plug or receptacle set in type 61-61 steel shell (see page 7) for below surface mounting. Room for insertion of Amphenol End Cable Outlet Plugs.

Number	Description	List
61-F10	2 Pole Universal Receptacle	\$.48
61-M10	2 Pole Standard Plug	.48
61-MP10	2 Pole Polarized Plug	.48

Molded-In-Plate Receptacle



Same as 61-F Receptacle (page 7) with standard steel mounting plate molded into the Bakelite body. Mounts in 1-3/16" chassis hole; two 5/32" screw holes on 1-1/2" centers.

No. 61-MIP-61F	2 Pole Universal Receptacle	List	\$.30
----------------	-----------------------------	------	--------

Miniature Cable Connectors



Short Long Flared

For shielded or unshielded cables having up to 6 conductors. Black Bakelite elements are housed in cadmium plated brass shells and are held in place by side-set screws. Polarized contact spacing makes incorrect insertions impossible. Accommodates cable up to 1/4" diameter.

Short Shell—13/16" Long

Male List	Description	Female List
91-MPM3S \$.36	3 Contact	91-MPF3S \$.36
91-MPM4S .40	4 Contact	91-MPF4S .40
91-MPM5S .45	5 Contact	91-MPF5S .45
91-MPM6S .45	6 Contact	91-MPF6S .45

Long Shell—1-3/16" Long

Male List	Description	Female List
91-MPM3L \$.36	3 Contact	91-MPF3L \$.36
91-MPM4L .40	4 Contact	91-MPF4L .40
91-MPM5L .45	5 Contact	91-MPF5L .45
91-MPM6L .45	6 Contact	91-MPF6L .45

Flared Shell—1-3/16" Long

Male List	Description	Female List
91-MPM3F \$.36	3 Contact	91-MPF3F \$.36
91-MPM4F .40	4 Contact	91-MPF4F .40
91-MPM5F .45	5 Contact	91-MPF5F .45
91-MPM6F .45	6 Contact	91-MPF6F .45

Note: Use long shell type with shielded chassis units; use either long or short shells with unshielded types such as 78-S3S (page 4) and 86-CP-3S (page 8).

Shielded Chassis Units



Economical chassis receptacles and plugs for connecting shielded or unshielded cables having from 2 to 6 conductors (for 2 wire cable use 3 contact unit and leave 1 contact unwired). Black Bakelite element; steel mounting plate. Can be mounted on surface or behind chassis or panel in 7/8" D. hole; 5/32" screw holes on 1-1/4" centers. Use with long shell cable connector above for a fully shielded connection.

Male List	Description	Female List
86-PCG3M \$.36	3 Contact	78-PCG3F \$.36
86-PCG4M .36	4 Contact	78-PCG4F .36
86-PCG5M .41	5 Contact	78-PCG5F .41
86-PCG6M .41	6 Contact	78-PCG6F .41

Shielded Multi-Wire Cable Connectors



Multi-wire cable connectors consist of Amphenol "S" type tube sockets and "CP" plugs. Metal cap shields connections and provides an unbreakable cover for cable termination. Cap may be removed with an ordinary screwdriver. Accommodates cable up to 7/16" diameter. Female chassis receptacles or sockets 78-S, 78-RS and 77-MIP are shown on pages 4 and 5; male receptacles are listed below.

With Rubber Grommets

Female List	Contacts	Male List
78-PF4 \$.31	4 Contact	86-PM4 \$.31
78-PF5 .31	5 Contact	86-PM5 .31
78-PF6 .31	6 Contact	86-PM6 .31
78-PF7L .31	7 Large	86-PM7L .31
78-PF7S .31	7 Small	86-PM7S .31
78-PF8 .35	8 Octal	86-PM8 .35
78-PF9 .39	9 Octal Style	86-PM9 .39
78-PF11 .47	11 Octal Style	86-PM11 .47

Mates with 77-MIP-20, 20 Contact Plug 86-PM20 .90
page 5.

With Cable Clamps

Female List	Contacts	Male List
78-PF4-11 \$.37	4 Contact	86-PM4-11 \$.37
78-PF5-11 .37	5 Contact	86-PM5-11 .37
78-PF6-11 .37	6 Contact	86-PM6-11 .37
78-PF7L-11 .37	7 Large	86-PM7L-11 .37
78-PF7S-11 .37	7 Small	86-PM7S-11 .37
78-PF8-11 .41	8 Octal	86-PM8-11 .41
78-PF9-11 .45	9 Octal Style	86-PM9-11 .45
78-PF11-11 .53	11 Octal Style	86-PM11-11 .53

Male Receptacles

Extremely compact. Held firmly in place by Amphenol patented retainer ring. Can be rotated to line up contacts for shortest possible leads. Nickel-plated steel mounting plate has slotted screw holes, centers from 1-1/2 to 1-7/8".

Number	Contacts	List
86-RCP4	4 Contact	\$.14
86-RCP5	5 Contact	.14
86-RCP6	6 Contact	.14
86-RCP-7L	7 Large	.14
86-RCP-7S	7 Small	.14
86-RCP8	8 Octal	.18
86-RCP9	9 Octal Style	.22
86-RCP11	11 Octal Style	.30

Female plugs are shown above, other styles can be made by assembling "S" type sockets (page 4) with plug caps (page 7).

Locking Shells for Cable Connectors



Cable Type

Cable Type Cadmium plated steel covers can be slipped over PF and PM connectors and 60 and 61 series, 110-250 volt connectors. Lock firmly together preventing accidental pull-aparts. Set consists of male and female threaded shells.



Chassis Type

No. 15-G-CAB List per set \$.30

Chassis Type Similar to the cable type except that one section is threaded shell which fits under "S" type socket or retainer ring type 60 and 61 series. The other shell slips over the cable connector.

15-G-CHA Chassis Type Locking Shells.....List per set \$.30

Rubber Plug Handle



End cable outlet receptacles or plugs (PF and PM or 61-F4 types) snap into this rubber handle and are held securely in place by a live rubber inner molded shoulder. Illustration is cut away to show how connector is gripped by plug handle.

3-RPH Plug Handle Only.....List \$.18



Inserts and Shells for Cable Plugs, Connectors and Receptacles. For Assembly into Type Required



Single Prong Plugs

Bakelite Plugs, black or red, for use with Tip Jacks below.

Number	Description	List
71-1S	For 3/32" Socket	\$.06
71-1M	For 1/8" Socket	.06
71-1L	For 5/32" Socket	.06

Tip Jacks

Molded of Bakelite in black or red. Mount in 3/8" hole with retainer ring included. Use standard phone tips for 78-1 and 78-1P1. Contacts recessed 1/8". The body may be used as a feed-thru.



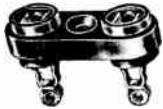
Number	Description	List
78-1S	For 3/32" Plug	\$.09
78-1L	For 5/32" Plug	.09
78-1M	For 1/8" Plug	.09
78-1P	For .080 Phone Tip	.09
78-1P1	High Voltage for .080 Phone Tip. Mounts in 1/2" hole.	.12

UHF Polystyrene Tip Jack



Body may be used as feed-thru. Mounts in 5/8" hole with retainer ring (included).
No. 54-111 For .080 Phone Tip. List \$.30

Crystal Holder Socket



Molded of mica-filled Bakelite for crystal holders having 2 prongs on 3/4" centers. Easily mounted. May be used as dual tip jacks on test panels.

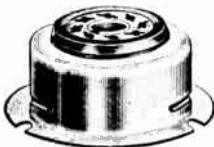
Number	Description	List
33-2T	For 1/8" Prongs	\$.17
33-3T	For 5/32" Prongs	.17

Polystyrene Crystal Holder Socket

For crystal holders with 3/4" centers as above. Contacts are special phosphor bronze, silver plated.

No. 34-2 For 1/8" Prongs List \$.36

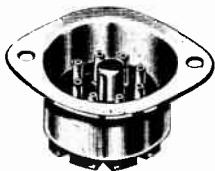
Receptacle Shells



ACS Shell extends "CP" or "S" type sockets or plugs 13/16" above or below surface. 4 knockouts in sides. Mounts in 1-3/4" hole; has 3 notched holes for No. 6 screws.

Number	Description	List
23-1S	For small "S" Sockets	\$.12
23-1L	For large "S" Sockets	.12
23-1	Top of shell is blank	.12

61-61 Shell. Nickel plated steel shell, lowers bottom of "CP" and "S" type plugs and sockets and 60 and 61 connectors 1-3/16" below surface. Mounts in 1-7/16" hole; two 5/32" screw holes on 1-3/4" centers.



No. 61-61 Shell only List \$.18



Retainer Ring Type Number	List
61-F	\$.30
60-F	.42

Retainer Ring Type Number	List
61-M	\$.30
61-MP	.30
60-M	.42



"S" Socket (Listings on page 4).



"CP" Plug

Black Bakelite	List
86-CP4	\$.13
86-CP5	.13
86-CP6	.13
86-CP7L*	.13
86-CP7S	.13
86-CP8	.17
86-CP9	.25
86-CP11	.29

Contacts	Stearite	List
4 Prong	49-245-00	\$.49
5 Prong	49-255-00	.49
6 Prong	49-265-00	.49
7 Large		.49
7 Small		.49
8 Prong, Octal	49-285-00	.49
9 Prong, Octal Style		.49
11 Prong, Octal Style		.49

* Mounts in 1-21/64" keyed hole. Use 25-LD-2 or 25-PP-2 Tool.

For 110-250 Volt Plugs and Receptacles

Compact in design, molded from high dielectric black Bakelite. Rated at 15 amp., 110 v. or 10 amp., 250 v. Two-pole type accepts any standard electric plug. Retainer ring type mounts in 1-11/64" keyed hole as punched by Tools 25-LD-1 or 25-PP-1 (page 4). Mounting plate type requires 1-9/32" D. chassis hole; has slotted screw holes on 1-1/2 to 1-7/8" centers. Mounting plate type is similar to Type "RS" Replacement Sockets shown on page 5.

Receptacles

Description	With Mounting Plate Number	List
2 Pole, Universal	61-F1	\$.34
3 Pole, Polarized	60-F1	.46

Plugs

Description	With Mounting Plate Number	List
2 Pole, Standard	61-M1	\$.34
2 Pole, Polarized	61-MP1	.34
3 Pole, Polarized	60-M1	.46

For Multi-Wire Plugs and Receptacles

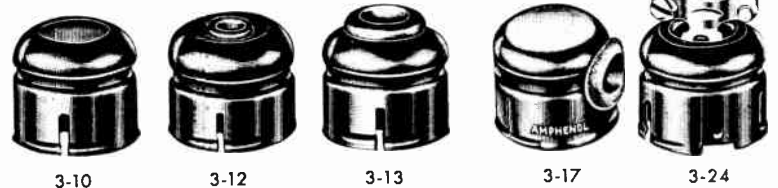
For quick, easy assembly to chassis or panels from 19 to 16 gage (.044 to .062") using Amphenol retainer ring. Black Bakelite or steatite. Cadmium plated contacts for easy soldering; rotation feature for lining up contacts. Complete with retainer ring.

Can be assembled in any of the plug caps or receptacle shells below. For chassis mounting in 1-11/64" keyed hole as punched by Tools 25-LD-1 or 25-PP-1 (page 4).

"CP" Plugs

Contacts	Stearite	List
4 Prong	49-245-00	\$.49
5 Prong	49-255-00	.49
6 Prong	49-265-00	.49
7 Large		.49
7 Small		.49
8 Prong, Octal	49-285-00	.49
9 Prong, Octal Style		.49
11 Prong, Octal Style		.49

Plug Caps for Every Purpose



Cable terminals can be assembled with these plug caps, using retainer ring type plugs, sockets and 60 and 61 series shown above. Plug caps are designed to fit all but the 7-large and 7-combination sizes. For 7-large and 7-comb, use Plug Cap 3-13L shown below.

Number	Length	End Hole	Side Hole	Grommet	List
3-10	1"	None	None	None	\$.18
3-12	1"	5/16"	None	Metal	.18
3-13	1"	7/16"	None	Rubber	.18
3-17	1"	None	7/16"	Rubber	.18
3-24	Cap with Cable Clamp attached. Accommodates cables to 1/2" diameter.				.24

79-CC4	Cable Clamp only. Same as used on Cap 3-24	.12
3-13L	Cap for large 7 Socket and Plugs, end rubber grommet 7/16" ID	.24
3-13LA	Insert secured by set screw. Used only on No. PM-20	.24

Black Rubber Grommets

For protecting cables from abrasion when passing thru chassis or panel hole.

Number	For Hole Size	Grommet ID	List Per C
22-1	9/16"	7/16"	\$1.50
22-2	7/16"	5/16"	1.26
22-3	5/16"	3/16"	1.08

AMPHENOL

AMERICAN PHENOLIC CORPORATION

1830 SOUTH 54TH AVENUE, CHICAGO 50, ILLINOIS

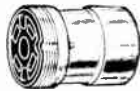


Heavy Duty Power Plugs

Male unit has four heavy brass blades; female has heavy phosphor bronze contacts. For use with current loads up to 15 amperes at 125 volts or 10 amperes at 250 volts. Molded black Bakelite unit is enclosed in tight, heavy brass shell... bright cadmium plated. Polarized with shell keys and keyways. Strain is taken up by concealed cable clamp. Grounding screw in body for safe wiring. Threaded locking ring keeps shells tight. Chassis or panel receptacle mounts in 1 1/4" hole in any material up to 1/2" thick. Complete with lock washer, spacer washer and nut.



Plug



Jack



Receptacle

Mating parts are arranged in same horizontal line below.

Number	Contacts	List	Number	Contacts	List	Number	Contacts	List
92-M	Male	\$3.01	92-F	Female	\$3.01	92-C	Female	\$3.01
92-F1	Female	3.01	92-M1	Male	3.01	92-C1	Male	3.01



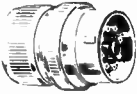
Flush Receptacles

Made up of above receptacles and steel yoke for mounting in regular wall or boxes. Full open end will come thru wall plate 1/8" to grip locking ring.

Number	Description	List
92-M2	Male	\$3.14
92-F2	Female	3.14
92-12	Cadmium plated steel yoke only. With nut, screws	.18
79-C3C8	Cap and Chain. Seals receptacles above and below	.61

Heavy Duty Radio Connectors

The plugs shown in bold face type mate with jacks and receptacles listed in bold type in the same horizontal line. For numbers in light faced type follow the same procedure... plugs mate with jacks and receptacles in the same horizontal line. Bold type also designates the most popular units.



Contacts	Plug		Jack		Receptacle		List
	Male	Female	Female	Male	Female	Male	
4	79-04M	79-04F1	79-04F	79-04M1	79-P04F	79-P04M	\$1.51
5	79-05M	79-05F1	79-05F	79-05M1	79-P05F	79-P05M	1.51
6	79-06M	79-06F1	79-06F	79-06M1	79-P06F	79-P06M	1.51
8	79-08M	79-08F1	79-08F	79-08M1	79-P08F	79-P08M	1.51
12	79-012M	79-012F1	79-012F	79-012M1	79-P012F	79-P012M	2.41



Bulb Tester and Tube Socket

Standard 7 contact combination socket for large and small 7 prong tubes. For testing miniature bulbs, either screw or bayonet types.

Number	Description	List
78-7C/D	With retainer ring	\$.53
78-RS7C/D	With mounting plate	.54

Adapters

A simple way to make adapter units which may be used for modernizing tube checkers and analyzers, adapting new tubes to old circuits and for connections to output meter, phonograph pickup, etc.



Socket Tops Only			Bases Only		
Number	Contacts	List	Number	Prongs	List
44-4	4	\$.24	50-4G	4	\$.36
44-5	5	.24	50-5G	5	.36
44-6	6	.24	50-6G	6	.36
44-7S	7 Small	.24	50-8SG	8 Octal	.36
44-8	8 Octal	.24			
44-L	Lockal	.24			
For testing new 9 pin miniature tubes.					
44-9	9 Noval	.45			

Shell Only

Of metal tubing for snap-in connection on either end of Amphenol "S" type sockets or "CP" plugs. Combinations possible from 4 to 11 prongs or contacts.

No. 3-14D With side hole, rubber grommet... List \$.24



Lockal Adapter Bases

Similar to small bases above but with metal band and lock-in stud like lockal tubes.

44-13 Lockal Base, No side stud... List \$.66

Miniature Tube Adapters

Unwired. For testing miniature tubes.

44-17-8 For 7 Prong Miniature Tubes, Octal base... List \$.61



Molded Speaker Plugs

Prongs are securely molded into one-piece black bakelite body. Each prong is deeply set into individually molded pocket, eliminating the possibility of shorts in case of pull-back of wire insulation.

With Finger Grip	Prongs	List	With Straight Sides	Prongs	List
71-4	4	\$.13	70-8	8	\$.17
71-5	5	.13	70-9	9	.21
71-6	6	.13	70-12	12	.30
71-7	7	.13	70-20	20	.61

Miniature Plugs



Cable Type used extensively for speaker connections in compact mid-gets. Ideal for all plug-in connections where space is limited. Brass prongs are deeply recessed in molded pockets preventing shorts due to insulation pulling back. With molded finger grip. Use with miniature sockets shown on page 4.



Chassis Type mounts in plain round 5/8" hole. No screws or rivets required. Held firmly by retainer ring included. Use with female miniature connectors (MPE type) shown on page 6.

Cable Type	List Price	Description	Chassis Type	List
71-3S	\$.15	3 Prong	86-CP-3S	\$.15
71-4S	.15	4 Prong	86-CP-4S	.15
71-5S	.21	5 Prong	86-CP-5S	.21
71-6S	.21	6 Prong	86-CP-6S	.21

Rectangular Plugs and Sockets



Style A



Style B



Style C

For compact apparatus. Plugs are often used as a supported type self-sustaining coil form.

Number	Plugs		List
	Style	Prongs or Contacts	
70-14	A	2	.20
70-27	B	2	\$.12
70-25	B	3	.15
70-26	B	4	.18

Sockets			
77-25	C	3	.26
77-26	C	4	.30

Tap Change Switch



An 8-position single pole continuous switch with white markings clearly visible in window cap. Side set screw locks switch arm in position preventing accidental tap changes.

Number	Description	List
36-1	With numerals 1 to 8	\$.90
36-2	With impedance markings 0-2-4-8-16-250-500	.90

Universal Grid Cap



A grid cap of improved design for universal use with tube grid caps from 1/4" to 3/4" diameter including standard glass and metal tubes. Spring brass contacts in red colored phenolic body.

63-1R Unwired Grid Cap... List Price \$.18

COAXIAL CABLES AND CONNECTORS • INDUSTRIAL CONNECTORS, FITTINGS AND CONDUIT • ANTENNAS • RADIO COMPONENTS • PLASTICS FOR ELECTRONICS

AMPHENOL



Duodecal and Diheptal Tube Sockets



Designed for television viewing tubes, oscilloscopes and other cathode-ray tubes. Provides means of grouping leads within the socket housing and bringing them out radially in a neat, unit-cable form, reducing the space required to a minimum. Grouping of the wires in the enclosed raceway eliminates flexing at solder terminals, minimizing breakage.

Removable socket cap provides complete enclosure for all connections, eliminating shock hazard, yet the cap is easily removed for wiring or servicing. Opening for the lead

wire harness can be positioned in any of 61 locations. Contacts are seated in individual wells, the walls of which form efficient creepage barriers. Socket cap and body molded from high quality electrical bakelite. Contacts are Amphenol exclusive "clover-leaf" design featuring four full lines of contact on each tube pin.

The socket is designed for easy assembly and disassembly... requires no special tools.

Duodecal Socket for a maximum of 12 equally spaced pins on a circle diameter of 1.063".

No. 59-402.....List \$1.56

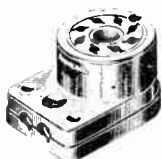
Diheptal Sockets for a maximum of 14 equally spaced pins on a circle diameter of 1.750".

No. 59-415 Small—for 2.050" D. Tube base.....List \$1.67

No. 59-417 Medium—for 2.250" D. Tube base.....List 1.67

Angle Octal Socket

For applications where the sockets are used with supported tubes such as Lighthouse tubes assembled in cavity resonators, Cathode-Ray, Klystron and Strahotron tubes. The protruding lead channel is designed to take the strain of the leads. Removable socket cap provides complete enclosure for all wiring connections. Provides a means of grouping leads within the socket housing and bringing them out radially in two neat, unit-cables.



No. 38 Black Bakelite.....List \$.78

Magic Eye Assembly



For easily adapting or replacing a 6 prong magic eye tube in any radio having automatic volume control. Also for FM receivers, test instruments, signal tracers, and as volume level and modulation indicators. Includes 1 megohm target plate resistor wired into socket and 5 wire, color coded cable 22" long. Mounting bracket is slotted for tube adjustment. Complete as illustrated, with escutcheon and hardware for assembly. Tube not included.

No. 58-MEA6 Complete Magic Eye Assembly.....List \$1.51

Octal Magic Eye Assembly



Similar to No. 58-MEA6 shown above, but for octal type magic eye tubes. New universal short bracket for the smaller tube sizes permits use of any of the octal magic eye tubes including the dual pattern and the new multi-pattern types. Complete with 8 wire, color coded cable.

22" long, full vision escutcheon and hardware for assembly. Tube not included.

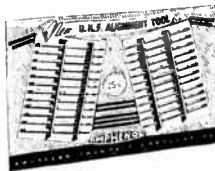
No. 58-MEA8 Complete Octal Magic Eye Assembly.....List \$1.51

Magic Eye Escutcheons

Hood type is of sturdy plastic with beautiful antique bronze finish. Full vision type for octal dual-pattern and new octal multi-pattern types is brass with antique bronze finish.



Number	Description	List
10-102	Hood Type. For 6 prong tubes.	\$.15
10-2	Full Vision Type. For octal tubes.	.36



Alignment Tool



Made of Amphenol 912-A polystyrene. Has no capacity effect when aligning critical circuits. A necessary tool for anyone who must make adjustments on high frequency circuits.

No. 55 U.H.F. Alignment Tool (minimum order 24).....List \$.25
Illustrated above is the colorful sales card on which are mounted 24 Amphenol Alignment Tools.

No. 55-024 Sales Card with 24 Alignment Tools.....List \$6.00

Amphenol 912-A Polystyrene Coil Forms and Stand-Off Insulators

Plug-In Coil Forms—A

Prong spacing fits standard tube sockets. Diameter of coil 1 1/4"; length of body 2 1/4"; Impregnate wound coils with Amphenol "912" Polyweld.

Number	Description	List
24-4P	4 Prong	\$.61
24-5P	5 Prong	.66
24-6P	6 Prong	.73

Miniature Plug-In Coil Forms—B

For transceivers, low power transmitters and UHF receivers. Use with 54-611 socket (page 4). 3/4" in diameter.

No. 24-611 6 Prong.....List \$.48

Miniature Coil Forms—C

Raised hole in center of base for self-tapping screw.

No. 24 3/4" OD, 1-9/16" long.....List \$.18

Universal Insulator—D

Overall height of insulator 3 1/4". With fittings, including screws and soldering lugs.

No. 66-60 Mtg. holes on 1 1/2" ctrs.....List \$1.21

Center Tube Only

Insulator Tube only can be fitted together and cemented with Amphenol 912-A Liquid as feed-thru for H.F. and H.V. lines and as forms for R.F., Ant. and I.F. coils. Overall length 2 1/4"; diam. 1/2" for 2" of length and 3/4" for the remaining 1/4".

No. 66-60T With 1/16" hole thru center.....List \$.50

Insulator Base

Versatile feed-thru bushing for H.F. or high voltage. Used with tubes 66-60T or E, including many types of insulators.

No. 66-60B Overall length 1 1/2".....List \$.30

Stub Insulator

Similar to 66-60, less center tube. For mounting coils, condensers and other parts carrying H.F. or H.V. currents.

Number	Overall Length	Insulator Length	List
66-61	1 7/8"	1"	\$.97

Stand-Off U.H.F. Insulators—E

For indoor or outdoor use. Nonhygroscopic. Wire held in place by screw or solder lug.

Number	Length	Diameter	List
66-1	1 3/8"	1/2"	\$.61
66-2	2 7/8"	1/2"	.73
66-3	2 7/8"	3/4"	1.32
66-4	4 7/8"	3/4"	1.63
66-5	6"	3/4"	1.80

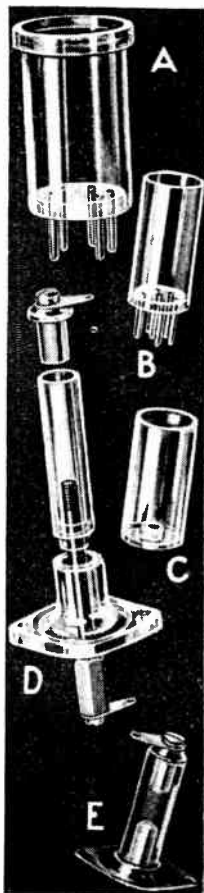
Polystyrene Beads

3/16"—For wires to No. 20 solid or 22 stranded.

5/16"—For wires to No. 12 solid or 14 stranded

1 1/32"—has 2-holes—For two wires to No. 18 solid.

Number	Overall Diameter	Hole Diameter	Length	Std. Package	List Std. Package
73-012	3/16"	.040"	3/8"	500	\$4.50
73-102	5/16"	.080"	1/2"	250	2.50
73-020	1 1/32"	.050"	1/2"	250	3.25





AMERICAN PHENOLIC CORPORATION

1830 SOUTH 54TH AVENUE, CHICAGO 50, ILLINOIS

Microphone Cables

Low Capacitance . . . Flexible Plastic Jackets

Amphenol Microphone Cables with polyethylene dielectric are of unusually low capacitance for their small diameter. Designed for use by P.A. system service men and for manufacturers of sound equipment and the complete range of similar applications.

Amphenol and any other standard microphone connectors may be used with them as shown below. The vinyl type jacket is suggested for heavy duty applications.



Amphenol Number	Jacket	Dielectric Diameter	Capacitance mmf. per ft.	Use Connectors	List per ft.
21-120	.242 D. Vinyl	.175	20	Series 80	\$.167
21-138	.195 D. Vinyl	.116	25	Series 75	.14
21-146	.135 D. Vinyl	.080	35	Series 75	.12
21-147	.195 D. Poly.	.116	25	Series 75	.15

Series 75 Microphone Connectors—Single Contact

Fit almost every microphone. Standard with leading manufacturers for many years. Compact, rugged, neat. Chassis receptacles are integral parts of microphones using single conductor cable. Widely used in amplifiers, transmitters, photoelectric devices, home recorders, and similar equipment. They are also suitable for connecting various units such as P.M. speakers, headphones, and for theft alarms or wall type coin-operated devices, etc.

In the 75 Series, plugs mate with all cable jacks and receptacles. The pressure contacts are spring actuated to assure positive electrical connection. Circuit closing contacts are the same except that they close the circuit when plug is disengaged, eliminating open circuit grid howls. Locknut Receptacles mount in .385" holes when grounding to chassis and 1/2" holes for ungrounded 2 circuit applications.

75-MC1FA		75-MC1F		75-SP-MC1M		75-PC1M		75-202 75-818	
Angle Plug		Straight Plug		Cable Jacks		Locknut Receptacles		Mounting Plate* Receptacles	
Contact	List	Contact	List	Contact	List	Contact	List	Contact	List
75-MC1F-A	Flush \$.66	75-MC1F	Flush \$.55	75-MC1M	Flush \$.44	75-PC1M	Flush \$.33	75-202	Pres. \$.45
				75-SP-MC1M	Pres. .55	75-SP-PC1M	Pres. .44	75-818	Cl. Cr. .45
						75-CL-PC1M	Cl. Cr. .44		

Pres. Pressure Contact. Cl. Cr. Closed Circuit. * Laminated linen base Bakelite.

Phone Plug Adapter

Screws into coupling ring of 75-MC1F and 75-MC1F-A plugs, permitting the cable to be plugged into any standard phone jack. No soldering or wiring.

75-MC1P.....List \$.49

Cap and Chain

Seals open chassis units against dirt and dust. Used with any threaded 1 or 2 conductor chassis unit.

75-CCC1.....List \$.55

Microphone Switch

Threaded on one end, coupling ring on the other end. For 75 Series Connectors. May be connected directly to any mike equipped with 75-PC1M or similar receptacle. Push-to-talk or slide button for permanent connection.

75-MC1S.....List \$1.10

Series 80 Microphone Connectors—Single and Double Contacts

Series 80 Cable Connectors are designed for shielded cables; for single and two conductor coaxial cables, microphone cables; for twisted pairs, concentric lines, photo cell leads, patch cords and similar uses. Suitable for connecting model railroad equipment, pin ball games and other small electrical apparatus. Elements are high dielectric black Bakelite.

Chassis connectors are of the same precision construction as cable connectors assuring positive connections. Free from noise, leaks or shorts.

Male chassis units have coupling rings. The chassis receptacles have coupling threads. All mount in 5/8" chassis holes. Maximum chassis thickness for locknut type receptacle and coupling ring chassis unit is 11/32".

Plugs, cable jacks and chassis receptacles are supplied with male or female contacts as listed below.

Mating families of connectors are listed in horizontal lines.

80-MC2M		80-MC2F		80-PC2F		80-CR		80-MSP	
Plugs		Cable Jacks		Locknut Receptacles		Flanged Receptacles		Coupling Ring Chassis Unit	
Contacts	List	Contacts	List	Contacts	List	Contacts	List	Contacts	List
80-M	M \$.71	80-F	F \$.71	80-C	F \$.44	80-CR	F \$.55	80-MSP	M \$.88
80-F1	F .71	80-M1	M .71	80-C1	M .44	.....	..	.....	..
SINGLE CONTACT									
80-MC2M	M .88	80-MC2F	F .88	80-PC2F	F .49	80-PC2-CR	F .60	80-SP-MC2M	M .99
80-MC2F1	F .88	80-MC2M1	M .88	80-PC2M	M .49	.....	..	.....	..
TWO CONTACTS									

M Male. F Female.

The most popular connectors are shown in bold face type.

Cap and Chain required is 75-CCC1.

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Series 91 Microphone Connectors—3 and 4 Contacts

Extensively used on all types of portable apparatus, these connectors were designed primarily to use with microphones. Some of the advantages of Amphenol Microphone Connectors . . .

- Accidental disconnections are eliminated by a positive screw-type connection.
- Incorrect insertions are impossible because connectors are polarized.
- Pulling and twisting strain on soldered contacts is eliminated because a squeeze-type clamp grips cable securely after assembly.

Series 91 male chassis units have coupling rings. Chassis and panel receptacles have coupling threads. All mount in 27/32" chassis tabs. Maximum chassis or panel thicknesses are as follows: chassis receptacle, 1/8"; panel receptacle, 5/8"; coupling ring chassis unit, 3/8".

Plugs, cable jacks and chassis receptacles are supplied with male or female contacts as listed below.

Mating families of connectors are listed in horizontal lines.

91-MC3M		91-MC3F		91-PC3F		91-SP-PC3F		91-SP-PC3M	
Plugs		Cable Jacks		Chassis Receptacles		Panel Receptacles		Coupling Ring Chassis Units	
Contacts	List	Contacts	List	Contacts	List	Contacts	List	Contacts	List
THREE CONTACTS									
91-MC3M M	\$1.10	91-MC3F F	\$1.10	91-PC3F F	\$.55	91-SP-PC3F F	\$1.10	91-SP-PC3M M	\$1.10
91-MC3F F	1.10	91-MC3M M	1.10	91-PC3M M	.55				
FOUR CONTACTS									
91-MC4M M	1.20	91-MC4F F	1.20	91-PC4F F	.60	91-SP-PC4F F	1.20	91-SP-PC4M M	1.20
91-MC4F F	1.20	91-MC4M M	1.20	91-PC4M M	.60				

M Male, F Female. The most popular connector is shown in 14 face type.

Side Cable Outlets

Provide an outlet for microphone cable where it is not practical to run the cable thru the stand. For use between microphones and stands having 5/8"-27 threads.

57-SC03 List \$.82

Cap and Chain

For 91 Series Connectors. Same construction and material as No. 75-CC1.

No. 91-CCC3 List \$.55

Stand Connectors

For attaching microphones to stands with provisions for quick disconnection. Threads on any microphone and having 5/8"-27 male threads. Mates with microphones equipped with No. 91-MC3M type connector. Finished in polished chrome plated machined brass.

91-SC3F 3 Contact, Female List \$1.10

91-SC4F 4 Contact, Female List 1.20

Twin-Lead Transmission Line

Convenient, efficient Amphenol Twin-Lead is the first choice of amateurs for construction of antennas and transmission lines. It transmits signals with minimum losses . . . it's durable . . . inexpensive . . . simple to install . . . repels water . . . is unaffected by acids, alkalis and oils because the dielectric is Amphenol Polyethylene. Remains flexible at -70°C. and after continuous aging in sunlight.

Full Thickness . . . Edge to Edge

The extruded polyethylene dielectric of Amphenol Twin-Lead is full thickness from one conductor to the other, minimizing impedance change caused by collecting of moisture on the surface of the dielectric between the conductors.

Receiving Twin-Lead

14-056 300 ohm, for most FM receivers \$48.50
 14-079 150 ohm, for experimental work 40.37
 14-080 75 ohm, for applications requiring lower impedance 33.45

Transmitting Twin-Lead

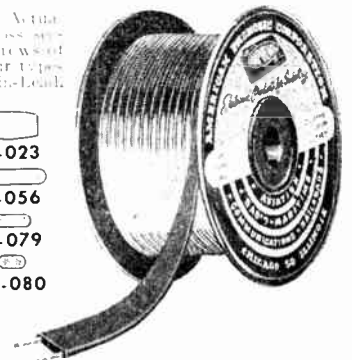
14-023 75 ohm, for amateur transmitting systems. Rated at 1000 watts for 30 mc. List per foot 12c

Below: Actual size cross-section views of the four types of Twin-Lead.

- 14-023
- 14-056
- 14-079
- 14-080



75 foot coil of 300 ohm Twin-Lead packaged in handy carton. No. 184-801, List \$3.80



Screw Eye Stand-Off Insulators

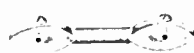


66-201 66-202

The low-loss polyethylene insert in Amphenol Screw Eye Insulator No. 66-202 fits the 3 types of Receiving Twin-Lead. No. 66-201 is designed to be used with coaxial cable and other types of leads with diameters not exceeding 1/2". The No. 14 wood screw is 3" long.

66-201 For Coaxial Cable, List each \$.15
 66-202 For Twin-Lead, List each .15

Polystyrene Line Spreaders



Used for separating feeder lines and for construction of folded dipole antennas from wire. Molded of low-loss, crystal-clear polystyrene, light-weight and easy to use. Set screws keep the spreaders firmly in place and the transmission line wires evenly spaced. Wire holes .085" D. Standard package 25.

66-205 Length 2" List each \$.15
 66-206 Length 4" List each .20
 66-207 Length 6" List each .25

Polystyrene Stand-Off Insulators

Molded of low-loss polystyrene for perfect insulation of Twin-Lead transmission lines. Offset mounting hole permits easy mounting to all surfaces. Long spring base for retainer arms insures permanent, strong grip on Twin-Lead. Spaces 1-5/16" from mounting surface. Standard package 100.

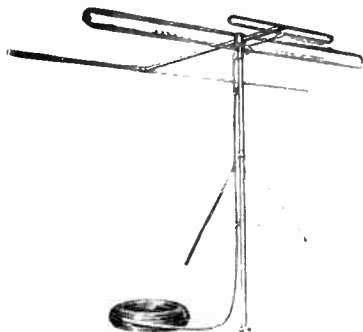
66-909 For 300 ohm Twin-Lead, List ea. \$.15





AMERICAN PHENOLIC CORPORATION

1830 SOUTH 54TH AVENUE, CHICAGO 50, ILLINOIS



Amphenol Television Antenna Array Brilliant Reception on All Channels in Both Bands

The added gain of the Amphenol Folded Dipole Television Antenna results in brighter pictures and its highly directional pattern eliminates "ghosts" caused by multipath pickup.

Two broadbanded folded dipoles and a low band reflector, with a common transmission line, provide reception over both television bands . . . 174-216 mc and 54-88 mc. The unique design of this new Amphenol antenna permits the large folded dipole (for the 54-88 mc band) to be used as a reflector for the small folded dipole which is tuned to the 174-216 mc band. Exhaustive tests show that gain is greater than for a cut dipole not only over the entire high frequency band but also over practically all the low frequency band. Thus the new antenna eliminates the need for individual antennas cut for each channel or band.

Genuine Amphenol Twin-Lead transmission line and rigid, low-loss stand-off insulators prevent loss of signal between antenna and receiver.

Antenna elements and supports are sturdy aluminum. The 5 foot mast is rust proof steel tubing. Easily assembled with ordinary tools. Swivel mounting plate and guy clamp permit installation on flat or slanted roofs.

No. 114-005 Packaged complete with 75 feet Amphenol Twin-Lead transmission line, and installation instructions. List \$27.50

Folded Dipole and Reflector FM Antenna

For Suburban Installations and General Long Distance Reception

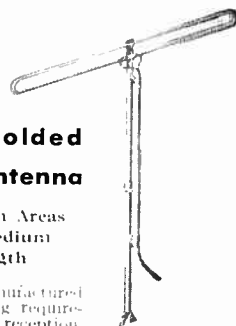
Specifically engineered for finest FM performance . . . to produce the best reception and optimum gain. Gives brilliant reception all across the FM band . . . not just the center. Impedance is efficiently matched with the genuine Amphenol Twin-Lead transmission line furnished.

Rigid low-loss stand-off insulators and genuine Amphenol Twin-Lead transmission line prevent loss of signal between antenna and receiver. Swivel bracket permits installation on flat or peaked roofs.

Mast and elements are high strength, tubular aluminum. Rugged construction makes this antenna practically weather-proof . . . withstands severe winds, ice, snow. Simple, lightweight, easy to install.

Packaged complete with 75 feet of Amphenol Twin-Lead transmission line and installation instructions.

No. 114-008 FM Folded Dipole and Reflector. List \$16.25



Amphenol Folded Dipole FM Antenna

For General Use in Areas of High and Medium Signal Strength

Engineered and manufactured to meet the exacting requirements of good FM reception, this antenna is broadbanded over the entire FM range (88 to 108mc). Impedance is efficiently matched with the genuine Amphenol 300 ohm Twin-Lead transmission line furnished.

Major electrical components . . . the Twin-Lead transmission line, the polystyrene stand-off insulators and the main dipole insulator . . . are all designed for minimum transmission loss. Streamlined, functional design, rugged construction and top quality materials assure maximum durability and weather resistance. Mast and elements are high strength, tubular aluminum. Lightweight, simple construction makes the Amphenol FM Antenna easy to install . . . a fast, one man job. A swivel bracket permits installation on flat or peaked roofs.

Supplied in a sturdy carton, complete with 75 feet of Amphenol 300 ohm Twin-Lead and installation instructions.

No. 114-001 FM Folded Dipole Antenna. List \$12.25

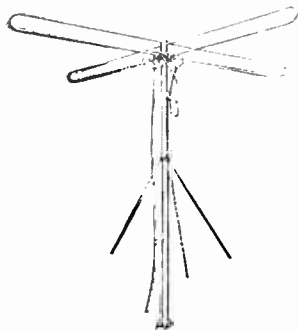
All-Direction Double Folded Dipole Antenna

Amphenol's double folded dipole antenna receives FM broadcasts from all directions. It does not require any rotation and will give even, crystal-clear reception all over the FM band . . . not just the center. Provided with a quarter-wave phasing stub, the two folded dipole elements are properly matched to give essentially a circular radiation pattern and gain equal to an efficient folded dipole.

Antenna is sturdy, lightweight aluminum, constructed to withstand the most severe wind and icing. Genuine Amphenol Twin-Lead transmission line and rigid, low-loss stand-off insulators at precise intervals prevent loss of signal between antenna elements and your receiver. Swivel mounting plate permits mounting on flat or sloping roofs.

Packaged complete with 75 feet of Amphenol Twin-Lead transmission line and installation instructions.

No. 114-010 All-Direction Double Folded Dipole FM Antenna. List \$16.25



Amphenol All-Wave Antenna Standard Broadcast, Short-Wave and FM

Amphenol All-Wave Antennas provide interference-free reception on FM, standard broadcast and short-wave bands. In actual comparative tests over a wide range of frequencies, the Amphenol All-Wave proved to be far superior in gain to the best double doubler.

The FM section of the antenna consists of a horizontally polarized dipole. A 65 foot length of Amphenol polyethylene covered copper wire comprises the antenna for standard broadcast and short-wave bands. A special filter automatically switches the energy from the proper antenna to the input of the receiver. Amphenol 52 ohm coaxial transmission line connects the antenna to the receiver reducing electrical interference to a minimum.

Packaged complete. Shipping weight, 9 lbs.

No. 124-001 All-Wave Antenna, 500 kc thru 108 mc List \$29.75



Reflector for Amphenol Folded Dipole FM Antenna

The Amphenol FM Reflector Kit is designed for installation on Folded Dipole FM Antenna No. 114-001 in low signal areas to improve distance coverage - provides additional gain over the entire 88-108 mc band. Easy to attach, it may be installed at the time the antenna is set up or later.

Packaged in a kit consisting of reflector element, tubular aluminum braces and installation hardware.

No. 114-003 Reflector Kit for use with FM Folded Dipole Antenna. List \$5.50

Side Mounting Bracket

When it is advantageous to mount an antenna on a chimney, side of building, etc., use this sturdy bracket. The antenna mast slides through the socket and is held securely at any point by 2 set screws in the bracket.

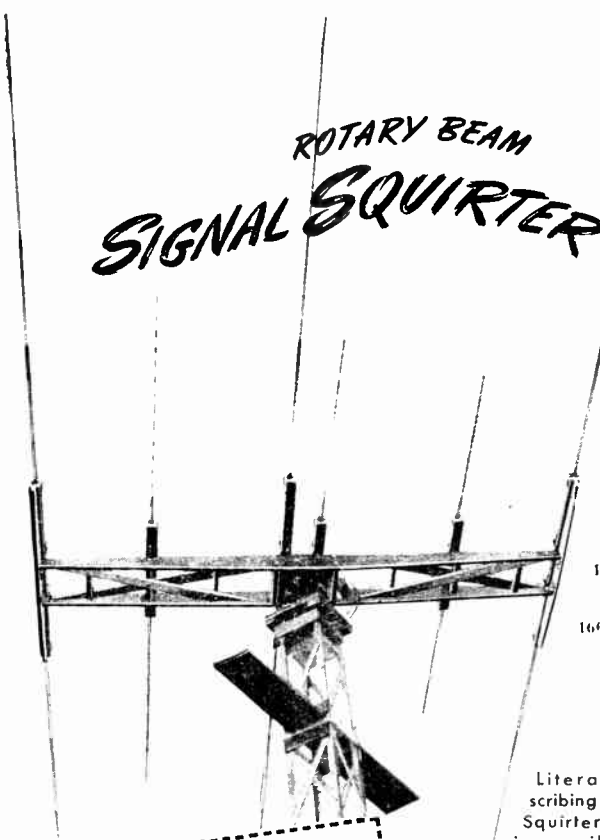
No. 107-110 Fits Amphenol antenna masts. List \$1.50



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**ROTARY BEAM
SIGNAL SQUIRTER**

10 and 20 Meter Band Antenna

Amateurs around the world have established records for DX communications with the Signal Squirter. Advanced engineering, simple construction, high efficiency and its durable, dependable rotator give full, uninterrupted performance.

The simple inductostub method of coupling the transmission line to the antenna insures excellent performance without the complicated adjustments usually required to reduce the transmission line standing wave.

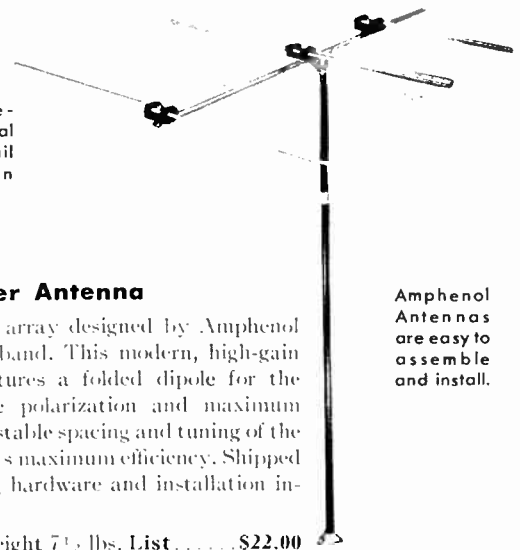
- Other important features are . . .
- Unlimited rotation
 - High forward directivity
 - Rigid, low-loss elements
 - Non-resonant transmission line
 - Positive position lock
 - High front-to-back ratio

Complete information on the Amphenol Rotary Beam Signal Squirter will be furnished on request.

Signal Squirter Kits include rotator with mounted inductostub assembly, direction indicator, center section, elements, insulators and installation hardware.

- Kits**
 140-005 Dual three 10 and 20 Meter Deluxe Kit Amateur Net Price \$458.00
- Rotator**
 160-003 Deluxe Rotator with Inductostub Rings for 10 and 20 Meters Amateur Net Price \$224.00
- Direction Indicator**
 160-947 For Rotators listed above Amateur Net Price \$28.00

Literature describing the Signal Squirter in detail is available on request.



Amphenol Antennas are easy to assemble and install.

2 Meter Antenna

Versatile, three-element array designed by Amphenol for use on the 2 meter band. This modern, high-gain directional antenna features a folded dipole for the driven element, 2-plane polarization and maximum front to back ratio. Adjustable spacing and tuning of the parasitic elements permits maximum efficiency. Shipped complete with mounting hardware and installation instructions.

No. 140-001 Shipping weight 7 1/2 lbs. List \$22.00

Features

Strong, Light Rotator weighs only 56 lbs. Unlimited rotation in either direction.

Direction Indicator synchronized with array, indicating direction of beam at all times.

Three Element Signal Squirter extremely effective in reception as well as transmission . . . better than 30 DB attenuation over more than 180° to the rear and approximately 40 DB front-to-back ratio.

Clear, Plastic Window Pane

This clear polystyrene window pane makes an easy job of bringing in leads . . . ends broken glass and drilling thru sash. It is easy to cut to size and drill . . . ordinary wood working tools will do the job. Polystyrene's dielectric properties make it ideal for the job.

Number	Sheet Size	List
19-093	3/32x12x16 in.	\$3.70

Silicone Compound

A thin coating of Amphenol Silicone Compound on radio transmission lines causes surface moisture to break up into isolated drops, preventing formation of a continuous film of moisture thereby eliminating changes of impedance and maintaining high surface resistivity. It is chemically inert; non-corrosive; effective up to 400° C.

No. 53-307 1 ounce tube. List \$2.00



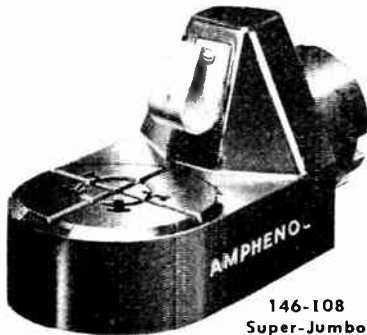
SERIES 146 AMPHENOL INDUSTRIAL TYPE TUBE SOCKETS

Designed for top performance and long tube life. First to comply with NEMA and Underwriters' specifications for industrial equipment.

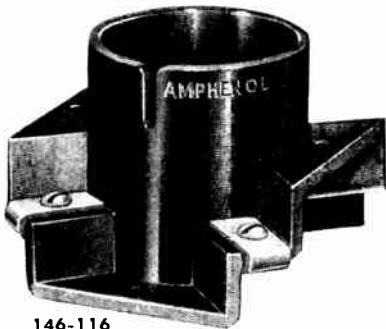
- The majority have screw type terminals to facilitate speedy servicing thereby reducing costly shut-downs. Sockets in older equipment more readily replaced.
- Cloverleaf contacts — an Amphenol exclusive — provide four full lines of contact with the tube pin to carry the required heavy current loads.
- Long insulating surfaces assure safety at high voltages.



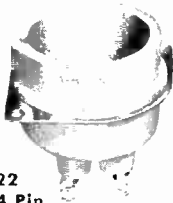
146-118 2 Pin Socket



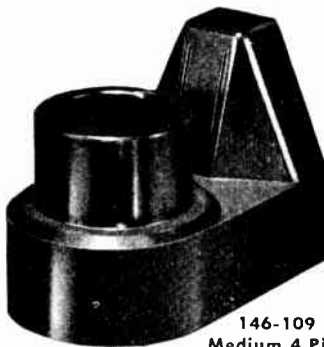
146-108
Super-Jumbo
4 Pin



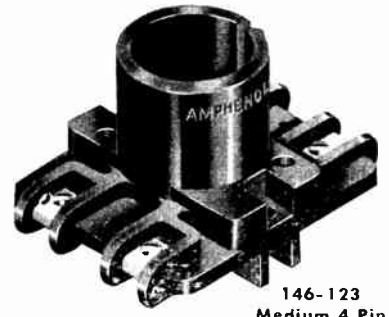
146-116
Super-Jumbo
4 Pin



146-122
Medium 4 Pin



146-109
Medium 4 Pin



146-123
Medium 4 Pin

Number	Description	List
146-118	2-PIN SOCKET for G.E. No. KC-4 and similar based tubes. Moulded of low-loss Bakelite with Underwriters' shield.	\$7.20
146-117	4-PIN SOCKET for G.E. No. FG-41 and similar based tubes. Design and construction similar to 146-118.	9.90
146-105	SUPER JUMBO 4-PIN ANGLE SOCKETS moulded of low-loss Bakelite. Back of panel terminal block provides long creepage. Bottom plate totally encloses wiring. Screw type terminals. For tubes having RMA bases A4-15, 16 or 18, maximum base diameter 2.219". With bottom plate, no terminal block.	4.95
146-106	Same as 146-105 less bottom plate, no terminal block.	4.65
146-107	Same as 146-105 with bottom plate and terminal block.	8.65
146-108	Same as 146-105 less bottom plate, with terminal block.	8.30
146-116	SUPER JUMBO 4-PIN SOCKET for top or bottom horizontal mounting. Moulded of low-loss Bakelite, staggered creepage pattern to prevent arc-over to chassis.	4.05
146-115	JUMBO 4-PIN SOCKET , similar to 146-116. For RMA A4-29, 28 and similar based tubes. Safety shield is 1-7/8" I.D., depth 1-3/8".	3.95
146-109	MEDIUM 4-PIN ANGLE SOCKETS moulded of low-loss Bakelite. Screw type terminals. For RMA A4-10 and similar based tubes. Safety shields are 1.377" I.D., depth 1-1/8". With safety shield for tubes with or without bayonet.	3.90
146-110	Same as 146-109 less safety shield.	3.90
146-122	MEDIUM 4-PIN HIGH VOLTAGE SOCKET WITH SAFETY SHIELD for high temperature applications. Mounting plate is solder-tused to steatite body. Mounting holes .156" D. on 2.428" centers.	2.30
146-123	MEDIUM 4-PIN HEAVY DUTY SOCKET WITH SAFETY SHIELD for horizontal rack mounting. Moulded of low-loss Bakelite.	2.25
146-124	Same as 146-123 without safety shield.	1.75
146-111	7-PIN MINIATURE BUTTON SOCKET for tubes such as 3Q4, 3S4 etc. Moulded of arc-resisting melamine, designed for top or bottom mounting. Has provisions for attaching tube shield base.	2.39
146-103	OCTAL INDUSTRIAL SOCKET accommodates all tubes passing RMA Gage No. GB8-1. Moulded of arc-resisting melamine for mounting above and below chassis.	1.58
146-104	Same as 146-103 with 4 moulded-in, threaded inserts for tie points.	2.16
146-101	OCTAL HIGH VOLTAGE SOCKET with mounting plate moulded into melamine body. Mounting holes .136" D. on 2 1/32" centers. Safety shield 1.377" I.D., Depth 1 1/8". Solder terminals.	1.12
146-119	SPECIAL SOCKET FOR GL-592 TUBE , a high RF Triode for industry and amateurs. Steatite insulation. Free floating contact bushings, solder type terminals.	2.10
146-121	SOCKET FOR CARTRIDGE TYPE PHOTOTUBE , 921, 922, or similar tubes. Moulded of mica-filled Bakelite. Angle bracket furnished for mounting in any of ten positions. Solder type terminals.	1.35

* Illustrated



SERIES 146 (Continued)

COMBINATION TUBE MOUNT AND STAND-OFF INSULATOR used as a tube mount for 6G-172 Thyratron and similar tubes, also as a stand-off insulator. Available with feed-thru panel bushing for above applications when thru mounting panel wiring is required.

Number	Description	List
146-120*	With bushing, 1/4" terminal screw	1.90
146-125	With bushing, 3/16" terminal screw	1.90
146-126	Without bushing, 1/4" terminal screw	1.52
146-127	Without bushing, 3/16" terminal screw	1.52

ANODE CAPS

Enclosed to prevent accidental touching of anode. Designed to prevent loosening usually caused by vibration. Cloverleaf contact assures full conductivity.

Number	Description	List
63-201	Anode cap for .800" D. anode	\$1.50
63-202*	Anode cap for .360" D. anode	.68

PREFOCUSED LAMP RECEPTACLES

For movie projectors, floodlights, beacons, searchlights using medium base prefocused lamps. Conservatively rated at 1000 watts 110-250 v. Listed by Underwriters' Laboratories. Heavy brass contacts assure minimum resistance for maximum light intensity. Can be installed in most movie projectors without drilling new holes. Heavy fiber insulator to cover terminals after wiring is included with receptacle. It is not needed when insulating cap is used on applications where socket is suspended.

Number	Description	List
98-8*	Bakelite receptacle only	\$1.93
98-9	Bakelite cap only	.55
98-1	Steatite receptacle for high temperature applications	1.93
98-2	Steatite cap only	.55

SERIES 148 AMPHENOL TRANSMITTING TYPE TUBE SOCKETS

Specially designed to bring out the best in tubes developed for transmitting and similar electronic circuits.

- Silicone moisture-proofed steatite body provided with tube cooling air vents assures maximum tube performance.
- Amphenol cloverleaf contacts—four full lines of contact with tube pin—for maximum conductivity.
- Barriers increase surface resistivity to prevent arcing at peak voltages.

Number	Description	Mounting Holes	Centers	List
148-101	Small & Medium 4-Pin Socket	.156" Slotted	1 1/16" to 1 1/8"	\$1.65
148-102	Small & Medium 4-Pin Socket	.156" D.	1 1/16"	1.65
148-103	Small & Medium 4-Pin Socket	.156" D.	2 1/16"	1.65
148-104	Jumbo 4-Pin Socket Bayonet	.156" D.	2 1/16"	1.70
148-105	Small 5-Pin Socket	.156" Slotted	1 1/16" to 1 1/8"	1.65
148-106	Giant 5-Pin Socket Bayonet	.156" D.	3 1/8"	1.70
148-107	Small 6-Pin Socket	.156" Slotted	1 1/16" to 1 1/8"	1.70
148-108	Small 7-Pin Socket	.156" Slotted	1 1/16" to 1 1/8"	1.65
148-109	Medium 7-Pin Socket	.156" Slotted	1 1/16" to 1 1/8"	1.75
148-110	Giant 7-Pin Socket Bayonet	.156" D.	2 1/8"	2.05
148-111*	Octal Socket	.156" Slotted	1 1/16" to 1 1/8"	1.60

TUBE BASE for #827 and #832 tubes. Each contact has individual full-floating steatite bushing. Has alternate sets of mounting holes.

148-112*	With 5 Condensers.	11/64" D.	2 1/16" & 1 7/8"	9.23
148-113	Without Condensers.	11/64" D.	2 1/16" & 1 7/8"	3.23

* Illustrated

98-8
Prefocused
Lamp Receptacle

148-111
Octal

148-112
with Condensers

146-119 for
GL-592 Tube

63-202
Anode Cap

146-103
Industrial Octal

146-101
High Voltage
Octal

146-120 Combination
Tube Mount and Stand-Off

146-111
Miniature
Button 7 Pin

63-202
Anode Cap

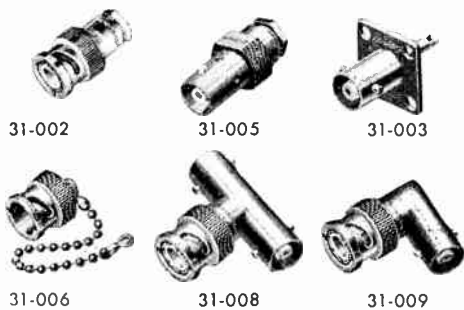


AMERICAN PHENOLIC CORPORATION

1830 SOUTH 54TH AVENUE, CHICAGO 50, ILLINOIS

RF CONNECTORS

TYPE BNC



TYPE N



TYPE HN



LARGE TYPE



TYPE BNC—Single Contact—Low Voltage

Small, for 50 ohm RF cables RG-58 and 58-U. Weatherproof.

Amphenol Number	Army-Navy No.	Description	List Price
31-002	UG-88/U	Plug	\$4.45
31-005	UG-89/U	Jack	3.68
31-001	UG-90/U	Jack, With mounting plate	4.39
31-003	UG-90/U	Receptacle	3.67
31-006	UG-123/U	Cap and Chain	2.15
31-008	UG-74/U	T Connector	9.24
31-009	UG-306/U	Angle Adapter	7.34

TYPE N—Single Contact—Low Voltage

Constant impedance for 50 ohm RG-8, 9 and 10/U cables. Weatherproof.

Amphenol No.	Army-Navy No.	Description	List Price
82-61	UG-21B/U	Plug	\$5.11
82-24	UG-58/U	Receptacle	2.92
82-41	UG-106/U	Panel Jack	2.23
82-62	UG-23B/U	Panel Jack For N and UHF Receptacles	4.16
82-63	UG-24B/U	Panel Jack	4.19
82-67*	UG-160/U	Same as 82-62 without mounting plate	5.34
82-66	UG-30/U	Jack, For single hole mounting	3.91
82-65	UG-29A/U	Feed-thru Connector, Pressurized	4.40
82-64	UG-27A/U	Function Junction	9.27
82-48	UG-107/U	Angle Adapter	11.14
82-36	UG-107/U	T Connector	9.27
82-48	MN-564/U	Armor Clamp	1.97

TYPE HN—Single Contact—High Voltage

Constant impedance for 50 ohm RG-8, 9 and 10 cables. Weatherproof.

Amphenol No.	Army-Navy No.	Description	List Price
82-38*	UG-59/U	Plug	\$5.18
82-39*	UG-60/U	Jack	4.44
82-40	UG-61/U	Jack, With mounting plate	4.56
103-301	MN-103/U	Tapering Tool	16.50
82-48	MN-564/U	Armor Clamp	1.97

LARGE TYPE—Single Contact—High Voltage

Constant impedance for 50 ohm RG-17 and 18/U cables. Weatherproof.

Amphenol No.	Army-Navy No.	Description	List Price
82-59	UG-154/U	Plug	\$20.82
82-80	UG-352/U	Receptacle	19.89

ADAPTERS

To connect medium size RF cable such as RG-8, 9 or 10/U with large flexible coaxial cable such as RG-17 or 18/U. Mate with plug 82-38. Weatherproof.

Amphenol No.	Army-Navy No.	Description	List Price
82-56	UG-333/U	Adapter, Without mounting plate	\$11.14
82-57	UG-334/U	Adapter, With mounting plate	12.30

To connect solid dielectric flexible coax with bead supported rigid lines.

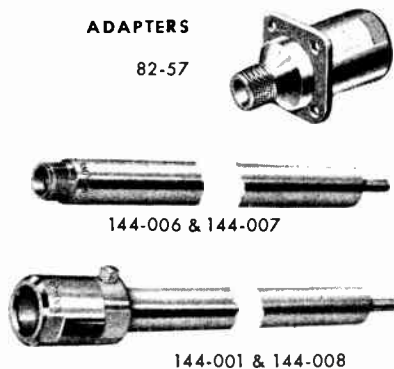
Amphenol No.	RG/U	For Rigid Line	Size	Mate With Plug	List Price
144-001	17, 18	70 ohms	7/8 in.	82-38	\$14.26
144-006	8, 9, 10	70 ohms	7/8 in.	82-38	5.52
144-007	8, 9, 10	50 ohms	7/8 in.	82-38	5.86
144-008	19, 20	50 ohms	1 3/8 in.	82-38	30.08

WEATHERPROOF END SEALS AND CABLE TERMINATIONS

Amphenol No.	Description	List Price
152-101	Cable Termination, For RG-17 and 18/U and 21-125	\$10.04
152-102	Same as 152-101 except for RG-74/U cable	9.48
152-103	Same as 152-101 except for RG 8, 9, 10, 11, 12 and 13	5.00
152-201	End Seal, For RG-8 and 11/U cables	1.19
152-202	Same as 152-204 except for RG-17/U and 21-125 cables, Open circuit	7.30
152-203	Same as 152-205 except for RG-17/U and 21-125 cables, Shorted circuit	7.38
152-204	End Seal, For RG-18/U armored cable, Open circuit	9.60
152-205	Same as 152-204 with shorted circuit	9.63

* When armored cable is used, substitute No. 82-48 Armor Clamp for the rear clamping unit.

ADAPTERS



END SEALS



COAXIAL CABLES AND CONNECTORS • INDUSTRIAL CONNECTORS, FITTINGS AND CONDUIT • ANTENNAS • RADIO COMPONENTS • PLASTICS FOR ELECTRONICS





UHF 83 SERIES CONNECTORS
UHF—Small—Coaxial

Non-constant impedance. For small and medium size RF cables RG-8 to 13 and 29, 55, 58, 59, 62 and 71/U unless otherwise specified.

Amphenol No.	Army or AN No.	Description	List
83-1SP	PL-259	Plug. (also see reducing adapters below)	\$1.40
83-168	UG-176/U	Reducing Adapter. For RG-59, 62 and 71/U. Use with 83-1SP or 83-1SPN	.36
83-185	UG-175/U	Reducing Adapter. For RG-29, 55 and 58/U. Use with 83-1SP or 83-1SPN	.36
83-1SPN	PL-259A	Plug. (also see reducing adapters above)	2.04
83-776	UG-203/U	Plug. For RG-29, 55, 58, 59, 62/U	2.24
83-1R	SO-239	Receptacle. Mica filled insert	2.06
83-1RTY	.....	Receptacle. Polystyrene with mica wafer on solder end	1.61
83-716	.....	Pressurized Chassis or Box Type Receptacle	4.04
83-1H	UG-106/U	Receptacle Hood. For RG-8 to 13/U	.23
83-1HP	.....	Receptacle Hood. For RG-8 to 13/U	.55
83-765	UG-177/U	Receptacle Hood. For RG-29, 55 or 58/U	.62
83-1AC	.....	Cap and Chain for Receptacle	1.84
83-1BC	.....	Cap and Chain for Plug	1.06
83-1T	M-358	T Connector	3.06
83-1AP	M-359	Angle Plug Adapter	2.49
83-1J	PL-258	Junction	1.94
83-1F	PL-274	Feed-thru Pressurized	2.94

UHF—Small—Twin Contact—Low Voltage

Non-constant impedance. For RG-22/U and RG-22A/U cable.

Amphenol No.	Army or AN No.	Description	List
83-22SP	UG-102/U	Straight Plug	\$1.91
83-22R	UG-103/U	Chassis or Box Type Receptacle	1.40
83-1H	UG-106/U	Receptacle Hood	.23
83-1AC	.....	Cap and Chain for Receptacle	1.84
83-1BC	.....	Cap and Chain for Plug	1.06
83-22AP	UG-104/U	Angle Plug Adapter	2.84
83-22J	UG-105/U	Junction	3.16
83-22F	PL-275	Pressurized Feed-thru	2.04
83-22T	UG-196/U	T Connector	3.31

UHF—Large—Coaxial—Low Voltage

Non-constant impedance. For RG-34 and 14/U Cables.

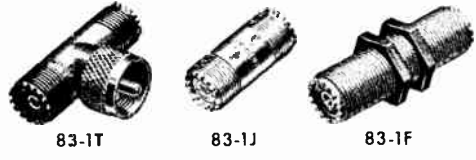
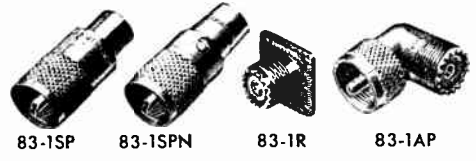
Amphenol No.	Army or AN No.	Description	List
83-21SP	Plug. For RG-34/U cable	\$4.16
83-787	Plug. For RG-14/U Cable	3.43
83-21R	Chassis or Box Type Receptacle	1.76
83-21H	M-365	Receptacle Hood	.49
83-2AC	Cap and Chain	1.22
83-21AP	Angle Plug Adapter	3.04
83-21J	Junction	2.64

UHF—Large—Twin Contact—Low Voltage

Non-constant impedance. Use with RG-57/U cable.

Amphenol No.	Army or AN No.	Description	List
83-2SP	PL-295	Plug	\$3.88
83-2R	SO-265	Chassis or Box Type Receptacle	2.97
83-21H	M-365	Receptacle Hood. Use with 83-2R and 83-21R	.49
83-2AC	.....	Cap and Chain	1.22
83-2AP	PL-325	Angle Plug Adapter. Use with plug 83-2SP	4.16
83-2J	PL-305	Junction	2.94

TYPE 83
UHF—SMALL—COAXIAL

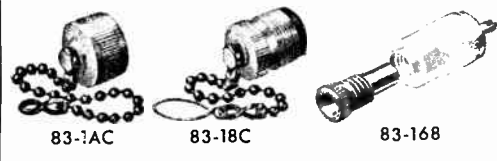


HOODS FOR SMALL CONNECTORS

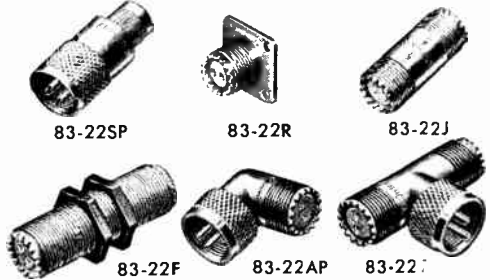


CAPS AND CHAINS

ADAPTER



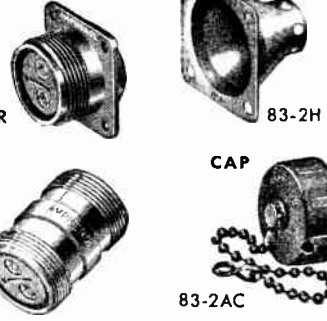
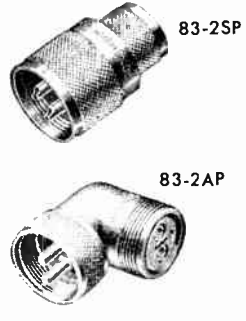
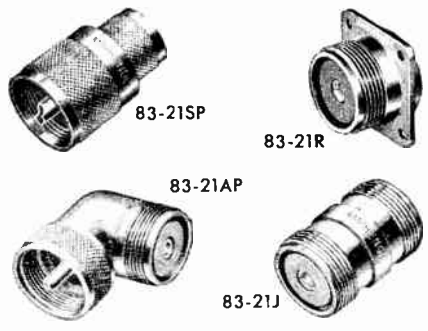
UHF—SMALL—TWIN CONTACT



UHF—LARGE—COAXIAL

UHF—LARGE—TWIN CONTACT

HOOD





AMPHENOL CORPORATION

1830 SOUTH 34TH AVENUE, CHICAGO 50, ILLINOIS

Amphenol Coax and Twinax RG Cables



RG-5/U
21-001

50 ohm Coax Cable with medium size, solid copper conductor, double copper shield and black vinyl jacket.



RG-8/U
21-004

50 ohm Coax Cable with medium size, stranded copper conductor, single copper shield and black vinyl jacket.



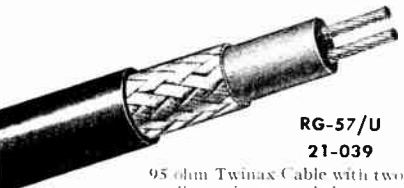
RG-11/U
21-007

70 ohm Coax Cable with medium size, stranded tinned-copper conductor, single copper shield and black vinyl jacket.



RG-22/U
21-038

95 ohm Twinax Cable with two small size, stranded copper conductors, single tinned-copper shield and black vinyl jacket.



RG-57/U
21-039

95 ohm Twinax Cable with two medium size stranded copper conductors, single tinned-copper shield and black vinyl jacket.



RG-58/U
21-024

50 ohm general purpose Coax Cable with a small size, solid copper conductor, single tinned-copper shield and black vinyl jacket.

Fully approved and produced in accordance with Army-Navy specifications (JAN-C-17A). These specifications utilize the very fine dielectric properties of polyethylene, proven most efficient as a low-loss, flexible, mechanically stable dielectric. The outer jacket in most of Amphenol's approved types is tough, resistant vinyl . . . protective, nonhygroscopic, and impervious to exposure to acids, alkalis, oils and gasoline. Polyethylene is also used as outer jacket for some of the types listed.

Polyethylene is processed in strict accordance with Bureau of Ships Specification RE-9172. It should be emphasized that unusually strict standards are applied to every operation in the processing of Amphenol's RG cables. Rigid laboratory tests and process checks, plus Amphenol's "OK" certification and notarized affidavit on every unit shipment is final assurance of extra quality and dependability.

Polyethylene Characteristics

Specific Gravity	0.92
Water Absorption	.005% C
Cold-Brittleness	-70° C.
Dielectric Constant, 60 cycles to 100 mc	2.29
Power Factor, 60 cycles to 100 mc	.0004
Volume Resistivity, ohm-cm	10 ¹⁴
Softening Temperature, transparency point	103-105° C.

RG Cables

Chart shows characteristics and dimensions of RG Cables manufactured by Amphenol. Further specifications and prices on request. Impedance subheads below are approximate . . . for the purpose of grouping. Nominal impedance is shown in the third column.

Abbreviations used in chart: C—Copper
CW—Copperweld
S—Nichrome
Poly.—Polyethylene
S—Silvered Copper
T—Tinned Copper

Amphenol No.	Army-Navy No.	Nominal Impedance	Nominal mmf ft.	Conductor Wire Size	Dielectric O.D.	Inner Shield	Outer Shield	Vinyl Jacket	Jacket O.D.	List Price Foot
50 Ohm Group										
21-018	RG-29/U†	53.5	28.5	20	.116	T		Poly.	.184	.17
21-024	RG-58/U†	53.5	28.5	20	.116	T		Black	.195	.1309
21-199	RG-58A/U†	52	28.5	19-.0073	.116	T		Black	.195	.14
21-023	RG-55/U	53.5	28.5	20	.116	T	T	Poly.	.206	.33
21-001	RG-5/U†	52.5	28.5	16	.185	C	C	Black	.332	.33
21-017	RG-21/U†	53	29	16X	.185	S	S	Grey	.332	.47
21-004	RG-8/U†	52	29.5	7-21	.285	C		Black	.405	.2907
21-006†	RG-10/U†	52	29.5	7-21	.285	C		Grey	.405	.52
21-005	RG-9/U†	51	30	7-21 S.	.280	S	C	Grey	.420	.61
21-179	RG-9A/U†	51	30	7-21 S.	.280	S	S	Grey	.420	.61
21-010	RG-14/U†	52	29.5	10	.370	C		Grey	.545	.607
21-041†	RG-74/U†	52	29.5	10	.370	C		Grey	.545	.85
21-013	RG-17/U†	52	29	.188	.680	C		Grey	.870	1.48
21-014†	RG-18/U†	52	29	.188	.680	C		Grey	.870	1.80
21-015	RG-19/U†	52	29.5	.250	.910	C		Grey	1.120	2.78
21-016†	RG-20/U†	52	29.5	.250	.910	C		Grey	1.120	3.15
60 Ohm Group										
21-022	RG-54A/U	58	26.5	7-.0152	.178	T		Poly.	.250	.21
70 Ohm Group										
21-025	RG-59/U†	73	21	22 CW	.146	C		Black	.242	.1722
21-002	RG-6/U†	76	20	21 CW	.185	S	C	Grey	.332	.419
21-021	RG-42/U†	78	20	21 N	.196	S	S	Grey	.342	.463
21-007	RG-11/U†	75	20.5	7-26 T	.285	C		Black	.405	.2529
21-008†	RG-12/U†	75	20.5	7-26 T	.285	C		Grey	.405	.52
21-009	RG-13/U†	74	20.5	7-26 T	.280	C		Black	.420	.52
21-011	RG-15/U†	76	20	15 CW	.370	C	C	Black	.545	.64
21-019	RG-34/U	71	21.5	7-21	.455	C		Black	.625	.644
21-020†	RG-35/U	71	21.5	9	.680	C		Grey	.870	1.78
21-125**	.....	72	21.5	9	.680	C		Grey	.870	1.33
90 Ohm Group										
21-029*	RG-71/U†	93	13.5	22 CW	.146*	T	T	Poly.	.250	.37
21-026*	RG-62/U†	93	13.5	22 CW	.146*	C		Black	.242	.1694
21-003*	RG-7/U†	97.5	12.5	19	.250*	C		Black	.370	.37
21-038	RG-22/U†	95	16	Two 7-.0152	.285	T		Black	.405	.3256
21-148	RG-22A/U	95	16	Two 7-.0152	.285	T	T	Grey	.420	.37
21-039	RG-57/U	95	17	Two 7-21	.472	T		Black	.625	.726

* Semi-solid Dielectric

** RG-35/U less armor

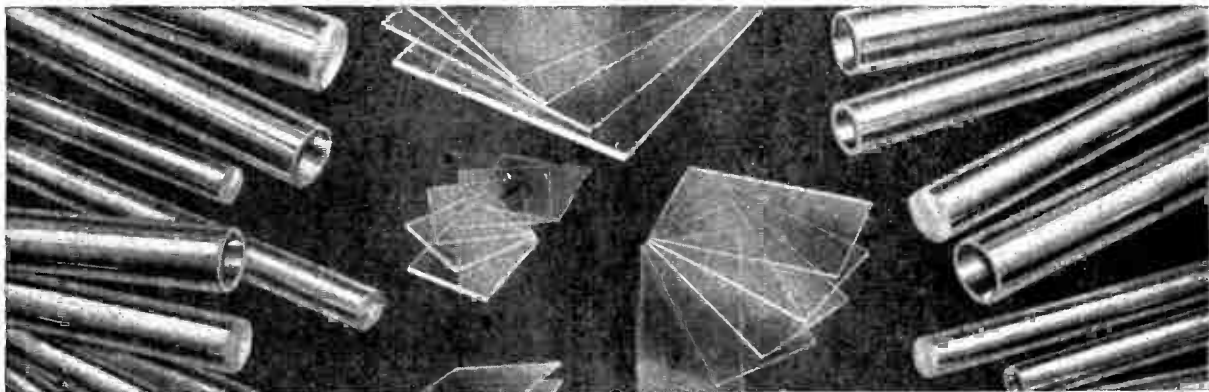
† Armored Cable

COAXIAL CABLES AND CONNECTORS • INDUSTRIAL CONNECTORS, FITTINGS AND CONDUIT • ANTENNAS • RADIO COMPONENTS • PLASTICS FOR ELECTRONICS

AMPHENOL



Polystyrene, Acrylic and Transparent Vinyls



BECAUSE of its low-loss factor, Amphenol POLYSTYRENE is used extensively for sockets, insulators and dielectrics in the very-high, ultra high and super high frequency fields. Further, it is colorless and transparent and does not deteriorate with age. Continuous exposure to sunlight affects its clarity only slightly.

The outstanding colorless transparency of Amphenol ACRYLIC makes it ideal for dial and meter faces and as an electrical insulating material where radio frequencies are not involved. The surface will not burn or carbonize when subjected to an electrical flash over its surface.

"90" Series Transparent Vinyl Flexible Tubing—"Spaghetti"

Small sizes of Amphenol clear vinyl Flexible Synthetic Tubing may be used as "spaghetti". The larger sizes provide the newest type all-purpose conduit. Resists tearing and abrasion; but may be cut. Very flexible and when stretched or flexed, readily returns to original form. Superior dielectric strength; resists heat, concentrated acids and alkalis.

Number	ASTM Size	Nom-inal ID	Wall Thick-ness	List Per 1000 Ft.
90-034	20	.034"	.016"	\$10.19
90-038	19	.038"	.016"	10.56
90-042	18	.042"	.016"	10.74
90-047	17	.047"	.016"	11.11
90-053	16	.053"	.016"	11.67
90-059	15	.059"	.016	11.85
90-066	14	.066"	.016"	12.22
90-076	13	.076"	.016"	12.78
90-085	12	.085"	.016"	13.70
90-095	11	.095"	.016"	14.81
90-106	10	.106"	.016"	16.30
90-118	9	.118"	.016"	17.96
90-133	8	.133"	.016"	21.30
90-148	7	.148"	.016"	25.93
90-166	6	.166"	.016"	34.44
90-2	1/8	1/8"	.030"	40.93
90-3	3/16	3/16"	.040"	64.80

"912-A" Polystyrene Sheet Stock

Optical clarity suitable for dial window and gage glass applications.

Number	Size	List per Sheet
19-0628	4"x8"x1/16"	\$.28
19-0938	4"x8"x3/32"	.34
19-1258	4"x8"x1/8"	.40
19-1878	4"x8"x3/16"	.50
19-2508	4"x8"x1/4"	.67
19-093	12"x16"x3/32"	3.70
19-125	12"x16"x1/8"	4.63
19-187	12"x16"x3/16"	6.85
19-250	12"x16"x1/4"	9.26

"912-A" Polystyrene Rods

Supplied in 12" and 48" lengths as shown below. Also available in diameters from 1 1/8" to 4 1/2" in 12" lengths or in lengths up to 48".

Number	List 12" Diam-eter	Number	List 48" Lgth.
19R125	\$.04 1/8"	19R125-48	\$.15
19R187	.08 3/16"	19R187-48	.31
19R250	.13 1/4"	19R250-48	.51
19R312	.20 5/16"	19R312-48	.77
19R375	.29 3/8"	19R375-48	1.11
19R500	.52 1/2"	19R500-48	2.00
19R625	.81 5/8"	19R625-48	3.12
19R750	1.15 3/4"	19R750-48	4.49
19R875	1.59 7/8"	19R875-48	6.16
19R1000	2.15 1"	19R1000-48	8.29

"912-A" Polystyrene Tubes

Tolerances maintained suitable for radio coil form and electronic applications . . . supplied in 12" and 48" lengths in various diameters as shown. Wall thickness is 1/16".

Number	List 12" Overall Lgth.	Number	List 48" Lgth.
19T1-062	\$.08 3/16"	19T1-062-48	\$.32
19T2-062	.12 1/4"	19T2-062-48	.48
19T3-062	.16 5/16"	19T3-062-48	.64
19T4-062	.18 3/8"	19T4-062-48	.72
19T5-062	.23 1/2"	19T5-062-48	.92
19T6-062	.32 5/8"	19T6-062-48	1.28
19T7-062	.38 3/4"	19T7-062-48	1.52
19T8-062	.52 1"	19T8-062-48	2.08

"912-B" Acrylic Sheet Stock

Supplied in standard sheets, 12"x16", from 1/16" to 1/2" thickness. No additional charge is made for quarter or half sheets. Also available in sheets as large as 20"x50".

Number	Thickness	List per Sheet
65-062	1/16"	\$ 4.00
65-125	1/8"	8.00
65-187	3/16"	11.70
65-250	1/4"	13.70
65-375	3/8"	20.15
65-500	1/2"	26.74

"912-B" Acrylic Rods

In addition to sizes shown below these rods are available in diameters 1-1/8" to 2" in 12" and 48" lengths.

Number	List 12" Lgth.	Diam-eter	Number	List 48" Lgth.
65R250	\$.27	1/4"	65R250-48	\$.99
65R375	.45	3/8"	65R375-48	1.78
65R500	.75	1/2"	65R500-48	2.86
65R625	1.16	5/8"	65R625-48	4.41
65R750	1.60	3/4"	65R750-48	6.06
65R875	2.15	7/8"	65R875-48	8.33
65R1000	2.85	1"	65R1000-48	11.11

"912-B" Acrylic Tubing

Supplied as shown below. Wall thickness 1/8". Also available in 12" and 48" lengths in diameters from 2-1/4" to 3". Prices on request. No cutting charge for lengths exceeding 12".

Number	List 12" Overall Lgth.	Diameter	Number	List 48" Lgth.
65T1-125	\$2.40	1 1/2"	65T1-125-48	\$9.60
65T2-125	2.85	1 3/4"	65T2-125-48	11.40
65T3-125	3.20	2"	65T3-125-48	12.80
65T4-125	3.75	2 1/4"	65T4-125-48	15.00
65T5-125	4.30	2 1/2"	65T5-125-48	17.20
65T6-125	4.45	2 3/4"	65T6-125-48	17.80
65T7-125	4.95	2 7/8"	65T7-125-48	19.80
65T8-125	4.95	3"	65T8-125-48	19.22

"912-B" Acrylic Cut Strips

Recommended for making most types of low-loss insulators . . . trimmer bases, terminal strips, bushings, open wire transmission line spreaders, mountings for binding posts and pin jacks, coil supports, etc. Supplied in 12" lengths per number listing below.

Number	Width	Thickness	List per Strip
65TS1-500	1/2"	1/16"	\$.31
65TS1-1000	1"	1/16"	.52
65TS2-500	1/2"	1/8"	.37
65TS2-1000	1"	1/8"	.64
65TS3-500	1/2"	3/16"	.44
65TS3-1000	1"	3/16"	.78
65TS4-500	1/2"	1/4"	.52
65TS4-1000	1"	1/4"	.91
65TS5-500	1/2"	3/8"	.73
65TS6-1000	1"	3/8"	1.28
65TS8-500	1/2"	1/2"	.98
65TS8-1000	1"	1/2"	1.76



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KINGS

electronics



MICROPHONE PLUGS • JACKS • CONNECTORS

that will eliminate noise, shorts, and leakage in your Public Address systems.

M-140 Y connector — 2 male and 1 female—for use where more than one mike or speaker from single circuit. ***

M-151 Female connector Solid silver plated contact. Coupling can be removed completely for soldering.

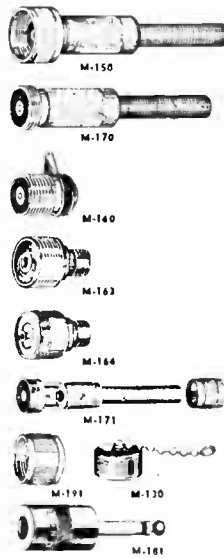
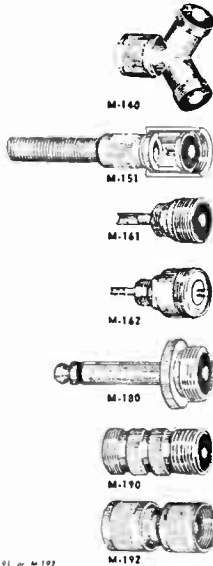
M-161 Chassis mounting, solid silver-plated contact. Milled flat, prevents turning in chassis.

M-162 Shorting male with solid silver-plated contact and milled flat to prevent turning in chassis. Circuit closes when female connector removed — eliminating open circuit grid howl.

M-180 Phone plug. Mates M-150 or M-151 for insertion in standard phone jack.

M-190 Solid silver plated contacts, double tone. Mates M-151 or M-150.

M-192 Double Female with twin coupling nuts. Ideal for stereo cable connections. Mates all male connectors.



M-150 Standard solder contact. Mates with models M-170, M-161, M-160.

M-170 Mates with Model M-151 and M-150. Standard solder contact.

M-160 Chassis mounting — standard solder contact.

M-163 Standard chassis mount, nickel-solder contact with milled flat preventing turning in chassis.

M-164 Standard shorting male with eyelet and milled flat to prevent turning in chassis. Circuit closes when female connector removed, eliminating open circuit grid howl.

M-171 Male connector solid silver-plated contact mates with M-151, M-192, M-191, M-150 and all standard female connectors.

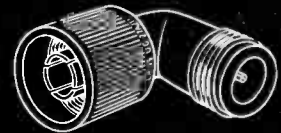
M-191 Double female coupling. Mates M-150, M-160, M-161.

M-130 Cap and chain assembly. Eliminates dust and noise by keeping open chassis units sealed.

M-181 Stubby Phone plug with nickel plated brass shell for shielding purposes. Especially suitable for Public Address Systems, Portable Radios, Telephone work, etc. Special size grip connecting lug.

***Buy combination cap by Model M-130 in conjunction with M-191 or M-192.

KINGS CO-AXIAL CABLE CONNECTORS



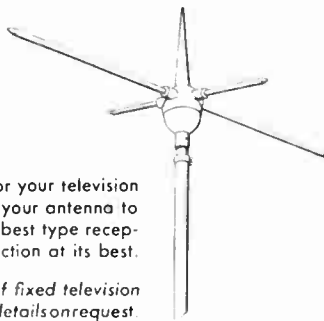
Kings is one of the largest manufacturers of co-axial connectors in the country. We carry most types in stock for immediate delivery, but we welcome your inquiries on any and all types.

A comprehensive chart listing our co-axial connectors is available on request. Write for your copy today.

KINGS REMOTE CONTROLLED TELEVISION ANTENNA

Now you can have pin-point selectivity for your television set. A flip of the switch at your set turns your antenna to the station you want. You're assured the best type reception to make your television receiver function at its best.

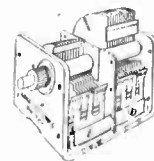
Kings manufactures three other models of fixed television and FM antennas. Catalogs and complete details on request.



KINGS VARIABLE CONDENSER

MODEL 200

452 M. M / F D CAPACITY



Kings engineering skill gives you this precision-made variable condenser. Prices and delivery available upon request. Write for details.

WHATEVER YOUR PROBLEM . . . bring it to KINGS. Our engineering department is always at your service with complete details and data. Please feel free to consult with us at any time.

KINGS ELECTRONICS • 372 CLASSON AVENUE • BROOKLYN 5, NEW YORK

manufacturers of

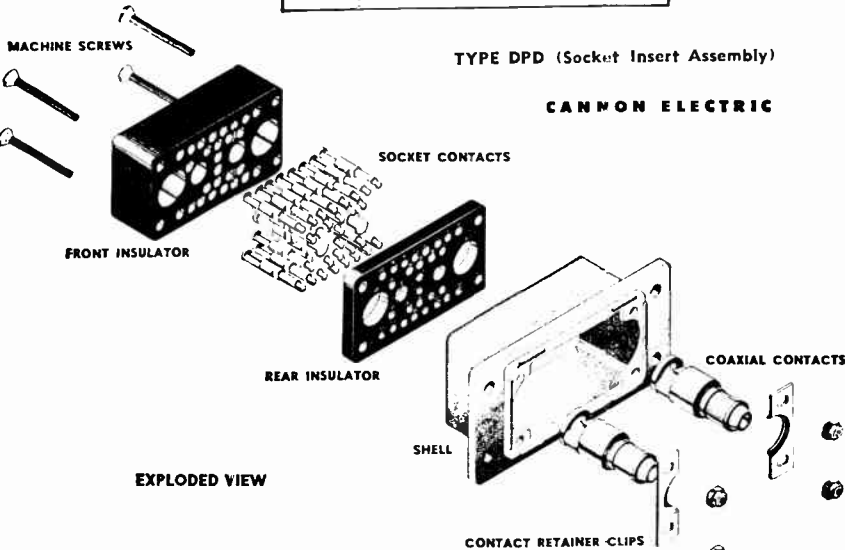
MICROPHONE PLUGS AND JACKS • CO-AXIAL CONNECTORS
TELEVISION ANTENNA • VARIABLE CONDENSERS • WAVE GUIDES • WAVE TRAPS
RADAR ASSEMBLIES AND SPECIAL EQUIPMENT

CANNON CONNECTORS

CANNON ELECTRIC DEVELOPMENT COMPANY • 3209 HUMBOLDT STREET, LOS ANGELES 31, CALIFORNIA



TYPE DP FITTINGS



TYPE DPD (Socket Insert Assembly)

CANNON ELECTRIC

In design, this series of connectors differs from the majority of Cannon Connectors. Type DP Fittings are rectangular in shape, and polarization is affected by the arrangement of the contacts within the connectors. A wide variety of contact arrangements is available with contacts ranging from 10-amp. to 40-amp. capacity and with low impedance Coaxial contacts of 10-amp. capacity providing for continuous shielding available in some types. Standard shells are aluminum finished in sand blast and clear lac-

quer; some types are available in zinc, sand blast and clear lacquer finished. Contacts are brass, silver-plated. Insulation is phenolic, with specially treated low moisture absorption ceramic insulation used in coaxial contacts. Leading uses of the Type DP connectors are in rack and panel instrument and radio equipment where weight and space saving are important factors. A BULLETIN ON DP CONNECTORS IS AVAILABLE ON REQUEST.

TYPE "DPD" RECEPTACLES (With Socket Insert)



Mounting flange is $3\frac{3}{8}$ " x $1\frac{1}{8}$ " and shell extends $\frac{1}{8}$ " from the mounting surface forward. Coaxial contacts extend

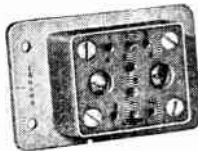
$\frac{1}{4}$ " to the rear from the mounting surface. Shells provide for mounting with four No. 6 oval head machine screws. Material is aluminum.

TYPE "DPD" PLUGS (With Pin Insert)

Mounting flange is $3\frac{3}{8}$ " x $1\frac{1}{8}$ " and shell extends $\frac{1}{8}$ " from the mounting surface forward and $\frac{1}{4}$ " from the mounting surface to the rear. The coaxial contacts extend $\frac{1}{4}$ " from the rear of the shell. Shells provide for mounting with four No. 6 oval head machine screws. Material is aluminum.

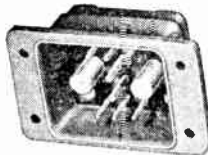


TYPE "DPB" RECEPTACLES (With Socket Insert)



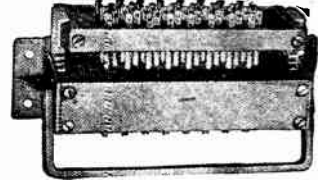
The DPB Receptacles are similar to the Type DP D differing only in the mounting flange which is reduced to $2\frac{1}{8}$ " x $1\frac{1}{8}$ " shell material, zinc or aluminum. Standard coaxials with ceramic insulation. Six insert arrangements available, one having twinax contacts and two having coaxial contacts.

TYPE "DPB" PLUGS (With Pin Insert)



The DPB Plugs are similar to the Type DPD, differing in the same respect as the DPB Receptacle differs from the DPD. They are mounted with four No. 6 Oval Head Machine Screws. Standard finish on all DPB shells is tinplate and clear lacquer. Other finishes by special order.

"DPR" Rack Type—Complete Unit



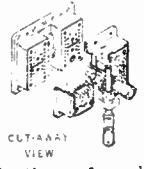
Four Insert Arrangements

Rack type fittings are used where large numbers of contacts must be repeatedly coupled and uncoupled, the coupling and uncoupling being performed by means of a geared movement operated by a bail type handle. The dimensions over all measure $5\frac{1}{2}$ " x 3 " x $2\frac{1}{2}$ " (including swing of bail). Has four holes for No. 8 Mounting Screws.

TYPE DPD-2

Special Instrument Panel Disconnect

The DPD2 has a two-gang shell holding 2 standard DPD inserts. Screw jack extraction means is available in straight or angle take-off. The purpose of the fitting is the standardization of such equipment so that it may be interchangeable between assemblies of various aircraft.



"DPB" and "DPD" JUNCTION SHELLS

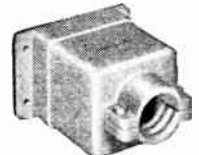
Type DPB-33

Used with DPB-33S shells, having socket insert assemblies. Made of diecast aluminum alloy with tin plate and clear lacquer finish.



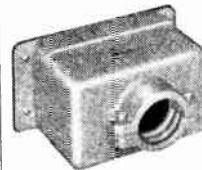
Type DPB-34

Used with DPB-34P shells, having pin insert assemblies. Same material and finish as above.



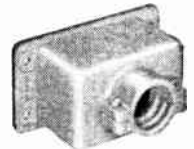
Type DPD-33

Used with DPD-33S shells, having socket insert assemblies. Made of diecast aluminum alloy with tin plate and clear lacquer finish.



Type DPD-34

Used with DPD-34P shells, having pin insert assemblies. Same material and finish as above.



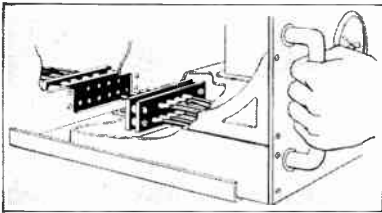
DPB with twinax contact on program monitor for radio.



LEN. LEVIN CO. PHOTO

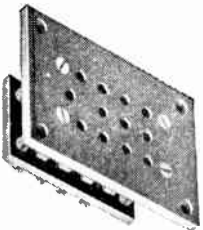
CANNON CONNECTORS

CANNON ELECTRIC DEVELOPMENT COMPANY • 3209 HUMBOLDT STREET, LOS ANGELES 31, CALIFORNIA



The cutaway view of Type DP plug and receptacle, both mounted, illustrates the method of application in rack equipment for radios and general instrument equipment. The use of this type of connector makes it possible to easily and quickly remove the rack portion without losing time in disconnecting all the wires. Although coaxials are not available in panel-type connectors now tested, the design is adaptable to their use.

TYPE "DP-12-33" RECEPTACLE



Socket Panel Assembly

Socket Panel Assembly is 2 1/4" x 2" x 3/8" with a solder pot extension of 1/8" from rear insulator mounted with 4 No. 4 Flat Head screws.

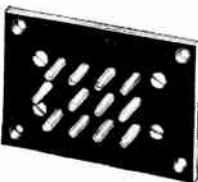
Contacts Capacity Wt. Lbs. Cat. No. List Pr.
12 30-amp. .135 387-1 2.68

TYPE "DP-12-34" PLUG

Pin Panel Assembly

2 7/8" x 2" x 1 1/8" overall, contacts extend 3/8" from insulation on engaging end and 3/8" on solder pot end. Has four mounting holes for No. 4 Flat Head Machine Screws.

Contacts Capacity Wt. Lbs. Cat. No. List Pr.
12 30-amp. .128 387-2 2.67



TYPE "DP-S10-33" RECEPTACLE (Socket Insert)



Socket Panel Assembly

Dimensions: Length 2 1/2"; width 7/8". Max. solder pot extension 1/8". 30-amp. contacts use No. 10 B & S stranded wire with 1/8" clearance. Insulation: phenolic. 4 mounting holes countersunk for No. 4 flat head machine screws.

Contacts Capacity Wt. Lbs. Cat. No. List Pr.
10 10-30-amp. .104 1596 2.72

TYPE "DP-S10-34" PLUG

Pin Panel Assembly

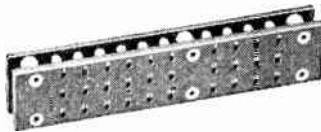


Dimensions: 2 1/8" x 7/8" x 3/8", with 3/16" max. pin extension and 3/16" max. solder pot extension. Insulation is phenolic. Four mounting holes countersunk for No. 4 flat head machine screws.

Contacts Capacity Wt. Lbs. Cat. No. List Pr.
10 10-30-amp. .065 1597 2.81

TYPE DP FITTINGS

TYPE "DP-30-57" RECEPTACLE (Socket Panel Assembly)



7 1/4" x 1 1/2" x 1 1/8" overall, solder pots extend approximately 3/8" from rear insulator. Fitting designed for mounting on panel with six No. 6 Flat Head Machine Screws.

Contacts Capacity Wt. Lbs. Cat. No. List Pr.
30 30-amp. .337 807 8.44

TYPE "DP-30-58" PLUG

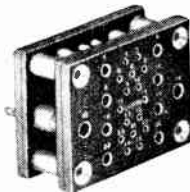


Pin Panel Assembly

7 1/4" x 1 1/2" x 1 1/8" overall, contacts extend 3/8" from insulation on engaging end and 3/8" on solder pot end. Has six mounting holes for No. 6 Flat Head Machine Screws.

Contacts Capacity Wt. Lbs. Cat. No. List Pr.
30 30-amp. .225 808 5.34

TYPE "DP-N26-33" RECEPTACLE



Socket Panel Assembly

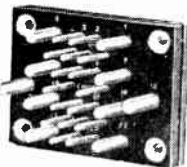
2" x 1 1/4" x 1 1/8" overall, maximum solder pot extension from rear insulator is approximately 1/8". Receptacle

has four mounting holes for No. 4 Flat Head Machine Screws.

Contacts Capacity Wt. Lbs. Cat. No. List Pr.
26 { 2-40-amp. .116 1269-1 6.01
8-30-amp.
16-10-amp.

TYPE "DP-N26-34" PLUG

Pin Panel Assembly



2" x 1 1/2" x 1 1/8" overall, contacts extend 3/8" from insulation on engaging end and 3/8" maximum on solder pot end.

Has four mounting holes for No. 4 Flat Head Machine Screws.

Contacts Capacity Wt. Lbs. Cat. No. List Pr.
20 { 2-40-amp. .111 1269-2 4.23
8-30-amp.
16-10-amp.

TYPE "DP-P10-33" RECEPTACLE



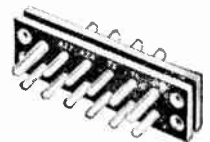
Socket Panel Assembly

Dimensions: 2 1/8" x 7/8" x 7/8", with max. solder pot extension 3/8". Ten 30-amp. contacts for No. 10 B & S stranded wire. Clearance 1/8". Insulation is phenolic. Spacer rivets aluminum alloy. Four mounting holes for No. 4 flat head machine screws. See illustration at upper left of page for application view.

Contacts Capacity Wt. Lbs. Cat. No. List Pr.
10 30-amp. .109 11460 3.56

TYPE "DP-P10-34" PLUG

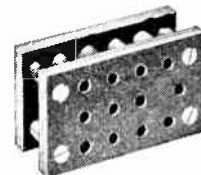
Pin Panel Assembly



Dimensions: 2 1/8" x 7/8" x 3/8" with guide pin extension 3/8", 30-amp. pin extensions 3/16" and max. solder pot extension 3/8". Four mounting holes for No. 4 flat head machine screws. Two guide pins.

Contacts Capacity Wt. Lbs. Cat. No. List Pr.
10 30-amp. .069 11461 3.25

TYPE "DP-S12-33" RECEPTACLE



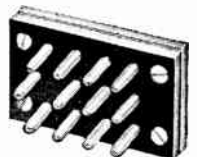
Socket Panel Assembly

Dimensions: 2 1/8" x 1 1/4" x 7/8", with 3/16" max. solder pot extension. Twelve 30-amp. contacts using No. 10 B & S stranded wire. Insulation is phenolic. Four No. 4x40x1 1/8" flat head machine screws.

Contacts Capacity Wt. Lbs. Cat. No. List Pr.
12 30-amp. .083 1164 5.25

TYPE "DP-S12-34" PLUG

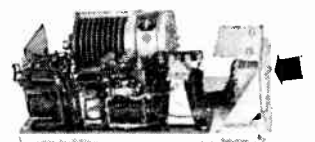
Pin Panel Assembly



Dimensions: 2 1/8" x 1 1/4" x 3/8", with max. pin extension 3/16" and 3/16" max. solder pot extension. Insulation is phenolic.

Contacts Capacity Wt. Lbs. Cat. No. List Pr.
12 30-amp. .121 1165 2.31

Plug-in Type Central Panel for aircraft radio facilitates safety check and other features, has DPD with 2 coaxials.



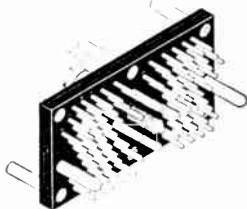
WESTINGHOUSE PHOTO

CANNON CONNECTORS



CANNON ELECTRIC DEVELOPMENT COMPANY • 3209 HUMBOLDT STREET, LOS ANGELES 31, CALIFORNIA

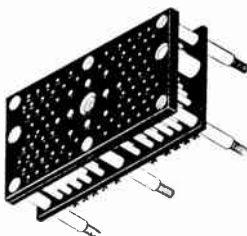
TYPE "DPL-92-34" PLUG (Pin Contacts)



Rack or panel type connector, having wing nut center post extraction means. Two guide pins, 82 contacts accommodating No. 16 B&S stranded wire; 6 for No. 12, and 4 for No. 8. Phenolic insulation.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
92	{ 10-amp. 6-amp. 40-amp. }	.3901	4424-2	15.26

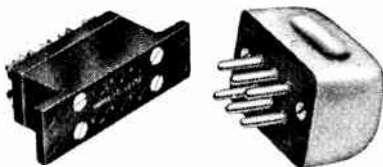
TYPE "DPL-92-33" RECEPTACLE (Socket Contacts)



Socket insert assembly, mating fitting for the above plug. Threaded center post, and 6 long spacer posts for mounting in rack or panel. Cannon full-floating socket contacts.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
92	{ 10-amp. 6-amp. 40-amp. }	.5312	4424-1	26.35

TYPE "DP-C6" and DP-C8" SWITCHING CONNECTORS

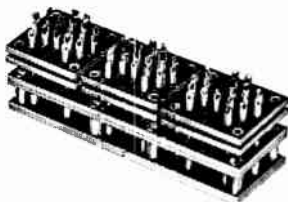


A switching connector for switching from 12 volts to 24 volts or vice versa. Pin contacts are bussed at the solder pot end. Shell material of the pin contact assembly is drawn steel; insulation melamine. DP-C8 is used for switching from positive ground to negative ground.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
6	Type DP-C6-33 Receptacle 30-amp.	.092	12922	2.25
6	Type DP-C6-34 Plug 30-amp.	.1210	12921	2.12
8	Type DP-C8-34 Plug 30-amp.	.110	12923	2.78
8	Type DP-C8-33 Receptacle 30-amp.	.0990	12924	1.92

TYPE DP FITTINGS

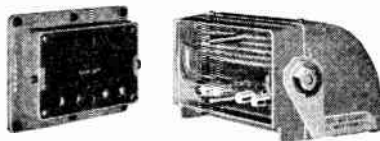
TYPE "DP-U60-33 AND -34" PANEL CONNECTOR



This panel connector has a single unit in the receptacle portion of the complete fitting, while the pin inserts are furnished in three sections or units, each having distinct polarization. Overall dimensions of the receptacle, 5 1/2 by 1 1/2 by 7/8. Plug units are 1 1/4 in length each. Twelve hollow spacer tubes on plug. Contacts have clearance of 1/16 min.

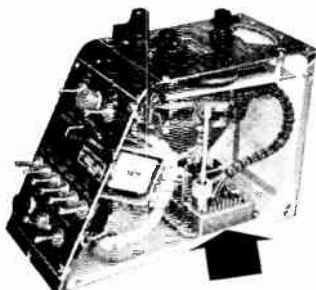
Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
60	{ 5-30-amp. 55-15-amp. }		1128	11.43
	"DP-U60-34"			
Sect. "A"			1129-1	3.62
Sect. "B"			1129-2	3.64
Sect. "C"			1129-3	3.14

TYPE DPF MASTER ENGINE DISCONNECT



This master engine disconnect has the cam-type extraction means. The complement of contacts is as follows: 4 No. 0, 1 No. 12 iron, 1 No. 12 constantan, and 69 No. 16, with two guide pins. The shell is aluminum alloy, insert insulation melamine. Cam nut is operated with a wrench for connection and disconnection. Pin insert assembly has the catalog number of DP-P-87-34P; socket insert assembly, DP-P-87-33S. Contact factory for prices.

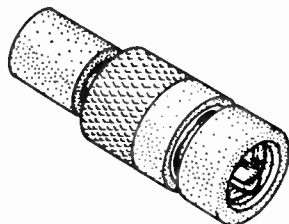
Radio control panel for aircraft has new DPD2, 2 gang connector with radio tubing shaft.



PR. ENG. DIV. BENDIX AVIATION

MISCL. FITTINGS

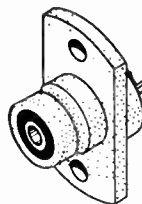
TYPE "270-1" (AN3116) PLUG



This small and rugged single contact fitting is used for lighting circuits, instruments, cameras, etc. Its low (15-amp.) amperage contact accommodates No. 14 B&S stranded wire. The ferrule assembly is equipped with a flexible conduit nut. Material is steel, cadmium plated.

List Price \$1.84

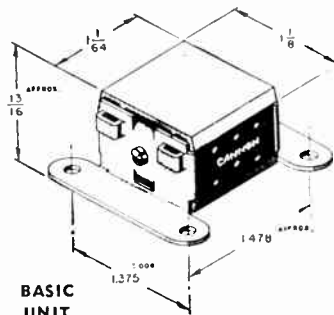
TYPE "272" RECEPTACLE



Mating fitting for above Type 270-1. Overall dimensions are 1 1/2" x 7/8" with 1/8" maximum solder pot extension. Mounting holes of .120" diameter are spaced .625" apart, center to center.

List price \$1.10

Y6 MULTIPLE-TO-SINGLE DISCONNECT



BASIC UNIT

A terminal block for radio and other low amperage equipment, the Y6 handles single-to-single for multiple-to-multiple circuits. Vertical or horizontal units may be added easily. Contacts accommodate No. 16 B&S stranded wire for 5 amperes. Basic unit, Y6-1F-1H, List. 89c. Y6-6 plug, List. 86c.



Y6-6 Plug

CANNON CONNECTORS

CANNON ELECTRIC DEVELOPMENT COMPANY • 3209 HUMBOLDT STREET, LOS ANGELES 31, CALIFORNIA



TYPE X FITTINGS

CANNON "TYPE X" PLUGS AND RECEPTACLES—The "Type X" Series of small connectors offers inexpensive fittings of reliable quality for sound service, radio, public address systems and geophysical research. In addition to compactness, many exclusive Cannon features are embodied in this series, such as full floating contacts in all socket inserts. Solder pot cable connections are easily accessible. Cable glands are removable. Contacts are so positive that no latching device is needed for ordinary uses.

The arrow shows spring clip on full-floating socket contact which gives a positive pressure fit connection.



TYPE "X-11" CORD PLUG (With Socket Insert)

Sturdily built for dependable service. Light in weight. Shell is die-cast zinc, nickel finish. Will take $\frac{3}{16}$ " to $\frac{1}{4}$ " cable. Used in conjunction with the following: X-11 Wall Receptacle, X-12 Straight Cord Plug, and X-42 Microphone Receptacle X-44L Receptacle.



Contacts Capacity	Wt. Lbs.	Cat. No.	List Pr.
1 15-amp.	0.081	X-1-11	\$1.75
3 15-amp.	0.083	X-3-11	1.75
4 {3-10-amp.} {1-15-amp.}	0.085	X-4-11	3.25

TYPE "X-12" CORD PLUG (With Pin Insert)

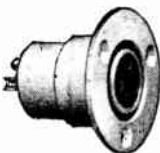
For use in conjunction with X-11 Straight Cord Plug (Socket Insert) or X-13 Wall Receptacle (Socket Insert). Shell is die-cast zinc, nickel finish. Will take $\frac{3}{16}$ " to $\frac{1}{4}$ " cable.



Contacts Capacity	Wt. Lbs.	Cat. No.	List Pr.
1 15-amp.	0.061	X-1-12	\$1.25
3 15-amp.	0.063	X-3-12	1.25
4 {3-10-amp.} {1-15-amp.}	0.065	X-4-12	2.25

TYPE "X-13" WALL RECEPTACLE (With Socket Insert)

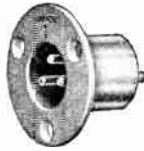
Body fits in $\frac{3}{4}$ " hole and extends $1\frac{1}{2}$ " behind flange. Flange is $1\frac{1}{2}$ " in diameter and drilled for three #4-40 oval-head screws on $\frac{1}{2}$ " radius 120° apart. Shell is die-cast zinc, nickel finish. To be used in conjunction with the following X-12.



Contacts Capacity	Wt. Lbs.	Cat. No.	List Pr.
1 15-amp.	0.081	X-1-13	\$1.75
3 15-amp.	0.083	X-3-13	1.75
4 {3-10-amp.} {1-15-amp.}	0.085	X-4-13	3.25

TYPE "X-14" WALL RECEPTACLE (With Pin Insert)

Body fits in $\frac{3}{4}$ " hole and extends $\frac{3}{8}$ " behind the flange, which is $1\frac{3}{4}$ " in diameter and drilled for three #4-40 oval-head screws on $\frac{1}{2}$ " radius, 120° apart. Shell is zinc, nickel plated finish. Used in conjunction with straight cord plug (Socket Insert) X-11. Solder pots extend $\frac{1}{4}$ " beyond rear of body.



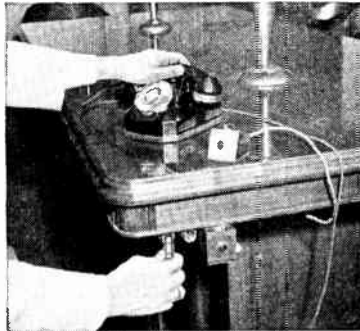
Contacts Capacity	Wt. Lbs.	Cat. No.	List Pr.
1 15-amp.	0.040	X-1-14	\$1.25
3 15-amp.	0.042	X-3-14	1.25
4 {3-10-amp.} {1-15-amp.}	0.044	X-4-14	2.25

TYPE "X-42" MICROPHONE RECEPTACLE (With Pin Insert)

Has all the features of "Type X" Straight Cord Plugs and Wall Receptacles but it is mounted on a flat base. Shell is die-cast zinc, nickel finish. Use with X-11 straight Cord Plug (Socket Insert) Mounting holes are $.144$ " in diameter and $1\frac{1}{4}$ " apart.



Contacts Capacity	Wt. Lbs.	Cat. No.	List Pr.
3 15-amp.	0.063	X-3-42	\$1.25



(Type X-3-11 Plug and X-3-42 Receptacle)

TYPE XK FITTINGS

CANNON "TYPE XK" PLUGS AND RECEPTACLES—A quality line of Connectors, similar in design and construction to the "Type X" Series, but equipped with the fast-acting, sturdy Acme Threaded Coupling Ring and, therefore, ideal for use on equipment which is subjected to considerable vibration and tension on cables, such as on sound trucks and other portable units.

TYPE "XK-11" STRAIGHT CORD PLUG (With Socket Insert)



Shell is of die-cast zinc, cad. plated finish. Equipped with quick-acting coupling ring. Solder pot connections are easily accessible. Takes $\frac{3}{16}$ " to $\frac{3}{32}$ " cable. Built for long, dependable service. Used with XK-12, XK-14.

Contacts Capacity	Wt. Lbs.	Cat. No.	List Pr.
1 15-amp.	0.081	XK-1-11	\$3.50
3 15-amp.	0.083	XK-3-11	3.50
4 {3-10-amp.} {1-15-amp.}	0.085	XK-4-11	5.00

TYPE "XK-12" STRAIGHT CORD PLUG (With Pin Insert)

For use in conjunction with Straight Cord Plug (Socket Insert) or Wall Receptacle (Socket Insert) with Coupling Ring. Provided with Shell is made of die-cast zinc, cad. plated finish. Takes $\frac{3}{16}$ " to $\frac{3}{32}$ " cable.



Contacts Capacity	Wt. Lbs.	Cat. No.	List Pr.
1 15-amp.	0.081	XK-1-12	\$2.00
3 15-amp.	0.083	XK-3-12	2.00
4 {3-10-amp.} {1-15-amp.}	0.085	XK-4-12	3.00

TYPE "XK-13" WALL RECEPTACLE (With Socket Insert) (For replacement only)

TYPE "XK-14" WALL RECEPTACLE (With pin insert)

Body fits in a $\frac{3}{4}$ " hole and extends $\frac{3}{8}$ " behind a $1\frac{1}{2}$ " flange. Flange is $1\frac{1}{2}$ " in diameter, drilled for four #4-40 oval-head mounting screws on a $\frac{5}{8}$ " radius, 90° apart. Shell is made of brass, nickel finish. Solder pots extend $\frac{3}{8}$ " beyond body. Has external acme thread on shell and is used in conjunction with straight cord plug XK-11.



Contacts Capacity	Wt. Lbs.	Cat. No.	List Pr.
1 15-amp.	0.045	XK-1-14	\$2.00
3 15-amp.	0.047	XK-3-14	2.00
4 {3-10-amp.} {1-15-amp.}	0.049	XK-4-14	3.00

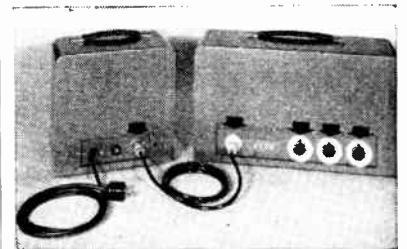
TYPE "XK-13L" WALL RECEPTACLE (With Socket Insert)

Body fits in $1\frac{1}{4}$ " hole and extends $1\frac{1}{2}$ " behind flange. Flange is $1\frac{1}{2}$ " in diameter and drilled for four #4-40 oval-head mounting screws on a $\frac{5}{8}$ " radius, 90° apart. Shell is made of brass, nickel finish. Solder pots on contacts extend $\frac{1}{4}$ " beyond body.



Use in conjunction with a straight cord plug (Pin Insert) XK-12.

Contacts Capacity	Wt. Lbs.	Cat. No.	List Pr.
1 15-amp.	0.144	XK-1-13L	\$3.75
3 15-amp.	0.146	XK-3-13L	3.85
4 {3-10-amp.} {1-15-amp.}	0.148	XK-4-13L	4.85



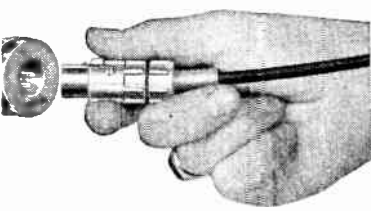
Raytheon's 3-channel Remote Amplifier and power unit use two types of Cannon Plugs: "X" and "P". Three receptacles on amplifier at right are Type P3-13.

CANNON CONNECTORS

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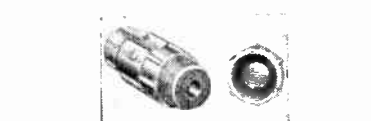
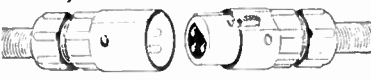
TYPE XL FITTINGS



(XL-3-14N" Receptacle and "XL-3-11" Plug engaging position. Compare small size of plug with hand.

The new Cannon Electric Type "XL" connector combines various features found in other Cannon types into a small fitting comparable only in size to the Type "X" for low level sound transmission circuits. Among the leading features are the following: (1) convenient latchlock device to hold connector tight. (2) lightweight. (3) polarizing means (4) compression gland with relief spring or integral clamp, if desired. (5) streamlined design. (6) tapped metal for insert retaining screw. (7) provision for special grounding contact. Contacts are 5-amp. for No. 14 B&S stranded wire. Shell is zinc or steel, with various finishes available, bright nickel being standard. Satin-chrome finish available on steel shells. Min. flashover voltage, 1500 (250 working voltage). Packaged in boxes of 10 identical fittings.

XL-3-12 and XL-3-11 Mating Plugs. May be used for cable extension.



XL-3-11 with compression gland removed, showing rubber reducer bushing.

ZINC SHELL TYPES

TYPE "XL-12" STRAIGHT CORD PLUG (Pin Insert)



Type XL-12 plug has alignment rib in addition to polarizing groove. Cable accommodation is $\frac{1}{8}$ ". Insert is removable for soldering or inspection. Overall dimensions: length, $1\frac{1}{2}$ ". with cable relief spring, $2\frac{1}{2}$ "; max. diameter $\frac{3}{4}$ ". Insert dia. $\frac{5}{8}$ ".

Contacts Capacity Wt. Lbs. Cat. No. List Pr.
3 15-amp. .0792 XL-3-12 1.20

TYPE "XL-11" STRAIGHT CORD PLUG (Socket Insert)



Type XL-3-11 is equipped with latch lock device and has raised polarizing boss. No. 1 contact engages before Nos. 2 and 3, and may be used for grounding purposes, if desired. $\frac{1}{8}$ " cable accommodation. Overall dimensions: length, 2 $\frac{1}{2}$ ", with relief spring, 2 $\frac{3}{4}$ " approx.

Contacts Capacity Wt. Lbs. Cat. No. List Pr.
3 15-amp. .0992 XL-3-11 1.25

TYPE "XL-14" RECEPTACLE (Pin Insert)

This wall mounting receptacle has three mounting holes having .136 diameter. Overall dimensions: flange diameter, $1\frac{1}{8}$ "; width flange, $\frac{3}{8}$ "; length behind flange to solder pot extension, $1\frac{1}{2}$ "; barrel diameter, $\frac{3}{4}$ ". Material zinc, bright nickel finish.



Contacts Capacity Wt. Lbs. Cat. No. List Pr.
3 15-amp. .0592 XL-3-14 1.00

TYPE "XL-13" RECEPTACLE (Socket Insert)

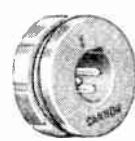
A wall mounting receptacle similar to XL-14 except that it has socket insert assembly and latch locking device. Overall Dimensions: flange diameter, $1\frac{1}{8}$ "; flange thickness $\frac{3}{8}$ "; rear of flange to solder pot extension $1\frac{1}{2}$ "; dia. barrel, $\frac{11}{16}$ "; three mounting holes drilled .136



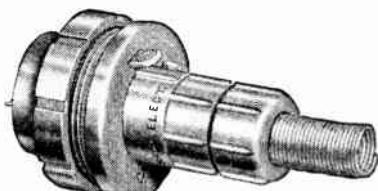
Contacts Capacity Wt. Lbs. Cat. No. List Pr.
3 15-amp. .132 XL-3-13 1.25

TYPE "XL-14N" RECEPTACLE (Pin Insert)

Designed to be mounted in a panel and has lock nut, accommodating up to $\frac{1}{8}$ " inch panel. Two fittings may be mounted on a single gang plate. Overall Dimensions: flange diameter, $1\frac{1}{8}$ "; barrel diameter, $1\frac{1}{2}$ "; width flange to barrel, $\frac{11}{16}$ ". with $\frac{1}{4}$ " max. solder pot extension; flange thickness, $\frac{3}{8}$ ".



Contacts Capacity Wt. Lbs. Cat. No. List Pr.
3 15-amp. .2048 XL-3-14N 1.15



TYPE XL-3-12 PLUG (engaged with Type XL-3-13N Receptacle)

TYPE "XL-13-N" RECEPTACLE (Socket Insert)

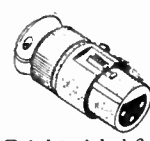


Similar to XL-14N except has socket insert assembly, with latch-lock device, and polarizing boss on insert barrel. No. 1 contact engages before Nos. 2 and 3 and may be used for grounding circuit, if desired. Overall dimensions: flange and barrel length from face of flange including solder pot extension, $1\frac{1}{2}$ ".

Contacts Capacity Wt. Lbs. Cat. No. List Pr.
3 15-amp. .2112 XL-3-13N 1.25

INTEGRAL CLAMP TYPES STEEL SHELL PLUGS

TYPE XL-3-11SC PLUG (Socket Insert)



The steel shell type is built for rugged service and has cable entry of $1\frac{1}{2}$ " min., $5\frac{1}{16}$ " max. $6\frac{1}{32}$ " shorter overall shell than zinc type. Otherwise same construction, mating with regular XL receptacle.

Bright nickel finish standard.
Contacts Capacity Wt. Lbs. Cat. No. List Pr.
3 15-amp. .1333 XL-3-11SC 2.80

TYPE XL-3-12SC PLUG (Pin Insert)

Corresponds to XL-3-12 except that shell is steel with integral clamp. For $5\frac{1}{16}$ " max. entry. Shell is $7\frac{1}{32}$ " shorter in overall length than corresponding zinc shell.



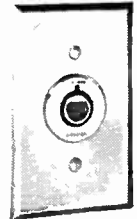
Contacts Capacity Wt. Lbs. Cat. No. List Pr.
3 15-amp. .1250 XL-3-12SC 2.75

TYPE "XL-3-50" ADAPTER RECEPTACLES



XL-3-50 1.05 List Pr. XL-3-50T 1.15 List Pr. XL-3-50N 1.30

SINGLE GANG WALL RECEPTACLES



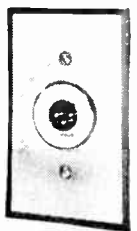
Type XL-3-35 (Socket Insert)
Face plate similar to type used in P-35. Takes an XL-3-13N Receptacle. Wt. 0.3479.

Cat. No. List Price
XL-3-35 \$4.93

Type XL-3-36 (Pin Insert)

Takes an XL-3-14N Receptacle. Bright nickel finish.

Cat. No. List Price
XL-3-36 \$5.43



CANNON CONNECTORS

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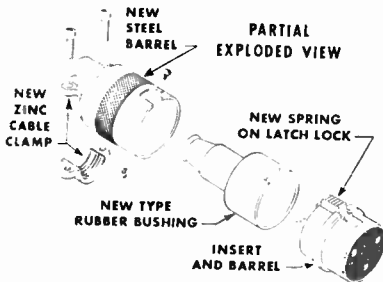


TYPE P FITTINGS

REVISED PRICES

CANNON "TYPE P" FITTINGS. Universally used in sound and allied applications. "Type P" Fittings include a size and type for every requirement, with a high standard of quality. All 90° Plugs have split-shell construction for quick, easy access for wiring or inspection. Splash-proof but not weather-proof. Plug and receptacle dust caps are available. Laboratory tests show an average voltage-drop of not more than 10 millivolts, with current flowing at the rated capacity. Insulating material is black phenolic which has a 0.7% absorption in 24 hours of immersion in water and a dielectric strength of 550 volts per mil at 60 cycles. Two to 6 contact inserts accommodate No. 10 B&S stranded wire; 8 contact insert No. 14 wire.

New shell designs of the P-CG-115 and P-CG-125, cord plugs, replace both old type shells of zinc and steel, and such improvements as shorter length, new rubber bushing, improved latch and spring, integral clamp. Shell material is steel, integral clamp zinc.



NEW TYPES WILL MATE WITH CORRESPONDING FITTINGS, SAME AS OLD DESIGN

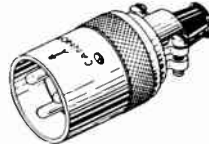
TYPE P-CG-115 CORD PLUG COMBINATION STEEL & ZINC (With Socket Insert)

This new type plug with steel shell and integral zinc clamp is $\frac{1}{8}$ " shorter than the old type and has an overall length of 2 1/2". The new rubber bushing allows a $\frac{1}{8}$ " D. cable entry, and on P1, P5, P6 and P8 $\frac{1}{2}$ " D. max. cable entry. Satin chrome finish.

Poles	Capacity	Wt. Lbs.	Cat. No.	List Price
2	30-amp.	0.202	P2-CG-115	\$4.60
3	30-amp.	0.202	P3-CG-115	4.75
4	30-amp.	0.202	P4-CG-115	5.00
5	30-amp.	0.206	P5-CG-115	5.25
6	30-amp.	0.208	P6-CG-115	5.40
8	15-amp.	0.208	P8-CG-115	5.75

TYPE P-CG-125 CORD PLUG COMBINATION STEEL & ZINC (With Pin Insert)

Similar construction and materials to the -115, except for pin insert. New rubber bushing on P1 to PS fittings is contained within the shell and lines the solder pot cavity. Same cable entry sizes as -115. Satin chrome finish.



Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.163	P2-CG-125	\$3.75
3	30-amp.	0.159	P3-CG-125	3.85
4	30-amp.	0.159	P4-CG-125	3.95
5	30-amp.	0.163	P5-CG-125	4.05
6	30-amp.	0.167	P6-CG-125	4.25
8	15-amp.	0.163	P8-CG-125	4.50

TYPE "P-23" STRAIGHT CORD PLUG (With Socket Insert), HEAVY DUTY

Shell is die-cast zinc for severe service, but employing all features such as the latch type locking device which is standard on "Type P." It has integral clamp for $\frac{3}{4}$ " cable. Also made for $\frac{1}{2}$ " & $\frac{5}{8}$ " cable if specified. Satin chrome finish.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.166	P2-23	\$4.75
3	30-amp.	0.170	P3-23	4.90
4	30-amp.	0.174	P4-23	5.15
5	30-amp.	0.178	P5-23	5.40
6	30-amp.	0.182	P6-23	5.55
8	15-amp.	0.178	P8-23	5.90

TYPE "P-24" STRAIGHT CORD PLUG (With Pin Insert), HEAVY DUTY

Corresponds with "Type P-23" Plug (Socket Insert). Built for hard service. The skirt is of steel, body die-cast zinc. Has Integral Clamp, for $\frac{3}{4}$ ", $\frac{5}{8}$ " or $\frac{1}{2}$ " cable, if specified. Satin chrome finish.



Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.170	P2-24	\$4.80
3	30-amp.	0.173	P3-24	4.90
4	30-amp.	0.176	P4-24	5.00
5	30-amp.	0.179	P5-24	5.10
6	30-amp.	0.182	P6-24	5.30
8	15-amp.	0.179	P8-24	5.55

TYPE "P-CG-15" 90° CORD PLUG (With Socket Insert)

Has Split Shell and all other "Type P" features found in "Type P-15, 90° Plug" except cable connection, which is an Integral Clamp for $\frac{1}{2}$ " or smaller cable. Made of cast aluminum alloy, finished in tin plate. New, heavier clamp.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.220	P2-CG-15	\$5.20
3	30-amp.	0.224	P3-CG-15	5.35
4	30-amp.	0.228	P4-CG-15	5.60
5	30-amp.	0.232	P5-CG-15	5.85
6	30-amp.	0.236	P6-CG-15	6.00
8	15-amp.	0.232	P8-CG-15	6.35

TYPE "P-CG-16" 90° CORD PLUG (With Pin Insert)

Corresponds with Type P-CG-15 90° Plug. (Socket insert), having Integral Clamp for $\frac{1}{2}$ " or smaller cable. Barrel is of steel and shell of cast aluminum alloy, tin plate finish. Removable cap for easy access to contacts for wiring or inspection. New heavier clamp.



Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.195	P2-CG-16	\$4.80
3	30-amp.	0.198	P3-CG-16	4.90
4	30-amp.	0.201	P4-CG-16	5.00
5	30-amp.	0.204	P5-CG-16	5.10
6	30-amp.	0.207	P6-CG-16	5.30
8	15-amp.	0.204	P8-CG-16	5.55

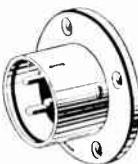
TYPE "P-17" PANEL RECEPTACLE (With Socket Insert), SURFACE MOUNTING

P-17 has Latch Locking Device and all other "Type P" features. Made of die-cast zinc. Satin chrome finish. Flange is 2" in diameter, drilled and countersunk at four points $\frac{1}{8}$ " apart on $\frac{1}{4}$ " radius for four $\frac{1}{4}$ "-40 oval head M.S. Body extends $\frac{1}{2}$ " in front of $\frac{1}{8}$ " mounting flange.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.125	P2-17	\$4.10
3	30-amp.	0.129	P3-17	4.25
4	30-amp.	0.133	P4-17	4.50
5	30-amp.	0.137	P5-17	4.75
6	30-amp.	0.141	P6-17	4.90
8	15-amp.	0.137	P8-17	5.25

TYPE "P-18" PANEL RECEPTACLE (with Pin Insert) Surface Mounting

Corresponds to "Type P-17", Panel Receptacle. Shell is made of brass, satin chrome finish. Flange is 2" in diameter, drilled and countersunk at four points on $\frac{1}{8}$ " radius for four $\frac{1}{4}$ "-40 oval head machine screws.



Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.156	P2-18	\$2.20
3	30-amp.	0.159	P3-18	2.30
4	30-amp.	0.162	P4-18	2.40
5	30-amp.	0.165	P5-18	2.50
6	30-amp.	0.168	P6-18	2.70
8	15-amp.	0.165	P8-18	2.95

TYPE "P-13" PANEL RECEPTACLE (with Socket Insert) Flush Mounting

Has Latch Locking Device which operates from front of panel. Made of die-cast zinc, satin chrome finish. Flange is 2" in diameter and drilled and countersunk at four points on $\frac{1}{8}$ " radius for four $\frac{1}{4}$ "-40 oval head machine screws.

Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.202	P2-13	\$3.85
3	30-amp.	0.206	P3-13	4.00
4	30-amp.	0.210	P4-13	4.25
5	30-amp.	0.214	P5-13	4.50
6	30-amp.	0.218	P6-13	4.65
8	15-amp.	0.214	P8-13	5.00

CANNON CONNECTORS

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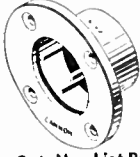


TYPE P FITTINGS

CONTINUED

TYPE "P-14" RECEPTACLE (Pin Insert), FLUSH MOUNTING

Flange is 2" in diameter, drilled with four .120" diameter holes to take four #4-40 oval-head mounting screws, arranged 90° apart on a radius of 1 1/8". Shell is die-cast zinc, satin chrome finish.



Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.104	P2-14	\$2.00
3	30-amp.	0.107	P3-14	2.10
4	30-amp.	0.110	P4-14	2.20
5	30-amp.	0.113	P5-14	2.30
6	30-amp.	0.116	P6-14	2.50
8	15-amp.	0.113	P8-14	2.75

TYPE "P-35" SINGLE GANG WALL RECEPTACLE (With Socket Insert)

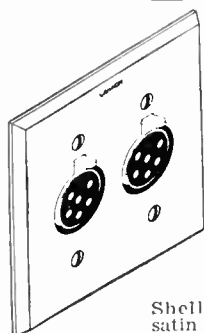
Furnished with brackets for standard switch box. Shell is die-cast zinc, satin chrome finish. Plate is 4 1/2" high and 2 3/4" wide. Latch Locking Device operates from front of panel.



Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.341	P2-35	\$6.70
3	30-amp.	0.345	P3-35	6.85
4	30-amp.	0.349	P4-35	7.10
5	30-amp.	0.353	P5-35	7.35
6	30-amp.	0.357	P6-35	7.50
8	15-amp.	0.353	P8-35	7.85

TYPE "P-35-2G" TWO-GANG WALL RECEPTACLE (With Socket Inserts)

Furnished with brackets for standard switch box. Plate is 4 1/2" high and 1 1/2" wide. Both receptacles have Latch Locking Device, operated from front of panel. Shell is die-cast zinc, satin chrome finish.



Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.448	P2-35-2G	\$9.60
3	30-amp.	0.456	P3-35-2G	9.90
4	30-amp.	0.464	P4-35-2G	10.40
5	30-amp.	0.472	P5-35-2G	10.90
6	30-amp.	0.480	P6-35-2G	11.20
8	15-amp.	0.472	P8-35-2G	11.90

MINIMUM FLASHOVER VOLTAGES ON P INSERTS

P-8 (socket, #4 to shell) 1050V
 P-2 (socket, #1 to shell) 1100V
 P-3 (socket, #1 and #3 to shell) 1100V

(All others more than 1100 volts.)
 For complete list, see Type "AP" Bulletin or Third Revised Edition "P & O" Bulletin

TYPE "P-36" SINGLE GANG WALL RECEPTACLE

(With Pin Insert)

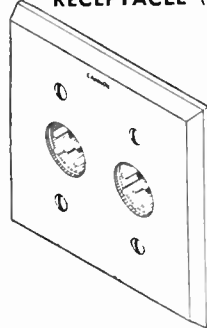
Plate is 4 1/2" high and 2 3/4" wide. Furnished with brackets for standard switch box. Made of die-cast zinc, satin chrome finish.



Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.277	P2-36	\$5.20
3	30-amp.	0.280	P3-36	5.30
4	30-amp.	0.283	P4-36	5.40
5	30-amp.	0.286	P5-36	5.50
6	30-amp.	0.289	P6-36	5.70
8	15-amp.	0.286	P8-36	5.95

TYPE "P-36-2G" TWO-GANG WALL RECEPTACLE (With Pin Insert)

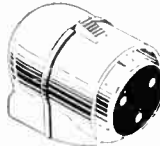
Plate is 4 1/2" high and 4 1/2" wide. Drilled to take four #6-32 oval-head mounting screws. Furnished with brackets for standard switch box. Made of die-cast zinc, satin chrome finish.



Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.554	P2-36-2G	\$7.60
3	30-amp.	0.563	P3-36-2G	7.80
4	30-amp.	0.572	P4-36-2G	8.00
5	30-amp.	0.579	P5-36-2G	8.20
6	30-amp.	0.588	P6-36-2G	8.60
8	15-amp.	0.579	P8-36-2G	9.10

TYPE "P-41" 90° MICROPHONE OR PANEL RECEPTACLE (With Socket Insert)

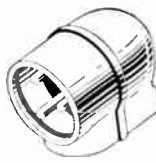
Can be mounted in equipment or instrument panel. Equipped with Latch Locking Device. Cap is removable for easy wiring. Shell is die-cast zinc, finished in black wrinkle enamel.



Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.249	P2-41	\$6.15
3	30-amp.	0.253	P3-41	6.30
4	30-amp.	0.257	P4-41	6.55
5	30-amp.	0.261	P5-41	6.80
6	30-amp.	0.265	P6-41	6.95
8	15-amp.	0.261	P8-41	7.30

TYPE "P-42" 90° MICROPHONE OR PANEL RECEPTACLE (With Pin Insert)

For mounting on equipment or instrument panel. Cap is removable for easy wiring. Shell is made of die-cast zinc with black wrinkle enamel finish.



Contacts	Capacity	Wt. Lbs.	Cat. No.	List Pr.
2	30-amp.	0.176	P2-42	\$4.50
3	30-amp.	0.179	P3-42	4.60
4	30-amp.	0.182	P4-42	4.70
5	30-amp.	0.185	P5-42	4.80
6	30-amp.	0.188	P6-42	5.00
8	15-amp.	0.185	P8-42	5.25

ACCESSORY ITEMS

DUST CAPS

Fits all "Type P" fittings with pin inserts. Made of brass, cadmium plated, with nickel silver bead chain.



Lbs.	Cat. No.	List
0.081	PPC	\$1.50
0.082	PCI*	1.75

*Type PCI is insulated inside for application where contacts are "hot."

TYPE PRC DUST CAP

Fits all "Type P" fittings with socket inserts. Made of brass, cadmium plated with nickel silver bead chain.



Lbs.	Cat. No.	List
0.095	PRC	\$1.25

REPLACEMENT ITEMS

A number of Type P and Type O Connectors formerly catalogued have been omitted from the list. These include various Special Items. It is the policy of the company at the present time to list such items as obsolete or replacement fittings, which are available only upon special request. If, however, they are required for replacement purposes, write for Type P & O Replacement Page for listing and catalog number.

Quantity Discounts Apply



TYPE "PCG" CLAMP GLAND NUT

Made of die-cast zinc, cadmium plated. Complete with gasket.

Wt. Lbs.	Cat. No.	List Price
0.037	PCG	\$.75



TYPE "P" GLAND GASKET

As used in Straight Glands and Clamp Glands. Made of soft white rubber.

