

SPECIAL REPRINT  
of  
**1935-36**  
FIRST EDITION

# Radio's

MASTER  
ENCYCLOPEDIA

SILVER  
ANNIVERSARY

1935-1960

UNITED  
CATALOG PUBLISHERS  
INC

# **RADIO'S MASTER ENCYCLOPEDIA**

## **OFFICIAL EQUIPMENT MANUAL of the RADIO INDUSTRY**

### *What to Buy and Where to Buy It*

- ILLUSTRATIONS
- SPECIFICATIONS
- DESCRIPTIONS
- PRICES

**Classified Directory of All Manufacturers in the U. S. A.**

**Directory of Trade Names, Trade Marks, etc.**

*Published by*

**UNITED CATALOG PUBLISHERS, INC.**

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**New York, N. Y.**

# Foreword

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We take pleasure in presenting our *1936 Spring and Summer LIST PRICE CATALOG*. This catalog is designed to fill a long-felt need for a new selling medium which may be exhibited to the consumer without the risk of disclosing confidential trade prices.

## **WHY A LIST PRICE CATALOG?**

You are entitled to make a fair and reasonable profit on the merchandise you sell. Our co-operation is signified by the issuance of a List Price Catalog. Solicit your consumer business through this book and you are assured of increasing your sales and profits. The distribution of this catalog is restricted to those actively and commercially engaged in "Radio"; it is intended to promote our mutual interests.

## **IMPORTANT NOTICE! . . . TRADE DISCOUNTS**

To ascertain your cost on any given article, you will find imprinted at the bottom-center of each page a small figure representing the confidential trade discount applying to that page. Thus, the numbers 50, 40, 30 indicate that your discounts for the respective pages on which they appear are 50%, 40% and 30%. Several pages, and some individual items, are quoted at net prices, in which case the word "NET" will appear at the bottom-center of page or next to the price.

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In the pages of this book you will find listed a complete line of nationally advertised Radio Replacement Parts and Accessories, representing the "best" in the field of Radio. Every part is manufactured in accordance with R.M.A. and N.E.M.A. Standards; rated at safety factors in excess of those required for normal operation.

## **CREATE "SALES" WITH THIS CATALOG**

Be sure to take full advantage of the wealth of information and technical data contained in this catalog. Use it as your constant "Silent Salesman". It also serves as a Radio Parts Reference Book and Encyclopedia.

## **GUARANTEE**

Our liberal guarantee policy is made possible because of the fact that every item of merchandise has been thoroughly tested and approved before being accepted for listing in our Catalog.

## **SPECIAL SERVICE**

We have endeavored to include in this Catalog all of the standard parts and accessories normally required. If you need some article not listed, do not hesitate to take advantage of our "Special Service". We will obtain it for you if it is at all possible.

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NOTE: Prices in this catalog are subject to change without notice. We reserve the right to discontinue any item.

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**STANDARD GLASS TYPES . . . GLASS WITH STANDARD BASE**

Type	List Price	Description	Cathode	Volts	Type	List Price	Description	Cathode	Volts
00-A	\$1.25	Detector Triode	D.C. Fil.	5.0	76	.69	Super-Triode Amplifier-Detector	Heater	6.3
01-A	.59	Detector-Amplifier Triode	D.C. Fil.	5.0	77	.99	Triple-Grid Detector-Amplifier	Heater	6.3
1-V	.89	Half-Wave Rectifier	Heater	6.3	78	.99	Triple-Grid Super Control Amplifier	Heater	6.3
10	2.00	Power Amplifier Triode	Fil.	7.5	79	1.25	Class "B" Twin Amplifier	Heater	6.3
11	1.25	Detector-Amplifier Triode	D.C. Fil.	1.1	80	.59	Full-Wave Rectifier	Fil.	5.0
12	1.25	Detector-Amplifier Triode	D.C. Fil.	1.1	81	2.00	Half-Wave Rectifier	Fil.	7.5
112-A	.69	Amplifier-Detector Triode	D.C. Fil.	5.0	82	.89	Full-Wave Mercury Vapor Rectifier	Fil.	2.5
15	2.00	R. F. Amplifier Pentode	Heater	2.0	83	.89	Full-Wave Mercury Vapor Rectifier	Fil.	5.0
19	.99	Class "B" Twin Amplifier	D.C. Fil.	2.0	83-V	1.50	Full-Wave Rectifier	Heater	5.0
20	.99	Power Amplifier Triode	D.C. Fil.	3.3	84	1.25	Full-Wave Rectifier	Heater	6.3
22	1.25	R. F. Amplifier Tetrode	D.C. Fil.	3.3	85	.99	Duplex-Diode-Triode	Heater	6.3
24-A	.89	R. F. Amplifier Tetrode	Heater	2.5	89	.99	Triple-Grid Power Amplifier	Heater	6.3
26	.59	Amplifier Triode	Fil.	1.5	V99	.99	Detector-Amplifier Triode	D.C. Fil.	3.3
27	.69	Detector-Amplifier Triode	Heater	2.5	X99	.99	Detector-Amplifier Triode	D.C. Fil.	3.3
30	.69	Detector-Amplifier Triode	D.C. Fil.	2.0	1A4	1.50	Super-Control R. F. Amp. Tetrode	Fil.	2.0
31	.69	Power Amplifier Triode	D.C. Fil.	2.0	1A6	1.25	Pentagrid Converter	D.C. Fil.	2.0
32	1.25	R. F. Amplifier Tetrode	D.C. Fil.	2.0	1B4	1.75	Screen-Grid R. F. Amplifier	Fil.	2.0
33	.99	Power Amplifier Pentode	D.C. Fil.	2.0	1B5/25S	1.25	Duplex-Diode-Triode	Fil.	2.0
34	1.25	Super Control R. F. Amplifier Pent.	D.C. Fil.	2.0	1C6	1.50	Pentagrid Converter	D.C. Fil.	2.0
35	.89	Super Control R. F. Amplifier	Heater	2.5	1F4	1.50	Power Amplifier Pentode	Fil.	2.0
36	.89	R. F. Amplifier Tetrode	Heater	6.3	1F6	1.50	Duplex-Diode Pentode	Fil.	2.0
37	.69	Detector-Amplifier Triode	Heater	6.3	2A3	1.25	Power Amplifier Triode	Fil.	2.5
38	.89	Power Amplifier Pentode	Heater	6.3	2A5	.99	Power Amplifier Pentode	Heater	2.5
39-44	.89	Super Control R. F. Amplifier Pent.	Heater	6.3	2A6	.99	Duplex-Diode Hi-Alu Triode	Heater	2.5
40	.69	Voltage Amplifier Triode	D.C. Fil.	5.0	2A7	1.25	Pentagrid Converter	Heater	2.5
41	.89	Power Amplifier Pentode	Heater	6.3	2B7	1.25	Duplex-Diode Pentode	Heater	2.5
42	.99	Power Amplifier Pentode	Heater	6.3	5Z3	.89	Full Wave Rectifier	Fil.	5.0
43	.99	Power Amplifier Pentode	Heater	25.0	6A4	1.25	Power Amplifier Pentode	Fil.	6.3
45	.69	Power Amplifier Pentode	Fil.	2.5	6A6	1.25	Class "B" Twin Amplifier	Heater	6.3
46	.99	Dual-Grid Power Amplifier	Fil.	2.5	6A7	1.25	Pentagrid Converter	Heater	6.3
47	.89	Power Amplifier Pentode	Fil.	2.5	6B7	1.25	Duplex-Diode Pentode	Heater	6.3
48	2.50	Power Amplifier Pentode	D.C. H't'r	30.0	6C6	.99	Triple-Grid Detector-Amplifier	Heater	6.3
49	.99	Dual-Grid Power Amplifier	D.C. Fil.	2.0	6D6	.89	Triple-Grid Super-Control Amplifier	Heater	6.3
50	2.50	Power Amplifier Triode	Fil.	7.5	6E5	1.50	Electron-Ray Tube (Indicator Type)	Heater	6.3
53	1.25	Class "B" Twin Amplifier	Heater	2.5	6F7	1.50	Triode-Pentode	Heater	6.3
55	.99	Duplex-Diode Triode	Heater	2.5	6G5	1.50	Electron-Ray Tube (Indicator Type)	Heater	6.3
56	.69	Super-Triode Amplifier-Detector	Heater	2.5	12Z3	.99	Half-Wave Rectifier	Heater	6.3
57	.89	Triple-Grid Detector-Amplifier	Heater	6.3	25Z5	.99	Rectifier-Doubler	Heater	12.6
58	.89	Triple-Grid Super Control Amplifier	Heater	2.5	874	4.90	Voltage Regulator—Glow Discharge	.....	.....
59	1.25	Triple-Grid Power Amplifier	Heater	2.5	876	6.70	Current Regulator (Ballast Tube)	.....	.....
71-A	.69	Power Amplifier Triode	Fil.	5.0	886	6.75	Current Regulator (Ballast Tube)	.....	.....
75	.99	Duplex-Diode Hi-Mu Triode	Heater	6.3					

**ALL-METAL TYPES**

6A8	\$1.25	Pentagrid Converter	Heater	6.3
6C5	1.00	Detector Amplifier Triode	Heater	6.3
6F5	1.00	High-Mu Triode	Heater	6.3
6F6	1.00	Power Amplifier Pentode	Heater	6.3
6H6	1.00	Twin Diode	Heater	6.3
6J7	1.25	Triple Grid Detector Amplifier	Heater	6.3
6K7	1.25	Triple Grid Super-Control Amplifier	Heater	6.3
6L6	2.00	Beam Power Amplifier	Heater	6.3
6L7	1.50	Pentagrid Mixer Amplifier	Heater	6.3
6N7	1.50	Class B Twin Amplifier	Heater	6.3
6R7	1.25	Duplex-Diode Triode	Heater	6.3
6Q7	1.25	Duplex-Diode High-Mu Triode	Heater	6.3
6X5	1.25	Full-Wave Rectifier	Heater	5.3
5W4	1.00	Full-Wave Rectifier	Filament	5.0
5Z4	1.25	Full-Wave High-Vacuum Rectifier	Heater	5.0
25A6	1.50	Power Amplifier Pentode	Heater	25.0
25Z6	1.25	High-Vacuum Rectifier-Doubler	Heater	25.0

**G SERIES TYPES . . . GLASS WITH OCTAL BASE**

5V4G	\$1.75	Full-Wave High-Vacuum Rectifier	Heater	5.0
5X4G	1.25	Full-Wave High-Vacuum Rectifier	Filament	5.0
5Y3G	1.00	Full-Wave High-Vacuum Rectifier	Filament	5.0
6A8G	1.50	Pentagrid Converter	Heater	6.3
6C5G	1.00	Detector Amplifier Triode	Heater	6.3
6F5G	1.00	High-Mu Triode	Heater	6.3
6F6G	1.25	Power Amplifier Pentode	Heater	6.3
6H6G	1.00	Twin Diode	Heater	6.3
6J7G	1.25	Triple-Grid Detector Amplifier	Heater	6.3
6K7G	1.25	Triple-Grid Super-Control Amplifier	Heater	6.3
6L7G	1.50	Pentagrid Mixer Amplifier	Heater	6.3
6N7G	1.50	Class B Twin Amplifier	Heater	6.3
6Q7G	1.25	Duplex-Diode High-Mu Triode	Heater	6.3
6R7G	1.25	Duplex-Diode Triode	Heater	6.3
6X5G	1.25	Full-Wave High-Vacuum Rectifier	Heater	6.3
25A6G	1.25	Power Amplifier Pentode	Heater	25.0
25Z6G	1.25	High-Vacuum Rectifier-Doubler	Heater	25.0

**NOW!**

the new and improved

**RCA SOCKET LAYOUT GUIDE**

Dictionary of the Radio Tube Department

Suppose a customer comes in and asks for a set of tubes for his General Motors Model 53A—can you give him what he wants? The RCA Socket Layout Guide gives you the answer. This book (256 pages) shows the tube complements of all important sets issued between 1921 and August 1st, 1935, and socket layouts of those issued since 1932.

Available only with the purchase of 100 RCA Radio Tubes.

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- (3) RADIO SERVICE BUSINESS METHODS helps you calculate how much you should charge and how to keep books on your business.

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1. Ask us for an RCA 3-Point Service System Purchase Record Card and at the same time place an order for RCA Parts (RCA Test Instruments are not included in this offer).
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3. After the first \$5 of purchases of RCA Parts (not including Test Instruments) you are entitled to a packet containing 20 Service Tip Cards for your File for every \$5.00 of purchases. Each packet is numbered to avoid duplication of Tips.
4. When your purchases total \$60, as shown on your card, your \$1.50 deposit will be returned to you. Thus you will have the whole System, including 300 Tips, for only \$1.50.
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**RCA**

**CUNNINGHAM - RADIOTRON GLASS AND METAL TUBE MANUALS**

The RCA Cunningham-Radiotron Glass Tube Manual contains Technical Data on all glass tubes to date. Learn their various applications and also how to rewire old circuits for using modern tubes.

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# TRANSMITTING AND SPECIAL PURPOSE TUBES

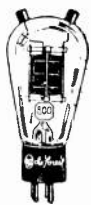
Type No.	Amateur's Net Price	DESCRIPTION	Elec-trodes	Max. Plate Disipation Watts	Cathode Type	Cathode Volts
203-A	\$15.00	R-F Power Amplifier, Oscillator, Class B Modulator	3	100	Filament	10.0
204-A	97.50	Oscillator, R-F Power Amplifier, Class B Modulator	3	250	Filament	11.0
211	15.00	R-F Power Amplifier, Oscillator, A-F Power Amplifier, Modulator	3	100	Filament	10.0
800	10.00	R-F Power Amplifier, Oscillator, Class B Modulator	3	35	Filament	7.5
801	4.50	R-F and A-F Power Amplifier, Oscillator, Modulator	3	20	Filament	7.5
802	3.90	R-F Power Amplifier Pentode	5	10	Heater	6.3
803	38.50	R-F Power Amplifier Pentode	5	125	Filament	10.0
804	15.00	R-F Power Amplifier Pentode	5	40	Filament	7.5
805	18.00	R-F Power Amplifier, Oscillator, Class B Modulator	3	125	Filament	10.0
830-B	10.00	Class B Modulator, R-F Power Amplifier, Oscillator	3	60	Filament	10.0
831	265.00	Oscillator, R-F Power Amplifier	3	400	Filament	11.0
840	6.00	R-F Pentode	5	.....	Filament	2.0
844	12.50	R-F Power Amplifier and Oscillator	3	50	Filament	7.5
837	8.50	R-F Power Amplifier Pentode	5	12	Heater	12.6
838	16.00	Class B Modulator, R-F Power Amplifier, Oscillator	3	100	Filament	10.0
841	3.25	R-F Power Amplifier, Oscillator, A-F Voltage Amplifier	3	15	Filament	7.5
842	3.25	A-F Power Amplifier, Modulator	3	12	Filament	7.5
843	12.50	Power Amplifier, Oscillator	3	15	Heater	2.5
844	18.00	Screen-Grid R-F Power Amplifier	4	15	Heater	2.5
845	16.00	Modulator, A-F Power Amplifier	3	75	Filament	10.0
849	160.00	Modulator, A-F and R-F Power Amplifier, Oscillator	3	400	Filament	11.0
850	37.50	Screen-Grid R-F Power Amplifier	4	100	Filament	10.0
851	350.00	Modulator, A-F and R-F Power Amplifier, Oscillator	3	750	Filament	11.0
852	16.40	Oscillator, R-F Power Amplifier	3	100	Filament	10.0
850	32.50	Screen-Grid R-F Power Amplifier	4	100	Filament	10.0
861	295.00	Screen-Grid R-F Power Amplifier	4	100	Filament	11.0
864	1.60	Amplifier (Low Microphonic Design)	3	.....	Filament	1.1
865	12.75	Screen-Grid R-F Power Amplifier	4	15	Filament	7.5
858	5.00	Phototube	2	.....	.....	.....
917	6.00	Phototube (High-Vacuum Type)	2	.....	.....	.....
918	5.00	Phototube (High Sensitivity)	2	.....	.....	.....
919	6.00	Phototube (High-Vacuum Type)	2	.....	.....	.....
920	7.00	Twin Phototube	4	.....	.....	.....
954	5.80	Detector, Amplifier Pentode (Acorn Type)	5	.....	Heater	6.3
955	3.75	Amplifier Detector Oscillator (Acorn Type)	3	.....	Heater	6.3
956	5.80	Super-Control R-F Pentode (Acorn Type)	5	.....	Heater	6.3
991	.90	Voltage Regulator	2	.....	.....	.....
1602	2.75	Amplifier Triode (Low-Microphonic Type)	3	15	Filament	7.5
1603	2.25	Amplifier Pentode (Low-Microphonic Type)	5	.....	Heater	6.3



RCA906



RCA801



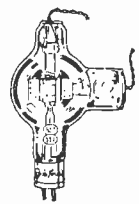
RCA800



RCA802



RCA955



RCA852

Type No.	Amateur's Net Price	RECTIFIERS	Elec-trodes	Max. Peak Inverse Volts	Cathode Type	Cathode Volts
217-A	\$20.00	Half-Wave, High-Vacuum	2	3500	Filament	10.0
217-C	20.00	Half-Wave, High-Vacuum	2	7500	Filament	10.0
836	11.50	Half-Wave, High-Vacuum	2	5000	Heater	2.5
856	1.75	Half-Wave, Mercury-Vapor	2	7500	Filament	2.5
866-A	4.00	Half-Wave, Mercury-Vapor	2	10000	Filament	2.5
872	14.00	Half-Wave, Mercury-Vapor	2	7500	Filament	5.0
872-A	15.50	Half-Wave, Mercury-Vapor	2	10000	Filament	5.0
878	11.00	Half-Wave, High-Vacuum for Cathode-Ray Tubes	2	20000	Filament	2.5
879	3.00	Half-Wave, High-Vacuum for Cathode-Ray Tubes	2	7500	Filament	2.5
885	2.00	Gas-Triode for Cathode-Ray Sweet-Circuit Control	3	300	Heater	2.5

Type No.	Amateur's Net Price	CATHODE-RAY TUBES	Elec-trodes	Max. Anode No. 2 Volts	Cathode Type	Cathode Volts
903	\$97.50	9 in., Electromagnetic Deflection, High-Vacuum	5	7000	Heater	2.5
904	52.50	5 in., Electrostatic-Magnetic Deflection, High-Vacuum	5	4600	Heater	2.5
905	45.00	5 in., Electrostatic Deflection, High-Vacuum	4	2000	Heater	2.5
906	18.00	3 in., Electrostatic Deflection, High-Vacuum	4	1200	Heater	2.5
907	48.75	5 in., Electrostatic Deflection, High-Vacuum, Short Persistence Screen	4	2000	Heater	2.5
908	21.00	3 in., Electrostatic Deflection, High Vacuum, Short Persistence Screen	4	1200	Heater	2.5
909	49.00	5 in., Electrostatic Deflection, High-Vacuum, Long Persistence Screen	4	2000	Heater	2.5
910	21.25	3 in., Electrostatic Deflection, High-Vacuum, Long Persistence Screen	4	1200	Heater	2.5
911	22.50	3 in., Electrostatic Deflection, High-Vacuum (Electron gun of low-magnetic material)	4	1200	Heater	2.5
912	163.40	5 in., Electrostatic Deflection, High-Voltage, High-Vacuum	4	15000	Heater	2.5

Effective Oct. 12, 1936—Prices subject to change without notice.

# Sylvania

REG. U. S. PAT. OFF.

## THE SET-TESTED TUBE

PRICES EFFECTIVE JULY 1, 1936



Type		List Price
01A	Amplifier and Detector	\$ .70
1A1	Ballast Tube	1.00
1A4	Super Control Tetrode Amplifier	1.60
1A6	Pentagrid Converter	1.35
1B1	Ballast Tube	1.25
1B4	Screen Grid R-F Amplifier	1.85
1B5/25S	Double Diode Triode	1.35
1C1	Ballast Tube	1.00
1C6	Pentagrid Converter	1.60
1C7G	Pentagrid Converter	1.85
1D1	Ballast Tube	1.25
1D5G	Super Control Tetrode Amplifier	1.85
1D7G	Pentagrid Converter	1.60
1E1	Ballast Tube	1.25
1E5G	Screen Grid R-F Amplifier	1.60
1E7G	Double Pentode Output Tube	1.60
1F4	Power Output Pentode	2.20
1F5G	Power Output Pentode	2.35
1F7G	Double Diode Pentode	1.85
1G1	Ballast Tube	1.25
1H4G	Amplifier and Detector	1.10
1H6G	Double Diode Triode	1.60
1J6G	Class B Twin Amplifier	1.35
1K1	Ballast Tube	1.25
1V	Half Wave High Vacuum Rectifier	1.00
2	Ballast Tube	1.00
2A3	Power Amplifier Triode	1.35
2A5	Cathode Type Power Pentode	1.10
2A6	Double Diode High Mu Triode	1.10
2A7	Pentagrid Converter	1.35
2A7S	(Maj) Pentagrid Converter	2.30
2B7	Double Diode Pentode	1.35
2B7S	(Maj) Double Diode Pentode	2.10
2E5	Tuning Indicator	1.60
2S/4S	(Maj) Double Diode	2.65
2Z2/G84	(Maj) Half Wave Rectifier	1.85
3	Ballast Tube	1.10
4	Ballast Tube	1.00
5	Ballast Tube	1.10
†5V4G	Full Wave High Vacuum Rectifier	1.85
5W4	(Met) Full Wave High Vacuum Rectifier	1.10
5X4G	Full Wave High Vacuum Rectifier	1.35
†5Y3G	Full Wave High Vacuum Rectifier	1.10
5Y4G	Full Wave High Vacuum Rectifier	1.10
5Z3	Full Wave High Vac. Rect.	1.00
5Z4	(Met) Full Wave High Vacuum Rectifier	1.35
6	Ballast Tube	1.50
6A3	Power Amplifier Triode	1.60
6A4/LA	Power Amplifier Pentode	1.35
6A6	Class B Twin Amplifier	1.35
*6A7	Pentagrid Converter	1.35
6A7S	(Maj) Pentagrid Converter	2.30
6A8	(Met) Pentagrid Converter	1.35
†6A8G	Pentagrid Converter	1.60
6B4G	Triode Power Amplifier	1.85
6B5	Power Output Amplifier	2.25
†6B6	Interchangeable with Type 6Q7G	
6B7	Double Diode Pentode	1.35
6B7S	(Maj) Double Diode Pentode	2.10
6C5	(Met) Triode Amplifier	1.10

Type		List Price
†6C5G	Triode Amplifier	\$1.10
6C6	R-F Pentode	1.10
6C7	(Maj) Double Diode Triode	1.90
6D6	Super Control R-F Pentode	1.00
6D7	(Maj) R-F Pentode	1.75
6E5	Tuning Indicator	1.60
6E6	Double Triode Power Amplifier	1.70
6E7	(Maj) Super Control R-F Pentode	1.75
6F5	(Met) High Mu Triode Amplifier	1.10
†6F5G	High Mu Triode Amplifier	1.10
6F6	(Met) Power Output Pentode	1.10
†6F6G	Power Output Pentode	1.35
6F7	Pentode Triode	1.60
6F7S	(Maj) Pentode Triode	1.90
6G5	Tuning Indicator	1.60
6H6	(Met) Double Diode	1.10
†6H6G	Double Diode	1.10
6J5G	Triode Amplifier	1.10
6J7	(Met) Triple Grid Amplifier and Detector	1.35
†6J7G	Triple Grid Amplifier and Detector	1.35
6K5G	High Mu Triode Amplifier	1.35
6K6G	Cathode Type Power Pentode	1.35
6K7	(Met) Triple Grid Super Control Pentode	1.35
†6K7G	Triple Grid Super Control Pentode	1.35
6L6	(Met) Power Amplifier	2.10
6L6G	Power Amplifier	2.10
6L7	(Met) Heptode Mixer	1.60
†6L7G	Heptode Mixer	1.60
†6N6G	Power Output Amplifier	2.50
6N7	(Met) Class B Power Amplifier	1.60
†6N7G	Class B Power Amplifier	1.60
6Q7	(Met) Double Diode High Mu Triode	1.35
†6Q7G	Double Diode High Mu Triode	1.35
6R7	(Met) Double Diode Medium Mu Triode	1.35
†6R7G	Double Diode Medium Mu Triode	1.35
6X5	(Met) Full Wave High Vacuum Rectifier	1.35
†6X5G	Full Wave High Vacuum Rectifier	1.35
6Y5	(Maj) Full Wave Rectifier	1.90
6Z5	(Maj) Full Wave Rectifier	1.90
7	Ballast Tube	1.10
8	Ballast Tube	1.10
9	Ballast Tube	1.10
10	Power Amplifier and Oscillator	2.10
12A	Power Amplifier	.80
12A5	Power Output Pentode	2.10
12A7	Output Pentode and Rectifier	2.20
12Z3	Half Wave High Vacuum Rectifier	1.10
15	2 Volt R-F Pentode	2.00
18	Cathode Type Power Pentode	2.00
19	Class B Twin Amplifier	1.10
20	Dry Cell Power Amplifier	1.10
22	Screen Grid Amplifier	1.35
*24A	A-C Screen Grid Amplifier	1.00
24S	(Maj) A-C Screen Grid Amplifier	1.30
25A6	(Met) Power Amplifier Pentode	1.60
†25A6G	Power Amplifier Pentode	1.35
25Z5	Rectifier and Voltage Doubler	1.10
25Z6	(Met) High Vacuum Rec. and Volt. Doub.	1.35

\*See Reverse Side.

†See Reverse Side.

Continued on Reverse Side



# Sylvania

REG. U. S. PAT. OFF.

## THE SET-TESTED TUBE



CONTINUED FROM PAGE B5)

Type	List Price	Type	List Price
†25Z6G High Vacuum Rectifier and Volt. Doub.	\$1.35	56S (Maj) A-C Amplifier and Detector	\$1.30
*26 A-C Amplifier	.70	57 R-F Pentode	1.00
*27 A-C Amplifier and Detector	.80	57AS (Maj) R-F Pentode	1.75
27S (Maj) A-C Amplifier and Detector	.80	57S (Maj) R-F Pentode	1.75
30 Amplifier and Detector	.80	58 Super Control R-F Pentode	1.00
31 Power Amplifier	.80	58AS (Maj) Super Control R-F Pentode	1.75
32 Screen Grid Amplifier	1.35	58S (Maj) Super Control R-F Pentode	1.75
33 Power Pentode	1.10	59 Triple Grid Power Amplifier	1.35
34 Super Control R-F Pentode	1.35	*71A Power Amplifier	.80
*35/51 Super Control Tetrode	1.00	75 Double Diode High Mu Triode	1.10
35S/51S (Maj) Super Control Tetrode	1.40	75S (Maj) Double Diode High Mu Triode	1.70
36 Screen Grid Amplifier	1.00	76 A-C Amplifier and Detector	.80
37 Amplifier and Detector	.80	77 R-F Pentode	1.10
38 Power Amplifier Pentode	1.00	78 Super Control R-F Pentode	1.10
39/44 Super Control R-F Pentode	1.00	79 Class B Twin Amplifier	1.35
41 Cathode Type Power Pentode	1.00	*80 Full Wave Rectifier	.70
42 Cathode Type Power Pentode	1.10	81 Half Wave Rectifier	2.10
43 Cathode Type Power Pentode	1.10	82 Full Wave Mercury Vapor Rectifier	1.00
*45 Power Amplifier	.80	83 Full Wave Mercury Vapor Rectifier	1.00
46 Power Amplifier	1.10	83V Full Wave High Vacuum Rectifier	1.60
46A1 Ballast Tube	1.10	84 Full Wave High Vacuum Rectifier	1.35
46B1 Ballast Tube	1.10	85 Double Diode Triode	1.10
*47 Power Pentode	1.00	85AS (Maj) Double Diode Triode	1.70
48 Power Amplifier Tetrode	2.60	89 Triple Grid Power Amplifier	1.10
49 Power Amplifier	1.10	V99 Dry Cell Amplifier and Detector	1.10
50 Power Amplifier	2.60	99 Dry Cell Amplifier and Detector	1.10
53 Class B Twin Amplifier	1.35	182B Power Amplifier	1.65
55 Double Diode Triode	1.10	183 Power Amplifier	1.65
55S (Maj) Double Diode Triode	1.70	210T Power Amplifier and Oscillator	2.75
56 A-C Amplifier and Detector	.80	485 Amplifier and Detector	1.45
56AS (Maj) A-C Amplifier and Detector	1.30	864 Amplifier and Detector	1.60

Type numbers followed by a "G" (1C7G) designate glass tubes with octal bases. (Bal.) Ballast; (Maj.) Majestic (Met.) Metal.

†"G" Tubes indicated by a dagger (†) are popular types, and a stock should be maintained according to your requirements. Your own experience will govern requirements of other "G" types.

### \*Selection of Tube Stocks—As an Assistance in Ordering

As an assistance in ordering and maintaining stock, we have broken down all current tubes into 3 classes. Generally speaking, approximately 65% of replacement sales will come from Group "A", 21% from Group "B" and 14% from Group "C." Even the small dealer should maintain generous supplies of Group "A" tubes, reasonable quantities of Group "B" and his own experience will dictate his requirements of Group "C." These classifications, naturally, are compiled on a national basis and are intended only as a general guide. Sectional differences will change them, as, for instance, dry battery tubes in farming areas AC-DC types in cities employing direct current, etc., etc.

\*GROUP A TYPES—8A7, 24A, 26, 27, 35/51, 45, 47, 71A, 80.

GROUP B TYPES—01A, 2A3, 6D6, 25Z5, 30, 32, 34, 35, 39/44, 41, 42, 43, 56, 57, 53, 75, 77, 78, 84, 485.

GROUP C TYPES—ALL OTHER TYPES.

## SELL SYLVANIA RADIO TUBES

**Stability of Manufacturer**—You are backed by the largest company in the United States making both radio tubes and incandescent lamps—with thirty four years of experience in business.

**Quality Merchandise**—High engineering standards and practices, with important contributions in design and innovations, have helped to make "Sylvania" a synonym for quality.

**Merchandise Policies**—The Sylvania policy of list price maintenance insures a full margin of profit for the retailer. **Sales Assistance**—From our engineering department and through technical manuals and other sales literature, greatly aids our dealers in building sales.


**Assured Profits**—From our policy of fair adjustment and price protection.

**Advertising and Sales Help**—Free Material in the form of window transparency, tube stickers, charts, displays, literature of many types, and the monthly "Sylvania News", with its general news and special Technical Section.




# RAYTHEON TUBES FOR THE AMATEUR

RAYTHEON presents a complete line of tubes especially designed for amateur use. Rigidly constructed, and utilizing Isolantite bases on all radio frequency types, these tubes permit the amateur to obtain the maximum output with a minimum input. Any type of modulation can be used or any type of amplification can be obtained by selecting the proper RAYTHEON tube. The new RK20 R.F.-Pentode is particularly interesting, since it is the first tube in the amateur line permitting efficient suppressor grid modulation. (All prices given below are NET for the Amateur).



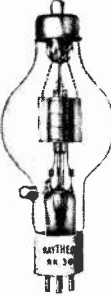
**RK-20**

Type RK-20 is the original R.F. Pentode for amateur service. Designed to furnish maximum power output for minimum driving power. Phone operation requires only two-tenths of a watt of audio power.



**RK-34**

Type RK-34 is a dual triode—two complete triodes in one bulb. The plates are connected to top caps on the bulb providing extremely low losses. The base is Isolantite. This tube, rated at 14 watts output at five meters, is intended for amateur use as a push-pull oscillator or as a combination oscillator doubler at lower amateur frequencies.



**RK-36**

Type RK-36 is a highly efficient triode for all amateur frequencies including 60 megacycles. At 2000 volt plate, the power output is 200 watts and the grid power required is only 6 watts.

No.	NET	TYPE	FILAMENT		PURPOSE	RATED VOLTAGES				POWER		
			Volts	Amps		Plate	Grid	Ser. G.	Supp. G.	Pl. Diss	Output	
<b>RK-10</b>	<b>\$3.50</b>	Triode.....	7.5	1.25	Thor.	{Osc.-Rf. Amp.....	450	-120	.....	.....	12W	15W
<b>RK-16</b>	<b>4.50</b>	Triode.....	2.5	2.0	K	{Class B Mod.....	425	-50	.....	.....	12W	25W*
<b>RK-17</b>	<b>4.50</b>	Rf. Pentode...	2.5	2.0	K	{Audio Amp.....	250	-28	250	.....	10W	3W
<b>RK-18</b>	<b>10.00</b>	Triode.....	7.5	3.0	Thor.	{Osc.-Rf. Amp.....	300	-50	125	.....	10W	7W
<b>RK-19</b>	<b>7.50</b>	Full W. Rect..	7.5	2.5	K	{Class B Mod.....	1000	-150	.....	.....	35W	40W
<b>RK-20</b>	<b>15.00</b>	Rf. Pentode...	7.5	3.0	Thor.	{Class B Mod.....	1000	-50	.....	.....	35W	100W*
<b>RK-21</b>	<b>5.00</b>	Half W. Rect..	2.5	4.0	K	LOW DROP 1250v. R.M.S. PERANODE 600 MA.						
<b>RK-22</b>	<b>7.50</b>	Full W. Rect..	2.5	8.0	K	{Osc.-Rf. Amp.....	1250	-100	300	0	40W	64W
<b>RK-23</b>	<b>4.50</b>	Rf. Pentode...	2.5	2.0	K	{Osc.-Rf. Amp.....	1250	-100	300	+45	40W	80W
<b>RK-24</b>	<b>2.25</b>	Triode.....	2.0	0.12	Oxide	{Supp. Mod. Phone.	1250	-100	300	-45	40W	18W
<b>RK-25</b>	<b>4.50</b>	Rf. Pentode...	6.3	0.8	K	LOW DROP 1250v. R.M.S. PERANODE 600 MA.						
<b>RK-28</b>	<b>38.50</b>	Rf. Pentode...	10.0	5.0	Thor.	{Osc.-Rf. Amp.....	500	-90	200	0	10W	18W
<b>RK-30</b>	<b>10.00</b>	Triode.....	7.5	3.25	Thor.	{Osc.-Rf. Amp.....	500	-90	200	+45	10W	24W
<b>RK-31</b>	<b>10.00</b>	Triode.....	7.5	3.0	Thor.	{Supp. Mod. Phone.	500	-90	200	-45	10W	5.5W
<b>RK-32</b>	<b>12.00</b>	Triode.....	7.5	3.25	Thor.	{Rf. Oscillator.....	180	-45	.....	.....	1.5W	1.2W
<b>RK-34</b>	<b>3.50</b>	Dual Triode..	6.3	0.8	K	CHARACTERISTICS SAME AS RK-23						
<b>RK-35</b>	<b>8.00</b>	Triode	7.5	3.25	Thor.	{Osc.-Rf. Amp.....	2000	-100	400	0	100W	160W
<b>RK-36</b>	<b>14.50</b>	Triode	5.0	8.00	Thor.	{Osc.-Rf. Amp.....	2000	-100	400	+45	100W	200W
<b>RK-100</b>	<b>7.00</b>	Gas Triode...	6.3	0.9	K	{Supp. Mod. Phone.	2000	-100	400	-50	100W	60W
<b>841</b>	<b>3.25</b>	Triode.....	7.5	1.25	Thor.	{Osc.-Rf. Amp.....	1250	-175	.....	.....	35W	65W
<b>842</b>	<b>3.25</b>	Triode.....	7.5	1.25	Thor.	{Class B Mod.....	1250	-70	.....	.....	35W	106W*
<b>866A</b>	<b>4.00</b>	Half W. Rect..	2.5	5.0	Oxide	{Class B Mod.....	1250	0	.....	.....	40W	140W*
<b>872A</b>	<b>18.50</b>	Half W. Rect..	5.0	10.0	Oxide	{Ultra H. F.....	1250	-250	.....	.....	50W	65W
						{Oscill.-Amp.....	1250	-250	.....	.....	50W	65W
						{Osc.-Rf. Amp.....	300	-36	.....	.....	10W	14W
						{Class B Mod.....	300	-15	.....	.....	10W	12W
						{Osc.-Rf. Amp.....	1000	-320	.....	.....	35W	60W
						{Osc.-Rf. Amp.....	2000	-360	.....	.....	100W	200W
						{Rf. Oscillator.....	110	-25	.....	.....	10W	3.5W
						{Rf. Amplifier.....	110	-25	.....	.....	10W	12W
						{Rf. Amplifier.....	450	-32	.....	.....	12W	14W
						{Aud. Modulator...	425	-100	.....	.....	12W	3W
						MERC. VAPOR MAX INVERSE PEAK 10000v 600 MA.						
						MERC. VAPOR MAX INVERSE PEAK 10000v 5.0 A.						

\* Indicates Value for Two Tubes.



# NATIONAL UNION RADIO TUBES FREE SERVICE SHOP EQUIPMENT

## Why Thousands of Service Experts Choose NATIONAL UNION

Many thousands of service experts throughout the United States are finding it profitable to be tied-up with the National Union program. They have proven to their own complete satisfaction that National Union means more than—Radio Tubes, National Union stands as a symbol of more service business and better service business at a profit. No service man who appreciates the full significance of what National Union can mean to his success can possibly afford not to tie-up with the National Union program. Consider a few of the points briefly outlined on these pages and resolve now to tie-up with National Union in your own best interest.

### Free Shop Equipment

One of the principal objectives of National Union has been to supply the serviceman with modern shop equipment and data so that he would be in a position to do better service work and more of it at a profit. Testers, analyzers, service manuals and service tools are given with the purchase of National Union tubes. The wide awake dealer realizes the advantage of obtaining his equipment in this way as he has both the guarantee of the manufacturer and the backing of National Union.

### Profit

The 10 cent higher list prices of National Union tubes were made to enable the service man to make the highest margin of profit on his tube sales. National Union servicemen have enthusiastically supported this full profit program with resultant benefits which are self evident. **STANDARD PRICES:** National Union tubes are sold everywhere at full list price so the service man need not fear ill-will of customers who might otherwise see the tubes in "cut price" stores.

### Service Aids

For more than three years National Union has specialized in service aids. Charts, data and information which would be of most practical value to experts in the service business. These valuable aids, available to National Union authorized dealers at no cost cannot be duplicated from any other single source. Every National Union service outlet can testify to what this has meant to him in better service work and more profit.

Are you on the list to receive  
"WHAT'S NEW IN RADIO TUBES"?  
News - Technical Data - Sales Ideas  
It's free. Write National Union Radio  
Corp., 570 Lexington Ave., N. Y. C.

This is a Partial List of Radio Equipment  
Given FREE with the Purchase of  
NATIONAL UNION RADIO TUBES.

If you don't find an instrument you need listed, ask your distributor  
whether it is obtainable as a NATIONAL UNION Offer.

## Dumont Equipment

	Total Tube Purchases	Time of Purchases
Dumont Frequency Modulator (Type 151).....	400	2 Years
Dumont Oscillograph (Type 154-3").....	1250	
Dumont Oscillograph (Type 148-5").....	1750	

## Supreme Equipment

Supreme #339 De Luxe Analyzer.....	675	2 Years
Supreme #339 Standard Analyzer.....	525	
Supreme #89 De Luxe Tube Tester.....	800	
Supreme #89 Standard Tube Tester.....	575	

## Triplet Equipment

Triplet #1503 Multipurpose Tester.....	800	2 Years
Triplet #1250 Vacuum Tube Voltmeter.....	575	
Triplet #1240 Condenser Tester.....	425	

## Readrite Equipment

Readrite #430 Tube Tester.....	300	2 Years
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## Webster-Chicago Sound Systems

Webster-Chicago Model PA417-A (Portable).....	1500	2 Years
Webster-Chicago Model C-10 Sound System.....	800	
Webster-Chicago Model C-36 Sound System.....	500	
Webster-Chicago Portable Phonograph.....	400	

## Triumph Equipment

Triumph Signal Generator No. 110.....	525	2 Years
Triumph Multi-Range Meter No. 300.....	325	

## Ranger Equipment

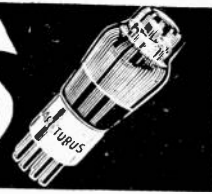
Ranger #640-740 Volt-Ohm-Milliammeter.....	450	2 Years 1 Year
Ranger #557 Signal Generator.....	300	
Ranger #735 D.C. Pocket Volt-Ohm-Milliammeter..	175	

## Miscellaneous Equipment

HICKOK OS-11 Oscillator.....	800	2 Years
NEON Effect Electric Sign.....	125	1 Year
SHOP COAT.....	100	1 Year
CARRYING CASE.....	125	1 Year
HOBBART Cabinet for small parts stock (100 drawer)	400	2 Years
HOBBART Cabinet for small parts stock (50 drawer)	250	1 Year
HOBBART Cabinet for small parts stock (27 drawer)	225	1 Year



# ARCTURUS



## Six Out of Seven Developments Pioneered by ARCTURUS

Progress in A.C. radio tubes since 1927 has been based on seven fundamental developments. Six out of the seven were pioneered by Arcturus. For the seventh, we give credit to one of our competitors. Seldom, if ever, in any field has a manufacturer so consistently and constructively pioneered. If you are interested in building your own standing, then you must handle products fundamentally right . . . tubes con-

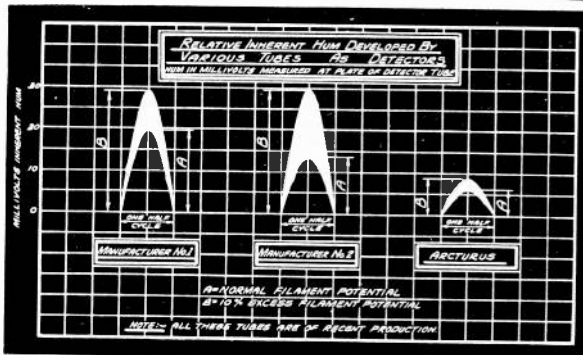
sistently superior . . . Arcturus Tubes.

1. Standard-base A.C. Tube
2. Quick-Heater
3. Screen Grid
4. Variable-Mu
5. Suppressor Grid (Pentode, 2A5)
6. Coaxial Grid (Wunderlich)
7. Emission Control Modulator (2A7)

### GLASS TUBES

Type No.	Class	Operation	Volts	List Price	Type No.	Class	Operation	Volts	List Price
01-A	Triode	Detector—Amplifier	5.0	\$3.75	Wunderlich "A"	Auto	Detector—Amplifier	6.3	\$3.00
1V	Diode	Half-Wave Rectifier	6.3	1.05	1A6	Heptode	Oscillator—Modulator	2.0	1.35
10	Triode	Amplifier—Class "A"	7.5	2.15	1B5/255	Duo-Diode			
12-A	Triode	Detector—Amplifier	5.0	.85	1C5	Triode	Detector	2.0	1.35
15	Pentode	Amplifier	2.0	2.00	1F4	Heptode	Oscillator—Modulator	2.0	1.60
19	Dup.—Triode	Amplifier—Class "B"	2.0	1.10	2A3	Pentode	Power Output	2.0	2.20
22	Tetrode	Amplifier	3.3	1.35	2A5	Triode	Amp. Cl. "A"—P.P. bias	2.5	1.35
24	Tetrode	Detector Biased—Ampl.	2.5	1.00	2A6	Pentode	Amplifier—Class "A"	2.5	1.10
26	Triode	Amplifier	1.5	.70	2A7	Diode—Triode	Oscillator—Modulator	2.5	1.10
27	Triode	Detector Biased—Ampl.	2.5	.80	2B7	Heptode	R.F., I.F., A.F. Amplifier	2.5	1.35
30	Triode	Detector—Amplifier	2.0	.85	5Z3	Dup. Diode	Rectifier Full-Wave	5.0	1.00
31	Triode	Power Amplifier	2.0	.85	6A6	Dup. Triode	Class "A", "B" Amplifier	6.3	1.35
32	Tetrode	Detector Biased—Ampl.	2.0	1.35	6A7	Heptode	Same as 2A7	6.3	1.35
33	Pentode	Amplifier—Class "A"	2.0	1.10	6B7	Diode—Pentode	Same as 2B7	6.3	1.35
34	Pentode	R.F. Amplifier	2.0	1.35	6C6	Pentode	Det. Biased—Ampl. "A"	6.3	1.10
35	Use Type 51			1.00	6D6	Pentode	Var.—Mu Ampl.—Mod.	6.3	1.00
36A	Tetrode	Detector Biased—Ampl.	6.3	1.00	6F7	Triode—Pentode	Oscillator—Modulator	6.3	1.60
37A	Triode	Detector Biased—Ampl.	6.3	.80	12A5	Pentode	Amplifier—Class "A"	6.3; 12.6	2.20
38A	Pentode	Amplifier—Class "A"	6.3	1.00	12A7	Pentode—Diode	Output Pent.—Rec. H.-W.	12.6	2.20
39-44	Pentode	R.F. Amp.—Modulator	6.3	1.00	12Z3	Diode	Rectifier Half-Wave	12.6	1.10
41	Pentode	Amplifier—Class "A"	6.3	1.00	12Z5	Dup. Diode	Rectifier Full-Wave	6.3; 12.6	1.50
42	Pentode	Amplifier—Class "A"	6.3	1.10	25Z5	Dup. Diode	Rectifier Full-Wave	25.0	1.10
43	Pentode	Amplifier—Class "A"	25.0	1.10					
44	Use Type 39-44			1.00	<b>SPARTAN TUBES</b>				
45	Triode	Amplifier—Class "A"	2.5	.80	482B		Power Amplifier	5.0	1.65
46	Tetrode	Class "A", "B" Amplifier	2.5	1.10	483		Power Amplifier	5.0	1.65
47	Use Type PZ			1.00	485		Detector Amplifier	3.0	1.45
50	Triode	Amplifier—Class "A"	7.5	2.60	<b>MAJESTIC TUBES</b>				
51	Tetrode	Var.—Mu Ampl.—Mod.	2.5	1.00	245		Detector—Amplifier	2.5	1.30
53	Dup. Triode	Class "A", "B" Amplifier	2.5	1.35	275		Detector—Amplifier	2.5	.80
55	Diode—Triode	Amplifier—Class "A"	2.5	1.10	355		Amplifier	2.5	1.40
56	Triode	Detector Biased—Ampl.	2.5	.80	555		Oscillator—AVC	2.5	1.70
57	Pentode	Det. Biased—Ampl. "A"	2.5	1.00	565			2.5	1.30
58	Pentode	Var.—Mu Ampl.—Mod.	2.5	1.00	575		Detector—Amplifier	2.5	1.75
59	Pentode	"A" or "B" Amplifier	2.5	1.35	585		Detector—Amplifier	6.3	1.75
71	Triode	Amplifier—Class "A"	5.0	.80	595		Amplifier	2.5	1.75
75	Diode—Triode	Amplifier—Class "A"	6.3	1.10	595A		Amplifier	6.3	1.75
76	Triode	Detector Biased—Ampl.	6.3	.80	595AS		Amplifier	6.3	1.75
77	Pentode	Det. Biased—Ampl. "A"	6.3	1.10	687S		Detector—Oscillator	2.5	2.30
78	Pentode	Var.—Mu Ampl.—Mod.	6.3	1.10	687S		Detector—Oscillator	6.3	2.30
79	Dup. Triode	Amplifier—Class "B"	6.3	1.35	6C7		Detector—Amplifier	6.3	2.10
80	Dup. Diode	Rectifier Full, Half-Wave	5.0	.70	6D7		Detector	6.3	1.90
81	Diode	Rectifier Half-Wave	7.5	2.10	6E7		R.F. Amplifier	6.3	1.75
82	Dup. Diode	Rectifier Full-Wave	2.5	1.05	6F7S		R.F. Pentode	6.3	1.75
83	Dup. Diode	Rectifier Full-Wave	5.0	1.05	6Y5		Detector—Oscillator	6.3	1.90
83	Dupl x-Diode	Full-Wave Rectifier	5.0	1.60			Full-Wave Rectifier	6.3	1.90
84	Dup Diode	Rectifier Full-Wave	6.3	1.35					
85	Diode—Triode	Amplifier—Class "A"	6.3	1.10					
89	Pentode	Amplifier—Class "A"	6.3	1.10					
99UV	Triode	Detector or Amplifier	3.3	1.10					
99UX	Triode	Detector or Amplifier	3.3	1.10					
AF	Duplex-Diode	Full-Wave Rectifier	2.5	1.80					
AG	Duplex-Diode	Full-Wave Rectifier	5.0	2.05					
GA	Pentode	Amplifier—Class "A"	5.0	2.75					
PZ	Pentode	Amplifier—Class "A"	2.5	1.00					
PZH	Pentode	Amplifier—Class "A"	2.5	1.60					
Wunderlich "A"	Tetrode	Detector	2.5	3.00	22	Triode	Amplifier	15.0	\$7.50
					26	Triode	Amplifier	15.0	4.50
					30	Triode	Amplifier—Class "A"	15.0	4.50
					32	Triode	Hi.-Mu Amplifier	15.0	4.50
					40(SOI)	Triode	Amplifier—Class "A"	15.0	6.00
					48(RAI)	Triode	Amplifier	15.0	4.50

Prices on Metal Tubes and "G" Tubes on next page



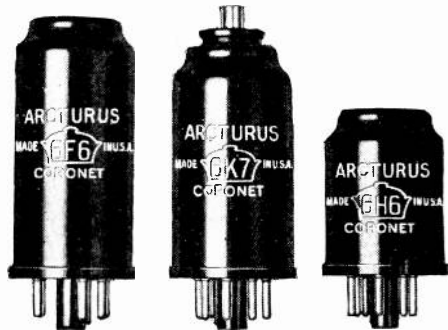
### Laboratory Tests Show Arcturus Tubes Have Less Hum

The diagram shows comparative hum output of three makes of tubes. Considerable increase in hum was shown with tubes of two manufacturers when the filament potential was increased, while the curve for Arcturus Tubes remained constant. While different manufacturers' tubes were used in this test, No. 1 and 2 are among the largest in the industry and the curves are representative of the tubes in present use. The tubes of Manufacturer No. 2 were found to have lower average hum than other makes investigated, with the exception of Arcturus.



## ARCTURUS "CORONET"—The New Perfected METAL Tube

The Salient Features of Arcturus Coronet Metal Tubes are:



1. Lower capacities than either other metal or glass tubes.
2. More dependable vacuum than the original metal tube.
3. Less prone to gas than the original metal tube.
4. Lower operating temperatures permit closer arrangement of chassis components.
5. Eliminate possibility of dead shorts to ground.
6. Diameter identical to other metal tubes.
7. Height 1/2-inch greater, facilitating insertion and removal.
8. Rugged structure; better appearance; longer life.
9. Quiet operation, as it has no metallic sleighbells.
10. Self-shielding.

### The Metal Tube the Industry Hoped For . . . Is Here !

Utilizing all the advantages of manufacturing technique developed in the past twenty-eight years, Arcturus has perfected and improved "the greatest advance in radio tube design in twenty-eight years." The radio industry, aware of the inherent weaknesses of metal tubes, had looked forward to an improvement by 1936.

Now, a full business year ahead of the industry, Arcturus introduces the CORONET Metal Tube—the **perfected development of the metal tube**. CORONET Metal Tubes at once advance the metal tube development from an experimental stage to a dependable design using all the tried and proved advantages of the vacuum tube art.

### Metal Glass "G" Tubes

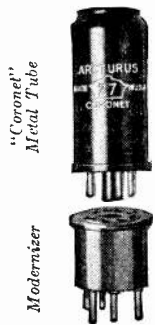
Originated and Pioneered by ARCTURUS

Type No.	Description	Volts	List Price
5W4G	Full-Wave Rectifier . . .	5.0	\$1.00
5Y3	Full-Wave Rectifier . . .	5.0	1.00
6A8G	Detector-Oscillator . . .	6.3	1.25
6B6	Detector-AVC . . . . .	6.3	1.40
6C5G	Detector-Amplifier . . .	6.3	1.00
6F5G	Amplifier . . . . .	6.3	1.00
6F6G	Power Amplifier . . . . .	6.3	1.00
6H6G	AVC Detector . . . . .	6.3	1.00
6J7G	Detector-Amplifier . . .	6.3	1.25
6K7G	Amplifier . . . . .	6.3	1.25
6L6G	Power Amplifier . . . . .	6.3	1.70
6L7G	Mixer-Amplifier . . . . .	6.3	1.50
6N6G	Power Output . . . . .	6.3	2.10
6N7G	Amplifier—Class "B" . . .	6.3	1.50
6P7	Detector-Oscillator . . .	6.3	2.00
6Q7G	Detector—AVC . . . . .	6.3	1.25
6R7G	Detector Amplifier . . . .	6.3	1.25
6X5G	Rectifier—Full Wave . . .	6.3	1.25
25A6G	Amplifier—Class "A" . . .	25.0	1.50
25Z6G	Rectifier—Full Wave . . .	25.0	1.25

### CORONET Metal Tubes

Type No.	Description	Volts	List Price	Type No.	Description	Volts	List Price
5W4	Full-Wave Rectifier . . .	5.0	\$1.10	25A6	Amplifier—Class "A" . . .	25.0	\$1.60
5Z4	Full-Wave Rectifier . . .	5.0	1.35	25Z6	Rectifier—Full Wave . . .	25.0	1.35
6A8	Detector-Oscillator . . .	6.3	1.35	2A6	Amplifier—Class "A" . . .	2.5	1.60
6C5	Detector-Amplifier . . . .	6.3	1.10	24	Detector Biased-Ampl. . .	2.5	1.50
6F5	Amplifier . . . . .	6.3	1.10	27	Detector Biased-Ampl. . .	2.5	1.35
6F6	Power Amplifier . . . . .	6.3	1.10	51 (35)	Var.-Mu Ampl.-Mod. . . .	2.5	1.50
6H6	AVC-Detector . . . . .	6.3	1.10	55	Amplifier—Class "A" . . .	2.5	1.60
6J7	Detector-Amplifier . . . .	6.3	1.35	56	Detector Biased-Ampl. . .	2.5	1.35
6K7	Amplifier . . . . .	6.3	1.35	57	Det. Biased-Ampl. "A" . .	2.5	1.50
6L6	Power Amplifier . . . . .	6.3	2.10	53	Var.-Mu Ampl.-Mod. . . .	2.5	1.50
6L7	Mixer-Amplifier . . . . .	6.3	1.60	75	Amplifier—Class "A" . . .	6.3	1.60
6N6	Power Output . . . . .	6.3	2.10	77	Det. Biased-Ampl. "A" . .	6.3	1.50
6N7	Amplifier—Class "D" . . .	6.3	1.60	78	Var.-Mu Ampl.-Mod. . . .	6.3	1.50
6Q7	Detector-AVC . . . . .	6.3	1.35	80	Rectifier Full, Half-wave .	5.0	1.10
6R7	Detector Amplifier . . . .	6.3	1.35	85	Amplifier—Class "A" . . .	6.3	1.60
6X5	Rectifier—Full Wave . . .	6.3	1.35	Modernizer	.....	.....	0.30

## CORONET — THE PERFECTED METAL TUBES FOR GLASS TUBE SETS



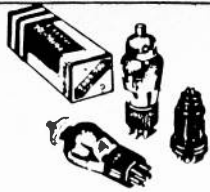
Every owner of a glass-tube set is a prospect for Coronets. They're all interested in making their radio a metal tube set.

Coronets permit this modernization easily and quickly by means of a modernizer. Exclusively an Arcturus development, Coronets offer increased sales and **real** profits. Made in the following types

Type	Will Replace Glass Type	Use MODERNIZER with following number of prongs	Type	Will Replace Glass Type	Use MODERNIZER with following number of prong
24 Coronet	24	5	77 Coronet	77	6
27 "	27	5	78 "	78	6
51 "	51 or 35	5	80 "	80	4
55 "	55	6	85 "	85	6
56 "	56	5	2A6 "	2A6	6
57 "	57	6	25A6 "	43	6
58 "	58	6	25Z6 "	25Z5	6
75 "	75	6	* This is a special Modernizer and is branded 25Z5.		







# TUNG-SOL

## DEALER AIDS



Folder — List Prices — Use them for envelope stuffers or wrap them up with packages. Either imprinted or space provided for your rubber stamp. NO CHARGE IN SMALL QUANTITIES.

### TUBE CARTONS



Glass and Metal Tube Cartons for window display use. NO CHARGE.

### WINDOW DISPLAYS

Window Displays consisting of 4 and 6 pieces are released at frequent intervals throughout the year, they are designed to sell your service as well as TUNG-SOL RADIO TUBES. NO CHARGE.

### POST CARDS



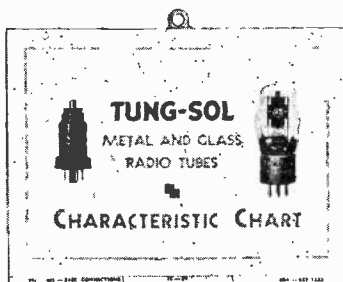
ADVERTISING POST CARDS—Post cards are economical business Stimulators imprinted and ready for addressing. \$1.00 per hundred (to cover postage).

### NEON SIGN



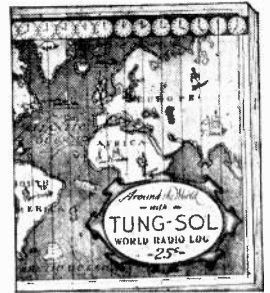
A sign with attractive appearance, dignity and selling power. An advertising medium that will draw more people to your store. It primarily advertises RADIO — secondarily TUNG-SOL Tubes. The TUNG-SOL Advertising policy to help the dealer sell Radio sets—Repair Service and Tubes is much evidence in this sign. Ask your wholesale agent how you can get this Neon Sign at a very nominal cost.

### CHARACTERISTIC CHARTS



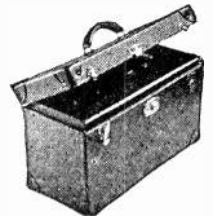
Characteristic Chart—Ready reference for base layout and electrical characteristic of Glass, Metal and "G" types of TUNG-SOL Radio Tubes.

### RADIO LOG



Radio Log — carefully compiled information consisting of American and foreign broadcasting stations, short wave, television, ship calls, etc., and photographs of most all the popular radio artists. Cover represents an antique world map, in 4 colors. Imprinted with your name and address on the cover at \$1.95 per hundred.

### SERVICEMAN'S KIT



Serviceman's kit — black leatherette with fittings 17¾" long, 7½" wide, 10¾" deep. \$3.00.

### GERNSBACH MANUALS

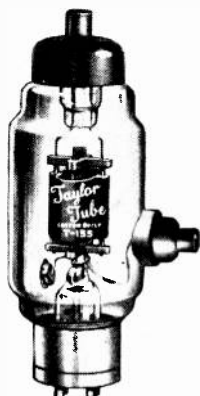
GERNSBACH manuals are available to all TUNG-SOL dealers at low prices as well as numerous items which are available free or at a nominal cost such as imprinted tube labels, price cards, gummed sealing tape, puzzles, etc.

# Taylor **HEAVY** **CUSTOM BUILT** **DUTY** Tubes

*"More Watts per Dollar!"*

All Taylor Tubes (except 203B and Rectifiers) use the famous Heavy-Duty Heat-Proof Carbon Anodes. Taylor Carbon Anodes can be run at red heat without injury to filament emission. Taylor Tubes are conservatively rated and are thoroughly guaranteed. Each Taylor Custom Built Carbon Anode Tube is individually processed through each stage of manufacture, insuring uniformity, dependability and performance.

## TAYLOR HIGH FREQUENCY TUBES



**T-155**

**155 WATTS  
PLATE DISSIPATION**

High efficiency on all frequencies  
up to 2 meters

**Fil. 10 volts—4 amps.  
Plate 2000 volts—300 M.A.  
or 3000 volts—200 M.A.  
Amp. Factor—20  
Grid to Plate—3 mmf.  
Max. D.C. Grid Cur.—60 M.A.  
Size—9" x 4 1/8"  
Plate Lead—Top  
Grid Lead—Side**

The Taylor T-155 is a high-power tube especially efficient as a Class C Amplifier on 5, 10 and 20 meters. The T-155 is very easy to drive and neutralize. The use of high resistance internal Insulators prevents misalignment of elements and adds a sturdiness not found in competitive tubes of this type. The T-155 represents a wonderful value.

**Net Price  
\$19.50**



**T-55**

**The Fastest Selling Amateur  
Transmitting Tube**

**55 WATTS  
PLATE DISSIPATION**

The T-55 is the ideal tube for medium Power Transmitters or Diathermy apparatus work on ultra High Frequencies.

**Fil. 7.5 Volts—2 amps.  
Plate 1500 volts—150 M.A.  
Modulated  
Amp. Factor—20  
Grid to Plate—2.5 mmf.  
Max. D.C. Grid Cur.—40 M.A.  
Size—7" x 2 5/8"  
Isolantile UX Base  
Plate Lead—Top**

The T-55 is amateur Radio's Favorite Tube due to its outstanding value. Easy to drive—easy to neutralize. In addition to Class C Amplifier, the T-55 makes an ideal buffer or doubler tube for use in high power Transmitters.

**Net Price  
\$8.00**



**T-200**

**HEAVY DUTY  
200 WATTS  
PLATE DISSIPATION**

The T-200 is a Heavy-Duty High Frequency Tube. Compare the ratings on the T-200 with competitive tubes and you will discover why the Taylor T-200 is leading in sales.

**Fil. 10 to 11 volts—4 amps.  
Plate—unmodulated 2500 v.  
modulated—2000 volts  
—350 M.A.  
Amp. Factor—17  
Grid to Plate—7 mmf.  
Max. D.C. Grid Cur.—80 M.A.  
Size—9 1/2" x 3 3/4"  
Plate Lead—Top  
Grid Lead—Side**

The T-200 is widely used in high-power diathermy apparatus because it can stand up in Heavy Duty operation. The T-200 is the perfect tube for full 1 K.W. Phone Rigs on 20 meters. Easy to drive—Easy to neutralize!

**Net Price  
\$21.50**

# Taylor **HEAVY** CUSTOM BUILT **DUTY** Tubes

"More Watts per Dollar"

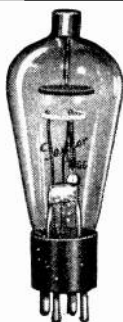
## A TUBE FOR EVERY PURPOSE



### TAYLOR 841-A

50 Watts Plate Dissipation. Efficient performance on all Bands from 10 to 160 meters. Fil. 10 Volts, 2 Amps. Max. Plate Volts 1000. Max. Plate Current 150 MA.

Amp. Factor 15  
Net \$7.00



### TAYLOR 866

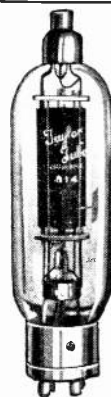
Half Wave mercury vapor rectifier. Fil. 2.5 Volts, 5 Amps. Inverse Peak 7500 Volts. Inverse Current 600 MA. \*Multistrand filament construction.

Net \$1.65

### TAYLOR 866-B

Half Wave Mercury Vapor Rectifier. Fil. 5 Volts, 5 Amps. Inverse Peak Voltage 8500. Inverse Peak Current 1 Amp.

Net \$3.00



### TAYLOR 814

200 Watts Plate Dissipation. Efficient on all frequencies from 10 to 160 meters. Fil. 10 Volts, 4 Amps. Max. Plate Volts 2000. Max. Plate Current 300 M.A.

Amp. Factor 12  
Net \$18.50

### TAYLOR 203-A

100 Watts Plate Dissipation. Efficient on 20-40-80-160 meters. Fil. 10 Volts, 3 Amps. Max. Plate Volts 1250. Max. Plate Current 175 M.A.

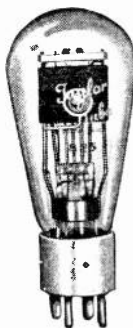
Amp. Factor 25  
Net \$12.50



### TAYLOR 825

40 Watts Plate Dissipation. Fil. 7.5 Volts, 2.0 Amps. Max. Plate Volts 850, Max. Plate Current 110 M.A. Efficient on 5 to 160 meters.

Amp. Factor 8  
Net \$4.95



### TAYLOR 822

200 Watts Plate Dissipation. 600 Watts Audio in Class B. Fil. 10 Volts, 4 Amps. Max. Plate Volts 2000. Max. Plate Current 300 M.A. Efficient on 10-20-40-80-160 meters. A Super HD-203A.

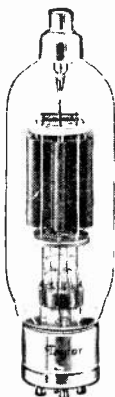
Amp. Factor 27  
Net \$18.50



### 756

40 Watts plate dissipation—Fil. 7.5 volts—2.0 amps., max. plate volts 850—max. plate current 110 M.A. An extremely efficient doubler or crystal osc. tube. Pair will deliver 100 watts audio in Class B. A high mu. tube. Amp. Factor 25

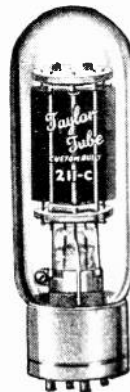
Net \$4.95



### TAYLOR HD203-A

150 Watts Plate Dissipation. Fil. 10 volts, 4.0 amps. Max. Plate volts 2000. Max. Plate Current 300 M.A. Fine for both Class C. Amp. and Class B Audio Work. A favorite among many amateurs.

Amp. Factor 25  
Net \$17.50



### TAYLOR 211-C

Widely used in Diathermy apparatus. Same general characteristics and appearance as standard 211 except has lower interelectrode capacities. Grid to Plate 9 mmf.

Amp. Factor 12  
Net \$12.50

### TAYLOR 203B

Will work on all Standard 203A type Class B Transformers. 200 Watts Audio in Class B. Fil. 10 Volts, 3.25 Amps. Max. Plate Volts 1000. Max. Plate Current 175 M.A.

Amp. Factor 25  
Net \$7.50

### Other TAYLOR Tubes

211—Same general characteristics as 203A except Mu. is lower.

Net \$12.50

845—Standard Class A, Amplifier Tube.

Net \$12.50

872—Another famous Taylor Heavy Duty Rectifier—Standard characteristics.

Net \$12.00

TAYLOR TUBES ARE

THOROUGHLY GUARANTEED!

WRITE US FOR  
**TAYLOR TUBES**  
NEW COMBINED  
CATALOG AND HAND BOOK  
FREE

### TAYLOR 204-A

Widely used in Commercial Broadcast Transmitters. Standard physical and electrical characteristics. A Truly Super Heavy Duty Carbon Anode 204-A.

Net \$90.00

# AMPEREX

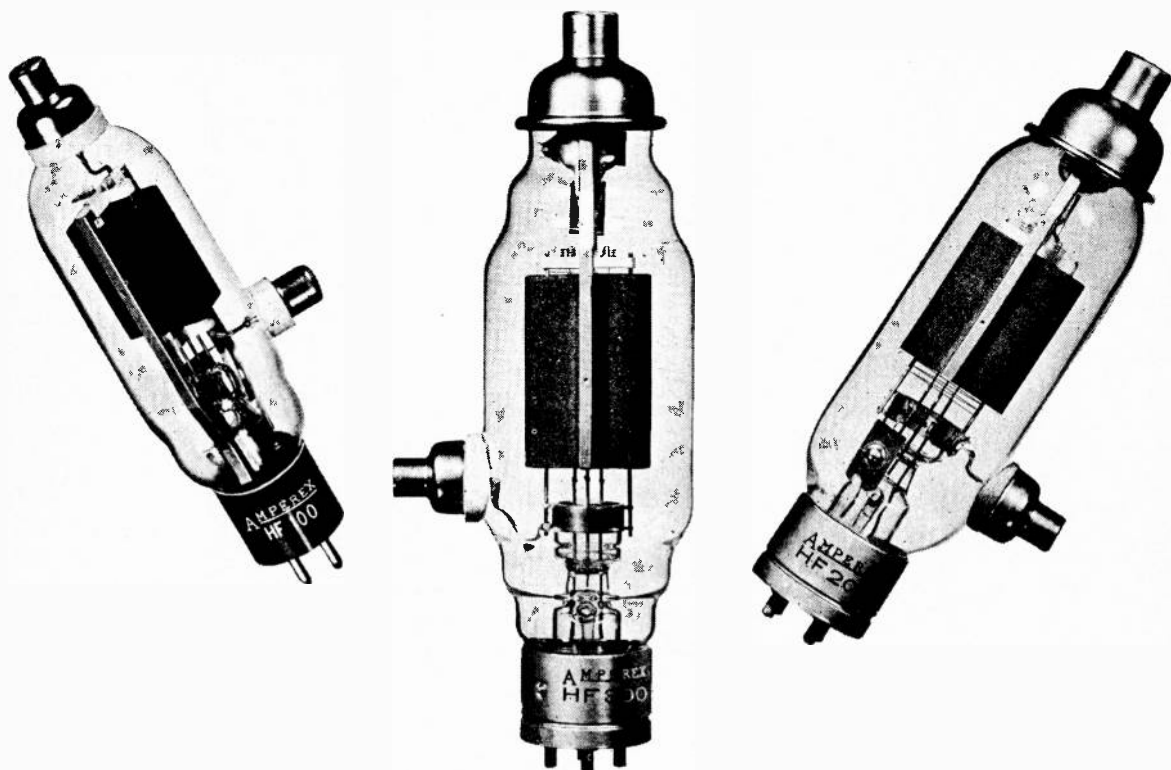
## Graphite Anode Transmitting Tubes

Remarkable in Efficiency

--

Startling in Performance

FOR BROADCASTING, DIATHERMY,  
PHYSIOTHERAPY AMATEUR AND  
INDUSTRIAL APPLICATIONS



Amperex Tubes are distinguished by exclusive developments in design and structure. These developments and design refinements are reflected in the superior performance of Amperex Tubes.

Even cursory inspection will show how Amperex Tubes differ from the mere adaptations of conventional types which have recorded little improvement since their introduction more than a decade ago.

This superiority is directly due to unremitting research by a staff of engineers and technicians whose experience covers practically the whole history of radio as we know it today. And this extensive knowledge and irreplaceable skill is built into every Amperex Tube.

With such a unique background Amperex performance standards are naturally more rigorous than those commonly regarded as more than satisfactory. Recognition by such Government agencies as the Army, Navy and Department of Commerce is but one of many proofs of Amperex superiority where specified performance at a competitive price is the sole consideration.

The growth of our company is due, we are certain, to our earnest determination to produce vacuum tubes of the highest quality possible in the present state of the art . . . to advance that art by improvements originating in our research and engineering departments . . . to produce tubes that day by day and year by year shall merit the confidence of the industries they serve.

SEE REVERSE SIDE FOR COMPLETE LISTING AND NET PRICES

# AMPEREX

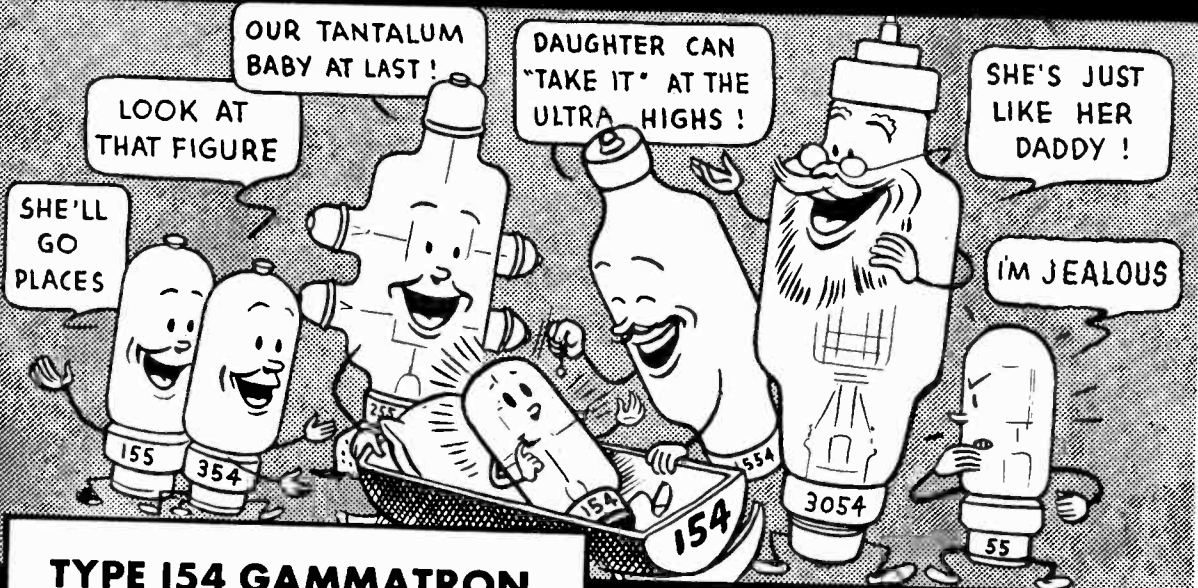
## Air-Cooled Vacuum Tubes

TYPE	Fil. Voltage	Fil. Current Amperes	Class C Nominal Mod. Power Output	USE	PRICE
HF100	10.0	2.0	170 Watts	Ultra H.F. Oscillator and Amplifier, Class B Modulator	\$10.00
HF200	10.5	3.4	300 Watts	Ultra H.F. Oscillator and Amplifier, Class B Modulator	24.50
203A	10.0	3.25	150 Watts	RF Osc. and Power Amplifier, Class B Modulator	15.00
204A	11.0	3.85	400 Watts	RF Osc. and Power Amplifier, Class B Modulator	95.00
205D	4.5	1.60	————	Class A Audio Power Amplifier	5.00
210	7.5	1.25	15 Watts	RF Osc. and Power Amplifier, Class B Modulator	2.50
211	10.	3.25	150 Watts	RF Osc. and Power Amplifier, Class B Modulator	15.00
211C	10.	3.25	180 Watts	High RF Oscillator and Power Amplifier	17.50
211D	10.	3.25	180 Watts	High RF Oscillator and Power Amplifier	17.50
211H	10.	3.25	200 Watts	High RF Oscillator and Power Amplifier	17.50
212E	14.	6.00	400 Watts	RF Osc. and Power Amplifier Class A Modulator	75.00
242A	10.	3.25	————	Class A Audio Power Amplifier and Modulator	12.50
264B	1.5	.3	————	Class A Audio Voltage Amplifier	1.75
HF300	11.5	4.0	400 Watts	Ultra H.F. Osc. and Power Amplifier, Class B Modulator	50.00
800	7.5	3.25	70 Watts	Ultra H.F. Osc. and Power Amplifier, Class B Modulator	10.00
801	7.5	1.25	25 Watts	Ultra H.F. Osc. and Power Amplifier, Class B Modulator	3.25
805	10.0	3.25	250 Watts	RF Osc. and Power Amplifier, Class B Modulator	18.00
830	10.0	2.00	50 Watts	RF Osc. and Power Amplifier, Class B Modulator	8.75
830B	10.0	2.00	90 Watts	High RF Osc. and Power Amplifier, Class B Modulator	10.00
838	10.	3.85	180 Watts	RF Osc. & Power Amp., Zero Bias Class B Modulator	16.00
841	7.5	1.25	15 Watts	RF Osc. and Power Amplifier, Class B Modulator	3.25
842	7.5	1.25	————	Class A Power Amplifier and Modulator	3.25
845	10.	3.25	————	Class A Power Amplifier and Modulator	16.00
849	11.	5.	700 Watts	RF Osc. & Power Amplifier, Class A & B Modulator	160.00
851	11.	15.5	1,500 Watts	RF Osc. & Power Amplifier, Class A & B Modulator	350.00
852	10.	3.25	180 Watts	High RF Osc. and Power Amplifier, Class B Modulator	16.40
864	1.1	.25	————	Class A Audio Voltage Amplifier	1.50

### RECTIFIERS

TYPE	Fil. Voltage	Fil. Current	Peak Inverse Voltage	Peak Plate Current		PRICE
575A	5.0	10.00	15,000 Volts	7.5 Amp.	Shielded Filament	\$35.00
857A	5.0	40.00	22,000 Volts	40.0 Amp.	Shielded Filament	295.00
866	2.5	5.	7,500 Volts	.6 Amp.		1.75 <del>1.00</del>
866A	2.5	5.	10,000 Volts	1.0 Amp.	Shielded Filament	4.00
872	5.	10.	7,500 Volts	2.5 Amp.		14.00 <del>10.00</del>
872A	5.	7.5	10,000 Volts	5.0 Amp.	Shielded Filament	16.50 <del>10.00</del>
869	5.	20.	20,000 Volts	10.0 Amp.		165.00
869A	5.	20.	20,000 Volts	10.0 Amp.	Shielded Filament	165.00

# A New Arrival IN THE GAMMATRON FAMILY



**TYPE 154 GAMMATRON**  
**\$12.50 AT YOUR DEALER**  
 ¼ kilowatt a pair at 1000 VOLTS and 5 meters

**HEINTZ AND KAUFMAN**  
 LTD  
 SOUTH CALIFORNIA  
 SAN FRANCISCO U. S. A.

## HK-154 GAMMATRON

This addition to the Gammatron Line gives the amateur and experimenter something radically new in a comparatively low voltage transmitting tube. The outputs in either audio or radio frequency circuits are exceptionally high. Ratings apply at all frequencies up to 60 megacycles (5 meters)! The most modern and finest type of construction is used, incorporating such advantageous features as tantalum grid and plate, tungsten supporting rods, thoriated tungsten filament, all-glass insulation and Nonex glass envelope. Grid and plate terminals extend from the sides of the envelope, thereby minimizing the length of external connecting leads and assisting materially with symmetrical layouts.