Cat. No.	List Price
P Gasket	\$.10

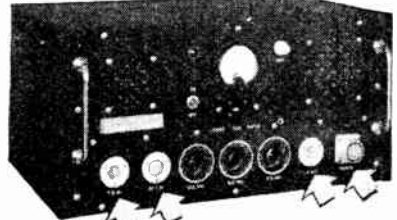
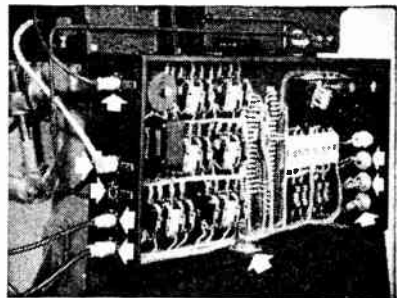


PHOTO SOUTHWESTERN INDUSTRIAL ELECTRONIC CO.
 Geophysical Radio with P-13 Receptacles and One AN3102 (at extreme right)



Type "P" CONNECTORS on Mitchell Camera Background Projector

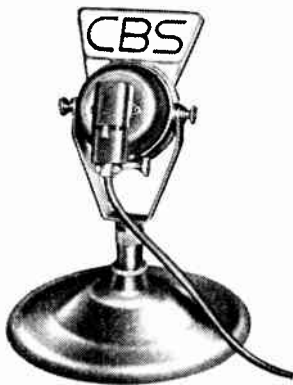
CANNON CONNECTORS

CANNON ELECTRIC DEVELOPMENT COMPANY • 3209 HUMBOLDT STREET, LOS ANGELES 31, CALIFORNIA



TYPE O FITTINGS

CANNON "TYPE O" PLUGS AND RECEPTACLES. This series consists of a line of 3-contact oval-shaped plugs and receptacles, equipped with Latch Locking Device. Contacts are silver-plated, full-floating, non-twisting, carry 30-amp. capacity. Solder terminals are tinned for ease of wiring. 30-amp. contacts accommodate No. 10 B&S stranded wire.



TYPE "03-42" MICROPHONE OR PANEL RECEPTACLE (With Pin Insert)

Has flat base, with two lugs for mounting with $\approx 1-10$ oval-head screws. Made of die-cast zinc, and cadmium plated.



Contacts Capacity Wt. Lbs. Cat. No. List Pr.
3 30-amp. 0.271 03-42 \$4.50

TYPE "03-41" 90 MICROPHONE OR PANEL RECEPTACLE (Socket Insert)



Flat base is flanged and is attached to microphone or panel by means of two $\approx 1-10$ oval-head mounting screws. Made of die-cast zinc, cad. plated.

Contacts Capacity Wt. Lbs. Cat. No. List Pr.
3 30-amp. 0.274 03-41 \$4.50

TYPE "03-11" STRAIGHT CORD PLUG (With Socket Insert)



Has Integral Clamp for $\frac{1}{8}$ " or smaller cable. Made of die-cast zinc, cadmium plated.

Contacts Capacity Wt. Lbs. Cat. No. List Pr.
3 30-amp. 0.113 03-11 \$4.50

TYPE "03-12" STRAIGHT CORD PLUG (With Pin Insert)

Corresponds with No. 03-11 "Type O" Straight Cord Plug (Socket Insert). Has integral cable clamp, for $\frac{1}{8}$ " or smaller cable. Made of die-cast zinc, cadmium plated.



Contacts Capacity Wt. Lbs. Cat. No. List Pr.
3 30-amp. 0.104 03-12 \$4.50

TYPE "03-13" FLUSH WALL RECEPTACLE (With Socket Insert)



Flange is 2" in diameter, drilled with four holes to take $\approx 1-10$ oval-head mounting screws, 90° apart on a radius of $\frac{1}{2}$ ". Made of die-cast zinc, cadmium plated. Latch Locking Device is operated from panel front.

Contacts Capacity Wt. Lbs. Cat. No. List Pr.
3 30-amp. 0.148 03-13 \$4.50

TYPE "03-14" FLUSH WALL RECEPTACLE (With Pin Insert)

The flange is 2" in diameter, drilled with four holes to take $\approx 1-10$ oval-head mounting screws, 90° apart, on a radius of $\frac{1}{2}$ ". Made of die-cast zinc, cadmium plated.



Contacts Capacity Wt. Lbs. Cat. No. List Pr.
3 30-amp. 0.107 03-14 \$4.50

TYPE "O" REPLACEMENT FITTINGS

(Discounts on replacement fittings apply to these items.)



ONE-FOURTH ACTUAL SIZE

03-35



ONE-FOURTH ACTUAL SIZE

03-36

TYPE "O" CONNECTORS ARE USED ON STANDARD RADIO BROADCAST MICROPHONES



TYPE TQ FITTINGS

CANNON TYPE "TQ" COAXIAL FITTINGS. Type "TQ" Coaxial Fittings provide continuous shielding with constant impedance. Each fitting contains 1 standard Cannon style silver-plated contact, rated at 10-amp. and accommodating #16 stranded or #14 solid, or smaller B&S stranded wire. Solder pots are tinned for ease of wiring. Insulation is ceramic.

CANNON TYPE "TQ" COAXIAL CORD PLUG (With Socket Insert) For Continuous Shielding



ONE-HALF ACTUAL SIZE

A tapered skirt is provided on this Plug, to which the shielding is easily soldered. Accommodates $\frac{1}{2}$ " cable, but can be supplied for $\frac{5}{8}$ " cable if specified with order. Body is brass, silver plated.

Contacts Capacity Wt. Lbs. Cat. No. List Pr.
1 10-amp. 0.106 TQ-1-12 \$2.00

TYPE "TQ13BC" FLUSH RECEPTACLE (With Pin Insert)

For Mounting Behind Panel

Same construction as No. TQ-1-13C, except that the flange is mounted on back of panel. Body is brass, zinc plated.

Contact Capacity Wt. Lbs. Cat. No. List Pr.
1 10-amp. 0.039 TQ-1-13BC \$2.00



ONE-HALF ACTUAL SIZE

TYPE "TQ-13B" RECEPTACLE For Continuous Shielding

Designed for mounting behind panel. Accommodates $\frac{1}{2}$ " cable. Body is brass, zinc plated.

Contacts Capacity Wt. Lbs. Cat. No. List Pr.
1 10-amp. 0.057 TQ-1-13B \$2.00



ONE-HALF ACTUAL SIZE

TYPE "TQ-13" RECEPTACLE (With Pin Insert)

For Continuous Shielding

Provided with a tapered skirt to which the shielding is easily soldered. Also has a removable solder pot shield, which snaps into place. Ceramic insulation is used in all Type "TQ" Connectors, silver plated. Accommodates $\frac{1}{2}$ " cable, but can be supplied for $\frac{5}{8}$ " cable if specified with order. Two holes— $\frac{1}{16}$ " in diameter, $\frac{1}{8}$ " apart.

Contacts Capacity Wt. Lbs. Cat. No. List Pr.
1 10-amp. .043 TQ-1-13 \$2.00



ONE-HALF ACTUAL SIZE

TYPE "TQ-13C" RECEPTACLE (With Pin Insert)

Similar to TQ-1-13, except that it is not provided with solder pot shield and is not designed for continuous shielding. Uses Ceramic insulation. For mounting on front of panel. Body is brass, silver plated. Two holes— $\frac{1}{16}$ " in diameter, $\frac{1}{8}$ " apart for mounting.

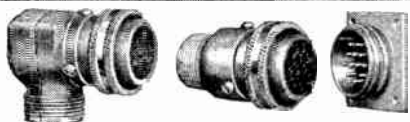


ONE-HALF ACTUAL SIZE

CANNON TYPES K & RK PLUGS FOR AIRCRAFT



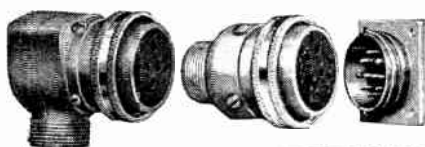
WK



GK



SK



NK



RWK



RGK

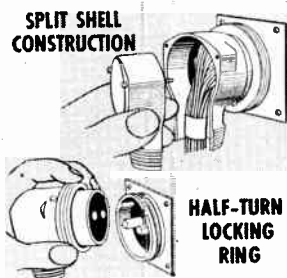


RSK



RNK

SPLIT SHELL
CONSTRUCTION



HALF-TURN
LOCKING
RING

The Type "K" Series was designed especially for use in the aircraft field and is used almost universally for aircraft radio, instrument and electrical circuits. Although light in weight, units are rugged and durable. The "K" Series is made in 3 basic types: (1) Straight Type, (2) 90° Type, (3) Wall Mounting Unit, for which either straight or right angle junction shells are provided. Inserts of laminated and molded phenolic are removable.

The cable entry is regularly threaded for various sizes of aircraft flexible conduit, but there are fittings also available with cable clamp for special applications. The "K" Series is comprised of 8 diameters, with a great variety of contact arrangements covering a range of from 1 to 82 contacts, depending, of course, upon the diameter, 188 insert arrangements.

A key and groove arrangement makes it possible to connect fittings easily and quickly without the necessity of fumbling to match pins and sockets. This eliminates any

possibility of forcing together in improper alignment and thus bending or breaking pins. Large contacts may be removed for soldering, thereby eliminating the possibility of damaging the insert with excessive heat.

Quick, easy access to solder pots at back of contact is made possible simply by removing either 3 or 4 Shake-proof Sems, depending upon the size of the fitting. Since these screws are equidistant, the barrel and insert may be rotated to accommodate 3 or 4 different positions. This is also true of the flanges on wall mounting units, making it easy to rotate these fittings to facilitate cable installation and avoid sharp bends in conduit.

Plugs and receptacles are locked together by means of a quick-acting threaded nut which holds both members firmly together and prevents shaking or accidentally pulling them apart. 10 to 250-amp. contacts.

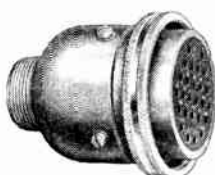
NOTE: Detailed Catalog Bulletin and Wall Chart for K Connectors available on request.



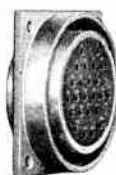
FK



RFK



IK



RIK



LK

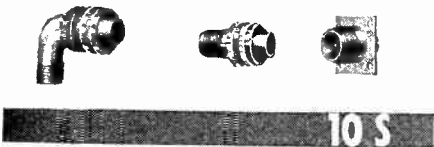


RLK

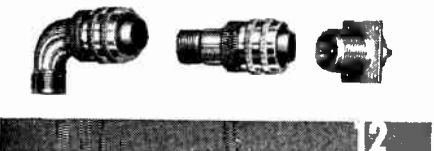
ALL FITTINGS ON THIS PAGE ARE SLIGHTLY MORE THAN ONE-QUARTER ACTUAL SIZE



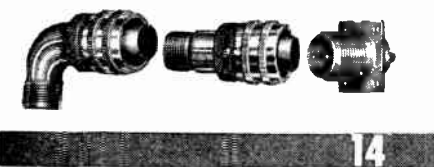
8 S



10 S

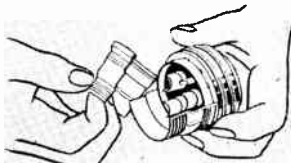


12



14

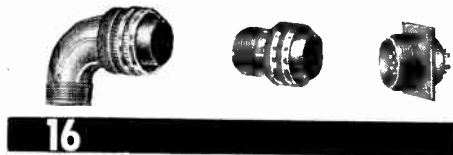
CANNON TYPE AN PLUGS FOR AIRCRAFT



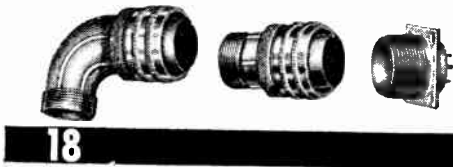
SPLIT SHELL CONSTRUCTION



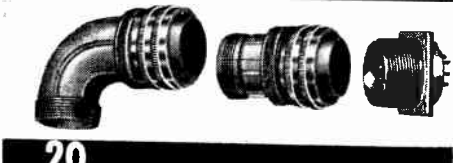
INTERCHANGEABLE INSERTS



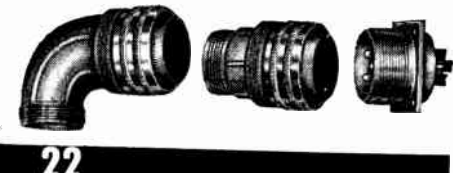
16



18



20



22

MORE THAN 200 INSERT ARRANGEMENTS AVAILABLE

CANNON "Type AN" Series of plugs and receptacles was designed especially to meet Army-Navy Specifications for aircraft electrical connectors. While the AN Series retains all the basic features of the Type K Series—features which have established conclusive proof of their effectiveness as applied to aircraft—numerous changes in design and construction have been made to conform to latest Army-Navy Specifications.

Type AN Plugs are made in three basic shapes or styles. These are: 1. Straight cord connectors. 2. Right angle or 90° cord connectors. 3. Flanged connectors for wall mounting. An almost unlimited combination of circuits and current capacities can be handled with AN connectors and their interchangeable inserts.

Removable and interchangeable inserts make it possible to change any fitting from a pin to a socket, or vice versa, and also to change the number of circuits

handled through any fitting provided the inserts are of the same diameter. The split shell, a feature pioneered by Cannon, makes it easy to install wiring or to solder contacts.

An important feature of the Type AN Series is the means provided for coupling the members together. This consists of a coupling nut which serves to draw the parts together and to release them, while it also prevents plugs and receptacles from being jarred apart by excessive vibration. No special tools are required to lock or unlock plugs and receptacles, to separate split shells or to remove inserts. This feature is invaluable, since it eliminates delay in servicing in the field and also because there are so many combinations possible with Type AN Series.

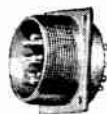
CONTACT CAPACITIES
5 to 200-amp.



AN3108 Plug



AN3106 Plug



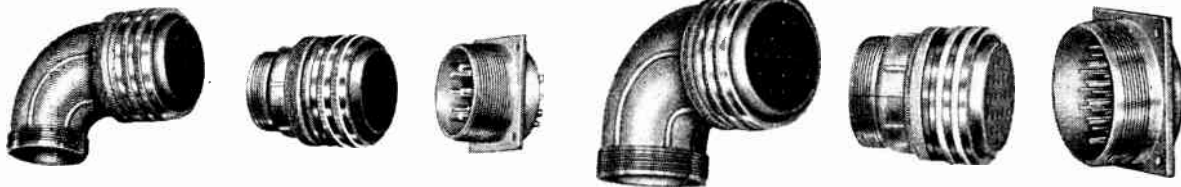
AN3102

*Write for Complete "AN" Bulletin,

Also "AN" Wall Charts.

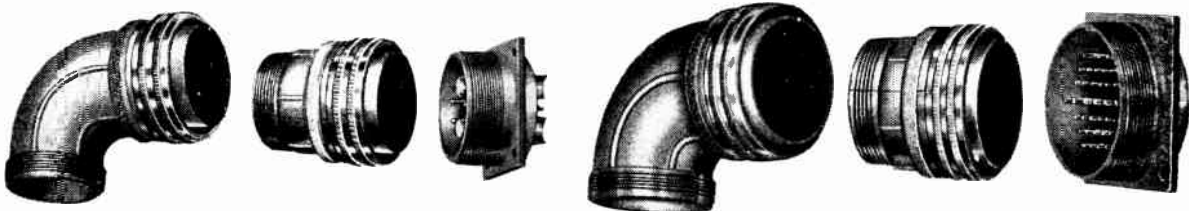
PEAK VOLTAGES
70 to 14,000V.

24



28

36



32

40

ALL FITTINGS ON THIS PAGE ARE SLIGHTLY MORE THAN ONE-QUARTER ACTUAL SIZE

"300" SERIES PLUGS AND SOCKETS

General Specifications

2 Contacts to 33 Contacts. All plugs and sockets are polarized. 2 Contact Plugs and Sockets are round, others rectangular. Plugs of one size cannot fit into sockets of another size. Phosphor bronze "knife-switch" type socket contacts engage both sides of flat plug contacts—double contact area. Molded Bakelite insulation. Formed metal caps. Formed fibre linings in caps. Small size, with good separation between contacts. Plug or socket for panel mounting. Plug or socket with cap. Simple, fool-proof assembly. Finish on caps—Black Crystal. Plug prongs— $\frac{3}{32}$ " wide by $\frac{3}{64}$ " thick. We suggest using the 300 series in circuits not exceeding 45 Volts and 5 Amps., although circuit characteristics may permit higher ratings.

Plug, Cable Clamp in Cap and with Latches

No. Contacts	Ea.
P-302-CCT-L (2)	\$.61
P-303-CCT-L (3)	.65
P-304-CCT-L (4)	.69
P-306-CCT-L (6)	.75
P-308-CCT-L (8)	.81
P-310-CCT-L (10)	.89
P-312-CCT-L (12)	.97

Socket, Cable Clamp in Cap and with Keepers

No. Contacts	Ea.
S-302-CCT-K (2)	\$.62
S-303-CCT-K (3)	.66
S-304-CCT-K (4)	.70
S-306-CCT-K (6)	.78
S-308-CCT-K (8)	.88
S-310-CCT-K (10)	.98
S-312-CCT-K (12)	1.08

Plug with Angle Brackets

No. Contacts	Ea.
P-315-AB (15)	\$.69
P-318-AB (18)	.86
P-321-AB (21)	1.09
P-324-AB (24)	1.32
P-327-AB (27)	1.55
P-330-AB (30)	1.78
P-333-AB (33)	2.01

Socket with Angle Brackets

No. Contacts	Ea.
S-315-AB (15)	\$.81
S-318-AB (18)	.98
S-321-AB (21)	1.21
S-324-AB (24)	1.44
S-327-AB (27)	1.67
S-330-AB (30)	1.90
S-333-AB (33)	2.13

Plug with End Brackets

No. Contacts	Ea.
P-315-EB (15)	\$.69
P-318-EB (18)	.86
P-321-EB (21)	1.09
P-324-EB (24)	1.32
P-327-EB (27)	1.55
P-330-EB (30)	1.78
P-333-EB (33)	2.01

Sockets with End Brackets

No. Contacts	Ea.
S-315-EB (15)	\$.81
S-318-EB (18)	.98
S-321-EB (21)	1.21
S-324-EB (24)	1.44
S-327-EB (27)	1.67
S-330-EB (30)	1.90
S-333-EB (33)	2.13

Plug with Angle Brackets

No. Contacts	Ea.
P-302-AB (2)	\$.21
P-303-AB (3)	.25
P-304-AB (4)	.29
P-306-AB (6)	.35
P-308-AB (8)	.41
P-310-AB (10)	.47
P-312-AB (12)	.53

Socket with Angle Brackets

No. Contacts	Ea.
S-302-AB (2)	\$.27
S-303-AB (3)	.33
S-304-AB (4)	.31
S-306-AB (6)	.38
S-308-AB (8)	.47
S-310-AB (10)	.56
S-312-AB (12)	.65

Plug with Shallow Brackets

No. Contacts	Ea.
P-315-SB (15)	\$ 1.04
P-318-SB (18)	1.27
P-321-SB (21)	1.50
P-324-SB (24)	1.73
P-327-SB (27)	2.01
P-330-SB (30)	2.30
P-333-SB (33)	2.53

Sockets with Shallow Brackets

No. Contacts	Ea.
S-315-SB (15)	\$ 1.16
S-318-SB (18)	1.39
S-321-SB (21)	1.62
S-324-SB (24)	1.90
S-327-SB (27)	2.13
S-330-SB (30)	2.42
S-333-SB (33)	2.65

Plug with Flush Plate

No. Contacts	Ea.
P-302-FP (2)	\$.36
P-303-FP (3)	.40
P-304-FP (4)	.44
P-306-FP (6)	.49
P-308-FP (8)	.55
P-310-FP (10)	.61
P-312-FP (12)	.67

Socket with Flush Plate

No. Contacts	Ea.
S-302-FP (2)	\$.37
S-303-FP (3)	.41
S-304-FP (4)	.43
S-306-FP (6)	.52
S-308-FP (8)	.61
S-310-FP (10)	.70
S-312-FP (12)	.79

Plug with Recessed Plate

No. Contacts	Ea.
P-302-RP (2)	\$.42
P-303-RP (3)	.46
P-304-RP (4)	.50
P-306-RP (6)	.57
P-308-RP (8)	.66
P-310-RP (10)	.75
P-312-RP (12)	.84

Socket with Recessed Plate

No. Contacts	Ea.
S-302-RP (2)	\$.44
S-303-RP (3)	.48
S-304-RP (4)	.52
S-306-RP (6)	.62
S-308-RP (8)	.73
S-310-RP (10)	.84
S-312-RP (12)	.95

Plug, Flared Hole in Cap

No. Contacts	Ea.
P-302-FHT (2)	\$.35
P-303-FHT (3)	.39
P-304-FHT (4)	.43
P-306-FHT (6)	.49
P-308-FHT (8)	.55
P-310-FHT (10)	.63
P-312-FHT (12)	.71

Socket, Flared Hole in Cap

No. Contacts	Ea.
S-302-FHT (2)	\$.36
S-303-FHT (3)	.40
S-304-FHT (4)	.44
S-306-FHT (6)	.52
S-308-FHT (8)	.62
S-310-FHT (10)	.72
S-312-FHT (12)	.82

Plug, Flared Hole in Top of Cap and with Latches

No. Contacts	Ea.
P-315-FHT-L (15)	\$ 1.04
P-318-FHT-L (18)	1.27
P-321-FHT-L (21)	1.50
P-324-FHT-L (24)	1.73
P-327-FHT-L (27)	2.02
P-330-FHT-L (30)	2.31
P-333-FHT-L (33)	2.54

Socket, Flared Hole in Top of Cap and with Keepers

No. Contacts	Ea.
S-315-FHT-K (15)	\$ 1.16
S-318-FHT-K (18)	1.39
S-321-FHT-K (21)	1.62
S-324-FHT-K (24)	1.91
S-327-FHT-K (27)	2.13
S-330-FHT-K (30)	2.43
S-333-FHT-K (33)	2.66

Plug, Flared Hole in Cap and with Latches

No. Contacts	Ea.
P-302-FHT-L (2)	\$.48
P-303-FHT-L (3)	.52
P-304-FHT-L (4)	.56
P-306-FHT-L (6)	.62
P-308-FHT-L (8)	.68
P-310-FHT-L (10)	.76
P-312-FHT-L (12)	.84

Socket, Flared Hole in Cap and with Keepers

No. Contacts	Ea.
S-302-FHT-K (2)	\$.49
S-303-FHT-K (3)	.53
S-304-FHT-K (4)	.57
S-306-FHT-K (6)	.65
S-308-FHT-K (8)	.75
S-310-FHT-K (10)	.85
S-312-FHT-K (12)	.95

Plug, Cable Clamp in Top of Cap and with Latches

No. Contacts	Ea.
P-315-CCT (15)	\$ 1.09
P-318-CCT (18)	1.32
P-321-CCT (21)	1.55
P-324-CCT (24)	1.84
P-327-CCT (27)	2.07
P-330-CCT (30)	2.42
P-333-CCT (33)	2.59

Socket, Cable Clamp in Top of Cap

No. Contacts	Ea.
S-315-CCT (15)	\$ 1.21
S-318-CCT (18)	1.44
S-321-CCT (21)	1.67
S-324-CCT (24)	1.96
S-327-CCT (27)	2.19
S-330-CCT (30)	2.54
S-333-CCT (33)	2.71

Plug, Cable Clamp in Cap

No. Contacts	Ea.
P-302-CCT (2)	\$.48
P-303-CCT (3)	.52
P-304-CCT (4)	.56
P-306-CCT (6)	.62
P-308-CCT (8)	.68
P-310-CCT (10)	.76
P-312-CCT (12)	.84

Socket, Cable Clamp in Cap

No. Contacts	Ea.
S-302-CCT (2)	\$.49
S-303-CCT (3)	.53
S-304-CCT (4)	.57
S-306-CCT (6)	.65
S-308-CCT (8)	.75
S-310-CCT (10)	.85
S-312-CCT (12)	.95

Plug, Cable Clamp in Top of Cap and with Latches

No. Contacts	Ea.
P-315-CCT-L (15)	\$ 1.21
P-318-CCT-L (18)	1.44
P-321-CCT-L (21)	1.67
P-324-CCT-L (24)	1.96
P-327-CCT-L (27)	2.19
P-330-CCT-L (30)	2.54
P-333-CCT-L (33)	2.71

Socket, Cable Clamp in Top of Cap and with Keepers

No. Contacts	Ea.
S-315-CCT-K (15)	\$ 1.33
S-318-CCT-K (18)	1.56
S-321-CCT-K (21)	1.79
S-324-CCT-K (24)	2.08
S-327-CCT-K (27)	2.31
S-330-CCT-K (30)	2.66
S-333-CCT-K (33)	2.84

"400" SERIES PLUGS AND SOCKETS

(Formerly "Heavy Duty")

General Specifications

2, 4, 6, 8, 10 and 12 Contacts.
 All plugs and sockets are polarized.
 Phosphor bronze "knife switch" type socket contacts engage both sides of flat plug contacts—double contact area.
 Molded Bakelite insulation.
 Fibre linings in caps.
 Plug or socket for panel mounting.
 Plug or socket with caps.
 Finish on caps—Black Crystal.
 Plug prong cross section $\frac{1}{8}'' \times \frac{1}{8}''$.
 Locking fittings available for panel types or extension cables as shown.
 We recommend using the 400 series in circuits not exceeding 110 Volts and 10 Amperes, although circuit characteristics may permit higher ratings.

PLUG—Less Angle Brackets not Drilled or Tapped Unless Specified



No. Contacts	Pr	Ea.
P-402-LAB (2)	.29	
P-404-LAB (4)	.40	
P-406-LAB (6)	.52	
P-408-LAB (8)	.63	
P-410-LAB (10)	.75	
P-412-LAB (12)	.86	

SOCKET—Less Angle Brackets. Not Drilled or Tapped Unless Specified



No. Contacts	Pr	Ea.
S-402-LAB (2)	.35	
S-404-LAB (4)	.52	
S-406-LAB (6)	.69	
S-408-LAB (8)	.86	
S-410-LAB (10)	1.04	
S-412-LAB (12)	1.21	

PLUG—with Angle Brackets for 1/16" Panel



No. Contacts	Pr	Ea.
P-402-AB (2)	.52	
P-404-AB (4)	.63	
P-406-AB (6)	.75	
P-408-AB (8)	.86	
P-410-AB (10)	.98	
P-412-AB (12)	1.09	

SOCKET—with Angle Brackets



No. Contacts	Pr	Ea.
S-402-AB (2)	.58	
S-404-AB (4)	.75	
S-406-AB (6)	.92	
S-408-AB (8)	1.09	
S-410-AB (10)	1.27	
S-412-AB (12)	1.44	

PLUG—with Shallow Brackets



No. Contacts	Pr	Ea.
P-402-SB (2)	.63	
P-404-SB (4)	.81	
P-406-SB (6)	.98	
P-408-SB (8)	1.15	
P-410-SB (10)	1.33	
P-412-SB (12)	1.50	

SOCKET—with Shallow Brackets



No. Contacts	Pr	Ea.
S-402-SB (2)	.69	
S-404-SB (4)	.92	
S-406-SB (6)	1.15	
S-408-SB (8)	1.38	
S-410-SB (10)	1.61	
S-412-SB (12)	1.84	

PLUG—with Deep Bracket



No. Contacts	Pr	Ea.
P-402-DB (2)	.81	
P-404-DB (4)	.98	
P-406-DB (6)	1.15	
P-408-DB (8)	1.38	
P-410-DB (10)	1.61	
P-412-DB (12)	1.84	

SOCKET—with Deep Brackets



No. Contacts	Pr	Ea.
S-402-DB (2)	.89	
S-404-DB (4)	.92	
S-406-DB (6)	1.15	
S-408-DB (8)	1.38	
S-410-DB (10)	1.61	
S-412-DB (12)	1.84	

PLUGS

PLUG—Flared Hole in Top	No. Contacts	Pr	Ea.	PLUG—Flared Hole in End	No. Contacts	Pr	Ea.
P-402-FHT (2)	2	.58		P-402-FHE (2)	2	.58	
P-404-FHT (4)	4	.75		P-404-FHE (4)	4	.75	
P-406-FHT (6)	6	.92		P-406-FHE (6)	6	.92	
P-408-FHT (8)	8	1.09		P-408-FHE (8)	8	1.09	
P-410-FHT (10)	10	1.26		P-410-FHE (10)	10	1.26	
P-412-FHT (12)	12	1.43		P-412-FHE (12)	12	1.43	



P-404-FHT

SOCKETS

SOCKET—Flared Hole in Top	No. Contacts	Pr	Ea.	SOCKET—Flared Hole in End	No. Contacts	Pr	Ea.
S-402-FHT (2)	2	.64		S-402-FHE (2)	2	.64	
S-404-FHT (4)	4	.87		S-404-FHE (4)	4	.87	
S-406-FHT (6)	6	1.10		S-406-FHE (6)	6	1.10	
S-408-FHT (8)	8	1.33		S-408-FHE (8)	8	1.33	
S-410-FHT (10)	10	1.56		S-410-FHE (10)	10	1.56	
S-412-FHT (12)	12	1.79		S-412-FHE (12)	12	1.79	

PLUGS

PLUG—Cable Clamp in Top	No. Contacts	Pr	Ea.	PLUG—Cable Clamp in End	No. Contacts	Pr	Ea.
P-402-CCT (2)	2	.81		P-402-CCE (2)	2	.81	
P-404-CCT (4)	4	.98		P-404-CCE (4)	4	.98	
P-406-CCT (6)	6	1.15		P-406-CCE (6)	6	1.15	
P-408-CCT (8)	8	1.32		P-408-CCE (8)	8	1.32	
P-410-CCT (10)	10	1.49		P-410-CCE (10)	10	1.49	
P-412-CCT (12)	12	1.66		P-412-CCE (12)	12	1.66	



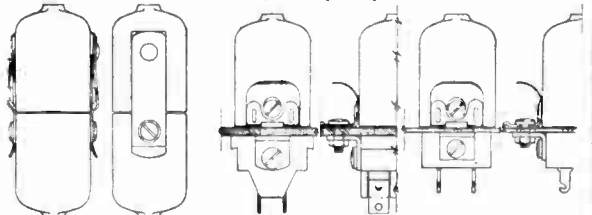
P-404-CCT

SOCKETS

SOCKET—Cable Clamp in Top	No. Contacts	Pr	Ea.	SOCKET—Cable Clamp in End	No. Contacts	Pr	Ea.
S-402-CCT (2)	2	.87		S-402-CCE (2)	2	.87	
S-404-CCT (4)	4	1.10		S-404-CCE (4)	4	1.10	
S-406-CCT (6)	6	1.33		S-406-CCE (6)	6	1.33	
S-408-CCT (8)	8	1.56		S-408-CCE (8)	8	1.56	
S-410-CCT (10)	10	1.79		S-410-CCE (10)	10	1.79	
S-412-CCT (12)	12	2.02		S-412-CCE (12)	12	2.02	

LOCKS FOR 400 SERIES PLUGS AND SOCKETS

(Formerly Heavy Duty)

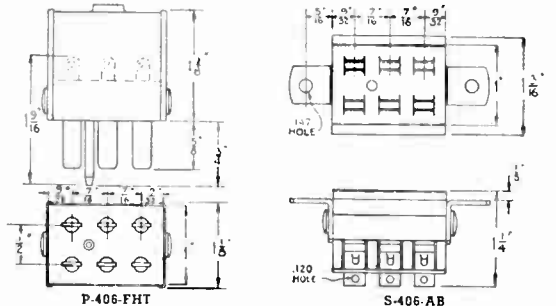


ILLUSTRATING No. 93 LOCK. May be attached to any 400 Series plug for extension cables. If plugs are ordered with this lock, specify "with No. 93 Locks."

ILLUSTRATING No. 63 LOCK. May be used on all panel mount 400 Series plugs and sockets when surface is flush with top of panel. Cannot be used on type 2B plugs.

No. 93 Lock when attached to plug, add to list per pair \$.35
 No. 63 Locks ONLY, per pair \$.35

Dimensions of 400 Series Plugs and Sockets



"500" SERIES PLUGS AND SOCKETS

For Complete Listing of 500 SERIES, Write for No. 500 Catalog

Designed for 5,000 volts and 25 amperes per contact. Circuit characteristics, however, may alter this rating one way or the other.

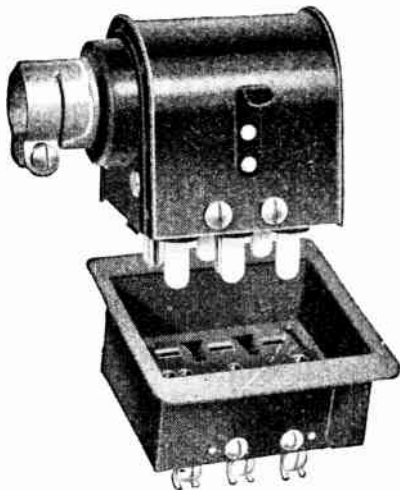
Long leakage path from terminal to terminal, and terminal to ground. Contacts are brass and phosphor bronze, silver plated. Metal parts of caps and brackets are steel, parkerized (rust-proofed). Plug and socket blocks are interchangeable in caps and brackets.

All sizes are polarized in a manner to prevent a smaller plug being inserted in a larger socket. Thus different sizes may be used on one installation without danger of making wrong connections.

Extreme care has been taken to make terminal connections under cap very accessible both for original wiring and subsequent inspection. The cap is insulated with canvas bakelite. Plug prong cross section $\frac{1}{16}$ " x $\frac{3}{32}$ ".

IMPORTANT: For safety with high voltages DEEP BRACKETS should always be used on one plug or socket, when the other plug or socket has a CAP. SHALLOW BRACKETS are for use only in connecting two units, each unit having plug or socket with SHALLOW BRACKET.

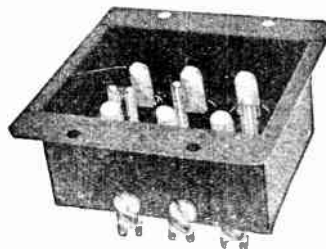
P-506-CE
(Plug with Cap)
(BX Clamp shown
but not furnished)



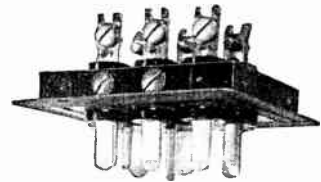
S-506-DB
(Socket with Deep Bracket)



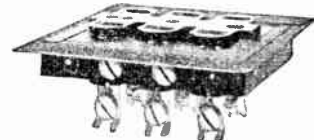
S-506-CE
(Socket with Cap)



P-506-DB
(Plug with Deep Bracket)



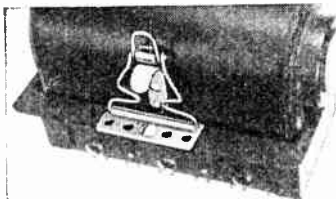
P-506-SB
(Plug with Shallow Bracket)



S-506-SB
(Socket with Shallow Bracket)

Cable entrance: Because of the great variation in type and size of cables, we have considered it best not to supply cable clamps of any kind. The cap end is made to accommodate standard BX clamps which may be obtained at any electrical jobbing house. The cap end will be furnished with round hole from $\frac{1}{2}$ " diameter and $1\frac{1}{4}$ " diameter in steps of $\frac{1}{8}$ ", if the size required is given on order. If no size is given, plain cap end with center punch locating center will be shipped.

LOCKS FOR 500 SERIES PLUGS AND SOCKETS



Locks shown above are used in connection with any DEEP BRACKET and cap combination.

The locks securely hold the units together, but they can be released instantly.

The mounting plates are made to fit all DEEP BRACKETS, and are fastened by the same screws or rivets that hold the deep brackets to the panel. Can not be used on shallow brackets. Sold in pairs only.

No. 500-L Locks..... Per pair \$0.90

PLUG

With Cap

Code	Price Ea.
P-502-CE	\$2.50
P-504-CE	3.60
P-506-CE	4.70
P-508-CE	5.80
P-510-CE	6.90
P-512-CE	8.00

PLUG

With Deep Bracket

Code	Price Ea.
P-502-DB	\$2.20
P-504-DB	3.15
P-506-DB	4.10
P-508-DB	5.05
P-510-DB	6.00
P-512-DB	6.95

PLUG

With Shallow Bracket

Code	Price Ea.
P-502-SB	\$2.20
P-504-SB	3.15
P-506-SB	4.10
P-508-SB	5.05
P-510-SB	6.00
P-512-SB	6.95

SOCKET

With Cap

Code	Price Ea.
S-502-CE	\$2.50
S-504-CE	3.60
S-506-CE	4.70
S-508-CE	5.80
S-510-CE	6.90
S-512-CE	8.00

SOCKET

With Deep Bracket

Code	Price Ea.
S-502-DB	\$2.20
S-504-DB	3.15
S-506-DB	4.10
S-508-DB	5.05
S-510-DB	6.00
S-512-DB	6.95

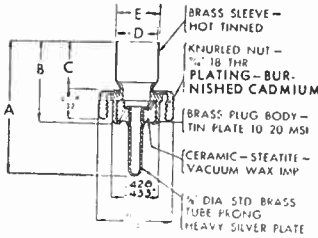
SOCKET

With Shallow Bracket

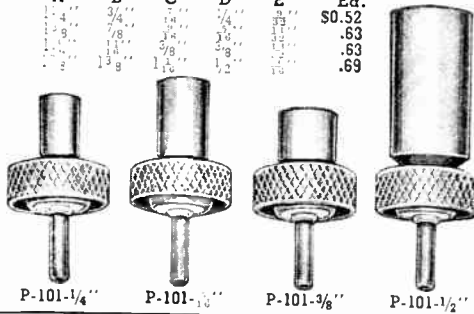
Code	Price Ea.
S-502-SB	\$2.20
S-504-SB	3.15
S-506-SB	4.10
S-508-SB	5.05
S-510-SB	6.00
S-512-SB	6.95

SERIES 101 PLUGS

The entire No. 101 Series of Plugs are identical with the exception of the cable ferrule which is furnished in four sizes as listed below. All metal parts are of brass. These Plugs fit all of the No. 101 Series Sockets. Assembly meets Navy Specifications. A low loss Plug and Socket ideal for high frequency connections.



Code, No.	A	B	C	D	E	Ea.
P-101-1/4"	1.4	3/4"	1/4"	3/4"	3/8"	\$0.52
P-101-1/8"	1.4	7/8"	1/4"	3/4"	3/8"	.63
P-101-3/8"	1.4	1 1/8"	1/4"	3/4"	3/8"	.63
P-101-1/2"	1.4	1 3/8"	1/4"	1/2"	3/8"	.69



SERIES 101 SOCKETS

The No. 101 Series Sockets are furnished in three types as shown below. Base is of Brass, Nickel Plated with Chrome Flash. Brass contact is Silver Plated. Insulation of low loss natural color XXX Bakelite. Meets Navy Specifications. The S-101-D is similar to the S-101 except that the Bakelite is recessed in the base. S-101-D Mod. is the same as S-101-D except that two sides of the base are milled as shown. Mounting Holes No. 101 - No. 41 drill on 1 1/4" centers. Mounting Holes No. 101-D and 101-D Mod. No. 30 drill on 1 1/8" centers.



S-101	S-101-D	S-101-D Mod
Price Each—\$0.46	Price Each—\$0.69	Price Each—\$0.69

SERIES 201

PLUGS

The No. 201 Series Plugs are of the same design as the No. 101 but are of heavier stock and larger. Made in one size only with 3/8" ferrule. All metal parts are of Brass, same finish as No. 101 Series and Wax Impregnated Ceramic insulation. Overall length 1 1/4". Prong diameter 3/16". Fits only the 201 Socket.

SOCKETS

The 201 Socket is similar to the S-101-D except larger. Brass base is nickel plated with Chrome Flash. Brass contact is Silver Plated. Insulation is of low loss natural color XXX Bakelite. Both Plug and Socket meet Navy Specifications. Mounting holes—No. 30 drill on 1" centers.



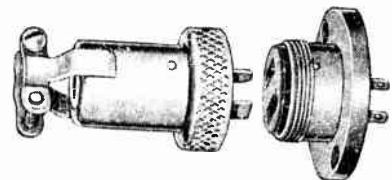
Code	1/4"-27 thread	Code	Ea.
P-201-3/8"	\$0.81	S-201	\$0.86

SERIES 202

PLUGS

The 202 Series Plugs and Sockets are made in two contact types only. Metal parts are of Brass with burnished Cadmium Plate. Insulation is of Molded Bakelite. Phosphor Bronze "Knife Switch" type Socket Contacts engage both sides of flat Plug Contacts—double contact area. Formed Fibre linings in caps. Polarized. Knurled nut has 3/4"-27 thread. Socket Mounting Holes: No. 30 drill on 1" centers.

SOCKETS



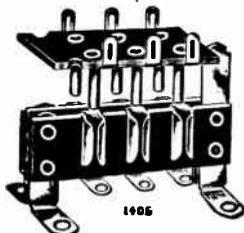
P-202-CCT—\$0.64 (as shown above)	P-202-FHT—\$0.52 (without Cable Clamps)	S-202-B—\$0.74
S-202-CCT—\$0.65	S-202-FHT—\$0.53	P-202-B—\$0.75

1400 SERIES PLUGS AND SOCKETS

This series of "disconnect" plugs and sockets has the distinct advantage of low cost for a separate unit handling many circuits. Due to exposed metal parts, it is recommended for use when the complete unit is within a housing. Reduces costs of servicing units. Advantageous in shipping when it is desirable to pack units separately. Polarized—assures

correct coupling. Spring temper brass sockets assure perfect contact. Standard units are listed below from 5 to 16 contacts. However we can supply units having as many as 30 or more contacts.

On No. 1420 or larger we recommend the plug be divided into two or more units, as a single long plug is not mechanically strong. The socket will be made in one assembly.



No. 1405 (5 Contacts)	Ea. \$0.32	No. 1411 (11 Contacts)	Ea. \$0.62
No. 1406 (6 Contacts)	Ea. .37	No. 1412 (12 Contacts)	Ea. .67
No. 1407 (7 Contacts)	Ea. .42	No. 1413 (13 Contacts)	Ea. .72
No. 1408 (8 Contacts)	Ea. .47	No. 1414 (14 Contacts)	Ea. .77
No. 1409 (9 Contacts)	Ea. .52	No. 1415 (15 Contacts)	Ea. .82
No. 1410 (10 Contacts)	Ea. .57	No. 1416 (16 Contacts)	Ea. .87

For units with more than 16 contacts, add 5c to the No. 1416 price for each additional contact

BARRIER TYPE TERMINAL STRIPS

Increased insulation is provided by having Barriers placed between each Terminal. These Barriers follow around the edge of the Strips and terminate at the base. They not only make a long leakage path but prevent direct shorts from frayed wires at the terminals. Mounting holes are at the ends as illustrated.

The base is molded Bakelite. The Terminals and Binder Screws are of brass, nickel plated. **Marker Strips** may be ordered and imprinted to supply terminal designations. These Marker Strips mount beneath Terminal Strips and also afford insulation from metal mounting surface.

5-40 x 3/16" Binder Head Screws



No. 2-140



No. 2-140-W



No. 2-140-3/4-W

No. 140 Code	Ea.
1-140	\$.14
2-140	.22
3-140	.30
4-140	.38
5-140	.46
6-140	.54
7-140	.62
8-140	.70
9-140	.78
10-140	.86
11-140	.94
12-140	1.02
13-140	1.10
14-140	1.19
15-140	1.27
16-140	1.35
17-140	1.43
18-140	1.51
19-140	1.59
20-140	1.67
21-140	1.75

No. 140-W Code	Ea.
1-140-W	\$.17
2-140-W	.29
3-140-W	.40
4-140-W	.52
5-140-W	.63
6-140-W	.75
7-140-W	.86
8-140-W	.98
9-140-W	1.09
10-140-W	1.21
11-140-W	1.32
12-140-W	1.44
13-140-W	1.55
14-140-W	1.67
15-140-W	1.78
16-140-W	1.96
17-140-W	2.01
18-140-W	2.13
19-140-W	2.24
20-140-W	2.36
21-140-W	2.47

No. 140-3/4-W Code	Ea.
1-140-3/4-W	\$.17
2-140-3/4-W	.29
3-140-3/4-W	.40
4-140-3/4-W	.52
5-140-3/4-W	.63
6-140-3/4-W	.75
7-140-3/4-W	.86
8-140-3/4-W	.98
9-140-3/4-W	1.09
10-140-3/4-W	1.21
11-140-3/4-W	1.32
12-140-3/4-W	1.44
13-140-3/4-W	1.55
14-140-3/4-W	1.67
15-140-3/4-W	1.78
16-140-3/4-W	1.90
17-140-3/4-W	2.01
18-140-3/4-W	2.13
19-140-3/4-W	2.24
20-140-3/4-W	2.36
21-140-3/4-W	2.47

No. 140 TERMINAL STRIPS

MARKER STRIPS

for 140, 140W and 140 3/4 W. .032" Fibre. Imprinting extra. For Bakelite add 20% to prices below and specify code MSX.

Code	Per C.
MS-1-140	\$.25
MS-2-140	3.00
MS-3-140	3.75
MS-4-140	4.50
MS-5-140	5.25
MS-6-140	6.00
MS-7-140	6.75
MS-8-140	7.50
MS-9-140	8.25
MS-10-140	9.00
MS-11-140	9.75
MS-12-140	10.50
MS-13-140	11.25
MS-14-140	12.00
MS-15-140	12.75
MS-16-140	13.50
MS-17-140	14.25
MS-18-140	15.00
MS-19-140	15.75
MS-20-140	16.50
MS-21-140	17.25

Metal to Metal Spacing over Bakelite 1/4"

MARKER STRIPS

for 140-Y. .032" Fibre. Imprinting extra. For Bakelite add 20% to prices below and specify code MSX.



No. 2-140-Y

No. 140-Y Code	Ea.
1-140-Y	\$.17
2-140-Y	.29
3-140-Y	.40
4-140-Y	.52
5-140-Y	.63
6-140-Y	.75
7-140-Y	.86
8-140-Y	.98
9-140-Y	1.09
10-140-Y	1.21
11-140-Y	1.32
12-140-Y	1.44
13-140-Y	1.55
14-140-Y	1.67
15-140-Y	1.78
16-140-Y	1.90
17-140-Y	2.01
18-140-Y	2.13
19-140-Y	2.24
20-140-Y	2.36
21-140-Y	2.47

Code	Per C.
MS-1-140-Y	\$ 5.25
MS-2-140-Y	6.00
MS-3-140-Y	6.75
MS-4-140-Y	7.50
MS-5-140-Y	8.25
MS-6-140-Y	9.00
MS-7-140-Y	9.75
MS-8-140-Y	10.50
MS-9-140-Y	11.25
MS-10-140-Y	12.00
MS-11-140-Y	12.75
MS-12-140-Y	13.50
MS-13-140-Y	14.25
MS-14-140-Y	15.00
MS-15-140-Y	15.75
MS-16-140-Y	16.50
MS-17-140-Y	17.25
MS-18-140-Y	18.00
MS-19-140-Y	18.75
MS-20-140-Y	19.50
MS-21-140-Y	20.25

6-32 x 1/4" Binder Head Screws



No. 2-141



No. 2-141-W



No. 2-141-3/4-W

No. 141 Code	Ea.
1-141	\$.18
2-141	.28
3-141	.38
4-141	.49
5-141	.59
6-141	.69
7-141	.80
8-141	.90
9-141	1.00
10-141	1.11
11-141	1.21
12-141	1.31
13-141	1.42
14-141	1.52
15-141	1.62
16-141	1.73
17-141	1.83
18-141	1.93
19-141	2.04
20-141	2.14

No. 141-W Code	Ea.
1-141-W	\$.22
2-141-W	.37
3-141-W	.52
4-141-W	.67
5-141-W	.82
6-141-W	.97
7-141-W	1.12
8-141-W	1.27
9-141-W	1.42
10-141-W	1.57
11-141-W	1.72
12-141-W	1.87
13-141-W	2.02
14-141-W	2.17
15-141-W	2.32
16-141-W	2.47
17-141-W	2.62
18-141-W	2.77
19-141-W	2.92
20-141-W	3.07

No. 141-3/4-W Code	Ea.
1-141-3/4-W	\$.22
2-141-3/4-W	.37
3-141-3/4-W	.52
4-141-3/4-W	.67
5-141-3/4-W	.82
6-141-3/4-W	.97
7-141-3/4-W	1.12
8-141-3/4-W	1.27
9-141-3/4-W	1.42
10-141-3/4-W	1.57
11-141-3/4-W	1.72
12-141-3/4-W	1.87
13-141-3/4-W	2.02
14-141-3/4-W	2.17
15-141-3/4-W	2.32
16-141-3/4-W	2.47
17-141-3/4-W	2.62
18-141-3/4-W	2.77
19-141-3/4-W	2.92
20-141-3/4-W	3.07

No. 141 TERMINAL STRIPS

MARKER STRIPS

for 141, 141W and 141 3/4 W. .032" Fibre. Imprinting extra. For Bakelite add 20% to prices below and specify code MSX.

Code	Per C.
MS-1-141	\$.25
MS-2-141	3.50
MS-3-141	4.50
MS-4-141	5.50
MS-5-141	6.50
MS-6-141	7.50
MS-7-141	8.50
MS-8-141	9.50
MS-9-141	10.50
MS-10-141	11.50
MS-11-141	12.50
MS-12-141	13.50
MS-13-141	14.50
MS-14-141	15.50
MS-15-141	16.50
MS-16-141	17.50
MS-17-141	18.50
MS-18-141	19.50
MS-19-141	20.50
MS-20-141	21.50

Metal to Metal Spacing over Bakelite 3/8"

MARKER STRIPS

for 141-Y. .032" Fibre. Imprinting extra. For Bakelite add 20% to prices below and specify code MSX.



No. 2-141-Y

No. 141-Y Code	Ea.
1-141-Y	\$.22
2-141-Y	.37
3-141-Y	.52
4-141-Y	.67
5-141-Y	.82
6-141-Y	.97
7-141-Y	1.12
8-141-Y	1.27
9-141-Y	1.42
10-141-Y	1.57
11-141-Y	1.72
12-141-Y	1.87
13-141-Y	2.02
14-141-Y	2.17
15-141-Y	2.32
16-141-Y	2.47
17-141-Y	2.62
18-141-Y	2.77
19-141-Y	2.92
20-141-Y	3.07

Code	Per C.
MS-1-141-Y	\$ 5.50
MS-2-141-Y	6.50
MS-3-141-Y	7.50
MS-4-141-Y	8.50
MS-5-141-Y	9.50
MS-6-141-Y	10.50
MS-7-141-Y	11.50
MS-8-141-Y	12.50
MS-9-141-Y	13.50
MS-10-141-Y	14.50
MS-11-141-Y	15.50
MS-12-141-Y	16.50
MS-13-141-Y	17.50
MS-14-141-Y	18.50
MS-15-141-Y	19.50
MS-16-141-Y	20.50
MS-17-141-Y	21.50
MS-18-141-Y	22.50
MS-19-141-Y	23.50
MS-20-141-Y	24.50

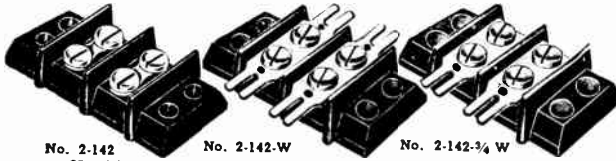
HOWARD B. JONES DIVISION ★ ELECTRICAL CONNECTING DEVICES

BARRIER TYPE TERMINAL STRIPS

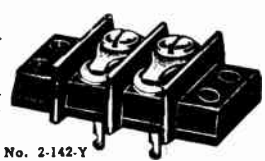
8-32 x 3/8" Binder Head Screws

No. 142 TERMINAL STRIPS

Metal to Metal Spacing over Bakelite 3/8"



MARKER STRIPS
for 142, 142-W and 142-3/4-W, .032" Fibre. Imprinting extra. For Bakelite add 20% to prices below and specify code MSX.

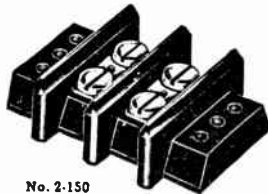


MARKER STRIPS
for 142-Y, .032" Fibre. Imprinting extra. For Bakelite add 20% to prices below and specify code MSX.

No. 142		No. 142-W		No. 142-3/4-W		No. 142-Y		No. 142-Y	
Code	Pr.	Code	Pr.	Code	Pr.	Code	Pr.	Code	Pr.
1-142	\$.21	1-142-W	\$.27	1-142-3/4-W	\$.27	1-142-Y	\$.27	MS-1-142-Y	\$ 5.75
2-142	.33	2-142-W	.45	2-142-3/4-W	.45	2-142-Y	.45	MS-2-142-Y	7.00
3-142	.46	3-142-W	.64	3-142-3/4-W	.64	3-142-Y	.64	MS-3-142-Y	8.50
4-142	.59	4-142-W	.82	4-142-3/4-W	.82	4-142-Y	.82	MS-4-142-Y	9.50
5-142	.71	5-142-W	1.01	5-142-3/4-W	1.01	5-142-Y	1.01	MS-5-142-Y	10.75
6-142	.84	6-142-W	1.19	6-142-3/4-W	1.19	6-142-Y	1.19	MS-6-142-Y	12.00
7-142	.97	7-142-W	1.38	7-142-3/4-W	1.38	7-142-Y	1.38	MS-7-142-Y	13.25
8-142	1.09	8-142-W	1.56	8-142-3/4-W	1.56	8-142-Y	1.56	MS-8-142-Y	14.50
9-142	1.22	9-142-W	1.75	9-142-3/4-W	1.75	9-142-Y	1.75	MS-9-142-Y	15.75
10-142	1.35	10-142-W	1.93	10-142-3/4-W	1.93	10-142-Y	1.93	MS-10-142-Y	17.00
11-142	1.47	11-142-W	2.12	11-142-3/4-W	2.12	11-142-Y	2.12	MS-11-142-Y	18.25
12-142	1.60	12-142-W	2.30	12-142-3/4-W	2.30	12-142-Y	2.30	MS-12-142-Y	19.50
13-142	1.73	13-142-W	2.49	13-142-3/4-W	2.49	13-142-Y	2.49	MS-13-142-Y	20.75
14-142	1.85	14-142-W	2.67	14-142-3/4-W	2.67	14-142-Y	2.67	MS-14-142-Y	22.00
15-142	1.98	15-142-W	2.86	15-142-3/4-W	2.86	15-142-Y	2.86	MS-15-142-Y	23.25
16-142	2.11	16-142-W	3.04	16-142-3/4-W	3.04	16-142-Y	3.04	MS-16-142-Y	24.50
17-142	2.23	17-142-W	3.22	17-142-3/4-W	3.22	17-142-Y	3.22	MS-17-142-Y	25.75

No. 150 TERMINAL STRIPS

1 1/4" wide by 3/8" high. Terminals are mounted on 1/8" centers. Screws: 10-32 x 1/8" brass, burnished nickel plate. Fits standard 50 Amp. solder lug for 6 Ga. stranded wire. Metal to metal spacing over bakelite 3/8".

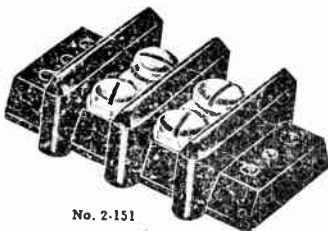


No. 2-150

No. 150		No. 150-W		No. 150-3/4-W		MARKER STRIPS	
Code	Pr.	Code	Pr.	Code	Pr.	Code	Pr.
1-150	\$.50	1-150-W	\$.60	1-150-3/4-W	\$.60	MS-1-150	\$6.00
2-150	.85	2-150-W	1.03	2-150-3/4-W	1.03	MS-2-150	7.40
3-150	1.20	3-150-W	1.45	3-150-3/4-W	1.45	MS-3-150	8.80
4-150	1.55	4-150-W	1.88	4-150-3/4-W	1.88	MS-4-150	10.20
5-150	1.90	5-150-W	2.30	5-150-3/4-W	2.30	MS-5-150	11.60
6-150	2.25	6-150-W	2.73	6-150-3/4-W	2.73	MS-6-150	13.00
7-150	2.60	7-150-W	3.15	7-150-3/4-W	3.15	MS-7-150	14.40
8-150	2.95	8-150-W	3.58	8-150-3/4-W	3.58	MS-8-150	15.80
9-150	3.30	9-150-W	4.00	9-150-3/4-W	4.00	MS-9-150	17.20
10-150	3.65	10-150-W	4.43	10-150-3/4-W	4.43	MS-10-150	18.60

No. 151 TERMINAL STRIPS

2" wide by 1/2" high. Terminals are mounted on 3/8" centers. Screws: 12-32 x 3/8" brass, burnished nickel plate. Fits standard 70 Amp. solder lug for 4 Ga. stranded wire. Metal to metal spacing over bakelite 1/2".

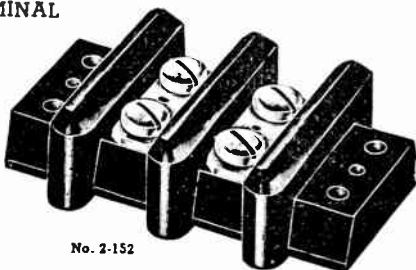


No. 2-151

No. 151		No. 151-W		No. 151-3/4-W		MARKER STRIPS	
Code	Pr.	Code	Pr.	Code	Pr.	Code	Pr.
1-151	\$.85	1-151-W	\$1.00	1-151-3/4-W	\$1.00	MS-1-151	\$6.25
2-151	1.55	2-151-W	1.85	2-151-3/4-W	1.85	MS-2-151	9.25
3-151	2.25	3-151-W	2.70	3-151-3/4-W	2.70	MS-3-151	12.25
4-151	2.95	4-151-W	3.55	4-151-3/4-W	3.55	MS-4-151	15.25
5-151	3.65	5-151-W	4.40	5-151-3/4-W	4.40	MS-5-151	18.25
6-151	4.35	6-151-W	5.25	6-151-3/4-W	5.25	MS-6-151	21.25
7-151	5.05	7-151-W	6.10	7-151-3/4-W	6.10	MS-7-151	24.25
8-151	5.75	8-151-W	6.95	8-151-3/4-W	6.95	MS-8-151	27.25

No. 152 TERMINAL STRIPS

2 1/2" wide by 1 1/8" high. Terminals are mounted on 1/2" centers. Screws: 1/4"-28 x 1/2" brass, burnished nickel plate. Fits standard 90 Amp. solder lug for 2 Ga. stranded wire. Metal to metal spacing over bakelite 1".



No. 2-152

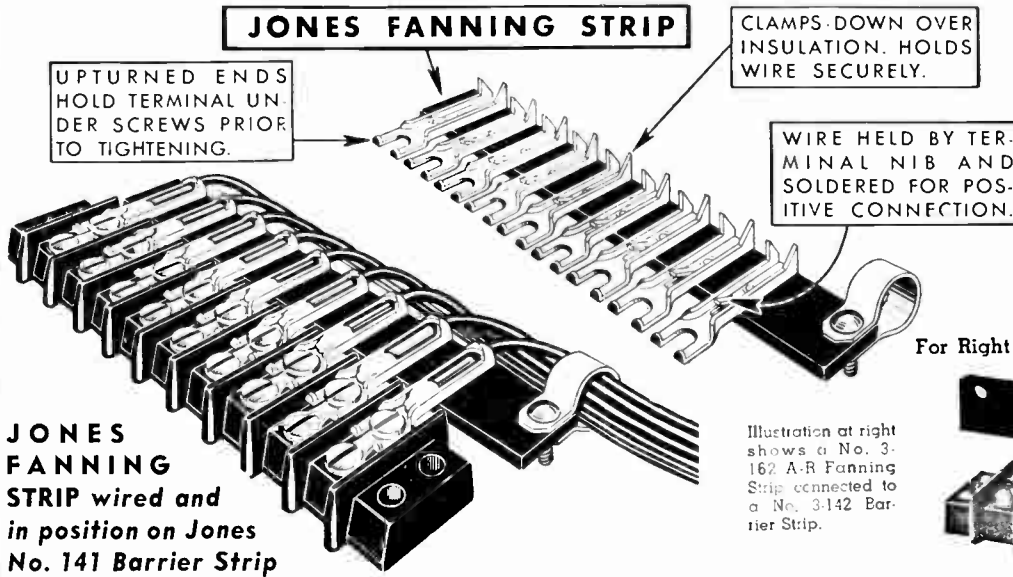
No. 152		No. 152-W		No. 152-3/4-W		MARKER STRIPS	
Code	Pr.	Code	Pr.	Code	Pr.	Code	Pr.
1-152	\$1.15	1-152-W	\$1.35	1-152-3/4-W	\$1.35	MS-1-152	\$6.50
2-152	2.20	2-152-W	2.60	2-152-3/4-W	2.60	MS-2-152	11.50
3-152	3.25	3-152-W	3.85	3-152-3/4-W	3.85	MS-3-152	16.50
4-152	4.30	4-152-W	5.10	4-152-3/4-W	5.10	MS-4-152	21.50
5-152	5.35	5-152-W	6.35	5-152-3/4-W	6.35	MS-5-152	26.50
6-152	6.40	6-152-W	7.60	6-152-3/4-W	7.60	MS-6-152	31.50

"W" Solder Terminal for Barrier Strips



Code	Pr.	Code	Pr.	Code	Pr.
No. W-140	\$3.45	No. W-142	\$5.75	No. W-151	\$13.80
No. W-141	4.90	No. W-150	8.05	No. W-152	20.70

FANNING STRIPS FOR CONNECTING TO BARRIER TERMINAL STRIPS



Eliminates
Color Coding

Speeds up
Assembly

Improves
Appearance

Insures Correct
Connections

For Right Angle Mounting

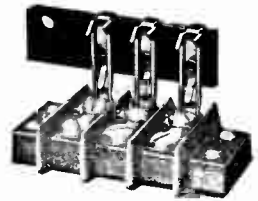


Illustration at right shows a No. 3-162 A-R Fanning Strip connected to a No. 3-142 Barrier Strip.

JONES FANNING STRIP wired and in position on Jones No. 141 Barrier Strip

Jones Fanning Strip Terminals are of .032" Brass, Cadmium Plated. The Bakelite strips are furnished with a hole in either the right or left end for fastening the cable with a cable clamp or lacing twine. Simplifies cable or harness wiring assuring positive connections. Makes replacement of units an easy matter and assures correct connections after servicing.

In many instances where there is not sufficient room for the standard Fanning Strips we can supply those listed formed for right angle mounting permitting use when Barrier mounts flush with the side of the chassis. Specify Series 160A, 161A and 162A instead of 160, 161 and 162. Prices slightly higher.



6-161-L (Cable Clamp on Left)



6-161-R (Cable Clamp on Right)



CABLE CLAMPS

Cable Clamps are available for the Fanning Strips listed in the 160 and 162 series and for 6 different sizes of standard cable. They are made of Brass Nickel Plated with a round inner Cable Pinned Brass Spring. For convenience the Cable Clamps are furnished unassembled.

CABLE CLAMP SIZES AVAILABLE

Code	Size
CC-161-4	1/4"
CC-161-6	3/8"
CC-161-8	1/2"
CC-161-10	5/8"
CC-161-12	3/4"
CC-161-14	7/8"

List price 10c each.

Be sure to give code number when ordering.

On small sizes Lacing Twine can be used for anchoring cable to the Fanning Strip instead of Cable Clamp.

THE 160 SERIES

The following Fanning Strips fit the 140 Series Barrier Strips. Terminals are mounted on a Bakelite .78" wide and on 3/8" centers.

Code	Pr.	Code	Pr.
2-160-L	.11	2-160-R	.11
3-160-L	.16	3-160-R	.16
4-160-L	.21	4-160-R	.21
5-160-L	.26	5-160-R	.26
6-160-L	.32	6-160-R	.32
7-160-L	.37	7-160-R	.37
8-160-L	.42	8-160-R	.42
9-160-L	.47	9-160-R	.47
10-160-L	.53	10-160-R	.53
11-160-L	.58	11-160-R	.58
12-160-L	.63	12-160-R	.63
13-160-L	.68	13-160-R	.68
14-160-L	.74	14-160-R	.74
15-160-L	.79	15-160-R	.79
16-160-L	.84	16-160-R	.84
17-160-L	.89	17-160-R	.89
18-160-L	.95	18-160-R	.95
19-160-L	1.00	19-160-R	1.00
20-160-L	1.05	20-160-R	1.05
21-160-L	1.10	21-160-R	1.10

THE 161 SERIES

The following Fanning Strips fit the 141 Series Barrier Strips. Terminals are mounted on a Bakelite .78" wide and on 3/8" centers.

Code	Pr.	Code	Pr.
2-161-L	.12	2-161-R	.12
3-161-L	.17	3-161-R	.17
4-161-L	.22	4-161-R	.22
5-161-L	.27	5-161-R	.27
6-161-L	.33	6-161-R	.33
7-161-L	.38	7-161-R	.38
8-161-L	.43	8-161-R	.43
9-161-L	.48	9-161-R	.48
10-161-L	.54	10-161-R	.54
11-161-L	.59	11-161-R	.59
12-161-L	.64	12-161-R	.64
13-161-L	.69	13-161-R	.69
14-161-L	.75	14-161-R	.75
15-161-L	.80	15-161-R	.80
16-161-L	.85	16-161-R	.85
17-161-L	.90	17-161-R	.90
18-161-L	.96	18-161-R	.96
19-161-L	1.01	19-161-R	1.01
20-161-L	1.06	20-161-R	1.06

THE 162 SERIES

The following Fanning Strips fit the 142 Series Barrier Strips. Terminals are mounted on a Bakelite .78" wide and on 3/8" centers.

Code	Pr.	Code	Pr.
2-162-L	.14	2-162-R	.14
3-162-L	.19	3-162-R	.19
4-162-L	.24	4-162-R	.24
5-162-L	.29	5-162-R	.29
6-162-L	.35	6-162-R	.35
7-162-L	.40	7-162-R	.40
8-162-L	.45	8-162-R	.45
9-162-L	.50	9-162-R	.50
10-162-L	.56	10-162-R	.56
11-162-L	.61	11-162-R	.61
12-162-L	.66	12-162-R	.66
13-162-L	.71	13-162-R	.71
14-162-L	.77	14-162-R	.77
15-162-L	.82	15-162-R	.82
16-162-L	.87	16-162-R	.87
17-162-L	.92	17-162-R	.92



NO. 1 TERMINAL STRIPS

Terminal $\frac{1}{8}$ " Round Copper, Flattened at Ends, Tin Plated
A convenient and compact strip where solder connections are desired.

Insulation: Canvas Base Bakelite, $\frac{1}{2}$ " wide, $\frac{3}{16}$ " thick.
Terminals mounted on $\frac{1}{2}$ " centers. Mounting holes $\frac{1}{2}$ " from center of end terminals.

Code	Ea.	Code	Ea.
No. 2-1 (2 Terminals)	\$.11	No. 5-1 (5 Terminals)	\$.14
No. 3-1 (3 Terminals)	.12	No. 6-1 (6 Terminals)	.15
No. 4-1 (4 Terminals)	.13		

For terminal strips with more than 5 terminals, add 1c to the No. 6-1 price for each additional terminal.



NO. 12 TERMINAL STRIPS

Terminal $\frac{1}{16}$ " Brass, Tin Plated

Similar to No. 11, except larger. Solder tab is flat, but will be bent up, if specified.
Screw: 10-32 x $\frac{3}{8}$ " brass, binder head, burnished nickel plate. Insulation: XP Bakelite, 1" wide, $\frac{1}{4}$ " thick. Terminals mounted on $\frac{7}{8}$ " centers. Mounting holes $\frac{7}{8}$ " from center of end terminals. Will take up to No. 9 B & S gauge wire (.114").

Code	Ea.	Code	Ea.
No. 2-12 (2 Terminals)	\$.40	No. 5-12 (5 Terminals)	\$.88
No. 3-12 (3 Terminals)	.56	No. 6-12 (6 Terminals)	1.04
No. 4-12 (4 Terminals)	.72		

For terminal strips with more than 6 terminals, add 16c to the No. 6-12 price for each additional terminal.



NO. 3 TERMINAL STRIPS

Terminal $\frac{1}{8}$ " Round Copper, Flattened at Each End, Tin Plated

Similar to No. 1, except closer spacing and furnished with holes instead of hooks.
Insulation: Canvas base Bakelite, $\frac{1}{2}$ " wide, $\frac{3}{16}$ " thick.
Terminals mounted on $\frac{3}{8}$ " centers. Mounting holes $\frac{3}{8}$ " from center of end terminals.

Code	Ea.	Code	Ea.
No. 2-3 (2 Terminals)	\$.13	No. 5-3 (5 Terminals)	\$.16
No. 3-3 (3 Terminals)	.14	No. 6-3 (6 Terminals)	.17
No. 4-3 (4 Terminals)	.15		

For terminal strips with more than 6 terminals, add $1\frac{1}{2}$ c to the No. 6-3 price for each additional terminal.



NO. 16 TERMINAL STRIPS

Terminal .028" Brass, Cadmium Plated

A popular priced screw and solder terminal with many desirable features.
Screw: 6-32 x $\frac{1}{4}$ " brass, binder head, burnished nickel plate. Insulation: XP Bakelite, $\frac{3}{4}$ " wide, $\frac{1}{8}$ " thick. Terminals spaced on $\frac{1}{2}$ " centers. Mounting holes $\frac{1}{2}$ " from center of end terminals.

Code	Ea.	Code	Ea.
No. 2-16 (2 Terminals)	\$.12	No. 5-16 (5 Terminals)	\$.24
No. 3-16 (3 Terminals)	.16	No. 6-16 (6 Terminals)	.28
No. 4-16 (4 Terminals)	.20		

For terminal strips with more than 6 terminals, add 4c to the No. 6-16 price for each additional terminal.



NO. 6 TERMINAL STRIPS

Terminal .046" Brass, Cadmium Plated

Screw and solder terminal. Substantial and reasonably priced.
Screw: 6-32 x $\frac{1}{4}$ " brass, binder head, burnished nickel plate. Insulation: XP Bakelite, $\frac{3}{4}$ " wide, $\frac{1}{8}$ " thick. Terminals spaced on $\frac{1}{2}$ " centers. Mounting holes $\frac{1}{2}$ " from center of end terminals.

Code	Ea.	Code	Ea.
No. 2-6 (2 Terminals)	\$.14	No. 5-6 (5 Terminals)	\$.26
No. 3-6 (3 Terminals)	.18	No. 6-6 (6 Terminals)	.30
No. 4-6 (4 Terminals)	.22		

For terminal strips with more than 6 terminals, add 4c to the No. 6-6 price for each additional terminal.



NO. 20 TERMINAL STRIPS

Terminal $\frac{1}{16}$ " Brass, Cadmium Plated

Strong two screw terminal with ears to hold wire securely under screw.
Screws: 6-32 x $\frac{1}{4}$ " brass, binder head, burnished nickel plate. Insulation: XP Bakelite, $\frac{7}{8}$ " wide, $\frac{1}{8}$ " thick. Terminals mounted on $\frac{5}{8}$ " centers. Mounting holes $\frac{5}{8}$ " from center of end terminals. Will take up to No. 13 B & S gauge wire (.071").

Code	Ea.	Code	Ea.
No. 2-20 (2 Terminals)	\$.28	No. 5-20 (5 Terminals)	\$.70
No. 3-20 (3 Terminals)	.42	No. 6-20 (6 Terminals)	.84
No. 4-20 (4 Terminals)	.56		

For terminal strips with more than 6 terminals, add 14c to the No. 6-20 price for each additional terminal.



NO. 7 TERMINAL STRIPS

Terminal .046" Brass, Cadmium Plated

A two screw insulated terminal strip that can be mounted directly on metal surface.
Screws: 6-32 x $\frac{1}{4}$ " brass, binder head, burnished nickel plate. Insulation: XP Bakelite, $\frac{7}{8}$ " wide, $\frac{1}{8}$ " thick (total). Terminals mounted on $\frac{1}{2}$ " centers. Mounting holes $\frac{1}{2}$ " from center of end terminals.

Code	Ea.	Code	Ea.
No. 2-7 (2 Terminals)	\$.20	No. 5-7 (5 Terminals)	\$.47
No. 3-7 (3 Terminals)	.29	No. 6-7 (6 Terminals)	.56
No. 4-7 (4 Terminals)	.38		

For terminal strips with more than 6 terminals, add 9c to the No. 6-7 price for each additional terminal.



NO. 21 TERMINAL STRIPS

Terminal $\frac{1}{16}$ " Brass, Cadmium Plated

Similar to No. 20, except larger.
Screws: 8-32 x $\frac{1}{4}$ " brass, binder head, burnished nickel plate. Insulation: XP Bakelite, $1\frac{1}{4}$ " wide, $\frac{1}{8}$ " thick. Terminals mounted on $\frac{3}{4}$ " centers. Mounting holes $\frac{3}{4}$ " from center of end terminals. Will take up to No. 11 B & S gauge wire (.093").

Code	Ea.	Code	Ea.
No. 2-21 (2 Terminals)	\$.40	No. 5-21 (5 Terminals)	\$.88
No. 3-21 (3 Terminals)	.56	No. 6-21 (6 Terminals)	1.04
No. 4-21 (4 Terminals)	.72		

For terminal strips with more than 6 terminals, add 16c to the No. 6-21 price for each additional terminal.



NO. 10 TERMINAL STRIPS

Terminal $\frac{1}{16}$ " Brass, Tin Plated

Sturdy screw and solder terminal with both screw and solder connections on top of bakelite panel. Solder terminal turned up.
Screw: 6-32 x $\frac{1}{4}$ " brass, binder head, burnished nickel plate. Insulation: XP Bakelite, $\frac{5}{8}$ " wide, $\frac{1}{8}$ " thick. Terminals spaced on $\frac{3}{8}$ " centers. Mounting holes $\frac{3}{8}$ " from center of end terminals. Will take up to No. 15 B & S gauge wire (.057").

Code	Ea.	Code	Ea.
No. 2-10 (2 Terminals)	\$.21	No. 5-10 (5 Terminals)	\$.51
No. 3-10 (3 Terminals)	.31	No. 6-10 (6 Terminals)	.61
No. 4-10 (4 Terminals)	.41		

For terminal strips with more than 6 terminals, add 10c to the No. 6-10 price for each additional terminal.



NO. 22 TERMINAL STRIPS

Terminal $\frac{1}{16}$ " Brass, Cadmium Plated

Similar to No. 21, except larger.
Screws: 10-32 x $\frac{3}{8}$ " brass, binder head, burnished nickel plate. Insulation: XP Bakelite, $1\frac{1}{4}$ " wide, $\frac{1}{8}$ " thick. Terminals mounted on $\frac{3}{4}$ " centers. Mounting holes $\frac{3}{4}$ " from center of end terminals. Will take up to No. 8 B & S gauge wire (.128").

Code	Ea.	Code	Ea.
No. 2-22 (2 Terminals)	\$.53	No. 5-22 (5 Terminals)	\$ 1.13
No. 3-22 (3 Terminals)	.73	No. 6-22 (6 Terminals)	1.33
No. 4-22 (4 Terminals)	.93		

For terminal strips with more than 6 terminals, add 20c to the No. 6-22 price for each additional terminal.



NO. 11 TERMINAL STRIPS

Terminal $\frac{1}{16}$ " Brass, Tin Plated

Similar to No. 10, except larger in size and the solder tab is flat, but will be bent up, if specified.
Screws: 8-32 x $\frac{1}{4}$ " brass, binder head, burnished nickel plate. Insulation: XP Bakelite, $\frac{7}{8}$ " wide, $\frac{1}{8}$ " thick. Terminals mounted on $\frac{3}{4}$ " centers. Mounting holes $\frac{3}{4}$ " from center of end terminals. Will take up to No. 12 B & S gauge wire (.080").

Code	Ea.	Code	Ea.
No. 2-11 (2 Terminals)	\$.28	No. 5-11 (5 Terminals)	\$.61
No. 3-11 (3 Terminals)	.39	No. 6-11 (6 Terminals)	.72
No. 4-11 (4 Terminals)	.50		

For terminal strips with more than 6 terminals, add 11c to the No. 6-11 price for each additional terminal.



No. 32 TERMINAL STRIPS

Terminal .050" Brass, Tin Plated

An ideal terminal strip (solder type) for medium heavy wiring. One or more wires may be connected to this terminal.
Insulation: XX Bakelite, $\frac{5}{8}$ " wide, $\frac{1}{4}$ " thick. Terminals mounted on $\frac{1}{2}$ " centers. Mounting holes $\frac{1}{2}$ " from center of end terminals.

Code	Ea.	Code	Ea.
No. 2-32 (2 Terminals)	\$.20	No. 5-32 (5 Terminals)	\$.47
No. 3-32 (3 Terminals)	.29	No. 6-32 (6 Terminals)	.56
No. 4-32 (4 Terminals)	.38		

For terminal strips with more than 6 terminals add 9c to the No. 6-32 price for each additional terminal.



NO. 34 TERMINAL STRIPS

Terminal .062" Brass, Cadmium Plated

Very substantial and neat appearing terminal. Ample length solder terminal below panel, with screw connection above.

Screw: 8-32 x 1/4" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, 3/8" wide, 1/8" thick. Terminals spaced on 1/2" centers. Mounting holes 1/2" from center of end terminals.

Code	Ea.	Code	Ea.
No. 2-34 (2 Terminals)	\$.20	No. 5-34 (5 Terminals)	\$.35
No. 3-34 (3 Terminals)	.25	No. 6-34 (6 Terminals)	.40
No. 4-34 (4 Terminals)	.30		

For terminal strips with more than 6 terminals, add 5c to the No. 6-34 price for each additional terminal.



NO. 53 TERMINAL STRIPS

Terminal, Spring Temper Brass, Cadmium Plated

A reliable socket type contact for many uses. Takes 3/8" prongs. May be used with No. 98 terminal strips (same terminal spacing).

Insulation: XP Bakelite, 3/8" wide, 1/8" thick. Terminals mounted on 3/8" centers. Mounting holes 3/8" from center of end terminals.

Code	Ea.	Code	Ea.
No. 2-53 (2 Terminals)	\$.17	No. 5-53 (5 Terminals)	\$.26
No. 3-53 (3 Terminals)	.20	No. 6-53 (6 Terminals)	.29
No. 4-53 (4 Terminals)	.23		

For terminal strips with more than 6 terminals, add 3c to the No. 6-53 price for each additional terminal.



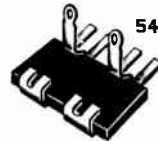
NO. 36 TERMINAL STRIPS

Terminal .031" Brass, Cadmium Plated

A popular priced screw and solder terminal with both screw and solder tab on same side of bakelite panel. Screw: 6-32 x 1/4" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, 3/8" wide, 1/8" thick. Terminals spaced on 1/2" centers. Mounting holes 1/2" from center of end terminals.

Code	Ea.	Code	Ea.
No. 2-36 (2 Terminals)	\$.12	No. 5-36 (5 Terminals)	\$.24
No. 3-36 (3 Terminals)	.16	No. 6-36 (6 Terminals)	.28
No. 4-36 (4 Terminals)	.20		

For terminal strips with more than 6 terminals, add 4c to the No. 6-36 price for each additional terminal.



NO. 54 TERMINAL STRIPS

Terminal .032" Brass, Cadmium Plated

Spade terminal for cable harness. Convenient to use in connection with No. 6 terminal strips. Insulation: XP Bakelite, 1/2" wide, 1/8" thick. Terminals mounted on 1/2" centers.

Code	Ea.	Code	Ea.
No. 2-54 (2 Terminals)	\$.10	No. 5-54 (5 Terminals)	\$.16
No. 3-54 (3 Terminals)	.12	No. 6-54 (6 Terminals)	.18
No. 4-54 (4 Terminals)	.14		

For terminal strips with more than 6 terminals, add 2c to the No. 6-54 price for each additional terminal.



NO. 42 TERMINAL STRIPS

Terminal, Hard Brass, Cadmium Plated

Similar in construction to No. 53. Takes 1/8" prong. May be used with No. 99 terminal strips (same terminal spacing).

Insulation: XP Bakelite, 1/2" wide, 3/8" thick. Terminals mounted on 1/2" centers. Mounting holes 1/2" from center of end terminals.

Code	Ea.	Code	Ea.
No. 2-42 (2 Terminals)	\$.20	No. 5-42 (5 Terminals)	\$.32
No. 3-42 (3 Terminals)	.24	No. 6-42 (6 Terminals)	.36
No. 4-42 (4 Terminals)	.28		

For terminal strips with more than 6 terminals, add 4c to the No. 6-42 price for each additional terminal.



NO. 59 TERMINAL STRIPS

Terminal .028" Brass, Tin Plated

An inexpensive solder terminal. One wire may be brought up through hole and soldered, leaving vertical tab for other connection. Insulation: XP Bakelite, 3/8" wide, 1/8" thick. Terminals mounted on 1/8" centers. Mounting holes 1/8" from center of end terminals.

Code	Ea.	Code	Ea.
No. 2-59 (2 Terminals)	\$.07	No. 5-59 (5 Terminals)	\$.16
No. 3-59 (3 Terminals)	.10	No. 6-59 (6 Terminals)	.19
No. 4-59 (4 Terminals)	.13		

For terminal strips with more than 6 terminals, add 3c to the No. 6-59 price for each additional terminal.



NO. 43 TERMINAL STRIPS

Terminal, Hard Brass, Cadmium Plated

Same as No. 42, except that it takes 3/8" prongs. May be used with No. 100 terminal strips. Insulation: XP Bakelite, 3/8" wide, 3/8" thick. Terminals mounted on 3/8" centers. Mounting holes 3/8" from center of end terminals.

Code	Ea.	Code	Ea.
No. 2-43 (2 Terminals)	\$.25	No. 5-43 (5 Terminals)	\$.40
No. 3-43 (3 Terminals)	.30	No. 6-43 (6 Terminals)	.45
No. 4-43 (4 Terminals)	.35		

For terminal strips with more than 6 terminals, add 5c to the No. 6-43 price for each additional terminal.



NO. 60 TERMINAL STRIPS

Terminal .050" Brass, Cadmium Plated

Screw terminal above panel—solder terminal below. Solder tab is notched. Screw: 6-32 x 1/4" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, 7/8" wide, 1/8" thick. Terminals spaced on 1/4" centers. Mounting holes 1/4" from center of end terminals.

Code	Ea.	Code	Ea.
No. 2-60 (2 Terminals)	\$.17	No. 5-60 (5 Terminals)	\$.32
No. 3-60 (3 Terminals)	.22	No. 6-60 (6 Terminals)	.37
No. 4-60 (4 Terminals)	.27		

For terminal strips with more than 6 terminals, add 5c to the No. 6-60 price for each additional terminal.



NO. 48 TERMINAL STRIPS

Terminal .028" Brass, Tin Plated

A low priced double solder terminal. Insulation: XP Bakelite, 1/2" wide, 1/8" thick. Terminals mounted on 1/8" centers. Mounting holes 1/8" from center of end terminals.

Code	Ea.	Code	Ea.
No. 2-48 (2 Terminals)	\$.07	No. 5-48 (5 Terminals)	\$.15
No. 3-48 (3 Terminals)	.10	No. 6-48 (6 Terminals)	.19
No. 4-48 (4 Terminals)	.13		

For terminal strips with more than 6 terminals, add 3c to the No. 6-48 price for each additional terminal.



NO. 66-S TERMINAL STRIPS

Terminal .032" Hard Brass, Cadmium Plated

A heavy solder terminal with large oval hole for several wires. Insulation: XP Bakelite, 3/4" wide, 3/8" thick. Terminals mounted on 3/8" centers. Mounting holes 3/8" from center of end terminals.

Code	Ea.	Code	Ea.
No. 2-66-S (2 Terminals)	\$.08	No. 5-66-S (5 Terminals)	\$.17
No. 3-66-S (3 Terminals)	.11	No. 6-66-S (6 Terminals)	.20
No. 4-66-S (4 Terminals)	.14		

For terminal strips with more than 6 terminals, add 1c to the No. 6-66-S price for each additional terminal.



NO. 50 TERMINAL STRIPS

Terminal .062" Brass, Cadmium Plated

One of the most popular screw and solder terminals. Made of heavy stock with ears to firmly hold wires under screw. Screw: 8-32 x 1/4" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, 7/8" wide, 1/8" thick. Terminals spaced on 1/2" centers. Mounting holes 1/2" from center of end terminals.

Code	Ea.	Code	Ea.
No. 2-50 (2 Terminals)	\$.19	No. 5-50 (5 Terminals)	\$.34
No. 3-50 (3 Terminals)	.24	No. 6-50 (6 Terminals)	.39
No. 4-50 (4 Terminals)	.29		

For terminal strips with more than 6 terminals, add 5c to the No. 6-50 price for each additional terminal.



NO. 66-D TERMINAL STRIPS

Terminal .032" Hard Brass, Cadmium Plated

Two No. 66 terminals mounted on opposite sides of panel and riveted together by solid rivet. Ideal strip for heavy work. Insulation: XP Bakelite, 3/4" wide, 1/2" thick. Terminals mounted on 3/8" centers. Mounting holes 3/8" from center of end terminals.

Code	Ea.	Code	Ea.
No. 2-66-D (2 Terminals)	\$.10	No. 5-66-D (5 Terminals)	\$.22
No. 3-66-D (3 Terminals)	.14	No. 6-66-D (6 Terminals)	.26
No. 4-66-D (4 Terminals)	.18		

For terminal strips with more than 6 terminals, add 4c to the No. 6-66-D price for each additional terminal.



NO. 76 TERMINAL STRIPS

Terminal .028" Brass, Cadmium Plated

Cup shaped top holds wire securely under screw. A compact and good appearing terminal.
Screw: 6-32 x 1/4" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, 3/4" wide, 1/4" thick. Terminals spaced on 1/2" centers. Mounting holes 1/2" from center of end terminals.

Code	Qty	Each	Code	Qty	Each
No. 2-76	(2 Terminals)	\$.14	No. 5-76	(5 Terminals)	\$.26
No. 3-76	(3 Terminals)	.18	No. 6-76	(6 Terminals)	.30
No. 4-76	(4 Terminals)	.22			

For terminal strips with more than 6 terminals, add 3c to the No. 6-76 price for each additional terminal.



NO. 130 TERMINAL STRIPS

Terminals Brass, Burnished Nickel Plate

An inexpensive terminal strip with two screw terminals. Screws: 5-40 x 1/4" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, 7/8" wide, 1/4" thick. Terminals mounted on 1/2" centers. Mounting holes 1/2" from center of end terminals.

Code	Qty	Each	Code	Qty	Each
No. 2-130	(2 Terminals)	\$.15	No. 5-130	(5 Terminals)	\$.39
No. 3-130	(3 Terminals)	.23	No. 6-130	(6 Terminals)	.47
No. 4-130	(4 Terminals)	.31			

For terminal strips with more than 6 terminals, add 8c to the No. 6-130 price for each additional terminal.



AG 76

AG-76

Standard Antenna-Ground strip using No. 76 terminals. Insulation: XP Bakelite, 1 1/4" wide, 1/4" thick. Mounting centers 1 1/4". Ends rounded. Letters A and G are filled in white.

No. AG-76..... Ea. \$.12



NO. 131 TERMINAL STRIPS

Terminals Brass, Burnished Nickel Plate

Similar to No. 130, except larger. Screws: 6-32 x 1/4" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, 1" wide, 3/8" thick. Terminals mounted on 3/8" centers. Mounting holes 3/8" from center of end terminals.

Code	Qty	Each	Code	Qty	Each
No. 2-131	(2 Terminals)	\$.19	No. 5-131	(5 Terminals)	\$.46
No. 3-131	(3 Terminals)	.28	No. 6-131	(6 Terminals)	.55
No. 4-131	(4 Terminals)	.37			

For terminal strips with more than 6 terminals, add 9c to the No. 6-131 price for each additional terminal.



NO. 96 TERMINAL STRIPS

Terminal, Spring Temper Brass, Cadmium Plated

Perhaps the most popular socket terminal ever sold. Takes standard tube prongs (No. 99 or No. 100). Furnished for No. 99 prongs (1/8" wide, 1/4" thick) unless otherwise specified. Insulation: XP Bakelite, 3/8" wide, 1/4" thick. Terminals mounted on 1/2" centers. Mounting holes 1/2" from center of end terminals.

Code	Qty	Each	Code	Qty	Each
No. 2-96	(2 Terminals)	\$.08	No. 5-96	(5 Terminals)	\$.17
No. 3-96	(3 Terminals)	.11	No. 6-96	(6 Terminals)	.20
No. 4-96	(4 Terminals)	.14			

For terminal strips with more than 6 terminals, add 3c to the No. 6-96 price for each additional terminal.



NO. 132 TERMINAL STRIPS

Terminals Brass, Burnished Nickel Plate

Similar to No. 131, except larger. Screws 8-32 x 1/4" brass, binder head, burnished nickel plate. Insulation: XP Bakelite, 1 1/4" wide, 1/4" thick. Terminals mounted on 3/4" centers. Mounting holes 3/4" from center of end terminals.

Code	Qty	Each	Code	Qty	Each
No. 2-132	(2 Terminals)	\$.23	No. 5-132	(5 Terminals)	\$.53
No. 3-132	(3 Terminals)	.33	No. 6-132	(6 Terminals)	.63
No. 4-132	(4 Terminals)	.43			

For terminal strips with more than 6 terminals, add 10c to the No. 6-132 price for each additional terminal.



NO. 98 TERMINAL STRIPS

Terminal 3/32" Round, Brass, Cadmium Plated

Standard tube base prong of 3/8" diameter. To be used with No. 53 terminal strips. Insulation: XP Bakelite, 3/8" wide, 1/4" thick. Terminals mounted on 3/8" centers.

Code	Qty	Each	Code	Qty	Each
No. 2-98	(2 Terminals)	\$.07	No. 5-98	(5 Terminals)	\$.16
No. 3-98	(3 Terminals)	.10	No. 6-98	(6 Terminals)	.19
No. 4-98	(4 Terminals)	.13			

For terminal strips with more than 6 terminals, add 3c to the No. 6-98 price for each additional terminal.



NO. 143 TERMINAL STRIPS

Terminal .040" Brass, Tin Plated

A strong two-way solder terminal. Solder tabs lie flat. Crimps securely around edges of panel.

Special Strips

These strips can be made up special, with terminals mounted on any centers, from 3/8" up.

Standard Strips

Insulation: XP Bakelite, 3/8" wide, 3/8" thick. Terminals mounted on 1/2" centers. Mounting holes 1/2" from center of end terminals. Terminals may be numbered or lettered in white, as illustrated. (See page 18 for imprinting cost.)

Code	Qty	Each	Code	Qty	Each
No. 2-143	(2 Terminals)	\$.10	No. 5-143	(5 Terminals)	\$.19
No. 3-143	(3 Terminals)	.13	No. 6-143	(6 Terminals)	.22
No. 4-143	(4 Terminals)	.16			

For terminal strips with more than 6 terminals, add 3c to the No. 6-143 price for each additional terminal.



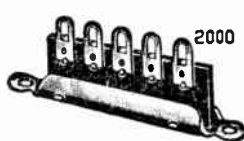
NO. 99 TERMINAL STRIPS

Terminal 1/8" Round, Brass, Cadmium Plated

Similar to No. 98, except that it is 1/8" in diameter. To be used with No. 42 terminal strips, and also with No. 96 terminal strips. Insulation: XP Bakelite, 1/2" wide, 1/4" thick. Terminals mounted on 1/2" centers.

Code	Qty	Each	Code	Qty	Each
No. 2-99	(2 Terminals)	\$.10	No. 5-99	(5 Terminals)	\$.22
No. 3-99	(3 Terminals)	.14	No. 6-99	(6 Terminals)	.26
No. 4-99	(4 Terminals)	.18			

For terminal strips with more than 6 terminals, add 4c to the No. 6-99 Price for each additional terminal.



NO. 2000 TERMINAL STRIPS

Terminals .019" Brass, Tin Plated

Compact and sturdy junction terminal strip. Useful in assembling radio chassis, wiring, etc.

Insulation: Bakelite. Brackets: Steel, cadmium plated. Terminals spaced on 1/4" centers.

Code	Qty	Mounting Hole Centers:	Per C.
No. 2002	(2 Terminals)	1"	\$ 6.40
No. 2003	(3 Terminals)	1-5/16"	7.00
No. 2004	(4 Terminals)	1-5/8"	7.60
No. 2005	(5 Terminals)	1-15/16"	8.20
No. 2006	(6 Terminals)	2-1/4"	8.80
No. 2007	(7 Terminals)	2-9/16"	9.40
No. 2008	(8 Terminals)	2-7/8"	10.00
No. 2009	(9 Terminals)	3-3/16"	10.60
No. 2010	(10 Terminals)	3-1/2"	11.20
No. 2011	(11 Terminals)	3-13/16"	11.80
No. 2012	(12 Terminals)	4-1/8"	12.40
No. 2013	(13 Terminals)	4-7/16"	13.00



NO. 100 TERMINAL STRIPS

Terminal 5/32" Round, Brass, Cadmium Plated

Similar to No. 99, except 5/32" in diameter. To be used with No. 43 terminal strip, and No. 96 terminal strip. Insulation: XP Bakelite, 3/8" wide, 1/4" thick. Terminals mounted on 3/8" centers.

Code	Qty	Each	Code	Qty	Each
No. 2-100	(2 Terminals)	\$.16	No. 5-100	(5 Terminals)	\$.31
No. 3-100	(3 Terminals)	.21	No. 6-100	(6 Terminals)	.36
No. 4-100	(4 Terminals)	.26			

For terminal strips with more than 6 terminals, add 5c to the No. 6-100 price for each additional terminal.

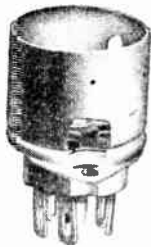
EBY SPECIALTY SALES CO.

SOCKETS

MINIATURE SHOCK SHIELD TYPE:

7 pins, 1/8" mounting centers

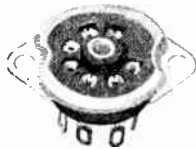
Cat. No.	Description	List Price each
102M	Ceramic, beryllium copper contacts, JAN-SO-10C	\$1.15
103M	Mea-filled bakelite, beryllium copper contacts, JAN-SO-10M	.85
8322	Black bakelite, phosphor bronze contacts	0.35
8328	Ceramic, phosphor bronze contacts	0.60
8329	Mea-filled bakelite, phosphor bronze contacts	0.40



MINIATURE SADDLE TYPE:

7 pins, 7/8" mounting centers

Cat. No.	Description	List Price each
E323	Black bakelite, phosphor bronze contacts (with center grounding shield)	\$0.22
E539	Black bakelite, phosphor bronze contacts (no center grounding shield)	0.20
8326	Ceramic, phosphor bronze contacts (with center grounding shield)	0.45
8327	Mea-filled bakelite, phosphor bronze contacts (with center grounding shield)	0.25



SHIELDS FOR MINIATURE SHOCK SHIELD TYPE SOCKETS:

Steel, cadmium plated with inner spring

Cat. No.	Description	List Price each
7797	Height 1 3/4"	\$0.20
7798	Height 1 1/2"	0.20
8694	Height 2 1/2"	0.45



FOR MINIATURE SADDLE TYPE SOCKET:

Cat. No.	Description	List Price each
8757	Height 1 3/4". Steel, cadmium plated	\$0.10
8758	Shield holder	0.05



LAMINATED MINIATURE SOCKETS:

Cat. No.	Description	List Price each
47-1	7 pin, laminated bakelite, spring brass contacts, no center grounding shield	\$0.10
47-2	7 pin, laminated bakelite spring brass contacts, with center shield and ground strap	0.11
47-9	9 pin, laminated bakelite, spring brass contacts, with center shield, no ground strap	0.25



CRYSTAL SOCKET

Cat. No.	Description	List Price each
CR-7	For crystals having .050 diameter pins and .050 spacing between pins. Suitable for JAN-1-10. Contacts: Phosphor bronze, cadmium plated, or beryllium copper, silver plated with tabs tinned. Phosphor Bronze Contact.....\$0.40 Beryllium Copper Contact.....0.60	
SO-200	For crystals having 3/4" centers and .150 diameter. Suitable for or .150 hole type pins. Insulation: Low Loss Phenolic. Contacts: Beryllium Copper, Silver Plated.....0.60	



TYPE 12 SOCKETS:

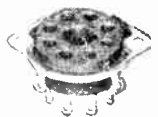
Phosphor bronze contacts, 1/4" mounting centers

Cat. No.	Description	List Price each
12-4	\$0.40
12-5	0.45
12-6	0.45
12-7	N-O.....	0.50
12-8	0.50



OCTAL SADDLE TYPE:

Cat. No.	Description	List Price each
8459	Black bakelite, phosphor bronze contacts, cadmium plated. Mounting centers 1 1/2". Phosphor bronze contacts, cadmium plated. List Price \$0.15 ea.	



LOCTAL SADDLE TYPE:

Cat. No.	Description	List Price each
E451	Black bakelite, phosphor bronze contacts, cadmium plated with center grounding shield. Mounting centers 1 1/2". Phosphor bronze contacts, cadmium plated. List Price \$0.18 ea.	

OCTAL ALL-MOLDED TYPE:

Cat. No.	Description	List Price each
8490	Phosphor bronze contacts, mounting centers 1 1/2". Phosphor bronze contacts, cadmium plated. List Price \$0.14 ea.	



LOCTAL ALL-MOLDED TYPE:

Cat. No.	Description	List Price each
8191	Black bakelite, phosphor bronze contacts, cadmium plated. Mounting centers 1 1/2". Phosphor bronze contacts, cadmium plated. List Price \$0.17 ea.	

MAGNAL TYPE TELEVISION SOCKET:

Cat. No.	Description	List Price each
S-20-11	Black bakelite, phosphor bronze contacts, cadmium plated. 11 contacts. Spring brass contacts, 1/4" mounting centers, cadmium plated. List Price \$0.90 ea.	



DUO DECAL TYPE TELEVISION SOCKET:

Cat. No.	Description	List Price each
47-12A	Aluminum contacts, 10 pins. Top diameter 1 1/2". Overall depth is 65/16". Contacts recessed to avoid shorting. List Price \$1.55 ea.	



DI HEPTAL TYPE TELEVISION SOCKET:

Cat. No.	Description	List Price each
47-14A	Heavy-duty type accommodates up to 14 pins. Top diameter is 1 7/32". Overall depth is 1 1/4". Contacts recessed to avoid shorting. List Price \$2.00 ea.	

OCTAL TYPE:

Cat. No.	Description	List Price each
46-5-E	3 pins Dimensions: Mounting Centers.....1 1/2" Overall Width.....1 1/2" Overall Length.....1 1/2" List Price \$0.10 ea.	



Cat. No.	Description	List Price each
46-1-E	5 pins Dimensions: Mounting Centers.....1 1/2" Overall Width.....1 1/2" Overall Length.....1 3/32" List Price \$0.11 ea.	

GLASS TUBE TYPE:

Cat. No.	Mounting Centers	Width	Length	List Price each
34-1AA	4 pins	1 1/2"	1 7/8"	\$0.10
34-1-B	4 pins	1 1/2"	1 3/8"	0.11
34-1-C	4 pins	1 1/2"	1 3/8"	0.12
34-1-DX	7 pins	1 3/8"	1 7/8"	0.13

EBY SPECIALTY SALES CO.

PLUGS



MOLDED BATTERY PLUGS

Cat. No.	Number of Prongs	Volts	Batt.	List Price each
30-2	2	3	A	\$0.11
30-3B	3	45	B	0.11
30-3C	3	4½	C	0.11
30-4L	4		A & B	0.11
30-5	5	22½	C	0.11
30-7½	5	7½	C	0.11



Cat. No.	Number of Prongs	Volts	Batt.	List Price each
30-2M	2	1½	A	\$0.09
30-2M3	2	6	A	0.11
30-3M	3	45	Midget	0.09



MOLDED SPEAKER PLUGS

Cat. No.	No. of Prongs	List Price ea.
29-4	4	\$0.10
29-5	5	0.10
29-6	6	0.11
29-7	7 .750 layout	0.12



Cat. No.	No. of Prongs	List Price ea.
28-4	4	\$0.18
28-5	5	0.19
28-6	6	0.23
28-7	7 .750 layout	0.26



LAMINATED BATTERY PLUGS

Cat. No.	Number of Prongs	Volts	Batt.	List Price each
66-2	2	3	A	\$0.06
66-2M	2	1½	A	0.05
66-2M3	2	6	A	0.05
66-3B	3	45	B	0.07
66-3C	3	4½	C	0.07
66-3M	3	45	Midget	0.07
66-4MS	4		B	0.07
66-4	4		A & B	0.07
66-4	4		A & B	0.09
66-4½	2	4½	A	0.05
66-8	9		A & B	0.14

BINDING POSTS



Cat. No. 37. ENSIGN: Knobs and base are molded Bakelite. Metal inserts are plain brass. Knurled base prevents post turning.

Knob: ½" diam. x 7/16" high.
Base: ½" diam. x ¼" thick.
Solid Stem: 6/32" x ¾" long.
Drilled Neck Diameter: 3/16".
Width of contact flanges: ¾".

List Price \$0.38 ea.

Cat. No. 38. ENSIGN: Same as No. 37 except that it has a molded insulating boss on base.

List Price \$0.38 ea.

Cat. No. 39. ENSIGN: Same as No. 37 except that it has molded dowel pin on base.

List Price \$0.38 ea.

Cat. No. 40. COMMANDER: Knobs and base are molded Bakelite. Metal inserts are plain brass. Knurled base prevents post turning.

Knob: 9/16" diam. x ½" high.
Base: ¾" diam. x ¼" thick.
Solid Stem: 8/32" x 7/8" long.
Drilled Neck Diameter: 13/64".
Width of contact flanges: 7/16".

List Price \$0.50 ea.

Cat. No. 41. COMMANDER: Same as No. 40 except that it has a molded insulating boss on base.

List Price \$0.55 ea.

Cat. No. 42. COMMANDER: Same as No. 40 except that it has a metal dowel pin on base.

List Price \$0.55 ea.

Cat. No. 43. ADMIRAL: Knobs and base are molded Bakelite. Metal inserts are plain brass. Knurled base prevents post turning.

Knob: 5/8" diam. x 17/32" high.
Base: 23/32" diam. x ¼" thick.
Solid Stem: 8/32" x ¾" long.
Plain Neck: 13/64" diameter.
Width of contact flanges: 7/16".

List Price \$0.55 ea.

Cat. No. 44. ADMIRAL: Same as No. 43 except that it has a molded insulating boss on base.

List Price \$0.55 ea.

Cat. No. 45. ADMIRAL: Same as No. 43 except that it has a molded dowel pin on base.

List Price \$0.55 ea.

Cat. No. 43-S. ADMIRAL: Same as No. 43 except that it has elongated slot in neck.

List Price \$0.60 ea.



Cat. No. 21-R. All-molded Bakelite, non-removable tops. Both posts completely insulated. Center mounting screw 6/32" x ¼" long. Base is 2" long, 11/16" wide and 3/16" thick. Center distance between posts is ¾".

List Price \$0.70 ea.



Cat. No. 21-S. All-molded Bakelite, non-removable tops. One post is completely insulated. One mounting screw 6/32" x ¼" long. Ground post is second mounting screw. Base is 2" long, 11/16" wide and 3/16" thick.

List Price \$0.70 ea.

TIP JACKS

Cat. No. 49. Top diameter ½" x 5/32" thick. Threaded brass body 5/16"-32 x ¾" long. One hexagon nut and two insulating washers furnished. Hole for washers is 19/64". Red or Black Bakelite top.



List Price: Red\$0.19 ea.
Black ... 0.18 ea.

Cat. No. 52. Top diameter ½" x 1/8" thick. Body is 5/16" x ¾" long. Special steel assembly washers, cadmium plated, are furnished. Red or black Bakelite.



List Price: Red\$0.10 ea.
Black ... 0.09 ea.

Cat. No. 76. Top diameter 5/8" x 5/32" thick. Body is .495" x 5/8" long. Special steel assembly washers, cadmium plated, are furnished. Red or black Bakelite.



List Price: Red\$0.18
Black... 0.15



Cat. No. 17. This twin jack with molded Bakelite base, is provided with two terminals 1 3/8" apart and has a 6/32" x ¼" mounting screw at center.

List Price \$0.65 ea.



Cat. No. 18. Twin jack, is provided with two terminals 7/8" apart and has two .140" diameter holes, 1-11/16" centers. Bottom plate is 1/16" thick, top plate 1/32" thick. 5/8" wide x 2-1/16" long.

List Price \$0.13 ea.



Cat. No. 18-T. Triple jack is provided with three terminals 9/16" apart and has two .140" diameter mounting holes, 1-15/16" centers. Bottom plate is 1/16" thick, top plate 3/64" thick. 5/8" wide x 2 3/8" long.

List Price \$0.19 ea.

EBY SPECIALTY SALES CO.

RADIO KNOBS

Product of Hurz-Kasch, Inc.



Cat. No. S-282-1

Walnut or black, setscrew type only; diam. 29/32", height 3/4".

List Price \$0.15 each



Cat. No. S-449-1

Walnut setscrew type only; diam. 3/4", height 3/4".

List Price \$0.12 each

Cat. No. S-450-1

Walnut setscrew type only; diam. 7/8", height 7/8".

List Price \$0.13 each



Cat. No. S-451-1

Walnut setscrew type only; diam. 13/16", height 17/32".

List Price \$0.12 each

Cat. No. S-452-1

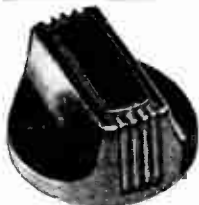
Walnut setscrew type only; diam 1", height 5/8".

List Price \$0.13 each

Cat. No. S-457-1

Walnut setscrew type only; diam. 1 1/8", height 5/8".

List Price \$0.15 each



Cat. No. S-453-1

Walnut setscrew type only; diam. 1", height 21/32".

List Price \$0.14 each



Cat. No. S-462-1

Walnut setscrew type only; diam. 1", height 5/8".

List Price \$0.13 each

Cat. No. S-473-1

Walnut setscrew type only; diam. 1 1/8", height 5/8".

List Price \$0.15 each



Cat. No. S-467-1

Walnut setscrew type only; diam. 1", height 41/64".

List Price \$0.13 each

Cat. No. S-468-1

Walnut setscrew type only; diam. 13/16", height 37/64".

List Price \$0.12 each



Cat. No. S-469-1

Walnut setscrew type only; diam. 1", height 5/8".

List Price \$0.13 each

Cat. No. S-470-1

Walnut setscrew type only; diam. 13/16", height 9/16".

List Price \$0.12 each



Cat. No. S-471

Walnut setscrew type only; diam. 7/8", height 39/64".

List Price \$0.13 each

Cat. No. S-472-1

Walnut setscrew type only; diam. 1 1/8", height 21/32".

List Price \$0.15 each



Cat. No. S-475-1

Walnut setscrew type only; diam. 3/4", height 17/32".

List Price \$0.12 each



Cat. No. S-476-1

Walnut setscrew type only; diam. 3/4", height 17/32".

List Price \$0.12 each

Cat. No. S-477-1

Walnut setscrew type only; diam. 1", height 5/8".

List Price \$0.13 each



Cat. No. S-478-1

Walnut setscrew type only; diam. 13/16", height 9/16".

List Price \$0.12 each

Cat. No. S-479-1

Walnut setscrew type only; diam. 1", height 21/32".

List Price \$0.13 each



Cat. No. S-480-7

Walnut spring type only; diam. 15/16", height 23/32".

List Price \$0.10 each

EBY SPECIALTY SALES CO.

INSTRUMENT & POINTER KNOBS

Product of Kurz-Kasch, Inc.



Cat. No. List Price each

S-308-64. Black only, with brass insert; diam. 1 1/8", height 5/8".....\$0.30

S-308-1. Black only, without brass insert; diam. 1 1/8", height 5/8"..... 0.20

S-308-64-40275. Black only, with brass insert, 5/8" vinylite pointer; diam. 1 1/8", height 5/8"..... 0.55

S-308-64-40269. Black only, with brass insert, 7/8" vinylite pointer; diam. 1 1/8", height 5/8"..... 0.55

S-385-64. Black only, with brass insert; diam. 1 3/8", height 1 1/16"..... 0.45

S-385-1. Black only, with brass insert; diam. 1 3/8", height 1 1/16"..... 0.35

S-385-64-40269. Black only, with brass insert and 7/8" vinylite pointer; diam. 1 3/8", height 1 1/16"..... 0.60

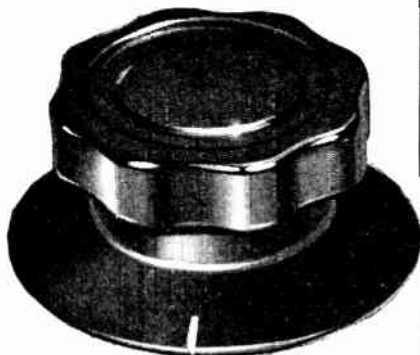
S-385-64-40260. Black only, with brass insert and 1-1/16" vinylite pointer; diam. 1 3/8", height 1-1/16"..... 0.60

S-309-64. Black with brass insert; diam. 1 5/8", height 3/4"..... 0.45

S-309-64-40260. Black with brass insert and 1-1/16" vinylite pointer; diam. 1 5/8", height 3/4"..... 0.65

S-310-64. Black with brass insert; diam. 2 3/8", height 7/8"..... 0.60

S-310-64-40291. Black with brass insert and 1/8/16" vinylite pointer; diam. 2 3/8", height 7/8"..... 0.90



Cat. No. List Price each

S-311-64. Black with brass insert; skirt diam. 2-1/16", height 7/8".....\$0.75

S-312-64. Black with brass insert; skirt diam. 3", height 15/16"..... 1.15

S-380-64. Black with brass insert; skirt diam. 1 1/2", height 13/16"..... 0.65

S-380-1. Black without brass insert; skirt diam. 1 1/2", height 13/16"..... 0.55

S-381-64. Black with brass insert; skirt diam. 1 3/4", height 27/32"..... 0.75



Cat. No. List Price each

S-76-3. Black with 10/32 tapped brass insert; diam. 3/4", height 9/16".....\$0.15

S-82-2. Black with 8/32 tapped brass insert; diam. 5/8", height 17/32"..... 0.12

S-222-1. Black with 6/32 tapped brass insert; diam. 1/2", height 7/16"..... 0.10

S-222-2. Black with 8/32 tapped brass insert; diam. 1/2", height 7/16"..... 0.10



Cat. No. List Price each

S-292-3L. Black only, with brass insert and filled pointer; radius 1 1/4", height 5/8".....\$0.18

S-292-1L. Black, walnut, red, grey, ivory, without brass insert. Filled pointer. Radius 1 1/4", height 5/8".
Black or Walnut..... 0.12
Red, Grey, Ivory..... 0.18

S-246-3L. Black only, with brass insert; radius 1 1/2", height 7/8"..... 0.25

S-246-1L. Black only, without brass insert; radius 1 1/2", height 7/8"..... 0.20



Cat. No. List Price each

S-293-3L. Black only, with insert, filled pointer. Radius 2 1/4" height 5/8".....\$0.27

S-293-1L. Black only, without brass insert, filled pointer. Radius 2 1/4" height 5/8"..... 0.18



Cat. No. List Price each

S-626-1L. Black only, no insert, filled pointer. Radius 1 1/2", height 5/8".....\$0.25



Cat. No. List Price each

S-17-64L. Black with brass insert, filled white arrow; diam. 1 1/8", height 9/16".....\$0.18

S-18-3L. Black with brass insert, filled white arrow; diam. 1 1/2", height 3/4"..... 0.20

S-18-1L. Black without brass insert, filled white arrow; diam. 1 1/2", height 3/4"..... 0.15



Cat. No. List Price each

S-483-64. Black with brass insert; diam. 1 1/8", height 11/13".....\$0.35

S-483-1. Black without brass insert; diam. 1 1/8", height 11/16"..... 0.20

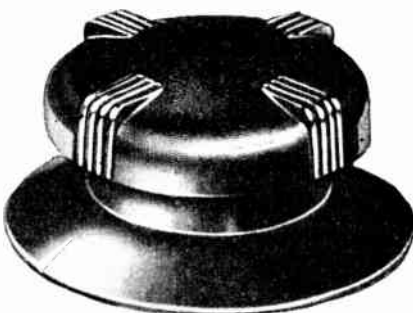
S-483-64-40269. Black with brass insert and 7/8" vinylite pointer; diam. 1 1/8", height 11/16"..... 0.60

S-481-64. Black with brass insert; diam. 1 5/8", height 13/16"..... 0.50

S-481-64-40260. Black with brass insert and 1-1/16" vinylite pointer; diam. 1 5/8", height 13/16"..... 0.70

S-482-64. Black with brass insert; diam. 2 3/8", height 15/16"..... 0.65

S-482-64-40291. Black with brass insert and 1-9/16" vinylite pointer; diam. 2 3/8", height 15/16"..... 0.90



Cat. No. List Price each

S-489-64. Black with brass insert; skirt diam. 2-1/16", height 15/16".....\$0.75

American Beauty

ELECTRIC SOLDERING IRONS

These Irons embody features that specialized experience—since 1894—has demonstrated to be desirable for efficient and lasting service. Hundreds of thousands in use throughout the world in manufacturing plants, service, maintenance and repair shops, Army and Navy Services, telephone, telegraph and radio stations.

No. 3138—Designed primarily for production and maintenance in radio, telephone, telegraph, ignition switchboard and telephone installation work and similar industrial applications.

No. 3158—For the same purposes as the No. 3138 but for work requiring an iron of greater capacity.

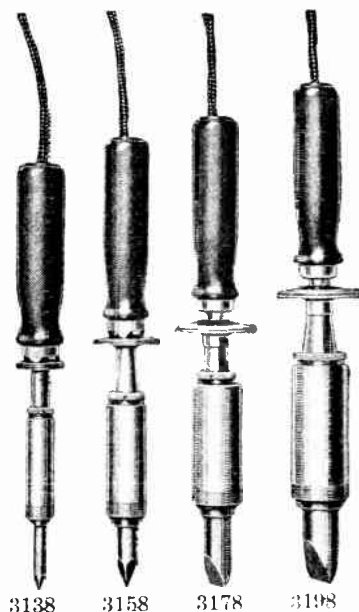
No. 3178—For use on still heavier work; for light commutators and service and production work. A very useful iron for general purposes.

No. 3198—For heavy work of all kinds. Supplies a large volume of heat at high temperature. Used by manufacturers in many different lines; for shop, service, production work, etc.

Each of the above irons is equipped with a baffle plate, at the shank, to prevent free conduction of heat to the handle.

No. 3128—Designed for lighter work than the No. 3138 in similar applications. Has plug-type $\frac{1}{4}$ "-diameter tip with a heating element of chrome nickel but without compression winding as used in the higher-wattage No. 3138-3198 series. Element and casing with handle springs and terminal assembly built as a unit.

No. S-76—Designed for work of the same kind as the No. 3128 but has a screw-type $\frac{7}{16}$ " diameter tip which screws on the metal head of the core of the chrome nickel heating element. Element with casing and handle springs and terminal assembly built as a unit.



3138 3158 3178 3198

Made in standard voltages and for 32 volts. No. 3138 also made for 6, 12, 24 and 55 volts. Nos. 3138-3198 can be equipped with three-conductor cord, one wire grounded, at slight additional charge. Separate heat-insulating stand supplied with each iron.



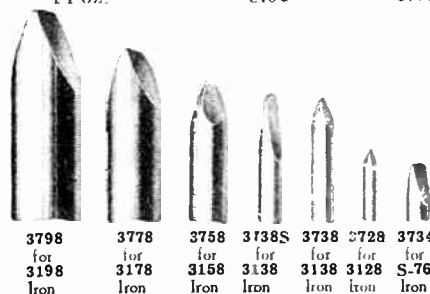
Top No. 3128 Bottom No. S-76

SPECIFICATIONS

Cat. No.	Diameter of Tip	Watts	Net Weight	Length Over All	Casing Diameter	Approx. Ship. Wt.	List Price	Net Price
3138	$\frac{3}{8}$ "	100	16 oz.	12 $\frac{7}{8}$ "	$\frac{7}{8}$ "	2 lbs.	\$ 8.00	\$ 5.36
3158	$\frac{5}{8}$ "	200	28 oz.	13 $\frac{5}{8}$ "	1 $\frac{1}{4}$ "	3 lbs.	9.60	6.41
3178	$\frac{7}{8}$ "	300	42 oz.	14 $\frac{3}{8}$ "	1 $\frac{9}{16}$ "	4 lbs.	12.90	8.59
3198	1 $\frac{1}{8}$ "	550	60 oz.	15"	1 $\frac{3}{4}$ "	5 $\frac{3}{4}$ lbs.	16.80	11.18
3128	$\frac{1}{4}$ "	60	7 $\frac{1}{2}$ oz.	12 $\frac{1}{4}$ "	$\frac{9}{16}$ "	16 oz.	5.00	3.34
S-76	$\frac{7}{16}$ "	50	6 oz.	11 $\frac{5}{8}$ "	$\frac{9}{16}$ "	14 oz.	5.00	3.34

American Beauty COPPER TIPS

These copper tips are made from commercially pure, drawn bar, copper rod. Except for the No. 3734 screw-on type tip for the No. S-76 iron, each tip is designed to fit into, and to the full length of, core of heating unit of the particular iron for which it is intended. Maximum area of contact between the tip and heating unit is thus assured. Tips are of uniform diameter throughout their entire length. Each tip is held in place in core of heating unit by a recessed set-screw. Removal for cleaning or replacement is therefore easy. Standard shaped tips with which the various models are equipped are shown in the illustration; but pyramidal, instead of chisel type, and vice versa, can be supplied when so specified without additional charge. For No. 3138 a special, long, semi-chisel shaped tip No. 3738-S can be supplied for telephone and switchboard work.



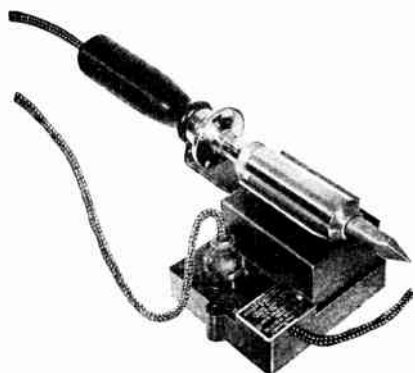
3798 for 3198 Iron
3778 for 3178 Iron
3758 for 3158 Iron
3138S for 3138 Iron
3738 for 3138 Iron
3728 for 3128 Iron
3734 for S-76 Iron

American Beauty TEMPERATURE REGULATING STANDS

For use on (AC) Alternating Current Only

This is a thermostatically controlled device for the regulation of the temperature of an electric soldering iron while at rest. When placed on this stand, soldering iron is maintained at working temperature, ready for instant use or, if desired, at a lower temperature. Through an adjustment on bottom of the stand, thermostat may be set for the maintenance of any desired temperature—from very low, or warm, to full working temperature. Body of stand is of molded plastic. Soldering iron cradle proper is of metal. Stand is equipped with cord and attachment plug-cap for connection to current and with a receptacle for connection of the electric soldering iron. It is designed for use with electric soldering irons up to 660 watts capacity and on circuits up to 240 volts.

Cat. No.	Net Weight	List Price	Net Price
475	27 oz.	\$5.50	\$3.88



ESICO

REG. U. S. PAT. OFF.

ELECTRIC SOLDERING IRONS FOR HOME, PROFESSIONAL MECHANIC AND FACTORY

● GREEN LABEL LINE

For intermittent duty. Meets all requirements of the home craftsman.



No. 415—List \$1.95— $\frac{3}{8}$ " Tip—55 Watts



No. 416—List \$2.95— $\frac{1}{4}$ " Tip—60 Watts



No. 417—List \$3.95— $\frac{3}{8}$ " Tip—100 Watts



No. 418—List \$4.95— $\frac{1}{2}$ " Tip—130 Watts

● ORANGE LABEL LINE

For Professional Mechanics—light or heavy soldering where iron must withstand operation for eight hour periods or more on frequent occasions.



No. 62—List \$4.95— $\frac{1}{4}$ " Tip—60 Watts



No. 63—List \$5.95— $\frac{3}{8}$ " Tip—100 Watts



No. 64—List \$6.95— $\frac{1}{2}$ " Tip—130 Watts



No. 65—List \$7.95— $\frac{5}{8}$ " Tip—200 Watts



No. 67—List \$8.95— $\frac{7}{8}$ " Tip—300 Watts



No. 69—List \$10.95—1 $\frac{1}{8}$ " Tip—500 Watts

● RED LABEL LINE

For Production Line Continuous Operation. These Irons are of most rugged construction.



No. 38—List \$6.95— $\frac{3}{8}$ " Tip—100 Watts



No. 58—List \$8.95— $\frac{5}{8}$ " Tip—200 Watts



No. 78—List \$10.95— $\frac{7}{8}$ " Tip—300 Watts



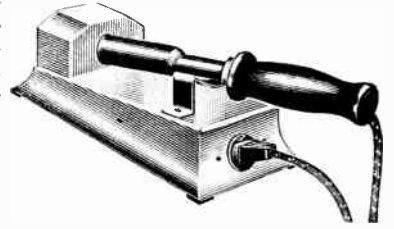
No. 98—List \$12.95—1 $\frac{1}{8}$ " Tip—550 Watts

● Thermostatic Temperature Control Stand

The iron can be maintained at any desired temperature while in the stand. This is the only way to control the tip temperature of an iron. Control of element temperature is not satisfactory. There is too much of a lag between element and tip temperature.

Years ago we developed a thermostatically controlled iron, which regulated the element temperature (just as presently marketed thermostatically controlled irons do) but we discarded the iron as it would permit the tip to cool.

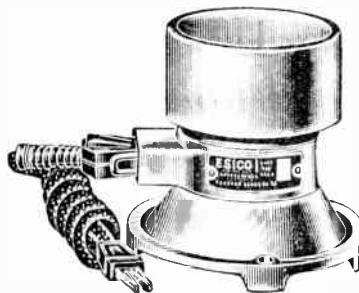
When the stand is properly adjusted, it is impossible for the iron to overheat or to burn off its tin.



List Price

Cat. No. 5 Irons up to 1" dia. tip \$ 6.50
 Cat. No. 6 Irons up to 1 $\frac{1}{8}$ " dia. tip 6.50

● Soldering Pots



Ruggedly constructed, cast iron pots for production work. Elements are easily replaced even while pots are hot.

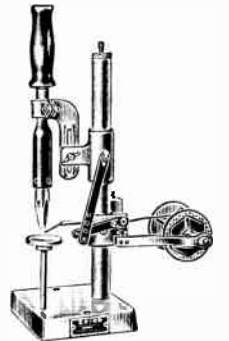
Net Price

Cat. No. 12—1 $\frac{1}{2}$ " dia. Cap.
 3 $\frac{1}{4}$ lbs. \$ 4.50
 Cat. No. 36—2 $\frac{1}{2}$ " dia. Cap.
 2 $\frac{1}{4}$ lbs. 5.50
 Cat. No. 60—3 $\frac{1}{2}$ " dia. Cap.
 3 $\frac{1}{4}$ lbs. 6.50

● Spot Soldering Machine

Model "F" is a treadle operated machine which feeds solder forward as the iron moves away from the work. Suitable for spot soldering where a mechanical connection has first been made. Net price\$15.00

Model "N" is a treadle operated machine for the advancement of the iron, but without a solder feed attachment. Net price\$7.50



● Glue Pots

The catalogue No. 700 Glue Pot is of two quart capacity. It is the water jacket type and has a gasket sealed element and thermostat completely protected from moisture. Thermostat is normally set at 150 degrees for use with glue, but can be set at various temperatures for use with wax, etc. Net price \$18.50



ELECTRIC SOLDERING IRON CO., INC.

DRAKE



RADIO IRONS

Suggested for Maintenance Work and for the Radio Service Man



60 Watt Iron with $\frac{3}{8}$ " Tip. An excellent iron for light work. Porcelain element. Six ft. cord and small stand.

No. 315 List \$1.70
Element List \$0.53 Tip List \$0.53

Shipping Weight 1 lb.

100 Watt Iron with $\frac{3}{8}$ " Tip. An ideal iron for those who require a hotter iron than our No. 315. Porcelain element. Six ft. cord and small stand.

No. 316 List \$2.95
Element List \$0.80 Tip List \$0.80

Shipping Weight $1\frac{1}{2}$ lbs.



80 Watt Iron with $\frac{3}{8}$ " Tip. Recommended for light radio work. Mica wound element. Six ft. cord and large stand.

No. 225 List \$4.05
Element List \$2.13 Tip List \$0.53

Shipping Weight $1\frac{1}{2}$ lbs.

100 Watt Iron with $\frac{3}{8}$ " Tip. Recommended for general radio work. Mica wound element. Six ft. cord with large stand.

No. 325 List \$4.70
Element List \$2.66 Tip List \$0.53

Shipping Weight 2 lbs.



125 Watt Iron with $\frac{3}{8}$ " Tip. An extra hot iron for the serviceman. Mica wound element. Six ft. cord and large stand.

No. 326 List \$5.50
Element List \$3.20 Tip List \$0.53

Shipping Weight 2 lbs.

200 Watt Iron with $\frac{5}{8}$ " Tip. Recommended for medium heavy work. Mica wound element. Six ft. cord and large stand.

No. 425 List \$9.00
Element List \$6.39 Tip List \$0.85

Shipping Weight 2 lbs.

Suggested for Home Use and Light Repairs



60 Watt Iron with $\frac{5}{8}$ " Tip. An ideal iron for light soldering. Porcelain element. Six ft. cord and small stand.

No. 700 List \$1.96
Element List \$0.53 Tip List \$0.53

Shipping Weight $1\frac{1}{2}$ lbs.

100 Watt Iron with $\frac{7}{8}$ " Tip. Recommended for light medium work. Porcelain element. Six ft. cord and small stand.

No. 701 List \$2.56
Element List \$0.80 Tip List \$0.53

Shipping Weight 2 lbs.

150 Watt Iron with $1\frac{1}{8}$ " Tip. An ideal iron for garage and machine shops. Mica wound element. Six ft. cord and small stand.

No. 703 List \$6.00
Element List \$2.13 Tip List \$2.13

Shipping Weight 2 lbs.



600 Watt Iron with $\frac{5}{8}$ " Tip. An excellent iron for light work. Porcelain element. Six ft. cord and small stand.

No. 55 List \$1.66
Element List \$0.53 Tip List \$0.53

Shipping Weight 1 lb.

100 Watt Iron with $\frac{7}{8}$ " Tip. An excellent iron for the Home. Porcelain element. Six ft. cord with small stand.

No. 804 List \$1.86
Element List \$0.80 Tip List \$0.53

Shipping Weight 1 lb.



MODEL 350 MIDGET

Recommended for voice coil leads on speaker cones, meter connections, test equipment, hearing aids, crystal pickups, headphone leads, etc. This iron is a continuous duty 35 watt iron with a nickel-chromium element wound over mica insulation on a steel core.

No. 350 List \$3.50
Element List \$1.50 Tips, ea. List \$0.10

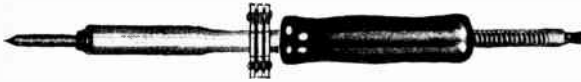
Shipping Weight 1 lb.

DRAKE



Industrial IRONS

INDUSTRIAL IRONS



60 Watt Iron with 1/4" Tip. An extra small iron for midget sets. Only 5" long.

No. 400 .....	.....	List \$4.95
Element.....	List \$3.20 Tip	List \$0.43
Shipping Weight 2 lbs.		

100 Watt Iron with 3/8" Tip. Only 10 inches over all. Ideal for close work on radio sets.

No. 600-10 .....	.....	List \$7.00
Element.....	List \$4.26 Tip	List \$0.53
Shipping Weight 2 lbs.		

140 Watt Iron with 3/8" Tip. An extra hot iron for high speed work on production lines.

No. 600 Special .....	.....	List \$7.50
Element.....	List \$4.26 Tip	List \$0.53
Shipping Weight 2 lbs.		



80 Watt Iron with 3/8" Tip. Recommended for fine instruments, light telephone and other light soldering.

No. 450 .....	.....	List \$5.50
Element.....	List \$3.20 Tip	List \$0.53
Shipping Weight 2 lbs.		

100 Watt Iron with 3/8" Tip. The standard 100 watt iron. Ideal for switchboards and radio sets.

No. 600 .....	.....	List \$6.50
Element.....	List \$3.73 Tip	List \$0.53
Shipping Weight 2 lbs.		

200 Watt Iron with 5/8" Tip. For general factory work such as art glass, medium tin work.

No. 800 .....	.....	List \$9.00
Element.....	List \$6.39 Tip	List \$0.85
Shipping Weight 3 lbs.		

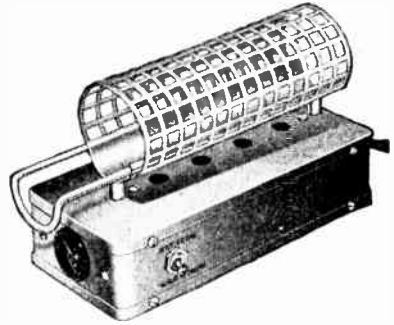
300 Watt Iron with 7/8" Tip. Recommended for tin-smiths, auto radiators, small branding irons.

No. 1100 .....	.....	List \$12.00
Element.....	List \$8.52 Tip	List \$1.07
Shipping Weight 4 lbs.		

The elements of all Industrial Irons are wound on high grade amber mica with Nichrome No. 5.

No. 12 "Magic Cup" stand is furnished with all irons having tips 3/8" or less. All other irons are furnished with No. 10 stand.

THE DRAKE HEAT CONTROL



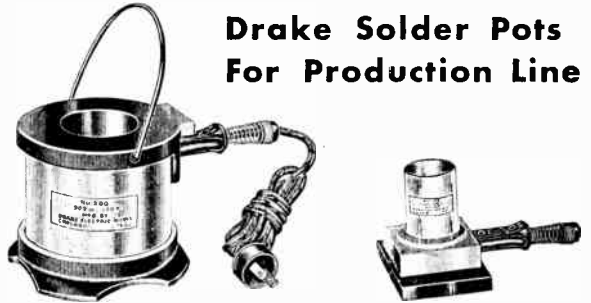
is the only control on the market that allows constant temperature regulation at all times. No thermostats to stick. A flip of the switch and the iron is ready for use in a few moments. Variable resistor allows individual temperature control to meet the requirements for each operation.

This control should be used wherever it is necessary to keep an iron ready for instant use, such as test benches, laboratories, etc. 100-watt irons only.

No. 300 (without Hood)	List Price \$4.50
No. 300H (with Hood)	List Price \$5.00
"Magic Cup" Stand	List Price \$0.50

Shipping weight 3 lbs.

Drake Solder Pots For Production Line



Model No. 200—300 Watt Unit

An ideal electric solder pot for production use. Used in factory production of tinned wire ends, terminal tinning and countless other volume tinning applications. Holds 2 lbs. of bar solder in 2 1/2" diameter 2" deep cast iron well. Complete with detachable Underwriters' Approved cord and plug, and bale type carrying handle. Genuine nichrome element. Shipping weight 6 lbs.

No. 200	List Price \$6.50
---------------	-------------------

Model No. 100—150 Watt Unit

Designed for light tinning. Ideal for occasional jobs. Suited especially for tinning ends of stranded wires to prevent fraying. Can also be used for soldering cord tips to cables. One piece cast iron construction holds heat longer. Size of pot 1 1/2" diameter 1" deep. Holds 1 lb. of bar solder. Complete with Underwriters' Approved cord and detachable plug. Shipping weight 3 lbs.

No. 100	List Price \$5.00
---------------	-------------------

All Drake Irons are listed as standard with the Underwriters Laboratories and the Canadian Power Commission.



CALROD[®] SOLDERING IRONS

FOR EVERY RADIO REQUIREMENT

MANUFACTURING — SERVICE

*Reg. U. S. Pat. Off.

- **HIGH-SPEED SOLDERING.** You can solder as fast and continuously as the nature of the work will allow.
- **UNIFORM PERFORMANCE.** Operating characteristics remain constant day after day. No appreciable decrease in efficiency even after months of service.
- **LONG LIFE AND LOW MAINTENANCE.** Long

life is assured and over-all costs are kept low because sturdy construction eliminates need of frequent repairs.

- **EASY, LOW-COST REPAIR.** Assembling and disassembling are easy.
- **THEY NEED NOT BE RETURNED TO THE FACTORY FOR REPAIR.** Irons can be repaired on the job without special tools or skill.

Cat. No. 6A161

Approved and Listed Under Re-examination Service of Underwriters' Laboratories



Watts 75 Volts 115

Calorized tip\$9.55*
IRONCLAD tip10.20*

Tip diam. See note below*



* For light, intermittent soldering such as radio-assembly and repair and installation, switchboard, ignition, wiring devices, meters and instruments, or very light high-speed soldering of similar products.

WEIGHTS: Less cord, 15 oz. With cord, 20 oz. Shipping, 26 oz. Equal to old-style copper—1 3/4 lb.

*Cat. No. 6A161 and Cat. No. 6A162 can be supplied with either a 3/8- or 1/2-inch diameter tip at prices given. The long 1/2-inch diameter tip projects 3/8 inches from the shell. Price of iron with long calorized tip—\$10.10; with long IRONCLAD tip—\$10.90.

For light, high-speed soldering, such as assembly of radios, telephones, switchboards, appliances, meters, and instruments, and installation and repair of wiring and wiring devices, ignition. Excellent for service and repair men.

WEIGHTS: Less cord, 15 oz. With cord, 20 oz. Shipping, 26 oz. Equal to old-style copper—1 3/4 lb.

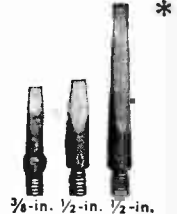
Cat. No. 6A162



Watts 100 Volts 115

Calorized tip\$9.55*
IRONCLAD tip10.20*

Tip diam. See note above*



Cat. No. 6A200



Watts 100 Volts 115

Calorized tip\$10.80
IRONCLAD tip 12.20

Tip diam. 3/4 inch

For light, high-speed soldering, such as assembly of radios and switchboards, medium intermittent soldering on tin ware, wiring, plumbing, and tinsmithing. Excellent general-purpose iron for shop and farm.

WEIGHTS: Less cord, 16 oz. With cord, 21 oz. Shipping, 27 oz. Equal to old-style copper—2 lb.

For medium, high-speed soldering of automobile and airplane assembly, electric equipment, light tanks and containers of copper and steel. Excellent general-purpose iron for manufacturing plant.

WEIGHTS: Less cord, 24 oz. With cord, 29 oz. Shipping, 34 oz. Equal to old-style copper—3 lb.

Cat. No. 6A201



Watts 200 Volts 115

Calorized tip\$13.55
IRONCLAD tip 15.10

Tip diam. 1 inch

Cat. No. 6A202



Watts 300 Volts 115

Calorized tip\$16.40
IRONCLAD tip 17.95

Tip diam. 1 1/4 inch

For heavy work such as light commutators, large-diameter pipe, medium-gage copper or steel tank and container material, roofing, heavy tinware.

WEIGHTS: Less cord, 37 oz. With cord, 42 oz. Shipping, 48 oz. Equal to old-style copper—4 lb.

ASK ABOUT IRONCLAD TIPS

IRONCLAD TIPS MEAN

- No Filing
- Lower Upkeep Cost
- Less Maintenance
- Longer Life



Effect of solder (250 C for 363.5 hours) on plain copper (left) and Ironclad copper (right) soldering tips.

Note—230-volt irons available on request. Same prices apply. Above prices include supporting stand.

ASK YOUR DISTRIBUTOR FOR A COPY OF BULLETIN GEA-4519.



MIDGET SOLDERING IRONS

FOR MANUFACTURING AND SERVICE
OF RADIO AND ELECTRONIC EQUIPMENT

APPLICATION

This 8-inch, 1¾-ounce featherweight iron for close-quarter soldering with pin-point precision is used where conventional irons might cause damage . . . be clumsy to handle . . . be more expensive to operate. The Midget literally goes places with greater efficiency and less power . . . with no sacrifice in heat or speed. With its fingertip operation, this iron will help make an expert out of any solderer in a short time.

The Midget has chisel-shaped ironclad copper tips either ⅛- or ¼-inch diameter, as desired.

THIS MIDGET DOES A BIG JOB IN

- Boosting Production Rates
 - Increasing Operator Efficiency
 - Cutting Down Employee Fatigue
 - Saving on Repair and Maintenance
 - Reducing Rejects
 - Manufacturing and Repairing:
 - Radios and other electronic equipment
 - Meters
 - Instruments
 - Jewelry
 - Appliances
- . . . and many other products requiring precision soldering

RATING: 6 VOLTS, 25 WATTS

Description	Cat. No.	List Price GO-14
★ ⅛-in. Ironclad copper tip (pyramid-shaped)	6A212	\$5.40
★ ¼-in. Ironclad copper tip (chisel-shaped)	6A210	5.40
⅛-in. Renewal tip and heater assembly	6A213	3.00
¼-in. Renewal tip and heater assembly	6A211	3.00

Net weight iron less cord 1¾ oz.
Net weight iron including cord 5 oz.
Shipping weight complete iron 8 oz.
Standard package consists of 6 irons of one tip size. Tip and heater assemblies can be purchased in any quantities.

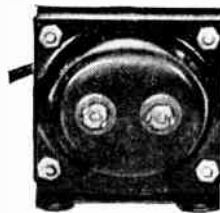


⅛-in. dia tip, Cat. No. 6A212

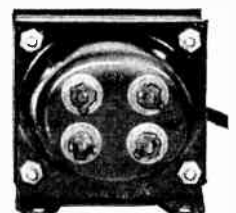


¼-in. dia tip, Cat. No. 6A210

SPECIAL TRANSFORMERS (OPTIONAL) FOR G-E MIDGET SOLDERING IRONS



Single-tap. Cat. No. 84G392



Four-tap. Cat. No. 84G370

Specially designed 115-volt transformers are available as optional equipment in two types:

1. Single-tap 115/6 volts—for use where only one soldering heat is required
2. Four-tap 115/6.3/6/5.7/5.4 volts — gives wide range of heats (from 20 to 30 watts) for close temperature control of tips

Transformers are small, lightweight, but sturdy. Their 6-foot extension cords can be plugged in any 115-volt a-c circuit.

Description	Cat. No.	List Price GO-14
Single-tap	84G392	\$7.25
Four-tap	84G370	8.90

Publication Reference GENS-3488

THE MIDGET OFFERS MAJOR ADVANTAGES

Low-cost soldering—Solders more efficiently, using only approximately one-fourth wattage normally used.

Fingertip operation—Only 8 inches long, weighs but 1¾ ounces. Styled for fingertip grip.

Quick, continuous heat—Famous G-E Calrod* heater built into ironclad copper tip for rapid heat transfer.

Easy renewal—Ironclad tip and heater can be replaced as a unit merely by unscrewing from handle.

Long life, low maintenance—Low voltage permits use of heavy, long-lasting resistant wire. Reduced servicing with long-lasting Ironclad copper tip.

* Registered U.S. Patent Office.



HEXA CON

C.S.A. APP. No. 6699



ELECTRIC SOLDERING IRONS

GENERAL INFORMATION—Equipped with 6 ft. (10,000 cycle) approved heater cord (covered with twine braid for extra long wear) and rubber plug. Continental or English type plugs 25c extra list. Metal stand furnished with each iron. Heating elements made of best grade nickel-chromium resistance wire, insulated with finest mica obtainable. Elements in the plug tip irons are replaceable by the user and in the screw tip irons replaceable at

the factory. Tips in all irons are replaceable; made of hard drawn pure copper. Case is made from solid hexagon steel (except No. 50 and P-30), affording it great mechanical strength, preventing denting. Terminal easily accessible and constructed to relieve cord strain. Smooth, cool, comfortable handle—readily replaceable. Voltage range: 32 to 250. Standard voltages 110/120, 121/130, 220/250. All other voltages \$1.00 extra list.

SCREW TIP IRONS



No. 50—For light soldering on radio, telephone and electrical apparatus. 50 Watts. Tip diam., $\frac{1}{16}$ ". Ship. wt., 1 lb. Equal to $\frac{1}{2}$ -lb. old style copper each **\$4.50**
No. 60—Medium light soldering on telephone, radio, apparatus and linemen's kits. 60 Watts. Tip diam., $\frac{1}{8}$ ". Ship. wt., $1\frac{1}{8}$ lb. Equal to 1-lb. old style copper.....each **\$6.25**



No. 85—A high speed tool for telephone, radio and home use. 90 Watts. Tip diam., $\frac{1}{8}$ ". Ship. wt., $1\frac{1}{4}$ lb. Equal to $1\frac{1}{2}$ -lb. old style copper.....each **\$7.00**



No. 120—Light tinware, toys, typewriter, light auto, etc. A high speed iron. 120 Watts. Tip diam., $\frac{5}{16}$ ". Ship. wt., $1\frac{1}{8}$ lb. Equal to 2-lb. old style copper.....each **\$8.00**



No. 130—Same as No. 120 except has larger tip and 10 more watts capacity. 130 Watts. Tip diam., $\frac{7}{16}$ ". Ship. wt., $1\frac{1}{2}$ lb. Equal to 2-lb. old style copper each **\$8.75**

No. 170—Medium tinware, small cans, auto repairs, pipes, gutters, toys, small motors. 175 Watts. Tip diam., $1"$. Ship. wt., $2\frac{1}{4}$ lb. Equal to $2\frac{1}{2}$ -lb. old style copper.....each **\$10.00**



No. 225—Medium tinware, cans, auto repairs, metal patterns, light roofing, small branders. 250 Watts. Tip diam., $1\frac{1}{8}$ ". Ship. wt., $2\frac{5}{8}$ lb. Equal to 3-lb. old style copper each **\$11.00**



No. 350—Heavy tinware, large cans, autos, roofing, refrigerators, ship and airplane. 350 Watts. Tip diam., $1\frac{3}{8}$ ". Ship. wt., $3\frac{3}{8}$ lb. Equal to 4-lb. old style copper each **\$13.00**



No. 500—Auto repair, sinks, roofs, cans, armatures, large branders, tinmiths, etc. 500 Watts. Tip diam., $1\frac{5}{8}$ ". Ship. wt., 4 lb. Equal to 5-lb. old style copper..... each **\$15.00**

No. 700—For extra heavy soldering and large branders. 700 Watts. Tip diam., $1\frac{3}{4}$ ". Ship. wt., 5 lbs. Equal to 7-lb. old style copper..... each **\$27.50**

OPERATE ON A.C. OR D.C., ANY CYCLE

PLUG TIP IRONS



No. P-30—For extremely light soldering on finest wire and delicate instruments. 40 Watts. Tip diam., $\frac{1}{16}$ ". Ship. wt., $\frac{5}{8}$ lb. Equal to $\frac{1}{4}$ -lb. old style copper each **\$4.50**

No. P-70—For light soldering on radio and telephone apparatus and electrical instruments. 80 Watts. Tip diam., $\frac{3}{16}$ ". Ship. wt., $1\frac{1}{8}$ lb. Equal to 1-lb. old style copper.....each **\$6.00**



No. P-100—A high speed tool for telephone switchboards, electrical instruments, etc. 100 Watts. Tip diam., $\frac{3}{8}$ ". Ship. wt., $1\frac{1}{4}$ lb. Equal to $1\frac{1}{2}$ -lb. old style copper each **\$7.00**

No. P-125—For light tinware, toys, typewriter type bars, small cans, auto, etc. 130 Watts. Tip diam., $\frac{5}{16}$ ". Ship. wt., $1\frac{1}{2}$ lb. Equal to 2-lb. old style copper..... each **\$8.50**



No. P-150—Extra high speed iron for radios, electrical apparatus and where a light iron with small diameter is required. 150 Watts. Tip diam., $\frac{3}{8}$ ". Ship. wt., $1\frac{3}{4}$ lb. Equal to 2-lb. old style copper each **\$7.75**

No. P-151—Same as No. P-150, except where a larger tip is desired. 175 Watts. Tip diam., $\frac{1}{2}$ ". Ship. wt., $1\frac{3}{4}$ lb. Equal to $2\frac{1}{2}$ -lb. old style copper.....each **\$8.25**



No. P-200—For medium tinware, cans, auto repairs, light roofing, sheet metal, etc. 200 Watts. Tip diam., $\frac{5}{8}$ ". Ship. wt., $2\frac{1}{8}$ lb. Equal to $2\frac{3}{4}$ -lb. old style copper..... each **\$9.50**

No. P-250—Same as No. P-200, except where greater speed is required for manufacturing. 250 Watts. Tip diam., $\frac{5}{8}$ ". Ship. wt., $2\frac{3}{4}$ lb. Equal to 3-lb. old style copper.....each **\$10.75**



No. P-300—For heavy tinware, large cans, auto, roofing, refrigerator work, etc. 300 Watts. Tip diam., $\frac{7}{8}$ ". Ship. wt., $2\frac{7}{8}$ lb. Equal to 4-lb. old style copper.....each **\$12.50**

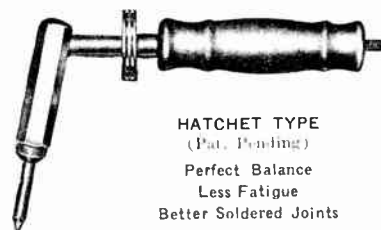


No. P-550—For auto radiators, copper sinks, roofs, heavy armatures, large branders, etc. 550 Watts. Tip diam., $1\frac{1}{8}$ ". Ship. wt., $4\frac{1}{8}$ lb. Equal to 5-lb. old style copper each **\$15.00**

SPECIFY VOLTAGE WHEN ORDERING

Cat. No.	Watts	Tip Dia.	Ship. Wt.	Price
*30H	40	$\frac{1}{16}$ "	$\frac{5}{8}$ lbs.	\$ 5.00
70H	80	$\frac{3}{16}$ "	$1\frac{1}{8}$ lbs.	8.00
100H	100	$\frac{3}{16}$ "	$1\frac{1}{2}$ lbs.	9.00
150H	150	$\frac{3}{16}$ "	2 lbs.	9.75
151H	175	$\frac{1}{2}$ "	2 lbs.	10.25
200H	200	$\frac{5}{16}$ "	$2\frac{3}{8}$ lbs.	11.50
300H	300	$\frac{7}{8}$ "	$2\frac{7}{8}$ lbs.	14.50

*No. 30H can be furnished in 50 or 60 watts or with $\frac{1}{8}$ " dia. tip.



HATCHET TYPE

For same use as Plug Tip irons of equal wattage, shown above. Replaceable elements and all other features of Plug Tip Irons.

HATCHET TYPE
(Pat. Pending)
Perfect Balance
Less Fatigue
Better Soldered Joints



SOLDERMASTER Royal Blue Line ELECTRIC SOLDERING IRONS



GENERAL INFORMATION—Replaceable elements. Best grade of Madagascar mica for insulation. No. 55 has brass-sheathed cartridge element. Best grade nickel-chrome resistance wire. Replaceable hard drawn copper tips. All one piece swaged cases

CHROME PLATED. Equipped with 6 ft. Underwriters' Approved heater cord, rubber plug. Continental or English type plug 25c extra list. Stand for resting iron furnished.

VOLTAGES 110/120 220/250 A.C. or D.C., ANY CYCLE
SPECIFY VOLTAGE WHEN ORDERING

SCREW TIP IRONS



No. 55B—For light soldering, radio apparatus, etc. 55 Watts. Tip diam., $\frac{1}{16}$ ". Ship. wt., 13 oz. each \$2.50



No. 76B—For light work, electrical instruments, etc. 75 Watts. Tip diam., $\frac{1}{8}$ ". Ship. wt., 15 oz. each \$4.00



No. 100B—Same as No. 76B except used where more speed is required and heavier work is done. For home use. 90 Watts. Tip diam., $\frac{1}{4}$ ". Ship. wt., 16 oz. each \$4.50



No. 150B—Ideal size for garage and repair work. For home use. 170 Watts. Tip diam., $\frac{7}{8}$ ". Ship. wt., 24 oz. each \$7.00



No. 300B—For heavy steel metal, auto radiators, etc. 275 Watts. Tip diam., $1\frac{1}{8}$ ". Ship. wt., 38 oz. each \$10.00

PLUG TIP IRONS



No. 71B—For light work, radio repairs, etc. 75 Watts. Tip diam., $\frac{3}{8}$ ". Ship. wt., 16 oz. each \$4.00



No. 101B—For same work as No. 71B, but where more speed is required or heavier work is done. For home use. 100 Watts. Tip diam., $\frac{3}{8}$ ". Ship. wt., 18 oz. each \$4.50



No. 121B—High speed iron for radio and electrical repairs. 125 Watts. Tip diam., $\frac{3}{8}$ ". Ship. wt., 13 $\frac{1}{4}$ lbs. each \$5.50



No. 201B—For same work as No. 150B, except where plug tip is desired. 200 Watts. Tip diam., $\frac{5}{8}$ ". Ship. wt., 34 oz. each \$8.00



No. 301B—For same work as No. 300B, except where plug tip is desired. 300 Watts. Tip diam., $\frac{7}{8}$ ". Ship. wt., 46 oz. each \$10.00

DISPLAYS

Increase your sales with these silent salesmen. Irons securely mounted, but readily removable for sale. Individually packed in cartons ready for shipment. Catalog number and wattage shown on front of display. Complete catalog information and price list on back.

SCROLL TYPE DISPLAY

Striking, Modernistic, All Metal Panel



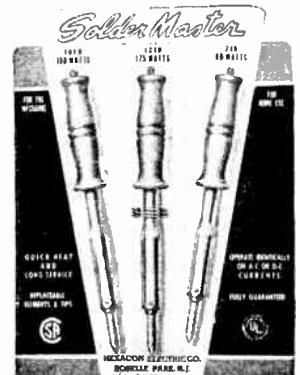
No. 1 DISPLAY Illustrated

Size 15" x 17 $\frac{1}{2}$ " (Nos. 1B, 2B, and 3B also same size)

This Display Panel Also Furnished With
Five or Seven Irons (See Below)

	Ship. Wt.	List Price
No. 1B—Nine Iron with Nos. 55B, 76B, 100B, 150B, 300B, 71B, 101B, 201B, 301B	20 lbs.	\$54.50
No. 2B—Seven Iron with Nos. 55B, 76B, 100B, 150B, 300B, 71B, 101B	17 lbs.	36.50
No. 3B—Five Iron with Nos. 55B, 76B, 100B, 150B, 300B	15 lbs.	28.00
No. 4B—Five Iron with Nos. 71B, 101B, 121B, 201B, 301B	16 lbs.	32.00

ATTRACTIVE THREE COLOR CARDBOARD DISPLAY



This same display card also furnished with No. 5B and No. 5DB, but mounted with irons listed below.

No. 6B DISPLAY Illustrated

Size 12" x 16 $\frac{1}{2}$ "
(Nos. 5B, 5DB also same size)

	Ship. Wt.	List Price
No. 5B—Three Iron with Nos. 55B, 76B, 100B	4 lbs.	\$11.00
No. 5DB—Three Iron with Nos. 55B, 100B, 150B on display and 2 No. 55B and 1 No. 100B for stock	8 lbs.	23.50
No. 6B—Three Iron with Nos. 71B, 101B, 121B	5 lbs.	14.00

ERSIN MULTICORE SOLDER



SEVEN POUND REELS



ONE POUND CARTONS



The Solder containing 3 cores of extra active non-corrosive flux giving high speed soldering.

Our claim is a simple one: We believe that ERSIN MULTICORE is the finest cored solder in the World!

Ersin Multicore is solder in the form of wire containing three cores of non-corrosive Ersin Resin Flux. No extra flux is required. The use of Ersin Multicore guarantees that the correct proportion of flux to solder is used and maximum fluxing action occurs at the correct melting point of the solder. Only by using solder

wire with three cores of flux is it possible to be sure the flux is always present—that there will not be lengths of wire without flux which result in “dry” or high-resistance joints.

In addition to this advantage, Ersin Multicore is the *only* cored solder in the world containing ERSIN, an extra-active non-corrosive flux. It is high grade rosin homogeneously activated by a process which confers on the rosin the vigorous fluxing action characteristic of the more active fluxes.

You enjoy speedy and a consistently high precision standard of soldering and attain just that extra rapidity which guarantees economy of operation. Ersin Flux not only removes surface oxides prior to soldering, but prevents formation during the soldering period. You can satisfactorily solder components which are highly oxy-

dized—ones on which it would be necessary to undertake additional mechanical or chemical cleansing processes when using any other type of flux.

In Ersin Flux, the protective qualities of the original rosin are preserved. Joints made with Ersin Multicore Solder will not corrode even after prolonged exposure to any degree of humidity. The flux residue is impervious to moisture. It is hard and not sticky. It avoids accumulation of dirt and impurities on the joint.

Every reel or carton of Ersin Multicore is clearly marked both as to Gauge and Alloy, showing the actual content of Tin and Lead. You know exactly what you are getting when you buy Ersin Multicore Solder! Multicore costs a fraction more initially, but is unquestionably most economical in the long run.

Ersin Multicore Solder is available in all Tin/Lead alloys and in standard wire gauge from 10 to 22. (14, 16 and 18 s.w.g. are most popular.)

Ersin Multicore is the only solder which offers you these two fundamental advantages: (1) Multicore construction, providing three cores which assure perfect joints; (2) Ersin Flux, our *exclusive* fast non-corrosive flux.

Ersin Multicore is the answer for those who seek the finest Cored Solder in the World!



The Solder containing 3 cores of extra active non-corrosive flux giving high speed soldering.

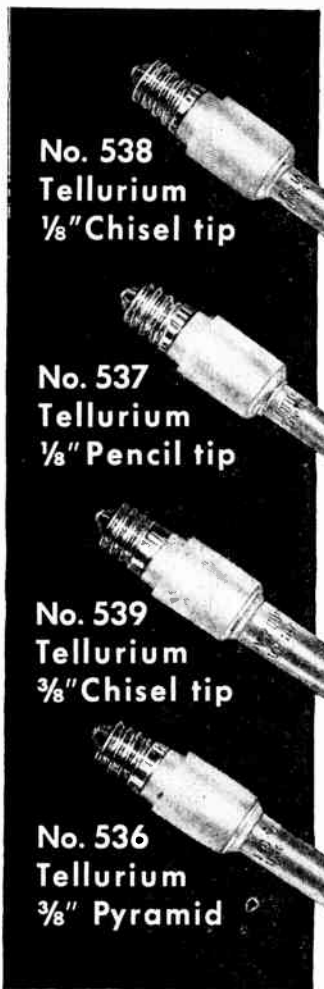
BRITISH INDUSTRIES CORP.

315 Broadway

New York 7, N. Y.

Manufacturers of

Ungar Electric Soldering Pencils



No. 538
 Tellurium
 1/8" Chisel tip

No. 537
 Tellurium
 1/8" Pencil tip

No. 539
 Tellurium
 3/8" Chisel tip

No. 536
 Tellurium
 3/8" Pyramid



8 New Features

- 1. Full Length CORD**
65 strand Extra Flexible
- 2. New, Cooler HANDLE**
of Durable Molded Plastic
(Patent applied for)
- 3. UNDERWRITERS' Listed**
Seal on Complete Pencil Set
- 4. Ceramic SEPARATORS**
for DOUBLE Safety
- 5. Spring Action Rivet**
Assures positive contact at all times
- 6. Extra Length Brass Shell**
Firmly engages all threads
Keeps Heating Unit Tight
- 7. 20 watt ELEMENT**
1,000 hours operation 56¢
110-120 volt A.C.—D.C.
- 8. 4 INTERCHANGEABLE TIPS** • ample copper heats to 600° in 90 sec.

New → →

Feather - Light
 for hard-to-reach Jobs

Heavy - Rugged
 for all Standard Soldering

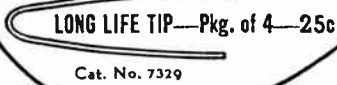
- No. 776 - HANDLE & CORD SET**
Packed 25 per case—Price \$1.00 ea.
- No. 536 - PYRAMID TIP**
Packed 10 per box—Price \$1.00 ea.
- No. 537 - PENCIL TIP**
Packed 10 per box—Price \$1.00 ea.
- No. 538 - CHISEL TIP**
Packed 10 per box—Price \$1.00 ea.
- No. 539 - CHISEL TIP**
Packed 10 per box—Price \$1.00 ea.

(Discounts: 1 to 9 - 20%
 10 or more - 35%)

Six New WELLER Soldering Guns with Solderlite

FOR FASTER
EASIER SOLDERING
AND TO PROTECT YOUR
WELLER SOLDERING GUN....
ALWAYS USE

Genuine Weller Flexitips



5 SECOND HEATING

No waiting time
Saves power

SOLDERLITE

Prefocused Spotlight

BUILT-IN TRANSFORMER

Produces current for heating loop tip

EXTRA LENGTH

Gives greater reach

TRIGGER SWITCH

Insulated plastic
Comfortable to hold

FASTER SOLDERING . . .

Time savers include 5 second heating; Solderlite to see where you work; loop tip gets in between wiring readily—can be formed to get in corners.

POWER SAVINGS . . .

Cost of power reduced up to 90% by intermittent 5-second heating.

SAVES RETINNING TIME . . .

Loop tip heats only when in use.

CHECK These Profit

Making Features . . .

5-Second Heating!

Soldering heat in 5 seconds saves waiting time. Saves power—used only when switch is closed.

Flexitip!

Long life tip. Can be formed to meet job needs. Replaceable quickly at low cost.

Easy to Hold!

Comfortable pistol grip and good weight distribution. Non-tiring and easy to hold.

Solderlite!

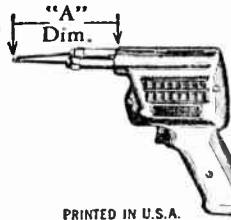
Locates the work fast. Spotlights the job. You see what you're doing.

Longer Reach!

Greater terminal length gets down farther in chassis wiring. Reaches through to the soldered joint.

Dual Heat!

Models D-207, DX-8 and DX-12 have 100 watts normal heat on first switch position, and 135 watts instantaneous heat on second position for soldering to chassis, etc.



PRINTED IN U.S.A.

*Model	Watts	Cycles	Volts	"A" Dim.	*Net Price	Primary Use
S-107	Single heat 100	60	115	4"	\$12.95	General Service
D-207	Dual heat 100/135	60	115	4"	14.95	
ES-110	Single heat 100	50/60	110	4"	13.50	Primarily for Export
ES-220	Single heat 100	50/60	220	4"	13.50	
DX-8	Dual heat 100/135	60	115	8"	15.75	Longer reach requirements: Telephone Multiple Maintenance, etc.
DX-12	Dual heat 100/135	60	115	12"	15.95	

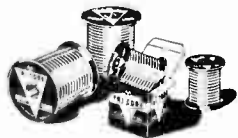
*Less 10% in quantities of 12 or more. F.O.B. Easton, Pa., U.S.A.
U.S. Pat. No. 2405866, other pat. pending.

WELLER MFG. CO.

ALPHA tri-core solders

An American Solder for American Production Methods

INSURE PERFORMANCE—SPECIFY ALPHA TRI-CORE



TRI-CORE ROSIN-FILLED SOLDER

Craftsmen prefer this faster, easier sequence solder. It provides more uniform fluxing and stronger joints for Radio, Electrical, and Automotive work. Saves time, money and labor for manufacturing or repair service.

WHY TRI-CORE ROSIN-FILLED IS THE IMPROVED SOLDER:

- three independently filled cores assure flux continuity, eliminate risk of empty flux sections.
- thinner solder walls speed melting, cut soldering time by 25% or more.
- no activating chloride agent to produce acid conditions and toxic vapors.
- forms a clean, smooth, strong joint without carbonizing.
- three cores instead of one at no premium in price.
- all gauges from 1/4" and heavier down to 0.020" and finer.



TRI-CORE "LEAKPRUF" ACID-FILLED SOLDER

Why put up with old-fashioned, leaky acid-cored solders? Mechanics acclaim Tri-Core's cleaner job, long shelf life, and guaranteed leakproof feature. Now you can protect yourself as well as your reputation for better craftsmanship with this development in the field of acid-cored solders!

WIDELY PREFERRED FOR BETTER SOLDERING:

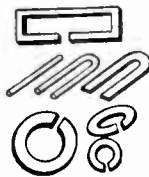
- The only three cored acid-filled solder.
- No solder waste due to fluxless areas.
- Highly soluble flux washes off with water.
- Non-toxic, and emits no offensive odors.
- Virtually non-sputtering, reduces hazards.
- Readily solders stainless steel, monel, nickel, etc.
- Leakproof; drip-proof; chalk-like flux will not leak to damage tools.
- The only acid core solder that can be formed into rings and other shapes, or cut to lengths without flux loss.



ALPHA SOLID SOLDER WIRE

Alpha's specialized know-how in lead and tin metallurgy and completely modern production facilities assures you of the finest solder wire available. Alpha's unique extrusion process assures a completely homogenized and uniform solder wire throughout. Supplied in any diameter and composition for your needs.

ALPHA PREFORMS



Alpha's preformed solders, in any shape or diameter required, cut many hours from your production time. Whether you use induction heating, flame jigs or heating ovens, we can swiftly supply your requirements in washers, rings, cut shapes, drops, pellets, solder foil, or other special shapes.

HANDY CAN PACKAGING

Alpha tri-core, rosin-filled, handy-cans: retail list 25c, packed in eye-appealing, sales-compelling, self-selling, safety flange tins. 12 cans per metal-edged display carton. 12 cartons per shipping container. Weight: 1 gross—25 pounds.

Alpha tri-core, "Leak-Pruf" acid-filled handy-cans: retail list 25c, packed in multiple color lithographed safety flange tins. 12 cans per metal-edged display carton. 12 cartons per shipping container. Weight: 1 gross—25 pounds.



STANDARD PACKING

1 LB. SPOOLS packed in individual cartons; 50 cartons per shipping container. 20 LB. SPOOLS packed 2 or 3 spools per shipping container. 5 LB. SPOOLS packed 10

SPECIAL ALLOYS

STANDARD ALPHA TRI-CORE SOLDERS ARE 40/60.

Also available in 25/75—35/65—45/55—50/50—60/40.

ALPHA SOLID SOLDER wire in all alloy ratios.

Available in all diameters from 1/4" and heavier, down to 0.020" and finer.

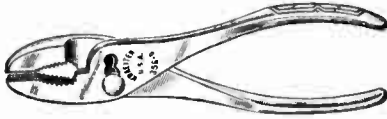
ALPHA METALS, INC.

363 Hudson Avenue, Brooklyn 1, N. Y.



KRAEUTER

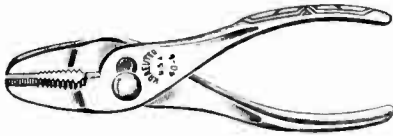
The choice of skilled mechanics



"GRIPTITE" COMBINATION PLIERS

The finest quality combination pliers. Designed for heavy duty. Slightly tapered nose, sharp deep milled teeth and grooved jaws for gripping cotter pins and wire. Knurled handles. The 8" and 10" sizes have three slip joint adjustments which give a wide range of parallel grips.

No.	Length	Finish	Wt. per doz.	Price
				Each
356	5 1/2 in.	Full Nickel	3 1/2 lbs.	\$1.50
356	6 in.	Full Nickel	5 1/4 lbs.	1.60
356	8 in.	Full Nickel	8 3/4 lbs.	2.00
356	10 in.	Full Nickel	14 lbs.	2.50



THIN NOSE COMBINATION PLIERS

The tapered jaws and thin nose of these pliers enable the mechanic to grip objects difficult to reach in tight, narrow working spaces. Knurled handles, milled gripping teeth and wire cutters.

No.	Length	Finish	Wt. per doz.	Price
				Each
40	5 in.	Nickel Plated	2 1/4 lbs.	\$
40	6 in.	Nickel Plated	4 1/4 lbs.	\$1.25



MECHANICS' SIDE CUTTING PLIERS

Gripping pliers with side cutters. Tapered nose, milled teeth and grooved jaws for gripping cotter pins and wire. Knurled handles. The cutters are very hardy for light wire work.

No.	Length	Finish	Wt. per doz.	Price
				Each
1973	5 1/2 in.	Full Nickel	3 1/2 lbs.	\$2.20
1973	7 in.	Full nickel	7 1/4 lbs.	2.50



LINEMEN'S SIDE CUTTING PLIERS

Designed for heavy work to meet the requirements of linemen. Drop forged from selected plier steel, skillfully hardened and tempered. Powerful wire cutters, a well balanced head and deep milled gripping jaw surface for holding and bending wire.

No.	Length	Finish	Wt. per doz.	Price
				Each
1801	6 in.	Blue Temper	5 1/4 lbs.	\$2.45
1801	7 in.	Blue Temper	7 1/2 lbs.	2.75
1801	8 1/2 in.	Blue Temper	11 1/4 lbs.	3.75



ELECTRICIANS' SIDE CUTTING PLIERS

Used extensively in electric wiring of fixtures, appliances and other general repair work. Very popular with mechanics on production work where electric wiring is required in the finished product.

No.	Length	Finish	Wt. per doz.	Price
				Each
1830	4 in.	Blue Temper	1 1/2 lbs.	\$1.75
1830	5 in.	Blue Temper	2 1/4 lbs.	1.90
1830	6 1/2 in.	Blue Temper	4 3/4 lbs.	2.10
1830	7 in.	Blue Temper	6 3/4 lbs.	2.35
1830	8 in.	Blue Temper	8 1/4 lbs.	2.75



IGNITION PLIERS

Very narrow head, serrated gripping teeth and well shaped handle grips. Three slip joint positions. Generally used on distributor, generator, magneto and carburetor work.

No.	Length	Finish	Wt. per doz.	Price
				Each
643	5 in.	Blue Temper	1 lb.	\$1.60

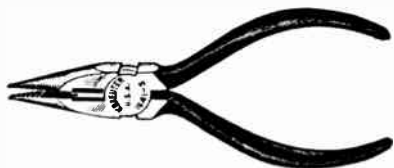
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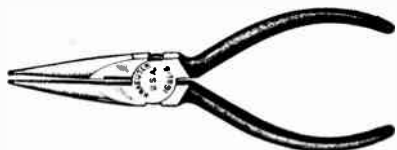
The choice of skilled mechanics



SHORT CHAIN NEEDLE NOSE PLIERS

Short tapered jaws for bending and looping wire. The short nose gives these pliers extra leverage and gripping strength. Used for wiring switches and other open electric work.

No.	Length	Finish	Wt. per doz.	Price	
				Each	Each
1641	5 in.	Blue Temper	2¾ lbs.	\$2.00	
1643	Same without Cutter		2¾ lbs.	1.75	



LONG CHAIN NEEDLE NOSE PLIERS

Long tapered jaws and needle nose. Used extensively in all industries . . . from switchboard, electric fixture and appliance wiring . . . to motor ignition, aviation and general manufacturing work.

No.	Length	Finish	Wt. per doz.	Price	
				Each	Each
1661	6 in.	Blue Temper	3½ lbs.	\$2.30	
1671	Same without Cutter		3½ lbs.	1.80	

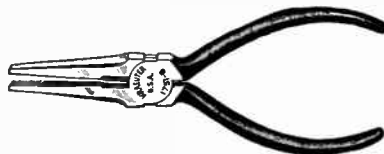


EXTRA LONG CHAIN NOSE PLIERS

Extra long tapered jaws with narrow pointed nose. Used extensively in automotive . . . electric . . . aviation and general production and repair work.

Length of jaw 2¾ in.

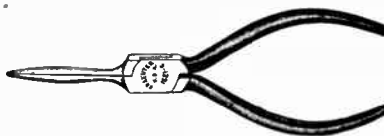
No.	Length	Finish	Wt. per doz.	Price	
				Each	Each
1781	7 in.	Blue Temper	3¾ lbs.	\$2.65	
1771	Same without Cutter		3¾ lbs.	2.15	



LONG FLAT NOSE PLIERS

Adaptable to many uses where a tool with long flat sturdy jaws is required. Jaws are scored to give a good gripping and holding surface.

No.	Length	Finish	Wt. per doz.	Price	
				Each	Each
1751	6 in.	Blue Temper	3 lbs.	\$2.40	
1741	Same without Cutter		3 lbs.	1.90	

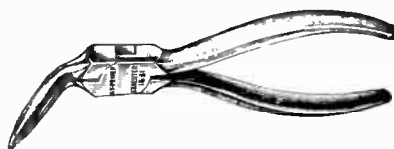


LONG NEEDLE OR SNIPE NOSE PLIERS

Especially designed for difficult and awkward jobs where no other tool will serve. The long slender jaws make it adaptable to many uses. A very popular plier for fine work.

2¾ in. Jaw

No.	Length	Finish	Wt. per doz.	Price	
				Each	Each
1621	6 in.	Blue Temper	2¼ lbs.	\$2.10	



CURVED NEEDLE OR SNIPE NOSE PLIERS

To reach that place down in under or around an obstruction. Very useful where greater visibility is required in holding small objects at an angle.

No.	Length	Finish	Wt. per doz.	Price	
				Each	Each
1631	5½ in.	Blue Temper	2¼ lbs.	\$2.35	

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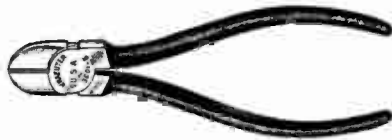
The choice of skilled mechanics



DIAGONAL "OBLIQUE" CUTTING PLIERS

Made especially for close cutting. Used extensively in electrical work, radio manufacturing, telephone and automotive ignition work.

No.	Size	Finish	Wt. per doz.	Price Each
4501	4½ in.	Blue Temper	1½ lbs.	\$1.80
	5 in.	" "	2¾ lbs.	2.05
	6 in.	" "	3¾ lbs.	2.35



SHORT NOSE DIAGONAL CUTTING PLIERS

An excellent cotter pin tool. Specially designed with short nose. Very popular with aviation and automotive mechanics.

No.	Size	Finish	Wt. per doz.	Price Each
3601	6	Blue Temper	4½ lbs.	\$2.50



"HIGH POWER" DIAGONAL CUTTING PLIERS

This type diagonal plier has the joint very close to the end of the cutter to give added leverage which makes cutting easy. A well balanced tool adaptable to the work in many trades.

No.	Length	Finish	Wt. per doz.	Price Each
4610	7 in.	Blue Temper	5¾ lbs.	\$2.30



No. 4206



WIRE STRIPPING DIAGONAL CUTTING PLIERS

Narrow head and notched cutters for stripping fine wire .062 diameter. The spring in the handle makes this a very fast cutting tool. Used by manufacturers of electric fixtures, appliances, radio and radio tubes.

No.	Length	Finish	Wt. per doz.	Price Each
2612	6½ in.	Blue Temper	3 lbs.	\$2.85



No. 1850

END CUTTING NIPPERS

Powerful end nippers carefully edged to insure sharp enduring cutters. Compact jaws and close riveted joint.

No.	Length	Finish	Wt. per doz.	Price Each
1850	5 in.	Blue Temper	4½ lbs.	\$2.00
1850	6 in.	Blue Temper	6 lbs.	2.25
1850	7 in.	Blue Temper	8 lbs.	2.50
1850	8 in.	Blue Temper	10½ lbs.	2.90

NOTE: These pages contain only a partial listing of KRAEUTER Tools. Ask for complete catalog describing the entire extensive KRAEUTER line. All prices subject to change without notice.

HARD WIRE DIAGONAL CUTTING PLIERS

Designed and edged for the purpose of cutting hard wire . . . in small sizes not larger than 1/8" diameter . . . not intended for cutting soft wire.

No.	Length	Finish	Wt. per doz.	Price Each
4206	6 in.	Blue Temper	4½ lbs.	\$2.50

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The choice of skilled mechanics

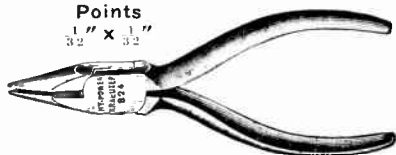
Professional Line

SPECIAL NEEDLE POINT PLIERS

Designed for light fine professional work. The special needle points of these pliers make them invaluable where delicate adjustments have to be made.

(NOSE OF THESE PLIERS NOT GUARANTEED)

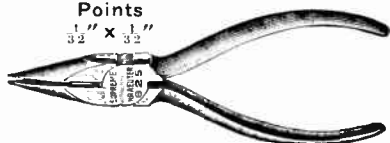
Needle Points
1" x 1/2"



SHORT NOSE NEEDLE POINT PLIERS

No.	Length	Finish	Wt. per doz.	Price Each
824	4 1/2 in.	Full Polished	1 1/2 lbs.	\$2.50
834	Same	without cutter		2.20

Needle Points
1" x 1/2"



MEDIUM NOSE NEEDLE POINT PLIERS

No.	Length	Finish	Wt. per doz.	Price Each
825	5 in.	Full Polished	2 1/4 lbs.	\$2.50
835	Same	without cutter		2.25

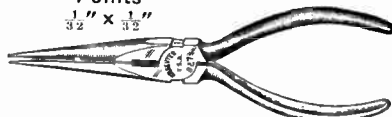
Needle Points
1" x 1/2"



LONG NOSE NEEDLE POINT PLIERS

No.	Length	Finish	Wt. per doz.	Price Each
826	6 in.	Full Polished	3 lbs.	\$2.70
836	Same	without cutter		2.35

Needle Points
1" x 1/2"



EXTRA LONG NOSE NEEDLE POINT PLIERS

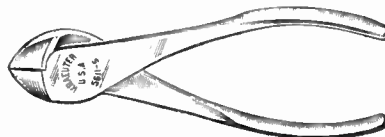
No.	Length	Finish	Wt. per doz.	Price Each
827	7 in.	Full Polished	3 3/4 lbs.	\$3.00
837	Same	without cutter	3 3/4 lbs.	2.75



NEEDLE POINT DIAGONAL CUTTING PLIERS

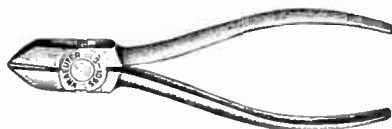
No.	Length	Finish	Wt. per doz.	Price Each
5612	6 1/2 in.	Full Polished	3 lbs.	\$3.30

(With Stripping Notch)



OVAL HEAD DIAGONAL CUTTING PLIERS

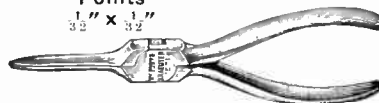
No.	Length	Finish	Wt. per doz.	Price Each
5611	5 in.	Full Polished	2 1/4 lbs.	\$2.75



NEEDLE POINT DIAGONAL CUTTING PLIERS

No.	Length	Finish	Wt. per doz.	Price Each
5601	4 1/2 in.	Full Polished	2 lbs.	\$2.50
5601	5 in.	Full Polished	2 3/4 lbs.	2.70
5601	6 in.	Full Polished	3 1/2 lbs.	3.10

Needle Points
1" x 1/2"

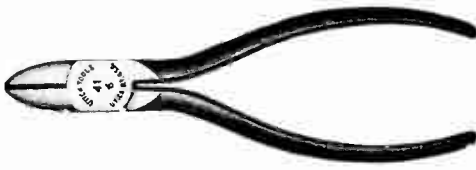


NEEDLE POINT SNIPE NOSE PLIERS

No.	Length	Finish	Wt. per doz.	Price Each
842	6 in.	Full Polished	2 1/4 lbs.	\$2.50

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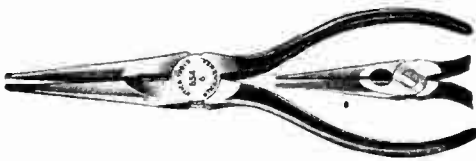
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No. 41 • Electricians' Diagonal Pliers—

Hardened and tempered in oil. Special narrow nose for radio and electrical work.

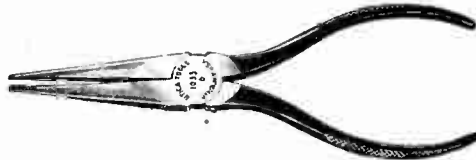
No. 41 4 inches, 5 inches and 6 inches
Can be furnished with insulation stripper.



No. 654 • Utica Long Needle Nose Side Cutting Plier

This is a long, fine, spring-tempered nose side cutting plier, drop forged and with hand-honed cutting knives.

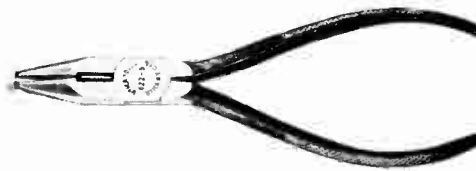
Utica Finish Size 6 inches and 7 inches



No. 1033 • Utica Long Chain Needle Nose Plier

This is a long needle nose type of plier without a side cutter. It has a spring-tempered needle nose with a fine balance for delicate work.

Utica Finish Size 6 inches and 7 inches

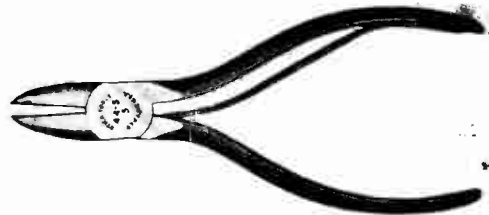


No. 622 • Utica Short Chain Nose Mechanic's Plier

This plier is a Short Chain Nose Side Cutting Plier, hand-honed cutting knives. It makes an all around Electrical Mechanic's plier.

Utica Finish Size 5 inches

No. 44S—Special Diagonal Pliers with Spring



A slim nose cutting plier designed especially for radio and electrical work. Extra fine hand honed edges permit nearly flush cuts.

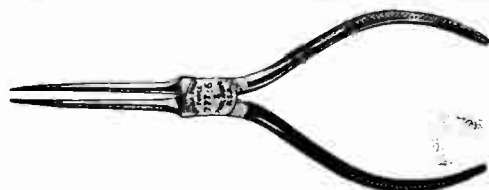
Utica Finish Size 5 inches and 6 inches



No. 50 • Utica Standard Side Cutting Plier

An ideal tool for electrical work. Drop forged and skillfully tempered. Its cutting qualities are unsurpassed by any side cutting plier.

Utica Finish Size 5, 6, 7, 8 inches



No. 777 • Utica Long Needle Nose Plier

This plier has a long, half-round, spring-tempered nose for very fine work in assembling small electrical apparatus.

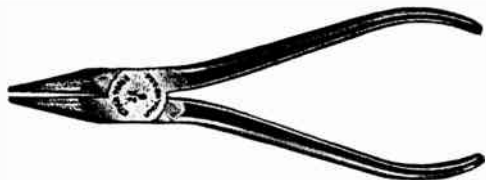
Utica Finish Size 6 inches



No. 888 • Curved Needle Nose Pliers—

This is a long curved spring-tempered Needle Nose Plier for use in deep and narrow places. It may be used without turning or twisting the hand in the assembling of small fixtures, electrical apparatus, etc.

Utica Finish Size 6 inches



No. 22 • Utica Chain Nose Plier

This is a Short Chain Nose Plier forged from a fine quality of steel with fine points particularly adapted for the use of Jewelers, Opticians, Telephone Installers, Electricians and Radio Assemblers.

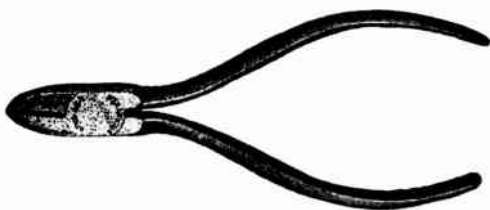
Utica Finish Size 4, 4½, 5, 6 inches



No. 82 • Utica Chain Nose Wiring Plier

This is a special Radio Repair man's plier, new in design, having a chain nose for those who prefer this type of construction.

Utica Finish Size 8 inches



No. 46 • Midget Diagonal Plier

A small Diagonal for radio and electrical work. Hand honed edges with a slim nose for use in cramped quarters.

Utica Finish Size 4 inches

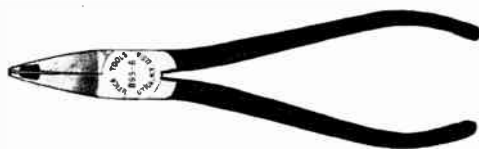


No. 91 • Thin Adjustable 22½° Angle Wrenches, Alloy Steel

Both the handle and jaw are drop forged from a high grade Alloy Steel, hardened and tempered in oil. Will not break or wear in the gear teeth and allow play in the wrench, permitting the jaw to slip off the nut.

It will give better service and last longer than any other wrench.

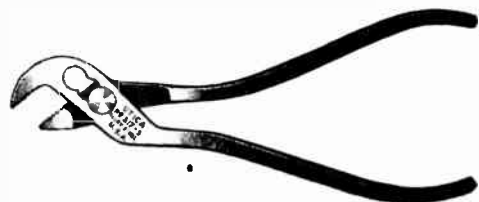
Size 4, 6, 8, 10, 12 inch



No. 895 Utica Radio Plier

This is a General Radio Repair Man's Plier. It has a center cutter and flat scored nose for looping and bending.

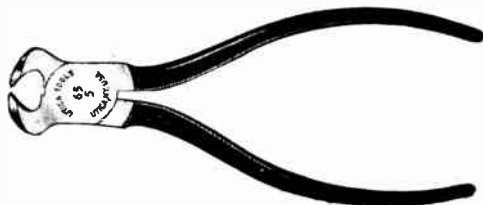
Utica Finish Size 6 inches



No. 517 Utica Ignition Plier

This ignition Plier with its unique design will fit all ignition units, spring tempered. A great little tool for the hard to get at adjustments.

No. 517 5 inches



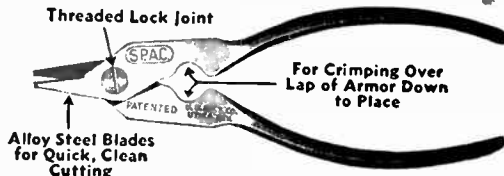
No. 65 • Utica Jeweler's End Cutting Nipper

This Nipper is forged from a fine grade of steel, carefully tempered. A light, strong End Cutting Nipper, used by Electricians and Machinists. The keen cutting edges and "Perfect Fit" handles make this a very popular tool.

Utica Finish Size 4½ and 5 inches

No. 100BX • Utica-Smith Pocket Armor Cutters

No. 100BX—Utica-Smith Pocket Armor Cutters 7" Alloy Steel



The easiest, quickest tool made for cutting armored cable. Fully illustrated instructions packed with each tool.

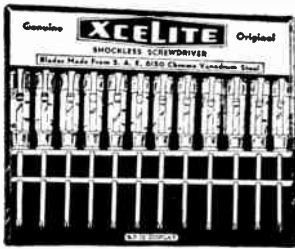
Utica Finish Size 7 inches

Quality

XCELITE

Tools

No. P-12 DISPLAY



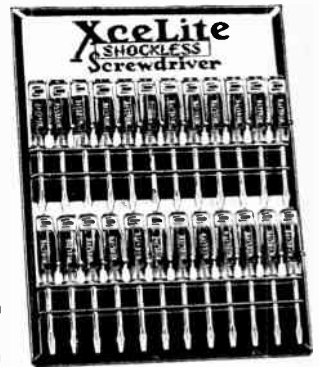
Pocket Reed & Prince (cross slot)
Net Weight 1 1/4 lbs.

There has been a demand for a small pocket size screwdriver to fit Reed & Prince and some of the other cross slot types of screws. We now offer such a driver. The blade is 3/8" diameter, 2" long with a 1/2" diameter Xcelite handle complete with pocket clip. They come packed 12 on a metal display.

No. P-12 Display—Complete List Price \$4.55
 Each Screwdriver List Price .35
 Refills List Price 4.20

No. 24 DISPLAY

Consists of 24 Screwdrivers
Net Weight 2 lbs.



This neat metal display "hits the spot" with many dealers. Consists of 24 Screwdrivers in the popular 1/4" x 2" size. Handles have pocket clips.

No. 24 Display Complete List Price \$7.60
 Each Screwdriver List Price .30
 Refills List Price 7.20

No. 10 DISPLAY — This Display consists of 10 screwdrivers with 5/32" blades in assorted lengths of 3", 4" and 5" all mounted on a very attractive metal display.

Complete, List Price \$6.35

Each Screwdriver List Price .60

No. 12 DISPLAY — Radiant Ignition Screwdrivers come complete with Pocket Clips assorted with 2", 3" and 4" blades in the popular 1/4" diameter size. Packed 12 on an attractive metal display.

Complete, List Price \$3.95

each Screwdriver, List Price .30

No. 332 Display—Same as No. 12 except diameter of blades is 3/22". Fits screws on knobs of midjet sets; also for fine instrument work.

Complete, List Price \$3.95. Each Screwdriver, List Price \$0.30



PHILLIPS SCREWDRIVERS

Xcelite Handles — Alloy Steel Blades

Cat. No.	Description Blade	No. in Box	Weight per box	List Price
X-101	3/8" diam., 3" length	10	1 1/4 lb.	\$0.95
X-102	1/4" diam., 4" length	10	2 lb.	1.35
X-103	5/16" diam., 6" length	10	3 1/2 lb.	1.85
X-104	3/8" diam., 8" length	10	5 lb.	2.05
SSX-101	3/8" diam., Stubby	10	7/8 lb.	.90
SSX-102	1/4" diam., Stubby	10	2" lb.	1.00

Xcelite Handles — Super Hard Blades

XP-101	XP-102	XP-103	XP-104	SXP-101	SXP102
3/8" diam., 3" length	1/4" diam., 4" length	5/16" diam., 6" length	3/8" diam., 8" length	3/8" diam., Stubby	1/4" diam., Stubby
\$1.95	1.45	2.00	2.35	1.00	1.10
	Recommended for use on sheet metal screws				

XCELITE SHOCKLESS SCREWDRIVERS Complete Xcelite Screwdriver Price Lists

Square Blades

Number	Size Blade	List	Weight Box of 10
S-183	1/8" x 3"	.45	1/2 lb.
S-184	1/8" x 4"	.45	1/2 lb.
S-185	1/8" x 4"	.45	1/2 lb.
†SH-183	1/8" x 3"	.60	1/2 lb.
†SH-184	1/8" x 4"	.60	1/2 lb.
†SH-185	1/8" x 5"	.60	1/2 lb.
S-3163	1/8" x 3"	.75	1 3/4 lb.
S-3164	1/8" x 4"	.80	1 3/4 lb.
S-3166	1/8" x 5"	.90	2 lb.
S-3168	1/8" x 6"	.95	2 lb.
S-31610	1/8" x 10"	1.05	2 1/4 lb.
S-142	1/4" x 2"	.90	1 3/4 lb.
S-144	1/4" x 4"	.95	2 lb.
S-146	1/4" x 4"	1.00	2 1/2 lb.
S-148	1/4" x 4"	1.10	3 lb.
S-5162	1/4" x 3"	.95	2 lb.
S-5166	1/4" x 3"	1.20	3 3/4 lb.
S-5168	1/4" x 3"	1.30	4 1/4 lb.
S-51610	1/4" x 10"	1.40	4 3/4 lb.
S-388	3/8" x 3"	1.75	6 lb.
S-3812	3/8" x 12"	2.45	1 1/2 lb.
S-7166	1/2" x 6"	2.05	1 1/2 lb.
S-71612	1/2" x 12"	2.55	1 1/2 lb.
S-71618	1/2" x 18"	2.80	1 1/2 lb.
S-3818	3/4" x 18"	2.70	1 1/2 lb.
S-1424	1" x 24"	2.25	1 1/2 lb.

Stubbies

S-3161	3/8" x 1"	.55	3/4 lb.
S-141	1/4" x 1"	.65	1 1/4 lb.
S-5161	1/2" x 1"	.65	1 1/4 lb.

Round Blades

Number	Size Blade	List	Weight Box of 10
*R-3322	3/32" x 2"	.30	1/2 lb.
*R-3323	3/32" x 3"	.30	1/2 lb.
*R-3324	3/32" x 4"	.30	1/2 lb.
*R-181	1/8" x 2"	.30	1/2 lb.
*R-183	1/8" x 3"	.30	1/2 lb.
*R-184 ¹	1/8" x 4"	.30	1/2 lb.
††R-184 ²	1/8" x 4"	.30	1/2 lb.
††R-186	1/8" x 6"	.35	3/4 lb.
††R-188	1/8" x 8"	.40	1 lb.
††R-1810	1/8" x 10"	.45	1 1/4 lb.
R-5323	5/32" x 3"	.60	1 lb.
R-5324	5/32" x 4"	.60	1 lb.
R-5325	5/32" x 5"	.60	1 lb.
R-5328	5/32" x 8"	.70	1 1/4 lb.
R-3163	3/16" x 3"	.70	1 1/2 lb.
R-3164	3/16" x 4"	.75	1 1/2 lb.
R-3166	3/16" x 6"	.85	1 3/4 lb.
R-3168	3/16" x 8"	.90	1 3/4 lb.
R-31610	3/16" x 10"	1.00	2 lb.
R-31618	3/16" x 18"	1.75	(pk. 1)
R-144	1/4" x 4"	.90	2 lb.
R-146	1/4" x 6"	.95	2 1/4 lb.
R-148	1/4" x 8"	1.05	2 1/2 lb.
R-5166	5/16" x 6"	1.15	3 1/2 lb.
R-5168	5/16" x 8"	1.25	4 lb.

*24 of this number used on #24 display.
 *These numbers have 1/2" dia. handles.
 ††These numbers have 5/8" dia. handles. For insulated blades any size in round list add 25 cents to list price.
 There's an Xcelite Screwdriver "sized" to fit every job.
 Note: We have standardized our packages on the decimal system instead of in dozens, in accordance with Government practice. All screwdrivers and nut drivers will be packed ten in a box, except where otherwise noted (exceptions are large sizes or slow moving items). Weights given above are correct to the nearest quarter-pound limit.

Quality

XCELITE

Tools

XCELITE NO. 3

De Lux

RADIO AND ELECTRICAL KIT

Chrome-Plated, extra heat treated SAE 6150 blades—accurately ground on flat belt and gauged to fit screw slots.

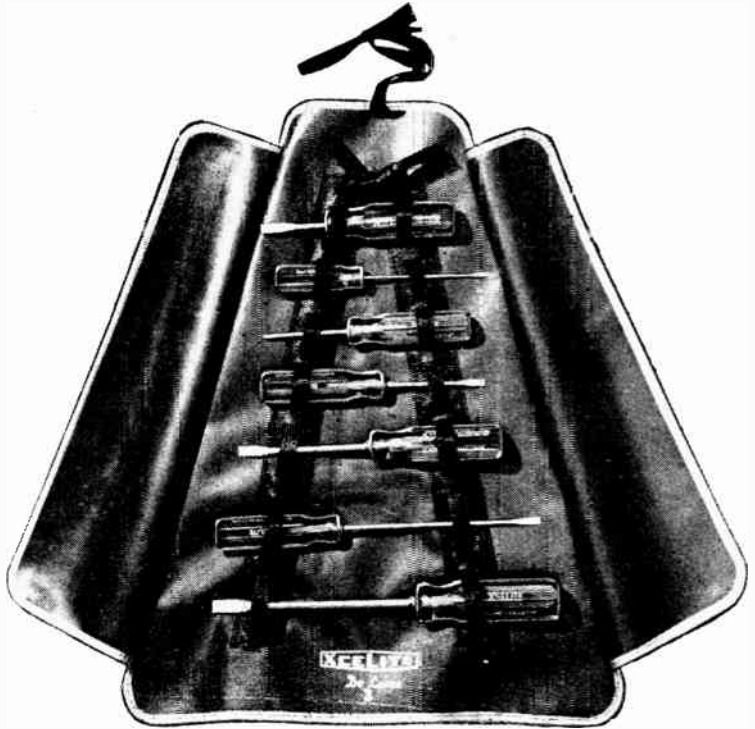
New design, better gripping handles.

The very sizes selected by radio and electrical service men! Set includes:

R-142 R-3163
R-184 R-144 R-5166
X-101 R-3166

Kit is new type blue plastic—very resilient, durable and easy to clean.

No. 3C—Chrome Plated \$7.65
No. 3 —Polished Finish 6.95
SHIPPING WEIGHT 1½ LBS.



XCELITE *De Lux* NO. 4 ALL PURPOSE KIT

Kit same as shown above, except it's Red. Blade finish is also the same as above. Set includes:

S-142 S-144
S-184 S-3166 S-388
X-102 S-5166

No. 4—Polished Finish \$8.60
No. 4C—Chrome Plated \$9.35
SHIPPING WEIGHT 2 LBS.

HOLLOW SHAFT NUT DRIVERS



This unique, time-saving tool was especially designed for general electrical and radio work. In radio, it is primarily useful in installing and removing volume control and other panel equipment. The nut is readily tightened or loosened without damage to the panel. On telephone or power switchboards, the Hollow Shaft Nut Driver is especially useful where nuts must be installed or removed over long protruding bolts or studs — made with or without insulated shafts. The former for use with high voltage work. Shafts insulated for protection up to 1000 volts; handles to 5000 volts.

Nut Size	Depth of Hole	No. and Length Overall	Weight per Box	Insulated List	
				List	List
¼"	2¼"	HS-10 6"	1 lbs.	\$1.05	\$1.30
⅜"	2¼"	HS-11 6"	1 lbs.	1.05	1.30
½"	5"	HS-12 6"	1 lbs.	1.05	1.30
⅝"	5"	HS-14 7"	1¼ lbs.	1.20	1.45
¾"	5"	HS-16 7"	1½ lbs.	1.25	1.50
⅞"	5"	HS-18 7"	1¾ lbs.	1.30	1.55
1"	5"	HS-20 7"	1¾ lbs.	1.50	1.75

STUBBY NUT DRIVERS

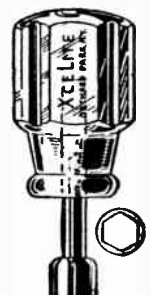
These tools have all the features of the regular XCELITE Nut Drivers, plus the advantage of a short shank for working in close or difficult quarters where a powerful grip is required. The Stubby Nut Driver is a mighty practical tool for installing car radios, working around carburetors, fuel pumps, shock absorbers, etc. Made in ¼", ⅜", and ½" sizes, with extra-deep hexagon sockets to handle two nuts at once.

Sockets are truly formed and free of burrs. They are tempered and fully finished. Handles are genuine shock-proof XceLite.

Handle, 1¼" diameter
Overall Length 3¼"
Shaft, 1¼" hollow
Weight per doz., 1½ lbs.

List Price

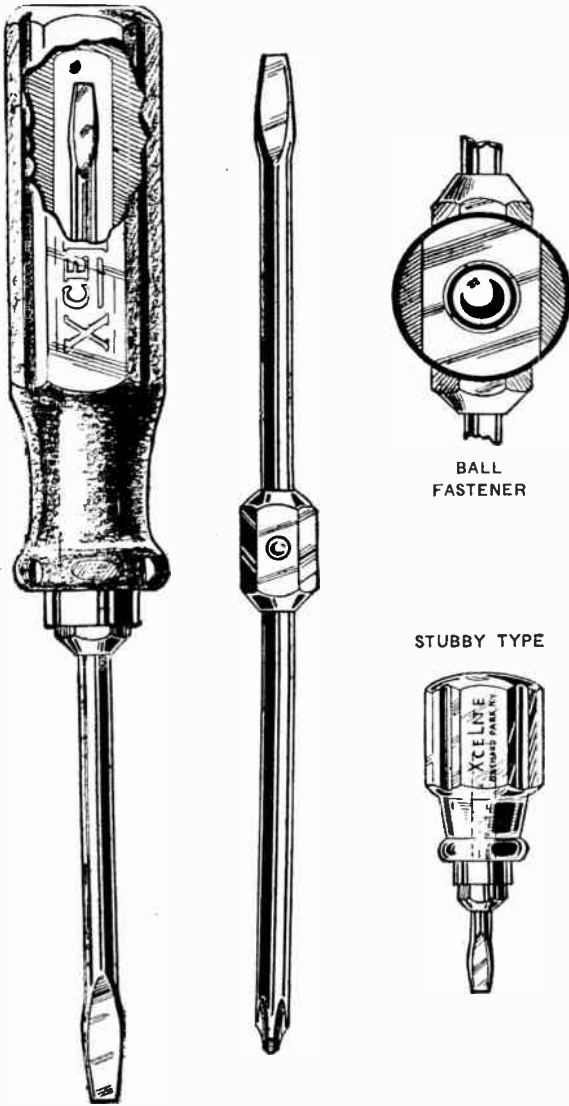
\$0.70



Quality

XCELITE

Tools



XCELITE "Combination Detachable" SCREWDRIVER

Here's convenience—and saving—combined in a mighty unique and useful tool. The XCELITE Combination Detachable Screwdriver has a genuine XceLite Shockless Handle, hollow to receive the dual-blade screwdriver units listed below. With this practical XceLite handle and, for example, a No. 2 Phillips blade on one end and a 1/4" XceLite blade on the other, you have two screwdrivers for just about the price of one! What's more, you can buy blades of other sizes to fit the same handle. Note the unique ball fastener on the blade. This holds the screwdriver unit securely in place—yet readily slips out when desired.

BLADE COMBINATIONS

(Please Order by Number)

- No. 1—No. 1 Phillips and 3/16" XceLite
- No. 2—No. 2 Phillips and 1/4" XceLite
- No. 3—No. 3 Phillips and 5/16" XceLite

COMPLETE

(Regular Type)	List Price
No. CR1	\$1.60
No. CR2	1.60
No. CR3	1.60

(Stubby Type)

No. CS1	\$1.30
No. CS2	1.30

BLADES ONLY

(Regular Type)	List Price
No. RB1	\$0.90
No. RB2	.90
No. RB3	.90

(Stubby Type)

No. SB1	\$0.65
No. SB2	.65

HANDLES ONLY

	List Price
Regular	\$0.75
Stubby	.65

(Please Order by Number)

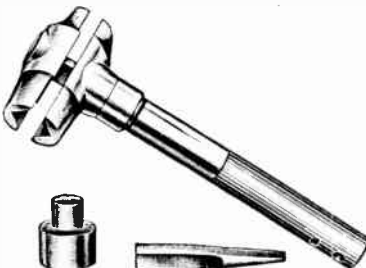
6" XCEL Adjustable SOCKET WRENCH (with Attachments)

A whole set of tools in one! Fits any size nut, hexagon or square, round or odd shaped, from 1/8" to 1".

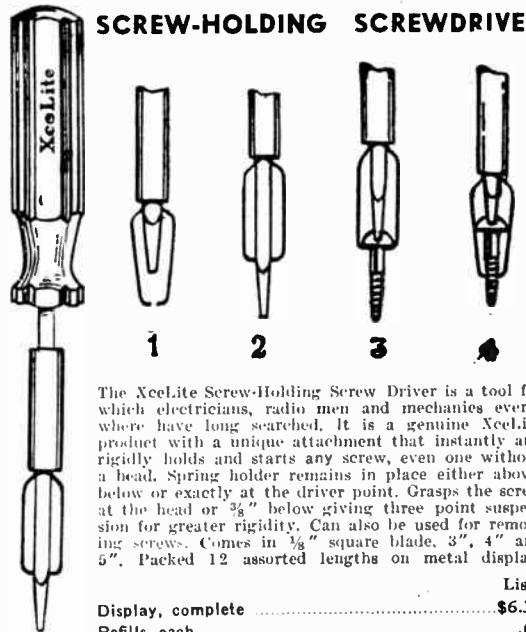
List Price, \$3.50

Individually boxed, packed 6 to a self-selling display carton.

Weight, 6 lbs.



SCREW-HOLDING SCREWDRIVER



The Xcelite Screw-Holding Screw Driver is a tool for which electricians, radio men and mechanics everywhere have long searched. It is a genuine Xcelite product with a unique attachment that instantly and rigidly holds and starts any screw, even one without a head. Spring holder remains in place either above, below or exactly at the driver point. Grasps the screw at the head or 3/8" below giving three point suspension for greater rigidity. Can also be used for removing screws. Comes in 3/8" square blade, 3", 4" and 5". Packed 12 assorted lengths on metal display.

	List
Display, complete	\$6.35
Refills, each	.60

Quality

XCELITE

Tools

Super Delux No. 137 NUT DRIVER SETS

With **NEW LARGER** Colored Handles

Consisting of

- The Five Most Popular Regular Nut Drivers Nos. 6, 8, 10, 11, 12.

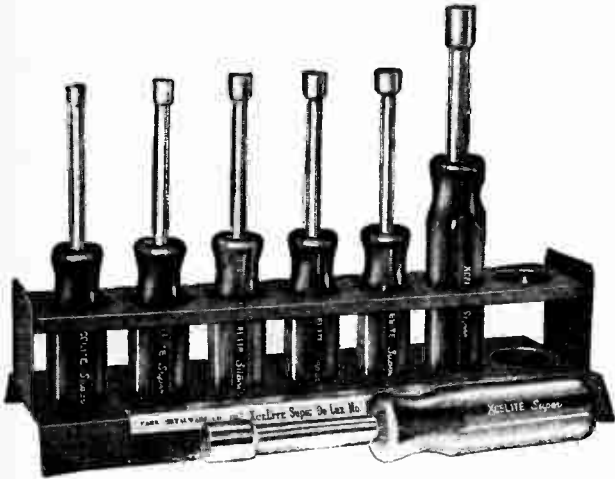
PLUS

- The Two Most Popular Hollow Shaft Nut Drivers Nos. HS-16 & HS-18.

No. 137 —Polished Finished, List Price \$7.75

No. 137C—Chrome Plated List Price 8.45

BE SURE to give SET NUMBER
When Ordering Replacements.



Here's That **NEW** Stand

Super Delux No. 127 NUT DRIVER SET

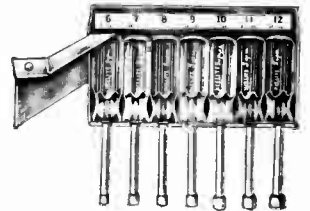
NEW LARGER HANDLES — BRIGHTER COLORS

Makes Size Selection Easy.

Set consists of Nos. 6, 7, 8, 9, 10, 11, & 12.
Furnished in either full polished or chrome finish.

No. 127 —Polished Finish List Price \$6.85

No. 127C—Chrome Plated List Price 7.65



Super Delux No. 117 SET

NEW DESIGN HANDLES

Larger—Better Gripping—Transparent Amber.
Double Heat Treated Blades—Highly Polished.
Contains Nos. 6, 7, 8, 9, 10, 11, & 12.

No. 117 Set—Polished Finish List Price \$6.45

No. 117C —Chrome Plated List Price 7.25

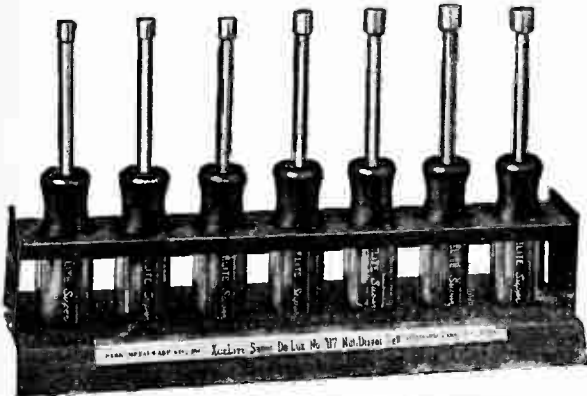
NEW DESIGN HANDLES
Larger — Better Gripping — Amber



Number	Size	Polished	Chrome Plated
N 6	3/16	\$0.80	\$0.90
N 7	7/32	.80	.90
N 8	1/4	.80	.90
N 9	9/32	.80	.90
N10	5/16	.80	.90
N11	11/32	.80	.90
N12	3/8	.80	.90
N14	7/16	1.15	
N16	1/2	1.15	

IMPORTANT: Be sure to PLACE the letter C AFTER the number when ordering CHROME PLATED Drivers.

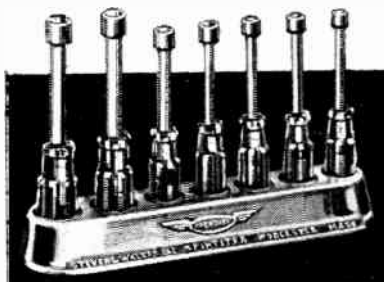
NOTE: For colored handles add 5¢ to list price shown above.



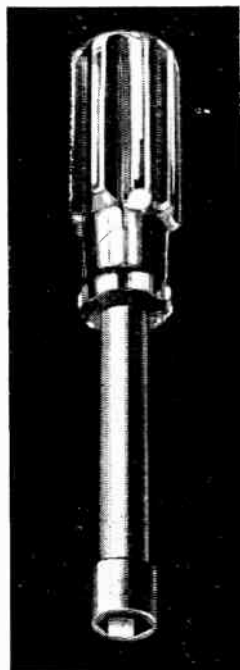
THE ORIGINAL
SPINTITE
 (TRADE MARK REGISTERED)
 WRENCHES



SUPER DELUXE SPINTITES



The wrench that works like a screwdriver! The super deluxe Spintite for panel or switchboard work — deep drilled with extra deep sockets. Beautifully plated and finished. A *must* for radio and electrical work.



Number	Size	Length	Drill Depth	List Price
3006	1/8	6"	1 3/4	\$1.00
3007	3/32	6"	2 1/4	1.00
3008	1/4	6"	2 1/4	1.00
3009	5/32	6"	2 1/4	1.00
3010	3/8	6"	2 1/4	1.00
3011	7/16	6"	2 1/4	1.00
3012	1/2	6 5/8"	5 1/8	1.00
3014	5/8	6 5/8"	5 1/8	1.20
3016	3/4	6 5/8"	5 1/8	1.20
3018	7/8	6 5/8"	5 1/8	2.20

REGULAR SPINTITES
 THE ORIGINAL SPINTITE WRENCH

Works like a screwdriver—features cold forged sockets, drilled shanks, special tool steel, hardened and tempered, ferrules and shanks are bright plated and the hardwood handles have natural rubbed finish.



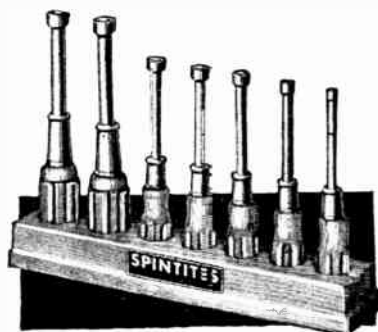
Number	Size	Length	Nut Size	List Price
3406	1/8	6"	2 & 3	\$0.65
3407	3/32	6"		.65
3408	1/4	6"	4	.65
3409	5/32	6"		.65
3410	3/8	6"	5 & 6	.65
3411	7/16	6"	8	.65
3412	1/2	6"	10	.65
3414	5/8	7 1/2"	12 & 1/4	.90
3416	3/4	7 1/2"		.90
3418	7/8	7 1/2"		1.60
3420	1 1/8	7 1/2"	5, 1 1/2, 3/8	1.60

T-73 SET

Set of popular sizes in wood stand.

CONTENTS

3406	3412
3408	3414
3410	3416
3411	Wood Stand
List Price	\$5.75





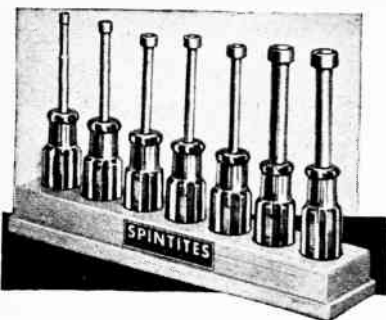
THE ORIGINAL SPINTITE

(TRADE MARK REGISTERED)
WRENCHES

DELUXE SPINTITES

For the mechanic who appreciates fine tools we offer these shining Spintites with transparent shockproof handles.

Number	Size	Length	Nut Size	List Price
3906	$\frac{3}{16}$	6"	2 & 3	\$0.90
3907	$\frac{7}{32}$	6"		.90
3908	$\frac{1}{4}$	6"	4	.90
3909	$\frac{9}{32}$	6"		.90
3910	$\frac{5}{16}$	6"	5 & 6	.90
3911	$\frac{11}{32}$	6"	8	.90
3912	$\frac{3}{8}$	6"	10	.90
3914	$\frac{7}{16}$	7 $\frac{1}{8}$ "	12 & $\frac{1}{4}$	1.10
3916	$\frac{1}{2}$	7 $\frac{1}{8}$ "		1.10
3918	$\frac{9}{16}$	7 $\frac{1}{8}$ "		1.90
3920	$\frac{5}{8}$	7 $\frac{1}{8}$ "	$\frac{5}{16}$ $\frac{3}{8}$	1.90



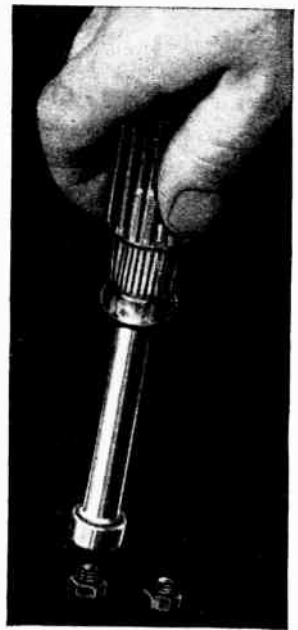
T-8 SET

Just right for a place on the mechanic's bench. Seven popular sizes.

CONTENTS

- | | |
|------|------------|
| 3906 | 3912 |
| 3908 | 3914 |
| 3910 | 3916 |
| 3911 | Wood Stand |

List Price \$7.15



ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

JUMBO SPINTITES



A rugged special Spintite for use on all types of hardened or self tapping cap screws. Shanks and sockets are made of alloy tool steel with a very high degree of hardness. Plastic grip is oversize for greater leverage. Depth of broach is less than thickness of screw heads to prevent marring panels.

Number	Size	Length	Handle Size	List Price
3058	$\frac{1}{4}$	8 $\frac{1}{2}$ "	1 $\frac{1}{8}$ "	\$2.75
3059	$\frac{9}{32}$	8 $\frac{1}{2}$ "	1 $\frac{1}{8}$ "	2.75
3062	$\frac{3}{8}$	8 $\frac{1}{2}$ "	1 $\frac{1}{8}$ "	2.75
3066	$\frac{1}{2}$	8 $\frac{1}{2}$ "	1 $\frac{1}{8}$ "	4.25
3068	$\frac{9}{16}$	8 $\frac{1}{2}$ "	1 $\frac{1}{8}$ "	4.25

EXTRA LONG SPINTITE



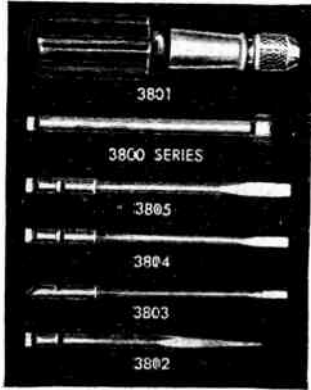
A special Spintite for those hard-to-get-at places. Medium sized, easily controlled plastic grip and extra long shaft made of chrome alloy steel. It belongs in the tool kit of every assembler and repairman.

Number	Size	Length	Drill Depth	List Price
3206	$\frac{3}{16}$	10"	1 $\frac{1}{2}$ "	\$1.60
3207	$\frac{7}{32}$	10"	1 $\frac{1}{2}$ "	1.60
3208	$\frac{1}{4}$	10"	1 $\frac{1}{2}$ "	1.60
3209	$\frac{9}{32}$	10"	1 $\frac{1}{2}$ "	1.60
3210	$\frac{5}{16}$	10"	1 $\frac{1}{2}$ "	1.60
3211	$\frac{11}{32}$	10"	1 $\frac{1}{2}$ "	1.60
3212	$\frac{3}{8}$	10"	1 $\frac{1}{2}$ "	1.60
3214	$\frac{7}{16}$	10"	1 $\frac{1}{2}$ "	2.50
3216	$\frac{1}{2}$	10"	1 $\frac{1}{2}$ "	2.50
3218	$\frac{9}{16}$	10"	1 $\frac{1}{2}$ "	4.00
3220	$\frac{5}{8}$	10"	1 $\frac{1}{2}$ "	4.50

THE ORIGINAL SPINTITE

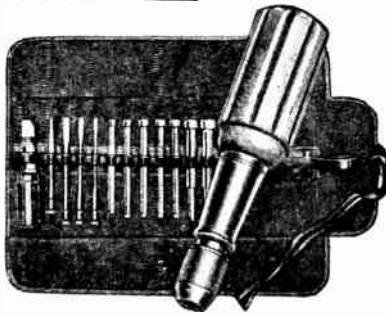
(TRADE MARK REGISTERED)

WRENCHES



CHUCK TYPE SPINTITES

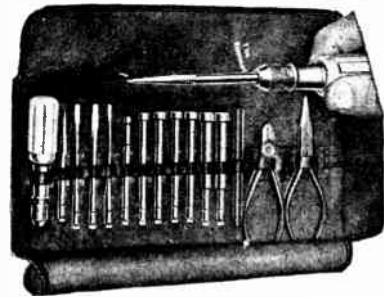
Number	Description	Size	Length	Nut Size	List Price
3801	Universal Handle				\$1.40
3802	Ream Awl				.65
3803	Screwdriver	$\frac{1}{16}$ to $\frac{3}{16}$	4 $\frac{5}{8}$		.65
3804	Screwdriver	$\frac{1}{8}$ x 4	4 $\frac{5}{8}$		.65
3805	Screwdriver	$\frac{3}{16}$ x 4	4 $\frac{5}{8}$		.65
3806	Spintite Shank	$\frac{1}{4}$ x 4	4 $\frac{5}{8}$		.65
3808	Spintite Shank	$\frac{3}{16}$	4 $\frac{7}{16}$	2 & 3	.45
3810	Spintite Shank	$\frac{1}{4}$	4 $\frac{5}{8}$	4	.45
3811	Spintite Shank	$\frac{5}{16}$	4 $\frac{5}{8}$	5 & 6	.45
3812	Spintite Shank	$\frac{3}{8}$	4 $\frac{5}{8}$	8	.45
3814	Spintite Shank	$\frac{7}{8}$	4 $\frac{5}{8}$	10	.45
3816	Spintite Shank	$\frac{1}{8}$	4 $\frac{3}{4}$	12 & $\frac{1}{4}$	.65
3850	Screwdriver, Cross Point	$\frac{1}{2}$	4 $\frac{3}{4}$		.65
3852	Four way Neutralizing Tool	No. 2	5		.90
		5	5		1.20



SET T-51
CONTENTS

3801	3805	3811
3802	3806	3812
3803	3808	3814
3804	3810	3816

in Leatherette Roll
List Price \$8.50



SET T-52
CONTENTS

3801	3805	3811
3802	3806	3812
3803	3808	3814
3804	3810	3816

6" Long Nose Pliers
6" Cutting Pliers
Neutralizing Tool
List Price \$14.00



SQUARE SPINTITES

No.	Size	List	No.	Size	List
3505	$\frac{3}{32}$	\$0.90	3511	$\frac{11}{32}$	\$1.10
3506	$\frac{1}{8}$	.90	3512	$\frac{3}{8}$	1.10
3507	$\frac{1}{4}$	.90	3513	$\frac{13}{32}$	1.35
3508	$\frac{3}{8}$	.90	3514	$\frac{1}{2}$	1.35
3509	$\frac{7}{8}$	.90	3516	$\frac{1}{2}$	1.65
3510	$\frac{1}{8}$	.90	3520	$\frac{5}{8}$	1.65



STUBBY SPINTITES

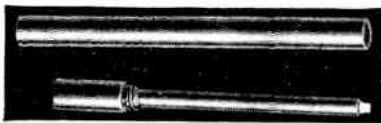
No.	Size	List	No.	Size	List
4406	$\frac{3}{16}$	\$0.65	4411	$\frac{11}{32}$	\$0.65
4407	$\frac{7}{32}$	.65	4412	$\frac{3}{8}$	.65
4408	$\frac{1}{4}$	.65	4414	$\frac{7}{16}$	.90
4409	$\frac{9}{32}$	.65	4416	$\frac{1}{2}$	.90
4410	$\frac{5}{16}$	.65			



KNURLED SPINTITES

Tapered knurls to take care of variations in size.

Number	Diameter	List Price
3710	$\frac{5}{16}$	\$1.35
3711	$\frac{11}{16}$	1.45
3712	$\frac{3}{8}$	1.65



FOUR-IN-ONE NEUTRALIZING AND ALIGNING TOOL

Made entirely of shock-proof plastic this tool has wrenches on each end, key slot, and screwdriver tip.

3852 List Price \$1.20



SPECIAL SPINTITE FOR BAT TYPE SWITCHES

Deep cavity accommodates bat handle, fine knurl is tapered to adjust for variations in knurled rings.

6337 List Price \$2.50



PANEL CUTTERS

List Price
T-564—For Bit Brace \$4.80
T-592—For Drill Chuck 3.80

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE



THE ORIGINAL SPINTITE (TRADE MARK REGISTERED) WRENCHES



SET NUMBER S-211

SET NUMBER S-211

1/4 Inch Square Drive — 11 Pieces

- | | |
|---------------------------------|----------------|
| 6 HEX SOCKETS | 1 HINGE HANDLE |
| 3 SQUARE SOCKETS | 1 CROSS BAR |
| ALL IN HEAVY ENAMELED METAL BOX | |
| Special Low Price | |

SET NUMBER S-217

1/4 Inch Square Drive — 17 Pieces

- | | |
|----------------------|----------------------|
| 8 Hex Sockets | 1 Cross Bar |
| 3 Square Sockets | 1 Sliding Tee Handle |
| 1 Reversible Ratchet | 1 Short Extension |
| 1 Hinge Handle | 1 Long Extension |

AN EXCELLENT COMBINATION OF SOCKET
WRENCHES AND ATTACHMENTS FOR FINE
WORK ON IGNITION, ELECTRICAL, RADIO
OR HOBBY WORK.

—Alloy Steel

—Bright Plated



SET NUMBER S-217

WALDEN WORCESTER SCREWDRIVERS

SQUARE SHANK SCREWDRIVER

Plastic Handle



Number	Size	List Price
SS4	4 x 1/4	\$1.20
SS6	6 x 5/16	1.65
SS8	8 x 3/8	2.05
SS12	12 x 3/8	2.45

ROUND SHANK SCREWDRIVER

Plastic Handle



Number	Size	List Price
SM2	2 1/4 x 1/8	\$0.40
SR3	3 x 1/16	.90
SR4	4 x 1/4	1.20
SR6	6 x 5/16	1.55
SR6A	6 x 3/16	1.15
SR8	8 x 3/8	2.00
SR12	12 x 3/8	2.30

CROSSPOINT SCREWDRIVER

Wood Handle



Number	Size	List Price
SC3	3 x 5/64	\$0.75
SC4	4 x 1/4	.75
SC6	6 x 5/16	.95
SC8	8 x 3/8	1.30

STUBBY SCREWDRIVER

Plastic Handle



Number	Size	List Price
SS2	1 1/2 x 1/4	\$0.80

ALL PRICES SUBJECT TO CHANGE WITHOUT NOTICE

VACO PRODUCTS COMPANY - CHICAGO 11, ILLINOIS - U. S. A.



Hand Forged Chrome Vanadium Screw and Nut Drivers With Amberyl* 5/8* (Sto-Burn)
Fire Safe Break and Shock Proof Handles

*Trade Marks Registered U. S. Pat. Off.

ROUND BLADE SCREW DRIVERS



Pocket Styles—3/32" & 1/8" Blades.
*High carbon tool steel blades only.

Stock Number	Handle Diameter and Length	Blade Diameter and Length	Weight per Doz.
A 000	1/4" x 13 3/8"	3/32" x 1 5/8"	3 oz.
A 010	13/32" x 13 3/4"	3/32" x 1 5/8"	1/4 lb.
A 230-2	1 1/2" x 17 1/2"	1/8" x 2"	1/2 lb.
A 130-3	1 1/2" x 17 1/2"	1/8" x 3"	2/3 lb.
A 116-2	1 1/2" x 21 1/2"	3/32" x 2"	2/3 lb.
A 116-3	1 1/2" x 21 1/2"	3/32" x 3"	3/4 lb.
A 116-4	1 1/2" x 21 1/2"	3/32" x 4"	1/2 lb.
A 131-2	1 1/2" x 21 1/2"	1/8" x 2"	1/2 lb.
A 131-3	1 1/2" x 21 1/2"	1/8" x 3"	1/2 lb.

Electrician and Cabinet Styles—1/8" Blades.

Stock Number	Handle Diameter and Length	Blade Diameter and Length	Weight per Doz.
A 216-2	5/8" x 23 1/4"	1/8" x 2"	3/4 lb.
A 216-3	5/8" x 23 1/4"	1/8" x 3"	3/4 lb.
A 216-4	3/4" x 3"	1/8" x 4"	1 lb.
A 216-6	3/4" x 3"	1/8" x 6"	1 1/4 lbs.
A 216-8	3/4" x 3"	1/8" x 8"	1 1/2 lbs.
A 216-10	3/4" x 3"	1/8" x 10"	1 3/4 lbs.

Electrician and Regular Cabinet Styles — 3/16" Blades.

Stock Number	Handle Diameter and Length	Blade Diameter and Length	Weight per Doz.
A 316-3	7/8" x 31 1/2"	3/16" x 3"	1 1/4 lbs.
A 316-4	7/8" x 31 1/2"	3/16" x 4"	1 1/2 lbs.
A 316-5	7/8" x 31 1/2"	3/16" x 5"	1 1/2 lbs.
A 316-6	7/8" x 31 1/2"	3/16" x 6"	1 3/4 lbs.
A 316-8	7/8" x 31 1/2"	3/16" x 8"	2 lbs.
A 316-10	7/8" x 31 1/2"	3/16" x 10"	2 1/2 lbs.

General Service Round Blade Styles — 1/4" Blades.

Stock Number	Handle Diameter and Length	Blade Diameter and Length	Weight per Doz.
A 416-3	1" x 35 3/8"	1/4" x 3"	2 lbs.
A 416-4	1" x 35 3/8"	1/4" x 4"	2 1/4 lbs.
A 416-5	1" x 35 3/8"	1/4" x 5"	2 1/2 lbs.
A 416-6	1" x 35 3/8"	1/4" x 6"	2 3/4 lbs.
A 416-8	1" x 35 3/8"	1/4" x 8"	3 1/4 lbs.
A 416-10	1" x 35 3/8"	1/4" x 10"	3 1/2 lbs.

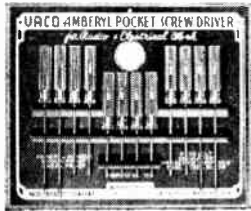
Heavy Duty General Service Round Blade Styles — 5/16" Blades.

Stock Number	Handle Diameter and Length	Blade Diameter and Length	Weight per Doz.
A 516-4	1-1/16" x 4"	5/16" x 4"	3 lbs.
A 516-5	1-1/16" x 3"	5/16" x 5"	3 1/2 lbs.
A 516-6	1-1/16" x 4"	5/16" x 6"	4 lbs.
A 516-8	1-1/16" x 4"	5/16" x 8"	4 1/2 lbs.
A 516-10	1 1/8" x 4 1/4"	5/16" x 10"	5 1/2 lbs.
A 516-12	1 1/8" x 4 1/4"	5/16" x 12"	6 1/2 lbs.

Extra Heavy Duty Round Blade Styles — 3/8" Blades.

Stock Number	Handle Diameter and Length	Blade Diameter and Length	Weight per Doz.
A 616-6	1 1/8" x 4 1/4"	3/8" x 6"	5 lbs.
A 616-8	1 1/8" x 4 1/4"	3/8" x 8"	6 lbs.
A 616-10	1-3/16" x 4 1/4"	3/8" x 10"	7 1/2 lbs.
A 616-12	1 1/8" x 4 1/4"	3/8" x 12"	9 lbs.

CARDED DISPLAYS OF POCKET STYLE SCREW DRIVERS



No. A 138C
12 Assorted A 138C, 2" and 3" lengths.
Single Unit Boxed Display . . . weight, 9 oz. or .248 kg's.

No. A 116
12 Assorted A 116, 2" and 3" lengths.
Single Unit Boxed Display . . . weight, 9 oz. or .248 kg's.

No. A 238
12 No. A 238, 2" lengths.
Single Unit Boxed Display . . . weight, 8 oz. or .227 kg's.

No. A 1311
12 Assorted A 1311, 2" and 3" lengths.
Single Unit Boxed Display weight, 10 oz. or 263 kg's.

VACO Super Hard NUT DRIVERS

Color Coded Hollow Handles For Quick Size Identification. For Use on Hardened Steel Self-Threading Sheet Metal Screws, Etc.



Stock Number	Hexagon Size (Across Flats)	Handle Diameter and Length	Color Code	Fits Machine Screw Nos.
S 61	3/16"	1" x 3 5/8"	Brown	2 and 3
S 62	3/16"	1" x 3 5/8"	Red	4
S 103	5/16"	1" x 3 5/8"	Green	5 and 6
S 114	11/32"	1" x 3 5/8"	Ivory	8
S 125	3/8"	1" x 3 5/8"	Blue	10
S 146	7/16"	1" x 3 5/8"	Orange	12 and 1/4"
S 167	1/2"	1" x 3 5/8"	Yellow	5, 16"

ALL HOLLOW SHAFT NUT DRIVERS



Stock Number	Hexagon Size (Across Flats)	Handle Diameter and Length	Weight per Doz.
S 160	1/2"	1" x 3 5/8"	3 lbs. 4 oz.
S 180	9/16"	1" x 3 5/8"	3 lbs. 8 oz.

VACO EXTRA HARD NUT DRIVERS

Size Stamped on Each Shaft for Easy Identification. Solid Amberyl 5/8 Fire Safe Handles.



Stock Number	Hexagon Size	Handle Diameter and Length	Weight per Doz.
S 5	5/32"	7/8" x 3 1/2"	1 lb. 8 oz.
S 6	3/16"	7/8" x 3 1/2"	1 lb. 10 oz.
S 7	7/32"	7/8" x 3 1/2"	1 lb. 12 oz.
S 8	1/8"	7/8" x 3 1/2"	1 lb. 4 oz.
S 9	9/32"	7/8" x 3 1/2"	2 lbs.
S 10	5/16"	7/8" x 3 1/2"	2 lbs. 8 oz.
S 11	11/32"	7/8" x 3 1/2"	2 lbs. 12 oz.
S 12	3/8"	7/8" x 3 1/2"	2 lbs. 14 oz.
S 14	7/16"	7/8" x 3 1/2"	2 lbs. 15 oz.
S 15	15/32"	7/8" x 3 1/2"	3 lbs.
S 16	1/2"	7/8" x 3 1/2"	3 lbs.

Extra Large Size

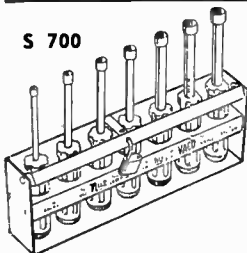
Stock Number	Hexagon Size	Handle Diameter and Length	Weight per Doz.
S 17	17/32"	1-1/16" x 4"	4 1/2 lbs.
S 18	9/16"	1-1/16" x 4"	4 1/2 lbs.
S 19	19/32"	1-1/16" x 4"	4 1/2 lbs.
S 20	5/8"	1-1/16" x 4"	4 1/2 lbs.



No. S 500 METAL BENCH HOLDER

Equipped with 1 each of five most popular sizes: S 8, S 10, S 11, S 12, S 14. Weight each . . . 1 1/2 lbs.

S 700



VACO WALL OR BENCH PADLOCK TYPE NUT DRIVER STAND

Holds One Complete Driver Outfit . . . from 3/16" to 1/2".

Stock Number	Weight (Packed)
S 700	2 1/4 lbs.
S 70 (Stand only)	1 lb. 2 oz.

VACO AMBERYL ELECTROLYTIC CONDENSER NUT DRIVERS



Weight per box . . . 3 lbs.

Packed 4 each of following sizes in display box, or assorted as desired:
No. S 32 for 31 32" Nuts
No. S 34 for 1" Nuts
No. S 36 for 1-5/32" Nuts

No. S 40 SOLID PLASTIC HANDLE NUT DRIVER



Diameter, 5/8" . . . 3" over-all length. 1/4" hexagon socket. Packed one dozen to box. Weight . . . 14 oz.

VACOMBO Nut Setter Kit No. ZS 60

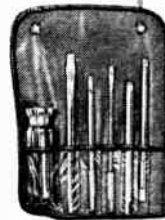


- Kit Consists of:
- 1 - ZH 1 Amberyl Handle with Clutch
 - 1 - ZS 8 Hex. Wrench 1 1/4" x 3"
 - 1 - ZS 10 Hex. Wrench 5/16" x 3"
 - 1 - ZS 11 Hex. Wrench 11/32" x 3"
 - 1 - ZS 12 Hex. Wrench 3/8" x 3"
 - 1 - ZS 14 Hex. Wrench 7/16" x 3"
 - 1 - ZR 77 Seven Section Leatherette Tool Roll

Also Available:
6" Extension No. ZX 56
3/16" Hex. Wrench No. ZS 6
1/2" Hex. Wrench No. ZS 16

Weight packed . . . 9 oz.

VACOMBO Screw Driver Kit No. ZB 50



- Kit Consists of:
- 1 - ZH 1 Amberyl Handle with Clutch, 1" x 3 5/8"
 - 1 - ZB 24 Blade 1/8" x 4" Out of Handle
 - 1 - ZB 34 Blade 3/16" x 4" Out of Handle
 - 1 - ZB 45 Blade 1/4" x 3" Out of Handle
 - 1 - ZP 14 Blade No. 1 Phillips x 4"
 - 1 - ZP 24 Blade No. 2 Phillips x 4"
 - 1 - ZR 77 Seven Section Leatherette Tool Roll

Also Available — 6" Extension No. ZX 56
Specifications: Amberyl 5/8 (Sto-Burn) Fire safe Handle — Oil Tempered Chrome Vanadium Blade — Bright Cadmium Rust-Proof Plated Finish.

Weight packed . . . 8 oz.

MORE THAN 250 VACO SCREW DRIVER STYLES! SEND FOR CATALOG!

VACO PRODUCTS COMPANY • CHICAGO 11, ILLINOIS • U. S. A.



Hand Forged Chrome Vanadium Screw and Nut Drivers With Ambery^l* S/B* (Slo-Burn)
Fire Safe Break and Shock Proof Handles

*Trade Marks Registered U. S. Pat. Off.

AMBERYL HANDLE PHILLIPS SCREW DRIVERS



Stock Number	Point Number	Handle Diameter and Length	Blade Diameter and Length	Takes Screws and Number	Weight per Doz.
P 01	1	3/8" x 3 1/2"	1/8" x 2 1/2"	4 and smaller	3 1/2 lbs.
P 1	2	1" x 3 5/8"	3/16" x 3"	4 and smaller	1 1/2 lbs.
P 2	2	1" x 3 5/8"	1" x 4 3/4"	5 to 9	2 1/2 lbs.
P 3	3	1-1/16" x 4"	5/16" x 6"	10 to 16	3 1/2 lbs.
P 4	4	1-3/16" x 4 1/2"	3/8" x 8"	18 and larger	6 lbs.
P 5	2	1 1/4" x 2 1/2"	3/8" x 1 3/4"	10 to 16	1 1/2 lbs.
P 6	1	1 1/8" x 1 3/4"	3/16" x 1 3/4"	4 and smaller	1 lb. 2 oz.
P 12	1	1 1/2" x 2 1/2"	1/8" x 2 1/2"	4 and smaller	1 1/2 oz.
P 101	1	3 1/4" x 3"	3/16" x 3"	4 and smaller	1 1/4 lbs.

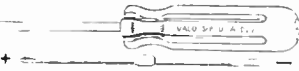
*Stub

*Pocket Clip, *Screw-Booting

PHILLIPS EXTRA LONG BLADE STYLES

P 1R	1	7/8" x 3 1/2"	3/16" x 8"	4 and smaller	1 3/4 lbs.
P 2R	2	1" x 3 5/8"	1/4" x 8"	5 to 9	3 lbs.
P 3R	3	1-1/16" x 4"	5/16" x 8"	10 to 16	4 1/2 lbs.
P 312	3	1-3/16" x 4 1/2"	5/16" x 12"	10 to 16	5 1/2 lbs.
P 416	4	1 1/4" x 5 1/4"	3/8" x 16"	18 to 24	10 1/2 lbs.

VACO DUPLEX REVERSIBLE SCREW DRIVERS with Ambery^l S/B (Slo-Burn) Plastic Handle



A Phillips bit on one end

A regular bit on other end

TWO SIZES

DU2 Light Duty — Chrome vanadium steel blade. Long lasting. Ambery^l handle of high dielectric and impact strength. Shock and break resistant. Impervious to most alkalis and acids.

Stock Number	Handle Diameter and Length	Blade Diameter and Length
DU 2	1" x 3 5/8"	1" x 3 5/8"
DUH 4	1 1/16" x 4"	1 1/16" x 4"

A Flip of the Wrist Does It . . . From Phillips to Regular.

Precision engineered blade may easily be inserted or removed and reversed to provide either a regular or Phillips bit. Ideal for automobiles, radios, retractors, household utilities, toys, etc., where straight slot screws and cross slot screws are frequently used in combination.



WOOD HANDLE PHILLIPS SCREW DRIVERS

High Carbon Tool Steel Blades . . . Chrome Vanadium Blades Also Available.



Stock Number	Handle Diameter and Length	Blade Diameter and Length	Takes Screws and Number	Weight per Doz.
WP 10	1" x 4"	3/16" x 3"	4 and smaller	1 1/4 lbs.
WP 20	1 1/8" x 5"	1/4" x 4 3/4"	5 to 9	2 1/2 lbs.
WP 30	1 1/4" x 6"	5/16" x 6"	10 to 16	3 3/4 lbs.
WP 40	1-5/16" x 7"	3/8" x 8"	18 and larger	5 lbs.
WP 50 (Stub)	1-5/16" x 2 1/2"	1/4" x 1 3/4"	5 to 9	1 lb. 2 oz.
WP 60 (Stub)	1-5/16" x 2 1/2"	3/16" x 1 1/4"	4 and smaller	1 lb.

MECHANIC'S BOXED SET No. P 550



Contains one each of Nos. P 1, P 2, P 3, P 5 and P 6. Weight . . . 1 1/4 lbs.

PHILLIPS OFFSET SCREW DRIVERS

Double End	No. 1 Point, One End	No. 2 Point, Other End	Diame. Overall Length	Weight per Doz.
No. P 120	No. 1 Point, One End	No. 2 Point, Other End	1/4" 4 1/2"	3 1/4 lbs.
No. P 320	No. 2 Point, One End	No. 3 Point, Other End	5/16" 5 1/2"	1 lb. 14 oz.
No. P 340	No. 3 Point, One End	No. 4 Point, Other End	3/8" 6 1/2"	3 lbs.
Single End	No. P 111	No. 1 Point, Both Ends	3/16" 3 1/4"	10 oz.
No. P 222	No. 2 Point, Both Ends		1/4" 4"	1 lb. 8 oz.

JEWELERS' AND INSTRUMENT SCREW DRIVERS

Stock Number	Bit Diameter	Overall Length	Weight per Doz.
J 25	.025	3 3/4"	6 oz.
J 40	.040	3 3/4"	6 oz.
J 60	.060	3 3/4"	6 oz.
J 80	.080	3 3/4"	6 oz.
J 100	.100	3 3/4"	6 oz.

VACO KLIPXIT SCREW HOLDING SCREW DRIVERS



Regular Styles

Stock Number	Handle Diameter and Length	Blade Diameter and Length	Weight per Doz.
K 303	7/8" x 3 1/2"	3/16" x 3"	1 lb. 4 oz.
K 304	7/8" x 3 1/2"	3/16" x 4"	1 lb. 8 oz.
K 305	7/8" x 3 1/2"	3/16" x 5"	1 lb. 12 oz.
K 306	7/8" x 3 1/2"	3/16" x 6"	2 lbs.
K 308	7/8" x 3 1/2"	3/16" x 8"	2 lbs. 4 oz.
K 310	7/8" x 3 1/2"	3/16" x 10"	

Phillips Style

Stock Number	Point Size	Handle Diameter and Length	Blade Diameter and Length	Weight per Doz.
P 101	No. 1	7/8" x 3 1/2"	3/16" x 3"	1 lb. 4 oz.

Slim Blade Regular Styles

Stock Number	Handle Diameter and Length	Blade Diameter and Length	Weight per Doz.
*K 202	5/8" x 2 3/4"	1/8" x 2"	12 oz.
*K 204	3/4" x 3"	1/8" x 4"	14 oz.
*K 206	3/4" x 3"	1/8" x 6"	15 oz.
*K 208	3/4" x 3"	1/8" x 8"	1 lb. 1 oz.
*K 210	3/4" x 3"	5/8" x 10"	1 lb. 3 oz.

Small Phillips Pocket Style

Stock Number	Point Size	Handle Diameter and Length	Blade Diameter and Length	Weight per Doz.
KP 12	No. 1	1/2" x 2 1/2"	3/8" x 2 1/2"	11 oz.

RADIO ALIGNING TOOLS NON-METALLIC ALIGNER

No metal — non-capacitive. Bone fibre blade may be repointed as required.



Stock Number	Handle Diameter and Length	Blade Diameter and Length	Weight per Doz.
AT 55	3/2" x 2 1/2"	3/16" x 4"	3 1/2 lbs.

GRIP-POINT SCREW HOLDING DRIVERS



Engaged

Release lever clicks and revolves firmly gripping screw slot.

Disengaged

Release lever is down. To use, insert blade in screw slot and flip lever.

Stock Number	Handle Diameter and Length	Takes Screw Sizes and Length	Weight per Doz.
G 2	3/4" x 3"	2 to 6	1 lb. 8 oz.
G 3	7/8" x 3 1/2"	4 to 14	2 lbs.
G 4	7/8" x 3 1/2"	8 to 20	2 lbs. 4 oz.

ALL INSULATED POCKET CLIP SCREW DRIVER



Shock and break proof Pyralene handle 1 1/2" x 3/4" Chrome Vanadium blade.

Stock Number	Handle Diameter and Length	Blade Diameter and Length	Weight per Doz.
A 86	1/2" x 6"	1/4" x 3/4"	3 1/2 lbs.

NON-MAGNETIC METAL TIP ALIGNER

Stainless steel bit — non magnetic, slight capacitance. Ambery^l high dielectric strength handle.



Stock Number	Body Size	Bit Diameter	Weight per Doz. Pounds
AT 45	3/8" x 4 1/2"	3/16"	6 oz.

VACO SCREW AND NUT HOLDER



All metal . . . starts screws No. 2 to No. 12 in inaccessible places, and hexagonal or square nuts from No. 2 to No. 6.

Stock No.	SN 5 (5" length)	SN 8 (8" length)	Weight per Doz.
	1 lb. 4 oz.	1 lb. 8 oz.	

VACO INSULATED BLADE SCREW DRIVERS

Blades heavily coated with high dielectric strength, break-resistant plastic. Ambery^l S/B fire safe handles.



Stock Number	Handle Diameter and Length	Blade Diameter and Length	Weight per Doz.
VR 241	3/4" x 3"	1/8" x 6"	3 1/2 lbs.
VR 261	3/4" x 3"	1/8" x 6"	1 lb.
VR 281	3/4" x 3"	1/8" x 8"	1 lb. 4 oz.
VR 361	7/8" x 3 1/2"	3/16" x 6"	2 lbs.
VR 381	7/8" x 3 1/2"	3/16" x 8"	2 lbs. 4 oz.

Weight . . . 1 1/4 lbs.

No. VR 1200 SCREW DRIVER DISPLAY UNIT



Includes 3 No. VR 241, 3 No. VR 261, 2 No. VR 281, 2 No. VR 361, 2 No. VR 381. Weight per card packed . . . 1 1/2 lbs.

No. A 860 SCREW DRIVER DISPLAY



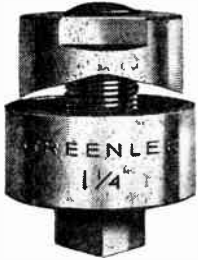
Includes one dozen No. A 86, all insulated radio and electrical screw drivers, 3/8" x 3/4" bits. Pocket clip supplied. Weight per card . . . 2 lb.

VACO MEANS SAFETY WITH AMBERYL S/B FIRE SAFE SHOCK AND BREAK PROOF HANDLES



RADIO CHASSIS PUNCHES

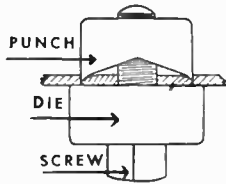
KNOCKOUT PUNCHES AND CUTTERS



No. 730 RADIO CHASSIS PUNCH

Quickly cuts clean, accurate holes in radio chassis for sockets, plugs, and other receptacles. Operates simply with ordinary wrench for drive power. Just insert the punch in a

$\frac{3}{8}$ -inch or $\frac{1}{2}$ -inch drilled hole and turn the drive nut. No reaming or filing—hole is smooth, perfect. Each size tool consists of the punch for cutting the metal, the die for supporting the metal, and the cap screw for providing the drive action. All parts are of high-grade tool steel carefully heat-treated and ground for clearance. Individually packed in a tube container and furnished complete with operating instructions. Odd-size holes for meters can be made with other punches and cutters listed at right.



No. 730 List PRICE AND WEIGHT EACH

WEIGHT IN POUNDS

	Price	Weight
$\frac{1}{2}$ " Complete	\$2.15	$\frac{1}{4}$
AV1760 Punch	1.25	$\frac{1}{4}$
AV1759 Die	.65	$\frac{1}{4}$
$\frac{3}{8}$ " Complete	2.15	$\frac{1}{4}$
AV1742 Punch	1.25	$\frac{1}{4}$
AV1743 Die	.65	$\frac{1}{4}$
AV1675 for $\frac{1}{2}$ " & $\frac{3}{8}$ " Punches	.25	$\frac{1}{4}$
$\frac{3}{4}$ " Complete	2.15	$\frac{1}{4}$
AV113 Punch	1.25	$\frac{1}{4}$
AV114 Die	.65	$\frac{1}{4}$
$\frac{7}{8}$ " Complete	2.15	$\frac{1}{4}$
AV121 Punch	1.25	$\frac{1}{4}$
AV122 Die	.65	$\frac{1}{4}$
AV322 Screw for $\frac{3}{4}$ " & $\frac{7}{8}$ " Punches	.25	$\frac{1}{4}$
1" Complete	2.35	$\frac{3}{8}$
AV87 Punch	1.35	$\frac{1}{4}$
AV88 Die	.75	$\frac{1}{4}$
1 $\frac{1}{8}$ " Complete	2.50	$\frac{3}{8}$
AV1763 Punch	1.45	$\frac{1}{4}$
AV1764 Die	.80	$\frac{1}{4}$
1 $\frac{1}{4}$ " Complete	2.50	$\frac{3}{8}$
AV91 Punch	1.45	$\frac{1}{4}$
AV92 Die	.80	$\frac{1}{4}$
1 $\frac{1}{2}$ " Complete	2.50	$\frac{3}{8}$
AV83 Punch	1.45	$\frac{1}{4}$
AV84 Die	.80	$\frac{1}{4}$
1 $\frac{3}{4}$ " Complete	2.50	$\frac{3}{8}$
AV115 Punch	1.45	$\frac{1}{4}$
AV116 Die	.80	$\frac{1}{4}$
1 $\frac{7}{8}$ " Complete	2.50	$\frac{3}{8}$
AV117 Punch	1.45	$\frac{1}{4}$
AV118 Die	.80	$\frac{1}{4}$
1 $\frac{7}{8}$ " Complete	2.85	$\frac{3}{8}$
AV119 Punch	1.65	$\frac{1}{4}$
AV120 Die	.95	$\frac{3}{8}$
1 $\frac{1}{2}$ " Complete	3.20	1
AV89 Punch	1.90	$\frac{3}{8}$
AV90 Die	1.05	$\frac{1}{2}$
AV112 Screw for 1" to 1 $\frac{1}{2}$ " inclusive	.25	$\frac{1}{4}$
2 $\frac{1}{4}$ " Complete	6.20	2 $\frac{1}{4}$
AV437 Punch	3.20	$\frac{7}{8}$
AV438 Die	2.50	1
AV304 Screw for 2 $\frac{1}{4}$ " Punch	.50	$\frac{1}{2}$

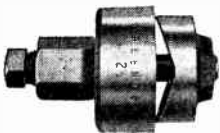


No. 735 KNOCKOUT PUNCH SET

For fast, easy cutting of holes in metal up to $\frac{1}{8}$ -inch or 10-gauge thickness. Insert in small opening and drive with an ordinary wrench. Speeds radio set work, cuts cleanly, no reaming and filing. Set includes four punches for making $\frac{7}{8}$, $1\frac{1}{2}$, $1\frac{1}{4}$, $1\frac{1}{8}$ inch holes. Packed in leather case.

No. 737 KNOCKOUT PUNCH SET

Similar to the No. 735 set, but consists of two punches . . . for cutting holes $1\frac{5}{8}$ and $2\frac{3}{8}$ inch diameter. Packed in leather case.



Nos. 738 and 739 KNOCKOUTS PUNCHES

For cutting holes $2\frac{7}{8}$ inch diameter (No. 738) and $3\frac{1}{2}$ inch diameter (No. 739) in metal up to $\frac{1}{8}$ inch or 10 gauge thickness. Similar in design and operation to that of smaller GREENLEE Knockout Punches. Packed and sold individually.



No. 740 KNOCKOUT CUTTER

Excellent tool for making meter openings and other large holes needed in radio work. Quickly cuts holes $1\frac{1}{8}$, $2\frac{3}{8}$, $2\frac{7}{8}$, $3\frac{1}{2}$ -diameter. Operation is simple . . . driven with ordinary wrench. Special discs can be furnished for cutting odd-size

holes from $1\frac{1}{8}$ to $3\frac{1}{2}$ -inch diameter. Packed in leather case.
 No. 740 Knockout Cutter \$15.00 $\sqrt{t.}$ (lbs.) $4\frac{1}{2}$

No. 735, 737, 738, 739 LIST PRICE AND WEIGHT EACH

WEIGHT IN POUNDS

	Price	Weight
No. 735 Knockout Punch Set	\$10.00	2 $\frac{3}{4}$
No. 737 Knockout Punch Set	10.00	4 $\frac{1}{4}$
No. 738 Knockout Punch	14.00	5 $\frac{3}{4}$
No. 739 Knockout Punch	19.00	7 $\frac{1}{4}$

Extra Parts

No. 735 Knockout Punch Set	
No. AV121— $\frac{7}{8}$ " Punch	1.25
No. AV122— $\frac{7}{8}$ " Die	.65
No. AV123—1" Punch	1.45
No. AV124—1" Die	.80
No. AV125—1 $\frac{1}{8}$ " Punch	1.65
No. AV126—1 $\frac{1}{8}$ " Die	.95
No. AV127—1 $\frac{1}{4}$ " Punch	1.90
No. AV128—1 $\frac{1}{4}$ " Die	1.05
No. AV322— $\frac{3}{8}$ " x $1\frac{1}{2}$ " Cap Screw	.25
No. AV249— $\frac{3}{4}$ " x $2\frac{1}{8}$ " Cap Screw	.35
No. 737 Knockout Punch Set	
No. AV439— $1\frac{1}{2}$ " Punch	2.30
No. AV440— $1\frac{1}{2}$ " Die	2.00
No. AV441— $2\frac{3}{8}$ " Punch	3.20
No. AV442— $2\frac{3}{8}$ " Die	2.50
No. AV304— $\frac{3}{4}$ " x $2\frac{3}{4}$ " Cap Screw	.50
No. 738 Knockout Punch	
No. AV1429— $2\frac{7}{8}$ " Punch	5.40
No. AV1430— $2\frac{7}{8}$ " Die	5.00
No. AV1433—Drive Nut	1.35
No. AV1434—Drive Screw	2.75
No. 739 Knockout Punch	
No. AV1431— $3\frac{1}{2}$ " Punch	8.00
No. AV1432— $3\frac{1}{2}$ " Die	7.50
No. AV1433—Drive Nut	1.35
No. AV1434—Drive Screw	2.75

T·A·C PLUGS · JACKS · CONNECTORS

— TELEGRAPH APPARATUS CO. —

INSULATED SOLDERLESS PHONE TIP PLUG



A standard insulated solderless phone tip plug which fits our parts 101, 106, 108 and 109 phone tip jacks. Metal parts are nickel plated brass. Overall length 2-3/16". The high lustre insulated handle is 1" long. Available in red, black, green and yellow.

No. 202 LIST PRICE 18c

SOLDERLESS PHONE TIP PLUG



No. 203 LIST PRICE 10c

A standard solderless phone tip plug. Identical to No. 202 above, except for insulated handle.

INSULATED SOLDERLESS JR. PHONE TIP PLUG



A standard insulated solderless junior phone tip plug made to fit our parts 101 and 106 phone tip jacks. Metal parts are nickel plated brass. The high lustre insulated handle is 1" long. Available in black, red, green and yellow. Overall length 1 7/8".

No. 204 LIST PRICE 18c

SOLDERLESS JR. PHONE TIP PLUG



No. 205 LIST PRICE 10c

A standard solderless junior phone tip plug identical to No. 204 above except for insulated handle.

Insulated Solderless SPRING BANANA PLUG



This insulated non-collapsible solderless spring banana plug is designed to give the greatest area of contact. Connection is made by a side set screw.

Metal parts are nickel plated brass except the four leaf banana spring which is nickel plated phosphor bronze. The high lustre insulated handle is 1" long. Available in red, black, green and yellow. Overall length 1-11/16".

No. 208 LIST PRICE 20c

Giant Banana Plug & Jack



Designed to handle heavy high frequency currents. Made of nickel plated spring brass.

No. 225—Jack LIST PRICE 30c
226—Plug with threaded shank LIST PRICE 35c
227—Plug with 10-32 hole with screw LIST PRICE 35c

SPRING BANANA PLUG INSULATED



In this spring banana plug no metal parts are exposed around the insulated handle. Connection is made by soldering to special type tubular lug which is an integral part of metal body. Non-collapsible four leaf banana spring gives maximum area of contact. Metal parts are nickel plated brass except banana spring which is nickel plated phosphor bronze. The high lustre insulated handle is 1" long. Available in red, black, green and yellow.

No. 209 LIST PRICE 18c

INSULATED SOLDERLESS SPRING BANANA PLUG

(INTERNAL SOLDERLESS FASTENER)



An insulated spring banana plug identical in appearance to our part No. 209 except that connection is made to an internal solderless fastener. The high lustre insulated handle is available in red, black, green and yellow.

No. 210 LIST PRICE 20c

Insulated Phone Tip Jack



An insulated phone tip jack which makes very positive contact. Contact springs are made of phosphor bronze. Metal parts are nickel plated brass. The high lustre insulated head is 3/8" in diameter. Available in red, black, green and yellow.

Fits 1/4" hole in panels up to 1/4" thick. Supplied with nut and insulating washer.

No. 101 LIST PRICE 15c

PHONE TIP JACK

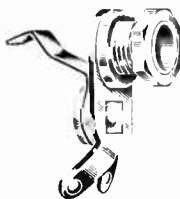


A phone tip jack identical to our part No. 101 above except that it has a non-insulated 5/16" hex head. Metal parts are nickel plated brass.

Fits 1/4" hole in panels up to 3/8" thick.

No. 106 LIST PRICE 10c

Open Circuit Phone Jack



Made to fit all stand-phone plugs. Contact spring made of nickel plated phosphor bronze and body made of nickel plated brass. Highest quality insulating material used. Fits 3/8" hole in panels up to 3/16" thick. Supplied with one metal washer.

No. 100 LIST PRICE 30c

SPRING BANANA PLUG



This spring banana plug is used extensively for plug-in coils, etc. Greater surface contact gives low RF resistance. Threaded shank is 6-32 thread, 3/8" long. Overall length 1-3/16". All metal parts are nickel plated brass except the four leaf banana spring which is nickel plated phosphor bronze. Supplied with soldering lug.

No. 206 LIST PRICE 11c

SPRING BANANA PLUG



Identical to our part No. 206 above except that threaded shank is 3/4" long.

No. 207 LIST PRICE 12c

SPRING BANANA PLUG



Identical to No. 206 spring banana plug except that instead of threaded shank it has a female 6-32 thread. Supplied with soldering lug and 6-32 screw.

No. 212 LIST PRICE 12c

BANANA JACK



A standard banana jack made of nickel plated brass. Overall length 5/8". Fits 1/4" hole in panel. Supplied with solder lug and nut.

No. 105 LIST PRICE 9c

INSULATED BANANA JACK



All metal parts are nickel plated brass. The high lustre insulated head is available in red, black, green and yellow. Fits 1/4" hole in panels up to 3/8" thick. Supplied with solder lug, insulating washer and nut.

No. 107 LIST PRICE 15c

Insulated Combination Banana Plug & Phone Tip Jack



An insulated combination banana plug and phone tip jack made to fit our parts Nos. 206, 207, 202, 203, 208, 209, 210, 212, 219 and 220. The phosphor bronze contact springs assure positive contact. Fits 1/4" hole in panels up to 5/8" thick. The high lustre insulated head is available in red, black, green and yellow.

No. 108 LIST PRICE 20c

STANDARD PHONE TIP



A standard phone tip made of nickel plated brass. Used extensively for connections on head phone cords.

No. 220 LIST PRICE, Per 100 \$1.50

T·A·C

PLUGS · CONNECTORS · CLIPS SWITCHES · KNOBS

DOUBLE PHONE PLUG

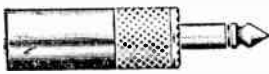


A two way phone plug. Will accommodate 2 sets head-phone tips

or lugs. Fits all standard jacks. Handle is molded bakelite. Metal parts are nickel plated brass. Available in red and black.

No. 211 LIST PRICE 50c
No. 224—Barrel only LIST PRICE 20c

SHIELDED TWO-WAY PHONE PLUG



Identical to our part No. 211 phone plug except that barrel is made of nickel plated brass for shielding purposes.

No. 221—Plug LIST PRICE 85c
No. 222—Barrel only LIST PRICE 50c

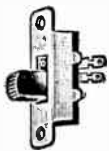
MOMENTARY CONTACT PUSH BUTTON SWITCH



This switch is designed to use a minimum of panel space. It is made with the finest insulating material. The contacts are fully enclosed. The button is black. The housing is made of brass with an all over nickel plated finish. It is SPST, normally open. Fits in $\frac{5}{8}$ " hole in panels up to $\frac{1}{4}$ " thick. Supplied with mounting nut.

No. 600 LIST PRICE 60c

SLIDE SNAP SWITCH



A very popular switch used in many radio circuits—tone—B.F.O.—phono, etc. Ribbed black bakelite handle. Housing is cadmium plated steel. High quality insulating material. Mounting centers $\frac{1}{8}$ "

No.	Type	LIST PRICE
601	SPST	26c
602	SPDT	33c
603	DPST	38c
604	DPDT	49c

3AG FUSE MOUNTINGS



Very sturdily constructed on $\frac{1}{8}$ " black bakelite. Bottom rivets are recessed to permit mounting on metal. Clips are made of spring tempered nickel plated brass. Have center holes for mounting.

No.	Type	LIST PRICE
700	Single	20c
701	Double	30c
702	Clips Only Per C	\$1.75

Single Contact Female Microphone Connector



This microphone connector assures a completely shielded connection. All metal parts are chrome plated brass except spring. Used extensively for making connections from microphone to amplifier. When used with our part No. 505 and 500, any combination of connection can be arranged. Equipped with coupling ring. No. 506 LIST PRICE 50c

Single Contact Male Microphone Connector



Similar to microphone connector No. 506 above except that it has a male thread $\frac{5}{8}$ -27 and no coupling ring. LIST PRICE 40c

No. 505 LIST PRICE 40c

Single Contact Male Chassis Connector



This microphone connector is used on chassis or in the microphone. Made of nickel plated brass. The thread is $\frac{5}{8}$ -27 and $\frac{3}{8}$ " hole required for mounting. Supplied with washers, soldering lug and nut. Highest quality insulating material used. No. 500 LIST PRICE 30c

No. 500 LIST PRICE 30c

Shorting Type Single Contact Male Chassis Connector



Used with amplifiers for a microphone chassis connection to prevent open circuit hum when volume control is on and microphone is disconnected. Ideal for use with multiple mixer amplifiers. LIST PRICE 40c

No. 501 LIST PRICE 40c

PHONE PLUG ADAPTER



For use with the connector 506 shown at the top. Fits any standard phone jacks. No wiring or soldering necessary to make connection. Made of nickel plated brass. LIST PRICE 45c

No. 223 LIST PRICE 45c

FAHNESTOCK CLIPS



Millions of these spring binding posts clips have already been used. Grips wire with just enough pressure for good electrical contact. Made of spring tempered brass. *Bronze

No.	Fig.	Length	Width	Max. Wire	Mtg. Hole	Price Per C
3	A	1 1/8"	3/8"	10	8	\$2.00
10	A	1 1/8"	3/8"	14	6	1.65
15	B	3/4"	1/8"	16	4	1.55
9	C	2 1/8"	3/8"	10	8	10.00
18	C	1 1/2"	1/8"	14	6	9.00

BANTAM OPEN AND CLOSED CIRCUIT JACKS



Fig. A



Fig. B

Small sized jacks that fit all standard phone plugs. The contact material is spring tempered nickel silver which will retain its resiliency permanently assuring good contact. Fits $\frac{3}{8}$ " hole in panels up to $\frac{1}{8}$ " thick. Supplied with nut and metal washer. Solder terminals tinned for easy soldering. Available in open and closed circuit.

No.	Fig.	Type	LIST PRICE
102	A	Open	40c
103	B	Closed	45c

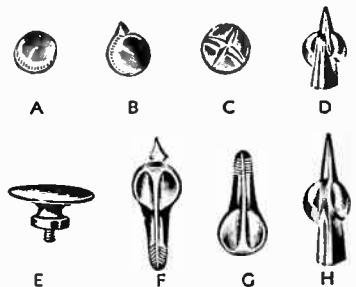
RCA TYPE PIN PLUG AND JACK



Used on RCA and most other receivers for a shielded phono connection. Can also be used as a shielded auto antenna connection.

No.	Des.	LIST PRICE
400	Pin Plug	9c
401	Shielded Jack	15c

BAKELITE KNOBS



These knobs are all made of a very high grade bakelite and are available in various colors as listed below. All are for $\frac{1}{4}$ " shafts and are set screw type, except for telegraph knob.

No.	Fig.	Color	Length	Dia.	LIST PRICE
1500	A	Black	1 1/2"	1 1/8"	12c
1501	A	Walnut	1 1/2"	1 1/8"	12c
1502	A	Red	1 1/2"	1 1/8"	12c
1503	A	Ivory	1 1/2"	1 1/8"	13c
1504	B	Black	1 1/2"	1 1/8"	12c
1505	B	Walnut	1 1/2"	1 1/8"	12c
1506	B	Red	1 1/2"	1 1/8"	12c
1507	B	Ivory	1 1/2"	1 1/8"	13c
1508	C	Black	3/4"	3/4"	12c
1509	C	Walnut	3/4"	3/4"	12c
1510	C	Red	3/4"	3/4"	13c
1511	C	Ivory	3/4"	3/4"	13c
1512	D	Black	1 1/4"	1 1/8"	15c
1513	D	Walnut	1 1/4"	1 1/8"	15c
1514	D	Red	1 1/4"	1 1/8"	21c
1515	D	Ivory	1 1/4"	1 1/8"	21c
1516	E	Black	Telegraph Knob		40c
1517	F	Black	2"		22c
1518	F	Walnut	2"		22c
1519	G	Black	1 3/8"	3/4"	15c
1520	G	Walnut	1 3/8"	3/4"	15c
1521	H	Black	2"		19c
1522	H	Walnut	2"		19c
1523	H	Red	2"		24c
1524	H	Ivory	2"		24c

T·A·C

SHAFT COUPLINGS • CLIPS TEST PRODS

AUTO ANTENNA CONNECTOR Instantly Detachable



Comes apart by slight twist. Makes an ideal single contact shielded connector.

No. 402 LIST PRICE 10c

AUTO FUSE CONNECTOR



Used in the battery lead of auto radio for protection. Fits a 3AG type fuse.

No. 403 LIST PRICE 14c

Insulated Alligator Clips



Sturdy clips made with thin jaws, fine meshing teeth and strong spring to assure hard bite. Handles 1" long.

No. 333—Red LIST PRICE 20c
No. 334—Black LIST PRICE 20c

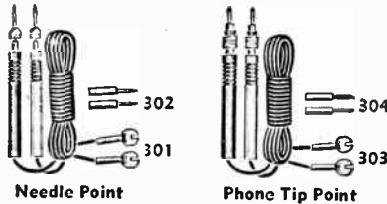
PANEL BEARING ASSEMBLY



The accurately reamed hole in bearing assures smooth, non-binding operation. Equipped with bowed spring washer which eliminates sliding forward and backward. Shaft is 1/4" in diameter. Fits 3/8" hole in panels up to 1/8" thick. Made of brass.

No. 1022—3" Shaft LIST PRICE 35c
No. 1023—6" Shaft LIST PRICE 50c

DE LUXE FINGER GRIP PHONO-NEEDLE AND PHONE TIP TEST LEADS



A deluxe test lead set with a ribbed finger grip will eliminate fatigue and slipping. Made of high quality insulating material 6 1/2" long, one each red and black. Supplied with a good grade of true kinkless wire 48" long. Available with phone tips or spade lugs on end as illustrated.

No.	Type	LIST PRICE PER SET
301	Spade lugs	\$1.20
302	Phone tips	1.20
303	Spade lugs	1.20
304	Phone tips	1.20

PANEL BEARING



Accurately machined bearing made to fit 1/4" shafts. Fits 3/8" hole in panels up to 1/8" thick. Supplied with one mounting nut. Body made of brass.

No. 1021 LIST PRICE 15c

SHAFT EXTENDERS, COUPLINGS AND REDUCERS



Brass No.	Insulated No.	EXTENDER FIG. A		Overall Length	List Price
		Hole Dia.	Shaft Dia.		
1014	914	3/8"	1/4"	1 1/8"	18c
1015	915	1/4"	1/4"	1 1/8"	18c
1017	917	1/4"	3/8"	1 1/8"	18c

A

Brass No.	Insulated No.	Hole Dia.	Hole Dia.	Overall Length	List Price
1016		1/4"	1/4"	1 3/4"	25c



Brass No.	Insulated No.	COUPLING FIG. B		Overall Length	List Price
		Hole Dia.	Hole Dia.		
1011	911	1/4"	3/8"	3/4"	18c
1012	912	1/4"	1/4"	3/4"	18c

B

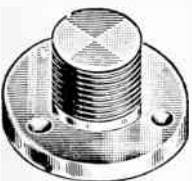


REDUCER FIG. C.
No. 1009—Reduces a 3/8" hole to 1/4" hole LIST PRICE 10c

No.	Material	Length	Dia.	BRASS AND FIBRE 1/4" SHAFTING	
				LIST PRICE	LIST PRICE
No. 1018	Brass	6"	1/4"	20c	40c
No. 1019	Brass	12"	1/4"	25c	50c
No. 1024	Fibre	6"	1/4"	25c	50c
No. 1025	Fibre	12"	1/4"	25c	50c

C

Microphone Base Flanges & Extension Rods



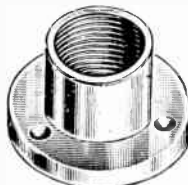
Male Type



New mike stand items for which there has long been a demand. With the male type Base Flange the microphone can be attached directly to the desk, table, pulpit, etc.

List Price

No. 515—Male Flange \$0.75
No. 516—Female Flange .75



Female Type

No. 517—6" Extension Rod \$0.75
No. 518—12" Extension Rod 1.00

DE LUXE FINGER GRIP PHONO-TIP TEST PROD REMOVABLE PHONO-NEEDLE CHUCK



A ribbed finger grip phono-tip test prod identical to the prod used in the De Luxe test lead at the left.

No.	Color	Length	LIST PRICE
311	Red	4 1/2"	45c
312	Red	6 1/2"	50c
313	Black	4 1/2"	45c
314	Black	6 1/2"	50c

DE LUXE FINGER GRIP SOLDERLESS TIP TEST PROD



Identical to the above except prods are equipped with solderless phone tips.

No.	Color	Length	LIST PRICE
319	Red	4 1/2"	45c
320	Red	6 1/2"	50c
321	Black	4 1/2"	45c
322	Black	6 1/2"	50c

NEEDLE POINT TEST PRODS REMOVABLE PHONO-NEEDLE CHUCK



Test prods are made of non-breakable extruded plastic and available in red and black. Chuck can be removed from prod as well as phono-needle from chuck. All brass parts are nickel plated.

No.	Color	Length	List Price
315	Red	4"	35c
316	Red	6"	40c
317	Black	4"	35c
318	Black	6"	40c

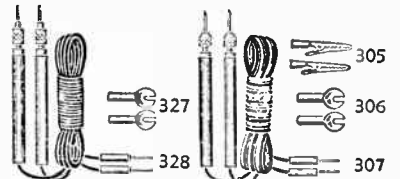
SOLDERLESS TIP TEST PRODS



Identical to above except that test prods are equipped with solderless phone tips.

No.	Color	Length	List Price
323	Red	4"	35c
324	Red	6"	40c
325	Black	4"	35c
326	Black	6"	40c

PHONO-NEEDLE AND PHONE TIP TEST LEADS



Solderless Tip Type Phono Tip Type

Prods are made of non-breakable extruded plastic, 4" long, one each red and black. Supplied with rubber covered kinkless wire 48" long. Insulated for high voltage. Available with non-insulated phone tips, spade lugs or alligator clips as illustrated.

No.	Type	List Price
305	Alligator Clips	\$1.10
306	Spade Lugs	1.00
307	Phone Tips	1.00
327	Spade Lugs	1.00
328	Phone Tips	1.00

WALSCO STAPLE DRIVER "NEW IMPROVED GUARANTEED MODEL"

Patent No. 2,285,384

PAYS FOR ITSELF ON THE FIRST JOB



- A sensational tool for installing wires and cables, that saves time and money.
- Pays for itself on the first job.
- Used by Radio, Public Address and Intercom Technicians.
- Staples into corners and other inaccessible places.
- Staples on hard surfaces such as plaster, hardwood, etc.
- Can be loaded in 10 seconds.

A real time and trouble-saving tool for stapling wires in Public Address, and Inter-Communication installation and service. Useful also for general stapling, sign-posting, refrigeration gasket work, etc. The WALSCO Staple Driver has met the test in the field and has proved itself a real aid to maintenance men. This handy device automatically positions the staple—then one or two strokes with the palm of the hand and the staple is driven home neatly, quickly, and accurately. A small trigger regulates the feeding mechanism to enable the operator to strike the handle on hard surfaces as often as necessary before a second staple leaves the magazine. Staples come in strips, are large enough for cables and wires up to 3/4" diameter. An adjustable regulator controls the depth to which the staple is driven into surface, thus preventing damage to the insulation of the wire.

STAPLE DRIVER COMPLETE

Including box of staples:

Cat. No.	List Price	Dealers' Net
500.....	\$8.25	\$4.95

Rubber Cap for Head of Staple Driver

Cat. No.	List Price	Dealers' Net
507.....	\$0.37	\$0.22

CARBON STEEL STAPLES



Put up in handy strips and available in plain, brown or ivory finish.

Cat. No.	List	Net
550—Box of 250.....	\$0.60	\$0.36
552—Box of 1000.....	2.25	1.35
553—Box of 5000.....	9.75	5.85

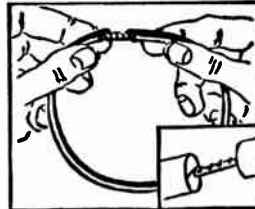
WALSCO UNIBELT

A NEW UNIVERSAL DIAL-DRIVE BELT ADJUSTABLE TO FIT ANY DIAL DRIVE



Covered by Patent No. 2,300,706

- Eliminates need for stocking 96 different sizes of belts.
- Unibelt gives the Radio Man the correct size belt for every make and model set.
- Easily installed in a few minutes. No need for taking dial mechanism apart.
- Put up on spools in continuous lengths which will make five or more average belt replacements.
- New patented construction incorporates special stainless steel core and pure latex covering.
- Belts cannot stretch, and when properly installed will not slip, fray or break.
- Unconditionally guaranteed.

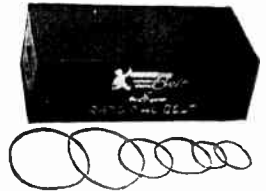


The ingenious construction of the New WALSCO Unibelt makes it possible to assemble any size belt by merely cutting the desired length and joining the ends with a simple "zipper-like" connector. The connected belt cannot stretch and has a breaking strength of over 60 lbs. ONLY ONE SIZE NEEDED for any belt replacement job.

Cat. No.	List Price	Dealer's Net
303—5-ft. spool Unibelt (with 10 connectors and instructions).....	\$2.75	\$1.65

WALSCO DIAL DRIVE BELTS

- Precision Made.
- No Stretch — No Slip.
- Smooth and Uniform.
- Exceptionally Strong.

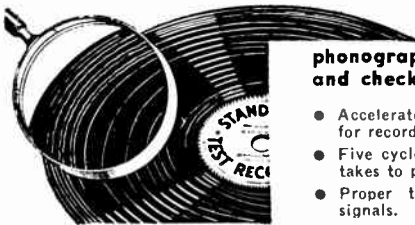


Available for any type of radio set. Specially constructed to give long lasting, trouble-free service. Treated for maximum friction and to provide accurate tuning. WALSCO Dial Belts are uniformly thick throughout the entire length and are precision made and guaranteed to fit perfectly.

All Sizes	List Price Each	\$0.25
Also put up in Kits of 25, 50, 100 and 150 Belts		

WALSCO STANDARD TEST RECORD

For immediate, audible adjustment of record changers and coin-operated phonographs . . . solves the problem of adjusting the set-down position of the pick-up, and checks for proper tripping THROUGH SOUND.