### GENERAL CHARACTERISTICS:

Grid and plate..... Tantalum  
 Filament..... Thoriated Tungsten  
 Base..... Medium 4 Pin

.....  
 Filament voltage..... 5.0 volts  
 Filament current..... 6.5 amps.  
 Plate dissipation..... 50. watts  
 Maximum plate voltage..... 1500. volts  
 Maximum plate current..... 175. ma.  
 Average amplification constant..... 6.7  
 Average plate impedance..... 1750. ohms

### Class "A" Audio Performance (Single Tube):

Plate voltage..... 500 to 1250 volts  
 Plate current..... 40 to 60 ma.  
 Grid bias..... -45 to -190 volts  
 Power output..... 3.5 to 15.5 watts.

### Class "B" Audio Performance (Two Tubes):

Plate voltage..... 750 to 1500 volts  
 Plate current..... 230 to 350 ma.  
 Grid bias..... -100 to -265 volts  
 Power output..... 150 to 250 watts  
 Suggested driver:..... Pair of 2A5 or 42 tubes as push-pull triodes with 350 plate volts.

### Class "B" Radio Performance (Single Tube):

Plate voltage..... 750 to 1500 volts  
 Plate current..... 52 to 75 ma.  
 Grid bias..... -100 to -265 volts  
 Carrier output..... 18 to 28 watts

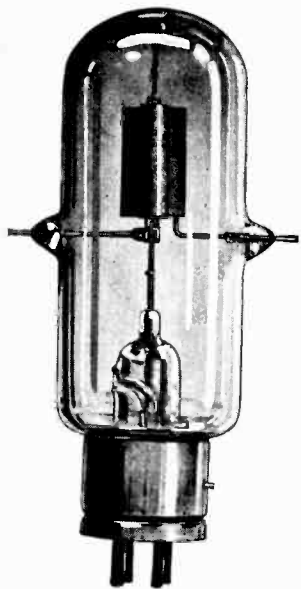
### Class "C" Radio Performance (Single Tube):

Plate voltage..... 750 to 1500 volts  
 Plate current..... 167 to 175  
 Grid bias..... -260 to -590 volts  
 Power output..... 85 to 200 watts.

### F.C.C. Broadcast Ratings (Final stage):

High level modulation..... 75 watts per tube  
 Low level modulation..... 25 watts per tube

**TANTALUM USED FOR PLATES AND GRIDS!**



HK-154

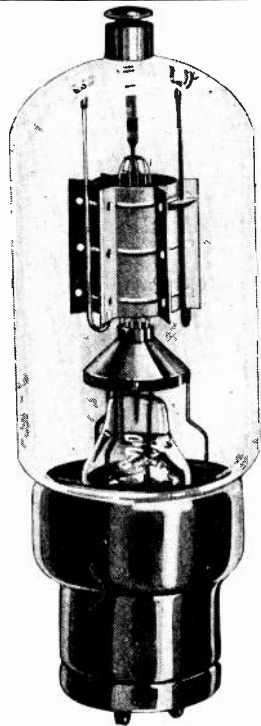
# The GAMMATRON LINE

## First With Tantalum!!

# The GAMMATRON LINE

## First With Tantalum!!

### HK-354 GAMMATRON



**HK-354**  
**\$24.50** NET

The Type HK-354 Gammatron transmitting tube is the original Tantalum element tube. It was made commercially available to the amateur and experimenter early in 1934. At the present time it stands foremost among tubes and will be found superior in every respect. As with other Gammatrons this tube has tantalum elements, tungsten supports, Nonex glass, thoriated filament, all-glass insulation and in addition uses extremely rigid three-post plate and grid supports. A cage type of grid insures complete plate current control. The tantalum plate and grid exclude need of a getter and allow safe operation at a red heat, without danger of the tube becoming gassy. Cheaper plate materials are inferior and liberate gas freely when operated at a red heat.

#### GENERAL CHARACTERISTICS:

Grid and plate.....Tantalum  
Filament.....Thoriated Tungsten  
Base.....Standard 50 watt

Filament voltage.....5.0 volts  
Filament current.....10. amps.  
Plate dissipation.....150. watts  
Maximum plate voltage.....4000. volts  
Maximum plate current.....300. ma.  
Average amplification constant.....14.  
Average plate impedance.....2800. ohms

#### Class "A" Audio Performance (Single Tube):

Plate voltage.....1000 to 2500 volts  
Plate current.....60 to 100 ma.  
Grid bias.....-40 to -150 volts  
Power output.....7 to 44 watts

#### Class "B" Audio Performance (Two Tubes):

Plate voltage.....1000 to 3000 volts  
Plate current.....230 to 390 ma.  
Grid bias.....-60 to -205  
Power output.....160 to 665 watts  
Suggested driver.....Two or four 2A5 or 42 tubes as push-pull triodes with 350 plate volts.

#### Class "B" Radio Performance (Single Tube):

Plate voltage.....1000 to 3000 volts  
Plate current.....58 to 97 ma.  
Grid bias.....-60 to -205 volts  
Carrier output.....20 to 82 watts

#### Class "C" Radio Performance (Single Tube):

Plate voltage.....1500 to 4000 volts  
Plate current.....255 ma.  
Grid bias.....-300 to -700 volts  
Power output.....270 to 840 watts.

#### F.C.C. Broadcast Ratings (Final Stage):

High level modulation.....250 watts per tube  
Low level modulation.....50 watts per tube  
Grid bias modulation.....50 watts per tube

**HK-253 GAMMATRON** A high vacuum half-wave rectifier for use where the time delay required with mercury rectifiers cannot be tolerated. Filament 5 volts, 10 amperes. Maximum inverse peak voltage 10,000 volts. Maximum load current 750 ma. Tube drop, 120 volts.

**HK-253-A** (Standard 50 watt base) **\$20.00**  
**HK-253-B** (Industrial base) **20.00**

**HK-353 GAMMATRON** A half-wave mercury rectifier for use in circuits of moderate voltage and high current. This tube is particularly suited for use with a Heintz and Kaufman Ltd. rectifier in conjunction with the HK Type 300 Engine Generator. Filament 1.25 volts, 13 amperes. Maximum inverse peak voltage 1000 volts. Maximum load current 2.5 amperes.

**HK-353** Medium 4 Pin Base **\$12.00**

**HK-354-C GAMMATRON**—A modification of the HK-354 specially adapted to high frequency use. Has identical electrical characteristics except for slightly lower G-P capacitance. Mechanical arrangement altered to permit grid connection at side of envelope. Grid and plate caps are welded. This tube is particularly suited to diathermy use. Appreciable outputs may be secured at frequencies as high as 100 megacycles.

**HK-354-C** (Standard 50 watt base) **\$24.50**

**HK-653 GAMMATRON**—A half wave mercury rectifier for use in circuits of moderate power and high voltage. This tube is of the hot cathode type. Filament 5 volts, 6.5 amperes. Maximum inverse peak voltage 10,000 volts, (15°-50°C). Average current 1.75 amperes. Peak current 7.5 amperes.

**HK-653-A** (Standard 50 watt base) **\$18.50**  
**HK-653-B** (Industrial base) **18.50**

**HK-654 GAMMATRON**—A medium size triode suitable for broadcast and other transmitters, as well as high powered diathermy machines. This tube has a glass side-arm and is suitable for operation at frequencies as high as 60 megacycles. Filament 7.5 volts, 15 amperes. Plate dissipation 300 watts. Amplification constant 25. Plate impedance 3800 ohms.

**HK-654** (Standard 50 watt base) **\$75.00**

**HK-753 GAMMATRON** A high powered mercury rectifier of the hot cathode type. This tube is well adapted to plate voltage supplies used in conjunction with water-cooled transmitting tubes. Filament 5 volts, 6.5 amperes. Maximum inverse peak voltage 10,000 volts, (15°-50°C). Average current 2.5 amperes. Peak current 10 amperes.

**HK-753-A** (Standard 50 watt base) **\$30.00**  
**HK-753-B** (Industrial base) **30.00**

**HK-1554 GAMMATRON**—A triode of moderate power adaptable to broadcast and commercial use. The grid connection is made to a side-arm. Tube is suitable for operation at frequencies as high as 60 megacycles. Filament 11 volts, 22.5 amperes. Plate dissipation 750 watts. Amplification constant 14.5. Plate impedance 1800 ohms. F.C.C. ratings; high level 1000 watts; low level and grid bias 250 watts.

**HK-1554** (Heintz & Kaufman Ltd. base) **\$250.00**

**HK-3054 GAMMATRON**—An exceedingly high powered and high efficiency air-cooled triode. This tube is suited to use in commercial and broadcast service at frequencies up to 40 megacycles. Filament 14 volts, 45 amperes. Plate dissipation, 1500 watts. Amplification constant, 20. Plate impedance 2000 ohms. F.C.C. ratings; high level 2500 watts; low level and grid bias 500 watts.

**HK-3054** (Heintz & Kaufman Ltd. base) **\$467.50**

**TANTALUM USED FOR PLATES AND GRIDS!**

Engineering Data on Request



# VACUUM EIMAC TUBES

CERTAIN fundamental design features are incorporated in all EIMAC transmitting tubes. These features, though costly to obtain, give to the EIMAC tube that very tangible degree of superiority that have made these tubes world famous. The anodes of all EIMAC tubes are suspended from the top of the glass envelope; no ceramic insulator of any kind is used. The anode is fabricated from completely degassed tantalum the finest material available today for vacuum tube construction. The grids, also fabricated from tantalum, are of the vertical bar type. The unusual grid design does not have large supporting bars that shade part of the effective area of the anode and which greatly increase the grid current. The highly efficient thoriated tungsten type of filament reaches a new degree of effectiveness in the EIMAC tube. Unusually long filament life plus a high order of usable space current have been brought about by a very recent development of the EIMAC laboratories. EIMAC tubes have been long recognized as having the lowest value of interelectrode capacity for any tubes with equal power ratings or capabilities. These low capacities have not resulted in a sacrifice of electrical

efficiencies though such design greatly extended the range of useful frequencies at which the EIMAC tubes can be operated. The highest possible degree of grid to filament insulation is employed on all EIMAC tubes making safe the use of a high value of grid excitation voltage when such practice is desirable. The vacuum in each EIMAC tube is the highest possible. The complete degassing of all the metal parts makes undesirable and unnecessary the use of a chemical agent or "getter" to maintain the vacuum, at the proper degree for successful operation of the thoriated filament. It may be interesting to note that tantalum electrodes as used in EIMAC tubes can safely radiate more heat per square inch of radiating surface than any other material now used for vacuum tube construction. Spotlessly clean glass bulbs and metal parts, perfect alignment of the elements, perfect vacuum, and uniformity of electrical characteristics attest to the skill of the men that fabricate the EIMAC tubes. The EIMAC developed technique in the proper handling of tantalum permits a guarantee of complete freedom from gas released by accidental overload.

## EIMAC 35T



The EIMAC 35T tube has the lowest interelectrode capacities of any transmitting vacuum tube available today. The EIMAC 35T while having extremely small physical size has really tremendous power capabilities. The use of tantalum electrodes and a sparkling clear glass bulb uncontaminated by "getter" makes possible the small physical size of the 35T. The rated class "C" output for telegraphy on all frequencies below 50 megacycles is 170 watts. The telephony output is 120 watts. The above outputs are for a single tube. The 35T is an excellent class "B" audio tube and can be operated with zero grid bias at plate potentials up to 700 volts. The maximum class "B" audio output from a pair of 35T's

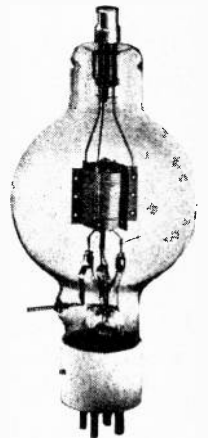
is 235 watts. The 35T is particularly adaptable to high frequency work due to the small interelectrode capacities. The 35T makes an excellent crystal oscillator tube with outputs of 60 watts or so at 3.5 megacycles. The 35T is very effective in frequency multiplying circuits.

Filament voltage	.....5 to 5.1
Filament current	..... 4 amperes
Amplification factor	..... 30
Maximum plate current	.....150 milliamperes
Maximum plate dissipation	..... 70 watts
Normal plate dissipation	..... 35 watts
Maximum plate voltage	..... 2000

**Net Price \$8.00**

## EIMAC 100TL

The 100TL tube is one of the new additions to the EIMAC line and supercedes the older 50T tube. The 100TL incorporates some interesting mechanical changes the most notable being the new low loss grid and plate connectors. The new connectors have greatly reduced the lead losses common to the older designs and has greatly increased the ultra high frequency capabilities of these tubes. The 100TL tube is finding wide application in diathermy equipment and fills the requirement for a low first cost tube that will give high outputs and long life in this grueling service. The 100TL can be used in equipment now using the older 50T though the 100TL tube carries heavier ratings and is capable of greater outputs. The 100TL tube has approximately the same power capabilities as the 100TH tube.



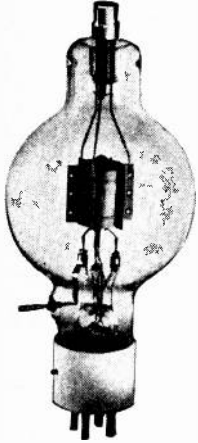
Filament voltage	..... 5 to 5.1
Filament current	..... 6.5 amperes
Amplification factor	..... 12
Maximum plate current	..... 225 milliamperes
Plate dissipation (normal)	..... 100 watts
Maximum plate voltage	.....3000

**Net Price \$13.50**



# VACUUM EIMAC TUBES

## EIMAC 100TH



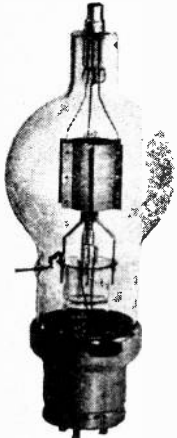
The 100TH tube has a high amplification factor. An improved grid design makes the 100TH tube exceedingly easy to excite and this tube makes an ideal class "C" radio frequency tube, a class "B" modulator tube, or a frequency multiplier tube. The class "C" output from a single tube is 300 watts at 75% plate efficiencies but actually 400 watts or better can be obtained without exceeding any tube rating. The class "B" audio output from a pair of 100TH tubes can be as high as 500 watts. The 100TH tube operates at zero bias at plate potentials up to 1250 volts on the plate. The class "B" output at 1250 volts is 260 watts. The 100TH is fast becoming one of the favorite tubes used by ultra high frequency experimenters.

Filament voltage ..... 5 to 5.1  
 Filament current ..... 6.5 amperes  
 Amplification Factor ..... 30  
 Maximum plate current..... 225 milli-amperes  
 watts

Plate dissipation (normal) 100  
 Maximum plate voltage ..... 2000

**Net Price \$13.50**

## EIMAC 250TH



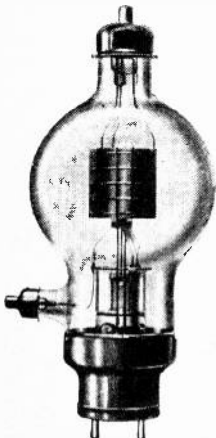
An improved grid design makes the 250TH tube extremely easy to excite. The high amplification factor greatly simplifies the bias requirements. The 250TH tube makes an excellent class "C" amplifier, class "B" audio tube, and a frequency multiplier tube. The 250TH tube can be operated at zero grid bias with plate potentials up to 1400 volts. A pair of 250TH can be operated at an input of 1000 watts with plate potentials as low as 1500 volts. A pair of 250TH tubes operating at the same plate potential are capable of completely modulating the above noted inputs. The 250TH tube is particularly adaptable to ultra high radio frequency work.

Filament voltage ..... 5 to 5.1  
 Filament current ..... 10.5 amperes  
 Amplification factor ..... 32  
 Maximum plate current..... 350 milli-amperes  
 watts

Plate dissipation (normal)..... 250  
 Maximum plate voltage ..... 3000

**Net Price \$24.50**

## EIMAC 500T



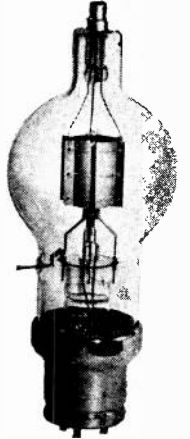
The EIMAC 500T is used extensively by commercial communication companies. The 500T is an economical substitute for tubes conventionally used and users report phenomenally long life. The 500T is approved by the F.C.C. for broadcast services. The low interelectrode capacities are unusual in a tube of this size with the result that excellent performances are obtained on the highest communication frequencies.

Filament voltage ..... 7.5  
 Filament current ..... 21 amperes  
 Amplification factor ..... 13  
 Maximum plate current ..... 700 milli-amperes  
 watts

Plate dissipation (normal) 500  
 Maximum plate voltage..... 6000

**Net Price \$175.00**

## EIMAC 250TL



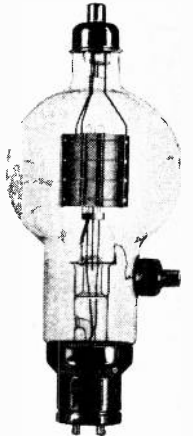
The 250TL tube supercedes the older 150T tube and is interchangeable in equipment now using the older tube. The 250TL is capable of operation at much higher inputs than the older 150T. The 250TL incorporates a new style grid and anode connector which materially reduce losses occurring at these points when compared to the more conventional arrangements. The new connectors permit successful operation on radio frequencies heretofore thought too high. The 250TL tube makes an excellent tube to be used in high power diathermy machines and is at the present time being extensively used in the better machines. The 250TL tube is capable of approximately the same outputs as the 250TH.

Filament voltage ..... 5 to 5.1  
 Filament current ..... 10.5 amperes  
 Amplification factor ..... 13  
 Maximum plate current..... 350 milli-amperes  
 watts

Plate dissipation (normal)..... 250  
 Maximum plate voltage..... 3000

**Net Price \$24.50**

## EIMAC 300T



The EIMAC 300T is finding wide application in broadcasting services as this tube is capable of replacing to advantage some of the more costly tubes now generally employed in these services. Commercial communication companies are using the 300T for operation in their high frequency equipment. A pair of 300T tubes are capable of an antenna power of 2500 watts when used in telegraph transmitters.

Filament voltage ..... 7.5  
 Filament current ..... 12 amperes  
 Amplification factor ..... 16  
 Maximum plate current..... 500 milli-amperes  
 watts

Plate dissipation (normal) ..... 300  
 Maximum plate voltage..... 6000

**Net Price \$60.00**

## EIMAC 1000UHf

The EIMAC 1000UHf tube is particularly designed for high power outputs on frequencies as high as 150 megacycles. The tube is physically small in size in order to minimize lead inductance. The tube is designed to operate with forced draft on the glass bulb. Provision is made to force cool the grid and plate stems. The plate dissipation under forced air draft is 1000 watts.

**PRICE ON APPLICATION**



# SOUND EQUIPMENT



## RCA PORTABLE SOUND SYSTEM 12 WATT—CLASS "A" AMPLIFIER

110 VOLTS—50-60 CYCLES

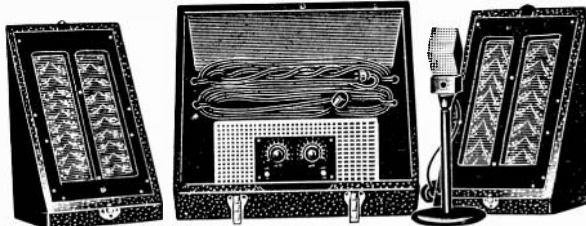
**HERE IT IS**—the standard PG 98 set up ready for operation. More than ample special flexible indestructible cable is supplied.

Two electro dynamic speakers are of special design—insure faithful reproduction. When combined with the amplifier section shown they provide a very handsome carrying case.

Note how neat and compact the RCA PG 98 Portable Sound Equipment appears when made ready for transporting from place to place.

**MICROPHONE**—Genuine RCA Velocity Microphone. 50 to 10,000 cycles Frequency Range. Table Stand.

**AMPLIFIER**—12 watts, Class A, undistorted output. 25 watts max.



These new RCA Portable Sound Systems embody all the splendid qualities that have been built into sound amplification equipment. Numerous prospects are anxiously awaiting demonstrations of this, the finest Portable Sound Equipment available; Political Meetings, Orchestras, Amusement Parks, Auditoriums, Cabarets, Gymnasiums, Hotels, Resorts, Swimming Pools and many other outlets which will immediately suggest themselves to you. The power output of the PG 98 will furnish sufficient volume of sound for auditoriums with seating capacities up to 1600.

Overall gain, 110 db. Extremely low hum level. Controls easily accessible. Tone Control. Volume Control. Music-Speech Switch. Radio and Phonograph inputs.

**SPEAKERS**—2 special Electro-Dynamic Speakers. Completely enclosed baffles. Speaker cases treated with Ozite acoustic material. Attractive, hand-rubbed, walnut baffle plaques, with decorative grille. Suspension eyelets for hanging speakers.

**TUBE COMPLEMENT**—3 RCA-42, 1 RCA-75, 1 RCA 6-C-6, 1 RCA 5-Z-3.

**FINISH**—Durable black leatherette.

**SIZE**—Complete unit ready for transportation: Length, 21¼"; Height, 21¼"; Depth, 10".

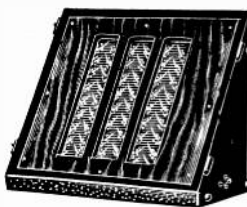
## Model PG 98, \$179.50 List Price Complete with RCA Radiotrons, All in One Case



20 WATT



## RCA DeLUXE PG62-E



## PORTABLE SOUND SYSTEM

110 VOLTS—50-60 CYCLES

## CLASS "A" AMPLIFIER

And here is the DeLuxe PG 62-E ready to demonstrate its superiority over all competition. Here again a generous supply of cable is furnished between the units.

These two exceptionally efficient and faithful electro-dynamic speakers are triangular in shape and fit together into a compact carrying case.

**THIS DELUXE PORTABLE SOUND SYSTEM** has a power output of 20 watts, which is sufficient to meet the average requirements in auditoriums with seating capacities up to 3,000. Brings speech or music to the listener with the clearness and brilliance of the original sound.

**THE DELUXE PG-62-E** has all the qualifications to meet these requirements.

This equipment is particularly adapted for use in night clubs and tap rooms. Modern entertaining technique demands its use in connection with orchestras and floor shows.

A Portable Sound System of superb quality, and extremely attractive appearance.

**MICROPHONE**—Genuine RCA Velocity Microphone. 50 to 10,000 cycles Frequency Range. Adjustable Banquet Stand.

**AMPLIFIER**—20 watts, Class A, undistorted output. 35 watts maximum. Overall gain, 108 db. 250-500 ohms input. Extremely low hum level. Music-Speech Switch. Separate voltage amplifier with volume control. Microphone Volume Control. Master Volume Control. Tone Control. Phonograph and Radio Inputs. Ample gain for RCA Velocity Lapel Microphone. Provision for mixing voice with musical background.

**SPEAKERS**—Two extra large Electro-Dynamic Speakers. Completely enclosed baffles. Speaker cases treated with Ozite acoustic material. Attractive, hand-rubbed, walnut baffle plaques, with decorative grille. Suspension eyelets for hanging speakers.

**TUBE COMPLEMENT**—1 RCA-57, 2 RCA-56, 1 RCA-59, 2 RCA 2-A-3, 1 RCA-80 and 1 RCA-83.

**FINISH**—Durable black leatherette.

**SIZE**—Complete unit ready for transportation (both cases same measurements): Length, 17¾"; Height, 21"; Depth, 12".

## PG62-E \$299.50 List Price Complete with RCA Radiotrons, in Two Cases



RCA AMPLIFIER MI-4283

## RCA 12 WATT AMPLIFIER MI-4283

Specially designed for general sound re-enforcement purposes, such as the amplification of Public Address, Radio and Phonograph programs. This four stage amplifier has an input impedance of 16,000 ohms for use with MI-4010A Velocity microphone or equivalent. The output impedances are 15, 7½ and 40 ohms. Field excitation for two 1000 ohm electro dynamic speakers in series is provided. A built-in power supply forms a part of the unit. It is capable of delivering 12 watts (25 watts Max.), Class A, undistorted output and has an overall gain of 110 db. The frequency range is from 50 to 10,000 cycles. Power supply 110 volt—50/60 cycle A.C.

Equipped with tone control, volume control, music-speech switch, radio and phonograph inputs. Specially designed input plug furnished with amplifier. Complete in every detail, except Radiotron tube complement.

**TUBE COMPLEMENT**—3 RCA-42, 1 RCA-75, 1 RCA 6-C-6, 1 RCA 5-Z-3, Code; SCABM.

List Price **\$76.95**

(less RCA tubes)

Set of RCA Tubes \$5.84

# RCA SOUND EQUIPMENT



## RCA VELOCITY MICROPHONE

**MI-4010-A**—This is the highest quality, low cost Velocity Microphone ever made available to sound engineers. The frequency range is so excellent that this microphone is rapidly replacing other types of microphones in use today. Highly favorable directional characteristics; high sensitivity and faithfulness of response. Frequency Range—50 to 10,000 cycles. Impedance—250 ohms and 16,000 ohms. Dimensions—2 $\frac{3}{4}$ " wide, 2 $\frac{3}{8}$ " deep, 6 $\frac{3}{8}$ " long. Net Weight—2 pounds; shipping weight, 4 pounds. Finish—Durable Baked Wrinkled Gunmetal. Shielded Cable—30 feet with plug. Average Operating Level, —68 db.

LIST PRICE ..... **\$43.50**

## MICROPHONE STANDS

These Microphone Stands are of excellent quality, and are very attractively priced:

**STUDIO FLOOR STAND MI-4068**—Its modernistic design makes it especially suited for Public Address or Studio work. The weight of the heavy base precludes all possibility of its being knocked over while in use. The height of the stand is adjustable from 37" to 67". An easily operated positive locking device holds the microphone at any desired height. Finished in stauary bronze; the base is of brown crackle.

LIST PRICE ..... **\$18.75**

**ADJUSTABLE BANQUET STAND MI-4065**—Finished in stauary bronze. Adjustable from 11" to 16"

LIST PRICE ..... **\$55.55**

**TABLE STAND MI-4069**—Gun Metal finish, 11" in height.

LIST PRICE ..... **\$1.60**

**MI-4056**—Heavy, substantial Program Stand, bronze finish. Adjustable in height from 56" to 81". Dashpot device permits lowering the microphone smoothly and without jolting when the catch is released, and can be pocked in position.

LIST PRICE ..... **\$55.55**

**COLLAPSIBLE STAND MI-4059**—Collapsible Microphone Stand for portable use. Weighs only three pounds, finished in oxidized bronze. Length: collapsed, 31"; extended, 72".

LIST PRICE ..... **\$44.45**



## RCA PERMANENT FIELD DYNAMIC SPEAKER MI-6240-B

Ruggedly designed, with a sensitivity far greater than that of any similar type Commercial Sound Speaker on the market. 5 watts input. 15 ohm voice coil. Input impedances ranging from 225 to 5,000 ohms. Dimensions: 10 $\frac{1}{4}$ " diameter, 5 $\frac{1}{4}$ " deep. Shipping Weight, 14 pounds. Net Weight, 11 pounds.

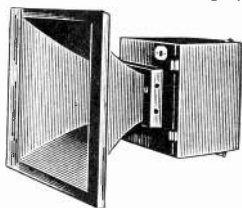
Code TALARLIST PRICE ..... **\$12.55**

## RCA DIRECTIONAL SOUND PROJECTOR

**MI-1453/1425-A:**

Wide angle projector, designed for high reverberation conditions. Excellent voice reproduction, with low frequency cut-off. Specially designed for public address work. Ruggedly constructed, and highly efficient. Delivers large acoustic outputs. Requires minimum amount of space—only 25". Efficiency, 25%. Distribution angle, 60°. Length 25", width 25", height 25". Net weight, 50 pounds. Shipping weight, 85 pounds. Material, wood. Finish, black.

LIST PRICE, Complete with MI-1425-A Speaker Mechanism ..... **\$88.90**



## SPEAKER MATCHING TRANSFORMER, MI-4603

For matching variable types and numbers of speakers. Over 20 combinations possible. Designed to handle the full output of any amplifier up to 40 watts. No frequency loss between 35 cycles and 14,000 cycles. Dimensions, 5" x 5 $\frac{1}{8}$ " x 5 $\frac{3}{4}$ ". Net weight, 9 pounds. Shipping weight, 15 pounds.

LIST PRICE ..... **\$30.00**

C-2

## 8 $\frac{1}{4}$ " ELECTRO-DYNAMIC SPEAKER, MI-6245

An especially good 8 $\frac{1}{4}$ " Dynamic Speaker. Will safely handle 10 watts of power continuously. Field coil, 1,000 ohms. Voice coil impedance, 2 ohms. Net weight, 3 $\frac{3}{4}$  pounds. Shipping weight, 5 pounds. Dimensions, 8 $\frac{1}{4}$ " in diameter, 4" deep. Specially suited for use with new RCA Baffle MI-4428 shown below.

LIST PRICE ..... **\$6.45**



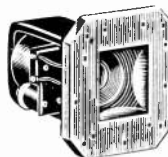
## 12 $\frac{1}{4}$ " ELECTRO-DYNAMIC SPEAKER, MI-6243

Special Dynamic Speaker with aluminum voice coil, with greatly increased frequency range. 12-ohm voice coil connected to a matching transformer, having a number of taps, making it possible to obtain matching impedances ranging from 800 to 8800 ohms. Field coil is enclosed in a metal housing, which also forms a base for mounting. Will safely handle 10 to 15 watts of power continuously. Excellent low-frequency response, together with a smooth overall response. Field, 100 to 140 volts, 100 M.A. Dimensions, 12 $\frac{1}{8}$ " diameter x 12 $\frac{1}{2}$ " high x 8 $\frac{3}{8}$ " deep. Finish, black wrinkled. Dust shielded. Net weight, 21 $\frac{1}{2}$  pounds. Shipping weight, 25 pounds. Specially suited for use with RCA Baffle MI-4428 shown below.

LIST PRICE ..... **\$22.50**



## RCA HIGH-FIDELITY SPEAKER MECHANISM MI-1425-A



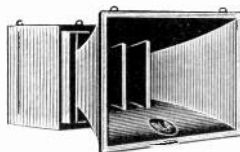
This standard powerful, ruggedly constructed Dynamic Speaker unit was developed for use in theatres, auditoriums, and other large institutions where the true, life-like reproduction of sound is essential. A tremendous demand for this speaker has been experienced. For that reason, RCA has

developed several baffles which can be used in conjunction with this unit, thereby permitting wide-spread use of this, the most faithful reproducer.

In order to obtain a greater frequency range, a special aluminum voice coil is used. To reduce the length of the directional projector required, the cone was reduced to 6" in diameter, and loaded with a 4" square aluminum throat.

Voice Coil Impedance—15 ohms. Cone with Aluminum Throat—6" in diameter. Overall Dimensions—8" x 8" x 8". Field Excitation—10 to 18 watts. Field Voltage—100 to 140 volts. Field Current—100 MA. Input—10 watts continuously. Net weight—26 pounds. Shipping weight—30 pounds.

LIST PRICE ..... **\$44.45**



## MI-4428 WOOD BAFFLE

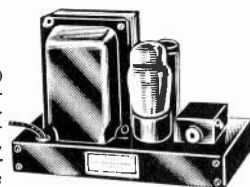
A new RCA development. Semi-weatherproof wood baffle, with high-frequency equalizers. Will house either 8" or 12" Dynamic Speakers, and has a distribution angle of 90° horizontal and 50° vertical. Bell mouth size, 27 $\frac{3}{4}$ " x 17 $\frac{3}{4}$ ". Depth of baffle, 27" overall. Bell, 15" x 14 $\frac{1}{2}$ ". Acoustically treated. Finish, baked durable gray crinkle. Net weight, 28 pounds. Shipping weight, 53 pounds. Mounting, substantial eyelets provided.

LIST PRICE ..... **\$22.50**

## LOUD SPEAKER FIELD SUPPLY, MI-6230

Provides field supply for three 1,000 ohm, 1/10 ampere speaker fields connected in series. Thoroughly filtered. Provided with 6-ft. power cord. Output, 340 volts, 112 M.A. Dimensions, 4 $\frac{3}{4}$ " x 8 $\frac{1}{2}$ " x 6 $\frac{1}{4}$ ". Tube complement, 1 RCA-80. Net weight, 8 $\frac{1}{2}$  pounds. Shipping weight, 14 pounds.

LIST PRICE (Less Tube) ..... **\$0.59**  
RCA 80 ..... **\$48.00**



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# ElectroCall

A PRODUCT OF UNITED SCIENTIFIC LABORATORIES, Inc.



STOCK AND SHIPPING DEPARTMENT INSTALLATION



RESTAURANT AND HOTEL INSTALLATION



FACTORY AND OFFICE



SECRETARIAL AND OFFICE



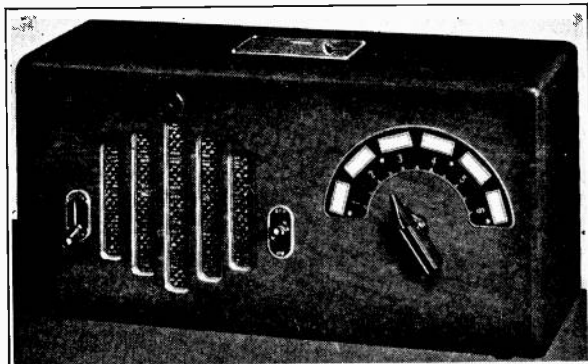
PROFESSIONAL INSTALLATION



DOMESTIC USE

## MULTIPLE SELECTIVE SYSTEM

MODEL 202



PATENTS PENDING

Meeting the demand of today's modern business conditions, the ELECTROCALL saves time and money, promotes efficiency in carrying out your instructions to various heads of departments. No bells, buzzers, or lost motion.

Instantaneous response from your desired party, eliminates the "tying up" of your telephone system.

You can hold direct two-way amplified conversation by merely pressing down a key.

There are two types of ELECTROCALL systems available—Model 200, is designed for direct communication between two important points of your business—The Model 202, Multiple selective system, consists of a Master station and as many as six outlying stations, permitting you to hold instant two-way amplified conversation with various individual departments.

**EASE OF OPERATION** Pressing down on the "talk-listen" key and speaking at arm's length in a moderate tone into ELECTROCALL, transmits your message distinctly in less time than it takes to twirl a phone dial.

**CALL SIGNALS** Direct conversation can be started with the person at whose station the unit is located or a loud clear signal can be introduced to summon any desired individual by a prearranged signal code. These features are available on all ELECTROCALL models.

**VOLUME** Switching devices located on the back of the instrument conveniently control the voice and signal amplification.

**EASE OF INSTALLATION** No expert installation required—just plug into any convenient AC or DC current outlet—No batteries required (220 volt units furnished on special orders).

### TIME SAVER

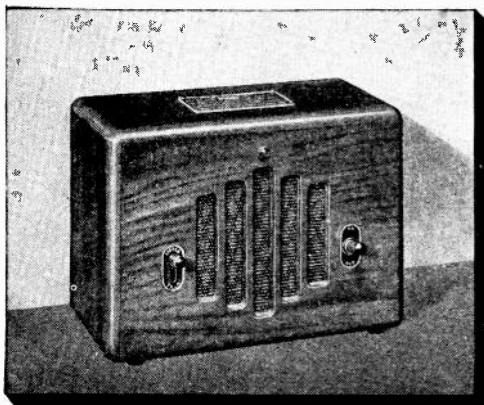
**ELECTROCALL** permits communication direct to the organization without crowding the switchboard, waiting for busy wires to clear, or countless other delays.

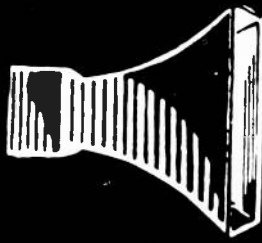
Model 200—Two-station communication consisting of two outlets and necessary equipment ready to install.  
List Price..... **\$48.00**

Model 202—Six position master selective station; available for 1 to 6 outlying stations—complete, ready to install.  
List Price..... **\$65.00**

Model 200—Outlying single unit stations for use with Master Model 202.  
List Price, each ..... **\$24.00**

One-way public address calling systems also available; ask for details.





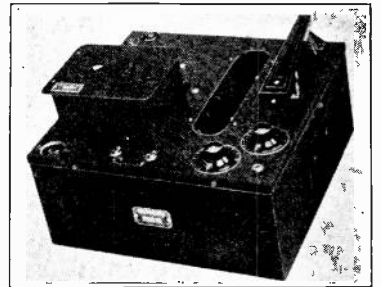
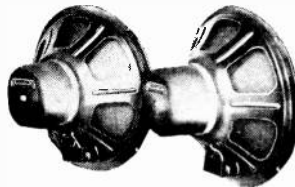
# Webster-Chicago Sound EQUIPMENT

## 20 WATT—MOBILE SYSTEMS

6 VOLT D.C.—DETACHABLE POWER PACKS—110 V. A.C.



SERIES MP-420



With 110 V. Power Pack only  
LIST PRICE... **\$186.50**

SYSTEM MP-420 COMPLETE WITH AMPLIFIER AND TURNTABLE, CRYSTAL MICROPHONE, TWO 12 INCH SPEAKERS AND BOTH 6 V. AND 110 V. POWER PACKS.

LIST PRICE..... **\$223.50**

With 6 V. Power Pack only  
LIST PRICE..... **\$200.00**

- Uses Plug in Type Power Pack for Either 6 Volt or 110 Volt Interchangeable, No Other Change Necessary.
- Improved Hand Type Crystal Microphone.
- Phonograph with High Fidelity Pick-up and Universal Electric Turntable Motor.

- Two 12 in. Permanent Magnet Speakers Matched to Amplifier.
- Mixes Microphone and Phonograph, Tone Control also Incorporated.
- Four Stage Twenty-Watt High Gain Amplifier (Tubes Furnished).

### APPLICATION

This system being either battery or A.C. operated has universal application either for permanent or mobile installations. Suitable for large dance halls, skating rinks, sport arenas, sound trucks, political gatherings, orchestras. Both indoor and outdoor. Will handle conservatively outdoor gatherings to 5,000, many more under favorable circumstances. Will handle indoor crowds of 10,000 people.

### UNUSUAL FEATURES

The plug-in type power pack is an exclusive Webster-Chicago development (patent pending). The use of phonograph turntable and pickup as an integral part of the system reduces size and cost. Excellent frequency characteristic and low hum level makes system adaptable for a great variety of installations.

The use of newly developed 10 watt permanent magnet speakers reduce storage battery drain 3 amperes. The amplifier has been designed for the maximum efficiency and a separate current saving switch is provided to permit keeping tube filaments only hot for instant operation.

### EQUIPMENT

This amplifier is a four stage 20 watt high gain amplifier, using five tubes on 6 volt D.C. use and six tubes on 110 volt A.C. use. The additional tube used on 110 volt is a rectifier tube, type 83 which is contained in the 110 V. power pack. It contains all

the refinements associated with fixed systems of this size, plus the fact that it can be used for mobile work on 6 volts. Its adaptability makes it the logical buy in all cases where the system may be called upon to do double duty, particularly in rentals.

The equipment comprises an improved hand type crystal microphone, latest type nickel alloy, cobalt high fidelity pickup; motor generator of the efficient ball bearing type; newly developed single speed turntable motor, latest development permanent magnet 12 in. speakers. A.C. equipment includes sturdy mercury vapor rectifier. Additional speakers may be used.

### SPECIFICATIONS

#### AMPLIFIER

Power Output.....20 Watts  
Gain .....115 DB  
Power Requirement:  
6 volts operation, 66 Watts  
A.C. operation, 98 Watts

NUMBER OF STAGES.....4

CONTROLS—Microphone volume, phonograph volume, tone control, master power switch, filament switch and turntable switch.

TUBES—1-6C6, 3-6A6, 1-6E6. For A.C. operation, additional tube, type 83. (All tubes furnished with system.)

#### MICROPHONE

Improved hand type crystal microphone with 6 feet of shielded cable.

### SPEAKERS

Two 12 in. curvilinear permanent magnet type with dustproof voice coil construction. 10 ft. speaker cables and polarized plugs. 6 ft. power cable with each type power unit.

### PRICES

Systems can be purchased in various combinations to suit requirements. In ordering please refer to system numbers or designate each component by its own part number.

**SYSTEM 106 MP-420** Complete with 20 watt amplifier (with tubes) and turntable, improved hand type crystal microphone No. 1233A, two 12 in. permanent magnet speakers No. 2850, and both 6 Volt power pack and 110 Volt power pack. Shipping weight 95 lbs.

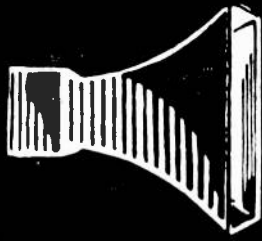
Code, PHARO LIST PRICE, **\$223.50**

**SYSTEM 6 MP-420** (Complete as above except with 6 Volt Power Pack only.) Shipping weight 85 lbs.

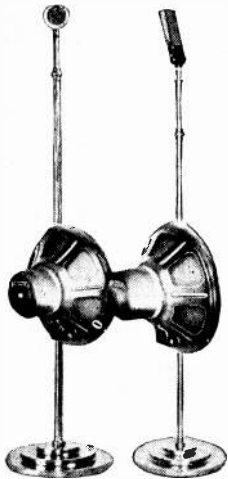
Code, MEDAL LIST PRICE, **\$200.00**

**SYSTEM 110 MP-420** (Complete as above except with 110 Volt Power Pack only), rectifier tube furnished. Shipping weight 84 lbs.

Code, MEDIC LIST PRICE, **\$186.50**



# Webster Chicago Sound EQUIPMENT



## 17 WATT

## SERIES 417 SYSTEMS For Portable or Fixed Installations

### FEATURES

- Dual Diaphragm Crystal Microphone.
- 17 Watt Four Stage Amplifier Using Six Tubes (Furnished)
- Dual Input Mixing System
- Uses One or Two 12 in. D.C. Dynamic Speakers

**Series 417A Public Address Systems are designed to meet 90% of the Installation Requirements as Encountered in the Field; has Ample Power and Excellent Reproducing characteristics.**

### APPLICATION

For large theatres, dance halls, orchestras, general indoor and out of door public address work; will comfortably handle 3,000 to 4,000 indoors and half this number out of doors.

Due to the fact that the HG-417A Amplifier is suitable for 90% of the requirements encountered in general public address work, these systems are particularly recommended.

### EQUIPMENT

Series 417A systems are available for either Portable or Fixed installation work.

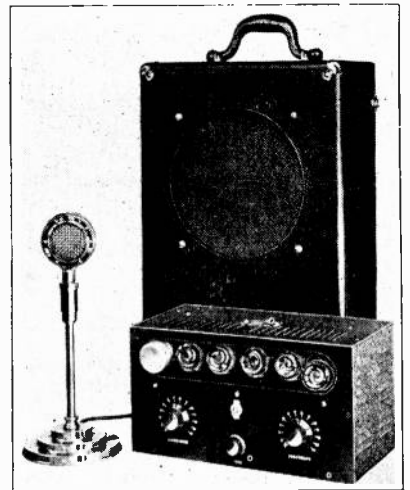
The Portable System consists of HG-417-A Amplifier, with tubes; No. 1231 Crystal Microphone with No. 1118 Banquet Stand and 25 ft. of shielded cable and shielded plug; one No. 2602—12 in. D.C. Dynamic Speaker with 50 ft. of cable and plug all contained in an attractive durable carrying case finished in black Beaver leatherette material. Installation is exceedingly simple because all connections terminate in polarized plugs and receptacles.

The Fixed Systems comprise an HG-417-A Amplifier with tubes, with one (or two) No. 2602—12 in. D.C. Dynamic Speaker, No. 1231 Dual Diaphragm Crystal Microphone, No. 1120 Floor Stand and 25 ft. of shielded cable and shielded plug. Optional systems can be selected by using HG-417-A Amplifier with the Webster No. 1221 Ribbon Microphone. Permanent Magnet Dynamic Speaker, etc. See accessory page for listings.

The amplifier is compact, well designed and entirely self contained in an attractive steel case with black crystalline finish. All component parts have been very carefully treated against moisture. The mixing system is so arranged that the addition of a No. 1252 portable phonograph turntable with pickup will make it possible to use either phonograph or microphone reproduction with musical background.

The speakers have specially designed cones and voice coil structures and have a handling capacity of 10 watts.

When using the HG-417A Amplifier in Fixed Systems, as the amplifier does not require speaker fields for operation, Permanent Magnet type Dynamic speakers can be substituted for the D.C. Dynamics herewith listed. See accessory pages for prices.



### AMPLIFIER SPECIFICATIONS

Power Output, 17 Watts. » Gain at 400 cycles, 129 D.B.  
» Power Requirement, 110 Watts at 115 V. 50-60 Cycles.  
» Number Stages, 4. » Input for high impedance ribbon or crystal microphone and 5000 ohm phono pickup. » Output Impedance, 3-6 & 500 ohms. » Amplifier Dimensions, 7x8x13½ in. » Tubes furnished 1-57, 1-53, 3-2A5 and 1-5Z3.

### PRICES

**SYSTEM PA-417A** (Portable) complete with 17 watt amplifier, HG-417A (tubes furnished); No. 1231 dual diaphragm crystal microphone, No. 1118 banquet stand, with 25 ft. of shielded cable with shielded plug, one No. 2602 12 in. D.C. dynamic speaker with 50 feet of cable and plug, all contained in portable case. Net weight 42 lbs.; shipping weight 50 lbs.

Code, PAGER

**LIST PRICE, \$147.50**

**SYSTEM PX-417A** (Fixed) complete with 17 watt amplifier HG-417A (tubes furnished); Webster No. 1231 dual diaphragm crystal microphone, floor stand with 25 ft. of shielded cable with shielded plug, one No. 2602 D.C. 12 in. dynamic speaker. Shipping weight 65 lbs.

Code, PLAID

**LIST PRICE, \$134.50**

### ADDITIONAL SPEAKERS

12 in. D.C. Dynamic Speaker No. 2602 installed in attractive black leatherette carrying case with 50 ft. of cable and plug (field resistance of 10,000 ohms, voice coil 6 ohms) shipping weight 20 lbs.

Code, STYLE

**LIST PRICE, \$37.00**

No. 2602 12 in. D.C. Dynamic, 10,000 ohm field, 6 ohm voice coil.

Code, SAPID

**LIST PRICE, \$15.50**

### OTHER SYSTEM COMBINATIONS

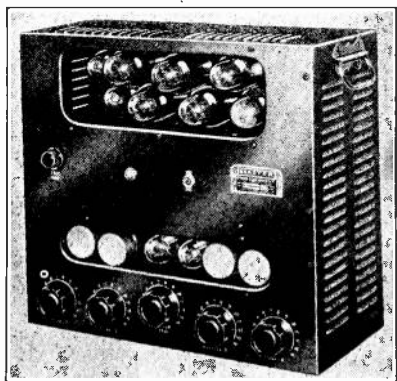
If combinations other than specified here are desired, prices of all parts can be obtained from accessory pages in catalogue. Add base price of amplifier with tubes, HG-417A (Complete with tubes). Shipping weight 28 lbs.

Code, PAVER

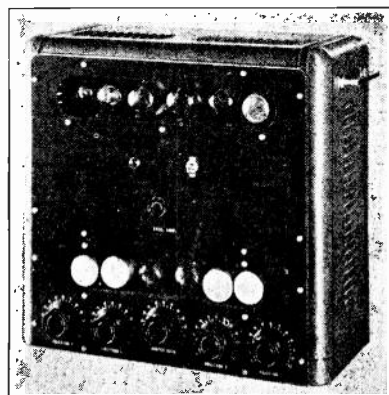
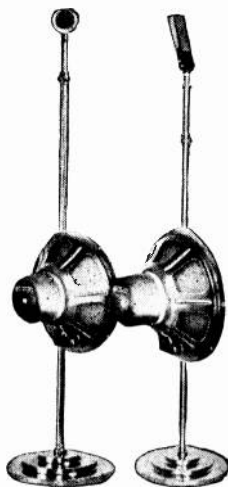
**LIST PRICE, \$72.00**



# Webster Chicago Sound EQUIPMENT



**30 WATT AMPLIFIER**  
Model 4P30



**60 WATT AMPLIFIER**  
Model 4P60

**FEATURES:** Strictly Class "A" Amplifier Using Fixed Bias—For Use With Crystal or Velocity Ribbon Microphone—Mixes One to Four Microphones or One to Three Microphones and One Phonograph—12-Inch Permanent Magnet Speaker, 10-Watt Capacity—14 Tubes (Furnished with Amplifier).

**APPLICATION**—For full size orchestra, complex play, sport announcements from different spots, or other application where up to 4 microphones are required. Will handle audiences from 6,000 to 8,000 people.

**EQUIPMENT**—Amplifier 4P-30 is built in two sections contained in one case. One section comprises the four input, electronic mixers and pre-amplifiers. The other section comprises power stage and power supply. Great care has been exercised in designing the circuit of this amplifier to reduce possibility of failure to an absolute minimum, in contrast with trouble so frequently experienced in high power amplifiers.

The amplifier is contained in a steel case with black crystalline finish and has two carrying handles. All parts are readily accessible for service, and well ventilated.

The four input controls, master gain, tone control, pilot light and power switch are all located conveniently on the front panel.

Provision is made for paralleling on this system, additional 30-watt amplifier (see price list) making possible installation of 60-watts, 90-watts, 120-watts, etc.

The speaker is a new design permanent magnet type, with curvilinear cones and high fidelity reproduction. Power handling capacity 10 watts per speaker. The design of these speakers insures complete protection of air gap from dust, chips and other foreign matter.

The dual diaphragm crystal microphone No. 1231 has a very broad frequency response, the characteristics closely paralleling that of the most expensive microphone of the multiple cell type.

The superior advantages of the ribbon microphone can be had by substituting Webster No. 1221 Ribbon Microphone (see price list).

### SPECIFICATIONS

Power Output.....30 Watts  
Gain .....132 DB  
Power Required  
220 Watts 115V-60 Cycles  
Output Impedance Tapped At  
2-4-6-8-10-16-500 Ohms  
Hum Level.26 DB Below Zero Level  
4P-30 Amplifier Size.....8"x15 1/4"x16"  
Number Stages .....5

Tubes—4-6CG, 2-6AG, 2-56, 4-2A3, 1-83, 1-80. (All tubes furnished with amplifiers).

Speaker—One 12" Permanent Magnet Speaker No. 2850—Power handling capacity 10 watts per speaker.

Microphones—Dual diaphragm crystal microphone No. 1231 with stand, 25 ft. cable supplied; or velocity ribbon microphone No. 1221 with floor stand, 25 ft. cable.

**PRICES**—Systems can be purchased in various combinations to suit requirements. In ordering please refer to system numbers or designate each component by its own parts number.

1 CPX—4P-30 (as mentioned above) consists of amplifier 4P-30 complete with tubes, one crystal microphone No. 1231 with floor stand, 25 foot of cable and one 12" P.M. speaker, No. 2850. Shipping weight 7 7/8 lbs. Code—SANDE. List Price.....\$206.00

1 RPX—4P-30 consists of amplifier 4P-30 complete with tubes, one ribbon microphone No. 1221 with floor stand, and one 12" P. M. speaker No. 2850. Shipping weight 72 lbs. Code—SASHE. List Price.....\$217.50

Additional No. 2850 12" Permanent Magnetic speakers. Shipping weight 10 lbs. Code—PACOS. List Price.....ea. \$14.25

**OTHER COMBINATIONS**—If base system other than specified here is desired, prices of all parts can be obtained from accessory pages in catalogue. Add price of amplifier. Shipping weight 65 lbs.

4P-30 (Comp. with Tubes). Code—SATUR. List Price.....\$145.00

**FEATURES:** 60-Watts Undistorted Output—Uses 6L6 Tube—Mixes One to Four Microphones or Three Microphones and Phonograph—For Use with Crystal or Velocity Ribbon Microphone—Handles One to Ten Permanent Magnet Speakers.

**APPLICATION**—This amplifier will comfortably handle audiences of from 12,000 to 20,000 depending on conditions. Thoroughly suitable for indoor or outdoor work such as parks, mass meetings, sports arenas, large halls, etc. **EQUIPMENT**—The 6L6 is an audio amplifying tube using the newly discovered beam principle of controlling electronic emission. Properly handled it produces a new order of amplification.

The 4P-60 Amplifier has been designed from scratch around the 6L6 tube. Adequate factors of safety have been employed throughout. The result is a high powered amplifier that achieves tremendous increase in output without material increase in size or weight over previous smaller units. The resulting economy also marks another milestone in the progress of Public Address Equipment.

Amplifier 4P-60 is furnished with a four position electronic mixer with four input controls and master control (noiseless). The output terminates in a 7 prong receptacle plug which is supplied. All component parts specially designed for conditions encountered in this type of public address work. Will supply one to ten permanent magnet speakers.

The amplifier is contained in a metal case with rounded corners and neutral tone japanned finish. The case is well ventilated and equipped with carrying handles. Case size is only 9"x16 1/4"x19" and weight 57 lbs.

### SPECIFICATIONS

Power Output.....60 Watts  
Gain.....143 DB  
Output Impedances Tapped At  
2-4-6-8-16 and 500 ohms  
Hum Lever .....—20 DB

Amplifier Size.....9"x16 1/4"x19"  
Number Stages.....5  
Tubes—4-6CG, 2-6AG, 1-76, 1-6E6, 2-6L6, 1-83, 1-5Z3. (All tubes furnished with amplifier.)

**MODEL 4P-60. List price.....\$195.00**

Amplifier only. Complete with radio tubes and receptacle plugs.

Code—SCRIP

**SYSTEM CPX—4P-60. List price.....\$375.50**

With amplifier as above, No. 1231 crystal microphone, No. 1120 floor stand, and four No. 2870 heavy duty permanent magnet speakers. Capacity 15 watts per speaker

Code—SOLFA

**SYSTEM RPX—4P-60. List price.....\$390.00**

Amplifier as above, velocity ribbon microphone No. 1221, floor stand No. 1120. Four permanent magnet speakers No. 2870.

Code—SOULE

**MAGNET SPEAKER. List price.....\$34.75**

Additional 12" heavy duty permanent, No. 2870 speaker.

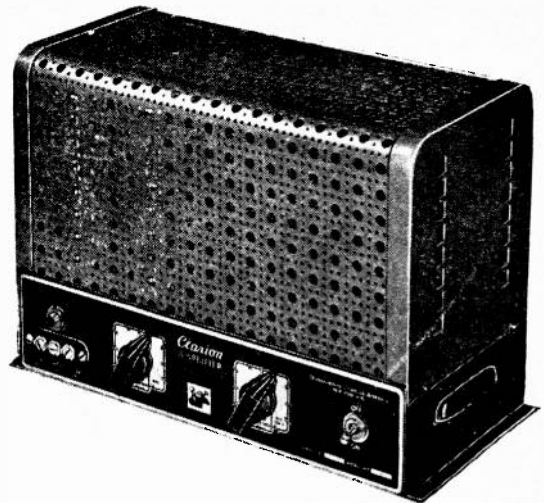
Code—SECCO

# Clarion



## AMPLIFIER

### MODEL C-10



A small but rugged amplifier for use where comparatively low power is required. Designed like all CLARION amplifiers, for continuous trouble-free service even under severe operating conditions. It is ideally suited for use in call systems where only one or two speakers are employed such as in restaurants, stock rooms, parking garages, etc. It is also an excellent amplifier for use with hard-of-hearing systems in churches and theatres, etc. For this type of service the low hum level and excellent frequency response of the Model C-10 will be especially appreciated.

The inclusion of many unusual features makes the C-10 an extremely versatile unit. Three input devices (one low level and two high level) can be connected permanently. Any of the three may be operated separately or the low level device can be mixed with either of the two high level devices as desired.

The overall gain of the C-10 is 116 db when measured at a source impedance of 150,000 ohms. This permits the use of any modern microphone, including velocity, dynamic (moving coil), diaphragm crystal or sound-cell crystal types.

Other features included are: current supply for a 1000 ohm speaker field, high and low voltage taps on the transformer primary permitting operation on voltages between 105 and 125 volts, fused power line, plug in microphone and speaker connections, protective overall metal cane screen, etc.

The CLARION C-10 amplifier employs four tubes in what is effectively a four stage circuit. The first two stages employ type 6C6 tubes. The succeeding two stages are obtained through the use of the type 6B5 tube which is effectively two tubes in one.

The frequency response of the C-10 is within 2 db from 50 to 10,000 cycles—true wide range reproduction.

The rated power output of the C-10 is 5 watts into a 7000 ohm load. The peak power output is 8 watts. Harmonic content is 6%. Hum level is 51 db below rated output. Gain of high gain channel 116 db., of low gain channels 80 db. Input impedances: high gain channel 5 megohms, low gain channels 500,000 ohms. Output impedance is that of the load required by the 6B5—7000 ohms. No output transformer is supplied. Field supply 6 watts for one 1000 ohm field. Power consumption of the amplifier is 60 watts at 115 volts 60 cycles A.C. All components have a wide safety factor so that long trouble-free service is assured.

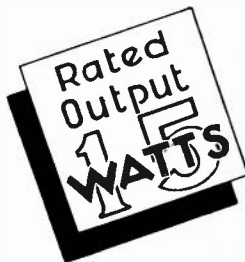
The C-10 is attractively finished in rubber black and CLARION-grey metallic lacquer. Overall dimensions are 12 inches long, 6 $\frac{3}{4}$  inches deep and 7 $\frac{1}{4}$  inches high. Net weight is 10 $\frac{1}{4}$  pounds, shipping weight 15 lbs.

CLARION Model C-10 amplifier as described for operation from 115 volt 50/60 cycle A.C. lines. Less tubes.

LIST PRICE.....\$31.14 ~~\$35.50~~

Tubes required: 1-6B5, 2-6C6's and 1-83V.

Models for 220, 240 or 250 volts can be furnished to special order at a higher price. 25 cycle models also available.



# Clarion



## AMPLIFIER

### MODEL C-16

The C-16 is ideally suited for the majority of public address installations because of its power output and its extremely reasonable price. Fifteen watts of audio power, with a peak of 20 watts, is usually found ample in public address installations requiring four or less speakers. In some cases, where the noise level is low and the rooms are reasonably small, the C-10 will furnish sufficient power to operate as many as 15 magnetic or permanent magnet dynamic speakers satisfactorily.

Many advantageous features are included in the design of the C-16. A mixer circuit, employing the electronic principle, makes it possible to reproduce the output of two input devices at the same time. For example: a voice announcement, over the microphone connected to one input channel, can be superimposed upon a musical background, provided by a phonograph record reproducer connected to another channel.

#### ADDITIONAL FEATURES

Other features included in the C-16 are: a fader control for the two low gain input channels, a built-in pre-amplifier for the microphone channel, direct current supply for speaker field excitation, a universal type output transformer providing impedances of .35/.6/1.35/2.4/6/8/15/50/250/500 ohms, a fused power line circuit and a ventilated metal cane cover.

The Model C-16 is designed for use with any modern type of microphone including velocity, dynamic (moving coil), sound-cell crystal and diaphragm crystal types. The microphone channel has a gain of 125 db. Two additional low gain channels, having a gain of 90 db, are provided for use with input devices having a high output level such as a phono-pickup, electric guitar, etc.

TECHNICAL SPECIFICATIONS of the CLARION Model C-16 are as follows: Rated Power Output—15 watts, Peak Output—20 watts, Harmonic Content at rated output—9%. Hum Level below rated output—45 db, Frequency Response—within 2 db from 50 to 10,000 cycles, Input Channels—one high gain at 125 db—two low gain at 90 db, Input Impedances—high gain channel 5 megohms—low gain channels 500,000 ohms, Output Impedances—.35/.6/1.35/2.4/6/8/15/50/250/500 ohms, Field Supply—16 watts for one 10,000 ohm field or 8 watts each for two 5,000 ohm fields, Power Consumption—120 watts at 115 volts 50/60 cycles A.C., Overall Dimensions—17 $\frac{1}{2}$  inches by 6 $\frac{1}{2}$  inches by 8 $\frac{3}{4}$  inches high, Net Weight—19 lbs., Shipping Weight—25 lbs., Tubes Employed—1-6C6, 1-6A6, 1-76, 2-6B5's, 1-83V.

All components used in the Model C-16 have a wide safety factor and are designed to handle considerably greater loads than will be encountered in normal operation. All chokes and transformer windings are thoroughly varnished for protection against moisture. Condensers and resistors are carefully selected and tested for capacity, breakdown voltage and leakage. After assembly the complete amplifier is again thoroughly tested and checked against a "laboratory standard" unit so that each and every CLARION C-16 is an exact duplicate of the original.

Tough wear-resisting lacquer, which is oven-baked after application is employed in finishing the chassis and screen cover of the Model C-16. A gleaming black is used for the base. The screen is finished in a new CLARION-grey color. The control panel is of deeply etched metal in satin black and aluminum.

CLARION amplifier Model C-16 as described above complete with screen cover but less tubes. Dimensions 17 $\frac{1}{2}$ " x 6 $\frac{1}{2}$ " x 8 $\frac{3}{4}$ " high. Shipping weight 25 lbs. For operation on standard 115 volt 50/60 cycle alternating current power lines.

LIST PRICE.....\$46.56 ~~\$51.50~~

Tubes required 1-6C6, 1-6A6, 1-76, 2-6B5's, 1-83V.

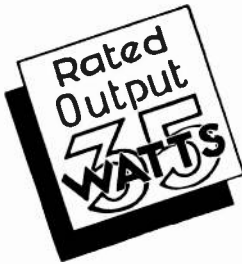


# Clarion



## AMPLIFIER

MODEL C-27



For large ballrooms, auditoriums, theatres, and wherever moderately high power output is required, this new CLARION Model C-27 will provide true high-fidelity reproduction. It is an excellent unit for use in multi-speaker installations and is rated at a normal power output of 35 watts with a peak output of 50 watts.

The overload characteristic and frequency response of the Model C-27 are such as to place this unit definitely in the high-fidelity classification. At its rated output the harmonic content is only 6% and the frequency response is flat within 2 db from 50 to 10,000 cycles. The gain of the C-27 is 122 db and its sensitivity is ample for use with any of the modern low level microphones such as the velocity, dynamic (moving coil), sound-cell crystal and diaphragm crystal types.

### FOUR INPUT CHANNELS

Four input channels are available including two high gain channels for use with microphones and two low gain channels for use with devices having a high output level such as phono-pickups for the reproduction of phonograph recordings. Complete mixing and fading facilities are provided so that the two high gain channels, a high and a low gain channel, or two low gain channels can be mixed together. Any of the four individual channels can, of course, be used separately.

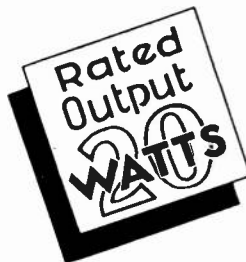
A fader control is provided for each pair (one high and one low gain) of channels. Each control permitting fading from the high to the low gain channel or vice versa. A tone control is also provided for attenuating the higher frequencies. Other features include: a choice of eleven output impedances, 40 watts of direct

current for speaker field excitation, high and low voltage taps on the primary of the power transformer, fused power line, protective overall steel screen cover, screw type as well as plug-in type output terminals, etc.

**TECHNICAL SPECIFICATIONS** of the CLARION Model C-27 include: Rated Power Output—35 watts, Peak Output—50 watts, Harmonic Content at rated output—6%, Hum Level below rated output—42 db, Frequency Response—within 2 db from 50 to 10,000 cycles, Input Channels—two high gain at 122 db, two low gain at 86 db, Input Impedances—high gain channels 5 megohms—low gain channels 500,000 ohms, Output Impedances—.35/6/1.35/2.4/6/8/15/50/250/500 ohms, Controls—Two fader-mixer controls (each control operates one high and one low gain channel)—tone control, Tubes used—2-2A6, 2-53's, 1-59, 4-46's, 1-83, Power Consumption—average drain 190 watts at 115 volts 60 cycles, Net weight—43 lbs., Shipping Weight—55 lbs., Finish—base rubber black lacquer—screen contrasting CLARION-grey metallic lacquer, Overall Dimensions—16½ inches by 10 inches by 9¾ inches high, Field Current Supply—40 watts into 5000 ohms (this wattage can be divided between two 2500 ohm fields (20 watts each field) or four 1250 ohm fields (10 watts each field). Other field resistances can be employed so long as the total resistance connected to the supply terminals is 5000 ohms.

**CLARION amplifier, Model C-27, as described, including protective steel cover but less tubes. For operation on standard 115 volt 50/60 Cycles A.C. Shpg. Wt. 55 lbs.**

LIST PRICE ..... \$96.60 ~~\$112.00~~



# Clarion



## AMPLIFIER

6 VOLT MODEL C-33

CLARION model C-33 has been especially designed for mobile operation in sound trucks, advertising cars, etc. where the only available source of power is an ordinary six volt storage battery. All the power required for the operation of the Model C-33 is taken from this battery and no additional batteries of any kind are required.

It has all of the features included in standard house current operated amplifiers. And in performance it is equal to or better than many a.c. operated units. The rated power output of the C-33 is twenty watts with a peak rating of thirty watts indicating exceptionally good overload characteristics. The frequency response is within 3 db from 50 to 10,000 cycles—well within the commonly accepted limits for high-fidelity response. The C-33 will do anything that an equivalent 20 watt 110 volt a.c. operated amplifier will do yet it requires only an ordinary six volt battery as a power source.

A special power pack is also available for use with the Model C-33 so that it can, if necessary, be used on an ordinary 115 volt 50/60 cycle a.c. power line. This feature is of advantage wherever the C-33 must serve as an all-round unit for rental purposes or is used by a traveling show, lecturer, etc. This power pack is very easily connected or disconnected at a moment's notice.

**TECHNICAL SPECIFICATIONS** of the Model C-33 are as follows: Rated Power Output—20 watts, Peak Power Output—30 watts, Harmonic Content at rated output—9%, Frequency Response—within 3 db from 50 to 10,000 cycles, Tubes used—2-75's, 1-53, 1-76, 1-59, 4-79's, Input Channels—two high gain at 125 db—two low gain at 95 db, Input Impedances—high gain 5

megohms—low gain 500,000 ohms, Output Impedances—.35/6/1.35/2.4/6/8/15/50/250/500 ohms, Controls—two fader-mixer controls (one high and one low gain channel on each control)—master tone control, Power Consumption—18 amperes at 6 volts or 108 watts, Overall Dimensions—17¼" x 9¼" x 12" high, Finish—base: rubber black—screen: contrasting CLARION-grey metallic lacquer, Net Weight—34 lbs., Shipping Weight—45 lbs.

The C-33 is a five stage amplifier and provides a gain of 125 db on each of the two high gain channels for use with modern high fidelity microphones and a gain of 95 db on each of two additional channels for use with magnetic or crystal phono-pickups. Complete mixing and fading facilities are provided so that by means of two simple controls (each one of which controls the volume from both a low gain channel and a high gain channel) two sound sources may be mixed together. A "stand-by" switch conserves battery current when the amplifier is not actually in use yet keeps the tube filaments "hot" for instant operation.

The C-33 is essentially a battery operated amplifier. A special power pack listed below permits operation on any 115 volt 50/60 cycle a.c. power line.

**CLARION Amplifier, Model C-33, as described, complete with screen cover but less tubes and 110 volt power supply. Shpg. wt. 45 lbs. For operation on 6 volts D.C.**

LIST PRICE ..... \$112.20 ~~\$115.50~~

Tubes required: 2-75's, 1-53, 1-76, 1-59, 4-79's.

**CLARION Power Supply, Model C-33APS, for operating Model C-33 amplifiers from 110 volts, 50/60 Cycles A.C., less tube.**

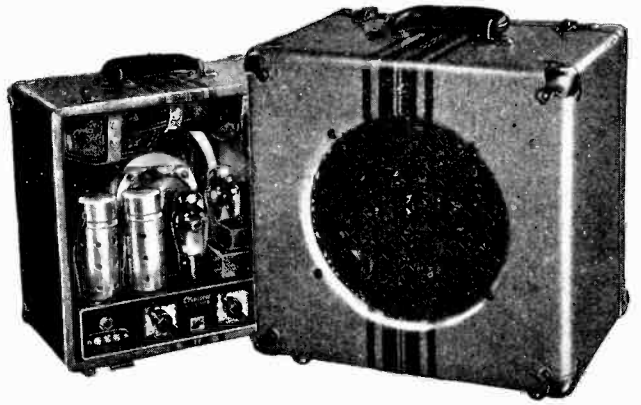
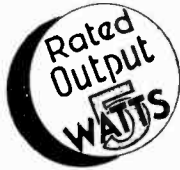
LIST PRICE ..... \$28.30

Tube required: 1-83.

# Clarion



## AMPLIFIER MODEL C-45



A compact 5 watt portable sound system ideally suited for use by small orchestras, barkers, pitchers, soloists and others requiring a small sound amplifying system in portable form. Unlike most small systems available on the market today this new CLARION system is designed for use with any modern high-fidelity microphone including velocity, dynamic (moving coil), sound-cell crystal and diaphragm crystal types. When used with these types of microphones the C-45 will provide crystal clear—lifelike—reproduction. There is no background hiss or noise and every spoken word is crisp and true to the original. In other words the C-45 will perform equally as well as the larger CLARION systems in every respect, except for the power output.

The amplifier incorporated in the Model C-45 is practically the same as the Model C-10 described on page 1. This amplifier together with a specially designed 8 1/2" electro-dynamic speaker is housed within a modern luggage case covered with durable and attractive "aero" cloth. The case covering is tan in color with contrasting warm brown stripes.

### AMPLIFIER IS REMOVABLE

A removable cover on the rear of the carrying case permits quick and easy removal of the amplifier. The front of the case contains the speaker and forms the baffle for it. Twenty-five feet of rubber covered cable on the speaker permits locating the amplifier and speaker this distance apart when the system is in use. The speaker cable is fitted with a rubber covered plug for connection to the amplifier. An extension cable for increasing the permissible distance between the amplifier and speaker is available.

Proportions of the case are such as to make for ease in handling and transportation. The handle permits hanging the speaker from a wall or ceiling when operating the system.

In addition to the microphone, two other input devices may be connected to the amplifier at the same time. These additional devices must have a comparatively high output level, such as a magnetic, or crystal, phono-pickup. Either of these two devices may then be "mixed" with the microphone input. Many novel effects can be produced by this means. For example: a musical background, provided by a phonograph record, can have a voice announcement, through the microphone, superimposed upon it. A fader control permits fading from one low gain input to the other at will. Any one of the three inputs can, of course, be used separately at any time.

The CLARION amplifier incorporated in the Model C-45 has a rated output of 5 watts and a peak output of 8 watts. The overall gain of the amplifier is 116 db. Tubes used include: 1-6B5, 2-6C6's, 1-83V. Overall dimensions are 12 3/4" x 9 1/2" x 11 3/4" high. Net weight 17 lbs. Shipping weight 23 lbs.

CLARION portable sound system Model C-45 complete as described but not including tubes or microphone.

LIST PRICE ..... \$59.00

The only items required to complete the above system are:  
Tubes—1-6B5, 2-6C6's, 1-83V.

Microphone—any high impedance type microphone either velocity, dynamic (moving coil), sound-cell crystal or diaphragm crystal.



## Clarion Model C-50P Portable Record Player

A portable electric record player especially designed to be used in conjunction with CLARION portable sound systems Models C-17 and C-45. Incorporates

a constant speed electric turn-table with variable speed control and a crystal phono-pickup with variable volume control within a compact portable case covered with "aero" cloth to match Models C-17 and C-45 exactly. A special record compartment is mounted within the cover for storing records.

This attractive record player can also be used with any ordinary radio receiver in order to reproduce recordings through the audio system of the radio. Instructions included with the record player show various methods of connecting this unit to receivers not provided with pick-up terminals as standard equipment. The C-50P is attractive enough to permit leaving the record player permanently on top of the radio receiver even among the most tastefully appointed furnishings.

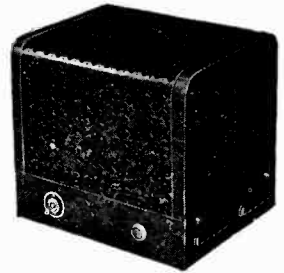
The motor is designed for operation on any standard 115 volt 50/60 cycle A.C. power line. The pickup is of the high impedance piezo-electric crystal type for direct connection to the grid of the amplifying tube. Overall dimensions of the case are 17 1/2" by 13 1/2" by 8". Net weight is 19 lbs. Shipping weight 25 lbs. Hardware is finished in brass and the case is equipped with a leather handle. Covering is in a tan color with contrasting stripes of warm brown.

CLARION Portable Record Player Model C-50P as described. For 115 volts 50/60 cycles A.C. operation.

LIST PRICE ..... \$68.95 ~~\$70.00~~

## Clarion C-40FE

### Field Exciter for 6 volt Speakers



This field exciter will furnish sufficient current for three average speaker fields. It has a rated output of 3 amperes at 6 volts. The rectifier employed is of the dry oxide-coated-plate type and will give long trouble-free service even under severe operating conditions.

The output is carefully filtered and practically hum-free. It is an excellent unit to use in conjunction with convertible 6 volt—110 volt sound systems employing an amplifier similar to the CLARION Model C-33 described on page C-25. With this exciter the same speakers may be used on 6 volts D.C. as well as 110 volts 50/60 cycles A.C.

The C-40FE can also be used for any other purpose where 6 volt direct current is required at a maximum current drain of 3 amperes. It is compact—measuring only 8 3/4" wide, 6 1/2" deep and 6" high. The A.C. supply cord is rubber covered and equipped with a rubber-covered attachment plug. The output terminals are rugged and easily accessible. A switch on the front panel turns off the A.C. supply current. Net weight, 15 lbs. Shipping weight, 19 lbs. CLARION Model C-40FE 6 volt Field Exciter for operation on 115 volts 50/60 cycles A.C.

LIST PRICE ..... \$46.00 ~~\$48.50~~

### NOTE by T. C. A.

Many new CLARION products are now being developed in the Transformer Corporation of America laboratories. As soon as these products become available they will be announced to the trade by means of special bulletins and advertisements in the leading trade publications.

Unfortunately there is often a considerable delay between the time the new products are ready and the date of publication for the various magazines. Therefore, if you will send your name to your distributor he will be pleased to verify your standing in the trade and send it on to us so that you will receive each new bulletin as it becomes available.