- Accelerated Pitch, saves time, as playing time for record is less than 40 seconds.
- Five cycle changes obtained in the same time it takes to play one regular 10" record.
- Proper tripping action is indicated by tone signals.
- Lead-in grooves are modulated with a series of three consecutive tones. If three tones are heard, pick-up is setting too close to edge of record . . . one tone indicates pick-up is setting down "too far in" . . . if two tones are heard, adjustment is correct.
- Stroboscope on rim of label indicates proper motor speed (78 r.p.m. at 60 cycles).
- Highest quality material is used, making records suitable for thousands of tests.
- Records are scientifically designed to R.M.A. and N.A.B. standards and are precision-checked for perfect flatness, concentricity, thickness, and correct groove depth.

WALSCO Standard Test Records are indispensable to Radio Dealers for checking combination sets, and for Radio and Coin Machine Technicians in testing, repairing and adjusting record changers.

Cat. No.	List Price	Dealer's Net
710-6—Set of six 16" test records.....	\$8.15	\$4.90
712-4—Set of four 12" test records.....	8.15	4.90

WALSCO DIAL CABLES AND CORDS

WALSCO Dial Cables and Cords are manufactured to meet the most rigid standards of the Government, Radio Industry and Engineering Laboratories. The finest raw materials are used and production is controlled to supply a uniform product with an absolute minimum stretch factor. All standard Cords are made with NYLON braid, known to have the highest abrasion resistance. These selected materials, plus special chemical treatment after fabrication, make WALSCO Cords the finest on the market. WALSCO Dial Cords are used by leading manufacturers as a standard component.



HEAVY CORD—Diameter .062"—Same as used on many Philco and Majestic sets. Very durable, and treated to prevent slipping.

No. 33 25 ft. List Price \$1.75
No. 33-1C 100 ft. List Price 4.60

BRONZE CABLE—16-Strand Braided—Diameter .039"—Breaking Strength 50 lbs.—A braided cable with good flexibility and abrasion resistance. "Fiber-glass" is used as core material and the braid is constructed of special hard Cadmium bronze. Does not unravel.

No. 31 25 ft. List Price \$1.20
No. 31-1C 100 ft. List Price 3.45
No. 31-5C 500 ft. List Price 14.00

PHOSPHOR BRONZE CABLE—42-Strand—Diameter .032"—Breaking Strength 60 lbs.—A very flexible metal cable constructed of 42 strands of hard Phosphor bronze over a "Fiber-glass" core. Extremely durable. Used for replacement of dial cables and many special applications where a strong, stranded cable is required.

No. 30 25 ft. List Price \$1.50
No. 30-1C 100 ft. List Price 5.00
No. 30-5C 500 ft. List Price 20.00

SPECIAL THIN BRONZE CABLE—Diameter .022"—An extra-thin cable for dial drives, flexible connections, pigtails, and many other applications—wherever a thin, but strong cable is required.

No. 32 25 ft. List Price \$1.20
No. 32-1C 100 ft. List Price 3.45
No. 32-5C 500 ft. List Price 14.00

The following cords cover over 80% of the replacement demand. With one spool of each kind on hand, the serviceman has the proper size for practically any set manufactured since 1934. Constructed with "Fiber-glass" or linen core and "pre-stretched," these are the most efficient cords available. The braided sleeves are made of Nylon.

Cat. No.	Diam.	Breaking Strength	LIST PRICES		
			Feet Per Spool		
"SPECIAL THIN"					
35	.025"	30 lbs.	\$1.25		
35-1C	.025"	30 lbs.		\$4.50	
35-5C	.025"	30 lbs.			\$13.00
STANDARD					
39	.032"	32 lbs.	\$1.25		
39-1C	.032"	32 lbs.		\$4.50	
39-5C	.032"	32 lbs.			\$13.00
MEDIUM					
34	.042"	35 lbs.	\$1.25		
34-1C	.042"	35 lbs.		\$4.50	
34-5C	.042"	35 lbs.			\$16.00

STANDARD PACKAGE—12

POPULAR DIAL CORD IN SMALL PACKAGES

Cat. No. 3070—Approximately 10' Special Thin Cord (Type 35)..... List Price \$0.40
Cat. No. 3080—Approximately 8' Medium Cord (Type 34)..... List Price 0.40
Cat. No. 3090—Approximately 8' Standard Cord (Type 39)..... List Price 0.40

(Standard Package . . . 20; available on display card or box)

WALSCO THRIFTY CORD RACK



An Economical and Practical Arrangement of Dial Cord for Radio Service Shops Which Costs Less Than the Spools Bought Separately.

Contains 300 ft. of the most popular WALSCO Dial Cords. Helps the serviceman to keep his workbench clean and to save valuable space. Attractively made with aluminum base and convenient measuring device. Contains 100 ft. each of Special

Thin Cord No. 35, Standard Cord No. 39, and Medium Cord No. 34.

Cat. No.	List Price	Dealer's Net
1030	\$8.88	\$5.33

(Standard Package . . . 6)

WALSCO DIAL CABLE ASSORTMENTS

MULTI-SPOOL — Especially Designed for the Outside Service Man — It is a divided spool, holding 15 feet each of Phosphor Bronze Cable No. 30—Heavy Cord No. 33—Medium No. 34—and Special Thin Cord No. 35.

Cat. No. 38 List Price \$3.50

THRIFTY-SPOOL, STYLE "A" — This very handy spool contains: 15 feet each of No. 34 Bronze Cable, No. 34 Medium Cord and No. 35 Special Thin Cord.

Cat. No. 37 List Price \$2.50

THRIFTY-SPOOL, STYLE "B" — Holds 15 feet each of No. 39 Standard Cord, No. 34 Medium Cord and No. 35 Special Thin Cord.

Cat. No. 36 List Price \$2.50



GRILLE CLOTH



Highest quality, acoustically perfect cloth available to match walnut, mahogany or light wood finishes.

Cat. No.	Size	List Price
360	12" x 12"	\$0.60
360-1	8" x 18"	0.60
361	18" x 24"	1.50
362	1 yard x 52" (packaged)	6.25
362-1	1 yard x 40" (packaged)	4.95
362 BU	52" wide material in bulk, minimum order: 5 yards, per yd.	5.75

GRILLE SCREENING

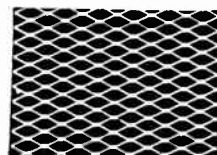
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Galvanized, rayon-flock covered screening. Attractive, weatherproof and modern. For auto radios, P.A. and Intercom, speakers, etc.

Cat. No.	Ivory	Size	List Price
374-1	374-3	8" x 11"	\$0.85
376-1	376-3	18" x 24"	2.90
378-1	378-3	36" x 36"	9.00

ORNAMENTAL METAL GRILLE



Heavy perforated grille, beautifully "brushed-brass" plated and lacquered with gold finish effect. For use over cloth or screening in custom-built radios, high quality P.A. speakers, juke boxes, etc.

Cat. No.	Size	List Price
382	12" x 18"	\$2.75
384	18" x 24"	5.00
386	24" x 36"	9.50

PRICES FOR BULK QUANTITIES AND SPECIAL SIZES QUOTED ON REQUEST

WALSCO PHONO-MOTOR DRIVES

Exact replacements for all standard motor drives. Precision made to assure constant uniform speed and made of abrasion-resistant synthetic rubber to assure long wear. For attaching, use WALSCO Rubber Cement.



Cat. No.	I.D.	O.D.	Thick	No. of Drives per pkg.	Used on	List Price per pkg.
†2560-16	2"	2 3/8"	3/8"	2	Gen. Indust. Mod. LX & RX	\$0.40
†2560-17	1 1/2"	1 3/4"	1/8"	2	Alliance, Seeburg, G.E., V. M. 400	0.40
†2560-18	7/8"	1 1/8"	3/16"	3	Seeburg, R.C.A., G.E.	0.40
†2560-19	1 1/4"	1 5/8"	1/4"	4	Phileo, R.C.A., etc.	0.40
†2560-20	5/8"	6"	1/8"	1	Detrola	0.40
*2560-22	1 1/2"	1 5/8"	3/16"	3	G.I. Recorder/Changer	0.40
†2560-25	Spring-Drive			1	Detrola - Utah	0.40

WALSCO KEY WRENCHES



FOR HEX AND SPLINE SOCKET SCREWS

Walsco features three sets of socket wrenches made of special alloy steel to fit all standard socket screws used in radio and electronic equipment.

Cat. No.	Description	List Price
†3580	Assortment of 4 small HEX wrenches... Fits set screws No. 4 to 8, cap screws No. 2 to 8.	\$0.40
†3581	Assortment of 3 medium HEX wrenches... Fits set screws 1/4" to 1/2" and cap screws No. 8 to 14.	0.40
†3584	Assortment of 4 small SPLINE wrenches... Fits all set screws up to 1/4" and cap screws up to No. 8.	0.40



WALSCO HEX & SPLINE WRENCH KIT



A handy kit containing a complete range of wrench sizes as used in the electronic trade. The case is made of durable leatherette with double snap button closure and contains both hex (Allen) and spline (Bristol) wrench keys for No. 2 to 3/8" screws.

Cat. No.	List Price	Dealer's Net
560—Wrench Kit	\$1.65	\$0.99

Std. Package — 25

WALSCO SPEAKER ADJUSTMENT SHIMS



- MADE OF NON-MAGNETIC METAL
- STRONG AND FLEXIBLE, SPRING TEMPER
- CORROSION-RESISTANT

4 Shims of each of 4 sizes supplied in handy plastic case with screw top and pencil clip. As easy to carry as a fountain pen. Marked for easy identification. Sizes supplied—.004", .006", .008" and .010". Indispensable to the serviceman in adjusting voice coils of speakers.

Cat. No.	List Price
†2550—16 Assorted Shims—4 of each size	\$0.55

WALSCO PHONOGRAPH PICKUP SET SCREWS

Precision knurled head steel screws, antique bronze finished for all popular pickups and recording heads. The assortment contains several each of the popular numbers and one each of the other sizes.



Cat. No.	Approx. No. Units per pkg.	Used On	Size	List Price per pkg.
†2570	10	Assorted	7 diff. sizes	\$0.40
*2571	10	Shure and others	2-56 x 3/8"	0.40
*2572	10	Most Asatic & Webster	2-64 x 3/8"	0.40
*2573	8	Asatic B1, 2, 3, 4, some Stromberg-Carlson & Webster, etc.	1-56 x 3/4"	0.40
-2576	6	Most RCA, etc.	1-72 x 1"	0.40

WALSCO PICKUP CARTRIDGE MOUNTING SCREWS

An assortment containing small machine and self-tapping screws of various lengths, sizes and styles as required in fastening cartridge to pick-up arm. Especially useful when threads are stripped or replacement of different cartridge requires longer screws.



Cat. No.	List Price
*3365—Approx. 30 Screws & Spacers	\$0.40

WALSCO DIAL CORD CLIPS

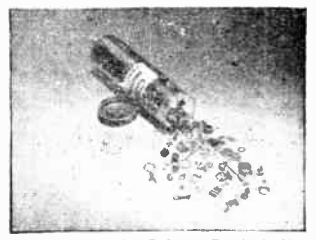
For fastening the end of dial drive cord. The assortment contains the proper sizes for all standard thicknesses of cord.



Cat. No.	List Price per pkg.
*2770—Approx. 35 Clips	\$0.40

WALSCO HARDWARE ASSORTMENT

A wonderful assortment of screws, nuts, washers, springs, clamps, eyelets, grommets, terminals, etc. Only regular hardware included. Just the thing for the experimenter, ham and technician.



The "Thousand-Piece" Assortment" comes in handy plastic container. The small assortment is packaged in a cellophane bag.

Cat. No.	List Price	Dealer's Net
K3003—"1000 Piece" Hardware Assortment	\$1.65	\$0.99
†3000—Hardware Assortment, over 100 pieces	0.40	0.24

WALSCO GLASS JAR

Empty glass jar—2 oz. size with wide mouth screw top. Handy for storing small hardware items to keep them clean and rust-free.

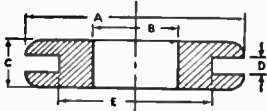


Cat. No.	List Price
999	\$0.12

(Standard Package . . . 36)

WALSCO RUBBER GROMMETS

For protecting cables from abrasion when passing through chassis holes. Also used for vibrationless mounting of parts.



Cat. No. †3340—12 assorted grommets, per pkg. List Price \$0.40

PKGS. OF GROMMETS — INDIVIDUAL SIZES

Cat. No.	Dimensions					Approx. No. of Grommets per pkg.	List Price per pkg.
	A	B	C	D	E		
†3341	3/8"	1/2"	3/4"	1"	1 1/4"	15	\$0.40
†3342	1/2"	3/4"	1"	1 1/4"	1 3/4"	12	0.40
†3343	3/4"	1"	1 1/4"	1 3/4"	2"	10	0.40
†3344	1"	1 1/4"	1 3/4"	2"	2 1/4"	10	0.40
†3345	1 1/4"	1 3/4"	2"	2 1/4"	2 3/4"	8	0.40

(For Bulk Quantity Prices on these, see Walsco Pages 16 and 17)

WALSCO CHASSIS MOUNTS



Made of resilient synthetic rubber to give chassis or other components a floating effect and to reduce "microphonics." Essential wherever vibration will affect operation.

Cat. No.	Dimensions				No. of Mounts per pkg.	List Price per pkg.
	A	B	C	D		
†2740	Assorted				10	\$0.40
*2742	3/4"	1"	1 1/4"	1 3/4"	6	0.40
*2744	1"	1 1/4"	1 3/4"	2"	4	0.40
*2746	1 1/4"	1 3/4"	2"	2 1/4"	4	0.40

(For Bulk Quantity Prices on these, see Walsco Pages 16 and 17)

WALSCO RUBBER WASHER AND BUMPER ASSORTMENT

An assortment of the various kinds of rubber washers, bumpers, and spacers used in the electronic and radio industry for shockless, vibrationless mounting, for eliminating rattles and microphonics, etc.

Cat. No. †3440—20 assorted washers and bumpers List Price \$0.40

WALSCO CORD STRAINRELIEFS FOR POSJ WIRE



Provides a grommet and strain relief in one piece. For use on appliance cord sets. Use WALSCO Rubber Cement (Cat. No. 112) for attaching to cord. Prevents insulation of wire from being damaged by sharp-edged holes in metal chassis or cabinets.

Cat. No. *3348—4 Strainreliefs List Price per pkg. \$0.40

(For Bulk Quantity Prices on these, see Walsco Pages 16 and 17)

WALSCO CABINET FEET



Made of oil resistant synthetic rubber. Wood screws are supplied with screw-type feet but machine or selftapping screws may be used. The rubber tack feet have steel tacks securely molded in.

Cat. No. †3350—12 Assorted rubber feet, per pkg. List Price \$0.40

PKGS. OF SCREW-TYPE FEET — INDIVIDUAL SIZES

Cat. No.	Diam.	Height	No. of units per pkg.	List Price per pkg.
*3352	1/2"	3/8"	8	0.40
*3353	3/4"	3/8"	8	0.40

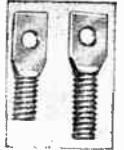
†3355—Assorted Rubber Tack Feet \$0.40

†3495—50 Felt Feet (Discs—3/4" Diam. 1/8" Thick) 0.40

(For Bulk Quantity Prices on these, see Walsco Pages 16 and 17)

WALSCO SPADE BOLTS

Indispensable for attaching condensers, coils, cans, and similar items. For Experimenters, Servicemen and Manufacturers of electronic equipment. Stud size 6-32. Hole size for No. 6 screw.



Cat. No.	Size	Approx. No. of bolts per pkg.	List Price per pkg.
†3270	Assorted	25	\$0.40
*3271	5/8" overall length (approx.)	25	0.40
*3272	7/8" overall length (approx.)	25	0.40

(For Bulk Quantity Prices on these, see Walsco Pages 16 and 17)

WALSCO RIVET ASSORTMENT

Various sizes of hollow, solid and split rivets in brass, copper and aluminum as used in everyday repair and experimental work. Sizes range approximately from 1/16" to 3/8" in diam. and up to 3/4" in length.



Cat. No. †2620—Approx. 60 asstd. rivets, per pkg. List Price \$0.40

WALSCO EYELET ASSORTMENT

Brass eyelets of various diameters and lengths. A handy item for every repair shop.

Cat. No. †2630—Approx. 55 eyelets, per pkg. List Price \$0.40

WALSCO SMALL COTTER & HAIR PINS

Package contains an assortment of most popular sizes of cotter and hair pins. A valuable aid in the repair of radios and phonograph mechanisms.



Cat. No. *2650—Approx. 50 assorted cotter and hair pins List Price per pkg. \$0.40

(For Bulk Quantity Prices on these, see Walsco Pages 16 and 17)

WALSCO SPEAKER CONE PATCHES

A quick and inexpensive means for patching tears and holes in speaker cones. Made of specially flexible material and backed with an adhesive which forms a permanent bond with the cone.



Cat. No. †2553—10 assorted patches, per pkg. List Price \$0.40

WALSCO SPEAKER DUST FELTS

Special, thin felt disks to keep metal particles and dust out of voice coils. Use Walsco Radio Cement to attach to cone.

Cat. No. 2775—Approx. 25 assorted sizes List Price \$0.40

WALSCO SNAP-HOLE PLUGS

A round, flat head, metal button with spring flanges that snap right into the hole. Used to seal adjustments, cover unused holes, etc.



Cat. No.	List Price per pkg.
†3500—8 assorted plugs	\$0.40
*3501—For 1/4" hole, 8 plugs	0.40
*3502—For 3/8" hole, 8 plugs	0.40
*3503—For 1/2" hole, 6 plugs	0.40
*3504—For 5/8" hole, 6 plugs	0.40
*3505—For 3/4" hole, 5 plugs	0.40
*3506—For 1" hole, 4 plugs	0.40

(For Bulk Quantity Prices on these, see Walsco Pages 16 and 17)

WALSCO VENTILATING HOLE PLUGS

For amplifiers, transmitters, portable radios, amateur equipment, etc., wherever ventilation is required. Fine wire screen permits free circulation of air. The assortment contains plugs for 1/2" and 1" holes.



Cat. No.	List Price per pkg.
†3320—Assorted plugs	\$0.40

(For Bulk Quantity Prices on these, see Walsco Pages 16 and 17)

WALSCO CABLE CLAMPS

Heavy gauge steel, Cadmium plated, 3/8" wide. Perfectly punched and formed with No. 6 or No. 8 mounting holes. Available in 3 sizes for cables from 1/8" to 5/16" in diameter.

Cat. No.	For cables	Approx. No. of Clamps per pkg.	List Price per pkg.
†3330	Assorted clamps	20	\$0.40
*3331	1/8" to 3/16" Diam.	24	0.40
*3332	3/16" to 1/4" Diam.	20	0.40
*3333	1/4" to 5/16" Diam.	15	0.40

(For Bulk Quantity Prices on these, see Walsco Pages 16 and 17)

WALSCO GRID CAP ASSORTMENT

An assortment of Grid Caps for all standard metal and glass tubes. Made of high quality spring brass, or steel and plated.

Cat. No.	List Price per pkg.
†2600—Approximately 20 assorted caps	\$0.40

(For Bulk Quantity Prices on these, see Walsco Pages 16 and 17)

WALSCO SPRING CONNECTOR CLIPS (FAHNESTOCK TYPE)

For fast connection and good electrical contact. No tools required for connecting or disconnecting. Made of spring brass or phosphor bronze.

Cat. No.	List Price per pkg.
*2730—Approx. 12 assorted clips	\$0.40
*2731—Approx. 20 small clips (for wire gauges of #16 & smaller)	0.40
*2732—Approx. 12 clips (for wire gauges of #12 to #18)	0.40

(For Bulk Quantity Prices on these, see Walsco Pages 16 and 17)

WALSCO FUSE CLIPS

Made of spring brass, nickel plated for single hole mounting.

Cat. No.	List Price per pkg.
*2720—10 assorted clips	\$0.40
*2721—12 clips for 1/4" diameter fuses	0.40
*2722—8 clips for 3/32" diameter fuses	0.40

(For Bulk Quantity Prices on these, see Walsco Pages 16 and 17)

WALSCO TERMINAL LUGS

Available in the six popular sizes which meet most of the requirements of the radio and electronic field. Accurate forming facilitates easy handling. Made of tinned brass.

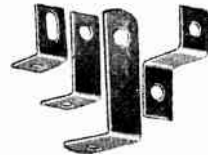


Cat. No.	Figure No.	Approx. No. of Lugs per pkg.	List Price per pkg.
†3280	Assorted	40	\$0.40
*3281	1	30	0.40
*3282	2	30	0.40
*3283	3	30	0.40
*3284	4	30	0.40
*3285	5	30	0.40
*3286	6	40	0.40

(For Bulk Quantity Prices on these, see Walsco Pages 16 and 17)

WALSCO ANGLE BRACKET ASSORTMENT

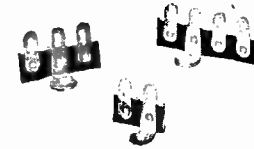
Handy brackets of various lengths and shapes as needed by every repairman, experimenter, "ham", etc. Precision made, of steel, or brass and plated.



Cat. No.	List Price per pkg.
*2610—Approximately 15 assorted brackets	\$0.40

WALSCO TERMINAL STRIPS

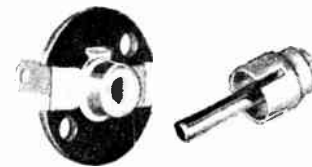
For mounting parts which are to be insulated from chassis, and for wire distribution. Made with high-grade phenolic insulation. Solder-coated terminals.



Cat. No.	List Price per pkg.
*2660—Assortment of various size strips	\$0.40

WALSCO PHONO PLUGS AND JACKS

Standard plugs and jacks as used for connecting record players or pickups; also used on auto radio antennae. Used for all single conductor, shielded cable connections.



Cat. No.	Description	List Price per pkg.
†2580	—Package of 4 plugs	\$0.40
†2585	—Package of 2 jacks	0.40

(For Bulk Quantity Prices on these, see Walsco Pages 16 and 17)

MINIATURE PLUG AND JACK TWO-CONDUCTOR PRECISION TYPE

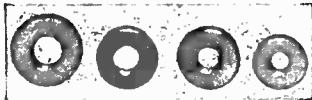
Ideal for hearing aids, speaker extensions, carbon microphones, and numerous other installations. Needs no screws; molded plastic case cements together. Illustration shown approximately one-half actual size.



Cat. No.	Description	List Price
†2590	—1 plug (type PL-291)	\$0.40
†2591	—1 jack (type JK-48)	0.40

WALSCO METAL WASHERS

Precision steel washers. Cadmium plated, in standard small sizes for innumerable uses.



Cat. No.	For Screw Size	Dimensions			Approx. No. of washers per pkg.	List Price per pkg.
		I.D.	O.D.	Thick.		
†3510	Assorted				50	\$0.40
3511	#4	.125"	.187"	.015"	100	0.40
3512	#6	.149"	.212"	.015"	100	0.40
3513	#8	.175"	.238"	.015"	100	0.40
3514	#10	.203"	.265"	.015"	75	0.40
3515	#14	.265"	.327"	.015"	50	0.40

(For Bulk Quantity Prices on these, see WalSCO Pages 16 and 17)

WALSCO LOCK WASHERS

Made of special steel and rust-proofed. Sizes listed below are the most popular ones in the radio and electrical appliance field.



Cat. No.	For Screw Size	Approx. No. of washers per pkg.	List Price per pkg.
†3550	Assorted	50	\$0.40
3592	#6	50	0.40
3593	#8	45	0.40
3594	#10	40	0.40
3595	#14	35	0.40
3596	#8	25	0.40

(For Bulk Quantity Prices on these, see WalSCO Pages 16 and 17)

WALSCO KNOB FELT WASHERS

Keeps cabinets from being scratched and makes knobs turn smoothly. Made of tough brown felt with 1/4" hole to fit standard control and condenser shafts. O. D. is approx. 3/4" and thickness 1/32".

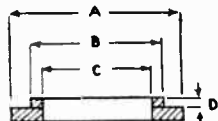
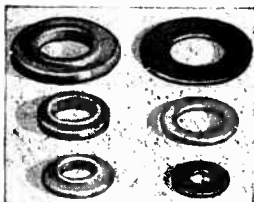


Cat. No.	List Price per pkg.
†3490—45 felt washers in cellophane bag	\$0.40

(For Bulk Quantity Prices on these, see WalSCO Pages 16 and 17)

WALSCO INSULATING WASHERS

Precision made of high-grade vulcanized fibre or phenolic material. Used on electronic and electrical equipment to insulate parts from chassis, etc.



Overall thickness of extruded washers is approximately 3/32" and of the flat washers 1/32".

Cat. No.	List Price per pkg.
†3430—30 Assorted extruded and flat washers	\$0.40

Cat. No.	Dimensions				Fits Screw Size	Quan. of Washers		List Price per pkg.
	A	B	C	D		Flat	Extrud.	
*3431	.136"	.186"	.015"	.015"	4	20	20	\$0.40
*3432	.165"	.215"	.015"	.015"	8	15	15	0.40
*3433	.195"	.245"	.015"	.015"	10	15	15	0.40
*3434	.225"	.275"	.015"	.015"	12	12	12	0.40
*3435	.255"	.305"	.015"	.015"	10	10	10	0.40

(For Bulk Quantity Prices on these, see WalSCO Pages 16 and 17)

WALSCO SPRING (FRICTION) WASHERS



Used in record changers, automatic tuning assemblies, etc. Assortment contains many popular sizes of phosphor bronze and spring steel washers.

Cat. No.	List Price per pkg.
†3425—Approx. 25 assorted spring washers	\$0.40

(For Bulk Quantity Prices on these, see WalSCO Pages 16 and 17)

WALSCO FUSE INSULATORS



Standard fibre insulators for use on automobile radios. Two lengths included fit all standard 1/4" diameter fuses.

Cat. No.	List Price per pkg.
†2690—Approx. 16 assorted insulators	\$0.40

(For Bulk Quantity Prices on these, see WalSCO Pages 16 and 17)

WALSCO METAL AND INSULATING SPACERS



A popular assortment of spacers of various lengths, with hole size to accommodate #6 and #8 screws. Often used for mounting sockets, switches, and for raising panels, chassis, and condensers.

Cat. No.	List Price per pkg.
*2670—Approx. 12 assorted insulating spacers	\$0.40
*2680—Approx. 12 assorted metal spacers	0.40

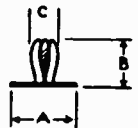
WALSCO SNAP-IN TRIMOUNTS

Faster than screws. Use them on modern radio sets, back covers, dial scales, chassis, built-in antennae, etc., to speed assembly and repairs.



Cat. No.	List per pkg.
†3460—Approx. 20 assorted Trimounts	\$0.40

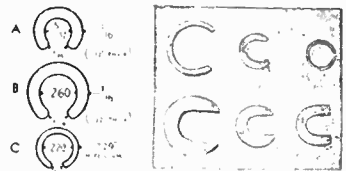
Cat. No.	Dimensions			For Hole	Cont.	per pkg.	List Price per pkg.
	A	B	C				
*3461	.11"	.11"	.11"	1/8"	20 pcs.	0.40	0.40
*3462	.11"	.11"	.11"	1/8"	25 pcs.	0.40	0.40
*3463	.11"	.11"	.11"	1/8"	25 pcs.	0.40	0.40
*3464	.11"	.11"	.11"	1/8"	18 pcs.	0.40	0.40
*3465	.11"	.11"	.11"	1/8"	16 pcs.	0.40	0.40



(For Bulk Quantity Prices on these, see WalSCO Pages 16 and 17)

WALSCO RETAINING RINGS & 'C' WASHERS

A necessity in the servicing of volume controls, record changers, etc. The rings are tempered spring steel. The washers are annealed. The assortment contains sizes for shafts from 1/8" to 5/8" Diam.

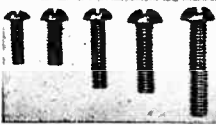


Cat. No.	Description	Picture Number	Approx. No. of units per pkg.	List Price per pkg.
†3420	Asst. Rings & Washers		35	\$0.40
*3421	Ring for 1/4" Shaft	C	40	0.40
*3422	'C' Washer for 1/4" Shaft	B	25	0.40
*3423	'C' Washer for 3/8" Shaft	A	25	0.40

(For Bulk Quantity Prices on these, see WalSCO Pages 16 and 17)

WALSCO STEEL MACHINE SCREWS

Round head, cadmium-plated, steel machine screws. Available in assortments or individual sizes, conveniently packaged for experimenters, servicemen and amateurs.



WALSCO Standard Machine Screw Ass'tm't

All the standard sizes used in electronic and similar work are combined in this handy, inexpensive assortment. It contains Nos. 6, 8, 10 screws— $\frac{1}{4}$ to 1" long.

Cat. No. List Price
 †3560—Approx. 40 assorted screws, per pkg. \$0.40

WALSCO Small Machine Screw & Nut Ass'tm't

A special assortment of extra small screws (Nos. 2 and 4), and nuts so often needed in electronic and experimental work for fastening small parts, to replace rivets, etc.

Cat. No. List Price
 †3360—Approx. 30 assorted screws and 30 assorted nuts, per pkg. \$0.40

PACKAGES OF SCREWS — INDIVIDUAL SIZES

Cat. No.	Size	Approx. No. of screws per pkg.	List Price per pkg.
†3100	$\frac{5}{32}$ x $\frac{1}{4}$	50	\$0.40
†3110	$\frac{5}{32}$ x $\frac{3}{8}$	40	0.40
†3120	$\frac{5}{32}$ x $\frac{1}{2}$	35	0.40
*3130	$\frac{5}{32}$ x $\frac{3}{4}$	30	0.40
*3135	$\frac{5}{32}$ x $\frac{1}{4}$	40	0.40
†3140	$\frac{5}{32}$ x $\frac{3}{8}$	35	0.40
†3150	$\frac{5}{32}$ x $\frac{1}{2}$	30	0.40
†3160	$\frac{5}{32}$ x $\frac{3}{4}$	25	0.40
*3165	$\frac{10}{32}$ x $\frac{1}{2}$	25	0.40
*3167	$\frac{10}{32}$ x $\frac{3}{4}$	20	0.40
*3169	$\frac{10}{32}$ x 1	15	0.40

(For Bulk Quantity Prices on these, see Walsco Pages 16 and 17)

WALSCO SMALL ESCUTCHEON AND WOOD SCREW ASSORTMENT



This assortment contains the extra small sizes of hard-to-get wood screws as needed by radio men, model builders, etc., for fastening name plates, escutcheons and numerous other devices.

Cat. No. List Price
 †3550—Approx. 30 assorted screws, per pkg. \$0.40

WALSCO Standard Wood Screw Assortment

Handy assortment for workshop or home. Contains round and flathead screws of popular sizes in brass and steel.



Cat. No. List Price
 †3553—Approx. 30 screws, per pkg. \$0.40

WALSCO THREADED STEEL RODS



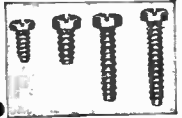
These rods have many uses in service and repair work and are made from the finest cold rolled steel to give maximum strength. Each package contains one each

of 6-32 and 8-32 threaded rod. Both 8 inches long.

Cat. No. List Price
 †2640—1 each 6-32 and 8-32 threaded rod \$0.40

WALSCO SHEET METAL AND SELF-TAPPING SCREWS

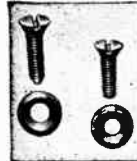
These screws cut their own threads in either metal or plastic. Just drill a hole and drive in the screw—no nut or tapping required. Ideal for mounting parts to chassis, replacing rivets and eyelets, etc.



Cat. No.	Size	Approx. No. of screws per pkg.	List Price per pkg.
†3470	Assorted	30	\$0.40
†2910	6 x $\frac{1}{4}$	30	0.40
*2911	6 x $\frac{3}{8}$	25	0.40
*2912	6 x $\frac{1}{2}$	25	0.40
*2914	6 x $\frac{3}{4}$	20	0.40
*2916	6 x 1	20	0.40
*2920	8 x $\frac{3}{8}$	25	0.40
*2922	8 x $\frac{1}{2}$	20	0.40
*2924	8 x $\frac{3}{4}$	15	0.40
*2926	8 x 1	15	0.40
*2930	10 x $\frac{3}{8}$	20	0.40
*2932	10 x $\frac{1}{2}$	16	0.40
*2934	10 x $\frac{3}{4}$	15	0.40

(For Bulk Quantity Prices on these, see Walsco Pages 16 and 17)

WALSCO RACK SCREWS & CUP WASHERS



For mounting panels in racks and cabinets, fastening record-players and recording chassis, etc. Enhances appearance of any assembly. The oval head screws are nickel plated—so are the cup washers.

Cat. No.	Size	Approx. No. of units per pkg.	List Price per pkg.
†3540	Assorted Screws & Washers	12	\$0.40
*3543	$\frac{5}{32}$ x $\frac{5}{8}$ Screws	35	0.40
*3541	$\frac{5}{32}$ x $\frac{3}{4}$ Screws	25	0.40
*3542	$\frac{10}{32}$ x $\frac{3}{4}$ Screws	20	0.40
*3544	#6 Washers ($\frac{7}{16}$ " O.D.)	50	0.40
*3545	#8 Washers ($\frac{1}{2}$ " O.D.)	40	0.40
*3546	#10 Washers ($\frac{9}{16}$ " O.D.)	25	0.40

(For Bulk Quantity Prices on these, see Walsco Pages 16 and 17)

WALSCO ORNAMENTAL HEAD SCREWS

Antique bronze finished; rosette head. For mounting of speakers, etc.



Cat. No.	Size	List Price per pkg.
†2950	15 assorted screws	\$0.40
*2951	20 screws, 6-32 x $\frac{3}{4}$ "	0.40
*2952	20 screws, 6-32 x 1"	0.40
*2953	15 screws, 8-32 x 1 $\frac{1}{4}$ "	0.40

(For Bulk Quantity Prices on these, see Walsco Pages 16 and 17)

WALSCO STEEL SET SCREWS

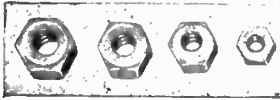
Precision, hardened steel set screws in all popular sizes for radio knobs, record changers, home and automobile radios, or wherever set screws are needed.



Cat. No.	Size	Approx. No. of screws per pkg.	List Price per pkg.
†3480	Assorted	15	\$0.40
*3205	$\frac{5}{32}$ x $\frac{1}{8}$	12	0.40
†3210	$\frac{5}{32}$ x $\frac{3}{16}$	12	0.40
*3212	$\frac{5}{32}$ x $\frac{1}{4}$	12	0.40
*3215	$\frac{5}{32}$ x $\frac{3}{8}$	12	0.40
†3220	$\frac{5}{32}$ x $\frac{1}{2}$	12	0.40
†3230	$\frac{5}{32}$ x $\frac{3}{4}$	12	0.40
*3235	$\frac{10}{32}$ x $\frac{3}{16}$	12	0.40
*3237	$\frac{10}{32}$ x $\frac{1}{4}$	12	0.40

(For Bulk Quantity Prices on these, see Walsco Pages 16 and 17)

WALSCO MACHINE SCREW NUTS

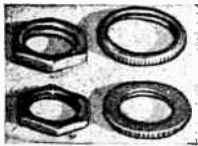


Walsco nuts are "Small Pattern" as preferred in the electronic and electric trade. Precision made and plated.

Cat. No.	Size Assorted	Approx. No. of nuts per pkg.	List Price per pkg.
†3520	Assorted	40	\$0.40
†3180	6/32	40	0.40
†3190	8/32	35	0.40
*3195	10/32	30	0.40

(For Bulk Quantity Prices on these, see Walsco Pages 16 and 17)

WALSCO SPECIAL MOUNTING NUTS



Various kinds of nuts used on volume controls, switches, jacks, potentiometers, etc. A "must" for every radioman and electrician. All nuts are cadmium or nickel plated.

Cat. No.	Description	Approx. No. of nuts per pkg.	List Price per pkg.
†3530	Assorted	15	\$0.40
*3531	3/4" x 32 Volume Control Hex Nut	12	0.40
*3532	1/2" x 32 Toggle Switch Hex Nut	12	0.40
*3533	1/2" x 32 Toggle Switch Ring Nut	10	0.40

(For Bulk Quantity Prices on these, see Walsco Pages 16 and 17)

WALSCO ACORN NUTS



Greatly improves the appearance on panel assemblies, test instruments, cabinets, etc. These PAL type steel nuts

are self-locking and bright cadmium plated.

Cat. No.	Description	List per pkg.
*2960	—12 assorted nuts	\$0.40
*2961	—15 nuts, 6-32	0.40
*2962	—15 nuts, 8-32	0.40
*2963	—10 nuts, 10-32	0.40

WALSCO KNURLED THUMB NUTS

Precision made, Brass Nuts.



Cat. No.	Description	List Price per pkg.
*2971	—Approx. 15 nuts, 6-32	\$0.40
*2972	—Approx. 12 nuts, 8-32	0.40
*2973	—Approx. 6 nuts, 10-32	0.40

WALSCO WING NUTS



Handy for experimental work and hobby craft. Made of Steel and plated.

Cat. No.	Description	List Price per pkg.
*2975	—10 Nuts, 6-32	\$0.40
*2976	—10 Nuts, 8-32	0.40
*2977	—8 Nuts, 10-32	0.40

WALSCO SPEED NUTS



Self-locking and easy to install. Often required for replacement on many record changers, tuning units, etc.

Cat. No.	List Price per pkg.	
*2980	—Approx. 30 assorted speed nuts	\$0.40

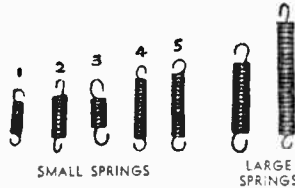
WALSCO ESCUTCHEON PIN ASSORTMENT



Brass finished pins in various sizes and lengths from 1/4" to 1".

Cat. No.	List per pkg.	
†3555	—Approx. 100 asstd. pins	\$0.40

WALSCO DIAL DRIVE SPRINGS



Made of fine music wire for greater flexibility. Available in all standard sizes. Carefully looped at each end, rust-proofed and cadmium plated.

Cat. No.	Description	List per pkg.
†3400	—Assortment of 10 springs (lg. and small)	\$0.40
†3410	—Assortment of 10 small springs	0.40

Cat. No.	Dimensions		Wire Thickness	Picture Number	No. of springs per pkg.	List Price
	Overall Length	Diam.				
*3411	1 1/2"	1 1/8"	.016"	1	10	\$0.40
*3412	1 1/2"	1 1/8"	.018"	2	10	0.40
*3413	1 1/2"	1 1/8"	.020"	3	10	0.40
*3414	1 1/2"	1 1/8"	.016"	4	8	0.40
*3415	1 1/2"	1 1/8"	.020"	5	8	0.40

Illustration Approximately two-thirds actual size

(For Bulk Quantity Prices on these, see Walsco Pages 16 and 17)

WALSCO RADIO KNOB SPRINGS



The modern method of fastening knobs to shafts. Available in all regular sizes and shapes. The assortment is complete and most useful to radio shops. Finest grade of selected steel is used.

Cat. No.	Picture No.	Approx. No. of springs per pkg.	List per pkg.
†3450	Assorted	16	\$0.40
*3451	1	10	0.40
*3452	2	10	0.40
*3453	3	15	0.40
*3454	4	15	0.40
*3455	5	20	0.40
*3456	6	20	0.40
*3457	7	20	0.40
*3458	8	20	0.40
*3459	9	20	0.40

(Bulk Prices Upon Request)

WALSCO PHONE TIPS



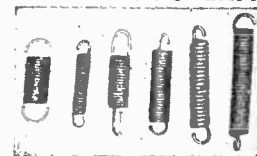
Fits all standard tip jacks. Easy to solder. Made of brass, nickel-plated. These are the conventional tips so often needed by

both experimenters and service men.

Cat. No.	List Price per pkg.	
†2725	—Approximately 12 tips per pkg.	\$0.40

(For Bulk Quantity Prices on these, see Walsco Pages 16 and 17)

WALSCO EXPANSION SPRINGS



Very handy for radio and electrical shops, laboratories, etc. The assortments contain various sizes of springs for many applications: record changers—to name one of a thousand.

Cat. No.	List per pkg.	
†3290	—10 assorted large springs	\$0.40
†3390	—10 assorted small springs	0.40

WALSCO COMPRESSION SPRINGS



A hard-to-get item. The Walsco assortments contain all of the springs often needed for repair work on radio and electronic equipment, motors, appliances, etc. Available in two assortments.

Cat. No.	List per pkg.	
†3370	—20 assorted small springs	\$0.40
†3380	—15 assorted large springs	0.40

CEMENTS—SOLVENTS COIL DOPE

WALSCO RADIO CEMENT

**Vibration-Proof Heat Resisting
Unsurpassed Adhesive Power**

An elastic cement especially made for the manufacture and repairing of speakers and for general radio work. Unaffected by vibration, dries fast and will never become brittle with age. • The latest developments in synthetic resins and gums are incorporated in Walsco Radio Cement.

• In addition to its use for speaker repair, Walsco Radio Cement can be used for repairing cabinets, loose tube bases, grid caps, etc. It will provide a strong bond between almost any materials and is not affected by high temperature, moisture or oil. All bottles come with built-in brush and have an evaporation-proof cap liner.



Cat. No.	List Price
51—1 1/4 oz. tube.....	\$0.55
52—2 oz. bottle.....	0.60
54—4 oz. bottle.....	1.00
58—8 oz. bottle.....	1.60
59—1 pt. bottle.....	3.00
50-GL—1 gal. can.....	12.50

Also available in 5, 15, 50 gal. containers.

WALSCO PLASTIC CEMENT

Especially made to repair broken plastic cabinets, knobs, etc. Waterproof, heat-resisting, and heavier in substance than Walsco Radio Cement. Unexcelled as "Household Cement," "Model Airplane Cement," etc. Cements Plastics, Metal, Wood, Glass, etc. Dries fast and forms an exceedingly strong bond.

Cat. No.	List Price
41—1 1/4 oz. tube.....	\$0.55
42—2 oz. bottle.....	0.60
44—4 oz. bottle.....	1.00
48—8 oz. bottle.....	1.60



WALSCO VINYLITE CEMENT

This adhesive uses the new Vinylite plastic resin as a base and has remarkable properties such as high tackiness, extreme flexibility when dry and excellent adhesion to metals, plastics, leather, cardboard and paper. Fast drying. Also an excellent thermoplastic cement for joining nonporous materials (e.g. metals). In this case the cement is applied to both surfaces and dried after which the parts are pressed together and bond established by heating with flatiron; soldering iron, etc.



Cat. No.	List Price
25—2 oz. bottle.....	\$0.70

WALSCO ALL-PURPOSE RUBBER CEMENT

For cementing rubber parts to metal or wood, rubber mounts to chassis, rubber cushions to lids, etc.—gives an especially strong bond. A Radio Serviceman should always have a bottle on his work bench.

Cat. No.	List Price
112—2 oz. bottle.....	\$0.60
114—4 oz. bottle.....	1.00



WALSCO FABRIC CEMENT

Does Not Penetrate the Fabric

Especially made for attaching grille cloth, turntable felt, covering of portable radios, etc. Dries very fast; is unaffected by moisture, sunlight, and high temperature and does not become brittle. Indispensable to Radio Dealers and Servicemen—eliminates the danger of spoiling the outside of a grille cloth, turntable felt, or other fabrics, since it does not penetrate the material.

Cat. No.	List Price
21—1 1/4 oz. tube.....	\$0.55



WALSCOBOND

A truly universal cement. Fast drying and easy to use. Bonds practically every material except rubber. Excellent as model airplane and general household cement. Has exceptional adhesiveness and strength. Not affected by heat and cold. Water, oil- and alcohol-proof.

Cat. No.	List Price
225—2 oz. bottle.....	\$0.60
226—4 oz. bottle.....	1.00



WALSCO WOOD GLUE

An "extra strength" adhesive incorporating the latest chemical developments and resins. A "must" item for every repair shop. Bottle caps have non-sticking rubber gaskets.

Cat. No.	List Price
222—2 oz. bottle.....	\$0.60
224—4 oz. bottle.....	1.00

WALSCO CEMENT SOLVENT AND THINNER

This Cement-Solvent is used for loosening cement on speaker cones, voice coils, and other parts where cement has been applied previously. Recommended also for thinning Walsco Radio Cement, Plastic Cement, and Fabric Cement.

Cat. No.	List Price
62—2 oz. bottle.....	\$0.45
64—4 oz. bottle.....	0.60
68—8 oz. bottle.....	0.85
69—1 pt. bottle.....	1.30



WALSCO POLYSTYRENE CEMENT AND COIL DOPE

For Bonding Polystyrene Parts and Coil Coating in Radio and High Frequency Work
A Polystyrene solution with a high solid content. Can be brushed on or parts can be dipped. Renders coils or other parts moisture-proof. Holds windings firmly in place due to a certain amount of shrinkage upon drying. Electrical losses due to coating with this cement are negligible—even if used for high or ultra-high frequency work.

Cat. No.	List Price
154—4 oz. bottle.....	\$1.00
158—8 oz. bottle.....	1.60

Larger Sizes on Request



WALSCO Polystyrene Solvent and Thinner

This thinner is especially designed for use with Walsco Polystyrene Cement where regular thinner cannot be used.

Cat. No.	List Price
164—4 oz. bottle.....	\$0.60

CLEANERS — LUBRICANTS "CONTACTENE"—"NO SLIP"

WALSCOLUB - B



A recently-developed chemical compound in thin paste form. WALSCOLUB-B counteracts oxidation, prevents corrosion of metals and eliminates noise on band switches, push buttons, tuners, volume and other controls, as well as air-exposed electrical contacts, attenuators, etc. WALSCOLUB-B will not change electrical properties. It is superior to any graphite compound for this purpose. Ideal on metal surfaces to prevent rust. Servicemen: Its use will save you both time and money. Once you have tried it, you will never be without it! Large, handy applicator tube.

Available also in 1-lb., 5-lb. and 25-lb. containers for industrial users. Prices on request.

Cat. No.	List Price
22—1 3/4 oz. tube	\$0.55

WALSCO CONTACTENE

New Improved "Contact Cleaning Fluid"

- Cleans contacts and controls.
- Keeps controls and contacts noise-free.
- Lubricates and reduces friction.



A fast-evaporating combination of special solvents affording greatest cleaning power without affecting insulating materials. Contains liquified Walscolub B, which after evaporation of the solvents, forms a thin film that protects the contacts. Contactene is recommended for treating volume controls, band switches, tuning condensers, springs, etc., to eliminate noisy operation. Bottles come with built-in brushes.

Cat. No.	List Price
82—2 oz. bottle	\$0.50
84—4 oz. bottle	0.65
88—8 oz. bottle	0.90
89—1 pt. bottle	1.65

WALSCO Motor and Gear Lubricant

The latest development in chemicals for lubricating purposes. Much superior to greases because of its higher lubricating and lasting qualities. Its viscosity does not change with temperature. Used on phonograph motors, record changers, and all appliances that require a grease-type lubricant. In large handy "applicator" tube.



Cat. No.	List Price
23—1 3/4 oz. tube	\$0.55

WALSCO "NO-SLIP"

A newly developed chemical composition that greatly increases the friction of pulleys, cords or belts. Contracts, "sets" and shrinks the fibres at the same time. Stops instantly any slippage of Dial Belts, Dial Cords, etc. Easily applied with brush. Indispensable to any radio man.

Cat. No.	List Price
401—1/2 oz. bottle	\$0.45
402—2 oz. bottle	0.75



WALSCO "NO-OX"

"The Miracle Electronic Contact Fluid"



Fast-acting liquid chemical formulated with a neutral, non-gumming special lubricating base. The answer to the radio man's need for an outstanding contact and control cleaner. Contains no solvents; its corrosion-dissolving action is entirely chemical. Cleans, lubricates and preserves. Proved in tens of thousands of applications by radio laboratories, service shops, broadcasting companies, motion picture, sound and recording studios, etc. "NO-OX" is highly recommended for treatment of volume and tone controls, attenuators, mixers, relay contacts and similar equipment.

Cat. No.	List Price
101—1 oz. bottle	\$0.85
102—2 oz. bottle	1.60
100-16—1 pt. bottle	12.50

* Mfd. under exclusive licensing agreement with NO-OX Laboratories. Trade mark registered.

WALSCOFLUX

A non-corrosive flux. Quick acting, easy to apply. May be safely used for all electrical, radio and telephone work. Helps to keep the iron tip clean.



Cat. No.	List Price
220—2 oz. bottle with applicator	\$0.60

WALSCO CARBON TETRACHLORIDE

For general cleaning and spot removing. Dissolves dirt and grease instantly. May be used on most delicate parts. Chemically pure, rapid drying, non-explosive and non-inflammable. A safe cleaning fluid.



Cat. No.	List Price
214—4 oz. bottle	\$0.55
219—16 oz. bottle	1.50

WALSCO RADIO DIAL OIL

A light-bodied lubricating oil for all electronic and electrical appliances—absolutely free of acids or gummy substances. Also recommended as a rust preventative for radio chassis, tools, machinery, etc.



Cat. No.	List Price
72—2 oz. bottle	\$0.45
74—4 oz. bottle	0.60

WALSCO "UNIKLEAN"

Contains "Trichlorethylene," a most effective cleaning agent. Instantly removes dirty spots and grease from cabinets, chassis, panels, etc., without damaging the finish. "Uniklean" is economical and effective.



Cat. No.	List Price
204—4 oz. bottle	\$0.50
209—1 pt. bottle	1.20

WALSCO products

Help The Radio Man

WALTER L. SCHOTT COMPANY, BEVERLY HILLS, CALIFORNIA

SCRATCH REMOVERS, RECORD CLEANERS, POLISHES, PAINTS, LACQUERS

WALSCO SCRATCH REMOVING POLISH

"Makes Scratches Disappear"

A blend of polishing and staining ingredients. Removes scratches from cabinets, radios, furniture, etc., and polishes at the same time. Very easy to apply. Will not change shade of finish. Comes in two shades: "Dark" for walnut, mahogany, etc., "Light" for light maple, light oak, etc.



Cat. No.	Dark	Light	4 oz. bottle	List Price
414	434			\$0.50
416	438		8 oz. bottle	0.75

Standard Package:
4 oz. bottles 1 doz.
8 oz. bottles 2 doz.

WALSCO SUPER POLISH

"A Concentrated White Cream Wax Polish"

Does two things: First, it removes any old polish, grease or dirt that may be on the cabinet or furniture. Second, it forms a hard, dry and durable film that will protect the object for a long time, giving it a "brand new" appearance. Requires very little rubbing.

Cat. No.	1 oz. bottle	List Price
412		\$0.50
418	8 oz. bottle	0.75

Standard Package: 4 oz. bottles 1 doz.
8 oz. bottles 2 doz.

WALSCO Recordene

Improves Tone • Renews and Prolongs the Life of Records and Recordings • Reduces Surface Noise and Wear

A wonder, scientific product for improving and preserving records and recordings. Removes dirt, dust or grease from grooves, and leaves a clean, clear plastic film that reduces surface noise and greatly increases record life. A special wool felt dauber is attached to each bottle cap for easy application. Attractive display of a dozen bottles increases turn-over and profits from this fast-moving product.



is attached to each bottle cap for easy application. Attractive display of a dozen bottles increases turn-over and profits from this fast-moving product.

Cat. No.	2 oz. bottle	List Price
92		\$0.50
90GL	1 gal. can	7.00

WALSCO RECORD-EASE

Recording—With the Greatest of Ease

Record-Ease should be applied to all recording and transcription blanks BEFORE the cutting. It makes the shavings "fluffy" as they pile up in the center of the record and thereby prevents interference with the cutting point. By decreasing cutting-point friction, Record-Ease greatly prolongs the life of cutting needles. Indispensable for commercial recordings, schools, police and court recordings, broadcasting stations and home recordings.

Cat. No.	95—2 oz. bottle	List Price
		\$0.75

WALSCO AIR-DRY WRINKLE VARNISH

Easy to apply in one coat. WALSCO Air-Dry Wrinkle Varnish provides a film that is hard, tough, and very resistant to wear. Repairs and replaces original wrinkle finish of manufactured equipment. No baking required. WALSCO Wrinkle Varnish will air-dry at room temperature.

Standard colors: grey and black. Other colors upon request.



Cat. No.	145—2 oz. jar (specify color)	List Price
		\$0.60
147	16 oz. can (specify color)	3.00

WALSCO CRYSTALLIZING LACQUER

Easily applied to metal, wood, cardboard, etc.—does not require experience. No spraying equipment or baking oven necessary. Brushed on, will dry in about thirty minutes, leaving an absolutely professional finish. Identical to finish found on commercial chassis, panels, speakers and transformers. WalSCO Lacquer Sealer, Cat. No. 142, should be used as undercoat if this lacquer is to be applied on porous materials or over other finishes. Available colors: Black, Green, Grey, Brown, Clear. Specify color when ordering.



Cat. No.	122—2 oz. jar	List Price
		\$0.60
129	16 oz. can	3.00
142	Sealer, 2 oz. jar	0.50

WALSCO SATIN FINISH LACQUER (TELEPHONE)

Made for commercial and amateur use on cabinets, chassis, panels, meters, racks, etc. This "satin finish" lacquer dries very fast and produces the "original finish" of most standard telephone and communication equipment. It air dries. May be brushed or sprayed.

Cat. No.	Black	Grey	2 oz. jar	List Price
172	182			\$0.50
179	189		1 pt. can	2.50



WALSCO INSULATING VARNISH

WalSCO "air-dry" varnish is fast-drying and produces excellent results when used on radio coils, transformers, solenoids, motors, and all electrical appliances. Withstands heat and is extremely resistant to acid, oil, and grease. It is non-corrosive and moisture-proof. An all-around clear insulating varnish.

Cat. No.	192—2 oz. bottle	List Price
		\$0.60
193	1 pt. can	2.00
194	1 gal. can	9.80



WALSCO LIGHT BULB COLORING

A transparent, heat and moisture-resisting dipping lacquer especially made for coloring bulbs such as used in radio dials, signal systems, auto dash lights, and fancy illumination. Big jars permit dipping of even larger bulbs.

Cat. No.	116 Red—2 oz. jar	List Price
		\$0.50
117	Blue—2 oz. jar	0.50
118	Green—2 oz. jar	0.50
119	Assorted—Kit of 3	1.45



WALSCO products

Help The Radio Man

WALTER L. SCHOTT COMPANY, BEVERLY HILLS, CALIFORNIA

REFINISHING and REPAIR KITS

WALSCO RADIO CABINET PATCHING OUTFIT

"The Most Popular Kit on the Market"



A complete kit especially designed for radio men who have little experience in cabinet work. Over 95% of all cabinet-finish damages can be repaired with this kit. The kit contains two shades of Spirit Walnut Stain, Dark Brown Lacquer, Plastic Wood, two shades of Ivory Spirit Enamel, Patching Lacquer, Super Polish, Alcohol, Brushes, Garnet Finishing Paper, French Polishing Pad, and Steel Wool, together with complete Instruction Booklet.

Cat. No.	List	Dealer's Net
K-10—In sturdy box with hinged lid.....	\$6.50	\$3.90
K-10-W—In California redwood case.....	7.50	4.50

WALSCO RADIO CABINET REPAIR KIT

A very handy compact and inexpensive kit that fills the requirements of many shops and stores. Especially useful for the Dealer or Serviceman who has only occasional cabinet repairs. The kit contains one bottle each of the following: Ivory Spirit Enamel—light and dark; Lacquer Enamel—Dark Brown; Spirit Stain; Super Polish; French Varnish; Finishing Paper; Steel Wool; Polishing Cloth; Instruction Booklet.



Cat. No.	List	Dealer's Net
K-9	\$3.00	\$1.80

WALSCO STICK SHELLAC KIT



An inexpensive kit for servicemen who have some experience in cabinet refinishing. Combined with Radio Cabinet Patching Outfit (K-10) it makes a most economical and completely professional kit for repairing radio cabinets. The shellac sticks match in color almost any cabinet on the market. The WalSCO shellac rubbing fluid makes it possible to smooth the patch without any effort or skill. Kit includes: six colors Stick Shellac, Alcohol Lamp, Burn-in Spatula, bottle of Shellac Rubbing Fluid, Felt, Steel Wool, Alcohol and Instructions.

Cat. No.	List	Dealer's Net
K-11	\$3.50	\$2.10

REFILLS OF POPULAR REFINISHING MATERIALS AS CONTAINED IN ABOVE KITS

Cat. No.	Patching Lacquer	List Price
290—4 oz. bottle		\$1.20
291—16 oz. bottle		3.50
	Stick Shellac Rubbing Fluid	
295—4 oz. bottle		.75
296—16 oz. bottle		1.75
	Stick Shellac	
299—Set of 8 assorted colors		1.50

WALSCO "SUPER-CHIEF" REFINISHING KIT

A "Must" Item



This is the most complete kit of its kind on the market. Designed by WalSCO for radio dealers. It contains everything which is needed to make an old radio look like new—all handy in one box-type carrying case. Contents of kit can be used by either skilled or unskilled refinishers, to completely refinish old radios and trade-ins, or to quickly patch up scratches, mars, etc. This kit will pay for itself on the first or second job. Every first-class radio dealer should have one. Kit contains the following:

Spirit Stain Dark Walnut	Scratch Rem. v. Fine Polish (Dark)
Spirit Stain Black	Scratch Rem. v. Fine Polish (Light)
Spirit Stain Mahogany	Patching Lacquer
Spirit Stain Maple	Alcohol Lamp
Super Polish	Alcohol
Spirit Stain Light Walnut	Screw Driver
Blending Stain Light Brown	Spatula
Blending Stain Medium Brown	Felt
Lacquer Enamel Light Ivory	Polishing Cloth
Lacquer Enamel Dark Brown	Polishing Pad
Lacquer Enamel Dark Ivory	Garnet Paper (8 sheets)
Shellac Rubbing Fluid	Instruction Book
Stick Shellac (12 shades)	Brushes (3 different sizes)

Cat. No.	List	Dealers Net
K-26	\$18.50	\$11.10

WALSCO FURNITURE REFINISHING KIT

Ideal for touch-up work on radios, furniture, pianos, etc. Scratches, mars, dents, broken edges can be repaired quickly. Contains: Super Polish, Patching Lacquer, Alcohol, Spirit Stains in Walnut, Mahogany, Maple and Black; Shellac Rubbing Fluid, Plastic Wood, six colors Stick Shellac, Alcohol Lamp, Spatula, Brushes, Garnet Finishing Paper. Complete instruction Book. Kit furnished in California Redwood case with hinged lid.



Cat. No.	List	Dealer's Net
K-15	\$8.00	\$4.80

WALSCOGLOW

"Makes Any Article Glow in the Dark"

WALSCOGLOW is a ready-mixed luminous paint, easy to apply and safe to use. Dries fast and may be used on any surface or article, such as light switches, buttons and chains, radio knobs and dial pointers, key holes, stair landings, house numbers, artificial flowers, costume jewelry, pictures, etc. Has many uses among technicians, hams, hobby-crafters, etc. Glows 6-18 hours after exposure to light.



Cat. No.	List	Dealer's Net
K-22—Kit of 3 Colors WALSCOGLOW with Brushes and Complete Instructions	\$2.25	\$1.35
K-23—De Luxe Kit; contains 3 Colors WALSCOGLOW, Seal-Coat, Thinner, Brush and Instructions	3.50	2.10

INSULATING TUBING FLOCK FINISH — DIAL CRYSTALS

WALSCO FLOCK FINISH SPRAY KIT

For flock finishing of radio cabinets, speaker grilles, interior of record and other cabinets, turntables, jewelry and gift boxes, toys, novelties and many automotive and hobby uses.

This original WALSCO Flock Kit is very easy to use and requires no skill — anyone can obtain expert results. Contains everything to produce a colorful, velvet-like and durable flock finish. The kit includes patented felt flock spray gun, ivory and brown felt flock, undercoats to match, thinner, brushes and complete instructions.

Cat. No. K-50—Complete Flocking Kit List Price, \$11.90



WALSCO FELT FLOCK MATERIALS

Felt Flock

Made of precision cut, lustrous rayon. Packed in 3 1/4 oz. containers (covers 7 to 10 square feet).

Flock Undercoat

Provides proper adhesive and color base for felt flock. Packaged in half-pint cans (covers 10-15 square feet of non-porous surface).

Cat. No.	List Price	Color	Cat. No.	List Price
470	\$1.65	Brown	480	\$1.65
471	1.65	Ivory	481	1.65
472	1.65	Blue	482	1.65
473	1.65	Taupe	483	1.65
474	1.65	Red	484	1.65
474-1	1.65	Maroon	484-1	1.65
475	1.65	Green	485	1.65
476	1.65	Silver	486	1.65
477	1.65	White		
478	1.65	Black	488	1.65
479	1.65	Canary	489	1.65

List Price

List Price

Flock per pound (specify color) \$5.50

Undercoat per gallon (specify color) \$14.40

Undercoat Thinner

For thinning of Undercoat, if necessary, and washing out brushes.

Cat. No. List Price
468—Half-pint can..... \$0.55

Felt Flock Spray Gun

Same as contained in WALSCO Flock Finish Spray Kit.

Cat. No. List Price
455 \$3.95

WALSCO INSULATING TUBING (SPAGHETTI)

WALSCO RAYOFLEX

A new type "spaghetti tubing" made of heavily lacquered rayon braid. More flexible and superior in many other respects to the conventional varnished tubing. Good dielectric strength (4,000 to 5,600 volts). RAYOFLEX has a smooth and tough surface inside and out. Meets ASTM and VTA Specifications #B2. Sizes up to #6 are packed in handy boxes.



WALSCO FLEXITUBE

A high grade synthetic extruded vinylite tubing for electronic and electrical insulation. Extremely flexible and resistant to abrasion. High dielectric strength (average 12,000 volt). Resistant to cold or heat from minus 65°F to plus 135°F. (Minus 54°C to 85°C). This tubing is impervious to water, oil, alcohol and most acids and alkalis.

Cat. No.	Size B & S Gauge No.	Approx. I.D. Inch	MM	Quantity per pkg.	List Price per pkg.	BULK* List Price per 100 ft.
630	18	.042	1	10 ft.	\$0.95	\$6.65
631	15	.059	1.5	10 ft.	0.95	7.40
632	12	.085	2	8 ft.	0.95	8.85
633	9	.118	3	5 ft.	0.95	10.15
634	6	.166	4	5 ft.	0.95	11.60
635	2	3/4"	6.5	30 in.	0.56	17.50
636	0	1"	8.5	30 in.	0.65	22.50
637	00	3/8"	9.5	30 in.	0.69	28.35
638	0000	1/2"	13	30 in.	1.15	36.65

* Prices shown are for 100 to 999 ft. For larger quantities write for quotation.

Available: black, blue, red, yellow. Please specify color when ordering.

Cat. No.	Size B & S Gauge No.	Approx. I.D. Inch	MM	Quantity per pkg.	List Price per pkg.	BULK* List Price per 100 ft.
600	18	.042	1	20 ft.	\$0.95	\$2.90
601	16	.053	1.4	20 ft.	0.95	3.00
602	14	.066	1.6	18 ft.	0.95	3.25
603	12	.085	2	16 ft.	0.95	3.50
604	10	.106	2.7	14 ft.	0.95	3.85
605	8	.133	3.5	12 ft.	0.95	4.25
606	6	.166	4	10 ft.	0.95	4.75
607	4	.208	5	6 ft.	0.95	7.15
608	2	.263	6.5	6 ft.	0.95	8.65

* Prices shown are for 100 to 999 ft. For larger quantities write for quotation.

Available: black, green, red, clear. Please specify color when ordering.

HANDY ASSORTMENTS OF RAYOFLEX

Cat. No.	List Price
640—12 ft. of Assorted sizes and colors, from size 18 to 9	\$0.90
640-D—36 Assortments of #640 in Display Box	32.40
641—6 ft. of Assorted sizes and colors, from size 9 to 1/2"	0.90
641-D—24 Assortments of #641 in Display Box	21.60

HANDY ASSORTMENTS OF FLEXITUBE

Cat. No.	List Price
620—25 ft. of assorted sizes and colors, from size 18 to 1C	\$0.90
620-D—36 assortments of No. 620 in one display box	32.40
621—15 ft. of assorted sizes and colors, from size 10 to 2	0.90
621-D—24 assortments of No. 621 in one display box	21.60

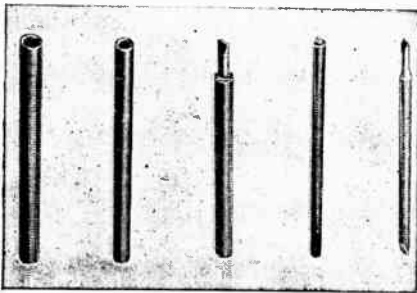


WALSCO PLASTIC DIAL CRYSTALS

The New Universal, Unbreakable Crystal, Available in Round and Flat Styles
This innovation in replacement crystal design makes it possible to use one basic crystal to fit any dial. A special template supplied with each crystal is used to cut a circle of any desired diameter, using ordinary scissors. The crystal is made of unbreakable plastic and has the further advantage over glass that it can be cemented firmly in place. Can be used for radio dials, clocks, instruments, dash board dials, etc.

Cat. No.	Size	List Price
990	6" Maximum Diameter	\$1.10
992	9" Maximum Diameter	1.80
994	8" x 10" Flat Sheet	1.65

WALSCO ALIGNMENT TOOLS



1 2 3 4 5

These tools have won wide acceptance among radio men everywhere. They are precision made of the highest quality materials. Indispensable for work bench or tool kit. With a set of these tools the radio technician has the proper instruments to align almost any set.

Most of the tools are available either in sturdy bone fibre or in special Polystyrene plastic. The fibre tools are tougher than the plastic tools and are recommended for alignment of broadcast and intermediate band circuits, whereas the Polystyrene tools are for adjustments on high and ultra-high frequency circuits. Polystyrene is recognized by the radio profession as one of the finest low-loss insulating materials available today. Definitely needed on FM and television sets.

WALSCO 1/4" HEX I. D. NEUTRALIZING WRENCH.

This tool is very durable and can last out if corners become rounded from wear as the internal hex shape extends through the entire length. Overall length—7 1/2", O. D.—3/4" round.

Cat. No.	Picture No.	List Price
\$2500—Bone Fibre Wrench	2	\$0.40
\$2503—Polystyrene Wrench	2	0.40

WALSCO 5/16" HEX I. D. NEUTRALIZING WRENCH.

Same construction as 1/4" wrench listed above. Overall length—7 1/2", O. D.—3/8".

Cat. No.	Picture No.	List Price
\$2505—Bone Fibre Wrench	1	\$0.40
\$2508—Polystyrene Wrench	1	0.40

WALSCO COMBINATION FIBRE HEX WRENCH AND SCREW DRIVER.

Standard 1/4" hex wrench combined with a fibre screw driver to fill the need for a handy combination tool in factories and radio repair shops.

Cat. No.	Picture No.	List Price
\$2510—Combination Tool	3	\$0.50

WALSCO DUPLEX ALIGNMENT SCREWDRIVER.

Precision made tool accurately ground or milled to fit large or small screws. Width of blade on large end—1/4"; on small end—1/8". Thickness to conform to standard slot dimensions. Overall length of tool—6".

Cat. No.	Picture No.	List Price
\$2520—Fibre Screwdriver	5	\$0.50
\$2521—Polystyrene Screwdriver	5	0.40

WALSCO METAL TIP ALIGNMENT SCREWDRIVER.

Made with Polystyrene handle in which a small metal screwdriver blade is rigidly inserted, thereby making the effect of inductance negligible. This tool combines the low capacity effect of an alignment tool with the mechanical strength of a metal screwdriver. Diameter—1/4"; overall length—6".

Cat. No.	Picture No.	List Price
\$2525—Alignment Screwdriver	4	\$0.40

WALSCO TUNING WAND.

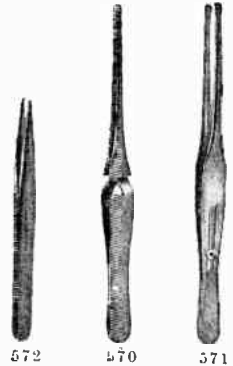
For checking alignment of tuned circuits without disturbing the setting of the trimmer condensers. Made from Polystyrene rod with inductance increasing powdered iron core on one end and inductance reducing brass piece on opposite end. Overall length—6".

Cat. No.	List Price
\$2540—Tuning Wand	\$0.40

(Picture not shown, but similar to Picture #1.)

WALSCO SERVICE TWEEZERS

These handy holding tools are made of fine spring steel and are polished nickel-plated. They have numerous uses in the shop and laboratory, such as starting screws and nuts in difficult places, holding wires and small parts together when soldering, clamping cemented items, installing dial cord and record-changer springs, looping and untying knots on drive cord, etc.



Cat. No.	Description	List Price
570	Self-Closing Tweezer with cross-over action, 6 1/2" long, serrated, blunt points	\$0.80
(Standard Package: Display card with 10 tweezers . . . Cat. No. 570D)		
571	Heavy-Duty Tweezer with slide-lock feature, Length 6 1/2", serrated, blunt points	\$1.20
(Standard Package: Display card with 10 tweezers . . . Cat. No. 571D)		
572	Precision Tweezer with narrow, pointed ends especially suitable for delicate work. Overall length 4 1/2"	\$0.55
(Standard Package: Display card with 20 tweezers . . . Cat. No. 572D)		
575	Tweezer Kit, made of durable leatherette, containing one each of the above listed tweezers	\$3.25

WALSCO TIRE STATIC NEUTRALIZING KIT

- Reduces or Eliminates Automobile Radio Tire Static.
- Dissipates Body Contact Shock (Door-handle Sparks).

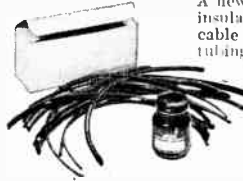


This kit contains a special injector gun and 5 packages of WALSCO Static Neutralizing Powder (one for each tire incl. spare). The powder is blown into each tire in a very simple operation, which takes just a few minutes and lasts for the life of the tire.

Cat. No.	Description	List Price
980	Tire Static Neutralizing Kit, complete with injector, powder and instructions	\$2.50
982	Injector gun only	1.50
985	Powder only (enough for 5 passenger-car tires)	1.00

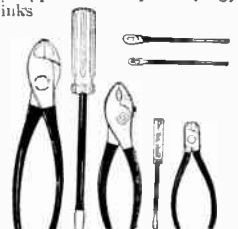
WALSCO PROTECTO-TUBE

A new synthetic tubing especially designed for insulating handles of pliers, screwdriver blades, cable connector ends, test prods, etc. This tubing is highly abrasion-resistant for long wear, and will not crack or shatter. Special Expanding Solution is furnished as part of the kit and "swells" tubing to permit easy application. Upon drying, tubing shrinks on tight.



Protecto-Tube Kit, containing approx. 12 ft. assorted sizes and colors of WALSCO Protecto-Tube, jar of Expanding Solution, and instructions.

Cat. No. K-18 List Price \$1.65





ELECTRONIC HARDWARE BULK PRICE LIST

FOR FULL DESCRIPTION OF THESE ITEMS SEE WALSCO CATALOG

DESCRIPTION	Part No. for Packaged Items as Shown in WALSCO Catalog	Part No. for BULK QUANTITY	NET RESALE (Dealer's Net) PRICES		
RD. HD. MACHINE SCREWS					
# 6-32 x 1/4"	3100	3560-6-1	Under 5000	5000 to 14,999	15,000 & over
# 6-32 x 3/8"	3110	3560-6-2	\$2.75 per M	\$2.20 per M	\$1.60 per M
# 6-32 x 1/2"	3120	3560-6-3	3.00 per M	2.35 per M	1.75 per M
# 6-32 x 5/8"	3130	3560-6-4	3.35 per M	2.65 per M	1.95 per M
# 6-32 x 1"	3145	3560-6-5	3.75 per M	2.95 per M	2.15 per M
# 8-32 x 1/4"	3115	3560-8-1	4.20 per M	3.35 per M	2.45 per M
# 8-32 x 3/8"	3110	3560-8-2	3.75 per M	3.00 per M	2.05 per M
# 8-32 x 1/2"	3150	3560-8-3	4.10 per M	3.20 per M	2.35 per M
# 8-32 x 5/8"	3160	3560-8-4	4.70 per M	3.70 per M	2.70 per M
# 8-32 x 1"	—	3560-8-5	5.45 per M	4.30 per M	3.15 per M
# 10-32 x 1/4"	3165	3560-10-1	4.85 per M	3.80 per M	2.80 per M
# 10-32 x 3/8"	3167	3560-10-2	5.70 per M	4.50 per M	3.30 per M
# 10-32 x 1/2"	3169	3560-10-3	6.50 per M	5.10 per M	3.75 per M
SHEET METAL SCREWS					
# 6 x 1/4"	2910	3470-6-1	4.55 per M	3.60 per M	2.60 per M
# 6 x 3/8"	2911	3470-6-2	5.00 per M	3.95 per M	2.90 per M
# 6 x 1/2"	2912	3470-6-3	5.10 per M	4.00 per M	2.95 per M
# 6 x 5/8"	2916	3470-6-4	5.65 per M	4.85 per M	3.55 per M
# 6 x 1"	2916	3470-6-5	6.15 per M	5.15 per M	3.85 per M
# 8 x 1/4"	2920	3470-8-1	5.65 per M	4.15 per M	3.35 per M
# 8 x 3/8"	2922	3470-8-2	6.00 per M	4.75 per M	3.45 per M
# 8 x 1/2"	2921	3470-8-3	6.90 per M	5.45 per M	3.95 per M
# 8 x 5/8"	2926	3470-8-4	7.90 per M	6.25 per M	4.55 per M
# 10 x 1/4"	2930	3470-10-1	6.90 per M	5.15 per M	3.95 per M
# 10 x 3/8"	2932	3470-10-2	7.25 per M	5.70 per M	4.15 per M
# 10 x 1/2"	2934	3470-10-3	8.20 per M	6.45 per M	4.70 per M
SET SCREWS					
# 6-32 x 1/4"	3205	3480-6-1	Under 2000	2000 to 9999	10,000 & over
# 6-32 x 3/8"	3210	3480-6-2	13.00 per M	10.25 per M	7.50 per M
# 6-32 x 1/2"	3212	3480-6-3	10.10 per M	8.20 per M	6.00 per M
# 6-32 x 5/8"	3213	3480-6-4	10.65 per M	8.40 per M	6.15 per M
# 8-32 x 1/4"	3215	3480-8-1	10.10 per M	10.25 per M	7.50 per M
# 8-32 x 3/8"	3210	3480-8-2	10.65 per M	8.20 per M	6.00 per M
# 8-32 x 1/2"	3215	3480-8-3	10.65 per M	8.10 per M	6.15 per M
# 10-32 x 1/4"	3237	3480-10-1	10.40 per M	8.20 per M	6.00 per M
# 10-32 x 3/8"	3237	3480-10-2	10.65 per M	8.40 per M	6.15 per M
ORNAMENTAL HEAD SCREWS					
# 6-32 x 3/4"	2951	2950-1	7.90 per M	6.25 per M	4.55 per M
# 8-32 x 1"	2952	2950-2	8.10 per M	6.65 per M	4.85 per M
# 8-32 x 1 1/4"	2953	2950-3	10.25 per M	8.65 per M	6.90 per M
OV. HD. RACK SCREWS					
# 8-32 x 5/8"	3511	3540-1	Under 5000	5000 to 14,999	15,000 & over
# 10-32 x 3/4"	3512	3540-2	1.10 per M	3.15 per M	2.55 per M
# 6-32 x 5/8"	3513	3540-3	1.10 per M	1.50 per M	1.30 per M
# 6-32 x 5/8"	3513	3540-3	3.50 per M	2.75 per M	3.00 per M
SPADE BOLTS (6-32 SIZE)					
5/8" Over-all length	3271	3270-1	1.95 per M	3.90 per M	2.85 per M
3/4" Over-all length	3272	3270-2	5.30 per M	4.15 per M	1.05 per M
INSULATING WASHERS (Flat)					
For # 6 Screw	3131	3430-F-1	Under 5000	5000 to 14,999	15,000 & over
For # 8 Screw	3132	3430-F-2	2.00 per M	1.55 per M	1.15 per M
For # 10 Screw	3133	3430-F-3	2.50 per M	1.95 per M	1.45 per M
For # 1/4" Screw	3131	3430-F-4	2.70 per M	1.95 per M	1.55 per M
For # 5/8" Screw	3135	3430-F-5	4.05 per M	3.20 per M	2.95 per M
INSULATING WASHERS (Extruded)					
For # 6 Screw	3131	3430-E-1	7.10 per M	5.80 per M	1.25 per M
For # 8 Screw	3132	3430-E-2	7.90 per M	6.25 per M	1.55 per M
For # 10 Screw	3133	3430-E-3	7.90 per M	6.25 per M	1.55 per M
For # 1/4" Screw	3131	3430-E-4	8.60 per M	6.75 per M	1.95 per M
For # 5/8" Screw	3135	3430-E-5	11.00 per M	8.70 per M	4.35 per M
KNOB FELT WASHERS (Brown)					
3/8" OD x 1/4" ID, 1/16" Thick	3190	3490-A	1.75 per M	1.40 per M	1.00 per M
SNAP-HOLE PLUGS					
For 1/4" Hole	3501	3500-1	Under 1000	1000 to 9999	10,000 & over
For 3/8" Hole	3502	3500-2	1.65 per C	1.50 per C	.95 per C
For 1/2" Hole	3503	3500-3	1.85 per C	1.35 per C	1.05 per C
For 5/8" Hole	3504	3500-4	2.35 per C	1.85 per C	1.35 per C
For 1" Hole	3505	3500-5	2.35 per C	1.85 per C	1.35 per C
For 1 1/4" Hole	3506	3500-6	2.65 per C	2.00 per C	2.10 per C
For 1 1/2" Hole	3507	3500-7	3.65 per C	2.90 per C	2.10 per C
VENTILATING HOLE PLUGS					
For 1" Hole (Snap-In Type)	3320	3320-1	5.80 per C	4.55 per C	3.75 per C
For 1/2" Hole (Eyelot Type)	3320	3320-2	2.75 per C	2.15 per C	1.60 per C
SNAP-IN TRIMOUNTS					
Fits Hole 1/4" (11/64" Long)	3161	3460-1	Under 5000	5000 to 24,999	25,000 & over
Fits Hole 3/8" (13/64" Long)	3162	3460-2	6.95 per M	5.15 per M	1.90 per M
Fits Hole 1/2" (12/64" Long)	3163	3460-3	7.80 per M	6.50 per M	3.75 per M
Fits Hole 5/8" (13/64" Long)	3164	3460-4	8.95 per M	7.15 per M	4.90 per M
Fits Hole 3/4" (13/64" Long)	3165	3460-5	8.10 per M	6.35 per M	1.65 per M
RUBBER GROMMETS					
1/4" ID, 1/4" Mounting Hole	3311	3340-1	Under 2000	2000 to 9999	10,000 & over
3/8" ID, 3/8" Mounting Hole	3312	3340-2	7.15 per M	6.10 per M	5.35 per M
1/2" ID, 1/2" Mounting Hole	3313	3340-3	9.20 per M	8.60 per M	6.75 per M
3/4" ID, 3/4" Mounting Hole	3314	3340-4	12.10 per M	9.75 per M	7.15 per M
1" ID, 1" Mounting Hole	3315	3340-5	17.90 per M	13.10 per M	1.80 per M
CORD STRAIN RELIEFS					
For POST Wire	3348	3340-9	3.15 per C	2.50 per C	1.80 per C
RUBBER FEET (Without Screws)					
3/8" Diam, 3/8" High	3351	3350-1	8.95 per M	6.50 per M	1.50 per M
1/2" Diam, 1/2" High	3352	3350-2	10.90 per M	7.00 per M	5.00 per M
3/4" Diam, 3/4" High	3353	3350-3	17.30 per M	13.50 per M	9.00 per M
RUBBER TACK FEET					
3/4" Diam	3365	3350-5	13.20 per M	10.10 per M	7.60 per M



ELECTRONIC HARDWARE BULK PRICE LIST

FOR FULL DESCRIPTION OF THESE ITEMS SEE WALSCO CATALOG

DESCRIPTION	Part No. for Packaged Items as Shown in WALSCO Catalog	Part No. for BULK QUANTITY	NET RESALE (Dealer's Net) PRICES		
			Under 2000	2000 to 9999	10,000 & over
FELT DISCS (Green)					
3/4" Diam. 1/8" Thick	3195	3490-5	\$1.60 per M	\$1.25 per M	\$0.95 per M
RUBBER CHASSIS MOUNTS					
3/4" Base Diam.	2742	2740-2	2.50 per C	1.80 per C	1.30 per C
1" Base Diam.	2741	2740-4	3.50 per C	2.50 per C	1.90 per C
1 1/4" Base Diam.	2746	2740-6	4.50 per C	3.10 per C	2.25 per C
PHONO PLUGS					
Single Cond., Shielded	2580	2580-1	5.30 per C	1.15 per C	3.05 per C
PHONO JACKS					
Single Cond., Shielded	2585	2580-6	8.10 per C	6.35 per C	1.65 per C
DIAL DRIVE SPRINGS					
1/2" x 1/2" x .016"	3111	3410-1	12.70 per M	10.00 per M	7.30 per M
5/8" x 3/8" x .018"	3112	3410-2	12.70 per M	10.00 per M	7.30 per M
5/8" x 3/8" x .020"	3113	3410-3	12.70 per M	10.00 per M	7.30 per M
5/8" x 3/8" x .016"	3111	3410-4	12.70 per M	10.00 per M	7.30 per M
5/8" x 3/8" x .020"	3115	3410-5	12.70 per M	10.00 per M	7.30 per M
1" x 13/64" x .022"	—	3400-1	11.50 per M	11.15 per M	8.35 per M
1 1/4" x 13/64" x .022"	—	3400-2	14.50 per M	11.15 per M	8.35 per M
SOLDERING LUGS					
Style 1	3281	3280-1	6.00 per M	4.85 per M	3.55 per M
Style 2	3282	3280-2	5.00 per M	3.90 per M	2.85 per M
Style 3	3283	3280-3	6.50 per M	5.20 per M	3.80 per M
Style 4	3284	3280-4	7.00 per M	5.50 per M	4.05 per M
Style 5	3285	3280-5	6.00 per M	4.85 per M	3.55 per M
Style 6	3286	3280-6	5.00 per M	3.90 per M	2.85 per M
GRID CAPS					
For Glass Tubes	2600	2600-1	5.80 per M	4.55 per M	3.35 per M
For Metal Tubes	2600	2600-4	6.60 per M	5.20 per M	3.80 per M
FUSE CLIPS					
For 1/4" Fuses	2721	2720-1	16.50 per M	13.00 per M	9.50 per M
For 3/8" Fuses	2722	2720-2	19.80 per M	15.60 per M	11.40 per M
SPRING CLIPS (Fahnestock)					
Small	2731	2730-1	7.75 per M	6.00 per M	4.45 per M
Medium	2732	2730-2	10.05 per M	7.95 per M	5.80 per M
Double, Large	—	2730-3	59.10 per M	46.80 per M	31.20 per M
CABLE CLAMPS					
For 1/4" to 1/2" Wire	3331	3330-1	6.50 per M	5.00 per M	3.70 per M
For 1/2" to 3/4" Wire	3332	3330-2	7.50 per M	5.80 per M	4.25 per M
For 3/4" to 1" Wire	3333	3330-3	8.20 per M	6.15 per M	4.75 per M
FUSE INSULATORS					
Fuse Insulators, 1 1/2" Long, 1/4" ID	2690	2690-1	4.00 per M	3.10 per M	2.30 per M
Fuse Insulators, 3/4" Long, 1/4" ID	2690	2690-2	3.50 per M	2.85 per M	2.10 per M
PHONE TIPS					
3/8" Over-all Length	2725	2725-1	11.00 per M	9.00 per M	6.50 per M
HEX NUTS (Steel, Cad. Pl., Sml. Pattern)					
# 2-56	—	3520-1	—	Prices quoted upon request.	—
# 4-40	—	3520-2	—	Prices quoted upon request.	—
# 6-32	3180	3520-3	3.10 per M	2.45 per M	1.85 per M
# 8-32	3190	3520-4	3.15 per M	2.75 per M	2.00 per M
# 10-32	3195	3520-5	3.80 per M	3.00 per M	2.20 per M
HEX NUTS (Brass, Sml. Pattern)					
# 4-40	—	3520-2 B	3.45 per M	2.75 per M	2.00 per M
# 6-32	—	3520-3 B	3.95 per M	3.10 per M	2.30 per M
# 8-32	—	3520-4 B	5.30 per M	4.15 per M	3.05 per M
# 10-32	—	3520-5 B	6.15 per M	4.85 per M	3.55 per M
VOLUME CONTROL HEX NUTS					
3/8" x 32 — Steel	3531	3530-1	8.05 per M	6.35 per M	4.65 per M
3/8" x 32 — Brass	—	3530-1B	13.50 per M	10.30 per M	7.50 per M
TOGGLE SWITCH HEX NUTS					
3/8" x 32	3532	3530-2	14.55 per M	11.45 per M	8.40 per M
TOGGLE SWITCH RING NUTS					
3/8" x 32	3533	3530-3	14.50 per M	11.45 per M	8.35 per M
METAL WASHERS (Steel, Cad. Pl.)					
For Screw # 4	3511	3510-1	1.10 per M	.85 per M	.65 per M
For Screw # 6	3512	3510-2	1.15 per M	.90 per M	.65 per M
For Screw # 8	3513	3510-3	1.15 per M	.90 per M	.65 per M
For Screw # 10	3514	3510-4	1.60 per M	1.25 per M	.95 per M
For Screw 1/4"	3515	3510-5	1.90 per M	1.50 per M	1.10 per M
LOCKWASHERS (Internal)					
For Screw # 4	3591	3590-1	2.55 per M	2.00 per M	1.45 per M
For Screw # 6	3592	3590-2	2.65 per M	2.10 per M	1.50 per M
For Screw # 8	3593	3590-3	2.70 per M	2.15 per M	1.55 per M
For Screw # 10	3594	3590-4	2.80 per M	2.20 per M	1.60 per M
For Screw 3/8"	3595	3590-5	3.30 per M	2.60 per M	1.90 per M
For Screw 1/2"	3596	3590-6	5.10 per M	4.00 per M	2.95 per M
SPRING (Friction) WASHERS					
1/8" Hole, 1/8" OD	—	3425-1	4.00 per M	3.20 per M	2.35 per M
3/16" Hole, 3/16" OD	—	3425-2	4.00 per M	3.20 per M	2.35 per M
1/4" Hole, 1/2" OD	—	3425-3	4.50 per M	3.50 per M	2.55 per M
CUP WASHERS					
For Screw # 6	3544	3540-4	2.60 per M	2.05 per M	1.50 per M
For Screw # 8	3545	3540-5	3.25 per M	2.55 per M	1.90 per M
For Screw # 10	3546	3540-6	4.70 per M	3.70 per M	2.70 per M
RETAINING RINGS					
For 1/2" Shaft	3421	3420-1	2.95 per M	2.35 per M	1.70 per M
"C" WASHERS					
For 1/2" Shaft	3422	3420-2	5.10 per M	4.05 per M	2.95 per M
For 3/8" Shaft	3423	3420-3	4.45 per M	3.50 per M	2.55 per M

SpeedWay "Blue Line" Tools

... for over 40 years, a famous name for quality tools



G. A. Kit
\$13.95



No. 129
Hand Grinder
\$8.25



No. 89
1/4" Hand Drill
\$29.95



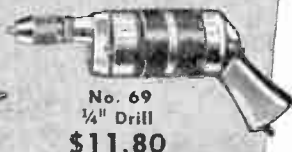
No. 89-J
1/2" Hand Drill
\$34.95



No. 209
Drill Stand
\$12.95



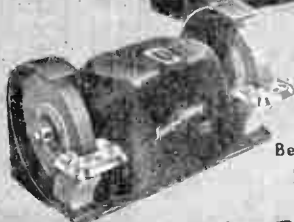
No. 229
Stand
\$5.25



No. 69
1/4" Drill
\$11.80



No. 117
Bench
Grinder
\$14.95



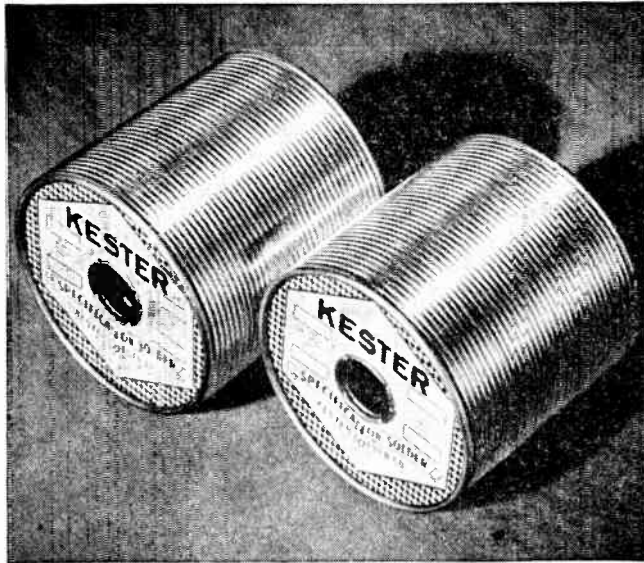
No. 128
Bench Grinder
\$29.95

- ✓ **G. A. Kit**—"16 tools in One". Consisting of a No. 129 SpeedWay Electric Hand Grinder with both 3/32" and 1/8" collets; 4 mounted stones; 3-steel cutting burrs; 4 mounted brushes and/or abrasive wheels, 1 mandrel and 4 abrasive discs all fitted and linged blue leatherette case. Net weight 2 1/4 lbs. Packaged in standard package of 6, shipping weight 17 lbs. \$13.95 List Price
- ✓ **No. 129 Hand Grinder**—Special SpeedWay 110-120 v. AC-DC tool motor operates at 20,000 R.P.M. Comes equipped with 3/32" and 1/8" collets. Complete with sliding thumb switch, rubber cord and plug. Net weight of grinder 1 1/4 lbs. Packed in standard package of 10, shipping weight 16 lbs. \$8.25
- ✓ **No. 89 and 89-J 1/4" Drills**—The last word in 1/4" capacity drills. Features Specially wound high torque SpeedWay motor, streamlined die cast housing, natural grip direct thrust breast plate handle, movable side handle for close quarter drilling, self-aligning oilless bronze bearings, 500 R.P.M. operating speed, sliding thumb switch, two-tone finish. Ideal for intermittent drilling at its rated capacity. No. 89 equipped with Snap-action chuck. \$29.95 List Price
No. 89-J equipped with 33B Jacobs key chuck. \$34.95 List Price
No. 89-J 220 v. AC-DC. \$36.45 List Price
No. 89-J 32 v. DC. \$36.45 List Price
NOTE: Both 89 and 89-J Drills are Underwriter Laboratories Approved and are equipped with 3 wire (ground) cord. Net weight of either 1/4" drill is 9 1/2 lbs. Packed in standard package of 3, shipping weight 32 lbs. \$29.95
- ✓ **No. 209 Drill Stand (for 1/4" Drills)**—The 209 Drill Stand is lever operated, sturdily built with machined and ground base, and has ears for bolting to bench. Cast drill bracket, line bored, holds drill rigidly and accurately in all positions. Drill and bracket can be instantly adjusted for height. With this stand a No. 89 Drill makes a convenient and accurate drill press. Stand only. \$12.95 List Price
Net weight of stand 16 lbs. Packed in standard package of 3, shipping weight 54 lbs. \$12.95
- ✓ **No. 229 Stand (for No. 69 Drill only)**—Invaluable for accurate alignment or close-limit bench work. Drill becomes an accurate lever fed drill press. This dependable stand increases the value of the 69 drill by 50%. \$5.25 List Price
Net weight of stand 6 lbs. Packed in standard package of 5, shipping weight 32 lbs. \$5.25
- ✓ **No. 69 1/4" Drill**—Here is a light duty 1/4" drill, the handiest and most valuable tool in anyone's kit. Designed to give maximum torque through three steps of precision cut gears, the 69 drill makes straight drilling easier and permits use of either carbon steel or high speed steel bits. Equipped with self-aligning porous bronze bearings; long life thumb switch; die-cast gear case and pistol grip handle. Here's quality at low price. Free speed 1000 R.P.M. Normal load speed 600 R.P.M. 1/4" capacity snap release chuck. 6 ft. flexible lead cord and plug. High-torque SpeedWay motor 110-120 volts AC-DC. \$11.80 List Price
Net weight of tool 2 1/4 lbs. Packed in standard package of 8, shipping weight 20 lbs. \$11.80
- ✓ **No. 117 Bench Grinder**—The new 117 SpeedWay Portable Bench Grinder has 3 times the power of the Pre-war model. It is beautifully balanced, operates smoothly, silently without creeping. Its light, strong, 1-piece cast aluminum case, completely houses motor, shaft and bearings. It is functional. Length 8" x 6", 1/15 H.P. Shaded Pole Motor. This efficient grinder can be bolted permanently to the shop bench, or easily taken to the job—plugs into any 110-120 v. AC 50 or 60 cycle outlet; has rubber feet that prevent marring of fine surfaces. Finished in SpeedWay Blue crackle, complete with two 4 1/2" x 3 1/2" wheels—1 "coarse" and 1 "fine"; built-in thumb switch, and 6 ft. rubber covered cord with unbreakable plug. \$14.95 List Price
No. 117 Bench Grinder is also available for 220 v. 50 or 60 cycle AC operation. \$16.45 List Price
Weight 7 lbs. Shipping weight 7 1/2 lbs. Shipped in standard cartons of 4, shipping weight 32 lbs. \$14.95
- ✓ **No. 128 1/2 H.P. Bench Grinder**—This new SpeedWay Electric Bench Grinder is sensational not only in appearance but in its capacity, power, convenience, features, performance and price. It has industrial size (6" x 3 1/2") grinding wheels, and operates at 3,500 R.P.M. 110-120 v. AC 1/2 H.P. 2-pole shaded pole motor. Its unique tool rests are not only fully adjustable to compensate for wheel wear but have built-in side guides of pre-set angles that simplify proper grinding of tools. Over-all cast aluminum housing. Self-aligning impregnated bearings, 6 ft. S-J 3-conductor lead cord with ground. Underwriter Approved. Built-in switch, rubber feet. \$29.95 List Price
Weight 25 lbs., shipping weight 28 lbs. Shipped in standard cartons of 3, shipping weight 84 lbs. \$29.95

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All SpeedWay tools are guaranteed for 1 year

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- Kester "Resin-Five" Core Solder
- Kester Radio Solder
- Kester Acid-Core Solder
- Kester "A" Flux-Core Solder
- Kester Nosput Flux-Core Solder
- Kester Knorust Flux-Core Solder
- Specialized Flux-Core Solders
- Solid Wire and Bar Solders
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- External Rosin Soldering Fluxes
- Other Fluxes
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Kester offers every conceivable type of Solder product. Strand sizes as small as .008" diameter in Flux-Core Solder, unusual alloys and varying Flux contents or Core sizes.

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ICA INSULINE RADIO PRODUCTS ICA

ICA Bakelite Double Phone Plug



No.	List
24B—Black	\$.50
24R—Red	.50
34B—Black barrel only	.20
34R—Red barrel only	.20
34P—Plug only	.40

ICA Midget Phone Plug

Overall length— $2\frac{1}{4}$ ". Diameter of barrel $\frac{1}{8}$ ".



No.	List
29B—Black	\$.50
29R—Red	.50
29P—Plug only	.40
39B—Black barrel only	.20
39R—Red barrel only	.20

ICA Stubby Shielded Phone Plug

Barrel Measures $\frac{1}{4}$ " diameter x $1\frac{1}{2}$ " long.



No.	List
37—Barrel only	\$.45
27	\$.80

ICA Midget Shielded Phone Plug

Diameter of Barrel $\frac{1}{8}$ ". Overall size of Plug $2\frac{1}{4}$ ".



No. 30	List \$.70
No. 40—Barrel only	List \$.40

ICA 3-Wire Microphone Plug



Has solder connections for cable or microphone use. Barrel molded of bakelite; brass parts, nickel plated.

No. 1901	List \$1.00
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ICA Shielded Double Phone Plug

Nickel Barrel Brass Shell Nickel Plated



Supplied with fibre insulating tube.

No. 25	List \$.90
No. 35—Barrel only	List \$.70

Wire Connector with Banana Plug Receptacle

Ideal for quick splicing for testing point.



No. 1933	List \$.30
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ICA Shielded 3-Way Portable

Microphone Jack



For all types of microphones. Sturdily constructed of brass parts with phosphor bronze springs. Nickel plated and thoroughly insulated.

No. 1904	List \$1.50
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ICA Bakelite Portable Jacks

Single Open Circuit



No. 1911—Overall Size $1\frac{1}{4}$ " Diameter $\frac{3}{4}$ "	List \$.70
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No. 1903—Portable Jack, black Bakelite barrel	List \$1.10
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ICA Shielded Portable Jack

Single Open Circuit



No. 1913— $2\frac{1}{8}$ " Long, $\frac{1}{4}$ " Diameter	List \$1.25
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Phone Plug Adapter



Soldering or wiring not necessary.

No. 33	List \$.45
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ICA De Luxe Phone Jacks

New Design



Greater Efficiency

New design. Tension fatigue minimized. Spring members made of phosphor bronze. Hooked type soldering lugs—cannot turn or short. For standard $\frac{1}{4}$ " plug.

No.	List
1920—Single Open Circuit	\$.75
1921—Single Closed Circuit	.85
1922—Three-Way Microphone Jack	1.10
1923—Same as 1922 but with extra shorting lug	1.25

ICA Phone Jacks



Smaller type precision made jacks for limited space. Complete with nut and metal washer.

No.	List
1870—Single open circuit	\$.50
1871—Single closed circuit	.55
1872—3-way mike jack	.60

ICA Panel Mounting Jacks



Small and Compact

No.	List
325—Single Open Circuit	\$.50
1905—3-Way Microphone Jack	.75

ICA Insulated Tip Jacks



With receptacle for standard phone tips.

No.	List
889B—Black	\$.15
889R—Red	.15

Insulated Banana Jacks

With receptacle for banana plugs.

No. 888B—Black	List \$.15
No. 888R—Red	List \$.15

ICA Bakelite Insulated Tip Jacks

Moulded of Low-Loss Bakelite



No.	List
1889—Black	\$.20
1890—Red	.20

Bakelite Banana Type Jacks

No. 1891—Black	List \$.20
No. 1892—Red	List \$.20

ICA Combination Banana Plug or Phone Tip Jack

Made to take banana plug or standard phone tips interchangeably. Insulated cap in black and red—With washers and nuts.



No. 528R—Red	List \$.20
No. 528B—Black	List \$.20

Microphone Connectors



No. 1929—For use on chassis unit or in microphone. Single contact List \$.30

No. 1930—Closed circuit connector. With spring actuated contact List .40

Microphone Connectors



Shielded cable type. Single contact.

No.	List
1931—Female connection	\$.50
1932—Male connection	.40

ICA Insulated Binding Posts with Jack for Banana Type Plug



Length $1\frac{1}{2}$ " overall when top is up. Extends $\frac{3}{4}$ " above panel when top is screwed down. Fitted with $8/32$ screw $\frac{1}{2}$ " long, and two hex nuts.

No.	List
622—Red	\$.25
623—Black	.25

ICA All Metal Binding Post

Designed for high amperage use and where low resistance connections are necessary on test equipment, etc. Nickel plated brass. Dimensions same as No. 617 below.



No. 620	List \$.20
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ICA Bakelite Binding Posts

$\frac{3}{8}$ " Diameter Head with Brass Threaded Insert, Nickel Plated Screw and Knurled Nut.

No.	List
617—Red	\$.18
618—Black	.18



ICA Vise-Grip Binding Post



Engineered on principle of a vise. Can cause no damage to even finest wire strands. Wire hole and designating symbol always in alignment. Two styles.

No. 630 Series—Has $6/32$ Male Threaded Shank	List \$.50
No. 690 Series—Has $6/32$ Female Thread	List \$.50

No.	Marking	No.	Marking
630	ANT	690	ANT
631	GND	691	GND
632	A	692	A
633	G	693	G
634	+	694	+
635	—	695	—
636	Rec.	696	Rec.
637 PLAIN (No Marking)		697 PLAIN (No Marking)	

Bakelite Binding Post Heads

Bakelite Heads only with Brass Threaded Insert for $8/32$ Screw.



No. 628—Red	List \$.10
No. 629—Black	List \$.10

Insulated Midget Phone Tip Plug

Fits all standard jacks. Tip is threaded. Overall length $1\frac{1}{4}$ ".



No.	List
876R—Red	\$.15
876B—Black	.15

ICA Midget Sharp Point Threaded Phone Tip Non-Insulated

No. 365	List \$.15
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U. S. Army and Navy Specification Jacks



Manufactured to meet the very exacting specifications of the U. S. Army Signal Corps and U. S. Navy. Will fit all standard jacks.

No. P.L. 55—2 Conductor Plug (long)	List \$.85
No. P.L. 68—3 Conductor Microphone Plug	List \$1.75

ICA Insulated Solderless Plug



2" long—fits all standard phone tip jacks.

No. 885B—Black	List \$.18
No. 885R—Red	List \$.18

ICA Sr. Solderless Plugs



$1\frac{1}{4}$ " overall length.

No. 358	List \$.10
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ICA Jr. Solderless Plugs

$1\frac{1}{8}$ " overall length. Tip $\frac{1}{4}$ ".



No. 359	List \$.10
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ICA Brass Tip Jacks

Nickel Plated



No. 357	List \$.10
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ICA Insulated Needle Point Tip Plug

886B—Black List \$.18

886R—Red List \$.18



Above with Insulating Sleeve

No. 341B—Black	List \$.10
No. 341R—Red	List \$.10

ICA Split Banana Plugs

For positive and durable spring action. Allows spring to fit into jack, cannot bend out of shape—Complete with two nuts.



No. 403	List \$1.12
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ICA INSULINE ICA

RADIO PRODUCTS

ICA Insulated Solderless Split Banana Plugs



Set screw provided at side of barrel to fasten screw without soldering.

- 1 1/2" Long
 No. 883B—BlackList \$.20
 No. 883R—RedList .20

- 2 1/2" Long
 With sleeve covering set screws.
 No. 882B—BlackList \$.40
 No. 882R—RedList .40

- 4" Long
 With sleeve covering set screws.
 No. 881B—BlackList \$.50
 No. 881R—RedList .50

ICA Spade Lug



Can be used on any size screw or terminal up to size 10. Receptacle fits all I.C.A. and other make Banana Plugs.

- No. 879List \$5.50 C
 100 in Standard Package

Insulated Spade Lug

Insulated Spade Lug with banana plug receptacle on lead end.



- No. 887B—BlackList \$.16
 No. 887R—RedList .16
 10 in Standard Carton

Beryllium Banana Plugs



Approved by the Signal Corps and other government agencies.

These plugs are used in all government equipment. Made of Beryllium copper and guaranteed for its spring and durability. Threaded plug accommodates 6/32 nuts.



- No. 419—Overall size 1 1/2" long. Shank length 3/4" long. Diameter of shank 1/8".

- No. 420—Overall size 1 3/4" long. Threaded shank length 3/4" long threaded for 6/32 nuts.

- No. List
 419—Rivet type\$.15
 420—Threaded shank—3/8"\$.25
 421—Threaded shank—1/2"\$.25
 422—Threaded shank—3/4"\$.25
 423—Threaded shank—1"\$.25

ICA Transmitting Banana Jacks

- No. 402
 Nickel Plat-I Brass
 List \$.09



Plugs and Jacks



A new line of heavy duty transmitting plugs and jacks. Plug-in type with positive grip contacts. Equipped with heavy insulated threaded heads and handles for safe handling on high R.F. currents. Supplied with large hex nuts for panel mounting.

Handle 1,000 Volts at 10 Amps

- | No. | List |
|-----------------------|-------|
| 450—Medium Plug-RED | \$.55 |
| 451—Medium Plug-BLACK | .55 |
| 452—Medium Jack-RED | .95 |
| 453—Medium Jack-BLACK | .95 |
| 454—Giant Plug-RED | .75 |
| 455—Giant Plug-BLACK | .75 |
| 456—Giant Jack-RED | 1.15 |
| 457—Giant Jack-BLACK | 1.15 |

ICA Alligator Clips

Good firm grip. Ideal for work in tight places. Overall length 2".



- No. 364List \$1.10

ICA Alligator Clip with Screw Connection



Good firm bite. Convenient screw connection eliminates the necessity for soldering. Overall length 2".
 No. 376List \$.12

ICA Insulated Alligator Clips



- No. 884B—BlackList \$.20
 No. 884R—RedList .20

ICA Insulated Alligator Clip with Phone Tip Jack



Has standard phone tip jack in insulated sleeve. Will accommodate phone tip or solderless plug tips.
 No. 525R—RedList \$.45
 No. 525B—BlackList .45

ICA Insulated Combination



Jack Alligator Clip



An insulated alligator clip with a dual purpose Jack in catalin sleeve—Equipped with the new combination Jack which takes either solderless phone tip or Banana plug. Overall length—3 1/4".

- No. 520R—RedList \$.50
 No. 520B—BlackList .50

ICA SHIELDED 3-WIRE MICROPHONE PLUG

Shielded Nickel Barrel



- No. 1900List \$1.45

ICA SHEARING PUNCHES

Now! No Hammering Necessary to Punch Chassis Holes

Shearing is accomplished with a wrench which forces shear punch into die. Made of High Grade Steel.



- | No. | Size of Hole | List |
|-----|--------------|--------|
| 723 | 5/8" | \$4.25 |
| 725 | 3/4" | 4.25 |
| 724 | 1" | 4.75 |
| 726 | 1.170 | 5.00 |
| 727 | 1 1/8" | 5.00 |
| 728 | 1 1/4" | 5.00 |
| 729 | 1 1/2" | 5.00 |
| 730 | 1 3/8" | 5.50 |

ICA IMPROVED ALL-PURPOSE CIRCLE CUTTER

Will Cut Holes from 1/2 to 8 Inches

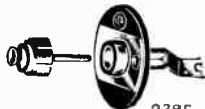
Cutting bar holder is 7/8" in diameter and also accommodates a centering drill or any size pilot pin. Cutting bar is 3/8" square and is arranged to hold a 3/8" high speed cutting bit.



- No. 775List \$6.60

ICA PLUG AND JACK

Used on RCA recording units, receivers and auto sets.



- | No. | List |
|----------------------|--------|
| 2383—Pin Plug | \$1.10 |
| 2385—Socket & Shield | .15 |

ICA SQUARE HOLE SHEARING PUNCH

This new punch permits the cutting of any size odd-shape hole (square rectangular, hexagon, oblong, etc.) on any size panel or chassis. Good for Enlarging or punching TRANSFORMER Holes.



- No. 790List \$16.50

REPLACEMENT DRILLS AND CUTTERS

Used as replacement on ICA No. 775 and No. 780 circle cutters as well as on other make cutters.

- No. 776—Replacement drill for No. 775 Circle Cutter
 List \$.60
 No. 777—Replacement cutter for No. 775 Circle Cutter
 List .85
 No. 781—Replacement drill for No. 780 Circle Cutter
 List .60
 No. 782—Replacement cutter for No. 780 Circle Cutter
 List .90



ICA UNIVERSAL MULTI-PURPOSE CUTTING TOOL

This handy tool can be used for counter-sinking, beading, drilling or cutting holes. Equipped with 3/8" drill for holes from 1/8" diameter up to 3" diameter. Can be used either in drill press or hand brace. Also acts as a boring tool when used in a lathe.



- No. 780List \$4.00

ICA RIVET AND EYELET PUNCH SET

A Universal Tool that can be used for either riveting or eyeletting. Holder is made of cast iron with hexagonal sides, thus permitting the tool to be placed in a vise without slipping.



No. 785—Complete with ample assortment of eyelets and rivets.

- List \$4.00

RIVET AND EYELET ASSORTMENT

Additional eyelets and rivets can be purchased separately.
 No. 5265—(Assortment of 100)List \$.80

RIVET & EYELET SETTING TOOL



- No. 786List \$.90

ICA INSULINE RADIO PRODUCTS ICA

ICA SOLDERING IRONS



ICA Highest Quality Soldering Irons are "Best By Test". Each model is submitted to the most severe tests and results prove conclusively that ICA irons are equal, if not superior, to any soldering iron on the market today.

60 WATT IRON

No. 1960-A—105-120 VoltsList \$5.00
No. 1963—220 VoltsList 5.00

85 WATT IRON

No. 1962-A—105-120 VoltsList \$6.50
No. 1964—220 VoltsList 6.50

115 WATT IRON

No. 1961-A—105-120 VoltsList \$7.50
No. 1965—220 VoltsList 7.50

REPLACEMENT ELEMENTS FOR ICA SOLDERING IRONS

Due to the construction of the ICA Soldering Irons, burnt out elements can be easily removed and replaced by anyone.



105-120 Volts			220 Volts		
No.	Watts	List	No.	Watts	List
1985	60	\$3.00	1990	60	\$3.00
1986	85	3.50	1991	85	3.50
1987	115	3.50	1992	115	3.50

ICA SNAP-ON SOLDERING IRON HOLDER

No. 1956



Fits on all makes and size irons. Can be snapped on to the barrel of any soldering iron so that iron and stand become a single unit, and iron can be left on constantly. Raises iron about 2" from work bench. Prevents fire damage.

List \$4.45

REPLACEMENT TIPS

For ICA Soldering Irons



Available in All Sizes

Made of a special copper alloy. Electrolytically pure. For replacement in ICA Soldering Irons. Can also be used in American Beauty and irons of similar construction.

No.	Watts	Tips	Diam.	Length	List
1970	60	Flat	3/8"	3"	\$6.00
1972	85	Point	3/8"	3 1/2"	.80
1971	115	Point	1/2"	3 1/2"	1.00

ICA GENERAL REPLACEMENT TIPS

For All Makes Soldering Irons

Made of special copper alloy, with a high conductivity. Electrolytically pure and oxygen free.

No.	Tips	Diam.	Length	List
1941	Flat	5/8"	2 7/8"	\$6.00
1942	Flat	3/8"	3 3/4"	.80
1943	Flat	1/2"	3 1/4"	.90

ICA UNBREAKABLE "TURN-TITE" SOCKET WRENCHES



7" long. Handle is of ribbed shockproof unbreakable material.

No.	Socket	List	No.	Socket	List
940	3/8"	\$.95	944	3/4"	\$.95
941	1/2"	.95	945	1/2"	.95
942	1/2"	.95	946	1/2"	.95
943	1/2"	.95	949	Set of 7 wrenches as above	6.65

ICA "TURN-TITE" SOCKET WRENCHES

HOLLOW SHAFTS



Made of hardened steel, cadmium plated, with sturdy Black japanned wooden handles

6 Inches Long		9 Inches Long	
No.	List	No.	List
898	3/8" .....\$4.45	900	3/8" .....\$5.55
890	1/2" .....45	894	1/2" .....55
891	1/2" .....45	895	1/2" .....55
892	3/4" .....45	896	3/4" .....55
893	3/4" .....45	897	3/4" .....55
899	1/2" .....45	901	1/2" .....55
910	Set of 6	911	Set of 6

Wrenches 2.70 | Wrenches 3.30

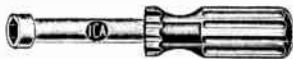
ICA FLEXIBLE SOCKET WRENCH



Especially designed for hard-to-reach spots. Can actually be used around corners or under obstructing objects.

No. 913—1 1/4" Hex	List \$1.50
No. 914—1 1/8" Hex	List 1.50

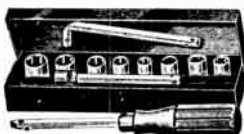
ICA UNBREAKABLE VOLUME CONTROL WRENCH



Socket is 3/8" diameter.

No. 937List \$1.75

ICA LOCK SOCKET WRENCH AND SCREW DRIVER SET



The all-purpose socket wrench, packed in neat, enameled steel case. Includes sturdy 6 1/2" Wood Grip Screw Driver—4" L. Handle—3 3/4" Extension Adaptor, 1/4", 5/16", 3/8", 1/2" and 5/8" Hex—3/8" Round Knurled Socket—1/4" and 1/2" Square Sockets.

No. 999List \$3.00

ICA AMBER COLORED UNBREAKABLE MIDGET SCREW DRIVER



Particularly shaped to fit into set screws of knobs. No. 1013 has convenient pocket clip.
No. 1013—4 3/4" lengthList \$2.25
No. 1017—7" lengthList .75

ICA UTILITY NEUTRALIZING AND ALIGNING TOOL KIT



A handy Service Man's Kit containing carefully selected tools suitable for varied uses. Packed in vest pocket leatherette case.

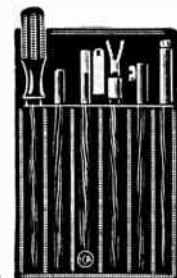
No. 997List \$3.00

ICA NEUTRALIZING AND ALIGNING TOOL KIT

The Kit consists of twelve separate and distinct parts, some of which can be employed for several operations. These units telescope into each other, forming four separate tools when assembled.

No. 998List \$6.50
Complete with Carrying Case

ICA DE LUXE NEUTRALIZING AND ALIGNING TOOL KIT



Complete for Every Service Need

Consists of fourteen tools, most of which telescope into one another, forming six units when assembled into the attractive black leatherette case.

The complete kit in carrying case can be kept in the pocket. Tools complete with carrying case.

No. 994List \$7.50

ICA NEUTRALIZING AND ALIGNMENT TOOL KIT — SIGNAL CORPS NO. TE4S-A

ICA Catalog No. 993



This versatile kit, designed for and used by the Signal Corps, is also strongly recommended for general service use. Compact, and contained in a handsome leatherette case, this kit consists of the following:

- 1—No. 935 Screw Driver
- 1—Bone Fibre No. 1015 Neutralizing Tool
- 1—5" Screw Driver
- 2—No. 980—Hex Tools, 1/4" I.D.
- 1—Insulated Screw Driver
- 2—No. 981—Hex Tools, 5/8" I.D.

No. 993List \$6.75

ICA COMPLETE NEUTRALIZING TOOL KIT



The kit consists of one of each of the following ICA tools, described herein:—Nos. 382, 1008, 987, 1015, 977, 996, 992, 985, 990, 1024, 1019, 1026, 1022, 1002, 1013, 1028, 1039, 1029, 1033, 935, 937.

No. 995—Kit, Complete with Carrying Case
List \$20.00

ICA FLEXIBLE SCREW DRIVER

For the Hard to Reach Spots



Allows access to screws in hard to reach and out of the way places. Can go under objects or around corners.

No. 935List \$2.00

ICA INSULINE RADIO PRODUCTS ICA

ICA DUAL PURPOSE ALIGNING TOOL

For IF and "K-Tran" Midget Transformers



Newly designed, all-insulated. For midget transformers of latest make. Made of trim fibre, milled at one end; screw driver at other end.

No. 978 List \$.75

ICA DIAL CABLE ADJUSTER



Handy aid to replacing slipped-off dial cable over drive drum. Permits easy manipulation in cramped places.

No. 437 List \$.75

ICA 4-in-1 NEUTRALIZING TOOLS, SCREW DRIVER AND WRENCH

Made of Fenoline Fully Insulated



No. 1019—Complete List \$.85

ICA 5-IN-1 NEUTRALIZING AND COMPENSATING TOOL

Same features as the 4-in-1 tool described above with an additional all metal screw driver.



No. 1022 List \$ 1.35

ICA Neutralizing Tools with Metal Nibs

Patent No. U.S. 83,321.

Sturdy, unbreakable, will outlast all other type neutralizing tools.

No. 996 List \$ 1.50

ICA BONE FIBRE SCREW DRIVER



Of $\frac{1}{8}$ " bone fibre rod with a sturdy blade. No. 1029 List \$.70

ICA BONE FIBRE SCREW DRIVER



Double Edged—No. Metal—Fully Insulated Made of $\frac{1}{4}$ " Bone Fibre Rod No. 1039 List \$.40

ICA NEUTRALIZING TOOL

For Push Button Tuners



The Socket is $\frac{3}{8}$ " in diameter, and contains a screw driver blade.

No. 1003 List \$.75

ICA SET TRIMMER NEUTRALIZING TOOLS

For Philco, Zenith, RCA, etc.



Fits the smallest size trimmer condensers. Trimmer end is $\frac{1}{2}$ " diam. to fit $\frac{1}{4}$ " hole. No. 992—6" long List \$ 1.00 No. 933—10" long List 1.25

ICA NARROW SHAFT ALIGNMENT TOOL



RCA—Zenith—etc. $\frac{3}{8}$ " Bakelite Shaft No. 987 List \$.85

ICA ALIGNMENT WRENCH

For RCA, Philco, etc.



Used on all makes Air Trimmer. Made of $\frac{1}{2}$ " Fenoline Rod— $8\frac{1}{2}$ " long—one end has hollow shaft hexagon wrench—other end has an especially shaped hook.

No. 1008 List \$ 1.50

ICA BALANCING TOOL



Fits into No. 1019 Neutralizing Tool. No. 1026 List \$.50

INSULATED NEUTRALIZING WRENCHES



Hexed—Full Length

For Philco, Majestic and Other Receivers $\frac{3}{8}$ " Diameter

No. 985—6" long List \$.25
No. 986—8" long List .35
No. 980—5" long List .25
No. 981—5" long, $\frac{1}{8}$ " dia. List .30

ICA Alignment Tool for Philco Receivers

For Air Trimmer Sets



Has specially designed metal clip for air trimmers. Made of narrow fibre rod, $\frac{1}{8}$ " diam. by 6" long.

No. 1033 List \$.60

ICA Insulated Adjustable Neutralizing Tools



Absolutely no metal parts. Screw driver slides into inside of neutralizing wrench.

No. 990—Extending from 6 to 10" List \$.90
No. 991—Extending from 12 to 16" List 1.00

ICA NEUTRALIZING AND ALIGNING TOOL



U. S. Army No. TL138A — ICA No. 1011 Used for general radio tuning and aligning. Approved by U. S. Army and Navy.

No. 1011 List \$ 1.00

ICA NEUTRALIZING AND ALIGNING TOOL



Machined of bakelite rod $9/32$ inch diameter. Designed for Western Electric Co. Approved by U. S. Army and Navy.

No. 1006 List \$ 1.25

ICA ALL PURPOSE ALIGNING TOOL



Handle is of $\frac{3}{8}$ " Fenoline. End has Socket Screw Driver for neutralizing all iron core tuning systems.

No. 1002 List \$.75

ICA TEST-LITE



Provides a steady, bright light—without annoying flickering—for dark, narrow spaces around chassis, cabinets, etc. Plugs into any AC-DC socket, 105-125 volt., $4\frac{1}{2}$ ft. cord.

Includes standard 6 volt lamp, No. 47, 15 amp., and plug complete. No. 938 List \$ 1.50

ICA ALIGNMENT TOOLS

For RCA Receivers



Narrow shaft Neutralizing Tools made of Bone Fibre— $\frac{1}{8}$ " wide. Has screw nib inserted in Brass Collar on end.

No. 1015 List \$.75

ICA MAGIC TUNING ALIGNMENT TOOL

Consists of a Bakelite rod with a Brass cylinder at one end, and a special finely divided iron core at the other end.

No. 977 List \$ 1.00

ICA FORK TYPE NEUTRALIZING WRENCH

and SCREW DRIVER For RCA and Other Sets



No. 1024 List \$.50

ICA Fenoline Neutralizing Screw Drivers



Made of Fenoline. Strong and sturdy, completely insulated for neutralizing and aligning coils, condensers, receivers, etc.

No. 1028 List \$.40

ICA ALL-PURPOSE TEST LEAD KIT

Complete For Every Testing Need

Equipped with one pair of test leads which have 48" of red and black kinkless live rubber wire. One end has insulated removable banana-type plugs.

Included in this test kit:

- 1 pr. test leads.
 - 1 pr. insulated alligator clips—red and black.
 - 1 pr. insulated spade plugs—red and black.
 - 1 pr. insulated needle points—red and black.
- No. 1005—Kit, complete List \$ 3.50

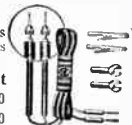


ICA PHONO-NEEDLE POINT TEST LEADS

With Slim Handles and Flexible Wire

Flexible rubber-covered, kinkless wire, 48" long. Tenite handles $4\frac{1}{2}$ " long.

No. 382—With Phone Tips \$.90
381—With Spade Terminals. .90
379—With Alligator Clips 1.10



ICA DE LUXE EXTRA-FLEXIBLE TEST LEADS

Slim Handles & Solderless Plugs 48" Extra-Flexible Test Leads with 1" Tenite handles. New non-kinking, rubber insulated wire.

No. 355—With Phone Tips \$.90
356—With Spade Terminals. .90



ICA PENCIL TYPE TEST LEADS

Finger-Grip Molded Tips

All connections are properly soldered providing low resistance connections vital in all precision tests. The Molded Finger Grip Tips are provided with rivets for easy removal of wire. Length of test leads is 48". Handles are 5" long. No. 373 List \$ 1.75



ICA HIGH VOLTAGE HEAVY DUTY TEST LEADS

10,000 VOLTS

Made of large diameter Bakelite handles with guards to prevent fingers from slipping. Cable 18 gauge, 67/36 tinned copper, with heavy walled rubber covering. Prods 6" long with 18" red and black cable and 2" Bakelite Prods on either end.

No. 475 List \$ 4.00 per pair



ICA INSULINE RADIO PRODUCTS ICA

ICA RETRACTIBLE TEST LEADS

Prevents accidental shorting. Retractable insulated sleeve upon pressure barbs prod tip for contact. Spring action, notched tip permits clamping of one leg of circuit while probing with other prod. 48" lead.



No. 448..... List \$2.00

NEW ICA SLIM-LINE TEST LEADS

Long vinyl-insulated shaft permits probing in closely wired circuits without fear of shorting. Black and red Tenite handles, 48" wire lead. With molded phone tip plug.

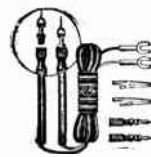
No. 438..... List \$1.50 Pr.



ICA HEAVY DUTY LABORATORY TEST LEADS

Long Slim Handles and Removable Phono Needle Chuck Extra long slim red and black handles knurled at end for finger grip case. Handles 6" long. 50" of heavy duty kinkless, flexible rubber wire.

No. 400—With knurled grip handle. Insulated solderless plug..... \$1.65
388—With alligator clip..... 1.50
391—With spade lugs..... 1.40
392—With non insulated phone tips..... 1.40



ICA Slim Handle Test Leads

Made of sturdy Tenite Handles. 50" of Kinkless Live Rubber wire. Handles 6" Long—Overall Length 7". Prods have pointed large phone tip plugs.

No. 313—Phone Tips on end..... \$1.25
314—Spade Lugs on end..... 1.25
315—Alligator Clips on end 1.40



ICA UNBREAKABLE TEST PRODS

Long Metal Prod with Shock-proof Rubber Handles One end has standard needle point Tips. Other end has Insulated Solderless Prods. Supplied with 50" Kinkless Rubber Wire.

No. 332—With Phone Tips Non Insulated. List \$1.00
No. 331—Insulated Solderless Plug Ends..... List \$1.15



ICA ALL PURPOSE TEST LEADS

Made of sturdy Tenite Tubing. Slim handles, 6" long. Overall length 7 1/2". Rubber covered wire 50" long.

With Interchangeable Tips
No. 312—Complete Kit..... \$2.50



NON-KINK FLEXIBLE TEST LEAD WIRE

Flexible rubber covered wire that will not kink or wear down in service. Consists of very fine tinned stranded copper wire with a heavy wall of live rubber insulation.

No. 307—100 ft. spool, Black..... List \$4.00
No. 309—100 ft. spool, Red..... List 4.00



ICA SAFE-T-TESTER

A new, unique, non-shortening prod that makes contact only when pressure is applied to barrel. Ideal for cramped spaces where probing is necessary. Specially applicable to televisic needs.

No. 446..... List \$1.50



ICA FENOLINE PHONO. NEEDLE POINT TEST PRODS

With Removable Chuck



5 Inch Test Prod
No. 389R—Red..... List \$.40
No. 389B—Black..... List .40
7 Inch Test Prod
No. 334R—Red..... List .40
No. 334B—Black..... List .40

ICA SOLDERLESS PLUG TEST PRODS

With Solderless Plug Chuck



5 1/4 Inch Long Prods
No. 390R—Red..... List \$.40
No. 390B—Black..... List .40
7 1/4 Inch Long Prods
No. 335R—Red..... List .50
No. 335B—Black..... List .50

ICA HEAVY-DUTY TEST PRODS



Slim tapped Tenite handle fitted with threaded heavy-duty phone tip. Length 5".
No. 387R—Red..... List \$.50
No. 387B—Black..... List .50

HIGH VOLTAGE ICA HEAVY-DUTY BAKELITE TEST PROD HANDLES



No. 480—Black Bakelite..... List \$1.15

HIGH VOLTAGE HEAVY-DUTY BAKELITE TEST PRODS

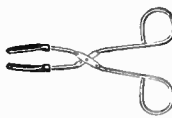
Measures 2" overall

No. 485—Black Bakelite..... List \$.55

ICA TUBE EXTRACTOR

Originally Designed for U. S. Signal Corps

Skillfully made of sturdy spring steel, cadmium plated. Moulded soft neoprene cushion over the two claws offers the maximum in tube protection. Suitable for removing all makes and sizes of tubes. Will not damage tube socket or shield.



No. 1001..... List \$1.50

ICA GRIP-RITE MOLDED PHONE TIP PLUG

Replacement for ICA and Weston — as well as other make Test Leads.

No. List
868—Red..... \$.50
869—Black..... .50



ICA PHONO NEEDLE CHUCKS

Push on type can be forced into handles — Threaded type can be screwed into handles. Machined of brass, nickel plated with needle point.

No. List
508—Push-on Type, Overall size 1"..... \$.15
509—Threaded Type, Overall size 1"..... .18

HEAVY-DUTY PHONE TIP

Made of high quality heavy brass with nickel plated finish. Used on test leads, prods, etc. (Overall length is 1 1/2")

No. 361—Heavy-Duty..... List \$.13
No. 360—Standard..... List 2.00C
25 in Standard Package



ICA CHROME SILVER DIAL PLATES

2 1/2" and 1" diameter. Two types, calibrated 180 degrees 0-100 and 325 degrees, 0-100.



No.	Degrees	Dial	Calib.	List
2196	325	2 1/2"	0-100	\$1.15
2197	180	2 1/2"	0-100	1.15
2194	325	1"	0-100	1.40
2195	180	1"	0-100	1.40

ICA BRASS BLACK SATIN FINISH DIAL PLATES

With Etched Silver Numerals



No.	Degrees	Dial	Calib.	List
2230	325	3 1/2"	0-100	\$.60
2231	180	3 1/2"	100-0	.60
2232	180	3 1/2"	0-100	.60
2233	180	2"	100-0	.45
2234	325	2"	0-100	.45
2235	325	2"	100-0	.45
2236	180	2"	0-100	.45

ICA CHROME SILVER DIALS

With Finger Grip Flange Knobs

Beautiful dial plates accurately Etcho-engraved with black numerals and calibrations.



No.	Size	Degrees	Calibr.	List
2170	2 1/2"	325	0-100	\$2.10
2171	2 1/2"	180	0-100	2.10
2168	1"	325	0-100	2.75
2169	1"	180	0-100	2.75

ICA MINIATURE DIALS

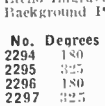
Beautiful Chrome Silver dials with black etched numerals. Finger grip black knob. Finger 1 1/2" diameter. Fit 1/4" shafts.



No. List
2164—10-0-180..... \$.85
2165—10-0-270..... .85

ICA CHROME SILVER DIAL PLATES

Attractive grain satin finish. Black Etcho Engraving on Chrome Silver Background Plates.



No.	Degrees	Dial	Calib.	List
2294	180	2"	0-100	\$.80
2295	325	2"	0-100	.80
2296	180	3 1/4"	0-100	1.25
2297	325	3 1/4"	0-100	1.25
2298	180	4"	0-100	1.40
2299	325	4"	0-100	1.40

Additional Dial Plates on Following Page

SPECIAL MANUFACTURERS' SERVICE

We provide an extensive manufacturing service on contract basis, comprising Engraving, Machining, Stamping, Drilling, Finishing, Etching and Assembling; Screw Machine Work, in any material of metal or plastic composition.

SPECIAL SIZE TERMINAL STRIPS, TEST PRODS AND PLASTIC INSULATED PARTS MADE TO SPECIFICATIONS. . . SEND US PRINTS FOR QUOTATIONS.

ICA INSULINE RADIO PRODUCTS

ICA ETCHED DIAL PLATES

RECTANGULAR TYPES

Made of brass finished in black with etched silver markings. Calibrated for 300 degree rotation. Marked 0 to 10. Will fit on 3/4" bushing. Size 2 1/4" x 1-11/16".



No.	Marking	List
2244	Record	\$.30
2245	Microphone	\$.30
2246	Gain	\$.30
2247	Tone	\$.30
2248	Plain (Calibrated but not worded)	\$.30

ICA INDICATING PLATES

Made of heavy brass with black satin background. Silver "Etcho Gravure" numerals and lettering. 1/2" center mounting hole. 1 1/8" Diameter.



No.	Marking	Degrees	List
2259	Marked 1 to 6	180	\$.35
2250	Marked 1 to 5 (Volume)	325	\$.35
2451	Marked 1 to 5 (Tone)	325	\$.35
2452	Marked 1 to 10	325	\$.35
2453	Marked Off On—with arrow	325	\$.35

ICA VERNIER DIAL MARKER



Complete with self-tapping screws for mounting on metal, wood, bakelite or brass panels.

No. 2189	For 2 1/2" - 325° Dials	List \$.50
No. 2190	For 2 1/2" - 180° Dials	List .50
No. 2191	For 4" - 325° Dials	List .50
No. 2192	For 4" - 180° Dials	List .50

ICA NAME PLATES

1-INCH ROUND

No. 2237—For "Microphone"
No. 2238—For "Phono"
No. 2239—For "On Off"



List \$.20



ICA "Insulex" R.F. CHOKE COIL
Silk Wire Wound
Supplied with wire leads for mounting.

ICA "INSULEX" R.F. CHOKES



Cat. No.	Inductance	D.C. Resis.	Current Cap.	List
1777	2.5	30	150	\$.60
1775	5.5	57	150	\$.75
1774	10	73	150	\$.80
1772	30	136	125	\$.90
1773	60	196	125	1.15
1771	80	222	125	1.25



IRON CORE HIGH "Q" R.F. CHOKES

No.	Ind. M.H.	D.C. Res. ohms	List
6200	2.5	17	\$1.20
6201	3.5	22	1.30
6202	5.5	28	1.35
6203	10	55	1.35
6204	30	83	1.60
6205	60	142	1.95
6206	80	168	2.10
6207	125	214	2.60



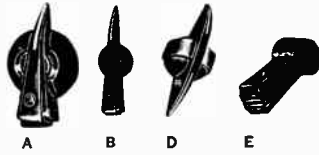
ICA TRANSMITTING R.F. CHOKES

Tapered Sections

Wound on Insulex low-loss core. Has a continuous universal winding in five tapered sections. Designed for maximum impedance in amateur bands from 160 meters downward.

No.	Ind. M.H.	Cur. Ma.	Res. Ohms	List
266	2.8	1000	5	\$2.75
267	5.3	600	12.5	2.50

RADIO REPLACEMENT AND INSTRUMENT KNOBS



No.	Type	Color	Size	List
1125	A	Black	1 1/4"	\$.15
1127	A	Red	1 1/4"	.20
1126	B	Black	2 1/4"	.20
1128	B	Red	2 1/4"	.24
1143	D	Black	2 1/4"	.35
1144	D	Walnut	2 1/4"	.35
1153	E	Black	1 3/4"	.30
1154	E	Walnut	1 3/4"	.30



No.	Type	Color	Size	List
248	J	Black	1 1/4"	\$.20
249	J	Black	1 1/2"	.22
1076	K	Walnut	3/4"	.18
1049	L	Walnut	3/8"	.16
1050	L	Walnut	1"	.16
1174	M	Black	3/8"	.20
1089	N	Walnut	3/8"	.18
1090	N	Walnut	1 1/4"	.20
1147	U	Black	7/8"	.18
1148	U	Walnut	7/8"	.18
1077	T	Walnut	3/4"	.15
1078	T	Walnut	7/8"	.18
1272	V	Black	3/4"	.20
1273	V	Walnut	3/4"	.20

ICA KNOB ASSORTMENTS



Walnut Bakelite JUNIOR ASSORTMENT

No. 1048—50 Knobs. Contains 5 each of 10 popular type knobs listed above.
List \$8.90

MASTER ASSORTMENT
No. 1043—100 Knobs. Contains 12 different type popular knobs including pointer knobs.
List \$17.50

ICA 2 1/2 and 5 METER R.F. CHOKE



A compact, efficient R.F. choke for use in transmitters and receivers at ultra-high frequencies. Single layer spaced winding on pig-tailed Insulex low-loss form. Small enough to be wired directly into the smallest transceivers. Inductance 5.4 Micr-Henries; Resistance 0.45 ohms; maximum current 1000 M.A. 1/8" Diameter x 1 1/4" long.
No. 1645.....List \$5.00



No.	Type	Color	Size	List
1270	F	Black	1 1/4"	\$.25
1271	F	Black	1 1/2"	.30
1137	G	Walnut	5/8"	.18
1138	G	Walnut	1 1/2"	.16
1139	G	Walnut	1 3/4"	.20
1087	H	Walnut	1"	.18
1088	H	Black	1"	.20
1133	I	Walnut	3/4"	.18
1134	I	Walnut	1 1/4"	.18
1274	S	Black	1 1/4"	.25
1274-S*	S	Black	1 1/4"	.32
1275	S	Black	2 1/4"	.28
1275-S*	S	Black	2 1/4"	.35

*With 2 Set Screws.



No.	Type	Color	Size	List
1081	P	Black	1 1/4"	\$.12
1082	P	Red	3/4"	.12
1083	P	Green	5/8"	.12
1084	P	Brown	5/8"	.12
1085	P	White	5/8"	.13
1116	Q	Walnut	1"	.18
1117	Q	Walnut	1"	.20
1135	R	Walnut	3/4"	.15
1136	R	Walnut	2"	.18
1310	W	Black	3/4"	.12
1311	W	Walnut	3/4"	.13
1312	W	Ivory	3/4"	.14
1320	W	Black	1 1/4"	.15
1321	W	Walnut	1 1/4"	.15
1322	W	Ivory	1 1/4"	.16
1330	X	Black	3/4"	.14
1331	X	Walnut	3/4"	.15
1332	X	Ivory	3/4"	.16

ICA FINGER-GRIP POINTER KNOBS



Moulded of black bakelite with 1/4" hole. Pointer type knobs have white indicators, flange type knobs have white indicating line.

With 1/4" Brass Inserts

No.	Type	List
1166	A—WITH POINTER	\$.60
1168	B—WITH POINTER	\$.75
1170	C—WITH POINTER	\$.95
1165	A—LESS POINTER	\$.45
1167	B—LESS POINTER	\$.55
1169	C—LESS POINTER	\$.75
1171	B—WITH FLANGE	\$.75
1172	C—WITH FLANGE	\$.90

NOTE: Above Knobs also furnished with 2 set screws. Order by adding "S" to each number.

HEAVY DUTY TRANSMITTING CHOKES

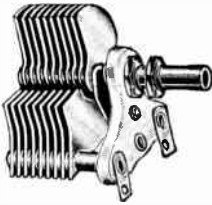


No.	Ind. M.H.	Cur. Ma.	D.C. Res. Ohms	List
280	2.5	1000	5	\$2.50
278	5.6	600	12	2.25

ICA INSULINE RADIO PRODUCTS ICA

ICA MIDGET CONDENSERS LO-LOSS CERAMIC INSULATION

Highly efficient, compact and rugged condensers for short wave receivers and transmitters. Employ non-corrosive plates, wiping phosphor bronze rotor contacts. Single Hole Mounting—Shaft is of Brass and 1/4" in Diameter; plated to resist corrosion—Complete with mounting nuts.

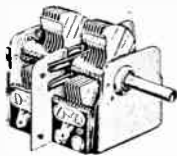


No.	Plates	Max. Cap.	Min. Cap.	List
6302	3	15 mmfd.	3 mmfd.	\$1.20
6304	4	25 mmfd.	3.5 mmfd.	1.30
6305	7	50 mmfd.	4 mmfd.	1.35
6306	11	80 mmfd.	6 mmfd.	1.50
6303	14	100 mmfd.	6 mmfd.	1.60
6301	19	140 mmfd.	7 mmfd.	1.75

Double-Spaced Condenser

6300	10	35 mmfd.	6.5 mmfd.	1.75
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ICA MIDGET PRECISION CONDENSERS



Better mechanical design insures constancy of calibration and uniformity between units. Ball bearings on both ends of shaft insure long life without wear or side play. Heavy brass springs make direct contact with rotor shaft, insuring a clean wiping contact at all times.

Single Gang Condenser

No.	List
533	\$3.00
542	3.00

Two Gang Condenser

538	3.50
534	3.50

Three Gang Condenser

532	4.50
531	4.50

SUPERHETERODYNE TYPE

Designed for 455KC IF. RF section is 27 plates; 485 Mmf. Oscillator Section is 19 plates; 173 Mmf. Measurements similar to two gang condensers shown above.

No. 545.....List \$3.50

ICA CERAMIC PADDING CONDENSERS



Compact, yet rugged Padding Condensers. Designed for aligning tandem condensers, short wave band switch coils, antenna trimmers, etc. Uses high grade Mica and Phosphor Bronze Spring contacts.

No.	Min. Cap.	Max. Cap.	List
611	4.0 mmfd.	40 mmfd.	\$5.50
612	12.0 mmfd.	100 mmfd.	.50
613	70.0 mmfd.	350 mmfd.	.55
614	160.0 mmfd.	500 mmfd.	.55

CERAMIC BEAD INSULATORS



3/8" Diam.

Used for construction of short concentric link lines.
No. 2315—(100 beads).....List \$1.25

ICA BASE-MOUNTING BAKELITE SOCKETS



No.	List
2480—4 Prong	\$.45
2481—5 Prong	.50
2482—6 Prong	.55
2483—7 Prong comb, large and small	.60
2489—8 Prong OCTAL	.65
2490—Contact for above Sockets	\$2.50C

ACORN TUBE WAFER SOCKET



Of Navy approved ceramic with silver plated contacts. Can be easily inserted and removed and no amount of vibration will cause the tube to become loose.

No. 961	List \$1.00
No. 2466—Contact only	\$2.50C

INSULEX INSULATORS



Made of WHITE Glazed Insulex. This new line of insulators meets the demand for a perfect, non-porous low loss product. Used by broadcasters, amateurs, experimenters and set-builders. All feed-thru have cork washers.



STAND OFF INSULATORS

No.	Description	Ht.	Base Diam.	Mtg. Hole	List
2300	Little Pete	1"	1 1/2"	7/8"	\$1.12
2301	Junior Pete	1 3/8"	3 1/2" x 1 1/2"		.15
2302	Big Pete	1 7/8"	1" x 1 1/2"		.18
2303	Beehive	2 3/4"	2" Diam.		.25
2304	Jack Type	1 1/2"	1" x 1 1/2"		.25

FEED-THRU INSULATORS

No.	Description	Ht.	Base Diam.	Mtg. Hole	List
2305	Sub-Panel	1 3/4"	5/8"	5/8"	\$2.20
2306	Sub-Panel	2"	3/4"	3/8"	.25
2307	Sub-Panel	2 3/4"	7/8"	7/8"	.28
2334	Large Sub-Panel	4"	1 1/2"	5/8"	.70
2320	Jack Type	1 3/4"	3/4"	7/8"	.35
2321	Jack Type	2 3/8"	7/8"	7/8"	.40

GIANT INSULEX INSULATORS

Heavy Duty—Will Withstand 10,000 Volts

No.	Description	Ht.	Base Diam.	Mtg. Hole	List
*2330	Stand Off	4 1/2"	3 1/2"	1/4"	\$9.95
*2331	Stand Off	4 1/2"	3 1/2"	1/4"	.90
*2332	Feed thru	4"	2"	7/8"	.95
*2333	Feed thru	4"	2"	7/8"	.90

*With Wing Nuts **With Screws and Nuts

ICA AIRCRAFT TYPE INSULATOR

A strain insulator made of Insulex. Particularly adaptable for aircraft, automobile and boat installation. Two 1/4" mounting holes. Distance between holes 3/4".



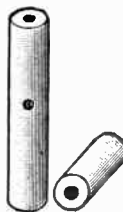
No. 2325.....List \$1.12

CERAMIC RODS

Made of Alsimag. Suitable for mounting insulators, condensers, coils, etc.

Available in two lengths.

No.	Lgth	Dia.	Tap.	List
2310	1 1/4"	1/2"	6-32	\$2.28
2311	3 3/4"	1/2"	6-32	.40



MOLDED BAKELITE SOCKET

For Miniature Tubes
Black molded general purpose bakelite with mounting saddle.



Standard mounting centers. Phosphor bronze contacts.

No. 2475	List \$2.00
Same as above but mica filled.	
No. 2476	List \$2.55

BAKELITE WAFER SOCKETS



Wafer socket of punched bakelite for miniature seven pin button base tubes. Phosphor bronze contacts. Standard mounting centers.

No. 1122	List \$1.15
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BAKELITE WAFER SOCKET

Similar to No. 1122 above but with grounding strap.

No. 1124	List \$1.17
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ICA "INSULEX" WAFER SOCKETS

An ideal low loss socket designed for ultra high frequency reception.



No.	List
2600—4 Prong	\$.50
2601—5 Prong	.50
2602—6 Prong	.55
2603—7 Prong, large	.60
2604—7 Prong, small	.60
2605—8 Prong OCTAL for new metal tubes	.65
2636—Contact for above Sockets	\$5.00C

ICA BAKELITE WAFER SOCKETS



No.	List
1118—4 Prong	\$.13
1096—5 Prong	.13
1095—6 Prong	.13
1119—7 Prong, small	.15
1120—7 Prong, large	.15
1121—8 Prong OCTAL	.16
1123—Loktal Wafer	.16

ICA MOLDED BAKELITE SNAP-ON SOCKETS



Octal—Loktal
Mounted in cadmium plated steel "Saddle." Equipped with 4 grounding lugs on saddle—Positive grip contacts.

No. 2470—Octal Socket	List \$1.15
Mtg Center 1 1/2"—Chassis Hole 1 1/8"	
No. 2471—Loktal Socket	List \$2.20
Mtg Center 1 1/8"—Chassis Hole 1"	



ICA "INSULEX" BASE MOUNTING SOCKETS

Especially adapted for ultra short-wave work and transmitters.

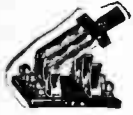
No.	List
290—4 Prong	\$.90
291—5 Prong	.90
292—6 Prong	1.00
294—Comb. 7 Prong, large and small	1.00
300—8 Prong OCTAL	1.00

ICA INSULINE RADIO PRODUCTS ICA

ICA BAKELITE KNIFE SWITCHES

Hardware of brass, heavily nickel-plated. Mounted on highly polished bases of Black BAKELITE. Firm contact assured.

No.	Description	List
1216	—S.P.S.T.	\$.85
1217	—S.P.D.T.	1.00
1218	—D.P.S.T.	1.15
1219	—D.P.D.T.	1.35
1360	—3.P.S.T.	1.85
1220	—3.P.D.T.	2.00
1221	—4.P.S.T.	2.50
1222	—4.P.D.T.	3.00
1364	—5.P.D.T.	3.50



ICA ROTARY CANOPY SWITCH

Single pole switch $\frac{3}{4}$ " shank with brown bakelite knob and 6" leads—1 ampere—250 volts.

No. 1257 List \$5.00
10 in Standard Package



MINIATURE BAKELITE SWITCHES

Can be mounted on panel or base. Black Bakelite base—highly nickel-plated brass parts with insulated handles.

No.	Description	Base Size	List
2223	S.P.S.T.	1 1/4" x 1/2"	\$.35
2224	S.P.D.T.	1 1/4" x 1/2"	.60
2225	D.P.D.T.	1 1/4" x 1"	.75
2226	D.P.S.T.	1 1/4" x 1"	.70



ICA ROTARY SWITCHES

Rated 3 Amps. at 125 Volts. Overall Length of shafts 1 1/2". Made by H & H for ICA. Underwriters Approved.



No.	Threaded Shank	Description	List
1228	3/8"	S.P.S.T.	\$.55
1229	1"	S.P.S.T.	.65
1286	3/8"	S.P.D.T.	.75
1287	1"	S.P.D.T.	.90
1288	3/8"	D.P.D.T.	1.30
1289	1"	D.P.D.T.	1.45

GT AND GT/G TYPE TUBE SHIELDS

Latest type seamless, drawn shell type. Length 2 1/4".



No.	For Tube Diam.	List
1744	Open top*	1.218" \$1.15
1745	Closed top*	1.218" .15
1746	Open top**	1.165" .15
1747	Closed top**†	1.165" .15

*For GT and GT/G tubes with large metal base.

**For GT tubes with small metal base.
†For Loktal tubes.

FORM FIT TUBE SHIELDS

A tube shield that assures a snug, positive fit. Vertical grooves provide flexibility. Includes ground clip as illustrated. Protects tubes against excessive vibration.



No. 1727B	—For GT; GT/G and Loktal tubes. Length 2 1/2"	.....List \$1.15
No. 1729B	—For GT and GT/G tubes. Length 2 3/4"	.....List \$1.15

ICA TOGGLE SWITCHES

Furnished in Nickel or Antique Bronze. Capacity 1 Amp. 250 Volts, 3 Amps. 125 Volts. Mfd. by H & H for ICA.



No.	Shank Length	Description	Finish	Net
1230	3/8"	S.P.S.T.	Nickel	\$.50
1232	3/8"	S.P.S.T.	Bronze	.55
1233	3/8"	S.P.S.T.	Bronze	.60
1235	3/8"	S.P.S.T.	Nickel	.55
1236	3/8"	S.P.D.T.	Nickel	.65
1237	3/8"	S.P.D.T.	Nickel	.75
1238	3/8"	D.P.S.T.	Nickel	.95
1365	3/8"	D.P.D.T.	Nickel	1.10
1366	3/8"	D.P.D.T.	Nickel	1.15

ICA ALUMINUM TUBE SHIELD

For 55, 57, 68, etc. type tubes



No.	List
1708—1 1/8" mounting centers	\$.40
1709—1 1/2" mounting centers	.40

ICA ALUMINUM TUBE SHIELD

Will fit all standard Screen Grid Tubes. Supplied with base. 1 3/4" mounting center.

No.	List
1541	\$.40

ICA 807 TUBE SHIELD

For use with Transmitter Pentodes, and Tetrodes, to prevent oscillation. Can also be used on RK 20, RK 39 and 804 tubes.

No.	List
1545	\$.60

ICA COIL SHIELDS

With Detachable Base

A sturdy coil shield made of aluminum with a detachable base.

No.	List
1539—2 1/2" x 3" High	\$.60
1540—2 1/2" x 3 1/2" High	.70
1549—3" x 3 1/2" High	.75

ICA HI-POWER SWITCH

Push Button Type



Designed to break primary circuit when rack door is open. D.P.S.T. Made by H & H for ICA. Capacity 12 Amp. 125 Volt. Overall size 7 3/4" long, 3/4" wide, 3/4" high, 7/16" shank.

No. 1280 List \$2.25

ICA PUSH BUTTON SWITCH

Single pole 2 circuit momentary switch. One circuit is "ON"; other normally "OFF." One Amp., 125 Volt, made by H & H for ICA. Shank 5/8" long.



No. 1282 List \$9.50

ICA EXTRA HEAVY DUTY SWITCH

D.P.D.T. With Neutral Center



An extra large heavy duty, Double Pole, Double Throw Switch with neutral position in the center for use in heavy current circuits such as transmitters, power amplifiers, motors, etc. Contacts have fast "break" which reduces the tendency to arc. Rated at 10 Amps., 125 Volts. Size of switch case, 2 1/2" long, 1" high, 1 1/4" wide. Mounting sleeve diameter 3/4".

No. 1283 List \$5.50

'ON-OFF' PLATE

For Toggle Switch



Nickel Plated
No. 1300 List \$0.40
Antique Bronze
No. 1300BR List \$0.05

ICA POWER SWITCH

(Toggle Type)

Characteristics and dimensions same as No. 1280 described above.



No. 1281
List \$1.50

SLIDING LEVER SWITCHES

For all electrical appliances, panels, analyzers, tube checkers, etc. Complete with plate. Rated 3 amps. at 125V.



No.	Description	List
1265	—S.P.S.T.	\$.150
1266	—D.P.D.T.	1.95

ICA SLIDER SWITCHES

Small—Compact

Switch dimensions 1 1/2" x 1 1/2" x 1/4". S.P.S.T. switch includes chrome mounting plate.



No.	Description	List
1255	—S.P.S.T.	\$.35
1259	—S.P.D.T.	.40
1260	—D.P.D.T.	.50
1264	—D.P.S.T.	.45

BAT-HANDLE TOGGLE SWITCH

Made by H & H. Identical to toggle switches listed above, except that handle is longer and shaped like a baseball bat.

Less on and off plate. Nickel plated only—7/16" shank. Packed 5 in a standard carton.



No.	Description	List
1296	—S.P.S.T.	\$.50
1297	—S.P.D.T.	.70
1298	—D.P.S.T.	.95
1299	—D.P.D.T.	1.10

ICA GRID CAP SHIELDS

(For Metal Tubes)



Fits firmly over grid cap, affording complete shielding. Slotted cap permits passage of grid wire.

No.	List
1552	\$.10
1558—With Bakelite Insert	.20

ICA BAKELITE FLEXIBLE SHAFT COUPLING

Flexible phosphor bronze spring contact mounted on a round bakelite disc. 1 1/4" diameter. Has 3/4" bushing.



No. 2142 List \$6.65

ICA INSULEX FLEXIBLE SHAFT COUPLING

Flexible phosphor bronze spring contact mounted on Insulex disc for efficient low-loss coupling. 1 1/4" diam. Has 3/4" bushing.

No. 2143 List \$7.75

ICA PANEL BEARING ASSEMBLY

Will fit on panels up to 5/16" thickness.

No. 1248	—Over-all length 3"	.....List \$4.00
No. 1249	—Over-all length 6"	......50
No. 1250	—Bearings only	......18

ICA INSULINE RADIO PRODUCTS ICA

ICA SHAFT COUPLINGS AND EXTENSION RODS



Brass Couplings and Reducers

No.	Length	Hole	O.D.	List
2105	3/4"	3/8" coupler to 1/4"	1 1/2"	\$.20
2106	3/4"	3/8" coupler to 3/8"	1 1/2"	.20
2107	3/4"	3/8" coupler to 1/2"	1 1/2"	.20
2111	1 1/8"	1/4" shaft to 1/4"	1 1/2"	.20
2112	1 1/8"	1/4" shaft to 3/8"	1 1/2"	.20
2113	1 1/8"	3/8" shaft to 1/4"	1 1/2"	.20
2125	Brass Split Bushing	3/8" long x 3/8" O.D. x 1/4" I.D.	1.0	.10

ICA Fenoline Couplings and Reducers

No.	Length	Hole	O.D.	List
2116	3/4"	3/8" coupler to 1/4"	1 1/2"	\$.20
2108	3/4"	3/8" coupler to 3/8"	1 1/2"	.20
2109	3/4"	3/8" coupler to 1/2"	1 1/2"	.20
2110	1 1/8"	1/4" shaft to 1/4"	1 1/2"	.20

Long Extension Couplings

Made of Brass with extra long extension

No.	Length	I.D.	O.D.	List
2123	1 3/4"	1/4"	1 1/2"	\$.25

ALUMINUM IDLER PULLEYS



Precision made. Distortion free non-warping. Permits closer tolerances. Supplied in any quantity in any type—with or without shoulders. Listed are typical sizes without shoulders, hole diam. .128".

No.	O.D.	Cord Diam.	List
601	3/8"	1/4"	\$2.00C
602	1/2"	3/8"	2.20C
603	5/8"	1/2"	2.30C
604	3/4"	5/8"	2.50C
605	3/4"	3/4"	3.00C

BAKELITE AND FENOLINE TUBING



ICA tubing is strong mechanically, has extremely low electrical absorption and is highly resistant to moisture. Absolute perfection in winding of coils is assured by the use of ICA tubing—thus affording relief from complaints or failure in performance.

Finished in Natural and Black Colors. Small sizes up to one inch in Black only. 1/4" Wall Thickness, Full Lengths. Approximately 36 to 48"

BAKELITE			FENOLINE		
No.	O.D.	Per Ft.	No.	O.D.	Per Ft.
100	1/4"	\$.95	161	1 1/4"	\$.85
101	3/8"	1.15	162	3/8"	.90
102	1/2"	1.20	163	1/2"	1.00
103	5/8"	1.30	164	5/8"	1.05
104	3/4"	1.40	165	3/4"	1.10
105	7/8"	1.55	166	7/8"	1.15
106	1"	1.65	167	1"	1.25
147	1"	1.75	134	1"	1.15
148	1 1/4"	1.95	135	1 1/4"	1.35
149	1 1/2"	2.05	136	1 1/2"	1.40
150	1 3/4"	2.25	137	1 3/4"	1.55
151	2"	2.50	138	2"	1.70
152	2 1/4"	2.70	139	2 1/4"	1.85
153	2 1/2"	3.15	140	2 1/2"	2.05
154	2 3/4"	3.50	141	2 3/4"	2.45
155	3"	4.00	142	3"	2.65
156	3 1/4"	4.20	143	3 1/4"	2.85
157	3 1/2"	4.50	144	3 1/2"	3.35
158	3 3/4"	4.50			
159	4"	5.50			

ICA LARGE LOW-LOSS RIBBED COIL FORMS AMBER BAKELITE 1 5/8" Diameter 3 3/4" High

No.	Prong	List
1051	—1 Prong	\$.60
1052	—5 Prong	.60
1053	—6 Prong	.65

ICA SMALL RIBBED COIL FORMS

Made of Amber Color Bakelite 1 3/8" diam., 2 1/4" high

No.	Prong	List
2158	—1 Prong	\$.45
2159	—5 Prong	.50
2160	—6 Prong	.50

ICA INSULATED BUSHINGS



No. 670	—Black 1/8" Hole 3/8" Diam. 3/8" Long	List \$.15
No. 671	—Red 1/8" Hole 3/8" Diam. 3/8" Long	List .15
No. 672	—Black 1/4" Hole 1/2" Diam. 1/2" Long	List .20
No. 673	—Red 1/4" Hole 1/2" Diam. 1/2" Long	List .20

ICA BRASS EXTENSION RODS

No. 2117	6" Length 1/4" O.D.	List \$.20
No. 2118	12" L. 1/4" O.D.	List .40

FENOLINE EXTENSION RODS

No. 2120	6" Length 1/4" O.D.	List \$.30
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BAKELITE BUSHINGS

Molded Bakelite Bushings for complete insulation. Strong seamless threads. Heat resisting to 300 F. Complete with stamped lock nuts.



No.	Hole Size	List
606	1/4"	\$.10
607	1/2"	.12
608	3/8"	.13
609	1/2"	.14
610 (2 holes)	3/8"	.15

STOCK SIZES OF BLACK AND BROWN FENOLINE TUBING

Individual lengths tubing in following diam.: 1"; 1 1/4"; 1 1/2"; 1 3/4"; 2"; 2 1/4"; 2 3/4"; 3"; Wall thickness 1/16".

No.	List
2131—3" long—1" O.D. to 3" O.D.	\$.65
2132—4" long—1" O.D. to 3" O.D.	.80
2133—6" long—1" O.D. to 3" O.D.	1.15

When ordering, specify exact diameter.

SPECIAL LENGTH BAKELITE TUBING

Cut to Order — Wall Thickness to 1/16" Outside diameters range from 1" to 4". Prices on request. Other diameters and thicknesses quoted on request.

ICA "INSULOID" RODS			
No.	Color	Size	List
2175	Black	12" x 3/4"	\$.45
2176	Black	24" x 3/4"	.80
2179	Black	12" x 3/8"	.60
2180	Black	24" x 3/8"	1.20
2183	Black	12" x 1/2"	.80
2184	Black	24" x 1/2"	1.60

BAKELITE RODS		FENOLINE RODS	
No.	Diam.	No.	Diam.
175	1/8"	168	1/4"
178	3/8"	169	3/8"
176	1/2"	170	1/2"
177	3/4"		

Lengths of 18" to 24"

List	List
\$1.30 ft.	\$.80 ft.
1.50 ft.	1.10 ft.
1.80 ft.	1.40 ft.
2.50 ft.	

ICA TRANSMITTING COIL FORMS

Made of Low-Loss RX-47 Dielectric. Rugged and durable. Amber color. Size of body affords 3 1/4" of winding space.



No. 2670	—1 Prong	List \$1.00
No. 2671	—5 Prong	List 1.05
No. 2672	—6 Prong	List 1.10

ICA SMALL BAKELITE COIL FORMS

1 1/4" diam., 2 1/4" high

No.	Prong	List
1108B	—1 Prong	\$.45
1113B	—5 Prong	.45
1114B	—6 Prong	.45

ICA GROOVED INSULEX TRANSMITTING FORMS



Suited for winding low loss inductors for Oscillators, R.F. Amplifiers, Short Wave Diathermy Machines, etc. The forms are grooved to hold the turns in place and holes are provided for tapping at every other turn if desired. Grooved for 25 and 28 turns respectively with .143" spacing.

No.	For 20 and 40 Meters	List	No.	For 80 and 160 Meters	List
2650	—Minus supporting legs	\$1.75	2652	—Minus supporting legs	\$3.00
2651	—With Mounting Legs and hardware	2.40	2653	—With supporting legs	3.40

ICA SHORT WAVE AND BROADCAST PLUG-IN COILS



Wound on Low-Loss Bakelite Forms

No. 4 PRONG—2 WINDINGS List

1471—Set of 4 short wave coils covering 9 1/2 to 217 Meters\$3.15

1473—Set of 2 Broadcast coils covering 190 to 550 Meters 2.50

ICA FLEXIBLE SPAGHETTI TUBING 20 Foot Lengths



A flexible tubing, heavily varnished, in attractive colors. Average dielectric strength, 5000 volts. Will accommodate from No. 10 to No. 18 wires. Furnished in one length—20 feet long on handy spools.

No.	Color	List
210	Red	Per Spool \$1.25
211	Yellow	Per Spool 1.25
212	Brown	Per Spool 1.25
213	Green	Per Spool 1.25
214	Black	Per Spool 1.25

500 Foot Spools, spaghetti tubing, same grade and colors as above. Specify color per spool. No. 197.....List \$28.50

ICA SPAGHETTI TUBING

For No. 10 to No. 18 gauge wire. Guaranteed not to crack. Furnished in 30" lengths.

No.	Color	List per length
182	—Red	\$.15
183	—Yellow	.15
184	—Brown	.15
185	—Green	.15
186	—Black	.15

SMALL SIZE SPAGHETTI TUBING

200	—Red	\$.15
201	—Yellow	.15
202	—Black	.15

LARGE SIZE SPAGHETTI TUBING

Supplied in 36" lengths. Diameter 9/64" I.D. x 3/16" O.D. No. 196—Supplied in black only List—per length \$5.00

ICA GIANT SLEEVEING

Made of high voltage insulation saturated cambrie material. Inside diameter 3/8". For Insulating Resistors, Small Condensers, Wire Cables, Leads, etc. 36" lengths.

No. 198.....List \$5.00

ICA INSULINE ICA

RADIO PRODUCTS

RUBBER INSULATED GRID CAPS

For Transmitting Tubes

New improved type. Insulation made of special soft rubber over spring bronze.

For 866 Type Tubes

No. 870—With Leads List \$.30

For Receiving Tubes

872—With 12" Lead20

For New Metal Tubes

874—With 12" Lead20



FENOLINE INSULATED GRID CAPS

Improved type for standard and transmitting tubes. Sturdy cadmium plated brass clip. Furnished with 12" wire.

For 866 Transmitting Tubes

No. 683—Black List \$.50

For Standard Glass Receiving Tubes with small caps

No. 680—Red List \$.25

No. 681—Black List .25



INSULATED DUAL GRID CAPS

Designed for metal and glass tubes. Equipped with 12" insulated lead.

No. 877—Black List \$.40



SPRING ACTION GRID CAPS

For all types of tubes. Positive contact. All grid caps are hot tinned ready for soldering.

No. 1550—For standard glass receiving tubes with small caps (.360 dia.) \$12.50M

1551—For tubes with miniature caps (.250 dia.) 12.50M

1553—For glass tubes 1.50C

1554—For glass tubes 1.50C



1553



1554



1550



1551

FUSE MOUNTINGS

Flush Type Mounting



Bakelite base. For standard radio or automotive fuses. Countersunk center hole for mounting.

Equipped with two soldering lugs.

No. 2340—Single pole List \$.20

No. 7201—Double pole List .35

Panel Type

Takes standard type radio—automotive fuse. Equipped with 6.32 screws for mounting on panels.

No. 2341—Single pole List \$.25

No. 7203—Double pole List .40

For AG 1" Long Type Fuse

No. 7202—For smaller type fuse. Bakelite base. 1 7/8" x 1 1/2" x 1/8" Flush Mount \$.20

7204—Double pole. 1 3/8" x 1" x 1/8" Flush Mount35

7205—Same as 7202. Panel Mount25

7206—Same as 7204. Panel Mount25

ICA TERMINAL STRIPS

Made of 3/32" heavy black Bakelite, engraved in white. Terminals are brass cadmium plated.

No.	Terminals	Marking	Mtg. Ctrs.	Size	List
2420	2	Plain	1 1/2	7/8 x 2 1/4	\$.18
2419	2	A & G	1 1/2		.18
2418	2	Output	1 1/2		.18
2417	2	Input	1 1/2		.18
2414	3	Plain	2	7/8 x 2 3/4	.27
2415	3	1, 2, 3	2		.30
2413	4	Plain	2 1/2	7/8 x 3 3/8	.36
2408	4	1, 2, 3, 4	2 1/2		.40
2405	5	Plain	3	7/8 x 4	.45
2406	5	1, 2, 3, 4, 5	3		.50
2404	6	Plain	3 1/2	7/8 x 4 5/8	.54
2402	6	1, 2, 3, 4, 5, 6	3 1/2		.60
2412	7	Plain	4	7/8 x 5 1/4	.63
2411	7	1, 2, 3, 4, 5, 6, 7	4		.70
2410	8	Plain	4 1/2	7/8 x 5 3/4	.72
2409	8	1, 2, 3, 4, 5, 6, 7, 8	4 1/2		.80
2424	9	Plain	5	7/8 x 6 3/8	.81
2423	9	1, 2, 3, 4, 5, 6, 7, 8, 9	5		.90
2422	10	Plain	5 1/2	7/8 x 7	.90
2421	10	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	5 1/2		1.00

BAKELITE TERMINAL MOUNTING STRIPS

Mounting tie strips for fastening Resistors, Condensers, etc. Mounting Lug hole diameter .140". Type A shows non-ground mounting lug. Type B shows combination grounding-mounting lug:



Type A



Type B

No.	Type	Terminals	Mtg. Centers	Mounting Lugs	List
2434	A	1	One Hole	1	\$3.00C
2455	B	1		1	3.00C
2435	A	2		1	4.00C
2456	A	2		1	4.00C
2436	A	3	1 1/2	2	7.00C
2457	B	3	1 1/2	2	7.00C
2437	A	4	1 7/8	2	8.50C
2458	B	4	1 7/8	2	8.50C
2438	A	5	2 1/4	2	10.00C
2459	B	5	2 1/4	2	10.00C
2439	A	6	1 7/8	2	12.00C
2460	B	6	1 7/8	2	12.00C
2440	A	7	1 1/2	2	13.50C
2461	B	7	1 1/2	2	13.50C
2441	A	8	1 7/8	2	15.00C
2462	B	8	1 7/8	2	15.00C

No. 2425—Terminal Lugs only (less screws) List \$6.00C

No. 2426—Terminal Screws, 3/8" long List 1.50C

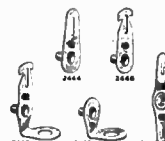
TWIN JACK STRIP



With two terminals. Takes standard phone tips. Base width 1 1/4". 1 1/4" between mounting holes.

No. 2443 List \$.20

TERMINAL LUGS



No.	List
2444	\$.65C
2445 # 6 Hole	1.25C
2446	.75C
2447	1.25C
2463	1.85C
2448 # 6 Hole—Combination	1.25C
2638 # 8 Hole—Combination	1.25C

ICA INSULINE ICA

RADIO PRODUCTS

FILTERVOLT NOISE FILTER

An efficient filter for disturbances caused by electrical appliances. For use with any all-wave or broadcast receiver.

Rated conservatively at 250 watts for 32, 110 and 220 volt AC or DC circuits. Can be installed either at the radio or at the source of disturbance.

Contains heavy duty R.F. chokes, large filter capacitor, and has a "PI" Filter circuit arrangement.

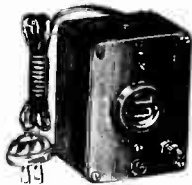
No. 338 List \$7.50



ICA FILTERVOLT

Improves extremely noisy radio reception due to interruptions in power line caused by electrical appliances, lights, etc.

No. 394
List \$4.50



DUPLIX FILTERVOLT

Eliminates Radio Noises Caused By—

- Electric Shavers
- Refrigerators
- Fans • Elevators
- Motors, etc.



Unit is equipped with Dual outlet, both sides being altered for noise elimination. Packed 25 to a standard carton.

No. 90 List \$1.50

UNIVERSAL VOLTAGE REGULATOR

Voltage fluctuation often occurs not gradually but suddenly, thus bringing a tremendous strain on the tubes. This regulator protects tubes through scientific regulation of current fluctuations. Housing body and end rings are neatly constructed and of perforated japanned metal. For all Radio Sets, AC, DC.



No. 92 List \$1.50

ICA 3-IN-1 RADIO TUNER



Functions as either an Antenna Tuner, Wave Trap, or Aerial Eliminator. Operates on any make or model radio set.

As an Antenna Tuner, it will improve the reception of a weak station. As a Wave Trap, it will separate interfering stations and improve selectivity. As an Aerial Eliminator, it makes unnecessary the outdoor aerial. Easily installed within a few minutes.

No. 95—Complete with instructions List \$1.00

ICA DELUXE SIGNA-TONE

AUDIO OSCILLATOR — CODE PRACTICE SET — KEYING MONITOR

The ICA Signatone is a perfected Audio Oscillator, having 3 different output frequencies and a continuously variable volume control. The Audio notes are similar to those of high quality commercial CW stations.

1. CODE PRACTICE SET—A number of phones and keys may be connected for intercommunication or for classroom or radio club instruction in code.

2. KEYING MONITOR—An invaluable aid in improving any ham's "fist". Will follow the "bug" at all speeds. No well-equipped station should be without this keying monitor.



No. 4300



No. 4301

3. MODULATION SIGNAL—The steady note of the Signatone is ideal for adjusting both the Modulator and modulated stages of your transmitter for a maximum modulation percentage of not over 100.

4. SIGNAL TRACER—By feeding the output of the Signatone into each stage of your modulator and listening to the output of that stage, defects and "bugs" can easily be located. Complete with tube and self-contained speaker, for 110 V AC-DC.

No. 4300—*Dealer Net Cost \$12.00
No. 4301—Classroom Model (No Speaker)—Dealer Net Cost 9.00

ICA EAR PHONES

Complete With Head Bands

Made of molded Bakelite and light-weight nickel-plated metal. 2000 ohms.



No. 23—Double Head Phone List \$4.50

EAR CUSHIONS

Made of soft rubber. Ideal for the amateur wireless operator, etc. Used by all leading air lines.



No. 195 List \$1.10 pr.

DOUBLE PHONE CORDS



No. 192—Tips on both ends List \$.95
193—Spades on one end, tips on other 95

ICA TENNA-SCOPE LOOP

For Midgets or Portables

Eliminates necessity of outdoor or indoor antenna. Replaces the antenna coil in portable or midget sets. Easily assembled.



No. 4385 List \$1.25

ICA TENNA-SCOPE

A new style built-in tuned radio antenna. Easily connected. Eliminates use of outside aerial and ground. Features: Better selectivity — Higher signal to noise ratio — Easily connected, no soldering.



No. 4380 List \$3.00

LINGUAPHONE MORSE CODE RECORDS

Learn the International Morse Code Quickly, Easily — Uses EYE - EAR Method. The Complete Linguaphone Code Equipment consists of 5 Double-faced, electrically transcribed records in durable album. Contents: 3 Tables, 10 Lessons.



No. 1800—Complete Dealer Net \$9.00

ICA "TRIPLEX"

Radio & Telegraph Code Practice Set
Blinker Light
Radio Signal—Telegraph

No. 70 List

70—Single Unit (less batteries) \$3.25

71—Double Unit (50 ft. wire) 6.85



ICA RECORD-PLAYER SWITCH

Replacement for RCA Switch 9824A

Recommended for quickly connecting Record Players, F.M. attachments, Television attachments, Microphones and similar devices into the audio amplifier of existing radio receivers.



No. 1740 List \$2.25

RESISTOR CORDS

A series of replacement resistor cords for practically all AC-DC requirements.



No.	Resistance-Ohms	List
513	135	\$1.25
514	160	1.15
515	190	1.15
516	220	1.15
517	290	1.15
518	340	1.15
519	540	1.25

UNIVERSAL RESISTOR CORD

Replacement Resistor Cord for all makes receivers. From 22 to 330 ohms on one cord. Instructions with each cord.

No. 205 List \$1.50

ICA INSULINE ICA

RADIO PRODUCTS

RADIO HARDWARE



ICA offers a wide variety of radio hardware items suitable for practically any use in the radio-electronic and allied fields. ICA hardware is offered in standard package quantities or in handsome glass display jars for convenient storing.



ROUND HEAD MACHINE SCREWS NICKEL-PLATED

Jar*	Qty.*	Bulk	Qty.	Description	Bulk List
Cat. No.	Each Jar	Cat. No.	Bulk Pkge.		
—	—	5504	1000	2-56 x 1/4" long	4.00M
5000	100	5500	1000	4-36 x 1/4" long	5.00M
5001	100	5501	1000	4-36 x 1/2" long	5.50M
—	—	5503	1000	4-36 x 3/8" long	5.65M
5002	75	5502	1000	4-36 x 1/2" long	5.75M
—	—	5506	1000	5-40 x 1 3/8" long	6.75M
5007	90	5507	1000	6-32 x 1/4" long	5.00M
—	—	5511	1000	6-32 x 3/8" long	5.00M
5008	80	5508	1000	6-32 x 1/2" long	5.50M
5009	70	5509	1000	6-32 x 3/4" long	6.50M
5010	50	5510	1000	6-32 x 1" long	8.50M
5014	75	5514	1000	8-32 x 3/8" long	6.00M
5015	70	5515	1000	8-32 x 1/2" long	7.00M
—	—	5512	1000	8-32 x 5/8" long	7.00M
5016	65	5516	1000	8-32 x 3/4" long	7.75M
5017	40	5517	1000	8-32 x 1" long	9.00M
—	—	5519	1000	10-32 x 1/2" long	8.50M
5022	60	5521	1000	10-32 x 1/2" long	9.50M
5023	50	5522	1000	10-32 x 3/4" long	9.50M
5024	35	5523	1000	10-32 x 1" long	10.00M
—	—	5524	1000	10-32 x 1 1/4" long	10.00M
—	—	5525	1000	10-32 x 1 1/2" long	12.00M
—	—	5526	1000	12-24 x 1" long	2.00C
—	—	5527	1000	1/4-20 x 3/8" long	1.50C
—	—	5531	1000	1/4-20 x 1/2" long	1.75C
—	—	5532	1000	1/4-20 x 1 1/4" long	2.00C
—	—	5533	1000	1/4-20 x 2 1/2" long	3.00C
—	—	5537	1000	1/4-20 x 3" long	3.50C
—	—	5538	1000	1/4-20 x 3 1/2" long	5.00C
—	—	5540	1000	1/4-20 x 4 1/2" long	6.00C

BINDING HEAD MACHINE SCREWS

—	—	5546	100	6-32 x 3/8" long	\$1.25C
5030	80	5547	100	6-32 x 1/2" long	1.25C
5031	75	5548	100	6-32 x 3/4" long	1.25C
5032	65	5549	100	8-32 x 3/8" long	1.50C

OVAL HEAD MACHINE SCREWS NICKEL PLATED

—	—	5552	100	2-56 x 1/8" long	\$.75C-4.00M
5040	50	5553	100	6-32 x 5/8" long	.95C-7.00M
5041	45	5554	100	8-32 x 3/4" long	.85C-6.50M
5042†	40	5710†	100	10-32 x 5/8" long	1.00C-8.50M

†For Transmitting Racks.

PARKER-KALON SELF-TAPPING SCREWS

5050	50	5561	1000	No. 2 x 1 1/2" long	\$1.50C
—	—	5562	1000	No. 3 x 3/8" long	1.50C
5051	50	5555	1000	No. 4 x 1/2" long	1.60C
5052	50	5556	1000	No. 6 x 1 1/4" long	1.60C
5053	45	5557	1000	No. 6 x 3/8" long	2.00C
5054	40	5558	1000	No. 7 x 1 1/2" long	2.25C
5056	45	5560	1000	No. 10 x 3/8" long	2.50C
5055	35	5559	1000	No. 10 x 3/4" long	2.75C

PHILLIPS TYPE FLAT HEAD MACHINE SCREWS

—	—	5543	100	2-56 x 3/8" long	\$1.50C
—	—	5544	100	2-56 x 1 1/8" long	1.50C

ESCTCHEON PLATE SCREWS

5182	100	5677	100	No. 1 x 1/4" long	\$15.00M
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FLAT STEEL PLATED WASHERS

5090	100	5595	1000	For No. 6 Screw	\$2.50M
5091	100	5596	1000	For No. 8 Screw	2.50M
5092	100	5597	1000	For No. 10 Screw	2.50M
5093	100	5603	1000	For 1/4" Screw	4.50M
—	—	5606	1000	For 3/8" Screw	5.50M
—	—	5607	1000	For 1/2" Screw	5.00M
—	—	5614	1000	For 5/8" Screw	6.00M
—	—	5622	1000	For 1" Screw	7.50M

EVERLOCK LOCK WASHERS

3085	100	5592	1000	For No. 6 Screw	\$.55C-3.75M
5086	90	5593	1000	For No. 8 Screw	.60C-4.00M
5087	80	5594	1000	For No. 10 Screw	.65C-4.50M
—	—	5600	1000	For 1/4" Screw	1.50C

KANTLINK SPLIT TYPE LOCKWASHERS

Jar*	Qty.*	Bulk	Qty.	Description	Bulk List
Cat. No.	Each Jar	Cat. No.	Bulk Pkge.		
5080	125	5589	1000	For 6-32 Screw, 1/16" thick	\$3.50M
5081	125	5590	1000	For 8-32 Screw, 1/16" thick	3.50M
5082	100	5591	1000	For 10-32 Screw, 1/16" thick	3.50M
5083	75	5602	1000	For 1-32 Screw, 1/16" thick	5.50M

FLAT FIBRE WASHERS

			Diam.	Thick.	Hole	
—	—	5623	1000	3/16	.030	\$5.00M
5100	125	5601	1000	1/8	1/16	6.25M
5103	60	5711	1000	.236	1/16	6.25M
—	—	5612	1000	3/8	1/16	7.25M
5102	90	5609	1000	1/2	1/16	8.00M
—	—	5626	1000	3/8	1/16	7.50M
—	—	5627	1000	.236	1/16	5.75M
—	—	5629	1000	1/2	.020	6.25M
—	—	5630	1000	1/2	1/16	7.75M
—	—	5631	1000	1/2	1/16	6.25M
—	—	5632	1000	3/8	1/16	7.50M
—	—	5643	1000	1 1/8	1/16	17.50M
5101	100	5605	1000	3/8	1/16	7.50M
5104	50	5610	1000	1/2	.020	8.00M
5105	50	5611	1000	5/8	1/16	9.75M
—	—	5644	1000	7/8	1/16	17.50M
—	—	5667	1000	7/8	.028	14.50M
—	—	5668	1000	.875	1/16	14.50M

FIBRE SHOULDER WASHERS

			Overall Diam.	Shoulder Diam.	Overall Hgt.	
—	—	5618	100	1/2	1/16	\$1.25C
5111	50	5620	100	3/8	1/16	1.25C
5110	50	5615	100	3/8	1/16	1.25C
5114	50	5619	100	1/2	1/16	1.25C
5115	40	5616	100	1/2	1/16	1.35C
5116	40	5675	100	1/2	1/16	1.35C
5112	50	5624	100	1/2	3/4	1.35C
5113	50	5628	100	5/8	1/2	1.50C

CUP WASHERS

			Hole Size	
			No. 6	
5211	50	5714	100	\$.75C-5.25M
5212	45	5712	100	.75C-5.50M
5213	20	5713	100	.80C-5.50M

STEEL HEXAGON NUTS — NICKEL PLATED

5070	100	5572	1000	4-36 x 1/4" long	\$4.00M
—	—	5573	1000	4-36 x 3/8" long	3.25M
5074	80	5577	1000	6-32 x 1/8" long	5.00M
5071	90	5576	1000	6-32 x 1/4" long	4.50M
5072	80	5580	1000	8-32 x 3/8" long	5.00M
5073	50	5584	1000	10-32 x 3/8" long	7.50M
—	—	5581	1000	12-24 x 1/2" long	1.10C
—	—	5582	1000	1 1/8 x 3/4" long	3.50C
5075	12	5583	1000	1 1/2 x 3/4" long	1.20C
—	—	5579	1000	1 1/2 x 3/8" long	1.00C
—	—	5586	1000	3/8-32 x 3/8" long	1.20C
5076	10	5575	1000	3/8-32 x 1/2" long	2.00C

BRASS HEXAGON NUTS — NICKEL PLATED

—	—	5563	100	2-56 x 1/8" long	\$.75C-6.00M
—	—	5564	100	4-36 x 1/8" long	.75C-6.00M
—	—	5566	100	6-32 x 1/4" long	.75C-6.00M
—	—	5567	100	6-32 x 3/8" long	.85C-6.50M
—	—	5570	100	8-32 x 1/2" long	1.00C-7.50M
—	—	5571	100	1 1/2 x 3/4" long	1.50C
—	—	5574	100	3/4-32 x 1/2" long	1.75C
—	—	5598	100	1 1/2-27 x 1/2" long	2.00C
—	—	5599	100	1 1/2-27 x 1 1/4" long	5.00C

WING NUTS NICKEL PLATED STEEL

5058	10	5740	100	6-32 Thread size	\$6.00C
5059	10	5741	100	8-32 Thread size	6.00C
5060	10	5742	100	10-32 Thread size	6.00C
5062	8	5744	100	12-24 Thread size	6.00C
5063	8	5743	100	1 1/2-20 Thread size	6.00C

ACORN CAP NUTS NICKEL PLATED

5067	15	5750	100	6-32 Thread size	\$3.50C-25.00M
5068	12	5751	100	8-32 Thread size	3.50C-25.00M
5069	10	5752	100	10-32 Thread size	3.75C-27.50M

RACK SCREW AND WASHER ASSORTMENT

Packed in ICA handy jars. Includes 20 Oval Head Screws (10-32 x 5/8") and 20 Cup Washers (10-32).

No. 5210

List \$.65

*ALL JARS LIST AT \$.65 PER JAR. BULK QUANTITIES LIST AS SHOWN. ORDER BY CATALOG NUMBER.

ICA INSULINE ICA

RADIO PRODUCTS

ICA RADIO HARDWARE BRASS EYELETS

Jar* Cat. No.	Qty.* Each Jar	Bulk Cat. No.	Qty. Bulk Pkg.	Diam. Shank	Length	Bulk List Price
5174	100	5718	1000	.085	1 1/8	\$10.00M
—	—	5719	1000	.086	1 1/8	10.00M
—	—	5748	1000	.090	1 1/8	10.00M
—	—	5585	1000	.107	1 1/8	10.00M
5172	80	5672	1000	.115	1 1/8	10.00M
5171	90	5671	1000	.125	1 1/8	9.50M
—	—	5587	1000	.130	1 1/8	10.00M
5170	100	5670	1000	.132	1 1/8	8.50M
5177	60	5588	1000	.150	1 1/8	10.00M
—	—	5737	1000	.152	1 1/8	10.00M
5176	60	5738	1000	.165	1 1/2	10.00M
—	—	5739	1000	.173	1 1/2	10.00M
5173	75	5673	1000	.176	1 1/2	10.00M
—	—	5715	1000	.189	1 1/2	10.00M
—	—	5716	1000	.198	1 1/2	10.00M
5175	40	5717	1000	.200	1 1/2	10.00M

NICKEL PLATED TUBULAR STEEL RIVETS

Jar* Cat. No.	Qty.* Each Jar	Bulk Cat. No.	Qty. Bulk Pkg.	Diam.	Length	Bulk List Price
—	—	5676	1000	.059	1/4	\$9.00M
—	—	5678	1000	.059	1/4	10.00M
—	—	5679	1000	.060	1/4	8.00M
—	—	5680	1000	.060	3/8	9.00M
—	—	5699	1000	.060	1/2	9.00M
—	—	5700	1000	.066	1/2	10.00M
5163	60	5727	1000	.121	1 1/2	12.50M
5164	60	5728	1000	.121	1 1/2	13.00M
5159	100	5729	1000	.14	1 1/2	7.50M
—	—	5730	1000	.14	1 1/2	8.00M
5160	100	5663	1000	.18	1 1/2	8.00M
—	—	5731	1000	.18	1 1/2	9.50M
5161	80	5664	1000	.18	1 1/2	10.00M
—	—	5732	1000	.18	1 1/2	10.00M
5162	70	5665	1000	.18	1 1/2	10.50M
—	—	5733	1000	.142	1 1/2	14.75M
—	—	5734	1000	.16	1 1/2	12.50M

STEEL CABLE CLAMPS, PLATED

Jar* Cat. No.	Qty.* Each Jar	Bulk Cat. No.	Qty. Bulk Pkg.	Length	Diam. Bend	Bulk List Price
5200	35	5697	1000	1 1/2	3/8	\$1.25C
5201	30	5698	1000	1 1/2	3/8	1.50C

MIDGET FUSE CLIPS (FOR 1/4" GLASS FUSES)

Jar* Cat. No.	Qty.* Each Jar	Bulk Cat. No.	Qty. Bulk Pkg.	Height	Length	Bulk List Price
5180	35	5681	100	1/8	1 1/4	\$1.75C

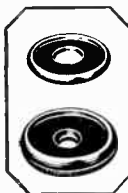
NICKEL PLATED SPRING CLIP

Jar* Cat. No.	Qty.* Each Jar	Bulk Cat. No.	Qty. Bulk Pkg.	Width	Length	Bulk List Price
5190	40	5691	100	3/8	1 1/8	\$1.65C
5191	40	5692	100	3/8	1 1/8	1.75C
5192	30	5693	100	3/8	1	2.00C



ICA FLEXIBLE RUBBER GROMMETS

Jar* Cat. No.	Qty.* Each Jar	Bulk Cat. No.	Qty. Bulk Pkg.	(3) Hole Size	(1) O.D.	(2) Thick- ness	(4) Slot	(5) Mtg. Width	Bulk List Price
5120	15	5633	100	1/8	1 1/2	3/16	1/8	1 1/8	\$3.85C
5121	12	5634	100	1/8	1 1/2	3/16	1/8	1 1/8	4.30C
5122	15	5635	100	1/8	1 1/2	3/16	1/8	1 1/8	3.90C
5123	12	5639	100	1/8	1 1/2	3/16	1/8	1 1/8	3.00C
5124	10	5636	100	1/8	1 1/2	3/16	1/8	1 1/8	4.75C
5125	10	5637	100	1/8	1 1/2	3/16	1/8	1 1/8	3.50C
5126	12	5640	100	1/8	1 1/2	3/16	1/8	1 1/8	4.35C
—	—	5641	100	1/8	1 1/2	3/16	1/8	1 1/8	7.00C
—	—	5642	100	1/8	1 1/2	3/16	1/8	1 1/8	3.90C
5127	12	5687	100	1/8	1 1/2	3/16	1/8	1 1/8	3.75C
—	—	5688	100	1/8	1 1/2	3/16	1/8	1 1/8	3.75C
—	—	5689	100	1/8	1 1/2	3/16	1/8	1 1/8	4.30C



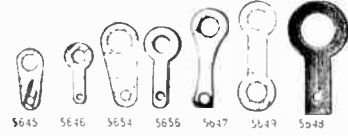
SOFT CURED RUBBER GASKETS

Jar* Cat. No.	Qty.* Each Jar	Stand. Pkg.	O.O.	Hole Size	Thick- ness	List
5755†	100	100	1 1/8	7/8	1/4	\$10.00C
5756†	100	100	1 1/8	5/8	1/4	10.00C
5757†	100	100	1 3/8	1 1/8	1/4	7.50C
5758†	100	100	1 3/8	3/4	1/4	2.50C

†With Sealing Rim. ‡Flat.

***ALL JARS LIST AT \$.65 PER JAR. BULK QUANTITIES LIST AS SHOWN. ORDER BY CATALOG NUMBER.**

BRASS TINNED TERMINAL LUGS

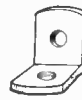


Jar* Cat. No.	Qty.* Each Jar	Bulk Cat. No.	Qty. Bulk Pkg.	Length	Hole Size	Bulk List
—	—	5645	100	1 1/2	No. 8	\$.75C- 6.00M
—	—	5654	100	1 1/2	1/4	.80C- 6.00M
5135	125	5646	100	1 1/2	No. 6	.60C- 4.00M
—	—	5656	100	1 1/2	No. 6	5.00M
5136	100	5647	100	1 1/2	No. 10	.65C- 5.00M
5137	75	5649	100	1 1/2	No. 8	1.00C- 8.00M
5141	75	5648	100	1 1/2	No. 8	1.00C- 8.00M
—	—	5655	100	1 1/2	No. 8	.80C- 6.50M
5138	100	5653	100	1 1/2	No. 6	.85C- 7.00M
5139	75	5651	100	1 1/2	No. 8	1.00C- 8.00M
5140	50	5652	100	1 1/2	No. 10	1.75C-11.00M
—	—	5645	100	1 1/2	No. 8	2.50C-16.00M

EVERLOCK TERMINAL LUGS



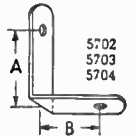
Jar* Cat. No.	Qty.* Each Jar	Bulk Cat. No.	Qty. Bulk Pkg.	Length	Hole Size	Bulk List
5483	—	5480	100	1 1/2	No. 6	\$1.50C-12.00M
5484	—	5481	100	1 1/2	1/4	1.50C-12.00M
5482	—	5482	100	1 1/2	No. 4	1.40C-11.00M
5145	50	5483	100	1 1/2	No. 6	1.40C-11.00M
5146	60	5482	100	1 1/2	No. 4	1.40C-11.00M
5147	55	5483	100	1 1/2	No. 6	1.40C-11.00M
5148	50	5484	100	1 1/2	No. 8	1.40C-11.00M



ANGLE BRACKETS

†One Hole Tapped — One Plain.

‡One Slot — One Hole.



Jar* Cat. No.	Qty.* Each Jar	Bulk Cat. No.	Qty. Bulk Pkg.	A	B	Width	Bulk List Price
5205	16	5702	100	3/8	3/8	3/8	\$2.50C
5206	15	5703	100	3/8	3/8	3/8	2.50C
5207	25	5704	100	3/8	1 1/8	3/8	4.00C
—	—	5705	100	3/8	1 1/8	3/8	4.50C
—	—	5706	100	3/8	1 1/8	3/8	2.00C
—	—	5707	100	3/8	1 1/8	3/8	3.00C

ICA SET SCREWS

Headless, slotted, cup point set screws of hardened steel. For all type knobs, insulated tools, couplers, etc.

Cat. No.	Description	List
319	6-32 x 1/8"	\$3.00C
324	8-32 x 1/8"	3.00C
320	8-32 x 1/4"	3.00C
318	8-32 x 3/8"	3.00C
321	10-32 x 1/4"	3.00C
326	11-20 x 1/4"	3.00C

SET SCREW ASSORTMENT

Practical Assortment of hardened steel set screws for a variety of uses. Assortment includes 100 set screws.

No. 322 — List \$3.00 Set

PILOT LIGHT CONTACT

For making center connection inside pilot light socket.

No. 2465
List \$5.00M

ICA UTILITY GLASS JARS

For use on service bench to store hardware, etc. 2 1/4" high x 1 1/2" deep.

No. 5400—List \$1.2



ICA INSULINE ICA

RADIO PRODUCTS

DISPLAY "SALESMAN" MERCHANDISER OF HARDWARE AND RADIO ESSENTIALS



With this ICA display assortment you can now sell hardware in a packaged form. This assortment includes — all sizes Round Head Machine Screws — Nickel plated nuts to match — Parker-Kalon self-tapping screws — Kant-Link lock washers — Shake-Proof washers — plain washers — flat fibre washers — flexible grommets — lugs — eyelets — rivets — escutcheon plate screws — midjet fuse clips — spade bolts — spring clips — clamps — angles — rack screws — and washers, etc.

EACH ITEM INDIVIDUALLY PACKED IN A GLASS DISPLAY JAR. Each jar contains an ample quantity of individual type and size hardware used by dealers, servicemen and amateurs. A complete radio hardware assortment, beautifully put up in these jars and stacked in a handsome durable metal rack which holds 36 jars.

- No. 5275—DISPLAY RACK—Contains 36 jars. A representative assortment of radio hardware, such as screws — nuts — bolts — washers — grommets, etc. List \$23.40
- No. 5276—DISPLAY RACK—Contains 36 jars. A representative assortment of radio hardware and essentials such as fibre washers — lugs — metal washers — grommets — spring clips — fuse clips — angle brackets, etc. List \$23.40
- No. 5405—METAL DISPLAY AND UTILITY RACK—Consists of 4 shelves for storing 36 hardware jars — small parts and miscellaneous items. Measures 12" high by 17 3/4" wide by 8" deep. List \$5.50

EVERYMAN'S 1000-PIECE RADIO HARDWARE ASSORTMENT No. 5250

An assortment of hardware commonly used by dealers, servicemen, amateurs, experimenters, etc. Contains 1000 pieces of assorted machine screws — wood screws — nuts — bolts — rivets — eyelets — lugs — lock washers — rubber grommets, etc.

No. 5250
List \$3.00



ICA ALL-PURPOSE RADIO HARDWARE AND ESSENTIAL EQUIPMENT

Packed in a handy indestructible metal utility case.

This De Luxe assortment includes such items as knob set screws — escutcheon screws — Parker-Kalon self-tapping screws — rubber grommets — screws — nuts, etc.

No. 5251.....List \$4.75



ICA MASTER SCREW AND NUT ASSORTMENT

Contains a substantial quantity of all the popular sizes machine screws, wood screws, Parker-Kalon self-tapping screws and nuts to match.

No. 5252.....List \$5.50



ICA ANGLE AND BRACKET ASSORTMENT



A complete assortment of 30 popular angles and brackets, nickel plated finish.

No. 5800.....List \$7.75

ICA RUBBER GROMMET ASSORTMENT



Assortment contains popular sizes used in Radio and Electrical Work.

No. 5810.....List \$.75

Contains 28 Rubber Grommets

No. 5811.....List \$1.50

Contains 60 Rubber Grommets

ICA FIBRE WASHER ASSORTMENT

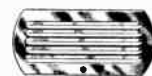


A representative assortment of fibre washers both plain and shoulder, to fit all popular size screws and bolts.

No. 5805.....List \$7.75

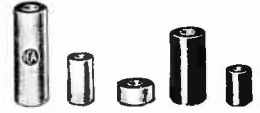
Contains 100 assorted washers

CHROME VENTILATING LOUVRES



Adds attractive touch to any receiver, amplifier, etc. Polished chrome finished steel. Overall size: 5 1/2" long—3" wide.

No. 3525.....List \$9.00



ICA INSULATED AND BRASS SPACERS AND BUSHINGS

Used for raising sub panels, chassis, condensers, etc. For manufacturers, experimenters and laboratory use.

Made of High Quality Brass

No.	Diameter	Length	List per C
5760	3/4"	1 1/2"	\$3.50
5761	1"	3/8"	4.00
5762	1"	3/2"	4.25
5763	1"	3/4"	5.00
5767	1"	3/4"	5.50
5764	3/4"	1"	4.25
5765	3/8"	3/2"	5.00
5766	3/8"	3/4"	5.50
5768	3/8"	1"	5.75

Made of Fenoline Insulation

5775	1/4"	1 1/2"	3.75
5776	3/4"	3/8"	4.50
5777	3/4"	1 1/2"	5.00
5778	3/4"	3/4"	5.50
5782	3/4"	3/4"	7.00
5779	3/4"	1"	5.00
5780	3/4"	3/4"	6.00
5781	3/4"	3/4"	6.50
5783	3/4"	1"	5.75

No.	Threaded Brass Bushings—1/4" Diameter	List
5785	for 6/32 screw	4.25
5786	"	5.25
5787	"	6.50
5788	"	7.50
5794	"	8.00
5790	for 8/32 screw	4.25
5791	"	5.25
5792	"	6.50
5795	"	8.00

Molded Bakelite Spacer Bushing

- No. 2365—Suitable for either spacer or bushing. With brass eyelet... \$2.500
- No. 2366—Same as above—without eyelet 2.000

SPACER AND BUSHING ASSORTMENTS Brass and Insulated

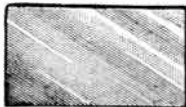


Assortment of 25 spacers and bushings in 1/4" & 3/4" diameters from 1/4" to 3/4" long. Ideal for raising sub panels, chassis, etc.

No.	Description	List
5260	Insulated Assortment	\$1.25
5261	Brass Assortment	1.25
Threaded Brass Bushing Assortments		
5262	16 Assorted Brass bushings. Threaded for 6/32 from 1/4" to 3/4" lengths	1.25
5263	16 Assorted Brass bushings. Threaded for 8/32 from 1/4" to 3/4" lengths	1.25

ICA BAKELITE RADIO PANELS

Black, Polished Mirror Finish



1/8" Thickness			3/16" Thickness		
No.	Size	List	No.	Size	List
832	7 x 10	\$1.55	842	7 x 10	\$2.25
833	7 x 12	1.85	843	7 x 12	2.75
834	7 x 14	2.00	844	7 x 14	3.25
835	7 x 18	3.00	845	7 x 18	4.10
836	7 x 21	3.10	846	7 x 21	4.65
837	7 x 24	3.50	847	7 x 24	5.50
840	7 x 30	4.50	850	7 x 30	6.75
860	10 x 12	2.75	863	10 x 12	4.15
861	10 x 18	3.65	864	10 x 18	5.65

ICA FULL SIZE BAKELITE SHEETS

Black Glossy Finish

No.	Size	Thickness	App. Wt.	List
852	38" x 49"	1/8"	6 lbs.	\$21.50
853	38" x 49"	3/16"	8 lbs.	27.00
854	38" x 49"	1/4"	12 lbs.	44.00
857	38" x 49"	3/8"	16 lbs.	55.00
858	38" x 49"	1/2"	20 lbs.	66.00

Prices on other sizes or thicknesses quoted on request

ICA ALUMINUM PANELS

ICA Aluminum panels and sheets have a bright silver finish and are supplied in the following sizes:

No.	Size	List	No.	Size	List
1194	7 x 10	\$1.35	1200	7 x 24	\$3.50
1195	7 x 12	1.60	3157	10 x 12	2.75
1196	7 x 14	1.75	3158	10 x 18	3.15
1198	7 x 18	2.35	3159	10 x 24	5.50
1199	7 x 21	2.85			

SEE OTHER PAGES FOR

ICA'S COMPLETE LINE OF RELAY RACK PANELS AND CHASSIS BASES (STEEL OR ALUMINUM), RACK CABINETS, AMPLIFIER CHASSIS, SPEAKER CABINETS, ETC. SPECIAL SIZE CABINETS AND CHASSIS MADE TO SPECIFICATIONS.

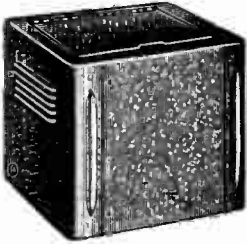
ICA

INSULINE

RADIO PRODUCTS

ICA

ICA DE LUXE HINGED STEEL CABINETS



The cabinets have rounded corners with specially designed Chrome plated "Air-Gate" ventilators on sides; and vertical Chrome Plated Trim moulding on front. Modern grille type ventilators are provided on the back panels which also have an opening on the bottom to allow for leads, cable connections, etc.

Bottoms have 4 embossed feet. Finished in a beautiful Marine Gray Ripple Enamel.

No.	H.	W.	D.	Panel Size	List
3860	8" x 10"	8"	8"	8" x 8"	\$7.25
3861	8" x 12"	8"	8"	8" x 10"	7.50
3862	8" x 14"	8"	8"	8" x 12"	9.00
3863	12" x 20"	12"	12"	12" x 18"	14.00

ICA STANDARD HINGED STEEL CABINETS

Designed in the same style and appearance as the De Luxe cabinets shown above except that the Chrome trim is eliminated. Sides and backs have ventilating louvers. Backs have opening for cable connections, etc. Top panel hangs on full sized piano type hinge. Bottoms have 4 embossed feet. Finished in Marine Gray Ripple Enamel.

No.	H.	W.	D.	Panel Size	List
3925	8" x 10"	8"	8"	8" x 8"	\$5.00
3926	8" x 12"	8"	8"	8" x 10"	5.50
3927	8" x 14"	8"	8"	8" x 12"	7.13
3928	12" x 20"	12"	12"	12" x 18"	13.00

CHASSIS FOR ICA CABINETS

No.	Size	For Cabinet Numbers	List
4024	7" x 7" x 2"	3860 and 3925	\$1.40
4004	7" x 9" x 2"	3861 and 3926	1.50
4005	7" x 11" x 2"	3862 and 3927	1.65
4033	10" x 17" x 3"	3863 and 3928	2.20

ICA DE LUXE SLOPING PANEL CABINETS

The top corners are rounded and trimmed with an attractive striped chrome trim. The sides of the cabinets have the beautiful "Air-fiate" Chrome ventilators. The front panel is removable so that the chassis can be attached to it and used as one unit. Beautifully finished in Marine Gray Ripple Enamel.

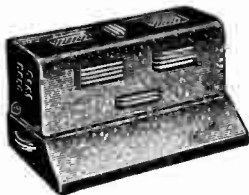


No.	H.	W.	D.	List
3990	8" x 8"	8"	8"	\$6.60
3991	8" x 10"	8"	8"	7.25
3992	8" x 14"	8"	8"	9.50
3993	12" x 18"	12"	12"	12.75

CHASSIS FOR ICA CABINETS

No.	Size	For Cabinet Number	List
4024	7" x 7" x 2"	3990	\$1.40
4004	7" x 9" x 2"	3991	1.50
4007	7" x 13" x 2"	3992	1.80
4033	10" x 17" x 3"	3993	2.20

ICA DE LUXE SLOPING CHASSIS AMPLIFIER UNITS



Chassis are sloped and are equipped with beautiful chrome trimmed handles. Slope provides ample space for mounting instruments. The top covers have beautiful Chrome Plated "Air-Gate" Ventilators with striped chrome trim. Supplied with ventilating louvers on sides and back. Have raised rectangular screen opening on the tops, embellished with chrome moulding. Marine Gray Ripple finish.

No.	Overall Size	Chassis Bottom	Chassis Slope Height	Slope Size	List
3962	7" x 17" x 9 1/2"	10" x 17"	3 1/2"	4"	\$10.25
3963	10" x 14" x 9 1/2"	13" x 14"	3 1/2"	4"	11.00
3964	10" x 17" x 9 1/2"	13" x 17"	3 1/2"	4"	11.50

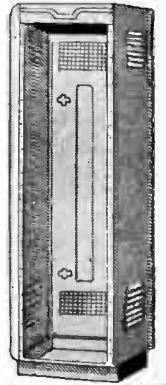
ENCLOSED RELAY RACKS

A beautifully streamlined designed rack for transmitters and public address systems. Front vertical; corners rounded. Rack is fabricated of 1/16" cold rolled steel; panel mounting angle of 1/8" steel. Universally drilled for either Amateur or Western Electric type panels. Panels fit into recess so edges are not exposed. Screen ventilators on rear door and louvers on sides afford proper ventilation. Rear door hung on sturdy hinges and equipped with two flush snap catches. Shipped "KNOCKED DOWN" with all necessary hardware. Finished in Marine gray ripple finish. Black Ripple furnished only if specified.

No. 3870 List \$43.50	Overall Size	42" x 22" x 16 1/2"
	Panel Space	36 3/4" x 19"
	Interior Width	17 5/8"
	Interior Depth	15 1/4"
Shipping Weight 97 Lbs.		

No. 3871 List \$63.50	Overall Size	66 1/2" x 22" x 16 1/2"
	Panel Space	61 3/4" x 19"
	Interior Width	17 5/8"
	Interior Depth	15 1/4"
Shipping Weight 145 Lbs.		

No. 3872 List \$74.50	Overall Size	82 1/4" x 22" x 16 1/2"
	Panel Space	77" x 19"
	Interior Width	17 5/8"
	Interior Depth	15 1/4"
Shipping Weight 172 Lbs.		



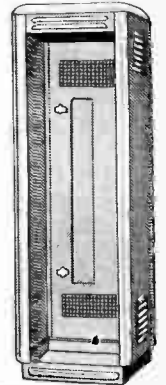
ICA DE LUXE TRANSMITTER RACKS

New modern design, streamlined transmitter and public address racks. Removable vertical corner mouldings are rounded and completely cover panel edges and mounting screws. Chrome trim. Rack is made of 1/16" cold rolled steel. Panel mounting angles drilled for either Amateur or Western Electric type panels. Screen ventilators on rear door and louvers afford ample ventilation. Easily assembled. Supplied in Marine gray ripple finish. Black ripple finish furnished only on specification.

No. 3865 List \$61.75	Overall Size	43 1/4" x 22" x 18"
	Panel Space	36 3/4" x 19"
	Interior Width	17 5/8"
	Interior Depth	16 3/4"
Shipping Weight 110 Lbs.		

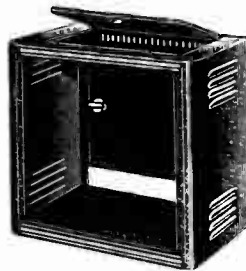
No. 3866 List \$78.90	Overall Size	67 3/4" x 22" x 18"
	Panel Space	61 3/4" x 19"
	Interior Width	17 5/8"
	Interior Depth	16 3/4"
Shipping Weight 162 Lbs.		

No. 3867 List \$94.50	Overall Size	83 1/2" x 22" x 18"
	Panel Space	77" x 19"
	Interior Width	17 5/8"
	Interior Depth	16 3/4"
Shipping Weight 190 Lbs.		



ICA MULTI-USE METAL CABINETS

An ideal unit for public address systems, transmitters, receivers, test equipment, etc. Has rounded corners on front of Cabinet. Trimmed with handsome chrome trim moulding. Equipped with hinge doors, and nickel brass snap locks. Completely assembled, ready for use. Finished in Black or Marine Gray Ripple Enamel. Black will be supplied unless Gray is specified.



No.	Size	Depth	List
No. 3880	10 1/2" x 21"	15" Deep.	\$16.50
	Door on top only. Panel space 8 3/4" x 19"		

No. 3881	Size 14" x 21" x 15" Deep.	20.00
	Door on top only. Panel space 12 1/4" x 19".	

No. 3882	Size 19 1/4" x 21" x 15" Deep.	27.75
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No. 3883	Size 28" x 21" x 15" Deep.	32.00
	Door on rear panel only. Panel space 26 1/4" x 19".	

No. 3884	Size 36 3/4" x 21" x 15" Deep.	35.50
	Door on rear panel only. Panel space 35" x 19".	

ICA INSULINE ICA

RADIO PRODUCTS

ICA STANDARD AMPLIFIER FOUNDATION UNITS



Top covers have rounded corners. The front, sides and back are equipped with louvre ventilators. The tops have raised screen openings for additional ventilation.

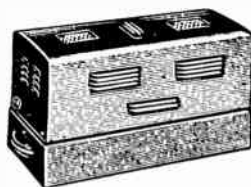
Finished in beautiful Marine Gray Ripple Enamel.

No.	Size	Height of Chassis	List
3980	5 1/2" x 10" x 9"	3"	\$3.75
3981	8" x 12" x 9"	3"	5.50
3982	7" x 17" x 9"	3"	5.75
3983	10" x 14" x 9"	3"	6.25
3984	10" x 17" x 9"	3"	6.50

ICA DE LUXE AMPLIFIER FOUNDATION CHASSIS

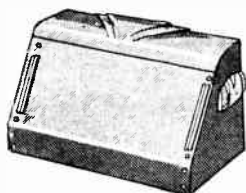
Top covers have rounded corners and fronts are embellished with the newly created Chrome plated "Air-Gate" Ventilators. Additional ventilation is obtained through the raised screen openings on the top as well as louvres on both sides and back.

Have beautiful Chrome mouldings and Chrome handles. Finished in Marine Gray Ripple Enamel.



No.	Size	Height of Chassis	List
3971	5 1/2" x 10" x 9"	3"	\$6.15
3972	8" x 12" x 9"	3"	8.00
3973	7" x 17" x 9"	3"	8.25
3974	10" x 14" x 9"	3"	9.00
3975	10" x 17" x 9"	3"	9.50

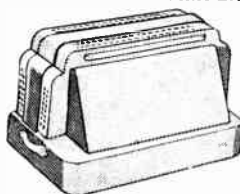
FUTURA STREAMLINED SLOPING PANEL CABINETS



Can be used as instrument cases in studios, laboratories, etc. Raised "Futura" design — streamlined corners. Ventilator openings for cable connectors. Removable front panel. Finished in Marine Gray Ripple enamel with chrome moulding.

No.	H.	W.	D.	List
3840	8"	8"	8"	\$8.00
3841	8"	10"	8"	9.00
3842	8"	14"	8"	11.00
3843	8"	18"	8"	13.50
3844	12"	18"	12"	15.00

"SUPER" STREAMLINED SLOPING-FRONT AMPLIFIER CHASSIS



New, modern design amplifier chassis. Front panel sloped with streamlined top cover. Removable front panel Marine Gray Ripple finish with Chrome trim. Bottom plates supplied. Top cover 6 1/2" high.

No.	Chassis Size	List
3930	10" x 12" x 3"	\$10.00
3931	10" x 17" x 3"	11.50
3932	13" x 17" x 3"	13.00

ICA HINGED COVER CABINETS



Supplied in knocked-down form for easy handling. Easily assembled. Finished in Black Ripple Enamel.

No.	W.	D.	H.	List
3825	9" x 5" x 6"			\$4.00
3826	10" x 8" x 7"			5.00
3828	12" x 8" x 7"			5.75
3829	12" x 11" x 7"			6.85
3830	11" x 8" x 7"			6.85
3831	13" x 12" x 9"			8.60

ICA METAL CABINETS

Black Ripple Finish

Have various uses such as input stages, mixers, transceivers, amplifiers, monitors, etc. Front and back covers are removable and can be fastened to cabinet with self tapping machine screws. Finished in Black Ripple Enamel.



No.	W.	D.	H.	List
3810	4" x 2" x 4"			\$1.35
3811	4" x 3" x 5"			1.45
3800	6" x 6" x 6"			1.65
3801	9" x 5" x 6"			2.55
3802	10" x 8" x 7"			3.25
3803	10" x 8" x 10"			4.00
3804	12" x 11" x 8"			4.30

ICA DE LUXE METER CASES

Finished in Marine Gray Ripple Enamel with rounded tops and trimmed with beautiful Chrome band. Available for 2" or 3" meters.



No.	D.	W.	H.	Hole	List
3995	4 1/4" x 4 3/8" x 4 1/2"			2 1/8"	\$2.25
3996	4 1/4" x 4 1/8" x 4 1/2"			2 1/8"	2.25

CHASSIS FOR ICA CABINETS

No.	W.	D.	H.	Number	List
4000	8 1/2" x 4 3/8" x 1 1/2"			3825	\$1.05
4004	9" x 7" x 2"			3826	1.50
4005	11" x 7" x 2"			3828	1.65
4007	13" x 7" x 2"			3830	1.80
4023	17" x 11" x 3"			3831	3.30

ICA DE LUXE SPEAKER CABINETS



Features rounded corners; neatly chrome trimmed front; equipped with chrome handle. Steel grille. Marine Gray Ripple finish.

No.	Size	Hole	Speaker Size	List
3935	10" x 10" x 6"	4 3/4"	6"	\$7.00
3936	12" x 12" x 7"	6 1/2"	8"	8.80
3937	14" x 14" x 8"	9"	10"	11.00
3938	16" x 16" x 8"	11"	12"	14.50

ICA STANDARD SPEAKER CABINETS

Finished in Black Ripple Enamel with plain black steel handles to match.



No.	Size	Hole	Speaker Size	List
3942	10" x 10" x 6"	4 3/4"	6"	\$5.10
3943	12" x 12" x 7"	6 1/2"	8"	6.10
3944	14" x 14" x 8"	9"	10"	8.00
3945	16" x 16" x 8"	11"	12"	10.75

ICA SLOPING PANEL CABINETS

Small—Compact



New streamlined cabinets, rugged, small and compact, have various uses such as speaker cabinets, oscillator cases, input stages, small receivers, re-talk systems, monitors, etc.

Beautifully designed, with rounded corners and finished in marine gray ripple.

No.	W.	H.	D.	List
3905	4 1/4" x 4 1/2" x 4 1/4"			\$2.15
3906	7 1/2" x 4 1/2" x 4 1/4"			3.85

ICA PORTABLE STEEL CABINETS



Ideal for housing oscillators, transceivers, test equipment, etc. Both front and back panels are removable and are held with self-tapping screws which are supplied. Equipped with leather handle. Finished in black ripple.

No. 3850	Size 12" x 7 3/4" x 7"	List \$4.25
No. 3851	Size 15" x 7 3/4" x 7"	List 4.95

STREAMLINED METER CASES

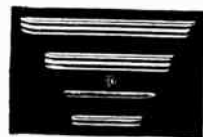


Modern streamlined cases, with raised "futura" design on top of cabinet. Finished in Marine Gray Ripple Enamel and trimmed with chrome band.

No.	D.	W.	H.	Hole	List
3997	4 1/4" x 4 3/8" x 4 1/2"			2 1/8"	\$3.00
3998	4 1/4" x 4 1/8" x 4 1/2"			2 1/8"	3.00

ICA CHROME TRIM MOULDING

Beautiful chrome trim mouldings to dress up any cabinet, chassis, receiver, speaker cabinet, transmitter, etc. Furnished with mounting tracks or clips.



No.	List
3510—Chrome Moulding with single Stripe—size 1/8" w. by 4" l.	\$.80
3513—Chrome Moulding with double Stripe—size 3/4" w. by 8" l.	1.30
3514—Chrome Moulding with double Stripe—size 3/4" w. by 12" l.	1.50
3515—Chrome Moulding with double Stripe—size 3/4" w. by 18 7/8" l.	1.85
3505—Bullet Shape All Chrome Moulding—size 1/8" w. by 6" l.	.80

ICA CHROME HANDLES

No. 3500—Length 4"; width 1 1/8"	List \$.75
No. 3501—Length 5 1/4"; width 1 1/2"	List .75

ICA INSULINE ICA

RADIO PRODUCTS



STEEL OR ALUMINUM CHASSIS BASES

For receivers, transmitters, etc. Bases are folded over on bottom for additional strength and drilled to permit attaching of bottom plates. Solidly constructed. **STEEL BASES**—one piece; heavy duty; zinc plated or black ripple finish. **ALUMINUM BASES**—First grade aluminum, electronically welded. Thickness: .055— $\frac{1}{4}$ Hard.

ICA CHASSIS BOTTOM PLATES



Designed to fit all ICA Chassis Bases and amplifier units listed to the left. Four raised bosses prevent marring or scratching. Supplied in steel or aluminum.

Steel—Zinc Plated Finish		Steel—Black Ripple Finish		Aluminum	
No.	List	No.	List	Gauge	Size
1560	\$1.05	4000	\$1.05	20	4 1/2" x 8" x 1 1/2"
1530	1.10	4001	1.15	20	5" x 9 1/2" x 1 1/2"
1565	1.45	4002	1.40	20	5" x 9 1/2" x 3"
1582	1.55	4032	1.55	20	5 1/2" x 10" x 3"
1566	1.75	4003	1.75	20	5" x 13" x 3"
1526	1.40	4024	1.40	20	7" x 7" x 2"
1569	1.50	4004	1.50	20	7" x 9" x 2"
1570	1.65	4005	1.65	20	7" x 11" x 2"
1527	1.95	4006	1.90	20	7" x 12" x 3"
1571	1.80	4007	1.80	20	7" x 13" x 2"
1572	2.15	4008	2.15	20	7" x 15" x 3"
1528	2.15	4009	2.15	20	7" x 17" x 3"
1567	2.15	4013	2.15	20	8" x 12" x 3"
1573	2.30	4014	2.30	20	8" x 17" x 2"
1575	2.45	4035	2.45	20	8" x 17" x 3"
1520	2.35	4016	2.35	20	10" x 12" x 3"
1568	2.45	4017	2.45	20	10" x 14" x 3"
1583	2.20	4033	2.20	20	10" x 17" x 3"
1521	2.65	4018	2.65	18	10" x 17" x 3"
1522	3.30	4019	3.30	18	10" x 23" x 3"
1577	3.00	4027	3.00	18	11" x 17" x 2"
1519	3.30	4023	3.30	18	11" x 17" x 3"
1574	3.00	4020	3.00	18	12" x 17" x 2"
1578	3.30	4028	3.30	18	12" x 17" x 3"
1579	3.60	4029	3.60	18	13" x 17" x 2"
1524	4.15	4021	4.15	18	13" x 17" x 3"
1580	3.50	4030	3.50	18	10" x 17" x 4"
1581	4.70	4031	4.70	18	13" x 17" x 4"
				4	4" x 17" x 3"

Steel		List Price	Size	Aluminum	
Zinc Plated	Black Ripple			No.	List Price
1601	4051	\$.65	5" x 9 1/2"	8725	\$.90
1625	4075	.70	5 1/2" x 10"	8702	.95
1602	4052	.75	5" x 13"	8723	.90
1623	4073	.75	7" x 7"	8703	.95
1603	4053	.75	7" x 9"	8704	1.05
1604	4054	.90	7" x 11"	8705	1.10
1605	4055	.95	7" x 12"	8706	1.20
1606	4056	.95	7" x 13"	8707	1.25
1607	4057	1.05	7" x 15"	8708	1.35
1608	4058	1.10	7" x 17"	8712	1.30
1612	4062	1.10	8" x 12"	8713	1.50
1613	4063	1.15	8" x 17"	8715	1.45
1615	4065	1.15	10" x 12"	8716	1.55
1616	4066	1.20	10" x 14"	8717	1.75
1617	4067	1.40	10" x 17"	8718	2.10
1618	4068	1.80	10" x 23"		
1622	4072	1.40	11" x 17"		
1619	4069	1.50	12" x 17"	8719	2.25
1620	4070	1.80	13" x 17"	8720	2.35
1624	4074	1.50	13" x 14"		

ICA SLOPING FRONT CHASSIS

Has a sloping front for mounting instruments. Has the effect of a beautiful open cabinet receiver, or amplifier unit, when used without top covers. Heavy Duty Steel, finished in Black Ripple Enamel. Top of Bottom of

No.	Base	Base	Hgt.	Slope	List
3320	7x17"	10x17"	3 1/2"	4"	\$3.30
3321	10x14"	13x14"	3 1/2"	4"	3.65
3322	10x17"	13x17"	3 1/2"	4"	4.15

ICA CHASSIS MOUNTING BRACKETS

Made to fit on 17" relay rack chassis. Panels must be at least 7" high.

Black ripple finish.

No.	For	Per Pair	List
3955	For 8" base	Per Pair	\$1.25
3958	For 10" base	Per Pair	1.70
3956	For 11" base	Per Pair	1.90
3957	For 13" base	Per Pair	2.20

ICA MASONITE RELAY RACK PANELS

Made of Tempered Masonite—a non-magnetic material, sturdy and tough yet easily drilled and worked with ordinary wood-working tools and punches. Finished in Black or Gray. Supplied in Black Ripple finish unless Gray is specified.

No.	Size	List
3662	1 3/4" x 19"	\$.85
3663	3 1/4" x 19"	1.10
3664	5 1/4" x 19"	1.45
3665	7" x 19"	1.60
3666	8 3/4" x 19"	2.00
3667	10 1/4" x 19"	2.25
3668	12 1/4" x 19"	2.50
3669	14" x 19"	2.80
3670	15 3/4" x 19"	3.10
3671	17 1/4" x 19"	3.60
3672	19 1/4" x 19"	4.00
3673	21" x 19"	4.35

SPECIAL SIZES RACK PANELS TO ORDER
We can supply Rack Panels in any thickness from 1/4" to 1/2" in Steel, Aluminum or Masonite; in any finish to specifications.

STANDARD RELAY RACK PANELS

Supplied in Amateur Rack notching, first notch 7/8" from edge of panel and 1 1/4" between centers. 19" long. Completely slotted. 1/8" thick. Made of steel (in black ripple or gray finish) or aluminum.

Steel			Aluminum		
Black	Gray	List	No.	Price	List
3600	3612	\$1.10	8600	\$1.35	
3601	3613	1.25	8601	2.15	
3602	3614	1.45	8602	2.90	
3603	3615	1.55	8603	3.35	
3604	3616	1.95	8604	4.10	
3605	3617	2.20	8605	5.30	
3606	3618	2.70	8606	6.20	
3607	3619	3.10	8607	7.10	
3608	3620	3.60	8608	7.90	
3609	3621	3.85	8609	8.40	
3610	3622	4.15	8610	9.40	
3611	3623	4.70	8611	9.90	

ICA RELAY RACK BRACKETS



Black Ripple Finish.

Used to reinforce racks and for mounting of panels, shelves, chassis, etc.

No.	List
3950—5" Base Brackets	Per Pair \$1.05
3951—6" Base Brackets	Per Pair 1.50
3952—11" Base Brackets	Per Pair 2.00



T-SHAPED MOUNT RELAY RACKS

Sturdily constructed heavy duty table rack with one piece base. Accurately drilled mounting holes. Finished in black ripple. Supplied "KNOCKED DOWN" with all necessary hardware.

No.	W.	H.	D.	Panel Space	List
3910	21"	25"	12"	21" x 19"	\$9.00
3911	21"	32"	12"	28" x 19"	10.50

ICA METER PANELS

Slotted to fit all standard racks. Finished in Baked Black or Gray Ripple. Size 5 1/4" x 19". Black will be shipped unless Gray is specified.

STEEL PANELS

No.	No. Holes	Meter Size	Hole	List
3651	5	2"	2 1/8"	\$3.60
3652	3	2"	2 1/8"	2.50
3653	5	3"	2 1/8"	3.60
3654	3	3"	2 1/8"	2.50

MASONITE PANELS

No.	No. Holes	Meter Size	Hole	List
3641	3	2 1/4"	2 1/8"	\$2.25
3642	4	2 1/4"	2 1/8"	2.50
3643	3	2 3/8"	2 1/8"	2.25
3644	4	2 3/8"	2 1/8"	2.50

ICA METAL PANELS

Thickness of Panels 1/8" Black Ripple Finish



No.	Size	List
3175	7" x 10"	\$.80
3176	7" x 12"	.90
3177	7" x 14"	1.20
3178	7" x 18"	1.50
3183	8" x 12"	1.15
3184	8" x 14"	1.30
3186	8" x 18"	1.50
3191	10" x 14"	2.00
3192	10" x 18"	2.35
3194	10" x 24"	2.75

ICA MASONITE PANELS

Black Ripple Finish Thickness of panel 1/8"



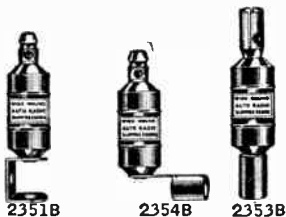
No.	Size	List
810	7" x 10"	\$1.00
811	7" x 12"	1.10
812	7" x 14"	1.25
813	7" x 18"	1.50
814	7" x 21"	1.65
815	8" x 12"	1.35
816	8" x 14"	1.45
817	8" x 16"	1.65
818	8" x 18"	1.80

ICA INSULINE ICA

RADIO PRODUCTS

AUTO RADIO CONDENSERS AND SUPPRESSORS

ICA WIRE WOUND SUPPRESSORS
LOW RESISTANCE 30 OHMS. D. C.



These suppressors have an extremely low D.C. resistance and thus definitely do not affect the intensity of the ignition spark or cut down the speed of the car.

- | | |
|---|-------|
| No. | List |
| 2351B—Spark Plug Suppressor | \$.65 |
| 2353B—Distributor Suppressor | .65 |
| 2354B—1940-41 Slip-On Suppressor;
Will Also Fit Older Type Cars..... | .65 |

ICA AUTO ANTENNA CONNECTORS AND ADAPTERS



No. 2347—Antenna Connector. List.....\$1.10 ea.



No. 2348—Standard Fuse Holder. List.....\$.15 ea.

No. 2349



Jumbo Fuse Holder
2 1/2 long x 1/2 wide
List.....\$.30 ea.



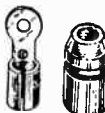
No. 2372—Lead-in Adapter—converts standard leads to Motorola Fittings. List.....\$.30 ea.



No. 2375—Motorola Pin Plug.....List \$.10 ea.
No. 2378—Motorola Shielded Jack
List \$.20 ea.



No. 2396—Lead-in Adapters—converts Motorola lead to Deleo Fittings. List.....\$.10 ea.



No. 2357
Ignition Cap Nut
List.....\$2.00 C

No. 2356
Ignition Cable Lug
List.....\$2.00 C

ICA WHEEL HUB STATIC ELIMINATOR



Used under hub of front wheel. An essential on all cars to eliminate front wheel static. Less Back Plate and screw.
No. 4476B.....List \$.15



2360



2361



2362



2363



2364



2365

- ### REPLACEMENT PARTS FOR ANTENNA AND FUSE RETAINERS
- | | |
|--|-------------------|
| No. 2360—Female sleeve of fuse connector | List \$5.00 per C |
| No. 2361—Female sleeve of antenna connector | List \$3.50 per C |
| No. 2362—Male part of antenna connector | List \$3.00 per C |
| No. 2363—Spring for both antenna and fuse connectors | List \$1.00 per C |
| No. 2364—Fiber insulator for auto fuse holder | List \$.90 per C |
| No. 2365—Bakelite eyelet bushing | List \$2.50 per C |

ICA SUPER-TEST AUTO RADIO IGNITION SUPPRESSORS

Made of Moulded Bakelite—All Metal Parts Made of Rugged Machined Brass



- | | |
|--|-------|
| Type No. | List |
| E—349B—Spark Plug Slip-on Suppressor. Fits 1940-41 cars..... | \$.30 |
| E—349F—Slip-on Spark Plug Suppressors for New Model Ford cars..... | .30 |
| D—350B—Spark Plug Suppressors with Dual Threaded Inserts..... | .30 |
| D—351B—Spark Plug Suppressors for Ford cars up to 1939..... | .30 |
| A—377—Bracket type Suppressor..... | .30 |
| B—352B—Distributor Suppressor for all cars..... | .35 |
| C—4461—Ford Early Models..... | .35 |
| C—4463—Ford Late Models..... | .35 |

MASTER DIST. CARBON SUPPRESSOR — 10,000 OHMS

For use on new type cars where only one suppressor is needed. Master Suppressor is guaranteed to eliminate all motor noise—making unnecessary the use of individual suppressors.



No. 330.....List \$.75



ICA AUTO BY-PASS CONDENSER

For by-passing ammeter, dome light or generator. Capacity 1/2 mfd.

No. 1244.....List \$.55

ICA GENERATOR SILENCER

Heavy duty generator condenser eliminates generator, ammeter, distributor noises. Capacity 1 mfd.



No. 1243.....List \$.80



ICA FORD V8 NOISE SILENCER

No. 1245
List \$.85

ICA FORD V8 CONDENSERS FOR 1939-1941 MODELS

Equipped with Special Bracket. Capacity 1/2 mfd.



No. 1246.....List \$.80

INTERFERENCE SUPPRESSOR SET



For Auto Radio
All the needed condensers, suppressors, etc. for a complete installation. Neatly packaged as a complete unit. Includes easy instructions. For all cars—old and new. Packed individually or in attractive counter display holding 6 Sets.

- | | | |
|------|----------------------------------|--------|
| No. | For | List |
| SK-1 | —8 Cyl. Cars (except Fords)..... | \$4.00 |
| SK-2 | —6 Cyl. Cars (except Fords)..... | 3.40 |
| SK-3 | —Ford Cars (to 1938)..... | 4.00 |
| SK-4 | —Ford Cars ('39 to current)..... | 4.05 |

ELBOW SHAPED SUPPRESSOR



Auto ignition suppressor. Elbow type. Molded-in-bakelite. Machined brass. Metal parts.

No. 4464.....List \$.30

ICA AERIAL KITS



Carries all the essentials for complete antenna installation, packed in handsome 2-color box. Includes:

- 50 ft. heavy 7 strand tinned copper aerial wire, 22 gauge—30 ft. stranded copper, insulated weatherproof, lead-in wire—10 ft. ground wire, 22 gauge—Ground Clamp—Lead-in Strip—Underwriters' Approved Lightning Arrestor—2 Porcelain Insulators—2 Nail-it Knobs.

No. 654.....List \$2.50

SPECIAL KIT

Includes the following aerial kit elements:

- 50 ft. heavy 7/22 tinned copper aerial wire—30 ft. stranded copper insulated weatherproof lead-in wire—10 ft. No. 22 Ground wire, 2 Porcelain insulators—Ground Clamp—Lead-in strip—Lightning arrestor.

No. 653.....List \$2.25

CAPITALIZER KIT

Includes the following components:

- 100 ft. 7/26 tinned aerial wire—30 ft. insulated lead-in wire—lightning arrestor—2 Porcelain insulators—Ground Clamp—Lead-in strip.

No. 651.....List \$1.65

JUNIOR KIT

A utility kit for high-grade performance. Includes:

- 100 ft. 7/26 tinned aerial wire—30 ft. insulated lead-in wire—2 porcelain insulators. Ground Clamp—Lead-in strip.

No. 649.....List \$1.35

ANTENNA ACCESSORIES

- | | |
|---------------------------------------|-------|
| No. | List |
| 227 —Porcelain Insulator—glazed..... | \$.10 |
| 223 —Ground Clamp—adjustable..... | .10 |
| 1504 —Lead-in strip—1/2" wide..... | .15 |
| 1504TW—Twin wire lead-in strip..... | .10 |
| 336 —Approved Lightning Arrestor..... | .35 |

TELEVISION ACCESSORIES

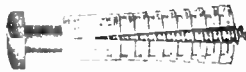
CARBIDE TIPPED MASONRY DRILLS



These drills are carbide tipped and have a spiral fluted body. It penetrates freely and easily, giving clean accurate holes. Individually packed complete with operating instructions.

No.	Size	Each
1234	1/4"	\$3.75
1236	3/8"	4.75
1235	1/2"	6.00

LAG SCREEN EXPANSION SHIELD



This expansion shield is extensively used in television antenna installations. Made of a special alloy — 100% rust proof. Newly designed threads hold greater load and external corrugations (ribs) give additional strength on masonry. This shield is 1" long x 1/2" O.D. and takes our standard 1/4" x 1 1/4" lag screw.

No. 1230 \$18.00 per C

STUD ANCHORS

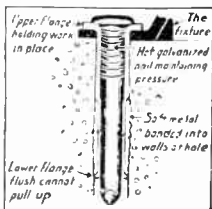


Stud Anchor consists of Cone-Headed Bolt, Lead Alloy Sleeve-Metal Cone and Square Nut completely assembled as above.

The bolt has two fins on its tapered section to lock into lead sleeve after the anchor has been set. This prevents the bolt from turning when the square nut is tightened. Fits into a 1/2" hole and is 2" long overall. Instructions for installation: Drill hole proper diameter and depth — place Star Stud in anchor into hole, head of the bolt first — remove the square nut — place setting tool or piece of pipe over bolt and hammer anchor solidly.

No. 1232 \$18.00 per C

DRIVE IN EXPANSION SHIELD

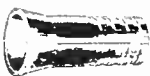


This is an expansion shield which uses nails as an expansion on locking pin. Drill 1/4" hole in the masonry and pass shield through mounting hole of object being attached so that top flange remains above fixtures. The nail, under the hammer blow, forces the lead into all the irregularities of the masonry

hole, then passes through and locks anchor flange of bottom under the lead. The length of the shield is 1 1/2".

No. 1233 \$15.00 per C

LEAD ANCHORS FOR WOOD SCREWS



This is a new design anchor which gives greater holding power; requiring a smaller installation hole for the corresponding size screws. It takes more sizes of screws grouped in a more convenient series than other designs. It also has a larger range of holding power through various sizes of hole diameters. These anchors are 1/8" O.D., take a 10-12-14 wood screw and are forced into a 1/8" or 1/4" hole.

No. 1231 1" long \$ 7.00 per C
 No. 1239 1 1/2" long 10.00 per C

PIPE STRAPS



These pipe straps are made of galvanized iron and are available in two sizes to fit over 1" and 1 1/2" pipes.

No.	Size	Per C
1211	1"	\$ 8.00
1212	1 1/2"	14.00

SCREW EYE



This screw eye has a special low-loss polyethylene insert and is specially designed for use in 300-ohm line television installations.

No. 1210	3 1/2"	\$11.00 per C
No. 1240	7 1/2"	15.00 per C

LAG BOLT



No. 1213 1/4" x 1 1/4" \$6.00 per C

MIDGET TURNBUCKLES



No.	Diameter of Bolt	Overall Lgt. Closed	Overall Lgt. Extended	List Price Each
1215	5/32"	3 3/8"	4 5/8"	\$0.21
1216	3/16"	4"	5 5/8"	.23
1217	1/4"	4 1/2"	6 3/8"	.25
1218	3/8"	5 1/2"	7 5/8"	.30
1219	5/16"	6 3/4"	9 1/4"	.50
1220	3/8"	7 1/2"	10 1/2"	.75

SOLDERLESS TERMINAL LUGS



These lugs are easily applied and do not require the use of any special tool. They are designed to give a trim appearance to an otherwise unsightly wire connection.

They fold neatly over the stranding and confine it directly under binding screw or nut and automatically insure greatest possible contact.

The cushion-like construction of these lugs, when closed, permits binding nut or screw to sink into the soft copper and so serves the purpose of a lock nut and is therefore vibration proof. Packed 100 per box.

No.	Wire Size	Type	Length	Per C
1459	18 to 14	Double Cup	1 1/16"	\$3.50
1460	18 to 10	" "	1 3/16"	3.75
1461	18 to 10	" "	1 5/16"	4.00
1462	18 to 14	Single Cup	1 1/4"	1.50
1463	18 to 14	" "	3/8"	1.75

SMITH

Electronic Components
HERMAN H. SMITH, INC.

BAKELITE FLAT PULL CAP



Approved and listed with U. L. This handy unit consists of two halves of bakelite held together by a screw and nut. The prongs are of heavy brass and have screw terminals for connecting wire leads. Attractively designed for visible use and with an "easy-grip" shape to facilitate insertion and removal from any receptacle. Colors: brown and ivory.

No.	Color	Per C
854	Brown	\$17.00
855	Ivory	21.00

BAKELITE PONY CAP



Bakelite Pony Cap with Brass Prongs.

No.	Color	Per C
858	Brown	\$13.00
859	Ivory	17.00

ATTACHMENT PLUG BASE



A snug-fitting, sturdy, bakelite base designed for use with standard attachment plug caps. Has slot finding features on its face and heavy spring contacts for positive and lasting electrical contact. 660 watts — 250 volts.

No. 857 \$17.00 per C

AMERICAN-FOREIGN PLUG ADAPTER



British Type

Streamlined bakelite plug adapter, which adapts from American to foreign type plugs. The plugs will fit snugly into the adapter. Prongs are made of brass and are of the BRITISH TYPE spacing.

No. 856 \$30.00 per C

RUBBER FEET BUMPER



Rubber Bumper— $\frac{5}{8}$ " diameter x $\frac{3}{16}$ " thick. Recessed to accommodate a self-tapping screw, machine screw, wood screw or a tack.

No. 2184 \$4.00 per C

Insert Rubber Bumper—O.D. of shoulder $\frac{1}{2}$ " x $\frac{3}{16}$ " thick. Insert $\frac{1}{8}$ " long tapered from $\frac{1}{8}$ " to $\frac{1}{4}$ ".

No. 2183 \$3.00 per C

FELT FEET



Available in two types, either with a 6-32 x $\frac{3}{8}$ " machine screw or with an "Anchor Fast" nail, which will stay in place, and will not back up, pull out, or "pop."

No.	Type	Per C
2181	With Machine Screw	\$6.50
2182	With Stronghold Nail	7.00

TERMINAL BOARDS

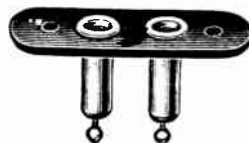
Screw Type



Brass hot tinned lugs mounted on $\frac{1}{16}$ " bakelite. Lugs are spaced $\frac{1}{16}$ " center to center.

No.	Terminals	Mounting Center	Per C
872	2	1 $\frac{5}{16}$ "	\$10.00
873	3	1 $\frac{3}{4}$ "	15.00
874	4	2 $\frac{1}{16}$ "	25.00
875	5	2 $\frac{5}{8}$ "	30.00
876	6	3 $\frac{1}{16}$ "	35.00
877	7	3 $\frac{1}{2}$ "	40.00

PHONO TIP JACK



Brass nickel plated jacks with positive contact springs mounted on $\frac{1}{16}$ " bakelite. Jacks are $\frac{1}{16}$ " center to center. Jacks will accommodate standard phone tips of either solderless or solder types.

No. 878 \$20.00 per C

CLOSED CIRCUIT CHASSIS CONNECTOR



Same as No. 117 Connector except that circuit closes when female microphone connector (our No. 116) is removed. Supplied complete with washers, soldering lug and nut.

No. 114 \$0.40 each

INSULATED SPADE LUG



Insulated sleeve $\frac{3}{8}$ " diameter, $\frac{3}{4}$ " long and available in Black and Red colors. The barrel of the insulated sleeve will accommodate all standard type banana plugs.

No.	Type	Per C
218	Insulated Lug	\$15.00
129	Lug only	2.00

MINI-MAX CONNECTING STRIP



This fastening connecting strip is spaced so that it will snap into all 67 $\frac{1}{2}$ -volt mini-max "B" batteries such as Eveready Nos. 455, 466 and Burgess Nos. XX30, XX45.

No. 1205 \$25.00 per C

LEAD-IN ADAPTER



Lead-in adapter converts Motorola pin plug to Delco type plug.

No. 1204 \$11.00 per C

MOTOROLA SHIELDED JACK



Shielded Jack for Automobile Chassis which takes standard Motorola Plug.

No. 1207 \$18.00 per C

H AND H TOGGLE SWITCHES

Rated 1 Amp. 250 Volts, 3 Amps. 125 Volts. Switches are nickel plated and supplied with mounting nut.



No.	Type	Shaft	Each
500	S P S T	1 5/32"	\$0.60
501	S P S T	1"	.66
502	S P D T	1 5/32"	.75
503	S P D T	1"	.85
504	D P S T	1 5/32"	1.15
505	D P S T	1"	1.25
506	D P D T	1 5/32"	1.30
507	D P D T	1"	1.40
508	On and Off Name Plate		.05

BAT HANDLE TOGGLE SWITCHES

These switches are the same as described above with bat shaped handle. Shaft length 1 5/32".



No.	Type	Each
510	S P S T	\$0.60
511	S P D T	.75
512	D P S T	1.15
513	D P D T	1.30

ROTARY TOGGLE SWITCHES

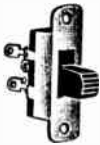
Made by H & H, rated at 1 amp, 250 volts, 3 amps. 125 volts. Switches are nickle plated and supplied with mounting nut.



No.	Type	Over-Threaded Shank	all Length	Each
570	SPST	3/8"	1 1/2"	\$0.80
571	SPDT	3/8"	1 1/2"	.90
572	DPST	3/8"	1 1/2"	1.40
573	DPDT	3/8"	1 1/2"	1.70

SLIDE LEVER SWITCHES

Rated 1 1/2 Amps. 110 Volts. Size 1 3/8" x 1/2". Mounting centers 1 1/4".



No.	Type	Each
515	S P S T	\$0.30
516	S P D T	.35
517	D P S T	.45
518	D P D T	.50

HEAVY DUTY POWER SWITCHES

These Heavy Duty Power Switches are made by H & H and are specially recommended for use in amplifiers, transmitters, motors and all heavy current circuits where heavy current is carried. Available in 3 types with neutral off in center position. Rated at 10 amps, 125 volts. Measures 2" long, 1" high, 1 1/4" wide, mounting sleeve diameter 5/8".



No.	Type	Each
574	DPDT	\$6.00
575	TPDT	9.00
576	4PDT	13.25

MOLDED BAKELITE SWITCHES



Made by H & H, rated at 3 amps 250 volts, 6 amps 125 volts. Bat Lever type with silver plated contacts. 15/32" slotted sleeve.

No.	Type	Shaft	Each
520	S.P.S.T.	15/32"	\$1.05
521	S.P.D.T.	15/32"	1.20
522	D.P.S.T.	15/32"	1.40
523	D.P.D.T.	15/32"	1.70

PUSH BUTTON MOMENTARY SWITCH



Two circuit slow make and break Momentary Switch made by H & H. Solder lug, one circuit normally "ON", one circuit normally "OFF". 5/8" slotted sleeve, rated at 75 watts, 125 volts.

No. 580.....\$1.05 each
Casein buttons in black and red colors can be obtained for the above switch.

ANTENNA CONNECTOR



For use as connection of auto radio antenna lead-in to auto radio receiver.

No. 1300.....\$10.00 per C

FUSE RETAINER



Recommended for use in auto radio power supply cables.

No. 1301.....\$14.00 per C

Parts for Connector and Retainer

No.	Item	Per C
1305	Male Cap for No. 1300 and No. 1301	\$1.50
1306	Female Shell for No. 1300	1.50
1307	Contact for No. 1300 and No. 1301	2.00
1308	Spring for No. 1300 and No. 1301	.50
1309	Washer for No. 1300 and No. 1301	.40
1310	Insulating Tube for No. 1301	.60
1311	Female Shell for No. 1301	2.50

JUMBO FUSE HOLDER



This Jumbo Fuse Holder is 2" long, 1/2" diameter and is for use with Philco and Motorola auto receivers. All parts comprising bushings, springs, contacts, etc., are furnished unassembled, packed in individual envelopes.

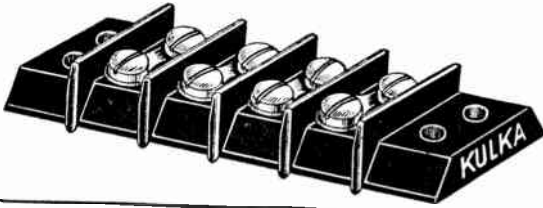
No. 1302.....Each \$0.25

SMITH

Electronic Components

HERMAN H. SMITH, INC.

HEAVY DUTY BAKELITE BARRIER TERMINAL STRIPS



This latest type of construction of bakelite strip is made of molded bakelite of very high tensile strength. The barriers between each terminal prevent any possibility of short circuits and leakage between terminals. The terminals and screws are brass, nickel plated. These strips are manufactured by the KULKA ELECTRIC MFG. CO. INC., Design Patent No. 136,762 and are exclusively distributed by us to the Radio Parts Distributors.

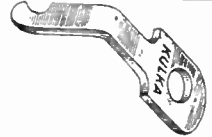
All the Barrier Terminal Strips enumerated in the columns below for the 1500, 1600 and 1700 series are made with screw type terminals exactly as the illustration at top of page.



All the Barrier Strips enumerated in the columns below for the 1500, 1600 and 1700 series are supplied with the two solder connection lug illustrated above.



All the Barrier Strips enumerated in the columns below for the 1500, 1600 and 1700 series are supplied with the one solder connection lug illustrated above.



All the Barrier Strips enumerated in the columns below for the 1500, 1600 and 1700 series are supplied with the bottom type connection lug illustrated above.

No. 1500 Series

Height 13/32", Width 7/8", Thickness 1/4". Terminals are 3/8" on centers. Screws 5-40x1/4" long Binding Head.

No.	Terminals	Each	No.	Terminals	Each	No.	Terminals	Each	No.	Terminals	Each
1501	1	\$0.14	1511	1	\$0.17	1521	1	\$0.17	1531	1	\$0.17
1502	2	.22	1512	2	.29	1522	2	.29	1532	2	.29
1503	3	.30	1513	3	.40	1523	3	.40	1533	3	.40
1504	4	.38	1514	4	.52	1524	4	.52	1534	4	.52
1505	5	.46	1515	5	.63	1525	5	.63	1535	5	.63
1506	6	.54	1516	6	.75	1526	6	.75	1536	6	.75
1507	7	.62	1517	7	.86	1527	7	.86	1537	7	.86
1508	8	.70	1518	8	.98	1528	8	.98	1538	8	.98
1509	9	.78	1519	9	1.09	1529	9	1.09	1539	9	1.09
1510	10	.86	1520	10	1.21	1530	10	1.21	1540	10	1.21

No. 1600 Series

Height 1/2", Width 1 1/8", Thickness 1/8". Terminals are 1/2" on centers. Screws 6-32x1/4" long Binding Head.

No.	Terminals	Each	No.	Terminals	Each	No.	Terminals	Each	No.	Terminals	Each
1601	1	\$0.18	1611	1	\$0.22	1621	1	\$0.22	1631	1	\$0.22
1602	2	.28	1612	2	.37	1622	2	.37	1632	2	.37
1603	3	.38	1613	3	.52	1623	3	.52	1633	3	.52
1604	4	.49	1614	4	.67	1624	4	.67	1634	4	.67
1605	5	.59	1615	5	.82	1625	5	.82	1635	5	.82
1606	6	.69	1616	6	.97	1626	6	.97	1636	6	.97
1607	7	.80	1617	7	1.12	1627	7	1.12	1637	7	1.12
1608	8	.90	1618	8	1.27	1628	8	1.27	1638	8	1.27
1609	9	1.00	1619	9	1.42	1629	9	1.42	1639	9	1.42
1610	10	1.11	1620	10	1.57	1630	10	1.57	1640	10	1.57
1611P	11	1.21	1641	11	1.72	1644	11	1.72	1647	11	1.72
1612P	12	1.31	1642	12	1.87	1645	12	1.87	1648	12	1.87
1613P	13	1.42	1643	13	2.02	1646	13	2.02	1649	13	2.02

No. 1700 Series

Height 5/8", Width 1 1/4", Thickness 3/16". Terminals are 5/8" on centers. Screws 8-32x5/16" long Binding Head.

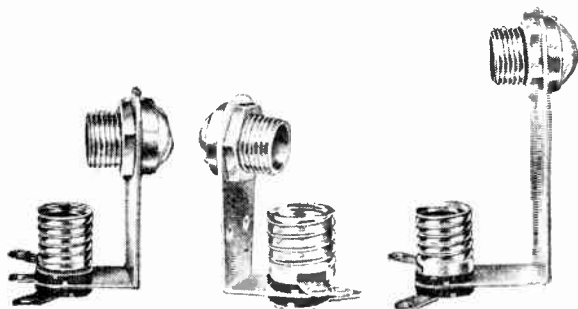
No.	Terminals	Each	No.	Terminals	Each	No.	Terminals	Each	No.	Terminals	Each
1701	1	\$0.21	1711	1	\$0.27	1721	1	\$0.27	1731	1	\$0.27
1702	2	.33	1712	2	.45	1722	2	.45	1732	2	.45
1703	3	.46	1713	3	.64	1723	3	.64	1733	3	.64
1704	4	.59	1714	4	.82	1724	4	.82	1734	4	.82
1705	5	.71	1715	5	1.01	1725	5	1.01	1735	5	1.01
1706	6	.84	1716	6	1.19	1726	6	1.19	1736	6	1.19
1707	7	.97	1717	7	1.38	1727	7	1.38	1737	7	1.38
1708	8	1.09	1718	8	1.56	1728	8	1.56	1738	8	1.56
1709	9	1.22	1719	9	1.75	1729	9	1.75	1739	9	1.75
1710	10	1.35	1720	10	1.93	1730	10	1.93	1740	10	1.93
1711P	11	1.47	1751	11	2.12	1754	11	2.12	1757	11	2.12
1712P	12	1.60	1752	12	2.30	1755	12	2.30	1758	12	2.30
1713P	13	1.73	1753	13	2.49	1756	13	2.49	1759	13	2.49

SMITH

Electronic Components

HERMAN H. SMITH, INC.

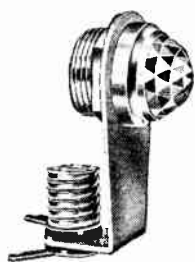
PANEL INDICATOR 1/2 INCH JEWEL



These panel indicator assemblies are available in the candelabra, miniature screw, or bayonet base type sockets. Jewel holder is made of brass, nickel plated. Jewel mounts in a single $\frac{1}{16}$ " dia. hole. Candelabra and bayonet base types can also be secured with a universal adjustable bracket for use where more accurate focus of the jewel to lamp filament is required. Facetted jewel available in red, green, amber, blue, opal and clear colors.

No.	Type	Each
1900	Miniature Screw Socket	\$0.35
1901	Candelabra 110 Volt	.35
1902	Candelabra 110 Volt with Universal Bracket	.40
1903	Bayonet Base	.40
1904	Bayonet Base with Universal Bracket	.45

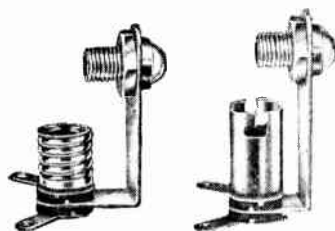
PANEL INDICATOR 3/4 INCH JEWEL



Available with candelabra 110 volt, miniature bayonet base, and miniature screw type sockets. Jewel holder is made of brass nickel plated. Jewel mounts in a single $\frac{1}{16}$ " dia. hole. Facetted jewels available in red, green, amber, blue, opal and clear colors.

No.	Type	Each
1905	Min. screw socket	\$0.75
1906	Min. bayonet base	.75
1907	Candelabra socket	.75

PANEL INDICATOR 3/8 INCH JEWEL



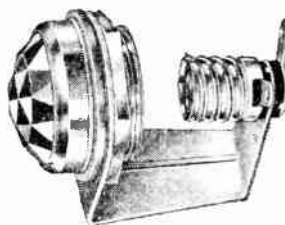
Available with miniature screw type socket, min. bayonet base, or candelabra type sockets. Jewel holder made of brass nickel plated. Jewel mounts in a single $\frac{1}{16}$ " dia. hole. Facetted jewels available in red, green, amber,

blue, opal and clear colors.

No.	Type	Each
1908	Min. screw socket	\$0.40
1909	Min. bayonet base	.40
1910	Candelabra socket	.40

1 INCH OPEN TYPE PANEL INDICATOR

Jewel Removable from Front of Panel



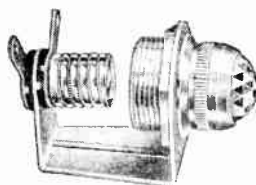
This type of panel indicator has the added feature of being able to remove the bulb from the front of the panel. Jewel holder made of brass, chromium plated finish. Jewel mounts in a single 1" dia. hole. The embossed rib in the center of the bracket

supplies additional strength assuring perfect alignment. Available in three types: Miniature screw socket, Miniature bayonet socket and Candelabra type socket. Facetted jewels available in the following colors: red, green, amber, blue, opal, clear.

No.	Type	Each
1917	Min. screw socket	\$1.45
1918	Min. bayonet base	1.50
1919	Candelabra	1.50

1/2 INCH OPEN TYPE PANEL INDICATOR

Jewel Removable from Front of Panel



Jewel holder made of brass, nickel plated. Mounts in a single $\frac{1}{16}$ " dia. hole. The embossed rib in the center of the bracket gives additional strength and assures perfect alignment. The bulb is easily removable from the front

of the panel. Available with Miniature screw type or Miniature bayonet base type sockets, with facetted jewels in the following colors: red, green, amber, blue, opal, clear.

No.	Type	Each
1920	Min. screw socket	\$0.65
1921	Min. bayonet base socket	.65

GLASS JEWELS

1/2 INCH JEWEL WITH MOUNTING NUT



Jewel holder made of brass nickel plated. Mounts in a single $\frac{7}{16}$ " dia. hole. Jewels are available in red, green, amber, blue, opal and clear colors in smooth or facetted types.

No.	Type	Each
1911	Smooth	\$0.25
1912	Facetted	.25

3/4 INCH JEWEL

Jewel holder made of brass nickel plated. Mounts in a single $\frac{1}{16}$ " dia. hole. Jewels are available in red, green, amber, blue, opal and clear colors in smooth or facetted types.

No.	Type	Each
1913	Smooth	\$0.60
1914	Facetted	.60

1 INCH JEWEL

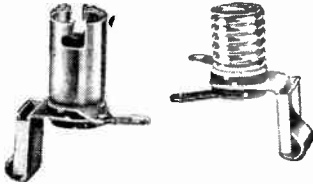
Jewel holder made of brass, dull white nickel finish. Mounts in a 1" dia. hole. Length of thread behind jewel holder $\frac{3}{16}$ ". Jewels are available in smooth or facetted types, in red, green, amber, blue, opal, white and clear colors.

No.	Type	Each
1915	Smooth	\$1.10
1916	Facetted	1.10

SMITH

Electronic Components
HERMAN H. SMITH, INC.

CLIP-ON TYPE PILOT LIGHT SOCKETS

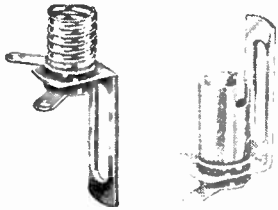


This type of socket is available with the clip up or down, and can be used by clipping on to the variable condenser or the chassis. This design socket is made with the miniature

screw base, miniature bayonet base, or candelabra 110 volt types. All brackets are cadmium plated.

No.	Type	Per C
1922	Min. Screw Up Clip	\$13.00
1923	Min. Screw Down Clip	13.00
1924	Min. Bayonet Up Clip	15.00
1925	Min. Bayonet Down Clip	15.00
1926	Candelabra Up Clip	17.00
1927	Candelabra Down Clip	17.00

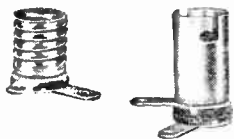
BRACKET TYPE PILOT LIGHT SOCKETS



Available with an up or down type of bracket for the miniature screw type, miniature bayonet base, and for the candelabra 110 volt type sockets. Brackets are made of steel, cadmium plated.

No.	Type	Per C
1928	Min. Screw Up Bracket	\$13.00
1929	Min. Screw Down Bracket	13.00
1930	Min. Bayonet Up Bracket	15.00
1931	Min. Bayonet Down Bracket	15.00
1932	Candelabra Up Bracket	17.00
1933	Candelabra Down Bracket	17.00

UNMOUNTED TYPE SOCKETS



These unmounted sockets can be secured for the miniature screw shell, miniature bayonet base or for the candelabra 110 volt types of sockets.

No.	Type	Per C
1934	Min. Screw Base	\$13.00
1935	Min. Bayonet Base	12.00
1936	Candelabra 110 volt	14.00

CLIP-IN SOCKET



This clip-in socket is of the bayonet base type construction, and is assembled with two solder lugs. The special clip in bracket is made of steel, cadmium plated, and is so designed that it clips into the dial directly.

No. 1938. \$14.00 per C

MICROPHONE CONNECTOR Single Contact Male



A completely shielded single contact connector. Made of brass and heavily chrome plated. Mate for No. 116 female connector.

No. 115 \$0.40 each

MICROPHONE CONNECTOR Single Contact Female



Mate for our No. 117 chassis connector. This connector is used extensively for making connections from microphone to amplifier. Comes equipped with coupling ring. All metal parts are made of brass, heavily chrome plated, except the spring.

No. 116 \$0.50 each

CHASSIS CONNECTOR Single Contact Male



This type connector is recommended for use on the chassis or in the microphone. Made of brass, heavily nickel plated. Threaded $\frac{3}{8}$ "-27, and mounts in a $\frac{3}{8}$ " hole. Supplied complete with washers, soldering lug and nut.

No. 117 \$0.30 each

CAP AND CHAIN



Made of brass, heavily nickel plated. The cap seals open end units against dust, eliminating noisy connections. Used with any threaded one or two conductor chassis unit.

No. 118 \$0.50 each

BAKELITE HANDLE PLUG Foreign Type



Moulded bakelite handle foreign type plug. Blades are made of brass, and of the Continental Type spacing.

No. 851. \$25.00 per C

AMERICAN - FOREIGN PLUG ADAPTER



Streamlined bakelite plug adapter, which adapts from American to foreign type plugs. The plugs will fit snugly into the adapter. The foreign type plugs are made of brass, and are of Continental Type spacing.

No. 852. \$30.00 per C

RUBBER ATTACHMENT—PLUG



Rubber handle attachment plug; Cord Hole $\frac{3}{8}$ " (.375). Rated at 15 Amps, 125 Volts. Blades are made of Brass.

No. 850. \$15.00 per C

BANANA TYPE PLUG



This plug is hexed brass, nickel plated. The spring is made of phosphor bronze assuring positive and lasting contact. Plug is constructed with a 6-32 female thread inside and is supplied with a 6-32 screw and soldering lug.

No. 100 \$12.00 per C

SPLIT TYPE BANANA PLUG



Made of hexed brass, heavily nickel plated overall. Will fit all standard banana type jacks. Overall length 1 1/4". Threaded portion 6-32 x 1/2" long. Supplied with two 6-32 hexagon nuts.

No. 104 12.00 per C

BANANA TYPE PLUG

Spring Type



Plug and spring are made of brass, nickel plated. The spring type of construction assures positive and lasting contact. Plug is threaded 6-32 and the threaded portion is 1/2" long. Supplied with two 6-32 hexagon nuts.

No. 103 \$12.00 per C

MIDGET PLUGS AND JACKS

Banana Type



Midget banana type plugs and jacks, for use where a minimum amount of space is available. Both plugs and jacks made of brass, nickel plated. A hexagon nut is provided with each plug and jack.

No.	Item	Per C
111	Plug	\$9.00
112	Jack	9.00

PHONE TIP JACK



Will accommodate all standard phone tip plugs of insulated and non-insulated types. Made of brass, nickel plated. Mounts in a 1/4" dia. hole in panels up to 3/8" thick, and is supplied with hexagon nut.

No. 107 \$10.00 per C

BANANA PLUG JACK



Recommended as the mate for the No. 100 Banana type plug, but will accommodate all standard banana type plugs. Jack is made of brass, heavily nickel plated overall. Mounts in a 1/4" hole and will fit in panels up to 1/8" thick. Jack is furnished with 1/4-32 nut and soldering lug.

No. 101 \$12.00 per C

BANANA PLUG JACK



Will accommodate all standard banana type plugs and specially recommended as the mate for Nos. 103 and 104 banana plugs. Made of brass nickel plated, and mounts in 1/4" hole in panels up to 3/8" thick. Supplied with nut and soldering lug.

No. 109 \$10.00 per C

MIDGET PHONE JACK



Signal Corps type J 670—Single open circuit midget phone jack. Mounts in 3/8" hole in panels up to 1/4" thick. Bushing is brass, nickel plated. Springs made of phosphor bronze, and the springs are insulated from the frame by heavy duty bakelite washers.

No. 122 \$35.00 per C

ALLIGATOR CLIP



Clips are made so that the jaws match accurately, permitting them to grip all sizes wire securely. The barrel of clip will accommodate all standard banana type plugs. Made of steel, cadmium plated. Overall length 2".

No. 300 \$10.00 per C

METAL BINDING POST



Made of brass, heavily nickel plated overall. Supplied complete with screw and lockwasher.

No. 110
\$25.00 per C

SOLDERLESS PHONE TIPS



These tips are constructed so that the wire fits through the body of the tip, and is wrapped around the screw portion, and tightened with the knurled nut provided, making soldering unnecessary.

No.	Length	Per C
105	1 5/8"	\$10.00
106	1 1/4"	10.00

SOLDER TYPE PHONE TIPS



Made of brass, nickel plated. Overall length 1". Dia. of tip will fit all standard phone tip jacks.

No. 108 \$20.00 per M

LARGE DIAMETER PHONE TIP

Material of Brass and Nickel-plated finish. The barrel is drilled extra large to accommodate heavy wire. Diameter hole 1/4"—length of barrel 1/2" and overall length 1".

No. 123 \$30.00 per M

THREADED PHONE TIPS



Available in either the Solderless Phone Tip type, or the Phono Needle Point type. The chuck is threaded 1/4 - 32.

No.	Type	Per C
124	Solderless tip	\$15.00
128	Needle Point	15.00

INSULATED BINDING POSTS



Insulated head posts available in 3/8" and 1/2" diameter in Black and Red colors. Each binding post complete with screw and lockwasher.

No.	Head Dia.	Per C
207	3/8"	\$15.00
208	1/2"	15.00

BINDING POST HEADS



The insulated heads are knurled and are the same as used on our Nos. 207-208 Binding Post. Knurled insulated head is threaded, eliminating the necessity for using a brass bushing. Available in Black and Red colors. Specify colors.

No.	Head Dia.	Per C
209	3/8"	\$6.50
210	1/2"	7.00

INSULATED PHONE TIP JACK



Will accommodate all standard phone tip plugs, of the insulated and non insulated types. Recommended for use with our Nos. 200 and 201 phone tip plugs. Insulated head $\frac{3}{8}$ " dia. available in Black and Red colors. Mounts in a $\frac{1}{4}$ " hole. Supplied complete with insulating shoulder washer and nut. Specify color.

No. 202 \$15.00 per C

INSULATED BANANA JACK



Will accommodate all standard banana type plugs. Mounts in a $\frac{1}{4}$ " hole in panels up to $\frac{3}{8}$ " thick. Insulated head $\frac{3}{8}$ " dia. available in Black and Red colors. Supplied complete with insulated shoulder washer, soldering lug, and nut. Specify color.

No. 205 \$15.00 per C

INSTRUMENT BANANA JACK



Made of brass nickel plated. Jack receptacle is countersunk and will accept all standard Banana type plugs for a snug and positive contact. Insulated head is $\frac{1}{2}$ " diameter and supplied complete with insulating washer, lock washer, heavy duty soldering lug and nut. Available in Black, Red, Yellow and Green. Specify color.

No. 219 \$19.00 per C

INSULATED COMBINATION JACK



This combination jack will accommodate all standard plugs, of the phone tip type or banana type construction. Mounts in a $\frac{1}{4}$ " hole in panels up to $\frac{1}{2}$ " thick. Overall length $1\frac{3}{8}$ ". Supplied complete with insulating shoulder washer and nut. Insulated head available in Black and Red colors. Specify color.

No. 206 \$20.00 per C

INSULATED SOLDERLESS BANANA PLUGS



Spring type construction, and will fit all standard banana jacks. Tapped hole is provided in rear of plug and small screw machine stud is provided so that wire can be wrapped around and tightened without the need of soldering. Insulated handle is $\frac{3}{4}$ " long and available in Black, Red, Yellow and Green colors. Specify color.

No. 211 \$20.00 per C



This plug constructed the same as No. 211 described above, but the plug portion is made of hexagon brass. Plug is also supplied with screw machine stud. Insulated handle 1" long and available in Black, Red, Yellow and Green colors. Specify color.

No. 212 \$25.00 per C

INSULATED SOLDERLESS PHONE TIP PLUGS



Insulated sleeve $\frac{3}{4}$ " long, and available in Black and Red colors. Will fit all standard phone tip jacks and specially recommended for use with our No. 202 insulated jack. The wire fits through the sleeve of plug, and is wrapped around the screw portion, and then tightened with the knurled nut provided, making soldering unnecessary. Specify color.

No.	Type	Per C
200	Plug with No. 105 Tip	\$18.00
201	Plug with No. 106 Tip	17.00

INSULATED PHONE TIP PLUG



Insulated sleeve $\frac{3}{4}$ " long, available in black and red colors. The phone tip will plug into all standard phone tip jacks, and the insulated sleeve is so designed to accommodate all standard banana type plugs.

No. 215 \$15.00 per C

Phone tip only—less insulated sleeve.

No. 125 \$8.00 per C

INSULATED PHONO NEEDLE TIP PLUG



Insulated sleeve $\frac{3}{4}$ " long, available in black and red colors. The body of the plug will accommodate all standard banana type plugs. The sharp needle point phone tip will pierce through corrosion for positive contact.

No. 216 \$20.00 per C

Needle tip only—less insulated sleeve.

No. 217 \$12.00 per C

INSULATED SHORT PHONE TIP



Will fit all standard phone tip jacks of the insulated or non-insulated types. Insulated sleeve $\frac{3}{4}$ " long, and available in Black and Red colors. Specify color.

No. 203 \$15.00 per C

INSULATED BANANA PLUG Spring Type



Will fit all standard banana type jacks. A set screw is provided in the side of the plug to secure the wire to the plug without soldering. Insulated sleeve $\frac{7}{8}$ " long available in Black, Red, Yellow and Green colors. Overall length $1\frac{5}{8}$ ". Specify color.

No. 204 \$20.00 per C

INSULATED BANANA PLUG Split Type



The banana plug is of the split type construction. Insulated handle $\frac{7}{8}$ " long. A set screw is provided in the side of the plug, to secure the wire to the plug without soldering. Available in Black, Red, Yellow and Green colors. Specify color.

No. 213 \$20.00 per C

INSULATED ALLIGATOR CLIP



Embodies our No. 300 Alligator Clip. Insulated handle $\frac{3}{4}$ " long and will accommodate all standard banana type plugs. Insulated handle available in Black and Red colors. Specify color required.

No. 301.....\$20.00 per C

ALLIGATOR CLIP PHONE TIP JACK



Insulated phone tip jack with No. 300 alligator clip. The jack portion will accommodate all standard phone tip plugs. Insulated handle 1" long available in Black and Red colors. Overall length 2 $\frac{3}{8}$ ". Specify color.

No. 304.....\$45.00 per C

ALLIGATOR CLIP COMBINATION JACK



The insulated jack portion will accommodate all standard phone tip or banana type plugs. Insulated handle 1 $\frac{1}{4}$ " long available in Black and Red colors. Overall length 2 $\frac{1}{2}$ ". Specify color.

No. 305.....\$50.00 per C

BANANA PLUG AND PHONE TIP JACK COMBINATION



Insulated banana type plug of the spring type construction will fit all standard banana type jacks, and the top of the insulated sleeve of the plug will accommodate all standard phone tips. Insulated handle 1" long. Available in Black and Red colors. Specify color

No. 214.....\$45.00 per C

SOLDERLESS TEST PROD HANDLES



Insulated handles, available in Black and Red colors. The wire is fed through the insulated handle, and is wrapped around the screw portion of the plug, and then tightened with the knurled nut provided, making soldering unnecessary. Specify color.

No.	Overall length	Each
302	5 $\frac{1}{4}$ "	\$0.40
303	6 $\frac{3}{4}$ "	.50

PHONO NEEDLE TEST PROD HANDLES



Insulated handles available in Black and Red colors. Wires can be assembled to the metal chuck by unscrewing the chuck from the prod handle. Specify color.

No.	Overall length	Each
317	5"	\$0.40
318	6 $\frac{3}{8}$ "	.50

TEST LEADS WITH SOLDERLESS TIPS



Fibre handles colored red and black 4" long x $\frac{3}{8}$ " diameter. Flexible rubber covered wire leads 50" long also colored red and black. Available with standard phone tips, spade lugs or alligator clips.

No.	Type	per Pr.
600	Phone tips	\$1.10
601	Spade lugs	1.10
602	Alligator clips	1.25

PHONO NEEDLE TEST LEADS



Fibre handles colored Red and Black, 4" long x $\frac{3}{8}$ " diameter. Tips are very sharp phonograph needles. Flexible rubber covered wires 50" long also colored red and black. Available with standard phone tips, spade lugs, or alligator clips

No.	Type	per Pr.
613	Phone tips	\$1.10
614	Spade lugs	1.10
615	Alligator clips	1.25

ALL SOLDERLESS TEST LEADS



The insulated handles and the insulated plugs are both of the solderless type construction. Insulated handles Red and Black are our Nos. 302, and the plugs are our No. 200. Flexible rubber covered leads 50" long.

No. 603.....\$1.65 per pair

ALLIGATOR CLIP TEST LEADS



Made of very flexible Red and Black wire with alligator clips at each end.

No.	Wire length	per Pr.
604	12"	\$0.75
605	24"	.85
606	36"	.95
607	48"	1.05

HEAVY DUTY TEST LEADS



Heavy duty fibre handles $\frac{1}{2}$ " O.D. x 5 $\frac{3}{8}$ " long, with fibre guard between handle and metal tip to prevent any possibility of shocks. Flexible wire leads 50" long, colored Red and Black. Test leads are available with standard phone tip, spade lugs or alligator clips.

No.	Type	per Pr.
620	Phone tips	\$2.25
621	Spade lugs	2.25
622	Alligator clips	2.50

FIBRE TEST PROD HANDLES

Handles are made of fibre and can be obtained with either solderless tips or phono needle tips. Constructed same as our numbers 302 and 317. Handles available in Black and Red colors. Specify color.

No.	Type	Length	Each
323	Solderless tip	5 $\frac{1}{4}$ "	\$0.30
324	Needle Point	5 $\frac{1}{8}$ "	.30

SMITH

Electronic Components
HERMAN H. SMITH, INC.

NEUTRALIZING AND ALIGNMENT TOOL



A complete, fully insulated neutralizing tool, screw driver and wrench combination. The fibre wrench portion has a $\frac{1}{4}$ " hexed socket on one end and a $\frac{5}{16}$ " hexed socket on the other end. A $\frac{1}{4}$ " metal screw driver nib on the inside portion of the tool fits into the fibre tube itself.

No. 320.....\$0.85 each
No. 700—Display of 12 No. 320 tools.....10.20 each

ALIGNMENT SCREW DRIVER



Fibre handle $\frac{3}{8}$ " dia. x 6" long, and fitted with a screw driver nib for aligning of coils, padding condensers, etc.

No. 321.....\$3.40 each
No. 776—Display of 24 No. 321 Drivers..... 9.60 each

ALIGNMENT TOOL FOR PUSH-BUTTON RECEIVERS



This tool is especially designed for aligning push-button receivers and for adjusting iron core I.F. transformers and R.F. coils. There is a recessed screw driver nib on one end and a screw driver blade on the other end. Both ends knurled for easy grip.

No. 325.....\$0.75 each
No. 777—Display of 24 No. 325 Tools.....13.00 each

FIBRE ALIGNMENT SCREW DRIVERS



Made of bone hard fibre and supplied in two sizes.

No.	Screw driver	Length	Each
307	7/32"	7"	\$0.40
308	5/16"	6"	.50
701—Display of 24 No. 307 Drivers..... 9.00			
702—Display of 18 No. 308 Drivers..... 9.00			

HEXED FIBRE TUBES



Made of bone hard fibre, and constructed so that if the hex wears out, it can be cut off and the balance of the tube can be used.

No.	Each	Size	No.	Each
309	\$0.20	6"	313	\$0.30
310	.35	8"	314	.35
311	.45	10"	315	.45
312	.50	12"	316	.50

GRID CAP SHIELD



Shield is slotted on the side, for passage of the grid lead wire. The shield fits snugly over the grid cap of the tube, completely shielding same. Shield is cadmium plated finish.

No. 527.....\$10.00 per C

BRASS AND INSULATED COUPLINGS



These couplings are drilled through to accommodate $\frac{1}{4}$ " shafts. Available in both brass and insulated material. Overall length $\frac{3}{4}$ ", O.D. 7/16". Set screws are provided in coupling for tightening to shaft.

No.	Type	Each
120	Brass	\$0.20
140	Insulated	.20

BRASS AND INSULATED EXTENDERS



Extra long extenders suitable for use on amplifiers, television receivers, radio receivers or wherever a $\frac{1}{4}$ " shaft extender is required.

No.	Type	Shaft Length	Overall Length	Each
130	Insulated	1 $\frac{1}{8}$ "	1 $\frac{3}{4}$ "	\$0.30
150	Brass	1 $\frac{1}{8}$ "	1 $\frac{3}{4}$ "	.30

BRASS AND INSULATED RODS

These rods are available in both brass and insulated material.

No.	Type	Length	Dia.	Each
1404	Brass	6"	$\frac{1}{4}$ "	\$0.20
1405	Brass	12"	$\frac{1}{4}$ "	.40
1406	Insulated	6"	$\frac{1}{4}$ "	.20
1407	Insulated	12"	$\frac{1}{4}$ "	.40

We are also in a position to supply brass and insulated rods of various diameters and will gladly quote upon receipt of inquiry.

THREADED BRASS RODS

Rods ordinarily supplied in 2 foot lengths; if one foot length is required, please specify.



No.	Size	Per Foot
1400	6-32	\$0.30
1401	8-32	.30
1402	10-32	.40
1403	$\frac{1}{4}$ "-20	.45

BEARING FOR PANEL ASSEMBLY



Made of brass, and fits in $\frac{3}{8}$ " diameter hole in panels up to $\frac{1}{4}$ " thick. Bearing is made to accommodate $\frac{1}{4}$ " shafts.

No. 119.....\$0.20 each

PANEL BEARING ASSEMBLY



This panel bearing is accurately machined and is specially recommended for use as dial drives, or for mounting volume controls, switches, etc. Overall length 1 $\frac{1}{8}$ ". Supplied with nut. Drive Shaft $\frac{1}{4}$ " O.D.