Supreme  
Fidelity

# AMPLIFIERS

WITH  
Universal  
Input  
FOR

NEW VELOTRON MICROPHONE-VELOCITY-CRYSTAL-SOUND CELL Microphones

## 1937 LINE OF SUPREME FIDELITY SOUND EQUIPMENT

LICENSED, by agreement with Electrical Research Products, Inc., UNDER PATENTS OWNED OR CONTROLLED BY WESTERN ELECTRIC CO., and AMERICAN TELEPHONE AND TELEGRAPH COMPANY

**SUPREME FIDELITY** . . . leads again with the presentation of the 1937 line of Amplifiers incorporating many exclusive features never before offered to the Sound Field.

The **OUTSTANDING EXCLUSIVE FEATURE** is . . . the Newly Developed Input Circuit for the new "Velotron" Microphone . . . the microphone that has the depth and tone quality of the Velocity . . . and with a better frequency response . . . has the brilliancy and clarity of the Crystal



and the output is comparable to the carbon Microphone. The "Velotron" Microphone is highly directional and can be used with cable up to 500 feet with negligible losses. Rugged construction, no chemical elements. No resonance diaphragm. Frequency response 30 to 14,000 cycles. Output level—49 db.

The New "Velotron" Microphone is furnished as stock microphone accessory with all of the new 1937 Supreme Fidelity Sound Systems.

## PRECISION LABORATORY STANDARD — "HIGH FIDELITY"

MODEL HF-40

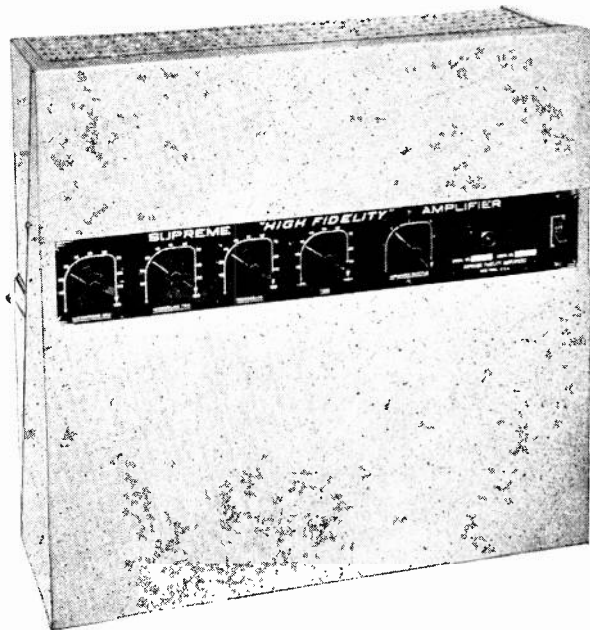
**40 WATTS** INTO 15-OHM  
VOICE COIL

52 WATTS INTO 500-OHM LINE

77 WATTS PEAK OUTPUT

- FIVE CHANNEL INPUT CIRCUIT
- DUAL POWER SUPPLY SOURCE
- TRI-STAGE ELECTRON MIXER
- COMPACT, only 18"x18"x6" deep.

The Model HF-40 is strictly a laboratory standard "High-Fidelity" amplifier incorporating every desirable feature of modern sound engineering, and is offered as the finest amplifying unit to meet the demand of the most discriminating Public Address purchaser.



The general design and construction of the Model HF-40 Amplifier is a radical departure and innovation in amplifiers, capable of tremendous power sufficient to handle large multiple groups of speakers for audiences up to 25,000 and yet constructed with such precision that there is no loss of tonal quality and reproduction at low volume levels for indoor installations where quality of reproduction is predominant. The Amplifier and power supply chassis are separate units, mounted on a heavy gauge steel rack which constitutes a complete rack and panel assembly and has a real professional appearance. The unique construction of the HF-40 makes it the most compact, high-powered amplifier on the market. The overall size, including rack is only 18"x18"x6" and weighs only 55 lbs., which gives it an extreme degree of portability. By using a specially designed portable carrying case, available at a slight additional cost, it is now possible to have a high-powered amplifier capable of high fidelity performance in such compact form as to be truly portable.

Equipped with a FIVE-CHANNEL input circuit with the new Supreme Universal Microphone Inputs, designed for the new **Velotron Microphone**, any **Velocity**, **Crystal** or **Sound Cell Microphone**. The Model HF-40 amplifier is ideal wherever multiple microphone equipment is desired. By means of these five channels and **Supreme's exclusive DUO-STAGE Electron Mixing Circuits**, many novel and unusual microphone applications can be reproduced simply and easily and with the elimination of costly and bulky pre-amplifiers. A separate phonograph pickup channel with its own individual master control is part of the mixing system and permits the operator to mix and fade any combination up to four microphones

against a background of recorded music. All controls, together with the master tone control, are mounted on a beautifully metal-etched full length control panel finished in silver and black. All microphone input circuits are equipped with the new lock type shielded connectors. The Impedance Selector switch permits the operator for the first time to connect any number of speakers to the amplifier and to immediately select the proper and best matching impedance audibly without the necessity of trying various taps by connecting and disconnecting wires. Field supply is available from the dual power supply source of this amplifier. Four built-in polarized speaker sockets, two supply field to two 1000-ohm dynamic speakers and two supply A.C. current directly from the amplifier to A.C. speakers, having their own field exciters.

The Model HF-40 is also capable of unusually high over-all gain. The lowest standard high-quality microphone of high impedance design is only capable of an output 80 dB. down or minus 80 dB. With such a low-level device, the HF-40 amplifier will deliver a plus 38 dB. output to a 15-ohm voice-coil load. There is an actual 122 dB over-all gain which Supreme Fidelity guarantees unconditionally.

**FREQUENCY RESPONSE:** 20 to 12,000 cycles linear plus or minus 2 dB. From 40 to 12,000 cycles the HF-40 is linear within plus or minus 1 dB. and the over-all frequency response within 5 dB. is from 15 to 16,000 cycles.

**Tube Complement:** 2-75, 2-6A6, 1-76, 1-6E6, 2-50, 3-5Z3.  
Size, 18"x18"x6". Net Wt. 55 lbs.

**MODEL HF40** ..... **\$145.00**  
**Price, less tubes** .....  
**Kit of Sylvania Matched Tubes** ..... **\$15.60**

MANUFACTURED BY DAVID BOGEN COMPANY, INC., NEW YORK CITY

*Supreme Fidelity*

# AMPLIFIERS

WITH *Universal Input* FOR

## NEW VELOTRON MICROPHONE-VELOCITY-CRYSTAL-SOUND CELL MicroPhones

### SUPREME SERIES BX-15 AMPLIFIER

**15 Watts INTO 15 - OHM VOICE COIL**    **18 WATTS INTO 500-OHM LINE**  
**22 WATTS PEAK OUTPUT**

A 5-stage, 7-tube, high-gain amplifier with built-in pre-amplification, and sufficient power output for the average Public Address installation of medium size. **FOUR CHANNEL INPUT—DUO-STAGE ELECTRON MIXER-FADER SYSTEM** Two Universal Microphone input channels, designed for the new "Velotron" Microphone, any Velocity, Crystal or Sound Cell Microphone. Two phono pickup channels. **Mixing and fading any combination of the four channels.** A master tone control for all channels. Shielded lock-type microphone input connectors. A terminal strip is provided for phono pickup connections. Two built-in speaker sockets with 110-volt A.C. and voice-coil connections. A terminal strip with output impedances tapped at 4, 9, 15 and 500 ohms for additional speakers. Convenient built-in A.C. receptacle. **Overall gain 113 db. Frequency response 30 to 12,000 cycles plus or minus 5 db. Linear frequency response within 2 db 40 to 7,000 cycles.** Tube complement: 2-6F5M, 2-6N6G, 2-6N7G, 1-5X4G.

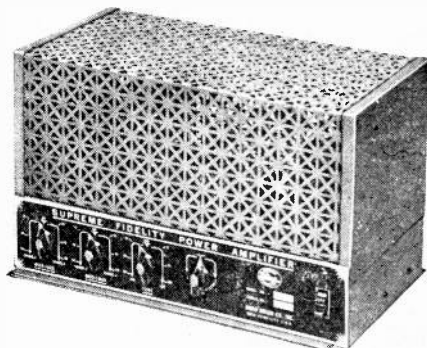
**MODEL BX-15**

Price, less Tubes.....

Kit of Matched Tubes.....

**\$59.50**

Price \$12.15



Size: 14" long, 7" deep, 8 3/4" high.

### SUPREME SERIES B-12 AMPLIFIER

**12 Watts Into 15-ohm Voice Coil**

A low-cost, high-quality amplifier suitable for any application where moderate power is required. **Five stages of high-gain audio with an overall gain of 118 db. Overall frequency response from 40 to 11,000 cycles.** The UNIVERSAL INPUT circuit is designed for the new "Velotron" Microphone, and any Velocity, Crystal or Sound Cell Microphone. Shielded lock-type microphone connectors. Phono input channel. Duo-stage Electron mixer-circuit. Speaker selector switch, selects one or two speakers. Two built-in speaker sockets; supplies excitation for one 500-ohm and one 10,000-ohm field. A terminal strip for additional speakers with output impedances tapped at 4, 9, 15 and 500 ohms, is built-in. Universal Octal sockets. Peak output 20 watts. Output to 500-ohm line 17 watts. The heavy-gauge auto-steel chassis is lead-coated against corrosion and rust, finished in gray shrivel. Size overall: 14" long, 7 3/4" deep, 7 3/4" high. Tube Complement: 1-6F5M, 2-6N6G, 2-6N7G, 1-5X4G.

**MODEL B-12**

Price, less Tubes.....

Kit of Matched Tubes.....

**\$45.00**

Price \$10.65



### SUPREME SERIES B-6 AMPLIFIER

**6 Watts Into 15-ohm Voice Coil**

A compact, low-powered amplifier extensively used for small public address systems, call systems, etc. The overall high-gain of 110 db. is sufficient for the latest high-impedance microphones. Universal Input for Velotron, Velocity, Crystal and Sound Cell Microphones. A separate low-gain input for phono pickups. A switch on the front of the chassis selects either input channel. A terminal strip for phono connections. Built-in sockets for microphone and speaker connections. New octal base sockets, for all-metal, metal-glass or "G" tubes. Field supply for a 1,000-ohm dynamic speaker. **Frequency response from 40 to 11,000 cycles, and a linear response from 70 to 7,500 cycles assures excellent tone quality.** Equipped with Master Tone Control. **7.5 Watts into 500-ohm line. 9 Watts Peak Output.** The heavy-gauge auto-steel chassis is lead-coated against corrosion and rust, finished in gray shrivel. Size: 11" long, 4 1/2" deep, 7 1/2" high. Tube Complement: 1-6F5M, 1-6J7M, 1-6N6G, 1-5X4G.

**MODEL B-6**

Price, less Tubes.....

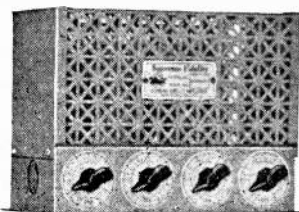
Kit of Matched Tubes.....

**\$21.50**

Price \$6.30



### FOUR POSITION MIXER AND PRE-AMPLIFIER



The Supreme PM4 Four-Position Mixer and Pre-Amplifier converts any amplifier into a four-channel input combination where the operator may blend the output of four high-impedance velocity or crystal microphones, a radio phono output and two microphones or any other combination of four inputs. Four sockets with four volume controls, each numbered to match the input socket, permit individual volume control on each input. Two type 79 tubes are used in the amplifier, resulting in a gain of 28 db., which permits crystal microphone operation with low-gain amplifiers. Size: 9 1/4" long, 4" deep, 7" high.

**MODEL PM4**

Price ea., less tubes.....

**\$22.50**

Kit of 2 matched Sylvania tubes \$2.70

### THE SUPREME VOLUME EXPANDER

The Supreme Fidelity Volume Expander is a new and exclusive development and can be attached to any amplifier or radio set. By means of this new and revolutionary device a tremendous improvement in tone quality and tonal range is obtained which far surpasses any previously accepted standard of high fidelity electro-musical reproduction. It is necessary for Broadcasting

Stations and Recording Studios, for technical reasons, to compress all music within a certain volume level, in other words, to make the softest passages louder and the loudest passages softer, which falls considerably short of the actual volume range of the instruments being played. Present-day amplifiers or radio receivers can only reproduce the volume range as recorded or broadcasted, and do not duplicate the original volume range. **The Volume Expander is entirely automatic in operation and reverses this process, it literally restores the exact rise and fall of the volume range as originally played in the studio or concert hall.** Equipped with a tuning control to permit the degree of expansion desired. Regardless of the volume level at which you set the instrument, a constant purity of tone is maintained, from fortissimo to pianissimo.

The Supreme Volume Expander also acts as the perfect scratch filter for phono pickups, eliminates the annoying background noise and needle scratch without sacrifice of tonal quality or range. Utilizes 1-6L7, 1-6F5, 1-6H6 tubes. Complete instructions furnished. Size: 9" long, 4" deep, 7" high.

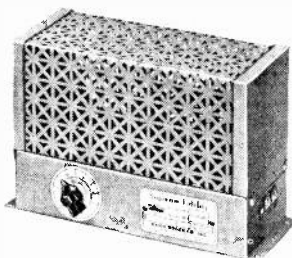
**MODEL VE6**

Price, less Tubes.....

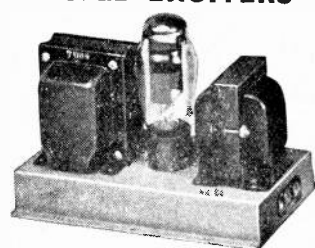
Kit of Matched Tubes.....

**\$21.50**

Price \$3.80



### FIELD EXCITERS



**MODEL FZ4**

An exceptionally well-designed and thoroughly filtered hum-free field exciter. Employs a 250-mil choke and extra-heavy duty filter condensers. Supplies 200 mills at 130 volts. For 2-1,000 ohm or 2-2,500 ohm or 1-500 ohm fields. Size: 8 3/4" x 4" x 5". For 110-115 volts A.C. 5X4G rectifier tube.

Price, less Tube..... **\$14.50**

**MODEL FZ3**

For 2 to 4 dynamic speakers with fields from 1,000 to 2,500 ohms. Output 200 mills at 110 volts. Size: 6 1/2" x 4" x 5". 5Z3 Rectifier. 110-115 volts A.C. 60 cy.

Price, less Tube..... **\$9.50**

**MODEL FZ5**

Delivers 100 mills at 100 volts; operates 1 Giant or 2 small speakers with field coils up to 2,500 ohms. 25Z5 rectifier. Size 6 1/2" x 4" x 1 3/4". 110-115 v. A.C.-D.C.

Price, less Tube..... **\$5.75**

MANUFACTURED BY DAVID BOGEN COMPANY, INC., NEW YORK CITY

**SUPREME FIDELITY**

# Sound Systems WITH THE NEW

## VELOTRON MICROPHONE

### SUPREME SERIES P-12 SYSTEMS

**12 WATT — THREE INPUT CHANNELS**

Low-cost, high-quality systems for installations of moderate power. For lecturers, dance orchestras, entertainers, political speakers, or any other medium-power purposes.

For portable use, a special carrying case is available, divides diagonally, each section accommodates one speaker, and amplifier unit mounts into base of one section. Additional speakers can be used, output impedances of 4, 9, 15 and 500 ohms are brought out to a terminal strip on the amplifier.

The Supreme Series P-12 Permanent System consists of: One Supreme 12-Watt Amplifier, Model B-12, Two Special 11-inch P. A. Dynamic Speakers. Each speaker is equipped with 25 feet of rubber-covered cable with a polarized armoured plug. One "Velotron" Microphone, one Supreme Model B10 Microphone Stand, 25 feet of rubber-covered shielded microphone cable, with lock-type shielded plug. Complete kit of tubes. **The two-section carrying case is not included in the fixed systems.**

Complete System as described above.....	<b>\$117.00</b>
<b>SYSTEM P12VT—Price, with Tubes.....</b>	<b>\$132.00</b>
Same System with Bruno SK-4 Velocity Microphone.....	<b>\$119.50</b>
<b>SYSTEM P12V—Price, with Tubes.....</b>	<b>\$12.50</b>
Same System with Supreme Crystal Microphone.....	
<b>SYSTEM P12C—Price, with Tubes.....</b>	
<b>Two-section Portable Carrying Case—Accommodates the amplifier unit and two speakers. Size: 18"x11"x15".</b>	
<b>MODEL 135—Price.....</b>	



### SUPREME SERIES P-16 SYSTEMS

**16 WATT — FOR MOBILE INSTALLATIONS**

**6-VOLT BATTERY OPERATED—SEPARATE PACK FOR 110 VOLT A.C.**

These systems are ideal for use wherever it is difficult to obtain the regular 110 volts source of electric power. They meet all the requirements of outdoor political gatherings, carnivals, picnics, sound truck installations, etc., with more than ample power to supply sound for several thousand people. The systems are readily convertible to 110 volt A.C. by the addition of the plug-in pack.

The Supreme Series PD-16 DeLuxe Systems consists of: The Supreme Six-Volt Battery-Operated 16-Watt Amplifier, Model B-16; two **Jensen B12** Permanent Magnet Speakers; one "Velotron" Microphone, one Supreme Model B10 Microphone Stand, with 25 feet of rubber-covered shielded microphone cable with lock-type shielded plug. **Less Parabolic Sound Projectors.** Complete kit of tubes.

Complete System as described above.....	<b>\$165.50</b>
<b>SYSTEM PD16VT—Price, with Tubes.....</b>	<b>\$180.50</b>
Same System with Bruno SK-4 Velocity Microphone. Price with Tubes.....	<b>\$168.00</b>
<b>SYSTEM PD16V—With Bruno SK-4 Velocity Microphone. Price, with Tubes.....</b>	

The above systems can be furnished with **Jensen C12** Permanent Magnet Speakers in place of **Jensen B12** Permanent Magnet Speakers as recommended above—at a reduced price of \$20.00 for each system.

**SUPREME SOUND PROJECTORS** for use with above systems: Model 12 Sound Projector, with mounting bracket (2 required) **\$13.50**

**MODEL 12-SPB—Price, Each.....**

#### SUPREME SERIES P-16 STANDARD SYSTEMS

Combines the Supreme B-16 Six-Volt Amplifier, "Velotron" Microphone, DS2 Desk Stand, 25 feet of cable, one **Jensen 10"** 6-Volt Dynamic Speaker. Complete kit of tubes. **Less Parabolic Sound Projector.**

<b>SYSTEM PS16VT—Price, with Tubes.....</b>	<b>\$114.50</b>
<b>SYSTEM PS16V—With Bruno SK-4 Velocity Microphone. Price, with Tubes.....</b>	<b>\$129.50</b>
<b>SYSTEM PS16C—With Supreme Crystal Microphone. Price, with Tubes.....</b>	<b>\$117.00</b>

**SUPREME SOUND PROJECTOR** for above systems: **Model 810** complete with mounting bracket. **Model 810-SPB—Price, Each.....** **\$13.00**



**110-VOLT A.C. PACK—Converting to Universal Operation**  
Plugs directly into the built-in socket on amplifier, for either the DeLuxe or Standard Systems.

<b>MODEL AC-16—Price, less Tube.....</b>	<b>\$18.50</b>
<b>5X4G Rectifier Tube for above—Price.....</b>	<b>\$1.35</b>

**TURNTABLE ASSEMBLY and CRYSTAL PICKUP—**Completely mounted in a case that fits over amplifier, making a single compact unit. In combination with 110-volt A.C. Power Pack it makes this unit Universal and can be used for 6-volt battery or 110-volt A.C. operation.

<b>MODEL UT6—Price.....</b>	<b>\$49.50</b>
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### SUPREME SERIES P-6 SYSTEMS

**6 WATT — ULTRA COMPACT PORTABLE SYSTEMS**

**Dual Input: Microphone and Phono Pickup**

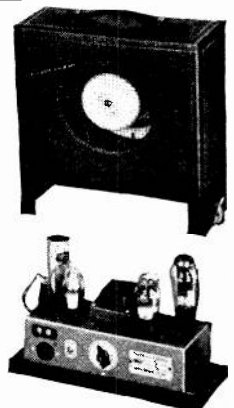
These systems are designed for the requirements of small public address installations, restaurants, social clubs, schoolrooms, call systems, etc., and provides excellent sound coverage for 500 persons.

The Supreme Series P-6 Systems are the most compact and powerful for their size and weight ever designed. The amplifier and speaker are completely housed in an attractive leatherette-covered plywood case, measuring only 12½"x5½"x14", and weighing only 15½ lbs. Microphone and phono pickup input; a switch for the

selection of either channel is located on the front of the amplifier.

The Supreme Series P-6 Portable System consists of: The Supreme 6-Watt Amplifier Unit, Model B-6; 8" Electro Dynamic Speaker, Supreme Model DS2 Desk Stand and the "Velotron" Microphone, with 25 feet rubber-covered shielded microphone cable and plug. Complete kit of matched tubes. For 110-115 volts, 50-60 cycles.

Complete System as described above.....	<b>\$75.00</b>
<b>SYSTEM P6VT—Price, with Tubes.....</b>	<b>\$90.00</b>
Same System with Bruno SK-4 Velocity Microphone.....	<b>\$77.50</b>
<b>SYSTEM P6V—Price, with Tubes.....</b>	<b>\$2.50</b>
Same System with Supreme Crystal Microphone.....	
<b>SYSTEM P6C—Price, with Tubes.....</b>	
<b>SPEAKER EXTENSION CABLE—25 feet of rubber-covered cable with necessary plugs and connectors.</b>	
<b>MODEL 25—Price.....</b>	



# 15 Watt SUPREME FIDELITY SOUND SYSTEMS

With the New VELOTRON Microphone

## STANDARD SYSTEMS



### 15 WATTS OUTPUT

The Supreme Series P-15 Standard Systems meet the requirements of 90% of All Public Address Needs

4-Channel Input — Duo-Stage Electron Mixer-Fader System

Suitable for orchestras, dance halls, theatres, general indoor and outdoor public address installations.

Approximate coverage 5,000 to 8,000 persons.

The 15-Watt Amplifier is a five-stage, employing a high-gain circuit, with four input channels; two universal microphone inputs, and two phono pickup inputs; duo-stage electron mixing and fading between the four channels. The two Jensen 10" electro dynamic speakers are supplied with 25 feet of rubber-covered cables with necessary plugs; one is 500-ohm and the other is 10,000-ohm field. The Supreme Model B10 Microphone Stand is chromium-plated with a black crystalline base; extends from 35" to 70". The recommended systems are for permanent installations, however. The special 3-section portable carrying case listed below accommodates the two speakers, one in each end section, and the amplifier is mounted in the center section, making the entire unit compact and extremely portable.

The built-in terminal strip with output impedances of 4, 9, 15 and 500 ohms is available for additional speakers.

The Supreme Series P15 Standard Systems consist of: The Supreme 15-Watt Amplifier, Model B15; two Jensen 10" Electro Dynamic Speakers; each speaker is equipped with 25 feet of rubber-covered cable with polarized armored plug. "Velotron" Microphone and Supreme Model B10 Microphone Stand with 25 feet of rubber-covered shielded microphone cable with lock-type shielded plug. Complete kit of matched tubes. Fixed systems are less carrying case. For 110-115 volts, 50-60 cycles.

Complete System as described above. **SYSTEM P15SVT—Price, with Tubes..... \$132.75**

Same System with Bruno SK-5 Velocity Microphone... **SYSTEM P15SV—Price, with Tubes..... \$147.75**

Same System with Supreme Crystal Microphone. **SYSTEM P15SC—Price, with Tubes..... \$135.25**

**THREE-SECTION PORTABLE CARRYING CASE:** Center section accommodates amplifier and each end section accommodates a speaker. Overall Size: 13 1/4" x 15" x 19"..... **\$16.75**

**MODEL 137—Price..... \$16.75**

## DELUXE SYSTEMS



### 15 WATTS OUTPUT

### Heavy Duty Dynamic Speakers

Supreme Fidelity offers the Series PX-15 Systems with DeLuxe equipment for installations requiring the finest systems available at moderate power.

The Supreme DeLuxe Systems employ the same 15-Watt Amplifier as used in the standard systems, but with a choice of two heavy-duty 12" dynamic speakers with field exciters or two Jensen 12B Permanent Magnet Speakers. The speaker selector switch on the amplifier permits the use of one or both speakers.

The Microphone Stand is the Supreme Model H10C DeLuxe Floor Stand, extending from 35" to 70", with 10" base weighing 14 lbs., fully chromium-plated.

For multiple installations, an external terminal strip with output impedances tapped at 4, 9, 15 and 500 ohms is available for additional speakers.

The DeLuxe Systems are recommended for permanent installations; however, the portable cases listed below readily convert them to portable use.

A diagonally divided portable carrying case for the two speakers; each section accommodates one speaker. A separate carrying case is available for the amplifier.

The Supreme Series PX-15 DeLuxe Permanent Systems consists of: The Supreme 15-Watt Amplifier, Model BX-15; two Jensen 12B Permanent Magnet Speakers, or two Jensen A-12 Dynamic Speakers, or two Rola G-12 Dynamic Speakers with field exciters. Each speaker is equipped with 25 feet of rubber-covered cable with polarized armored plug. The "Velotron" Microphone and Supreme Model H10C Microphone Stand with 25 feet of rubber-covered shielded microphone cable with lock-type shielded plug. Kit of matched tubes for amplifier and field exciters. For 110-115 volts A.C., 50-60 cycles. Permanent systems are less carrying cases.

### COMPLETE SYSTEMS WITH "VELOTRON" MICROPHONE

**SYSTEM PX15VT** With Jensen PM B12 Speakers.  
**SYSTEM PX15VT-1** With Jensen A-12 Speakers.  
**SYSTEM PX15VT-2** With Rola G-12 Speakers  
**Price, Any System, with Tubes..... \$169.50**

### COMPLETE SYSTEMS WITH BRUNO SK-5 VELOCITY MICROPHONES

**SYSTEM PX15V** With Jensen PM B12 Speakers  
**SYSTEM PX-15V-1** With Jensen A-12 Speakers  
**SYSTEM PX15V-2** With Rola G-12 Speakers  
**Price, Any System, with Tubes..... \$184.50**

### COMPLETE SYSTEMS WITH SUPREME CRYSTAL MICROPHONE

**SYSTEM PX15C** With Jensen PB B12 Speakers.  
**SYSTEM PX15C-1** With Jensen A-12 Speakers  
**SYSTEM PX15C-2** With Rola G-12 Speakers.  
**Price, Any System, with Tubes..... \$172.00**

### NECESSARY EQUIPMENT FOR PORTABLE USE

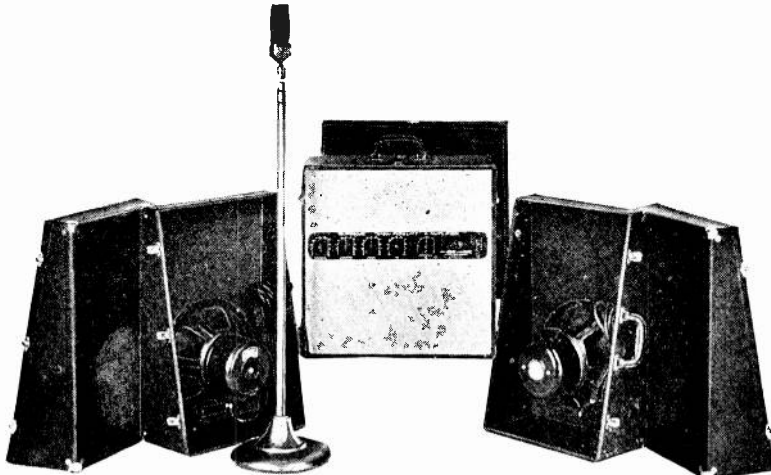
**Portable Carrying Case for Amplifier:** Size: 18" long, 10 1/2" deep, 12 1/4" high. **Model 136—Price..... \$15.00**  
**Portable Carrying Case for Two Speakers:**  
**Model 134—Size: 23 1/4" x 16" x 10"—Price..... \$15.50**

MANUFACTURED BY DAVID BOGEN COMPANY, INC., NEW YORK CITY

**SUPREME  
FIDELITY**

# Sound Systems WITH THE NEW

## VELOTRON MICROPHONE



### SUPREME SERIES P-40 SYSTEMS 40-WATT OUTPUT FIVE CHANNEL INPUT

The Supreme Series P-40 Systems are capable of tremendous power, sufficient to handle large multiple groups of speakers for audiences up to 25,000 and yet constructed with such precision that there is no deterioration in its beautiful tone and reproduction at low levels of volume for indoor installations where tonal demand are predominant in small size places. The impedance selector switch permits the operator to connect any number of speakers to the amplifier and to immediately select the proper and best matching impedance audibly without disconnecting wires. The five-channel input and duo-stage electron Mixer provides the mixing and fading of any combination of the five channels of microphone and phono pickup inputs. The recommended systems are for permanent installations and are complete with 4 speakers, however, additional speakers can be used according to type installation required. Portable carrying cases for speakers and amplifier are available if systems are desired for portable use.

The Supreme Series P-40 Permanent System consists of: The Supreme B-40 40 Watt Amplifier; Two JENSEN A-12 Electro Dynamic Speakers; two JENSEN B-12 Permanent Magnet Speakers; each speaker is equipped with 50 feet of rubber covered cable with polarized armoured

plug. The "Velotron" microphone with Supreme Model H10C Microphone Stand with 25 feet of rubber covered shielded microphone cable with lock-type shielded plug. Complete kit of matched tubes. **Fixed systems are less carrying case.** For 110-115 volts, 50/60 cycle.

- Complete System as described above. **\$300.00**  
**SYSTEM P40VT—Price, with Tubes**.....  
 Same System with Bruno SK-5 Velocity Microphone **\$315.00**  
**SYSTEM P40V—Price**.....  
 Same System with Supreme Crystal Microphone. **\$302.50**  
**SYSTEM P40C—Price, with Tubes**.....

- Necessary Equipment for Portable Use**  
**Portable Carrying Case for Amplifier Unit.**  
 Overall Size: 18" long, 18" high, 8½" deep. **\$15.00**  
**Model 000—Price**.....  
**Dual Speaker Carrying Cases** (two required for this system). **\$15.50**  
**Model 134—Size: 23¼"x16"x10". Price, Each**.....

### SUPREME SERIES P-20 SYSTEMS 20-WATT—FOUR CHANNEL INPUT

The Supreme Series P-20 Systems are of medium high-power, created to meet the demand for High Fidelity equipment, at a reasonable cost. These systems are capable of sufficient volume for the average hall, auditorium, theatre or indoor or outdoor gathering place with capacities up to 12,000 persons.

THE FOUR CHANNEL INPUT and DUO-STAGE ELECTRON MIXER-FADER circuit provides instantaneous mixing and fading between the four channels of microphones and phono pickups. The separate power supply furnishes field excitation for the two 1000-ohm dynamic speakers. Although the systems are recommended for permanent installations, the portable carrying cases for speakers and amplifier are available for portable use. Provision is made on the amplifier for additional speakers, for multiple installations, with output impedances of 4, 9, 15 and 500 ohms.

The Supreme Series P-20 Permanent Systems consists of: Supreme 20 Watt Amplifier, Model B-20; a choice of two JENSEN A-12 Dynamic Speakers, or two ROLA G12 Dynamic Speakers, speakers are equipped with 25 feet of rubber-covered cable with polarized armored plugs. The "Velotron" Microphone and Supreme Model H10C Microphone Stand with 25 feet of rubber covered shielded microphone cable with lock-type shielded plug. Complete kit of matched tubes. For 110-115 volts, 50/60 cycle. **Permanent Systems are less carrying cases.**



- Complete Systems with Supreme Crystal Microphone**  
**SYSTEM P20C—With Rola G-12 Speakers.**  
**SYSTEM P20C-1—With Jensen A-12 Speakers.** **\$182.50**  
**Price, Either System, with Tubes**.....

- Complete Systems with "Velotron" Microphone**  
**SYSTEM P20VT—With Rola G-12 Speakers.**  
**SYSTEM P20V-1—With Jensen A-12 Speakers** **\$179.50**  
**Price, Either System, with Tubes**.....

- Complete Systems with Bruno SK-5 Velocity Microphone**  
**SYSTEM P20V—With Rola G-12 Speakers.**  
**SYSTEM P20V-1—With Jensen A-12 Speakers** **\$195.00**  
**Price, Either System, with Tubes**.....

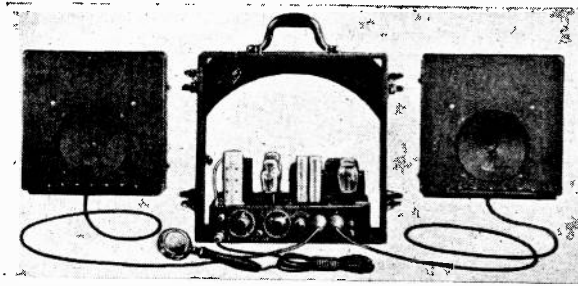
- Necessary Equipment for Portable Use**  
**Portable Carrying Case for Amplifier:** Size 18" long, 10½" deep, 12¼" high. **\$15.00**  
**Model 136—Price**.....  
**Portable Carrying Case for Two Speakers:** Size: 22¼"x16"x10". **\$15.50**  
**Model 134 Price**.....

MANUFACTURED BY DAVID BOGEN COMPANY, INC., NEW YORK CITY

# WEBSTER ELECTRIC SOUND EQUIPMENT

## Webster Electric Sound System

MODEL TSP-104 . . . 7 WATTS



● This efficient WEBSTER ELECTRIC portable Sound System incorporates Class "A" amplification with two matched speakers providing faithful tone quality.

This model is ideal for clubs, hotels, restaurants, orchestras, etc. Will cover audiences up to 1,000 people. Compact, light, highly portable.

The complete system is housed in one case measuring 16"x16"x10". Weight: 47 lbs. Both speakers equipped with 35 ft. rubber covered cord. Model TSP-104 is complete with Hand Type Crystal Microphone with 20 ft. cord and shielded plug.

### SPECIFICATIONS

Tubes Used: 1-57, 1-53, 2-2A5's and 1-83V.

Input: For 1 or 2 Crystal Microphones and High Impedance Phono-Pickup.

Maximum Undistorted Power Output: 7 watts.

Output Impedance: Speaker plug receptacles for two 6 ohm D.C. Dynamics with 2500 ohm fields; also 3, 6, 10, 15, 500 ohm taps.

Field Current Supply: 7½ watts for each of 2-2500 ohm speaker fields.

Controls Included: Mixing controls for microphone and phono-pickup, tone control, switch which enables the use of one or both speakers, and ON-OFF switch.

Gain at 1,000 Cycles: 100 D.B.

Frequency Characteristics: Flat within 2 D.B. from 40-10,000 cycles.

Power Consumption: 75 watts with Speaker fields excited.

Model TSP-104 Webster Electric Sound System. List Price, \$155.00

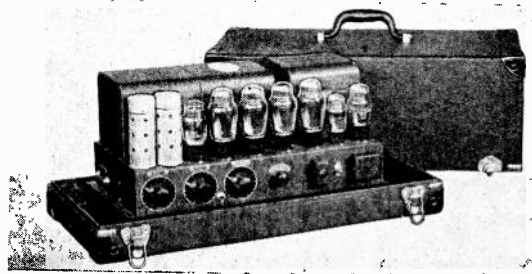
Model TSP-104 Webster Electric Sound System. List Price, \$127.50  
(less carrying case)

Model 6104-R Webster Electric Replacement. List Price . . . . \$70.00  
Amplifier Chassis only

Set of Tubes. List Price . . . . . \$5.62

## Webster Electric Sound System

MODEL C-108 MS . . . 15 WATTS



● Universal acceptance of the Crystal Microphone has created definite demand for higher powered Portable Sound Systems. WEBSTER ELECTRIC C-108 MS high quality Sound System meets this demand.

Model C-108 MS consists of two separate cases—one measuring 24"x11½"x11½" contains the Power Amplifier Chassis—the second measuring 18¾"x18¾"x10" contains the two 12 inch Heavy Duty Dynamic Speakers. Model C-108 MS will cover audiences up to 2,000 people. Total weight: only 65 pounds.

### SPECIFICATIONS

Tubes: 2-57, 1-79, 1-56, 2-6B5, 1-83-V.

Input: For one or two crystal microphones and 500 ohm pick-up which can be mixed.

Power Output: 15 watts at 5% distortion.

Output Impedance: 6 ohms on speaker receptacles, 3-6-10-15-500 ohms on terminal strip.

Field Supply: 10 watts each for two 2500 ohm speakers.

Controls: Volume control for each microphone and control for phonograph pick-up. Tone control, "off-on" switch, pilot light.

Gain at 1,000 Cycles: 104 D.B.

Frequency Characteristics: Flat within plus or minus 1 D.B., 40 to 8,000 cycles.

Power Consumption: 110 watts with two speaker fields excited.

The following 15 Watt systems are offered for adaptation to any requirements:

Model C-108 MS System—Consists of C-108 amplifier in carrying case, one crystal hand mike with 20 ft. cord and plug (adjustable floor stand—optional at extra cost), one DS-12-50 speaker case including two 12" dynamic speakers with 50 ft. cords and plugs. List Price \$215.00

Model 108 MS—Same as C-108 MS but without carrying cases, two dynamic speaker chassis only with 50 ft. cords. List Price . . . \$157.50

Model 6108-R Webster Electric Replacement Amplifier, Chassis only. List Price . . . . . \$95.00

Set of Tubes. List Price . . . . . 10.22

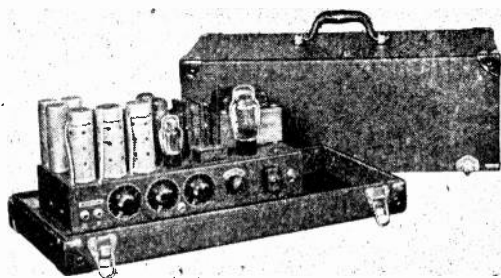
WEBSTER ELECTRIC COMPANY, Racine, Wisconsin, U. S. A. • Established 1909



# WEBSTER ELECTRIC SOUND EQUIPMENT

## Webster Electric Sound System

MODEL C-103 MS . . . 30 WATTS



● This new, high powered WEBSTER ELECTRIC system (C-103 MS—30 watt) is designed to cover audiences of 4,000 people and more.

Additional output stages may be added if desired to include power output up to as high as 120 watts by the addition of the 30 watt booster power stage amplifier, Model 6106-R.

### SPECIFICATIONS

Tubes: 2-79, 1-6A6, 4-2A3, 1-31, 1-83V.  
 Input: Two crystal microphones. One 500 ohm phono pick-up—gain control for each permit mixing.  
 Power Output: 30 watts, 2½% harmonic distortion (Class "A" filed bias).  
 Output: Impedance: 2-4-8-16-250 or 500 ohms.  
 Field Supply: Uses separate FS-60 Field Supply.  
 Controls: Two microphone gain controls, one phono volume control, one tone control—"off-on" switch. Pilot light.  
 Gain at 1,000 Cycles: 109 D.B. for each microphone. 78 D.B. for 500 ohm phono pick-up.  
 Frequency Characteristics: Within plus or minus 2½ D.B., 40 to 10,000 cycles.  
 Power Consumption: 162 watts with full output signal.  
 Added Power Stage: Provisions made to plug in up to three extra power output stage (6106-R).  
 Number of Stages: Four.  
 Fuses: Circuit protected by two fuses, 3 amp. in power supply, 110 V. AC—½ amp. in high voltage supply.

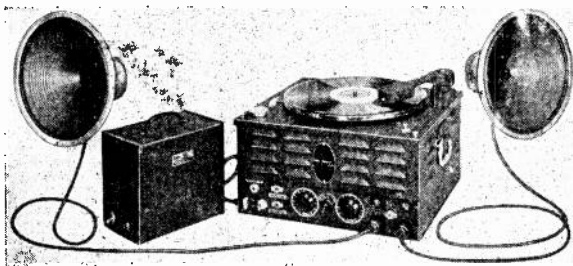
The following 30 watt systems are available:

Model C-103 MS—Consists of amplifier in carrying case with receptacle panel (4 speaker receptacles available), FS-60 Field Supply, Crystal Microphone with 20 ft. cord and shielded plug, Adjustable Floor Stand, Two Straight Side Horns (33½" o.a. length, front opening 22½"x30½") and two 12" Heavy Duty Dynamic Speakers with 100 ft. cords and plugs. Net weight: 230 lbs. List Price.....\$31.55  
 Model 103 MS—Same as C-103 MS except less amplifier carrying case and Straight Side Horns (speaker chassis only supplied). List Price.....\$243.30  
 Model 6103-R WEBSTER ELECTRIC replacement amplifier chassis only. List Price.....\$140.00  
 Set of tubes. List Price.....10.94  
 Model C-106—30 watt Booster Power Stage in carrying case with receptacle panel. List Price.....\$135.00  
 Model 6106-R—Booster Stage replacement amplifier chassis only. List Price.....\$98.50  
 Set of tubes. List Price.....8.44  
 Connecting Cable—(103 type to 106 type). List Price.....4.73

## Webster Electric

## "Dual" Mobile Sound System

MODEL MB-1 . . . 18 WATTS



● Model MB-1 is designed to operate both indoors and out from a six volt storage battery or from 110 volt 60 cycle commercial current without change in equipment. This self-contained system will cover outdoor audiences of 2,500 people or more.

Supplied complete with two 12" heavy duty P.M. Dynamic Speakers with 10 ft. cords and plugs and a Spherical type Crystal Hand Microphone with 20 ft. cord and plug.

### SPECIFICATIONS

Tubes employed: 77, 79 and four 6A6.  
 Gain at 1000 cycles: 95 D.B.  
 Frequency Variation: Not more than 2 D.B. from 60 to 10,000 cycles.  
 Power output: 18 watts.  
 Battery Consumption: Amplifier 17 amps. Phono 2.5 amps.  
 Phono motor: Single speed, 78 R.P.M.  
 Case: Welded steel construction, 15"x13¾"x8".  
 Net Weight: Complete outfit: 70 lbs.

The 18 watt Mobile Sound System is offered in the following arrangements:

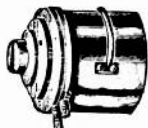
Model MB-1 consists of the amplifier unit in case with a phonograph motor complete with two permanent magnet speakers and crystal type Spherical Hand Microphone with separate AC power pack.

List Price.....	\$239.50
Tubes.....	8.45
Model MB-3 consists of the amplifier chassis only less the case and phonograph, but supplied with two speakers, the spherical type microphone and power pack. List Price.....	\$185.00
Model MB-4 is the same as Model MB-1, less the power pack. For 6-volt operation only. List Price.....	\$218.00
Tubes.....	6.95
Model MB-6 is the same as Model MB-3, less the power pack, for 6-volt operation only. List Price.....	\$163.50



WEBSTER ELECTRIC COMPANY  
 ESTABLISHED 1909  
 RACINE, WISCONSIN, U. S. A.

[ Webster Electric Sound Systems are licensed by agreement with Electrical Research Products, Inc., under patents owned by Western Electric Company, Inc. and American Telephone and Telegraph Company ]



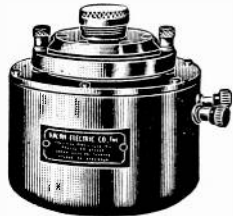
# UNITS



# TRUMPETS

## SUPER POWER Dynamic Unit

110 Volts D.C.



30-watts consumption. 15 ohm voice-coil impedance at 1000 cycles. Continuous operating capacity 35 watts. Peak load capacity 90 watts. Unexcelled for use where concentrated high

power output is required for long-range projection, as in aeroplanes, airports, traffic control, etc. Quality of reproduction is exceptionally clear. Newly-designed horns can be supplied or standard Racon Horns can be converted for use with it. Wt. 35 lbs. Code: RUGBY.....List Price \$90.00

## SUPER - GIANT Dynamic Horn Unit



6-8 volt field excitation. 1.0 ampere consumption at 6 volts. 15-ohm voice-coil impedance at 1000 cycles. Continuous operating capacity 25 watts. Peak load capacity 50 watts. Particularly adapted for theatre and auditorium use where the finest quality reproduction is required. Wt. 20 lbs.

Code: RHEUM.....List Price \$66.00

## GIANT Dynamic Horn Unit



6-8 volt field excitation. 1.1 ampere consumption at 6 volts. 15-ohm voice-coil impedance at 1000 cycles. Continuous operating capacity 22 watts. Peak 50 watts, with perfect reproduction; can be used for all general sound purposes. Special heavy duty construction for aeroplane and hi-power public address work, where a heavier unit is desired. Wt. 19 lbs.

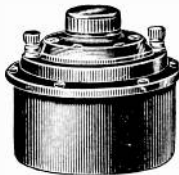
Code: RANGE.....List Price \$55.00

## MASTER Horn Unit



6-8 volt field excitation. 1.1 ampere consumption at 6 volts. 15-ohm voice-coil impedance at 1000 cycles. Continuous operating capacity 20 watts. Peak load capacity 50 watts. Lightweight hi-powered unit especially suitable for portable systems and permanent installations where heavier units are not required. The perfect reproducer. Wt. 13 1/2 lbs. Code: RINSE.....List Price \$44.00

## P. M. Unit Permanent Magnet Horn Unit



An efficient permanent magnet horn unit requiring no outside excitation. 38 per cent cobalt steel magnets are used to supply maximum flux density in the air gap. Cast bronze case, completely enclosed, making Unit water-tight. 15-ohm impedance at 1000 cycles. Continuous operating capacity 10 watts. Peak load capacity 30 watts.

Code: REVUE.....List Price \$44.00

## BABY Electrodynamic Horn Unit

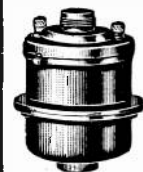


6-volt excitation. 1 1/4 ampere consumption at 6 volts. 15-ohm voice-coil impedance at 1000 cycles. Continuous operating capacity 5 watts Type A. 10 to 15 watts Type B. Peak load capacity 18 watts Type A. 50 watts Type B. Wt. 6 1/2 lbs.

Type A—Code: RAVEL.....List Price \$24.75  
Type B—Code: RASSE.....List Price 27.50

NOTE.—Racon Units obtainable in any field ohmage at slight additional cost.

## JUNIOR Electrodynamic Horn Unit



6-8 volt field excitation. 1.1 ampere consumption at 6 volts. 15-ohms voice impedance at 1000 cycles. Continuous operating capacity, 6 watts Type A. 15 watts Type B. Peak load capacity, 20 watts Type A. 40 watts Type B. Wt. 11 lbs.

Type A—Code: RATAN....List Price \$33.00

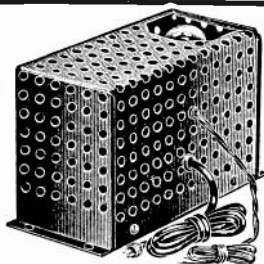
Type B—Code: REBUS....List Price 35.75

## Field Exciters Tube-Type Rectifier Supplies 300 Volts D.C. at 100 Mills

Type R46	List Price
One-Unit Supply (Code: ROWAN).....	\$25.00
Two-Unit Supply (Code: ROWDY).....	32.50
Four-Unit Supply (Code: ROXEY).....	40.00

## Dry Rectifier Supplies 6-9 Volts from 110 Volts A.C.

One-Unit Supply—Code: ROCKY.....	\$22.00
Two-Unit Supply—Code: REPLY.....	38.50
Four-Unit Supply—Code: RODEO.....	66.00

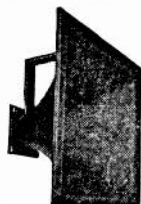


## Diaphragm Replacements

Net Price

Code: RUTEX	Type A Diaphragms only.....	\$2.60
Code: RUVEX	Type B Diaphragms only.....	3.60
Code: RUZUR	Type A Head Assembly (including diaphragm).....	4.25
Code: RUZEN	Type B Head Assembly (including diaphragm).....	5.25
Code: RUCHE	Type C Head Assembly (including heavy-duty diaphragm).....	6.00

## Flared Baffle Projectors



Equipped with mounting block for the cone speaker and patented self-supporting frame. The use of a baffle projector of this type increases the efficiency of the sound distribution. It also extends the frequency response of the speaker.

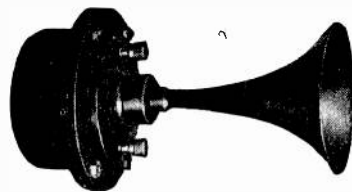
Code	Bell, Inches	Depth, Inches	List Price
RAVEN	18x30	10	\$13.20
RAZOR	27x27	24	33.00
REACH	36x36	24	44.00
REBEL	41x41	15	44.00

Also available with acoustically-damped box for housing dynamic speaker. When ordering, specify size and type speaker.

RODIN	27x27	24	\$42.50
RONDO	36x36	24	53.50
ROOTY	41x41	15	53.50

## Electrodynamic High-Frequency Loudspeaker

Designed to meet the latest requirements for wide-range reproduction. Will cover a frequency range from 3000 to 8000 cycles. Supplied with horn as illustrated. To be used in conjunction with a suitable low-frequency speaker. Field rating—D.C. 6 volts or 110 volts, as specified. Voice-coil impedance 15-ohms. Overall height 6 3/4". Horn bell 3".



Either Type: (Code: RABAT 6 Volts.....) List Price \$20.00  
(Code: RABEX 110 Volts.....)

## Multiple Horn Combinations

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, and frequency response is improved since the low-frequency cut-off is a product of the total bell area of all the horns.

Code: RADIX Double.....List Price \$14.85  
Code: RACER Triple.....List Price 19.25





# TRUMPETS

## ACOUSTIC TRUMPETS



Trumpets are made of Racon patented acoustic non-vibratory material. **Stormproof models** are guaranteed for life as waterproof in outdoor use in all climates and weathers, including immersion in water.

### 3 1/2-Foot Regular Model

Equipped with rolled-metal beaded edge, metal ferrule and suspension ring. Adapted for 3/4-18" or 1 1/8-18" threaded unit. Wt. 6 1/2 lbs. 22" diam.

Code: RELAY..... **List Price \$22.00**

### De Luxe Model

Equipped with rolled-metal beaded edge, reinforced cast-aluminum tone-arm, and suspension ring. For indoor use. Wt. 10 lbs.

Code: REMIT..... **List Price \$27.50**

### Stormproof Model

Equipped same as De Luxe. Waterproof. Wt. 12 lbs.

Code: RENEW..... **List Price \$44.00**

### 4 1/2-Foot Trumpets

Equipped with rolled-metal beaded edge and 25" cast-aluminum throat. Demountable into two sections, which can be quickly assembled or disassembled.

**De Luxe Type**—Wt. 16 lbs.  
Code: RANCH..... **List Price \$44.00**

**Stormproof Type**—Wt. 18 lbs.  
Code: RACEY..... **List Price \$60.50**

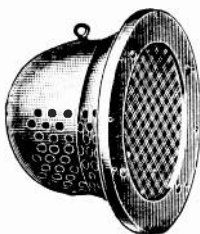
### 6-Foot Trumpets

Equipped with rolled-metal beaded edge, 34" cast-aluminum throat, and suspension eyelets. Bell 30" diam.

**De Luxe Type**—Wt. 18 lbs.  
Code: RHYME..... **List Price \$58.50**

**Stormproof Type**—Wt. 23 lbs.  
Code: RIDER..... **List Price \$75.00**

## BULLET PROJECTOR



An all-steel Bullet Projector, acoustically padded and having the proper air release for wide response. Used in local area for ice, either indoor or outdoor. The driving units mount on a front flange that permits quick inspection and simple connection. Can be mounted in any position by

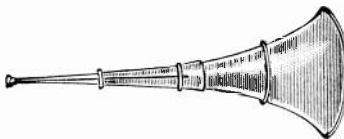
means of mounting flange holes and mounting hook. Cone opening protected by durable screening and gauze. Specify whether for use with 8", 10" or 12" speaker.

**With 8" Broad-Band Speaker**  
Code: REPEX..... **List Price \$25.00**

**With 12" Broad-Band Speaker**  
Code: RUTAN..... **List Price \$35.00**

**Bullet Projector Only**..... **List Price \$16.00**

## ALL ALUMINUM TRUMPETS



All trumpets made of 12-gauge aluminum with cast-aluminum throat sections and cast-aluminum clamping edges, with reinforced bell and loose couplings.

### 6-Foot Trumpet

Bell 30" diam. Demountable into three sections

**New Single-Unit Type**—34" cast throat.  
Code: RHINO..... **List Price \$55.00**

**New Two Single-Unit Type**  
Code: RHOMB..... **List Price \$70.00**

### 4 1/2-Foot Trumpet

Demountable into 2 sections. 25" cast throat.

**Single-Unit Type**  
Code: RIANT..... **List Price \$50.00**

**Two-Unit Type**  
Code: RIBES..... **List Price \$57.50**

### 3 1/2-Foot Trumpet

Demountable into 2 sections. 16" cast throat.  
Code: RAPIX..... **List Price \$25.00**

## UNBREAKABLE REINFORCED TRUMPETS



Made of Racon acoustic stormproof material, reinforced throughout. Guaranteed unbreakable. The last word in trumpet design and particularly adaptable where high quality and high efficiency is required, with the ability to withstand the roughest handling without breakage.

### 6-Foot Trumpet

Demountable into three sections. Equipped with 34 inches of aluminum throat casting.

**Single-Type Unit**  
Code: REGON..... **List Price \$92.50**

**Two Single-Unit Type**  
Code: REGAY..... **List Price \$97.50**

### 4 1/2-Foot Trumpets

Demountable into two sections. Equipped with 25" cast-aluminum throat.

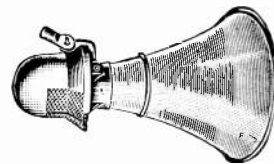
Code: REFIX..... **List Price \$72.50**

### 3 1/2-Foot Trumpet

Demountable into two sections. Equipped with 16" cast-aluminum throat.

Code: RAPOX..... **List Price \$59.00**

## TURRET PROJECTOR

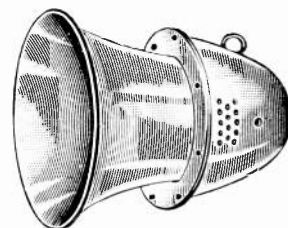


Rigidly mounted on a mechanical-acoustic impedance-matching throat element, with an all-steel, acoustically-damped, bullet back. Made with either unbreakable bell section or heavy-gauge aluminum, with rolled-metal beaded edge and cast-aluminum coupling. Bronze mounting bracket with pipe socket fitting for general mounting or hanging requirements. Weatherproof. For general use, where excellent quality and projective power is required. The R30 BROAD-BAND Speaker used. 8-ohm voice-coil impedance, 10-watt capacity, 60-degree distribution, 18-watt field, 110-volts D.C. Overall length 34 1/2". Bell diameter 24". Finish: Battleship gray.

**Aluminum Bell**—Wt. 33 lbs. Complete with speaker.  
Code: ROUSE..... **List Price \$90.00**

**Unbreakable Bell**—Wt. 38 lbs. Complete with speaker.  
Code: RUBEO..... **List Price \$110.00**

## ARMORED CONE PROJECTOR



An efficient heavy-gauge steel and aluminum projector for dynamic cone speakers. Steel back enclosure with proper release holes for excellent response, and 16-gauge aluminum bell. Provided with mounting hook and mounting holes. Simple to install and assemble. Overall length 20", Bell diameter 17". For use with 12" or 10" cone speakers.

Code: RUMID..... **List Price \$10.00**

Above with steel back, acoustically damped with 1" material, and cone opening protected by durable screening and silk gauze.

Code: ROBOT..... **List Price \$15.00**

Same as above, for use with 6" or 8" speakers. Overall length 15". Bell diameter 15".

Code: RUMIX..... **List Price \$8.00**

Above with steel back, acoustically damped with 1" material, and cone opening protected by durable screening and silk gauze.

Code: RIFLE..... **List Price \$12.50**



REPLACEMENT FIELD COILS

APEX GLORITONE				LYRIC				List	MAGNAVOX				List				
Mod.	Spkr.	I.D.	O.D.	L.	Our No.	Mod.	Spkr.		I.D.	O.D.	L.	Mod.		Spkr.	I.D.	O.D.	L.
<b>Our No.</b>																	
3001	26	2286	1 1/4	2 3/8	1 1/2	3073	Model No. 9				5,000	7.00					
3002	26A	2467	1	2 1/4	1 3/4	3074	Model 70, 73, 85				10,000	4.50					
3004	26P	2925	7/8	2 1/4	1	<b>MAJESTIC</b>											
3006	27	1936	1 1/4	2 1/4	1 1/2	3075	9 in. (Medium) D7, D8				2,500	6.50					
3008	8A	2801	7/8	2 1/4	1	3084	Model G1				3,100	8.00					
3009	10B	2802	1 1/8	2 3/4	1 3/8	3085	Model G2				2,730	8.00					
3011	24		1 1/8	2 3/8	1	3086	Model G3				2,730	7.50					
<b>AIRLINE (Montgomery-Ward)</b>																	
3181	61-72					3088	Model G5				7,650	8.00					
<b>ATWATER-KENT</b>																	
3017	Models 46, 53, 47 (Speaker F2) Early, Late 55K					1,700	6.00	3093	Model G10B				1,750	4.00			
3018	(Speaker F4) Early and Late, 55, 60					1,100	6.00	3110	Model G19F				710	2.70			
<b>BOSCH</b>																	
3021	Model 48					2,000	6.00	3111	Model G19G				710	2.70			
3023	Model 5A					2,000	4.00	<b>PHILCO</b>									
<b>BRUNSWICK</b>																	
3024	Model D11, 12, 16, 18, 33					2,400	4.20	3129	Model 20				3,100	2.00			
<b>CROSLEY</b>																	
3041	Model M45					1,500	4.40	3130	Models 86, 87, 65, 95, 76, 96, 77				3,200	4.50			
3042	Model M45					2,500	4.80	3195	Model 70				3,600	2.00			
3043	Model 269					10,000	4.00	<b>RCA-VICTOR</b>									
3246	Model 167 Type 335-3					1,200	2.25	3132	Model 66				7,000	4.75			
3249	Model 167 (Magnavox)					1,100	2.80	3134	Model 106				6,000	5.00			
<b>GRUNOW</b>																	
3198	5A, Model 500, 504					1,850	4.00	<b>ROLA</b>									
<b>JENSEN</b>																	
3058	Models D7 D8					1,500	4.40	3140	Model F4				3,000	2.75			
3059	Models D7-D8					2,500	5.00	3137	Model K				4,700	4.00			
<b>KENNEDY</b>																	
3072	Model 52A					2,500	3.50	3274	Model G12				2,500	6.00			

**CARRON SPEAKER CONE CEMENT**

Made Particularly for Speaker Work. Fast Drying, Quick Adhesion. This cement is of the all-purpose type, and can be used in many of your repair jobs.

List Price .....42c



**CARRON RADIO REPAIR CEMENT KIT**

Carron Radio Repair Cement Kit manufactured expressly for speaker repair work. Kit consists of one two-ounce metal can of cement, one two-ounce metal can of thinner, together with brush. Used for cementing leads, voice coil, R.F. coils, chokes, etc. The thinner is used for loosening wires, breaking down cemented parts, etc. If cement hardens mix thinner with it, and the cement will become as efficient as ever.

This cement and thinner is the same as that used by many of the leading speaker manufacturers in the country. For efficiency in your speaker repair work, use Carron Cement Thinner, and avoid the difficulties which accompany all experimentation.

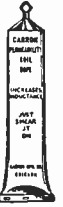
List Price ..... \$0.62 1/2 per Kit

**CARRON PERMEABILITY COIL DOPE**

To increase inductance of low coils, or for matching odd coils, just smear it on.

A very effective medium of solving many of your coil difficulties. On tubular coils, apply dope to inside of form.

List Price ..... \$0.42



**CARRON MIDGET SOLDERITE KIT**

Smallest Electric Soldering Iron on the Market

Length 7 inches overall. Weight 5 1/2 ounces including cord and plug. Operates on either AC or DC Current. Handy. Compact. Practical. Heats instantly. Stays hot. Full 20 watt rating—with special patented design for concentrated heat that permits work of bigger soldering irons.

No. 105—110 Volt AC or DC ..... List \$1.25  
No. 106—For 6 Volt Battery, Especially For Farm Use ..... List 1.25



**CARRON SPEAKER CENTERING SHIMS**

In order to properly hold the speaker diaphragm in place while it is being glued or screwed into the speaker, it is absolutely necessary to have the proper thickness shim, to guard the voice coil from moving around during this operation.

Carron Speaker Centering Shims are made of very flexible celluloid, in four different thicknesses and four distinct colors. Each size and thickness has its own compartment in a specially constructed leather case, and is so marked on the case.

No serviceman, doing speaker work, can possibly get along without one of these inexpensive and convenient cases.

List Price \$0.60



**CARRON TUNING WAND**

With Genuine Cat-Gut Shaft

For checking alignment in all wave receivers without disturbing the trimmer adjustments. . . . An extremely flexible rod, made of genuine catgut, with a brass cylinder colored yellow on one end, and a special powdered iron core, colored grey, on the other end. . . . By inserting the brass cylinder, colored yellow, into a coil, the inductance is lowered. Inserting the iron core, colored grey, inductance is increased. . . . Because of the genuine catgut shaft in this wand, it is possible to make adjustments in coils mounted on side, or in other positions inaccessible to a less flexible wand, as this can be bent practically in half without damage. . . . Packed in specially designed tubular container, wand can be carried in vest pocket, ready for use while out on a service call. . . . List \$1.00



**MAGNETIC COILS**

RCA 100, Western Electric 540-AW, RCA Model 30. Per pair ..... List \$0.75  
RCA 100A, 100B, 103, used in RCA receivers 30A, 50 and 51. Per pair ..... List \$0.75

**UTAH ORTHOVOX COILS For High Impedance Tubes**

Types 10, 12A, 18, 19, 20, 31, 33, 38, 41, 42, 46, 47, 79, 59, 89, 2A5, 6A4, LA, 6A6 in push-pull and single types 38, 49, 12A7. For any type of Output tubes in single or push-pull having a total primary load impedance of 12,000 to 18,000 ohms. . . . List \$0.75

**For Medium Impedance Tubes**

Types 43, 45, 71A in push-pull and single types 10, 12A, 18, 19, 20, 31, 33, 38, 41, 42, 43, 46, 47, 49, 59, 89, 2A5, 6A4, 6A6, 12A5, LA, GA, PZ. For any type of output tube in single or push-pull having a total primary load impedance of 7000 to 12,000 ohms. . . . List \$0.75

**For Low Impedance Tubes**

Types 48, 2A3 in push-pull and single types 43, 45, 59, 71A, 12A5. For any type of tube in single or push-pull having a total primary load impedance of 3000 to 6000 ohms. . . . List \$0.75

**FOR UTAH ORTHOVOX SPEAKERS Used with P. A. Amplifier**

500 ohm impedance coil, 1000 ohm impedance coil ..... List \$0.75

**BEST KINEMATIC COILS**

For High impedance tubes ..... List \$0.75  
For Medium impedance tubes ..... List .75  
For Low impedance tubes ..... List .75

Classification of Output Tubes Above—We can furnish any other magnetic coil made to exact physical and electrical dimensions if we have the original to rewind.



**CARRON DIALUMINATOR**

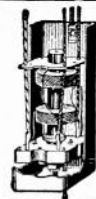
A dial Lite Coloring Kit, consisting of five 1/4 oz. jar type bottles, having large opening for easy dipping. Four colors: red, green, blue and brown. One bottle of solvent ..... List \$0.50

YOU CAN OBTAIN THE COMPLETE CARRON CATALOG FROM US.

EXACT  
DUPLICATE

**CARRON**  
"A CARRON CORE IMPROVES THE TONE"

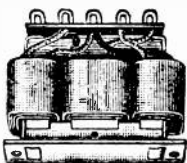
REPLACEMENT  
COILS



These coils are exact duplicates of the original in physical and electrical characteristics. All coils are thoroughly impregnated to withstand any and all atmospheric conditions.

If the coil you want is not listed, send us the old coil and its mate, if any, model number and all pertinent information regarding same, and we will duplicate same.

Our Part No.	Mfrs. Part No.	Model	List Price
<b>APEX GLORITONE</b>			
D4151		Model 7A-99 1st I. F. & Oscillator Complete.....	2.50
D4161		Model 24 Chassis 400 Autodyne 1st I. F. & Osc.....	3.00
<b>BELMONT</b>			
D4003		Part No. C119 Model 50C, 1st I. F. & Oscillator complete.....	2.50
D4005		Model 50, Preselector Coil.....	1.00
<b>CLARION</b>			
D4125		Model 220, 1st I.F. and Oscillator complete.....	2.50
D4074		Model 220, Output I.F. Coil only.....	1.00
D4128		Model 32b, 1st I.F. and Oscillator complete.....	2.50
D4129		Model 320, 2nd I.F. Coil complete.....	1.50
D4130		Model 320, Preselector Coil.....	1.25
<b>CROSLLEY</b>			
D4083	W21322	Model 58, R.F. Coil only.....	1.30
D4081	W20445	Model 53, 54, 57, R.F. Coil only.....	1.00
D4082	W20444	Model 53, 54, 57, Ant. Coil only.....	1.00
D4084	W21323	Model 58, Ant. Coil only.....	1.00
D4087	W22603	Model 124, 1st I.F.T. complete.....	1.75
D4143		Model 124, 2nd I.F.....	.75
<b>MAJESTIC</b>			
D4035	4428	Model 15-15B, 1st I.F.T. and Oscillator.....	2.50
D4089	4429	Model 15-15B, 2nd I.F.T. complete.....	1.50
D4121	3908	Model 20, 1st I.F. Coil complete.....	2.50
D4122	3960	Model 20, 2nd I.F. Coil complete.....	3.00
D4150	5768	Model 35, 1st I.F. Coil complete.....	2.50
D4148	5771	Model 35, 2nd I.F. Coil complete.....	1.50
D4094	4339	Model 60-160, 1st I.F. Coil complete.....	3.00
D4095	4267	Model 60-160, 2nd I.F. Coil complete.....	3.00
D4098	4724	Model 120, 1st I.F. Coil complete.....	2.25
D4909	4727	Model 120, 2nd I.F. Coil complete.....	2.25
D4049	6984	Model 120B, 1st I.F. Coil complete.....	2.50
D4048	6524	Model 200, 2nd I.F. Coil complete.....	2.30
D4111	10148	Model 460, 1st I.F. Coil complete.....	1.50
D4112	10253	Model 460-800, 2nd I.F. Coil only.....	.85
D4113	10843	Model 500, 1st I.F. Coil complete.....	2.25
D4114	11705	Model 500, 2nd I.F. Coil complete.....	2.00
D4115	10852	Model 500, 3rd I.F. Coil complete.....	4.00



**MAJESTIC REACTANCE DIMMER ASSEMBLY**

S561 7785 Pt. 7785, used in Majestic Models 300, 300A, 320, 360 and other models using pilot light dimmer circuit. Complete ready to install. Uses heavier built primary than original. Will outlast original. 1.50

PHILCO	Our Part No.	Model	List Price
D4262	06662	Model 19, R.F.....	.55
D4318	32-1153	Model 57, 58, R.F.....	.60
D4324	32-1412	Model 66, R.F.....	.85
D4326	03082	Model 70, 35, 470, R.F.....	.75
D4329	03091	Model 70, 470, I.F.....	.90
D4331	04190	Model 70, 71, I.F.....	.50
D4333	32-1030	Model 84, R.F.....	.60
D4334	32-1310	Model 84, R.F.....	.40
D4336	32-1313	Model 84 I.F.....	1.05
D4347	04409	Model 90, Osc.....	.80

R. C. A.	Our Part No.	Model	List Price
D4054	8567	Models 80, 82, 86, RAE 68, 1st I.F. Coil only.....	1.00
D4055	8566	Model 80, 82, 86, RAE 68, 2nd I.F. Coil only.....	1.00
D4056	8565	Model 80, 82, 86, RAE 68, 3rd I.F. Coil only.....	1.00
D4057	3636	Model M134, M105, 1st I.F.....	.80
D4058	3637	Model M134, M105, 1st I.F.....	.80
D4153	2952	Model R7, R7A, R9, 10DC, RAE 16, 2nd I.F.....	1.00

STEWART-WARNER	Our Part No.	Model	List Price
D4068		Model R116, Ant. Coll. Complete.....	1.00
D4154		Model 1231, R123A, 2nd I.F. Coil only.....	.75

ZENITH	Our Part No.	Model	List Price
D4159		Model 91, R.F. Coil.....	1.00
D4160		Model 91, 1st I.F. Coil, complete.....	1.50



**IRON CORE COILS**

	Our Part No.	Model	List Price
	S535	R.F. Coil.....	1.00
	S536	Antenna Coil.....	1.00
Gain and selectivity double that of ordinary coils. Midjet size. Litz secondary high impedance primary. Complete in can. 1½x1¾. We recommend these coils unqualifiedly.			
S542	456 K.C. I.F.T.	Double tuned in square can. 1¾x1¾x3. Double gain and selectivity of similar size air core type. May be used to replace 1st I.F. in any type 456 K.C. superheterodyne to improve performance.	2.00
S564		Same as above, except for output use.....	2.00

Our No.	Model	List Price
<b>MAJESTIC PAPER SECTION COILS ONLY</b>		
P4428	Model 15, 15B, 150, 1st I.F.....	.60
P4429	Model 15, 15B, 150, 2nd I.F.....	.70
P5326	Model 25, 1st I.F.....	.70
P5337	Model 25, 2nd I.F.....	.90
P5602	Model 25B, 1st I.F.....	.90
P5601	Model 25B, 2nd I.F.....	.70
P6506	Model 55, 1st I.F.....	.70
P8384	Model 55, 2nd I.F.....	.90
P10589	Model 66, 1st I.F.....	.70
P10098	Model 66, 2nd I.F.....	.70
P7643	Model 114, 2nd I.F.....	.70
P9355	Model 116, 1st I.F.....	.70
P9361	Model 116, 2nd I.F.....	.70
P6987	Model 120B, 2nd I.F.....	.70
P6250	Model 200, 1st I.F.....	.70
P6254	Model 200, 2nd I.F.....	.90
P6119	Model 210, 1st I.F.....	.70
P6123	Model 210, 2nd I.F.....	.70
P6127	Model 210, 3rd I.F.....	.70
P6558	Model 220, 1st I.F.....	1.00
P6572	Model 220, 2nd I.F.....	.70
P6592	Model 220, 3rd I.F.....	1.00
P7205	Model 290-300, 1st I.F.....	.70
P7230	Model 290-300, 2nd I.F.....	.90
P7821	Models 301A, 310B, 330, 800, 1st I.F.....	.90
P7812	Models 301A, 310B, 330, 800, 2nd I.F.....	.80
P9094	Model 360, 2nd I.F.....	.70
P9669	Model 400, 1st I.F.....	.70
P10148	Model 460, 1st I.F.....	.70
P10253	Model 460, 2nd I.F.....	.85
P10843	Model 500, 1st I.F.....	.70
P11705	Model 500, 2nd I.F.....	.70
P11014	Models 520, 800, 2nd I.F.....	.90
P8729	Antenna Choke.....	.90
P8857	R.F. Choke.....	.50

**STANDARD R.F., ANTENNA, PRE-SELECTOR, OSCILLATOR COILS**

S519	R.F. Coil.....	\$0.80
S523	Antenna Coil.....	.80
Litz wound, high impedance primary, complete in round can. 1¾x2¾. This is a very selective type of coil, used in the popular 4-tube AC midjet sets.		
S520	R.F. Coil.....	.75
Enameled wire, high impedance primary, complete in round		
S525	Antenna Coil.....	.75
can. 1¾x2¾. Used in popular AC 4-tube midjet sets.		
S521	R.F. Coil.....	.70
S524	Antenna Coil.....	.70
Litz wound, high impedance primary, with mounting brackets, unshielded. Recommended for use in the popular AC-DC midjet sets.		
S522	R.F. Coil.....	.60
S526	Antenna Coil.....	.60
Enamel wire, high impedance primary, with mounting brackets, unshielded. Used in the popular AC-DC sets. Will perform well, but not as effectively as Litz wire coils, our S521 and S524.		
S530	R.F. Coil.....	.60
S531	Antenna Coil.....	.60
Litz wound, low impedance primary, complete in round can. 1¾x2¾. Recommended for replacement purposes in sets now using this type of coil.		
S532	R.F. Coil.....	.75
S533	Antenna Coil.....	.75
Litz wire, midjet size, 5 pie, high Q winding, high impedance primary, with mounting brackets, unshielded, size 1½x¾. Gives excellent results where space is limited.		
S534	Antenna Coil. Dowel Type.....	.85
With terminal strip and mounting brackets. Duo-lateral wound Litz secondary. Size ¾x1¾. Is used in majority of 5-tube, 456 K.C. superheterodyne sets.		
S517	Pre-selector Coils.....	1.00
550 to 1700 K.C., complete in square can 2x2x3". Can be used to replace the solenoid type of pre-selector coil used in many sets.		
S527	Oscillator and 1st I.F. Combination.....	1.75
For sets using pentagrid tubes, complete in square can, 1¾x2x3¾. Specify I.F. frequency.		
S528	Oscillator, Duo-Lateral Coil.....	.85
175 K.C., for use with pentagrid tube. Wound on dowel, ¾x1". Color coded terminal strip. For use with .001 padder.		
S529	Oscillator, Duo-Lateral Coil.....	.85
456 K.C., for use with pentagrid tube, wound on dowel ¾x1". Color coded terminal strip. For use with .0005 padder.		

ASK FOR COMPLETE CARRON CATALOG—WE HAVE IT

**STANDARD  
I. F.  
TRANSFORMERS**



Our No.	Description	List Price
S501	175 K.C. double tuned, complete in round can, 1½x2¼"	\$1.25
S502	175 K.C., double tuned, with tapped secondary, complete in square can, 2x2x3"	1.75
S507	175 K.C. double tuned, complete in square can, 1¾x1¾x3. Used in practically all types of auto sets	1.25
S509	456 to 466 K.C., single tuned, complete in square can, 1¾x1¾x3	1.20
S510	456 to 466 K.C., double tuned, complete in square can, 1¾x1¾x3 diode tubes	1.25 1.50
S543	456 K.C., coil only. Duo-lateral Litz winding on treated wood dowel, ¾x2½"	.75
S537	175 K.C., coil only. Duo-lateral Litz winding on treated wood dowel, ¾x2½"	.75



**BEAT FREQUENCY  
OSCILLATOR**

**MICA TUNED**

Our No.	Description	List Price
S540	Used with any superheterodyne receiver. Can be furnished in any frequency from 175 to 525 K.C. (specify frequency). Diagram furnished	1.75

**AIR TUNED**

S559	Used with any superheterodyne receiver. Can be furnished in any frequency from 175 to 525 K.C. (specify frequency). Diagram furnished	4.00
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**SLIP OVER  
TYPE SECONDARY  
WINDINGS**

Carron replacement secondaries of all types are wound with Litz wire unless otherwise listed. The inductance is purposely made

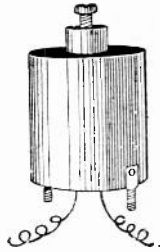
higher than necessary in any case and must be altered by removing turns to match circuit conditions. In case too many turns are removed accidentally, the inductance can, in most cases, be brought up by the proper application of permeability coil dope.

Our No.	Description	List Price
S738	Two bank winding, 10-41 litz on treated paper tube size ¾"x2½", may be used for either R. F. or antenna secondary	\$ .50
S739	Single layer No. 30 P.E. wire on bakelite tube 1¼" x 2½", may be used for either R.F. or Antenna secondary	.45
S740	Duo-lateral winding on paper tube, made to slip over ½" wood dowel, size: O.D. ¾" I.D. ½", width 1½", used in dowel type antenna and preselector coils	.30
S741	Duo-lateral two pie winding made to slip over ½" wood dowel, size of winding ¾"x1½"	.45

**KIT OF REPAIR PARTS**

S752	12 pieces most generally used by the service man, consisting of the following: 2—Antenna primary windings, our S701. 1—Antenna primary winding, our S706. 2—Antenna primary windings, our S703. 2—R.F. Plate primary coils, our S725. 1—175 K.C. I.F.T. winding, our S731. 1—175 K.C. I.F.T. winding, our S732. 1—175 K.C. I.F.T. winding, our S733. 1—456-500 K.C. I.F.T. winding, our S736. 1—Bank wound R.F. secondary coil, our S738 complete kit	4.25
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**I. F. INTERFERENCE  
SIGNAL REJECTOR  
PERMEABILITY TUNED**



Our No.	Description	List Price
S568	450-490 K.C.	\$2.50
S569	150-200 K.C.	2.50
S570	250-280 K.C.	2.50

Very effective for eliminating interference coming in through the Antenna High "Q" tuned circuit. Tuned by an iron core. Much more efficient than old condenser tuned type.

**NOISE SUPPRESSOR I.F. TRANSFORMERS**

No.	Description	Price
S560	Designed for use in the new noise suppression circuit as described in Q.S.T. Single tuned with center topped secondary	1.50

**CARRON COIL  
TEST SET**

**AN EXCLUSIVE CARRON  
DEVELOPMENT**

**Makes Coil Matching and Testing  
As Easy as Testing a Tube**



Patent Pending

- 1—Instantly determines the frequency of an unknown I.F. transformer, and the size trimmer necessary to tune it.
- 2—Permits exact matching of any unknown R.F. or I.F.T. winding with other coils.
- 3—Identifies oscillator coil for 456, 175 and other frequencies.
- 4—Coupling (mutual inductance) may be set or matched accurately on any R.F. transformer.
- 5—Permits comparison of coil efficiency (Q factor) of any winding, a quick convincing method of demonstrating the difference in "Pen." sensitivity and selectivity of the various types of windings, such as duo-lateral and bank litz windings, enameled wire single layer windings, iron core coils, etc.

This instrument includes a stable test oscillator with six switch selected test frequencies; a calibrated air condenser, and a sensitive bridge type vacuum tube voltmeter, employing a high grade 0-1.5 milliamperes foundation meter. This vacuum tube voltmeter alone is worth more than we ask for the complete set.

No batteries are required. Designed for use on 110-120 volts, either AC or DC.

Complete with R.C.A. tubes, and complete instructions..... List \$32.50  
No service shop or laboratory can be complete without this instrument.

**CARRON  
INTER-OFFICE COMMUNICATOR**

This system consists of a compact amplifier of special design, housed in an attractive crystalline finished metal case, and two identical station units with the necessary cables for quick installation. Each station unit consists of a high grade P. M. speaker, encased in a fine hand rubbed walnut finish cabinet. The "Talk-Listen" switch is of the quick acting push button type, employing alloy contacts in the springs.

**EXCLUSIVE CARRON FEATURES**

- 1—Only one electric outlet needed for the entire system.
- 2—Can be installed by anyone in five minutes. No splicing or screws to loosen.
- 3—Voice is reproduced as clear and distinct as a radio. No blasting speak at arm's length.
- 4—As many as four station units may be used with one amplifier in much the same way as a four party telephone line.
- 5—More economical in first cost, as well as upkeep, than any other system on the market.

The entire system, complete, consisting of amplifier with tubes, two station units, and 50 feet of transmission cable equipped with plugs for instant installation ... List \$32.50  
For use on either AC or DC, 110-120 volts, any cycle.  
Extra station units and additional cable lengths, at nominal charge. Prices on request.

# WRIGHT



# DeCOSTER

## Electro-Dynamic

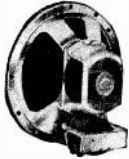
## Reproducers

### GONE IS THE NEED FOR SPECIAL FIELDS AND TRANSFORMERS

**One Universal Field and Transformer Makes a Speaker Adaptable to All Radios.**

The dynamic reproducers shown below (with the exception of the Model 390-5" unit) all have universal field coils which furnish the following fields: 2500, 2200, 1800, 1800 tapped at 300, 1500, 1000 and 700 ohms and Universal Transformer to match all radio tubes.

#### STANDARD 5" D.C. MODEL

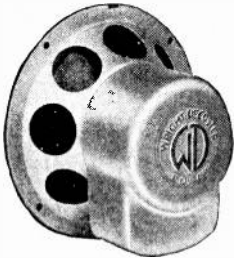


Voice coil  $5/8$ ", power handling capacity 1.65 watts.\* Voice coil impedance 4.2 ohms at 400 cycles. Standard transformer matches single 43 tube. Standard field resistance 3000 ohms. Field coil dissipation, max. 6 watts, min. 3.5 watts. Diameter of cone bracket 5", depth  $2\frac{1}{4}$ "; packed 1 to a carton; shipping weight  $1\frac{1}{4}$  lbs.

Model 390VC 5" automobile speaker, 6 volt field. Transformer matches single 41 or 42 tube.

Model 390 . . . Code: WORTH . . . List \$3.90  
Model 390VC . . . Code: WRATH . . . List \$3.90

#### UNIVERSAL 8" D.C. MODEL

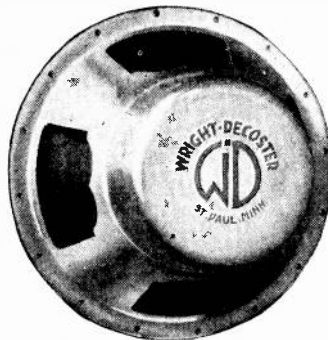


Voice coil 1.0", power handling capacity  $3\frac{1}{2}$  watts.\* Voice coil impedance 5.05 ohms at 400 cycles. Universal transformer matches all output tubes. Field coil universal. Diameter of cone bracket,  $8\frac{1}{4}$ "; depth 4"; packed 1 to a carton; shipping weight,  $4\frac{1}{2}$  lbs.

Model 590VC 8" auto. speaker, 6 volt field. Universal transformer.

Model 590 . . . Code: WHALE . . . List \$5.90  
Model 590VC . . . Code: WITTY . . . List \$5.90

### GREATEST BUY EVER OFFERED



### WRIGHT-DeCOSTER'S FINEST 12 INCH RADIO SPEAKER FOR ONLY \$9.90 LIST

Voice coil 1.0", power handling capacity  $3\frac{1}{2}$  watts.\* Voice coil impedance 5.05 ohms at 400 cycles. Universal transformer matches all output tubes. Field coil universal. The Paracurve diaphragm has an extremely wide frequency range and is capable of reproducing with fidelity the entire rendition of a symphony orchestra. This model will give almost unbelievable improvement to any radio. Diameter of cone bracket,  $12\frac{1}{4}$ "; depth 7"; width in back,  $6\frac{1}{2}$ "; packed 1 to a carton; approximate shipping weight,  $8\frac{1}{2}$  lbs.

Model 990 . . . Code: WARES . . . List \$9.90

#### UNIVERSAL 6" D.C. MODEL

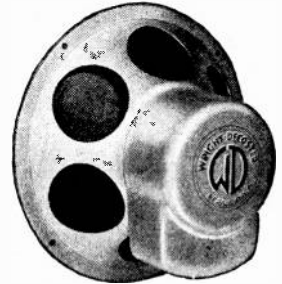


Voice coil 1.0", power handling capacity  $3\frac{1}{2}$  watts.\* Voice coil impedance 5.05 ohms at 400 cycles. Universal transformer matches all output tubes. Field coil universal. Diameter of cone bracket,  $6\frac{3}{4}$ "; depth  $3\frac{1}{2}$ "; packed 1 to a carton; shipping weight,  $3\frac{1}{2}$  lbs.

Model 490VC 6" auto. speaker, 6 volt field. Universal transformer.

Model 490 . . . Code: WHELP . . . List \$4.90  
Model 490VC . . . Code: WHICH . . . List \$4.90

#### UNIVERSAL 10" D.C. MODEL



Voice coil 1.0", power handling capacity  $3\frac{1}{2}$  watts.\* Voice coil impedance 5.05 ohms at 400 cycles. Universal transformer matches all output tubes. Field coil universal. Diameter of cone bracket,  $10\frac{1}{8}$ "; depth  $5\frac{1}{8}$ "; packed 1 to a carton; shipping weight,  $5\frac{1}{4}$  lbs.

Model 690 . . . Code: WRITE . . . List \$6.90

### WRIGHT-DeCOSTER "MULTI-TEST" SPEAKER

With our coupon system, you can secure the Multi-Test for only \$7.50

#### Sound Engineers

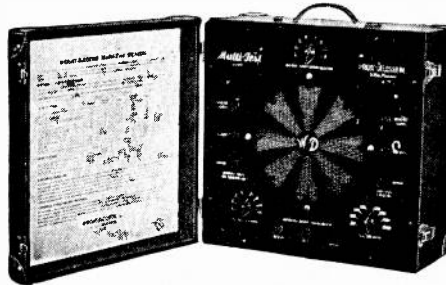
- Increases Your Speaker Sales
- Increases Your Efficiency

The universal field coil has taps for all standard ohmages, including a tap for use as a bias resistor in sets which have this feature. All field resistance taps are connected to the field coil so that the speaker can be used to check the operation of the filter circuit. Automobile sets may be tested by using a Wright-DeCoster Model 470 Field Supply to energize the field of the Multi-Test Speaker. This field supply will fit perfectly in the Multi-Test Case. The "Multi-Test" is most useful for sound engineers in checking sound equipment.

Model 3000—Size 14x14x7. Shipping Weight 19 Lbs. . . . . Code: WOLSY . . . . . List \$30.00

#### Service Men

- Matches All Tubes
- Matches All Output Transformers



The "Multi-Test" Speaker is housed in a handsome leatherette carrying case with a removable cover and is built with a care and thoroughness that places it in a class with the finest of instruments. When desired, the all steel panel,  $13 \times 13$ ", may be removed from the carrying case and mounted in a test panel on a service bench. The universal output transformer matches all output tubes. The universal voice coil transformer permits easy checking of those radio sets and amplifiers that have the output transformer built into the chassis.

**\*Our power handling ratings are now based solely on the heat dissipating ability of the voice coils. Comparative tests will prove the greater power handling capacity of the Wright-DeCoster reproducers.**



Model 414—By using the Model 414 Field Supply you may now have the best 6, 8, 10, 12-inch A. C. Speaker at a price which would have been considered impossible yesterday. Dimensions,  $8\frac{3}{4} \times 2\frac{1}{2} \times 1$ . Weight, packed one to a carton, 2 lbs. Standard Specifications: 110 volt, A. C. 25, 50 or 60 cycle. Delivers 9 watts to 2500 field.

Model 414—Less 25Z5 Tube . . . . . Code: WAITS . . . . . List \$4.14

Model 514—Expressly designed to furnish A.C. field excitation for Models 1490, 1590 and 1990. Delivers 100 M.A. at 170 volts. Finish: Black crystalline. Size  $8\frac{3}{4}$ " long,  $2\frac{1}{2}$ " wide, 1" deep. Pack. 1 to carton. Ship. weight, 2 lbs.

Model 514—Less 25Z5 Tube . . . . . Code: WHISK . . . . . List \$5.14



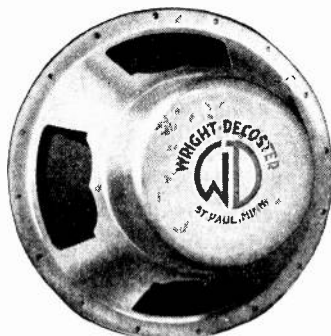
# W R I G H T D e C O S T E R

## Electro-Dynamic **PARA-CURVE DIAPHRAGM** Reproducers

Featuring Solid Center Spiders and Bakelite Voice Coil Forms

**LOW IN PRICE**

**MODEL 1490  
PROVES  
ITS WORTH**



**HIGH IN QUALITY**

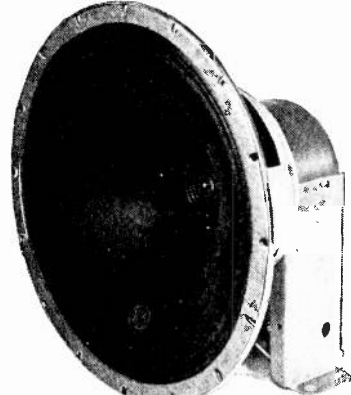
**THE POPULARITY  
OF THIS  
REPRODUCER  
FORCES INCREASED  
PRODUCTION**

Will improve the performance of any radio or record player. A perfect speaker for light indoor P. A. use. Continuous power handling capacity 7.3 watts. Model 514 A.C. Field Supply excites the field of 1 Model 1490. Model 1614 A.C. Field Supply excites the fields of 1 to 3 Model 1490's. Specify 3500 ohm speaker fields for multiple operation. Model 1490..... Code: WINNE..... List \$14.90

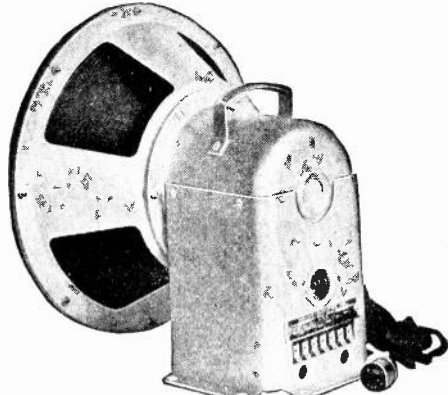
Bakelite voice coil form. Voice coil 1 1/2", power handling capacity 7.3 watts. Voice coil impedance 5.5 ohms at 400 cycles. Universal transformer matches all output tubes. Field coil, standard field dissipation 9 watts min., 16 watts max. Diameter of cone bracket 12 1/2". Depth 7". Width at back 6 1/2". Wt. 17 lbs. List \$14.90

## INSIST ON WEATHER-PROOF STADIUM MODELS

Solid Center Spiders Essential For Outdoor Installations



Compare These Speakers  
With Any Similar Units  
for  
**Appearance  
Performance  
Construction  
and  
PRICE**



### STADIUM WEATHER PROOF JUNIOR

Perfectly adapted for outdoor and indoor sound installations. Continuous power handling capacity 15.8 watts. New dual A.C. or D.C. field structure for A.C. or D.C. operation. Instructions packed with each speaker. Model 514 A.C. Field Supply excites the field of 1 Model 1990. Model 2914 A.C. Field Supply excites the field of 1 to 6 Model 1990's. Be sure to specify 3500 ohm field for multiple operation. Bakelite voice coil form. Voice coil 2 1/4". Power handling capacity 15.8 watts. Voice coil impedance 10 ohms at 400 cycles. Universal transformer matches all output tubes. Standard field resistance D. C. model, 2500 ohms. Field resistance made to any specification when dissipation does not exceed 22 watts maximum or less than 15 watts minimum. Special field or transformer furnished at no additional cost. Cone bracket 12 1/2", depth 8 3/8", weight 25 lbs. Model 1990..... Code: WROTH..... List \$19.90

### STADIUM WEATHER PROOF SENIOR

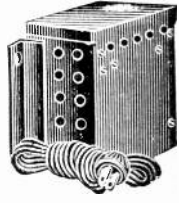
A reserve of power for all indoor and outdoor installations. One Model 3490 will give more volume than a nest of inferior speakers. The tremendous field strength of these units gives them a sensitivity which simply pours out the volume. Model 1614 A.C. Field Supply excites the field of 1 Model 3490. Model 2914 A.C. Field Supply excites the fields of 1 to 3 Model 3490's, connected in parallel. Bakelite voice coil. Voice coil 2 1/4". Power handling capacity 15.8 watts. Five input impedances. 10 ohms (directly to voice coil), 500, 1000, 1500, and 4000 ohms, thus eliminating the need for special transformers. Field resistance 180 ohms, to operate on 220 to 275 volts D. C. at current of 125 to 150 mls. Field dissipation 18 to 40 watts. Dimensions: 12 1/2" wide, 9" deep, 12 1/2" high. 1 to a carton, wt. 32 lbs. Model 3490..... Code: WATER..... List \$34.90

Cadmium Plating On All Speakers Guarantees Rust-Proof Units.

## WRIGHT DeCOSTER FIELD SUPPLIES

**SINGLE TUBE FIELD SUPPLIES List**  
**Model 1614**—Code: WOODY, 110 v. 50-60 cycle \$16.14  
**Model 1914**—Code: WAIVE, 110 v. 25 cycle... 19.14  
**Model 2014**—Code: WITHE, 220 v. 50-60 cycle 20.14  
**Model 2314**—Code: WAGON, 220 v. 25 cycle... 23.14  
 (Output of above models—200 volts, min. load resistance, 750 ohms.)  
**Model 1714**—Code: WRIST, 110 v. 50-60 cycle \$17.14  
 Output Voltage 110 D.C. Single Tube Field Supplies use one 5Z3 tube. 7"x3 1/2"x6 1/2". Weight 10 lbs.

**DOUBLE TUBE FIELD SUPPLIES List**  
**Model 2914**—Code: WHEAT, 110 v. 50-60 cycle \$29.14  
**Model 3314**—Code: WEALD, 110 v. 25 cycle... 33.14  
**Model 3414**—Code: WUNKY, 220 v. 50-60 cycle 34.14  
**Model 3714**—Code: WHACK, 220 v. 25 cycle... 37.14  
 (Output of above models—200 volts, min. load resistance, 300 ohms.)  
 Double Tube Field Supplies use two 5Z3 tubes. Size: 8" long, 6" wide, 6 1/2" high. Weight, 18 1/2 lbs.



# W R I G H T D e C O S T E R

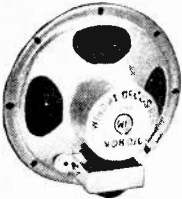
**PERMANENT MAGNET  
NO FIELD COIL**

**NOKOIL**

**DYNAMIC REPRODUCERS  
NO FIELD DRAIN**

**Twelve Months Ago The Word Nokoil Was Used to Introduce The Small P. M. (Permanent Magnet) Speaker. No Heat Being Generated In The Fields, The Voice Coils In The Nokoil Reproducers Will Handle More Power.**

## NOKOIL 82 SERIES



### 6" P. M. Reproducer

82 Series NOKOIL Models are splendid for improving radio reproduction. Voice coil  $\frac{3}{4}$ ". Power handling capacity  $3\frac{1}{2}$  watts. Voice coil impedance 5.43 ohms at 400 cycles. Diameter of cone bracket  $6\frac{3}{8}$ ". Depth  $2\frac{3}{8}$ ". Shipping weight  $2\frac{1}{4}$  lbs. Universal transformer matching all output tubes is standard.

**Model 582... Code: WADLE... List \$5.82**

**PLAY SAFE**

**USE THE WORD**

**NOKOIL**

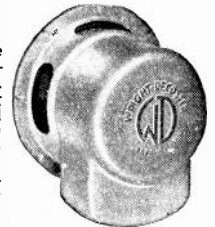
**WHEN ORDERING**

**P. M. SPEAKERS**

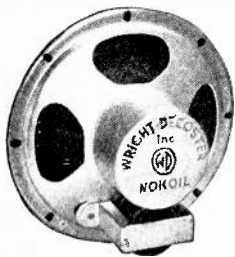
## NOKOIL 80 SERIES

### 6" P. M. Reproducer

80 Series NOKOILS all have permanent magnets and transformers completely shielded. Voice coil  $1\frac{1}{2}$ ". Power handling capacity  $7\frac{1}{2}$  watts. Voice coil impedance 5.65 ohms at 400 cycles. Diameter of cone bracket  $6\frac{3}{8}$ ". Depth  $4\frac{1}{4}$ ". Shipping weight  $2\frac{1}{2}$  lbs. Universal transformer matching all output tubes is standard.



**Model 880... Code: WELDT... List \$8.80**



### 8" P. M. Reproducer

Due to the tremendous coercive force of the material in the magnet of the Nokoil, it has long lasting efficiency. Voice coil  $\frac{3}{4}$ ". Power handling capacity  $3\frac{1}{2}$  watts. Voice coil impedance 5.43 ohms at 400 cycles. Diameter of cone bracket  $8\frac{1}{4}$ ". Depth  $3\frac{1}{8}$ ". Shipping weight  $2\frac{3}{4}$  lbs. Universal output transformer matching all output tubes is standard.

**Model 682... Code: WAYER... List \$6.82**

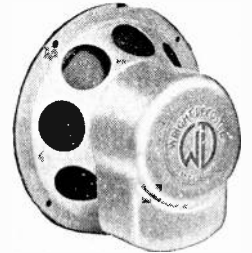
### 5" P. M. REPRODUCER



For auto radio and inter-communication talk-back systems. Voice coil  $\frac{3}{4}$ ". Power  $3\frac{1}{2}$  watts. Voice coil imp. 5.43 ohms at 400 cycles. Univ. trans. matches all tubes. Cone bracket 5". Depth  $2\frac{1}{2}$ ". Weight 2 lbs. Code: WORLE.  
**Model 482... List \$4.82**

### 8" P. M. Reproducer

The 80 Series have sensitivity and power handling capacity which make these units perfect for small indoor sound installations. Voice coil  $1\frac{1}{2}$ ". Power handling capacity  $7\frac{1}{2}$  watts. Voice coil impedance 5.05 ohms at 400 cycles. Diam. cone bracket  $8\frac{1}{4}$ ". Depth  $4\frac{3}{8}$ ". wt.  $3\frac{1}{2}$  lbs. Universal transformer matching all output tubes is standard.

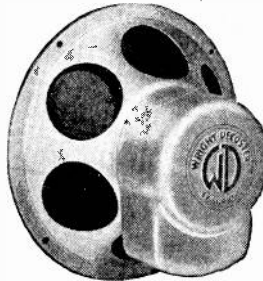


**Model 980... Code: WEMBR... List \$9.80**

## 10" P. M. REPRODUCER

This small magnet is less susceptible to loss from touching outside metal than other magnets, yet due to its size we are able to perfectly shield it with a non-magnetic metal covering. Voice coil  $\frac{3}{4}$ ". Power handling capacity  $3\frac{1}{2}$  watts. Voice coil impedance 5.43 ohms at 400 cycles. Diameter of cone bracket  $10\frac{1}{8}$ ". Depth  $5\frac{1}{8}$ ". Shipping weight  $4\frac{1}{2}$  lbs. Universal output transformer matching all output tubes, is standard.

**Model 782... Code: WHOPS... List \$7.82**



## 10" P. M. REPRODUCER

The Model 1180 is adapted to indoor sound installations and full console radios where power handling capacity and sensitivity are both required. Voice coil  $1\frac{1}{2}$ ". Power handling capacity  $7\frac{1}{2}$  watts. Voice coil impedance 5.05 ohms at 400 cycles. Diameter of the cone bracket  $10\frac{1}{8}$ ". Depth  $5\frac{1}{8}$ ". Shipping weight 5 lbs. Universal transformer matching all output tubes is standard.

**Model 1180... Code: WEPRO... List \$11.80**

## 12" P. M. REPRODUCER

### An Ultra-Sensitive Speaker for Radio Receivers

A splendid, sensitive 12" speaker for improving radio sound reproduction. Voice coil  $\frac{3}{4}$ ". Power handling capacity  $3\frac{1}{2}$  watts. Voice coil impedance 5.43 ohms at 400 cycles. Shipping weight  $7\frac{1}{2}$  lbs. Universal output transformer matching all output tubes is standard.

**Model 982... Code: WANDS... List \$9.82**

**SUPER SENSITIVE  
MODERATE PRICE**

**Dust-Proof**

**Rust-Proof**

For Public Address work. Voice coil  $1\frac{1}{2}$ ". Power handling capacity 15 watts. Shipping weight  $8\frac{1}{2}$  lbs. Diameter of cone bracket  $12\frac{1}{8}$ ". Depth 7". Width at back  $6\frac{1}{2}$ ".

**Model 1984... Code: WILOT... List \$19.84**



## 12" P. M. REPRODUCER

### Ideal for Record Playing Devices, Radio or Indoor Sound Installations

Suitable for high power radio, electric record playing devices and any type of indoor sound application. Voice coil  $1\frac{1}{2}$ ". Power handling capacity  $7\frac{1}{2}$  watts. Voice coil impedance 5.05 ohms at 400 cycles. Shipping weight 8 lbs. Universal output transformer matching all output tubes is standard.

**Model 1380... Code: WATKI... List \$13.80**

**SUPER POWER  
HIGHEST QUALITY**

**Weather-Proof**

**Fool-Proof**

Voice coil impedance 5.5 ohms at 400 cycles. Shipping weight 2  $\frac{1}{4}$  lbs. Schools equipped with Hyflux Reproducers are assured of clear, distinct reproduction which can always be easily understood by the pupils.

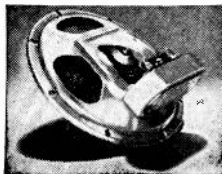
**Model 450... Code: WEARD... List \$4.50**

## HYFLUX

### ● METAL DUST-PROOFING

**Model 400—6".** Impedances: A—7000 ohms for single output tubes; B—10,000 ohms for push-pull and class B; C—500-1000 ohms for P. A. use. Any impedance furnished at no extra cost. A—7000 ohms furnished standard. Diameter of cone bracket  $6\frac{1}{2}$ ". Depth  $2\frac{3}{8}$ ". Wt.  $1\frac{1}{8}$  lbs.

**Model 400... Code: WESEL... List \$4.00**



## REPRODUCERS

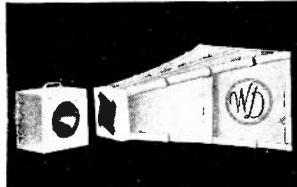
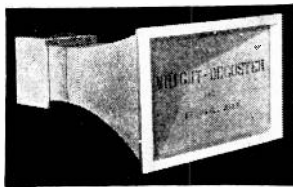
### ● BAKELITE COIL FORM

**Model 450—8".** Same as Model 400—6" except for size. Diameter of cone bracket 8". Depth  $2\frac{1}{8}$ ". Shipping weight  $2\frac{1}{4}$  lbs. Schools equipped with Hyflux Reproducers are assured of clear, distinct reproduction which can always be easily understood by the pupils.

**Model 450... Code: WEARD... List \$4.50**

# WRIGHT-DeCOSTER "WEATHER-PROOF" HORNS

SILVER HORN and SPEAKER SILVER "STADIUM" HORN SILVER "PORT-A-HORN"



### COMPLETE WITH SPEAKER UNIT

An inexpensive reproducer and weather proofed horn for use in hotels and small auditoriums. Field resistance 2500 ohms. Special field resistance furnished, no extra charge. Field dissipation, max. 12 watts, min. 6 watts. Voice coil impedance 5 ohms. Length 27 1/2"; Bell opening 22 1/2"x14". Weight: 15 lbs. Transformer furnished to match any impedance.

- Model 2050—Less Transformer List \$20.50  
Code: WEEDS
- Model 2300—With Transformer List \$23.00  
Code: WEPES

For "Stadium" Speakers. Reinforced and bound with metal. Guaranteed weather-proof. Screen across opening excludes all foreign substances. Length 48"; Bell opening 30"x21 1/2". Wt. 91 lbs. **Model 5000**...Code: WAGER...List \$50.00

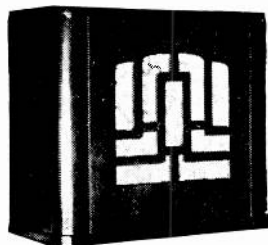
### COMPLETE WITH SPEAKER, UNIT

Baffle or horn at a moment's notice. Completely reinforced and weather-proofed. Three input impedances—500, 1500, and 4000 ohms. Field resistance 6000 ohms.

One Model 1614 Field Supply handles 1 to 3 Port-A-Horns. One Model 514 Field Supply operates 1 Model 6000 Port-A-Horn with 1700 ohm field.

Length 39 1/4"; Bell opening 28"x18 1/2"; Unit housing 10 1/4"x7 1/4". Weight: 77 lbs.

- Model 6000...Code: WAVES...List \$60.00



### WOOD "CABINETTE"

The CABINETTE is designed to satisfy the most exacting critic. The dark walnut finish, with lace edges of base and top black walnut creates a most effective contrast. The CABINETTE may be hung on the wall without any mounting shelf. 10 3/4" high, 12 1/2" wide, 5 1/2" deep. Weight: 6 1/2 lbs.

- Model 1026—Cabinet only...List \$10.26

#### Code: WILKE

#### Hyflux Equipped

- Model 1296—8" Code: WACER List \$12.96

#### Nokoil Equipped

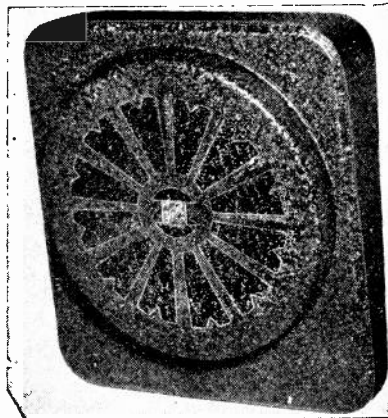
- Model 1526—8" Code: WHIPS List \$15.26

- Model 1626—10" Code: WHAME List \$16.26

#### Electro-Dynamic Equipped

- Model 1436—8" Code: WAVER List \$14.36

- Model 1536—10" Code: WODEL List \$15.36



### ILLUSTRATING THE APPEARANCE OF THE MODEL 586 ON THE WALL

Ideal for centralized sound installations in schools, hotels, etc. Furnished with or without mounting holes for volume control and selector switch. The Model 576 provided with metal conduit box and Model 586 provided with walnut finished wooden mounting trim for installation.

Flush Wall Mounting Cabinet—12" wide, 14" high, 5 1/2" deep, incl. conduit box. Wt. 6 3/4 lbs. Surface Wall Mounting Cabinet—Height 13 3/4", width 12 1/2", top depth 4 1/2", otton depth 1 3/4". Weight: 5 lbs.

- Model 576—Flush Cabinet only...List \$5.76

Code: WERST

- Model 586—Surface Cabinet only...List \$5.86

Code: WISTE

- Model 916—Flush 8" Code: WOPERS List \$9.16

Code: WOPMS

- Model 926—Surface 8" Code: WOLKS List \$9.26

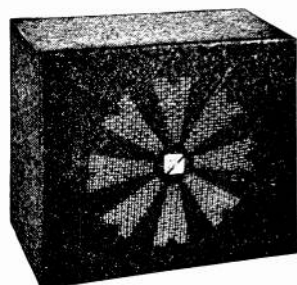
Code: WOLKS

- Model 1146—Flush 8" Code: WHITE List \$11.46

Code: WHITE

- Model 1156—Surface 8" Code: WIELD List \$11.56

Code: WIELD



### MULTI-PURPOSE METAL CABINET

A high quality, high efficiency separate speaker for use by "Hams", amateurs, experimenters, and sound engineers. 10" wide, 9" high, 5" deep. Weight: 3 3/4 lbs.

- Model 426—Cabinet only...List \$4.26

Code: WINCE

#### Hyflux Equipped

- Model 756—6" Code: WOPER List \$7.56

- Model 806—8" Code: WALER List \$8.06

#### Nokoil Equipped

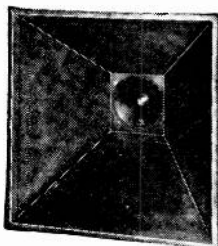
- Model 936—6" Code: WIDEN List \$9.36

- Model 1036—8" Code: WHILE List \$10.36

#### Electro-Dynamic Equipped

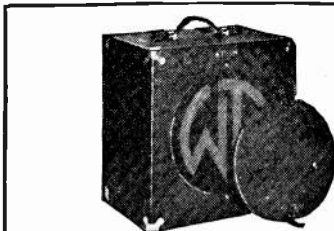
- Model 846—6" Code: WEARY List \$8.46

- Model 946—8" Code: WAIFS List \$9.46



### DIRECTIONAL BAFFLE PATENTED

Hardwood interior surface for adequate high frequency transmission. Soft insulating exterior prevents vibration. Baffle opening for 12" speaker 37 1/2" wide, 37 1/2" high, 20 1/2" deep. **Model 2750**...Code: WRUNG...List \$27.50



### "PORT-A-CASE" MODELS

A sturdy, good looking case priced so low as to enable our customers to house their Wright-DeCoster Reproducers at far less than they would ordinarily have to pay.

The Port-A-Case has room to house many of the different popular amplifiers as well as the 414 or 514 Field Supply. Yet it is not too large to work in with practically any sound installation. Outside dimensions: 16" high, 14 1/2" wide, 10 1/2" deep. Weight: 12 lbs.

- Model 1176—Port-A-Case only...Code: WHORT...List \$11.76

- Model 1556—Equipped with 10" Model 690...Code: WADDY...List \$15.56

- Model 1646—Equipped with 10" Model 782...Code: WERRE...List \$16.46

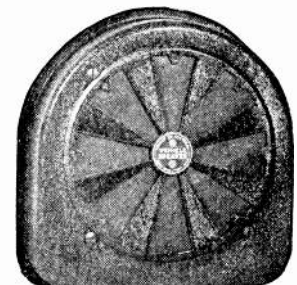
- Model 1846—Equipped with 12" Model 982...Code: WINLE...List \$18.46

- Model 1856—Equipped with 12" Model 990...Code: WAFLE...List \$18.56

- Model 2356—Equipped with 12" Model 1490...Code: WROME...List \$23.56

- Model 2456—Equipped with 12" Model 1590...Code: WILST...List \$24.56

- Model 2856—Equipped with 12" Model 1990...Code: WILPS...List \$28.56



### VEHICLE CABINETS

The ideal method of properly installing separate speakers in automobiles, sound trucks, etc. Electro-dynamic speakers have 6-volt, 9-watt fields. 9 1/2" high, 9 1/2" wide, 4" deep. Weight: 2 3/4 lbs.

- Model 226—Cabinet only...List \$2.26

Code: WHISH

#### 6-Volt Electro-Dynamic Equipped

- Model 646VS—6", 6-volt...List \$6.46

Code: WELSH

- Model 746VS—8", 6-volt...List \$7.46

Code: WRECK

#### Nokoil Equipped

- Model 736VS—6" Code: WIGAN List \$7.36

- Model 836VS—8" Code: WHIPT List \$8.36





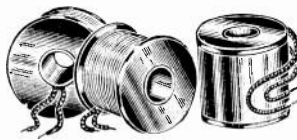
# LEOTONE



## CONE AND VOICE COIL ASSEMBLY

### REPLACEMENT FIELD COILS

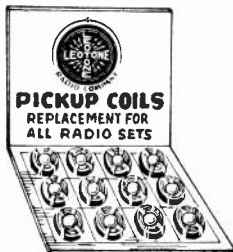
Part No.	Name	Ohms	List Price
<b>APEX GLORIATONE</b>			
AY07	26, 26A, 26P, T11500.....		\$4.00
AY08	26P, T11500.....		4.00
AY09	27, T11500.....		4.00
<b>ATWATER KENT</b>			
AY18	46, 53, 55, 65.....	1000	6.00
AY19	46, 53, 55, 65.....	1700	6.00
<b>BOSCH</b>			
BY12	48.....	2250	6.00
BY13	58.....	2000	6.00
<b>BRUNSWICK</b>			
BY18	14, 21, 33.....	5000	8.00
BY20	15.....	1500	7.50
BY21	15.....	2500	8.00
BY22	16.....	2250	4.20
<b>COLONIAL</b>			
CY03	33AC, LL18.....	2500	5.50
CY03	33AC, LL18.....	6000	6.50
CY09	36, 38, LL19.....	2500	6.00
CY10	36, 38, LL19.....	8000	8.00
<b>CROSLLEY</b>			
*CY30	M45.....	2500	4.80
CY31	57, 58, 59.....	10000	4.00



Part No.	Name	Ohms	List Price
<b>EDISON</b>			
*EJ05	All Models (Jensen JY05)	4500	\$6.00
<b>JENSEN</b>			
*JY03	D7, D8, D8G.....	1400	4.40
*JY04	D7, D8, D8G.....	2500	5.00
*JY05	D7, D8, D8G.....	4500	6.00
<b>MAGNAVOX</b>			
MY01	9" (medium), 12", 6, 7, 8, 9, 80, 90, 402, 405.....	2500	6.50
MY10	9" id.....	5000	7.00
MY02	9" id.....	7500	7.50
<b>MAJESTIC</b>			
MY24	G1.....	3100	8.00
MY26	G2.....	2730	8.00
MY26	G3.....	2730	7.50
MY27	G4.....	7650	7.50
MY28	G5.....	7650	7.50
MY34	G10B.....	1750	4.00

Part No.	Name	Ohms	List Price
<b>PHILCO</b>			
*PY30	20, 21, 70, 470, 790.....	3300	\$2.00
*PY33	65, 76, 77, 86, 87, 95, 96..	2000	3.00
*PY32	65, 76, 77, 86, 87, 95, 96, 111.....	3100	4.50
<b>R. C. A.</b>			
RY10	106.....	550	4.20
RY11	106.....	6000	6.00
<b>ROLA</b>			
RY17	F6, K7, K9.....	1250	3.50
RY18	F6, K7, K9.....	1500	3.50
RY20	F6, K7, K9.....	T1800	4.00
RY21	F6, K7, K9.....	2500	3.50
RY22	F6, K7, K9.....	4700	4.00
RY27	F5, F5A.....	3000	3.28
<b>STEWART-WARNER</b>			
SY20	102, 104, 202, 204, 206, 6", Midget.....	10000	4.00
SY21	R200A, 400, 445A, 550, 565A, 900, 950.....	10000	8.00
<b>STROMBERG-CARLSON</b>			
SY27	10", 12", Regular type...	2500	6.00
SY28	10", 12", Regular type...	7300	6.50
<b>TEMPLE</b>			
TYP5	All models.....	2250	7.00
<b>VICTOR</b>			
VY07	RE32, 45, 52, 75.....	3000	5.50
<b>ZENITH</b>			
ZY03	50-52, LL18.....	2500	6.50

### REPLACEMENT PICKUP COILS

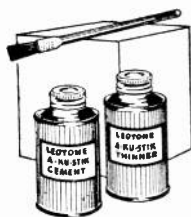


LEOTONE replacement pick-up coils for most sets. Proper replacements for ATWATER-KENT, BRUNSWICK, GENERAL ELECTRIC, MAJESTIC, PHILCO, R.C.A., STROMBERG-CARLSON, VICTOR, WEBSTER (Small), and many others.

The coils are attractively mounted in 12's, on a folded card such as illustrated. Small, handy, and easy to replace.

Type	List Price
WRP01—Low Impedance.....	\$4.75 doz.
WRP02—High Impedance.....	9.00 doz.
WRP03—5000-ohm Impedance.....	10.50 doz.

### GIANT A-KU-STIK REPAIR KIT



The GIANT A-KU-STIK repair kit contains one metal can (about 4 oz.) of A-KU-STIK Cement, one metal can (also about 4 oz.) of A-KU-STIK Thinner, one metal handle brush, and complete direction sheet for use.

The Cement is ideal for cementing speaker leads, voice coils, leathers, and rings, and radio coils, chokes, and loose wires. It will also insulate and impregnate. The Thinner can be used for loosening cemented parts and to cut cement.

This GIANT kit is the most popular seller of its type on the market. Remember that

A-KU-STIK STIKS TO ANYTHING. \*List Price.....\$0.62½

### SURE-SET SPEAKER SHIMS



LEOTONE recommends the SURE-SET SPEAKER SHIMS—16 celluloid shims—4 of each size of .005", .0075", .010", and .0125" in a handy little leather holder. Each size is of a distinctive color so that a set is easily selected.

These are the same shims as those used in our expert repair department for the past year. You have the benefit of our experience.

List Price.....\$0.55

### CAST REPLACEMENTS

LEOTONE Radio Co. has instituted a new and complete department entirely devoted to "hard-to-get," rare and obsolete cast replacements. The following are a few of our numerous cast replacements. Complete data may be yours for the asking.



Part No.	Name	List Price
858MP	Tuning Bracket Cast.....	\$1.50
872MP	Tuning Bracket Cast.....	1.50
869MP	Dial Cast with Numerals.....	2.15
871MP	Dial Cast with Numerals.....	2.15
878MP	Two Leg Speaker Bracket.....	1.50
888MP	Three Leg Speaker Bracket.....	2.75
901MP	Three Leg Speaker Bracket.....	2.75
1716x	Solid Tuning Drum—4½"x1½".....	1.75
1724r	Tuning Shaft and Washers—2½".....	1.00
1724b	Tuning Shaft and Washers—2¼".....	1.00

FADA No. 871MP

### Fried-Eisemann Cast Replacements

14-25	Dial Tuning Cast.....	1.88
24-26	Volume Control Cast.....	1.88

### Crosley Cast Replacements

4899	Tuning Pinion for Set Numbers 26, 53, 57, 60S, 706, Gembox and Showbox.....	.55
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### Miscellaneous Cast Replacements

R.C.A., G.E., and At. Kent Dial Rubber Grumit.....\$0.75  
Above Grumit in lots of 100.....5.00

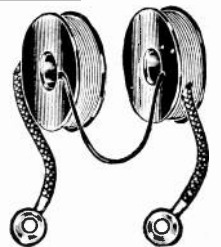


FADA No. 1716x

### MAGNETIC COILS

LEOTONE Radio Co. stocks and supplies a great quantity of magnetic coils. Coils that are not in stock can be wound upon order.

Model	List Price
Atwater Kent.....	\$0.86
B. B. L.....	.86
Fada.....	.86
Farrand.....	.52
Freshmen.....	.52
Utah.....	.86



### CELOTEX

Our Celotex Cutting Department, which we have been maintaining ever since our entry into Speaker business, is now releasing its services to the trade. All standard sizes in all standard thicknesses are in stock at all times: such as 12"x12", 18"x18", 24"x24", 36"x36" in ½", 1", or 1½" thickness. These sizes can be obtained with any size hole. Special sizes will be quoted on upon request. For information regarding prices consult your Jobber.



# Jensen

FULL RANGE SOUND EQUIPMENT

Known all over the world for predominating high quality



## The New Jensen 18-inch Speakers

... The Largest ... Most Powerful ... and Most Capable Speakers ever offered ... Completely Dust and Dirt Proofed ...

The size and unusual performance ability of these speakers might classify them as special purpose speakers but certainly only in the sense that their use will be demanded where the absolute in performance is the essential requirement. In all models amplitude distortion has been reduced to a minimum never before reached; middle frequency response has been improved, and power handling and efficiency factors increased beyond any point previously available in loud speakers. The High Frequency Models (HF) provide remarkable extended range performance out to 9000 cycles. The Standard Fidelity Models (M) do not have the extended range performance and are particularly recommended for more general applications, the high frequency range extending to approximately 5500 cycles. V Models are especially recommended where the reproduction of voice is the principal requirement, since they have rising efficiency in the middle and upper frequency range. L Models are specifically for use in wide range systems and provide greatly improved low frequency response with sharp attenuation above 3000 cycles.

### GENERAL DESIGN DATA

**Frequency Response** . . . Frequency response varies in accordance with the discussion above. For more specific information write to our Engineering Department. **Power-Handling Capacity** . . . From 25 to 40 watts. Distortion products at the minimum value are exceptionally low and even at the maximum value less distortion is introduced than that generally present in so-called "high power" loud speakers. **Efficiency** . . . The highest degree of conversion efficiency ever attained in electro-dynamic cone speakers is incorporated in these new 18-inch models. The actual efficiency of course depends on the frequency selected for the measurement, but in all cases these speakers are several hundred percent more efficient than 12-inch speakers of conventional design. **Voice Coil Impedance** . . . All voice coils have a nominal impedance of 8 ohms at 400 cycles. **Field Coil Wattage** . . . Maximum 33; normal 26; minimum 20. **A.C. and D.C. Designs** . . . **Weight Packed** . . . A.C. models 78 lbs.; D.C. models 68 lbs.

### MODEL

MODEL		Less Input with 8 ohm voice coil Type	With 500 ohm input Type	With 4400 ohm center tapped input Type	LIST PRICE	
					With Input	Less Input
<b>FOR A.C. OPERATION</b>						
L-18A.C.	{ 110v.-60 Cy.	5701	5704	5707	\$89.50	\$86.50
	{ 110v.-25 Cy.	5702	5705	5708	96.50	93.50
M-18A.C.	{ 110v.-60 Cy.	5801	5804	5807	89.50	86.50
	{ 110v.-25 Cy.	5802	5805	5808	96.50	93.50
V-18A.C.	{ 110v.-60 Cy.	5901	5904	5907	89.50	86.50
	{ 110v.-25 Cy.	5902	5905	5908	96.50	93.50
HF-18A.C.	{ 110v.-60 Cy.	6001	6004	6007	92.50	89.50
	{ 110v.-25 Cy.	6002	6005	6008	99.50	96.50
<b>FOR D.C. OPERATION</b>						
L-18D.C.	{ 110v. Field	5710	5713	5716	\$64.50	\$61.50
	{ 220v. Field	5711	5714	5717	64.50	61.50
	{ Field for FS-1	5712	5715	5718	64.50	61.50
M-18D.C.	{ 110v. Field	5810	5813	5816	64.50	61.50
	{ 220v. Field	5811	5814	5817	64.50	61.50
	{ Field for FS-1	5812	5815	5818	64.50	61.50
V-18D.C.	{ 110v. Field	5910	5913	5916	64.50	61.50
	{ 220v. Field	5911	5914	5917	64.50	61.50
	{ Field for FS-1	5912	5915	5918	64.50	61.50
HF-18D.C.	{ 110v. Field	6010	6013	6016	67.50	64.50
	{ 220v. Field	6011	6014	6017	67.50	64.50
	{ Field for FS-1	6012	6015	6018	67.50	64.50

## Auditorium Speakers

... Undeniably the Best Known and Respected High Quality Loud Speakers available . . . Second only to the New Jensen 18-inch Speakers in Performance, Efficiency, and Power-Handling Ability . . . Recommended for every use where Efficiency and Accuracy of Reproduction are Prime Requirements . . .

In efficiency, response characteristics, and a high degree of all-around excellence, Jensen Auditorium Speakers have consistently set the highest standards. Three types of response characteristics are offered. Series M Speakers are generally used where good overall performance is required, such as for the reproduction of both voice and music. Series V Speakers provide predominant efficiency in the middle high frequency range and are to be preferred where voice reproduction is the chief requirement. Series L Speakers provide predominant efficiency in the low frequency range and are not used except as a part of Jensen Full Range Installations in conjunction with suitable filters and high frequency reproducers. HF Models provide extended range performance with uniform response out to 8000 cycles.



### GENERAL DESIGN DATA

**Frequency Response** . . . In accordance with the description above. Write to our Engineering Department for further information about response characteristics. **Power-Handling Capacity** . . . 18 watts continuously; peaks of 25 watts and very little objectionable distortion is introduced by the speaker at even higher levels of input power. Physically the moving structure will handle up to 40 watts except at sustained low frequencies. **Efficiency** . . . About 400 percent more efficient than conventional speakers having equivalent cone area. **Voice Coil Impedance** . . . 8 ohms at 400 cycles.

### A.C. AND D.C. DESIGNS

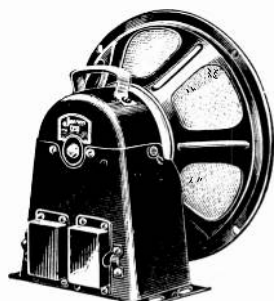
All models available for A.C. or D.C. operation in accordance with the following description: Any D.C. operating value may be specified with some delay in delivery. A.C. models for special voltage values are available at an increase in price. **Field Coil Wattage** . . . Maximum 33; normal 26; minimum 20. **Baffle** . . . Minimum, flat baffle recommended 4 ft. x 4 ft. Maximum necessary, 10 ft. x 10 ft. **Dimensions** . . . Cone housing diameter 13. inches. **Weight Packed** . . . A.C. models 56 lbs. D.C. models 46 lbs.

MODEL		With Regular Input Type	With 500-ohm Input Type	Less Input with 8-ohm V.C. Type	LIST PRICE	
					With Input	Less Input
M-10A.C.	{ 110v.-60 Cy.	3001	3009	3005	\$76.50	\$73.50
	{ 110v.-25 Cy.	3002	3010	3006	83.50	80.50
M-20D.C.	{ 110v.-D.C.	3051	3057	3054	51.50	48.50
	{ 220v.-D.C.	3052	3058	3055	51.50	48.50
M-20D.C.	{ Field for FS-1 or FS-2	3060	3062	3063	51.50	48.50
V-10A.C.	{ 110v.-60 Cy.	3101	3109	3105	76.50	73.50
	{ 110v.-25 Cy.	3102	3110	3106	83.50	80.50
V-20D.C.	{ 110v.-D.C.	3151	3157	3154	51.50	48.50
	{ 220v.-D.C.	3152	3158	3155	51.50	48.50
V-20D.C.	{ Field for FS-1 or FS-2	3160	3161	3162	51.50	48.50
L-10A.C.	{ 110v.-60 Cy.	3901	3904	3907	76.50	73.50
	{ 110v.-25 Cy.	3902	3905	3908	83.50	80.50
L-20D.C.	{ 110v.-D.C.	3951	3955	3959	51.50	38.50
	{ 220v.-D.C.	3952	3956	3960	51.50	48.50
L-20D.C.	{ Field for FS-1 or FS-2	3954	3958	3962	51.50	48.50

# Jensen

## FULL RANGE SOUND EQUIPMENT

Known all over the world for predominating high quality



## CONCERT SPEAKERS

... For Fine Radio and Musical Instruments ... Monitoring and Audition ... Theatre and Public Address ... in fact for any purpose where exceptional power-handling ability and high-quality performance are essential at moderate cost.

**MODEL A-12** . . . Jensen Model A-12 Concert Speakers are available in two designs: High Fidelity, and Standard. The High Fidelity design is recommended where operating and listening conditions permit the reproduction of extended high frequencies. In this design good response is maintained out to 7500 cycles. Standard Fidelity designs have the more conventional response characteristics with high frequency cutoff at approximately 5000 cycles. Both designs are uniformly capable in the middle and low-frequency range. Model A-12 Jensen Speakers are well known throughout the Industry as an outstanding achievement in fine quality designing and manufacturing at a moderate price.

**MODEL B-12X** . . . Similar in performance characteristics to the standard design of Model A-12 Concert Speakers, except that efficiency and power-handling capacity is somewhat less. The cone housing diameter is  $12\frac{1}{8}$ " ; the voice-coil impedance is 8 ohms; and the weight packed is 14 lbs. Field coil wattage, maximum 12, minimum 8.

**GENERAL DESIGN DATA** . . . **Fidelity Characteristics** . . . Typically Jensen, uniform and brilliant, with striking degree of presence and exceptionally good low frequency performance. **Power-Handling Capacity** . . . 12 watts continuously, peaks of 18 watts. Distortion even at the 15-watt level is less than that usually present in many 12-inch speakers. **Efficiency** . . . Unusually high, second only to the well-known and highly-efficient Jensen Auditorium Speakers. **Voice-Coil Impedance** . . . 8 ohms at 400 cycles. **Field-Coil Wattage** . . . Maximum 18; normal 14; minimum 10. **Weight Packed** . . . 21 lbs. **Dimensions** . . . Cone housing diameter  $12\frac{1}{8}$ " ; baffle opening  $10\frac{1}{4}$ " .

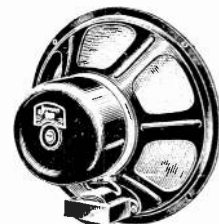
<b>MODEL A-12—D.C.</b>	<b>STANDARD FIDELITY DESIGN</b>			<b>HIGH FIDELITY DESIGN</b>		
<b>LIST PRICE</b>	<b>Stock No.</b>	<b>Field Coil Resistance</b>	<b>Input Trans. Impedance</b>	<b>Stock No.</b>	<b>Field Coil Resistance</b>	<b>Input Trans. Impedance</b>
With Input . . . . . \$21.50	<b>ST-197</b>	860 ohms	4400 ohms C. T.	<b>ST-206</b>	860 ohms	4400 ohms C. T.
Less Input . . . . . 19.75	<b>ST-198</b>	860 ohms	500 ohms	<b>ST-207</b>	860 ohms	500 ohms
<b>Transformer only, size <math>\frac{7}{8}</math>" x <math>\frac{3}{8}</math>"</b>	<b>ST-199</b>	860 ohms	Less Input	<b>ST-208</b>	860 ohms	Less Input
When sold with speaker(s) <b>\$1.75</b>	<b>ST-200</b>	2500 ohms	4400 ohms C. T.	<b>ST-209</b>	2500 ohms	4400 ohms C. T.
When sold less speaker(s) <b>2.25</b>	<b>ST-201</b>	2500 ohms	500 ohms	<b>ST-210</b>	2500 ohms	500 ohms
Specify impedance or tube type(s).	<b>ST-202</b>	2500 ohms	Less Input	<b>ST-211</b>	2500 ohms	Less Input
	<b>ST-203</b>	5400 ohms	4400 ohms C. T.	<b>ST-212</b>	5400 ohms	4400 ohms C. T.
	<b>ST-204</b>	5400 ohms	500 ohms	<b>ST-213</b>	5400 ohms	500 ohms
	<b>ST-205</b>	5400 ohms	Less Input	<b>ST-214</b>	5400 ohms	Less Input

<b>MODEL B12-X—D.C.</b>	<b>STANDARD FIDELITY DESIGNS</b>			<b>HIGH FIDELITY DESIGNS</b>		
<b>LIST PRICE</b>	<b>Stock No.</b>	<b>Field Coil Resistance</b>	<b>Input Trans. Impedance</b>	<b>Stock No.</b>	<b>Field Coil Resistance</b>	<b>Input Trans. Impedance</b>
With Input . . . . . \$16.50	<b>ST-181</b>	2500 ohms	4400 ohms C. T.	<b>ST-187</b>	1250 ohms	500 ohms
Less Input . . . . . 15.00	<b>ST-182</b>	2500 ohms	7000 ohms	<b>ST-188</b>	1250 ohms	Less Input
<b>Transformer only, size <math>\frac{7}{8}</math>" x <math>\frac{3}{4}</math>"</b>	<b>ST-183</b>	2500 ohms	500 ohms	<b>ST-189</b>	1800 ohms	4400 ohms C. T.
When sold with speaker(s) <b>\$1.50</b>	<b>ST-184</b>	2500 ohms	Less Input	<b>ST-190</b>	Tapped at 300	7000 ohms
When sold less speaker(s) <b>2.00</b>	<b>ST-185</b>	1250 ohms	4400 ohms C. T.	<b>ST-191</b>	Tapped at 300	500 ohms
	<b>ST-186</b>	1250 ohms	7000 ohms	<b>ST-192</b>	Tapped at 300	Less Input

## CONCERT MODEL PERMANENT MAGNETIC SPEAKERS

**MODEL A12-PM** . . . This Speaker is even more of an innovation than the other new Jensen PM Speakers. For convenience, economy and high performance ability it is unsurpassed in the public address and centralized sound field. We know of nothing more convincing to say about the efficiency, power-handling capacity and response characteristics of this new speaker than to point out that it is the equal of the well-known Jensen A-12 Concert Speaker. It is the same speaker with permanent magnet substituted for field coil and other improvements added, such as dirt and dust proofing.

**SPECIFICATIONS** . . . The High-Frequency Cutoff in Standard Fidelity designs is 5500 cycles; in High-Fidelity Design 7500 cycles. Non-magnetic Covers for magnetic structures are included in above list price. **LIST PRICE—Input Transformer only.** Size  $\frac{7}{8}$ " x  $\frac{3}{8}$ ", when sold with speaker(s), **\$1.75.** Less speaker(s), **\$2.25.** Voice Coil Impedance, 8 ohms at 400 cycles. Cone Housing diameter  $12\frac{1}{8}$  inches.



### STANDARD FIDELITY DESIGNS

<b>Model No.</b>	<b>Stock No.</b>	<b>Input Transformer Impedance</b>
<b>A12-PM</b> . . . . .	<b>ST-255</b> . . . . .	500 ohms
<b>A12-PM</b> . . . . .	<b>ST-256</b> . . . . .	4400 ohms C. T.
<b>A12-PM</b> . . . . .	<b>ST-257</b> . . . . .	Voice Coil only

**LIST PRICE** With input, **\$36.50.** Less input, **\$34.75.**

### HIGH FIDELITY DESIGNS

<b>Model No.</b>	<b>Stock No.</b>	<b>Input Transformer Impedance</b>
<b>A12-PM</b> . . . . .	<b>ST-258</b> . . . . .	500 ohms
<b>A12-PM</b> . . . . .	<b>ST-259</b> . . . . .	4400 ohms C. T.
<b>A12-PM</b> . . . . .	<b>ST-260</b> . . . . .	Voice Coil only

**LIST PRICE**—With input, **\$36.50.** Less input, **\$34.75.**

# Jensen

## FULL RANGE SOUND EQUIPMENT

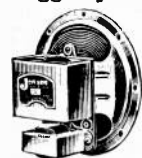
Known all over the world for predominating high quality

"FOR ADJUSTABLE IMPEDANCE INPUT TRANSFORMERS" — ASK US FOR LATEST "DATA"

**For Radio Receivers and Centralized Sound Applications**  
Ruggedly Constructed . . . Brilliant in Performance

### MODEL F5R—5 INCH

Exceptionally good small speakers for use in radio receivers and similar applications. Not to be confused with the usual cheaply made inefficient five-inch Speakers. Cone housing diameter 5 inches.



Stock No.	Field Coil Resistance	Input Transformer For Tube Type
ST-101	3000 ohms	43 or 45
ST-102	" "	42 or 47
ST-103	" "	41
ST-104	" "	Less Input
ST-105	2500 ohms	43 or 45
ST-106	" "	42 or 47
ST-107	" "	41
ST-108	" "	Less Input

Voice coils are 5 ohms at 400 cycles. All speakers are with 12-inch connector cords and bucking coil. Input transformer size is  $\frac{1}{2}$ " x  $\frac{3}{4}$ ".  
**LIST PRICE—Speaker**—With Input, \$3.85. Less Input, \$3.10.  
**Input Transformer Only**—When sold with speaker(s), 75c. Less Speaker(s), \$1.00.

### MODEL E6R—6 INCH

Ruggedly constructed, good quality speakers with cone housing having diameter of 6 $\frac{5}{8}$  inches.

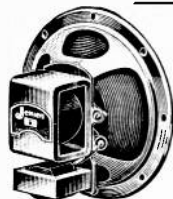


Stock No.	Field Coil Resistance	Input Transformer For Tube Type
ST-113	2500 ohms	43 or 45
ST-114	" "	42 or 47
ST-115	" "	41
ST-116	" "	Less Input
ST-117	1800 ohms	43 or 45
ST-118	tapped at 300	42 or 47
ST-119	" "	41
ST-120	" "	Less Input
ST-121	1000 ohms	43 or 45
ST-122	" "	42 or 47
ST-123	" "	41
ST-124	" "	Less Input

Voice coils are 5 ohms at 400 cycles. All speakers are with 18" connector cords and bucking coil. Input transformer size is  $\frac{3}{8}$ " x  $\frac{3}{4}$ ".  
**LIST PRICE—Speaker**—With Input, \$5.25. Less Input, \$4.25.  
**Input Transformer Only**—When sold with speaker(s), \$1.00. Less Speaker(s), \$1.25.

### MODEL D8R—8 INCH

An unusually good 8-inch speaker for better class of small radio receivers, or low power public address.



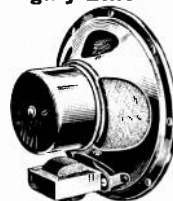
Stock No.	Field Coil Resistance	Input Transformer For Tube Type
ST-129	2500 ohms	43 or 45
ST-130	" "	42 or 47
ST-131	" "	41
ST-132	" "	Less Input
ST-133	1800 ohms	43 or 45
ST-134	tapped at 300	42 or 47
ST-135	" "	41
ST-136	" "	Less Input
ST-137	1000 ohms	43 or 45
ST-138	" "	42 or 47
ST-139	" "	41
ST-140	" "	Less Input

Voice coils are 5 ohms at 400 cycles. All speakers are with 18" connector cords and bucking coil. Input transformer size is  $\frac{3}{8}$ " x  $\frac{3}{4}$ ". The speakers with 6-ohm field coil are thoroughly dust-proofed for use in automobile receivers.  
**LIST PRICE—Speaker**—With Input, \$6.50. Less Input, \$5.50.  
**Input Transformer Only**—When sold with speaker(s), \$1.00. Less Speaker(s), \$1.25.

**For Radio Receivers and Public Address**  
Highly Efficient . . . Unusual Power-Handling Ability

### MODEL C8R—8 INCH

This is a highly efficient 8-inch model for the better class radio receivers and is particularly recommended for amateur and short-wave receivers. The power-handling capacity is approximately 6 watts.

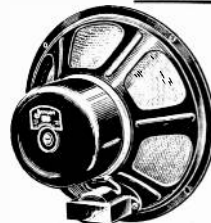


Stock No.	Field Coil Resistance	Input Transformer Impedance
ST-145	2500 ohms	4500 ohms center tapped
ST-146	" "	7000 ohms
ST-147	" "	500 ohms
ST-148	" "	Less Input
ST-149	1250 ohms	4500 ohms center tapped
ST-150	" "	7000 ohms
ST-151	" "	500 ohms
ST-152	" "	Less Input
ST-153	1800 ohms	4500 ohms center tapped
ST-154	tapped at 300	7000 ohms
ST-155	" "	500 ohms
ST-156	" "	Less Input

**LIST PRICE—Speaker**—With Input, \$7.50. Less Input, \$6.25.  
**Input Transformer Only**—When sold with speaker(s), \$1.25. Less Speaker(s), \$1.50.

### MODEL C10R—10 INCH

This 10-inch speaker is widely used in good quality radio consoles and for public address applications. Power-handling capacity is approximately 8 watts.



Stock No.	Field Coil Resistance	Input Transformer Impedance
ST-157	2500 ohms	4500 ohms center tapped
ST-158	" "	7000 ohms
ST-159	" "	500 ohms
ST-160	" "	Less Input
ST-161	1250 ohms	4500 ohms center tapped
ST-162	" "	7000 ohms
ST-163	" "	500 ohms
ST-164	" "	Less Input
ST-165	1800 ohms	4500 ohms center tapped
ST-166	tapped at 300	7000 ohms
ST-167	" "	500 ohms
ST-168	" "	Less Input

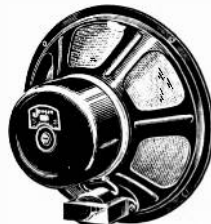
**LIST PRICE—Speaker**—With Input, \$8.00. Less Input, \$6.75.  
**Input Transformer Only**—When sold with speaker(s), \$1.25. Less Speaker(s), \$1.50.

### JENSEN MODEL C12R—12 INCH

An outstanding value in a 12-inch speaker for good quality radio console and public address use. Considering the price, we know of no other speaker which compares favorably with Model C12-R. Approximate power-handling capacity 9 watts.

Stock No.	Field Coil Resistance	Input Transformer Impedance
ST-169	2500 ohms	4500 ohms center tapped
ST-170	" "	7000 ohms
ST-171	" "	500 ohms
ST-172	" "	Less Input
ST-173	1250 ohms	4500 ohms center tapped
ST-174	" "	7000 ohms
ST-175	" "	500 ohms
ST-176	" "	Less Input
ST-177	1800 ohms	4500 ohms center tapped

**LIST PRICE—Speaker**—With Input, \$10.50. Less Input, \$9.25.  
**Input Transformer Only**—When sold with speaker(s), \$1.25. Less speaker(s), \$1.50.



**SPECIAL NOTE!**  
All of the Models C8R-8"-C10R-10" & C12R-12" have voice coils of 8 ohms at 400 cycles. All speakers are with 18" connector cords and bucking coil. Input transformer size is  $\frac{3}{4}$ " x  $\frac{3}{4}$ ". All models have cover for field coil structure. Voice coil diameter 1 $\frac{1}{4}$ ".

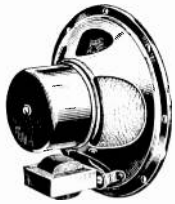
The list prices above apply only to stock Models identified by stock numbers shown. For special designs add 15% to all list prices.



# Jensen

FULL RANGE SOUND EQUIPMENT

*Known all over the world for predominating high quality*



## SIX AND EIGHT INCH PERMANENT MAGNETIC SPEAKERS

... These new Jensen PM Speakers eliminate the field coil used in conventional electro-dynamic speakers . . . The substitute is a heavy, permanently magnetized, newly discovered metal alloy . . . In performance ability they fully equal the best energized types of electro-dynamic speakers . . . Their sensitivity and efficiency is startling . . . Their cost surprisingly low . . . and they have positive protection against dust and dirt.

### SIX AND EIGHT INCH MODELS

The C Models are the most highly efficient and should be used where there is a particular premium on sensitivity, either in radio or centralized sound installations. In response characteristics they fully equal the best quality energized speakers, and they are 25 percent more efficient than energized speakers of similar size with six watts in their field coils.

The E Models are somewhat less efficient than C Models, but will substantially increase the acoustic output of Battery Type Radio Receivers. And of course the quality of reproduction from the receiver will be improved tremendously. In fact, so far as the speaker is concerned, the quality will be fully equal to A.C.-operated sets.

#### EIGHT INCH MODELS

Model No.	Stock No.	Input Transformer Impedance
PM8-C	ST-227	500 ohms
PM8-C	ST-228	4400 ohms
PM8-C	ST-229	10,000 ohms C. T.
PM8-C	ST-230	Voice Coil only
PM8-E	ST-231	500 ohms
PM8-E	ST-232	4400 ohms
PM8-E	ST-233	10,000 ohms C. T.
PM8-E	ST-234	Voice Coil only

**LIST PRICE**—C Models with input, \$9.75. Less input, \$8.50.  
E Models with input, \$8.50. Less Input, \$7.50.

#### SIX INCH MODELS

Model No.	Stock No.	Input Transformer Impedance
PM6-C	ST-235	500 ohms
PM6-C	ST-236	4400 ohms
PM6-C	ST-237	10,000 ohms C. T.
PM6-C	ST-238	6 ohm Voice Coil
PM6-E	ST-239	500 ohms
PM6-E	ST-240	4400 ohms
PM6-E	ST-241	10,000 ohms C. T.
PM6-E	ST-242	Voice Coil only

**LIST PRICE**—C Models with input, \$9.25. Less input, \$8.00.  
C Models with input, \$8.00. Less input, \$7.00.

Covers for Magnetic Structures are not regularly provided nor included in above list price.

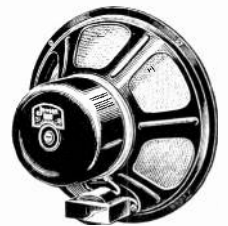
**LIST PRICE**—Input Transformer only, size  $\frac{3}{4}$ " x  $\frac{3}{4}$ ", for E Models when sold with speaker(s), \$1.00. Less speaker(s), \$1.25. Size  $\frac{3}{4}$ " x  $\frac{3}{4}$ " for C Models when sold with speaker(s), \$1.25. Less speaker(s), \$1.50. The voice-coil impedance of six and eight-inch speakers described above is 6 ohms at 400 cycles for the C Models and 3 ohms for the E Models.

## TEN AND TWELVE INCH MODELS PERMANENT MAGNETIC SPEAKERS

The C Models in the 10 and 12-inch sizes are particularly recommended for Radio Receivers, Public Address and Centralized Sound. Their efficiency and performance ability is fully equal to such superlative and well known energized Jensen speakers as Models C12-R and C10-R when they are provided with normal excitation in their field coils. The high performance ability of these speakers and their low cost eliminates all necessity for A.C.-operated speakers with their attendant service troubles and higher costs.

The B Models are available in only the 12-inch size, and these speakers are recommended where power-handling requirements and efficiency make them desirable as compared to C Models. They are fully equal to Jensen Model B12-X as described on another page.

The voice coil impedance of 10 and 12-inch C Models is 6 ohms and of 12-inch B Models 8 ohms at 400 cycles. Cone Housing diameter—10-inch models, 10 inches; 12-inch models, 12 $\frac{1}{4}$  inches.



#### TEN INCH MODELS

Model No.	Stock No.	Input Transformer Impedance
PM10-C	ST-243	500 ohms
PM10-C	ST-244	4400 ohms
PM10-C	ST-245	10,000 ohms C. T.
PM10-C	ST-246	8 ohm Voice Coil

**LIST PRICE**—With input, \$13.50. Less input, \$12.25

**LIST PRICE**—Input Transformer only. Size  $\frac{3}{4}$ " x  $\frac{3}{4}$ " for C Models when sold with speaker(s), \$1.25. Less speaker(s), \$1.50. Size  $\frac{3}{4}$ " x  $\frac{3}{4}$ " for B Models when sold with speaker(s), \$1.50. Less speaker(s), \$2.00.

#### TWELVE INCH MODELS

Model No.	Stock No.	Input Transformer Impedance
PM12-C	ST-247	500 ohms
PM12-C	ST-248	4400 ohms
PM12-C	ST-249	10,000 ohms C. T.
PM12-C	ST-250	Voice Coil only
PM12-B	ST-251	500 ohms
PM12-B	ST-252	4400 ohms
PM12-B	ST-253	10,000 ohms C. T.
PM12-B	ST-254	Voice Coil only

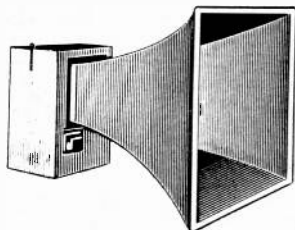
**LIST PRICE**—C Models, \$15.50 with input. \$14.25 less input.  
B Models, \$24.50 with input. \$23.00 less input.

# Jensen

FULL RANGE SOUND EQUIPMENT

Known all over the world for predominating high quality

## JENSEN PERI - DYNAMIC PROJECTORS



The reliability, high efficiency, and superior performance of Cone Type Electro-Dynamic Speakers compared to other types are undisputed facts, but in some applications cone-type speakers have been unable to meet operating conditions. Jensen now introduces a new Reproducing Unit which IMPROVES all the known superior qualities of cone speakers and incorporates features of speaker protection and other advantages which hence-

forth will be indispensable to the high quality reproduction of sound in public address work, no matter what operating conditions must be met.

Here briefly are a few features and advantages of the New Jensen Peri-Dynamic (meaning enclosed dynamic) Projectors:

- The speaker is enclosed in an air-tight and weather-proof enclosure; no enclosure resonance.
- Absolute reliability; the life is to be measured in years, not in days or months.
- Improved performance on voice and music.
- No back side radiation toward microphone.
- High efficiency and no power loss through back side radiation.
- Same models suitable for both indoor or outdoor operation.

Model No.	Low Freq. Cut-off	Input Watts	Dimen. in In.		Weight	With	
			Length Overall	Large Opening of Horn		500 or 4200 Packed Ohm	Less Input
PD-1	80 cy.	18	52	36x48	151 lbs.	\$119.50	\$116.50
PD-2	58 cy.	18	79	63x63	245 lbs.	149.50	146.50
PD-7	80 cy.	10	52	36x48	125 lbs.	92.50	91.00
PD-8	58 cy.	10	79	63x63	220 lbs.	123.00	121.50

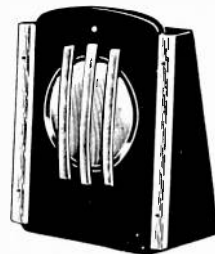
### MODEL AND TYPE DESCRIPTION

Model	With Field Coil For 110 Volts D.C.			With Field Coil For Jensen Field Supply		
	Input Trans.		Less Input Type	Input Trans.		Less Input Type
	500 Ohm Type	4200 Ohm Type		500 Ohm Type	4200 Ohm Type	
PD-1	4502	4502	4504	4506	4507	4508
PD-2	4510	4511	4512	4514	4515	4516
PD-7	4550	4551	4552	4554	4555	4556
PD-8	4558	4559	4560	4562	4563	4564

**TRUE EXPONENTIAL AND DIRECTIONAL HORNS.—** A complete line of Jensen Quality Horns are offered suitable for all purposes. Write for descriptive literature.

## JENSEN PERI - DYNAMIC REPRODUCERS

These New Reproducers, and they are new in both conception and design, provide the answer to an insistent demand for a complete line of high quality equipment suitable for centralized sound and similar installations—such as in Hotels, School Rooms, Assembly Rooms, Hospitals, Broadcast Studios, etc. They are made available chiefly because of two major Jensen accomplishments, both of equal importance: first, the New Jensen highly efficient Electro-dynamic PM Speakers; and second, the newly perfected exclusively Jensen Peri-Dynamic (Peri-Dynamic means enclosed dynamic) principle.



The New Jensen Permanent Magnet Speakers are essentials to the achievement, because of their excellent response characteristics, their high efficiency, their compactness of design, and their moderate cost. The Peri-Dynamic enclosures are equally essential because of their solving the problem of baffling the speakers, providing improved speaker performance, and introducing the exceedingly important features of positive speaker protection, together with installation and operation convenience.

**Model 1000—Peri-Dynamic Reproducer**—This is the smallest and most inexpensive model. Flush mounting type with metal box, 11½"x14½"x4" deep.

**Model 1001—Peri-Dynamic Reproducer**—This is Model 1000 with the metal fillet added. It is better than Model 1000 in response characteristics because of the larger volume in the enclosure. Same as 1000, except for metal fillet between flush box and panel which tips the speaker down at an angle of 18 degrees.

**Model 2000—Peri-Dynamic Reproducer**—Larger and better in response characteristics than the above types. Flush type with larger metal enclosure (11"x28"x4"). Improved low-frequency performance.

**Model 2001—Peri-Dynamic Reproducers**—The best of all the models offered, and always to be preferred where this type of enclosure can be used. Like Model 2000, except for fillet between enclosure and panel to tip speaker down at 18-degree angle.

All Models include an 8" "C" Model Jensen Electro-Dynamic Speaker and efficiency is so high that ½ watt of input power will serve the average school classroom seating fifty or less students. The speaker will, however, handle 5 watts of input power continuously without the introduction of objectionable distortion.

All speakers have 6-ohm voice coils (impedance at 400 cycles), but are available as shown in stock models with either 500 or 4400 ohms impedance transformers. Special design transformers are available on order.

Model	Stock No.	Ohms Input Imped.	List Price	Model	Stock No.	Ohms Input Imped.	List Price
1000	ST-261	6	\$15.65	2000	ST-269	4400	\$21.15
1000	ST-262	500	16.90	2001	ST-270	6	22.15
1000	ST-263	4400	16.90	2001	ST-271	500	23.40
1001	ST-264	6	17.90	2001	ST-272	4400	23.40
1001	ST-265	500	19.15	3000	ST-273	6	20.75
1001	ST-266	4400	19.15	3000	ST-274	500	22.00
2000	ST-267	6	19.90	3000	ST-275	4400	22.00
2000	ST-268	500	21.15				

## JENSEN EQUALIZERS



Jensen Equalizers must not be subjected to more than one and one-half watts input and for this reason must be placed in the circuit ahead of the amplifier. Insertion loss (five to twelve decibels) is negligible, and may be easily compensated for by raising the gain in the amplifier. A single Equalizer may be used to control the characteristics of one or more amplifiers which in turn furnish input to one or more reproducers. Where more than one amplifier is required, the combined input resistance of the amplifiers must properly match the value provided by the Equalizer.

**Models EL-1, EL-2 and EL-4** are variable devices intended to operate in the circuit between the microphone (or other source) and the amplifier. They have two variable controls, and by properly adjusting them the difficulties of reverberation, harshness, feedback and similar troubles are brought effectively under control. Surely no more valuable or useful device has ever been offered the sound industry. All the above models are alike, except for impedance: EL-1 is for 200-ohm lines, EL-2 for 500-ohm lines, and EL-4 is a bridging type for 20,000-ohm circuits.

### MODEL EL-5 EQUALIZER for TALK-BACK CIRCUIT

This Equalizer is designed particularly for use with PM Speakers when they are used for "talk-back" or microphones. The Model EL-5 provides compensation which effectively improves speech articulation by reducing the low-frequency efficiency of the speaker and is therefore recommended for best performance of PM Speakers in "talk-back" circuits. Available for 500-ohm impedance only.

List Price  
Model EL-5 ..... **\$8.50**

### MODELS EL-1—2—4

The Equalizer is a compact unit, completely shielded by its own container, and may be mounted in any convenient position. Each unit is shipped complete with instructions, including curves for selecting the characteristics desired.