No. 126.....\$25.00 per C

STEEL SPADE BOLTS



Steel cadmium plated finish, threaded 6-32, thread length $\frac{5}{8}$ ", length overall $\frac{3}{4}$ ".

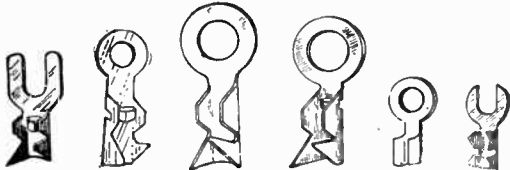
No. 1500.....\$8.45 per M

SOLDER TYPE LUGS

BRASS HOT TINNED



1484 1485 1486 1487 1488 1489



1490 1491 1492 1493 1494 1495

No.	Lgth.	Hole	Per M
1484	5/8"	No. 6	\$ 7.00
1485	5/8"	No. 6	4.00
1486	7/8"	No. 6 & No. 8	5.50
1487	5/8"	No. 6	4.00
1488	3/4"	No. 6	8.00
1489	7/8"	No. 8	8.00
1490	1"		0.00
1491	15/16"	No. 8	12.00
1493	1"	1/4"	20.00
1492	1-1/8"	1/4"	20.00
1494	5/8"	No. 6 & No. 8	7.50
1495	5/8"	No. 8	7.00

EYELET TYPE SOLDER LUGS



1480 1481 1482 1483

Made of brass. Nos. 1480, 1481 and 1482 are hot tinned and No. 1483 cadmium plated. Specially recommended for mounting on terminal strips.

No.	Lgth.	Hole	Per M
1480	5/8"	5/64 slot	\$ 4.50
1481	5/8"	No. 8	10.00
1482	1/4"	No. 8	7.50
1483	15/16"		7.50

TERMINAL LUGS AND SCREWS

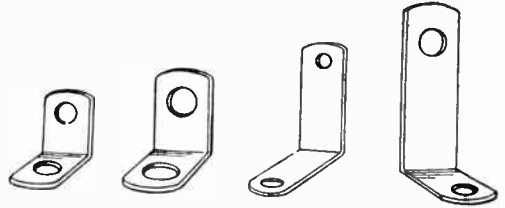


1478 1479

Recommended for heavy duty terminal strips. Lugs are tapped with screw inserted. No. 1478 lug, brass cadmium plated and No. 1479 lug, brass hot tinned.

No. 1478\$3.50 per C
No. 1479 6.00 per C

BRASS AND STEEL ANGLES



No.	Material	Size	Per C
1474	Brass N.P.	1/2" x 1/2"	\$2.50
1475	Brass N.P.	5/8" x 5/8"	5.00
1476	Steel H.T.	3/4" x 3/4"	2.00
1477	Steel H.T.	5/8" x 1 1/8"	2.00

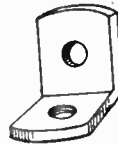
CABLE CLAMPS



1472 1470 1471

No.	Description	Per C
No. 1470	Steel Cadmium plated. No. 8 hole, length 3/4", width 3/8". Will fit over 1/4" cable.	\$1.25
No. 1471	Steel Cadmium plated. No. 8 hole, length 5/8", width 3/8". Will fit over 1/8" to 1/4" cable.	\$1.25
No. 1472	Steel Cadmium plated. No. 8 hole, length 1", width 3/8". Will fit over 1/2" cable.	\$1.50

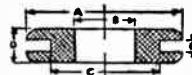
TAPPED ANGLE BRACKET



Made of steel cadmium plated. Size 1/2" x 1/2", with one 8/32 tapped hole and one plain .165 hole.

No. 1473\$4.50 per C

RUBBER GROMMETS



A: Outside Dia. B: Inside Dia.
C: Panel Hole. D: Thickness
Overall. E: Panel Thickness.

No.	A	B	C	D	E	Per C
2185	5/16"	1/8"	1/4"	3/16"	1/16"	\$2.00
2171	3/8"	11/64"	5/16"	1/4"	1/16"	2.50
2172	7/16"	3/16"	5/16"	3/16"	1/16"	3.00
2176	1/2"	7/32"	3/8"	3/16"	1/16"	3.00
2170	5/8"	1/4"	3/8"	3/8"	1/16"	3.50
2173	9/16"	9/32"	11/32"	1/4"	1/16"	3.00
2174	5/8"	5/16"	7/16"	1/4"	1/16"	3.25
2175	11/16"	5/16"	1/2"	1/4"	1/16"	3.50
2177	3/4"	7/16"	9/16"	1/4"	1/16"	3.25

STEEL MACHINE SCREWS

Round Head Cadmium Plated

Available in bulk quantities, or can be obtained packed 1,000 or a gross to the box.

No.	Per M	Size	No.	Gross
1000	\$3.40	6-32 x 1/4"	1018	\$0.61
1001	3.60	6-32 x 3/8"	1019	.61
1002	3.90	6-32 x 1/2"	1020	.65
1003	4.20	6-32 x 5/8"	1021	.65
1004	4.55	6-32 x 3/4"	1022	.72
1005	5.20	6-32 x 1"	1023	.85
1006	4.20	8-32 x 1/4"	1024	.65
1007	4.55	8-32 x 3/8"	1025	.72
1008	5.20	8-32 x 1/2"	1026	.85
1009	5.50	8-32 x 5/8"	1027	.98
1010	5.50	8-32 x 3/4"	1028	1.10
1011	6.50	8-32 x 1"	1029	1.25
1012	5.50	10-32 x 1/4"	1030	1.10
1013	6.00	10-32 x 3/8"	1031	1.17
1014	6.50	10-32 x 1/2"	1032	1.25
1015	7.15	10-32 x 5/8"	1033	1.40
1016	7.65	10-32 x 3/4"	1034	1.45
1017	7.80	10-32 x 1"	1035	1.55



RACK SCREWS

Oval Head Steel Nickel Plated

Specially recommended for mounting panels in racks and cabinets. Available in gross packages or packed 1000 to the box.

No.	Per M	Size	No.	Gross
1102	\$6.50	6-32 x 1/4"	1090	\$0.98
1103	6.85	6-32 x 1/2"	1091	1.05
1104	7.15	6-32 x 3/4"	1092	1.17
1105	7.80	6-32 x 1"	1093	1.30
1106	6.70	8-32 x 1/4"	1094	1.10
1107	7.80	8-32 x 1/2"	1095	1.25
1108	9.10	8-32 x 3/4"	1096	1.45
1109	9.20	8-32 x 1"	1097	1.55
1110	8.45	10-32 x 1/4"	1098	1.45
1111	9.20	10-32 x 1/2"	1099	1.55
1112	10.40	10-32 x 3/4"	1100	1.60
1113	12.35	10-32 x 1"	1101	1.80

COUNTERSUNK WASHERS

Brass Nickel Plated

Recommended for use with Rack Screws designated above.

No.	Per M	Size	No.	Gross
1115	\$6.80	6	1118	\$1.05
1116	7.20	8	1119	1.10
1117	7.20	10	1120	1.10

FLAT AND SHAKEPROOF WASHERS

No.	Per M	Type	No.	Gross
1150	\$1.65	# 6 Brass N.P.	1146	\$0.30
1151	2.00	# 8 Brass N.P.	1147	.40
1152	2.00	#10 Brass N.P.	1148	.40
1127	3.50	# 4 Shakeproof Int. Teeth	1121	.55
1128	3.75	# 6 Shakeproof Int. Teeth	1122	.60
1129	3.75	# 8 Shakeproof Int. Teeth	1123	.60
1130	3.75	#10 Shakeproof Int. Teeth	1124	.60
1131	4.25	3/8" Shakeproof Int. Teeth	1125	.70
1132	4.00	1/4" Shakeproof Int. Teeth	1126	.60
1139	3.50	# 4 Shakeproof Ext. Teeth	1133	.55
1140	3.75	# 6 Shakeproof Ext. Teeth	1134	.60
1141	3.75	# 8 Shakeproof Ext. Teeth	1135	.60
1142	3.75	#10 Shakeproof Ext. Teeth	1136	.60
1143	4.25	3/8" Shakeproof Ext. Teeth	1137	.70
1144	4.00	1/4" Shakeproof Ext. Teeth	1138	.65

BRASS MACHINE SCREWS

Round Head Nickel Plated

Available in bulk quantities, or can be obtained packed 1,000 or a gross to the box.

No.	Per M	Size	No.	Gross
1044	\$6.10	4-36 x 1/4"	1036	\$0.90
1045	6.25	4-36 x 3/8"	1037	.95
1046	6.40	4-36 x 1/2"	1038	.98
1047	6.10	4-40 x 1/4"	1039	.90
1048	6.25	4-40 x 3/8"	1040	.95
1049	6.40	4-40 x 1/2"	1041	.98
1050	6.40	6-32 x 1/4"	1070	.98
1051	6.80	6-32 x 3/8"	1071	1.05
1052	7.10	6-32 x 1/2"	1072	1.10
1053	7.35	6-32 x 5/8"	1073	1.17
1054	7.80	6-32 x 3/4"	1074	1.25
1055	12.75	6-32 x 1"	1075	1.85
1056	9.45	8-32 x 1/4"	1076	1.40
1057	9.90	8-32 x 3/8"	1077	1.45
1058	10.25	8-32 x 1/2"	1078	1.55
1059	11.65	8-32 x 5/8"	1079	1.70
1060	12.75	8-32 x 3/4"	1080	2.30
1061	16.95	8-32 x 1"	1081	2.50
1062	9.75	10-32 x 1/4"	1082	1.45
1063	12.00	10-32 x 3/8"	1083	1.75
1064	13.00	10-32 x 1/2"	1084	1.95
1065	13.60	10-32 x 5/8"	1085	2.00
1066	14.60	10-32 x 3/4"	1086	2.15
1067	16.95	10-32 x 1"	1087	2.45

FANCY HEAD BRONZE FINISH SCREWS

No.	Size	Per M
1150	6-32 x 3/4"	\$10.70
1161	6-32 x 1"	11.40
1162	6-32 x 1 1/4"	12.50
1163	6-32 x 1 1/2"	14.00
1164	8-32 x 3/4"	13.50
1165	8-32 x 1"	14.30
1166	8-32 x 1 1/4"	16.25
1167	8-32 x 1 1/2"	21.50



HEXAGON NUTS

Brass Nickel Plated

No.	Per M	Size	No.	Gross
1188	\$7.80	4-36 x 1/4"	1182	1.15
1168	7.80	4-40 x 1/4"	1169	1.15
1189	7.00	6-32 x 1/4"	1183	1.15
1190	7.80	6-32 x 5/16"	1184	1.15
1191	9.75	8-32 x 1/4"	1185	1.45
1192	9.75	8-32 x 5/16"	1186	1.45
1193	9.75	10-32 x 5/16"	1187	1.45

Steel Cadmium Plated

1179	\$5.15	6-32 x 1/4"	1176	\$0.85
1180	6.25	6-32 x 5/16"	1177	.98
1181	6.25	8-32 x 5/16"	1178	.98

SPECIAL NUTS

Machined of Brass Nickel Plated. Correct sizes for volume controls and toggle switches.

No.	Type	Dimensions	Per M
1195	Volume Control	3/8-32 x 1/2 x 3/32	20.00
1196	Toggle Switch	15-32 x 1/8 x 5/64	25.00
1197	Toggle Ring Nut	15-32 x 5/8 x 1/8	30.00

BRASS BUSHINGS



These brass bushings are ideal for use in raising sub panels, chassis, condensers, transformers, etc. Hole in bushing to accommodate a No. 6 or No. 8 screw.

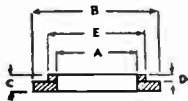
For No. 6		1/4" O.D.	For No. 8	
No.	Per C	Length	No.	Per C
2100	\$3.50	1/4"	2105	\$3.50
2101	4.00	3/8"	2106	4.00
2102	4.25	1/2"	2107	4.25
2103	5.00	3/4"	2108	5.00
2104	5.50	1"	2109	5.50
		3/8" O.D.		
2110	\$4.25	1/4"	2115	\$4.25
2111	4.75	3/8"	2116	4.75
2112	5.00	1/2"	2117	5.00
2113	5.50	3/4"	2118	5.50
2114	6.25	1"	2119	6.25

THREADED BRASS BUSHINGS

Brass bushings 1/4" O.D. Threaded 6-32 and 8-32.

Threaded 6-32		Threaded 8-32		
No.	Per C	Length	No.	Per C
2120	\$4.25	1/4"	2125	\$4.25
2121	5.25	3/8"	2126	5.25
2122	6.50	1/2"	2127	6.50
2123	7.50	3/4"	2128	7.50
2124	8.50	1"	2129	8.50

FIBRE SHOULDER WASHERS



- A. Inside Diameter
- B. Outside Diameter
- C. Thickness Overall
- D. Height of Shoulder
- E. Diameter of Shoulder

No.	A	B	C	D	E	Per M
2150	.140	.375	.093	.031	.237	\$10.50
2151	.110	.250	.062	.031	.187	8.50
2152	.136	.250	.093	.031	.187	9.00
2153	.136	.312	.093	.031	.187	10.00
2154	.250	.500	.068	.028	.312	11.00
2155	.172	.375	.093	.031	.246	9.75
2156	.196	.375	.093	.031	.308	9.75
2157	.375	.750	.093	.031	.500	13.00
2158	.385	.625	.093	.031	.500	12.50

FLAT FIBRE WASHERS

No.	I.D.	O.D.	Thickness	Per M
2160	.136	.250	1/16	\$8.25
2161	.110	.250	1/16	8.25
2162	.140	.375	1/16	7.50
2163	.172	.375	1/16	7.50
2164	.196	.375	1/16	7.50
2165	.250	.500	1/16	8.00
2166	.250	.500	3/32	8.25
2167	.312	.500	1/16	8.00
2168	.385	.625	1/16	9.75
2169	.375	.750	1/16	12.00

KNURLED BATTERY NUTS

Brass Nickel Plated



No.	Dimensions	Per C
1198	6-32 x 11/32 x 13/64	\$2.50
1199	8-32 x 11/32 x 13/64	2.50

TIE DOWN TERMINAL STRIPS



861



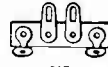
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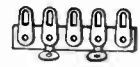
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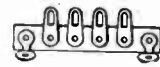
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868



866



869



870

No.	Per C	No.	Per C
861	\$2.75	866	\$5.80
862	3.25	867	4.60
863	3.65	868	6.25
864	4.20	869	6.40
865	5.50	870	8.30

MOTOROLA TYPE PLUG



Attachment plug for all Motorola auto radio receivers and many other types of auto radios.

No. 1200.....\$10.00 per C

PHONO ADAPTER ATTACHMENT PLUG



Phonograph pick-up and auto radio connection plug.

No. 1201.....\$8.00 per C

PHONO JACK



Mate for the No. 1201 plug. Jack mounted on bakelite and metal back supplied for use with phonograph attachment.

No. 1203.....\$12.00 per C

FAHNESTOCK SPRING BATTERY CLIPS



Clips are made of brass, nickel plated and are available in the single and double clip types

No.	Type	Length		Per C
533	Single	3/4"	Will take #14 B & S wire	\$1.65
534	Single	1"	Will take #10 B & S wire	2.00
535	Double	1 1/2"	Will take #10 B & S wire	9.00
536	Double	2 1/8"	Will take #10 B & S wire	10.00

INSTRUMENT AND RADIO BAKELITE KNOBS



A



B



C



D



E



F



G

No.	Type	Length	O.D.	Height	Hole	Color	Each
160	A	2-1/4"		5/8"	1/4" Moulded Hole	Black	\$0.21
161	A	2-1/4"		5/8"	1/4" Moulded Hole	Walnut	.21
162	A	1-1/4"		5/8"	1/4" Moulded Hole	Black	.15
163	A	1-1/4"		5/8"	1/4" Moulded Hole	Walnut	.15
164	B	1-3/4"		5/8"	Brass Insert	Black	.30
165	B	1-3/4"		5/8"	Brass Insert	Walnut	.30
166	C		2-1/16"	7/8"	Brass Insert	Black	.70
167	C		3"	1"	Brass Insert	Black	.80
168	D		1"	21/32"	Moulded Hole	Walnut	.20
169	D		1"	21/32"	Moulded Hole	Black	.20
170	E		13/16"	37/64"	Moulded Hole	Walnut	.16
171	F		13/16"	9/16"	Moulded Hole	Walnut	.18
172	G		3/4"	17/32"	Moulded Hole	Walnut	.12

MINI-SHIELDS

The Perfect Shield For Mini-Tubes



These new Mini-Shields are formed to fit snugly and yet expand to a constant snug fit on larger tubes to automatically compensate for the considerable variation in physical dimensions of miniature tubes as commercially produced.

Special shaped serrations spaced to engage the lower mini-shield ribs catch and hold the shield firmly which actually tightens against vibrations or other forces tending to jiggle the tube loose.

These shields are made so that three rows of dimples pressing against the tube provide a gentle but firm snug fit. The three prong spring base clip grips the shield positively, cradling the tube within the shield and retaining it firmly in the socket secure against vibration. These Mini-Shields are available in two sizes to accommodate tubes 1 1/2" long and 2" long.

No.	Type	Overall length	Per C
550	for 2" tube	1 3/4"	\$12.00
551	for 1 1/2" tube	1 1/4"	10.00
553	3 prong base clip		5.00
554	single clips		3.00

NON STRETCH TUNING DIAL CABLE

60 LB. TENSILE STRENGTH

No.	Spool	Per Spool
2400	25 Ft.	\$1.26
2401	50 Ft.	2.46
2402	100 Ft.	4.38
2403	500 Ft.	16.43

40 LB. TENSILE STRENGTH

No.	Spool	Per Spool
2404	25 Ft.	\$1.26
2405	50 Ft.	2.46
2406	100 Ft.	4.38
2407	500 Ft.	16.43



MINI-SPRING FOR MINI-TUBES

For Tables Radios • Electronic Equipment Radio Receivers



The Mini-Tube guard gives support to the Mini-Tube in two ways. It maintains a direct axial pressure downwards plus a sideways support that keeps the tube upright and perpendicular to the chassis. The spring action is constant and resilient permanently. If your radio equipment has an inclined chassis . . . or the tubes are mounted upside down or horizontal . . . or if it is subject to any vibration . . . or if your demand is constantly superior trouble-free reception, Mini-Tube

guards are the one way to insure that tubes stay in place forever.

No.	Type	Per C
560	Short	\$12.00
561	Medium	12.00
562	Long	12.00
563	9 Prong	12.00

FUSE MOUNTING BASES



Black bakelite, panel mount type. Will accommodate the 3 A G Auto type cartridge fuse.

No.	Type	Each
530	Single	\$0.20
531	Double	.30

FUSE CLIPS



Clips made of spring brass, nickel plated. Will accommodate the 3 A G Auto type cartridge fuse. Clips 1/4" wide x 3/8" high.

No. 532 \$1.75 per C



INSULATED BANANA PLUG

Set screw in side of barrel secures wire within plug without soldering. Full length center pin prevents spring from collapsing. Standard colors.

No.	Sleeve	Overall	Price Each
131	3/8"	1 5/8"	\$0.30
131A	1 1/2"	2 1/4"	.35



SPLIT TYPE BANANA PLUG

Designed to snugly fit a standard type banana jack. Spring action is positive and durable. Length 1-7/16". The plug is 1/2" long. Standard colors.

No. 331.....Price Each \$0.20



SOLDERLESS BANANA PLUGS

Made with three-pointed leaf spring; screw into insulated portion of plug. Overall length 1 7/8". All standard colors.

No. 207.....Price Each \$0.25



ARCHOITE-SOLDERLESS INSULATED BANANA PLUG

All external set screws are eliminated removing possibility of shocks or grounding. One piece phosphor bronze spring and full length center pin assure good contact and long life. ARCHOITE barrel is 3/4" long. 5/8" diameter. Standard colors.

No. 332.....Price Each \$0.20



INSULATED BANANA JACKS

Equipped with insulated shoulder washer, lug and a nut. Can be mounted in a 1/4" hole on a panel up to 3/8" in thickness. Standard colors.

No. 136.....Price Each \$0.15



BANANA PLUG OR TIP JACK

So constructed that either phone tip or banana plugs fit interchangeably. Cap of ARCHOITE insulation in standard colors. Mounts in a 1/4" diameter hole in panels up to 1/2" thick. With shoulder washer and nut. Overall length is 1 3/8".

No. 148.....Price Each \$0.20

INSULATED SOLDERLESS PHONE TIP PLUG



Fits all standard tip jacks including such units as our No. 137, 138 Insulated Jacks, and No. 143 Binding Posts. Overall length is 1 7/8". Sleeve is 3/4" long. All standard colors.

No.	Price Each
141	.....\$3.15
142	......14



SOLDERLESS PHONE TIPS

So made that a wire fits through the body and is wrapped around the screw and tightened with the nut.

No.	Price per C
10-1 1/8" in length.....	\$9.00
9-1 1/4" in length.....	8.00



INSULATED PHONE TIP JACKS

Accommodates all standard phone tips. Phosphor bronze springs make positive contact and hold phone tip straight and secure. Insulating washer and nut. Standard colors.

No.	Head	Price Each
1866.....	3/8"	.....\$0.14
138.....	7/16"	......15
1861.....	1/2"	......16



STREAMLINED PHONE TIP PLUG

The highly polished ARCHOITE handles are made to fit a standard non insulated or insulated phone tip jack. By inserting the wire in the hole and screwing the tip in securely, a solid, solderless connection is made. 1 3/8" long and 1/2" high.

No. 1855.....Price Each \$0.40



INSULATED BANANA PLUG JACK

For use with all our standard size Banana Plugs. The insulated head has a shoulder which extends into the mounting hole thus centering the jacks and preventing grounds. Mounts in 5/16" diameter hole. Can be used in panels up to 5/8" thick. Complete with second shoulder washer and nut. The overall length is 7/8". Available in all standard colors.

No. 336.....Price Each \$0.20



PHONE TIP JACKS

Specially designed springs within the body hold the phone tips straight and grip firmly at all times. Mounts in a 1/4" diameter hole in panels up to 3/8" thick.

No. 137.....Price per C \$9.00



BANANA TYPE PLUG JACK

Recommended for use with No. 1150 Banana Plug. Counter sunk to fit tapered portion of plug shank. Heavily nickel plated and furnished with nuts and soldering lug. Will fit panels up to 7/16" thick and mounts in 1/4" hole.

No. 1151.....Price per C \$12.00



BANANA TYPE PLUG

6/32" female thread and 6/32" screw and soldering lug. One piece phosphor bronze spring assures positive, long lasting contact. Full length center pin prevents plug from collapsing when misaligned with jack.

No. 1150.....Price per C \$12.00

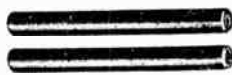


BANANA TYPE PLUGS

Spring brass, nickel plated. Full length center pin prevents spring from collapsing. Supplied with two plated nuts.

No.	Thread	Price per C
120-6	32-1/2" long	.....\$12.00
1764-6	32-1" long	..... 16.50
122-8	32-1/2" long	..... 12.00

FIBRE NEUTRALIZING TUBES



These tubes are made of specially treated hard fibre for durability. They are ideal for servicemen and production lines, for when the hexagon wears out it can be cut off and used again.

No.	Price Each
1/4" HEXAGON	
2502-6" long	.....\$0.30
2503-8" long	......35
2504-10" long	......45
2505-12" long	......50
2506-28" long	..... 1.00
5/16" HEXAGON	
2507-6" long	.....\$0.30
2508-8" long	......35
2509-10" long	......45
2510-12" long	......50
2511-28" long	..... 1.00

ALLIGATOR CLIP COMBINATION JACK



Embodies our No. 129 insulated alligator clip and No. 148 insulated phone tip jack. It is possible to insert any test prod equipped with phone tips, directly into Alligator Clip for temporary connection to any part or wire of radio receivers, public address systems, or electrical appliances, leaving the other test lead and both hands free to test any part of the circuit. Overall length 2 3/8". Length of insulated handle 1". All standard colors.

No. 338.....Price Each \$0.50

ALLIGATOR CLIP PHONE TIP JACK



Incorporates our No. 129 insulated alligator clip and No. 138 insulated phone tip jack. It is possible to insert any test prod, equipped with phone tips, directly into the Alligator Clip for a temporary connection to any part or wire of radio receivers, public address systems or electrical appliances, leaving the other test lead and both hands free to test any part of the circuit. Overall length 2 3/8". Insulated handle 1". All standard colors.

No. 337.....Price Each \$0.45

INSULATED ALLIGATOR CLIPS



No. 130 Clips are made so that the attached ARCHOITE handle will receive any male banana type plugs. No. 129 has a round ARCHOITE handle and is made for wire assembly. No. 152 Clip is similar to the No. 130 but larger.

No.	Handle	Overall	Price Each
129	1 1/4"	2 3/4"	\$0.22
130	3/4"	2 1/4"	.20
152	1 1/2"	3 1/4"	.25

ALLIGATOR CLIPS



For use in all types of testing equipment; designed with a long thin nose to fit into confined areas and hard to get at places. Steel or brass, nickel plated.

No.	STEEL	Price per C
45AT-2"	long	.....\$10.00
242-2 3/4"	long	..... 20.00
BRASS		
80-2"	long	.....\$12.00
84-2 3/4"	long	..... 17.50



FIBRE NEUTRALIZING TOOLS



3 in 1 combination. A 3/8" diameter screw driver on the inside and 3/16" and 5/16" sockets at each end of the tool. Completely insulated.

No. 2501.....Price Each \$0.85

NEUTRALIZING TOOLS METAL TIPS



With brass nickel plated metal tip at both ends. Metal tips are hexagon broached for 3/8" and 5/16" nuts. Screw driver inside is 7/32" diameter to fit inside of coils for compensating. 3 in 1 combination.

No. 2500.....Price Each \$1.25

TEST PRODS Solderless Type



Designed so that the phone tip screws right into the handle itself. Handles in various lengths made in ARHCOITE.

No.	Handle Overall	Price Each
145	5"	\$0.40
149	6 3/4"	.45

Phonographic Needle Type

These test prod handles are standard photograph needles to fit into the chuck. Can be tightened with nut.

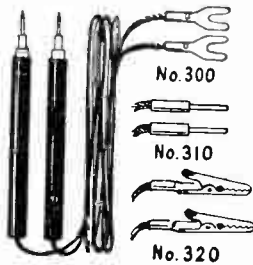
No.	Handle	Overall	Price Each
153	3 1/2"	4 3/4"	\$0.40
155	4"	5 1/2"	.45

SOCKET HEAD ALIGNMENT WRENCH



6" long with a brass 3/8" socket head that fits over trimmer screws on various types of receivers. Outside diameter is 3/8". Has a hardened screw driver bit for adjusting trimmer screws. Insulated diameter shaft fits 1/4" holder. Available in assorted colors.

No. 820.....Price Each \$0.70



HEAVY DUTY TEST PRODS

For rough usage in production testing lines and large service shops. ARHCOITE prod handles, 7/16" diameter and 5" long. Prods equipped with 60" heavy duty flexible wire; choice of attachments. Handles and leads are colored red and black for identification.

No.	Type	Price per Pair
300	Taper lugs	\$1.25
310	Phone tips	1.25
320	Alligator clips	1.35



PENCIL TYPE SHARP POINT TEST PRODS

Long and thin. Ideal for testing in tight places in receivers and amplifiers. Handles and 60" leads Overall length 7", diameter 1/4".

No.	Type	Price per Pair
330	Spade lugs	\$1.15
340	Phone tips	1.15
350	Alligator clips	1.25



TEST PRODS Solderless Tip Type

Test leads run through prod handles into tip where connection is securely made by means of a knurled collar. Fibre handles and leads colored red and black for identification. Handles are four inches long and 3/8" diameter. Wire length 50".

No.	Type	Price per Pair
210	Spade lugs	\$0.85
200	Phone tips	.85
260	Alligator clips	1.00

Phono Needle Tip Type

Prod handles are equipped with chucks for securely holding standard phonograph needles, which are quickly replaceable. Fibre handles and leads are colored red and black for identification. Handles are 4" long and 3/8" in diameter. Wire length 50".

No.	Type	Price per Pair
230	Phone tips	\$0.85
240	Spade lugs	.85
259	Alligator clips	1.00

ALLIGATOR CLIP TEST LEADS



Made with Alligator Clips at each end and red and black flexible wire for easy identification. Ideal as temporary connections. Clips have a firm grip and will make a perfect contact at all times.

No.	Wire Length	Price per Pair
400	12"	\$0.70
420	21"	.80
430	38"	.90
440	48"	1.00

ALLIGATOR ALIGNMENT WRENCH



Fits various sizes of knurled or hexagon nuts up to 3/4" diameter. Has hardened screw driver on the other end for adjusting trimmer screws. Overall length is 6" and diameter of shaft is 1/4". Assorted colors.

No. 805.....Price Each \$0.50

SOCKET WRENCHES Spin Type



Made with a deep hollow hole in the end of socket. Takes a long screw any size up to No. 10 diameter. Wooden handle for firm grip and the socket is hardened for durability and service.

No.	Hex. Nut Size (6" LONG)	Price Each
48	3/16"	\$0.45
50	1/4"	.45
51	5/16"	.45
52	3/8"	.45
53	7/16"	.45
49	1/2"	.45

(9" LONG)

58	3/16"	.50
54	1/4"	.50
55	5/16"	.50
56	3/8"	.50
57	7/16"	.50
59	1/2"	.50

660	Box of six 6" wrenches— one of each size	2.65
690	Box of six 9" wrenches— one of each size	3.00

Offset Type

Ideal for inconvenient places and for tightening up nuts under condensers, transformers, or sub-panels.

No.	Length	Hex. Nut Size	Price Each
106	7"	3/16"	\$0.50
107	7"	1/4"	.50
108	7"	5/16"	.50
109	7"	3/8"	.50
110	7"	7/16"	.50
111	7"	1/2"	.50

670—Box of 6 7" wrenches...\$3.00

FIBRITE ALIGNMENT SCREW DRIVER



Designed to work satisfactorily on all ultra-high frequency ranges without disturbing the circuit. Overall length is 7".

No.	Diameter	Length	Price Each
815	7/32"	7"	\$0.20
817	5/16"	6"	.70

SOLDERLESS TEST PRODS



Used extensively in the service shop or laboratory. ARHCOITE handles in red and black for identification. Leads and phone tip plugs are also color coated. Wire easily replaced without soldering.

No.	Handle Length	Price per Pair
220	4"	\$1.25
450	5 1/2"	1.50
460	7"	1.75



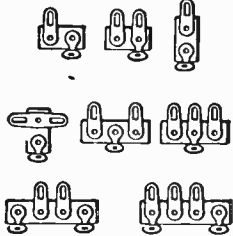
AMERICAN RADIO HARDWARE CO., INC.

BAKELITE TERMINAL STRIPS AND TERMINALS



No.	Type	Price Each
1501	2 Term. Marked	\$0.14
1502	2 Term. Plain	.14
1503	2 Term. A. & G.	.14
1504	2 Term. "Output"	.14
1505	2 Term. "Input"	.14
1506	3 Term. Plain	.21
1507	3 Term. Marked	.28
1508	1 Term. Marked	.35
1509	1 Term. Plain	.28

TERMINAL LUG STRIPS



No.	Price per C
5101	\$2.65
5110	2.65
512	2.65
5121	2.65
5201	3.30
5210	3.55
5202	4.40
5211	4.90

SPECIAL ANGLE BRACKETS WITH TAPPED HOLES



No.	Type	Price per C
1627	1/2" x 1/2" Bracket	\$4.50
1628	1/2" x 3/4" Bracket	5.00
1629	1/2" x 3/4" Bracket	6.00
2663	Z Bracket Type with no clearance hole - one tapped hole 1/2" x 3/8" Bend x 7/16" long	6.00

RACK SCREWS



Particularly suitable for mounting panels in racks and cabinets. Enhances appearance of any panel. Screws, steel nickel plated.

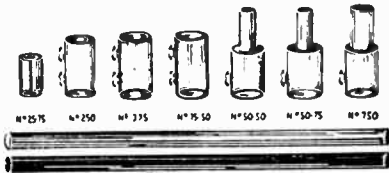
No.	Size	Price per M
1641	1/4" x 6/32	\$5.00
1642	1/2" x 6/32	5.25
1643	3/4" x 6/32	6.00
1644	1" x 6/32	6.50
1637	1/4" x 8/32	5.25
1638	1/2" x 8/32	6.00
1639	3/4" x 8/32	7.00
1640	1" x 8/32	7.10
1630	1/4" x 10/32	6.50
1631	1/2" x 10/32	7.10
1645	3/4" x 10/32	8.00
1632	3/4" x 10/32	9.50

WASHERS



No.	Size	Price per M
1634	6/32 Cup Washer	\$5.25
1635	8/32 Cup Washer	5.50
1636	10/32 Cup Washer	5.50

SHAFT COUPLINGS EXTENDERS AND REDUCERS



These accurate machined brass fittings can be used for coupling shafts of the same or different diameter, for straight extension, or for extension with smaller or larger shaft diameter.

No.	Length	Price Each
25-75	7/16"	3/4" Hole I.D.—3/8" O.D. Dial Bushings.....\$0.10
250	3/4"	3/4" Hole I.D.—1/2" O.D. Brass Coupling..... .20
375	3/4"	3/8" Hole I.D.—9/16" O.D. Brass Coupling..... .20
75-50	3/4"	3/8" Hole I.D.—9/16" O.D. Brass Coupling..... .20
50-50	1 1/8"	3/4" Hole I.D.—1/2" O.D. Brass Reducer..... .20
50-75	1 1/8"	3/8" Hole I.D.—9/16" O.D. Brass Reducer..... .20
750	1 1/8"	1 1/4" Hole I.D.—1/2" O.D. Brass Reducer..... .20
6250	6"	1 1/4" Diameter Brass Shafting..... .40
12250	12"	1 1/4" Diameter Brass Shafting..... .40
388	8"	3/8" Diameter Brass Shafting..... .40
250C	3/4"	3/4" Hole I.D.—1/2" O.D. Ins. Coupling..... .20
375C	3/4"	3/8" Hole I.D.—9/16" O.D. Ins. Coupling..... .20
75-50C	3/4"	3/8" Hole I.D.—9/16" O.D. Ins. Coupling..... .20
50-50C	1 1/8"	3/4" Hole I.D.—1/2" O.D. Ins. Reducer..... .20
50-75C	1 1/8"	3/8" Hole I.D.—9/16" O.D. Ins. Reducer..... .20
750C	1 1/8"	1 1/4" Hole I.D.—1/2" O.D. Ins. Reducer..... .20
637C	6"	3/4" Diameter Insulated Shafting Black..... .20
1237C	12"	1 1/4" Diameter Insulated Shafting Black..... .30
388C	12"	3/8" Diameter Insulated Shafting Black..... .40

FAHNESTOCK SPRING BATTERY CLIPS

A complete line of Fahnestock Clips to meet every demand. Each clip is made of either Phosphor Bronze or Spring Brass assuring maximum life and good contact. Any type Fahnestock Clip available upon request.



No.	Price per C
41	3/4" Long 1 Clip.....\$ 1.65
42	1" Long 1 Clip..... 2.00
44	1 1/2" Long 2 Clip..... 9.00
45	1 3/4" Long 2 Clip..... 10.00
47	1" High 1 Clip..... 5.50
1844	1 1/2" Long 1 Clip..... 13.20
1857	1 3/4" Long 1 Clip..... 12.00
1858	1 1/4" Long, same as 1857..... 16.50
1853	1" Long 1 Clip..... 5.50
1826	3/4" Long 1 Clip (Bronze)..... 3.00

RUBBER GROMMETS

Ideal for Use in All Types of Electrical and Radio Purposes

Available in either black or gum rubber.

No.	Panel Hole	I.D.	O.D.	Panel Thickness	Price per C
1113	13/32	21/64	5/8	1/16	\$3.85
1114	1/4	1/8	11/32	1/16	2.50
1115	3/8	1/4	9/16	7/32	3.85
1118	5/16	3/16	7/16	1/16	3.00
1119	13/32	17/64	9/16	1/16	3.00
1120	7/16	19/64	5/8	1/16	3.25
1121	1/2	3/8	11/16	1/16	3.55
1122	11/32	1/4	1/2	1/32	3.00

When ordering Gum Rubber add "G" to number and add \$1.00 per C to list price of Black.

RUBBER GROMMET ASS'T



An assortment of 5 sizes of pure gum and black rubber grommets.

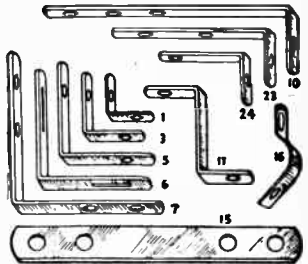
No.	Price
68	Assortment of 12 Rubber Grommets.....\$0.35
69	Assortment of 30 Rubber Grommets..... .75
70	Assortment of 100 Rubber Grommets..... 2.30

R. H. STEEL CADMIUM PLATED MACHINE SCREWS

No.	Price	Length	No.	Price
2648	\$4.25	3/4"	2654	\$4.25
2649	4.25	3/8"	2655	5.25
2650	4.50	1/2"	2656	6.00
2651	4.50	5/8"	2657	6.25
2652	4.75	3/4"	2658	6.50
2653	7.00	1"	2659	7.00

No.	Size	Price per M
2665	10-32 x 1/4"	\$4.75
2666	10-32 x 3/8"	6.25
2667	10-32 x 1/2"	6.50
2668	10-32 x 5/8"	7.00
2669	10-32 x 3/4"	7.25
2670	10-32 x 1"	8.50

ANGLES AND BRACKETS



No.	Size	Price per C
1	1 1/2" x 1 1/2"	\$1.50
3	5/8" x 5/8"	2.30
5	1" x 1"	3.50
6	1 1/2" x 1 1/2"	4.50
7	1 3/4" x 1 1/2"	5.50
10	1 1/2" x 1 1/2"	5.75
11	1 3/4" x 1 1/2" high	2.25
15	2 1/2" long	4.60
23	1 1/2" x 1 1/2"	3.10
24	1 1/2" x 1 1/2"	2.25

TINNED BRASS LUGS



No.	Length	Hole Size	Price per M
1	5/8"	6 or 8	\$6.00
2	3/4"	8	6.00
3	3/4"	8	6.00
4	3/4"	6 or 8	6.00
5	3/4"	6 or 8	6.00

TWIN PHONE TIP JACKS

Jacks in this assembly are our No. 138 type, mounted on a bakelite strip 1/2" and 2" long. Standard spacing between Jacks 3/4". Coded red and black for identification.



No. 406	Price Each	\$0.35
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RADIO ESSENTIALS, INC.

EXCLUSIVE DISTRIBUTORS OF **ARHCO** TO THE RADIO PARTS JOBBERS



AMERICAN RADIO HARDWARE CO., INC.



FLEXIBLE COUPLING

Flexible coupling with a square ceramic insulation $5/32''$ thick. Couples standard $1/4''$ shafts without necessity of close alignment. Springs of tough phosphor bronze, all other hardware brass. Overall length approximately $3/8''$. $1-3/16''$ square. No. 1922.....Price \$0.40

ROUND TYPE COUPLING

Similar to No. 1922 except ceramic is $1''$ diameter round, and $5/32''$ thick. Bushings of brass, spring of phosphor bronze. Overall length $3/4''$. No. 1921.....Price \$0.40



LONG PIN BINDING POST

$3/4''$ high without the threaded portion. Alongside the threaded portion, there is a small pin forced in the post so that it can be assembled in a set position on any type of apparatus. Stem is $9/16''$ long threaded $6/32''$. Overall length $1-5/16''$. $1/16''$ soldering tip, polished or dull nickel finish. Also available with the following engraved heads: + No. 1756—Blank.....Price Each \$0.30

SHORT PIN BINDING POST

$3/4''$ high without threaded portion. Alongside the threaded portion is a small pin forced into the post so that it can be assembled in a set position on any type of apparatus. Stem is threaded $6/32''$ x $1/4''$ long. Overall length $1''$. Can also be furnished with the threaded portion in various lengths. Also available with the following engraved heads: + No. 1755—Blank.....Price Each \$0.25



SPECIAL BINDING POST

$3/4''$ overall. For use in any chassis where long screws, insulating washers, lugs or any combination of parts may be needed for mounting to Binding Post. Also available with following engraved heads: + No. 1812.....Price Each \$0.20



HEAVY DUTY ALL METAL BINDING POST

This binding post is all brass with a highly polished nickel finish, overall length $1 1/2''$. The diameter of the body and cap $1/2''$. The stem of the post is $3/4''$ long threaded 10/32. The knurled cap has a receptacle on top which can be used to accommodate standard banana plugs. Hole in body is $1/32''$ diameter to accommodate wire or phone tips. Stem is provided with a tip for soldering. No. 1751.....Price Each \$0.60



COMBINATION INSULATED BINDING POSTS PLUG AND TIP JACK TYPE

Accommodates standard banana plugs through the top of post, a standard phone tip through side or, as more ordinarily used, with a wire through side. Suitable for test equipment and laboratory instruments. Standard colors. No. 143.....Price Each \$0.25



SINGLE JACK (SC, Type JK-34A)

Made of special brass, heavy nickel plated. Will accommodate phone plugs Signal Corps type PL-55, PL-155 and all standard 2-circuit phone plugs.

No. 1798.....Price Each \$0.60



DOUBLE JACK (SC, Type JK-33A)

Made of brass, heavy nickel plated and can be used with plugs Signal Corps No. PL-68, PL-168 and all standard 3 circuit plugs.

No. 1799.....Price Each \$0.75



NON-SEPARABLE HEAD POSTS

Brass nickel plated insert and brass nickel plated washer. The body of the post is drilled for the insertion of a phone tip or a solderless plug. Equipped with a solder insulating washer and a 6/32 nut for mounting. $1/2''$ high and has a $1/2''$ insulated head in red, black, blue, green, yellow, purple and white.

No. 154.....Price Each \$0.22

ALL METAL BINDING POST



For high amperage work or for test equipment where low resistance connections are imperative. Nickel plated brass. Approximately $1''$ high.

No. 32 Price per C \$25.00



METAL BINDING POSTS

Nickel plated brass, supplied with a knurled 6/32" screw to hold the wire or phone tip in place.

No. 1910 Price per C \$10.00



INSULATED BINDING POST

With a $1/2''$ or a $3/8''$ diameter head. Identification is made possible by the bright colored head.

No.	Dia.	Price Each
146.....	$1/2''$	\$0.13
147.....	$3/8''$	.15



BINDING POST HEADS

For use in noise eliminators, vibrators, etc. The heads are knurled and have a threaded portion which eliminates need for a brass insert. The head is completely insulated. Standard colors.

No.	Dia. of Head	Thread	Price per C
1817.....	$3/8''$	6/32	\$6.00
1818.....	$1/2''$	8/32	8.00
1819.....	$5/8''$	10/32	9.00



PL-55 PLUG

PL-55 is standard telephone plug made in novel manner by molding internal insulation. A tenite shell serves as insulated handle. Ample accommodations for cordage serving on rear end. Distance from shoulder to center of ball contact is $1''$. Overall length of plug $2-13/16''$. Handle $2-5/8''$ long. Withstands breakdown of 1000 volts. No. 1782.....Price Each \$2.25



PL-54 PLUG

PL-54 is shorter, made to mate with JK-26 Jack. Overall length $2-7/16''$. Otherwise has same features as PL-55. No. 1781.....Price Each \$1.35

JK-26 MATE OF PL-54



Overall length $2-3/4''$. Diameter of insulated shell $1/2''$. Three leaf reinforced spring of spring temper phosphor bronze, mounted on a sturdy brass body. Bakelite sheet insulation $1/16''$ thick. Two lined lugs. Withstands 1000 volts A.C. breakdown across terminals. No. 1781.....Price Each \$2.00

NAVY TYPE PLUG



Standard two-circuit telephone plug, heavy duty type, all brass except for insulation terminals made to accommodate either phone tips or wire. Barrel has insulating sleeve. Rubber retaining ring in cap at rear end holds cable firmly. Overall length approximately $3''$. Barrel diameter $1 1/16''$. Length of barrel $1 1/2''$. Plug withstands voltage breakdown of 500 volts A.C. between terminals. Fits into standard $1/2''$ diameter jacks of long-form two-circuit type. No. 1783.....Price Each \$2.00



MIDGET PHONE JACKS

J-670—Open circuit jack, midget type. Sturdy phosphor bronze spring. Heavily insulated $1 1/16''$ thick bakelite. Mounts in $3/8''$ hole in panels up to $1/4''$ thick. Ground connection through lug forms part of insulation of brass. No. 1795.....Price Each \$0.30

DOUBLE JACKS

J-671—Same features as 1795 except it is 3 circuit microphone jack. No. 1796.....Price Each \$0.50



PANEL BEARING ASSEMBLY

Useful in facilitating the panel control of condensers, switches, potentiometers, etc. Flexible coupling can be attached to assembly shafts. Each shaft is grooved and washers are placed on each end to prevent shaft from moving in and out of the bearing

No.	Type	Price Each
1623—6"	long	\$0.50
1624—3"	long	.40
1613—12"	long	.60
1612—Bearing only		.20



PHONE PLUG

For use with all standard size jacks; bakelite shell, available in a variety of solid colors. Will accommodate two phone cord tips or lugs which are held securely in place with two binding head screws.

No. 128.....Price Each \$0.50

SHIELDED PHONE PLUG



Designed for use with all standard size jacks. Brass finished with a heavy chrome plating. The barrel contains an insulating tube to prevent any possible loose strands of wire from shorting against the barrel. Accommodates two phone cord tips or lugs which are held securely in place with two binding head screws.

No. Type Price Each
218—Shielded phone plug.....\$0.85

JUNIOR SHIELDED PHONE PLUG



Barrel contains an insulating tube which prevents any possibility of loose strands of wire shorting. Accommodates two phone cord tips or lugs which are held securely in place with two binding head screws. Overall length $2 1/8''$. Fits all standard size jacks.

219—Phone plug.....\$0.70
1791—Barrel only......40



SELF-TAPPING SCREW ASSORTMENT

Parker Kalon self-tapping screw assortment of most popular sizes. Genuine replacements for ALL standard brand receivers. No. 1078.....Price Each \$0.65

BRACKET TYPE LUG STRIPS

No.	Type	Price per C
1620—3 lug.....		\$15.00
1621—1 lug.....		16.50
1622—5 lug.....		20.00
1623—6 lug.....		25.00

1841—Special mounting bracket. 2.00
1839—Mounting bracket and lug combination 2.25

Available with No. 1811 Bracket as illustrated or with No. 1839 Bracket, which is a combination bracket and mounting lug or with No. 1817 Bracket which is similar to No. 1839, but with a tapped 6/32 hole.

1660—3 lug with 1839 Bracket.....	16.50
1661—1 lug with 1839 Bracket.....	19.50
1662—5 lug with 1839 Bracket.....	24.00
1663—6 lug with 1839 Bracket.....	27.00
1664—3 lug with 1817 Bracket.....	22.00
1665—1 lug with 1817 Bracket.....	22.00
1666—5 lug with 1817 Bracket.....	26.00
1667—6 lug with 1817 Bracket.....	34.00
1647—Bracket and lug with tapped 6/32 hole.....	4.50

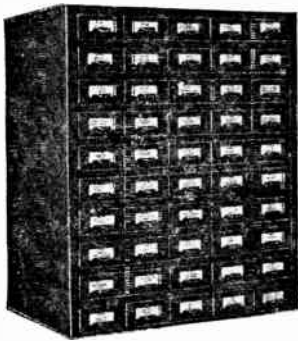
ANGLE AND BRACKET ASSORTMENT



28 popular size angles and brackets made of brass and nickel plated. A choice selection of "Z" included. Indispensable for mounting radio parts. No. 488-10.....Price \$0.70



**50
"NO SPILL"
DIE
STAMPED
STEEL
DRAWERS**



**EITHER
STYLE
\$25.00
NET*
F.O.B.
Mt. Vernon
N. Y.**

"ARHCO" DISPLAY AND STOCK CABINET

Made of heavy gauge steel—Gray Crackle Finish!

Furnished in two models: One model has sloping back and is provided with a pictorial display-board illustrating 77 popular parts; drawer markers are furnished with this model. The second model has a straight steel back and is ideal for use as a small parts stock cabinet.



Spring steel in two models—one without a hole and one with a hole in the tail of the cap. Fits all standard miniature grid caps. Will take wire up to 3/8" diameter.

No.	Type	Price per M
114	Glass Tube Caps	\$5.50
121	Metal Tube Caps	\$10.00

INSULATED GRID CAPS

Consist of a sturdy cadmium plated brass clip fastened within an ARHCO shell. 12" wire, with a solderless phone tip on one end. Fits standard glass tube cap.

418	Glass tube cap	Price \$0.30
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SPECIAL Manufacturers Service

The products featured in this catalog represent those items we manufacture for the general trade and which we normally carry in stock. We have exclusive facilities for the production of parts in special form to take care of manufacturers' requirements. We have facilities for the handling of all kinds of stampings, punchings, drilling, screw machine work, engraving and assembly.

We have personnel available to cooperate with you in the design and development of special parts and will submit estimates on request.

NOTE!

The products featured in this catalog represent only a part of the "ARHCO" line. A more complete listing will be found in our General Catalog.



INSULATED GLASS TUBE GRID CAPS

Designed to accommodate the standard glass tube grid cap. Spring brass clip assures permanent wiping contact. 12" wire, shielded or plate. Standard colors.

No.	Type	Price Each
139	12" plain wire	\$0.18
140	12" shielded wire	.25



DUAL GRID CAP

Standard glass tube cap or small metal tube grid cap. Cadmium plated brass clips, securely cycled together. 15" wire and standard phone tip or cap less wire. Cap made of ARHCO shell. Available in various colors.

No.	Type	Price Each
412	With 15" wire	\$0.35
413	As wire	.30



CLIP-IN SOCKETS

A radically new design, constructed so that it may be clipped into a dial directly. This facilitates maintaining and changing of bulbs. Requires a mounting slot 3/4" long and 1/2" wide. Made of cadmium plated tempered steel to assure a permanent grip.

No.	Type	Price per C
179	Screw shell type, 2 lugs	\$12.00
170	Bayonet type, 2 lugs	12.00
1806	Candleabra type, 2 lugs	15.00



GRID CAP SHIELD

Fits firmly over the grid cap completely shielding the tube. Cadmium plated or black finish.

No.	Type	Price Each
92	Cadmium plated	\$0.15
92	Insulated	.40
94	Black	.20

PANEL INDICATOR



DIM-E-ROID (Registered)

Suitable for use on instrument boards, signal systems, or any other apparatus where it is required to adjust the intensity of the indicator light. Rough handling or usage will not affect the manual adjustment. Complete with a special designed clip bracket that won't jar loose or come apart; cannot be removed without unmounting the lamp. Bayonet base shell, which is insulated with a rice paper shell and two 12" leads of Underwriters' Approval wire—mounts in 5/8" diameter hole—projects 5/8" from front of mounted surface—3/4" diameter—1 1/2" overall. Red or green lens.

No. 1920	Price \$1.00
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GIANT PANEL INDICATORS

Each pilot light indicator can be individually marked, by writing in the desired copy on the card disc supplied with each unit. When pilot lamp is illuminated, the writing is able to be seen three feet away. Bayonet or miniature type screw shell sockets. Mounts in 3/4" hole in panels up to 3/4" thickness. Indicator is 1 1/2" in diameter and extends 1 1/2" behind panel. Green, red, blue and crystal.

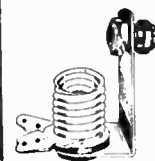
No.	Type	Price Each
1872	Bayonet	\$1.00
1873	Miniature screw shell	1.00



NEW PANEL LIGHT ASSEMBLY

Pilot light is accessible from front of panel. Assembly mounts in a single hole 5/8" in diameter extends behind the panel for a distance of 1 1/2" and projects from the front panel distance of 5/8", and may be used on panels up to 3/4" in thickness. Red, green or amber caps.

1870	Miniature screw socket	\$0.60
1871	Bayonet base socket	.60



PANEL INDICATOR BRACKET

For use on all types of test equipment, receivers, or transmitters, or wherever an indicator lamp is used. The indicator mounts in a single hole 7/16" in diameter and can be used on panels up to 5/16" in thickness. Red, blue, white, green or amber glass jewels.

39	Miniature socket	\$0.30
93	Candleabra socket	.30
95	Bayonet socket	.30



HORIZONTAL PANEL INDICATOR ASSEMBLY

This departure in design of panel indicators has many outstanding features. The bulb fits into the jewel so the maximum light is concentrated thru the jewel. Red, green, amber, blue and white jewels.

No.	Type	Price Each
88	Indicator Assembly	\$0.60
1545	Threaded Glass Jewel	.20
1546	Force Fit Glass Jewel	.18

ANTENNA AND FUSE CONNECTORS



Made for automobile quick connections either on the antenna or ground line as well as for the standard three AG automobile fuses.

No.	Type	Price per C
221	Antenna connector	\$10.00
222	Fuse retainer	14.00
231	Reinforced ring, Ant.	17.00
232	Reinforced ring, Fuse	21.00

HEAVY DUTY POWER SWITCHES



Made by H & H. for use in motors, transmitters, amplifiers, and other circuits where heavy current is carried. Three types with neutral off in center position. Rated at 10 amps, 125 volts. Rated high 1 1/2" wide, mounting sleeve diameter 5/8".

1041	D.P.D.T.	Price Each \$5.50
1042	T.P.D.T.	8.25
1043	A.P.D.T.	12.00



TOGGLE SWITCHES

Toggle switches by Hart and Hegeman. Capacity 1 amp, 250 volts—3 amps, 125 volts. Nickel plated.

No.	Type	Shaft Length	Price Each
1020	S.P.S.T.	15/32"	\$0.55
1021	S.P.S.T.	1"	.60
1022	S.P.D.T.	15/32"	.70
1023	S.P.D.T.	1"	.80
1024	D.P.S.T.	15/32"	1.00
1025	D.P.S.T.	1"	1.10
1026	H.P.D.T.	15/32"	1.10
1027	H.P.D.T.	1"	1.20
1028	On and Off Name Plate		.05

BAT HANDLE TOGGLE SWITCHES

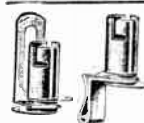
Same as above with Bat shaped handle. Shaft length 15/32". Nickel plated.

1029	S.P.S.T.	Price Each \$0.55
1030	S.P.D.T.	.70
1031	D.P.S.T.	1.00
1032	D.P.D.T.	1.10

BRACKET TYPE LIGHT SOCKETS

Socket can be used on practically all sets. Bracket is adjustable over a wide range, to set properly on any dial. Socket available for miniature base or candleabra base bulb. 1 1/2" or DOWN type. Adjustment hole is 5/8" long and 7/16" wide. Overall height is 1 1/2".

No.	Type	Price per C
36	Min. Base UP Bracket	\$ 9.00
37	Min. Base DOWN Bracket	17.00
72	Can. Base UP Bracket	17.00
273	Can. Base DOWN Bracket	9.00



BAYONET TYPE DIAL SOCKETS

For use with bayonet type pilot bulb. Shell is securely cycled to the bracket proper. Center contact permits constant and positive pressure on bulb contact. Slotted or clip-on type bracket.

1538	Straight UP bracket	\$10.00
1539	Straight DOWN bracket	10.00
1540	UP clip-on bracket	10.00
1541	DOWN clip-on bracket	10.00

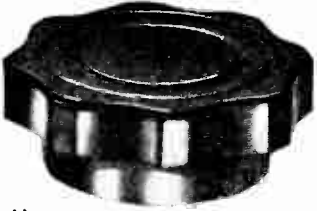
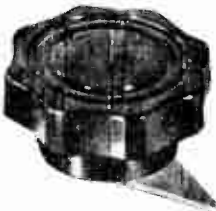

Harry Davies Molding Co.


Molders of Plastics

1428 NORTH WELLS STREET • CHICAGO 10, III.


STANDARD COLORS FOR DAVIES KNOBS: Black, Walnut, Red or Ivory. Others to order. Quality radio knobs for standard 1/4" shaft. Set screw, spring, or knurled hole mounting, or 1/4" brass bushing.

ELECTRONIC INSTRUMENT KNOBS


	Type No.	Width	Height		Type No.	Width	Height		Type No.	Width	Skirt diameter
	4100	1 1/8"	5/8"		4100-P	1 1/8"	7/8"		4104	1 1/8"	1 1/2"
	4101	1 3/8"	1 1/16"		4101-P	1 3/8"	1 1/16"		4106	1 3/8"	1 1/2"
	4102	1 5/8"	3/4"		4102-P	1 5/8"	1 1/16"		4108	1 5/8"	3"
	4103	2 3/8"	7/8"		4103-P	2 3/8"	1 9/16"		4109	2 3/8"	2 1/16"




No. 1400. (With pointer). Height 1 3/32". Diameter 1 1/16".
No. 1450. (No pointer). Height 1 3/32". Diameter 1 1/16".
Set screw, spring, or knurled hole mounting.



No. 1700.
Height 1 9/32". Diameter 3/4".
Set screw, spring, or knurled hole mounting.




No. 2500.
Height 3/4". Diameter 3/4".
No. 2600.
Height 7/8". Diameter 7/8".
Set screw, spring, or knurled hole mounting.




No. 2965.
Short Shank. Dia. 7/8"; Hgt. from 1/2" to 1 1/2".
Medium Shank. Dia. 7/8"; Hgt. from 9/16" to 1 1/2".
Long Shank. Dia. 7/8"; Hgt. from 9/16" to 1 1/2".

This type knob can be supplied with arrow; Off-On; Tuning; Volume; Tone; Batt-Elec.; Band Switch; Radio-Phono, or Dor markings.
Set screw, spring, or knurled hole mounting.




No. 3008. Dia. 1 1/4"; Hgt. 3/4".
No. 3009. Dia. 1 1/2"; Hgt. 3/4".
No. 3000.
Long Shank Dia. 1 3/4"; Hgt. 3/4", 1", 1 1/4" and 1 1/2".
Short Shank. Dia. 1 3/4". Hgt. 3/4", 1", 1 1/4" and 1 1/2".
1/4" molded hole or brass insert. Plain or threaded hole. Set screw or knurled hole mounting.




	Length overall	Hgt.	Dia.
No. 2110	1 5/8"	1 9/32"	3/4"
No. 2100	2 1/2"	5/8"	3/4"


Molded hole or brass insert, set screw mounting.
No. 2110-P 1 15/16" 1 9/32" 3/4"
No. 2100-P 2 13/16" 5/8" 3/4"
Metal insert and pointer, set screw mounting.




No. 2300—Zephyr bar knob. Length 1 1/4".
No. 2350—Zephyr bar knob. Length 2".
Molded hole, set screw mounting.
No. 2300-A—Zephyr bar knob. Length 1 1/4".
No. 2350-A—Zephyr bar knob. Length 2".
1/4" brass insert and set screw.



No. 1800 Series
These can be furnished in either plain or recessed tops. Dia. 7/16"; Heights range from 1" to 1 3/8". Also supplied with studs of various lengths.



No. 5149 — Rectangular touch tuning knob. Push on, self-locating.
No. 5149-A—Oval touch tuning knob. Push on, self-locating.
Hgt. 13/16" - 1 1/32".



No. 1750—Touch Tuning. Push on, self-locating.
No. 1760—Touch Tuning, Recessed top, push on, self-locating. Dia. 3 1/64", Hgt. 9/16", 1 1/16", 1 3/16", 1 5/16".
No. 1770—Binding Post and Switch knob. No. 6-32 and No. 8-32 brass inserts. Dia. 3 1/64". Hgt. 1/2", 5/8", 3/4", 7/8".



No. 2710
Height 1/2". Dia. 3/4".
Metal-faced insert or plain insert.
Female thread available 8-32, 10-32 and 10-24.



No. 2150
Streamlined bar knob.
Length 1 1/4".



No. 1780
Push button knob.
Dia. 1/2". Hgt. 1", 1 1/8", 1 7/32", 1 3/8".

No. 1790
Recessed top. Dimensions same as No. 1780.

NEW YORK

SALES OFFICES IN
MILWAUKEE

TORONTO, CANADA



RADIO BATTERY PLUGS



701

No. 701.....List, \$0.10 ea.
3-prong large Plug, for 45 volt "B" PORTABLE batteries. (Eveready 482, etc.)



702

No. 702.....List, \$0.25 ea.
3-prong Plug, with Fahnestock Clips, for STANDARD 4 1/2 volt "C" batteries. (Eveready 771, etc.)



703

No. 703.....List, \$0.40 ea.
5-prong Plug, with Fahnestock Clips, for STANDARD 22 1/2 volt "C" batteries. (Eveready 768, etc.)



704

No. 704.....List, \$0.10 ea.
2-prong Plug, for PORTABLE 4 1/2 volt "A" batteries. (Eveready 746, etc.)



705

No. 705.....List, \$0.10 ea.
3-prong small Plug, for 45 volt "B" PORTABLE batteries. (Eveready 738, 482, etc.)



706

No. 706.....List, \$0.10 ea.
2-prong small Plug, for 1 1/2 volt "A" PORTABLE batteries. (Eveready 742, etc.)



707

No. 707.....List, \$0.12 ea.
4-prong large Plug, for combination 1 1/2 volt "A" and 90 volt "B" PORTABLE Packs. (Eveready 748, etc.)



708

No. 708.....List, \$0.10 ea.
2-prong Plug, for 6 volt PORTABLE "A" batteries. (Eveready 718, 747, etc.)



709

No. 709.....List, \$0.12 ea.
4-prong Plug, for combination 6 volt "A" and 90 volt "B" PORTABLE Packs. (Burgess 2F4B60, etc.)



710

No. 710.....List, \$0.10 ea.
2-prong plug with guide pin, for 7 1/2 volt PORTABLE "A" batteries. (Burgess G5, etc.)



711

No. 711.....List, \$0.12 ea.
4-prong small Plug, for combination 1 1/2 volt "A" and 63 volt, 75 volt, or 90 volt "B" PORTABLE batteries. (Philco P60-A41, Burgess 4GA42, 6FA60, etc.)



712

No. 712.....List, \$0.20 ea.
8-prong Plug, with guide pin, for combination 7 1/2 volt "A" and 63 volt or 90 volt "B" PORTABLE packs. (Philco P87, P841, Sky Chief models, Burgess D5A60, etc.)



713

No. 713.....List, \$0.08 ea.
Male Snap-Fastener for connecting to negative terminal of miniature 67 1/2 volt "B" PORTABLE batteries: Eveready No. 467 Minimax, Burgess XX-45, etc.



714

No. 714.....List, \$0.10 ea.
Female Snap-Fastener for connecting to positive terminal of miniature 67 1/2 volt "B" PORTABLE batteries: Eveready No. 467 Minimax, Burgess XX-45, etc.



715

No. 715.....List, \$0.25 ea.
3-prong large Plug, with Fahnestock Clips, for STANDARD 45 volt "B" batteries.



716

No. 716.....List, \$0.20 ea.
2-prong Plug, with Fahnestock Clips, for STANDARD and PORTABLE 1 1/2 volt "A" batteries.



717

No. 717.....List, \$0.12 ea.
4-prong large Plug, for combination 6V "A" and 75V "B" battery packs such as Zenith Z-675, Burgess G4B50, etc.



718

No. 718.....List, \$0.15 ea.
5-prong large Plug, for combination 6V "A" and 90V "B" battery packs such as Zenith Z-650, Burgess F4B60, etc.



719

No. 719.....List, \$0.12 ea.
4-prong small Plug (has three thin pins and one thick pin) for combination 6V "A" and 90V "B" battery packs such as Philco P60ASF4, Burgess 2F4A60, etc.



721

No. 721.....List, \$0.20 ea.
8-prong Octal plug, for combination 1 1/2 volt and 90-volt Portable "AB" Packs, such as Burgess 4FA60, General P60A4L, Zenith Z-9 B, etc.



722

No. 722.....List, \$0.20 ea.
2-prong plug with Fahnestock Clips, for STANDARD 3-volt "A" batteries such as Rayovac P9403, etc.



723

No. 723.....List, \$0.10 ea.
2-prong plug without clips, for STANDARD 3-volt "A" batteries such as Rayovac P9403, etc.



724

No. 724.....List, \$0.10 ea.
3-prong plug (has two thin pins and one thick pin), for STANDARD 4 1/2 volt "C" batteries such as Eveready 771, etc.



725

No. 725.....List, \$0.20 ea.
7-prong large plug for combination 135 volt "B" and 9 volt "C" batteries such as used on Philco 37-33, 37-38, 38-33, and 38-38 battery receivers and type 9068, etc.



726

No. 726.....List, \$0.25 ea.
Special 8-prong large plug for combination 135 volt "B" and 13 1/2 volt "C" batteries, such as used on Philco Models 34, 34A, 39 and 39A battery receivers, etc.



727

No. 727.....List, \$0.20 ea.
5-prong plug for standard 22 1/2 volt "C" battery (Eveready 763, etc.) Same as our catalog No. 703, except without Fahnestock clips.



728

No. 728.....List, \$0.10 ea.
Two prong plug with large pins, one thin and one thick. Used extensively in portable batteries.



729

No. 729.....List, \$0.20 ea.
5-prong small plug, including guide pin, for combination 1 1/2 volt "A" and 75 volt or 90 volt "B" portable batteries.



730

HANDY SERVICEMEN'S KIT

Contains 100 Battery Plugs—Sturdy Metal Container. Supplies with reference chart giving full information on each plug.

For portable and farm radios, test equipment and countless other present-day devices using plug-in batteries.

Model BP, 100 MC—Servicemen's Net Cost.....\$7.33



50 ASSORTED PLUGS IN CARDBOARD CONTAINER KIT

Contains 50 fast moving battery plugs in handy cardboard container. Useful technical data included. A necessity for every radio serviceman!

MODEL BP-50
SERVICEMEN'S NET COST.....\$3.25



New Enlarged Line of AC-DC RESISTANCE LINE CORDS

STANDARD 3 TERMINALS AC-DC RESISTANCE CORDS

FLEXIBLE, STURDY CORDS, 3-TERMINAL TYPE, WITH COLOR-CODED, TINNED LEADS

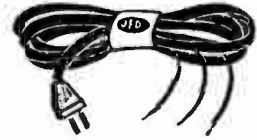


No.	Ohms	List
*2180	135	\$1.17
*2181	160	1.17
*2182	180	1.17
*2183	200	1.17
2184	220	1.17
2185	250	1.17
2186	290	1.17
2187	300	1.17
2188	330	1.17
2189	350	1.17
2190	390	1.17
2450	450 (High Resist.)	1.72

Attractive individual
Cartons

*Note: 135, 160, 180, and 200 ohm cords can also be used for single light 20 and 15 watt fluorescent fixtures.

HIGH RESISTANCE CORDS



No. List Price

2197 For 3-way portable radios. AC-DC battery. New high resistance type cord, has 560 ohms resistance. Many thousands of sets using this identical cord are now in use. This popular replacement cord should be stocked by every serviceman! Individually packaged \$1.72

TAPPED 4 TERMINAL AC-DC RESISTANCE CORDS

Pilot light resistor shunt built into the line cord. Used on Emerson, Zenith, Sparton, R. C. A., General Electric, Wells-Gardner, Sears Roebuck, Fada, Admiral, Air King, Detroit, Crosley, Garod, and others.



No.	List, Ea.	No.	List, Ea.
2176—160 OHMS—TAPPED AT 24 OHMS		2174—280 OHMS—TAPPED AT 40 OHMS	
For sets using tubes having a voltage drop of approximately 69 volts as 2-25 volt tubes and 3-6.3 volt tubes plus single pilot light or similar combination	\$1.38	For sets using tubes having a voltage drop of approximately 32 volts as 2-12 volt tubes and 1-6.3 volt tube or 5-6.3 volt tubes or similar combinations using 2 pilot light in series	\$1.38
2195—165 OHMS—TAPPED AT 30 OHMS		2164—360 OHMS—TAPPED AT 80 OHMS	
There is a large demand for this tapped line cord	1.38	Used in Garod Model BP-20. See No. 2196 for specifications	1.72
2177—180 OHMS—TAPPED AT 25 OHMS		2166—430 OHMS—TAPPED AT 80 OHMS	
For sets using tubes having a voltage drop of approximately 63 volts as 2-25 volt tubes and 2-6.3 volt tubes plus a single pilot light or similar combination	1.38	For Farnsworth Model CD59. See No. 2196 for specifications	1.72
2178—200 OHMS—TAPPED AT 25 OHMS		2156—510 OHMS—TAPPED AT 80 OHMS	
For sets using tubes having a voltage drop of approximately 57 volts as 1-25 volt tube, 1-12 volt tube and 3-6.3 volt tubes and a single pilot light. May also be used for sets using tubes having a voltage drop of 63 volts, (2-25 volt and 2-6.3 volt tubes) if high line voltage (125 volts) is encountered....	1.38	For Fada. See No. 2196 for specifications	1.72
2179—200 OHMS—TAPPED AT 40 OHMS		2196—560 OHMS—TAPPED AT 80 OHMS	
For sets using tubes having a voltage drop of approximately 57 volts as 1-25 volt tube, 1-12 volt tube and 3-6.3 volt tubes and two pilot lights in series	1.38	Tapped at 80 ohms for plate of rectifier. Designed with voltage dropping resistor to plate of rectifier. Avoids necessity of using B+ resistor. This cord used extensively	1.72
		2158—960 OHMS—TAPPED AT 80 OHMS	
		For G. E. Model L622. See No. 2196 for specifications	1.72
		2165—1950 OHMS—TAPPED AT 360 OHMS	
		Used extensively in sets such as Crosley Model 27BD, Admiral Model 28-G-5, and other sets with similar circuits	2.06

2157—For AC-DC Sets.

This cord has 960 ohms resistance, and is used wherever 45Z3 rectifier tube is employed. (For pocket type radios, such as: Admiral, Fada Sentinel, Sonora, Motorola, Detroit, Farnsworth, etc.) Individually packaged 1.72

REPLACEMENT LINE CORD FOR MOTOROLA SETS



No. List Price

2198—8 ft. cord containing 2 resistance elements—1100 and 280 ohms. Has 4 terminals. Essential replacement for all Motorola portables. Nos. 41D, 51D, 52D, 41H. \$2.05

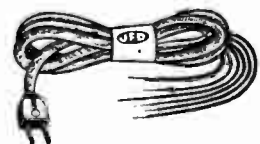
COMBINATION ANTENNA WIRE and STRAIGHT AC CORD



No. List Price

2168—3-wire cord with special female socket to fit sets which have three prong male plug, used in Sentinel, Admiral, Belmont, Sonora, etc. Individually packaged \$1.72

UNIVERSAL AC-DC RESISTANCE LINE CORDS



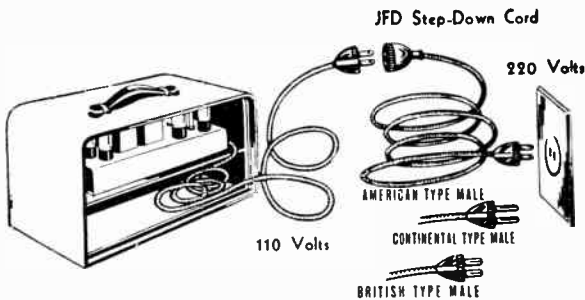
No. List Price

2175—This line cord replaces AC-DC cords from 220 ohms to 300 ohms. Can be used for either standard three terminal or tapped cord..... \$1.72



STEP-DOWN — AC-DC RESISTOR LINE CORDS

(Step-Down from 220 V. to 110 V.)
JFD STEP-DOWN LINE CORDS FOR RADIOS

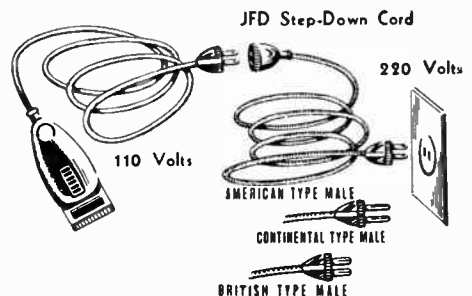


Cat. No.	Description	List Price
2191	220V-110V Stepdown for 4, 5, 6 tube sets drawing .3 amps. American Male Plug	\$2.40
2193C	220V-110V Stepdown for 4, 5, 6 tube sets drawing .3 amps. Continental Male Plug	2.40
2193B	220V-110V Stepdown for 4, 5, 6 tube sets drawing .3 amps. British Male Plug	2.40
2192	220V-110V Stepdown for 5 tube sets drawing .15 amps. American Male Plug	2.40
2194C	220V-110V Stepdown for 5 tube sets drawing .15 amps. Continental Male Plug	2.40
2194B	220V-110V Stepdown for 5 tube sets drawing .15 amps. British Male Plug	2.40
2430A	220V-110V Stepdown for 6 tube sets drawing .150 amps. American Male and Female Plugs	2.40
2431B	220V-110V Stepdown for 6 tube sets drawing .150 amps. British Male and American Female Plugs	2.40

Cat. No.	Description	List Price
2432C	220V-110V Stepdown for 6 tube sets drawing .150 amps. Continental Male and American Female Plugs	\$2.40

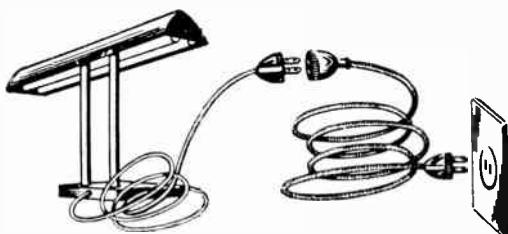
JFD STEP-DOWN LINE CORDS FOR ELECTRIC RAZORS

Cat. No.	Description	List Price
2203	220V-110V Stepdown for Remington Rand Razor 15W. American Female and American Male	\$2.60
2203B	220V-110V Stepdown for Remington Rand Razor 15W. American Female and British Male	2.60
2203C	220V-110V Stepdown for Remington Rand Razor 15W. American Female and Continental Male	2.60
2204	220V-110V Stepdown for Schick Razor 9W, Sunbeam Shavemaster 15W, Williams Roto-Shaver, Gillette, Gem 10W with American Female and American Male	2.60
2204B	220V-110V Stepdown for Schick Razor 9W, Sunbeam Shavemaster 15W, Williams Roto-Shaver, Gillette, Gem 10W with American Female and British Male	2.60
2204C	220V-110V Stepdown for Shick Razor 9W, Sunbeam Shavemaster 15W, Williams Roto-Shaver, Gillette, Gem 10W with American Female and Continental Male	2.60
2205	220V-110V Stepdown for Packard Razor 6W with American Female and American Male	2.60
2205B	220V-110V Stepdown for Packard Razor 6W with American Female and British Male	2.60



Cat. No.	Description	List Price
2205C	220V-110V Stepdown for Packard Razor 6W with American Female and Continental Male	\$2.60

JFD AC-DC LINE CORDS FOR FLUORESCENT FIXTURES



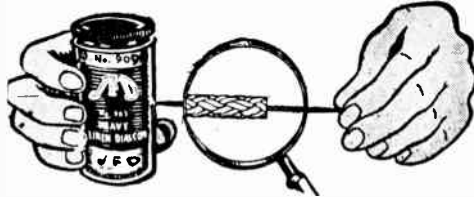
Cat. No.	Description	List Price
2181FL	165 ohm, for 20 watt bulb, 117 volts, 6 feet long	\$1.17
2181FL-2	Two 165 ohm windings, for two 20 watt bulbs, 117 volts, 6 feet long	2.00
2182FL	180 ohm, for 15 watt bulb, 117 volts, 6 feet long	1.17
2200FL	Two 180 ohm windings, for two 15 watt bulbs, 117 volts, 6 feet long	2.00



DIAL DRIVE NYLON CORD and CABLE

HANDY SPOOL FOR DIAL CABLE AND CORDS

The finest line of nylon dial cables and cords on the market, put up and packaged in a truly modern manner. All length spools come on metal spools, housed in transparent plastic containers which permit simplicity of



handling, renders cable weather-proof, prevents cable from rotting, becoming brittle, or losing its original strength or color.

Empty Plastic Container Makes A Handy All-purpose Kit for Small Parts, Washers, etc.

JFD 42 STRAND PHOSPHOR BRONZE CABLE



42 Strand Phosphor Bronze Cable with a linen thread center. This is the best flexible bronze cable obtainable. Wound on metal spool.

No.	Spools	List
901—25	25 ft.	\$1.26
901—50	50 ft.	2.46
901—100	100 ft.	4.38
901—500	500 ft.	17.52
901—1000	1000 ft.	35.04

JFD LIGHT NYLON CORD



This light Nylon Cord has ample reserve strength and is now popularly used in original radio sets. Will adequately replace the cords of older type receivers. Wound on metal spool.

No.	Spool	List
904—25	25 ft.	\$1.26
904—50	50 ft.	2.46
904—100	100 ft.	4.38
904—500	500 ft.	16.43
904—1000	1000 ft.	27.38

JFD THIN NYLON CORD



Extra Special Thin Nylon Cord. Made of the finest braided black nylon. Wound on metal spool.

No.	Spool	List
908—25	25 ft.	\$1.25
908—50	50 ft.	2.40
908—100	100 ft.	4.50
908—500	500 ft.	13.00
908—1000	1000 ft.	25.00

JFD FINE BRAIDED PHOSPHOR BRONZE CABLE



Very fine braided Phosphor Bronze Cable with a fiberglass center. This is a very popular cable. Wound on metal spool.

No.	Spools	List
901D—25	25 ft.	\$1.26
901D—50	50 ft.	2.46
901D—100	100 ft.	4.38
901D—500	500 ft.	17.52
901D—1000	1000 ft.	35.04

JFD SPECIAL NYLON HEAVY CORD



This special heavy Nylon Cord was designed to replace many cords in the older model receivers such as Kolster and Grebe sets, etc. Readily adaptable for many other applications where great strength is required.

No.	Spools	List
905—25	25 ft.	\$2.19
905—50	50 ft.	3.83
905—100	100 ft.	7.39
905—500	500 ft.	37.23

JFD SPECIAL THIN NYLON CORD



Extra Special Thin Nylon Cord. Made of white braided linen. Very strong. Suited for replacements where very thin cord is required.

No.	Spools	List
908B—25	25 ft.	\$1.25
908B—50	50 ft.	2.40
908B—100	100 ft.	4.50
908B—500	500 ft.	13.00
908B—1000	1000 ft.	25.00

JFD 18 STRAND PHOSPHOR BRONZE CABLE



18 Strand knitted Phosphor Bronze Cable, will give good service.

No.	Spools	List
902—25	25 ft.	\$0.93
902—50	50 ft.	1.81
902—100	100 ft.	3.45
902—500	500 ft.	14.78
902—1000	1000 ft.	27.38

JFD 8 STRAND PHOSPHOR BRONZE CABLE



Special Thin Phosphor Bronze Knitted Cable, 8 strands. Strong, flexible and especially made to replace cables on RCA and G.E. 1936 to 1938 receivers. Wound on metal spool.

No.	Spool	List
906—25	25 ft.	\$1.25
906—50	50 ft.	2.40
906—100	100 ft.	4.50
906—500	500 ft.	13.00
906—1000	1000 ft.	25.00

JFD FLAX BRAIDED HEMP



Flax Braided Hemp. Pre-stretched, diameter .062 and used in late models of Emerson, G.E., Sparton, Crosley, etc. Tensile strength more than sufficient for these and other receivers.

No.	Spools	List
909—25	25 ft.	\$1.26
909—50	50 ft.	2.46
909—100	100 ft.	4.38
909—500	500 ft.	16.43
909—1000	1000 ft.	27.38

JFD HEAVY NYLON CORD



This Heavy Nylon Cord will adequately replace old cables used in Silver-Marshall, Philco, Brunswick, and many other sets where heavy linen cable was formerly used. This heavy cord is also used in some of the modern receivers. Has great pulling strength. Wound on metal spool.

No.	Spool	List
903—25	25 ft.	\$1.42
903—50	50 ft.	2.74
903—100	100 ft.	4.60
903—500	500 ft.	21.90
903—1000	1000 ft.	38.33

JFD EXTRA HEAVY NYLON CORD



Extra heavy Nylon Cord .072 gauge. For specific use on Philco receivers but can also be used for many other adaptations.

No.	Spool	List
907—25	25 ft.	\$1.37
907—50	50 ft.	2.74
907—100	100 ft.	4.93
907—500	500 ft.	21.90
907—1000	1000 ft.	38.33

JFD DIAL DRIVE SPRINGS



	List per 100
35-1—Spring 1/8"x1/2"	\$4.22
35-2—Spring 1/8"x1"	4.22
35-3—Spring 3/8"x1"	4.22
35-4—Spring 3/8"x1 3/8"	4.22
35-5—Spring 1/4"x1 1/2"	4.22
35-6—Spring 1/4"x2"	4.54
35-7—Kit of 25 assorted springs	1.10
35-8—Kit of 100 assorted springs	3.83



IDLER PULLEYS

Two sizes replace original idler or drive pulleys.

203D	List	\$0.11
203E		.11

JFD NON-SLIP COMPOUND

Prevents slipping of belts, cords or cables used on radio dials, refrigerators, etc. In powder form, easy to use. Insures a perfect non-slipping job.



No.	List
ST480—2 oz.	\$0.30

ASK FOR THE DIAL CORD IN THE PLASTIC CONTAINER!



POPULAR TEST LEAD LINE

ALL JFD TEST LEADS OFFER THESE FEATURES:

1. All fitting ends are solid brass (nickel-plated).
2. All wires are flexible, kink-free, rubber-covered for use on high voltages.
3. Prod handles are made for long, heavy duty—5" long.
4. Individually packed in dust-proof cellophane container.

STANDARD TEST LEADS



- | | |
|---------------------|--------|
| No. | List |
| 3-1—Phone tips | \$1.25 |
| 3-2—Spade lugs | 1.25 |
| 3-3—Alligator Clips | 1.35 |
- 5" Heavy duty fibre handle. Phono needle point, removable, permits penetration through insulation of wire.

Wire is 50" long.



- | | |
|---------------------|--------|
| No. | List |
| 3-4—Phone tips | \$1.25 |
| 3-5—Spade lugs | 1.25 |
| 3-6—Alligator Clips | 1.35 |
- 5" heavy duty fibre handle. Pointed senior solderless phono tips which permit easy changing of test leads without soldering.

Wire is 50" long.

SPECIAL TEST LEADS



- | | |
|---------------------|--------|
| No. | List |
| 3-7—Phone tips | \$1.75 |
| 3-8—Alligator Clips | 1.75 |
| 3-9—Banana Plugs | 1.75 |
- Sturdily made with 5" long high luster cast phenolic handles. Phono needle point. Wire is 54" long. Solderless wire of test leads without soldering.

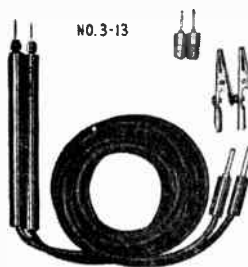
connection permits easy changing



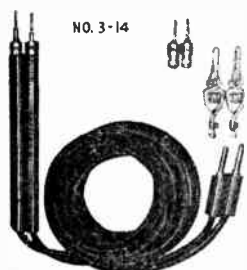
- | | |
|----------------------|--------|
| No. | List |
| 3-10—Phone tips | \$1.75 |
| 3-11—Alligator Clips | 1.75 |
| 3-12—Banana Plugs | 1.75 |
- Sturdily made with 5" long high luster, cast phenolic handles; Senior solderless phono tips. Wire is 54" long. Solderless wire connection permits easy changing of test leads without soldering.

less wire connection permits easy soldering.

JFD ALL-PURPOSE TEST LEADS

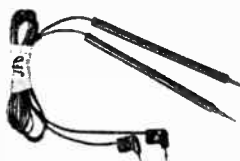


- No. 3-13 High luster, heavy duty, cast phenolic handles, 5" long, red and black; special, flexible, kink-free, all-rubber covered 42-strand wire, 54" long, insulated for use on high voltages; sturdy, solid brass (nickel-plated) phono needle tips, designed for easy penetration through insulation of wire. Comes with insulated banana plugs on meter end. Also includes 1 pair Junior solderless phono tips and 1 pair alligator clips. Designed for easy interchange of parts.
- No. 3-13 List \$2.50



- No. 3-14 High luster, heavy duty, cast phenolic handles, 5" long, red and black; special, flexible, kink-free, all-rubber covered 42-strand wire, 54" long, insulated for use on high voltages; solid brass (nickel-plated) senior solderless phono tips. Comes with insulated banana plugs on meter end. Also includes 1 pair Junior phone tips and 1 pair alligator clips. Designed for easy interchange of prod ends.
- No. 3-14 List \$2.50

NEW TYPE ELBOW ANGLE TEST LEAD



No. 3-15 New plug design eliminates danger of wire pulling out or breaking off—fits into curvature at an angle. Red and black catalin insulation; all rubber-covered kinkless wire, 48" long. Handles are 5" long cast phenolic. All connections are well soldered affording low resistance. Comes with nut and bolt for ease of assembly.

- | | |
|---|-------------|
| No. 3-15 With Senior Solderless Phone Tips | List \$1.75 |
| No. 3-16 With Replaceable Phono Needle Points | List \$1.75 |

JFD TEST LEAD ACCESSORIES



Durable Fibre prod, 5" long, nickel-plated brass, solderless tips permit easy changing of leads without soldering. Red or black.

No. 3-31—Senior Solderless Phone tips List, Ea. \$0.35

No. 3-32—Phone needle tips List, Ea. .35



Durable, high luster, cast phenolic prods, nickel-plated brass solderless tips permit easy changing of leads without soldering, 5" long. Red or black.

No. 3-33—Senior Solderless Phone tips List, Ea. \$0.50

No. 3-34—Phono needle tips List, Ea. .50



No. 3-35 Insulated solid brass (nickel-plated) Junior solderless phone tips, red or black, durable cast phenolic handles, over-all length 2".

List Price, ea. \$0.24



No. 3-38 Senior solderless phone tips, solid brass (nickel-plated). Made for easy insertion of wire.

List Price, Ea. \$0.10



No. 3-39 Junior solderless phone tips, solid brass (nickel-plated). Made for easy insertion of wire.

List Price, Ea. \$0.10



No. 3-40 Phono needle chuck, solid brass (nickel-plated). Specially tooled for easy insertion of wire.

List Price, Ea. \$0.15



No. 3-36 Insulated solid brass (nickel-plated) banana plug, solderless, durable, cast phenolic handles, red or black, over-all length 2".

List Price, Ea. \$0.25



No. 3-37 Nickel-plated brass Alligator clips, tight, even-matched jaws; durable, high luster, insulated handles, come in red or black.

List Price, Ea. \$0.25



No. 3-41 Phone tips, solid brass (nickel-plated). A perfect replacement on headset, speakers, and extension cords.

List Price, Ea. \$0.02



WIRE & CABLE FOR RADIOS and ELECTRICAL APPLIANCES



AC-DC ANTENNA WIRE (Cotton Covered)

AC-DC antenna wire, stranded, woven cotton covered, flexible, brown.
 2150—25' hank (100 to carton)
 2151—100' hank 2153—1000' spool

AC-DC ANTENNA WIRE (New Unkinkable Vinylite)

AC-DC antenna wire, stranded, new vinylite, flexible, durable, unkinkable.
 2154R—25' hank 2155R—1000' spool

(Soft Flexible Rubber)

Stranded, rubber-covered AC-DC antenna wire. Extremely flexible, unkinkable.
 2154R—25' hank 2155R—1000' spool

STRANDED HOOK-UP WIRE No. 22

Stranded hookup wire, 22 gauge, easy push-back, tinned, covered with special LAC-QUERED braid. Five colors: black, red, yellow, blue, green.
 914-H

STRANDED HOOK-UP WIRE No. 20

Stranded hookup wire, 20 gauge, cotton covered.
 935-C—1000' spool
 936-C—3000' spool

STRANDED HOOK-UP WIRE No. 18

Stranded hookup wire, 18 gauge.
 913-H

STRANDED HOOK-UP WIRE No. 16

Stranded hookup wire, 16 gauge, covered with durable cotton braid. Five colors.
 915-H

STRANDED HOOK-UP WIRE No. 14

Stranded hookup wire, 14 gauge, as above.
 916-H

SOLID HOOK-UP WIRE No. 22

Solid hookup wire, 22 gauge, easy pushback, tinned, woven fabric covered. Five colors: black, red, yellow, blue, green.
 920-C—1000' spool
 921-C—3000' spool

7/24 BARE COPPER AERIAL WIRE

937—50' coil (standard carton 100 coils)
 938—100' coil (standard carton 50 coils)
 939—1000' metal spool

SHIELDED PHONOGRAPH WIRE

Single conductor shielded wire, 22 gauge, very flexible, for phono pickups, and phono switches.
 940-A—100' coil
 941-A—1000' spool

EXTRA FLEXIBLE THIN SHIELDED PHONO WIRE

Extra flexible, special thin, shielded phono wire. Same as used by Webster, Astatic, Brush, etc. in their new type lightweight pickup arms.
 Cat. No. 942—1000' spool
 Cat. No. 943—100' spool

TEST LEAD WIRE

Kinkless flexible soft rubber covered test lead wire, 18 gauge, red or black.
 2170—25' hank 2172—500' spool
 2171—100' hank 2173—1000' spool

SHIELDED LEAD-IN WIRE (Single Cond.)

Single conductor shielded wire, stranded, tinned, 22 gauge, durable cotton braid covered.
 911-H

WEATHERPROOF 2 COND. SHIELDED WIRE

Two conductor shielded wire, stranded, tinned, 22 gauge, durable cotton braid covered. Weatherproof—excellent for indoor or outdoor use. Extremely popular.
 912-H

TRANSMISSION WIRE

Two conductor transmission wire, 20 gauge, cotton braided, weatherproof impregnated.
 945-C

JFD INTER-COMMUNICATION CABLE, BRAIDED TYPE

GENERAL PURPOSE: Designed for interior use for connecting intercommunication systems, etc.
 CONSTRUCTION: Each conductor stranded copper wire, two rayon reverse serves paraffined, color coded.

No.	Description	No.	Description
992	2 conductor	996	6 conductor
993	3 conductor	997	7 conductor
994	4 conductor	998	8 conductor
995	5 conductor	999	10 conductor

3-CONDUCTOR INTERCOM CABLE



2 Wires Plain, 1 Wire Shielded
 Extremely successful on intercommunication systems. The shielding on one wire can be used as a ground for break-in onto the line switch. The shielding can also be used as an extra conductor—which can make this cable a 4-conductor wire.
 Cat. No. 965—1000' spools

LAPEL MICROPHONE CABLE (.180 diam. Thin Gauge, Single Cond.)

Single conductor shielded microphone cable, 20 gauge. Smaller OD than standard type
 960-C

MICROPHONE CABLE (Single Cond.)

Single conductor shielded microphone cable OD .250, 20 gauge.
 961-C

MICROPHONE CABLE (Two Cond.)

Two conductor shielded microphone 20 gauge cable.
 962-C

MICROPHONE CABLE (Three Cond.)

Three conductor shielded microphone 20 gauge cable.
 963-C

SV (Vacuum Cleaner Service Cord) No. 18/2 .180 OD Thin Gauge

Two conductor No. 18 gauge SV cord, OD .180, for use with light electrical appliances such as vacuum cleaners and blowers.
 974-C

U. L. Approved

SJ (Service Cord) No. 16/2

Two conductor, No. 16 gauge SJ cord, 26-30, OD .325. U. L. Approved.
 976-C

SJ (Service Cord) No. 18/2

Two conductor, No. 18 gauge SJ cord, 16-30, OD .300. U. L. Approved.
 978-C

S CORD (Heavy Duty Service Cord) No. 14/2

Two conductor, No. 14 gauge S heavy duty cord, 41-30, OD .540.
 984-C U. L. Approved

S CORD (Heavy Duty Service Cord) No. 16/2

Two conductor, No. 16 gauge S heavy duty cord, 26-30, OD .410.
 986-C U. L. Approved

S CORD (Heavy Duty Service Cord) No. 18/2

Two conductor, No. 18 gauge S heavy duty cord, 16-30, OD .395.
 988-C U. L. Approved

POSJ WIRE



18/2—U. L. Approved. Brown or Black Zip-cord. Markers every 5 feet. Manufactured by a leading wire mill.

Cat. No. POSJ—500' spools

All Items Below Come With Moulded, Unbreakable Rubber Plugs



Sturdy 2 conductor, 18 gauge, POSJ (Zip), 6 foot power supply cord.
 2199-Z U. L. Approved

SV No. 18 (Vacuum Cleaner Service Cord)

Two-conductor No. 18 SV cord, OD .180, for use with light electrical appliances such as vacuum cleaners and blowers. Stripped and tinned ready for use. U. L. Approved.

10-1	6' length	10-4	12' length
10-2	8' length	10-5	20' length
10-3	10' length		

SJ No. 18 (Service Cord for washing machines and larger appliances)

Two-conductor, No. 18 SJ cord, 16-30, OD .300. Stripped and tinned ready for use.
 U. L. Approved

10-11	6' length	10-14	12' length
10-12	8' length	10-15	20' length
10-13	10' length		

SJ No. 16 (Heavy duty service cord)

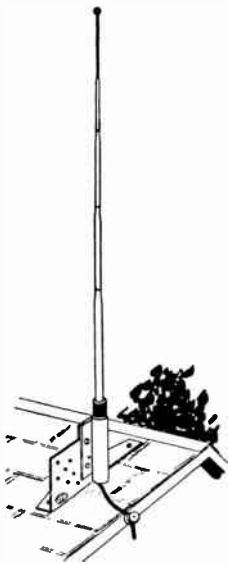
Two-conductor No. 16 SJ cord, 26-30, OD .325. Stripped and tinned ready for use.
 U. L. Approved

10-21	6' length	10-24	12' length
10-22	8' length	10-25	20' length
10-23	10' length		



VERTICAL NON-DIRECTIONAL HOME ANTENNAS

JFD Vertical Non-Directional Home Antennas are easily and quickly installed on flat roofs, walls, eaves, windows, ridge poles, parapets or anywhere else. Improves short-wave and broadcast reception on new and old model sets. These antennas use the improved adjustable brackets to simplify installations. Approved by leading manufacturers.



4 SECTIONS

Extends to 12 ft. With single bracket and 60 ft. of durable lead-in wire.

No. 3072RA DE-LUXE

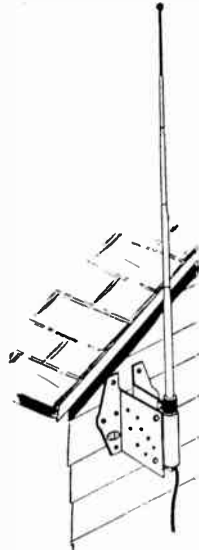
Large diameter admiralty metal tubing. Heavily plated, beautiful finish, rust-proof.

No. 3072RA List Price \$7.45

No. 3073RA

Admiralty metal—Heavily plated, beautiful finish, rust proof.

No. 3073RA List Price \$6.30



5 SECTIONS

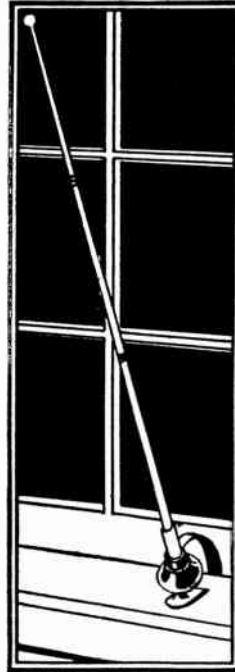
Extends to 16 ft. 4 in. With double bracket, and 40 ft. of durable lead-in wire.

No. 3075RA

Admiralty metal—Heavily plated, beautiful finish, rust proof. With 40 ft. durable lead-in wire.

List Price \$12.00

Ask your jobber for JFD's complete FM & Television Master Catalog.



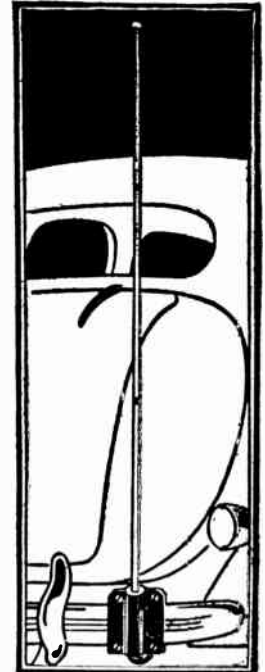
No. 3070B WINDOW ANTENNA

FOR APARTMENT HOUSES, HOTELS, ROOMING HOUSES, ETC.

Three piece telescopic. First two sections Admiralty metal tempered seamless tubing, chromium plated — third section polished stainless steel. Extends to 96 inches. Easily attached to any window sill. Complete with mounting bracket and screws.

Individual Cartons

List Price \$4.29



DE LUXE No. 3040B BUMPEROD ANTENNA

Three piece telescopic. . . . First two sections Admiralty metal tempered seamless tubing, chromium plated — third section polished stainless steel. Extends to 96 inches. Easily attached to front or rear bumpers. No drillings. Fits all cars.

Individual Cartons

List Price \$4.29

JFD ASSORTED RADIO PRODUCTS

RADIO DIAL KNOBS

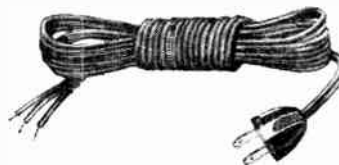


4-26—Set screw, width $\frac{3}{4}$ " height $\frac{3}{8}$ "; to fit $\frac{1}{4}$ " shaft. Walnut Ivory, Mahogany, Peach-Blond.
Cat. No. List
4-26 Set screw \$0.14
4-25S Spring .10
4-25K Knurled .10

4-25—Set screw, width $1\frac{1}{4}$ " height $\frac{1}{2}$ "; to fit $\frac{1}{4}$ " shaft. Walnut Ivory, Mahogany, Peach-Blond.
Cat. No. List
4-25 Set screw \$0.15
4-26S Spring .10
4-26K Knurled .10



JFD COMB. AC CORD and ANTENNA WIRE



Combination straight AC cord and antenna wire. This cord has three wires—2 wires for AC and one which acts as antenna. Used in many AC-DC sets, phonoscanners, record changers, and wireless phonographs. Made in 6' 6" lengths, complete with molded rubber plugs.
No. 2167..... List Price \$1.25

MINIATURE WAFER SOCKET



Miniature wafer socket with spring-type phosphor bronze constant contacts which hold tubes securely. No need for locking devices. Soldering is easier because of longer and wider spaced contacts. Used with following miniature tubes: 1R5, 1S5, 1T4, etc.

No. 85-1..... List Price \$0.15



Auto Antennas

JFD CUSTOM BUILT DELUXE STAR AUTO RADIO ANTENNAS

The JFD Star and Standard Antennas are built of antimonial-admiralty brass tubing, stainless steel type rods, of high tension flexible strength—rattle-proof construction—heavily chrome plated.

By direct comparison, the JFD STAR antenna is actually 50% heavier than other makes, with proportionately greater signal capacity and rigidity.

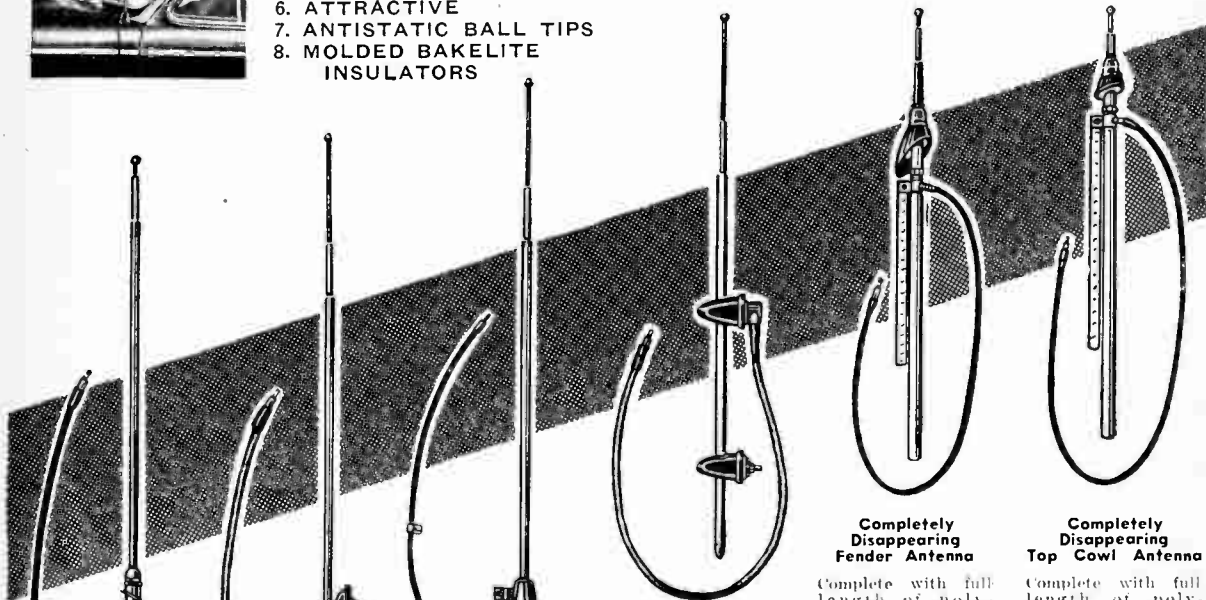
Every JFD Star and Standard Antenna is equipped with a full length of Q.H.F. low-loss Polyethylene air-gap type shielded cable to prevent noise pickup, together with necessary mounting brackets designed to give a custom-built appearance. All antennas come individually packed—10 to the master carton.

JFD ANTENNA FEATURES

1. NOISELESS
2. RUSTPROOF
3. WILL NOT JAM
4. ONE-MAN INSTALLATION
5. FITS ALL CARS
6. ATTRACTIVE
7. ANTISTATIC BALL TIPS
8. MOLDED BAKELITE INSULATORS



STAR ANTENNAS



Single Mounting Cowl Antenna

Adjustable to fit Torpedo shaped body.

Complete with full length of polyethylene shielded cable and all necessary mounting accessories.

Standard 3B6066 List 3-section 66" \$4.95

Standard 3B6099 List 3-section 99" \$5.70

Star Heavy Duty SC 6066 List 3-section 66" \$5.45

Star Heavy Duty SC 6099 List 3-section 99" \$6.70

Top Cowl Antenna

Complete with a 43 1/2" coaxial cable with necessary mounting accessories.

Standard 3B4000 List 3-section 60" \$5.25

Star Heavy Duty SC 4000 List 3-section 60" \$6.25

Alligator Hood or Hinge Antenna

Complete with full length of polyethylene shielded cable and all necessary mounting accessories.

Standard AL60 List 3-section 60" \$4.95

Star Heavy Duty UH100 List 3-section 60" \$5.95

Side Cowl Antenna

Complete with full length of polyethylene shielded cable and all necessary mounting accessories.

Standard 3B66C List 3-section 66" \$4.95

Standard 3B99C 3-section 99" \$5.70

Star Heavy Duty SC 1066 List 3-section 66" \$5.45

Star Heavy Duty SC 1099 3-section 99" \$6.70

Completely Disappearing Fender Antenna

Complete with full length of polyethylene shielded cable and all necessary mounting accessories.

Standard 3B 3000 List 3-section 60" \$7.25

Star Heavy Duty 3C 3000 List 3-section 60" \$8.25

Completely Disappearing Top Cowl Antenna

Complete with full length of polyethylene shielded cable and all necessary mounting accessories.

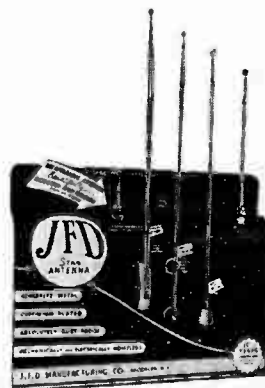
Standard 3B5000 List 3-section 60" \$6.25

Star Heavy Duty 3C5000 List 3-section 60" \$7.25

JFD AUTO ANTENNA DISPLAYS

Increase your Antenna Sales — by displaying prominently!

The New JFD Antenna Displays are beautifully finished in four colors. One each of the six antennas illustrated above is mounted on the card as it will appear on the auto.



You pay only for the antenna—Display Board is FREE!

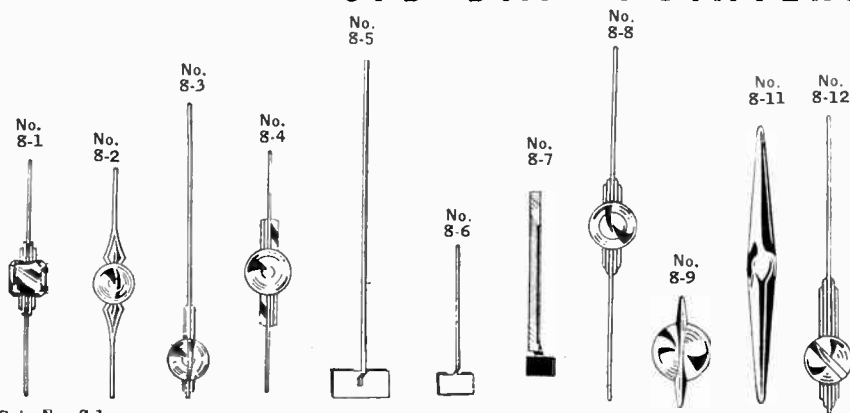
Display No. 990—6 JFD STAR Heavy Duty Antennas List Price \$42.00

Display No. 991—6 JFD STANDARD Auto Antennas List Price \$36.00



DIAL POINTERS

JFD DIAL POINTERS



Cat. No. 8-1
 2 3/8" overall length from tip to tip. Polished bronze, clear lacquered dial pointer. 1/4" bushing, can be snipped off to any desired length. Decorative modernistic square.....List Price \$0.35

Cat. No. 8-2
 3 1/8" overall length from tip to tip. Polished bronze, clear lacquered dial pointer. 1/4" bushing, can be snipped off to any desired length. Modernistic curved motif.....List \$0.35

Cat. No. 8-3
 Single arm. Measures 3 1/2" from center to end. Polished bronze, clear lacquered dial pointer. 1/8" bushing. Can be snipped off to any desired length. Modernistic design.....List \$0.35

Cat. No. 8-4
 3 1/4" overall length tip to tip. Polished bronze, clear lacquered dial pointer. 1/8" bushing. Can be snipped off to any desired length. Modernistic design.....List \$0.35

Cat. No. 8-5
 Slide scale dial pointers. 4 1/2" overall length. White enamel finish. Can be snipped off to any length desired.....List \$0.25

Cat. No. 8-6
 Slide scale dial pointer, 2 3/8" overall length. White enamel finish. Can be snipped off to any desired length. 1/2" x 1/4" slide shank. List \$0.25

Cat. No. 8-7
 Slide scale dial pointer. Red plastic indicator. 2 1/8" overall length. Can be snipped off to any length. 1/2" x 1/4" slide shank. List \$0.25

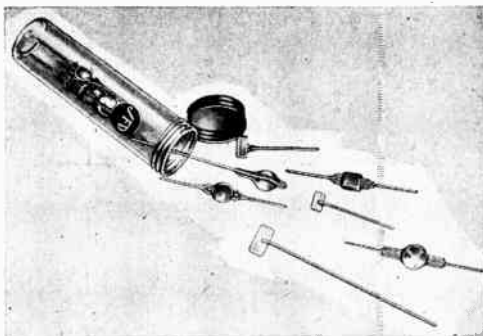
Cat. No. 8-8
 Polished bronze; clear lacquered. Red dot. 3/8" bushing; 4 3/4" overall. List \$0.35

Cat. No. 8-9
 Polished bronze; clear lacquered. 3/4" center disc; 1/4" bushing. 1 1/2" overall. List \$0.35

Cat. No. 8-11
 Polished bronze; clear lacquered. Propeller shape. 1/4" bushing; 3 3/4" overall. List \$0.35

Cat. No. 8-12
 Polished bronze; clear lacquered. Diagonal red stripe in center disc. 1/4" bushing; 4" overall. List \$0.35

JFD DIAL POINTER ASSORTMENT



Cat. No. 8-10
 Popular servicemen's assortment of 10 assorted dial pointers containing all the numbers at left. Comes in attractive plastic container which keeps pointers in perfect condition....List Price \$2.90



RADIO DIAL BELT KITS

Save Time



JFD DIAL BELTS FOR SERVICEMEN

JFD offers you the choice of three kit assortments containing 25, 50 or 100 of the most popular belts—in a sturdy metal index cabinet. Included with each kit are 1 MEASUREMENT CHART, a CONVERSION CHART and a 64-page BELT BOOKLET covering all types of belts for more than 1,500 radio models. **BETTER GRIP:** Maximum friction on the inside surface, nonslip grip.

THREE PLY CONSTRUCTION: Three layers of woven fabric impregnated with high-grade synthetic rubber.

EXACT FIT: Precision-made to correct length, guarantees accurate tuning. Easy to install, no adjustments necessary. USE JFD BELTS ALWAYS.

**EACH
 BELT
 LIST
 PRICE
 \$0.25**



USE THE BELT THE MANUFACTURERS USE

JFD WOVEN FABRIC DIAL BELTS

	List Price
B25A Belt Kit Assortment of 25.....	\$6.70
B50A Belt Kit Assortment of 50.....	13.40
B100A Belt Kit Assortment of 100.....	25.00

Buy 'Em By The Box!



AUTO RADIO ACCESSORIES

JFD "LOW LOSS" ANTENNA LEAD CABLES

Heavy Lacquered—Protected by Shielded Loom Covered with Processed Braid

GENERAL PURPOSE LEADS



With male connector and aerial and ground lead.

No.	Length	List
3022	2 ft.	\$0.90
3025	4 ft.	1.28
3026	6 ft.	1.57
3027	8 ft.	1.96



With male and female connectors.

No.	Length	List
3023	2 ft.	\$0.90

With both male connector ends.

No.	Length	List
3024	2 ft.	\$0.90



With male connector and ground box.

No.	Length	List
3017S	3 ft.	\$1.54



With set plug-in for Motorola and ground box.

No.	Length	List
3017M	3 ft.	\$1.54

INDIVIDUAL CARTONS

WHEEL HUB STATIC ELIMINATORS



No. 4000

An essential for every auto radio installation. Used under hubs of front wheels.

List, Each \$0.12

SPECIAL WHEEL

STATIC ELIMINATOR Flat Contact



For All 1940-41 General Motors Cars

No. 4007.....List, Each \$0.15

Phosphor Bronze Hood Static Eliminator



For contact between hood and frame of car. Eliminates static caused by poor grounded hood.

No. 4008 List, Each \$0.11

JFD CUSTOM-BUILT MOUNTING HARDWARE FOR ALL AUTO RADIO ANTENNAS

Will fit JFD, Ward, Radiart, Phileo, Motorola, Delco, ICA, Snyder, Radel, and all other makes of antennas

No. 516—STRAIGHT SIDE COWL MOUNTING For antennas with 1/2" dia. tubing



Quan.	Type	Description	List, Ea.
2	A	Porcelain Insulators	\$0.30
2	B	Rubber Pads	.05 1/2
2	C	Eyebolts	.07
2	D	Spider Washers	.06
1	E	Shield Cup	.10
2	F	Shoulder Bushings	.04
1	G	Set of 2 flat washers and 4 nuts	.10

No. 516—Complete Kit listed above...List \$1.25

No. 518—STRAIGHT SIDE COWL MOUNTING For antennas with 3/8" dia. tubing

Quan.	Type	Description	List, Ea.
2	AA	Porcelain Insulators	\$0.37 1/2
2	B	Rubber Pads	.05 1/2
2	CC	Eyebolts	.10
2	D	Spider Washers	.06
1	E	Shield Cup	.10
2	F	Shoulder Bushings	.04
1	GG	Set of 2 flat washers and 4 nuts	.14

No. 518—Complete Kit listed above...List \$1.50

No. 519—SLOPING COWL MOUNTING For antennas with 3/8" dia. tubing



Quan.	Type	Description	List, Ea.
2	A	Porcelain Insulators	\$0.30
2	B	Rubber Pads	.05 1/2
2	C	Eyebolts	.07
2	D	Spider Washers	.06
1	E	Shield Cup	.10
2	F	Shoulder Bushings	.04
1	G	Set of 2 flat washers and 4 nuts	.10

No. 519—Complete Kit listed above...List \$1.25

No. 519—SLOPING COWL MOUNTING For antennas with 3/8" dia. tubing

Quan.	Type	Description	List, Ea.
2	AA	Porcelain Insulators	\$0.37 1/2
2	B	Rubber Pads	.05 1/2
2	CC	Eyebolts	.10
2	D	Spider Washers	.06
1	E	Shield Cup	.10
2	F	Shoulder Bushings	.04
1	GG	Set of 2 flat washers and 4 nuts	.14

No. 519—Complete Kit listed above...List \$1.50

No. 616—SINGLE BRACKET MOUNTING For antennas with 5/16" dia. tubing



Quan.	Type	Description	List, Ea.
1	P	Single mount fender and side cowl bracket	\$1.00
1	M	Rubber mat	.10
2	C	Eyebolts	.07
2	D	Spider Washers	.06
1	E	Shield Cup	.10
2	F	Shoulder Bushings	.04
1	G	Set of 2 flat washers and 4 nuts	.10
2	S	Spacer Bushings	.05 1/2

No. 616—Complete Kit listed above...List \$1.75

No. 618—SINGLE BRACKET MOUNTING For antennas with 3/8" dia. tubing

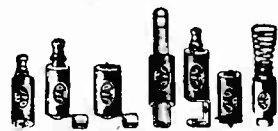
Same as above except that you get 2-CC and 1-GG.

No. 618—Complete KitList \$1.75

JFD AUTO MOTOR SPARK NOISE SUPPRESSORS AND CONDENSERS

Maximum efficiency for both radio and motor is insured by the use of JFD Suppressors. They are designed with long resistors, minimum capacity and have the best possible ratio of RF to DC resistance. Adequate noise suppression is given by a resistance of only 10,000 ohms and with this low DC resistance, full motor efficiency is assured. Very strong mechanically, they will withstand high voltage, vibration, heat and every weather condition.

With the exception of the Ford special which has a resistance of 200,000 ohms, the standard resistance is 10,000 ohms.



280 281 282 283 284 285 286-87

No.	Description	List, Ea.
280	SCREW ON PLUG TYPE. Will fit most popular cars	\$0.30
281	SNAP ON PLUG TYPE. Snaps on plug at any angle	.30
282	SNAP ON PLUG CABLE END TYPE. Replaces regular cable end	.30
283	DISTRIBUTOR TYPE. Placed in series with center distributor cable	.30
284	BRACKET TYPE. For older type cars	.30
285	CABLE TYPE. To be inserted in spark plug cable near spark plug	.30
286	SPECIAL RESISTOR BRUSH. Replaces regular distributor brush on Ford 1936-37-38	.30
287	SPECIAL RESISTOR BRUSH. Replaces regular distributor brush on Ford 1935 and previous cars	.30



288 297 291-292 290

No.	Description	List, Ea.
288	DESIGNED ESPECIALLY FOR FORD CARS. Has a higher resistance required for this type of motor	\$0.30
297	IMPROVED DISTRIBUTOR SUPPRESSOR. No tools required, just press suppressor into the distributor head and snap cable end into the suppressor	.30
290	DOME AND AMMETER CONDENSER. Double spade tips aid in easy installation—capacity 1/2 mfd.	.50
291	UNIVERSAL GENERATOR CONDENSER. Double spade tips aid in easy installation—capacity 1/2 mfd.	.50
292	UNIVERSAL GENERATOR CONDENSER. Capacity 1 mfd.	.95



No.	Description	List, Ea.
293-294	CONDENSER DESIGNED FOR 1937 FORD V8 DISTRIBUTOR HEAD. Eliminates interference caused by brush sparking, etc.	\$0.80
294	CONDENSER FOR 1936 FORD and previous distributor heads	.80
295	GAS GAUGE FILTER CONDENSER. Capacity .05 mfd.	.50
298	GENERATOR CONDENSER FOR 1940 FORD CARS. With special bracket for use on 1940 Ford cars	.80



Radio Chemicals

All Bottles Sealed with Exclusive DuPont "Air-tight" "Celo-Seal" Caps!

JFD RADIO CEMENT

A special preparation for the repair of radio and speaker parts. Of special value in the repairing or replacing of old cones on speakers, in stiffening and coating voice coils and spiders, in cementing grid caps and tube bases, etc. Reliable, vibrationless, water-proof, transparent. Comes with brush attached.



Cat. No.	Size	List Price
ST40-2	—2 oz.	\$.50
ST40-4	—4 oz.	.90
ST40-8	—8 oz.	1.60
ST40-16	—1 pt.	3.00
ST40-G	—1 gal.	9.35

JFD RADIO SOLVENT



A special preparation for loosening cement on speaker cones, spiders and voice coils. Simply saturate the cemented part and it loosens in a few minutes. Can also be used for cleaning volume controls, contact points and all movable parts.

Cat. No.	Size	List Price
ST41-2	—2 oz.	\$.35
ST41-4	—4 oz.	.50
ST41-8	—8 oz.	.75
ST41-16	—1 pt.	1.25
ST41-G	—1 gal.	5.00

JFD CEMENT AND SOLVENT KIT



Put up in handy carton—easy to carry. Kit contains 1 bottle of JFD Cement and 1 bottle of JFD Solvent.

Cat. No.	Size	List Price
ST400K2	—2 oz.	\$.85
ST400K4	—4 oz.	1.40

JFD TUBE CEMENT

Moisture - proof, water-proof, oil-proof, vibration-proof, flexible and quick drying; this cement will be found satisfactory, not only for speaker cones but for radio set parts, cabinets, etc. Applied directly from tube—no brush is required.



Cat. No.	Size	List Price
ST40-T2	—2 oz. tube	\$.42
ST40-T212	—Carton of 12 2 oz. tubes	5.04
ST40-T4	—4 oz. tube	84
ST40-T412	—Carton of 12 4 oz. tubes	10.08

JFD CARBON TETRACHLORIDE



Is an invaluable and effective cleaner for contact points, volume controls, tuning condensers, fabrics, grille cloth and all movable parts.

Cat. No.	Size	List Price
ST42-2	—2 oz.	\$.35
ST42-4	—4 oz.	.50
ST42-8	—8 oz.	.85
ST42-16	—1 pt.	1.50
ST42-32	—32 oz.	2.45
ST42-G	—1 gal.	5.75

JFD BAKELITE CEMENT



A special preparation for cementing bakelite to bakelite and bakelite to other materials. Ideal for the repair of bakelite cabinets, dial knobs and general utility bakelite repairs. Neutral finish. Will not discolor or stain finish.

Cat. No.	Size	List Price
ST86-2	—2 oz.	\$.60
ST86-4	—4 oz.	1.10
ST86-8	—8 oz.	2.00
ST86-16	—1 pt.	3.75

JFD POLI-WAX CABINET POLISH

The only general utility liquid wax which cleans as it polishes. Made according to the formula used by the Army and Navy for the maintenance of government property. Non-injurious. Non-separating.



No. 69-8—8 oz. List \$.45

JFD ELECTRONIC CONTACT CLEANER

(Red Color)



Just the thing for insuring positive contacts and eliminating noise. Fast acting, leaves a protective film of JFD Lubriplate which does not affect electrical characteristics.

Cat. No.	Size	List Price
ST89-2	—2 oz.	\$.35
ST89-4	—4 oz.	.50
ST89-8	—8 oz.	.85
ST86-16	—1 pt.	1.65

JFD GRAPHINE

To eliminate noises on tube prongs, controls and contacts. A valuable service aid.



No.	Size	List Price
ST90-2	—2 oz.	\$.35
ST90-4	—4 oz.	.60
ST90-8	—8 oz.	1.65
ST90-16-1	pt.	2.00

JFD LIQUID NON-SLIP COMPOUND



To prevent slipping of radio dial belts and cables and to lengthen their lives. Easy to use—penetrating and quick drying. Shrinks the fibers.

No.	Size	List Price
ST88-2	—2 oz.	.75

JFD "LUBRIPLATE"

For cleaning contacts and preventing corrosion. Excellent for switches, contacts, attenuators, etc. Protective film clings to the metals.



No.	Size	List Price
ST91-2	—2 oz.	\$.50
ST91-4	—4 oz.	.80
ST91-8	—8 oz.	1.25

JFD RECORD LUBRICANT



Makes records last longer. Reduces surface noises and lessens wear on records. When used before recording, it makes a better recording—and one that will last longer.

Cat. No.	Size	List Price
ST712	—2 oz.	\$.35
ST714	—4 oz.	.50

JFD RECORD COMPOUND



Longer life and better tone for all recordings. Renews old records and improves reproduction by removing all dirt and loose particles, lubricating the surface and hardening the grooves. Preserves new records.

Cat. No.	Size	List Price
ST702	—2 oz.	\$.45
ST704	—4 oz.	.60

BEARING LUBRICANT



To lengthen the life and improve the performance of any recording machine. Just the thing for turntable spindles, phonograph motors, recording mechanism. Non-acid. Will not dry out, thin or run.

Cat. No.	Size	List Price
ST722	—2 oz.	\$.50
ST724	—4 oz.	.65

BOTTLES PACKED 12 TO STANDARD CARTON



Feather-Touch Playback Needles

Long Life — Fine Tone — Full Record Protection

JFD FEATHER-TOUCH PHONOGRAPH NEEDLES will give you COMPLETE satisfaction. The JFD FEATHER-TOUCH NEEDLES possess fine tone, long life, and full record protection. There is nothing more that a fine needle can offer!

The sale of good needles is profitable. Each year more and more phonographs, records, discs, and needles are sold. Last year's sales reached an all-time high, with more than 200,000,000 rec-

ords and discs being sold. The sale of needles has increased to astounding proportions; the new JFD needles should greatly stimulate these sales.

ALL JFD FEATHER-TOUCH PHONO NEEDLES are shadow-graphed and mounted on attractive, colorful, self-selling displays. Each individual needle is mounted on an attractive card, individually wrapped in cellophane.



PN-060 This feather-touch needle is guaranteed for a minimum of 2000 playings. It has excellent tone, unusual in the low class field. It will outplay, and give finer performance than any needle on the market in its class. The PN-060 is shadow-graphed, made of fine alloy metals, with precious metal point.

PN-060—Each \$0.60 list. 24 individually wrapped needles on beautiful display card.

\$14.40 List



PN-100 This feather-touch needle is guaranteed for a minimum of 4000 playings. It is truly a de-luxe needle, containing a long life highly polished precious metal point, cushioned shaft, clear bell shank to produce balanced tone. For record performance and protection, this needle is tops in its field. Each needle is shadow-graphed and mounted on an attractive three-color card, individually wrapped in cellophane.

PN-100—Each \$1.00 list. 12 individually wrapped needles on beautiful display card.

\$12.00 List



PN-150 This JFD feather-touch needle is guaranteed for a minimum of 6000 playings. Will not scratch or scrape records and will produce fine tone quality. The clarity of this needle is due to its highly polished curved shank construction and bell-like precious metal alloy tip. Each needle is carefully shadow-graphed and mounted on a beautiful three-color graphed and mounted on a beautiful three-color display card, individually wrapped in cellophane.

PN-150—Each \$1.50 list. 12 individually wrapped needles on beautiful display card.

\$18.00 List



(15¢ RETAIL PKGE.)



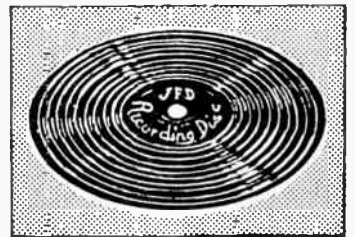
(25¢ RETAIL PKGE.)

Here is an excellent, all-around playback needle of highly polished steel. This needle is made to give clear reproduction of tone and to eliminate all surface noises. Each needle is scientifically designed so that it fits precisely into the grooves of the record, thus reducing record wear. Will give 12 or more plays. Packed in gold and silver-colored envelopes mounted on an attractive 3-color display card. Packaged in two different popular assortments, as follows:

PN-015—Display card of 50 envelopes, each containing 12 needles (15¢ per envelope).
List Price per card **\$7.50**

PN-025—Display card of 50 envelopes, each containing 25 needles (25¢ per envelope).
List Price per card **\$12.50**

JFD HOME RECORDING DISC



The finest in home recording discs. Check these exclusive JFD Features

1. Made on a fibre base.
2. Absolutely grit-free—eliminates all surface noises.
3. One piece surface chemically treated.
4. Title can be written with pen or pencil.
5. Fits all standard recorders.
6. Comes in convenient inlex envelope.
7. Two playing faces on each disc.
8. Light in weight.
9. Flexible—will not crack or break.
10. Will not dry out or deteriorate.
11. Shavings are flame-proof.
12. Non-peeling surface.
13. Low in cost.

No.	Size
64-1	6 1/2"
64-2	8"
64-3	10"
64-4	12"



SAPPHIRE NEEDLES



SN-200—This sturdy-shanked Saphire Needle contains a carefully calculated precision point, diamond lapped by hand. Each needle undergoes careful microscopic inspection and is individually shadowgraphed. Has twice the plays of any metal needle at any price. Comes individually wrapped in cellophane and mounted on an attractive three-color display card.

SN-200—Each \$2.00 List. 12 individually wrapped needles on beautiful display card.
List Price per card \$24.00



SN-500—"The finest Ruby Saphire needle on the market!" Slightly under one full karat of sapphire is used. No other jewel needle approaches this quality and value at any price. Contains a full solid sapphire shank—not just a chip. Smooth gliding action. Microscopically inspected three times—individually shadowgraphed to insure perfection. **GUARANTEED FOREVER BY REGISTERED CERTIFICATE!** This needle remains a permanent part of the phonograph.

SN-500—Each \$5.00 List. Mounted on beautiful three-color display card packaged in attractive Clear-View Plastic boxes — Six boxes to card..... List Price per card \$30.00



SN-300—This Saphire Needle eliminates surface noises with full measure of amplification. Has a flame-polished point. It contains a full rod jewel—not just a polished chip. Scientifically balanced Dual Shank. Microscopically inspected three times; individually shadowgraphed to insure perfection. Individually wrapped in cellophane and mounted on attractive three-color display card.

SN-300—Each \$3.00 List. 10 needles individually packed in Clear-View Plastic box. Mounted on beautiful display card.
List Price per card \$30.00

JUKE BOX SAPHIRE



JB-250 Contains all the desirable characteristics of the SN-300. Its straight, sturdy shank is developed expressly for use in commercial coin boxes. In use, it gives a richer tone and high volume, thus enabling the operator to reduce the volume control of his juke box.

JB-250.....Each \$2.50 List
Comes individually mounted on an attractive card inserted in a cellophane envelope in boxes of 12.
List Price, per box.....\$30.00

JFD CUTTING NEEDLES



CN-050 The JFD feather-touch recording stylus is guaranteed for a minimum of 300 cuttings on 4 inch discs. This sturdy, precious metal, alloy tipped needle, cuts a V bottom groove. It is highly polished, long wearing and a producer of best in recording. Unusual for its price this shadow-graphed cutting needle is especially recommended for amateur use. Each needle is individually wrapped in cellophane and mounted on a striking three-color display card.

CN-050—Each \$0.50 list. 24 individually wrapped needles on beautiful display card.
\$12.00 List



CN-100 This high quality feather-touch recording stylus is guaranteed for a minimum of 500 cuttings on a 4 inch disc. Designed with an electrically welded and microscopically ground tip. **CN-100** provides the finest in total quality. It is a highly polished needle, carefully shadow-graphed and especially recommended for both amateur and professional use. Each needle is individually wrapped in cellophane and mounted on a striking three-color display card.

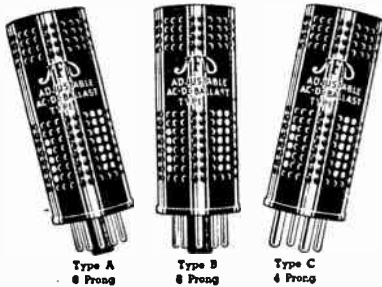
CN-100 — Each \$1.00 list. 12 individually wrapped needles on beautiful display card.
\$12.00 List



Improved • Air-Cooled AC-DC Adjustable Ballasts



Just
3 Adjustable Ballasts
Replace Over **3000**
Exact Duplicate AC-DC Resistance Tubes!

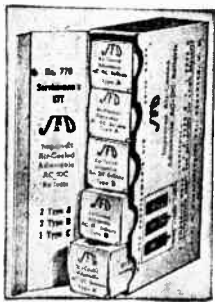


JFD IMPROVED AIR-COOLED ADJUSTABLE AC-DC BALLASTS HAVE THESE IMPROVEMENTS:

1. Air-Cooled Perforated Shell
2. Larger Insulating Surface
3. Longer Life, Heavier Resistance Wire
4. Exact Adjustments made

LIST PRICE \$1.50 ea.

Over 3,000,000 JFD Adjustable Ballasts have been sold since 1934 — practically every one still in use, giving service and satisfaction.



Dealer's and Serviceman's Kit
Improved • Air-Cooled
AC-DC Adjustable Ballasts

No. 770—SERVICEMEN'S KIT

contains 5 Ballasts: 2 Type A, 2 Type B, 1 Type C Ballasts together with listing of over 2500 replacements and complete instructions..... List Price \$7.50

GET THIS FREE AC-DC BALLAST TUBE MANUAL!

Contains valuable information on how to adapt adjustable ballasts to all service jobs. Simply send 12 flaps from JFD Dial Belt envelopes and 10c in stamps (to cover mailing) to JFD MANUFACTURING CO. INC., 4117 Ft. Hamilton Parkway, Brooklyn 19, New York, U. S. A. (Further Details on Page 37.)



USE JFD BALLASTS	TO REPLACE AC-DC RESISTANCE TUBES		
	Beginning with Letter	With Numbers Including	Ending with letter
"A" Ballasts	K, L, M, BK, BL, or BM	6 through 42	A, B, C, D, F, G, or H
"B" Ballasts	K, L, M, BK, BL, or BM	45 through 105	A, B, C, D, F, G, H, S1, S2, S3
"C" Ballasts	All 4 prongs	80 through 350	R, R4, R8, L, L4, L8

AC-DC STANDARD TUBES—RMA STANDARD CODING

Type No.	List Price	Type No.	List Price	Type No.	List Price	Type No.	List Price	Type No.	List Price	Type No.	List Price		
10A	Acadison	\$1.00	M36B	1.00	M42D	1.00	L49B	1.00	BK55D	1.00	M73B	1.00	
17A	1.00	M36C	1.00	M42E	1.00	L49BJ	1.25	K55F	1.00	K74B	1.00	K74B	1.00
K17B	1.00	M36D	1.00	M42F	1.00	L49C	1.00	K55H	1.00	K74C	1.00	K74C	1.00
K17C	1.00	42A	1.00	M42H	1.00	L49CJ	1.25	KX55A	1.25	K74D	1.00	K74D	1.00
L17B	1.00	42B2	1.25	49A	1.00	L49D	1.00	KX55B	1.25	80A	1.00	80A	1.00
L17C	1.00	K42B	1.00	K49B	1.00	L49DJ	1.25	KX55C	1.25	K80B	1.00	K80B	1.00
K22B	1.00	K42BJ	1.25	K49BJ	1.25	L49E	1.00	L55B	1.00	K80C	1.00	K80C	1.00
K23B	1.00	BK42B	1.00	BK49B	1.00	L49F	1.00	L55C	1.00	K80D	1.00	K80D	1.00
L23B	1.00	BL42B	1.00	K49C	1.00	LX49B	1.25	L55CP	1.25	K80F	1.00	K80F	1.00
L23C	1.00	K42C	1.00	BK49C	1.00	LX49C	1.25	L55D	1.00	K80H	1.00	K80H	1.00
33A	1.00	BK42C	1.00	K49CJ	1.25	LX49D	1.25	L55F	1.00	L80B	1.00	L80B	1.00
33AG	1.00	BL42C	1.00	K49D	1.00	M49B	1.00	L55H	1.00	M80C	1.00	M80C	1.00
36A	1.00	K42D	1.00	BK49D	1.00	M49C	1.00	M55B	1.00	M80D	1.00	M80D	1.00
K36B	1.00	BK42D	1.00	K49E	1.00	M49D	1.00	M55C	1.00	M80E	1.00	M80E	1.00
BK36B	1.00	KX42A	1.25	K49F	1.00	M49H	1.00	M55D	1.00	K87B	1.00	K87B	1.00
K36BJ	1.25	KX42B	1.25	K49H	1.00	50	1.00	M55E	1.00	90A	1.00	90A	1.00
K36C	1.00	KX42C	1.25	KX49A	1.00	K52H	1.00	M55H	1.00	K90B	1.00	K90B	1.00
K36D	1.00	L42B	1.00	KX49B	1.25	55A	1.00	G0R30	1.25	K90C	1.00	K90C	1.00
K36H	1.00	L42BJ	1.25	KX49C	1.25	K55A	1.00	62A	1.00	92A	1.00	92A	1.00
KX36A	1.25	L42C	1.00	KX49D	1.25	K55B	1.00	K67B	1.00	K92B	1.00	K92B	1.00
KX36B	1.25	L42CJ	1.25	KY49A	1.25	BK55B	1.00	K67BJ	1.25	K92C	1.00	K92C	1.00
KX36C	1.25	L42D	1.00	KY49B	1.25	BL55B	1.00	K67C	1.00	K92D	1.00	K92D	1.00
L36B	1.00	L42DJ	1.25	KY49C	1.25	BM55B	1.00	K67D	1.00	K92F	1.00	K92F	1.00
L36C	1.00	L42E	1.00	KZ49A	1.25	K55C	1.00	L67C	1.00	K92H	1.00	K92H	1.00
L36D	1.00	M42B	1.00	KZ49B	1.25	BK55C	1.00	K72B	1.00				
L36DJ	1.25	M42C	1.00	KZ49C	1.25	K55D	1.00	K73C	1.00				

THE NEW IMPROVED JFD REMOTE-O-CABLE REPLACER

The Most Efficient Auto
Radio Tuning Cable-
Servicing Machine
in Use Today!

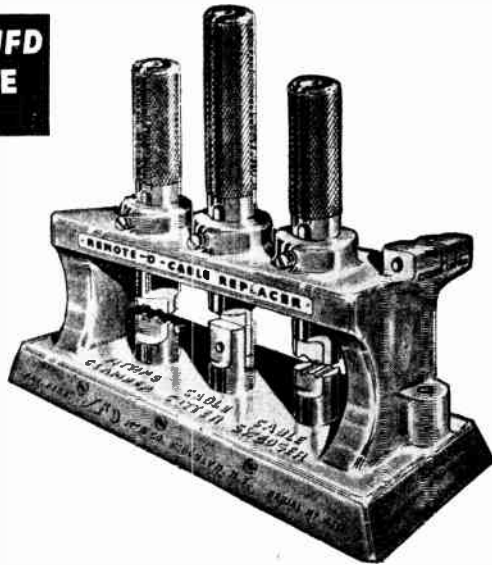
Completely redesigned to meet MOD-ERN Servicing requirements, the NEW JFD REMOTE-O-CABLE REPLACER is a vital necessity in the workshop of every auto-radio serviceman.

1. SWEDGES SHAFTING TO PREVENT UNRAVELLING.
2. CUTS SHAFTING TO EXACT LENGTH.
3. REPLACES OLD FITTINGS ON NEW SHAFTING.
4. CASING GROOVE MAKES CUTTING EASY.