Model EL-1 for 200 ohms  
Model EL-2 for 500 ohms  
Model EL-4 for 20,000 ohms

List Price  
All Models ..... **\$15.00**

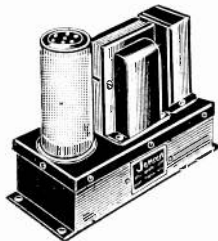
# Jensen

## FULL RANGE SOUND EQUIPMENT

Known all over the world for predominating high quality

### FIELD SUPPLY UNITS

#### Model FS-1



60 watts is the maximum continuous rating in the FS-1, with a peak capacity of 65 watts for short periods, but overloading is not recommended due to the resultant sacrifice in tube life. Equipped with a two-way or III-1.0 switch, by which the secondary voltage of the plate power transformer is altered to provide

more or less output as the case may require. Utilizes the 83-v. type rectifier tube. Complete with instructions, including phasing and hum test.

**Model FS-1**—For 110-volt 60-cycle.

**List Price**.....\$27.50

#### Model FS-2

For multiple speaker installations which do not require more than 25 watts field excitation. Continuous rating 25 watts, with an overload capacity of 30 watts for short periods. Utilizes type 83-v. rectifier tube. Complete with tube and instructions.

**Model FS-2**—For 110-volt 60-cycle.

**List Price**.....\$17.50

#### Model FS-3

The maximum continuous rating of the FS-3 is 10 watts, which is suitable for exciting the field coils of Jensen speakers from Model F5R (5") and including Model B12X (12").

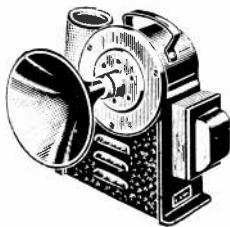


Type 25Z5 rectifier tube is used. Complete with tube and instructions.

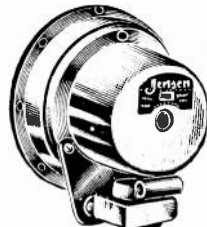
For 100-volt 60-cycle.

**List Price**.....\$7.50

### NEW MODEL HIGH FREQUENCY SPEAKERS



Q-3



Q-4A



Q-5

**Voice Coil Impedance**—16 ohms at 3000 cycles on all models. Q Model Speakers are not offered with high impedance input transformers as standard equipment. All models except Q-4 **must be operated from Filters**, and Jensen Filters are designed to operate directly into voice coil (s).

**A. C. Design**—Models Q and Q-3 with tube rectifier; standard for voltages and frequencies as shown under listing on following page. Models Q-4, Q-4-A, Q-5 and Q-5-A are not available for A.C. operation except with Jensen Field Supply Units.

**D. C. Design**—With field coil resistance as shown in listing on following page. Other resistance values are readily available on order.

**Field Coil Wattage**—Model Q and Q-3 maximum 15, normal 12, minimum 10. Other models maximum 8, normal 6, minimum 5.

**Frequency Response**—Model Q Speakers with high-frequency 'cut-off' at approximately 8000 cycles are recommended for Theatres and most other public address installations. Model Q-3 is more highly efficient than Model Q; high-frequency range is extended to 10,000 cycles with less than 10 dB attenuation at 18,000 cycles. This speaker is recommended for addition instruments, broadcasting stations and similar applications.

#### Models Q and Q-3—High Efficiency Metal Diaphragm Horn Type Speakers

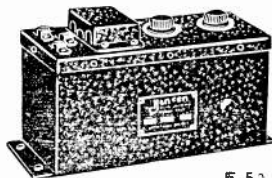
Model	Type		Field Coil Power Source	LIST PRICES	
	With Reflectors	Less Reflectors		With Reflectors	Less Reflectors
Q	3611	3601	110-v., 60-cy.	\$54.50	\$50.50
Q	3631	3621	110-v., D.C.	39.50	35.50
Q	3632	3622	220-v., D.C.	39.50	35.50
Q	3634	3624	Jensen Field Supply	39.50	35.50
Q-3	3651	3641	110-v., 60-cy.	79.50	75.00
Q-3	3671	3661	110-v., D.C.	64.50	60.00
Q-3	3672	3662	220-v., D.C.	64.50	60.00
Q-3	3673	3663	Jensen Field Supply	64.50	60.00

#### Models Q-4 and Q-5—Cone Type Speakers

Model	Type No.	*Input Impedance	Frequency Range	†Field Coil	List Price
Q-5	3681	16 ohms	1,200 to 16,000	10,000 ohms	\$20.00
Q5-A	3682	16 ohms	1,200 to 8,000	10,000 ohms	20.00
Q-4	3691	16 ohms	1,200 to 8,000	2,500 ohms	12.00
Q4-A	3692	4,200 ohms	1,200 to 8,000	10,000 ohms	14.00
Q4-A	3693	7,000 ohms	1,200 to 8,000	10,000 ohms	14.00

\*All Models, except Q4-A, operate from filters at voice-coil impedance and are not available with high-impedance transformers. Models Q-4, Q4-A, Q-5 and Q5-A are not offered in A.C. design. Their field coils may be conveniently excited from the power supply used for low-frequency speakers such as Jensen Models FS-1 and FS-2, or in radio receivers the power may be supplied from the power supply of the receiver itself.

†Field Coils are always available wound to any specified resistance. The 10,000-ohm values are proper for operation from Jensen Field Supply Units where power is also supplied to the low-frequency speakers from the same unit.



F-5



F-9

### JENSEN FILTER UNITS

All Q Model High Frequency Speakers, except Q4-A require the use of a filter to permit operation in combination with low frequency speakers from a single-channel amplifier output. Two-channel Filters limit the reproduction of high frequencies to the high frequency speaker (s) and the reproduction of low frequencies to the low frequency speaker (s). Single-channel Filters limit reproduction of the low frequencies to the low frequency speaker (s) but high frequencies are reproduced by all of the speakers in the system.

**Models F5-A and F7-A** are equipped with frequency selector switch and volume control, allowing high frequency cutoff at the following points: 1800, 6600, 8800, 14,500 and 20,000 cycles per second. Control of high frequency volume is provided through a rotary switch introducing attenuation in decibels as follows: 0 dB., 3dB., 6dB., and 9 dB.

**Model F-9**—This is a low cost Filter, providing a means for connecting Model Q Speakers directly across the high impedance input of the transformer primary on the speaker (s) used for low frequency reproduction. Its performance is the same as Model F7-A, except that no frequency cutoff or volume control switch is provided. This Filter will accommodate one or more Low Frequency speakers and one or two High Frequency Speakers.

(Order by Type Number.)

Model	*Impedance Input.	Channels	Type No.	List Price
F5-A	500	2	3309	\$38.50
F5-A	4200	2	3308	38.50
F7-A	500	1	3338	28.50
F7-A	4200	1	3337	28.50
F-9	500	1	3340	12.00
F-9	4200	1	3339	12.00

\*4200-ohm impedance values are satisfactory to match 4000 to 4400-ohm circuits.



# ATLAS TRUMPETS

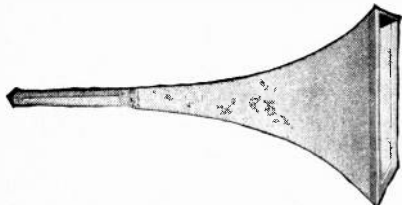
To the average layman ALL horns and trumpets appear to be alike. To manufacture horns of the proper acoustics, require accurate engineering and skilled manufacturing. Otherwise, the lack of this experience will result very definitely in poor frequency response of the units, breakage of diaphragms, voice coil burn-outs and in general, low efficiency and poor sound projection. A poorly designed trumpet will also have bad resonance peaks. The Atlas Engineers

have had years of experience and have kept up with the trend of development in the public address field, with the results that every Atlas trumpet produced today will give the best frequency response and eliminate deficiencies or breakdowns in driver units. DON'T EXPERIMENT OR GAMBLE WITH OTHER HORNS — USE ATLAS PRODUCTS WITH 100% PROTECTION.

## ATLAS 6 FT. PROJECTOR TRUMPET

GUARANTEED WEATHER PROOF IN ALL CLIMATES

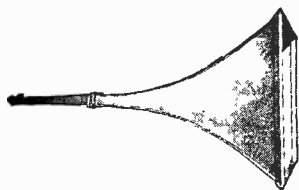
**STURDY DURABLE DEMOUNTABLE CONVENIENT EFFICIENT ATTRACTIVE**



Model KD-6 ..... List Price \$25.00

These trumpets are the last word in a high quality low priced trumpet. They are shipped partly assembled permitting great ease in handling. To completely assemble this trumpet requires only the use of a small spintite wrench or pliers. The finish is a lustrous and durable aluminum. The horn material is a non-resonant, all-weather material guaranteed 100% weather proof in all climates. Will not rattle or resonate when driven with high power. The 2½ foot tone arm is removable to facilitate installation and handling. Shipping weight 25 lbs. Shipping size 53x28x5 inches. CODE WORD YVOKS

## Atlas Square-Mouthed Trumpets



These trumpets present the last word in trumpet design. They are especially suited for sound-truck and outdoor work, due to their ease of mounting. They are constructed of a special all-weather material which will withstand the most severe usage to which it may be subjected.

These horns have a solid brass welding and an aluminum demountable tone arm with a standard thread for the reproducer unit.

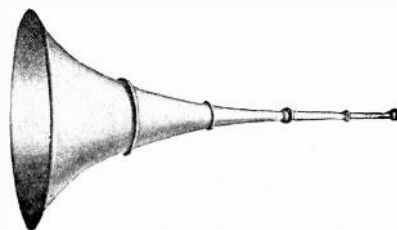
Model S-6 ..... List Price \$42.50  
Bell 30x30 in., length, 6 ft.; color, bright aluminum; weatherproof.  
Net Weight, 20 lbs. CODE WORD YNACN

Model S-54 ..... List Price \$35.00  
Same as above, length 51 in., finish aluminum.  
Net Weight, 14 lbs. CODE WORD YNABV

Model S-43 ..... List Price \$30.00  
Same as above, length 43 in., finish aluminum. Net Weight 12 lbs.  
CODE WORD YNAAC

## 6 Ft. All-Aluminum Exponential Trumpet

Atlas all aluminum trumpets are so designed mechanically that the resonant conditions often noticed with metal trumpets is eliminated. The heavy gauge metal used for the spinning is well reinforced and carefully machined. The unusually long two section cast aluminum throat is accurately constructed greatly assisting the trumpet to perform uniformly and efficiently over a wide range of frequencies. The horn is easily demountable into four sections permitting ease in handling. They are beautifully finished in a natural aluminum and are absolutely 100% weatherproof in all climates. A special loose coupling is supplied for attaching driver units having a standard 1½ in.—18 thread. Length 6 ft., bell opening 32 in. Shpg. wght., 15 lbs. CODE WORD YNIEK



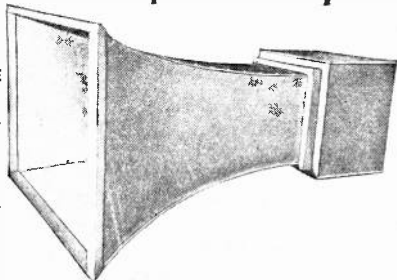
Model RA72 ..... List Price \$55.00  
Model RA-42—3½ Ft. ALL ALUMINUM EXPONENTIAL TRUMPET  
Same mechanical construction as RA-72. Demountable into two sections. Length 3½ feet, bell opening 23 inches. Shpg. wght. 8 lbs. CODE WORD YNICH

List Price \$30.00

## Atlas Giant Cone Speaker Projector Horn

FLARED EXPONENTIAL SIDE

This horn is ideal for long range indoor and outdoor application. With a good cone speaker sound can be projected over extreme distances. This horn can be easily demounted for storage and transportation. Guaranteed 100% weatherproof in all climates. Finished in a brilliant aluminum. Will accommodate all speakers having 10, 11 or 12-inch cones. Bell opening 24x36 in. Total length as shown, 4 ft. Shpg. Size (demounted) 37x25x3½ in. Shpg. Wt. 24 lbs.



Model UP (less Cone Housing) ..... List Price \$14.50  
CODE WORD YNGLE

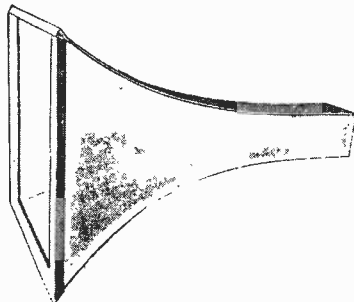
Model UP (with UB Housing as illustrated) ..... List Price 19.50  
CODE WORD YNGMI

## Directional Power Cone Trumpet

AT-5

For 5 inch Power Cones

These exponential trumpets are for use with the five inch power cone speakers that are becoming popular for certain P.A. application. These horns flare on all four sides and will distribute sound over a large area. Absolute resistance to weather is guaranteed and they will withstand considerable shock and strain. When mounted on sound trucks, etc. They are constructed of a smooth fibre material and the seams are joined by a one piece brass welding. The speaker mounting board is actually a part of the trumpet and its placement raises the acoustic efficiency of the horn to a great extent. Finished in brilliant aluminum. Overall length, 4 feet; Bell opening 30x30 in. Shipping weight, 25 lbs. CODE WORD YNIAA



List Price \$25.00



# ATLAS BAFFLES

## ATLAS FLOOR STAND AND MOUNTING FIXTURE



Model MF-10 (stand and fixture, less baffle) Shipping weight 36 lbs.

List Price \$15.00

### MOUNTING FIXTURE SA-10

This fixture is the same as supplied with the floor stand. It offers a simple method of mounting the aluminum baffles on sound trucks, stadiums, etc. A standard plumbing pipe fitting is fastened to this fixture permitting a support and designed with inexpensive standard pipe fittings. This fixture is adjustable and its angle securely locked by tightening the large special bronze wing nut. Finish, black crystalline. Shipping weight 3½ lbs.

CODE WORD YNHOS

Model SA-10 .....List Price \$4.50

## WALL SURFACE SPEAKER HOUSING

A speaker housing for school-room, hospital installation, inter-office call system, ship state-rooms, etc. These housings are spun from heavy gauge aluminum and beautifully finished in a weather-resistant, natural aluminum color. The cone opening is protected with a strong metal screen and grill cloth covering.



Dimensions: Cone opening diam., 5½ in.; inside depth, 4½ in.; smallest inside diam., 8 in. Shipping weight, 1½ lbs.

CODE WORD YNFLU

Model SH-5 .....List Price \$4.00

Dimensions: Cone opening diam., 7 in.; inside depth, 5¼ in.; smallest inside diam., 10½ in. Shpg. Wt., 2 lbs.

CODE WORD YNFNE

Model LH-7 .....List Price \$5.00

## ORIGINAL ATLAS ALUMINUM DEFLECTOR BAFFLE

The latest development in all-aluminum, 100% weatherproof, directional baffles. The Atlas Baffle features: heaviest gauge metal, snap-on weatherproof cover, heavy metal grill cloth, protective screen, acoustic felt lined speaker housing, all hardware for mounting cone speaker, etc. Overall length 20 in., diameter bell 17 in. Will accommodate all 10, 11, 12 inch speakers. Finish, brilliant aluminum. Shpg. Wt. 6 lbs.

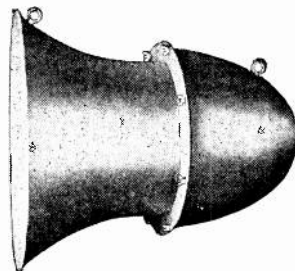
CODE WORD YNDAB

MB-10 .....List Price \$15.00

This model is identical in size, shape and finish to the above model. The metal gauge is somewhat lighter and it does not include the cover, screen or felt lined housing.

CODE WORD YNDOK

Model AM-10 .....List Price \$9.00

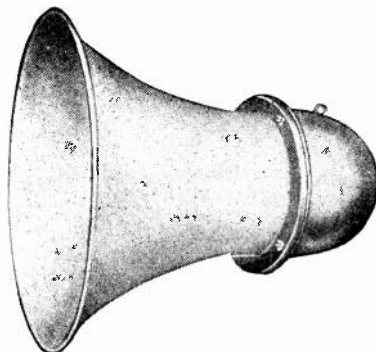


## GIANT ALL ALUMINUM PARABOLIC DEFLECTOR

This baffle is ideal for use with high powered cone speaker reproducers. Its large size offers sufficient loading to permit the speaker to reproduce very low frequencies. Bell opening 22 in., total overall length, 26 in. Spun of heavy gauge aluminum and finished in a brilliant natural color. Shipping weight 8 lbs.

CODE WORD YNIFO

Model P-16...List Price \$13.50



## ALUMINUM DEFLECTOR BAFFLE

### MODEL AM-8

This model is constructed and finished in the same manner as the larger models. The dimensions are proportionately smaller. This model will accommodate all speakers having an outside ring diameter of from 8 in. to 10½ in. Overall length 16 in., bell diameter 15 in. Shipping weight 5 lbs.

CODE WORD YNIIG

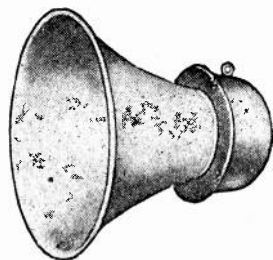
Model AM-8 .....List Price \$8.00

### MODEL AM-6

Identical to the AM-8 but proportionately smaller. Will accommodate all speakers having an outside cone ring diameter of from 6 in. to 8½ in. Overall length 15 in. Bell opening 15 in. Shipping weight 4 lbs.

CODE WORD YNIHF

Model AM-6 .....List Price \$7.50





# ATLAS DRIVER UNITS

Atlas units represent the Acme of Perfection in electro-dynamic unit construction. Atlas diaphragms are spun from sheets of the very best grade of Duraluminum. They are given various heat treatments and annealing processes which have much to do with the ability of the one-piece all metal diaphragm to withstand the motion at its flex points yet offer the necessary rigidity at its dome. This diaphragm is designed with a special corrugation which pro-

vides a recess for accurately seating the voice coil. Other important diaphragm features incorporated in the Atlas diaphragm are six point mounting, copper-bronze voice coil leads, aluminum voice coil wire, two layer winding, etc. These units are sturdily constructed and designed to withstand all manner of hard usage and weather conditions.

## "SILVER TOP" GIANT DRIVER UNIT

MODEL GU-3

DEPENDABLE — TROUBLE PROOF 20 WATTS 15 OHM VOICE COIL  
EFFICIENT — POWERFUL POWER 6-8 VOLT FIELD

The new ATLAS "SILVER TOP" giant driver unit is the latest model unit designed at the ATLAS laboratories. Its unique and efficient construction permits it to be sold at a price far below that of any other giant unit. The input power is rated at 20 watts continuous service. The heat tempered diaphragm will resist severe overloads. Its anodized surface will resist surface corrosion even in conditions of high humidity. The voice coil is wound with aluminum wire. Its light weight greatly assists the naturally high efficiency of this driver unit. Shpg. wght. 12 lbs.

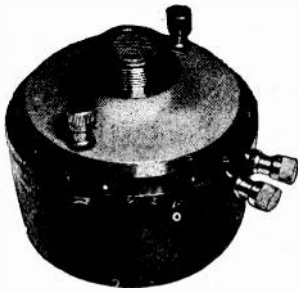
Model GU-3.....List Price \$25.00 (If 110 volt field required add 10%)



## ATLAS SENIOR UNIT

MODEL SU-2

6-8 Volt Field Excitation  
1.2 Amp. Consumption  
at 6 volts  
Continuous Operating  
Capacity 20 Watts  
15 Ohm Voice Coil  
Impedance at 1000 cycles



The Model SU-2 reproducer unit is constructed with the same degree of accuracy and precision as the Giant GU-2 unit. All fittings, materials, binding posts, etc., are identical. The field coil and pot casting are somewhat smaller resulting in a lighter weight reproducer unit. This unit is ideal for use where weight is a factor such as portable systems, aeroplane installation, etc. Weight 12 lbs.

CODE WORD YNAMZ

Model SU-2.....List Price \$40.00

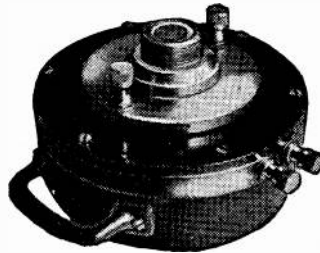
110 volt field coils supplied at no extra cost.

## ATLAS GIANT UNIT

HI-FIDELITY MODEL

MODEL GU-2

6-8 Volt Field Excitation  
1.2 amp. consumption  
at 6 volts  
Continuous operating  
Capacity 22 Watts  
15 ohm voice coil  
impedance at 1000 cycles



Model GU-2 reproducer unit is the largest of the Atlas Driver units. The diaphragm is spun from sheets of the very best grade of Duraluminum, it is designed with a special corrugation which provides a recess for accurately seating the Voice coil. Has six point mounting, copper-bronze voice coil leads. All fittings and binding posts are of the very best. Shpg. wght. 20 lbs.

CODE WORD YNALJ

GIANT UNIT GU-2.....List Price \$60.00

110 volt field coils supplied at no extra cost.

## ATLAS ADAPTERS



This adaptor bears standard thread, is a carefully machined bronze casting. It enables the use of two horns with a single unit.

CODE WORD YNARM

U-2H.....List Price \$10.00

Same as above but for three horns with a single unit.

CODE WORD YNAST

U-3H.....List Price \$13.50

This adaptor is for coupling a western electric unit to a horn bearing a standard size thread.

CODE WORD YNATY

WEB.....List Price \$3.50

This adaptor is for the purpose of connecting two units to one horn.

CODE WORD YNAVX

H-2U.....List Price \$10.00

## ATLAS FIELD EXCITERS

ATLAS EXCITER FE-2

Supplies proper field excitation for one or two Atlas units. This is a special all-dry, all-electric, humless exciter and will not over-heat. Built for 110-120 volt, 50-60 cycle operation. Net wt., 7 lbs.

CODE WORD YNAOL

FE-2.....List Price \$22.50

ATLAS EXCITER FE-4

Same as above but capable of supplying up to four units. Net weight, 13 lbs.

CODE WORD YNAPS

FE-4.....List Price \$42.50

FE-10 FIELD EXCITER FOR 1000 OHM FIELDS

This D.C. 110 volt field supply unit delivers a smooth well filtered direct current of 110 volts at 115 mils. This exciter is not of the line cord, resistor, transformerless type. With this exciter the D.C. output is well isolated from the A.C. power input and a dangerous short circuit to ground is impossible. This exciter suitable for 1000 ohm field coils. Shipping weight 6 lbs.

CODE WORD YNHUI

FE-10.....List Price \$7.00



# ATLAS MIKE STANDS

## THE NEW ATLAS "VELVET ACTION"

### MICROPHONE

Simple Convenient  
Quick Adjustment

Shock Proofed  
Rubber Base Pads

Universal Ball  
Swivel On All Models



Model MS-8

List Price \$7.50

CODE WORD YNGEZ

Net Weight—8 lbs.

Base—Silver Crackle

Tube—Chromium

Tube Diameter— $\frac{7}{8}$ "

Base Diameter—10"



Model MS-11

List Price \$10.00

CODE WORD YNGHU

Net Weight—11 lbs.

Base—Chromium

Tube—Chromium

Tube Diameter— $\frac{7}{8}$ "

Base Diameter—10"

### STANDS

Adjustable "Velvet  
Action" Friction Clutch  
and Locking Device

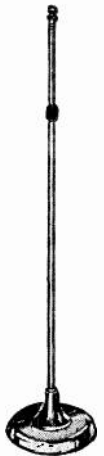
NO - METAL BEARINGS

NO - UNEVEN ACTION

NO - SCRATCHING

NO - SLIPPING

NO - NOISE



Model MS-18

List Price \$12.50

CODE WORD YNGIF

Net Weight—18 lbs.

Base—Chromium

Tube—Chromium

Tube Diameter— $\frac{7}{8}$ "

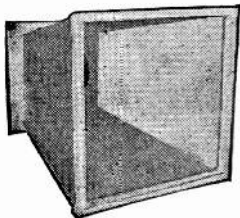
Base Diameter—10"

The absence of any metal to metal bearing eliminates the possibility of scratching or noise being conducted to the microphone when varying height adjustment. The Velvet Action clutch mechanism can be adjusted for the weight of the microphone and the height varied by merely raising or lowering the running tube without again touching or adjusting the clutch mechanism. The clutch mechanism can be permanently locked if so desired. "Velvet Action" will not permit the running tube to drop suddenly and

damage the microphone. Models MS-11 and MS-18 bases mounted on rubber cushions to absorb any floor vibrations that may be present. Also prevents floor marring and improves stability of stand. All models include Universal Ball Swivel ( $\frac{7}{8}$ "-27) as standard equipment.

Model SVL.....List Price \$0.75  
Universal ball swivel available as separate item ( $\frac{7}{8}$ "-27).

## ATLAS "DEMOUNTABLE" FLARE AND DIRECTIONAL Baffles



MODEL "UD"

Overall dimensions, Bell opening 22x23, depth 25 inches. Shpg. Wght., 15 lbs. Shpg. Size 27x25x3 inches.

Type "A" for 10, 11 and 12-inch cones.

CODE WORD YNAHR

Type "B" for 7, 8 and 9-inch cones.

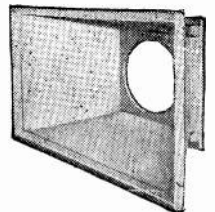
CODE WORD YNAFE

Model "UD".....List Price \$8.50

Low Cost  
Absolutely Weather Proof  
Small Storage Space

Simple Assembly  
Fine Appearance  
Convenient Handling

IMPROVE THE FREQUENCY RESPONSE, INCREASE  
THE EFFICIENCY AND CONTROL THE SOUND  
DISTRIBUTION OF YOUR CONE SPEAKER



MODEL "UF"

Overall dimensions, Bell opening 30x18, depth 14 inches. Shpg. Wght., 10 lbs. Shpg. Size 30x16x2 $\frac{1}{2}$  inches.

Type "A" for 10, 11, and 12-inch cones.

CODE WORD YNAJI

Type "B" for 7, 8 and 9-inch cones.

CODE WORD YNAIF

Model "UF".....List Price \$7.00

## WEATHERPROOF "DEMOUNTABLE" SPEAKER HOUSING

This speaker housing may be easily attached to either of the above horn baffles. Inside dimensions of housing 15 $\frac{3}{4}$ "x15 $\frac{3}{4}$ "x11" deep. Shpg. Wght., 8 lbs. Shpg. Sizes 17x17x2 inches.

CODE WORD YNAEB

Model "UB" Speaker Housing.....List Price \$5.00

Speakers by

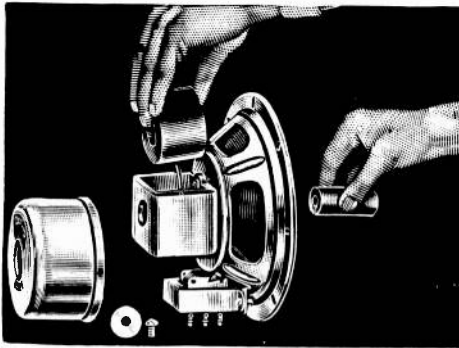
OXFORD

**CHANGEABLE FIELD COIL**  
and  
**Standard Dynamic Speakers**

The "Changeable" Field Coil speaker is **complete with field coil**, but is specially designed to permit the service man or amateur to change the field when a different field resistance is necessary for the job. **Voice coil remains centered.**

The "Standard" type offers additional economy where the "changeable field" feature is not desired.

The **Universal Transformer**, matching any output tube, is standard equipment on all these speakers.



These two new series of Oxford Dynamic Speakers are very compact and rugged. Tone quality, sensitivity, and power-handling ability have been greatly improved through careful refinement of design.

Diaphragms are of one-piece construction, waterproofed by a special process to give them lasting quality under all climatic conditions.

Speaker mounting holes are spaced so as to be interchangeable with all standard makes.

All of these speakers may be used for A.C. with an Oxford Field Exciter.

Full instructions are furnished with each speaker.

**Models 5-O and 5-R**

An ideal speaker for replacement in small A.C.-D.C. and automobile sets. Normal field 4 watts, voice coil maximum 3 watts, outside diameter 5", depth 2 1/4", baffle opening 4 1/4", voice impedance 3 1/2 ohms, supplied with tapped universal output transformer for S41, 42 or equivalent, or 43 output tube. Models 5-O and 5-R are supplied complete with any of the following fields—5, 2500 or 3000 ohms at no extra cost. Shpg. Wt. 2 lbs.

**Models 65-A and 65-R**

A popular modified 6" speaker for replacement purposes in table model sets and automobile sets. Normal field 5 watts, voice coil maximum 4 watts; outside diameter 6 1/2", depth 2 3/4", baffle opening 5 1/2", voice coil impedance 3 1/2 ohms, supplied with tapped universal output transformer for S41, 42, or 43 output tube. Models 65-A and 65-R are supplied complete with any of the following fields—5, 2500 or 3000 ohms at no extra cost. Shpg. Wt. 2 1/2 lbs.

**Models 65-O and 65-L**

A heavy duty 6" speaker exceptionally well made for use with large table model sets or small consoles. Normal field 6 watts; voice coil maximum 5 watts, outside diameter 6 1/2", depth 3 3/4", baffle opening 5 1/2", voice coil impedance 4 1/2 ohms, supplied with a multi-tapped universal output transformer to match all tubes. Models 65-O and 65-L are supplied complete with any of the following fields—5, 1000, 1800 T 1500, or 2500 ohms at no extra cost. Shpg. Wt. 3 1/4 lbs.

**Models 8-O and 8-R**

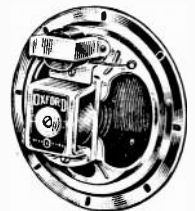
A speaker of excellent performance ability. Giving fine quality reproduction. Compact, sturdy and ideal for mantel sets and small consoles. Normal field 7 watts; voice coil maximum 6 watts, outside diameter 8", depth 4 1/8", baffle opening 7", voice coil impedance 4 1/2 ohms, supplied with multi-tapped universal output transformer to match all tubes. Models 8-O and 8-R are supplied complete with any of the following fields—5, 1000 1800 T 1500, or 2500 ohms at no extra cost. Shpg. Wt. 4 1/2 lbs.

**SPECIFY FIELD RESISTANCE DESIRED WHEN ORDERING**

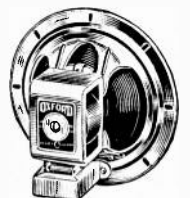
Model No.	Size	Type Field	List Price	Model No.	Size	Type Field	List Price
5-O	5"	Standard	\$3.15	65-O	6 1/2"	Standard	\$4.30
5R	5"	Changeable	3.55	65L	6 1/2"	Changeable	4.80
65A	6 1/2"	Standard	3.60	8-O	8"	Standard	5.15
65R	6 1/2"	Changeable	4.05	8R	8"	Changeable	5.70



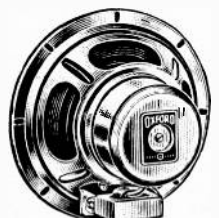
5-O "Standard"  
5-R "Changeable"



65-A "Standard"  
65-R "Changeable"



65-O "Standard"  
65-L "Changeable"



8-O "Standard"  
8-R "Changeable"

**ADDITIONAL FIELD COILS FOR CHANGEABLE FIELD SPEAKERS**

The field coils listed below may also be used as general replacements in speakers of other makes.

Field Coil No.	Resistance Ohms	For Speaker Models	Size	List Price
FC 1	5	5R-65R	3/8" I.D. x 1 1/2" O.D. x 3/8"	\$1.25
FC 2	2500	5R-65R	3/8" I.D. x 1 1/2" O.D. x 3/8"	1.25
FC 3	3000	5R-65R	3/8" I.D. x 1 1/2" O.D. x 3/8"	1.25
FC 4	5	65L-8R	3/8" I.D. x 2 1/4" O.D. x 1 1/8"	1.65
FC 5	1000	65L-8R	3/8" I.D. x 2 1/4" O.D. x 1 1/8"	1.65
FC 6	1800 T 1500	65L-8R	3/8" I.D. x 2 1/4" O.D. x 1 1/8"	1.65
FC 7	2500	65L-8R	3/8" I.D. x 2 1/4" O.D. x 1 1/8"	1.65
FC 8	11500 T 2400	65L-8R	3/8" I.D. x 2 1/4" O.D. x 1 1/8"	2.75

The 1800-ohm field tapped at 1500 can be used as a 1500-ohm field by using only the first section. This field can also be used as an 1800-ohm tap 300 by reversing the external connections. Where critical resistance is not desired the 1800-ohm winding can be used as a 2000-ohm field.

**ADDITIONAL OXFORD REPLACEMENT SPEAKERS ON OTHER SIDE**



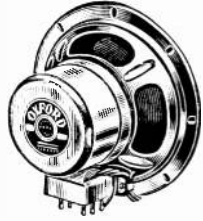
Speakers by

**OXFORD**

**STANDARD AND CHANGEABLE FIELD SPEAKERS**

(Continued from Other Side)

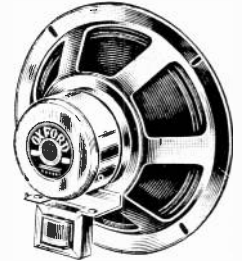
**Models 8-F and 8-L**



An especially outstanding speaker for console sets, larger table model receivers and small P.A. systems. Designed to handle large volume without distortion. Normal field 9 watts; voice coil maximum 7 watts, outside diameter 8", depth 4 5/8", baffle opening 7", voice coil impedance 4 1/2 ohms, supplied with large multi-tapped universal output transformer to match all tubes. Models 8-F and 8-L are supplied complete with any of the following fields—5, 1000, 1800 T 1500, or 2500 ohms at no extra cost. Shpg. Wt. 5 3/4 lbs.

Model No.	Size	Type Field	List Price
8F	8"	Standard	\$6.25 B
8L	8"	Changeable	7.00

**Models 11-O and 11-R**



Designed for use in console sets and semi-portable sound installations. Excellent tone quality and power handling capacity. Normal field 9 watts; voice coil maximum 9 watts, outside diameter 11", depth 5 1/4", baffle opening 9 1/2", voice coil impedance 4 1/2 ohms, supplied with large multi-tapped universal output transformer to match all tubes. Models 11-O and 11-R are supplied complete with any of the following fields—5, 1000, 1800 T 1500, or 2500 ohms at no extra cost. Shpg. Wt. 6 3/4 lbs.

Model No.	Size	Type Field	List Price
11-O	11"	Standard	\$7.50
11-R	11"	Changeable	8.50

**ADDITIONAL FIELD COILS FOR CHANGEABLE FIELD SPEAKERS**

The field coils listed below may also be used as general replacements in speakers of other makes.

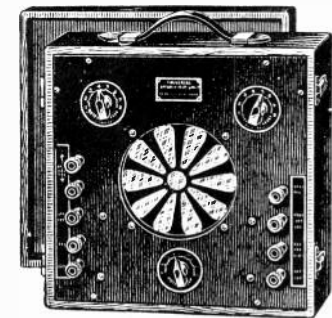
Field Coil No.	Resistance Ohms	For Speaker Models	Size	List Price
FC 9	5	8L-11R	1 1/8" I.D. x 2 1/4" O.D. x 1 3/8"	\$2.35
FC 10	1000	8L-11R	1 1/8" I.D. x 2 1/4" O.D. x 1 1/2"	2.35
FC 11	1800 T 1500	8L-11R	1 1/8" I.D. x 2 1/4" O.D. x 1 3/8"	2.35
FC 12	2500	8L-11R	1 1/8" I.D. x 2 1/4" O.D. x 1 1/2"	2.35
FC 13	11500 T 2400	8L-11R	1 1/8" I.D. x 2 1/4" O.D. x 1 3/8"	3.60

**SPECIFY FIELD RESISTANCE DESIRED WHEN ORDERING**

**NEWLY DEVELOPED 12" PUBLIC ADDRESS OR CONSOLE TYPE REPRODUCER**

Combines the latest advancements in speaker design and construction to provide a high-quality low-cost unit. Has curvilinear high-fidelity diaphragm of waterproof material. Three-point balanced suspension assures perfect alignment of voice coil at all times. Speaker furnished with either 6-volt, 1000 ohms, or 2500-ohm field. Universal output transformer supplied as standard—500-ohm line transformer can be furnished at no extra cost. Safe output rating 12 watts; peak rating 15 watts; overall diameter 12"; baffle opening 11"; overall depth 6 3/4"; shipping weight 14 lbs.

**MODEL 12-D . . . . . List Price \$9.75**



**DYNATEST SPEAKER TESTER**

**Portable Model**—Complete in case.

**List Price . . . . . \$22.50**

**Laboratory Model** without cover or handle.

**List Price . . . . . \$21.50**

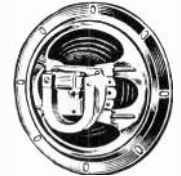
**Panel Model**—Completely wired.

**List Price . . . . . \$19.60**

- Matches any output circuit or tube, including new metal output tubes!
- Checks set filter action.
- Tests receivers without their speakers.
- Variable rotary switch brings 8 fields into the circuit.
- Can handle 5 watts continuously and from 8 to 10 watts for testing purposes.

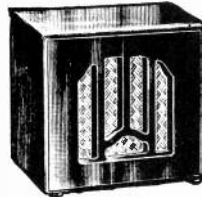
**QUALITY MAGNETIC SPEAKERS**

High-quality low-cost units for A.C.-D.C. and battery sets, also announcing systems. Will match most output tubes. Rigid pressed steel frames with heavy magnets. Improved balanced armature unit insures dependable performance and longer life.



Model	Size	Shpg. Wt.	List
5C	5"	1 lb.	\$1.95
6C	6 1/2"	2 lbs.	2.35
8C	8 1/2"	2 1/2 lbs.	2.80
8M (Double Magnet)	8 1/2"	3 lbs.	3.50

**MAGNETIC SPEAKERS IN CABINETS**



Modern attractive square-type cabinets, richly finished overall in dark Walnut. Front and rear grills same design, backed with black and gold cloth. Equipped with sturdy OXFORD magnetic speaker and furnished with six ft. two conductor flexible cord.

Model	Speaker Size	Cabinet Size	Shpg. Wt.	List
5SMC	5"	7 1/8" square, 4 1/8" deep	3 lbs.	\$4.30
6SMC	6 1/2"	7 1/8" square, 4 1/8" deep	3 lbs.	4.70
8SMC	8 1/2"	9 1/4" square, 5 1/4" deep	5 lbs.	5.80

**MAGNETIC SPEAKERS IN CABINETS WITH VOLUME CONTROL**

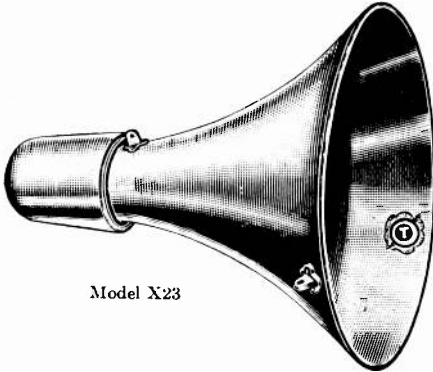
Same type cabinets and speakers as described above, equipped with volume control and On-Off switch. Allows complete control of volume from minimum to maximum right at the speaker.

Model	Speaker Size	Cabinet Size	Shpg. Wt.	List
5VSM	5"	7 1/8" square, 4 1/8" deep	3 lbs.	\$6.50
6VSM	6 1/2"	7 1/8" square, 4 1/8" deep	3 lbs.	7.00
8VSM	8 1/2"	9 1/4" square, 5 1/4" deep	5 lbs.	8.10

Speakers by

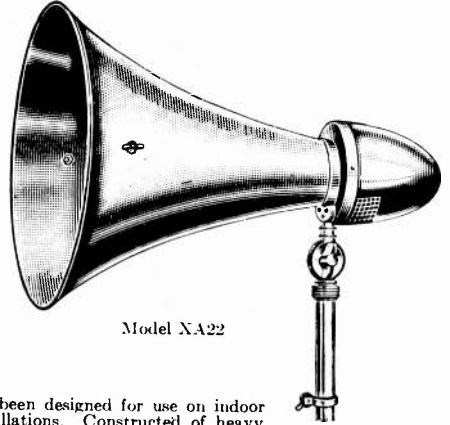
**OXFORD**

**A NEW HIGH IN EFFICIENCY WITH THESE EXPONENTIAL HORNS**



Model X23

These Horns have what sound men want. Outdoors or indoors they quickly demonstrate the improved reproduction and projective power possible to obtain by using a matched cone unit and horn.



Model XA22

**Model X23 Horn** is constructed of patented accoustical material—weather-proof and water-proof. It is scientifically designed for use with electro-dynamic cone trumpet unit shown below and has an excellent overall frequency response. Mechanically reinforced by steel bands this horn will stand a lot of abuse. Ideal for permanent installations where a considerable volume and directional effect is desired. Furnished in attractive and serviceable silver finish. Bell Diameter 23", Horn length 19", overall length 27½". Net weight 12 lbs. Shpg. Wt. 25 lbs.

**Model XA22 Horn** has been designed for use on indoor or portable outdoor installations. Constructed of heavy gauge spun aluminum, acoustically treated to avoid any metallic sound, it is ideal where volume, directional effect and appearance is of great importance. The flare is sprayed with a satin aluminum finish and the back cover is highly polished to give an attractive finish so that the horn can be used by the finest orchestra or band. Its light weight makes it suitable for mobile installations. The Horn is furnished with a support, so that a stand may be used readily. Bell diameter 20", horn length 20", overall length 28". Net weight 7½ lbs. Shpg. Wt. 18 lbs.

**Model X23 Exponential Horn** ..... List Price \$25.00

**Model XA22 Exponential Horn** ..... List Price \$25.00

**XA22 Horn and 6T Unit Combination** ..... List Price \$38.25

**X23 Horn and 6T Unit Combination** .... List Price \$38.25

**Model CS1**—Heavy duty chromium plated Collapsible Floor Stand with Folding Base. Min. Height 3½ ft., Max. Height 7 ft. .... List Price \$21.00

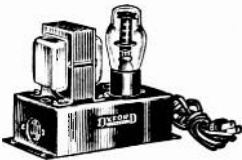


Model E9

**9-WATT FIELD SUPPLY UNIT**

Special design field supply unit of sturdy construction for operation on 110-volt 60-cycle. Does away with resistance line cord so that A.C. leads can be extended if desired. Will deliver 9 watts to a 2500-ohm field. Overall Size: 3½"x3¾"x7" Requires a 25Z5 rectifier tube. Shpg. Wt. 3½ lbs.

**Model E 9**—Less Tube. .... List Price \$4.25

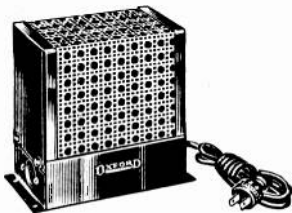


Model E17

**17-WATT FIELD SUPPLY UNIT**

Exceptionally well designed and filtered field supply unit for operation on 110-volt 60-cycle. Supplies 17 watts filtered direct current to a 2500-ohm speaker. Uses an 80 rectifier tube. Size over all 3½"x5½"x7". Shpg. Wt. 4¾ lbs.

**Model E 17**—Less Tube. .... List Price \$6.00



Models E6-E30

**30-WATT FIELD SUPPLY UNIT**

Heavy duty type unit entirely encased. Uses well designed choke and condenser filter system to insure 30 watts humless D.C. from 110-volt 60-cycle A.C. Unit large enough to handle several large speakers. D.C. obtained from socket outlet. Uses a 5Z3 rectifier tube. Size overall 4"x7½"x9". Shpg. Wt. 8 lbs.

**Model E 30**—Less Tube. .... List Price \$12.00

**6-9-VOLT FIELD SUPPLY UNIT**

Designed to be used with 6-volt speakers from 110-volt 60-cycle A.C. Well filtered and fully encased. Does not require a tube as rectifier unit is self contained. Will supply field current for two or three 6-volt speakers. Size overall: 4"x7½"x9". Shpg. Wt. 10 lbs.

**Model E 6** ..... List Price \$22.00

**MODEL 6T TRUMPET CONE UNIT**



The 6T Unit combines the enormous output of the dynamic horn unit with the superior tone quality of the cone type speaker. Designed for use with an exponential horn of the X23 or XA22 type so as to have directional effect in transmitting sound over great distance. A high ratio of acoustic output to electrical input is brought about through the use of a special diaphragm acoustically matched to the horn. The diaphragm consists of extra tough accoustical composition, weather-proof treated and capable of handling enormous volume without breaking down. Voice coil diameter 1¼"; impedance 8 ohms. Safe output rating with proper horn 10 watts, peak 15 watts. Overall diameter 6¼"; depth 6". Shpg. Wt. 10 lbs.

**Model 6T 6**—6 volts. .... List Price \$17.50

**Model 6T 10**—1000 ohms. .... List Price \$17.50

**Model 6T 25**—2500 ohms. .... List Price \$17.50

**Combination of Either X23 Horn or XA22 Horn and 6T Unit** ..... List Price \$38.25

# Speakers by **OXFORD**

## HIGH FIDELITY—BALANCED Color Tone REPRODUCERS

- High fidelity balanced color-tone.
- Curvilinear diaphragm of Inertia counteracted construction.
- Three point balanced spring suspension.
- Moisture-proof coil mountings.

- 1 1/4" diameter voice-coil. Impedance 8 ohms at 400 CPS.
- Universal output transformer.
- High efficiency and power handling capacity.
- Good eye appeal.

The Oxford Chromavox Reproducers, designed to extend the useful frequency response throughout the entire musical range, are available for either D.C. or A.C. operation. D.C. models are supplied with standard fields of 4 ohms, 1000 ohms or 2500 ohms. Fields of special resistance can also be furnished to customers' specifications at slightly higher prices than listed below. A.C. speakers, as listed, are furnished with a transformer for 110 volts,



### MODEL 14DS

**For Large Outdoor or Indoor P.A. Installations**

Peak Rating.....18 Watts  
 Normal Field.....18 Watts  
 Cone Housing Diameter.....14"  
 Height, Overall.....14 1/4"

Model No.	Field Ohms	Transformer	List Price
14DS	4	With Trans.	\$18.00
14DS	4	Less Trans.	16.90
14DS	1000	With Trans.	18.00
14DS	1000	Less Trans.	16.90
14DS	2500	With Trans.	18.00
14DS	2500	Less Trans.	16.90
14DS A.C.	110-volt A.C.	With Trans.	26.50
14DS A.C.	110-volt A.C.	Less Trans.	25.40

Shipping weight: 14DS 18 1/2 lbs.; 14DS A.C. 23 lbs.

60-cycle operation, and use an 80 tube as a rectifier. Special transformers for 25 cycles or 220 volts can be supplied at increased prices. Models 12DS and 14DS are supplied with universal output transformers as standard equipment. The following transformers can also be supplied at no additional charge: 1000-ohm line, 500-ohm line, or 1000-ohm line tapped at 500.

### MODEL 12DS

**For Use on Medium-Sized P.A. Installations or Console Sets**

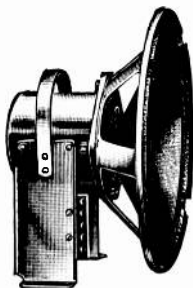
Peak Rating.....15 Watts  
 Normal Field Rating.....15 Watts  
 Cone Housing Diameter.....12 3/4"  
 Height, Overall.....12 3/4"  
 Depth.....8"

Model No.	Field Ohms	Transformer	List Price
12DS	4	With Trans.	\$15.00
12DS	4	Less Trans.	13.90
12DS	1000	With Trans.	15.00
12DS	1000	Less Trans.	13.90
12DS	2500	With Trans.	15.00
12DS	2500	Less Trans.	13.90
12DS A.C.	110-volt A.C.	With Trans.	23.00
12DS A.C.	110-volt A.C.	Less Trans.	21.90

Shipping weight: 12DS 17 lbs.; 12DS A.C. 21 lbs.

## PUBLIC ADDRESS REPRODUCERS

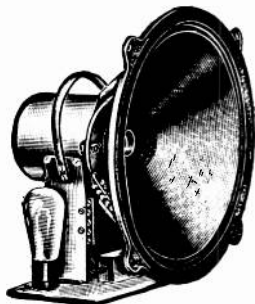
Present-day public address equipment requires speakers capable of handling large amounts of power output, without distortion and without sacrificing sensitivity. With this aim in mind, Oxford Radio Corporation has designed a full line of speakers to suit the needs of permanent and portable sound installations.



11MB  
11MB-A.C.

### DE LUXE MODEL

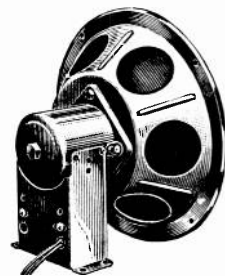
Safe Output Rating.....10 Watts  
 Peak.....15 Watts  
 Normal Field.....10 Watts  
 Baffle Opening.....10"  
 Cone Size, Overall.....11"



14B  
14B-A.C.

### AUDITORIUM MODEL

Safe Output Rating.....15 W.  
 Peak Rating.....25 W.  
 Normal Field.....20 W.  
 Baffle Opening.....12 1/2"  
 Cone Size, overall.....14"  
 Height, overall.....14 1/4"  
 Depth.....9 1/2"



12MB  
12MB-A.C.

### STANDARD MODEL

Safe Output Rating .10 W.  
 Peak.....15 W.  
 Normal Field.....12 W.  
 Baffle Opening.....11"  
 Cone Size, overall.....12 1/2"  
 Height, overall.....12 3/4"  
 Depth.....7 1/2"

Speaker	Field Ohms	Shipping Wt.	List Price
11 MB	4 1000 2500	11 lbs.	\$9.50
11 MB-A.C.	A.C.	15 lbs.	18.75
12 MB	4 1000 2500	14 lbs.	12.50
12 MB-A.C.	A.C.	19 lbs.	22.50
14 B	4 1000 2500	20 lbs.	21.50
14 B-A.C.	A.C.	25 lbs.	32.50

# UTAH High Fidelity SPEAKERS

6½" Dynamic

8" Dynamic

10" Dynamic

12" Dynamic

Utalflux

Orthovox



## PUBLIC ADDRESS DYNAMICS

Utah Dynamic Speakers have been standard in the industry for years. Only the finest of materials and workmanship are ever used in Utah products. Any of the speakers listed may be purchased less output transformer by deducting 75c from the 6", 1.00 on the 8", 10" and 12" speakers.

6½"-6 WATT					
** Type	Field Resistance	Output Transf.	Ship. Wt.	Price	Code
C6U25	2500 Ohms	Universal	4½ Lb.	\$6.00	CAB
C6U6	6 Ohms	Universal	4½ Lb.	6.00	CAD
C6U18	1800 Ohms Tapped 300	Universal	4½ Lb.	6.00	CAL
8"-8 WATT					
E8U25	2500 Ohms	Universal	6 Lb.	\$7.25	CAM
E8U100	10,000 Ohms	Universal	6 Lb.	7.25	CAR
E8U4	4 Ohms	Universal	6 Lb.	7.25	CAT
E8U18	1800 Ohms Tapped 300	Universal	6 Lb.	7.25	CAW
8"-10 WATT					
F8U25	2500 Ohms	Universal	7 Lb.	\$8.75	CUT
F8U100	10,000 Ohms	Universal	7 Lb.	8.75	COT
F8U4	2.5 Ohms	Universal	7 Lb.	8.75	COB
10"-9 WATT					
E10L25	2500 Ohms	Universal Line	10 Lb.	\$8.00	CUD
E10L4	4 Ohms	Universal Line	10 Lb.	8.00	CUP
10"-11 WATT					
F10L25	2500 Ohms	Universal Line	11 Lb.	\$9.75	CUR
F10L2	2.5 Ohms	Universal Line	11 Lb.	9.75	CAP
12"-10 WATT					
E12L25	2500 Ohms	Universal Line	12 Lb.	\$10.00	COY
E12L4	4 Ohms	Universal Line	12 Lb.	10.00	CUE
12"-12 WATT					
F12U25	2500 Ohms	Universal	14 Lb.	\$11.50	CARE
F12L25	2500 Ohms	Universal Line	14 Lb.	11.50	CAPE
F12U2	2.5 Ohms	Universal	14 Lb.	11.50	COOP
F12L2	2.5 Ohms	Universal Line	14 Lb.	11.50	COVE
F12UAC	110 v. 60 cy. AC	Universal	20 Lb.	19.00	CAST
F12LAC	110 v. 60 cy. AC	Universal Line	20 Lb.	19.00	CAUL
12"-25 WATT					
H12C25	2500 Ohms	4400 Ohm Center Tap	19 Lb.	\$26.25	CUBE
H12L25	2500 Ohms	Universal Line	19 Lb.	26.25	CULL
H12C2	1.6 Ohms	4400 Ohm Center Tap	19 Lb.	26.25	CORD
H12L2	1.6 Ohms	Universal Line	19 Lb.	26.25	COOL
H12LAC	110 v. 60 cy. AC	Universal Line	23 Lb.	36.25	CELL
H12CTAC	110 v. 60 cy. AC	4400 Ohm Center Tap	23 Lb.	36.25	CARP

## REPLACEMENT SPEAKERS

Suitable for light P. A. work and all Radio Set replacements. All equipped with Universal output transformer. Available in 1000, 1500, 2000 and 2500 ohm fields. Specify which.

R 500 Series 5" ..... \$ 3.75    R 1000 Series 10" ..... \$ 8.25  
 R 600 Series 6" ..... 5.35    R 1200 Series 12" ..... 10.25

\*\*Peak watts approximately 50% more than recommended input.

## PERMANENT MAGNET DYNAMICS

Not to be confused with inferior quality so-called permanent magnet dynamics. These speakers are in every case equal to or better in performance than regular dynamics of equivalent rating.

6½ INCH-4 WATT				
Type	Output	Wt.	Code	Price
6UP	Universal	4 Lb.	PER	\$7.00
6LP	Universal Line	4 Lb.	PET	7.00
8 INCH-6 WATT				
8UP	Universal	5 Lb.	PEP	8.50*
8LP	Universal Line	5 Lb.	PIN	\$8.50*
8 INCH-8 WATTS				
F8UP	Universal	6 Lb.	PRO	\$12.50
F8LP	Universal Line	6 Lb.	PAR	12.50
10 INCH-9 WATT				
10UP	Universal	10 Lb.	PEN	\$14.50
10LP	Universal Line	10 Lb.	PIT	14.50
12 INCH-10 WATT				
12UP	Universal	13 Lb.	PAD	\$17.50
12LP	Universal Line	13 Lb.	POD	17.50

\*60c additional for pot cover.

## UTAH ORTHOVOX SPEAKERS

Ideal for service where field current is difficult to provide. Amazingly true tone, rugged construction, and long life.

5 INCH					
Type	Power Handling Capacity in Watts Max.	Input Impedance	Approx. Shipping Weight	List Price	Code
25004	1½	High Imp.	2 lb.	\$3.75	DIP
25005	1½	Medium	2 lb.	3.75	DOT
25006	1½	Low	2 lb.	3.75	DOE
25007	1½	5C Line	2 lb.	3.75	DEN
25009	1½	1M Line	2 lb.	3.75	DEW
6 INCH					
26043	2	High Imp.	3 lb.	4.00	DART
26044	2	Medium	3 lb.	4.00	DOLE
26045	2	Low	3 lb.	4.00	DIRE
26046	2	5C Line	3 lb.	4.00	DINE
26053	2	1M Line	3 lb.	4.00	DARE
8 INCH					
28045	3½	High Imp.	4 lb.	4.50	DOME
28046	3½	Medium	4 lb.	4.50	DOLE
28047	3½	Low	4 lb.	4.50	DULL
28048	3½	5C Line	4 lb.	4.50	DOZE
	3½	1M Line	4 lb.	4.50	DELL
12 INCH					
212009	6	High Imp.	5 lb.	7.00	DANE
212010	6	Medium	5 lb.	7.00	DAME
212011	6	Low	5 lb.	7.00	DICE
212012	6	5C Line	5 lb.	7.00	DOOR
212013	6	1M Line	5 lb.	7.00	DIAL

For Class B operation, connect a one-watt resistor across the two outside speaker terminals. The resistance value in ohms should be at least 5 times the total plate to plate load impedance.

\*First letter in Type No. indicates in pounds amount of wire available in field.

A-.3lb., B-.4lb., C-.5lb., D-.7lb., E-1.2lb., F-2.0 lb., G-3 lb., H-5lb.

# Thank You!

When ordering products shown in this book or writing for additional information, please be sure to specify:

1. **Manufacturer's Catalog Numbers and Page Numbers.**
2. **The Year and Edition of This MASTER.**

This will avoid confusion and expedite delivery.

# AMERICAN MICROPHONES

## Microphone Stands

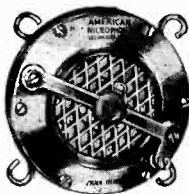


### MODEL "A1"

The special .002 in. hard duralumin diaphragm is stretched to an initial resonance of 5,500 cycles. A level output is thus extended several thousands cycles. The pressure calibration curve shows a response extending from 50 to 10,000 C.P.S. with a variation of but plus or minus 3 dB. The current on each button should approximate 10 mls. Net Weight, 1 lb. 9 oz.; body size, 3 1/2 in. in diameter by 1 1/2 in. thick.

List Price ..... \$45.00

### MODEL "CD-4" DOUBLE-BUTTON CARBON MICROPHONE



is an advance in carbon microphone construction. This model features the "No-pack" cup, which effectively prevents packing due to displacement of the granules. The cellulose retainer gasket, now provided in this model, gives the CD-4 its very usable performance characteristic.

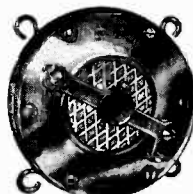
Diaphragm-protective grille is constructed to offer no acoustical impedance.

Internal resistance 200 ohms per button. Stretched duralumin diaphragm .002 in. in thickness. Normal operating current 10 ma per button. Finished in polished chrome. Complete working data and characteristics packed with each instrument. Packed wt. 1 1/4 lbs. Diameter 3 1/4 in. depth 1 1/4 in. Complete with yoke with 5/8"-27 thread for floor stand mounting.

Application: Amateur transmitters, home recording, public address, inter-office communication systems, etc.

List Price ..... \$15.00

### MODEL "EL-4" DOUBLE-BUTTON MICROPHONE



has cast grille which is attractive and serves as a protection to the diaphragm. The "No-pack" carbon cup greatly increases the stability of the instrument, making frequent volume settings, while the microphone is in operation, unnecessary. The diaphragm is stretched duralumin .002 in. in thickness and the tension has been carefully controlled so resonance does not occur within the working range. The cellulose retainer gasket, further reduces packing and undesirable damping and increases carbon life.

Normal operating current 10 ma per button. Internal resistance 200 ohms per button. Finished in polished chrome. Carefully packed with a comprehensive set of instructions and performance data. Packed wt. 1 1/4 lbs. Diameter 2 3/4 in., depth 1 1/4 in. Complete with yoke with 5/8"-27 thread for floor stand mounting.

Applications: Experimental recordings, amateur stations, public address installations etc.

List Price ..... \$7.50

### MODEL "SD"

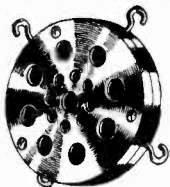


Typical public address microphone. The gold-spotted dural diaphragm is stretched to a measured resonant point of 5000 C.P.S. Good-quality reproduction extends from 50 to

well above 6000 cycles. The buttons, equipped with polished carbon discs, have a resistance of 200 ohms each. Finished in bright nickel. 3 in. diameter 1 1/2 in. thick. Wt. 1 lb. 2 oz.

List Price ..... \$30.00

### MODEL "SJ"



It is a single-button microphone with an internal resistance of 200 ohms. The "SJ" may be used with any standard two-button microphone transformer, by using one-half of

the primary in the microphone circuit. A regular single-button microphone transformer, however, is preferable.

Applications.— Inter-office communicating systems, burglar alarms, amateur transmitters, concealed detective auditors, and as an aid to the hard-of-hearing.

List Price ..... \$5.00

### MODEL "DB"

This double button mike is built to withstand rough usage. No rubbing noises are transmitted from the case to the microphone. A switch in the handle, makes and breaks the circuit.

The output of this two-button microphone is constant between the upper and lower limits of the speaking voice. Chrome finish. Furnished with 12 feet of three-conductor microphone cord. 200 ohms resistance per button.

List Price ..... \$15.00



### MODEL "SB"

The "SB" Hand Microphone is a single-button composite diaphragm unit. Equipped with an on-and-off switch. Handles the voice frequencies adequately, and is very sensitive.

List Price ..... \$5.00

### MODEL "BH" LAPEL MIKE



The quality obtainable with this little unit is above expectation. It is fully adequate for high and low range speaking voices. Single button, 200 ohms resistance. Finish: black art metal; size, 1 1/2 x 1/2 ins.

Applications.— Speaker's platform, lecture rooms, theater premiers, sports announcements, surgeon's operating lecture rooms, remote control, class rooms.

List Price ..... \$6.00

### MODELS "FS" AND "BS" STANDS

American Round Base Stands suitable for every purpose. Finished in bright nickel. The heavy base is mounted on an imbedded vibration absorbing rubber ring. The tubular upright serves as a passageway for microphone cable. Friction control permits noiseless positive height adjustment. Base diameter, 9 in.; net weight, 9 lbs. Floor stand extended height 64 in. Banquet stand extended height, 26 ins.

Furnished without the ring. The extension rod has a 5/8"-27 male thread to accommodate our 6 in. ring or any standard ring with a 5/8"-27 female thread.

Floor Stand, Model "FS"  
List Price (less rings) ..... \$10.00  
Banquet Stand, Model "BS"

List Price (less ring) ..... \$7.00



### CARBON GRANULES

American Granules are processed to eliminate carbon noise. They are high in sensitivity and packed in hermetically sealed vials in exact amounts. Each vial packs 2 two-button standard microphones.

List Price ..... \$0.75

### SUSPENSION RINGS WITH 3/8" x 27 FEMALE THREAD FOR STAND MOUNTING

Chrome Plated with 4 Double Mounting Hooks

6" Ring—List Price ..... \$2.50

5" Ring—List Price ..... \$2.25

Complete with 8 Springs

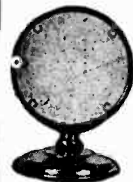
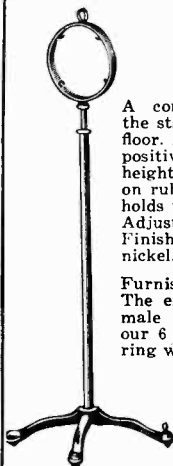


### MODEL "FY" FLOOR STAND

A compensating foot adjusts the stand to any unevenness of floor. A friction control permits positive, quick, and noiseless height adjustments. Mounted on rubber pads. The 11-lb. base holds the center of gravity low. Adjustable from 32 to 66 ins. Finished entirely in bright nickel.

Furnished without the ring. The extension rod has a 5/8"-27 male thread to accommodate our 6 in. ring or any standard ring with a 5/8"-27 female thread.

List Price  
(Less Ring)  
\$15.00



Models "EL" and "A1" Desk Stand's base rests on an insulating imbedded rubber ring. The four double hooks facilitates the installation and removal of unit. Space provided for passing cord thru ring. Stands finished in nickel.

"A1" Desk Stand. 6-inch ring, no covers—springs included. Weight 4 lbs., 9 1/2 in. high.  
List Price ..... \$4.00

"EL" Desk Stand. 5-inch ring, no covers—springs included. Weight 2 lbs.: 7 1/2 ins. high.  
List Price ..... \$2.75

Covers for A1 Stands—List Price ..... \$4.00

Covers for EL Stands—List Price ..... \$2.00

# AMERICAN MICROPHONES

## Microphone Stands

### "GLOBE" CRYSTAL MICROPHONE C-5

#### DUAL-DIAPHRAGM DUAL-CRYSTAL



The C-5, a non-directional microphone, recommended for good quality audio pick-up, which includes general public address applications, disc and film recordings, and good amateur phone transmission. The high internal capacity of the dual-crystal elements lowers the impedance proportionately, thus the cable effect is minimized. The frequency response of the C-5 is uniform for all angles of approach. Standard reference level, -58 db. Push-pull or single grid input may be used.

Each microphone is equipped with side cable outlet stand mounting ( $\frac{5}{8}$ " x 27 thread) and eight feet low-capacity cable.

List Price

C-5 Crystal Microphone .....	\$25.00
Desk Stand "AG" .....	2.50
Floor Stand "AF" .....	8.00

### MODEL CL-2 LAPEL MICROPHONE



A crystal microphone designed specifically for lapel microphone work. Output is equal to that of the larger diaphragm type. Diameter  $2\frac{1}{4}$ ", depth  $\frac{3}{8}$ ". Equipped with spring clip and 25 feet cloth-covered cable.

CL-2 Lapel Microphone

List Price  
\$25.00

### AMERICAN DELUXE D-3 DYNAMIC MICROPHONE



The reputation of the American Microphone Company stands back of this instrument, whose quality is not excelled by any other dynamic microphone produced today.

**FIDELITY:** Faithful response over the entire audio range. Absence of peaks means elimination of acoustic feedback troubles in PA systems.

**OUTPUT:** Minus 80 db. with zero level at 6 Milliwatts permitting low level mixing. 50 ohms impedance. Inductive pick-up troubles at a minimum.

The American Model D-3 Dynamic is rugged, unaffected by temperature, pressure and humidity. Semi-directional pick-up. Cobalt steel field, no polarizing voltage required. Case bronze finished  $2\frac{3}{4}$ " in diameter by  $2\frac{1}{2}$ " long. Equipped with 3 contact plug at microphone with 25 feet of high quality shielded and rubber covered cable. Mounting consists of an inconspicuous yoke slipping over unit and designed to mount on standard  $\frac{5}{8}$ " x 27 male thread. Suitable for broadcasting, high fidelity recording and finest public address purposes.

List Price .....\$90.00

### A. G. CRYSTAL MICROPHONE



A. G. Stand

Model AH

Model AG

An all-purpose microphone with a wide range of efficiency. Self-energizing; no polarizing voltage is required. Its high impedance permits the output to be fed direct to the grid of the input tube. It is not subject to overloads and is practically free from the disturbance of mechanical shock. Protected against moisture and temperature changes.

Completely wired, with low-loss microphone cable. A yoke fitting is furnished for mounting on desk or floor stand. Can be mounted in the standard carbon microphone rings. Size of the head  $3\frac{1}{4}$ " x  $1\frac{3}{8}$ ".  
(Complete Instructions)

Model "AG"—List Price .....\$22.50

#### MODEL "AH" HAND MICROPHONE

Equipped with switch and filter to absorb surge of make-and-break contact. Can be inserted in regular desk base.

List Price .....\$25.00  
Base only ..... 1.00

#### MODEL "AG" DESK STAND

(Illustrated.) Chromium-plated. Base removable without removing plug from assembled cable.

List Price .....\$2.50

#### MODEL "AF" FLOOR STAND

Extends to 6 feet in height. Nine-inch cast base assures firm support. Vibration absorbing rubber ring imbedded in base. Chromium-plated extension tubes. Base and main tube art metal black.

List Price .....\$8.00

Model AF

### ELECTROSTATIC MICROPHONES

**NO INHERENT NOISE;** immune to temperature changes.  
**UNAFFECTED BY ATMOSPHERIC MOISTURE** and barometric changes.  
**NO CAVITY RESONANCE.** Free from **STRUCTURAL RESONANCE** peaks.  
**HIGH IMPEDANCE** — Direct to grid. No matching transformer.

An amplifier having a gain of 90 db. or greater is required, or a pre-amplifier. A polarizing voltage is necessary. Three or four electrostatics may be mixed without the use of transformers. A full set of resistors, packed with each microphone. Simple to operate. For amateur station use, public address, inter-office communication systems, call systems, etc.

**MODEL GA** — Shown in specially designed stand mount. Eyes are provided with each unit for suspension mounting in carbon microphone stands. Size 3" in diameter and 1" thick. Equipped with 15-ft. shielded cable. Net weight 1 pound.

List Price .....\$16.50

**MODEL GB HAND TYPE (With Switch)**— Equipped with 15-ft. shielded cable.

List Price .....\$19.50

**MODEL GG DESK MOUNT**—Height 12". Net weight 3 pounds.

List Price .....\$6.00

**MODEL GE FLOOR STAND**—Compensating foot. Adjustable 32" to 66". Bright Nickel. Net weight 11 pounds.

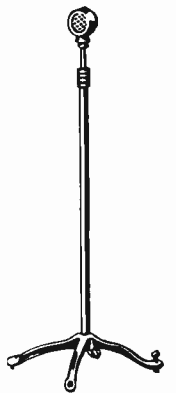
List Price .....\$19.00

**MODEL GO FLOOR STAND** — Round base. Imbedded rubber vibration absorbing ring. Adjustable 32" to 64". Bright Nickel. Net weight 9 pounds.

List Price .....\$15.00



Model GA



Model GE

# UNIVERSAL MICROPHONES

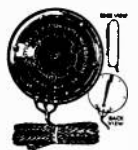
## Microphone Stands and Accessories

### Mod. W—Single Button



Small protected diaphragm, very sensitive and compact. Standard impedance—gold surface. Output level—38 dB. 1 1/8" diam., 1/4" thick. Wt. 1 1/2 oz.  
**List Price . . . \$3.00**

### Universal Lapel Mike



#### Two Button

A precision instrument with real broadcast reproduction. Cord easy to replace or remove. Output level—55 dB.; frequency response 50 to 4500 cy. Diam. 2 1/4" x 3/4" thick. Wt. 2 oz.

**List Price . . . \$25.00**

#### Single Button

For hearing aids, detective listening-in equipment, etc. Output level—37 dB.; frequency response from 50 to 4000 cy. Same as above in appearance.

**List Price . . . \$17.00**

### Ordering Phone Box



Microphone Control Box 3 1/2" x 5" x 2". Wt. 1 1/2 lbs. Engraved bakelite panel as shown. Threaded for standard 1/2" pipe conduit. Provided with press button "to talk," green light as "O. K. signal" and red light

showing "in use." For single-button mounting, press button is D.P.S.T.; without microphone.

**List Price . . . \$10.00**

For double-button mounting, press button is three pole single throw; without microphone.

**List Price . . . \$12.00**

### Handi Mikes



Scientifically damped. Gold contact faces. Equipped with "on and off" switch in handle. Length 6". Diam. head 2 1/4". Packed Wt. 1 1/2 lbs. (Standard impedance.)

#### Single-Button Model No. 200.

For all uses. Output level—40 dB. With 6 ft. cord.

**List Price . . . \$10.00**

**Double Button.**—For clarity and high quality. Damped for use close to loud speakers, sound trucks, etc. Output—55 dB. With 6-ft. cord.

**List Price . . . \$15.00**



### Model "A"—Single Button

Fully protected diaphragm. New heavy-duty design. Stretched diaphragm—24k gold contacts, highest grade. "Less hiss" granules. Scientific damping. 200 ohms—response 100 to 3500 cy. Output level—45 dB. Diam. 3"x1" thick. Net Wt. 1 lb. Packed Wt. 1 1/2 lbs.

**List Price . . . \$15.00**

### Models X and XX—Stretched Diaphragm

Standard impedance—gold spots, low hiss level, and new detailed improvements. Fully protected diaphragm, frequency response 100 to 4000 cycles. Packed Wt. 1 1/4 lbs.

**SINGLE BUTTON** (as shown, except no front bar is used. Output level—50 dB.)

**List Price . . . \$7.50**

**DOUBLE-BUTTON** (as shown in illustration with heavy front bar). Furnished in three sensitivities—S-Sen. output level—45 dB.; M-Med. output level—50 dB.; D-Damped output level—55 dB.

**List Price . . . \$10.00**



### Model "BB"—Two-Button



The general all purpose microphone for both voice and music. 3 in. dia., 2 in. thick. Wt. packed 1 1/4 lbs. Polished chrome plate. Fr. 50 to 5000 cy. 200 ohm buttons.

Three degrees of sensitivity—S-Sen. Output level—45 dB.; M-Med. Output level—50 dB.; D-Damped. Output level—55 dB.

**List Price . . . \$25.00**

### Model "KK"—Two-Button

Ideal for studio broadcasting and recording. Frequency range from 40 to over 6000 cycles. Buttons 200 ohms impedance each. Output—50 dB. 24K pure gold spots. Finished in polished chrome. Three degrees of sensitivity as above. 2 1/2 in. dia., 1 1/4 in. thick. Net Wt. 1 1/4 lbs.

**List Price . . . \$40.00**

### Model "LL"—Two-Button

Standard broadcasting Model. Rust proof. Pure gold contacts, 30 to 7000 cycles. Output—50 dB. Dia. 3 1/2 in.; 1 1/4 in. thick. 200 ohms per button. 3 degrees of sensitivity as BB.

**List Price . . . \$60.00**

### Model "E" Condenser Microphone

#### For Highest Quality Broadcasting and Recording

Assembled. Ready for use as shown. A 2-stage amplifier using No. 230 tubes. Absolutely does away with batteries and renewal costs. Just plug Model "E" into 110v. A.C. 50-60 cycle socket. Absolutely no hum or ripple. Guaranteed as quiet as batteries. Output perfect for recording on either film or discs. Frequency response 35 to 10,000 cycles. Output greater than from a standard two-button microphone (—32 dB.) Connect to standard input transformers where carbon microphones have previously been used. Head has automatic barometric adjustment and diaphragm is protected by a solid cast grating. 25-ft. of rubber-covered, shielded cable furnished. Without tubes. Black crackle finish. Wt. packed, 34 lbs.

**List Price Complete . . . \$100.00**

**Model E-30**, as shown and described above, without power pack. Wt. 11 lbs.

**List Price . . . \$60.00**

**Battery Model E-64**, wired for 864 tubes. To be entirely operated by batteries. Output—35 dB. Without tubes. Wt. 11 lbs.

**List Price . . . \$60.00**

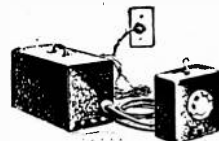
**E" Condenser only.** With circuit blue print—**List Price . . . \$40.00**

**Suitable Desk Mount—List Price . . . \$6.00**

**Floor Stand—List Price . . . \$15.00**



### Model "G" All A.C. Condenser Microphone



Same specifications as above, but 70 to 7000 cycles.

**List Price . . . \$84.00**

**"G" Condenser head only, with blue print.**

**List Price . . . \$30.00**

**Floor Stand for Condense: Mike.**

**List Price . . . \$15.00**

**Desk Mount for Condenser Mike.**

**List Price . . . \$6.00**

### Suspension Rings

Solid metal for hanging mikes from ceiling, etc. Beautifully chrome-plated. 8 springs included.

5" diam. for Model X-KK.

**List Price . . . \$2.50**

6 1/2" diam. for Model LL, BB.

**List Price . . . \$4.00**



### New "X" Desk Mount



Highly-polished nickel-plated ebony rubber-covered base and 8 suspension springs, especially for mounting of Universal "X" microphone. Ring 5" diam.

**List Price . . . \$3.50**

### "K" Desk Mounts

5" diam. for mounting, Models "X", "K", or "A." 4-point suspension. 8 springs. Base set in moulded rubber. Two tubes furnished for high and low assembly. Chrome-plated finish. Blank call-letter plate. High assembly 13". Low assembly 9 1/2".

**With Covers.**

Springs included.

**List Price . . . \$6.00**

**Without Covers.**

Springs included.

**List Price . . . \$4.00**



### "L" Desk Mounts

Similar to Type "K", but more rugged. Ring 6 1/2" diam.

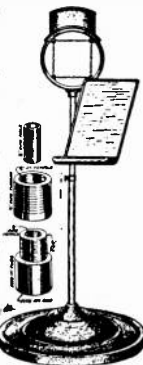
**Without Covers—List Price \$6.00**

**With Covers—List Price . . . \$10.00**

### Studio Floor Stand

#### For Dynamic-Ribbon or Crystal Mikes

A perfect floor stand. Ring 6 1/2" diam. Base 12" diam. Wt. 12 1/2 lbs. Ht. 5 1/2 ft. Smooth operation. Clamplock positive. Silver crackle base. Highly polished chrome plate equipped with blank call letter nameplate. 8 springs included. Three fittings are furnished with each floor stand at no additional cost allowing the use of any make or model of microphone. Also a light weight adjustable and detachable copy holder furnished free.



**List Price . . . \$15.00**



# UNIVERSAL MICROPHONES

## Microphone Stands and Accessories

### Hearing Aid Devices



**HA2**—Has two-stage amplifier using Type 230 tubes— $3\frac{1}{2}'' \times 6\frac{1}{2}'' \times 7''$ . Weight without batteries 4 lbs. With batteries installed 7 lbs. Utmost

in quality and volume. Complete with Universal Microphone and Two-ounce Earphone with head band, but without tubes or batteries.

**List Price**.....\$44.00

**HA1**—Same as above except larger— $11'' \times 5\frac{1}{2}'' \times 7\frac{1}{4}''$ . Weight without batteries  $4\frac{1}{4}$  lbs.; with batteries  $16\frac{1}{2}$  lbs. Up to ten single earphones can be connected to HA1 at one time.

**List Price**.....\$48.00

### "Mike" and "Phone" Hand Sets



Special for five-meter transceivers. Light in weight and compact. Highly polished molded bakelite units of the French phone type, using special high output mikes. A 6-ft. 4-conductor cord furnished. Wt. 15 oz.

**Single-Button Mike** (output—38 db.), with either 2000 or 75-ohm high quality sensitive receiver.

**List Price**.....\$16.00

**Double-Button Mike** (output—55 db.), with either 2000 or 75-ohm high quality sensitive receiver.

**List Price**.....\$15.00

### Telephone Type Plug and Jack



Special 3-conductor plug and jack for microphone use. Plug length  $2\frac{3}{4}''$ . Diameter  $\frac{3}{8}''$ . Jack length  $3\frac{1}{2}''$ . Fits  $\frac{3}{8}''$  hole.

**Jack—List Price**.....\$0.75

**Plug—List Price**.....1.50

### Suspension Springs



Highest grade spring steel. Rust proofed and polished chrome plated.

**List Price, each**.....\$0.05

### Carbon Granules

No. 100 Size



Very best grade transmitter carbon granules. Each vial contains sufficient granules to recarbon two two-button microphones. Hermetically sealed.

**List Price**.....\$1.00

## 4 NEW MICROPHONES



The Ideal Stage Microphone

Measures only  $2\frac{3}{4} \times 5\frac{3}{8}$  inches,  $1\frac{3}{4}$  inches in thickness and weighs less than 18 ozs. (Packed weight, 4 lbs.). The head swings to any desired angle. Beautifully finished in black enamel and artistic chrome plate.

**MODEL RL**—Velocity Microphone. Not effected by temperature or humidity. Frequency response flat from 40 to 10,000 C. P. S. Output—63 D. B. with built-in transformer to match 200 ohm line for feeding direct into present microphone mixers, input transformers, of amplifiers of not less than 85 D. B. gain. Can be used up to 500 feet from main amplifier.

**List Price, (less Stand) (Plug extra)**.....\$22.50

**MODEL RP**—Velocity Microphone. Not effected by temperature or humidity. Frequency response flat from 40 to 10,000 C. P. S. Output—63 D. B. with built-in transformer to match 500 ohm line for feeding direct into input transformers, mixers, or standard 400 ohm lines, etc., to amplifier of 75 D. B. or more. Can be used up to 500 feet from main amplifier.

**List Price (less Stand) (Plug extra)**.....\$22.50

**MODEL RH**—High Impedance velocity microphone. Frequency response flat from 40 to 10,000 C. P. S. Output—63 D. B. Direct to grid without necessity of transformer. Can be used without preamplifier on amplifiers of not less than 85 D. B. gain. Also by use of low capacity R. F. Cable can be used 200 feet from amplifier.

**List Price (less Stand) (Plug extra)**.....\$22.50

**MODEL CB**—Highly refined two-button carbon microphone built especially for public address work. To be used with amplifier of approximately 70 D. B. gain or more. (No preamplifier needed.) When used with low gain amplifiers brings old type systems up to the minute. Buy Model CB if you want volume and quality without complication and expense of preamplifiers. Will operate without loss up to 500 feet from amplifier. Output over 10 times that of low level devices. Output S (Sensitive) for transmitters—45 D. B.; M (Medium) for music and speech—48 D. B.; D (Damped) for close talker—55 D. B.

**List Price (less Stand) (Plug extra)**.....\$22.50

**3-Contact Coupling Plug** as illustrated.....**List Price \$1.75**

### ORCHESTRA STAND

Orchestra Stand illustrated herewith will fit any model microphone listed above, as well as all others having  $\frac{5}{8}$ –27 thread. In 3 sections; as a floor stand it extends to 66", or as a table or banquet stand down to 25". Takes down in a jiffy without tools. Packs in space only  $3\frac{1}{2} \times 20''$ . Will go in any suit case or can be carried in overcoat pocket. Clamp joint firm, smooth and noiseless. Chrome and cadmium plated. Neat and clean out in appearance. Weighs only 4 lbs. Microphone thread at top  $\frac{5}{8}$ –27th.

**List Price**.....\$10.00



### DESK MOUNT

Threaded especially for above microphones. Beautiful chrome finish. Height of Desk mount is 8" with cushion rubber base cover. Overall height when microphone mounted 18"

**List Price**.....\$4.50

### Professional Cutting Head Full Frequency Built Like a Watch

A scientific recording head capable of cutting or grooving all types of material. Size— $2\frac{1}{4}''$  high  $\times 1''$  wide  $\times \frac{3}{8}''$  thick. Response to input frequency substantially flat from 30 to 8000 cycles.

Furnished in either 15, 50, 200, or 400-ohm. Specify which wanted in ordering.

**Recording Head, only**, as shown above.

**NET Price**.....\$35.00

Professional cutting head as described above, complete with 12 inch arm. Furnished in either 15, 50, 200, or 400-ohm.

**NET Price**.....\$45.00

### Full Frequency Pickup



A high class pickup for playback of all types of instantaneous records—especially aluminum, Silveroid and other semi-plastic materials, up to 16 inches. Adjustable arm. Pressure adjustable. Matches input of standard mike transformers. Supplied in either 15, 50, 200, or 400-ohm. Beautifully finished.

**List Price**.....\$15.00

### Needles



**A**—For simultaneous grooving and recording on aluminum discs. Sapphire.

**List Price**.....\$4.00

**B**—For recording on pregrooved discs. Sapphire.

**List Price**.....\$4.00

**D**—For Silveroid and semi-plastic materials in which a fine thread is actually cut out. Hardest Sapphire.

**List Price**.....\$6.00

**Red Cactus Needle**—Plays 5 to 15 records without repointing. Envelope of 10 needles.

**List Price**.....\$1.00

### Blank Aluminum Disks

Universal Aluminum Discs are of special hardness, alloy and surface mirror polish to assure volume, brilliancy and durability, with a minimum of surface noise.



Dia.	List Price	Dia.	List Price
6"	\$0.24	10"	\$0.48
8"	.36	12"	.60

AMPERITE OFFERS A COMPLETE LINE OF VELOCITY MICROPHONES FEATURING:

1. High fidelity reproduction of the finest quality.
2. No mechanical sounding peaks.
3. Eliminates acoustic feedback.
4. Triple shielding eliminates inductive hum.
5. First to use new Nickel Aluminum Magnets.
6. Hand-hammered ribbon will withstand even a 40-mile gale.
7. No background noises. Not affected by temperature, pressure or humidity or rain.

NOTE: If unopened, Amperite Velocity Microphones will give many years of uninterrupted service without any loss of efficiency. No ribbon changing or servicing required.

GUARANTEED FOR 3 YEARS AGAINST ANY MANUFACTURING DEFECTS



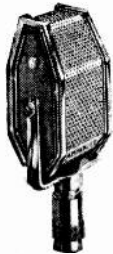
**New! Studio Models SR80 and SR80-H**

Feature the ring core transformer—the ideal transformer! Its low distributed capacity decreases the high frequency attenuation to an absolute minimum, resulting in more brilliant reproduction. Inductive pickup is reduced to an absolute minimum.

The SR80 is electrically and mechanically accepted as the very best in microphones. Used by leading broadcast studios throughout the world. Frequency response 30-14,000 c.p.s. Output 64 db (open line); hand-hammered ribbon not affected by even a 40-mile gale. Obtainable 25, 50, 200 and other output impedances. State impedance required.

**Model SR80-H**—High Impedance—Operates directly into grid of tube. New design permits running 1/4" cable up to 125 ft. Shipping Weight—8 lbs.

	<b>Gunmetal</b>	<b>Chrome</b>
<b>List Price. SR80 or SR80-H</b>	<b>\$80.00*</b>	<b>\$82.00*</b>
<b>Call Letter Plate. List Price</b>	<b>5.00*</b>	



**NEW!**

A specially designed microphone built to Amperite standards which can be used for both speech and music. No peaks. Flat response over audible range. Output—68 db. Triple shielded. Shock absorber. Swivel bracket. Shipping wt. 5 lbs.

**Model RAL (200 ohms)** Gunmetal Chrome  
8 ft. of cable. List Price..... \$22.00 \$23.00

**Model RAH (2000 ohms)**  
High Impedance, with 12 ft. of cable. List Price..... 22.00 23.00

**NEW! AMPERITE VELOCITY RBHn – RBMn – RBSn – RSHn**

Compact. Streamline. Modern. Embodies the latest and best technique in microphone design. Gives studio type reproduction. Unexcelled for quality, fidelity and ruggedness!

**FEATURES:**

1. All-cast case, achieving maximum ruggedness.
2. Acoustically designed to eliminate any possibility of cavity resonance.
3. 6 db higher output.
4. Triple shielded.
5. Switch.
6. New cable clamp.

Available with built-in cable connector having a locking device.

**RBHn (High Impedance) 2000 ohms.** Excellent for speech and music. Permissible cable length up to 125 ft. Output —64 db. Frequency response 40-11,000 c.p.s. Complete with shock absorber, switch, 25 ft. cable. Obtainable without switch upon request.

**RBMn (Low Impedance) 200 ohms.** Other impedances obtainable at no extra charge. Permissible cable length up to 2000 ft. Can be used with high gain amplifier in conjunction with Amperite cable type transformer Model LGP. No pre-amplifier necessary. 40-11000 c.p.s. Output —64 db.

**RBSn 200 ohms.** Low impedance type for very unusual feedback conditions. Output 3 db lower than RBM. Frequency range 40-11,000 c.p.s.

Shipping Weight—5 lbs.

	<b>LIST PRICE</b>	<b>Gunmetal</b>	<b>Chrome</b>
<b>Models RBHn, RBMn, RBSn, RB-BHn, with 25 ft. cable, Switch</b> .....		<b>\$42.00</b>	<b>\$43.00</b>
<b>With built-in female cable connector, male plug and 25 ft. cable</b> .....		<b>44.00</b>	<b>45.00</b>

**MODEL RB-DIn**—Dual impedance for low or high impedance amplifiers. Can be used with high impedance input with S.C.S. cable lengths up to 125 ft.—or low impedance input with D.C.S. cable lengths up to 2000 ft. Just plug in the proper cable.

Shipping Weight—5 lbs.

**List Price. Model RB-DIn**.....\$45.00

**NEW!** Excellent all-around microphone for speech and music. Similar in appearance but slightly lower output and frequency range than RBMn and RBHn.

**MODEL RSHn—2000 ohms (High Impedance)**

Output —68 db. Frequency range 60-7500 c.p.s. Permissible cable length 100 ft. Cable supplied 12 ft.

**MODEL RBSn—200 ohms (Low Impedance)**

Output —68 db. Frequency range 60-7000 c.p.s. Permissible cable length 2000 ft. Cable supplied 12 ft.

Shipping Weight—5 lbs.

**List Price. Model RSHn or RBSn**.....\$32.00

**With built-in male cable connector, female plug and 12 ft. cable**..... 34.00

With switch, add \$1.00 List Extra.  
Chrome finish, add \$1.00 List Extra.

**NOTE**

**Special custom microphones**—Special requirements, such as microphones with increased low or high frequencies or special impedances, are obtainable at no extra charge from the factory.

**Cable lengths** — Any additional lengths attached to microphone or plug are obtainable at 3c net per foot. Charge made for additional cable only. Prompt service.

**Certified measurements only** are given for frequency range. Wherever output in db is given, only certified measurements are used (reference 10 bars pressure). Not to be confused with measurements given at one foot normal speech volume.

## NEW AMPERITE MICROPHONE STANDS!

Positive, Non-Sliding ball-bearing clutch. Will never wear out . . . never require adjustment. Will not "Creep." Tightens with only one-eighth turn of clutch. Microphone can be rotated without loosening clutch. Smooth pneumatic-like action up and down. Stands are furnished in polished gunmetal offset with a chrome clutch. Also available in all chrome finish at slight additional cost.

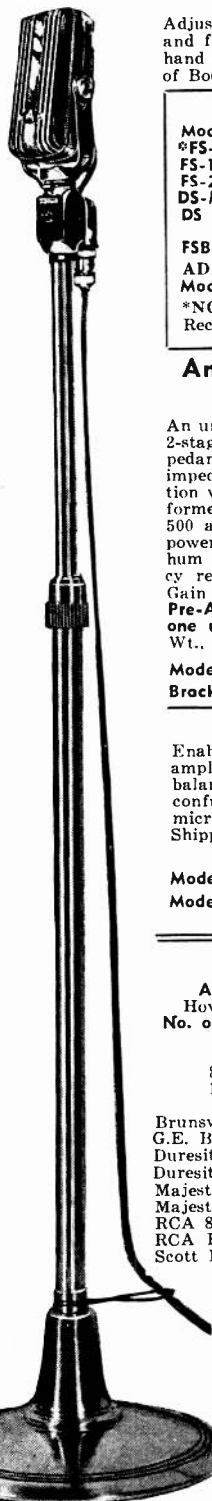
### AMPERITE BOOM STAND (MODEL FSB)

Adjustable in any direction. Noiseless operation permits adjustment while in action. Adjustable counterweight and friction clutch provide smooth and easy operation. Boom can be lowered or raised by mere pressure of hand without requiring any locking devices. Microphone height can be varied from 36 in. to 96 in. Length of Boom arm, 28 in.

Model	Description	Base Weight	Base Spread	Height Range	Thread	Shipping Weight	Gunmetal	Chrome
FS-8M	Floor Stand	9 lb.	11"	42-60"	5/8"-27	15 lb.	\$14.00	\$15.00
FS-13M	Floor Stand	13 lb.	11"	42-60"	3/4"-27	19 lb.	16.00	17.00
FS-25M	Studio 3-legged floor stand	21 lb.	17"	42-69"	1 1/2" pipe	25 lb.	26.00	28.00
DS-M	Comb. desk and banquet	6 lb.	7 1/2"	16-24"	5/8"-27	11 lb.	10.00	11.00
DS	Desk only	6 lb.	7 1/2"	3"	5/8"-27 & 1 1/2" pipe	11 lb.	5.00	6.00
FSB	Boom	21 lb.	17"	36-96"	1 1/2" pipe	43 lb.	50.00	55.00

ADAPTER for microphone having 1/2" pipe thread to be used on 5/8"-27 stand; Model B-P. List Price \$0.80

\*NOTE: The FS-8M is similar in appearance as the FS-13M, but lighter and easy to move and shift about. Recommended for use in Night Clubs, Theatres, etc.



### Amperite A.C. Operated Pre-Amplifier

#### Model PAC6

An unusually excellent A.C. operated 2-stage pre-amplifier with high impedance input. Can be used with low impedance microphone in conjunction with Amperite cable type transformer LGP. Output impedance 200, 500 and high imp. Balanced wound power transformer reduces inductive hum to absolute minimum. Frequency response 40-10,000 cycles (1 db.) Gain 56 db. Metal Tubes.

Pre-Amplifier and Power Supply in one unit; size 5"x16"x6" high. Shpg. Wt., 18 lbs.

Model PAC6. List Price (less tubes) \$50.00  
 Brackets for panel mounting. List Price 2.00



### AMPERITE JUNIOR (LAPEL) VELOCITY

Size of a match box. Ideal for lectures, specialty acts and "walking" after-dinner speakers. Can be hidden under coat. Output is constant with any position of the head. Transformer included in microphone case. Frequency response 60-7500 c.p.s. Size 2 1/8"x1 3/4"x 3/8" in.

Models 7J (200 ohms) or 7-JH High Impedance with 25 ft. cable; shpg. wt., 2 lbs.

Model 7J (200 ohms) or 7-JH High Impedance with 25 ft. cable; shpg. wt., 2 lbs. List Price \$30.00



### INPUT TRANSFORMER (CABLE TYPE) LGP

Enables the use of low impedance microphone and cable lengths up to 2000 ft. with amplifiers having high impedance input. Hum trouble is entirely eliminated by special balanced windings. Extra heavy case; will withstand mechanical abuse. Not to be confused with ordinary input transformers. Can be used with 25, 50 or 200 ohm microphones. Output connects directly to the high-impedance input of amplifier. Shipping weight, 3 lbs.



Model	Frequency Response	List Price	Model	Grade	List Price
Model LGP (Standard)	60-8000 c.p.s.	\$ 5.00	Model LG (Line-to-Grid)	Standard	\$ 5.00
Model LGP (Laboratory)	40-14,000 c.p.s.	10.00	Model PL (Plate-to-Line)	Standard	5.00
			Model LG (Laboratory Grade)	(Ring Core)	12.00
			Model PL (Laboratory Grade)		10.00

### AMPERITE SELF-ADJUSTING LINE VOLTAGE CONTROL

Amperites—110 Volts—A.C. Sets  
 How to Determine Proper Amperite  
 No. of Tubes in Set Use Amperite No.

4 or 5	5-A-5
6 or 7	7-A-5
8, 9 or 10	9-A-5
11 or 12	11-A-5

#### A.C. Set Replacements

Brunswick 14, 21, 31	9-20
G.E. B-86	5-16
Duresite 98, 105, 106	9-20
Duresite 110	11-20
Majestic 70, 71, 72	70
Majestic 90, 91, 92	90
RCA 876 (\$2.50 net)	876
RCA R-223	5-16
Scott Raider	12-20
Victor R32, 52	10v10
Victor R35, 39	9v10
List Price, any type	\$2.10
Socket. List Price	.25

#### Replacement Regulators for AC-DC Sets

Will control line voltages of 85 to 140 volts.

Amperite KL-45 octal base—will replace:  
 42A M45R K49B K55C L55D L49B  
 49A K42B K49C K55D L42B L49C  
 55A K42C K49D L55B L42C L49D  
 M50R K42D K55B L55C L42D

Amperite 4P-45 4 Prong base -- will replace:

185R	185L8	165R44	140R4	140L44
185R4	185L44	165L4	140R8	300
185R8	165R	165L8	140R44	50X3
185R44	165R4	165L44	140L4	5B
185L4	165R8	140R	140L8	

Amperite 50-AB octal base—will replace:

55A1	55B2	49A2	42A1	42B2
55A2	49A1	49B2	42A2	21R212
List Price, any type \$1.25				



#### Replacement Regulators for 2-Volt Battery Sets

2H1	(1D1)* for .25 amp.	10AB	(5H1)* for .55 amp.	30	(1A2)
1B1	" .36 "	1K1	(5H1)* " .55 "	31	(1B2)
1G1	" .42 "	6-1	(1J1)* " .62 "	52	(1C2) †
1E1	(5E1)* " .48 "	1F1	(7-1) " .72 "	1R1G	(1T1G) † for .54 amp.
5E1	(1A1)* " .50 "	7H1	(1C1)* " .76 "	1S1G	" .66 "
6AA	(5E1)* " .50 "				

\*Either type can be used

†Octal base List Price, any type \$1.25

# CARBON RIBBON **EASTERN** MIKE STANDS **CRYSTAL DYNAMIC**

## Two-Section Floor Stands

### 8-Lb. Thumb-Screw Type

A high-grade floor stand with a base diam. of 7½". Extends from 3 ft. to 67". Rod is threaded for ½"-27 thread.

**Without fittings:**  
**No. EF-3L—Chromium..... List Price \$10.00**  
**No. EF-3L—Bronze..... List Price 10.00**

### 10-Lb. Thumb-Screw Type

A medium-type floor stand of good quality. Base diam. 10". Height 3 ft. to 67". Rod is threaded for ⅝"-27 thread.

**Without fittings:**  
**No. EF-2L—Chromium..... List Price \$12.50**  
**No. EF-2L—Bronze..... List Price 12.50**

### 10-Lb. "Chuck" Holding Type

Same as above, with exception of chuck-holding device instead of thumb-screw arrangement.

**Without fittings:**  
**No. EF-2CL—Chromium..... List Price \$13.50**

### 18-Lb. Thumb-Screw Type

A ruggedly-constructed floor stand of high quality. Extends from 3 ft. to 67". Extra-heavy base with a diameter of 10". Rod is threaded for ⅝"-27 thread.

**Without fittings:**  
**No. EF-1L—Chromium..... List Price \$16.50**  
**No. EF-1L—Bronze..... List Price 16.50**

### 18-Lb. "Chuck" Holding Type

Same as above, with exception of chuck-holding device instead of the thumb-screw arrangement. Easy to handle and prevents the possibility of slipping.

**No. EF-1CL—Chromium..... List Price \$17.50**  
**Fittings for above on next page**

## 32-Lb. Studio Type Two-Section Stand

An extra-heavy floor stand, employing over-sized material throughout, designed especially for use with all heavy velocity, dynamic and condenser microphones. Especially recommended for use with Amperite SR80 and RCA velocity-mikes. Swaying and top-heaviness are entirely eliminated by use of a 23-lb. base with a diameter of 12". The total net weight of the stand is 32 lbs. A special feature incorporated in the clamping screw allows the stand-height to be varied with the slightest amount of pressure. A soft rubber cushion attached at the bottom of the movable rod acts as a shock-absorber. This stand has its movable rod threaded for ½" pipe-thread, which allows the velocity microphones mentioned above to be mounted directly thereon without the use of extra fittings. Extends from 39" to a maximum of 6 ft. 6 in.

**No. EF-9L—Gun-Metal..... List Price \$35.00**



## Banquet Stand

This high-grade banquet stand is identical in appearance to the EF-1 and EF-2 floor stands and presents a very neat appearance.

The height can be extended from 16" to 26". Felt feet in base prevent marring of furniture. The base diameter is 7½" and the net weight is 6 lbs. The connecting rod is threaded for ⅝"-27 thread.

**Without fittings:**  
**No. EB-4L—Chromium..... List Price \$10.00**  
**No. EB-4L—Bronze..... List Price 10.00**



## Three-Section Floor Stands

### 8-Lb. Collapsible Type

A telescopic stand, comprising three non-removable sections. Has 7½" base. Height extends from 26" to 62". Rod is threaded for ½"-27 thread.

**No. EF-8L—Chromium..... List Price \$10.00**  
**No. EF-8L—Bronze..... List Price 10.00**

### 10-Lb. Collapsible Type

Same as above, but heavier. Base diam. 10". Height extends from 26" to 62". Rod threaded for ⅝"-27 thread.

**Without fittings:**  
**No. EF-8AL—Chromium..... List Price \$13.00**  
**No. EF-8AL—Bronze..... List Price 13.00**

### 18-Lb. Collapsible Type

Designed for applications where weight is not a factor. Heavy base 10" in diam. Height from 26" to 62". Rod is threaded for ⅝"-27 thread.

**Without fittings:**  
**No. EF-8BL—Chromium..... List Price \$16.00**  
**No. EF-8BL—Bronze..... List Price 16.00**



## Banquet and Desk Stand Combination Standard Model

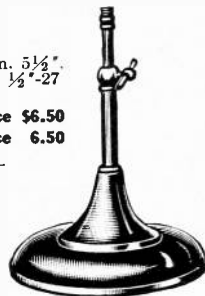
A light-type desk-banquet stand. Base diam. 5½". Height from 9" to 14". Rod threaded for ½"-27 thread. **Without fittings:**

**No. ED-14L—Chromium..... List Price \$6.50**  
**No. ED-14L—Bronze..... List Price 6.50**

### Heavy-Duty Model

Base diam. 7½". Height from 9" to 12". Net Wt. 6 lbs. Rod threaded for ⅝"-27 thread. **Without fittings:**

**No. ED-21L—Chromium..... List Price \$9.00**  
**No. ED-21L—Bronze..... List Price 9.00**



## Non-Adjustable Desk Stands

### Carbon Mike Model

High-quality stand with 6⅝" diam. ring. Overall height, 12½". Base diam. 5½".

**No. ED-5—Chromium..... List Price \$6.00**  
**No. ED-5—Bronze..... List Price 6.00**

### For Light Non-Carbon Mikes

Same as ED-5, less mike ring. Height 6". Threaded ½"-27. **Without fittings:**

**No. ED-5L—Chromium..... List Price \$4.50**  
**No. ED-5L—Bronze..... List Price 4.50**

### For Crystal Mikes

Same as ED-5L, but with 9¼" height and swivel fitting. **Without fittings:**

**No. ED-5D—Chromium..... List Price \$5.50**



### For Heavy Non-Carbon Mikes

For mikes with their own tilting feature. Base diam. 7½".

**Without fittings:**  
**No. ED-23L—Chromium..... List Price \$6.50**  
**No. ED-23L—Gun-Metal, Black Nickel..... List Price 6.50**

## Suspension Ring

A 6⅝" ring for ceiling suspension.

**No. ER-6—Chromium-finish..... List Price \$2.50**

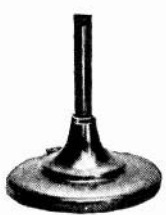


SEE OTHER SIDE FOR FITTINGS TO ADAPT THESE STANDS TO ANY MICROPHONE

**CARBON  
RIBBON**

# EASTERN MIKE STANDS

**CRYSTAL  
DYNAMIC**



## CRYSTAL-DYNAMIC DESK STAND

For Crystal Mikes and Dynamic Mikes of the Radio Receptor-Audio Research types which come equipped with  $\frac{3}{8}$ "-27 thread and do not require a swivel. Microphone is mounted directly, resulting in a lower-priced stand. Base is  $5\frac{1}{2}$ ". Height is 7". Net weight, 2 lbs. Felt feet in base. Chromium, Bronze, or Gunmetal finish.

No. ED51L ..... List Price \$4.75

## FLEXIBLE SHOCK ABSORBERS

These shock absorbers eliminate all metallic contact between microphone and stand. Supplied in chromium finish unless otherwise specified.

Our No.	Mike Thread	Stand Thread	Type	List Price
401	$\frac{1}{2}$ " Pipe	$\frac{3}{8}$ " Pipe	E	\$2.50
402	$\frac{1}{2}$ " Pipe	$\frac{3}{8}$ "-27	E	2.50
405	$\frac{1}{2}$ "-27	$\frac{3}{8}$ "-27	H	2.00
406	$\frac{1}{2}$ "-27	$\frac{3}{8}$ "-27	H	2.00
411	$\frac{1}{2}$ " Pipe	$\frac{3}{8}$ "-27	Q	2.00
412	$\frac{1}{2}$ " Pipe	$\frac{3}{8}$ "-27	Q	2.00



## Collapsible Floor Stand Folding Base

For remote control equipment and portable systems, where space is at a premium, we recommend this type of stand. The three legs can be adjusted to give a base spread of 20", which is ample assurance against tipping. Three brass telescopic sections allow stand height to be varied from 26" to 43" for two sections and a maximum of 60" for all three sections. When folded it requires only 21" of space. Entire stand furnished in chromium finish. These stands can be used with any type of microphone by ordering the required reducer as listed below.

No. EF73L—Heavy tubing model for  $\frac{3}{8}$ "-27 thread. List Price ..... \$13.50  
No. EF75L—Light tubing model for  $\frac{1}{2}$ "-27 thread. List Price ..... \$10.50

## THESE FITTINGS FOR ALL STANDS LISTED ON OTHER SIDE

### Carbon Mike Ring



A carbon mike ring made of the finest materials for use with the Eastern Mike Stands listed on the previous page. The ring is  $6\frac{3}{4}$ " in diameter and is available in various finishes to match the finish of the stand. Specify thread size or Stand No. with order.

List Price ..... \$2.00

### Double Arm Fitting



For two mikes on a single stand. Made to match any of the floor or banquet stands listed on other page. Length of arm  $11\frac{1}{2}$ ".

No. DAC—With 2 Rings. List Price ..... \$13.50

### $\frac{5}{8}$ "-27 Bushing

$\frac{5}{8}$ "-27 Bushing, available in the following inside thread sizes:  $\frac{3}{8}$ "-27;  $\frac{1}{2}$ "-27;  $\frac{3}{4}$ "-27.



Model R—Bushing List Price ..... \$0.75

### $\frac{1}{8}$ " Pipe Reducer

$\frac{1}{8}$ " Pipe Reducer, available in the following inside thread sizes:  $\frac{3}{8}$ "-27;  $\frac{1}{2}$ "-27;  $\frac{3}{4}$ "-27. For microphones of Astatic, Brush and Turner Crystal Mikes; Bruno Lab. Models P.A.-2 and L. (no swivel).



Model F—Pipe Reducer List Price ..... \$0.75



## New Mike Stand Fittings With Shorting Switch

Eastern now presents a new type of microphone stand-fitting with a shorting-switch. Available with or without swivel. Both types may be had with a  $\frac{1}{8}$ " pipe or  $\frac{5}{8}$ "-27 outside thread. Both are available in the following inside thread sizes:  $\frac{5}{8}$ "-27;  $\frac{3}{4}$ "-27;  $\frac{1}{2}$ "-27 and  $\frac{3}{4}$ "-27.

List Price—Swivel Type ..... \$3.50  
List Price—Less Swivel ..... 2.50



## Swivel Fittings

Available in the following inside threads:  $\frac{5}{8}$ "-27;  $\frac{3}{4}$ "-27;  $\frac{1}{2}$ "-27;  $\frac{3}{4}$ "-27.

Model D— $\frac{1}{8}$ " Fitting

For mikes of Astatic, Brush and Turner Crystal Mikes; Bruno Lab Models P.A.-2 and L. (no swivel).

List Price ..... \$1.00



$\frac{1}{8}$ " Pipe Swivel

Model S— $\frac{5}{8}$ "-27 Fitting

For mikes of Shure Crystal, Radio Receptor Models 6B and 6C, Amperite Corp. (except SR-80).

List Price ..... \$1.00

### $\frac{1}{4}$ " Pipe Reducer

$\frac{1}{4}$ " Pipe Reducer, available in the following inside thread sizes:  $\frac{5}{8}$ "-27;  $\frac{3}{4}$ "-27;  $\frac{1}{2}$ "-27;  $\frac{3}{4}$ "-27. For microphones of Bruno Lab., models P.A.-3, M, and R.V.-3 (with swivel).



Model G—Pipe Reducer List Price ..... \$0.75

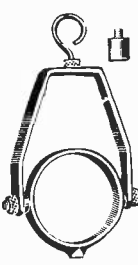
### $\frac{1}{2}$ " Pipe Reducer

$\frac{1}{2}$ " Pipe Reducer, available in the following inside thread sizes:  $\frac{5}{8}$ "-27;  $\frac{3}{4}$ "-27;  $\frac{1}{2}$ "-27;  $\frac{3}{4}$ "-27. For microphones of Universal Dynamic.



Model P—Pipe Reducer List Price ..... \$1.00

### Dynamic Mike Fittings



For ceiling suspension mounting. The mike can be set at any angle and locked into place. For floor stand mounting, unscrew hook. Chromium or bronze.

No. EW-18B—For Western Electric.

No. RR-18B—For Radio Receptor & Audio Research.

No. TL-18B—For Thomaston Lab. List Price ..... \$16.50

Principle same as above, but fitted with a thumb-screw swivel, allowing the mike to be tilted to any angle. Chromium and Bronze.

No. EW-18A—For Western Electric.

No. RR-18A—Radio Receptor & Audio Research.

No. TL-18A—Thomaston Lab. List Price ..... \$11.00



For W.E. models 618 and 618A. A set screw concealed in the mtg. fitting holds mike firmly in place. Can be furnished threaded for any stand.

No. EW-18 List Price \$6.50



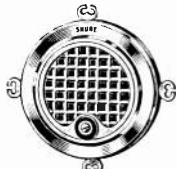
# SHURE MICROPHONES

## for Every Application

### Model 3B Two-Button

Advanced engineering and controlled quantity production have made possible this full-size Two-Button Microphone with quality performance never before available at such extremely low cost! Designed for spring suspension. Rigid cast frames and built-in protective grill, finished in bright nickel plate overall. Has the well-known Shure "Quickway" Hooks. May be used as a single-button microphone. Frame diameter, 3". Net weight, 1/2 lb. Shipping weight, 3/4 lb.

Model 3B. Two-Button. Code: Ruciv. \$5.50  
List Price.....



Model 10B. Convertible Hand Microphone. Convenient general purpose P.A. microphone, convertible from hand to 3B type for stand mounting by removing mounting ring and inserting four "Quickway" Hooks. Black enameled handle. Overall length, 8 3/8". Net weight, 3/4 lb. Shipping weight, 1 lb. Complete with 6 feet of three-conductor cable and 4 "Quickway" Hooks. Code: Rucor. \$10  
List Price.....



Model 10BS. Convertible Hand Microphone. Same as Model 10B but includes a concealed switch which automatically cuts off the microphone when it is placed in a horizontal position. Code: Rucos. \$11.50  
List Price.....

### Model 11B Two-Button Hand Microphone

High quality two-button "close-talking" hand microphone. Especially suitable wherever the level of "crowd" or background noise is high. Modern chrome-finished case; rubber-black handle. Suspension eye at top. Case diameter 3 1/8". Length 9". Net weight, 1 1/4 lb. Shipping weight, 1 3/4 lbs. Complete with 6 ft. color-coded three-conductor cord.

Model 11B. Code: Rudil. \$15  
List Price.....

Model 11BS. Same as 11B, but with push-button switch. Code: Ruhas. List Price..... \$16.50

Model 11C. A "non close-talking" type two-button hand microphone. Code: Rubom. List Price..... \$15

Model 11CS. Same as Model 11C, but with "press-to-talk" switch in handle. Code: Rubot. List Price..... \$16.50

Model A35A. Suspension Adapter. Chromium plated, 5/8" — 27 thread. Shipping weight, 1/4 lb. Code: Rudem. \$1.50  
List Price.....

Model W10A. Carbon Granules. Recommended for experimental work only. Packed in capsule or vial. Code: Rugun. List Price..... \$1

### Model 5B Two-Button

A full-size two-button microphone (diameter overall 3 3/4", thickness 1 1/8", weight 15 1/2 ozs.). Regular full-size precision adjustable buttons and special diaphragm assure exceptional quality of reproduction. Ideal for low cost sound systems. Attractive modern design, finished in chromium plate. Screen-protected diaphragm and "Quickway" Hooks. Shipping weight, 1 1/4 lbs.

Model 5B. Code: Rucit. \$10  
List Price.....



### Model 22B Two-Button

Embodies refinements formerly found only in more costly instruments. Genuine cathode-sputtered gold-spot diaphragm, carefully stretched and scientifically damped. Chromium plated. Net weight, 1 lb. Shipping weight, 1 1/2 lbs.

Model 22B. Code: Rudip. \$25  
List Price.....

### Model 27N Two-Button

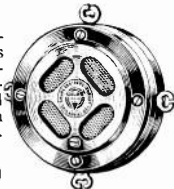
Professional type two-button microphone in every respect. Beautiful case, richly finished in chromium plate. Thickness 1 3/8". Diameter overall 3 3/4". Net weight, 1 1/2 lbs. Shipping weight, 1 3/4 lbs.

Model 27N. Code: Rubal. \$37.50  
List Price.....

### Model 33N Two-Button

The most highly developed two-button microphone. Used in Broadcast Stations because of its excellent frequency response, ruggedness and dependability. Massive brass frames. Dural diaphragm with genuine cathode-sputtered gold spots, carefully stretched and aged. Chromium plated. Thickness 1 1/8". Diameter overall, 4 3/8". Net weight, 2 1/2 lbs. Shipping weight, 3 lbs.

Model 33N. Code: Rulit. \$50  
List Price.....



### Rings and Springs



Model R20B. Standard Ring. A sturdy full-size, 6" ring for carbon microphones. Attractive bevel-edge design. "Quickway" Hooks for quick mounting. Chromium plated. Complete with 8 rustproof springs. Shipping weight, 1 lb. Code: Ruket. List Price..... \$2.50

Model R10A. Ring. A light 5" ring for small carbon microphones. Chromium plated. Shipping weight, 3/4 lb. Complete with 8 rustproof springs. Code: Rujes. List Price..... \$2.25

Model R10B. Ring. Same as R10A but bright nickel plated. Code: Rujam. List Price..... \$2

The above Rings are protected by U. S. Patent Des. 100,928

Model A30A. Springs. Medium length for R20B Rings. Rust-proof. Code: Rukis. Set of eight. List Price..... \$1

Model A31A. Springs. Short length for R10 Rings. Rust-proof. Code: Rukop. Set of eight. List Price..... \$1

**Microphone Repair Service** All microphones require occasional repairs. Carbon microphones need reconditioning at least once a year to maintain sensitivity and quality. "Microphone Headquarters" maintains a special repair department for repairing and reconditioning all types and makes of microphones. Write for quotations.

### 4-WAY UTILITY MICROPHONES

#### 4 Microphones in One!

Now a new economical microphone convenience—4 Microphones in One! A special handle and base with coupling permits instant change from Hand Type to Desk Type . . . or Desk Microphone to Hand Instrument without tools or bother. The same microphone may easily be mounted on a Floor Stand or Spring-Suspended in a Carbon Ring.

Shure 4-WAY UTILITY Microphones are available in General-Purpose Crystal, "Communications-Type" Crystal and Two-Button Carbon Types.



DESK



HAND

### Crystal and Carbon Types

Model 70HK. General-Purpose Crystal Microphone. For high quality lite-like reproduction of Music and Speech and for General applications. Complete with microphone, 25 ft. single-conductor shielded cable, special handle, adapter, 4 "Quickway" Hooks and chrome plated base. Code: Rurat. \$27.50  
List Price.....

Model 70SK. "Communications-Type" Crystal Microphone. Specially designed for effective communications service in Police Radio, Amateur Radiophone, and High-Efficiency P.A. voice-announcement systems. Complete with

microphone, 7 ft. two-conductor shielded cable, special handle, adapter, 4 "Quickway" Hooks, and chrome plated base. Code: Rurep. \$26  
List Price.....

Model 10BK. Two-Button Microphone. Advanced engineering and design makes it possible to offer this most economical 4-WAY UTILITY Unit for low-cost P.A. and Amateur use. Complete with microphone, 4 "Quickway" Hooks, special handle, adapter, 6 ft. three-conductor cable and nickel plated base. Code: Rucoel. \$12  
List Price.....



STAND



Ring Suspension

# SHURE



# Crystal MICROPHONES

## NEW "ULTRA" Wide-Range CRYSTAL MICROPHONES



**8 Exclusive Features!**

These new Shure "ULTRA" Wide-Range Crystal Microphones bring you amazingly life-like reproduction... plus new "Highs" in utility and dependability... at remarkably low cost. This outstanding performance has been attained by Shure Engineers through these exclusive advanced features:

- (1) "Ultra" Wide-Range reproduction from 40 to 10,000 cycles.
- (2) Dual-Drive, High-Capacity Grafoil Crystal.
- (3) Complete Barometric Compensation.
- (4) Internal Screen-Protected Cartridge.
- (5) Crystal "Moisture-Sealed" by new exclusive special process.
- (6) High output level through new Shure "Cruciform" Crystal Mounting.
- (7) New acoustically-correct single high-efficiency Curvilinear Diaphragm.
- (8) Beautifully styled new semi-nondirectional and semi-directional models in Spherical, Swivel and "Grille-Type" case designs.

And remember—only Shure "Ultra" gives you all 8 great performance-insuring features!

**Model 700A.** A small compact unit with swivel arrangement for use where "tilting" of microphone head is desired. Cable may be run inside or outside stand tubing. Finished in bright polished chromium plate overall. Diameter, 2 3/8". Complete with 7 ft. single-conductor shielded cable. Code: Ruret. **\$25**

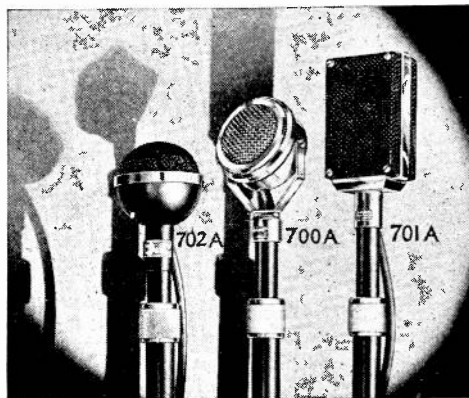
**Model 700A-25 FT.** Cable length, 25 ft. Code: Rurel. List Price. **\$26.80**

**Model 701A.** A "Grille-Type" Microphone, styled to meet the most critical taste and designed to give outstandingly high-quality reproduction. Attractive rubber-black screens with contrasting chromium fittings. 3 1/8" high, 2 3/8" wide, 1 1/4" deep. Complete with 7 ft. single-conductor shielded cable. Code: Rurev. **\$25**

**Model 701A-25 FT.** Cable length, 25 ft. Code: Rured. List Price. **\$26.80**

**Model 702A.** A small Spherical Microphone with Semi-nondirectional pickup... a feature which is especially valuable because it permits placement of a group around the Microphone without frequency discrimination. Beautiful rubber-black finish with circular chromium band. Diameter, 2 3/4". Complete with 7 ft. single-conductor shielded cable. Code: Rurez. **\$25**

**Model 702A-25 FT.** Cable length, 25 ft. Code: Rureg. List Price. **\$26.80**



### Model 70H



The Shure 70H sets the "standard of performance" for diaphragm-type crystal microphones. Adopted by leading Sound-Equipment Manufacturers. "Curvilinear" diaphragm and "Bimorph" crystal. "Cantilever" actuated. Beautiful cast case, chromium-plated overall. Mounts direct on any Shure Stand or in carbon ring. Cable may be brought through stand tubing or outside as desired. Convertible to a Hand Microphone with A40A Handle. Complete with removable "close-fitting" ring, 4 "Quickway" Hooks and shielded single-conductor rubber jacketed cable.

Model	Cable Length	Code	Shpg. Wt.	List
70H	7 feet	Rurab	1 1/2 lbs.	<b>\$22.50</b>
70H-25FT.	25 feet	Rurov	2 lbs.	<b>\$24.30</b>

**Model 70HP.** "Push-Pull" Crystal Microphone. Same as 70H except cable is two-conductor shielded. Recommended for amplifiers with push-pull input.

Model	Cable Length	Code	Shpg. Wt.	List
70HP	7 feet	Rulev	1 1/2 lbs.	<b>\$22.50</b>
70HP-25FT.	25 feet	Rulex	2 1/4 lbs.	<b>\$25.20</b>

**Model A40A** (formerly 71BH). Handle. Removable handle which fits 70H Crystal Microphone for hand use. Shipping weight, 1/4 lb. Code: Rurij. List Price. **\$1.50**

### 70H-79AC Demountable

A complete unit consisting of the 70H Crystal Microphone with plug attachment, and Stand Receptacle. Instantly installed! Instantly removable for safekeeping or use elsewhere. Cable Strain Relief included. Net weight, 1 lb. Shipping weight, 1 1/2 lbs. No cable furnished.

**Model 70H-79AC.** Code: Ruram. **\$25**



### Model 73A Lapel Type

A light, highly efficient lapel microphone which faithfully reproduces the speaker's voice. Free from "background" noise and vibration pickup. Only 2" in diameter and less than 2 oz. in weight... small, light and inconspicuous. Also useful for general microphone applications and for hearing-aid devices. Rubber-black finish. Equipped with special spring clip and 25 ft. shielded single-conductor black mercerized cotton-covered cable. Shipping weight, 3/4 lb.

**Model 73A.** Code: Rutap. **\$25**

### Model 70S "Communications-Type"

Specially designed for high-efficiency voice communication in Commercial and Amateur radiophone transmitters. Highly recommended for high-intelligibility voice-announcement P.A. systems. Doubles power on important intelligibility speech frequencies... produces clear, crisp, powerful signals that cut through noise and static. No transmitter or amplifier changes... connect as you would an ordinary crystal microphone. Finished in polished chromium plate and baked rubber-black enamel. Complete with integral Desk Mount and 7 feet of shielded two-conductor, rubber-jacketed cable. Net weight, 2 lbs. Shipping weight, 2 1/2 lbs.



**Model 70S.** Code: Rurak. **\$25**

**Model 70SP.** Same as 70S. but without Desk Mount. Includes 7 ft. two-conductor shielded cable and 4 "Quickway" Hooks. Code: Rurap. List Price. **\$22.50**

**Model 70SH-25FT.** Same as 70SP but with 25 feet of single-conductor shielded cable. Code: Rurap. List Price. **\$24.30**

### Shure Model 71AS Crystal Hand Microphone

"Close-Talking" type. Handsome chrome-finished case with rubber-black handle. "Push-to-talk" switch in handle. 7 ft. of special shielded, single conductor cable. Diameter of case 3 3/8". Overall length 9". Shipping weight, 1 3/4 lbs.

**Model 71AS.** Code: Rurec. **\$26.50**

**Model 71A.** Crystal Hand Microphone. Same as Model 71AS but without switch. Code: Rureb. List Price. **\$25**

**Model 71BS.** Crystal Hand Microphone. Non-"Close-talking" type. "Push-to-talk" switch in handle. 7 ft. of special cable. Code: Rurih. List Price. **\$25.50**

**Model 71B.** Crystal Hand Microphone. Same as 71BS but without switch. Code: Rurig. List Price. **\$24**



### Model A80A Stand Switch

New handy stand-mounting on-off switch which can be used with any type microphone. Small attractive cast-aluminum case, with rubber-black enamel finish. Standard 3/16"-27 thread fits all Shure Stands. Overall height, 2 1/2". Shipping weight, 1/4 lb.

**Model A80A.** Stand Switch. Code: Rudam. **\$2.50**



# SHURE



# Crystal MICROPHONES

## Model 74C "Spheroid"

A crystal microphone combining High Output Level, "Wide-Range" Reproduction and Non-Directional Pickup. Sound reaches the small Curvilinear diaphragm through a complete angle of 360 degrees with a frequency response from 40 to 10,000 cycles. Response is essentially non-directional for sound approaching from any angle. Special Dual-Drive "Grifoil" Bimorph Crystal, Cruciform Mounted, lowers cable losses. Overall diameter 2 1/4". Rubber-black finish with chromium circles. Furnished with locking, shielded 3-conductor plug, convertible receptacle for stand or suspension use, and cable strain relief. (No cable furnished—see C10B and C20B listings on this page). Net weight, 7 1/2 oz. Shipping weight, 1 lb.

Model 74C. "Spheroid" Crystal Microphone. Code: Rugel. **\$37<sup>50</sup>**  
List Price.



## Model 75B Spherical Crystal Microphone

An economical Shure Non-Directional Crystal Microphone with wide-range response. Acoustic stream lining and scientific placement of the small Curvilinear diaphragm insure essentially non-directional response for sound approaching from any angle. Crystal element is a Dual-Drive "Bimorph" unit, with the new Shure Cruciform Mounting. Only 2 1/4" in diameter. Rich rubber-black finish. Mounts on any Shure stand. Complete with side-cable outlet and 25 feet of shielded single-conductor, rubber-jacketed cable. Shipping weight, 1 1/2 lbs.

Model 75B. Spherical Crystal Microphone. Code: Rugom. **\$32**  
List Price.



## Volume Controls for Crystal Microphones

Speakers, soloists, and announcers can now control the volume of a crystal microphone... smoothly... noiselessly... with complete freedom from unwanted "tone-control" effects! A new capacity attenuator, an original development by Shure engineers, has made this possible. The unit is small and compact (4" by 2" by 2") and mounts on any Shure Stand. Finish is standard rubber-black with chrome and black "Volume" escutcheon. Convenient ON-OFF switch, independent of volume control is provided. Cable may be run through stand tubing if desired.

Shure Volume Controls are supplied in two types: "Demountable," with receptacle for 74C and 70H-79AC Microphones, and "Coupling" type threaded 3/8"-27 for Models 70H, 700A, 701A and 702A. Both types are supplied with 25 or 50-foot lengths of single-conductor, rubber-jacketed shielded cable. For best results the cable should not be lengthened or shortened—use the full length supplied with the unit.



Model V21A. Crystal Microphone Volume Control. "Demountable" Type with 25-foot cable. Shipping weight, 2 3/4 lbs.

Code: Rugos. **\$12<sup>50</sup>**  
List Price.

Model V22A. Crystal Microphone Volume Control. "Demountable" Type with 50-foot cable. Shipping weight, 3 1/2 lbs. Code: Rugat.

List Price. **\$15**

Model V11A. Crystal Microphone Volume Control. "Coupling" Type with 25-foot cable. Code: Rugap.

List Price. **\$12.50**

Model V12A. Crystal Microphone Volume Control. "Coupling" Type with 50-foot cable. Code: Rugar.

List Price. **\$15**

Model 70H-V11A. Crystal Microphone with Volume Control. Shure 70H mounted on Volume Control with 25-foot cable. Shipping weight, 3 3/4 lbs. Code: Rugow.

List Price. **\$35**

Model 70H-V12A. Crystal Microphone with Volume Control. Shure 70H mounted on Volume Control with 50-foot cable. Shipping weight, 4 1/2 lbs. Code: Rugoy.

List Price. **\$37.50**

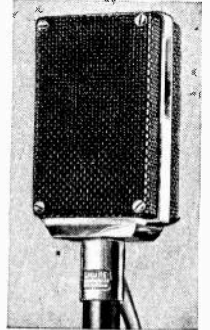
*Crystal Microphones licensed under patents of the Brush Development Company. Shure patents pending.*

© Shure Brothers 1936

## Model 85A High-Fidelity Sound-Cell Type Crystal Microphone

A true High-Fidelity microphone with a response characteristic within a total range of only 5 db from 30 to 10,000 cycles. Meets the most critical requirements in applications calling for the very highest quality sound reproduction. Uses a genuine Brush sound-cell unit. Non-directional pickup characteristic permits placement of artists all around the microphone if desired. Attractive "Grille-Type" case, finished in rubber-black with chromium plated fittings. Case measures 3 1/8" high, 2 5/8" wide and 1 1/4" thick. Net weight, 10 oz. Shipping weight, 1 lb. Furnished complete with 7-foot single-conductor shielded cable.

Model 85A. Code: Ruleb. **\$45**  
List Price.



## Model 60C Contact-Type Crystal Microphone

For sound and vibration pickup in studies of machine noise and vibration, reproduction of stringed musical instruments, interception of sound through walls in criminal investigation work, and many other applications. High efficiency obtained with minimum acoustic pickup. 1 1/2" long, 1" wide, 3/4" high. Mounting lugs provided. Chromium plated. Complete with 7 feet of single-conductor, rubber-jacketed shielded cable. Net weight, including cord, 5 oz. Shipping weight, 10 1/2 oz.

Model 60C. Code: Rutac. **\$22<sup>50</sup>**  
List Price.



## Model 65A "Stethophone"

A new improved, non-acoustic piezo-electric device for pickup of heart and chest sounds for reproduction or recording. High output level achieved through new design principle. 3 1/4" long. Net weight (not including the cable), only 5 1/2 oz. Contrasting chromium and black finish. Has "press-to-listen" push-button switch. Furnished complete with removable strap (useful when making long observations) and 7 feet of shielded single-conductor cable. Shipping weight, 3/4 lb.

Model 65A. "Stethophone." Code: Rutab. **\$35**  
List Price.



## Cable

Good cable is essential for proper operation of crystal microphones. Shure Crystal Cables are specially designed for low capacity and high insulation resistance, manufactured to rigid standards and carefully tested and inspected. Recent developments have made possible a cable with still lower capacity than was previously obtainable. Available in bulk, any length, or in special convenient trimmed lengths at no extra charge.

Model C10B. Crystal Microphone Cable. Single-conductor type, shielded with overall rubber jacket. Diameter, 7/32". Weight, 3 lbs. per 100 feet. Standard trimmed lengths are 7, 20, 25, 35 and 50 feet. Code: Rurim. List Price, per foot. **10c**

Model C20B. Crystal Microphone Cable. Two-conductor type, shielded with overall rubber jacket. Diameter, 1/4". Weight, 4 lbs. per 100 feet. Standard trimmed lengths are 7, 20, 25, 35 and 50 feet. Code: Rubat. List Price, per foot. **15c**

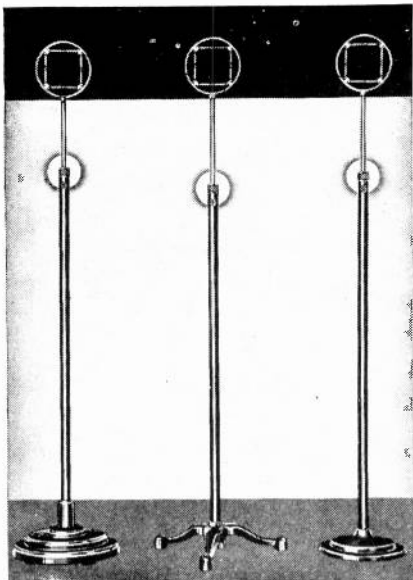
Model C11A. Crystal Microphone Cable. Light, flexible, single-conductor type, shielded, with black cotton braid. Used on 73A Lapel Microphones. Diameter, 3/16". Weight, 1 1/4 lbs. per 100 feet. Standard trimmed length is 25 feet. Code: Ruriv. List Price, per foot. **10c**

## OTHER SHURE PRODUCTS

*include Preamplifier Type Microphones in General Purpose Crystal and High-Fidelity "Wave-Equalized" Crystal and Condenser Models. Preamplifiers and Power Supplies are also available. Write for complete information.*



# SHURE STANDS and Accessories



S58A

S57B

S56A

Shure Stands, designed by microphone specialists familiar with every phase of microphone service, have become the accepted standard due to their convenience, distinctive modern design, rugged construction and moderate cost. A complete range of types and styles solves every microphone mounting problem.

## FLOOR STANDS

All Shure Floor stands have the exclusive "Automatic Friction Lock." You simply raise, lower or turn the microphone . . . no thumb screws or wing nuts . . . no rattling or sudden dropping! The proper degree of friction is adjusted by rotating the chromium collar at the top of the barrel. Cables may be run through tubings, or outside with a P50A Side Cable outlet. Effective height adjustment 43" to 68". Finish is standard rubber-black with chromium plated trim. Standard  $\frac{3}{8}$ "—27 thread. Rings are not included, and must be ordered separately.

**Model S56A.** Floor Stand. "Round" Base. Base diameter, 10 $\frac{1}{4}$ ". Net weight, 11 lbs. Shipping weight, 12 $\frac{1}{2}$  lbs. Code: **Ruvos.**  
List Price . . . . . **\$13<sup>50</sup>**

**Model S57B.** Floor Stand. 3-leg "Tri-Ped" Base. Leg spread, 15 $\frac{1}{2}$ ". Net weight, 13 $\frac{3}{4}$  lbs. Shipping weight, 15 $\frac{3}{4}$  lbs. Code: **Rugart.**  
List Price . . . . . **\$15<sup>50</sup>**

**Model S58A.** Floor Stand. Large, heavy "Modernistic" round base. Base diameter, 12 $\frac{1}{2}$ ". Net weight, 14 $\frac{1}{4}$  lbs. Shipping weight, 16 lbs. Code: **Ruvim.**  
List Price . . . . . **\$17<sup>50</sup>**

**Model S59A.** Floor Stand. Modernistic extra-heavy base. with space in base for pre-amplifier or power supply. Effective height adjustment, 48" to 73". Base diameter, 15". Net weight, 29 $\frac{1}{4}$  lbs. Shipping weight, 33 $\frac{1}{2}$  lbs. Code: **Rudal.**  
List Price . . . . . **\$36<sup>50</sup>**

**Model S54B.** Floor Stand. A light weight Utility stand with three extensible sections. Modernistic base, 10 $\frac{3}{8}$ " in diameter, finished in black "Wrinkle" enamel. Height adjustment, 25 $\frac{1}{2}$ " to 62 $\frac{1}{2}$ ". Net weight, 7 $\frac{1}{2}$  lbs. Shipping weight, 8 $\frac{3}{4}$  lbs. Code: **Rucov.**  
List Price . . . . . **\$10**



S54B

## DESK and BANQUET STANDS



**Model S30B.** "Special" Desk Stand. A small desk unit for Carbon Microphones complete with 5" ring. Modern bevel-edged design, beautifully finished in chromium plate overall. Cord entrance in base. Complete with 8 rust-proof springs. Base diameter, 4 $\frac{1}{4}$ ". Height overall, 7". Net weight, 1 lb. Shipping weight, 1 $\frac{1}{4}$  lbs. Code: **Runep.**  
List Price . . . . . **\$3<sup>50</sup>**

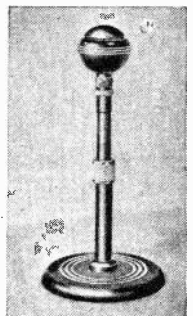
**Model S31A.** Desk Mount. A short, non-adjustable, desk-type mount of proper height for operating table. Cord entrance in base. Rubber black finish overall. Base diameter 4 $\frac{1}{4}$ ". Height, 6 $\frac{3}{4}$ ". Net weight, 1 lb. Shipping weight, 1 $\frac{1}{4}$  lbs. Code: **Rujab.**  
List Price . . . . . **\$3**

**Model S41A.** Banquet Stand. A lightweight "utility" stand, finished in polished nickel plate. Non-adjustable. Cord entrance in base. Base diameter, 4 $\frac{1}{4}$ ". Height, 10". Net weight, 1 lb. Shipping weight, 1 $\frac{1}{4}$  lbs. Code: **Rujak.**  
List Price . . . . . **\$3<sup>50</sup>**



**Model S32C** (formerly 51DC). Modernistic Desk Stand. A new adjustable desk stand with the exclusive Shure "Automatic Friction Lock!" Beautiful modern design, with three chromium circles on base contrasting with the rich rubber-black finish. Base diameter, 6". Height, adjustable from 7" to 11". Net weight, 3 $\frac{1}{2}$  lbs. Shipping weight, 3 $\frac{3}{4}$  lbs. Code: **Rudes.**  
List Price . . . . . **\$6<sup>50</sup>**

**Model S42C** (formerly 52DC). Modernistic Banquet Stand. A companion unit to Model S32C listed above, useful where greater height is needed. Height range, 15" to 22". Net weight, 3 $\frac{1}{2}$  lbs. Shipping weight, 4 $\frac{1}{4}$  lbs. Code: **Rukof.**  
List Price . . . . . **\$7<sup>50</sup>**



S32C

## Plugs and Receptacles



**Model P10B.** Plug. Three-conductor type. Threaded locking ring and water-proof strain-relief gasket cap. May be used to convert "non-demountable" microphones to demountable type. Chromium plated. Shipping weight,  $\frac{1}{4}$  lb. Code: **Rulab.**  
List Price . . . . . **\$1**



**Model P20B.** Receptacle. Three-Conductor type, complete with water-proof strain-relief gasket cap. Fits P10B Plug. Chromium plated. Shipping weight,  $\frac{1}{4}$  lb. Code: **Rulam.** List Price. . . . . **\$1**

**Model P41A.** Receptacle. Three-Conductor type. Mounts in  $\frac{1}{16}$ " hole on chassis or panel. Fits P10B Plug. Nickel plated. Shipping weight,  $\frac{1}{4}$  lb. Code: **Rutop.** List Price . . . . . **50c**

**Model 79P.** Plug. Two-Conductor Telephone type. Fully shielded. Chromium plated. Shipping weight,  $\frac{1}{4}$  lb. Code: **Rurik.**  
List Price . . . . . **\$2.25**

**Model 79R.** Receptacle. Fully-shielded cable-connector type receptacle for 79P Plug. Chromium plated. Shipping weight,  $\frac{1}{4}$  lb. Code: **Ruril.**  
List Price . . . . . **\$2.50**



**Model P40C.** Stand Receptacle. Locking three-conductor, fully shielded type. Mounts on any Shure Stand. Useful for converting "non-demountable" microphones to "demountable" type. A P51A Strain Relief (See description below) is included. Standard rubber-black finish. Shipping weight,  $\frac{1}{4}$  lb. Code: **Rulir.** List Price . . . . . **\$1.25**

**Model P51A.** Strain Relief. Used with Stand Receptacle when cable is run inside tubing. Prevents terminal strain. Cadmium plated. Code: **Rupat.** List Price . . . . . **25c**



**Model P52A.** Cable Guide. Holds cable neatly beside stand. Attached to tubing near base. Rubber-black finish. For S54B Floor Stand. Shipping weight,  $\frac{1}{4}$  lb. Code: **Rujov.**  
List Price . . . . . **\$1.00**

**Model P53A.** Cable Guide. For S56A, S57B, S58A and S59A. Floor Stands. Code: **Rujor.** List Price . . . . . **\$1.00**

**Model P50A.** Side Cable Outlet. Brings cable outside stand. Self strain-relief feature. Rubber-black finish. Code: **Rupak.**  
List Price . . . . . **75c**



## Stand Adapters

**Model A20A.** Adapter. For mounting microphones with  $\frac{1}{2}$ " Pipe Thread on any Shure Stand ( $\frac{3}{8}$ "—27 thread). White nickel plated. Shipping weight,  $\frac{1}{4}$  lb. Code: **Rudap.** List Price . . . . . **\$1.00**

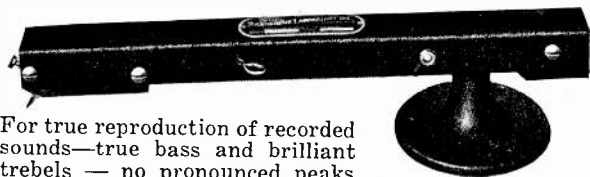
**Model A21A.** Adapter. For mounting microphones with  $\frac{1}{8}$ " Pipe Thread on any Shure Stand ( $\frac{3}{8}$ "—27 thread). Chromium plated. Code: **Rujec.**  
List Price . . . . . **\$1.00**

**Flexible Coupling**  
**Model A10A.** Flexible Coupling. Reduces pickup of shock and vibration. Installed between microphone and any Shure Stand. Code: **Ruvor.** List Price . . . . . **\$1.00**

**KNOWN THE WORLD OVER**

# ASTATIC

## CRYSTAL MICROPHONES AND PICKUPS



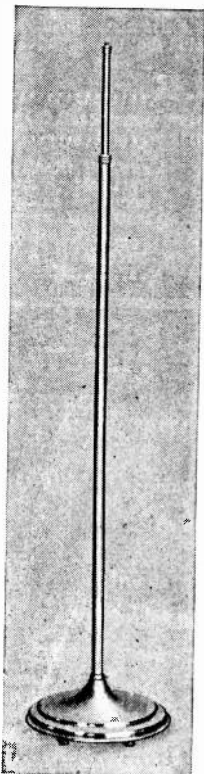
### HIGH FIDELTY PICKUP

For true reproduction of recorded sounds—true bass and brilliant trebles — no pronounced peaks throughout audio range. About one-half as light on the record as conventional magnetic pickup, therefore extremely kind to life of recordings. Only 2 3/4 ounces pressure on needle point.

The remarkable efficiency of the Astatic Bimorph Crystal element in the faithful reproduction of actual sounds through the medium of the microphone, has been adapted as successfully to the reproduction of recorded sounds through the now internationally accepted Astatic Crystal Pickup. Where normally records are weakest, in the bass, it is strongest. Finished black wrinkle with chromium plated trimmings. Two models: S 8 for 10 and 12-inch records; S-12 for 16-inch records.

Types S-8 ..... Fully Guaranteed ..... List Price \$12.00  
Types S-12 ..... List Price 15.00

### ADJUSTABLE MICROPHONE STANDS



Astatic microphone stands are beautifully finished in triple chrome plate. No objectionable thumb screws; adjusted to desired elevation by simply raising or lowering rod; remains in any position until manually changed. Equipped with cast iron base and rubber feet. Threaded for Astatic Microphones.

**FLOOR STAND**  
List Price ..... \$12.50  
**BANQUET STAND**  
List Price ..... \$7.50  
**TABLE STAND**  
List Price ..... \$3.00

### FOR CONCEALED PLACEMENT

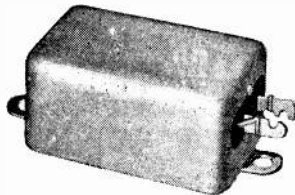
#### MODEL 218

A single diaphragm type crystal microphone having wide angle uni-directional pickup—especially designed to be used for effective pickup in places where microphone is to be concealed. 2 1/8" in diameter by 7/8" thick, flat back with domed screen front. Output level is approximately—56 D.B., using a 5.0 meg. load. Interior assembly is cushion mounted, permitting use under adverse conditions of vibration. Provided with 8 ft. single wire rubber covered cable—(longer length on request). So designed that long cable may be used without serious loss of output. Provided with spring clip for attachment.

Fully Guaranteed  
List Price \$22.50



### SCRATCH FILTER



MODEL  
5-M

Metallic container, size 1x1 1/4x2 inches—thoroughly sealed and tuned to resonate at the point of greatest scratch intensity.

Fully Guaranteed.  
List Price \$1.50

An Astatic special purpose crystal microphone, replacing the stethoscope in the medical profession.

MODEL CP-104

### CARDIAPHONE

The Astatic Cardiaphone is a super sensitive instrument for determining and studying heart and lung conditions. Its greater range and precision in this field open up wider possibilities for this type of investigation.

Fully Guaranteed.  
List Price \$25.00

LICENSED UNDER PATENTS OF BRUSH DEVELOPMENT CO. — Astatic Patents Pending

**PIONEER MANUFACTURERS OF QUALITY CRYSTAL DEVICES**

KNOWN THE WORLD OVER

# ASTATIC

## CRYSTAL MICROPHONES AND PICKUPS



Threaded  $\frac{5}{8}$ " x 27 threads per inch for stand mounting.

### STUDIO MODEL K-2

The broadcasting station type K-2 is built with two separate units of the DUAL DIAPHRAGM construction (a distinctly new microphone advancement exclusively controlled by Astatic) functioning on GRAFOIL BIMORPH CRYSTALS, the most highly perfected element of its kind—producing a NON-DIRECTIONAL, dependable, clear-toned crystal microphone that broadcasting and P.A. engineers are installing to replace now outdated, bulkier, more erratic devices. Frequency response substantially flat from 30 to 6000 c.p.s. with rising characteristics to 10,000 c.p.s.; output level of -64 decibels (conservatively rated). Bright chromium finish; monel metal protecting screen; 8 ft. of two-wire shielded rubber covered cable (longer length on request) for use with either single tube or push pull input.

Fully Guaranteed  
List Price \$37.50



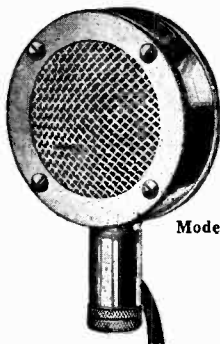
### LAPEL MICROPHONE MODEL L-1

Ideal for singers, speakers and moving announcers—freeing them from limitations of ordinary mike—so true in pickup and so inconspicuous that neither listeners nor performers are conscious of its presence. A NON-DIRECTIONAL quality crystal microphone with a frequency response substantially flat from 50 to 6000 c.p.s., utilizing the exclusive Astatic DUAL DIAPHRAGM principle functioning on a single genuine GRAFOIL BIMORPH CRYSTAL element. Furnished with 25 ft. single wire braid covered cable—longer length on request.

Only  $1\frac{1}{2}$ " in diameter and  $\frac{1}{2}$ " thick—clamps tightly and neatly to lapel, cord back over shoulder. Not sensitive to frictional noise. Output level—68 DB.

Fully Guaranteed  
List Price \$25.00

### "SPEECH RANGE" TYPE



Model D-104

Low in price, built rugged for long service, giving quality "speech range" performance under all conditions, the D-104 has become the favorite of veteran amateurs the world over. Frequency response especially appropriate. Ask the 'ham' who owns one! No background noise of any kind. Performance not affected by moving or handling. Comes equipped with 8 feet of one-wire shielded rubber covered cable (longer length on request)—adapted threaded  $\frac{5}{8}$ " x 27 threads for stand mounting.

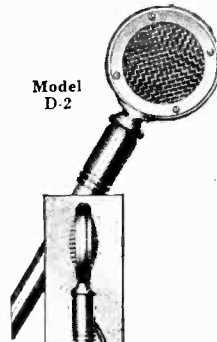
Fully Guaranteed

Model D-104	.....	List Price \$22.50
Model D-104H	.....	List Price \$25.00
Model D-104HS	.....	List Price \$25.50
Model D-104RS	.....	List Price \$27.50



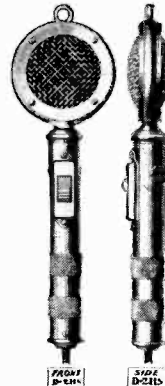
Model D-104HS

Three inches in diameter, one inch thick—delicate parts suspended within. Furnished with handle, handswitch as illustrated above or relay switch. All four models listed below.



Model D-2

Only  $2\frac{1}{2}$ " diameter and  $\frac{1}{2}$ " thick—finished entirely in chromium.



### PUBLIC ADDRESS CRYSTAL MICROPHONE WATCH CASE MODEL

Shaped and styled like a watch, the D-2 is the latest achievement of Astatic engineers and has won the hearts of every microphone user wherever public appearance is made. Not only beautiful to look at but does not obstruct the performer's face. Utilizing the exclusive Astatic DUAL DIAPHRAGM principle on a GRAFOIL BIMORPH CRYSTAL element, it is essentially a NON-DIRECTIONAL unit with a frequency response substantially flat from 50 to 6000 c.p.s.; an output of -60 decibels and a definitely reduced feed back tendency—recommended for P.A. systems. Built to stand shock far beyond ordinary.

Fully Guaranteed

#### LIST PRICES

Equipped with 8 feet of single wire shielded rubber covered cable (longer length on request); adapter threaded $\frac{5}{8}$ " x 27 threads for stand mounting.	
Model D-2	..... \$25.00
Same as above, furnished with handle.	
Model D-2H	..... \$27.50
Same as D-2, furnished with handswitch (illustrated opposite).	
Model D-2HS	..... \$28.00
Same as D-2, furnished with relay switch.	
Model D-2RS	..... \$30.00

PIONEER MANUFACTURERS OF QUALITY CRYSTAL DEVICES

# Bruno High Fidelity Microphones

## The "Velotron" Microphone

Manufactured under BRUNO Patents and Patents Pending

The "Velotron" is more than "just another mike" . . . it embodies in a simple and rugged device all the qualities of the various types, eliminating most of their defects and thus becoming the ideal microphone for the amateur and P.A. fields.

Based on a new construction principle, the "Velotron" retains the high fidelity of the Velocity Magnetic microphone, surpasses the output of the diaphragm type Crystal—and is as moderately priced as a good carbon "mike."

**PRINCIPLE**

The "Velotron" is a true velocity microphone employing a static rather than a magnetic field. This radical departure makes the construction very simple and its output greater than any other type microphone with the exception of the "Carbon." A polarizing voltage from 150 to 350 volts is applied to the instrument through the same single conductor shielded cable from which the signal is taken and which terminates at the "fixed" and "moveable" elements of the sound cell.

The "fixed" element is a perforated metallic plate heavily and thoroughly insulated. The "moveable" consists of eight ribbons of .0002 duraluminum.

When the sound gradient acts on the ribbons, they are set in motion thus varying the voltage supplied to the grid circuit and translating acoustic energy into electrical variations.

**ELECTRICAL CHARACTERISTICS**

While the use of polarizing voltage is essential, the "Velotron" should not be confused with the condenser microphone from which it differs, as the Magnetic Velocity Microphone differs from the Dynamic.

The "Velotron" has all the characteristics of the Velocity Magnetic Microphone—highly directional—extreme fidelity—etc. Its frequency response is normally from 30 to 14,000 cycles but it may be altered at will by changing the value of polarizing voltage thus accentuating the low or the high ranges.

Although the "Velotron" is a microphone of

high impedance output, it will not "mush up" when spoken into from close range nor will its frequency response be affected audibly when used 500 feet from the amplifier.

Its output level is -50 db., (zero level 6 milliwatts). Thus it will operate satisfactorily with one stage less of amplification than any other velocity microphone.

As there are no transformers present, it is possible to operate the "Velotron" in a strong magnetic field without experiencing any hum pickup. Being thoroughly shielded, it is not subject to high frequency pickup.

This microphone operates on both sides and due to its sharp directional feature, it greatly lowers the feedback point when placed at right angles in front of a loud speaker. The "Velotron" cannot be affected by ordinary temperature and barometric changes and is not affected by high wind.

The "Velotron" may be quickly connected to the amplifier by means of a simple adapter circuit consisting of two small resistors and condensers. A diagram illustrating the necessary circuit is furnished with each microphone. There is no necessity for any "below chassis" changes in the amplifier.

**PHYSICAL CHARACTERISTICS**

The "Velotron" is sold complete with shock absorber, ball swivel, detachable cable connector, and 8 feet of single conductor shielded cable. Finish: Gunmetal Dimensions: 6 1/4" x 2 1/4" x 1 3/4" Net Weight: 1 lb.

Velotron "MODEL A" (as described)  
List Price ..... \$20.00



## MAGNETIC VELOCITY MICROPHONES

Licensed by agreement with ELECTRIC RESEARCH PRODUCTS under Patents owned or controlled by WESTERN ELECTRIC CO. and AMERICAN TELEPHONE & TELEGRAPH CO.

### FOR DE LUXE P.A. SYSTEMS

The BRUNO VELOCITY MICROPHONE, being actuated by the velocity component of the sound wave, rather than by its kinetic energy, eliminates the resonant peaks inherent in the diaphragm type microphone. As the velocity microphone is a complete self-contained audio frequency generator producing its own E.M.F., there is a total absence of background noise.

Bruno Velocity Microphones utilize "NICALUM" field pieces . . . an alloy recently developed by Bruno engineers, that has a magnetic strength of 400% greater than the best magnetic metal heretofore obtainable.

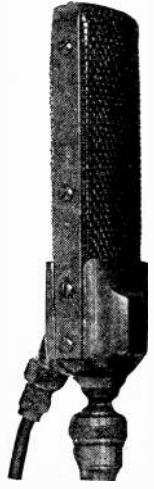
A special heat treated aluminum ribbon .0001" thick is suspended in the concentrated magnetic field. As no obstruction is offered the sound path, the microphone is equally sensitive on both sides. Any tendencies to pick-up hum, due to outside fields have been entirely eliminated. This has been made possible by three factors: (1) Great increase in output level due to the use of the highly magnetic "NICALUM" field pieces. (2) The reduction in size of the transformer winding by use of a special high permeability core. (3) The encasing of the microphone in a heavy magnetic shield. Floating on a rubber cushion, which is an

integral part of the microphone, the Bruno Velocity Microphone is completely insulated from disturbing floor vibrations. A new system of universal mounting permits tilting or turning of the microphone in any direction.

As the microphone is almost entirely constructed of metal, it is unaffected by atmospheric conditions. The rugged construction allows severe abuse without injury to the delicate mechanism.

**SPECIFICATIONS**

Output level: -64 db (across 250 ohm load with sound pressure of 10 dynes per cm<sup>2</sup>, zero level = 6 milliwatts).  
Frequency response: ± 1 db from 50 to 12,000 cycles.  
Output impedance: 200 to 500 ohms.  
Overall dimensions: 6" x 2 1/4" x 3/4".  
Weight: 2 pounds.  
Equipped: With 25 feet of shielded cable.