ANY JOB PROMPTLY DONE AND DELIVERED—The Remot-O-Cable Replacer + 50 feet of shafting and casing + an assortment of fittings and you are fully equipped.

USE OLD FITTINGS ON NEW SHAFTING—No need to wait for special lengths or odd fittings.

NO DELAY—Shafting of any length immediately available.



**SERVICEMEN'S
NET COST
\$67.52**

**Size: Length, 10 1/2". Width,
4 1/4". Height, 13". Weight,
29 1/4 lbs.**

NO LOSS OF HEADS OR SHAFTING—Shafting of any make radio immediately changed to fit any dashboard head.

FRONT—REAR—ANYWHERE—Radio control in any part of the car.

EXACT LENGTH OF SHAFTING DOES IT—Maximum tuning efficiency.

AUTO RADIO CONTROL SHAFTING AND CASING



UNSWEDGED "LIVE" SHAFTING

Type CB
.130 gauge
\$0.18 per ft. List
Type CA
.150 gauge
\$0.23 per ft. List

NON-RAVELLING DEAD SHAFTING

Type CD
.130 gauge
\$0.20 per ft. List
Type CE
.150 gauge
\$0.26 per ft. List

CASING FOR ALL SHAFTINGS

Type HB
.130 gauge
\$0.18 per ft. List
Type HA
.150 gauge
\$0.23 per ft. List



AUTO RADIO CONTROL SHAFTING AND CASING CUT TO LENGTH

.130 CABLE AND CASING — List Prices

	18"	24"	30"	36"	42"	48"
Shafting only CB .130 Gauge	\$0.50	\$0.60	\$0.71	\$0.81	\$0.92	\$1.02
Casing only HB for .130 Gauge	.50	.60	.71	.81	.92	1.02
Shafting & Casing Complete CB HB .130	1.00	1.20	1.42	1.62	1.84	2.04

.150 CABLE AND CASING — List Prices

	18"	24"	30"	36"	42"	48"
Shafting only CA .150 gauge	\$0.57	\$0.70	\$0.84	\$0.96	\$1.10	\$1.22
Casing only HA for .150 gauge	.57	.70	.84	.96	1.10	1.22
Shafting & Casing Complete CA HA .150	1.14	1.40	1.68	1.92	2.20	2.44

JFD EXACT DUPLICATE CABLES

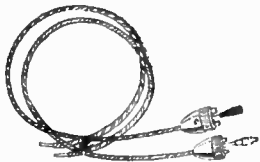
FOR ALL 1936-37-38 MOTOROLA SETS AND HEADS

No. 520—List Price per set of two cables\$4.14

FOR STANDARD HEADS

With Fittings to fit Star, Crowe, Stewart Universal Remote Control Heads.

No. 521—List Price per set of two cables\$4.82



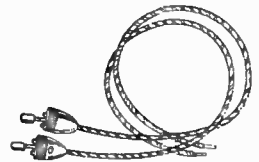
FOR ALL 1939-40-41 MOTOROLA SETS AND HEADS

No. 522—List Price per set of two cables\$4.14

FOR STANDARD HEADS

With Fittings to fit Star, Crowe, Stewart Universal Remote Control Heads

No. 523—List Price per set of two cables\$4.82



JFD EXACT DUPLICATE CABLES FOR PHILCO, ARVIN AND DELCO

Complete set of two cables, with fittings, same as original.

No.	List
15 AR—For all Arvin Radios	\$3.02
16 PH—For all Philco 1937 Radios	3.02
17 DE—For all Delco Radios	3.02
18 PH—For Philco, single tuning control cable	1.51

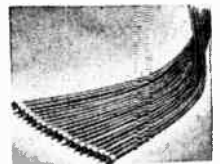
SERVICEMEN'S STAND- ARD SHAFT AND CASING ASSEMBLIES

Contains 20 assemblies (10 pairs)
Casings are 24" long—will fit
nearly all installations. Come
equipped with D casing nut and

No. 2 spad-shaft tip to fit Star,

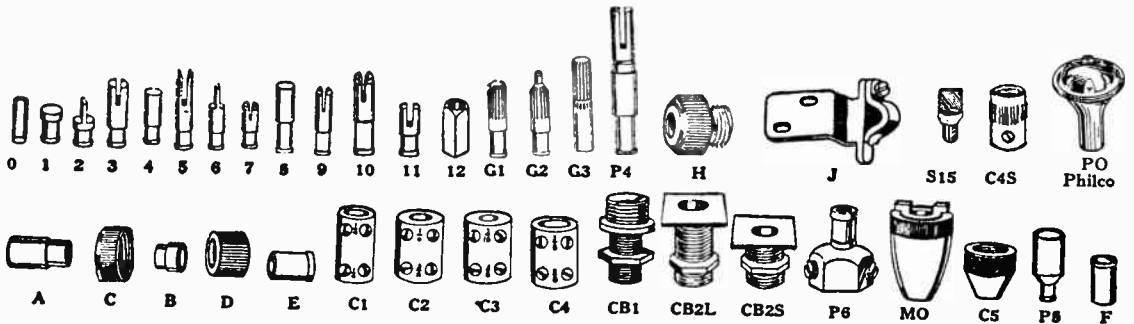
Crowe, Stewart Universal Remote Control Heads. The other end of each assembly is without fitting, thus permitting use of whatever fittings are needed to match the radio being serviced.

No. 20 PH Stock Packages (20 Assemblies). List.....\$18.00





Auto Radio Tuning Cable Fittings Gear & Couplers



Nos. 0, 1, 7, B, E..... Lots of 20 @ \$0.10 ea. List
 Nos. C, D Lots of 20 @ .10 ea. List
 Nos. 2, 4, 8, 11, F Lots of 20 @ .10 ea. List
 Nos. 3, 5, A Lots of 20 @ .13 ea. List

Nos. 6, 9, 10, 12, C1, C2, C3, C4, C5, J, S15
 Lots of 10 @ \$0.20 ea. List
 Nos. C4S, CB1, CB2L, CB2S, P5, P6 Lots of 5 @ .33 ea. List
 Nos. M0130, M0150, H Lots of 10 @ .30 ea. List
 Nos. G1, G2, G3, P4 Lots of 5 @ .25 ea. List

SERVICEMEN'S ASSORTMENT

120 Assorted Pieces—
30 Different Types

Contains 30 different types of fittings, gears and couplers (as above) used in Philco, Motorola, RCA, United Motors, Bosch, Crosley, Sparton, Atwater-Kent, Stewart-Warner, Arvin, Zenith, Emerson, and other auto radio sets. 120 pieces in all. Neatly packed in an attractive durable, steel box which comes to you FREE of charge.



K120 List Price \$23.30

SERVICEMEN'S COMPLETE COMBINATION KIT OF CABLE, HOUSING AND FITTINGS

30 Different Types of Fittings
120 Assorted Pieces

50 Feet of Cable - 50 Feet of Housing
 Here is a single, compact kit that fills all servicemen's needs for cable, housing, and fittings. Contains 120 pieces of fittings, gears, and couplers—30 different types. Used in Philco, Motorola, RCA, United Motors, Bosch, Crosley, Sparton, Atwater-Kent, Stewart-Warner, Arvin, Zenith, Emerson, and other auto radio sets. Also contains 50 feet of cable and 50 feet of housing. All compactly packed in a FREE durable, steel box.



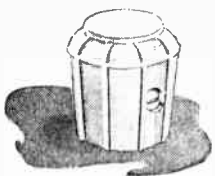
CK200

List Price \$41.30

EVERY SERVICEMAN MUST OWN ONE!

AUTO RADIO MOLDED PLASTIC KNOBS

Come in black, dark gray, brown, light gray and pearl gray.



- | | |
|--|-------------|
| K54— $\frac{3}{8}$ " shaft, assortment of 12 knobs (Assorted colors) in a cellophane display envelope..... | List \$2.40 |
| K60A— $\frac{3}{8}$ " shaft, assortment of 50 knobs (5 Assorted colors) in display box..... | 10.00 |
| K60PG— $\frac{3}{8}$ " shaft, 50 pearl gray knobs in display box..... | 10.00 |
| K60BL— $\frac{3}{8}$ " shaft, 50 black knobs in display box..... | 10.00 |
| K60DG— $\frac{3}{8}$ " shaft, 50 dark gray knobs in display box..... | 10.00 |
| K60BR— $\frac{3}{8}$ " shaft, 50 brown knobs in display box..... | 10.00 |
| K60LG— $\frac{3}{8}$ " shaft, 50 light gray knobs in display box..... | 10.00 |
| K55— $\frac{1}{4}$ " shaft, assortment of 12 knobs (assorted colors) in a cellophane display envelope..... | 2.40 |
-
- | | |
|--|-------|
| K70— $\frac{1}{4}$ " shaft, assortment of 50 knobs (5 assorted colors) in display box..... | 10.00 |
| K70PG— $\frac{1}{4}$ " shaft, 50 pearl gray knobs in display box..... | 10.00 |
| K70BL— $\frac{1}{4}$ " shaft, assortment of 50 black knobs in display box..... | 10.00 |
| K70DG— $\frac{1}{4}$ " shaft, assortment of 50 dark gray knobs in display box..... | 10.00 |
| K70BR— $\frac{1}{4}$ " shaft, assortment of 50 brown knobs in display box..... | 10.00 |
| K70LG— $\frac{1}{4}$ " shaft, assortment of 50 light gray knobs in display box..... | 10.00 |

Servicemen's Assortment of 12 molded plastic knobs in cellophane bag (K54, K55)



AUTO RADIO CHROME-PLATED BRASS KNOBS

Durable good-looking replacement knobs.



- | | |
|---|--------------|
| K56— $\frac{3}{8}$ " shaft. Servicemen's assortment of 12 knobs in a cellophane display envelope..... | List \$3.60 |
| K80A— $\frac{3}{8}$ " shaft, assortment of 50 knobs in a display carton..... | List \$15.00 |
| K57— $\frac{1}{4}$ " shaft, Servicemen's Assortment of 12 knobs in a cellophane display envelope. List \$3.60 | |
| K90A— $\frac{1}{4}$ " shaft, assortment of 50 knobs in a display carton..... | List \$15.00 |

Servicemen's Assortment of 12 chrome-plated brass knobs in cellophane bag. (K56, K57)



JFD Wire Wound Suppressors

Clear radio reception without loss of motor power . . . continuous wire circuit from end to end . . . no increase in gas consumption . . . no decrease in spark plug strength . . . quick get-away . . . heat-proof . . . moisture proof . . . hermetically sealed . . . rustproof brass . . . positive connections.

IGNITION SUPPRESSORS



SNAP-ON TYPE
No. 84-1
List 65c each



BRACKET TYPE
No. 84-2
List 65c each



DISTRIBUTOR HEAD TYPE
No. 84-3
List 65c each



BRACKET TYPE
No. 84-4
List 75c each

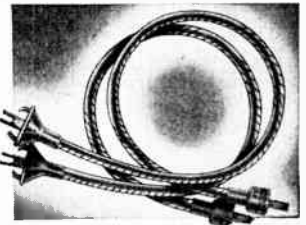


DISTRIBUTOR HEAD TYPE
No. 84-5
List 75c each

JFD Exact Duplicate Philco Replacement Cable

Exact duplicate replacement cable for the following models: AR-40, AR-45, AR-50, AR-55, AR-65, AR-75, UN 6-400, UN 6-450, UN 6-500, UN 6-550, AR-4, AR-5, AR-6, AR-7, AR-8, AR-9, AR-10. May be used for either volume control or tuning control. Special snap fastener fork tip for set end; spade tip for control heads, such as: Crowe, Star, Stewart, Universal, etc.

Cat. No.	Length	List Price per set of 2 cables
524-24	24"	\$4.82
524-30*	30"	5.34
524-36*	36"	5.86
524-42*	42"	6.38
524-48*	48"	6.90



JFD Miscellaneous Items

JFD SNAP BUTTON HOLE PLUGS



Just the thing to plug holes, seal adjustments, etc. Fits in any material up to $\frac{1}{16}$ " thick.

No.	Description	List
45-1	50 Assorted plugs in box	\$2.46
45-2	10 Assorted plugs in envelope	.40
45-3	Jobbers' Assortment of 500 plugs	28.50

No.	Hole Diameter	List
45-4	$\frac{3}{8}$ " per 10	\$0.38
45-5	$\frac{1}{2}$ " per 10	.49
45-6	$\frac{5}{8}$ " per 10	.55
45-7	$\frac{3}{4}$ " per 10	.55
45-8	$1\frac{1}{4}$ " per 10	.88

JFD RG59U CABLE



Newest type low-loss polyethylene Coaxial lead cable. Highly recommended as lead-in on all auto aerials.

No. TW-2 List Price 17c per ft. (Mill Reel 1000 feet)

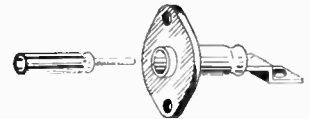
LOW LOSS EXTENSION LEAD



Can be used with all pin type plugs: Female for pin plug on one end; male plug on the other. For use where standard leads cannot reach.

No.	Length	List Price
<input type="checkbox"/> 81-12	12"	\$0.75
<input type="checkbox"/> 81-18	18"	.83
<input type="checkbox"/> 81-24	24"	.91
<input type="checkbox"/> 81-30	30"	.99
<input type="checkbox"/> 81-36	36"	1.07
<input type="checkbox"/> 81-42	42"	1.15
<input type="checkbox"/> 81-48	48"	1.23

JFD PIN PLUG AND JACK



Can be used on all types of auto radio sets. Motorola type. Positive connection plug and jack.

No.	List
3018FT Shielded Pin Plug	\$0.12
82-1 Shielded Jack	.24

JFD SHIELDED LOOM



Copper shielding covered with black cotton. $\frac{3}{16}$ " I. D. This type of loom is being used with all types of auto radios.

No. 83-1 (250' & 500' coils) 17c per ft.

* Used in such automobiles as 1946-1947 Nash, Hudson, Oldsmobiles, and many others, where the heater unit takes up considerable space necessitating a longer cable to reach from the radio to the remote control head.

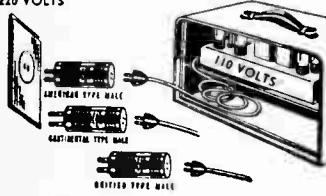


STEP-DOWN

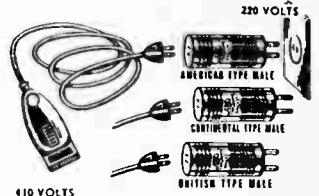
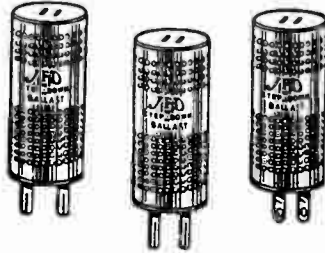
RESISTOR BALLASTS

STEP-DOWN FROM 220 VOLTS TO 110 VOLTS

220 VOLTS



JFD STEP-DOWN BALLAST



110 VOLTS

Use JFD voltage reducing ballasts on 220 volt current supply if you want to operate 110 volt appliances. Excellent for radios, floor lamps, clocks, therapeutic lamps, electric blankets, etc.

Catalog No.	Resist.	Current	Voltage Drop	Watts	Male End	Female End	Load	List Price
450	.97	1.13	220-110	125	American	American	125 W Infra Red Therapeutic Lamp	\$2.40
451B	.97	1.13	220-110	125	British	American	125 W Infra Red Therapeutic Lamp	2.40
451C	.97	1.13	220-110	125	Continental	American	125 W Infra Red Therapeutic Lamp	2.40
456	.250	.44	220-110	65	American	American	35-65 W Radio Heating Pads	2.40
457B	.250	.44	220-110	65	British	American	35-65 W Radio Heating Pads	2.40
457C	.250	.44	220-110	65	Continental	American	35-65 W Radio Heating Pads	2.40
458	.300	.35	220-110	38	American	American	4-5 Tube AC-DC Radio, 3 Amp tubes	2.40
459B	.300	.35	220-110	38	British	American	4-5 Tube AC-DC Radio, 3 Amp tubes	2.40
459C	.300	.35	220-110	38	Continental	American	4-5 Tube AC-DC Radio, 3 Amp tubes	2.40
462	.500	.22	220-110	25	American	American	General Use	2.40
463B	.500	.22	220-110	25	British	American	General Use	2.40
463C	.500	.22	220-110	25	Continental	American	General Use	2.40
464	.560	.20	220-110	25	American	American	5 Tube AC-DC Radio Using .15 Amp tubes	2.40
465B	.560	.20	220-110	25	British	American	5 Tube AC-DC Radio Using .15 Amp tubes	2.40
465C	.560	.20	220-110	25	Continental	American	5 Tube AC-DC Radio Using .15 Amp tubes	2.40
466	.660	.167	220-110	8	American	American	General Use	2.40
467B	.660	.167	220-110	8	British	American	General Use	2.40
467C	.660	.167	220-110	8	Continental	American	General Use	2.40
468	1345	.082	220-110	9	American	American	Electric Razor	2.40
469B	1345	.082	220-110	9	British	American	Electric Razor	2.40
469C	1345	.082	220-110	9	Continental	American	Electric Razor	2.40
470	6000	.018	220-110	2	American	American	Electric Clock	2.40
471B	6000	.018	220-110	2	British	American	Electric Clock	2.40
471C	6000	.018	220-110	2	Continental	American	Electric Clock	2.40
472	110	.950	220-110	105	American	American	15.7 Watt Xmas lights in parallel	2.40
473B	110	.950	220-110	105	British	American	15.7 Watt Xmas lights in parallel	2.40
473C	110	.950	220-110	105	Continental	American	15.7 Watt Xmas lights in parallel	2.40
474	960	.115	220-110	13	American	American	Schick Razor	2.40
475B	960	.115	220-110	13	British	American	Schick Razor	2.40
475C	960	.115	220-110	13	Continental	American	Schick Razor	2.40
476	1100	.1	220-110	11	American	American	Packard Razor	2.40
477B	1100	.1	220-110	11	British	American	Packard Razor	2.40
477C	1100	.1	220-110	11	Continental	American	Packard Razor	2.40
478	475	.230	220-110	26	American	American	Remington Razor	2.40
479B	475	.230	220-110	26	British	American	Remington Razor	2.40
479C	475	.230	220-110	26	Continental	American	Remington Razor	2.40
480	300	.300	220-110	33	American	American	6 tube AC-DC Radio Using .15 Amp tubes	2.40
481B	300	.300	220-110	33	British	American	6 tube AC-DC Radio Using .15 Amp tubes	2.40
481C	300	.300	220-110	33	Continental	American	6 tube AC-DC Radio Using .15 Amp tubes	2.40
482	785	.140	220-110	16	American	American	Detrola Automatic Phono Turntable	2.40
483B	785	.140	220-110	16	British	American	Detrola Automatic Phono Turntable	2.40
483C	785	.140	220-110	16	Continental	American	Detrola Automatic Phono Turntable	2.40
484	430	.255	220-110	28	American	American	General Use	2.40
485B	430	.255	220-110	28	British	American	General Use	2.40
485C	430	.255	220-110	28	Continental	American	General Use	2.40
488	2000	.055	220-110	6	American	American	General Use	2.40
489B	2000	.055	220-110	6	British	American	General Use	2.40
489C	2000	.055	220-110	6	Continental	American	General Use	2.40
490	143	.87	220-110	96	American	American	65-130 Watt 110 Volt Radio	2.40
491B	143	.87	220-110	96	British	American	65-130 Watt 110 Volt Radio	2.40
491C	143	.87	220-110	96	Continental	American	65-130 Watt 110 Volt Radio	2.40

FOR PHONO-RADIO COMBINATIONS

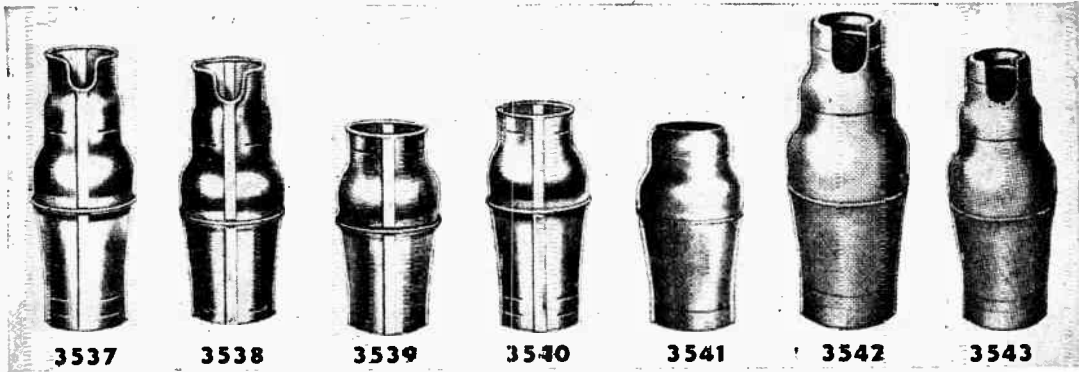
Cat. No.	Res.	Current	Voltage Drop	Watts	Load	List Price
626-F (Radio)	560	.20	220-110	25	Combination Ballast and Adapter with American Plug	\$6.00
(Phonograph)	430	.255	220-110	28		
626-FB (Radio)	560	.20	220-110	25	Combination Ballast and Adapter with British Plug	\$6.00
(Phonograph)	430	.255	220-110	28		
626-FC (Radio)	560	.20	220-110	25	Combination Ballast and Adapter with Continental Plug	\$6.00
(Phonograph)	430	.255	220-110	28		





TUBE SHIELDS

JFD Standard ST-12 and ST-14 "Form Fit" Tube Shields



Cat. No.	Description	Assembly Consists of	For Use with Following Tubes	List Per Assembly
3537	For ST12 long tubes, with grid cap shielding.	1 half shield plain 1 half shield notched 1 clamping ring	6C6, 6D6, 6D7, 6E7, 6U7G, 25B5, 57, 58, etc.	\$0.45
3538	For ST12 short tubes, with grid cap shielding.	1 half shield plain 1 half shield notched 1 clamping ring	1A4P, 1A6, 1C7G, 1F6, 2A7, 2B7, 6A7, 6A8G, 6C8G, 6F5G, 6F7, 6F8G, 6J7G, 6J8G, 6K7G, 1Q7G, 38, 39, 55, 77, 78, 79, 85, 88, etc.	.45
3539	For ST12 short tubes without grid cap shielding.	2 half shields 1 clamping ring	1E7G, 1H6G, 1J6G, 1V, 6H6G, 6J5G, 6P5G, 27, 30, 31, 37, 41, 56, 76, 84, 485, etc.	.45
3540	For ST12 long tubes without grid cap shielding.	2 half shields 1 clamping ring	6AB6G, 25N6G, etc.	.45
3541	For ST14 tubes without grid cap shielding.	2 half shields 1 clamping ring	11A, 1F4, 1F5G, 1G5G, 2A5, 6B5, 6F6G, 6N6G, 6N7G, 26, 33, 40, 42, 43, 45, 53, 71A, etc.	.25
3542	For ST14 tubes with grid cap shielding.	1 half shield plain 1 half shield notched 1 clamping ring	22, 24A, 32, 34, 35, etc.	.25
3543	For ST12 small tubes with grid cap shielding.	1 half shield plain 1 half shield notched 1 clamping ring	1A6, 1C6, 2A6, 2A7, 2B7, 6A7, 6B7, 6C6, 6D6, 6F7, 12A5, 12A7, 36, 38, 39, 55, 57, 58, 75, 77, 78, 79, 85, 89, etc.	.25

JFD "GLOVE FIT" TUBE SHIELDS-New ST-12 Bulb Series



A new, improved type of tube shield assembly that fits the tube "like a glove." The body of the shield is composed of two identical half shields which slightly overlap to insure complete enclosure. When the two half shields are fitted to the tube, they can easily be slipped into the base. The half shields are then pressed together near the top and the cap snapped on. The shoulder of the bulb acts as a pivot and the halves are forced outward at the bottom, tightening the shield in the base. This insures positive contact between shield and base, and also tends to hold tube tightly in socket. Especially desirable for auto and portable radios. Caps, bodies and bases can be used interchangeably.

For Tubes with Short ST-12 Body

Assembly consists of four pieces as illustrated at left: two identical half-shields each $3\frac{1}{2}$ " long, together with high cap for tubes with top grid, plus base for wafer sockets, having slotted mounting holes $1\frac{1}{2}$ to $1\frac{3}{4}$ " center to center. Suitable for following tubes:

1A4	2A6	6A8G	5K5G	85
1A6	2A7	6B8G	6K7G	6Q7G
1B4	2B7	6D8G	6L7G	6R7G
1C6	6A7	6F5G	55	6S7G
1D5G	6B7	6J7G	75	6T7G
1E5G	6F7	38	77	etc.
1F6	15	39	78	
1F7G	36	44	79	

No. 3554—Four-piece tube shield assembly as described..... List Price \$0.55

For Tubes with Long ST-12 Body

Assembly comprises four sections as illustrated at right: two identical half-shields each $3\frac{1}{2}$ " long, together with one low cap, for tubes requiring no top grid cap shielding, plus one base for wafer type sockets having $1\frac{1}{2}$ " to $1\frac{3}{4}$ " mounting centers. Suitable for following type tubes:

1E7G	6J5G	6C6
1H4G	6K6G	6D6
1H6G	6L5G	57
1J6G	6N5G	58
6H6G	25Z6G	etc.

No. 3555—Four-piece tube shield assembly as described..... List Price \$0.55



RADIO TUBE DEALERS' & SERVICEMEN'S PACKAGE 100 Complete Tube Shield Assemblies and 40 Extra Accessories

An essential for every radio tube dealer and serviceman! This package contains 100 fast moving assorted tube shield and 40 accessories. A convenient way of carrying a complete tube shield stock to meet the ever-growing demand!

No. TS 100—Servicemen's assortment of one hundred tube shields and accessories..... List Price \$25.00



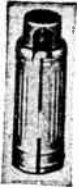


Tube Shields

JFD "T-9 SERIES" TUBE SHIELDS

FOR T-9 BULB BATTERY TUBES
(having .050 amp fil.)

FOUR-PIECE "HIGH COVER" ASSEMBLY



For the new Bantam type battery tubes, where complete shielding including grid cap, is required. Shield fits snugly over base of tube, and grounding lug automatically grounds shield to ground pin of tube. Overall length of shield with grid cap cover is 3 3/4". For use with following tubes:

1A7G 1H5G 1N5GT 1P5GT
1A7GT 1H5GT 1P5G ETC.

No. 3545—complete assembly (illustrated).
List Price \$0.25

FOUR-PIECE "LOW COVER" ASSEMBLY



For new battery type bantam tubes having "T-9" bulb, same as above, except has low cover. Overall length with cover, 3 1/2". Can be used with battery type bantam tubes having grid cap, where shielding of cap is not necessary (1A7G, 1H5G, 1N5GT, etc.) or with battery tubes having no top cap, such as 1E4G, 1G4G, etc.

No. 3544-N—complete assembly (illustrated).
List Price \$0.25

THREE-PIECE "COVERLESS" ASSEMBLY



For Battery type bantam "T-9" tubes, without grid cap. Length of shield is 2 1/2". Fits snugly around base of tube. Grounding clip is provided, to permit connecting shield to ground pin of tube as illustrated. Clamping ring included affords

tight fit for severe vibration service. Suitable for following tubes:

1E4G 1G4GT ETC.
1G4G 1G4GT/G

No. 3550 complete assembly (illustrated).
List Price \$0.20

FOR GT/G AND GT TUBES ONE-PIECE TUBE SHIELD

For Metal Base Tubes

One-piece tube shield for "T-9" GT and GT/G tubes having METAL BASE. Shield fits snugly around base, automatically grounding. Overall length of shield 2 3/4". Can be used with following tubes:

1A7GT 6J7GT 12J7GT
1H5GT 6K7GT 12Q7GT
6C5GT/G 6Q7GT ETC.
6H6GT/G 12K7GT

No. 3551—Tube ShieldList Price \$0.13



THREE-PIECE ASSEMBLY For Bakelite Base Tubes



For GT and GT/G tubes with "T-9" bulbs, having BAKELITE BASE. Overall length of shield 2 3/4". Shield fits snugly around base of tube and additional tightness is secured by means of clamping ring. Grounding clip automatically connects shield to ground pin of tube.

For use with:

1A5GT 6H4GT 6B6GT/G
1C5GT 6J5GT/G 12F5GT
1D8GT 6K5GT 25A6GT/G
1G4GT/G 6K6GT/G ETC.
6F5GT 6SA7GT/G

No. 3552—Complete assembly.
List Price \$0.20

ONE-PIECE TUBE SHIELD FOR LOKTAL TUBES

One piece tube shield, for all Loktal Tubes. Tube shield fits tightly around tube and grounds to metal base which is connected internally to ground pin. Length of shield 2 1/2". For use with following tubes:

1LA4 1LN5 7B5
1LA6 7A4 7B6
1LH4 7A5 7C5
ETC.

No. 3553—One-piece shield.
List Price \$0.13



MINIATURE TUBE SHIELDS

New two-piece shield for all miniature size tubes. Permits easy installation. Overall length 1 7/8" high. Can be used with all miniature tubes.



No. 3565List Price \$0.25

JFD "SINGLE SHELL SERIES" TUBE SHIELDS

FOR GT/G — GT LOKTAL TUBES
HAVING METAL BASES

Open Top Shields

Attractive new one-piece shields. Vertical grooves provide flexible positive fit. Shield automatically grounds to metal base of tube, eliminating any necessity for additional connector. Overall length 2 1/8". Has open top for grid cap lead. Suitable for following tubes:



1A7GT 6Q7GT 12K7GT
6K7GT 12Q7GT 12J7GT
1H5GT 6J7GT ETC.

No. 3546—Small base open top shield.
For GT/G tubes with 1.165" diameter base.
List Price \$0.12

No. 3548—Large base open top shield.
For GT tubes with 1.218" diameter base.
List Price \$0.12

Closed Top Shields

New one-piece shield, similar to shield above. Shield fits tightly over metal base of tube, thus automatically grounding and eliminating need for additional connector. Overall length 2 1/8". Has closed top. Suitable for following tubes:



6C5GT/G 7A8 7A5 1LN5
1LA6 6H6GT/G 7B5 7B4
7A4 1LB4 1LA4 7B8
ETC.

No. 3547—Small base closed top shield.
For GT/G and Loktal tubes with 1.165" diameter base.
List Price \$0.12

No. 3549—Large base closed top shield.
For GT tubes with 1.218 diameter base.
List Price \$0.12

ACCESSORIES FOR JFD TUBE SHIELDS



No. 3556

No. 3556—Grid Cap Cover, fits No. 3545 and 3544 tube shields listed above, as well as No. 3554 and No. 3555 tube shields. Height 7/8". Notched.

List Price \$0.08

No. 3557—Grid Cap Cover same as above, except has clearance hole in top for Grid Cap Clip.

List Price \$0.08



No. 3557

No. 3558—Low Cap, for tubes without grid cap, or where shielding of grid cap is not considered necessary. Height 3/4". Hole in top, ID 7/8".

List Price \$0.06

No. 3559—Clamping Ring for any above type "T-9" tube shield.

List Price \$0.04



No. 3558



No. 3559



No. 3560

No. 3560—Ground Clip Base, for above type "T-9" tube shields. Has slotted holes for mounting on wafer sockets with 1 1/2" to 1 3/4" mounting centers.

List Price \$0.10

No. 3561—Single Ground clip for wafer type sockets, with 1 1/2" mounting centers.

List Price \$0.05

No. 3562—Ground Clip for sockets with 1 1/8" mounting centers.

List Price \$0.06



No. 3561



No. 3562



No. 3563

No. 3563—Base for all "T-9" series tube shields listed above. For sockets with mounting centers of 1 1/2" to 1 3/4".

List Price \$0.10

No. 3564—Grounding clip, fits over octal key and ground pin of bakelite base octal tubes, and makes contact with tube shield.

List Price \$0.05



No. 3564



Switches and Radio Essentials

JFD TOGGLE SWITCHES



Popular switches for radio construction and replacement, for controlling small motors and appliances, etc. Made especially for JFD by H&H in a nickel plated or Statuary bronze finish. Rated at 3 amps. at 125 v., these switches are Underwriter approved. Solder connections are heavy. will not break off.

No.	Description	Shank	List Price
11-1	S.P.S.T.	1/2"	\$0.60
11-2	S.P.S.T.	7/8"	.70
11-3	S.P.D.T.	1/2"	.75
11-4	S.P.D.T.	7/8"	.80
11-5	D.P.S.T.	1/2"	1.15
11-6	D.P.S.T.	7/8"	1.25
11-7	D.P.D.T.	1/2"	1.25
11-8	D.P.D.T.	7/8"	1.35

JFD PUSH BUTTON SWITCH



Employed on many analyzers and testers, this two circuit slow make and quick break momentary contact switch is made for JFD by H&H. One circuit is cut off while the other is normally on. Circuits may be reversed by merely pushing button. Shaft 3/8" long. U. L. Approved

No.	Description	List Price
12-1	Switch	\$0.85
12-2	W. Red Plastic But.	1.15
12-3	W. Black Plastic But.	1.15

JFD EXTRA HEAVY DUTY POWER SWITCH



Rated 10 amps. 125 v., 3 types, with neutral position in center. Size 2" x 1" x 1 1/2" sleeve 3/4" dia. Made specifically for use in projectors, motors, amplifiers, transmitters, and movie equipment where heavy currents are used. Made for JFD by H&H. U. L. Approved

No.	Description	List Price
13-1	D.P.D.T.	\$5.50
13-2	3.P.D.T.	8.15
13-3	4.P.D.T.	11.50

JFD HEAVY DUTY POWER SWITCH



Made by H&H for JFD. Adaptable as safety switch for transformers, high frequency work, etc., available in toggle or push button types. This D.P.S.T. power switch has a capacity of 22 amps. at 125 volts. U. L. Approved

No.	Description	List Price
14-1	Toggle Type	\$1.50
14-2	Push button type	2.15

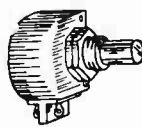
JFD SNAP SWITCHES



Used as a tone control, phono switch, circuit switch, etc., in many of the new sets. 1/2" wide — 1 1/8" between center mounting holes. Cadmium plated steel housing; Bakelite buttons. Contacts and terminals are silver plated. U. L. Approved

No.	Description	List Price
17-1	S.P.S.T.	\$0.35
17-2	S.P.D.T.	.40
17-3	D.P.S.T.	.45
17-4	D.P.D.T.	.60

JFD ROTARY SWITCHES



Underwriter approved, this well-constructed rotary switch is especially made for replacements, or in original sets. Rated at 3 amps. 125 volts. Made for JFD by H&H. 1 1/2" long shaft. Heavy solder contacts.

No.	Description	Shank	List Price
16-1	S.P.S.T.	3/8"	\$0.70
16-2	S.P.S.T.	1/2"	.80
16-3	S.P.D.T.	3/8"	.90
16-4	S.P.D.T.	1/2"	1.00
16-5	D.P.S.T.	3/8"	1.30
16-6	D.P.S.T.	1/2"	1.40
16-7	D.P.D.T.	3/8"	1.40
16-8	D.P.D.T.	1/2"	1.50

JFD BAT HANDLE TOGGLE SWITCHES



This tear-drop style switch dresses up any panel or instrument board. Nickel plated. Heavy solder connections. 1/2" shank. Made for JFD by H&H. U. L. Approved

No.	Description	Shank	List Price
15-1	S.P.S.T.	1/2"	\$0.60
15-2	S.P.D.T.	1/2"	.70
15-3	D.P.S.T.	1/2"	1.15
15-4	D.P.D.T.	1/2"	1.25

Toggle Switch On-Off Plate No. 18-1 List \$0.04

CIRCUIT SELECTOR SWITCHES



For multiple switch applications: testers, analyzers, etc. Single hole mounting 3/8", flat end shaft length 1 1/2". Thread length 3/4".

No.	Description	Shank	List Price
ST131	S.P.S.T.	1 1/2"	\$0.75
ST132	S.P.D.T.	1 1/2"	.75
ST133	D.P.S.T.	1 1/2"	.75
ST134	D.P.D.T.	1 1/2"	.75
ST135	3 P.S.T.	1 1/2"	.90
ST136	3 P.D.T.	1 1/2"	1.00
ST137	4 P.S.T.	1 1/2"	1.00
ST138	4 P.D.T.	1 1/2"	1.20
ST139	5 P.S.T.	2"	1.15
ST140	5 P.D.T.	2"	1.35
ST141	6 P.S.T.	2"	1.25
ST142	6 P.D.T.	2"	1.50

JFD PLASTIC SPEAKER SHIMS

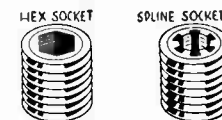
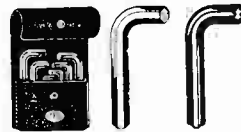


Indispensable to every serviceman for the rapid and accurate adjustment of any type dynamic speaker. Made of a very tough and flexible plastic. Five sizes in an attractive, silver-lettered, partitioned snap case. Genuine leather pouch. No. ST1806—Set of 20 color coded shims in kit, complete. List Price \$0.60

JFD SPRING STEEL SPEAKER SHIMS

For quick, precise adjustment of any type dynamic speaker. Made of highest grade, extremely flexible spring steel. Four sizes in an attractive, silver-lettered, partitioned snap case. No. ST1807—Set of 16 color coded shims, complete. List Price \$0.65

JFD HEXAGON AND BRISTO KEY WRENCHES



A "must" in every serviceman's tool kit. Used on knobs, dials, motors, pulleys, etc. Only toughest hardened steel is used in both the Hex and Bristo Wrench.

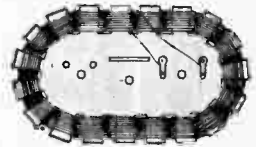
HEX KEY WRENCHES

No.	Description	List Price
9-1	Kit of 6 Hex Key Wrenches for No. 4 to 1/4" Set Screws and No. 2 to 8 Cap Screws in Genuine Leather Pouch	\$0.75
9-2	Env. 4 Hex Key Wrenches for 1 1/4" to 7/16" Set Screws and No. 8 to 5/16" Cap Screws	\$0.40
9-3	Env. 5 Hex Key Wrenches for No. 4 to 1/4" Set Screws and No. 2 to 8 Cap Screws	\$0.40
9-4	No. 4 Set Screw Wrench	List \$0.10
9-5	No. 5 Set Screw Wrench	List \$0.10
9-6	No. 6 Set Screw Wrench	List \$0.10
9-7	No. 8 Set Screw Wrench, No. 4 Cap Screw	List \$0.10
9-8	No. 10 Set Screw, No. 5-6 Cap Screws	List \$0.10
9-9	1/4" Set Screw, No. 3 Cap Screw	List \$0.10
9-0	5/16" Set Screw, No. 8 Cap Screw	List \$0.10
9-11	3/8" Set Screw, No. 1 1/4" Cap Screw	List \$0.10
9-12	7/16" Set Screw, No. 5/16" Cap Screw	List \$0.10

BRISTO KEY WRENCHES

No.	Description	List Price
10-1	Kit of 6 Bristo Key Wrenches for No. 4 to 1/4" Set Screws and No. 2 to No. 8 Cap Screws in Genuine	\$0.10

JFD ANTENNA LOOPS



Ideal for battery and midget sets or portables. Replaces an Antenna Coil; gives satisfactory pickup and excellent selectivity. Inductance slightly higher than necessary, permitting removal of turns for adjustment.

No.	Description	List Price
21-1	4" x 5 1/2"	\$1.10
21-2	4 1/2" x 7"	1.10
21-3	5 1/2" x 8"	1.10
21-4	6" x 8 5/8"	1.10
21-5	6 1/2" x 9 3/4"	1.10

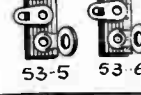
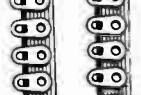
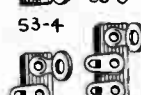
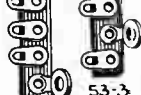
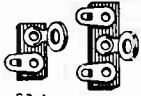
Same as above but includes PRIMARY WINDING permitting use of outdoor antenna in remote areas for better sensitivity.

No.	Description	List Price
21-10	4" x 5 1/2"	\$1.25
21-11	4 1/2" x 7"	1.25
21-12	5 1/2" x 8"	1.25
21-13	6" x 8 5/8"	1.25
21-14	6 1/2" x 9 3/4"	1.25

New type loop construction permits mounting inside radio. Used in newest type portable and midget radios.

No.	Description	List Price
21-20	Box loop antenna, 3 1/4" x 5"	\$1.25
21-21	Box loop antenna, 4 1/4" x 6 1/4"	1.25

JFD Terminal Strips



Rigidly riveted to prevent the lugs from turning and getting out of line. Made of sturdy construction.

53-1 Single Cont. List \$0.05

53-2 Two Cont. List \$0.06

53-3 Three Cont. List \$0.06

53-4 Four Cont. List \$0.11

53-5 Five Cont. List \$0.12

53-6 Six Cont. List \$0.13

No.	Description	List Price
10-2	No. 4 Set Screw Wrench	List \$0.10
10-3	No. 5 Set Screw Wrench	List \$0.10
10-4	No. 6 Set Screw Wrench	List \$0.10
10-5	No. 8 Set Screw, No. 4 Cap Screw	List \$0.10
10-6	No. 10 Set Screw, No. 5-6 Cap Screws	List \$0.10
10-7	No. 1/4" Set Screw, No. 8 Cap Screw	List \$0.10
10-8	No. 5/16" Set Screw, No. 10 Cap Screw	List \$0.10
10-9	No. 3/8" Set Screw, No. 1/4" Cap Screw	List \$0.10
10-10	No. 7/16" Set Screw, No. 5/16" Cap Screw	List \$0.10



Insulated Test Tools

JFD INSULATED SCREW-DRIVER



Made of $\frac{1}{4}$ " rod—sturdy, durable bone fibre. No metal parts. Perfect for neutralizing and adjusting radio sets, coils, condensers, etc. Ends can be reground when necessary. 7 inches long.

No. 5-50 List Price \$0.40

JFD INSULATED SCREW-DRIVER AND HEX WRENCH



Durable bone fibre combination insulated screw-driver and hex wrench. Screw adjustment permits screw-driver to be extended from 7" to 13".

No. 5-51 List Price \$0.75

JFD ALLIGATOR WRENCH AND SCREW-DRIVER



Sturdy, tough $\frac{3}{8}$ " bone fibre. Combination strong metal wrench and metal screw-driver tip.

No. 5-52 List Price \$0.50

JFD ALIGNING SCREW-DRIVER



Metal tip screw driver made of tough bone fibre. $\frac{1}{4}$ " diameter x 6" long, completely insulated.

No. 5-53 List Price \$0.40

JFD ALIGNMENT TOOL FOR PHILCO RECEIVERS



Air Trimmer condensers on all model sets can be easily neutralized with this specially designed metal clip. Other end has screw-driver with metal nib. Made of $\frac{3}{8}$ " bone fibre.

No. 5-54 List Price \$0.60

JFD WRENCH AND SCREW-DRIVER



One end has $\frac{1}{4}$ " metal hex wrench; other end has metal screw-driver nib made of $\frac{1}{2}$ " bone fibre.

No. 5-55 List Price \$0.75

JFD INSULATED ALIGNING WRENCH



Made of tough bone fibre. Hexed its full length inside, so that end of wrench can be cut off when necessary, and neutralizing wrench is ready for more use.

No. 5-56 6" long ($\frac{1}{4}$ " hex; $\frac{3}{8}$ " dia. List Price \$0.35

No. 5-57 8" long ($\frac{1}{4}$ " hex; $\frac{3}{8}$ " dia. List Price \$0.40

JFD WRENCH ALIGNMENT TOOL



Sturdy bone fibre with $\frac{1}{4}$ " metal hex wrench on one end and $\frac{1}{8}$ " metal hex wrench on the other end.

No. 5-58 List Price \$1.25

JFD ALIGNMENT WRENCH FOR RCA, PHILCO, etc.



Ideal for neutralizing and adjusting air trimmers of all models of Philco, Victor, and ROA. One end has $\frac{1}{2}$ " metal hex wrench; other end has an especially shaped metal hook for adjusting trimmers. Durable bone fibre.

No. 5-60 List Price \$1.50

JFD "4-In-1" ALIGNMENT TOOL



Contains four handy tools— $\frac{1}{4}$ " hex wrench with key slot on one end, $\frac{1}{8}$ " hex wrench on other end, screw-driver with metal nib comprises insert. Sturdy bone fibre.

No. 5-61 List Price \$1.00

JFD "5-In-1" ALIGNMENT TOOL



Contains five handy neutralizing tools— $\frac{1}{4}$ " hex wrench with key slot, $\frac{1}{8}$ " hex wrench, screw-driver with metal nib insert and heavy metal screw-driver nib on one end. Durable bone fibre.

No. 5-62 List Price \$1.35

JFD ALL-PURPOSE TOOL



Made of tough bone fibre. Combination tool contains $\frac{1}{4}$ " hex wrench with key slot, $\frac{1}{8}$ " hex wrench, $\frac{1}{4}$ " metal hex side wrench with key slot, inserted screw-driver with metal nib.

No. 5-63 List Price \$1.35

JFD BALANCING TOOL



No need to remove set from cabinet when using this tool. Neutralizing and balancing can be done easily and quickly in even the closest quarters.

No. 5-64 List Price \$0.50

JFD WRENCH AND ALLIGATOR ALIGNING TOOL



Made of $\frac{3}{8}$ " bone fibre—alligator wrench on one end, $\frac{1}{4}$ " slotted metal hex wrench on other end.

No. 5-65 List Price \$0.50

JFD POCKET ALIGNING KIT

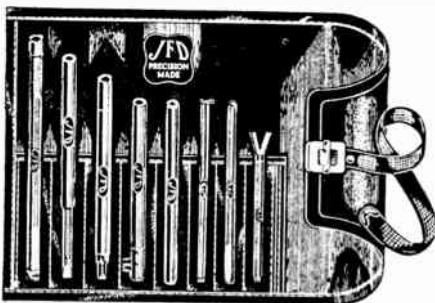


Here is a handy aligning kit that will fill most servicemen's requirements! Kit contains:

- 1 No. 5-53 Aligning Screw-driver
- 1 No. 5-50 Insulated Screw-driver
- 1 No. 5-52 Alligator Wrench and Screw-driver
- 1 No. 5-55 Wrench and Screw-driver
- 1 Leatherette Case

No. 5-75 List Price \$3.00

JFD JUMBO ALIGNING KIT



Here is a single kit that will take care of practically every aligning tool need! These eight tools have 24 different usable ends. The kit contains:

- 1 No. 5-51 Tool
- 1 No. 5-52 Tool
- 1 No. 5-53 Tool
- 1 No. 5-54 Tool
- 1 No. 5-56 Tool
- 1 No. 5-57 Tool
- 1 No. 5-60 Tool
- 1 No. 5-62 Tool
- 1 No. 5-63 Tool

1 Roll-Type Leatherette Case

No. 5-77. List Price \$8.75

JFD ALL-PURPOSE ALIGNING KIT



Here is a handy, compact kit containing five JFD sturdy bone fibre aligning tools.

The kit contains:

- 1 No. 5-50 Insulated Screw-driver
- 1 No. 5-52 Alligator Wrench and Screw-driver
- 1 No. 5-56 Aligning Wrench

1 No. 5-58 Metal Wrench

1 No. 5-64 Balancing Tool

1 Leatherette Case

No. 5-76. List Price \$4.25

JFD ASSORTED RADIO PRODUCTS

JFD DURABLE STOCK CABINETS



For parts, hardware, etc., with sliding drawer. Sturdier, heavier metal than average.
No. 25-1 List \$2.50



JFD RADIO CABINET SPEAKER GRILLE CLOTH

Highest quality. Blends with any shade cabinet.

No.	Size, In.	List	No.	Size, In.	List
48-1	18x20	\$1.25	48-7	8x8	\$0.28
48-2	9x18	.58	48-8	9 1/2 x 10	.30
48-3	12x12	.60	48-9	6x6	.25
48-4	14x18	.70	48-10	9x12	.50
48-5	24x13	.90	48-11	Any length	
48-6	18x13	.70		per yard	4.95

Also comes in special light color for plaskon and ivory cabinets. Specify "light" when desired.

JFD PHONO-TURNTABLE

Rubber-Replacement DRIVES



Prevent slipping, increase efficiency by replacing worn rubber drives with these exact duplicates of popular friction-type phonograph turntable drives.

No.	Description	List
30-1	For Alliance Model and Motorola	\$0.25
30-1B	Bag of 2 Number 30-1 Drives	.40
30-2	For Detroit Models	.40
30-3	For General Electric Models	.15
30-3B	Bag of 3 Number 30-3 Drives	.40
30-4	For General Industries Rx-Lx Motors	.25
30-4B	Bag of 2 Number 30-4 Drives	.40
30-5	For Philco, RCA, Etc.	.15
30-5B	Bag of 3 Number 30-5 Drives	.40
30-6	For RCA	.15
30-6B	Bag of 3 Number 30-6 Drives	.40
30-7	For Webster Model 56	.25
30-7B	Bag of 2 Number 30-7 Drives	.40

JFD PHONO TURNTABLE SPRINGS



Assortments of the most popular type phonograph turntable springs—in great demand by servicemen. Assortments contain springs used by RCA, Philco, Seeburg, New Products, Oak, Zenith, etc. Two assortments, one of smaller size springs and the other of larger sizes.

No.	Description	List
34-1	Envelope 10 small size phono springs	\$0.40
34-3	Envelope 8 larger size phono springs	.40

JFD PHONOGRAPH NEEDLE AND STYLUS SET SCREWS



Machined replacement set screws for pick-up arms and recording heads. For all popular types.

No.	Description	List
31-1	10 Assorted Stylus Screws	\$1.51
31-1B	Bag of 7 Assorted Screws	1.06
31-1C	20 Bags No. 31-1B	21.20
31-2	100 Assorted Stylus Screws	13.95
31-3	For Astatic Number 3207 and Number 3205; Stromberg-Carlson SD-64 and SD 149; Universal No. 3207; Webster No. 26A2108	.17
31-4	For Astatic No. 3258; RCA No. 37045; Webster Electric No. P9564-1	.17
31-5	For Audex, D-32	.17
31-6	For RCA Nos. 33974, 3311, 33529, 31160, 12539	.17
31-7	For RCA No. 34432	.17
31-8	For RCA, Lang 1 Inch Type	.17
31-9	For Bek-O-Kit Recorder Cutter No. MG625, and No. 8-8; Webster Co. No. 26A2112	.17
31-10	For Shure Bros. No. 30-76	.17
31-11	For Shure Bros. No. 30-132	.17
31-12	For Webster Electric Co. P4819-2	.17

JFD RADIO SPAGHETTI TUBING

(All in 30" Lengths)



Highest grade, flexible spaghetti for radio-television work. Average dielectric strength—5,000 volts. Colors: Black, Brown, Red, Green, Yellow.

No.	Size	List
37-0	No. 20 Fit 20 wire	\$0.15
37-2	No. 18 Fit 18 wire	.15
37-6	No. 14 Fit 14 wire	.15
37-8	No. 12 Fit 12 wire	.15
37-9	1/8" I.D.	.32
37-10	3/16" I.D.	.44
37-11	1/4" I.D.	.50
37-12	3/8" I.D. (Resist. Types)	.68
37-13	7/16" I.D.	.94
37-14	1/2" I.D.	1.15

JFD RADIO SPAGHETTI ON SPOOLS

(5000 Volt Dielectric Strength)



Highest grade varnished tubing put on spools of 20-foot length. Will fit wire from No. 12 to No. 18. Colors: Black, Red, Yellow, Green and Blue.

No. 37-20	20-ft. Spool	List \$1.95
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JFD ASSORTED SATURATED SLEEVING KIT



Assortment of 7 1/2" lengths of saturated sleeving. 26 lengths to the kit. Sizes include from No. 17 wire to 3/8" I.D.

No. 50-1	Kit of 26 lengths	List \$0.65
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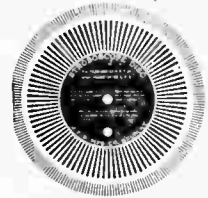
JFD UNBREAKABLE PLASTIC JARS FOR HARDWARE AND PARTS



Made of clear, unbreakable plastic. Wide-mouthed, the perfect storeplace for small radio parts, screws, nuts, washers, etc.

No.	Description	List
43-2	2 ounce plastic jar	\$0.30
43-4	4 ounce plastic jar	.35
43-8	8 ounce plastic jar	.40

STROBOSCOPE DISC



Accurately calibrated strobo scope for adjusting both phono playback and record making speeds. 7.8 and 33 1/3 RPM. 6" Diameter. Complete instructions on face.

No. ST188	List \$0.12
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JFD SERVICEMEN'S COMBINATION KIT



An assortment of all these little things that the Serviceman will find so convenient to have with him on the job.

Kit No. 51-1	List \$2.00
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- 15 Dial Drive Tension Springs
- 25 Knob Springs
- 10 Set Screws
- 5 Idler Pulleys
- 10 Dial Drive Rubbers

Kit No. 51-2	List \$4.00
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- 35 Dial Drive Tension Springs
- 35 Knob Springs
- 25 Set Screws
- 25 Idler Pulleys
- 15 Dial Drive Rubbers

JFD BAKELITE NEEDLE CUP



A replacement phono needle cup. Standard size.

No. 4-20	List Price \$0.11
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JFD EYELET AND CLAMP ASSORTMENT



Make your own belts, bands and cables — Increase Your Profits! The same eyelets and clamps as used in our ready-made belts, bands, and cables.

No.	Description	List
46-1	60 assorted pieces	\$0.40

JFD ASSORTED RADIO PRODUCTS

JFD RADIO AND PHONO RUBBER DRIVES



Made especially for RCA, Stewart-Warner, Atwater-Kent, Emerson, Olsen, Kennedy, etc. Finest grade rubber drives.

No.	Description	List
36-1	Assortment of 5 small dial drives	\$0.40
36-2	Display 20 envelopes 36-1	8.00
36-3	Assortment of 5 large dial drives	.40
36-4	Display of 20 envelopes 36-3	8.00
36-5	Assortment of 10 dial drives	.80
36-6	Display 24 envelopes of 36-5	19.20
36-7	Box of 25 assorted drives	1.50
36-8	Box of 100 assorted drives	6.00
36-11	AK small, part number 1568L	.10
36-12	AK large for gear part No. 17961	.10
36-13	Phono drive for Detrola	.40
36-14	Phono drive for Alliance Model 80 and Motorola	.25
36-15	Atwater Kent Part No. 27333, for models 465, 655Q, 768Q, 978Q	.10
36-16	Large Atwater Kent for part No. 27332 for models 465Q, 655Q, 768Q, 978Q	.10
36-17	Small AK, for part No. 27332	.40
36-18	Emerson-Majestic grooved rubber fits 1/4" shaft	.10
36-19	Phono drive for General Electric	.15
36-20	Phono drive for General Industries RX-LX Motors	.25
36-21	Kennedy 26, 34, 36 and Wells-Gardner 2-22 series	.10
36-22	Philco part No. 42-2346	.25
36-23	Phono drive for Philco, RCA, etc.	.15
36-24	Phono drive for RCA	.15
36-25	RCA all numbers	.10
36-26	Stewart-Warner 113, 114 connector	.10
36-27	Stewart-Warner 105-120	.10
36-28	Stewart-Warner 102-104	.10
36-29	Stewart-Warner 105-120 small	.10
36-30	Stewart-Warner 126	.10
36-31	Phono drive for Webster model 56	.25

JFD RADIO KNOB SET SCREWS



To replace lost knob set screws. Assortments contain 6/32", 8/32", and 10/32" screws.

No.	Description	List
32-1	50 Assorted Set Screws	\$0.99
32-2	100 Assorted Set Screws	1.81
32-3	20 Assorted Set Screws in envel.	.40
32-4	Display of 20 envelopes 32-3	8.00

CABLE TYPE MIKE CONNECTORS



ST164



ST165

For use with single conductor microphone cable. Completely shielded, cable shield being used as return conductor. Contacts securely locked together by coupling ring on female connector, preventing vibration and accidental separation. For cables up to 5/16"-5/8"-27 coupling ring thread. Spring cord protector. Chrome plated on brass.

No. ST164	Female type	List \$0.55
No. ST165	Male type	List .44

COIL SPRING CORD PROTECTOR

For use with above type connectors; available separately.

No. ST163	List, Ea., \$0.12/2
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PHONE PLUG ADAPTER

Plugs into standard phono jacks. Screws into microphone connector No. ST164. Chrome plated on brass.

No. ST166	List \$0.49
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JFD GRID CAP ASSORTMENT

Various grid caps to fit all makes of tubes. For radio repairs and for construction of new equipment.

No.	Description	List
49-1	Envelope 16 caps	\$0.40
49-2	Glass tube grid caps per 1000	12.50
49-3	Metal tube grid caps per 1000	12.50

JFD SNAP BUTTON HOLE PLUGS



Just the thing to plug holes, seal adjustments, etc. Fits in any material up to 1/16" thick.

No.	Description	List
45-1	50 Assorted plugs in box	\$2.46
45-2	10 Assorted plugs in envelope	.40

No.	Hole Diameter	List
45-4	3/8" per 10	\$0.38
45-5	1/2" per 10	.49
45-6	5/8" per 10	.55
45-7	3/4" per 10	.55
45-8	1-1/4" per 10	.88

JFD SNAP-IN TRIMOUNTS



Used in place of screws to fasten dials, built in aeriols, speakers and other parts. Every serviceman should have a kit.

No.	Description	List
44-1	30 assorted trimounts	\$0.40
44-2	100 assorted trimounts	1.20
44-3	100 small, 11/64"	1.20
44-3B	Envelope 30 number 44-3	.40
44-4	100 medium 13/64"	1.20
44-4B	Envelope 30 number 44-4	.40
44-5	100 large 17/64"	1.20
44-5B	Envelope 25 number 44-5	.40
44-6	100 extra large 9/32"	1.20
44-6B	Envelope 25 number 44-6	.40
44-7	New large size 5/8" long Philco, RCA General Electric 20 trimounts 5/8"	.40
44-700	100 trimounts 5/8" long	1.92

MICROPHONE CONNECTORS

Non-shorting chassis mounting and mike connector. Standard solder contact. Used with ST164.

No. ST167	List \$0.33
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Standard shorting male with eyelet; milled flat to prevent turning. Prevents open circuit noise when microphone is disconnected, grounding automatically.

No. ST168	List \$0.44
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Standard chassis mount male solder contact with milled flat preventing turning in chassis.

No. ST190	List \$0.35
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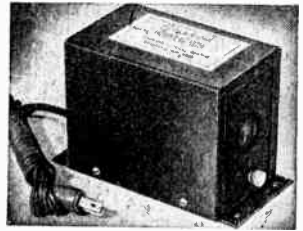
Cap and chain assembly. Eliminates dust and noise by keeping open chassis units sealed.

No. ST191	List \$0.50
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Double female coupling. Fits ST165 and ST167.

No. ST192	List \$0.25
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JFD RADIO INTERFERENCE FILTER



An exceptionally effective filter for the most serious cases of radio interference from power lines and appliances. Filter plugs into electric outlet and radio set or noise-producing device plugs into receptacle on filter. For use on 110 volts AC or DC, up to 5 amps.

Thorough filtering action is obtained by use of inductance as well as capacitance. This filter is especially desirable for connection between interfering device and power line. Housed in hand some brown wrinkle-finish case, with 6 1/2 ft. cord.

No. ST1040	List, ea. \$8.50
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JFD FLUORESCENT LIGHT NOISE SUPPRESSORS



Approved by Underwriters' Laboratories

Designed to suppress noises caused by fluorescent lamps. Also efficient for correcting radio interference caused by electrically operated machines and appliances. Easy to install.

No. ST1030	List \$1.50
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JFD BAKELITE SOCKETS



Highest quality molded bakelite sockets. High dielectric. Have plated non-corroding bronze sockets. Three grounding lugs on metal base of each socket are automatically grounded when socket is installed, 1 1/2" mounting centers, 1-3/32" mounting hole.

No.	Prongs	List
38-4	4	\$0.13
38-5	5	.13
38-6	6	.15
38-7	7	.15
38-8	8 Octal Base	.15
38-9	8 Loktal Base	.15

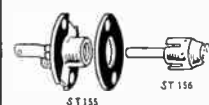
JFD WAFER SOCKETS



For miniature tubes, high grade laminated bakelite sockets with positive contacts. Standard spacings.

No.	Prongs	Mtg. Centers	List
39-4	4	1 1/2"	\$0.11
39-5	5	1 1/2"	.13
39-6	6	1 1/2"	.13
39-7S	7	Small, 1-1/2"	.13
39-7L	7	Large, 1-1/2"	.13
39-8S	8	Octal, 1 5/16"	.16
39-8L	8	Octal, 1-1/2"	.16
39-9	8	Loktal, 1-5/16"	.16

JFD MIDGET JACKS & PLUGS USED ON RCA RECORDING UNITS, RECEIVERS AND AUTO SETS



Will be found very handy and practical for connecting microphones, record players, P.M. attachments and many other uses where a small, compact jack and plug is needed.

No.	Description	List
ST155	Midget Shielded Jack	\$0.12
ST156	Midget Pin Plug	.08



Radio Hardware and Essentials

JFD TRIK-HOLD SCREW-DRIVER



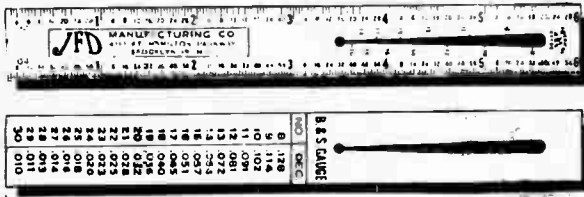
"IT DOES THE TRICK"

Securely holds $\frac{1}{8}$ " to $\frac{1}{2}$ " screws—reaches remote spots.

This is the new screw driver that servicemen are talking about! With the TRIK-HOLD SCREW-DRIVER, any part of the radio can readily be reached. Blade holds screw securely until it is snugly in place, then a flick of the finger releases it—and the job is done!

No. 5-69 List Price \$0.45

JFD STEEL GAUGE AND RULE



Face

Reverse Side

Handy pocket all-purpose rules that no serviceman should be without. Made of stainless steel with $\frac{1}{16}$ " and $\frac{1}{32}$ " graduations. Has American or Browne & Sharpe wire gauge. Reverse side has gauge numbers and decimal equivalents.

No. 3-50 List Price \$0.70

JFD PUSH-ON KNOB SPRINGS for all types of knobs



Any of these springs except ST9 in lots of 100.....List \$1.37

Each .02

Type ST9 in lots of 100.....List 2.74

Each .05

No.	Quan.	Type	No.	Quan.	Type
33-1	20	ST1	33-11	20	ST6
33-3	20	ST2	33-13	20	ST7
33-5	20	ST3	33-15	20	ST8
33-7	20	ST4	33-17	10	ST9
33-9	20	ST5			

Each of above kits.....List \$0.40

JFD RADIO PUSH-ON KNOB SPRING KITS



No. 33-51

20 Ass't. in envelopes
List \$0.40

No. 33-53

Kit of 35 Springs
List \$0.56

No. 33-54

Kit of 100 Springs
List \$1.37

JFD RUBBER GROMMETS

Prevents the abrasion of wires and cables when passing through panel hole or chassis. Makes a perfect cushion for sockets, condensers, etc.

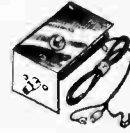
A: Outside Diameter. B: Inside Diameter. O: Panel Hole.
D: Thickness overall. E: Panel Thickness.

No.	A	B	C	D	E	Per C
19-1	5/8"	1/4"	13/32"	1/3"	1/15"	\$3.50
19-2	3/8"	1/8"	5/16"	1/4"	1/15"	2.50
19-3	7/16"	3/16"	5/16"	3/16"	1/16"	3.00
19-4	9/16"	9/32"	11/32"	1/4"	1/16"	3.00
19-5	5/8"	5/16"	7/16"	1/4"	1/16"	3.25
19-6	11/16"	5/16"	1/2"	1/4"	1/16"	3.50
19-7	1/2"	7/32"	3/8"	3/16"	1/13"	3.00
19-8	3/4"	7/16"	9/16"	1/4"	1/15"	3.25

List Price

No. 19-15—Bag of 15 Ass'td. Grommets.....\$0.40
No. 19-50—Bag of 50 Ass'td. Grommets.....1.04

JFD REPLACEMENT PHONO-RADIO SWITCH



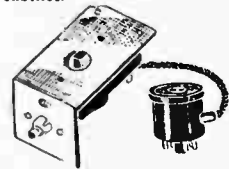
For quickly connecting Record Players, Microphones, F.M. or Television Attachments, etc., to the audio amplifier of radio receivers... Also replaces R.C.A. Part No. 9824A.

No. ST145.....List \$2.25

(Complete with Midget Tip Plug)

JFD PHONOGRAPH PICKUP ADAPTERS

Completely assembled and wired on a sturdy steel frame... easily and quickly mounted in any cabinet.



"G", "GT" METAL TUBE OCTAL BASE ADAPTER

For use with detector (2nd detector Superhet.) for audio amplifying tubes with an octal (8 prong) base without top grid cap and with basing similar to 6AC5G, 6AE5T, 6C5, 6C8G, 6F6, 6F8G, 6G6G, 6H6, 6J5, 6K6G, 6L6G, 6N6G, 6N7, 6T7G, 6Y6G, 6Z7G, 12J5GT, 25A6, 25A7G, 25AC5GT, 25B6G.

No. ST181—Complete with Standard Plug, Jack and Wired Tube Socket Adapter.

List Price \$3.00

STANDARD GRID CAP ADAPTER

For use with tubes used as detector or amplifier such as 2A6, 2B7, 6B7, 6C6, 6D6, 6F7, 2A4, 36, 39, 56, 57, 58, 75, 77, 78, 79, 85.

No. ST182—Complete with Standard Plug and JackList Price \$2.25

5-PRONG UY BASE ADAPTER

For use with 5 prong tubes used as detector or audio amplifier such as 27, 37, 49, 56, 76.

No. ST183—Complete with Standard Plug, Jack and Wired Tube Socket Adapter.

List Price \$3.00

"SINGLE-ENDED" DIODE-TRIODE BASE ADAPTER

For use with single ended "S" series tubes used as detector or amplifier with basing similar to 6SQ7, 6SR7, 12SQ7, 12SR7.

No. ST184—Complete with Standard Plug, Jack and Wired Tube Socket Adapter.

List Price \$3.00

"SINGLE-ENDED" TRIODE-PENTODE BASE ADAPTER

For use with single ended "S" series tubes used as detector or amplifier with basing similar to 6SC7, 6SF5, 6SJ7, 12SC7, 12SJ7, 12SF5.

No. ST185—Complete with Standard Plug, Jack and Wired Tube Socket Adapter.

List Price \$3.00

"G", "GT" METAL TUBE GRID CAP ADAPTER

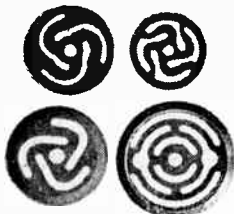
For use with metal "G" or "GT" type tubes having top control grid cap such as 6B6G, 6B8G, 6C8C, 6F5, 6F8G, 6J7, 6J7GT, 6K5G, 6K7, 6Q7, 6Q7GT, 6R7, 6T7G, 12C8, 12F5GT, 12J5GT, 12J7GT, 12K7GT, 12Q7GT.

No. ST186—Complete with Standard Plug and JackList Price \$2.25



Radio Hardware and Essentials

JFD SPEAKER SPIDERS



A full selection of speaker spiders as originally used on 5", 6", 8", 10", 12" speakers by all leading speaker manufacturers. Made of finest and best strength tensile fibre.

Catalog No.	Outside Diameter	List Price Each
6-1	1 1/4"	\$0.15
6-2	1 1/2"	.20
6-3	1 3/4"	.25
6-4	2 1/2"	.40

JFD Twin-Lead 300 Ohm Wire for Television & FM

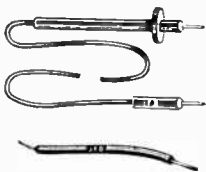
Extruded parallel ribbon-type lead-in wire. Polyethylene insulation—300 ohm surge impedance. Will withstand severe weather and use. Highly recommended for FM, Television receivers.



TW-1—100' Reels (as shown)		
List Price		\$4.85/C'
TW-1—1000' Reels		
List Price		\$41.75/M'

JFD TEN KV TEST LEADS

A—For checking high voltages in TV units. Safety, non-slip feature prevents contact. No. 3-20—List Price Per Pair \$4.00



B—Leads made of heavy-duty, heavy-gauge, rubber-insulated wire. High insulation factor.

No. 3-25—List Price, Per Foot \$0.06

JFD 9-PIN ADAPTERS

To adapt all octal tube testers—fixed and 3-point or selective type testers.



A—To test 12AU7 and 12AT7 (fixed).

No. 88-1 List Price \$2.25

B—To test 6TS and 19TS (fixed).

No. 88-2 List Price \$2.25

C—For all 9-pin noval tubes in 3-point or selective type testers.



No. 88-3.....List Price \$2.50

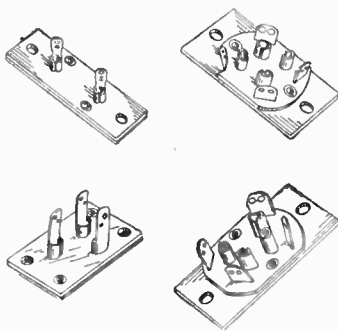
JFD Insulated SCREWDRIVER



Same as No. 5-50—only 3/8" rod. Sturdy, durable bone fibre. No metal parts. Ends can be reground. 7" long.

No. 5-72.....List Price \$0.40

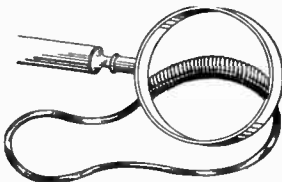
JFD SPECIAL WAFER SOCKETS



Used in battery construction and other applications. Made of fine grade Phenolic laminated materials (with or without wax impregnating). Contacts are spring metal finished in Cadmium, Silver or Hot Tin. Come in wide range of size and layout to meet any and all requirements.

No.	Prongs	List Price
62-2	2	\$0.11
62-3	3	.16
62-4	4	.20
(Used with Burgess G6B60; Willard WZ3)		
62-44	4	.20
(Used with Burgess G4B501 Willard WZ2)		

DETROLA RECORD CHANGER DRIVE SPRING AND RUBBER



Detrola part No. 59137 for Detrola Model No. 626, etc. This is the same spring used by the manufacturer in his original equipment. Elastic tension spring with core.

No. 63-1—Original Spring List Price \$0.50

No. 63-2—Original Rubber..... " " .60

JFD COMPRESSION SPRINGS



Used for repair work on radio dials, push buttons, phonograph motors, electronic appliances, etc. Assortments contain all needed springs.

No. 55-20—Bag of 20 Small Springs. List Price \$0.40

No. 55-15—Bag of 15 Large Springs. List Price \$0.40

JFD VACUUM CLEANER BELTS



Made of finest grade five rubber. Here is an item that has a tremendous market. These belts can be sold to every radio customer. Carry a JFD assortment with you when making calls. Display them in your shop—it will mean profits for you.

No. 56-1—Flat Belt, 2 1/8" I.D. x 1/2" wide x 1/8" thick. Fits Premier Duplex Jr.; G.E.; AMC; Bee Vac; Eureka, G. Models; Hamilton Beach, 8, 12, 14; Kenmore, BV Types; Universal; Westinghouse \$0.20

No. 56-2—Flat Belt, 2 3/8" I.D. x 1/2" wide x 1/8" thick. Fits Premier Duplex, G.E.; Westinghouse; Royal; Universal; Hamilton Beach; AMC, Airway; Apex; Eureka; Graybar; Kirby; Regina; Scott-Fitzer; Sweeper Vac \$0.20

No. 56-3—Flat Belt, 3 1/2" I.D. x 1/2" wide x 3/8" thick. Fits Airway; Apex; G.E.; Kenmore; Premier; Singer \$0.25

No. 56-4—Flat Belt, 3 3/4" I.D. x 1/2" wide x 2 1/2" thick. Hoover large flat type \$0.25

No. 56-5—Round Belt, 3" diam. x 1/8" thick. Fits Hoover, 25, 26, 27, 80, 103, 150, 360, 305, 450, 475; Apex, 129. \$0.25

No. 56-6—Round Belt, 3 3/4" diam. x 1/4" thick. Fits Hoover models, 102, 105, 541, 543, 961, N. Special \$0.25

No. 56-7—Round Belt, 3 3/4" diam. x 3/8" thick. Fits AMC; Kenmore Commander; Hoover models 60, 90, 575, 700, 725, 750, 800, 925, 930 \$0.25

JFD FIBRE SHOULDER WASHERS



Finest insulating material. Ideal for use on metal panels wherever insulating washers are used.

- A: Inside Diameter
- B: Outside Diameter
- C: Thickness Overall
- D: Height of Shoulder
- E: Diameter of Shoulder

No.	A	B	C	D	E	List Price per M
57-1	.140	.375	.093	.031	.237	\$10.50
57-2	.110	.250	.062	.031	.187	8.50
57-3	.136	.250	.093	.031	.187	9.00
57-4	.136	.312	.093	.031	.187	10.00
57-5	.250	.500	.068	.028	.312	11.00
57-6	.172	.375	.093	.031	.246	9.75
57-7	.196	.375	.093	.021	.308	9.75
57-8	.375	.750	.093	.031	.500	13.00
57-9	.385	.625	.093	.031	.500	12.50



Radio Hardware and Essentials

ADAPTER HARNESSES

For sets using 1½V "A" and 90V "B". Permits using separate batteries 4-pin socket on harness fits plug from set. Other end of harness has tinned ends for convenient connection under the terminals of the batteries where screw terminals are used. Can be used with packs listed under harness No. 503.



No. 503SP..... List Price 0.65

JFD BATTERY CABLE



All-around harness to be used as replacement on farm and portable radio battery sets. On Philco and others. 24" long.

No. 707SP
List Price\$0.65

67½ VOLT "B" Battery Snap-On

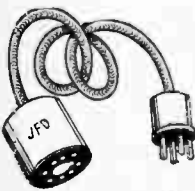
Snap-on has + and - terminal connections. Gives you an effective, positive connection to a 67½ volt "B" portable battery.



No. 734
List Price \$0.30

ADAPTER HARNESS

For Zenith Sets
Using 1½V "A" and 90V "B"



This harness is designed particularly for Zenith battery-powered sets, and similar sets having standard octal battery cable plug.

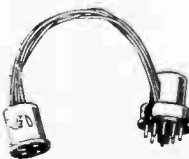
The purpose of this harness is to permit the use of

easily available combination "AB" packs such as: Burgess 17GD60, Eveready 748, etc. In place of hard-to-get Zenith packs, tubes 7-9-B, Z-28, etc. The standard octal socket at one end of this adapter takes the plug from radio set. The other end of the adapter plugs into the socket on the Burgess 17GD60, Eveready 748, etc., packs.

No. 526..... List Price \$1.25

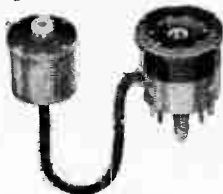
ADAPTER HARNESS Using 1½V "A" and 90V "B" Battery

This harness is the reverse of our type No. 526. Permits the use of Zenith packs that use a standard octal socket, to adapt to any battery, radio equipped with 4-prong male plug.



No. 526-R..... List Price \$1.25

JFD PHONOGRAPH PICKUP ADAPTER FOR FARM RADIOS

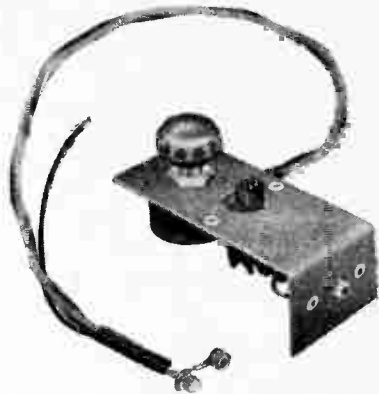


To connect a phonograph to a farm radio which is not wired for a record-player, simply plug adapter in tube socket. Used with spring-wound motors, and crystal pickups or high impedance pickups with volume control mounted on motor box. For use with detector (2nd detector Supermet) for audio amplifying tubes

No. 88-14—With a lock-tal base, used with following tubes: 1LA4, 1LB4.
List Price \$3.00

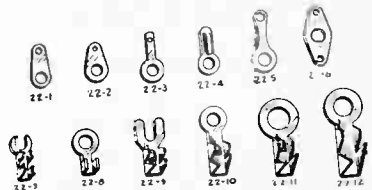
No. 88-15—With octal (8 pin) base, used with following tubes: 1A5, 1C5, 1E7, 1F5, 1G5, 1J5, 3Q5..... List Price \$3.00

JFD REPLACEMENT PHONO-RADIO SWITCH WITH VOLUME CONTROL



For quickly connecting Record players, Microphones, FM, or television attachments, etc., to the audio amplifier or radio receivers where no means of controlling the volume of the Phono Pickup is supplied. Also replaces R.C.A. part No. 9824A.
No. ST145VC..... List Price \$3.50

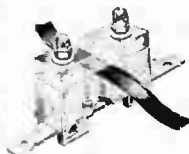
JFD SOLER TYPE LUGS BRASS HOT TINNED



No.	Length	Hole	List Price
22-1	5/8"	No. 5	\$ 7.00
22-2	5/8"	No. 4	7.00
22-3	3/4"	No. 6	8.00
22-4	5/8"	No. 6	7.00
22-5	7/8"	No. 7	7.00
22-6	7/8"	No. 4	8.00
22-7	5/8"	No. 4	7.00
22-8	5/8"	No. 6	7.50
22-9	1"		10.00
22-10	1 1/16"	No. 5	12.00
22-11	1-1/8"	1 1/4"	15.00
22-12	1"	1 1/4"	15.00

Twin-Lead Lightning Arrestor

The only 300 ohm lightning arrestor that does not destroy the impedance of a 300 ohm transmission line. Can be attached anywhere, even after installation is complete. No wirestripping necessary! Simple provision for grounding.



No. AT102 — JFD 300 Ohm Lightning Arrestor.
List Price \$2.25

JFD AUTOMATIC LINE VOLTAGE REGULATOR



Prevents burning out of radio set tubes by keeping line voltage at constant level. Operates on 110 volts AC or DC. Simply plug into socket — safeguards against surges or increases up to 140 volts. The voltage drop

across the JFD Automatic Regulator is negligible at 110 volts but increases proportionately as the line voltage increases. Insures a steady, practically constant and safe operating potential.

Cat.	Rating	For Use With	Tubes Used	List Price
93-1	50	Up to 60 watts		\$1.75
93-2	100	60 to 100 "	5, 6, 7	1.75
93-3	150	100 to 150 "	8, 9, 10	1.75
93-4	200	150 to 200 "	1, 12	1.75
93-5	250	200 to 250 "	2 type 50	1.75
93-6*	100	60 to 100 "		1.75

*For use with 220 volt receivers.

JFD BRASS AND STEEL ANGLES



No.	Material	Size	List Price per C
22-17	Brass N.P.	1/2" x 1/2"	\$2.50
22-18	Brass N.P.	3/8" x 3/8"	5.00
22-19	Steel H.T.	3/8" x 3/8"	2.00
22-20	Steel H.T.	3/8" x 1 1/8"	2.00

JFD CABLE CLAMPS



No. 22-22—Steel Cadmium plated. No. 8 hole, length 3/4", width 3/8". Will fit over 1/4" cable. List Price per C.....	\$1.25
No. 22-23—Steel Cadmium plated. No. 8 hole, length 3/4", width 3/8". Will fit over 1/4" to 1/2" cable. List Price per C.....	\$1.25
No. 22-24—Steel Cadmium plated. No. 8 hole, length 1", width 3/8". Will fit over 1/2" cable. List Price per C.....	\$1.50



BALLASTS, TRANSFORMERS

JFD 220V.-110V. STEP-DOWN TRANSFORMERS

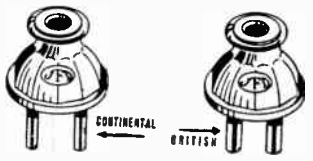


Here is a Step-Down Transformer that is just the thing for use with Radio Receivers, Phono-radio combinations, all electrical appliances and equipment such as: irons, toasters, vacuum cleaner, refrigerators, washing machines, etc.. JFD Step-Down Transformers are precision-made to comply with exacting requirements. They all have input of 200-240 volts. Output of 115 volts, and operate on cycles of 50-60 volts.

JFD 220V. 110V. STEP-DOWN TRANSFORMERS

Cat. No.	Cap. in Watts	Cycles	List Price
52-85	85	50-60	\$8.50
52-125	125	50-60	9.50
52-200	200	50-60	11.50
52-300	300	50-60	13.50
52-400	400	50-60	20.00
52-500	500	50-60	27.00
52-1000	1000	50-60	48.00
52-1500	1500	50-60	69.00
52-2000	2000	50-60	80.00
52-2500	2500	50-60	86.50
52-3000	3000	50-60	101.50

JFD Bakelite Handle Cap for Use in Foreign Countries



Comes with either Continental or British Prongs

No.	List Price
2-451—Cap with Continental type prongs	\$0.25
2-452—Cap with English type prongs	.30

JFD FOREIGN ADAPTER

Converts American Male Plug to Continental and British Male Plugs
Converts Foreign receptacles into the standard American type—in a jiffy!



No. 2-449—with Continental type prongs.	List Price	\$0.33
No. 2-450—with British type prongs.	List Price	\$0.33

NEW JFD "REPAIRACK"

(TV Chassis, Radio Chassis and Phono-Turntable Holder)



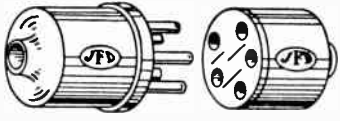
- TAKES UP TO 75 LBS.
- GLEAMING TRIPLE CHROMIUM FINISH!
- ALL-WELDED, HEAVY-GAUGE STEEL ASSEMBLY!
- Holds TV and radio chassis or phono-turntable securely when making repairs or inspections.

• Spring action indexing sets position—parts cannot slip or rotate accidentally. Ideal for assembly of new TV chassis, radios, etc. Rotates without chassis being removed. Extends to 32". Dimensions: Width—12". Height—12".

Cat. No. 79-2 List Price \$20.00

JFD SHIELDED PLUGS AND JACKS

(Small Size)



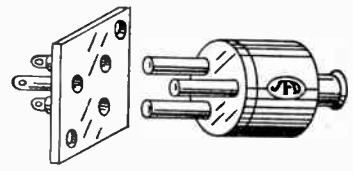
Shell is cadmium-plated steel with fibre insulation inside. Projections securely hold plug after assembly. Projections securely hold plug after assembly. Come in 3 to 6 prongs in male and female construction. Male unit is $\frac{1}{8}$ " Bakelite with Standard tube pins. Plugs are polarized. 1" Diameter-cable hole is $\frac{1}{4}$ ", length $\frac{3}{8}$ ".

No.	Male Plug	List
58-3	3 prong	\$0.30
58-4	4 prong	.30
58-5	5 prong	.30
58-6	6 prong	.30

No.	Female Receptacle	List
59-3	3 hole	\$0.30
59-4	4 hole	.30
59-5	5 hole	.30
59-6	6 hole	.30

JFD SHIELDED PLUGS AND CONNECTORS

(Midget Size)

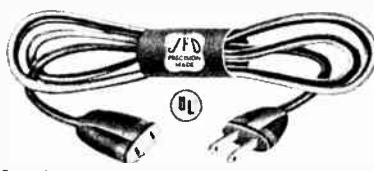


Midget size—only $\frac{5}{16}$ " diameter of shell; cable hole is $\frac{1}{16}$ "; length $\frac{1}{8}$ ". An economical combination. Perfect shielding — excellent electrical connection.

No.	Shielded Male Plug	List
60-3	3 prongs	\$0.15
60-4	4 prongs	.20
60-5	5 prongs	.25

No.	Female Receptacle (Chassis Type, non-shielded)	List
61-3	3 contact	\$0.25
61-4	4 contact	.25
61-5	5 contact	.25

JFD All-Rubber Extension Cord



Here is a popular all-rubber unbreakable extension cord that is in wide demand by all servicemen, dealers and installation men when an extra extension is required. U. L. Approved wire is rubber insulated. Unbreakable male plug and female socket are permanent solid rubber. U. L. Approved. Comes in either ivory or brown in the following lengths.

Cat. No.	Length	List
2-3	3 ft.	\$0.54
2-6	6 ft.	.70
2-9	9 ft.	.90
2-12	12 ft.	1.05
2-16	16 ft.	1.30
2-20	20 ft.	1.50
2-25	25 ft.	1.75

JFD WIRE MEASURING OUTFIT

(COUNTER MODEL)



Here is a compact, sturdy wire measuring outfit that can be set up easily on counter, bench or table. More than pays for itself in time saved and exact wire measurements. Measures up to 1000 feet. Very simple to set up and operate—it works silently. Take-up reel is adjustable.

Cat. No. 66-C Complete Outfit



RADIO KNOBS



4-1U Universal push-on knob — diameter $\frac{3}{8}$ " height $\frac{3}{8}$ "; Walnut, Ivory, Maroon, Mahogany, Black List \$0.10

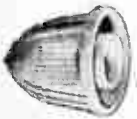


4-2U Universal push-on knob diameter $\frac{3}{8}$ " height $\frac{3}{8}$ "; Walnut, Ivory, Maroon, Mahogany, Black List \$0.10



4-3 Set screw — dia. $\frac{3}{8}$ ", height $\frac{1}{2}$ "; Walnut, Ivory. List \$0.15

4-3K Knurled hole. List \$0.10



4-4K Knurled hole, diameter $\frac{3}{8}$ " height $\frac{3}{4}$ "; Walnut, Ivory List \$0.10



4-5 Set screw — diameter $\frac{1}{8}$ " height $\frac{1}{8}$ "; Walnut, Ivory. List \$0.15

4-5K Knurled hole. List \$0.10

4-5S Spring List \$0.10



4-6K Knurled hole; diameter $\frac{3}{8}$ " height $\frac{1}{8}$ "; Walnut, Ivory List \$0.10



4-7K Knurled hole; diameter $\frac{3}{8}$ " height $\frac{1}{2}$ "; Walnut, Ivory List \$0.10



4-8K Knurled hole, diameter $\frac{3}{8}$ "; height $\frac{3}{8}$ "; Walnut, Ivory List \$0.10



4-9K Knurled hole, diameter $\frac{3}{8}$ " height $\frac{3}{8}$ "; Walnut, Ivory List \$0.10



4-10 Set screw, diameter $\frac{1}{8}$ " height $\frac{3}{8}$ "; Walnut, Ivory. List \$0.15

4-10K Knurled hole. List \$0.10



4-11K Knurled hole, diameter $\frac{3}{8}$ " height $\frac{1}{2}$ "; Walnut, Ivory List \$0.10



4-12 Set screw, diameter $\frac{1}{8}$ " height $\frac{3}{8}$ "; Walnut, Ivory. List \$0.15

4-12K Knurled hole. List \$0.10



4-13S Spring, diameter 1", height $\frac{3}{8}$ "; Walnut, Ivory List \$0.10



4-14K Knurled hole, diameter $\frac{1}{2}$ ", height $\frac{3}{8}$ "; Walnut, Ivory List \$0.10

4-14S Spring List \$0.10



4-15K Knurled hole, diameter $\frac{1}{2}$ ", height $\frac{3}{8}$ "; Walnut, Ivory List \$0.10

4-15S Spring List \$0.10



4-16 Set screw, length 1 $\frac{1}{4}$ "; Brown, Black List \$0.15



4-17 Set screw, length 2"; Brown, Black List \$0.21



4-18 Set screw, diameter $\frac{3}{8}$ ", height $\frac{1}{2}$ "; Walnut, Ivory List \$0.15



4-19 Set screw, diameter $\frac{3}{8}$ " height $\frac{3}{8}$ "; Walnut, Ivory. List \$0.14



4-20 Set screw, diameter $\frac{3}{8}$ ", height $\frac{3}{8}$ "; Walnut, Ivory. List \$0.12



4-21 Set screw, diameter $\frac{3}{8}$ ", height $\frac{1}{2}$ "; Walnut, Ivory. List \$0.11



4-22 Set screw, diameter $\frac{1}{2}$ ", height $\frac{1}{2}$ "; Walnut, Ivory. List \$0.11



4-23 Set screw, diameter $\frac{1}{2}$ ", height $\frac{1}{2}$ "; Walnut, Ivory. List \$0.12



4-24 Set screw, diameter $\frac{3}{8}$ ", height $\frac{1}{2}$ ", length 1 $\frac{1}{2}$ "; Brown, Black List \$0.14



JFD ASSORTMENT KITS OF 35 KNOBS EACH

No.	List
4-93 Set screw knobs.....	\$5.25
4-94 Spring knobs	3.50
4-95 Knurled knobs	3.50

JFD Assortment of 12 (6 Pairs) Dial Knobs of Most Popular Types in Clear Plastic Envelopes



No.	List
4-90 Set screw knobs	\$1.80
4-91 Spring knobs	1.20
4-92 Knurled knobs	1.20



AERIAL KITS AND WIRE

JFD AERIAL WIRE



7 Strand 24 gauge bare copper aerial wire. High tensile strength—no stretching, no sagging.

937.....50 ft. coil
938.....100 ft. coil
939.....1000 ft. metal spool

Heavy duty antenna wire—7 strand 22 gauge bare copper. High tensile strength — no stretching, no sagging.

970.....50 ft. coil
971.....100 ft. coil
972.....1000 ft. metal spool

JFD LEAD-IN WIRE



Stranded, rubber-covered No. 18 lead-in wire. Will withstand excessive weather conditions.

922.....50 ft. coil
923.....100 ft. coil
924.....1000 ft. metal spool



JFD NAIL-IT KNOB

Two piece glazed porcelain knob. Heavy nail insures security.

No. 67-3 List Price \$0.10

JFD Porcelain INSULATOR

Made to withstand greatest strain. Finest grade of glazed porcelain. Will not crack or absorb moisture.



No. 67-4 List Price \$0.15

JFD LEAD-IN STRIP



Fully insulated—covered with a heavily varnished braid covering to keep weatherproof. Fahnestock clips are firmly soldered to ends of strip.

No. 67-5 List Price \$0.15

JFD GROUND CLAMPS



67-6	Ground Clamp (Fig. 1)	.....	\$0.15
67-7	"C" Clamp (Fig. 2)	.....	.15
BR9S	Saddle Clamp—6" length (Fig. 3)	.....	.15
BR9L	Saddle Clamp—18" length (Fig. 3)	.....	.30

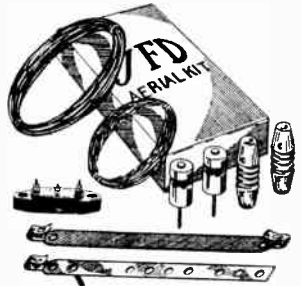
JFD STANDARD ANTENNA KIT

Contains everything needed for aerial installation. Contains:

50 ft. of 7 strand, 24 gauge bare copper aerial wire.
50 ft. #18 rubber-covered lead-in wire.
10 ft. ground wire. 1 Ground Clamp.
2 Porcelain insulators.
2 Nail-it Knobs. 1 Lead-in Strip.
All packed in beautiful box.

No. 67-10..... List Price \$2.10

JFD DELUXE ANTENNA KIT



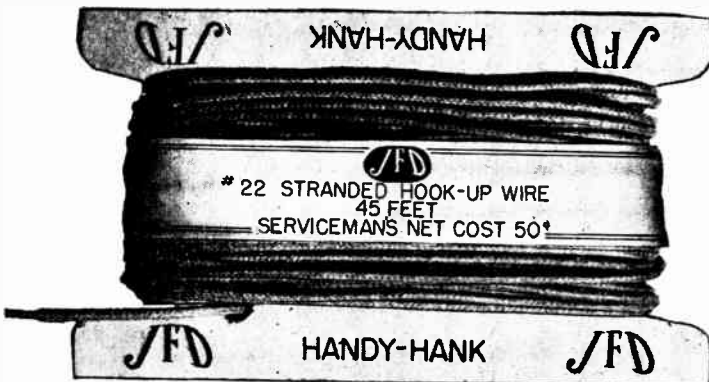
Finest materials in a kit that contains everything needed for complete antenna installation. Consists of:

75 ft. of 7 strand, 22 gauge heavy duty bare copper aerial wire.
75 ft. # 18 rubber-covered lead-in wire.
1 Three-pole lightning arrester.
10 ft. of ground wire.
2 Porcelain insulators.
2 Nail-it knobs.
1 Lead-in strip.
1 Ground clamp.

All packed in a beautiful box.
67-20..... List Price \$4.50

JFD "HANDY-HANK" WIRE SPECIALTIES

Here is JFD's answer to your everyday, hard-to-handle wire problems! The JFD HANDY-HANK prevents tangling, kinking and waste. The most popular types of wire are put up for the serviceman in neat, compact, easy-to-handle packages, as follows:



- 20-1 #22 Solid Hook-up-Wire*
- 20-2 #20 Solid Hook-up Wire*
- 20-3 #18 Solid Hook-up Wire*
- 20-4 #22 Stranded Hook-up Wire*
- 20-5 #20 Stranded Hook-up Wire*
- 20-6 #18 Stranded Hook-up-Wire*
- 20-7 #16 Stranded Hook-up Wire*
- 20-8 #14 Stranded Hook-up Wire*
- 20-9 #22 Shielded Phonograph Wire
- 20-10 #24 Extra Fine Shielded Phonograph Wire
- 20-11 #18 Test Lead Wire
- 20-12 #18 Heavy Wall Test Lead Wire
- 20-13 #18 Shielded Lead-in Wire

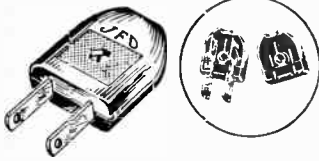
*Hook-up wires comes in all colors—yellow, blue, red, green, black and brown.

SERVICEMAN'S NET COST 50¢



ASSORTED RADIO PRODUCTS

JFD UNBREAKABLE PLASTIC MALE PLUG



Unbreakable plastic with solid brass blades. Withstands hard use. Permanent, secure contact without soldering. No loose ends exposed. Polished plastic with knurled grip.

No. 2-448 List Price \$0.15

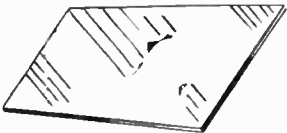
BUY 'EM BY THE CARD!



Card of 100 Unbreakable Male Plugs.

No. 2-448C List Price \$15.00

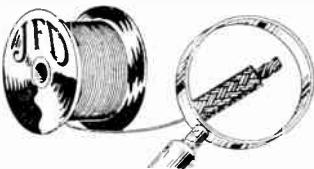
JFD PLASTIC WINDOW FACES FOR RADIO DIALS



Especially adaptable for all airplane type dials. Flat sheet, 10"x12 1/2". Same thickness as used in original radio sets. Will fit most larger dial faces. Can be cut for smaller dials.

No. 95-1 List Price \$1.75

JFD VOICE COIL LEAD WIRE



Extra flexible, soft, drawn, braided copper wire. Used in repairing broken lead wires on voice coils of all 5", 6", 8", 10", 12", 15", etc. speakers. Order yours now.

No. 92-1—Thin gauge (for small diameter speakers) 100' spool List Price \$3.00
No. 92-2—Medium gauge (for large diameter speakers) 100' spool List Price \$4.00

JFD NEUTRALIZING TOOLS JFD SPECIAL EMERSON SQUARE-HEAD SCREW ALIGNING WRENCH



For special square nut used on I.F. trimmer in latest portables, FM and television receivers made by Emerson, R.C.A., Zenith, etc. Set into unbreakable, insulated amber handle.

No. 5-66 List Price \$0.75

JFD SPECIAL TELEVISION I.F. & PUSH-BUTTON ADJUSTING TOOL



Screwdriver end recessed in metal bushing for fine adjustment of I.F. trimmers having small slotted screws. Set into unbreakable, insulated amber handle.

No. 5-67 List Price \$0.75

JFD LONG-REACH ALLEN SCREWDRIVER



For use wherever Allen screw cannot be reached with regular Allen wrenches. Set into unbreakable, amber handle.

No. 5-70 List Price \$0.75

JFD INSULATED I.F. ALIGNING TOOL (With Metal Nibs)



Special screwdriver etc. recessed in a bone fibre handle for fine adjustments of I.F. trimmers where a small slotted screw is used. For use on all FM and television receivers.

No. 5-68 List Price \$0.75

JFD BALLAST TUBE MANUAL FREE!



68 page Ballast Tube Manual—a treasury of information to Radio Servicemen and Dealers.

- More than 3,000 radio ballasts.
- AC-DC ballasts for fluorescent lights and electrical appliances.
- Step-down ballasts, 220-110 V.

YOUR FREE COPY is now ready. Merely mail in to JFD factory (4117 Ft. Hamilton Parkway, Brooklyn 1, N. Y.) 12 tags from JFD Dial Belt envelopes; include 10¢ in stamps to cover mailing.

JFD HANDY SPOOL "TWIN'S" RADIO DIAL CORD



Here is the last word in dial cord convenience. Easy-to-carry package gives you two different types of nylon cord in one compact package dispenser. The transparent weather-resistant plastic container prevents cable from kinking, unraveling, or tangling. Simplifies handling. After cable is used, containers make an ideal store-place for small parts, screws, washers, nuts, etc. Packed 12 to a box.

No. 948-25—"Twin" contains 2-25' spools of No. 908 thin and No. 904 medium nylon cord. List Price \$2.08

No. 948-50—"Twin" contains 2-50' spools of No. 908 thin and No. 904 medium nylon cord. List Price \$3.99

JFD NON-SLIP POWDER COMPOUND



Prevents slipping of belts, cords or cables used on radio dials, refrigerators, etc. In powder form, easy to use. Insures a perfect non-slipping job.

No. ST480

List Price \$0.30

JFD SPECIAL RESISTANCE CORD FOR PORTABLE RADIOS

3-wire resistance cord. Special female socket fits set with 3-prong male plug. For all popular camera type radios.



2164FP—350 ohms tapped at 80 ohms. For Admiral sets 28G5, 29G5.	} List Price Each \$2.00
2166FP—430 ohms tapped at 80	
2156FP—710 ohms tapped at 80	
2196FP—560 ohms tapped at 80	
2158FP—660 ohms tapped at 80	

(Standard Package — 10 of each number)

JFD FEMALE SOCKET



Female socket only, as above. For three-prong male.

No. 2-447

List Price \$0.30

GENERAL



CEMENT

RADIO CEMENTS FOR ALL PURPOSES



G-C RADIO SERVICE CEMENT

The best Cement for repairing radios and speakers. Excellent for repairing and replacing torn cones. Vibration-proof, water-proof and fast drying. Brushes attached.

No.		List
30-2	2-oz.	\$0.50
34-2	Tube	.42
30-4	4-oz.	.90
30-6	6-oz.	1.25
30-8	8-oz.	1.60
30-16	16-oz.	3.00

G-C RADIO SERVICE SOLVENT

Best Solvent for loosening cement on speaker cones, frames, etc. Will dissolve all cements on speakers. Brush attached.

No.		List
31-2	2-oz.	\$0.40
31-4	4-oz.	.60
31-6	6-oz.	.75
31-8	8-oz.	.85
31-16	16-oz.	1.25

G-C CEMENT THINNER

Made of same solvents as G-C Service Cement. Best thinner for all cements.

No.		List
28-2	2-oz.	\$0.40
28-4	4-oz.	.60
28-8	8-oz.	.85
28-16	16-oz.	1.25

G-C SPEAKER CEMENT

Best grade cement put up in handy tubes. For radio and speaker repairs. Water-proof, vibration-proof, fast drying.

No.	List
34-2 2oz. Tube	\$0.42

G-C PLASTIC CEMENT

For cementing broken plastic cabinets, knobs, dial and crystal assemblies, grille cloth, etc. Fast drying. Brush attached.

No.	List
32-2A 2-oz.	\$0.60
32-8A 8-oz.	1.60
32-16A 16-oz.	3.00



G-C BAKELITE CEMENT

For cementing bakelite to bakelite and bakelite to other materials. For repairing knobs, cabinets, panels, for inserts in moldings, attaching labels to plastics, etc. Brush attached.

No.	List
32-2 2-oz.	\$0.60
32-8 8-oz.	2.00
32-16 16-oz.	3.75

G-C VINYLITE CEMENT

Clear transparent adhesive, air drying. For cementing metals, plastics, paper, leather, etc. Used also as thermoplastic cement for non-porous materials. Sets on cooling. Brush attached.

No.	List
58-2 2-oz.	\$0.50
58-8 8-oz.	1.60

G-C HOUSEHOLD & MODEL CEMENT

Best cement for model makers, household, and office use. For airplanes, railroads, ships, toys, etc. Will cement wood, paper, plastics, metal, china, ceramics, etc. Fast drying, water-proof. Brush attached.

No.	List
45-2 2-oz.	\$0.50
45-3 Tube	.42

G-C FABRIC TO METAL CEMENT

For cementing cloth and felt to metal or plastics. Best for grille cloth, phonograph turntable felts, upholstery fabrics, etc. Fast drying, water-proof.

No.	List
22-4 4-oz.	\$0.50
22-8 8-oz.	.90
22-16 16-oz.	1.75

G-C GRAY RUBBER CEMENT

General purpose for cloth, paper, rubber, etc. Has great tackiness and adhesion for radio, shop, auto, or hobby use.

No.	List
23-4 4-oz.	\$0.50
23-8 8-oz.	.90
23-16 16-oz.	1.75

G-C GRILLE CLOTH CEMENT

Rubber base cement for grille cloth, leatherette, fabric, upholstery, etc. Will not penetrate, stain, or shrink.

No.	List
38-4 4-oz.	\$0.50
38-8 8-oz.	.90
38-16 16-oz.	1.75



G-C RUBBER TO METAL DIAL DRIVE CEMENT

For cementing rubber drives to shafts, rubber mountings, gaskets, hose, weather stripping, for radios, refrigerators, autos, etc.

No.	List
35-2 2-oz.	\$0.50
35-3 Tube	.50
35-4 4-oz.	.90
35-8 8-oz.	1.60
35-16 16-oz.	3.00

G-C WOOD GLUE

New white resin water-proof glue for radio cabinets, furniture, chairs, etc. Will not injure finish. Extra strong.

No.	List
39-2 2-oz.	\$0.50
39-4 4-oz.	.65
39-8 8-oz.	.90
39-16 16-oz.	1.50

G-C ELECTRICAL AND RESISTOR CEMENT

Heat-proof cement, hardens like porcelain. Same as on resistors, flat irons, etc.

No.	List
27-2 2-oz.	\$0.60

G-C FILM CEMENT

New improved cement for all safety and nitrate film. Sets fast. Brush attached.

No.	List
33-1 1-oz.	\$0.35

G-C ACRYLIC CEMENT

Welds and cements lucite, plexiglass, and other acrylic materials. Strong, fast drying. Brush attached.

No.	List
40-2 2-oz.	\$0.50

G-C LABEL CEMENT

Sticks labels to anything — metal, glass, wood, tin, bakelite, plastics, etc. Good for cementing labels to bins, racks, water-proofing labels, etc.

No.	List
46-2 2-oz.	\$0.50
46-8 8-oz.	1.50



G-C ART-X RUBBER CEMENT

Transparent, pure, real rubber cement for artist and layout work. Will not stain or shrink paper, can be easily removed. Handy for panel layout, photo mounting, etc.

No.	List
33-4 4-oz.	\$0.50
33-8 8-oz.	.75
33-16 16-oz.	1.25

G-C No. 67 PAINT THINNER

For Ruf-Koat, Krome-Koat, B-K Cement, Insulating Varnish, Rubber Cements, and ordinary paints.

No.	List
67-2 2-oz.	\$0.40
67-4 4-oz.	.60
67-8 8-oz.	.85
67-16 16-oz.	1.25

G-C Q-DOPE THINNER

Will cut and dissolve Q-Dope and other polystyrene coil dopes and cements. Will soften and weld polystyrene rods, tubes, sheets, etc.

No.	List
41-2 2-oz.	\$0.40
41-4 4-oz.	.60
41-8 8-oz.	.90

G-C LACQUER THINNER

Will thin lacquers, lacquer enamels, telephone black or gray, touch-up lacquers, airplane dopes, model cements, etc.

No.	List
29-2 2-oz.	\$0.40
29-4 4-oz.	.60
29-8 8-oz.	.85
29-16 16-oz.	1.25

G-C SAMPLER KIT

What kind of cement shall I use? Get this kit and experiment with all types of cements available. Cements for all applications included so you can try them yourself for your application. Save time — get the answer quicker. 10 — 2-oz. bottles in Kit.

No.	List
345 Kit	\$5.00

GENERAL



CEMENT

RADIO CHEMICALS



G-C COIL DOPE KIT

For high frequency coils, ultra low loss. Contains 2-oz. bottle Polystyrene Q-Dope, 2-oz. Thinner, and 2 brushes. The best!

No.	List
888 Kit	\$0.80

G-C CEMENT & SOLVENT KIT

"Handy to carry with you." Contains bottle G-C Radio Cement and G-C Solvent, with brushes.

No.	List
343 Kit	\$0.65

G-C CONTACT & ATTENUATOR KIT

For cleaning and lubricating attenuator, tuners, contacts, all-wave switches, condenser bearings, etc. Eliminates noise and prevents corrosion.

No.	List
777 Kit	\$1.00

G-C INSULATING & DIPPING VARNISH

For treating field coils, noisy or buzzing transformers and chokes. Air dries to a tough insulating film. Can be brushed or dipped.

No.	List
56-2 2-oz.	\$0.50
56-4 4-oz.	.75
56-8 8-oz.	1.00
56-16 16-oz.	1.75

G-C LIQUIDOPE

All wave nitrocellulose base dope for coils. Air dries fast to tough film, that insures toughness and firmness. Use for sealing, doping, supporting coils, etc.

No.	List
36-2 2-oz.	\$0.50
36-8 8-oz.	1.25
36-16 16-oz.	2.25

G-C Q-DOPE

Liquid polystyrene ultra low loss coil dope for RF, UHF, and VHF components. Will not change R.F. circuit values. Performs — 70°F to 160°F. Also use as Polystyrene Cement.

No.	List
37-2 2-oz.	\$0.50
37-4 4-oz.	.75
37-8 8-oz.	1.25
37-16 16-oz.	2.25



G-C FUNGUS VARNISH

Used on radio equipment and instruments to insulate and prevent fungus growth in moist or humid climates. Air dry, brush or spray.

No.	List
57-2 2-oz.	\$0.50
57-8 8-oz.	1.00
57-16 16-oz.	1.50

G-C CONTACT & CRYSTAL CLEANER

Extra pure cleaner. Fast drying for cleaning contacts and crystals. Will not injure delicate parts.

No.	List
127-2 2-oz.	\$0.40
127-4 4-oz.	.60
127-8 8-oz.	.75
127-16 16-oz.	1.10

G-C RED ELECTRONIC CONTACT CLEANER

The best and only all-purpose cleaner. Dissolves the dirt and removes corrosion. Leaves protective film on contacts to prevent corrosion.

No.	List
210-2 2-oz.	\$0.40
210-4 4-oz.	.65
210-8 8-oz.	.90
210-16 16-oz.	1.65

G-C RADIO CHASSIS CLEANER

Clean the chassis and make extra money on every repair job. Satisfy your customer. For radio chassis, panels, testers, etc. Non-explosive cleaner.

No.	List
123-8 8-oz.	\$0.65
123-16 16-oz.	1.00
123-G 1 Gal.	3.50

G-C CARBON TETRA-CHLORIDE

100% pure for cleaning and degreasing electrical contacts, controls, motors. Absolutely safe — will not burn. Also kills bugs, roaches, etc.

No.	List
211-2 2-oz.	\$0.40
211-4 4-oz.	.60
211-8 8-oz.	.85
211-16 16-oz.	1.50
211-32 32-oz.	2.45
211-G 1 Gal.	6.25

G-C CONTACT DOPE

Ideal cleaner and lubricant for switches, controls and contacts. Resists corrosion and oxidation. Eliminates noise.

No.	List
1213 Tube	\$0.40
1214 2-oz.	.50

CARB-O-TET

Specially made from 100% Carbon-Tet materials.

215-G 1 Gal.	\$3.85
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G-C CARBON CONTROL CLEANER

Fix noisy carbon controls without taking apart. Just squirt cleaner along shaft and job is done. Save money. Applicator supplied.

No.	List
212-2 2-oz.	\$0.75

G-C GRAFOLINE

Noiseless lubricant for air exposed switch contacts, rheostats, relays, wire volume controls, tube prongs, etc. Increases current capacity of switch controls. Cleans also.

No.	List
120-2 2-oz.	\$0.50

G-C CARBON-X

New improved formula. Fix those old noisy carbon controls, touch up noisy spots on worn controls. Brush in bottle.

No.	List
1204 1-oz.	\$0.75
1205 2-oz.	1.00

G-C LUBE-REX

Lubriplate — white lubricant for push buttons, phonographs, Philco mystery controls, guns, fishing reels, dials, etc. Prevents corrosion, repels water.

No.	List
1206 2-oz. Tube	\$0.60
1209 2-oz. Bottle	.60

G-C SILVER PLATE

Silver plates and polishes worn contacts, copper, bronze, silver, zinc, etc. Easy to use — apply and wipe. Puts silver on metal.

No.	List
213-2 2-oz.	\$0.75

G-C LIQUID SOLDER FLUX

Non-corrosive flux for radio and electrical work. Solders faster, smoother.

No.	List
42-2 2-oz.	\$0.50
42-8 8-oz.	1.60



G-C CHEMICAL LABORATORY

Complete assortment of 20 popular radio chemicals and cements in 2-oz. bottles, put up on steel rack. Very neat for the radio bench and home work shop. Rack sets on bench or hangs on wall. Steel Rack is FREE.

No.	List
997 Lab	\$9.10
Dealer's Net	5.46

G-C CHEMICAL KIT

Pocket size kit of 8 popular radio chemicals and cements, for fast repairs on the job. Put up in neat leatherette case. Easy to carry.

No.	List
999	\$3.00

— Refills available at your jobbers —

G-C DELUXE CHEMICAL LAB

Practical larger laboratory of popular chemicals and cements to fit needs of average shop — 2-oz., 4-oz., and 8-oz. bottles. Larger bottles of more popular items. Rack sets on bench or hangs on wall. Steel rack is FREE

No.	List
998	\$12.25
Dealer's Net	7.35

GENERAL



CEMENT

PAINTS—KITS—COMPOUNDS



G-C RUF-KOAT WRINKLE VARNISH

Air Dry or Bake

The only finish that will air dry and give professional wrinkle job without baking. Same as used by leading manufacturers. Don't experiment — use the best. Apply and let dry. Colors: Black, Gray, Brown, Green, Red and Blue (Specify Color).

No.		List
60-2	2-oz.	\$0.60
60-4	4-oz.	1.00
60-8	8-oz.	1.75
60-16	16-oz.	3.00

G-C KRystal KOAT CRYSTAL LACQUER

Makes beautiful floral pattern when dry. Strictly air drying. For chassis, panels, decorations on metal, wood, paper, etc. Colors: Black, Gray, Brown, Green, Red, Blue and Clear. (Specify Color).

No.		List
63-2	2-oz.	\$0.60
63-4	4-oz.	1.00
63-8	8-oz.	1.75
63-16	16-oz.	3.00

G-C TELEPHONE BLACK OR GRAY

High grade lacquer enamel covers well, dries fast. Black is satin chony finish similar to telephones. Gray is pleasing shade. For panels, racks, parts, etc. (Specify Color).

No.		List
62-2	2-oz.	\$0.50
62-8	8-oz.	1.25
62-16	16-oz.	2.25

G-C SILVER PRINT "Original Silver Conductive Paint"

Pure Silver conductive paint, same as used on printed circuits. Necessary for experimenters and service men for repairs and touching up printed circuits on hearing aids, amplifiers, radios, etc. Brush included. A bottle will last a long time. Paint circuits instead of wiring them. This is a pure silver compound.

No.	List
21-2	1-oz. \$5.00



G-C KROME-KOAT ALUMINUM PAINT

Fast drying, ready mixed, leaves chrome-like finish. For PA equipment, speakers, chassis, towers, antennas, etc.

No.		List
61-2	2-oz.	\$0.50
61-4	4-oz.	.75
61-8	8-oz.	1.25
61-16	16-oz.	2.00

G-C PORCELAIN GLAZE

Fills in nicks and dents on porcelain and duo refrigerators, sinks, washing machines, etc. Fill in and let dry.

No.		List
911	2-oz.	\$0.75
911-16	16-oz.	3.50

G-C SPIRIT VARNISH

Fast drying walnut spirit varnish for touching up nicks and scratches. Will not raise the finish.

No.		List
161-2	2-oz.	\$0.50
161-4	4-oz.	.75
161-8	8-oz.	1.25
161-16	16-oz.	2.00

G-C PENETRATING STAIN

Spirit type stain, penetrates and will not injure finish. Covers scratches, dents, darkens corners on cabinets, etc. Walnut.

No.		List
162-2	2-oz.	\$0.40
162-4	4-oz.	.75
162-8	8-oz.	1.25
162-16	16-oz.	2.00

G-C MICROPHONE CARBON GRANULES

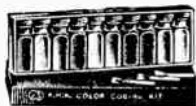
Polished pure carbon granules for microphones.

No.	List
1281 100 Size	\$0.80
Highest Sensitivity	
1282 80 Size	.80
Best for General Use	
1283 60 Size	.80
Best for Hard Use — Sound Trucks, etc.	

G-C SCRATCH REMOVER LIQUID

New liquid! Removes scratches instantly. Simply wipe over scratches. Handy to have in tool box.

No.	List
917 2-oz.	\$0.40
923 1/2-oz.	.25



G-C RMA COLOR CODING KIT

Complete kit of all standard RMA colors to code resistors, condensers, parts, etc. Chart included. Ten bottles.

No. 677	List \$1.75
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G-C TOUCH UP CODING KIT

Five bottles, 4 colors and solvent for coding and sealing parts, adjustments, wires, etc. Red, Green, Blue, Yellow and Solvent.

No. 675	List \$0.75
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G-C DIAL LITE COLOR KIT

Long lasting coloring for dials, signals, lamps, panels, hobby work, etc. Red, Green, Blue, Amber, Purple and Solvent in kit.

No.	List
66-6	Kit no \$0.85
66-5	Kit no purple .70
66-2	2-oz. (Specify color) .50
66-16	16-oz. (Specify color) 2.00

G-C LUMINOUS KITS

Complete kits of luminous paint that glows in the dark. Many uses in shop and home. See it at night. Easy to use — apply and let dry.

No.	List
184-0	Deluxe kit contains Powder, Mix-Koat, Top Coat and Brush. \$2.50
184-1	Regular kit contains Powder, Mix-Koat and Brush. \$1.65

G-C LUMINOUS MATERIALS

LITE-KOAT POWDER

No.	List
185-1	1-oz. \$0.95
185-2	2-oz. 1.65

MIX-KOAT

No.	List
186-2	2-oz. \$0.50
186-8	8-oz. 1.25

KOVER-KOAT

To protect and cover luminous material.

No.	List
187-2	2-oz. \$0.50
187-8	8-oz. 1.25

MIX-KOAT AND KOVER-KOAT THINNER

No.	List
188-2	2-oz. \$0.50
188-8	8-oz. 1.25



G-C DIAL OIL

Made with graphite. Special for lubricating dials, drives, and fine mechanisms. Long lasting.

No.	List
1245 4-oz.	\$0.40

G-C REFRIGERATOR AND APPLIANCE OIL

Non-gumming oil for household appliances and small motors. The best general purpose oil.

No.	List
1250 4-oz.	\$0.40

G-C SOLDERING PASTE

The best non-corrosive paste for radio and electrical work. Solders faster and smoother.

No.	List
1207 2-oz. can	\$0.25

G-C NON-STICK IRON TIP COMPOUND

Prevents soldering iron tips from burning into iron. Saves your iron and tips.

No.	List
1201 2-oz.	\$0.50

G-C NON-SLIP COMPOUND

Powder Compound

For dial cords, belts, pulleys, etc. Good for V or flat belts on refrigerators, motors, etc.

No.	List
1210	\$0.40

Liquid Compound

Penetrating, fast-drying liquid, prevents slipping on dial cords, pulleys, belts. Increases life of cords and belts.

No.	List
1211 1/2-oz.	\$0.25
1215 2-oz.	.50



G-C FRENCH EMULSION

Best pad lubricant to use with French Varnish Polishing Method.

No.	List
164-4 4-oz.	\$0.50

G-C FRENCH VARNISH

Used by craftsmen to repair furniture and blend in the finish. Can be applied with pad, brush or spray. Dries fast.

No.	List
160-2 2-oz.	\$0.50
160-4 4-oz.	.70
160-8 8-oz.	1.25

G-C WINDOW CLEANER CONCENTRATE

Mix with quart of water and make your own high-grade window cleaner. Makes glass sparkle.

No.	List
122-5 6-oz.	\$0.50

G-C SPOT CLEANER

Safe high-grade cleaner with special applicator in cap. Non-explosive.

No.	List
124-2 6-oz.	\$0.50

G-C STRIP-X

Strips enamel from magnet wire. Dip wire in and wipe insulation off—ready for soldering.

No.	List
26-2 2-oz.	\$0.50

G-C CONE RECONDITIONER

Apply to old dried out cones to restore plasticizer and bring back original tones.

No.	List
25-8 8-oz.	\$0.85
25-16 16-oz.	1.50



G-C RUBBING OIL

Rub down newly finished or repaired cabinets to produce rich satin sheen finish.

No.	List
163-16 16-oz.	\$0.70

G-C FLOOR WAX

High-grade heavy duty commercial self-polishing floor wax. Gives hard, durable finish.

No.	List
97-G 1 Gal.	\$5.95

G-C LEMON OIL POLISH

Inexpensive polish for removing dust, fingerprints, treating dust rags, mops, etc. Picks up dust.

No.	List
91-8 8-oz.	\$0.40
91-6 16-oz.	.55

G-C SCRATCH REMOVER POLISHES DARK

Polish contains stains to remove scratches. Sell to housewives.

No.	List
92-2 2-oz.	\$0.25
92-8 8-oz.	.45
92-8-L 8-oz. Lab. size	.45
92-16 16-oz.	.75

G-C SCRATCH REMOVER POLISHES LIGHT

For light woods; polishes and removes scratches at same time. Popular with housewives.

No.	List
93-2 2-oz.	\$0.25
93-8 8-oz.	.45
93-16 16-oz.	.75

G-C CREME-O-WAX POLISH

White non-staining hard wax base polish produces a hard glossy finish. Excellent for radios, pianos, refrigerators, furniture, etc.

No.	List
95-2 2-oz.	\$0.25
95-8 8-oz.	.45
95-8-L 8-oz. Lab. size	.45
95-16 16-oz.	.75



G-C REFRIGERATOR PATCH KIT
"New Improved Kit"

Supplies everything necessary to repair porcelain or Duco nicks, dents, or scratches. Kit contains bottle of pure white lacquer enamel and bottles of Yellow, Blue, Brown, and Black tinting colors, solvent, spatula, porcelain patch stick, sandpaper, and brushes. Useful on refrigerators, washers, ranges, table tops, etc. Directions included.

No. 902	List \$3.95
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G-C DELUXE CABINET REPAIR KIT
"New Improved Kit"

Comes in handy metal box. Contains ten shades of shellac sticks, bottles of light and dark oil stain, bottles of metal shading varnish, polish, General Scratch Stik, alcohol lamp (with alcohol), spatula, small brushes, steel wool, sandpaper, and wiping cloth. Everything necessary for a practical repair job. No special skill required. Directions included.

No. 901	List \$4.95
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G-C MASTER DELUXE CABINET REPAIR KIT
"New, Most Complete Kit"

A complete cabinet repair kit put in a permanent metal box. All finishes supplied are spirit soluble and will not cut or damage surrounding finishes on cabinets, etc. Kit contains 19 shellac sticks, alcohol lamp, French varnishes, rubbing felt and fluid, enamels, glue, steel wool, sandpaper, polish, directions, etc. Nothing else needed! The best buy on the market!

No. 900	List \$8.95
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G-C FRENCH VARNISH KIT

Kit for French polishing. Only way to blend repairs with adjoining finish. Kit includes varnish, emulsion, pad, and instructions.

No. 160-0	List \$1.25
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G-C MAGIC SCRATCH KIT

Combination of 6 shades fillers and light and dark scratch fluid. Easy to use on emergency jobs.

No. 915	List \$1.25
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G-C MASTER CABINET TOUCH-UP KIT
"Ideal Quick Touch-Up Kit"

A complete, fast touch-up kit for repairing scratches and dents. Works on wood and plastic cabinets. The spirit finishes will not cut into the adjoining surface or injure surrounding finish. Contains French varnish, emulsion, colored enamels, stains, polishes, and filler. Sandpaper, steel wool, rubbing cloth and directions included. Brushes attached to caps of all finish bottles. Put up in metal box.

No. 907	List \$2.95
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G-C RADIO-REFRIGERATOR CABINET PATCH KIT
"New Improved Kit"

A kit of the shellac patch sticks to fill all needs. Patches wood, plastics, bakelite and porcelain. Nine shellac sticks for the light and dark shades of wood, and black and white, alcohol lamp (with alcohol), spatula, steel wool, sandpaper and wiping cloth are packed in the metal box. Directions included.

No. 903	List \$3.50
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G-C TOUCH-UP KIT

Practical for touching up small scratches and dents. Includes light and dark varnish and spirit stains, filler, cloth, brushes, etc.

No.	Kit	List
905	Kit	\$1.00

G-C PLASTIC TOUCH-UP KIT

Kit contains 6 colors touch-up lacquer enamels to fix up plastic and colored cabinets. Walnut, Ivory, Black, Red, Blue, Green, and brushes.

No.	Kit	List
910	Kit	\$1.25

G-C PORCELAIN PATCH STICK

Made for white porcelain refrigerators, sinks, ranges, fixtures, etc. Simply melt into nick and smooth off.

No.	Stick	List
908	Stick	\$0.40

G-C SHELLAC STICK KIT

Handy assortment of 10 colors to take care of any shade of wood. Same as in G-C Kits.

No.	Kit	List
925	Kit	\$1.65

G-C SHELLAC STICKS

High grade sticks for filling dents and nicks in wood cabinets and furniture. Sticks 7" long.

No.	List	No.	List
929 Lt. Walnut	\$0.50	979 Dk. Oak	\$0.50
930 Dk. Walnut	.50	980 Transparent	.50
933 Black	.50	981 Lt. Transp.	.50
934 White	.50	982 Walnut	.50
935 Maple	.50	983 Mahogany	.50
978 Lt. Oak	.50	984 Blonde Maple	.50



G-C FELT KOAT FLOCK KIT

New G-C kit with special blower gun. Distributes flock evenly and applies a thick velvet-like coat. Kit is complete with gun, brown and ivory flock, brown and ivory undercoat, thinner, brush, etc. Gives professional job on turntables, cabinets, grilles, tool boxes, toys, signs, etc. Has thousands of applications.

No.	Kit	List
180-2	Kit	\$9.50

G-C FELT KOAT KITS

Complete flock kit with flock undercoat, thinner and brushes and shaker type can for applying flock. Colors: Brown, Blue, Taupe, Black, White, Ivory, Red, Green, Silver and Gold. (Specify Color).

No.	Kit	List
180-0	DeLux Kit	\$2.50
180-1	Reg. Kit (No brush or thinner)	1.95

G-C FLOCK BLOWER GUN

It's easy to apply flock and be sure to get a good job with the G-C Patented Gun. Gun can also be used for dusting and cleaning.

No.	Kit	List
180-3	Gun	\$3.95
180-4-N	Cleaning Nozzle for Gun	.60

G-C FLOCK UNDERCOAT

Material is first applied on surface to be flocked. Then flock is applied. Used on metal, wood, paper, etc. Colors: Brown, Taupe, Blue, Black, White, Ivory, Red, Green, Silver and Gold. (Specify Color).

No.	Kit	List
180-4	4-oz.	\$1.00
180-5	8-oz.	.75
180-16	16-oz.	2.50

G-C RUBBER BASE UNDERCOAT

Use as flock sizing on fabrics, upholstery, turntables, etc. Makes pliable coating.

No.	Kit	List
182-4	4-oz.	\$1.00
182-8	8-oz.	1.75
182-16	16-oz.	2.50

FLOCK SIZING THINNER

For #	Undercoat.	List
181-4	4-oz.	\$0.40
181-8	8-oz.	.55
181-16	16-oz.	.75
181-G	1 Gal.	3.75



G-C FELT-KOAT FLOCK

Genuine Rayon Flock. 1/8" length fibers accurately cut, give beautiful even finish. One pound covers approximately 90 sq. ft. Colors: Brown, Taupe, Blue, Black, White, Ivory, Red, Green, Silver, and Gold. (Specify Color).

No.	Kit	List
180-5	2-oz. Can	\$1.00
180-6	1/2-lb. Bag	2.50
180-7	1-lb. Bag	4.50

G-C GENERAL SCRATCH STICK

Removes scratches. Simply run over scratches and they will disappear. Handy to carry in your pocket or tool box for emergency repairs. Also sell to housewives.

No.	Kit	List
909	Scratch Stik	\$0.35
909-D	Display 12 Stiks	4.20

1-A SKRATCH STIK DEAL — WIRE DISPLAY FOR DEALERS

Dealers and servicemen — Display the No. 1-A Skratch Stik deal in your shop or store and sell Skratch Stiks to your customers. Every home and office needs one. You can earn extra profit with this self-selling display.

No. 1-A Deal	12 Skratch Stiks Wire Display	List \$4.75
		Dealer's Net 2.49

G-C LUGGAGE FABRIC

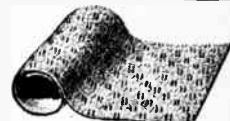
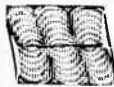
Airplane type fabric for portables, test instruments, cabinets, etc. Colors: Gray and Brown. (Specify Color).

No.	Kit	List
960	18" x 18"	\$0.75
961	36" x 18"	1.50
962	Any length, 36" wide, per yard	2.75

G-C INSTRUMENT FABRIC

Leatherette fabric to cover cabinets and instruments. Same as used by manufacturers. Colors: Black and Brown. (Specify Color).

No.	Kit	List
965	18" x 16"	\$0.75
966	18" x 32"	1.50
967	Any length, per yard	2.75



G-C CABINET SPEAKER GRILLE CLOTH

Beautiful modern patterns of Brown, Gold and light colors to match Walnut, Mahogany and Ivory cabinets. Specify "Ivory" when ivory is wanted.

No.	Size	List	No.	Size	List
940	18" x 20"	\$1.25	954	5" x 10"	\$0.35
941	9" x 18"	.58	949-1	1-Yd. Pkgs., 40" Wide	5.75
942	12" x 12"	.60	949-1R	40" Wide Cont. lgth., per yd.	4.95
943	14" x 18"	.70	949-2R	50" Wide Cont. lgth., per yd.	5.60
944	24" x 13"	.90	950	Roll 9" x 12"	.50
945	18" x 13"	.70			
946	8" x 8"	.28			
947	9 1/2" x 10"	.30			
948	6" x 6"	.25			

G-C SPARKLE GRILLE CLOTH

Juke box metallic grille cloth. Beautiful gold pattern. Sparkles in the light. Very good for ivory cabinets also.

No.	Kit	List
957	Large Pat-tern, per Yd.	\$10.00
958	Small Pat-tern, per Yd.	10.00

G-C METAL FLOCKED GRILLE SCREEN

Very popular. Both sides flocked with rayon over galvanized metal screen. Used on radios, P.A. speakers, intercoms, auto radios, etc. Waterproof, durable. Colors: Brown, Ivory, Maroon.

No.	Size	Color	List
951-1	8" x 11"	Brown	\$0.70
951-3	8" x 11"	Ivory	.70
951-5	8" x 11"	Maroon	.70
952-1	18" x 24"	Brown	2.75
952-3	18" x 24"	Ivory	2.75
952-5	18" x 24"	Maroon	2.75
953-1	36" x 36"	Brown	6.95
953-3	36" x 36"	Ivory	6.95
953-5	36" x 36"	Maroon	6.95

GENERAL CEMENT RADIO DIAL CORDS and CABLES



THE THREE MOST POPULAR CORDS USED

G-C No. 75 STANDARD THIN NYLON CORD

.028" diam. Most popular; used on 95% of sets. Braided nylon over fibre glass core. In plastic container.

No.	Spool	List
75-25	25 ft.	\$1.25
75-50	50 ft.	2.40
75-100	100 ft.	4.50
75-11	Env.	.40

G-C No. 75-A EXTRA THIN NYLON CORD

.025" diam. Used on RCA, GE, Strom-Carl, etc. Braided nylon over fibre glass core. In plastic container.

No.	Spool	List
75A-25	25 ft.	\$1.25
75A-50	50 ft.	2.40
75A-100	100 ft.	4.50

G-C No. 74 MEDIUM NYLON CORD

.040" diam. Very popular; used by RCA, Philco, GE, etc. Braided nylon over fibre glass core. In plastic container.

No.	Spool	List
74-25	25 ft.	\$1.25
74-50	50 ft.	2.40
74-100	100 ft.	4.50
74-11	Env.	.40

G-C No. 70 BRAIDED BRONZE CABLE

.040" diam.; used on radio dials, instruments and for aircraft reel-in antenna cable. Phosphor bronze braided over fibre glass core for strength. In plastic container.

No.	Spool	List
70-25	25 ft.	\$1.25
70-50	50 ft.	2.40
70-100	100 ft.	4.50
70-11	Env.	.40

G-C No. 71 42-STRAND BRONZE CABLE

.040" diameter; 42 strands twisted phosphor bronze over fibre glass core. Radio dials, aircraft reel-in antennas, etc. Durable and flexible. In plastic containers.

No.	Spool	List
71-25	25 ft.	\$1.25
71-50	50 ft.	2.50
71-100	100 ft.	4.50
71-11	Env.	.40

G-C No. 73 HEAVY NYLON CORD

.062" diameter; used on Philco, Majestic, Brunswick, etc. Very strong, chemically treated to prevent slipping. In plastic container.

No.	Spool	List
73-25	25 ft.	\$1.50
73-50	50 ft.	2.75
73-100	100 ft.	5.00
73-11	Env.	.40



G-C No. 76 SPECIAL THIN BRONZE CABLE

.025" diam. braided bronze as used on GE, RCA, and others. Also for flexible connections on speakers, cones, etc. In plastic container.

No.	Spool	List
76-25	25 ft.	\$1.25
76-50	50 ft.	2.40
76-100	100 ft.	4.50
76-11	Env.	.40



G-C No. 73-X EXTRA HEAVY NYLON CORD

.072" diameter. Extra heavy cord as used by Philco and others. Chemically treated to prevent slipping. In plastic container.

No.	Spool	List
73X-25	25 ft.	\$1.50
73X-50	50 ft.	2.75
73X-100	100 ft.	5.00
73X-11	Env.	.40



G-C No. 78 BRAIDED LINEN CORD

.040" diameter, same as used on Emerson radios, instruments, drawing boards, etc. Extra strong and durable. In plastic container.

No.	Spool	List
78-25	25 ft.	\$1.25
78-50	50 ft.	2.40
78-100	100 ft.	4.50
78-11	Env.	.40



G-C No. 79 MONEL METAL CABLE

.035" diam. Strong and durable, non-corrosive cable for radio dials and instruments. Preferred by many to bronze cable. In plastic container.

No.	Spool	List
79-25	25 ft.	\$1.25
79-50	50 ft.	2.40
79-100	100 ft.	4.50



G-C No. 80 EXTRA THIN METAL CABLE

.015" diameter. Very strong twisted steel cable. Popular for foreign and export receivers, instruments, dials, etc. In plastic container.

No.	Spool	List
80-25	25 ft.	\$1.25
80-50	50 ft.	2.40
80-100	100 ft.	4.50



G-C No. 82 EXTRA THIN PHOSPHOR BRONZE CABLE

.012" diam. twisted of 7 strands .004" phosphor bronze. Used on dial instruments and Army and Navy Radar Equipment. In plastic container.

No.	Spool	List
82-25	25 ft.	\$1.25
82-50	50 ft.	2.40
82-100	100 ft.	4.50



G-C PHOSPHOR BRONZE BELTING

This belting is required to make repairs on some of the older model sets.

For Atwater Kents — $\frac{1}{8}$ " wide x .005" thick.
No. List
61-25 25 ft. \$1.50
For Brunswicks — $\frac{1}{8}$ " wide x .006" thick.
62-25 25 ft. \$2.00



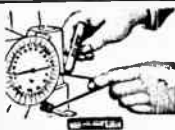
G-C NON-SLIP COMPOUNDS

Powder Compound
For dials, cords, pulleys, belts. Prevents slipping.

No.	List
1210 2 oz.	\$0.40

Liquid
Penetrating liquid shrinks fibers, prevents slipping on dial cord and belts.

No.	List
1215 2 oz.	\$0.50



G-C CORD DRESSING

Easy way to treat slipping cords. Simply rub on stick and job is done. Prevents and stops slipping.

No.	List
1212 Stick	\$0.25



G-C READY MADE CABLES

For popular sets. Save time in repairing these sets.

No.	Model	List
R7	Brunswick, 15, 22 Front.	\$0.50
R8	Brunswick, 15, 22 Rear	.50
R9	GE, A88, A82, A87	.50
R10	Majestic, 70, 71, 72	.50



G-C DIAL CABLE TOOL

Handy tool to aid in stringing new dial cord and replacing cables slipped off pulleys and drums. It's like an extra hand. Speeds up the job.

No.	List
5096	\$0.75

G-C HANDY PICK-UP TOOL

Very handy for every one. Picks up pieces in hard-to-get-at places. Will hold and start screws, nuts, etc. Will pay for itself in short time.

No.	List
5089	\$1.50



G-C DIAL CABLE RACK

Very handy, includes popular cables. Hangs on wall or on bench. Handy measuring rule or sign. Kit includes rack and five 25 ft. spools each Nos. 71, 73, 74, 75 and 76 cables.

No.	List
7A-25	\$6.50



G-C DIAL SPRING KITS

Handy kit of springs as used on dial cord drives. Six sizes included.

No.	List
1054 10 Assorted Springs	\$0.40
1054-S 10 Small Springs	.40
1055 Kit 25 Ass. Springs	1.10
1056 Kit 100 Ass. Springs	4.00



G-C No. 77-SK DIAL CORD KIT

Contains four 25 ft. spools most popular cord; 75-25, 74-25, 76-25, 71-25, and free assortment of dial cord clamps and eyelets.

No.	List
77-SK Cable Kit	\$4.75



G-C No. 78-SK DIAL CORD KIT

Combination kit in 10 ft. lengths of all G-C Dial Cables. Each in separate envelope, packed in leatherette box. Handy for servicemen and experimenters.