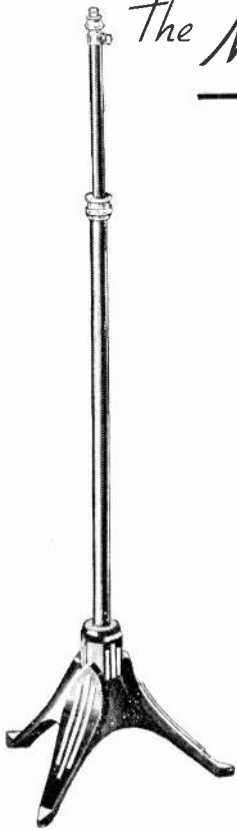


Low Impedance .....	Model SK-4LI .....	Beveled Screen .....	Model SK-5LI
High Imp.—High Fidelity .....	Model SK-4HF .....	Model SK-5HF	
High Imp.—High Pitched .....	Model SK-4HP .....	Model SK-5HP	
High Imp.—Close Talking .....	Model SK-4CT .....	Model SK-5CT	

**LIST PRICE, any model..... \$40**

# “Bruno” HIGH GRADE ACCESSORIES

## The Monohand



### 'One Hand Adjustable' STAND

With a Positive Internal Expansion Spring Lock  
Adjustable with One Hand!

THE MONO-HAND STAND is a combination of beauty and convenience never before approached. Finished in durable lacquered gunmetal, the beautiful modernistic lines blend pleasantly with modern studio furnishings.

An ingenious arrangement makes it possible to lower or raise, absolutely noiselessly, the movable part of the stand by the pressure of a button conveniently placed below the microphone.

Smooth action in both directions—no wearing of parts—no sliding down—no clutches to tighten—just a button to press!

The only “one hand adjustable” stand—another original thought of the Bruno Engineering staff.

The base of the MONO-HAND Stand is triangular and it finds its own level no matter how uneven the floor may be. It is unobstructive and may be placed where a round base cannot stand conveniently.

#### Specifications:

Weight	14 lbs.	Upper Tube	7/8" dia.
Minimum Height	42"	Microphone Thread	3/4"-27
Maximum Height	59"	Base Thread	1"-27
Lower Tube	1" dia.	Finish	Gunmetal

Model B-22..... List Price \$22.50

### CABLE CONNECTORS

C-1



Specially designed connector for use on single wire installation so that permanent or detachable connections may be made easily and securely. Contact points positive in action and self-wiping; failure to hold contact is a practical impossibility. Unit cannot be accidentally disconnected and is completely shielded. Method of wiring connector is so simple that it can be accomplished in one-third the time required for wiring other types.

Model C-1 Cable Connector  
(both parts complete)

List Price ..... \$1.25

C-2

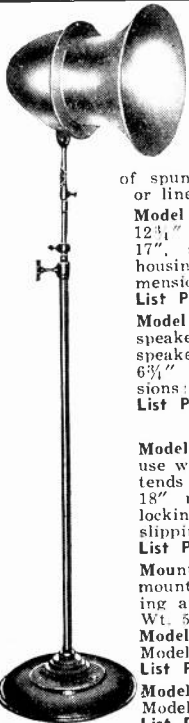


Same as Model C-1. except that this connector is designed for mounting on the amplifier “chassis”. Sturdy; easy to wire; cannot pull.

Model C-2 Cable Connector  
(both parts complete with lock washer and nut)

List Price ..... \$1.35

### PARABOLIC SOUND PROJECTORS



The two sections, consisting of horn-and-bell and speaker housing, are made of spun aluminum; no ribs or lines to weaken frame.

Model PR12 — For 11" to 12 1/4" speakers. Bell diameter 17", speaker opening 10", housing 10" deep. Outside dimensions: 17" x 20".  
List Price ..... \$10.50

Model PR10—For 8" to 10 1/4" speakers. Bell diameter 15", speaker opening 8", housing 6 3/4" deep. Outside dimensions: 15" x 18".  
List Price ..... \$10.00

Model FSP Floor Stand for use with parabolic units. Extends from 5 to 9 ft. and has 18" non-tipping base. Two locking collars to prevent slipping. Wt. 40 lbs.  
List Price ..... \$17.50

Mounting Brackets for mounting projector and tilting at any angle. Ht. 10"—Wt. 5 lbs.

Model MBP12—For Parabolic Model PR12.  
List Price ..... \$3.50

Model MPB10—For Parabolic Model PR10.  
List Price ..... \$3.50

### CHROMIUM MICROPHONE STANDS

With Automatic Clutch

These popular BRUNO microphone stands are made of special heavy brass tubing with full chromium plating. They will accommodate every style of microphone, including the BRUNO “VELOTRON” described on the reverse side. They are all supplied with the new smooth, self-locking automatic friction clutch which provides simple and sure adjustment of stand to the height desired. All floor stands extend from 35" to 70"—standard 5/8"—27 thread.

Model F12B — Heavyweight floor stand; wt., 18 lbs.—12" base.

List Price ..... \$18.00

Model F10 — Medium weight studio floor stand; wt., 14 lbs.—10" base.

List Price ..... \$15.00

Model B10B — Light weight studio floor stand; wt., 9 lbs.—10" black crystalline base.

List Price ..... \$10.00

Model 3SP — Portable studio floor stand; extends from 18" to 30"; 7" base.

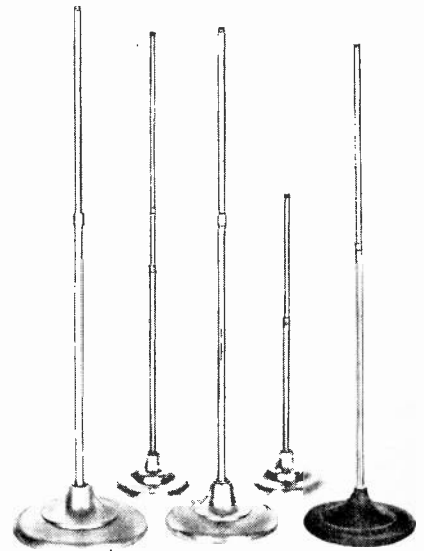
List Price ..... \$10.00

Model BKT—Banquet stand; three sections—7" base.

List Price ..... \$8.50

Model DSK — Desk stand; height overall 4 1/2"—6" base.

List Price ..... \$3.00



F12B

3SP

F10

BKT

B10B

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# GENERAL INDUSTRIES

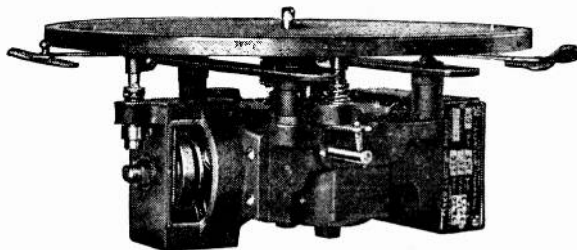
## PHONOGRAPH MOTORS

The General Industries Company's Motors are the result of long years of experience and exhaustive experimental and scientific study. The General Industries types of Motors

have been manufactured continuously since 1915, and many millions are in constant use giving permanent and positive satisfaction.

**GREEN FLYER TWO-SPEED, GOVERNOR CONTROLLED, ELECTRIC MOTOR, 33-1/3 and 78 R.P.M.**

Model D with 12" Turntable Speed Regulator, Speed Change Lever and Plate.



Model H for 16" Records

Furnished for use on all voltages and frequencies, also supplied for:

110 volts D.C. or 220 volts D.C.  
110 volts A.C. and D.C. Universal  
220 volts A.C. and D.C. Universal  
6 volts D.C. Single and Two-Speed

Please Specify the voltage and frequency required.

Accessories—10" or 12" turntable Dial and Pointer Speed Regulator.

Speed Change Pointer.

Speed Change Escutcheon Plate.

Model "D"—110 Volts A.C., 60 Cycles List Price, Each \$16.50  
Model "D"—110 Volts D.C. .... List Price, Each 21.50  
Model "H"—110 Volts A.C., 60 Cycles. (Recommended for 16" records) ..... List Price, Each 17.75  
Add \$1.75 to list price for weighted 12" turntable.  
Add \$1.25 to list price for Automatic Stop.  
Deduct \$.50 from the list price for standard 10" turntable.

Hardware in Nickel, Oxidized, Brass, Gold Lacquer, or Statuary Bronze finish.

Automatic Stops are optional. Specially designed for playing the new records recorded at 33' R.P.M. and records recorded at 78 R.P.M.

The shift from one speed to the other is accomplished by simply moving a lever.

All gears are completely enclosed and run in oil.

Silent Spiral-Cut Gears made from Laminated Bakelite.

Long over-size self-lubricating bearings.

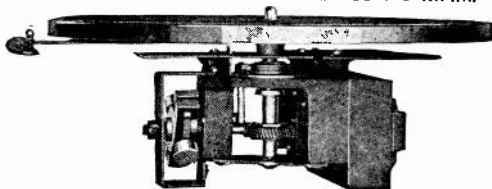
Absolute uniformity of speed under severe variation of voltage and record drag.

Will not overheat in closed Cases and Cabinets.

Length—8" Width—5 1/4"  
Depth — 3 3/4" from Mounting Strap to Bottom

### Green Flyer Governor Controlled Electric Motor

Model A—78 R.P.M. and Model B—33-1/3 R.P.M.



Furnished for use on all voltages and frequencies, also supplied for:

110 volts D.C. or 220 volts D.C.  
110 volts A.C. and D.C. Universal  
220 volts A.C. and D.C. Universal

Please Specify the voltage and frequency required.

Furnished complete mounted on plate ready for installation.

Open construction allowing perfect ventilation.

Absolute uniformity of speed under severe variation of voltage and record drag.

Long over-size self-lubricating bearings.

Single-Speed Green Flyer Electric Phonograph Motor with standard 12" turntable and speed regulator.

Model "A"—78 R.P.M. (110 Volts A.C., 60 Cycles) ..... ea. \$13.00  
Model "B"—33 1/3 R.P.M. (110 Volts A.C., 60 Cycles) ..... ea. 14.00  
Model "A"—78 R.P.M.—(110 Volts D.C.) ..... ea. 18.75  
Model "B"—33 1/3 R.P.M. (110 Volts D.C.) ..... ea. 19.75

Add \$1.75 to list price for weighted 12" turntable.

Add \$1.25 to list price for Automatic Stop.

Deduct \$.50 from the list price for standard 10" turntable.

#### SIX VOLT D.C. MOTORS List Price

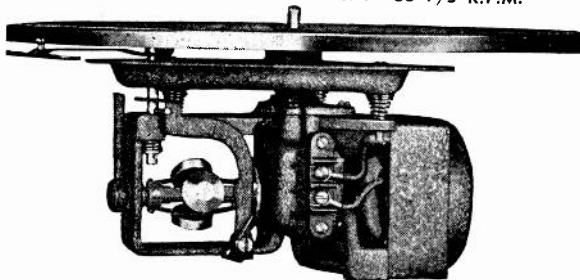
78 R.P.M. .... each \$71.50  
33 1/3 R.P.M. .... each 21.50  
78 and 33 1/3 R.P.M. .... each 24.00  
Add \$1.75 to list price for weighted 12" turntable.  
Add \$1.25 to list price for Automatic Stop.  
Deduct \$.50 from the list price for standard 10" turntable.

#### UNIVERSAL PHONOGRAPH MOTORS List Price

Model "N"—33 1/4 and 78 R.P.M. Two-Speed Universal Motor, 110 volts A.C. and D.C., with 12" turntable, speed regulator and speed change lever and escutcheon plate ..... each \$22.50

### Blue Flyer Governor Controlled Electric Motor

Model E—78 R.P.M. and Model F—33-1/3 R.P.M.



A very fine and powerful Motor for Combination Radios and Phonographs and Cabinet Machines.

Furnished for use on all voltages and frequencies. Please Specify the voltage and frequency required.

Furnished complete mounted on plate ready for installation.

Open construction allowing perfect ventilation.

Absolute uniformity of speed under severe variations of voltage and record drag.

Long over size self-lubricating bearings.

Silent spiral-cut gears made from Laminated Bakelite.

Will not overheat in closed cases and cabinets.

Finished in handsome blue cracklin enamel.

Accessories—10" or 12" turntable.

Dial and Pointer Speed Regulator.

Hardware in Statuary Bronze, Oxidized, Brass, Nickel or Gold Lacquer finish. Automatic Stops are optional.

Length—7 1/4" Width—3 1/4"

Depth—4 3/8" from Mounting Plate to Bottom.

Single-Speed Blue Flyer Electric Phonograph Motor with standard 12" turntable and speed regulator.

Model "E"—78 R.P.M. (110 Volts A.C., 60 Cycles) ..... ea. \$14.75  
Model "F"—33 1/3 R.P.M. (110 Volts A.C., 60 Cycles) ..... ea. 15.75  
Add \$1.75 to list price for weighted 12" turntable.  
Add \$1.25 to list price for Automatic Stop.  
Deduct \$.50 from the list price for standard 10" turntable.

Model "G"—78 R.P.M. Single Speed Universal Motor, 110 volts A.C. and D.C., with 12" turntable and speed regulator ..... each 19.50

Model "J"—33 1/3 R.P.M. Single-Speed Universal Motor, 110 volts A.C. and D.C., with 12" turntable and speed regulator ..... each 19.50

Add \$1.75 to list price for weighted 12" turntable.

Add \$1.25 to list price for Automatic Stop.

Deduct \$.50 from the list price for standard 10" turntable.

# GENERAL INDUSTRIES

## PHONOGRAPH RECORD CHANGERS

A PRODUCT OF GENERAL INDUSTRIES CO.

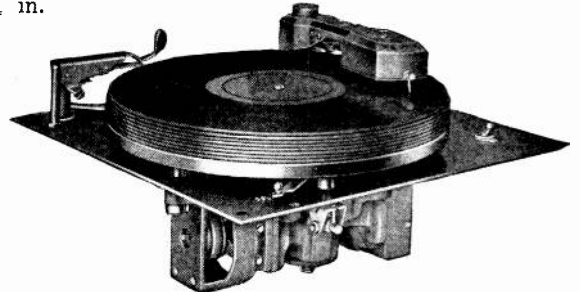
### AUTOMATIC RECORD CHANGER — MODEL "K"

PLAYS EIGHT 10-in. RECORDS AUTOMATICALLY

This Model K Automatic Record Changer is a very efficient, compact and simple unit. It will play standard 78 and 33 1/2 R.P.M. records. The improved two-speed motor is very quiet in operation and remarkable for its simplicity. The pick-up is damped thereby bringing out the best tone quality of the records. The entire unit requires a small space for mounting. Size: Length across front of base plate 12 in.; Width: (front to back of base plate) 12 in.; Height: above plate 5 in.; Depth: below plate 3 1/4 in.

#### FEATURES

Plays eight 10 in. Records Automatically. . . .  
 Plays 12 in. Records Manually. . . Any Record may be repeated. . . . Repeats last record. . . . Records may be rejected. . . . Simple change for playing manually. . . . All steel Construction. . . . Finish—Statuary Bronze. . . . Furnished for all voltages and frequencies, also for direct current, and for Universal A.C.-D.C. Operation.



Automatic Record Changer with master switch, high impedance pickup with volume control and 110 volt A.C. 60 Cycle, two-speed motor.

No. 8—LIST PRICE ..... **\$45.00**

Same as No. 8, except less Volume Control.  
 No. 7—LIST PRICE ..... **\$44.25**

Same as No. 8, except less Master Switch.  
 No. 6 LIST PRICE ..... **\$44.50**

Same as No. 8 except less volume control and master switch.  
 No. 5—LIST PRICE ..... **\$44.00**

Same as No. 8, except with Automatic Stop Switch (especially for Funeral Chapel or similar use where remote control is desired).

No. 9—LIST PRICE ..... **\$50.00**

For 110 Volts A.C. & D.C. Univ. Motor..... Add \$8.00 to list price

For 110 Volts D.C. only..... Add \$7.00 to list price

For 6 Volts D.C. .... Add \$8.50 to list price

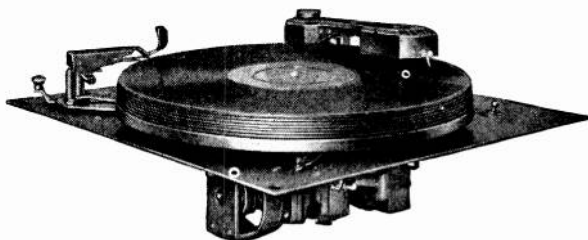
For 110 Volts A.C. 25 Cycles ..... Add \$1.25 to list price

**NOTE:** We are furnishing as standard either the Webster Electric Co. high impedance magnetic pickup or Astatic crystal pickup. Please specify which one you prefer. The Webster pickup may be had with 200 or 500 ohm impedance at no extra charge.

### AUTOMATIC RECORD CHANGER — MODEL "L"

PLAYS EIGHT 10-in. RECORDS OR SEVEN 12-in. RECORDS AUTOMATICALLY

This efficient record changer is compact and simple in construction. It will play 78 or 33 1/2 R.P.M. standard records. The new and improved type of two-speed motor is very quiet in operation. There are no intricate working parts to get out of order. It uses a flat type, flexible damped pickup which will reproduce fine tone quality. The complete unit requires very small space for mounting. Length: across the front of base plate 14 inches. Width: front to back of base plate 15 in. Height: above plate 5 in. Depth: below the plate 3 1/4 in.



#### FEATURES

Plays seven 12 in. or eight 10 in. Records automatically. . . . Any Record may be repeated. . . . Records may be rejected. . . . Repeats last record. . . . Simple change for playing manually. . . . Simple change for 10 in. or 12 in. Records. . . . All steel Construction. . . . Finish—Statuary Bronze. . . . Furnished for all voltages and frequencies, also for direct current, and for Universal A.C.-D.C. Operation.

Record Changer mounted on 14 in. x 15 in. Plate with On-and-Off Switch, Pickup and Volume Control, 110 Volt A.C., 60 Cycle Two-Speed Motor.

No. 18—LIST PRICE ..... **\$52.50**

Record Changer, same as No. 18, less Volume Control.  
 No. 17—LIST PRICE ..... **\$51.75**

Record Changer, same as No. 18, less On-and-Off Switch.  
 No. 16—LIST PRICE ..... **\$52.00**

Record Changer, same as No. 18, less Volume Control and On-and-Off Switch.

No. 15—LIST PRICE ..... **\$51.50**

Same as No. 18, except with Automatic Stop Switch (especially for Funeral Chapel or similar use where remote control is desired).

No. 19—LIST PRICE ..... **\$57.50**

For 110 Volts A.C. & D.C. Univ. Motor..... Add \$8.00 to list price

For 110 Volts D.C. only..... Add \$7.00 to list price

For 6 Volts D.C. .... Add \$8.50 to list price

For 110 Volts A.C. 25 Cycles ..... Add \$1.25 to list price

**NOTE:** We are furnishing as standard either the Webster Electric Co. high impedance magnetic pickup or Astatic crystal pickup. Please specify which one you prefer. The Webster pickup may be had with 200 or 500 ohm impedance at no extra charge.

# WESTON Instruments

## Model 665 Selective Analyzers Types 1 and 2



The Model 665 is available in two types. Type 1, the "Rotary Switch Model," is illustrated at the left and Type 2, the "Pin Jack Model," is illustrated at the right. The Rotary Switch is incorporated in Type 1 for a more rapid selection of ranges. The Model 666 Type 1-B Socket Selector, which serves to bring the tube socket connections to the analyzer circuit, or the Model 666 Type 2 Capacity Unit, may be mounted on both analyzers in precisely the same manner. When the latter unit is used, capacity measurements from 0 to 10 microfrads may be read directly on the scale.



Both Model 665 Analyzers have the following broad list of A.C. and D.C. voltage ranges: 1,000-500-250-100-50-25-10-5-2.5-1, all with a sensitivity of 1,000 ohms per volt. The D.C. current ranges of the Type 1 Analyzer are 500-250-100-50-25-10-5-2.5-1 milliamperes. The D.C. current ranges of the Type 2 Analyzer are the same except that measurements may be taken up to 1,000 milliamperes. Resistance readings may be made from 1 ohm to 1 megohm, readable in four ranges. The customary analyzer grid test, including both high and low grid tubes, made with self contained batteries. The A.C.

ranges, for ordinary A.C. measurements as well as for trip readings, are obtained through the use of a copper oxide full-wave bridge-type rectifier.

The indicating instrument, a Model 301 type, is mounted in a Standardized Service Unit bakelite panel. The assembly is supplied in a sturdy pressed steel case attractively finished in black. A leatherette carrying case can be provided to accommodate the Model 665 Analyzer (Type 1 or Type 2), and a Model 666 I-B Socket Selector.

<b>Model 665—Type 1</b> (less carrying case and Model 666 Socket Selector).....	<b>Dealer's Wholesale NET Price, \$52.50</b>
<b>Model 665—Type 2</b> (less carrying case and Model 666 Socket Selector).....	<b>48.75</b>
<b>Carrying Case</b> .....	<b>3.75</b>

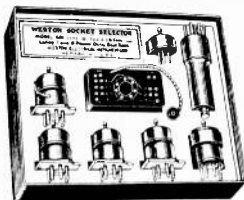
## New Model 771—Weston Checkmaster



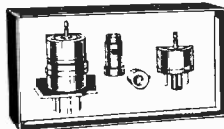
Checks all tubes, including octal base, metal, glass, glass with metal shell, etc. Spare socket provided to guard against radical tube changes. Flexible switching system provides for various filament return arrangements. Short check under actual operating conditions. Tubes checked by WESTON "BCD" SYSTEM (Battery type tubes—Cathode or normal type tubes—Diode type tubes). Simplified, easy-reading scale. Voltage ranges: 10-100-1000; ideal for rapid point-to-point, ready reference and free-point measurements. Resistance range: 0-2,000,000 ohms. High resistance condenser leakage test. Attractively finished in black, cream and red. Size 1 1/2"x9 1/4"x6". Net Weight 1 3/8 lbs.

<b>Model 771—CHECKMASTER</b>	
<b>Dealer's Wholesale NET Price</b> .....	<b>\$45.00</b>

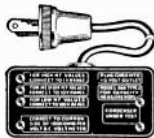
## Model 666 Socket Selectors



TYPE 1-B



TYPE 3-A



TYPE 2

Type 1-B Socket Selector for testing 4, 5, 6, 7, and 8-prong base tubes. The selector block mounts mechanically on the analyzer by means of two pin-terminals. With the tester plug inserted in the radio set socket, and the tube in the selector block socket, tube circuit conditions (voltage, current, resistance) can be checked by plugging in the pin-tipped jumper cables from the jack in the selector block to the analyzer jacks or binding posts.

Type 2 provides voltage taps for the accurate measurements of capacities from .001 to 10 mfd.

<b>Model 666—Type 1-B</b> (for 4, 5, 6, 7, and 8-octal base tubes).....	<b>3.38</b>
<b>Model 666—Type 3-A</b> (octal accessories for those who now use a Model 666 Type 1-A).....	<b>7.88</b>
<b>Model 666—Type 2 Capacity Unit</b> .....	<b>.56</b>
<b>Jumper Cables, No. D-71785-6, Per Pair</b> .....	<b>.38</b>
<b>Ground Lead, No. D-71787, Each</b> .....	<b>.38</b>
<b>Output Meter Lead, No. D-73063, Each</b> .....	<b>.38</b>
<b>Test Leads, Elbow Terminals D-70033-4, Per Pair</b> .....	<b>.94</b>
<b>Dealer's NE Price</b> .....	<b>\$14.81</b>

## The Super-Sensitive Analyzer

### Model 772



The first REAL super-sensitive analyzer. See the following unique features:

- (1) All d-c voltage ranges at 20,000 ohms per volt.
- (2) A 4 1/4" instrument with large movement especially designed for Model 772.
- (3) Has a wide, open scale, 100 divisions, knife-edge pointer.
- (4) Reads in all circuits where minute currents are present.
- (5) Model 772 will service television receivers, as well as present-day transmitters and receivers.
- (6) 5 d-c voltage ranges available at rotary switch 0-2.5-10-50-250-1,000 volts.
- (7) 5 a-c voltage ranges, 1,000 ohms per volt, available at rotary switch. 0-2.5-10-50-250-1,000 volts.
- (8) 6 current ranges; rotary switch positions for 3 highest ranges—0-10-50-250 milliams. Pin jack positions for 0-50-100 microamps 0-1 milliams.
- (9) 4 resistance ranges at rotary switch—0-3,000-30,000-3,000,000-30,000,000 ohms. High range ohmmeter gives ideal test of condenser leakage.
- (10) 5 output meter ranges through special pin jacks—0 2.5-10-50-250-1,000 volts.

The most practical, versatile, sensitive analyzer on the market.

<b>Model 772—Super-Sensitive Analyzer. Dealers Wholesale NET Price</b> (less Model 666 Socket Selectors).....	<b>\$46.50</b>
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# WESTON Instruments

## MATCHED TEST UNITS

### Model 564 Volt-Ohmmeter Type 3-C

4 Voltage Ranges! 0-3; 0-30; 0-300; 0-600 all at 1000 ohms per volt.  
4 Resistance Ranges! 0-1000; 0-10,000; 0-100,000 0-1,000,000 ohms, full scale.  
A fine Weston-quality instrument with self-contained 4½ volt battery supplies the necessary potential. Changes in battery potential are compensated for by short-circuiting the resistance pin jacks of any range and adjusting pointer to zero ohms by turning the battery adjustment knob. Voltage ranges are brought out to pin jacks. Toggle switch connects meter in circuit as a voltmeter, or ohmmeter. A pair of test leads is furnished.  
Size: 5¼" x 3¾" x 2¾".

Dealer's Net Price, Model 564, Type 3-C.....\$27.00

### Model 571 Output Meter

This Output Meter is a rectifier type A.C. voltmeter designed for output or volume measurements where a constant impedance type is desired.  
Five voltage ranges, 150/60/15/6/1.5, are available at pin-jacks and are selected by a dial switch. A self-contained condenser for blocking any D.C. component is connected to a separate pin-jack. Model 571 has a constant impedance of 4,000 ohms. A long pair of test leads for connection to the speaker voice-coil and an adapter for the output tube socket are provided.

Model 571—Type 3A  
Dealer's Wholesale NET Price, \$22.50

### Model 695 Power-Output Voltmeter

It has a resistance of 2,667 ohms per volt, or 4,000 ohms total on its lowest range and 400,000 ohms total in its highest range. It provides five voltage and eleven dB ranges, selected through a dial switch.—8,—4, 0, 8, 12, 16, 20, 24, 28, 32 dB. 1½, 6, 15, 60, 150 volts. A chart gives corrections for decibel readings on any load from 5 to 50,000 ohms, at 6 milliwatts zero level.

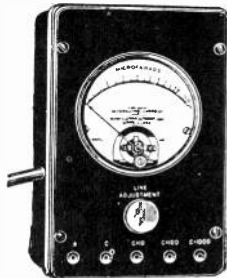
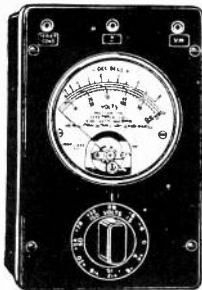
Dealer's Wholesale NET Price  
Model 695—Type 3A .....\$27.00  
Model 695—Type 3B (High Speed) ..... 30.37

### Model 780 Capacity Meter

Model 780 is a newly designed multi-range capacity meter. It is especially suited for measuring capacity of electrolytic as well as paper condensers. Operates from any 115-volt, 60-cycle A.C. outlet.  
Ranges: Full scale value—20/2/0.2/.02 mfd. Reads down to .0001 mfd.

Model 780 is equipped with a line voltage adjuster and is insulated from the line by an internal transformer. A pair of long test leads is provided.

Model 780—Dealer's Wholesale  
New Reduced NET Price.....\$22.50



## STANDARDIZED SERVICE UNITS

### Model 663 Volt-Ohmmeter

Ranges: 0/5/25/250/2,500/25,000/250,000 ohms; 0/200/1,000/10,000/100,000/1,000,000/10,000,000 ohms; 0/2.5/10/100/250/500/1,000 volts 1,000 volts per volt; 0/1/5/25/100 M.A. at 500 M.I.V. Switch selects each ohm range.

Supplied with self-contained batteries, test leads and registration card.

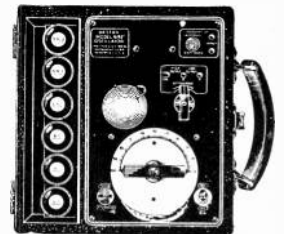
Dealer's Wholesale NET Price,  
\$45.00



### Model 692 Test Oscillator

Portable, triple-shielded all-wave test oscillator with plug-in coils to prevent interaction. Very low leakage. A 200-ohm constant impedance special attenuator gives a signal strength from 0.2 volt to 1 microvolt. 50% modulation at all frequencies. Ranges: I.L. 100 to 250 KC.; H.L. 250 to 550 KC.; DC 535 to 1600 KC.; S.W.-1; 1.5 to 4 MC.; S.W.-2; 4 to 10 MC.; S.W.-3; 10 to 22 MC. Pin jacks for external modulation. Two type 30 tubes are used. Complete with tubes, calibrated curve and batteries.

Dealer's Wholesale  
New Reduced NET Price \$45.00



### Model 664 Capacity Meter

A direct-reading capacity meter, ranging from .0001 to 200 mfd. and providing A.C. voltage measurements up to 1,000 volts. Ranges are 10-200, 1-20, .1-2, 0.01-0.2, 0.0001-0.02 mfd. and 4, 8, 40, 200, 800 A.C. volts, 1000 ohms per volt. Accurate measurement for all electrolytic condensers regardless of voltage rating. Shorts and opens indicated. Operates direct from A.C. line.

Dealer's Wholesale NET Price,  
\$41.25



### Model 669 Vacuum Tube Voltmeter

Has infinite resistance in ohms per volt. Ranges have input impedances equal to that of the tube itself, no resistance network being used in input circuit. A.V.C. circuits are not upset when making measurements. Operates direct from 115-volt, 60-cycle source. Ranges of 1.2/3/6/8/12/16 volts full scale allows a.f. and r.f. measurements from 0.1 to 16 volts. Two tubes, Types 1-V and 78, are used. The instrument is a 100 microampere Weston Model 301. Model 669, in combination with Model 092 Oscillator, is indispensable for measuring gain-per-stage.

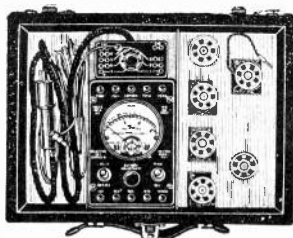
Dealer's Wholesale New Reduced NET Price.....\$45.00

(Prices given above are less carrying case)  
Single Unit Carrying Case ..... Dealer's NET, Price \$3.75  
Multiple Unit Carrying Case ..... " " " 11.25

## Model 698 Selective Set Servicer

Includes a Weston Volt-Ohm-Milliammeter, equipped with a Model 301 instrument—a complete Model 666 Type 1-B socket Selector Set, all necessary leads, carrying case and instructions. Future developments in tube base design can be compensated for by an inexpensive selector block or an adapter. Its ranges are 750-150-15-7.5 volts A.C. and D.C.; 500,000-5,000 ohms center scale, and 75-7.5 M.A., D.C. only.

Model 698 Type 1-B—Complete, Dealer's NET Price.....\$37.50



## Model 689 Ohmmeters

Available in two types. A 1½-volt No. 2 Unit Cell Battery, self-contained, supplies the potential. Provides adjustment for variation of voltage. Complete with batteries and a long pair of test leads.

Dealer's Wholesale NET Price

Type 1E—5,000-50,000 ohms....\$14.62  
Type 1F—10-1,000 ohms..... 18.75  
Leather Carrying Case..... 3.56



# Radio TRIPLET Testers

## Volt-Ohm-Milliammeter



Model 1200-A Unit

Has two instruments A.C. and D.C. in the exclusive Triplet tilting type twin case. New features include Backup Ohmmeter for checking low ohms and new arrangement of shunts, limiting switch contact error to less than 1/2%. Ohms scale markings in straight lines. Scale readings—D.C. 10-50-250-500-1000 volts at 2000 ohms per volt; 1-10-50-250 M. A.; Low ohms .5 to 500; 1500, 1.5 and 3 megohms. A.C. 10-50-250-500-1000 volts. Resistance measurements have individual zero adjustments. Selector switch for all instrument readings. Contains 2 1/2 and 1 1/2 volt batteries. Shpg. Wt. 10 lbs.

1200-A Unit Code—TRITE  
List—\$32.50 Net—\$21.67

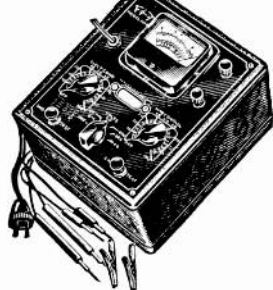
Model 1200-B, same as 1200-A except A.C. meter is replaced with D.C. movement and copper oxide rectifier for A.C. with readings 2-10-50-250-500-1000 volts at 2000 ohms per volt. Shpg. wt. 10 lbs.

1200-B Unit Code—TRRRF  
List—\$40.00 Net—\$26.67

1200-C Unit, same as 1200-A but has 5000 ohms per volt D.C.; 250 microamperes; 7.5 megohms.

1200-C Unit Code—TRFFA  
List—\$36.50 Net—\$24.33

## Condenser Tester



Model 1240 Unit

Model 1240 does the complete job of testing any type condensers from .0001 to 10 microfarads for breakdowns, opens, shorts, leakages and capacity. Any defects of paper, mica or electrolytic condensers are indicated on the direct reading meter scale. The three scales are: A—.1 to 10 mfd.; B—.01—.6 mfd.; C—.0001—.05 mfd. Open condensers and those having high resistance leakages can be ascertained with certainty. A.C. and D.C. voltage is available for breakdown tests up to 1,000 volts in steps of 2, 20, 60, 200, 600 and 1,000. Capacity is read in microfarads on the dial. Accuracy maintained for capacity test by a line voltage, regulator with a unique shadow-type indicator. Test leads included. Shpg. wt. 10 lbs.

1240 Unit. Code—TRTYT  
List—\$37.25 Net—\$24.83

## Tube Tester

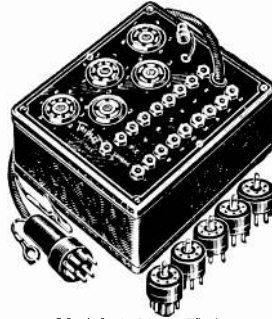


Model 1210-A Unit

Tests all types tubes — metal, glass-metal and glass. Direct reading. Colored GOOD and BAD scale. Includes rectifier tube. Large meter. Line voltage regulation. All short tests. Cathode leakage test. Individual tests on diodes and full wave rectifiers. Simple to operate. Has four sockets with one 5-6 in combination to minimize panel space. Has a new RMA approved circuit with every essential for a dependable emission test of tube values. No confusion, complications or calculations. 60 cycle, 100-130 volts. Shpg. wt. 11 lbs.

1210-A Unit. Code—TRIER  
List—\$30.00 Net—\$20.00

## Free Point Tester



Model 1220-A Unit

For servicing sets using metal, glass-metal or glass tubes. Has five sockets—with standard RMA markings. Panel also includes eight automatic switch type and ten single action jacks. Makes all series and parallel meter connections through the set sockets to all parts of the circuit. Automatic in operation. Used in conjunction with Model 1200 Volt-Ohm-Milliammeter. Extra connections may be added, when necessary, at a very slight cost. Shpg. wt. 8 lbs.

1220-A Unit. Code—TRICH  
List—\$15.00 Net—\$10.00

## Signal Generators



Model 1231 Unit

Model 1231 All-Wave Direct Reading D.C. Signal Generator now has built-in trimmer calibrated coils for accuracy of 1% on broadcast, intermediate and short wave bands. Six bands cover 100-30,000 Kc.—all fundamentals. Fully stabilized. Extra-long 12 in. vernier type direct reading scale. Improved band selector switch. 400 cycle audio signal available. Includes batteries and two type '30 tubes. Shpg. wt. 13 lbs.

1231 Unit. Code—TRUTH  
List—\$35.00 Net—\$23.33

Same as 1231, but for 110 volts—60 cycle A.C. operation. Shpg. wt. 16 lbs.

1232 Unit. Code—TULSA  
List—\$37.50 Net—\$25.00

Model 1230 Unit is an All-Wave Signal Generator supplying a continuously variable signal. Frequencies controlled on six fixed positions, from 100-18,000 Kc. Batteries, tubes and six individually calibrated graphs supplied. Shpg. wt. 14 lbs.

1230 Unit. Code—TRIBE  
List—\$23.00 Net—\$15.33

## MASTER UNITS

Case is metal with baked electro black wrinkle finish. Size: 7 7/8 x 6 5/8 x 4 5/8 in. deep. Panels are black and silver with metal re-inforcements. Sockets are flush. All materials are of the best quality. Master carrying cases listed on page F-6.

## Vacuum Tube Voltmeter



Model 1250 Unit

With its accuracy independent of changing tube values, Model 1250 is the first self-calibrating Vacuum Tube Voltmeter. Tube characteristics are stabilized with the circuit, irrespective of what tube emission values may be. Replacing a tube does not alter accuracy. Measures low A.C. and D.C. voltages without current drain. Has two separate D.C. movements in a tilting type case. One indicates when tube characteristics are stabilized with circuit, other is a three-range voltmeter with approximately linear scales reading in peak A.C. and D.C. volts. Ranges are 2.5, 10, and 50 volts. All accessories included. Shpg. wt. 13 lbs.

1250 Unit. Code—TRPPD  
List—\$50.00 Net—\$33.34

## Audio Frequency Oscillator

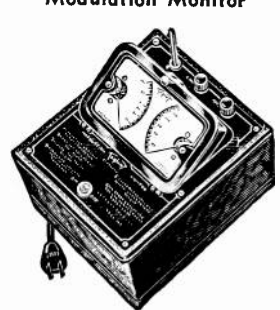


Model 1260 Unit

A compact, portable Audio Frequency Oscillator that generates a pure sine wave without distortion or harmonics. Has circuit of feedback type, giving precision performance of a degree usually found only in the finest of laboratory equipment. Wide frequency range: 100-250-500-1,000-2,000-3,000-4,000-5,000-7,500-10,000 cycles. Furnishes audible frequency to test audio amplifiers, speakers, P. A. systems and is useful for a wide range of laboratory purposes. Strong signal. Attenuation is extremely accurate. Impedance matching is variable. Operating power furnished by A.C. line voltage. Necessary tubes and test leads included. Shpg. wt. 14 lbs.

1260 Unit. Code—TRMMA  
List—\$42.50 Net—\$28.33

## Modulation Monitor



Model 1295 Unit

Actual modulation percentage of radio transmitters is shown on the direct reading dial. Eliminates uncertainty of depending on the ear, variation of antenna ammeter or the loop and light in determining carrier shift and percentage of modulation. Scale indicates modulation from 40 to 120 per cent. All readings are in peaks. Visual information provided on a second dial for carrier reference level for modulation test and also to check carrier shift during modulation. Model 1295 has a twin instrument, tilting type, with two separate movements. It is factory calibrated and no further calibrations are needed. Shpg. wt. 11 lbs.

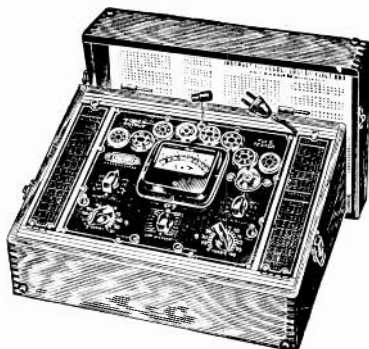
1295 Unit. Code—TRKKY  
List—\$37.25 Net—\$24.83

# Radio



# Testers

## POWER OUTPUT TUBE TESTER



Model 1502 is the acknowledged last word in tube tester design. The gain method is used showing the nearest approach to actual receiving set operation. Quickly tests all glass, metal-glass and metal tubes.

Applies proper D. C. voltages to tube elements. Includes test for rectifier tubes and separate diode test. Supplies pulsating signal to C-G and indicates tube values on the GOOD-BAD scale. Neon inter element short test (made while tube is hot) detects even the slightest leakage. Has shadow-graph line voltage indicator. When new tubes are released up-to-date tube charts are provided. Furnished in a highly attractive quartered oak case with sloping silver and black panels. For portable or counter use. Case measures 15 3/4 x 11 1/2 x 7 1/2 ins. Shipping Wt. 26 lbs.

**Model 1502.** Code—TUNIC.  
List Price—\$55.00      **Net Price—\$36.67**

## TUBE TESTER



Model 1310 is a 1937 improved emission-type tester—conforming to all standards of good engineering practice. Accepts and rejects all glass, glass-metal or metal tubes according to their GOOD or BAD values. Simple to operate. The four controls are: Load, Tube Selection and Shorts, Line and Filament Voltages. Supplies separate diode test.

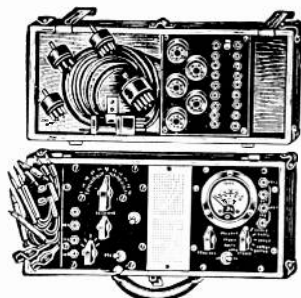
Furnished in a beautiful modernistic, two-tone walnut case with sloping panel, and metal tube reading charts. Case measures 11x8 1/2 x 8 ins. with removable cover for either portable or counter use.

Shipping Wt. 18 lbs.

**Model 1310.** Code—TROGS.  
List Price—\$37.00      **Net Price—\$24.67**

**1201 Case only,** for single Master Unit.  
Code—TRENT.  
List Price—\$6.00  
**1202 Case only,** for two Master Units.  
Code—TREEN.  
List Price—\$7.00

## SERIES 1100 TESTERS



The Model 1100 series quality Triplett testers are noted for their precision accuracy and compact construction. Designed by servicing engineers. Fully equipped for circuits using all types of tubes.

**Model 1181-A** Portable Laboratory combines: Models 1125 Volt-Ohm-Milliammeter, 1151 All-Wave Oscillator, 1166-A Free-Point Auxiliary Set Tester. Quartered oak case size—16 1/2 x 7 1/2 x 4 3/4 ins. deep. Cover is removable. Batteries, accessories and complete operating instructions included.

Shipping Wt. 17 lbs.  
**1181-A—Code—TRAMA.**  
List Price—\$57.00      **Net Price—\$38.00**

**Model 1180** Perpetual tester combines Models 1125 and 1151 in a 1181-A size case.

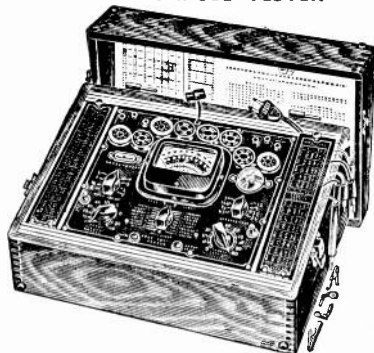
**1180—Code—TREAT.** Shipping Wt. 17 lbs.  
List Price—\$45.00      **Net Price—\$30.00**

**Model 1167-A** Set Tester includes Models 1125 and 1166-A, in a 1181-A size case.

**1167-A—Code—TRAIN.** Shipping Wt. 17 lbs.  
List Price—\$37.50      **Net Price—\$25.00**

**1151—Code—TRAKE.** (Signal Generator only.)  
Shipping Wt. 13 lbs.  
List Price—\$35.00      **Net Price—\$23.33**

## MULTI-PURPOSE TESTER



Combines in one instrument the equivalent of nine separate units. Has the improved Model 1502 Power Output circuit.

Checks any type glass, metal-glass or metal tube for worth—Neon short test—Separate diode test—Metered paper condenser test (for shorts and open)—Electrolytic condenser leakage test—D. C. voltmeter and milliammeter—Ohmmeter—A. C. voltmeter—Decibel meter.

D. C. scale: 10-50-250-500-1000 volts, 1000 ohms per volt; 10-50-250 M. A.; ohms, .2 ohms to 10 megohms; 10-50-250-500-1000 A. C. volts at 400 ohms per volt; down 10 and up 15 decibels. Shadowgraph line voltage indicator. Case same as Model 1502.

Shipping Wt. 26 lbs.

**Model 1503.** Code—TROTH.  
List Price—\$70.00      **Net Price—\$46.67**

**Model 1504,** same as 1503 but with complete Free Point Set Tester in side panels.

Shipping Wt. 23 lbs.

Code—TRIMM.  
List Price—\$85.00      **Net Price—\$56.67**

## MASTER UNIT TEST SETS



A complete portable radio servicing laboratory. Includes Models 1200-A Volt-Ohm-Milliammeter, 1210-A Tube Tester; 1220-A Free Point Tester and 1231 Direct Reading All-Wave Signal Generator in the 1204 case.

**1206 Complete.** Code—TROMB.  
Shipping Wt. 37 lbs.  
List Price—\$121.50      **Net Price—\$81.00**

**1207,** as above, but with Model 1232.

Code—TWINE. Shipping Wt. 37 lbs.  
List Price—\$124.00      **Net Price—\$82.67**

**1205-A,** same as 1206, but has Model 1230.

Code—TRIED. Shipping Wt. 36 lbs.  
List Price—\$109.50      **Net Price—\$73.00**

## MASTER UNIT CASES

Shipping Wt. 5 lbs.  
**Net Price—\$4.00**

Shipping Wt. 8 lbs.  
**Net Price—\$4.67**

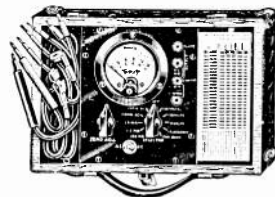
**1203 Case only,** for three Master Units.  
Code—TREAD.  
List Price—\$8.00

**1204 Case only,** for Master Test Set.  
Code—TRAWL.  
List Price—\$9.00

Shipping Wt. 11 lbs.  
**Net Price—\$5.33**

Shipping Wt. 13 lbs.  
**Net Price—\$6.00**

## VOLT-OHM-MILLIAMMETER



Model 1125 contains a direct reading Ohmmeter, Output Meter, A. C.-D. C. Voltmeter and Milliammeter. A. C.-D. C. voltage readings are 15-150-750 at 1,000 ohms per volt; D. C. M. A. 1.5-15-150; A. C. M. A. 15-150. Direct Reading Ohmmeter has scale readings of 0-1500 ohms, 1.5 and 3 megohms. All readings controlled by a selector switch. Batteries included. Furnished in oak case, 11 1/2 x 7 1/2 x 4 1/2 ins. deep.

Shipping Wt. 12 lbs.  
**Model 1125.** Code—TRANI.  
List Price—\$30.00      **Net Price—\$20.00**

## FREE-POINT TESTER

Measures voltages, currents, resistances and continuities without removing the radio chassis from the cabinet. Same case as Model 1125. Shipping Wt. 10 lbs.

**1166-A.** Code—TRAIT.  
List Price—\$18.50      **Net Price—\$12.33**

**1166-A** (less case to mount in cover of 1179-A or 1181-A.)  
Shipping Wt. 8 lbs.

Code—TRASH.  
List Price—\$15.00      **Net Price—\$10.00**



## PANEL INSTRUMENTS



223 & 323-D.C.  
233 & 333-A.C.



221, 321 & 521-D.C.  
231, 331 & 531-A.C.

TRIPLETT D. C. INSTRUMENTS are the D'Arsonval type with an extra light moving coil and reinforced strong parts. TRIPLETT A. C. INSTRUMENTS are the movable iron repulsion type. All are air damped. Have extra light moving parts. Both A.C. and D.C. instruments have: Sapphire jewel bearings. Finest workmanship to assure dependable performance. White enameled metal scales. Molded zero adjusters. Accuracy within 2%. Portable models 525-535 with mirror scales and knife-edge pointers are accurate within 1%.



324, 328 & 524-D.C.  
334, 338 & 534-A.C.



326 & 421-D.C.  
336 & 431-A.C.

### DIMENSIONS OF A. C. AND D. C. MODELS

Model No.	D. C.	A. C.	D. C.	A. C.	Body	Flange	Body Depth	Type Case	D. C.	A. C.	Case
221	231	THROW	TIRAM	2 1/8" diam.	2 5/8" diam.	1 3/8"	Flush	1 23/32"	1 35/64"	Molded	
223	233	TOAST	TRICE	2 1/16" diam.	2 5/16" diam.	1 1/2"	Clamp-on	1 23/32"	1 35/64"	Metal	
323	333	TAUT	TOBIT	2 3/8" diam.	3 3/16" diam.	1 1/2"	Clamp-on	2 9/64"	2 9/64"	Metal	
321	331	TRIFE	TROUT	2 3/8" diam.	3 1/2" diam.	1 3/8"	Flush	2 9/64"	2 9/64"	Molded or Metal	
324	334	TIGER	TROWL	2 3/8" diam.	3 1/16" diam.	1 3/8"	Projection	2 9/64"	2 9/64"	Metal Case—Molded Base	
329	339	TWAZ	TWUL	3" diam.	3 1/2" X 2 15/16"	1 1/32"	Flush	2 9/64"	2 9/64"	Molded	
328	338	TRQPE	TRPTE	3" diam.	4 1/2" X 4"	1 15/16"	Flush	2 9/64"	2 9/64"	Metal	
421	431	TOOTH	TRINE	2 3/8" diam.	3 1/2" diam.	1 3/8"	Flush	3 1/4"	3 1/4"	Molded	
521	531	TRES	TRIMS	4 3/8" diam.	5 1/2" diam.	1 1/2"	Flush	3 1/4"	3 1/4"	Molded	
524	534	TALOS	TUTOR	4 3/8" diam.	5 1/2" diam.	1 1/2"	Projection	3 1/4"	3 1/4"	Molded	
IWIN	TWIN	(See page F-6)		4 3/8" X 2 5/8"	5 1/2" X 3 3/8"	1 3/8"	Flush			Molded	

Molded cases furnished unless metal specified, except Models 223, 233, 323, 333, 334, 325, 335, 328 and 338. Metal cases—Code—METAL

### D. C. VOLTMETERS—125 OHMS PER VOLT

Range	Code	Models 221-223	Model 321	Model 324	Model 326	Model 421	Model 521	Model 524
0-5	TRCXC	\$ 4.50	\$ 5.75	\$ 5.75		\$ 7.50	\$ 8.25	\$ 8.25
0-10	TRDWD	4.50	5.75	5.75	\$ 5.75	7.50	8.25	8.25
0-15	TREVE	4.50	5.75	5.75				
0-25	TRFUF	4.50	5.75	5.75				
0-50	TRGTG	4.50	5.75	5.75		7.50	8.25	8.25
0-100	TRHSH	4.50	5.75	5.75		7.50	10.00	10.00
0-150	TRIRI	4.50	5.75	5.75	5.75	7.50	8.25	8.25
0-300	TRLLOL	6.50	8.25	8.25	8.25	9.75	12.00	12.00
0-500	TRMNM	7.75	9.25	9.25		11.00		
0-2,000	TRPKP	16.00	17.50	17.50		19.25		20.00

### D. C. VOLTMETERS—1000 OHMS PER VOLT

Range	Code	Models 221-223	Model 321	Model 324	Model 326	Model 421	Model 521	Model 524
0-10	TAIGA	\$ 6.50	\$ 8.25	\$ 8.25	8.25	9.75	11.75	11.75
0-150	TAINE	7.75	8.75	8.75	8.75	10.00	12.75	12.75
0-300	TRULL	8.75	10.00	10.00	10.00	11.50	14.25	14.25
0-500	TUBAL	10.00	11.00	11.00		12.75		
0-1,000	TURIN	14.25	16.00	16.00		18.50		

### D. C. MILLIAMMETERS

Range	Code	Models 221-223	Model 321	Model 324	Model 326	Model 421	Model 521	Model 524
0-1	TRAAN	\$ 5.75	\$ 7.00	\$ 7.00	\$ 7.00	\$ 9.00	\$10.00	\$10.00
0-15	TRFFS	4.50	5.75	5.75				
0-25	TRGTG	4.50	5.75	5.75	5.75	7.50	8.25	8.25
0-50	TRHHU	4.50	5.75	5.75	5.75	7.50	8.25	8.25
0-100	TRJJW	4.50	5.75	5.75	5.75	7.50	8.25	8.25
0-150	TRKXX	4.50	5.75	5.75	5.75	7.50	8.25	8.25
0-200	TRLLY	4.50	5.75	5.75	5.75	7.50	8.25	8.25
0-250	TRMMZ	4.50	5.75	5.75	5.75	7.50	8.25	8.25
0-300	TRNNA	4.50	5.75	5.75	5.75	7.50		
0-500	TROOB	4.50	5.75	5.75	5.75	7.50	8.25	8.25

### D. C. MICROAMMETERS

Range	Code	Models 221-223	Model 321	Model 324	Model 326	Model 421	Model 521	Model 524
0-200	TARDY	\$10.50	\$12.00	\$12.00	\$12.00	\$14.00	\$17.25	\$17.25
0-500	TWIRL	7.75	9.25	9.25	9.25	10.75	12.75	12.75

### D. C. AMMETERS

Range	Code	Models 221-223	Model 321	Model 324	Model 326	Model 421	Model 521	Model 524
0-1	TALUS	\$ 4.50	\$ 5.75	\$ 5.75		\$ 7.50	\$ 8.25	\$ 8.25
0-10	TROCK	4.50	5.75	5.75	5.75	7.50	8.25	8.25
0-25	TANGS	4.50	5.75	5.75	5.75	7.50	8.25	8.25
30-0-30	TAPIR	4.50	5.75	5.75				

### A. C. VOLTMETERS

Range	Code	Models 231-233	Model 331	Model 334	Model 336	Model 431	Model 531	Model 534
0-5	TERSE	\$ 4.50	\$ 5.75	\$ 5.75	5.75	7.50	8.25	8.25
0-10	TRUMP	4.50	5.75	5.75	5.75	7.50	8.25	8.25
0-15	TURCO	4.50	5.75	5.75	5.75	7.50	8.25	8.25
0-150	TOYFE	5.75	7.00	7.00	7.00	9.00	10.00	10.00
0-300	TWEAK	7.25	8.25	8.25	8.25	9.75	15.75	15.75

### A. C. AMMETERS

Range	Code	Models 231-233	Model 331	Model 334	Model 336	Model 431	Model 531	Model 534
0-3	TULIP	\$ 4.50	\$ 5.75	\$ 5.75		7.50	8.25	8.25
0-5	TEUCH	4.50	5.75	5.75	5.75	7.50	8.25	8.25
0-10	TEHEE	4.50	5.75	5.75	5.75	7.50	8.25	8.25
0-25	TELEO	5.75	7.00	7.00	7.00	9.00	10.00	10.00

### A. C. MILLIAMMETERS

Range	Code	Models 231-233	Model 331	Model 334	Model 336	Model 431	Model 531	Model 534
0-10	TEETH	\$ 4.50	\$ 5.75	\$ 5.75		\$ 9.00	\$10.00	\$10.00
0-15	TOUSY	4.50	5.75	5.75				
0-50	TEMPT	4.50	5.75	5.75		7.50	8.25	8.25
0-100	THARM	4.50	5.75	5.75	5.75	7.50	8.25	8.25
0-250	THEEK	4.50	5.75	5.75	5.75	7.50	8.25	8.25
0-500	THEOS	4.50	5.75	5.75	5.75	7.50	8.25	8.25

# Measuring



# Instruments

## POCKET VOLT-OHM-MILLIAMMETER

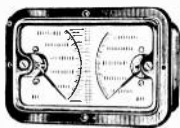
### Model 666



An actual pocket-size Volt-Ohm-Milliammeter in black molded case with A.C. and D.C. voltage ranges, D.C. milliamperes range and a selector switch for all instrument and standard readings. Has low and high ohms scales for testing resistances. . . . Small enough to be carried conveniently in the coat pocket yet has all the advantages of larger multimeters. Provides measurements for every requirement of the serviceman—in the home or shop. Also an indispensable extra-utility instrument for laboratory experimenters, radio amateurs and manufacturers. . . .

Scale length corresponds in size to that of Triplett three-inch instrument. Ranges: D.C. 10-50-250-500-1000 volts at 1000 ohms per volt; 1-10-50-250 M.A.; A.C. 10-50-250-500-1000 volts at 1000 ohms per volt; Low ohms 1/2 to 300; 250 ohms to 250,000. Provisions for external batteries for higher resistance measurements. Sturdy black molded case, 3 1/2 x 5 1/2 x 2 1/4 in. high. Panel is modernistic silver and black. Battery and test leads with alligator clips included. Shipping wt., 4 lbs. Code—TRYMA  
**Model 666. . . . . List Price \$22.50**

## TWIN INSTRUMENTS



THE TWIN is furnished in any combination of A. C. or D. C. instruments. Both are included in the special rectangular molded case that requires a minimum of space. Permits simultaneous readings on both instruments when connected in the same or separate circuits. Instrument scales are side by side making possible two distinct readings at a glance. Used to balance loads in three-wire circuits; detect line fluctuations when load readings are taken; measure antenna and modulation current; determine filament and plate voltages and similar applications.

To determine List Price of Twin Instruments take the sum total list price of both instruments as supplied in Models 321 or 331.  
**MODEL 1200-A KIT**

Enables the engineer to build his own Volt-Ohm-Milliammeter. Has No. 120 Triplett Twin Instrument with scale reading: D.C. 10-50-250-500-1000 volts at 2000 ohms per volt; 1-10-50-250 milliamperes; 1/2 to 500 low ohms by back up circuit; 1500 ohms; 1.5 and 3 megohms. A.C. 10-50-250-500-1000 volts. Also included in the kit are mounted resistors and shunts for the above readings; No. 121 Special Triplett Selector Switch; No. 124 .5 MFD Condenser for output measurements; No. 125 Rheostat Assembly; Complete set of diagrams and instructions; Hook-up wire; Complete set of hardware; Marked panel plate; Test leads.

**Model 1200-A Kit—Complete. Code: TRIPS. List Price \$25.00**  
**No. 120 Twin Instrument only (for above kit.) . . . . . List Price \$15.50**

## UNIVERSAL A.C.-D.C. METER (COPPER-OXIDE TYPE)



D. C. 2% Accuracy. A. C. 5% Accuracy. The A.C. scale has 75 divisions marked 0-15 in red. The D. C. scale is similar but printed in black. The ohm scale reads 0-1500 in black and 0-1.5 megohms in red. With multipliers, scale readings are 15-150-750 volts, A. C. or D. C. at 1000 ohms per volt resistance. D. C. Milliamperes readings are 15-150. The copper-oxide unit is employed in what is regarded as the most advanced circuit, minimizing losses in rectification. This unit with a D. P. D. T. toggle switch for A. C. or D. C. is housed with shunts for the 0-.4 milliammeter in a separate case suitable for panel mounting and having four connections, 2 each for A. C. and D. C. A 12" lead connects to meter.

**Universal Model 321 Meter (0-.4 M. A.) with copper-oxide unit and switch complete. Code—TRIOS. List Price \$15.00**

**Model 1127 Kit consisting of mounted resistors and shunts for all above readings, selector switch, rheostat, jacks, panel, bar knobs, batteries—22.5 and 1.5 v. and hook-up wire, complete less meter. Code—TRUNK. List Price \$20.00**

**C-4—Copper-oxide Rectifier (full-wave). List Price \$ 4.00**

**Code—TAKER**

**B-2—Copper-oxide Rectifier (half-wave). List Price \$ 2.00**

**Code—TIMON**

## VOLT-OHM-MILLIAMMETERS

The Following Three Instruments are 0-1 Milliammeters With 100 Ohms Internal Resistance, Equipped with Knife-edge Pointers

**Model 321—(Scale for reading, 30-300-600 volts, 30-300 milliamperes, 100,000 ohms). Shpg. wt. 3 lbs. List Price \$ 7.50**

**Code—TRIES.**  
**Model 321—(Scale reads 10-50-250-500 volts, 10-50-250 milliamperes, 100,000 ohms). Shpg. wt. 3 lbs. List Price \$ 7.50**

**Code—TABOR.**  
**Model 321—(Scale reads 10-50-250-500 volts, 10-50-250 milliamperes, 100,000 ohms). Shpg. wt. 5 lbs. List Price \$10.50**

**Code—TRILL. (Wiring diagrams furnished with each instrument)**

## SHUNTS AND RESISTORS FOR ABOVE THREE INSTRUMENTS

**No. 30—Resistors mounted on Bakelite for 30-300-600 volts. Code—TRICK. List Price \$7.25**

**No. 31—Shunts mounted on Bakelite for 30-300 milliamperes. Code—TRULY. List Price \$2.00**

**No. 64—Current Limiting Resistor for 100,000 ohms. Code—TRGGU. List Price \$1.00**

**No. 10—Resistors mounted on Bakelite for 10-50-250-500 volts. Code—TRIST. List Price \$7.50**

**No. 11—Shunts mounted on Bakelite for 10-50-250 milliamperes. Code—TRIGG. List Price \$2.75**

**No. 12—Current Limiting Resistor for 100,000 ohms. Code—TRIPP. List Price \$1.00**

## THERMO AMMETERS ± High Frequency. Accuracy 2%

Triplett Thermo Ammeters are supplied in Models 241, 341, 346, 441 and 541. These models correspond in size, etc., to corresponding D.C. models. All have molded cases. Have external couples which withstand 50% overload connected to meter with 2 ft. leads. Couples are easily replaced when necessary.

†Write for special discounts—regular

†Triplett discounts do not apply to Thermo Ammeters. External Couples only, for any Model. List Price . . . . . \$ 6.40

Range	Approx. Res.	Model 241		Model 341		Model 346		Model 441		Model 541	
		Code	List	Code	List	Code	List	Code	List	Code	List
0-1 Amps. . . . .	.35	TOLUS	\$14.50	TONGA	\$16.00	TRUST	\$16.00	T'BER	\$21.00	TACHE	\$21.00
0-1.5 Amps. . . . .	.21	TITHE	14.50	TIZZA	16.00	TWILL	16.00	TONIC	21.00	TOTAL	21.00
0-2.5 Amps. . . . .	.13	TODDY	14.50	TESTA	16.00	TWIST	16.00	TONS	21.00	T'ANK	21.00
0-5 Amps. . . . .	.06	TOLYL	14.50	TOUGH	16.00	TWIST	16.00	T'EUR	21.00	TOUCH	21.00

## OUTPUT METER



The Triplett Output Meter has 3 ranges—2.5-5-50 volts. Copper-oxide rectifier type. Contains condenser or blocking the D. C. component. Four marked adjustment posts or pin jacks and meter are mounted on substantial molded base. Test leads with clips and break-in adapter furnished. Shipping Wt. 31 lbs.

With Tip Jacks. Code—TRALL. List Price \$16.75

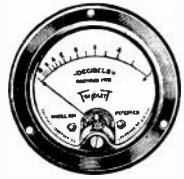
With Binding Posts. Code—TREET. List Price \$16.75

## SENSITIVE RELAYS

Highly sensitive Triplett relays are of the D'Arsonval Moving Coil type, carefully designed to give dependable, satisfactory performance. Fixed contacts of instruments are set in adjustable screws, allowing a wide adjustment of upper and lower limits of contact. Contacts furnished are Hardly metal; also platinum, silver, and platinum-iridium are supplied according to applied current and voltages. These relays are generally used in connection with polarized relays when current draw exceeds 50 M.A. Magnetic clutch type with manual release can also be had. 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. All data should be included before prices can be quoted. Relays are usually furnished in Model 325 Portable cases but can be had in other case mountings. Connections can be attached to suit. Code—TRYKE

## POWER LEVEL INDICATORS

Used to measure sound or noise levels in amplifiers for Public Address, Theaters, Broadcasting Studios, Broadcasting Station Equipment, etc. The Decibel Meter permits the operator to make instant adjustments to prevent sound blasting or distortion. Furnished in two ways—either standard or highly damped. Standard range furnished reads 0 and down 10 decibels, zero decibel at 1.73 volts, 500 ohm lines, 6 milliwatts. Standard damping furnished, unless highly damped is specified. Other ranges to order only.



**Model 321—Up 6 down 10 Decibel Meter. Code—TAINT. List Price \$18.00**  
**Model 221—Up 6 down 10 Decibel Meter. Code—THUMB. List Price \$16.50**

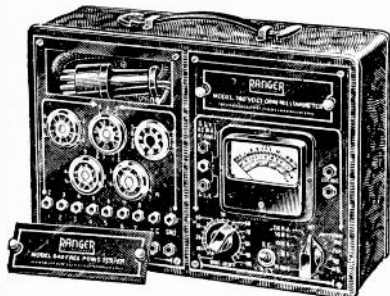
## DECIBEL METERS AND KITS

Kits are now available to increase range of Power Level Indicators. Readings advance in steps of 1 decibel up to 22 decibels. Easily assembled Triplett Decibel Meter Kits are supplied for either constant or non-constant impedance. 500 ohm input line.  
**Model 150 Decibel Meter Kit—(Non-constant Impedance)—includes: Triplett Model 321 Decibel Meter, Selector Switch, 9 Wire-wound Multipliers on Bakelite Mounting Board, Hook-up Wire, Diagrams and Instructions. List Price \$30.00**  
**Code—THITTI**  
**Model 200 Decibel Meter Kit—Constant Impedance (includes—same parts as Model 150 Kit, except it has Model 321 Constant Impedance Meter.) Meter has four studs allowing movement to be shunted without altering impedance over 50 ohms. Code—TIMOD. List Price \$32.75**

We also distribute a complete line of TRIPLET Multipliers, Shunts, Ring Shunt Assemblies, Multi-Deck Selector Switches and Bar Knobs.

# Radio **RANGER** Instruments

## FREE POINT TESTER AND MULTIMETER



Model 640-740

Combination Volt-Ohm-Milliammeter and Free Point Tester; adaptable for every purpose in voltage, current or resistance testing, by the free point direct contact and the plug-in methods.

The 740 Volt-Ohm-Milliammeter unit has a Triplett precision instrument. Scale readings: 10-50-250-500-1000 A.C. and D.C. volts. Rheostat adjustment will take care of 15 volts for ohms readings up to 2.5 megohms. Batteries may be added, permitting readings in 250,000 ohms steps. Low ohms reads to 1/4 ohms, the 25 ohms portion being in center of scale. Current draw is only 1 M.A.

Model 640 Free Point Tester has five sockets for handling any type glass, metal-glass or metal tube. Panel includes eight automatic switch-type and ten single-action jacks. Case same as model described opposite.

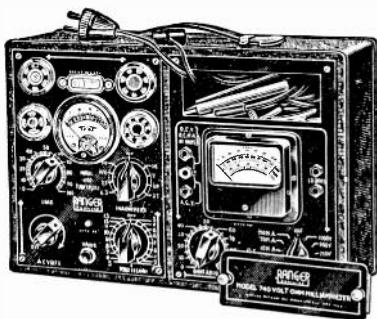
Code **RENAN**

Model 640-740 ..... List Price \$45.00  
U.S.A. Dealer's Net Price ..... 27.00

## RANGER COMBINATIONS



Model 440-540



Model 440-740

## SIGNAL GENERATOR AND MULTIMETER



Model 540-740

With the 740 Volt-Ohm-Milliammeter the serviceman can locate most of the troubles common to radio receivers. This unit is the same as Model 740 described opposite, with Triplett precision instrument.

The 540 Direct Reading Signal Generator has plug-in type coils. Five frequency bands from 110 to 20,000 Kc., all fundamentals. Guaranteed accuracy is 1% from 110 to 3000 Kc.; 2% for higher frequencies.

Completely shielded for static and magnetic fields. Strong signals, both modulated and unmodulated, are furnished. Sturdy metal case with built-in compartments, snap-on covers, for accessories. Electro black baked enamel finish, silver and black panels—size 11-7/16" x 7 7/8" x 4 1/4". All batteries and two type 30 tubes included with necessary accessories.

Code **RECTO**

Model 540-740 ..... List Price \$60.00  
U.S.A. Dealer's Net Price ..... \$36.00

## MODEL 440-540 TUBE TESTER AND DIRECT READING SIGNAL GENERATOR

Another of the popular Ranger-Examiner Combination instruments adaptable for either the laboratory work bench or portable field servicing.

Model 440 is a quality tube tester of advanced design and is engineered to test any type tube speedily and accurately. Condition of tubes under test are noted on direct reading GOOD-BAD scale of the Model 221 Triplett precision instrument. Proper load values are applied to tubes being checked. Four flush mounted sockets provide for all glass, metal-glass or metal tubes without the use of adaptors. The lamp used to illuminate the special shadow type A.C. line voltage adjuster meter also indicates when tester is connected to power supply. The tester circuit is designed to indicate all inter element shorts and leakages. Up-to-date tube charts furnished as new tubes are available.

Model 540 is a direct reading D.C. Signal Generator with plug-in type coils, the same as described above. Each coil is individually calibrated by an exclusive method of peaking, with trimmer condensers built as an integral part of the coil. Completely shielded. Attenuation and stability are outstanding features.

Model 440-540 Combination ..... List Price \$56.00  
U.S.A. Dealer's Net Price ..... 33.60

Consisting of Model 440 Quality Tube Tester and Model 740 Volt-Ohm-Milliammeter.

Model 440-740 Combination ..... List Price \$62.50  
U.S.A. Dealer's Net Price ..... 37.50

## D.C. POCKET VOLT-OHM-MILLIAMMETER



Model 735

Model 735 is a pocket size D.C. Volt-Ohm-Milliammeter with selector switch, black molded case with all corners nicely rounded and ranges comparable to those of larger multimeters. Can be carried easily in the coat pocket. Provides measurements for all essential requirements of the serviceman on home calls and is suitable for extra utility use in the shop and laboratory.

Ranges are 15-150-750 volts; 1.5-15-150 M.A.; 1/2-1,000 low ohms; 0-100,000 high ohms at 15 volts. External batteries may be used for higher resistance measurements.

Has Triplett D'Arsonval type precision instrument with readings accurate within two per cent. Selector switch for all

ranges and individual zero adjustment for resistance measurements. Sturdy black molded case, 3-1/16" x 5 5/8" x 2 1/4" high. Attractive silver and black panel. Battery and test leads with alligator clips are included. Approximate shipping weight, 3 pounds, 4 ounces.

Code **REGAL**

Model 735 ..... List Price \$18.00  
U.S.A. Dealer's Net Price ..... 10.80

## DIRECT READING SIGNAL GENERATOR

Individually calibrated plug-in type coils, setting a new standard of obtaining laboratory accuracy at low cost, are used with Model 557 Ranger-Examiner All-Wave Direct Reading Signal Generator. See description above for Model 540 oscillator.

Supplied in attractive black leatherette case. Silver and black panel. When closed case measures 12" x 6 1/2" x 5 3/4". Approximate shipping weight 12 pounds.



Model 557

Model 557 ..... List Price \$30.00  
U.S.A. Dealer's Net Price ..... 18.00

Model 557-A—Same as Model 557 but not Direct Reading. Calibrated graphs included for accuracies under 1% on any band. Code—**RADIO**. Shipping weight 12 pounds.

Model 557-A ..... List Price \$24.00  
U.S.A. Dealer's Net Price ..... 14.40

# Readrite TEST INSTRUMENTS Readrite

## EQUIPMENT

### DIRECT READING TUBE TESTER



Model 430

An up-to-the-minute 1937 tube tester, designed to check all tubes speedily and accurately. Results noted on Direct Reading (GOOD-BAD) meter scale will convince the most skeptical buyer. This latest 1937 model applies the proper load to tubes under test. Be prepared for modern tube testing with this rugged and reliable tester. Five flush mounted sockets provide for the various tubes without the use of adapters. The lamp used to illuminate the special shadow type A.C. line voltage adjuster meter also indicates when tester remains connected to power supply. The tester circuit is designed to indicate all inter element shorts and leakages. A complete tester with attractive oak case and sloping silver and black metal panel. Must be seen and used before true appreciation can be had. Removable cover makes tester equally satisfactory for either counter or portable use. Up-to-date tube charts furnished to all registered users. Shipping weight 10 pounds.

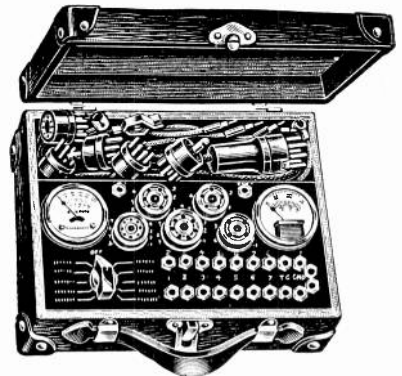
Code: REPLY  
**Model 430** ..... List Price \$30.00  
 U.S.A. Dealer's Net Price ..... 18.00

Code: REPLY  
**Model 431** ..... List Price \$24.00  
 U.S.A. Dealer's Net Price ..... 14.40  
 Same as Model 430, but with Readrite meter having GOOD-BAD Direct Reading Scale. Shipping weight 10 pounds. Code: RENEW

### MODEL 430 FEATURES

1. Checks glass, metal and glass-metal tubes.
2. Applies proper load values to tube being checked.
3. Tests for slightest leakages and all shorts.
4. But four simple operations required.
5. Uses Triplett Model 221 meter with GOOD-BAD scale.
6. Meter especially protected against damage.
7. Unique shadow type A.C. meter for line volts adjustment.
8. Has double grid cap for metal and glass-metal tubes.
9. Sloping, all metal, silver and black panel.
10. Attractive quartered oak case with handle.

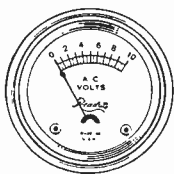
### POINT-TO-POINT TESTERS



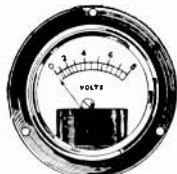
Model 720-A

Designed for speedy and efficient servicing. Equipped to handle sets using glass or glass-metal tubes. Measures resistance, capacity and continuity; checks voltage of any tube circuit. Has two meters—D.C. scale reading 15-150-300-600 volts, 15-150 milliamperes; A.C. scale reading 10-25-150 and 750 volts. Complete set of instructions, charts and accessories; black leatherette covered case which measures 11" x 8" x 4 3/4" when closed. Shipping weight 10 pounds. Code: READY

Code: READY  
**Model 720-A** ..... List Price \$25.00  
 U.S.A. Dealer's Net Price ..... 15.00  
**Model 730-A** ..... List Price \$31.00  
 U.S.A. Dealer's Net Price ..... 18.60  
 Similar to 720-A, but has three meters. Shipping weight 10 pounds. Code: ROBOT  
**Model 710-A** ..... List Price \$27.50  
 Dealer's Net Price ..... 16.50  
 Same as 720-A, but has Triplett 223 D.C. voltmeter with scale reading 15-150-300-600 volts at 1000 ohms per volt. Shipping weight 11 pounds. Code: REIGN  
**Model 712-A** ..... List Price \$37.00  
 Dealer's Net Price ..... 22.20  
 Same as 710-A, but has Triplett 1000 ohm per volt D.C. voltmeter; scale 15-60-300-600. Shipping wt., 11 pounds. Code: REMIT



Model 55



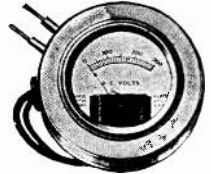
Model 65



### PANEL METERS



Model 75



Model 85

READRITE instruments are economical, ruggedly constructed, and dependably accurate. D.C. are the polarized vane, solenoid type. A.C. are double vane repulsion type. Easy reading black lithographed on white, metal plates. Model 55, flush mounted

clamp-on type, requires a 2-5/64" hole; has narrow rim and is furnished in full nickel; this model will be furnished unless other types are specified. No. 65-A flange ring is used to convert Model 55 into Model 65 wide flange type (Dealer's net price \$0.09).