No.	List
78-SK Cable Kit	\$4.65



G-C DIAL CORD CLIPS

Handy clip and eyelet assortment used to fasten to ends of dial cords, etc. Required on every set.

No.	List
1028-E Assortment	\$0.40

GENERAL



CEMENT

DIAL BELTS
RUBBER DRIVES — CRYSTALS



G-C SERVICEMEN'S DIAL BELT KITS

General Cement Belts are approved replacements for all sets. They are made of best quality material and will not stretch. They are specially treated to prevent slipping. They are the best. Sizes available for all sets. They are easy to install as they are made to fit. No adjustments necessary.

BELTS — 25c List Each

G-C SERVICEMEN'S KITS

Servicemen! Have an assortment of belts on hand for prompt replacement. Kits contain only the most popular belts used. KIT INCLUDES ATTRACTIVE STEEL BOX—BELT SCALE AND COMPLETE LISTING OF OVER 1100 MODELS.

List Price
No. G-25—Kit of 25 popular belts ... \$ 6.70
No. G-50—Kit of 50 popular belts ... 13.40
No. G-100—Kit of 100 (includes every size) 25.00

INSTRUCTIONS — FOR MEASURING BELTS

To determine size of belt, if the old belt is available, cut the belt and measure for stretched out length. This will be "cut length" of belt. If old belt is not available or is worn out so that it cannot be properly measured, stretch a thin thread around belt pulleys on set. (Be sure to use thin thread as a thick cord will give an inaccurate reading.) Measure the thread, it will be our "circumference around pulleys." In measuring belts always remember that the circumference around pulleys is not the same as stretched out or cut length. A belt when cut, develops approximately 3/16" extra length when stretched out, depending on thickness of belt.

G - C RADIO BELT SPECIFICATIONS

LISTED AS PER BELT NO.

GC Belt No.	Circumference Around Pulleys	Cut Length	GC Belt No.	Circumference Around Pulleys	Cut Length
101	6-23/32"	6-29/32"	148	14-33/64"	14-3/4"
102	6-57/64"	7-5/64"	149	15-1/64"	15-13/64"
103	7-15/32"	7-21/32"	150	15-61/64"	16-9/64"
104	8-1/64"	8-13/64"	151	14-57/64"	15-5/64"
105	7-1/2"	7-11/16"	152	10-1/16"	10-11/16"
106	7-1/4"	7-7/16"	153	8-39/64"	8-31/64"
107	7-11/16"	7-7/8"	154	12-1/32"	12-7/32"
108	8-21/32"	8-27/32"	155	7-35/64"	7-23/32"
109	8-1/2"	8-11/16"	156	7-9/32"	7-15/32"
110	8-25/64"	8-37/64"	157	7-1/64"	7-13/64"
111	7-15/16"	8-1/8"	158	6-15/16"	7-1/8"
112	8-43/64"	8-55/64"	159	8-1/32"	8-7/32"
113	8-3/32"	8-9/32"	160	8-11/16"	8-7/8"
114	8-15/64"	8-27/64"	161	6-55/64"	7-3/64"
115	9-13/64"	9-25/64"	162	8-13/64"	8-25/64"
116	9-5/16"	9-1/2"	163	9-19/64"	9-31/64"
117	9-1/16"	9-1/4"	164	10-1/4"	10-7/16"
118	10-23/64"	10-35/64"	165	17-1/16"	17-1/4"
119	9-17/32"	9-23/32"	166	18-13/64"	19-5/8"
120	10-45/64"	10-57/64"	167	8-13/16"	9"
121	10-11/16"	10-7/8"	168	12-13/16"	13"
122	10-3/8"	10-9/16"	169	17-13/32"	17-19/32"
123	9-7/8"	10-1/16"	170	11-3/16"	11-3/8"
124	10-17/64"	10-29/64"	171	11-3/16"	11-3/8"
125	10-25/64"	10-37/64"	172	8-3/16"	8-3/8"
126	10-1/16"	10-1/4"	173	11-7/16"	11-5/8"
127	9-59/64"	10-7/64"	174	7-3/4"	7-15/16"
128	10-19/64"	10-31/64"	175	21-5/16"	21-1/2"
129	10-41/64"	10-53/64"	176	22-35/64"	22-47/64"
130	11-5/64"	11-17/64"	177	7-13/32"	7-19/32"
131	11-9/64"	11-21/64"	178	12-1/2"	12-11/16"
131W	11-9/32"	11-15/32"	179	17-37/64"	17-49/64"
132	10-31/32"	11-5/32"	180	10-27/32"	11-1/32"
133	10-61/64"	11-9/64"	181	18-9/16"	18-3/4"
134	11-3/8"	11-9/16"	182	15-13/16"	16"
135	11-1/16"	11-3/16"	183	15-7/16"	15-5/8"
136	11-25/64"	11-37/64"	184	16-27/64"	16-39/64"
137	11-5/32"	11-13/32"	185	16-15/16"	17-1/8"
138	12"	12-3/16"	186	14-7/32"	14-13/32"
139	12-9/32"	12-15/32"	187	15-7/32"	15-13/32"
140	12-7/32"	12-13/32"	188	19-47/64"	19-59/64"
141	11-3/4"	11-15/16"	189	18-1/2"	18-11/16"
142	12-3/32"	12-1/4"	190	17-5/8"	17-13/16"
143	11-13/16"	12"	191	22-49/64"	22-61/64"
144	12-15/32"	12-21/32"	192	straight belt	16"
145	12-39/64"	12-51/64"	193	straight belt	12-7/16"
146	13-1/2"	13-1/16"	194	11-21/32"	11-27/32"
147	14-27/64"	14-39/64"			

LISTED AS PER BELT SIZE

Circumference Around Pulleys	Cut Length	GC Belt No.	Circumference Around Pulleys	Cut Length	GC Belt No.
6-23/32"	6-29/32"	101	11-1/16"	11-3/16"	135
6-55/64"	7-3/64"	161	11-5/64"	11-17/64"	130
6-57/64"	7-5/64"	102	11-9/64"	11-21/64"	131
6-15/16"	7-1/8"	158	11-5/32"	11-15/32"	137
7-1/64"	7-13/64"	157	11-3/16"	11-3/8"	171
7-1/32"	7-7/16"	106	11-9/32"x5/16"	11-15/32"x5/16"	131W
7-9/32"	7-13/32"	156	11-3/8"	11-9/16"	134
7-13/32"	7-19/32"	177	11-25/64"	11-37/64"	136
7-15/32"	7-21/32"	103	11-7/16"	11-57/64"	134
7-15/16"	7-11/16"	105	11-21/32"	11-27/32"	173
7-35/64"	7-23/32"	155	11-3/4"	11-15/16"	141
7-11/16"	7-7/8"	107	11-13/16"	12"	143
7-3/4"	7-15/16"	174	12-1/2"	12-3/16"	138
7-15/16"	8-1/8"	111	12-1/32"	12-7/32"	154
8-1/64"	8-15/64"	104	12-3/32"	12-1/4"	142
8-1/32"	8-7/32"	159	12-7/32"	12-13/32"	140
8-3/32"	8-9/32"	109	12-9/32"	12-7/16" str. belt	193
8-3/16"	8-3/8"	162	12-9/32"	12-15/32"	139
8-13/64"	8-25/64"	172	12-13/32"	12-31/32"	144
8-5/64"	8-27/64"	114	12-1/2"	12-11/16"	178
8-25/64"	8-37/64"	110	12-39/64"	12-51/64"	145
8-1/2"	8-11/16"	109	12-13/16"	13"	168
8-39/64"	8-51/64"	153	13-3/16"	13-3/8"	146
8-21/32"	8-27/32"	108	14-7/32"	14-13/32"	186
8-43/64"	8-55/64"	160	14-25/64"	14-39/64"	147
8-11/16"	8-7/8"	168	14-33/64"	14-3/4"	148
8-13/16"	9"	167	14-57/64"	15-3/64"	151
9-1/16"	9-1/4"	117	14-57/64"	15-3/64"	149
9-13/64"	9-25/64"	115	15-1/64"	15-13/64"	149
9-19/64"	9-31/64"	163	15-17/64"	15-29/64"	187
9-5/16"	9-1/2"	116	15-7/16"	15-5/8"	183
9-17/32"	9-23/32"	119	15-13/16"	16"	182
9-7/8"	10-1/16"	113	straight belt	16" str. belt	192
9-59/64"	10-7/64"	127	15-61/64"	16-9/64"	150
10-1/16"	10-1/4"	126	16-19/64"	16-31/64"	170
10-1/4"	10-7/16"	164	16-27/64"	16-39/64"	184
10-17/64"	10-29/64"	124	16-15/16"	17-1/8"	185
10-19/64"	10-31/64"	128	17-1/16"	17-1/4"	165
10-23/64"	10-35/64"	118	17-13/32"	17-19/32"	169
10-25/64"	10-37/64"	118	17-37/64"	17-49/64"	179
10-25/64"	10-37/64"	122	17-5/8"	17-13/16"	179
10-1/2"	10-11/16"	152	18-1/2"	18-11/16"	189
10-41/64"	10-53/64"	129	18-19/64"	18-39/64"	181
10-11/16"	10-7/8"	121	19-7/16"	19-59/64"	188
10-45/64"	10-57/64"	120	19-47/64"	19-59/64"	188
10-27/32"	11-1/32"	180	21-5/16"	21-1/2"	175
10-61/64"	11-9/64"	133	22-35/64"	22-47/64"	176
10-31/32"	11-5/32"	132	22-19/64"	22-61/64"	191

Buy a G-C Belt Kit and Get a Free Belt Replacement Guide

G-C RADIO AND PHONO DRIVES

No.	List	No.	List
1024-SE Env. Asst. 5 Small	\$0.40	17	1gc. Atwater-Kent \$0.10
1024-LE Env. Asst. 5 Large	.40	18	Emerson, Majestic .10
1024-E Env. Asst. 10 Dial	.80	19	Small AK .10
1025 Box 25 Asst. Drives 1.50		20	Phileo .25
1026 Box 100 Asst. 6.00		18	General Industries, RX-1X .25
1 AK Small	.10	20-E	Alliance 80, Admiral, Phileo, VM, Gen. Ind., Seeburg, etc. .25
2 AK Large	.10	20-1-E	RCA .15
3 Stewart-Warner	.10	21-A	Phileo, RCA, etc. .15
4 Kennedy, Wells-G.	.10	22	Detrola, Rubber Typ. .40
5 Stewart-Warner	.10	23	Spring for Detrola .50
6 RCA	.10	24	General Electric .15
7 Stewart-Warner	.10	23	RC RP-176, GE 1.00
8 Stewart-Warner	.10	24-E	809-J, large tire .20
9 Atwater-Kent	.10	24-AE	RCA RP-176, GE .40
10 Stewart-Warner	.10	24-AE	809-J, rim drive .20
			Crescent 3 3/4" O.D. .40
			Admiral, Crescent 3 3/4" O.D. .40

G-C PLASTIC CRYSTAL

Clear plastic crystal in flat sheet. For radio dials, clocks, dashboards, etc. Can be cut to size, fitted and cemented in place.
No. 92 8" x 10" List \$1.45

G-C RADIO DIAL GLASS AND CLOCK CRYSTALS



Round convex replacement glass crystals for radios, clocks, auto radios, instruments, panels, dash board.

No.	Diam.	List	No.	Diam.	List
45	4 3/8"	\$0.60	64	6 3/4"	\$0.60
46	4 1/2"	.60	66	7 1/4"	.70
47	4 5/8"	.60	67	7 3/8"	.70
48	4 3/4"	.60	68	7 1/2"	.70
49	4 7/8"	.60	69	7 5/8"	.70
50	5"	.60	70	7 7/8"	.70
51	5 1/8"	.60	71	7 3/4"	.70
52	5 1/4"	.60	72	7 3/8"	.70
53	5 3/8"	.60	73	7 5/8"	.70
54	5 1/2"	.60	74	8"	.70
55	5 5/8"	.60	75	8 1/8"	.75
56	5 3/4"	.60	76	8 1/4"	.75
57	5 7/8"	.60	77	8 3/8"	.75
58	6"	.60	78	8 1/2"	.75
59	6 1/8"	.60	79	8 5/8"	.75
60	6 1/4"	.60	80	8 3/4"	.75
61	6 3/8"	.60	81	8 7/8"	.75
62	6 1/2"	.60	82	9"	.75
62A	6 5/8"	.60	83	9 1/8"	.75
63	6 3/4"	.60	84	9 1/4"	.75
DC65	Kit of 65 Crystals	\$35.00			
DC25	Kit of 25 Popular Crystals	12.50			

GENERAL



CEMENT

RADIO KNOBS - KITS



MAJESTIC BAKELITE KNOBS
Popular pattern. Set screw type. $\frac{7}{8}$ " diam., $\frac{1}{4}$ " shaft.
No. List
1100 Walnut \$0.16
1100-I Ivory .20

ROYAL BAKELITE KNOBS
Beautiful pattern. Set screw type. $\frac{7}{8}$ " diam., $\frac{1}{4}$ " shaft.
No. List
1105 Walnut \$0.16
1105-I Ivory .20

YANKEE BAKELITE KNOBS
Set screw type. $\frac{3}{4}$ " and 1" diam., $\frac{1}{4}$ " shaft.
No. List
1109 $\frac{3}{4}$ " Wln. \$0.16
1110 1" Walnut .16
1109-I $\frac{3}{4}$ " Ivory .20
1110-I 1" Ivory .20

MODERN LARGE KNOB
Knurl shaft or set screw types. $1\frac{1}{8}$ " diameter.
No. List
Knurl Shaft Type
1176 Walnut \$0.12
Set Screw Type
1177 Walnut .16

NEW LARGE KNOB
Knurl shaft or set screw types. $1\frac{1}{8}$ " diameter.
No. List
Knurl Shaft Type
1178 Walnut \$0.12
Set Screw Type
1179 Walnut .16

POPULAR LARGE KNOB
Knurl shaft or set screw types. $1\frac{1}{8}$ " diameter.
No. List
Knurl Shaft Type
1180 Walnut \$0.12
Set Screw Type
1181 Walnut .16



MIDGET BAKELITE KNOBS
Set Screw Type
For small sets. $\frac{11}{16}$ " diam., $\frac{1}{8}$ " shaft.
No. List
Pointer Type
1115 Walnut \$0.12
1116 Ivory .13
1117 Red .13
1118 Black .12

MIDGET BAKELITE KNOBS
Non-Pointer Type
For small sets. $\frac{11}{16}$ " diam., set screw $\frac{1}{8}$ " shaft.
No. List
1111 Walnut \$0.12
1112 Ivory .13
1113 Red .13
1114 Black .12

STREAMLINE POINTERS
The most popular pointer knob. $\frac{1}{4}$ " shaft, set screw type $1\frac{1}{4}$ " long.
No. List
1136 Black \$0.15
1136-W Walnut .16
1137 Red .18
1137-I Ivory .20

STREAMLINE POINTERS
A very popular pointer knob. $\frac{1}{4}$ " shaft, set screw type, 2" long.
No. List
1135 Black \$0.20
1135-W Walnut .24
1138 Red .24
1138-I Ivory .26

MODERN POINTER BAR KNOBS
Brass Bushing
For intercomms and instruments. Black finish. Set screw, $\frac{1}{4}$ " shaft, $1\frac{1}{8}$ " long.
No. List
1130 Black \$0.38
1130-W Walnut .38

MODERN POINTER BAR KNOBS
Brass Bushing
For intercomms and instruments. Black finish. Set screw, $\frac{1}{4}$ " shaft, $1\frac{1}{8}$ " long.
No. List
1131 Black \$0.35
1131-W Walnut .35



INSTRUMENT KNOB
A heavy duty knob for communication equipment. Instruments. $\frac{1}{4}$ " brass insert, set screw. $1\frac{3}{4}$ " O.D. x $\frac{7}{8}$ ".
No. List
1175 Black \$0.35

STREAMLINE POINTERS
Brass Bushing
Brass insert. $\frac{1}{4}$ " shaft, set screw. $1\frac{1}{4}$ " long.
No. List
1170 Black \$0.25
1170-W Walnut .25
1172 Red .30
1172-I Ivory .30

STREAMLINE POINTERS
Brass Bushing
Brass insert. $\frac{1}{4}$ " shaft, set screw. 2" long.
No. List
1171 Black \$0.30
1171-W Walnut .30
1173 Red .36
1173-I Ivory .36

POPULAR BAR KNOB
For intercomms, instruments, appliances. Bakelite with set screw. $\frac{1}{4}$ " hole. $1\frac{5}{8}$ " long.
No. List
1132 Walnut \$0.20

POPULAR PLASTIC KNOB
 $1\frac{1}{8}$ " diameter with $\frac{1}{8}$ " shank extension for $\frac{1}{4}$ " knurled shaft.
No. List
1153 Walnut \$0.12
1154 Ivory .13

ATTRACTIVE PLASTIC KNOB
 $1\frac{1}{8}$ " diameter, flush type for $\frac{1}{4}$ " knurled shafts.
No. List
1155 Walnut \$0.12
1156 Ivory .13



MIDGET TYPE PLASTIC KNOB
 $\frac{3}{8}$ " diam., $\frac{3}{8}$ " shank for $\frac{1}{4}$ " knurled shafts.
No. List
1157 Walnut \$0.12
1158 Ivory .13

MIDGET TYPE PLASTIC KNOB
 $\frac{3}{8}$ " diam. flush type for $\frac{1}{4}$ " knurled shafts.
No. List
1159 Walnut \$0.12
1160 Ivory .13

ACORN PLASTIC KNOB
 $\frac{3}{8}$ " diam., $\frac{1}{4}$ " shank for $\frac{1}{4}$ " knurled shafts.
No. List
1182 Walnut \$0.12
1183 Ivory .13

PUSH-ON KNURL KNOB
 $1\frac{1}{8}$ " diam. flush type for $\frac{1}{4}$ " knurled shafts.
No. List
1184 Walnut \$0.12
1185 Ivory .13

PUSH-ON KNURL KNOB
 $1\frac{1}{8}$ " diam., $\frac{1}{2}$ " shank for $\frac{1}{4}$ " knurled shafts.
No. List
1186 Walnut \$0.12
1187 Ivory .13

POINTER TYPE PLASTIC KNOB
 $1\frac{1}{8}$ " diam., $\frac{1}{2}$ " shank for $\frac{1}{4}$ " knurled shafts.
No. List
1188 Walnut \$0.12
1189 Ivory .13



MIDGET TYPE PLASTIC KNOBS
 $\frac{3}{8}$ " diam., $\frac{1}{2}$ " shank for $\frac{1}{4}$ " knurled shafts.
No. List
1197 Walnut \$0.12
1198 Ivory .13

MIDGET TYPE PLASTIC KNOBS
 $\frac{3}{8}$ " diam., flush shank for $\frac{1}{4}$ " knurled shafts.
No. List
1193 Walnut \$0.12
1194 Ivory .13

SPRING AND D-SHAFT KNOBS
Spring type, $1\frac{1}{2}$ " diam. Fits $\frac{1}{4}$ " flat shafts.
No. List
1151 Walnut \$0.12
1152 Ivory .13

SPRING AND D-SHAFT KNOBS
D- or flat shaft type. $\frac{5}{8}$ " diam.
No. List
1161 Walnut \$0.12
1162 Ivory .13

SPRING AND D-SHAFT KNOBS
D- or flat shaft type. $\frac{3}{4}$ " diam.
No. List
1163 Walnut \$0.13
1164 Ivory .14

SPRING AND D-SHAFT KNOBS
D- or flat shaft type. 1" diam.
No. List
1165 Walnut \$0.14
1166 Ivory .15



G-C RADIO KNOB KITS

Popular plastic knobs in assorted kits, all kinds of knobs included.



G-C AUTO RADIO KNOBS
 $1\frac{1}{2}$ " diam. x $\frac{1}{2}$ " high. For $\frac{1}{4}$ " and $\frac{3}{8}$ " shafts. Brass bushing with set screw.
No. List
 $\frac{1}{4}$ " Shaft
1191 Pearl Gray \$0.30
1192 Maroon .30
 $\frac{3}{8}$ " Shaft
1167 Pearl Gray .30
1168 Maroon .30

G-C AUTO RADIO KNOBS
Set screw type auto radio knob. $1\frac{1}{2}$ " diam. x $\frac{1}{2}$ " high. For either $\frac{1}{4}$ " or $\frac{3}{8}$ " shafts with bushing.
No. List
1195 Pearl Gray \$0.30
1196 Maroon .30

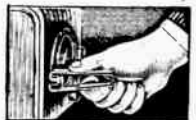
G-C AUTO RADIO KNOBS
Chrome plated. For $\frac{1}{4}$ " and $\frac{3}{8}$ " shafts. Set screw mounting.
No. List
1169 $\frac{1}{4}$ " \$0.30
1174 $\frac{3}{8}$ " .30

G-C KNOB SET SCREW ASST.
Handy set screw assortments for radio knobs, shafts, pulleys, 6-32, 8-32, and 10-32.
No. List
1060 50 Asst. \$1.00
1061 100 Asst. 1.80
1062-E 20 Asst. .40
6605 30 Asst. .65

No. Quantity List
1140 35 Asstd. Push-on Buttons \$3.95
1141 28 Asstd. Spring Knobs 3.95
1142 24 Asstd. Set Screw Knobs 3.95
1143 30 Asstd. All Type Knobs 3.95
1144 15 Asstd. Auto Radio Knobs, for $\frac{1}{4}$ " and $\frac{3}{8}$ " shafts 3.95

G-C RADIO KNOB PULLER

Very handy in removing knobs that are hard to pull off. Simply slip behind knob and pull off. Saves the cabinet and the knobs.



G-C KNOB SPRING KITS
Twelve types of knob springs or wedges in kit.
No. List
1049-E Env. 20 Asstd. \$0.40
1050 Kit 35 .70
1051 Kit 100 1.35
6619 Jar 35 Asstd. .65

G-C KNOB FELTS
Used behind knobs. Saves cabinet.
No. List
1065-E Env. 50 \$0.40
6641 Jar 70 .65

G-C KNOB BUSHINGS
Reduce from $\frac{1}{4}$ " to $\frac{3}{8}$ ". For auto radios.
No. List
6751 \$0.40

G-C KNOB BUSHINGS
Reduce from $\frac{1}{4}$ " to $\frac{3}{8}$ ". For auto radios.
No. List
6751 \$0.40

GENERAL



CEMENT

PHONO NEEDLES and ACCESSORIES



G-C MASTER POINT PHONO NEEDLES

G-C CATHEDRAL TONE

Long life, excellent tone needle made with osmium alloy tip to insure uniform reproduction and long life. Will save the records and give excellent reproduction for a long time.

No.	Each	List
1430		\$0.75
1431-D Display		
12 # 1430,		9.00

G-C SYMPHONIC NEEDLE

Superior quality long life needle designed to give excellent tone. Special osmium alloy tip gives true reproduction with less pressure on the records. Will last indefinitely.

No.	Each	List
1435		\$1.00
1435-D Display		
12 # 1435,		12.00

G-C CONCERT GRAND

Very finest "long life" curved "spring action" needle that will bring out the finest tones in music. Special osmium alloy tip insures long life. Tip is perfectly formed to fit record grooves. The best.

No.	Each	List
1436		\$1.50
1436-D Display		
12 # 1436,		18.00

G-C RECORD-LIFE LUBRICANT

Simply wipe record with "Record-Life" and the needle will glide over the record smoothly. Prevents record and needle wear; also eliminates noises and scratching sounds. Use also for making records.

No.	1-oz.	List
125-1		\$0.25
125-2	2-oz.	.50
125-4	4-oz.	.75
125-6	6-oz.	.90

G-C REK-O-DOPE

Required lubricant when recording and cutting records. All purpose, it cools, cleans, lubricates, and hardens grooves when cut. Rek-O-Dope will give better tone and longer life.

No.	1-oz.	List
126-1		\$0.25
126-2	2-oz.	.50
126-4	4-oz.	.75
126-6	6-oz.	.90

G-C CORD CONNECTOR

Handy cord connector to connect phono motors to radio sets, for appliances, vacuum cleaners, sewing machines, etc.

No.	List
868	\$0.65



G-C JUKE SPECIAL PHONO NEEDLE

Long life needle. Preferred by operators on coin machines, automatic records, etc. Precious osmium tip will give long, hard service and tone quality, even when used with heavy pick-ups. Will give thousands of plays.

No.	Each	List
1437		\$1.00
1437-D Display		
12 # 1437,		12.00

G-C RECORDING STYLUS

The best cutting stylus made from alloy steel will give several hours of good cutting. Make your own recordings.

No.	Each	List
1433		\$0.50
1434-D Display		
12 # 1433,		6.00

G-C SERVICEMAN'S NEEDLE PACKET

Handy package containing ten assorted high quality G-C Master-Point Needles. Packaged in attractive folder which protects the needle packages so that they are fresh and new when you make your sale.

No.	List
1432 Packet	\$9.50

G-C RECORD TURNTABLE FELT

Re-cover phono turntables with ready cut felts. Dark brown.

No.	Dia.	List
1292	7 7/8"	\$0.40
1296	8 7/8"	.55
1293	9 7/8"	.60
1294	11 7/8"	.70
1295	15 7/8"	1.20
Brown Felt — By The Yard		
1298	36" Wide, per yd.	5.00

G-C DETROLA SPRING DRIVE

Genuine replacement for Detrola turntables. Spring drive with core inside. Used on Detrola, Utah, and Trela models, etc.

No.	List
20-1-E Detrola Spring	\$0.50

G-E — RCA PHONO DRIVES

Special V and Rim drives for RCA, RP-176 and G-E, 809-J turntables.

No.	List
22 Large Tire, each	\$1.00
23-E Env. 2 Rim Drives	.40



G-C PHONO NEEDLE STYLUS SCREWS

Here's the hard-to-get replacement thumb set screws for pick-up arms and recording heads!

No.	List
1052 15 Asst. Stylus Screws	\$ 1.50
1052-E Env. 7 Asst. Screws	.40
1053 100 Asst. Stylus Screws	10.00

Individual Phono Screw Specifications

P1 For Shure Brothers, etc.	.10
P2 For Astatic, RCA, Seeburg, Webster, etc.	.10
P3 For Astatic, Stromberg-Carlson, Universal, Webster, etc.	.10
P4 For Rek-O-Cut, Webster, etc.	.15
P5 For RCA, etc.	.15
P6 For RCA, etc.	.10
P7 For Webster, etc.	.15
P8 For Shure Brothers, etc.	.15
P9 For RCA, Astatic, Webster, etc.	.15
P10 For Audek, etc.	.15

CARTRIDGE MOUNTING SCREWS

For mounting cartridges in Phono Pick-Up Arms.

No.	List
6005-E Env. 60 4-36 x 1/4"	\$0.40
6005-AE Env. 60 4-40 x 1/4"	.40

G-C STA-PUT PHONO-GEAR LUBRICANT

New "STA-PUT" lubricant for phono motors, gears, shafts, etc. Will not run or drip—it "Stays Put." Recommended by RCA, G-E, and others.

No.	List
1223 Tube	\$0.50
122-2 2-oz.	.50

G-C PHONO NEEDLE AND PARTS CUP

Standard size bakelite cup for phono needles and parts. It makes handy holder for screws, nuts, parts, etc., on the service bench.

No.	List
1399 Needle Cup	\$0.10

G-C SHIELDED PHONO PICK-UP WIRE

Handy package of single conductor shielded wire as used on phono pick-ups, etc. Enough wire for several jobs in package.

No.	List
1738-E Envelope	\$0.40

G-C RECORD CLEANING PAD

Specially treated soft felt pad for cleaning and removing dust from records. Saves records.

No.	List
1290 4" x 4"	\$0.25
1291 6" x 6"	.45



G-C PICK-UP & CARTRIDGE SCREW ASST.

Contains small size screws and bushings such as used on cartridges of pick-up arms. Very handy in replacing cartridges or repairing stripped threads.

No.	List
6000-E 30 Screws,	\$0.40



G-C PHONO TURNTABLE DRIVES RUBBER REPLACEMENT DRIVES

Exact duplicates for replacement of popular friction type phono turntable drives. Use G-C # 35-2 Rubber-to-Metal Cement for cementing rubber to rim.

No.	List	No.	List
16 For General Industries RX-IX Motors	\$0.25	21-A For General Electric Models	\$0.15
16-E Env. 2 No. 16 Drives	.40	21-A-E Env. 2 No. 21-A	.40
17 For Alliance Model and Motorola	.25	22 RCA RP-176, G-E 809-J, large tire	1.00
17-E Env. 2 No. 17 Drives	.40	23 RCA RP-176, G-E 809-J, rim drive	.20
18 For RCA	.15	23-E Env. 2 No. 23 Drives	.40
18-E Env. 3 No. 18 Drives	.40	24-E Crescent Models, 3 3/4" O.D.	.40
19 For Philco, RCA, etc.	.15	24-A-E Admiral, Crescent, 3 1/4" O.D.	.40
19-E Env. 4 No. 19 Drives	.40		
20-E Detrola Rubber Drive	.40		
20-1-E Detrola Spring Drive	.50		

GENERAL



CEMENT

SWITCHES - SPAGHETTI TUBING



G-C TOGGLE SWITCH

S.P.S.T. Radio and appliance switch. Open housing, underwriters approved. Made by Cutler-Hammer, 3 amp. 125 volt. Nickel Plated.

No.	List
1339 S.P.S.T.	\$0.40

G-C PUSH-ON PUSH-OFF SWITCH

For vacuum cleaners, appliances, test equipment. Made by H & H for G-C. Rated at 3 amps., 125 volts. Nickel Plated.

No.	List
1338 S.P.S.T.	\$1.30

G-C BAT HANDLE SWITCH WITH WIRE LEADS

For vacuum cleaners, appliances, radio sets, etc. Made by H & H for G-C. Rated at 3 amps., 125 volts. Nickel Plated.

No.	List
1335 S.P.S.T.	\$0.85

G-C ON-OFF PLATE

Will fit the G-C, H & H, Cutler - Hammer, and other makes of standard switches.

No.	List
1329 On-Off Plate	\$0.05

G-C BAT HANDLE TOGGLE SWITCH

Tear drop handle general purpose switch. Made by H & H for G-C. 3 amps., 125 volts. Nickel Plated.

No.	List
1330 S.P.S.T.	\$0.60
1331 S.P.D.T.	.70
1332 D.P.S.T.	1.20
1333 D.P.D.T.	1.30

G-C TOGGLE SWITCHES

Ball handle general purpose switch. Made by H & H for G-C. 3 amps., 125 volts. Nickel Plated.

No.	List
1300 S.P.S.T.*	\$0.60
1301 S.P.S.T.†	.70
1302 S.P.D.T.*	.80
1303 S.P.D.T.†	.80
1304 D.P.S.T.*	1.20
1305 D.P.S.T.†	1.25
1306 D.P.D.T.*	1.30
1307 D.P.D.T.†	1.40

* ½" Shank Length.
† 1" Shank Length.



G-C PUSH BUTTON SWITCH

Two circuit, "slow make and quick break" momentary contact switch. One circuit normally on, other off; pushing button reverses circuits in use. Made by H & H for G-C. 3 amps., 125 volts. Shank ¾" long.

No. List
1340 Switch \$1.00

PUSH BUTTON

For 1340 Switch Red or Black (Specify)
1343 Button \$0.30

G-C ROTARY SWITCHES

Best grade enclosed rotary switches. Made by H & H for G-C. 3 amps., 125 volts. Shafts 1½" long.

No.	List
1320 S.P.S.T.*	\$0.75
1321 S.P.S.T.†	.85
1322 S.P.D.T.*	.95
1323 S.P.D.T.†	1.05
1324 D.P.S.T.*	1.45
1325 D.P.D.T.*	1.45
1326 D.P.D.T.†	1.55

* ¾" Shank Length.
† 1" Shank Length.

G-C NEUTRAL CENTER SWITCH

Handy radio, appliance and tester switch with 3 positions, On-Off-On. Rated 15 amps., 110 volts; ¼" shank. Nickel Plated.

No.	List
1308 S.P.D.T.	\$1.25
1309 D.P.D.T.	2.00

G-C EXTRA HEAVY DUTY POWER SWITCH

Three position for motors, projectors, transmitters, movie equipment, etc. Made by H & H for G-C. 10 amps., 125 volts. Neutral off in center. Size 2" x 1" x 1½", shank ¾" diameter.

No.	List
1352 D.P.D.T.	\$5.50
1353 S.P.D.T.	8.25
1354 A.P.D.T.	12.00

G-C HEAVY DUTY POWER SWITCH

Push button, D.P.S.T. safety switch for transformers, racks, transmitters, refrigerators and high frequency work. Made by H & H for G-C. 12 amps., 125 volts. Nickel Plated.

No.	List
1351 D.P.S.T.	\$2.20

G-C HEAVY DUTY POWER SWITCH

D.P.S.T. toggle power switch for motors, appliances, projectors, etc. Made by H & H for G-C. 12 amps., 125 volts. Nickel Plated.

No.	List
1350 D.P.S.T.	\$1.50



G-C SLIDE SWITCHES

For phonographs, tone controls, auto lights, electric trains, etc. ½" wide x 1½" center mounting.

No.	List
1355 S.P.S.T.	\$0.35
1357 S.P.D.T.	.40
1358 D.P.S.T.	.45
1359 D.P.D.T.	.50

G-C RADIO FRICTION TAPE

This narrow ¾" tape was particularly made for radio work. It eliminates waste and tearing of tape. It saves time and is handy to carry with you.

No.	Roll	List
870	65 ft.	\$0.55

G-C PLASTIC TUBING KITS

Handy kits of assorted colors and sizes. Ideal for experimenters and servicemen.

No.	Kit of	List
635	Kit of 25 ft. Ass'd.	\$0.90
635-D	Display 8 No. 635	7.20
636	Kit of 15 ft. Ass'd.	.90
636-D	Display 8 No. 636	7.20

G-C ASSORTED SPAGHETTI KIT

An assortment of 7½" lengths of spaghetti sleeving, 26 lengths to the kit. Sizes include from No. 17 wire to ¾" I.D. A very handy bundle to have for repair jobs.

No.	List
550 Kit 26 Lengths	\$0.65

G-C SPAGHETTI ASSORTMENT

"A Box Full of Spaghetti"

Here's a buy you can't heat on a spaghetti assortment. A variety of sizes and colors are included of high grade varnish tubing. Put up in attractive box.

No.	List
551	\$1.25

G-C SPAGHETTI ON SPOOLS

"Approved by ASTM" 5000-Volt Dielectric Strength

Best grade varnished tubing put on convenient 20-ft. spools. Will fit wire from No. 12 to No. 18. Colors: Black, Red, Yellow, Green, Blue. Specify color.

No.	Spool	List
499	20-ft.	\$1.75

G-C COATED SLEEVING



Best grade varnished sleeving. Dielectric strength 2000 volts. Colors: Black, Red, Yellow, Green, Brown. Specify color.

No.	Size	List
525	No. 20, ft 20 wire	\$0.10
528	No. 17, ft 18 wire	.10
531	No. 14, ft 14 wire	.12
533	No. 12, ft 12 wire	.13
537	¾" I.D.	.19
540	⅝" I.D.	.25
543	½" I.D.	.31
546	¾" I.D. (resist. size)	.44
547	⅞" I.D.	.50

G-C GENFLEX PLASTIC TUBING

"MADE OF EXTRUDED PLASTIC"

High grade extremely flexible plastic tubing for Radio and Electronic Insulation work. Resistant to cold or heat. High dielectric strength, average 8,000 volts. Put up in attractive individual boxes for easy handling.

Colors: Black, Red, Green, Clear (Specify)

No. Wire	Std. Pkg.	List	No. Wire	Std. Pkg.	List
603	18 20 ft.	\$0.80	613	8 15 ft.	\$0.80
605	16 20 ft.	.80	616	6 10 ft.	.80
607	14 20 ft.	.80	617	4 10 ft.	.80
609	12 20 ft.	.80	620	2 10 ft.	.80
611	10 15 ft.	.80			

All sizes available in continuous lengths on special order of 1,000 feet or more.

G-C RADIO SPAGHETTI



Best grade Radio and Television spaghetti. Smooth coated, with best varnishes. Very flexible. 5000 volt dielectric. Approved by ASTM. Colors: Black, Red, Yellow, Green, Brown. Specify color. 30" lengths.

No.	Size	List
500	No. 20, ft 20 wire	\$0.15
503	No. 17, ft 18 wire	.15
506	No. 14, ft 14 wire	.15
508	No. 12, ft 12 wire	.15
512	¾" I.D.	.32
515	⅝" I.D.	.44
518	½" I.D.	.56
521	¾" I.D. (resist. size)	.69
522	⅞" I.D.	.94
523	1" I.D.	1.15

GENERAL



CEMENT

RADIO SOCKETS—PLUGS—JACKS



G-C STANDARD TUBE SOCKETS

BAKELITE SOCKETS

High quality molded bakelite sockets with plated bronze contacts. Three grounding lugs on base of each socket. 1 1/2" mounting centers.

No.	List
1528 8-prong Octal	\$0.15
1528-L 8-prong Octal	.20

WAFER SOCKETS

No.	Mounting Centers	List
1534 4-prong	1 1/2"	\$0.15
1535 5-prong	1 1/2"	.15
1536 6-prong	1 1/2"	.15
1537 7-pr. Small	1 1/2"	.15
1537-L 7-pr. Large	1 1/2"	.18
1538 8-pr. Octal	1 1/2"	.18
1538-2 8-pr. Octal	1 1/2"	.18
1538-L 8-pr. Octal	1 1/2"	.20

G-C MINIATURE TUBE SOCKETS

BAKELITE MINIATURE SOCKET For Miniature Tubes

High quality molded bakelite socket with metal saddle mounting. Made with phosphor bronze plated contacts for 7-prong tubes. Standard 7/8" mounting centers.

No.	List
1540 Bakelite Socket	\$0.25

WAFER MINIATURE SOCKET For Miniature Tubes

High grade bakelite sockets for new miniature tubes. Phosphor bronze contacts, for 7-prong tubes. Standard 7/8" mtg. centers.

No.	Wafer Socket	List
1541	Wafer Socket	\$0.15
1542	Wafer Socket with grounding strap	.17



G-C 860 CAP

Spring action flat brown bakelite cap. Approved brass blades.

No.	List
860 Cap	\$0.25

G-C 861 CAP

Spring action, finger grip rubber caps. Approved, screw terminal brass blade.

No.	List
861 Cap	\$0.25

G-C 865 CAP

Modern flush type rubber cap. Easy to assemble. No exposed screws or wires.

No.	List
865 Cap	\$0.25

G-C 867 PLUG

Popular screw plug for standard sockets.

No.	List
867 Plug	\$0.17

G-C CUBE TAP

New type spring action cube tap with 3 outlets always available.

No.	List
862 Brown	\$0.30

G-C CORD CONNECTOR

Brown bakelite with bronze contacts.

No.	List
863 Brown	\$0.25



G-C SURFACE BLOCK

3-plug. Bakelite outlet for extension cords. Can fasten to wall or base.

No.	List
866 Brown	\$0.50

G-C AUTO ANTENNA PLUG

Shielded connector plug as used on Motorola and other auto radios.

No.	List
1740	\$0.15

G-C ANTENNA CONNECTOR JACK

Shielded jack to fit the 1740 plug for auto antenna and phonograph connection.

No.	List
1741	\$0.25

G-C PHONO PLUG

For all phonographs and auto radio connections; RCA, Zenith, Philco and others.

No.	List
1742	\$0.10
1742-E Env. of 4	.40

G-C PHONO JACK

Used for phonograph attachments. To be used with 1742 plug.

No.	List
1743	\$0.15
1743-E Env. of 3	.40

G-C EXTENSION JACK AND CONNECTOR

For extending radio ant. cables and phono attachments. Fits 1740 or 1742 plugs.

No.	List
1744	\$0.20



G-C MOTOROLA LEAD ADAPTER

Adapter plug used to adapt bayonet type connector to Motorola type.

No.	List
1745	\$0.35

G-C ADAPTER SHELL

Used to change the Motorola fitting to bayonet type connector.

No.	List
1746	\$0.10

G-C ANTENNA CONNECTOR

Used for connections on auto antenna and ground lines.

No.	List
1747	\$0.15

G-C JUMBO FUSE HOLDER

14 amp. fuse holder, 2 1/2" long x 1/2" diameter.

No.	List
1748	\$0.30

G-C FUSE CONNECTOR

Regular Type Used on auto radios and other equipment. Completely assembled.

No.	List
1749	\$0.20

G-C ANTENNA CONNECTOR END

To be used with regular antenna connectors. With bushing.

No.	List
1750	\$0.10



G-C REPLACEMENT PARTS FOR ANTENNA AND FUSE CONNECTORS

No.	Description	List
(a) 1791	Sleeve of Fuse Connector	\$0.05
	1791-GBox of 144 No. 1791	7.20
(b) 1792	Sleeve of Antenna Connector	.05
	1792-GBox of 144 No. 1792	5.00
(c) 1793	End piece for Antenna and Fuse Connector	.04
	1793-GBox of 144 No. 1793	7.20
(d) 6720	Auto Fuse Insulator Sleeve	.02
	6720-GBox of 144 No. 6720	1.50
(e) 1796	Spring for Antenna and Fuse Connector	.01
	1796-GBox of 144 No. 1796	1.40
(f) 1795	Bakelite Bushing	.03
	1795-GBox of 144 No. 1795	3.50

G-C SCREW TYPE TERMINAL STRIPS

Laminated bakelite strips, rigidly constructed, terminals will not turn and short.

No.	Contacts	List
1772	2	\$0.18
1773	3	.27
1774	4	.36
1775	5	.45
1776	6	.54
1777	7	.63
1778	8	.72
1779	9	.81
1780	10	.90

G-C SOLDER TYPE TERMINAL STRIPS

Mounted on laminated bakelite strips. Lugs securely fastened and will not turn.

No.	Contacts	List
1781	1	\$0.05
1782	2	.06
1783	3	.07
1784	4	.11
1785	5	.12
1786	6	.13
1787	7	.14
1788	8	.15
1789	9	.18
1790	10	.20

G-C PHONO SPRING KIT

Kit contains assorted springs same as are used on phono turntables. With this kit you can replace the broken or weak spring without waiting or delay in service.

No.	List
6478	Kit of 50 \$2.25
6749	Kit of 100 4.00

G-C AUTO FUSE INSULATOR SLEEVE

Insulating sleeve to fit regular fuse holders.

No.	List
6720-E Env. of 16	\$0.40



G-C INSULATING CAMBRIC 10,000 Volts

Yellow varnished cambric. .010" thick.

No.	List
549	Roll over 210 sq. in. \$0.75
548	36" x 36", yd., any length 4.00

G-C LAMINATED BAKELITE PANELS

1/8" thick. Black.

No.	List
590	6" x 6" \$0.60
591	6" x 12" \$1.10
592	12" x 12" \$2.20

G-C FIBYROID "FISH PAPER"

Fish paper has many uses around the shops for repair jobs where electrical insulation is required. .010" — 240 sq. in. roll.

No.	List
560	Roll \$0.50

G-C RUBBER KIT ASSORTMENT

Handy kit to keep in the shop. Contains various sizes of rubber grommets, chassis mounts, etc. An exceptional buy.

No.	List
7600	Rubber Kit \$1.00

G-C RADIO CORD SETS

Handy replacement cord sets, ready to attach to radio sets and appliances. Approved Brown parallel wire with plugs attached.

No.	List
885	6 ft. \$0.45
886-P	7 1/2 ft. .60

G-C EXTENSION CORDS

G-C extension cords are made of approved wire ready to use with a plug on one end and a 3-way tap on the other end. Brown.

No.	List
887	6 ft. \$0.75
889	7 1/2 ft. .90

GENERAL CEMENT SIGNAL LIGHTS — CONNECTORS — CLIPS



G-C ONE-INCH JEWEL SIGNAL LIGHT

For signal devices of all types. Bulbs change from the front; for socket bases as listed below. One-inch mounting hole. Jewel colors: Red, Green, Blue, Amber, Opal, and Clear (Specify Jewel Color).

No.	Socket	Jewel	List
7901	110-V. Cand.	Facett	\$1.40
7902	110-V. Cand.	Smooth	1.40
7903	Min. Bayonet	Facett	1.40
7904	Min. Bayonet	Smooth	1.40
7905	Min. Screw	Facett	1.40
7906	Min. Screw	Smooth	1.40

G-C 3/4-INCH JEWEL SIGNAL LIGHT

All purpose signal light with faceted jewels in colors of Red, Green, Blue, Amber, Opal, Clear. 3/8" mounting hole. Jewel removed from front. (Specify Jewel Color)

No.	Socket	List
7907	Min. Screw	\$0.80
7908	Min. Bayonet	.80
7909	110-V. Candel.	.80

G-C 1/2-INCH JEWEL SIGNAL LIGHT

Popular signal light, requires only 3/8" mounting hole. Facetted jewel removed from front. Colors: Red, Green, Blue, Amber, Opal, Clear. (Specify Jewel Color).

No.	Socket	List
7910	Min. Screw	\$0.35
7911	Min. Bayonet	.40
7912	110-V. Candel.	.40

G-C PANEL JEWELS

Complete assemblies in 1", 3/4", and 1/2" diameters. Fit panels up to 1/4" thick. Brass nickel-plated. Colors: Red, Green, Blue, Amber, Opal, Clear. (Specify Jewel Color).

No.	Dia.	Jewel	Mtg. Hole	List
7913	1/2"	Facett	7/16"	\$0.25
7914	1/2"	Smooth	7/16"	.25
7915	3/4"	Facett	13/16"	.60
7916	1"	Facett	1"	1.10



G-C CLIP-ON PILOT LIGHT SOCKETS

Clip up and clip down types for replacements. Cadmium-plated.

No.	Type	List
7920	Min. Screw Clip Up	\$0.15
7921	Min. Screw Clip Down	.15
7922	Min. Bay. Clip Up	.17
7923	Min. Bay. Clip Down	.17
7924	110-V. Cand. Clip Up	.20
7925	110-V. Cand. Clip Down	.20

G-C BRACKET-TYPE PILOT LIGHT SOCKETS

Sturdy bracket-up or bracket-down type. Cadmium-plated.

No.	Type	List
7926	Min. Screw Bracket Up	\$0.15
7927	Min. Screw Bracket Down	.15
7928	Min. Bay. Bracket Up	.17
7929	Min. Bay. Bracket Down	.17
7930	110-V. Candel. Bracket Up	.20
7931	110-V. Candel. Bracket Down	.20

G-C UNMOUNTED PILOT LIGHT SOCKETS

Cadmium plated. Ideal for replacements or special assemblies.

No.	Type	List
7932	Min. Screw Base	\$0.15
7933	Min. Bayonet Base	.14
7934	110-V. Candelabra	.16

G-C PILOT LAMP INSTALLER

Makes it easy to install miniature dial bulbs, neon and candle-lamp in hard-to-get-at places. All rubber.

No.	List
7935	Installer \$0.40

G-C DOUBLE ALLIGATOR CLIP

Brand New! A clip on both ends. Handiest connector made for joining wires, making temporary circuits, repairs; for tests, experiments, etc. Cadmium-plated.

No.	List
7758-E	Env. 2 \$0.40



G-C MALE MICROPHONE CONNECTOR

Completely shielded, sturdy, single contact connector. Brass, bright chrome-plated. Steel spring cord protector.

No.	List
7940	Connector \$0.45

G-C FEMALE MICROPHONE CONNECTOR

Single contact female type used with No. 7940, 7941 and 7943 connectors. Complete, brass chrome-plated.

No.	List
7942	Connector \$0.55

G-C MICROPHONE CHASSIS UNIT CONNECTOR

Single contact male connector for chassis. Used with type 7942 female connector. Supplied complete. Brass nickel-plated.

No.	List
7941	Connector \$0.35

G-C MICROPHONE CONNECTOR

Single contact, closed circuit type, prevents open circuit noises when microphone is disconnected. Chassis type, use with type No. 7942 female connector. Brass, nickel-plated.

No.	List
7943	Connector \$0.55

G-C MICROPHONE CONNECTOR CAP

Chrome plated cap with anchor chain for all connectors. Seal against dirt and prevent thread damage.

No.	List
7944	Connector Cap \$0.50

G-C INSULATED ALLIGATOR CLIP

Solder type with Red or Black insulated sleeve. Strong spring. Nickel plated.

No.	List
5064	Red Clip \$0.20
5064-E	Env. of 2, .40
5065	Black Clip .20
5065-E	Env. of 2, .40



G-C CROCODILE CLIP

Set screw type. Teeth nest together to assure perfect contact with wires, etc. Cadmium-plated.

No.	List
7757	Clip \$0.20

G-C WEE-PEE-WEE CLIP

Very small and thin nosed with set screw for wire. Phosphor bronze. Ideal for coil work.

No.	List
7755	Clip \$0.25

G-C PEE-WEE CLIP

Popular test clip. Interlocking jaws assure positive contact. Set screw type.

No.	List
7756	Clip \$0.10

G-C ALLIGATOR CLIP

Solder type, non-insulated. Strong spring for positive contact. Nickel-plated.

No.	List
5063	Clip \$0.12
5063-E	Env. of 3, .40

G-C ALLIGATOR CLIP

Wire fastens under set screw. Handy for all types of connectors. Cadmium-plated.

No.	List
7752	Clip \$0.18

G-C SCREW TYPE INSULATED ALLIGATOR CLIP

Very popular. Bright polished handles. Set screw for wire.

No.	List
7750	Bk. Clip \$0.25
7751	Red Clip .25



G-C AMMETER CONNECTOR

Easily clips to the ends of screws. Positive fast connector.

No.	List
6307	Each \$0.12
6307-GBox 144	14.60

G-C SMALL CLIP

1/2" long by 3/16" wide. Handles up to No. 16 wire. No. 6 Mtg. Hole.

No.	List
6301	Each \$0.03
6301-GBox 144	2.10

G-C MEDIUM CLIP

3/4" long by 1/8" wide. Handles up to No. 14 wire. No. 6 Mtg. Hole.

No.	List
6302	Each \$0.03
6302-GBox 144	2.25

G-C LARGE CLIP

1 1/2" long by 3/8" wide. No. 8 Mtg. Hole.

No.	List
6303	Each \$0.04
6303-GBox 144	2.40

G-C MEDIUM SOLDER LUG CLIP

3/4" long by 1/8" wide. No. 6 Mtg. Hole.

No.	List
6306	Each \$0.04
6306-GBox 144	3.10

G-C DOUBLE CLIP

1 1/2" long by 1/8" wide. No. 6 Mtg. Hole.

No.	List
6304	Each \$0.14
6304-GBox 144	19.45

GENERAL



CEMENT

TEST PRODS - PLUGS - TIPS



G-C TEST LEAD WIRE

Ideal long-life replacement wire, extra flexible, 6000 volt insulation. Red and Black (Specify color).

No.	Env.	Length	List
5049	Red, 1 Black	50' long.	\$0.50
5049-C	100-ft.		5.00
5049-M	1000-ft.		45.00

G-C MASTER TEST LEADS

Heavy duty type. Very best. 6000 volt test, 50" extra flexible wire. Solderless connectors. Polished, colored plastic prods, removable tips. Brass nickel-plated. One Red, one Black lead.

No.	List
5050 Test Leads	\$1.50

G-C TEST PRODS

Solderless type non-breakable fibre. Removable tip, brass nickel-plated.

No.	Size	Color	List
5041	5 1/4"	Red	\$0.40
5042	5 1/4"	Black	.40
5043	7 1/4"	Red	.50
5044	7 1/4"	Black	.50

G-C LOW-LOSS DELUXE TEST PRODS

New polished low-loss material. Non-breakable. Moisture resistant. Withstands high voltages. Solderless type, brass nickel-plated.

No.	Color	List
5045	Red	\$0.50
5046	Black	.50

G-C NEEDLE POINT TEST PRODS

Adjustable chuck tip for needle. 6" polished plastic handles in Red or Black. Brass nickel-plated chuck removable. Includes needle. (Specify color).

No.	List
7701	\$0.50



G-C MODERN PHONE TIP PLUG

New type safety tip plug fits standard phone tip jack. Solderless connectors, brass plated nickel contact.

No.	Color	List
7704	Red	\$0.50
7705	Black	.50

G-C INSULATED TEST PROD TIPS

Unbreakable polished plastic insulated handles. Solderless connectors, brass nickel-plated.

No.	Color	List
5061	Red	\$0.24
5061-E	Env. 2	.40
5062	Black	.24
5062-E	Env. 2	.40

G-C TEST PROD TIPS

Solderless type, brass nickel-plated. Non-insulated. Wire fastens easily.

No.	Env.	List
5060		\$0.12
5060-E	Env. 3	.40

G-C PHONO NEEDLE POINT TEST PROD CHUCK

Threaded chuck fits 3/4-20 threaded hole. Needle removable. Brass nickel-plated. Includes needle.

No.	List
7702	\$0.18

G-C HEAVY DUTY PHONE PLUG

Standard type as used on test prods, leads, etc. Fits snugly in 1/4" hole. Brass nickel-plated.

No.	List
7706	\$0.15



G-C SOLID STANDARD PHONE TIP

Solid brass type made to RMA specifications. Bright nickel-plated.

No.	Env.	List
6321-E	Env. 8	\$0.40
6321-G	Pkg. 144	5.85

G-C STANDARD PHONE TIP

Made of drawn brass with hole through center for easy soldering of wire at tip. Bright nickel-plated.

No.	Env.	List
6320	Env. 16	\$0.40
6320-G	Pkg. 144	2.10
6629	Jan 30	.65

G-C PHONO NEEDLE POINT TEST PROD CHUCK

Push on type fits snugly in 1/4" hole. Brass nickel-plated.

No.	List
7703	\$0.15

G-C INSULATED PHONE TIP PLUG

Fits standard phone tip jacks. Polished non-breakable low-loss plastic insulated handles. Brass, nickel-plated tip. Minimum contact exposure.

No.	Color	List
7710	Red	\$0.15
7711	Black	.15

G-C INSULATED SPADE LUG

Tapered spade lug fits all screws or terminal strips up to No. 10. Insulated female end fits banana plugs.

No.	Color	List
7712	Red	\$0.16
7713	Black	.16



G-C PHONO TIP JACKS

Standard type with phosphor bronze spring contacts. Fits 1/4" hole and panels up to 3/8" thick. Brass parts nickel-plated.

No.	List
7714	\$0.10

G-C INSULATED PHONE TIP JACKS

Standard insulated type phosphor bronze spring contacts. 3/8" insulated lead. Fits 1/4" hole and panels up to 3/8" thick. Brass parts nickel-plated.

No.	Color	List
7715	Red	\$0.20
7716	Black	.20

G-C SPRING BANANA PLUG

Insulated solderless type with polished insulated handles. Non-collapsible spring action plug. Metal parts nickel-plated.

No.	Color	List
7730	Red	\$0.25
7731	Black	.25

G-C SET SCREW TYPE BANANA PLUG

Insulated set screw type. Polished insulated plastic handles. Non-collapsible spring action banana type plug. Nickel-plated metal parts.

No.	Color	List
7732	Red	\$0.20
7733	Black	.20

G-C SMALL BANANA PIN PLUGS

Approved silver-plated plugs with straight shank. Can be riveted or soldered. For wires, multiple plugs, etc.

No.	Env.	List
6400	Env. 10	\$0.40
JACKS FOR 6400 PLUGS		
6401	Env. 4	\$0.40



G-C SPRING BANANA PLUG

Standard size with 6-32 threaded shank. Use on plug-in coils, terminal strips, etc. Complete with lug and nut. Brass nickel-plated.

No.	List
7736	\$0.12

G-C SPRING BANANA PLUG

Standard size with 6-32 female thread on end. Supplied with screw and solder lug. Brass nickel-plated.

No.	List
7737	\$0.12

G-C BANANA JACK

Standard size banana pin jack. Fits 1/4" hole up to 3/8" thick panel. Nut and lug supplied. Brass nickel-plated.

No.	List
7740	\$0.10

G-C INSULATED BANANA JACK

Standard size with polished plastic insulators. Fits 1/4" hole, up to 3/8" thick panel. Nut, lug, and insulators supplied. Brass, nickel-plated.

No.	Color	List
7741	Red	\$0.15
7742	Black	.15

G-C RCA PHONO PIN PLUG AND JACK

RCA types used on many type receivers. Also used as auto antenna connectors.

No.	List
1742 Midget Plug	\$0.10
1742-E Env. 4	.40
1743 Midget Jek.	.15
1743-E Env. 3	.40

G-C INSULATED BANANA PLUG OR PHONE TIP JACK

Standard size insulated combination jack. Brass nickel-plated with phosphor bronze spring contacts. Fits 1/4" hole, panels up to 3/8" thick.

No.	Color	List
7744	Red	\$0.20
7745	Black	.20



G-C ALL-PURPOSE ALIGNMENT TOOL KIT

Most popular kit. Seventeen tools designed into nine basic tools some of which telescope into each other. Roll type leatherette case. Includes one each G-C tools Nos. 5001, 5003, 5004, 5011, 5016, 5017, 5053, 5056, 5057.



No.	Kit	List
5023		\$6.25

G-C PROFESSIONAL ALIGNMENT TOOL KITS

Complete kits. Be prepared to service every set with these Deluxe Alignment Kits. These are the preferred kits for radio men. In a handy roll-type leatherette case or a steel partitioned box. Kits contain one each of the following G-C tools described on these pages: Nos. 5000, 5001, 5002, 5003, 5004, 5005, 5011, 5012, 5013, 5015, 5016, 5017, 5018, 5019, 5031, 5032, 5033, 5034, 5035, 5051, 5053, 5056, 5057, 5081, 5082, 5083, 5084, 5085, 5086, 5087.



No. 5025



No. 5024

No.	Kit in Roll Type Case	List
5024		\$19.95
No.	Kit in Steel Box	List
5025		19.95

ALIGNMENT COMBINATION TOOLS

G-C COMBINATION ALIGNMENT TOOL



Popular bone fibre tool. Consists of screwdriver with metal nib, 1/8" slotted hex wrench and 1/16" hex wrench on other end.

No.	List
5014	\$0.85

G-C No. 5015 ALIGNMENT TOOL



Popular combination tool. Bone fibre. Includes metal screwdriver tip to fit hex wrench, 1/8" hex wrench, 1/4" slotted hex wrench and fibre screwdriver with metal nib.

No.	List
5015	\$1.35

G-C DELUXE COMBINATION ALIGNMENT TOOL



Most useful tool designed to use in cramped quarters. Bone Fibre. Consists of short screwdriver with metal nib and 1/4" hex side wrench with slotted 1/4" hex end wrench, 3/8" hex wrench and heavy metal screwdriver tip.

No.	List
5016	\$1.35

G-C INSULATED HEX WRENCH AND DRIVER



Combination insulated 1/4" hex wrench and screw-driver. Screw-driver can be extended for extra length. Made of bone fibre.

No.	Extends	List
5005	7"-13"	\$0.75
5006	Extends 11"-17"	1.00

ALIGNMENT SCREWDRIVERS

G-C NON-EXTENSION INSULATED WRENCH AND DRIVER



Combination tool 1/4" hex wrench on one end and screwdriver on other. 6" overall length. Made of bone fibre.

No.	List
5007	\$0.40

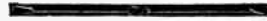
G-C ALIGNMENT SCREWDRIVER



Popular insulated tool. New low inductance material with metal nib. Strong and flexible. Two sizes.

No.	Size	List
5000	1/4" x 6"	\$0.40
5088	3/8" x 6"	.40

G-C BONE FIBRE ALIGNMENT SCREWDRIVER



Indispensable for all sets. Tough black bone fibre resists chipping. Can be reground. 1/4" blade on each end.

No.	List
5004	7" \$0.40

G-C POLYSTYRENE ALIGNMENT SCREWDRIVER

For U.H.F. sets. Best low loss material. 1/4" blades on both ends. Blades easily reground.

No.	Length	List
5008	7"	\$0.40

G-C DUPLEX NO-METAL ALIGNMENT SCREWDRIVER



In polystyrene or hard bone fibre. 1/4" blade on one end and 1/8" blade on other. 6" long. Tips easily reground.

No.	Material	List
5009	Bone Fibre	\$0.40
5010	Polystyrene	.40

G-C DUPLEX ALIGNMENT SCREWDRIVER



Made of Genflex low-loss material. Especially strong. 1/4" driver on end and 3/8" on other. Metal tips for extra strength.

No.	List
5001	\$0.75

G-C RCA TYPE ALIGNING SCREWDRIVER



Especially for push button adjustments. Narrow screwdriver on one end and recessed screw nib on other. 1/4" Bone Fibre.

No.	List
5003	\$0.75

G-C PHILCO, RCA TYPE TRIMMER TOOL



For neutralizing air trimmers. 3/8" bone fibre. Special clip-on end, metal tip on other.

No.	List
5086	\$0.60

G-C BALANCING TOOL



For adjustments in close quarters. Two 1/4" hex wrenches; one on side and other on end. Fibre screwdriver with metal tip.

No.	List
5084	\$0.50

G-C DUPLEX TUBE TAPPER



Handy soft rubber mallet on one end and insulated 1/4" bone fibre screwdriver on other.

No.	List
5081	\$0.65

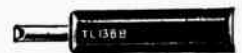
G-C MULTI-PURPOSE TOOL



For neutralizing padding condensers and iron core tuners. One end metal screwdriver, other sleeve socket screwdriver. Best steel, fibre handle.

No.	List
5091	\$0.75

G-C NEUTRALIZING TOOL



U.S.A. type TL-138-B. Special short tool. Bone Fibre.

No.	List
5066	\$1.50

G-C U.S.A. TYPE TL-138-A ALIGNING TOOL



To Government specifications. Sturdy. For tuning and aligning. 6" long. Bone Fibre.

No.	List
5098	\$1.00

G-C CABLE EYELET TOOL



For eyelets and rivets on dial cables, part assemblies, etc. Includes clincher punch and base. Tempered steel.

No.	List
741	\$1.00

G-C DIAL CABLE TOOL



Makes it easy to replace dial cords and springs. A necessity in cramped quarters.

No.	List
5096	Dial Cable Tool \$0.75

G-C FLEXIDRIVER



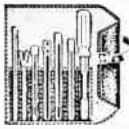
Flexible shaft for "hard to get places." Insulated guide for tip. Army-Navy approved. 7" overall length.

No.	List
5019	\$2.90



G-C DELUXE ALIGNMENT KIT

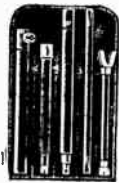
Fourteen most popular tools including Flexible Shaft Screwdriver and Tuning Wand, designed into seven basic tools, some of which telescope together. Contains one each Nos. 5002, 5004, 5011, 5014, 5016, 5017, 5019. In leatherette roll-type case.



No. 5026 Kit List \$7.50

G-C NX ALIGNING KIT

Popular approved Army - Navy Kit for all sets. Fourteen tool applications, some telescoping together, to form five basic tools. Contains Nos. 5004, 5011, 5017, 5015, 5016, and leatherette case.



No. 5020 Kit List \$6.50

G-C VEST POCKET ALIGNING KIT

Easy - to - carry all-purpose kit of popular tools. Four tools with telescoping parts making them equivalent to six. Contains Nos. 5012, 5000, 5003, 5004 and leatherette case.



No. 5022 Kit List \$3.00

G-C TE-45A NEUTRALIZING KIT

Approved by U. S. Signal Corps. All popular balancing tools to make an all-purpose kit. Contains two each Nos. 5051, 5052, and one each Nos. 5019, 5003, 5000, and 5" screwdriver in roll-type leatherette case.



No. 5021 Kit List \$6.75

G-C ALIGNMENT TOOLS AND WRENCHES

G-C INSULATED ALIGNING WRENCHES



Popular sizes. Hoxed full-length bone fibre tubing. Just cut off to renew when worn.

No.	Length	Across Flat Diam.	List
5051	5"	5/8"	\$0.30
5052	5"	1 1/8"	.25
5053	6"	1 1/4"	.35
5054	8"	1 3/8"	.40
5055	12"	1 3/4"	.50

G-C PHILCO TYPE ALIGNMENT WRENCH



5/8" Hex Wrench on one end, metal hook for air trimmers on other. For RCA, Victor, Philco, etc. Bone fibre handle.

No. 5085 List \$1.50

G-C DUPLEX WRENCH ALIGNMENT TOOL



Long life 1/4" hex wrench on one end and 3/8" hex wrench on other. Brass nickel-plated. Tapered bone fibre handle.

No. 5017 List \$1.25

G-C DUPLEX ALLIGATOR WRENCH



RCA, Philco type. Metal alligator wrench on one end, alignment screwdriver with metal tip on other. 3/8" shaft. Insulated bone fibre.

No. 5011 List \$0.50

G-C DOUBLE ALLIGATOR ALIGNING WRENCH



5/8" bone fibre handle with alligator wrench on one end and 1/4" brass hex wrench on other. Popular.

No. 5012 List \$0.50

G-C INSPECTION MIRROR



New! For close inspection of parts in hard-to-get-at quarters, under chassis, etc. Long handle.

No. 5090 List \$0.50

G-C WRENCH AND SCREWDRIVER ALIGNING TOOL



Popular 1/4" hex wrench on one end, 3/8" metal nib screwdriver on other. Bone-fibre-insulated handle.

No. 5013 List \$0.35

G-C BAKELITE 5/16" WRENCH



Molded 5/8" hex wrench with reinforced brass collar. Metal screwdriver tip included.

No. 5083 List \$0.50

G-C "STRATO" TUNING WAND



Chrome brass cylinder, iron core on ends of low loss girthflex rod. Inserting core in coil increases inductance, brass end decreases inductance. Checks tuning fast.

No. 5002 List \$1.00

G-C TEST PROBE



Checks loose connections and parts. Metal hook on one end and insulated fibre tip on other.

No. 5082 List \$0.50

G-C SCREWDRIVER



Insulated. One size for knobs, other for small parts. Best tempered steel.

No. 5056 1/8" x 3" List \$0.25
No. 5057 3/8" x 3" .75

G-C BAKELITE ALIGNMENT TOOL



U. S. Army type TL-207. Combination 3/8" Hex Wrench with telescoping screwdriver. Moulded bakelite, reinforced with metal.

No. 5027 List \$2.25

G-C ARMY-NAVY TYPE NEUTRALIZING TOOL



Approved. Double end bakelite tool 3/2" diam, x 6" long.

No. 5099 List \$1.25

G-C ZENITH PUSH-BUTTON WRENCH



5/8" hex on one end, slotted on other. Tempered steel, nickel-plated. Necessity for Zenith sets.

No. 5094 List \$0.17

G-C CONTACT ADJUSTER



Handy for contacts on switches, jacks, condenser plates, relays, pinball-coin machines, radios. Tempered steel, nickel-plated.

No. 5095 List \$0.17

G-C TELEVISION AND F-M WRENCH AND SCREWDRIVER



Adjusts smallest trimmer condensers. Small 3/8" screwdriver on one end, reinforced 5/8" hex wrench on other. 6" long. Bone fibre.

No. 5067 List \$1.00

G-C TELEVISION AND F-M TOOLS

G-C TELEVISION ALIGNING WRENCH



New Television Tool! 1/4" socket wrench, 3/8" steel shaft with insulated handle. Approx. 6" overall length.

No. 5080 List \$0.75

G-C T-V AND F-M ALIGNING TOOL



Socket-type screwdriver of tempered steel. Bone fibre handle.

No. 5018 List \$0.75

G-C BENDIX-RCA TELEVISION SCREWDRIVER



For push buttons, television and F.M. Small diameter. Metal tip on one end and recessed tip on other. Insulated bone fibre.

No. 5087 List \$0.75

G-C K-TRAN ALIGNING TOOL



Special bone fibre screwdriver one end, reinforced 3/8" hex wrench driver on other. Especially for F-M and television sets.

No. 5097 List \$0.75

G-C RADIO BATTERY PLUGS



Part No.	Voltage	For Burgess No.	For Eveready No.	For R.C.A. No.	For Philco No.	For Ray-O-Vac No.	List Price
7803	45 "B" Large	A-0, B-0, M30, Z-0	182, 738, 762	VS012, VS013, VS014, VS015	P210, P305	120P, P7830, P5303	\$0.11
7804	Same as No. 7826, except has			Falmestock Clips			.25
7805	Same as No. 7829, except has			Falmestock Clips			.40
7806	1 1/2 "A"	G-3	746	VS002	P100	P-83A	.11
7807	1 1/2 "B" Small	A-0, B-0, M30, Z-0	182, 738, 762	VS012, VS013, VS014, VS015	P210, P505	430P, P7830, P5303	.11
7808	1 1/2 "A"	4FL, 6F, 8F, 8FL, TE	711, 742, 743, 1052P	VS004, VS005, VS007, VS008	P04, P96, P8F1	P94, P94L, PN, P96A, P98A, P98L	.11
7809	1 1/2 "A" 90 "B"	17GD60, 5DA60, 2FA60	758	VS022, VS043	P60D11L	AB82, 10793	.13
7810	6 "A"	2F4L, F1P1, T5	A509, 718, 744, 747	VS009, VS010, VS011	P4F1R	P604A, P606L, P608A, P608L	.11
7811	6 "A" 90 "B" etc.	2F4B60, etc.		VS003		P87A	.13
7812	7 1/2 "A"	4F5	687	VS003		P87A	.11
7813	1 1/2 "A" 90 "B"	6FA60, 4GA11, 4GA42		VS037	P60A-4L, P11A1G	AB119	.13
7814	7 1/2 "A" 90 "B"	G5A42, P5A60			P87, P841	AB791	.22
7815	6 1/2 "B"	XX30, XX45	155, 167	VS016, VS016		P1367	.09
7816	6 1/2 "B"	XX30, XX45	155, 167	VS016, VS016		P1367	.11
7817	Same as No. 7803, except has			Falmestock Clips			.25
7818	Same as No. 7805, except has			Falmestock Clips			.20
7819	6 "A" 75 "B" etc.	G4B50, etc.					.13
7820	6 "A" 90 "B"	F1B60		VS018			.15
7821	6 "A" 90 "B"	2FA60		VS044	P60A8P4	AB691	.13
7822	6 "A" 90 "B"	4FA60					.22
7823	Same as No. 7824, except has			Falmestock Clips			.20
7824	6 "A" 90 "B"	20F2	X125	VS025	P8024	P9103	.11
7825	"AB" Batt. Packs	Usalite	AB5671		P60A110		.13
7826	4 1/2 "C"	2370P1	X771	VS030	P4D	P221W	.11
7827	1 1/2 "B" 9 "C"				37.08, 3738, etc.		.22
7828	1 1/2 "B" 13 1/2 "C"				34, 31A, 39, 39A		.27
7829	2 1/2 "C"	5156P1	768	VS031	P15R5	P5151	.22
7830	2 prong large with one thin and one thick. Popular on Portables.						.11
7831	9 "A" 90 "B"	P8A60, G6M60	755, 754	VS018, VS019	P841A	AB878, AB991	.22



G-C DIAL AND KNOB REPAIR KIT

Handy assortment of knob springs, set screws, dial springs, idler pulleys and drive rubbers in box.

No.	List
1015 70-pc. Kit.	\$2.25
1016 150-pc. Kit.	4.50

G-C PLASTIC JAR HARDWARE ASSORTMENT

Approximately 1000 assorted screws, nuts, washers, springs, clamps, eyelets, ground-sets, terminals, etc. No cast-offs - only regular hardware.

No.	List
6064 1000 Assd.	\$1.65
6056-E Env. 100 Assd.	.40

G-C HELL BOX

A grand assortment of useful hardware: screws, nuts, lugs, clips, washers, clamps, etc. Thousands of items needed every day. Metal hinged box.

No.	List
6500	\$3.25



G-C STEEL HARDWARE RACK

Steel racks, hold No. 4002 2 oz. glass bottles or plastic jars. Attractively finished. Welded construction. Heavy steel. Two sizes.

No.	Size	List
4010	20 Jars	\$1.75
4012	40 Jars	2.50

G-C STEEL STOCK BOXES

Slide-in drawer type cabinet box for parts. Made so can be stacked. Attractive finish, steel welded construction with handle. Size 13 1/2" long, 6" wide, 4" high.

No.	List
4001	\$2.50

G-C SERVICEMEN'S HARDWARE ASSORTMENT

Inexpensive complete hardware assortments. Similar to larger hardware lab Ass't No. 1 like No. 6601; and No. 2 like No. 6602 (Page F-139). Items individually packaged.

No.	Asst.	List
6303-D	#1	\$8.00
6603-2-D	#2	8.00



G-C VENTILATING PLUGS

To ventilate chassis, amplifier racks, transmitters, etc. Snaps into 1-inch hole. Plated.

No.	List
1709-E Env. 4	\$0.40

G-C PLASTIC HARDWARE JARS

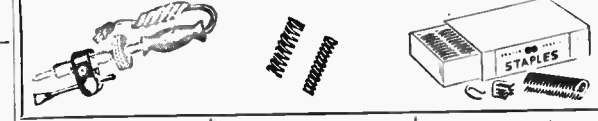
4 oz. size wide mouthed plastic jar with screw type cap. Ideal for hardware.

No.	List
4000	\$0.35

G-C GLASS HARDWARE JARS

Wide mouthed jars, for storing small radio parts, screws, nuts, etc. Includes cap.

No.	Size	List
4002	2-oz.	\$0.12
4004	4-oz.	.20
4008	8-oz.	.25
4009	16-oz.	.35



G-C SOLDERING COOLANT AND FLUX ATTACHMENT

Here's a handy attachment that you can put on any soldering iron and speed up production and repairs. No waiting for solder to cool. Dip the brush in a coolant and cool the solder instantly! Also can be used for soldering flux or paste.

No.	List
720	\$0.25

G-C SOLDERING WIRE COUPLERS

(Patent Pending) New patented connectors to be used when re-connecting cut wires and leads, when making tests, etc. Saves time! Simply slip between wires and solder. Assorted lengths.

No.	List
7500-E	\$0.40

G-C STAPLE DRIVER STAPLES

Hardened steel staples in cartridge form to fit staple drivers. Lacquer coated.

No.	List
430 Box 250	\$0.60

G-C RADIO BATTERY PLUGS

For all plug-in radio batteries. It pays to have an assortment to be ready for all repairs. Plugs as listed above. Complete with box and handy reference chart.



No. 7801	100 Assd. Plugs, Metal Box	List \$12.00
No. 7800	50 Assd. Plugs, Cardboard Box	List 5.50

G-C INSULATED BELL STAPLES

Saddle-type insulated staples for holding wires in place and out of the way.



No.	Fig.	Size	List
1751	1	3/8" x 1/2"	\$0.20
1752	1	Box 50, No. 1	.35
1753	2	3/8" x 5/8"	.20
1754	2	Box 50, No. 2	.35
1755	3	3/8" x 3/4"	.20
1756	3	Box 100, No. 3	.35
1757	5	1/4" x 5/8"	.20
		Box 50, No. 5	

No.	Fig.	Size	List
1758	6	1/4" x 3/4"	\$0.35
1759	6	Box 100, No. 6	.35
1760	7	1/4" x 7/8"	.35
		Box 100, No. 7	
		Extra Large Cable Size	
1761	10	3/8" x 3/4"	.65
		Box 100, No. 10	

G-C STANDARD SPEEDEX WIRE STRIPPER

Fast operating precision made hand tool for stripping insulation from all types of wire. Very easy to operate. Strips 750 to 1000 wires per hour. Used by girls or men. All blades are interchangeable and easily replaced.



Standard Models

No.	Wire	List	No.	Wire	List
733	12 to 20	\$6.00	733-G	For \approx 18 P.O., S.J. or parallel wire	\$6.00
733-A	14 to 30	6.00			
733-B	10 to 18	6.00	733-H	For the new 300-ohm television and FM transmission line	6.00
733-C	8 to 10	6.00			
733-D	16, 18, 20, 22	6.00			
733-E	14, 16, 18	6.00			
733-F	10, 12, 14	6.00			

G-C AUTOMATIC SPEEDEX WIRE STRIPPER

Similar to standard models except has the "stay open feature" with the new Speedex "Trig-O-Matic Action." Automatically holds jaws open until wire is removed, and prevents bending or crushing of fine wires. Has on-off mechanism so tool can be used as standard model if desired.



Automatic Models

No.	Wire	List	No.	Wire	List
744	12 to 20	\$8.00	744-G	For \approx 18 P.O., S.J. or parallel wire	\$8.00
744-A	14 to 30	8.00			
744-B	10 to 18	8.00	744-H	For the new 300-ohm television and FM transmission line	8.00
744-C	8 to 10	8.00			
744-D	16, 18, 20, 22	8.00			
744-E	14, 16, 18	8.00			
744-F	10, 12, 14	8.00			

G-C SPEEDEX WIRE STRIPPER KIT

Wire stripper complete with seven different size blades put up in a specially designed permanent steel box. For wires No. 8 to No. 30. Helps keep all the parts together in one kit. Available with automatic or standard model strippers.



No.	Description	List
733-K	Standard Stripper Kit, with blades	\$15.00
744-K	Deluxe Automatic Stripper Kit, with blades	17.00

G-C SHUR-GRIP PLIER WRENCH

Here's a universal handy all-purpose plier wrench. This is something new and different from the average Grip Wrench. It works with a short pawl against the cam handle, giving it extra power. IT UNLOCKS WITHOUT SNAPPING THE FINGERS. Jaws are forged from alloy steel and specially heat treated for toughness and durability. It is a high quality tool.



No.	Description	List	Dealer's Net
767	7" Shur-Grip	\$3.50	\$1.80
770	10" Shur-Grip	3.95	1.95



G-C SPEEDEX REPLACEMENT BLADES

Fit standard and automatic models. Blades interchangeable.

No.	Wire	List
3W	12 to 20	\$1.50
3W-A	14 to 30	1.50
3W-B	10 to 18	1.50
3W-C	8 to 10	1.50
3W-D	16, 18, 20, 22	1.50
3W-E	14, 16, 18	1.50
3W-F	10, 12, 14	1.50
3W-G	Blades for parallel No. 18 P.O.S.J. or similar	1.50
3W-H	Blades for the new 300-ohm television and FM twin transmission line	1.50

G-C SPEEDEX STRIPPER BENCH HOLDER

Bench type holder for any model Speedex Wire Stripper. Converts a hand operated tool to a bench type and increases production up to 2,500 wire strippings per hour. Steel.

No.	Description	List
755	Bench Holder	\$3.75

G-C SPEEDEX TRIG-O-MATIC PLATE (Patent Pend.)

Converts any standard model Speedex Stripper to an Automatic Model. Easy to install.

No.	Description	List
756	Trig-O-Matic Plate, only	\$2.00

G-C SOLDER IRON TIPS

Best grade hard-drawn copper, bright plated to resist corrosion. Heats fast and holds heat.

No.	Description	List
724	$\frac{3}{4}$ " x 3"	\$0.45
725	$\frac{1}{2}$ " x 4 $\frac{1}{2}$ "	.55
726	$\frac{3}{8}$ " x 4 $\frac{1}{2}$ "	.60
727	$\frac{3}{16}$ " x 4"	.75



G-C INSPECTION LITE

Portable type, lights up those "hard-to-see" spots. Operates on 110-120 volts AC or DC. Cord approx. 6 ft. long. Molded handle and non-inflammable clear plastic shield over bulb.

No.	Description	List
705	Inspection Light	\$1.75
704	Replacement Bulb for No. 705	.15
704-S	Clear Plastic Shield	.15

G-C LO-VOLT TESTER

For 0-15 volts AC or DC. For all low voltage testing on cars, generators, batteries, bell circuits, etc. Shielded bulb easily replaced. Molded plastic handle and insulators.

No.	Description	List
5125	Lo-Volt Tester	\$1.25
5126	Bulb for No. 5125	.25
5127	Shield for No. 5125	.15

G-C THERMO-VOLT CIRCUIT TESTER

Tests from 15 to 60 volts AC or DC on thermostats, aircraft, trains, marine lighting, 28-32 volt light plants, etc. Molded plastic case and insulated tips.

No.	Description	List
5150	Thermo-Volt Circuit Tester	\$1.75

GC CARBON BRUSH KIT

Complete assortment replacement brushes, for vacuum cleaners, washing machines, ironers, pumps, fans, etc. Contains 92 brushes and 18 springs.

No.	Description	List
7000	Carbon Brush Kit	\$8.25

GENERAL CEMENT SERVICE AIDS—TOOLS—SHIMS

G-C CHASS-EZ (Pat. Pending)

New wonder tool makes the Serviceman's job easier. Its simplicity is its chief merit. Chassis can be installed on "Chass-Ez" in five seconds. All one unit — no extra bolts or nuts to adjust. Heavy steel, riveted construction, nicely plated.



No. 5207
List \$3.65
Dealer's Net Only 1.95

G-C PHONO TURNTABLE STAND

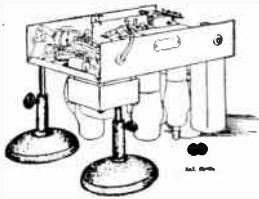
New improved model, adjustable and inexpensive. Adaptable to all turntables. Raises the turntable 15 inches above bench and can be pivoted on the swivel joints for easy examination or repairs. Sturdy steel construction. Plated.



No. 5205
List \$6.65
Dealer's Net Only 3.99

G-C RADIO JACKS

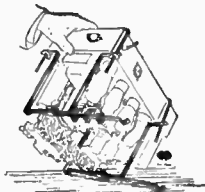
Permanent type adjustable jacks. All metal construction. Adjustable to fit any set or conditions. Easily and quickly adjusted. Two jacks supplied with three extension rods — one extra long. You need several sets in your shop.



No. 711
List \$1.95
Dealer's Net Only 1.17

G-C RADIO CHASSIS GUARDS

Inexpensive guards that protect the chassis and tubes when servicing. Set can be turned in any position. Easily applied and adjustable to all sets. Permanent plated metal construction.



No. 709
List \$2.25
Dealer's Net Only 1.35

G-C MINIATURE TUBE PIN STRAIGHTENER

Saves tubes! Straightens without damage the pins on the fragile miniature tubes such as 1A5, 6AK5, 9002, etc. Just insert tube between guide pillars into precision base die and tube prongs are straightened and properly spaced. All metal.



No. 5191
List \$1.00

G-C TUBE AND PARTS EXTRACTOR

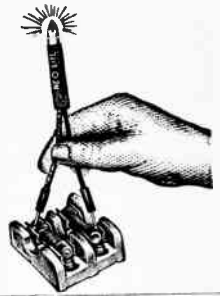
U. S. Signal Corps part No. T1. 201. Handy prong tool for extracting tubes and picking up parts. Rubber cushions on prongs.



No. 5092
List \$1.00
Tube Extractor

G-C NE-O-LITE

Simple, safe, electrical circuit tester. Uses neon glow lamp which varies in brightness according to voltages. Tests cords, appliances, automotive ignition circuit, fuses, radios, electric fences, etc. For 60-volts AC to 550 volts AC or DC. Molded plastic, handy vest pocket size. Buy a display and sell your customers.



No. 5100
List \$0.50
5112-D Display 12 No. 5100 6.00

G-C NE-O-LITE WIRE



Wire same as used on Ne-O-Lite Testers. #18 stranded, rubber covered with a red or black braid, varnished. For ignition wiring, motor wiring, etc. Red or Black — Specify color.

No. 5113 100 Ft. List \$4.00

G-C RESISTOR FOR NEON LAMP



Required resistor when using No. 717 neon lamp on voltages of 60 to 550 volts AC or DC. Connect in series.

No. 718 List \$0.10

G-C NEON GLOW LAMPS



NE-T2 lamp as used in testers, appliances, as pilot light, etc.

No. 717 List \$0.20

G-C AMO MINIATURE TUBE PULLER (Pat. Pending)

Prevents burned fingers and broken tubes. Makes it easy to remove and install tubes such as 6AG5, 50B5, etc. Works on suction and vacuum principle. Operates just by pressing on the tube and to release, just press the release button. Tube protected by rubber sleeve. Gets where your fingers can't reach. Permanent metal.



No. 5093 List \$1.65

G-C FIBRELOID SPEAKER SHIMS

Shims made of tough and flexible fibreloid. Non-magnetic. 4 each of 5 sizes — twenty in all: Sizes, .005", .0075", .010", .0125", and .015". Color coded. Supplied in gold lettered leatherette snap case with instructions.



No. 702 Kit List \$0.60

G-C SWEDISH STEEL SPEAKER SHIMS

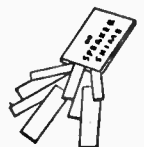
Makes it easier to center speaker voice coil. Permanent flexible Swedish steel. 4 shims each of 4 sizes coded for identification: .004", .006", .008" and .010" thick. Supplied in gold stamped leatherette partitioned snap case. Complete with instructions.



No. 701 Kit List \$0.65

NEW! G-C SPEAKER SHIM KIT

For every type of speaker adjustment. A generous supply of Fibreloid and bronze shim stock in the various widths and thicknesses needed for speakers. Non-magnetic material. Stock can be cut to exact requirements. A long-lasting assortment. Complete instructions.



No. 7720 Kit List \$2.00

GENERAL



CEMENT

**RECORDING WIRE
STATIC CHASER — TOOL KITS**

G-C RECORDING WIRE



For all wire recorders. Includes plastic leads. Permanent recordings which can be replayed indefinitely. Finest quality reproduction on stainless steel wire. Standard RMA spool fits Webster, Air King, Sears Roebuck, etc.

No.	Leaders with Spools	Consumer's		Dealer's	
		List	Net	List	Net
5171	1-hr. Spool	\$6.95	\$5.00	\$3.50	
5172	1/2-hr. Spool	4.18	3.00	2.10	
5173	1/4 hr. Spool	2.78	2.00	1.40	
5174	Leaders only, for Armour type recorders, per pair	.20	.16	.11	
5175	Empty Rewind Spool	1.00	.70	.49	

G-C REPLACEMENT AUTO AERIALS

FORD ROOF AERIAL
Ford-Mercury Part No. 51A-18813-A1



Replacement aerial for all Ford and Mercury Roof Aerials of 1941-42-46-47-48 that operate from behind the dividing post of the windshield. Made of Admiralty brass tubing with stainless steel extension rod, triple chrome plated. Free sliding with positive contacts insure noise-free reception. Easy to install, fits without changes, replaces original aerial. Comes complete with knob and set screw.

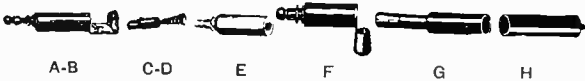
No. 7056	Ford Roof Aerial	List \$2.25
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BUICK REPLACEMENT ANTENNA
Buick Part No. 980,688

Standard Buick Roof Aerial Mast. The replacement mast for Buick Roof Aerials on models 1940 through 1949. Easy to replace — merely tightens into position with a set screw. Admiralty brass tubes with a stainless steel top rod. Chrome plated. Each mast individually packed in a paper tube. Standard packing — 10 tubes to a carton.

No. 7057	Buick Antenna Mast	List \$2.75
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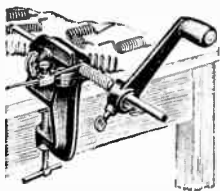
G-C IGNITION SUPPRESSORS



A rugged long-life assortment of bakelite auto radio ignition suppressors. Resistance, 10,000 ohms (V-8 types), 50,000 ohms. Resistors, moisture-proofed to eliminate variations due to weather changes. Impervious to heat, oil, moisture and mild acids. All metal parts brass. Good for more than 50,000 miles.

No.	List	No.	List
(a) 1501 Bracket Type	\$0.30	(e) 1505 Screw Type, Universal	\$0.30
(b) 1502 Ford V8	.30	(f) 1506 Snap-On Type	.30
(c) 1503 Ford V8 Brush Type, 33, 34, 35 Cars	.30	(g) 1507 Distributor Type	.30
(d) 1504 Ford V8 Brush Type, 36 to 40 Cars	.30	(h) 1508 Cable Type for Splicing Cables	.30

G-C SPRING MAKER
(Pat. Pending)



Makes all types of coil springs — compression or extension types — with any number of coils or degree of wire pitch. Designed for simple adjustment and operation with any size spring wire. Necessary whenever springs must be made fast or to special specifications. Liberal supply spring wire furnished with each winder. Fastens to any bench.

No. 5209	Spring Winder and Asst. Spring Wire	List \$16.58	Dealer's Net \$9.95
5210	Replacement Asst. Spring Wire	2.50	1.50

G-C STATIC POWDER AND INJECTOR GUN



It really works, cuts down auto radio static. Inject powder in tubes, and eliminate wheel tire static. Easy to apply. Powder also cuts down tire trouble by eliminating those pin-point tube leaks caused by tire static discharge. Powder blown into tube with G-C Injector Gun. Every car should be treated with G-C Static Chaser Powder.

No. 5604	Injector Gun, only	List \$1.50
5605	Packet Static Powder for 5 tires (1 car)	1.00
5606	Kit, one No. 5604 Injector, and one No. 5605 Powder	2.50

G-C DIAL POINTER KIT



A complete kit of 10 assorted dial pointers. Pointers come in a clear transparent plastic case which keeps the pointers in perfect condition.

No. 6810	List \$2.95
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G-C DIAL POINTERS

Popular replacement pointers.

No.	List
(a) 6801 3" Rotary Pointer for 1/4" shaft, gold	\$0.35
(b) 6802 5" 360° Rotary Pointer for 1/4" shaft, gold and red	.35
(c) 6803 2" Slide Pointer, red translucent	.25
(d) 6804 2 1/4" Slide Pointer, white enamel	.25

G-C VACUUM CLEANER BELTS



Dealers and servicemen earn extra money by selling belts. Display in your store for "cover the counter sales." Best grade live rubber belts marked for identification. Popular belt assortments on displays.

No.	List	
1010-D	Asst. 12 Belts, Most Popular	\$2.80
7010-D	Asst. 12 Popular Flat Belts	2.70
7011-D	Asst. 12 Popular Round Belts	3.00

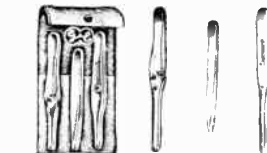
(Individual belts available — see your Distributor)

G-C HUB CAP STATIC SPRINGS



Eliminate wheel static noise developed by poor electrical contact between front axle and wheels. Springs have riveted metal points for firm, smooth contact. Plated.

No. 1058	Each	List \$0.11
1059	Box, 24 Springs	2.30



G-C TWEEZERS AND KIT

For the shop or laboratory to pick up and examine small parts, start screws and nuts, to get in hard-to-get spots. Striking dial cord, fastening springs, etc.

No. 7950	Tweezer Kit, beautiful leatherette case and one each tweezers described below	List \$3.25
7946	6 1/2" Self-closing tweezers. One's also serrated. Serrated, blunt points	0.50
7947	6 1/2" Heavy duty type with slide lock feature. Holds wires or parts tight like an extra finger. Serrated blunt points	1.20
7948	4 1/2" Precision Tweezer. Narrow pointed ends for delicate work.	0.55

*Standard Jobber's quantity — 12 tweezers on display card — Add suffix 11



G-C TOOL HANDLE INSULATING KIT

Special insulated sleeving for handles of pliers, cutters, screw-driver blades, connectors, etc. Tough material, high dielectric strength. Just soak in expanding solution and apply. Shrinks to a form-like tight fit. Approx. 12 ft. assorted sizes and colors tubing, and an expanding liquid. Instructions included.

No. 7945	List \$1.65
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G-C SHAFT COUPLINGS, EXTENSIONS AND REDUCERS

BRASS FITTINGS		INSULATED FITTINGS	
No.	List	No.	List
6701	1/4" to 1/2" coupling... \$0.25	6721	1/4" to 1/2" coupling... \$0.25
6702	1/2" to 3/4" coupling... .30	6722	1/2" to 3/4" coupling... .30
6703	3/4" to 1" coupling... .25	6723	1/2" to 3/4" coupling... .25
6704	3/4" to 3/8" coupling... .30	6724	3/4" to 1" coupling... .30
6705	3/4" hole to 1/4" shaft extension... .30	6725	3/4" hole to 1/4" shaft extension... .30
6709	3/4" hole to 3/8" shaft extension and increaser... .30	6731	1/4" hole to 3/8" shaft extension and increaser... .30
6710	3/4" hole to 1/2" shaft extension and reducer... .30	6732	3/4" hole to 1/2" shaft extension and reducer... .30
6711	3/4" hole to 3/8" shaft extension... .30	6733	3/4" hole to 3/8" shaft extension... .30
6712	1 1/2" x 6" brass shaft... .20	6734	1 1/2" x 6" fibre shaft... .30
6713	1 1/2" x 12" brass shaft... .35	6735	1 1/2" x 12" fibre shaft... .55
6714	3/4" x 6" brass shaft... .35	6736	3/4" x 6" bakelite shaft... .60
6715	3/4" x 12" brass shaft... .60	6737	3/4" x 12" bakelite shaft... 1.00
6716	3/4" hole x 1/4" round shaft x 4" long... .35	6738	3/4" x 6" fibre shaft... .45
		6739	3/4" x 12" fibre shaft... .80



G-C REDUCING BUSHINGS

For knobs and shafts. A split bushing that really works. Brass. Easy to use.

No.	List
6751	3/4" to 3/8" reduction, 8 in. Env. \$0.40
6751-G 144 No. 6751 (Gross)	6.50



G-C SHAFT EXTENSIONS

Popular 1/4" shaft extension with flat shaft for spring type push-or-knobs.

No.	List
6755	3/4" x 1/4" Long Flat Shaft Extension \$0.35
6716	3/4" x 4" Long Round Shaft Extension .35



G-C BRASS AND INSULATED SPACERS AND BUSHINGS

Spacers and Bushings needed for insulating and spacing of parts. Needed on chassis, sub-panels, etc.

No.	Assortments	List
6617	Hardware Lab. Jar 12 Assorted Spacers and Bushings	\$0.65
6760-E	Env. 12 Asst. Ins. Spacers	.40
6762	15 Asst. Threaded Brass Bushings 6-32 thread, 1/4" to 3/4" lg.	1.25
6763	15 Asst. Threaded Brass Bushings 8-32 thread, 1/4" to 3/4" lg.	1.25
6775-E	Env. 12 1/4" x 1/4" Ins. Spacers	.40
6776-E	Env. 8 1/4" x 3/8" Ins. Spacers	.40
6779-E	Env. 6 3/8" x 1/4" Ins. Spacers	.40
6761-E	Env. 12 Asst. Metal Spacers	.40
6765-E	Env. 10 1/4" x 1/4" Metal Spacers	.40
6766-E	Env. 8 1/4" x 3/8" Metal Spacers	.40
6769-E	Env. 6 3/8" x 1/4" Metal Spacers	.40

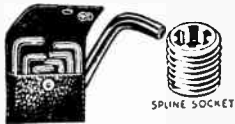
BRASS			INSULATED				
No.	O.D.	Length	List	No.	O.D.	Length	List
6765	1"	1/4"	\$0.04	6775	1/4"	1/4"	\$0.04
6766	1"	3/8"	.05	6776	1/4"	3/8"	.05
6767	1"	1/2"	.05	6777	1/4"	1/2"	.05
6768	1"	3/4"	.06	6778	1/4"	3/4"	.06
6769	3/8"	1/4"	.05	6779	3/8"	1/4"	.05
6770	3/8"	3/8"	.06	6780	3/8"	3/8"	.06
6771	3/8"	1/2"	.07	6781	3/8"	1/2"	.07

THREADED BRASS BUSHINGS

Thread				Thread					
No.	O.D.	Size	Length	List	No.	O.D.	Size	Length	List
6785	1/4"	6-32	1/4"	\$0.05	6790	1/4"	8-32	1/4"	\$0.05
6786	3/8"	6-32	3/8"	.07	6791	3/8"	8-32	3/8"	.07
6787	1/2"	6-32	1/2"	.08	6792	1/2"	8-32	1/2"	.08
6789	3/4"	6-32	3/4"	.09	6793	3/4"	8-32	3/4"	.09



HEX SOCKET



SPLINE SOCKET

G-C ALLEN-HEX WRENCHES AND KITS

Essential key wrenches for every repair man. Made of special alloy steel properly hardened. Used on knobs, dials, phono needles, motors, pulleys, etc.

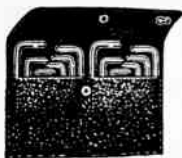
HEX KEY WRENCHES	
No.	List
5030	Env. 4 Asstd. Wrenches \$0.40
5029	Kit 6 Asstd. Wrenches in Leatherette Case .75
5029-A	Env. 3 Hex Key Wrenches for No. 3/8" to 3/8" Set
	Screws .40
5031	No. 4 .11
5032	No. 5 .11
5033	No. 8 .11
5034	No. 10 .11
5035	1/4" .11
5036	5/16" .12
5037	3/8" .12
5038	1/2" .14

G-C BRISTO-SPLINE WRENCHES AND KITS

Very popular "Bristo" or "Spline" type wrenches as used on phono needles, motors, pulleys, knobs, etc. Made of alloy steel, properly hardened.

No.	List
5069	Env. 4 Asstd. Wrenches \$0.40
5070	Kit 6 Asstd. Wrenches in Leatherette Case .75
5071	No. 4 .11
5071-A	No. 5 .11
5072	No. 6 .11
5073	No. 8 .11
5074	No. 10 .11
5075	1/4" .11
5076	5/16" .12
5077	3/8" .12
5078	1/2" .14

G-C ALLEN-BRISTO WRENCH KIT



Complete wrench kit for hex and spline type screws used in electronic field. Double snap button case of durable leatherette. Fit No. 2 to 3/8" screws.

No.	List
5028	\$1.65

Dealer's Net .39



G-C 8-PIECE VEST POCKET SET

Handiest tool! Seven sockets, 1/4", 5/16", 3/8", 1/2", 5/8", 3/4", 1" hex; 3/8" round knurled, 1/4" square, complete with 4" L handle. Ball type socket assembly. Baked enamel box.

No.	List
712	\$1.40



G-C WIRE STRIPPER

5-in-1 tool. Wire stripper, scraper, cutter, screwdriver, and wire winder all in one. Tempered steel, plated.

No.	List
757	\$0.25



G-C 6-PIECE SLIP-ON WRENCH SET

Handle holds five sockets, sizes 1/4", 5/16", 3/8", 1/2", and 5/8". Easily assembled. Tempered steel, plated.

No.	List
715	\$1.50



G-C FUSE PULLERS

For cartridge fuses. Heavy duty construction of high dielectric material.

No.	List
5525	Midget size, for fuses 1/4" to 1/2" \$0.50
5526	Large size, for fuses 1/2" to 1 1/2" 1.00



G-C ELECTRONIC HARDWARE LABORATORIES

Complete assortment of hardware. Rack contains several thousand essential electronic hardware items. Packed in clear jars with screw caps. Assortments as below: Free Steel Rack!

No.	List	Dealer's Net
6604	DeLuxe Hdwe. Laboratory, 40 jars, as in assortments No. 6601 and 6602, as below \$26.00	\$15.60
6601	No. 1, 20 jar asst. 1 each jars G-C No. 6605 through 6624 (see hardware pages U-140, U-141, U-142).	13.80
6602	No. 2, 20 jar asst. 1 each jars G-C No. 6625 through 6644 (see hardware pages U-140, U-141, U-142).	13.80



4-IN-1 CARD DISPLAY OR BOX
20 ENVELOPES TO A CARD BOX
When Card is wanted Specify "C" after No.
When Box is wanted Specify "B" after No.

PLASTIC ENVELOPES
Transparent and Unbreakable
List Price **40¢**

GLASS JARS
For Hardware Racks
List Price **65¢**

BOXES OF 144
(One Gross)
Specify "G" after Part No.

BOXES OF 1000
Specify "M" after Part No.



4-IN-1 CARD DISPLAY OR BOX
20 ENVELOPES TO A CARD BOX
When Card is wanted Specify "C" after No.
When Box is wanted Specify "B" after No.

PLASTIC ENVELOPES
Transparent and Unbreakable
List Price **40¢**

GLASS JARS
For Hardware Racks
List Price **65¢**

BOXES OF 144
(One Gross)
Specify "G" after Part No.

BOXES OF 1000
Specify "M" after Part No.

G-C ROUND HEAD MACHINE SCREWS
STEEL - NICKEL PLATED

Assorted Machine Screws	296-E	50							
Assorted Screws and Nuts	6038-E	50							
Assorted 2-56 Screws and Nuts	7129-E	50							
Assorted 4-36 Screws	6001-E	45	6610	75					
Assorted 6-32 Screws	6002-E	45							
Assorted 8-32 and 10-32 Screws	6003-E	40	6611	60					
Assorted 10-32 Screws	6004-E	30							
Machine Screws, 2-56 x 1/2"			7130-G	70	7130-M	4	20		
Machine Screws, 2-56 x 1 1/2"			7131-G	75	7131-M	4	50		
Machine Screws, 2-56 x 1 1/4"			7132-G	85	7132-M	5	60		
Machine Screws, 3-48 x 1 1/2"	7124 E	60	7124-G	95	7124-M	5	60		
Machine Screws, 4-36 x 1/2"	6005-E	60	6005-G	75	6005-M	4	40		
Machine Screws, 4-36 x 3/4"	6006-E	50	6006-G	105	6006-M	4	60		
Machine Screws, 4-36 x 1"	6007-E	40	6007-G	95	6007-M	5	60		
Machine Screws, 4-40 x 1/2"	6005-AE	60	6005-AG	75	6005-AM	4	40		
Machine Screws, 4-40 x 3/4"	6005-AB	50	6005-BG	80	6005-BM	5	60		
Machine Screws, 4-40 x 1"	6005-AC	40	6005-CG	95	6005-CM	4	60		
Machine Screws, 4-40 x 1 1/2"	6008-E	50	6008-G	90	6008-M	5	70		
Machine Screws, 6-32 x 1/2"	6009-E	50	6009-G	85	6009-M	4	50		
Machine Screws, 6-32 x 3/4"	6010-E	45	6010-G	75	6010-M	4	60		
Machine Screws, 6-32 x 1"	6011-E	35	6011-G	60	6011-M	3	50		
Machine Screws, 6-32 x 1 1/2"			7141-G	110	7141-M	8	90		
Machine Screws, 8-32 x 1/2"	6013 E	45	6013-G	110	6013-M	6	50		
Machine Screws, 8-32 x 3/4"	6014 E	40	6014-G	115	6014-M	6	75		
Machine Screws, 8-32 x 1"	6015 E	35	6015-G	120	6015-M	7	25		
Machine Screws, 8-32 x 1 1/2"	6016-E	30	6016-G	140	6016-M	8	35		
Machine Screws, 10-32 x 1/2"	6017-E	25	6017-G	160	6017-M	9	65		
Machine Screws, 10-32 x 3/4"	6020-E	30	6020-G	145	6020-M	8	60		
Machine Screws, 10-32 x 1"	6021-E	25	6021-G	170	6021-M	10	75		
Machine Screws, 10-32 x 1 1/2"	6022-E	20	6022-G	190	6022-M	11	50		
Machine Screws, 1/2-20 x 1/2"	7143-G	255	7143-M	15	25				
Machine Screws, 1/2-20 x 1"	7144-G	240	7144-M	14	50				
Machine Screws, 1/2-20 x 1 1/2"	7145-G	365	7145-M	22	00				
Machine Screws, 1/2-20 x 2 1/2"	7146-G	625	7146-M	37	50				

G-C BINDING HEAD MACHINE SCREWS
STEEL - NICKEL PLATED

Assorted Binding Head Machine Screws	7150-E	50							
Machine Screws, 6-32 x 3/16"			7151-G	80	7151-M	4	80		
Machine Screws, 6-32 x 1/4"	7152-E	50	7152-G	80	7152-M	4	90		
Machine Screws, 6-32 x 1/2"			7153-G	90	7153-M	5	30		
Machine Screws, 8-32 x 5/16"			7154-G	110	7154-M	6	50		

G-C OVAL HEAD RACK AND CABINET SCREWS
STEEL - NICKEL PLATED

Assorted Rack Screws and Washers	6039-E	30	6628	50					
Machine Screws, 6-32 x 1/2"	6541-E	40	6541-G	40	6541-M	5	70		
Machine Screws, 6-32 x 3/4"	6542-E	40	6542-G	45	6542-M	5	25		
Machine Screws, 10-32 x 1/2"	6543-E	20	6543-G	45	6543-M	6	50		

G-C THREADED STEEL RODS
Package 6-32 and 8-32 Rnds
C665 E

G-C ORNAMENTAL HEAD SCREWS
STEEL - STATUARY BRONZE PLATED

Assorted Ornamental Head Screws	1094-E	15	6631	50					
Ornamental Head Screws, 6-32 x 1/2"	1097-E	20	1097-G	95	1097-M	5	75		
Ornamental Head Screws, 6-32 x 3/4"	1098-E	20	1098-G	140	1098-M	8	25		
Ornamental Head Screws, 8-32 x 1 1/4"	1099-E	15	1099-G	190	1099-M	11	25		

G-C WOOD SCREWS
ROUND HEAD - STEEL - NICKEL PLATED

Assorted Wood Screws	6110-E	30	6633	45					
Wood Screws, No. 4 x 1/2"	6114-E	30	6114-G	165	6114-M	9	75		
Wood Screws, No. 4 x 3/4"	6115-E	30	6115-G	180	6115-M	10	75		
Wood Screws, No. 4 x 1"	6116-E	30	6116-G	185	6116-M	11	00		
Wood Screws, No. 6 x 1"	6117-E	25	6117-G	215	6117-M	13	00		
Wood Screws, No. 8 x 1"	6118-E	25	6118-G	215	6118-M	12	75		

G-C SHEET METAL SCREWS
HEX HEAD - SLOTTED - SELF-TAPPING - NICKEL PLATED
POINTED TYPE "A"

Assorted Sheet Metal Screws	297-E	25							
Assorted No. 4 and No. 6 Sheet Metal Screws	6608	50							
Assorted No. 8 and No. 10 Sheet Metal Screws	6609	45							
Sheet Metal Screws, No. 4 x 1/2"	6090-E	40	6090-G	125	6090-M	7	50		
Sheet Metal Screws, No. 6 x 1/2"	6091-E	35	6091-G	125	6091-M	7	50		
Sheet Metal Screws, No. 6 x 3/4"	6092-E	30	6092-G	130	6092-M	7	75		
Sheet Metal Screws, No. 6 x 1"	6093-E	30	6093-G	140	6093-M	8	25		
Sheet Metal Screws, No. 6 x 3/4"	6094-E	25	6094-G	150	6094-M	9	00		
Sheet Metal Screws, No. 8 x 1/2"	6095-E	30	6095-G	150	6095-M	9	00		
Sheet Metal Screws, No. 8 x 3/4"	6096-E	25	6096-G	165	6096-M	9	75		
Sheet Metal Screws, No. 8 x 1"	6097-E	20	6097-G	175	6097-M	10	00		
Sheet Metal Screws, No. 10 x 3/4"	6098-E	25	6098-G	185	6098-M	11	00		
Sheet Metal Screws, No. 10 x 1"	6099-E	20	6099-G	195	6099-M	11	75		
Sheet Metal Screws, No. 10 x 3/2"	6100-E	20	6100-G	220	6100-M	13	25		

G-C ESCUTCHEON PLATE SCREWS
ROUND HEAD - SLOTTED - STATUARY BRONZE PLATED

Assorted Escutcheon Screws	1090-E	30	6632	50					
Escutcheon Screws, No. 2 x 1/2"	1091-E	30	1091-G	160	1091-M	9	50		
Escutcheon Screws, No. 2 x 3/4"	1093-E	30	1093-G	160	1093-M	9	50		

G-C SPADE BOLTS OF MOUNTING SCREWS
STEEL - NICKEL PLATED

Assorted Spade Bolts	6080-E	30							
6-32 No. 6 7/16"	725	6081-E	30	6081-G	155	6081-M	9	25	
6-32 No. 6 9/16"	718	6082-E	30	6082-G	160	6082-M	9	50	
6-32 No. 8 9/32"	7732			6083-G	310	6083-M	18	65	
8-32 No. 8 7/16"	13316			6084-G	310	6084-M	22	50	

G-C RADIO KNOB SET SCREWS
SLOTTED - HEADLESS - HARDENED STEEL

No. 1060 Kit: 50 Ass't Set Screws	List Price \$1.00								
No. 1061 Kit: 100 Ass't Set Screws	List Price \$1.80								
Assorted Set Screws	1062-E	20	6605	30					
Assorted Set Screws, 6-32	6061-E	20							
Assorted Set Screws, 8-32	6062-E	20							
Assorted Set Screws, 10-32	6063-E	20							
Set Screws, 6-32 x 1/8"	6071-E	20	6071-G	30	6071-M	2	40		
Set Screws, 6-32 x 3/16"	6072-E	20	6072-G	30	6072-M	2	65		

G-C RADIO KNOB SET SCREWS - Continued

Set Screws, 6-32 x 1/4"	6073-E	20	6073-G	30	6073-M	2	40		
Set Screws, 6-32 x 1/8"	6074-E	20	6074-G	30	6074-M	2	50		
Set Screws, 8-32 x 3/16"	6075-E	20	6075-G	30	6075-M	2	25		
Set Screws, 8-32 x 1/4"	6076-E	20	6076-G	30	6076-M	2	30		
Set Screws, 8-32 x 1/2"	6077-E	20	6077-G	30	6077-M	2	65		
Set Screws, 10-32 x 3/16"	6078-E	20	6078-G	30	6078-M	2	40		
Set Screws, 10-32 x 1/4"	6079-E	20	6079-G	30	6079-M	2	65		

G-C BRISTO SET SCREWS
HARDENED STEEL - SPLINE TYPE - HEADLESS
One Wrench Included In Each Envelope Package

Assorted Lengths, 4-36	7175-E	4							
Assorted Lengths, 6-32	7180-E	4							
Assorted Lengths, 8-32	7185-E	4							
Bristo Set Screws, 4-36 x 1/8"			7176-G	14	50				
Bristo Set Screws, 6-32 x 1/8"			7181-G	15	30				
Bristo Set Screws, 8-32 x 3/16"			7186-G	15	65				
Bristo Set Screws, 8-32 x 1/8"			7187-G	16	10				

G-C ALLEN HEX SET SCREWS
STEEL - HARDENED - HEADLESS
One Wrench Included In Each Envelope Package

Assorted Lengths, 4-36	7190-E	4							
Assorted Lengths, 6-32	7195-E	4							
Assorted Lengths, 8-32	7200-E	4							
Hex Set Screws, 4-36 x 1/8"			7191-G	14	50				
Hex Set Screws, 6-32 x 1/8"			7196-G	15	30				
Hex Set Screws, 6-32 x 3/16"			7197-G	15	65				
Hex Set Screws, 8-32 x 1/8"			7201-G	15	65				
Hex Set Screws, 8-32 x 3/16"			7202-G	16	10				

G-C HEXAGON NUTS
STEEL - NICKEL PLATED

Assorted Hex Nuts	293-E	45							
Assorted 4-36 and 6-32 Nuts	6606	60							
Assorted 8-32 and 10-32 Nuts	6607	60							
Thread	Width	Thickness							
2-56	3/16"	1/16"	7225-E	40					
3-48	3/16"	1/16"	7226-E	40					
4-36	1/4"	3/32"	6041-E	50	6045	80	6041-G	105	7225-M
4-40									



4-IN-1 CARD DISPLAY OR BOX
20 ENVELOPES TO A CARD BOX
When Card is wanted Specify "D" after No.
When Box is wanted Specify "B" after No.

PLASTIC ENVELOPES
Transparent and Unbreakable
List Price **40c**

GLASS JARS
For Hardware Tools
List Price **65c**

BOXES OF 144
One Gross
Specify "G" after Part No.

BOXES OF 1000
Specify "M" after Part No.

DESCRIPTION AND SPECIFICATIONS

Part No.	Quantity in Box	Part No.	Quantity in Jar	Part No.	List Price	Part No.	List Price
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G-C METAL WASHERS

Assorted Metal Washers	6150-E	100					
Assorted No. 4 and No. 6 Washers			6612	135			
Assorted No. 8 and No. 10 Washers			6613	100			
Screw Size	Hole Size	OD	Thickness				
No. 4	1/8"	9/32"	1/32"	6154-E	100	6154	150
No. 6	5/32"	3/8"	1/32"	6155-E	80	6155	125
No. 8	3/16"	7/16"	1/32"	6156-E	80	6156	100
No. 10	13/64"	3/8"	1/32"			7306-G	70
No. 10	13/64"	7/16"	1/32"			7307-G	70
No. 10	13/64"	1/2"	0.09	6157-E	75	6157	100
No. 12	2/8"	7/16"	0.21			6157-G	70
No. 1/4"	9/32"	5/8"	1/16"	6158-E	75	6158	100
No. 1/4"	7/16"	1/2"	1/16"			7311-G	70
No. 5/16"	5/16"	11/16"	1/16"			7312-G	70
No. 3/8"	3/8"	11/16"	1/16"			7313-G	70

G-C LOCK WASHERS

Assorted Lock Washers, All Types	1717-E	65	6614	90
Assorted Internal Lock Washers <td>7320-E</td> <td>60</td> <td></td> <td></td>	7320-E	60		
Screw Size	OD			
No. 2	7/32"	45		
No. 4				
No. 6	9/32"	7326-E	60	
No. 8	21/64"	7326-E	61	
No. 10	3/8"	7330-E	60	
No. 1/4"	9/16"			
No. 5/16"	19/32"			
No. 3/8"	11/16"			
No. 1/2"	1 1/32"			

EXTERNAL LOCK WASHERS

Assorted External Lock Washers	7350-E	60		
External Lock Washers, No. 4			7354-G	75
External Lock Washers, No. 6			7356-G	75
External Lock Washers, No. 8			7358-G	75
External Lock Washers, No. 10			7360-G	80
External Lock Washers, No. 1/4"			7361-C	100
External Lock Washers, No. 3/8"			7363-C	175

SPLIT TYPE LOCK WASHERS

Assorted Split Type Lock Washers	6502-E	60		
Screw Size	OD	Thickness		
No. 4	3/16"	1/32"	6503-E	65
No. 6	1/8"	1/32"	6504-E	65
No. 8	13/64"	0.25	6505-E	55
No. 10	5/16"	0.50	6506-E	50
No. 1/4"	7/16"	5/64"	6507-E	50

G-C SPRING FRICTION WASHERS

Assorted Spring Friction Washers	6190-E	25		
A	B	Thickness or Metal		
9/64"	5/16"	0.12	7385-G	175
3/16"	3/8"	0.08	7386-G	195
3/16"	7/16"	0.08	7387-G	195
1/4"	9/16"	0.12	7389-G	210

G-C CUP FINISHING WASHERS

Assorted Screws and Washers	6039-E	30	6628	45
Assorted Cup Washers <td>6159-E</td> <td>40</td> <td></td> <td></td>	6159-E	40		
Cup Washers, No. 6	6161-E	40	6161	65
Cup Washers, No. 8	6162-E	40	6162	65
Cup Washers, No. 10	6163-E	40	6163	65

G-C C-WASHERS and RETAINING RINGS

Assorted C-Washers	6180-E	50	6636	85
Screw Diam	A	B	D	
3/16"	1/71	1/25	0.31	6182-E
1/4"	2/34	1/56	0.31	6183-E
1/4"	2/60	1/87	0.31	6184-E
1/4"	9/32"	0.29	0.29	6185-E

G-C COTTER PINS

Assorted Cotter Pins	6440-E	60	6642	90
Diameter	Length Under Eye			
Cotter Pins, 1/16"	1/2"		7301-G	70
Cotter Pins, 1/16"	1"		7303-G	70
Cotter Pins, 1/16"	1 1/4"		7304-G	70
Cotter Pins, 3/32"	1 1/2"		7305-G	70

G-C HAIR PIN COTTERS

Assorted Hair Pin Cotter	6475-E	50	6637	75
A	B	C		
9/32"	1/16"	0.26	7375-G	70
3/8"	1/16"	0.26	7376-G	70
13/32"	3/32"	0.26	7377-G	70
1/2"	5/32"	0.26	7378-G	80
21/32"	3/16"	0.32	7379-G	70

G-C FLAT FIBRE WASHERS

Assorted Flat Fibre Washers	1718-E	60	6634	85
Screw Size	ID	OD		
No. 6	1/16"	1/4"	6513-E	60
No. 8	1/16"	3/8"	6514-E	60
No. 10	1/16"	3/8"	6515-E	50
No. 1/4"	1/4"	1/2"	6516-E	40
No. 3/8"	3/8"	5/8"	6517-E	40
No. 15/32"	15/32"	3/4"	6518-E	100



4-IN-1 CARD DISPLAY OR BOX
20 ENVELOPES TO A CARD BOX
When Card is wanted Specify "D" after No.
When Box is wanted Specify "B" after No.

PLASTIC ENVELOPES
Transparent and Unbreakable
List Price **40c**

GLASS JARS
For Hardware Tools
List Price **65c**

BOXES OF 144
One Gross
Specify "G" after Part No.

BOXES OF 1000
Specify "M" after Part No.

DESCRIPTION AND SPECIFICATIONS

Part No.	Quantity in Box	Part No.	Quantity in Jar	Part No.	List Price	Part No.	List Price
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G-C EXTRUDED FIBRE WASHERS

Extruded and Flat Fibre Washers	6512-E	30		
Assorted Extruded Fibre Washers <td>6520-E</td> <td>40</td> <td></td> <td></td>	6520-E	40		
A	B	C	D	Screw Size
5/16"	1/8"	1/40	0.09	No. 6
3/8"	255	166	0.31	No. 8
1/2"	375	250	0.32	No. 10
3/4"	437	380	0.31	3/8" Shaft

G-C SNAP TROUGH HOLE PLUGS

Assorted Hole Plugs	1716-E	10		
No. 1710 Ass't. 50 Plugs in Box	List Price	\$2.45		
Ventilating Plugs, 1" Hole Size	1709-G	16.25	1709-M	97.00
For Hole Dia	A	B	C	
1/4"	13/32"	1/4"	17/64"	1711-AE
5/16"	1/2"	1/4"	21/64"	1711-BE
3/8"	17/32"	3/8"	25/64"	1711-CE
1/2"	21/32"	17/64"	17/32"	1712-E
5/8"	51/64"	9/32"	41/64"	1713-E
3/4"	15/16"	19/64"	49/64"	1714-E
1"	1 5/32"	19/64"	1 1/32"	1715-AE
1 1/8"	1 5/16"	11/32"	1 9/64"	1715-BE
1 1/4"	1 7/16"	5/16"	1 17/64"	1715-CE

G-C SNAP-IN TRIMOUNTS

No. 1720 Ass't. 100 Trimounts	List Price	\$1.20		
Assorted Trimounts	1719-E	25	6620	45
Trimount	A	B		
1/8"	9/32"	3/16"	1721-E	25
1/8"	9/32"	13/64"	1722-E	25
1/8"	1/32"	17/64"	1723-E	25
1/8"	1/32"	9/32"	1724-E	25
5/32"	3/16"	11/32"	1726-E	18
5/32"	3/16"	11/32"	1727-E	18

G-C DIAL CORD CLIPS

Assorted Dial Cable Clips	6710-E	45	6621	75
Used On Cord Dia	A	B		
7/5"	7/8"	7/64"	6221-E	45
7/4"	7/4"	1/4"	6222-E	45
7/3"	7/3"	3/16"	6223-E	45

G-C SOLDERING LUGS

No. 1020 100 Ass't. Solder Lugs	List Price	\$0.90		
Assorted Soldering Lugs	1019-E	45	6618	75
Solder Lug	No.	Fig.	M Length	
Solder Lugs, No. 6	M	11/16"	7441-E	30
Solder Lugs, No. 8	M	11/16"	7442-E	30
Solder Lugs, No. 10	A	11/16"	1021-AE	30
Solder Lugs, No. 6	B	23/32"	1021-BE	30
Solder Lugs, No. 8	B	23/32"	7445-E	30
Solder Lugs, No. 10	C	1021-CE	30	
Solder Lugs, No. 6	F	1021-FE	30	
Solder Lugs, No. 8	F	7451-E	30	
Solder Lugs, No. 10	H	7454-E	30	
Solder Lugs, No. 6	H	7455-E	30	
Solder Lugs, No. 8	H	7456-E	30	
Solder Lugs, No. 10	H	7458-E	30	
Solder Lugs, No. 6	K	7460-E	30	
Solder Lugs, No. 8	K	7461-E	30	
Solder Lugs, No. 10	K	7462-E	30	
Solder Lugs, No. 6	L	7463-E	30	

G-C CABLE HOLDER CLAMPS

Assorted Cable Clamps	6250-E	25	6644	40
Cable Dia	Mounting Hole			
1/8"	to 3/16"	No. 6	6251-E	25
3/16"	to 1/4"	No. 6	6252-E	35
1/4"	to 5/16"	No. 6	7503-E	20
5/16"	to 1/2"	No. 6	6253-E	20
3/4"	No. 10			

G-C GRID CAPS

Assorted Grid Caps	6290-E	16	6635	25
Class Tube Grid Caps	6291-E	15		
Metal Tube Grid Caps	6292-E	15		

G-C FUSE CLIPS

For 1/4" Glass Fuses, No. 6 Mfg Hole	6311-E	10	6311-G	2.25
			6311-M	13.50

G-C FANSTOCK CLIPS

Assorted Fanstock Clips	6300-E	18	6639	30
Fig	Length	Width	Mfg Hole	
A	1 1/2"	7/32"	6	6301-E
B	3/4"	5/16"	6	6302-E
C	1 1/16"	3/8"	8	6303-E
D	1 3/4"	3/8"	8	6304-E
E	3/4"	5/16"	6	6306-E
F				Ammeter Connectors

G-C ANGLES and BRACKETS

Assorted Angles and Brackets	6260-E	15		
A	B	C	Hole Size	
1/4"	3/16"	9/32"	6	6261-E
3/8"	1/4"	9/32"	6	6262-E
1/2"	7/16"	3/8"	6	6263-E
3/16"	5/8"	3/8"	6	6264-E



4-IN-1 CARD DISPLAY OR BOX
20 ENVELOPES TO A CARD BOX
When Card is wanted Specify "D" after No.
When Box is wanted Specify "X" after No.

PLASTIC ENVELOPES
Transparent and Unbreakable
Last Price **40c**

GLASS JARS
For Hardware Parts
Last Price **65c**

BOXES OF 144
Specify "D" after Part No.

BOXES OF 1000
Specify "M" after Part No.

DESCRIPTION AND SPECIFICATIONS

Part No.	Quantity in Jar	Part No.	Quantity in Jar	Part No.	List Price	Part No.	List Price
G-C DIAL PULLEYS							
Assorted Dial Pulleys							
A	D	6037-E	6	6638	12		
3/8"	.120	1/8"	3/4"	6051-AE	H	6057-AG	4.60
7/16"	.061	13/64"	1.8"	6051-BE	7	6057-BG	6.10
1/2"	1/8"	3/16"	3/32"	6051-CE	7	6057-CG	5.85
.620	128	165	1.16"	6051-DE	5	6057-CG	9.00
860	128	5/32"	.050	6051-FE	3	6057-FG	16.75
						6057-FM	100.00

DESCRIPTION AND SPECIFICATIONS

Part No.	Quantity in Jar	Part No.	Quantity in Jar	Part No.	List Price	Part No.	List Price
G-C RADIO KNOB SPRINGS							
Assorted Knob Springs							
No. 1050 Kit of 35 Springs List Price \$0.70							
No. 1051 Kit of 100 Springs List Price \$1.35							
Fig. No.	Width	Length	For Knob Shaft Diam.				
K1	Light	9/32"	1 1/16"	4	6460-E	20	
K2	Heavy	9/32"	7/16"	1 1/4"	6461-E	20	
K3		9/32"	5/16"	1 1/4"	6462-E	20	
K4		3/8"	5/32"	1 1/4"	6463-E	15	
K5		7/32"	13/32"	1 1/4"	6464-E	10	
K6		9/32"	3/8"	1 1/4"	6465-E	10	
K6-S		9/32"	1 1/4"	1 1/4"	6466-E	10	
K7		9/32"	1/2"	1 1/4"	6467-E	10	
K8		9/32"	3/8"	1 1/4"	6468-E	10	
K9		11/32"	1/4"	1 1/4"	6469-E	10	
K10		3/8"	3/8"	1 1/4"	6470-E	20	
K11		3/8"	7/16"	1 1/4"	6471-E	20	
K12		3/8"	7/16"	3/16"	6472-E	20	

Additional Listings on Knob Springs on Page 251

DESCRIPTION AND SPECIFICATIONS

Part No.	Quantity in Jar	Part No.	Quantity in Jar	Part No.	List Price	Part No.	List Price
G-C DIAL DRIVE TENSION SPRINGS AND PHONO SPRINGS							
Assorted Regular Dial Drive Springs							
Assorted Small Dial Drive Springs							
No. 1055 Kit of 25 Ass. Springs List Price \$1.10							
No. 1056 Kit of 100 Ass. Springs List Price \$4.00							
Assorted Large Tension Springs							
Assorted Small Tension Springs							
Fig. No.	Width	Length	Wire Size	Part No.	List Price	Part No.	List Price
1/8"	1/2"	1 1/4"	.019	6450-E	10		
1/8"	1"	3 1/4"	.019	6451-E	8		
3/16"	1"	5/8"	.020	6452-E	8		
3/16"	1 1/32"	1"	.020	6453-E	8		
1/4"	1 1/2"	1"	.026	6454-E	8		
1/4"	2"	1 1/2"	.026	6455-E	5		

Additional Listings on Dial Drive Springs on Page 182

DESCRIPTION AND SPECIFICATIONS

Part No.	Quantity in Jar	Part No.	Quantity in Jar	Part No.	List Price	Part No.	List Price	
G-C PHONOGRAPH SPRINGS								
No. 6478 Kit of 50 Springs List Price \$2.25								
No. 6479 Kit of 100 Springs List Price \$4.00								
Assorted Small Phono Turntable Springs								
Assorted Large Phono Turntable Springs								
Fig. No.	A	B	C	Wire Size	Part No.	List Price	Part No.	List Price
9-64"	7/16"	1 1/8"	1 1/8"	.008	6470-E	20		
9-32"	1 1/8"	1 1/8"	1 1/8"	.016	6471-E	20		
3-16"	1 1/8"	1 1/8"	1 1/8"	.016	6472-E	20		
8"	1 1/8"	1 1/8"	1 1/8"	.016	6473-E	20		
5-32"	1 1/16"	1 1/8"	1 1/8"	.010	6474-E	20		
132-11"	1 3/4"	1 1/8"	1 1/8"	.027	6475-E	20		
2-16"	1 1/16"	1 1/8"	1 1/8"	.033	6476-E	20		
15-16"	1 1/16"	1 1/8"	1 1/8"	.033	6477-E	20		

DESCRIPTION AND SPECIFICATIONS

Part No.	Quantity in Jar	Part No.	Quantity in Jar	Part No.	List Price	Part No.	List Price
G-C COMPRESSION SPRINGS							
Assorted Small Compression Springs							
Assorted Large Compression Springs							
OD	Length	Wire Size					
7/64"	5/32"	.016		7476-G	1.45	7476-M	8.75
.121	1/4"	.015		7477-G	1.45	7477-M	8.75
.145	19/32"	.012		7478-G	1.45	7478-M	8.75
.175	11/16"	.016		7479-G	1.45	7479-M	8.75
.195	7/16"	.014		7481-G	1.95	7481-M	11.75
9/32"	1 1/4"	.023		7485-G	1.90	7485-M	11.50
5/16"	1 1/2"	.030		7486-G	1.75	7486-M	10.50
.320	13/32"	.016		7488-G	1.95	7488-M	11.25
11/32"	5/8"	.029		7491-G	2.20	7491-M	13.25
3/8"	1 1/16"	.022		7493-G	1.25	7493-M	7.50
25/64"	5/16"	.048		7494-G	2.40	7494-M	14.50
.491	1"	.039		7495-G	2.75	7495-M	16.50
19/32"	1 1/2"	.040	tapered	7496-G	2.90	7496-M	17.50
5/16"	1 1/16"	.039	tapered	7497-G	3.15	7497-M	19.00

DESCRIPTION AND SPECIFICATIONS

Part No.	Quantity in Jar	Part No.	Quantity in Jar	Part No.	List Price	Part No.	List Price
G-C BRASS EYELETS							
Assorted Rivets and Eyelets							
Assorted Eyelets and Clamps							
Eyelet Assortment							
Shank Dia.	Length Under Head						
.087	5/32"			7257-G	65	7257-M	3.75
.087	7/32"			7258-G	75	7258-M	4.50
.087	11/32"			7259-G	95	7259-M	5.75
.123	7/32"			7259-G	85	7259-M	5.00
.123	1 1/4"			7260-G	90	7260-M	5.50
.123	9/32"			7261-G	95	7261-M	5.75
.125	5/16"			7262-G	2.50	7262-M	15.00
.127	15/32"			7265-G	90	7265-M	5.50
.133	11/64"			7266-G	85	7266-M	5.00
.150	1/8"			7267-G	90	7267-M	5.25
.150	5/16"			7268-G	1.10	7268-M	6.25
.182	3/16"			7269-G	55	7269-M	3.50
.182	7/32"			7270-G	1.15	7270-M	7.00
.182	11/32"			7271-G	1.60	7271-M	9.50
.210	3/16"			7272-G	1.90	7272-M	11.50
.213	3/16"			7273-G	1.25	7273-M	7.50
.248	7/32"			7274-G	1.55	7274-M	9.25

DESCRIPTION AND SPECIFICATIONS

Part No.	Quantity in Jar	Part No.	Quantity in Jar	Part No.	List Price	Part No.	List Price
G-C CORD STRAIN RELIEFS							
Will Fit P.O.S.J. Cord							
6675-E 4 6675-G 935 6675-M 56.00							

DESCRIPTION AND SPECIFICATIONS

Part No.	Quantity in Jar	Part No.	Quantity in Jar	Part No.	List Price	Part No.	List Price
G-C RADIO KNOB FELTS							
3/4" O.D. x 1/2" Hole, Brown							
1065-E 45 6641 75 1065-G 70 1065-M 2.00							

DESCRIPTION AND SPECIFICATIONS

Part No.	Quantity in Jar	Part No.	Quantity in Jar	Part No.	List Price	Part No.	List Price
G-C TERMINAL STRIP ASSORTMENT							
Assorted Terminal Strips							
6855-E 4							



4-IN-1 CARD DISPLAY OR BOX
20 ENVELOPES TO A CARD BOX
When Card is wanted Specify "D" after No.
When Box is wanted Specify "X" after No.

PLASTIC ENVELOPES
Transparent and Unbreakable
Last Price **40c**

GLASS JARS
For Hardware Parts
Last Price **65c**

BOXES OF 144
Specify "D" after Part No.

BOXES OF 1000
Specify "M" after Part No.

DESCRIPTION AND SPECIFICATIONS

Part No.	Quantity in Jar	Part No.	Quantity in Jar	Part No.	List Price	Part No.	List Price
G-C RIVETS							
Assorted Rivets and Eyelets							
Rivet Assortment							
Shank Diameter Length Under Head							
Rivets	.059	5/32"		7276-G	1.40	7276-M	8.50
Rivets	.059	3/16"		7277-G	1.40	7277-M	8.50
Rivets	.059	1/4"		7278-G	1.40	7278-M	8.50
Rivets	.088	3/16"		7280-G	1.40	7280-M	8.50
Rivets	.098	3/16"		7283-G	1.40	7283-M	8.50
Rivets	.121	1/8"		7286-G	1.65	7286-M	10.00
Rivets	.121	5/32"		7287-G	1.65	7287-M	10.00
Rivets	.121	3/16"		7289-G	1.65	7289-M	10.00
Rivets	.121	7/32"		7289-G	1.65	7289-M	10.00
Rivets	.121	1/2"		7290-G	1.65	7290-M	10.00
Rivets	.121	5/16"		7291-G	2.10	7291-M	12.50
Rivets	.121	3/8"		7292-G	2.10	7292-M	12.50
Rivets	.121	1/2"		7293-G	2.10	7293-M	12.50
Rivets	.121	5/8"		7294-G	2.10	7294-M	12.50
Rivets	.146	5/16"		7296-G	2.10	7296-M	12.50
Rivets	.146	1/2"		7297-G	2.10	7297-M	12.50

DESCRIPTION AND SPECIFICATIONS

Part No.	Quantity in Jar	Part No.	Quantity in Jar	Part No.	List Price	Part No.	List Price
G-C ESCUTCHEON PINS							
Assorted Escutcheon Pins							
6670-E 100							
Length	Diam.	Finish					
1/4"	No. 18	Star Bronze		7526-G	60	7526-M	3.50
1/4"	No. 19	Star Bronze		7527-G	65	7527-M	4.00
1/4"	No. 20	Star Bronze		7528-G	75	7528-M	4.50
1"	No. 15	Nickel Plated		7529-G	85	7529-M	5.00

DESCRIPTION AND SPECIFICATIONS

Part No.	Quantity in Jar	Part No.	Quantity in Jar	Part No.	List Price	Part No.	List Price
G-C VOICE COIL DUST FELTS							
Assorted Dust Felts							
Diameter							
Dust Felts	1 1/2"			1080-E	25	1080-G	1.25
Dust Felts	3 1/4"			1081-E	25	1081-G	1.35
Dust Felts	1"			1082-E	25	1082-G	1.40
Dust Felts	1 1/4"			1083-E	20	1083-G	1.85
Dust Felts	1 1/2"			1084-E	20	1084-G	2.00
Dust Felts	1 3/4"			1085-E	20	1085-G	2.10
Dust Felts	2 1/4"			1085-AE	20	1085-AG	2.50

DESCRIPTION AND SPECIFICATIONS

Part No.	Quantity in Jar	Part No.	Quantity in Jar	Part No.	List Price	Part No.	List Price
G-C RUBBER GROMMETS							
Assorted Soft Grommets							
Assorted Grommets							
No. 10-10 Kit of 50 Assorted Grommets List Price \$1.05							
11/32"	1/8"	3/16"	1/4"	1041-E	15	1041-G	1.25
7/16"	3/16"	7/32"	5/16"	1041-E	15	1041-G	2.60
9/16"	1/4"	1/4"	3/8"	1042-E	15	1042-G	3.30
5/8"	3/8"	1/2"	1/2"	1043-E	15	1043-G	3.75
13/16"	1/2"	9/32"	5/8"	1043-E	10	1043-LG	5.15
1 1/16"	5/16"	11/32"	7/8"	1043-E	10	1043-LG	10.75

DESCRIPTION AND SPECIFICATIONS

Part No.	Quantity in Jar	Part No.	Quantity in Jar	Part No.	List Price	Part No.	List Price
G-C PURE GUM GROMMETS							
Assorted Pure Gum Grommets							
No. 7581 Kit of 100 Assorted Grommets List Price \$2.25							
7/16"	3/16"	7/32"	1/2"	7582-E	15	7582-G	3.05
9/16"	1/4"	1/4"	3/8"	7584-E	15	7584-G	4.10

DESCRIPTION AND SPECIFICATIONS

Part No.	Quantity in Jar	Part No.	Quantity in Jar	Part No.	List Price	Part No.	List Price
G-C RUBBER CHASSIS M							

RADIO'S MASTER

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