Range	Code	List Price	Dealer's Net	Range	Code	List Price	Dealer's Net	Range	Code	List Price	Dealer's Net
<b>D. C. VOLTMETERS</b>				<b>D. C. MILLIAMMETERS</b>				<b>A. C. VOLTMETERS</b>			
0-1	Royal	\$1.00	\$0.60	0-5	Ratio	\$2.25	\$1.35	0-6	Rale	\$2.75	\$1.65
0-3	Ridge	1.00	.60	0-10	Rue	2.00	1.20	0-10	Ram	2.75	1.65
0-5	Rive	1.00	.60	0-15	Ruff	1.00	.60	0-15	Ramp	2.75	1.65
0-6	Rite	1.00	.60	0-25	Rug	1.00	.60	0-150	Rath	4.50	2.70
0-8	Road	1.00	.60	0-50	Razor	1.00	.60	0-300	Rase	5.50	3.30
0-10	Roam	1.00	.60	0-100	Rump	1.00	.60	0-750	Reck	7.75	4.65
0-15	Roar	1.00	.60	0-150	Run	1.00	.60	0-10-140	Rural	4.50	2.70
0-50	Rod	1.00	.60	0-200	Rung	1.00	.60	<b>A. C. AMMETERS</b>			
0-100	Roil	1.50	.90	0-300	Runt	1.00	.60	0-1	Rant	\$2.75	\$1.65
0-150	Roll	1.75	1.05	0-400	Ruse	1.00	.60	0-3	Ritz	2.75	1.65
0-150	Romp	3.25	1.95	0-20-100	Raven	2.00	1.20	0-5	Route	2.75	1.65
0-300	Rood	3.25	1.95	0-15-150	Rebel	2.90	1.20	0-10	Rast	2.75	1.65
0-500	Roof	4.50	2.70	<b>A. C. MILLIAMMETERS</b>				0-50	Rouge	3.25	1.95
0-60-300	Rook	4.50	2.70	0-25	Raff	\$2.75	\$1.65	<b>SELECTOR SWITCHES</b>			
<b>D. C. AMMETERS</b>				0-50	Rum	2.75	1.65	Six Double Pole Positions. List Price \$1.25. Net Price ..... 50.75			
0-1	Repel	\$1.00	\$0.60	0-100	Rome	2.75	1.65	Single Pole, 13 Positions. List Price \$1.25. Net Price ..... 50.75			
0-3	Rot	1.00	.60	0-250	Rong	2.75	1.65	Code: RALLS			
0-10	Rote	1.00	.60	0-500	Roost	2.75	1.65	Double Pole, 12 Positions. List Price \$1.75. Net Price ..... \$1.05			
0-25	Ridd	1.50	.90	<b>D. C. POCKET TYPE</b>				Code: RAIDS			
0-50	Rokk	2.00	1.20	40 Amp.	Rise	\$1.00	\$0.60				
20-0-20	Rud	1.00	.60	50 Volts	Risk	1.00	.60				
30-0-30	Ryky	1.50	.90	40 A.—50 V.	Rustle	1.50	.90				

We also distribute the complete line of READRITE Selector Switches, Bar Knobs, Precision Resistors and Multipliers, Ohmmeters, Resistance Meters, Induction Ammeters, Air-Cell Testers and TUNING METERS.



# TEST EQUIPMENT

ON EASY PAYMENTS — A FEW DOLLARS PER WEEK

## RCA OSCILLOGRAPH—THE X-RAY OF RADIO SERVICE



Servicing problems easily solved with this RCA Cathode Ray Oscillograph and modulator listed at lower right. Enables amateur to monitor percentage modulation, examine phase shift. The RCA Cathode Ray Oscillograph is ready for immediate use. It includes two power supplies, one for the cathode ray tube and one for the amplifier. Through the use of two wide frequency high gain amplifiers the sensitivity is assured at .7 volts A.C. (RMS) per inch for both vertical and horizontal deflection. Amplifier gain is approximately 40. The sweep range extends from 10 to 18,000 cycles and permits the examination of a single cycle up to 18,000 cycles; the examination of 5 cycles up to the limit of the amplifier, operation on 110-120 volt lines. Complete

90,000 cycles. For A.C. with 6 Radiotrons. Stock No. 9545—NET PRICE.....**\$84.50**  
Stock No. 9640 (25 cycle operation)—NET PRICE.....**\$110.00**  
Stock No. 9641 (Extended Sweep Frequency Range—4 to 18,000 cycles)—NET PRICE.....**\$110.00**

## RCA UNIVERSAL A.C. BRIDGE



For the simplification and quick analysis of service or laboratory problems. Gives an accurate check of inductance, capacity and resistances over extremely wide ranges including the low values that ordinary resistance and capacity meters do not check. Measures inductance 100 microhenries to 10 henries. Capacity 10 micro-microfarads to 10 microfarads. Resistance 1 ohm to 1 megohm. Variable—Ratio—Arm A.C. circuit, Wheatstone type bridge. 3 tubes. 40 watt power consumption.

Accuracy 5% overall. Frequency of Audio Oscillator—1000 cycles  $\pm$  10%. For 110-120 volts, 25-60 cycles A.C. Stock No. 9600—NET PRICE.....**\$49.65**

## RCA VIBRATION PICK-UP



Converts any mechanical vibration or motion into electrical currents of identical characteristics. If this motion is recurrent in character, the resulting electrical current may be presented visually on a Cathode Ray Oscillograph. The RCA Vibration Pick-up, which functions through the piezo-electric properties of a Rochelle salt crystal, is an instrument of great value to all physical, mechanical and sound laboratories. If your problem is a mechanical one, this instrument will help in solving it. Output voltage—.25 volt per .001 inch movement at 250 cycles.

Frequency range—10-3000 cycles. Vibration axis—right angles to face of pickup. Stock No. 9649—NET PRICE.....**\$20.00**

## RCA REGULATED POWER UNIT



Supplies direct current for any equipment requiring unusually constant voltage. Better than a heavy duty "B" battery over extremely wide ranges of input line voltage and output load variations. Circuit provides ideal filtering so that the output voltage is practically hum free under all conditions. Operates from usual 110-volt A-C line. 5 tubes. Delivers voltages between 135

volts and 180 volts D.C. at a current drain between 10 m.a. and 80 m.a. with line voltages of 110 volts  $\pm$  10% or 120 volts  $\pm$  10%.

Also delivers both 90 volts and 135 volts. 90-volt tap delivers up to 20 m.a. at 90 volts. Output from main section 40 m.a. at 135 volts. Stock No. 9560—NET PRICE.....**\$39.50**

## RCA PIEZO-ELECTRIC CALIBRATOR



This unique instrument calibrates receivers, tests oscillators and laboratory apparatus to an accuracy better than two parts in one million. Uses special crystal having two frequency modes; provides calibration points in 100-kc. steps from 100 kcs. to 20,000 kcs. From 1000 kcs. to 50,000 kcs. Individual calibration and the temperature at which made are furnished with each instrument. The crystal frequencies of 100 kc. and 1000 kc. are accurate to  $\pm$  .05%. Has self-contained power supply and one RCA-955 Acorn-type tube. For 110-120 volt, 50-60 cycle A.C.

Stock No. 9572—NET PRICE.....**\$29.95**

## RCA BEAT FREQUENCY OSCILLATOR

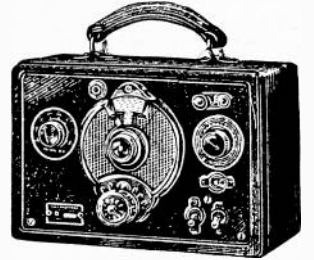
With the Famous "ACORN" TUBES



A variable frequency A-C source is a necessity for many radio service and laboratory uses. This instrument is ideal for any application requiring an A-C source of frequencies ranging from 30 to 15,000 cycles per second. Highly accurate, this unit incorporates design features found in only the highest priced laboratory oscillators. Has a maximum output of 60 milliwatts and overall distortion (with 20 milliwatt external load) of less than 5%—(with 60 milliwatt external load) less than 10%. Output impedances—250, 500 and 5000 Ohms, center tapped to ground. Uses 4 acorn type tubes. For 110-120 volts, 50-60 cycles. Stock No. 9633—NET PRICE.....**\$64.50**

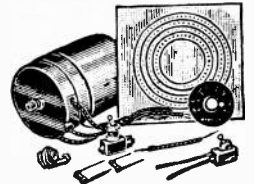
## RCA TEST OSCILLATOR (Signal Generator)

The latest type Oscillator manufactured by RCA. Covers a frequency range from 90 kc. to 25,000 kc. by means of eight overlapping bands. The entire range is covered by fundamental frequencies; no harmonics being used. A separate modulator tube is provided and is controlled by means of a switch so that it can be used with or without modulator. Panel jack permits applying modulated frequency voltage. Also a companion instrument with the oscillograph and frequency modulator. Calibration guaranteed within plus or minus 3%. Two ranges of output ranges. Battery operated but battery not included. Entire coil unit shielded with copper. Stock No. 9595—NET PRICE.....**\$34.50**



## MODERNIZATION KIT (For RCA Test Oscillators)

For making RCA TMV-97A or B Test Oscillator virtually the equal of the RCA Signal Generator shown above, which itself sets the standard for the industry. Frequency range of modernized oscillator is from 90 kc. to 25,000 kc. without the use of harmonics. Eight position range switch and tuning dial marked in kilocycles. Guaranteed accuracy of dial calibration is plus or minus 3%. Separate tube included for providing 400-cycle modulation frequency. Two position toggle switch permits operation with or without modulation. Sweep circuit jack provides for use of low-capacity cable furnished with unit.



Stock No. 9559—NET PRICE.....**\$5.67**

## RCA FREQUENCY MODULATOR

For use with the RCA Oscillograph (at upper left) for aligning circuits visually. Functions both as a sweep capacitor and as an A.C. impulse synchronizing generator. Output of generator has very peaked wave form instead of usual sine wave. Quick, accurate alignment, just like factory production. For 110-115 volts A.C. Complete with black crackle finish metal carrying case and 14 inch connecting cable with plugs.



Stock No. 9558—NET PRICE.....**\$27.50**

## RCA OUTPUT INDICATOR

Small, VISUAL output indicator designed for use with an oscillator when aligning receivers. Consists of tapped step-up transformer, potentiometer, glow tube and three binding posts for connecting the output of receiver to transformer. Three input impedances are available, 0.6 ohm, 1.5 ohms and 4 ohms, which cover practically all receivers. Bakelite case. Lamp rating—50-60 volts breakdown. Transformer rating 80:1 (max.). Potentiometer resistance 100,000 ohms.



Stock No. 4317—NET PRICE.....**\$4.00**



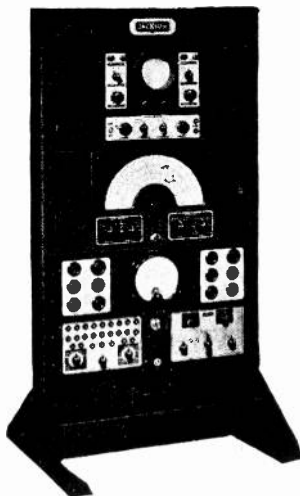


# RADIO TEST INSTRUMENTS

## MODEL 500 COMPLETE "SERVICE LAB"

### DISPLAY VALUE

The Jackson "Service-Lab" is the most impressive and elaborate equipment installation ever offered to the servicing profession. This "Display Value" impresses the customer with the importance and necessity of precision workmanship. The "Display Value" offered by the Model 500 "Service-Lab" will be used advantageously this year by many service shops to increase the price charged per job.



Standard Relay Rack Style,  
20" wide—38" high.

### RELAY RACK CONSTRUCTION

The most modern equipment installation available at any price. Complete in every respect, including:

- Cathode Ray Oscillograph
- R.F.—A.F. Test Oscillator
- Frequency Modulated Oscillator
- "Dynamic Output" Tube Tester
- Complete Circuit Tester
- Full Range Universal Test Meter

The "Service-Lab" is designed to help you increase your profits. With the Type 500 you can speed up your work, do a more accurate job and receive a much better price.

## FULL SPECIFICATIONS

**COMPLETE CATHODE RAY OSCILLOGRAPH** is identical with the Jackson Model 520 Oscillograph. This instrument is equipped with complete horizontal amplifier and complete vertical amplifier. The oscillograph is provided for portable use should the necessity arise to remove it from the laboratory.

**Sensitivity**—The maximum input sensitivity to both horizontal and vertical plates is .75 volts R.M.S. per inch of deflection. This exceptional sensitivity is secured by means of high gain amplifiers having flat response characteristics up to 100 kilocycles. **HORIZONTAL SWEEP**—A horizontal time axis "saw-tooth" oscillator provides a frequency from 10 to 20,000 cycles. Frequencies up to 100,000 cycles may readily be inspected, resulting in a five-pattern image. Timing switch is marked directly in frequency.

**Calibrated Screen**—A special calibrated screen is furnished. This screen is marked directly in kilocycles band width and is invaluable in all work which requires visual resonance curves. The Model 520 is complete with one 906 Cathode Ray Tube, two type 57, one type 885, one type 879 and one type 80.

**FREQUENCY MODULATED TEST OSCILLATOR**—This unit is basically a high grade test signal generator with a built-in "Frequency Modulator." Frequency sweep is **constant band width** at all frequencies. **FREQUENCY RANGE** is 100 kilocycles to 70 megacycles—all direct reading.

**Large Glass Enclosed Scale**—Total effective scale length is 72 inches. Knife edged pointer is attached directly to condenser shaft. Condenser drive is slow motion type.

**SIGNAL OUTPUT**—Either modulated or frequency modulated. Maximum signal is sufficient for any receiver. Two circuit attenuator provides variable ratio and also vernier control. **SHIELDING**—Case is one piece cast aluminum. Important circuits are isolated by excellent mechanical construction.

**Frequency Modulation**—For securing visual resonance curves in connection with a standard oscillograph. The frequency modulation is accomplished by the electronic method and produces a **single image curve** on the Cathode Ray screen. The band width of this image is automatically maintained at 30 KC regardless of the frequency delivered by the oscillator.

**DYNAMIC OUTPUT TUBE TESTER**—Tests over 200 types of tubes including all metal and metal-glass types. The test method is the well known Jackson "Dynamic Output" test. Test each diode plate separately—also both sections of dual class B tubes and both plates of all rectifiers. Special tests for pentagrid converter types. **SHORTS—LEAKAGE TESTS**—All tests made with tube heated in operating condition. This assures indication of Cathode-heater leakage if present. The shorts indicator is a large size neon lamp and the shorts system is properly sensitive for modern tubes.

**COMPLETE SET TESTER AND UNIVERSAL RANGE METER**—This unit is provided with an extra large 5½" meter which has a direct reading tube test scale. In addition there are other scales for A.C. and D.C. volts, megohms, low resistance, microfarads and decibels. All meter ranges are selected by means of a special 18-position switch. This method assures rapid adjustment of the instrument to the desired range.

**Meter Ranges**—D.C. Volts—0—7.5/75/150/300/750/1500. D.C. Milliamperes—0—7.5/75/150. A.C. Volts—0—15/150/1500. Ohms—0—100/100,000/1 meg/10 meg. Microfarads—.001 to .15/01—1.5/1—15. Decibels—-10 to +18. All ranges are direct reading and any desired range can be instantly selected by the "Meter Selector" switch.

**Circuit Analysis**—In addition to point to point tests, the Model 580 may be used for socket analysis of any radio receiver. The instrument has a complete set of sockets and "cut-in" jacks for this purpose. These jacks are numbered to standard R.M.A. tube base pins. A standard 8-wire analysis cable plug and adapter kit is furnished for connection to the radio receiver. **CONSTRUCTION**—Main panel is one piece cast aluminum 19 inches long, 10½ inches wide. Control panels are etched metal having a white background and black characters.

The Model 500 is a modern, accurate and complete instrument assembly. All units are installed on a standard 20-inch relay rack. Every conceivable receiver alignment and test operation may be performed. Also, the Type 500 is especially versatile since individual units may be removed from the rack if desired.

THE "SERVICE-LAB" is unquestionably the finest complete equipment installation ever offered at the amazingly low price of \$199.50. A careful examination of the specifications and the illustration will reveal many superior and valuable features.

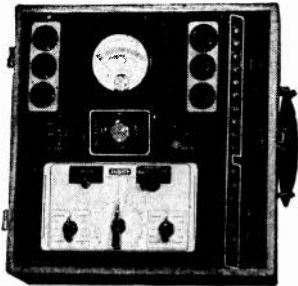
**Model 500 Complete "Service-Lab" (Net to Dealer) . . . . . \$199.50**



# RADIO TEST INSTRUMENTS

## JACKSON "DYNAMIC OUTPUT" TUBE TESTERS

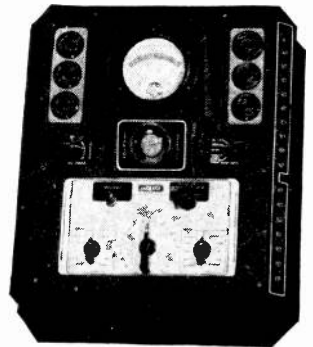
### MODEL 535 FEATURES



Cast Aluminum Panel—Etched metal control plates—solid oak case dimensions 12 3/4" x 13 1/4" x 6" overall. Weight, 13 lbs.

- 1. Dynamic Output Test**—the most perfect method devised for accurate determination of tube condition.
- 2. Tests ALL tubes** announced up to date. Provision for many more.
- 3. All readings direct** on "Good—Bad" scale. No special marks for diodes, etc. Most simplified operation ever attained in a precision instrument.
- 4. Sensitive neon test** for all shorts or possible leakage between elements.
- 5. Deluxe Multi-Meter ranges** for volts, M.A., ohms, megohms. Also condenser test incorporated.
- 6. True "Unit Construction"**—Socket plates removable and control panel removable. Protects instrument against obsolescence, should changes ever become necessary.

### COUNTER STYLE in Attractive Metal Case Model 535-C



**MAKES A COMPLETE, ACCURATE test on EVERY tube.** Tests over 200 different types, including the new metal and metal-glass octal base tubes. Tests each diode plate separately, also both sections of Dual Class B tubes and both plates of all rectifiers. Special tests for Pentagrid Converter types.

**DIRECT READING METER RANGES**—VOLTS, OHMS, MILLIAMPERES. D.C. Volts—0-7.5, 0-75, 0-150, 0-300, 0-750, 0-1500. Milliamperes—0-7.5, 0-75, 0-150. Ohms—0-100, 0-100,000, 0-1 megohm, 0-10 megohms. All ranges direct reading. Ohms range in sensitive from 1/10th Ohm—to 10 Megohms. Does not require external battery for megohms.

**MODEL 535 PORTABLE TESTER—NET PRICE..... \$39.50**

Model 535-C Counter style—Net Price..... \$43.50

### MODEL 580 DYNAMIC ANALYZER

The Model 580 is a complete "Dynamic Output" tube tester which also includes full provision for radio set testing. It is provided with an extra large 5 1/2 inch meter which has a direct reading tube test scale. In addition there are other scales for A.C. and D.C. volts, megohms, low resistance, microfarads and decibels. All meter ranges are selected by means of a special 18-position switch. This method assures rapid adjustment of the instrument to the desired range.

### SPECIFICATIONS

**TUBE TESTER**—Tests over 200 types of tubes including all metal and metal-glass types. The test method is the well known Jackson "Dynamic Output" test. Tests each diode plate separately—also both sections of dual class B tubes and both plates of all rectifiers. Special tests for Pentagrid converter types.

**METER RANGES**—D.C. Volts—0-7.5/75/150/300/750/1500. D.C. Milliamperes—0-7.5/75/150. A.C. Volts—0-15/150/1500. Ohms—0-100/100,000/1 meg/10 meg. Microfarads—.001 to .15/.01—1.5/1.-15. Decibels— -10 to +18. All ranges are direct reading and any desired range can be instantly selected by the "Meter Selector" switch.

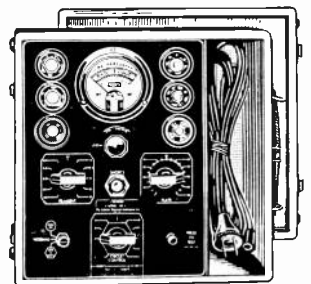
**CIRCUIT ANALYSIS**—In addition to point to point tests, the Model 580 may be used for socket analysis of any radio receiver. The instrument has a complete set of sockets and "cut-in" jacks for this purpose. These jacks are numbered to standard R.M.A. tube base pins. A standard 8-wire analysis cable plug and associated adapters may be used to connect to the radio receiver. This plug and adapter set is **not** furnished with the instrument.

**CONSTRUCTION**—Main panel is one piece cast aluminum 19 inches long, 10 1/2 inches wide. Control panels are etched metal having a white background and black characters. Case is genuine oak, measuring 19 3/4 inches by 13 1/4 inches by 6 inches.

**PRICE Model 580 (less 8-wire cord and plug) (Net to dealer)..... \$59.50**

NET

### MODEL 427-A TESTER NET.... \$29.50



### SPECIFICATIONS

**DIRECT READING METER** with colored dial. Meter is 3 1/2".

**TESTS ALL TUBES, INCLUDING METAL TYPES.**

**NEON SHORTS TEST.**

**"DYNAMIC OUTPUT" TEST** makes complete tests on all multi-element tubes such as diodes, etc.

**HIGH QUALITY CONSTRUCTION.** Solid oak case, Bakelite panel, tapped primary line voltage control, rugged sockets, designed to accommodate future types of tubes. **MAY BE USED FOR OTHER TESTS by the addition of a simple attachment.** Measures D.C. volts, 0-50/500, D.C. MA, 0-50, Ohms 0-500,000. Also condenser test for shorts, opens and leakage. Attachment costs only \$3.75 (Catalog No. 428). Dimensions 11" x 11" x 5". Weight 9 lbs.

**Model 427-A—Tube Tester—Net Price..... \$29.50**



# RADIO TEST INSTRUMENTS

## MODEL 520 CATHODE RAY OSCILLOGRAPH

The Jackson Oscillograph incorporates every valuable feature necessary for visual voltage and current examination. It is easy to operate and is designed to secure stability. The illustration indicates the control arrangement.

The control panels are separated into three distinct functions. First, the vertical amplifier control (upper left panel); second, the horizontal amplifier control (upper right panel); third, the linear timing control panel. This design is a very important step in simplifying the use of the instrument.



**CALIBRATED SCREEN**—The shield hood is recessed to accommodate a special calibrated screen which is furnished with the instrument. This screen is marked directly in kilocycles band width and is invaluable in all work which requires visual resonance curves.

The Model 520 is provided with a cast aluminum main panel and a protection hood for viewing the trace on the screen. All controls are mounted on the main panel and adjustments are clearly indicated.

### SPECIFICATIONS

**SENSITIVITY**—The maximum input sensitivity to both horizontal and vertical plates is .75 volts R.M.S. per inch of deflection. This sensitivity is secured by means of high gain amplifiers having flat response characteristics up to 100 kilocycles.

**HORIZONTAL SWEEP**—A horizontal time axis "saw-tooth" oscillator provides a frequency from 10 to 20,000 cycles. Frequencies up to 100,000 cycles may readily be inspected, resulting in a five-pattern image. Timing frequency range switch is marked directly in frequency. This feature greatly simplifies the selection of a desired frequency range.

**CONSTRUCTION**—The main panel and tube hood are cast aluminum. The entire cabinet is heavy gauge welded steel construction. The instrument is attractively finished in black morocco, oven-baked enamel. The control plates are etched metal with white background and black characters. The very finest of materials and construction are employed throughout.

**POWER SUPPLY & TUBES**—Operates from a 110-volt, 50-60 cycle power supply. The Model 520 is supplied complete with one 906 Cathode Ray Tube, two type 57, one type 885, one type 879 and one type 80. Dimensions are 10¼ x 9¼ x 18¼ inches overall. Net weight 30 pounds.

**PRICE (Net to dealer) Model 520 Oscillograph**..... **\$79.50**

**PRICE (Net to dealer) Model 520 Oscillograph (without tubes)**..... **\$54.50**



## FREQUENCY MODULATED TEST OSCILLATOR MODEL 540

**Self-contained frequency modulator is electronic type.  
NO MOTOR OR ROTATING PARTS ARE EMPLOYED**

The Model 540 is basically a high grade test signal generator, but in addition contains a built-in "Frequency Modulator." Frequency sweep is provided with **constant band width at all frequencies.**

### SPECIFICATIONS

**FREQUENCY RANGE**—100 kilocycles to 70 megacycles—all direct reading. **LARGE GLASS ENCLOSED SCALE**—total effective scale length is 72 inches. Knife edged pointer is attached directly to condenser shaft. Condenser drive is slow motion planetary type.

**SIGNAL OUTPUT**—Either audio modulated or frequency modulated. Maximum signal is sufficient for any receiver. Two circuit attenuator provides variable ratio and also vernier control.

**SHIELDING**—Case is one piece cast aluminum. Important circuits are isolated by excellent mechanical construction. All control shafts are at ground potential.

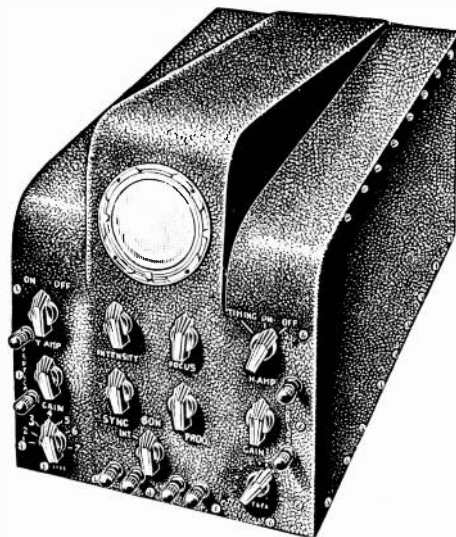
**FREQUENCY MODULATION**—For securing visual resonance curves in connection with a standard oscillograph. The frequency modulation accomplished in the Model 540 (electronic method) produces a single image curve on the Cathode Ray screen. The band width of this image is automatically maintained at 30 Kc. regardless of the frequency delivered by the oscillator. Operates from 110-volt 60 cycle A.C. line supply. Dimensions—11½" x 8¼" x 4¾".

**PRICE Complete with all metal tubes and accessories (Net to dealer)**..... **\$56.25**

# SUPREME Testing EQUIPMENT

## MODEL 545 CATHORAY OSCILLOSCOPE

When combined with Model 580 DeLux Signal Generator, can be used as a complete visual servicer for receivers and contains in combination all features of the Supreme Model 555 Diagonoscope, for both alignment and checking purposes. **Complete power supply** for operation with 110 volt, 60 cycle A.C. supply. **Horizontal amplifier**, input resistance of 500,000 ohms, input capacitance approximately 20-Mmfd, maximum input potential of 800 volts, frequency range 20—90,000 cycles, sensitivity of approximately 2 peak volts per inch deflection and graduated gain control for facilitating comparative tests. **Vertical amplifier**, input resistance of 500,000 ohms, input capacitance approximately 20-Mmfd, maximum input potential of 800 volts, frequency range 20—90,000 cycles, sensitivity of approximately 2 peak volts per inch deflection and graduated gain control for facilitating comparative tests. **"Saw tooth" oscillator or linear time base**, employs an 885 gaseous discharge tube with current limiting resistors for insuring a maximum of linearity with a range of 7 cycles to 20,000 cycles. A **"phase splitting" device** for aid in study of Lissajou figures. **Intensity control** for varying brilliancy of pattern as seen on screen of cathode ray tube. **Focus control** for regulating applied potential to No. 1 anode in order to vary distance at which electronic beam focuses. **Spot centering controls**. Access to horizontal and vertical deflecting plates by direct connection or through amplifiers. Means for external or internal synchronization of input potential under study with "saw tooth" oscillator or linear time base. Provisions for synchronization of linear time base with local power supply frequency. **Complete with following tubes:** RCA 906, 885, 879, 80 and two 57's. Metal case provides effective magnetic shielding. Full instruction sheets. Available in all A.C. voltage and frequency power supply ratings at slight additional cost.



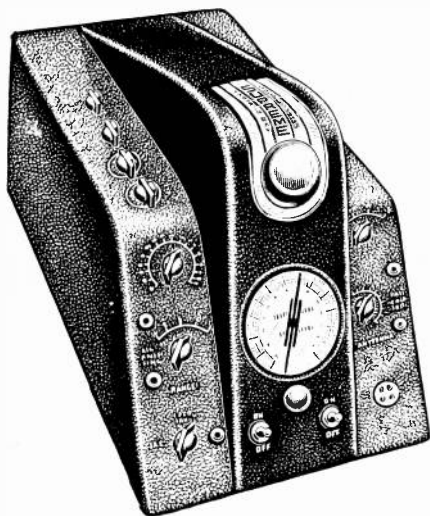
Dealer's Net Cash Wholesale Price..... \$92.95  
 S.I.C. Easy Payment Price—  
 \$10.00 Cash and twelve Monthly Payments of..... \$ 7.68

## MODEL 555 DIAGNOMOSCOPE

The most complete and up-to-date cathode ray test instrument on the market. "Modern as Tomorrow!" Fixed frequency oscillator is frequency modulated and in turn mixed with a variable frequency oscillator, resulting signal being that of a frequency modulated signal having a constant band width and variable between 125 kilocycles and 15 megacycles having sufficient harmonic content for further extension of the range. **Built-in dual purpose signal generator** of the direct reading type affords means for visual alignment as well as alignment of receivers by use of generated "standard test voltage" which modulates the carrier 30% at 400 cycles. **Beat frequency audio oscillator and amplifier** of the direct reading type continuously variable from 50 cycles to 10,000 cycles with a constant output, harmonic content of which does not exceed 5%. Provisions for external amplitude modulation of the carrier. **Modulator stage** has fixed frequency of 400 cycles capable of modulating the carrier 30%. **"Saw tooth" oscillator** employing a type 885 gaseous discharge tube with necessary current limiting resistors which insure a maximum of linearity, with a range of 7 cycles to 20,000 cycles. Facilities for shifting phase relation of input signal for aid in study of Lissajou figures. Horizontal and vertical amplifiers with a gain of approximately 40 and a practically flat line frequency response curve with a range from 20 to 90,000 cycles. Graduated gain controls. **Time base** automatically synchronized and properly phased with frequency modulated output. **Spot centering controls**. **Intensity and focus controls**. Access to horizontal and vertical deflecting plates by direct connection or through amplifiers. External use of the 400 cycles audio output. **Attenuator circuits** for output of signal generator. Provisions for synchronizing linear time base with frequency of power supply. **Completely shielded.**

The first and only completely self-contained cathode ray apparatus capable of a wider range of test work than any other instrument of its type now available. Completeness—compactness—accuracy—flexibility—beauty, all perfectly combined in producing a super-cathode ray instrument. Available in all A.C. voltage and frequency power supply ratings at slight additional cost.

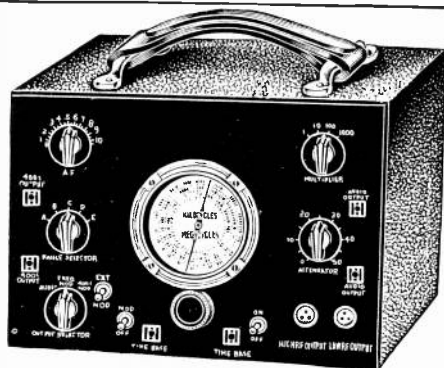
Dealer's Net Cash Wholesale Price..... \$147.95  
 S.I.C. Easy Payment Price—  
 \$15.00 Cash and Twelve Monthly Payments of..... \$ 12.05



## MODEL 580 DELUXE SIGNAL GENERATOR

Combines all features which, together with the 545 Cathoray Oscilloscope, is the last word in visual service instruments, containing, together, all the circuits of the Supreme Model 555 Diagonoscope.

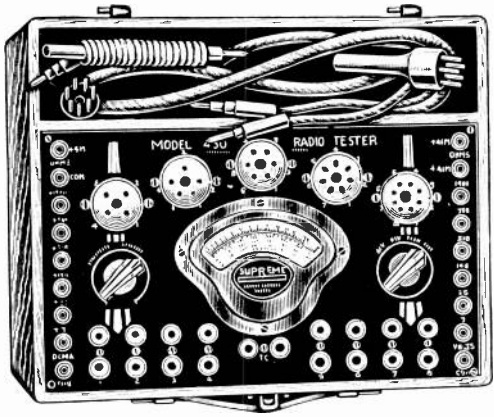
**Variable radio frequency output** may be frequency modulated at constant band width or amplitude modulated for use in visual alignment of receivers by usual "Standard Test Voltage" method. Range of unit covers all frequencies which lie between 125 kilocycles and 60 megacycles. Fundamentals are employed from 125 kilocycles to 15 megacycles. Extension of range to include frequencies up to 60 megacycles is accomplished by utilizing harmonics of fundamental signal. Timing voltage obtained directly from Signal Generator which is automatically synchronized electrically with frequency modulated output for use in producing on screen of a cathode ray tube a double image of tuned circuit under test. **Transparent screen** calibrated in kilocycles off resonance in terms of frequency modulated output. **Beat frequency audio oscillator** calibrated from 50 to 10,000 cycles having constant output over entire range and harmonic content which does not exceed 5%. Provisions for external amplitude modulation of radio frequency carrier at any frequency from 20 to 10,000 cycles with a minimum of distortion. Self-contained modulator stage modulates carrier 30% at 400 cycles. **Attenuator** is of ladder type, consisting of variable control and multipliers. The two controls are graduated for use in gauging approximate microvolt output of generator. Modulated radio frequency output or un-modulated radio frequency output may be obtained. Two pin jacks make available the 400 cycle audio output of modulator stage which may be used for audio test purposes where a sinusoidal signal is desirable. Complete shielding; entire unit housed in metal case and shielding of inductors and other component parts. All necessary accessories and full instructions. Available in all A.C. voltage and frequency power supply ratings at slight additional cost.



Dealer's Net Cash Wholesale Price..... \$54.95  
 S.I.C. Easy Payment Price—\$6.00 cash and ten monthly payments of..... \$ 5.44

# SUPREME Testing EQUIPMENT

## MODEL 450 STANDARD SET TESTER



For the serviceman who desires an up-to-date test instrument with all the most desirable ranges, but at the lowest price consistent with good set tester design and production, SUPREME offers the Model 450 Standard Set Tester. As easy to operate as its bigger brothers, it combines simplicity and accuracy at an astonishingly low cost. This model uses the popular Supreme 5" Fan Shaped meter with its easily read scale ranges and a 500 microampere movement! Also incorporated is the Supreme Free Reference Point system of analysis of connecting the various ranges for each test. Twenty-eight ranges are included: 0/7/35/140/350/700/1400 D.C. volts, 0/7/35/140/350/700/1400 A.C. volts, 0/7/35/140/350/700/1400 D.C. Mils., 0/4,000/40,000/400,000 ohms with provisions for external forty-five volt battery to 4 megohms and 0/7/35/140/350/700/1400 A.C. volts output ranges. The regular Supreme Free Reference System of analysis through one cable is provided which allows the circuit to be spread out on the analyzer panel. This set tester has a beautiful verichromed bakelite panel, and is housed in an attractive Golden Oak carrying case with removable lid and is delivered with all accessories, complete instructions and necessary adapters. Available for all A.C. frequency power supply ratings at slight additional cost.

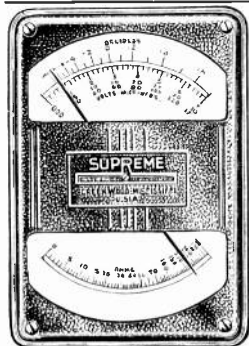
Dealer's Net Cash Wholesale Price ..... **\$34.95**  
 S.I.C. Easy Payment Price:  
 \$4.00 cash and nine monthly payments of ..... **\$ 3.82**

## MODEL 490 STANDARD MULTI-METER

The unit thousands of radio servicemen, amateurs and general experimenters are looking for. Not a cheap, inaccurate make-shift, but a really good multi-meter, at a price that assures one hundred cents on the dollar value. Has the same meter circuit and ranges as the Model 450 Set Tester but does not include set testing cable. Each range is carefully calibrated and accuracy is assured. Uses the famous Supreme 5" Fan Shaped meter with a sensitive 500 microampere movement and incorporates the following 28 ranges: 0/7/35/140/350/700/1400 D.C. volts, 0/7/35/140/350/700/1400 A.C. volts, 0/7/35/140/350/700/1400 D.C. Mils., 0/4,000/40,000/400,000 ohms with provision for external forty-five volt battery to 4 megohms, and 0/7/35/140/350/700/1400 A.C. volts output ranges. Mounted on a very handsome verichromed bakelite panel and installed in a sturdy Golden Oak carrying case with handle. Complete with all accessories and instruction manual. Available for all A.C. frequency power supply ratings at slight additional cost.



Dealer's Net Cash Wholesale Price ..... **\$22.95**  
 S.I.C. Easy Payment Price:  
 \$4.00 cash and five monthly payments of ..... **\$ 4.25**



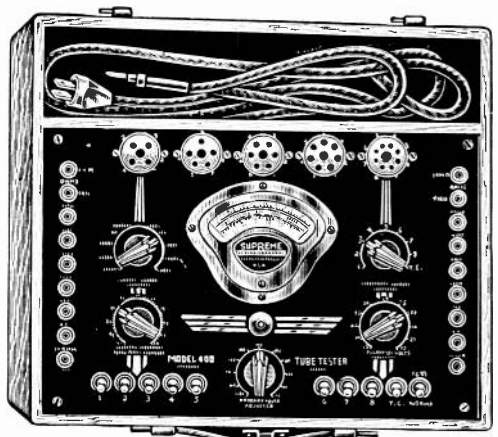
## MODEL 510 METER KIT

The new Quadrimeter included in this kit employs a Bi-Indicating Needle, or double pointer, centrally balanced and driven by a hi-torque 1-mil. movement having a sensitivity of 1,000-ohms-per-volt. Dual Viewing Windows, each having an actual scale length of 3 3/4 inches are provided which can be indirectly illuminated by dial lights. A sword pointer enables accurate readings of dial indications in poor light, the various ranges being evenly spaced and clearly marked. The overall meter measures 5 1/4 x 7 1/4 inches and is beautifully finished, having a dust proof bakelite cover which is easily removable. The powerful meter movement is heavily damped and utilizes a large hi-permeability magnet with welded poled tips. In combination with the parts kit, twenty-seven ranges are available, 0/7/35/140/350/700/1400 volts A.C., 0/7/35/140/350/700/1400 volts D.C., 0/7/35/140/350/700/1400 milliamperes D.C., 0/2,000/20,000/200,000 ohms and six output ranges of 0/7/35/140/350/700/1400 volts A.C. The parts kit includes one SUPREME Bi-Indicating Needle Quadrimeter, one meter adjustment resistor, 15 resistors with 6 attached matching capacitors, 1 0-3600 ohm potentiometer, one A.C. rectifier and all necessary switches.

Dealer's Net Cash Wholesale Price ..... **\$17.95**

## MODEL 400 STANDARD TUBE TESTER

There is always a definite demand for a high quality tube tester, but one which is so reasonably priced that it is within the price range of every serviceman. The SUPREME INSTRUMENTS CORPORATION has engineered their Model 400 Standard Tube Tester in answer to this demand. Only the best parts are used throughout, but because of superior engineering, the price to the serviceman is kept at a minimum. Not only is incorporated the tube testing functions of the Model 400 which include a special tube testing circuit for both tube quality and tube leakage and separate tests for diodes, general purpose, rectifier and other type tubes, but—measuring ranges are included as follows: 0/7/35/140/350/700/1400 D.C. volts, 0/7/35/140/350/700/1400 D.C. Mils. and 0/4,000/40,000/400,000 ohms with self-contained batteries and provisions for external 45-volt battery to 4 megohms. The ever popular Supreme Fan Shaped meter is used in the Model 400 which has an English reading "Good," "?," "Bad" scale for tube quality tests. Mounted on a bakelite panel and housed in a Golden Oak carrying case with slip-hinged cover, the instrument presents a very attractive and workmanlike appearance. A tube chart is mounted in the cover and the tester is supplied with all necessary adapters, accessories and instruction manual. Available for all A.C. voltage and frequency power supply ratings at slight additional cost.

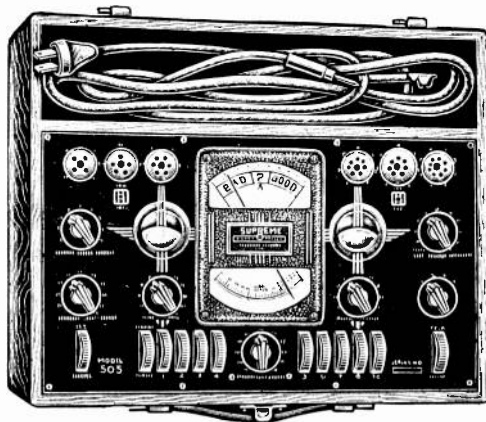


Dealer's Net Cash Wholesale Price ..... **\$38.95**  
 S.I.C. Easy Payment Price:  
 \$4.50 cash and ten monthly payments of ..... **\$ 3.83**

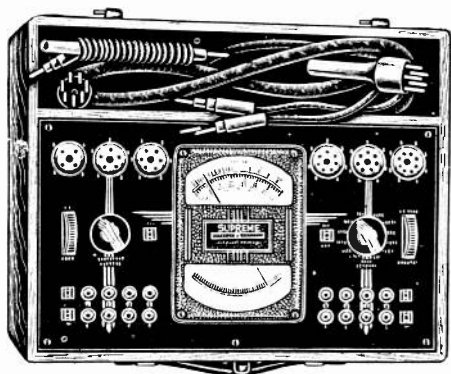
# SUPREME Testing EQUIPMENT

## MODEL 505 DELUXE TUBE TESTER

An ideal instrument for the radio dealer or serviceman, who wants one instrument for both counter sales and service calls, but does not require the additional multi-meter functions of the Model 500 Tube Tester. Tube testing functions of the Model 505 are identical with those incorporated in the Models 500 and 585, and this unit will make an ideal companion piece to the Model 550 DeLux Radio Tester for anyone who prefers his test equipment in smaller units in which none of the functions of one tester are duplicated in another! Designed to: (1) **reduce obsolescence probabilities to a minimum**, (2) **provide utmost flexibility**, (3) **test all tubes without adapters**, (4) **test all tubes at rated loads**. After a radio tube is placed in use, its service life will be limited by one of two factors: (1) loss of emission or (2) inter-element leakages. The "Quality" test of SUPREME testers is designed to indicate the extent of loss of emission of any tube, and the "leakage" test is intended to reveal the presence of any objectionable inter-element leakages. The radically new SUPREME Quadrimeter, with its Bi-Indicating Needle and indirectly illuminated Dual Viewing Windows is used in this tester, the top scale being divided into "Good"—"?" and "Bad" sectors for the quality test of all tubes, and the bottom scale into 100 divisions to indicate percentage of full scale deflection for closer comparison between tubes of similar types. Complete adjustment for variations in power supply. Full sized neon lamp for tube leakages. Separate tests of diodes. Individual element tests of all multi-element and multi-purpose tubes. Separate plate tests of full wave rectifiers and detectors. Tubes tested under rated load. One 8-hole socket used to test all octal tubes regardless of filament connections. Fully protected meter and circuits. Mounted in beautifully finished hardwood carrying case with detachable lid. Available in all A.C. voltage and frequency power supply ratings at slight additional cost.



Dealer's Net Cash  
Wholesale Price ..... **\$47.95**  
S.I.C. Easy Payment Price—\$5.25 cash and  
ten monthly payments of ..... **\$ 4.75**



## MODEL 540 DELUXE RADIO TESTER

The Supreme Model 540 DeLux Radio Tester combines highest quality workmanship and lowest price, being ideally suited for those service engineers who do not require a more complete or higher priced instrument. The sensational new SUPREME Quadrimeter with its Bi-Indicating Needle and Dual Viewing Windows is incorporated in this tester and prevents the crowding of a number of scales in one viewing window as heretofore. The tester permits all point-to-point tests in addition to all socket voltage and current analysis work. A 12-point switch is used in connection with a D. P. D. T. toggle switch to permit the selection of twenty-four ranges: 0/7/35/140/350/700/1400 volts A.C., 0/7/35/140/350/700/1400 volts D.C., 0/7/35/140 M. A. D. C., 0/2,000/20,000/200,000 ohms and six output ranges of 0/7/35/140/350/700/1400 A. C. volts. Large figures are used on all scales making them easily readable. Lowest ohmmeter reading—1 ohm, with 35 ohm reading at center scale.

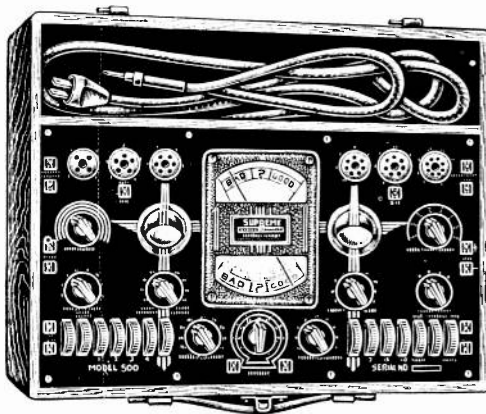
Instrument panel finished in antique bronze; meter, panel and component parts housed in an attractive golden oak cabinet and furnished with complete accessories, instruction manual, and Free Reference Point System of Analysis Chart. Available for calibration at any frequency power supply ratings at slight additional cost.

Dealer's Net Cash  
Wholesale Price ..... **\$36.95**  
S.I.C. Easy Payment Price—\$4.00 cash and  
ten monthly payments of ..... **\$ 3.66**

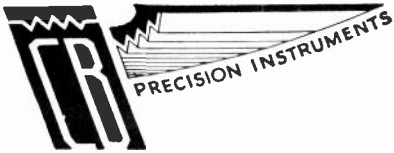
## MODEL 500 DELUXE AUTOMATIC

Designed for the service engineer who requires not only a modern tube testing instrument, but also additional multi-meter functions. The Supreme Model 500 DeLux Automatic is designed around Supreme's ultra-modern Quadrimeter with its Bi-Indicating Needle and Dual Viewing Windows which are indirectly illuminated. Tests all tubes for quality on English reading scale, and under correct rated loads. Only six sockets for all tests including octal tubes with filaments terminating at any two positions, by means of exclusive filament return selector switch. Simple, accurate line voltage adjustment. Separate tests of all elements of multi-element and multi-purpose tubes, diodes, detectors and full wave rectifiers. Full size neon lamp used for hot leakage tests between any two elements. Detects open elements. Tests all latest tubes including cathode ray indicator types. Four A.C. voltage ranges 0/7/140/700/1400 volts; four D.C. voltage ranges 0/7/140/700/1400 volts; four D.C. milliamperes ranges 0/7/140/700/1400 milliamperes, five ohmmeter ranges 0/2,000/20,000/200,000/2,000,000/20,000,000 ohms; three D. B. ranges —10 to +6, 0 to +16, and +10 to +26 D. B.; four output ranges 0/7/140/700/1400 A.C. volts. Electrolytic capacity leakage on colored "Bad—Good" English reading scale; electrostatic capacity leakage.

Mounted in beautifully finished golden oak-carrying case with slip-hinged cover, all necessary accessories, instruction sheets and tube chart. Available in all A.C. voltage and frequency power supply ratings at slight additional cost.



Dealer's Net Cash  
Wholesale Price ..... **\$66.95**  
S.I.C. Easy Payment Price—\$7.50 cash and ten  
monthly payments of ..... **\$ 6.61**



# CLOUGH-BRENGLE

## 1937 Super-Service Line

### MODEL 99 R. F. Signal Generator



The new MODEL 99 is the first r.f. signal generator to offer an output accurately calibrated in microvolts, at a cost of less than several hundred dollars.

Now, you can quickly check receiver sensitivity and gain with precision heretofore possible only in a few engineering laboratories. The introduction of this much needed instrument will cause an immediate change in receiver servicing methods, and marks an important forward step in servicing accuracy.

Through a combination of important new oscillating circuit design improvements, that accomplish uniform voltage output over wide frequency ranges, and a new straight line attenuator—it is possible to offer direct calibration of the r.f. output in microvolts.

OUTPUT CALIBRATED  
DIRECTLY IN MICROVOLTS

VARIABLE PERCENTAGE  
OF MODULATION

100 K.C. TO 60 M.C.  
ON FUNDAMENTALS

DIRECT READING  
FREQUENCY CALIBRATION

FREQUENCY GUARANTEED  
TO 1/2 OF 1%

In addition to this revolutionary improvement, the MODEL 99 offers countless other exclusive features, such as: Percentage of modulation adjustable from 0 to 75%; Hand calibrated reading dial and an accuracy of 1/2 of 1% at any test frequency from 100 kc. to 60 mc.; A total of one hundred and fifty inches of dial length; The "Roto-Inductor" coil assembly which eliminates wave change switches and the associated losses; and instant adaptability to Cathode-Ray visual alignment by means of the C-B Model 81-A Frequency Modulator.

Furnished complete for operation from 110-volt 50-60 cycle line, with all metal tubes and six hand drawn calibration curves.

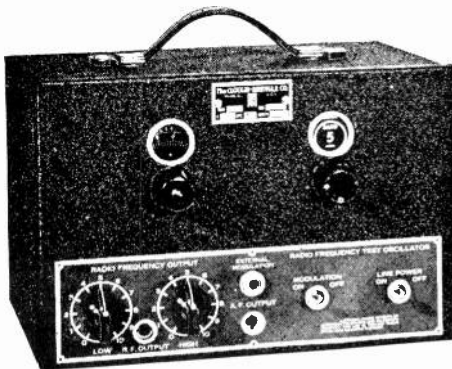
#### MODEL 99

Calibrated R.F. Output Signal Generator, Net Cash  
**\$43.90**

(Only \$5.00 down and ten monthly payments of \$4.44)

Model 99-R, Rack Style, Net Cash \$49.30

### Improved MODEL OC R. F. Signal Generator



C-B leads the way to bigger values with this new 1937 instrument! More features, improved performances—yet the price is drastically lowered because of the tremendous sales record this instrument has made.

Some of its outstanding features are: All-wave continuously variable on fundamentals from 100 kc. to 30 mc. and to 60 mc. on calibrated second harmonic; Accuracy guaranteed to 1/2 of 1% at every frequency; Twenty-five inch R.F. tuning dial per band for greater ease and accuracy of setting; Modulated, Unmodulated R.F. and 400 cycle sine-wave audio outputs; All metal audio and radio frequency oscillator tubes; Improved dual attenuator with smooth stepless control to less than 1/2 microvolt.

Adaptable to Cathode-Ray visual alignment without alterations by use in conjunction with the Model 81-A "Inductor-Sweep" Frequency Modulator.

NEW LOW PRICE

Wide Frequency Range  
100 K.C. to 30 M.C.

Accuracy Guaranteed to 1/2 of 1%

Each Instrument Crystal Calibrated

Battery and Line Operated Models Available

#### MODEL OC-A

R.F. Signal Generator for operation from 110 volt 50-60 cycle line, complete with tubes and hand drawn calibration curves, net cash.

**\$29.95**

(Only \$4.50 Down and Seven Monthly Payments of \$4.20)

#### MODEL OC-B

Identical to above, for operation from 110 volt line, direct current or any frequency, net cash.

**\$29.95**

(Only \$4.50 Down and Seven Monthly Payments of \$4.20)

#### MODEL OD-A

New compact battery version of above instrument. Operates from self-contained batteries of light weight and exceptionally long life. Less batteries, net cash.

**\$29.95**

(Only \$4.50 Down and Seven Monthly Payments of \$4.20)

Model OC-AR, Rack Style, Net Cash \$33.95

New "INDUCTOR-SWEEP" Cathode-Ray Alignment



MODEL OM-A

Improved Frequency Modulated R.F. Generator

Range: 100 k.c. to 30 mc. continuously variable on fundamental output over six bands, each tuned by a micro-vernier dial 25 inches long.

Single or Double Trace Curves: An exclusive feature of C-B Cathode-Ray equipment provides both single or double trace selectivity curves. Since a uniform "wobble" of plus and minus 20 k.c. is secured, the selectivity curve is accurately calibrated by means of a pyroxalin chart supplied for placement over the Cathode-Ray tube screen.

Use with any Oscillograph or Output Meter: The Model OM-A may be used with any standard cathode-ray oscillograph, or, with the frequency modulator shut off, as a standard oscillator for output meter measurements.

Accuracy Guaranteed to 1/2 of 1%: Each instrument is hand calibrated against crystal controlled master signal standards of the greatest precision modern science can devise.

Metal Tubes: Employs a type 6C5 as variable r.f. oscillator, a type 6C5 as "wobbled" oscillator, a type 6C5 as audio frequency oscillator, a type 6C7 as mixer and a 5Z4 rectifier, all metal.

ELIMINATES ROTATING CONDENSERS, ELECTRON DISCHARGE CIRCUITS, ETC.

This new method for securing the "wobble" necessary for cathode-ray alignment, eliminates rotating condensers and unstable electron discharge ("electronic") circuits. Instead, these models employ a totally new sweep method offering the choice of both single and double trace curves. To secure this "wobble," a small copper disc is rotated by an oversize synchronous motor in the field of an inductance coil. As this disc turns, the frequency of the oscillating circuit is varied due to change of the coils' inductance over a range of plus or minus 20 kc.

This is secured the exclusive C-B "Fixed-Width" selectivity curve which is calibrated directly in kilocycles.

MODEL OM-A — R.F. Signal Generator, complete with hand drawn calibration charts, tubes and output cable, net cash.

\$57.75

(Only \$6.50 Down and 10 Monthly Payments of \$5.85)

MODEL 81-A

Frequency Modulator

Brings "INDUCTOR-SWEEP" fixed-width frequency modulation to any oscillator, thus adapting it for Cathode-Ray visual alignment without alterations or loss of calibration. Simply connect the output to the receiver. Suitable for use with any oscillograph. Provides single and double trace curves. For operation from 110-volt, 50-67 cycle lines.

MODEL 81-A—Frequency Modulator, complete with tubes and output cable, net cash.

\$34.25

(Only \$4.00 Down and 10 Monthly Payments of \$3.46)

Model OMA-R, Rack Style, Net Cash \$74.50

MODEL CRA Cathode-Ray Oscillograph



MODEL CRA

Cathode-Ray Oscillograph

This instrument offers complete facilities for countless problems of receiver circuit study and adjustment. R.F. and I.F. alignment, resistor, condenser, and vibrator tests are made while the receiver is under actual operation.

Flexible Operation: The switching system makes possible instant changeover for any desired test, greatly adding to the ease and simplicity of operation.

Higher Input Sensitivity: Two improved input amplifiers, one for each set of plates, offer the highest sensitivity available on a cathode-ray oscillograph, .38 r.m.s. volts per inch of deflection. This extreme sensitivity is an added advantage in servicing receivers of the latest designs.

Wide-Range Sweep: The MODEL CRA has an improved sweep circuit with positive synchronizing control, generating fundamental sweep frequencies up to 20,000 cycles per second, allowing convenient study of wave forms at 150,000 cycles per second or higher.

These and many other features make the MODEL CRA, the outstanding Cathode-Ray Oscillograph value, regardless of price. It has back of it the unequalled experience of the pioneer builder of cathode-ray equipment for high-frequency applications.

MODEL CRA—Cathode-Ray Oscillograph, complete in metal carrying case with all tubes including the type 906 cathode-ray tube, net cash.

\$84.50

(Only \$9.50 Down and 10 Monthly Payments of \$8.36)

Model CRA-R, Rack Style, Net Cash \$99.75



**Model 79-A Beat-Note Audio Oscillator**

A newly improved instrument offering a standard of performance not available in combination r.f. and a.f. oscillators. For radio receiver servicing, it has the advantage that it may be used to audio modulate an r.f. signal generator over the entire audible frequency range, for the extremely important frequency characteristic test of the radio receiver. This can not be done with the a.f. oscillators built into the r.f. signal generators.

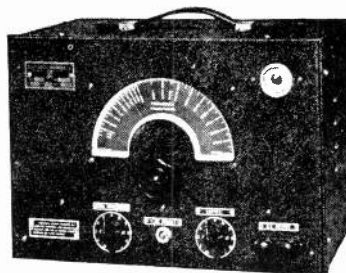
Continuously variable from 0 to 15,000 cycles, with accurate calibration throughout. Output is 27 volts at 5000 ohms or 150 milliwatts, several times the power obtainable from oscillators using low power tubes.

Has built-in amplifier, type 6E5 electron-eye zero-beat indicator and new air dielectric trimmer condensers. Distortion content less than 5%. Output essentially flat over entire frequency range. Operated directly from 110-volt 50-60 cycle line.

**MODEL 79-A Beat-Note Audio Oscillator** ..... Net Cash \$53.75  
Complete in Metal Carrying Case with all Tubes.

(Only \$6.00 down and ten monthly payments of \$5.45)

**MODEL 79-AR, Rack Style** ..... Net Cash \$59.50



**Model 85-A Unimeter**



This low cost point-to-point set analyzer offers every facility for rapid and accurate receiver checking. The large 4-in. fan type meter has D.C. voltage scales of 0-15-150-750 v. D.C. current of 0-; .5-; 5-; 50 ma., A.C. 0-15-150-750 volts and resistance from 1/2 ohm to 2 megs. on three scales.

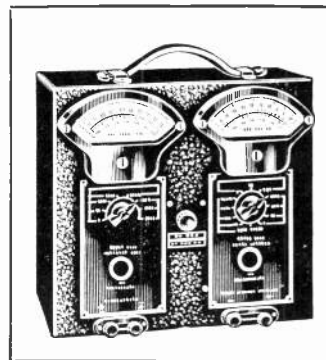
The 0-100 ohms scale is of the shunt type, greatly reducing battery drain and increasing accuracy on the important low ohm readings. When tests are made to the output post marked "Receiver," a heavy duty blocking condenser is placed in the circuit to remove the d.c. component from the plate circuit.

With the MODEL 85-A, all ranges are instantly available through the use of a rotary selector switch. The socket cable and adapters of former analyzers have been eliminated as an aid to quick servicing and to prevent needless obsolescence.

**MODEL 85-A Unimeter**.....Net Cash \$24.95  
Complete with Test Leads and Battery.

(Only \$4.00 down & 7 monthly payments of \$3.44)

**Model 95 Super-Unimeter**



A new analyzer with added ranges to meet the requirements for quick checking of all receiver circuits and components. The first popularly priced instrument to offer direct reading of capacity in all needed values.

Two 4-inch fan-type meters, offer D.C. voltage ranges of 0-5-50-500-1000, D.C. ma. 0-5-50-500, A.C. volts 0-8-40-160-400-800, five resistance ranges from 1/2 ohm to 20 megs. and capacity from .0025 to 16 mfd., all readings made from self-contained power supply eliminating battery inaccuracies and expense. Rotary switches provide instant selection of all ranges without complicated pin-jack or push button combinations.

**MODEL 95 Super-Unimeter**.....Net Cash \$53.75  
Complete with testleads and rectifier tube.

(Only \$6.00 down & 10 monthly payments of \$5.45)

**MODEL 95-R, Rack Style** ..... Net Cash \$59.75

**Model 88 Combination Vacuum-Tube and Peak Voltmeter**

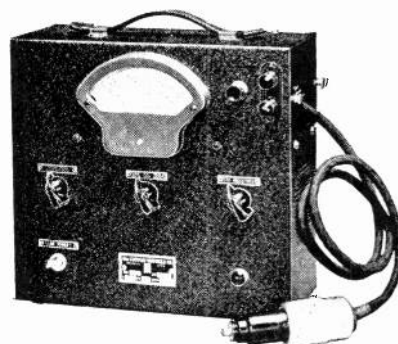
A vacuum-tube voltmeter of improved practicability and ease of operation combined with a peak voltmeter of the "slide-back" type operating from an internal balancing voltage.

Long recognized as an indispensable laboratory instrument, the vacuum-tube has now become a frequent service instrument for measuring c-bias, a.v.c. voltage etc., where ordinary voltmeters of even the highest sensitivity will draw current and upset circuit conditions.

As a vacuum-tube voltmeter, the 4-inch fan type meter indicates 1.2 volts for full deflection. Connection is direct to the tube grid giving an input resistance of 10 megs., sufficient to preclude drawing current in any circuit. As a peak voltmeter, ranges of 0-10 and 0-100 volts are offered. The entire unit is housed in a metal carrying case, with the voltmeter tube on a 30-inch extension cable to allow direct connection to circuit under test.

**MODEL 88 Vacuum-Tube Voltmeter**.....Net Cash \$42.50  
Complete with all tubes.

(Only \$5.00 down and ten monthly payments of \$4.29)





**CLOUGH-BRENGLE**

# 1937 Super-Service Equipment

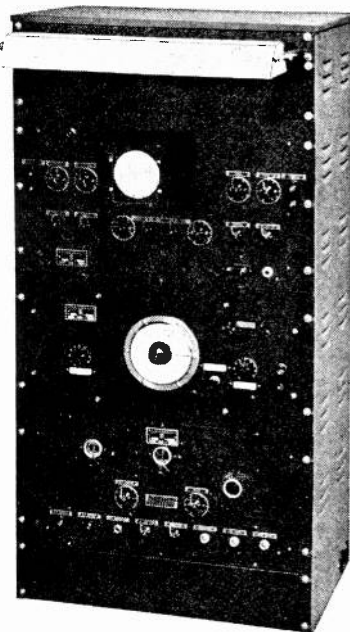
IMPRESSIVE DISPLAY EQUIPMENT BUILDS CUSTOMER CONFIDENCE!

## COMPLETE SERVICE LABORATORIES

Picture the prestige building and business-getting ability of these flashing green cabinets with the silvered Lumaline floodlight pouring light down over the black and silver front panels. Every dial, nameplate and control standing out to intrigue the customer's eye and convince him your services are worth more because you are equipped to do accurate, scientific work.

The C-B Laboratory Cabinet can be purchased with one or more instrument panels, or in any of the special combinations listed below, and will be shipped complete with blank filler panels. As you need additional instruments, you can choose them from the complete C-B Line, and they can be installed in your cabinet without any loss of investment.

With the new C-B "Pay-As-You-Earn" Plan, a Complete Service Laboratory can now be put in your shop for less than it was formerly necessary to pay for a single instrument. Don't miss this opportunity to increase your income by speeding up work and building customer confidence. Ask your jobber for special bulletin describing this new line in detail.



### SPECIAL PRICES ON COMPLETE LABORATORIES

**SERIES 1040**—Complete with Model OC-AR Signal Generator, Model 95-R Super-Unimeter in Laboratory Cabinet. Space for addition of two panels. Net cash.

**\$104.50**

(Only \$12.00 Down and Twelve Monthly Payments of \$8.80)

**SERIES 1020**—Complete with Model OMA-R Frequency Modulated Oscillator and Model CRA-R Cathode-Ray Oscillograph in Laboratory Cabinet. Beat-Note Audio Oscillator and Unimeter panels may be added later. Net cash.

**\$194.50**

(Only \$22.00 Down and Twelve Monthly Payments of \$18.08)

**SERIES 1010**—Same as above but with addition of the Model 79-A Beat-Note Audio Oscillator. Model 95-R Super-Unimeter may be added for receiver voltage, current and component tests when desired. Net cash.

**\$249.50**

(Only \$28.00 Down and Twelve Monthly Payments of \$21.06)

**SERIES 1000**—The finest and most complete service equipment that modern engineering can offer. Complete with Model MA-R Frequency Modulated Oscillator, Model CRA-R Cathode-Ray Oscilloscope, Model 79A-R Audio Beat-Note Oscillator, and Model 95-R Super-Unimeter. Net cash.

**\$299.50**

(Only \$33.70 Down and Twelve Monthly payments of \$25.26)

### THE C-B "PAY-AS-YOU-EARN" PLAN HAS BUILT BETTER INCOMES FOR HUNDREDS OF SERVICEMEN

The new lower down payments and smaller monthly payments announced in this bulletin, effects every C-B Instrument. You can purchase a single instrument, or any combination of instruments desired on a single convenient contract.

Take advantage of this easy way to put your shop

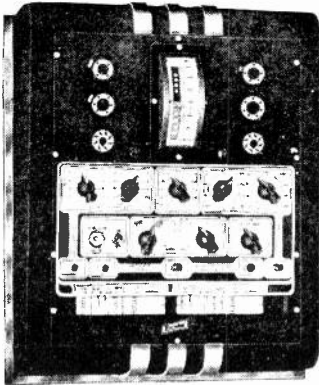
into first class condition for the coming season. The added income will more than pay the small monthly installments.

Write today for application blank and further information on the purchase of any instrument combination desired.



# TUBE TESTERS

## COUNTER TYPE MODEL 51-C



Ninety-six unused switch positions for future tubes. Only forty-eight used. All positions wired.

### Technical Description of AC51-C and AC51-P Tube Testers:

Rectified current is used to energize both plate and grid. Superimposed on the rectified voltage in the grid circuit is an alternating signal voltage. The large edgewise meter responds only to the change in plate current caused by the signal on the grid. The meter is not affected by the steady value of plate current, except in diodes and rectifiers in which plate current is indicated.

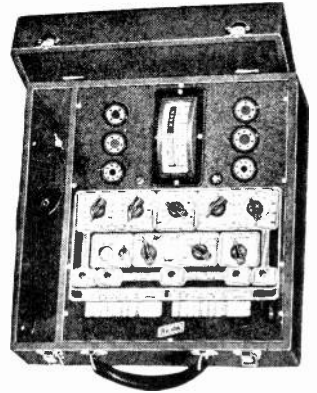
Size, AC-51-C: 14" x 16" x 6" deep at top. Sloping panel. Beautifully trimmed in chromium. Shipping weight, 23 lbs.

The only dual reading unit made—Indicating D.M.C. in Micromhos—also how Good, Bad, Doubtful. New Roll type Chart Easy to Read and Replace.

### FEATURES:

1. True Dynamic Mutual Conductance.
2. Sufficient plate current to accurately check both emission and mutual conductance.
3. Each tube element receives proper voltage.
4. Checks gas content.
5. Detects both short and open elements.
6. Elements tested separately.
7. Short tests made hot or cold.
8. Selector switches take care of all tubes.
9. Meter not affected by amount of plate current.
10. SELLS MORE TUBES—CULLS THEM CLOSER.

## PORTABLE TYPE MODEL 51-P



Size, AC-51-P: 14" x 13 3/4" x 6" deep. Sloping panel. Hardwood case. beautiful rubbed walnut finish. Shipping weight, 23 lbs.

The AC-51 type testers are a truly Dynamic Mutual Conductance Tester. In twin and multi-element tubes, the components are tested separately, determining the dynamic mutual conductance of each component. In twin grid tubes each grid is energized separately, determining the relative function of each. Diode plates are tested separately.

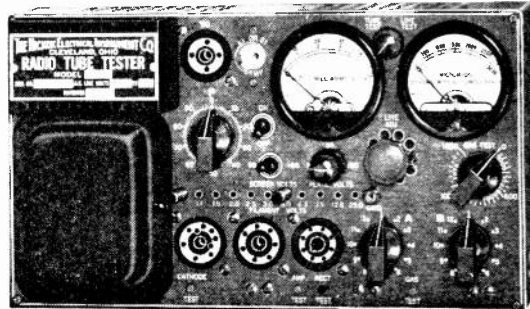
LIST PRICE .....\$75.00

Dealer's Net Price,

either type, 110 Volts, 50-60 cycles.....\$45.00

## MODEL 47-A ALL-TYPE

- Applies DIRECT CURRENT (Standard Manufacturers Ratings) to PLATE and SCREEN GRID. The only precision method of Tube Testing.
- Indicates MICROMHOS DIRECTLY. Also Plate Current. Readings can be compared to Manufacturers Specifications.
- Tests Both Sections of Dual Purpose Tubes Separately, indicating MICROMHOS of each section.



Size: Width 6 3/4", length 12", depth 4".  
Shipping weight, 18 lbs.

## RADIO TUBE TESTER

- Tests Both Plates of rectifier tubes SEPARATELY.
- Tests Both Plates of Diode Tubes SEPARATELY.
- Gas Content indicated directly on "Good" — "Bad" Scale. Also indicates Gas in actual microamperes.
- Cathode Leakage accurately measured.

### OPERATION

The operation of testing tubes is very simple, and requires only settings for the proper filament voltage, grid bias and tube connections. After these settings are made, no further adjustments are necessary in testing a number of tubes, except a slight adjustment for the line voltage when same is unstable.

### FLEXIBILITY—NON OBSOLESCENCE

The switches A and B control all connections to the 3 tube sockets. These switches have 144 available combinations of which only 18 are used to test all present type tubes. Thus, there are 96 unused positions available for future types.

### D. C. POWER SUPPLY

To accurately test any radio tube a correct DC Plate volts, screen grid volts and grid bias must be used. This condition is accurately fulfilled, and in all cases, the tube is tested under conditions corresponding to those in a radio receiving set. In most radio tube testers, raw AC is applied to the plate, which is a method not used by tube manufacturers owing to inherent inaccuracies.

### DYNAMIC MUTUAL CONDUCTANCE

The Dynamic Mutual Conductance of any receiving tube is in most cases the most important factor of the tube's successful operation, and if the plate current and Dynamic Mutual Conductance are normal, the tube will give maximum results in radio receivers. The mutual conductance of a radio receiving tube is actually the mutual effect of the grid voltage upon plate current.

The tube tester actually measures the resultant change in plate current from a change in grid voltage. This is done dynamically by applying AC to the grid, super-imposed upon the DC grid bias and reading the AC component in the plate current in the form of micromhos.

The values of plate current and mutual conductance, which are indicated on the Plate Milliammeter and the Mutual Conductance Meter given in the tube chart supplied with each tester are the same as supplied by the tube manufacturers.

### DUAL PURPOSE TUBES

Tubes containing two elements in one envelope such as two triodes or a triode and two diodes can only be accurately tested when each section of the tube is tested as a separate unit. The AC-47-A tests each section or unit of this type tube separately, that is, in tubes containing two triodes the Dynamic Mutual Conductance of each triode is measured separately.

### RECTIFIER AND DIODE TUBES

In the above type tubes both plates of full wave rectifier and diode tubes are tested for emission separately as any test made with the plates tied together frequency shows O.K. when one of the plates is defective.

### GAS CONTENT

The AC-47-A Tube Tester embodies the most sensitive gas test available and it is possible to read 1/2 microampere of gas content. The Gas Content Indicator also is equipped with a "Good" and "Bad" scale so arranged that the amount of gas present in any type tube, which would interfere with its proper operation, can be instantly indicated and also the actual gas content in micro-amperes.

### CATHODE LEAKAGE

Filament to Cathode Leakage seriously interferes with proper biasing of tubes and operation of receivers, also is liable to cause AC hum in a receiver. This factor is instantly indicated by simply pressing the button marked "CATHODE TEST."

LIST PRICE .....\$125.00

Dealer's Net Price.....\$75.00

Carrying Case. Size: 10 1/2" width, 5 1/4" depth, 15 3/4" length.

LIST PRICE .....\$10.00

Dealer's Net Price.....\$6.00

# HICKOK

# SERVICE EQUIPMENT

## RFO-1 OSCILLOGRAPH

Utmost Economy—In Initial Cost—Application and Use

Simplified Control Grouping—Equipped with Calibrated Screen.  
Uses 3" type 906 tube. Shielded from external magnetic fields.

### THE MASTER OSCILLOGRAPH

Complete with Electronic Frequency Modulator.

No extra accessories or gadgets to buy; will operate with any good Oscillator. Completely designed and built in the Hickok Radio Frequency Laboratories. Fundamental design, will give years of profitable service.

#### FEATURES:

- Built-in electronic frequency modulator.
- Sweep variable from 5 to 30 kilocycles.
- Single or double trace alignment.
- All controls including the beam centering on the main panel.
- Calibrated screen (not shown in illustration) supplied with each Oscillograph.
- Segregation of control into individual panels simplifies operation.
- High sensitivity horizontal and vertical amplifier. 0.2 volts per inch.
- Wide range sweep circuit Oscillator, 15 to 25,000 cycles per second.
- Horizontal amplifier may be used to amplify external voltages to be applied to the horizontal plate.

#### TUBES:

The RFO-1 employs the type 906 3" cathode ray tube. Type 885 gas triode, type 879 high voltage rectifier, type 80 low voltage rectifier. Two 6C6 tubes, one as a horizontal amplifier and the other as a vertical amplifier. One type 41 used as Oscillator, one type 6D6 electronic frequency modulator tube and one type 6A7 mixer tube.

#### POWER SUPPLY:

The power supply of the RFO-1 is completely self-contained and operates on 100-130 volts, 50 to 60 cycles. A. C. Other voltages and frequencies may be supplied at slight additional cost.

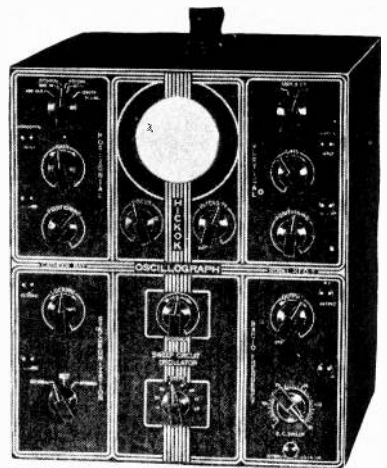
#### LIST PRICE

.....\$175.00

#### Dealer's Net Price

.....\$105.00

Detailed Bulletin sent on request



Size: Width 11", height 13", depth 15 1/4".  
Weight 35 lbs.



Size: Width 11", height 9" depth 5 1/4".  
Shipping weight 16 lbs.

## The OS-10 OSCILLATOR

Check These Exclusive Characteristics

- ✓ Large Horizontal Edgewise Direct Reading Frequency Dial, Accuracy 0.2 of 1%.
- ✓ R. F. Corrector—Insures Precision of R. F. Adjustment and Permits Micrometer Band Spreading.
- ✓ External Electronic (no motor) Frequency Modulator Available for Oscillograph Use.
- ✓ Electron Coupled R. F. Oscillator.  
1/2 micro-volt to 1 volt output.  
85 kilocycles to 50 megacycles—7 ranges.  
Accuracy better than 1/2 of 1%.
- ✓ Two Negative Resistance Audio Frequency Oscillators.  
(a) 400 cycle fixed.  
(b) 0-10,000 cycle variable.  
Output variable from 0 to 1 volt.
- ✓ Horizontal Edgewise Decibel Output Meter—2 Ranges.  
— 10 to + 15 DB  
+ 12 to + 40 DB  
Direct and Capacity Connections.

### TECHNICAL DESCRIPTIONS AND DETAILS

**POWER:** The Oscillator includes a complete built-in power supply consisting of a transformer, rectifier and filter. It may be operated from any 110 volt A.C. line, 40 to 65 cycles; other voltages and frequencies available at slight additional cost.

**TUBES:** The tubes used are the type 41, type 6C6, type 6D6 and type IV. All these tubes are the latest 6 volt heater type tubes, and are operated sufficiently below their normal rating to insure long life and uniform service.

**CIRCUIT:** The variable radio frequency circuit utilizes the type 41 pentode tube as an electron-coupled high stability, radio frequency oscillator. This oscillator circuit is continuously variable from 85 kilocycles to 25 megacycles in six ranges. Each range is clearly marked on the main tuning dial and extends over more than 7% of scale length. The electron couple circuit is used for its high stability and freedom from frequency variations with line voltage. A type 6C6 is used interchangeably, as a negative resistance oscillator, at 400 cycles or at a fixed frequency of 150 kilocycles. When used as the 400 cycle Oscillator, its output may be used to modulate the radio frequency carrier at approximately 50%. When used as a radio frequency oscillator operating at 150 kilocycles, it is used to beat against the main oscillator to provide a variable audio frequency from zero to approximately 11,000 cycles. The negative resistance oscillator has the inherent advantage of extreme freedom from harmonics and consequently develops a pure sine wave which is essential for oscillograph operation. A type 6D6 tube is used as a demodulator mixer for mixing the outputs of the two oscillating sections, and providing a decoupling amplifier to isolate the input from the output circuit. It also acts as an amplifier and amplifies the radio and audio frequency to the high level of 3 volts output which is essential for modern visual alignment. The type IV tube is a half-wave cathode type rectifier and is used to rectify the alternating current supplied by the secondary of the power transformer.

**RADIO FREQUENCY COILS:** The radio frequency coils are impregnated in a special lacquer making them moisture proof and not subject to inductance change with change of humidity or temperature. The coils are mounted integral with a specially designed switch so that the proper coil is selected and all other coils are grounded when not in use. The coil and switch assemblies are completely shielded in a metal container. This provides freedom from stray fields which results in poor attenuation and concentrates the radio frequency energy in its proper channel in the oscillator.

**METER:** A precision decibel meter is calibrated direct in decibels from minus 10 to plus 40. When this meter is connected across a 400 ohm

line, the accuracy may be depended upon to within 1%. The output meter has two ranges, the first range from minus 10 to plus 15 DB and the second range plus 15 to plus 40 DB. Provisions are also made for a capacity connection to the output meter so that the output may be taken directly from the plate of a tube.

**OUTPUT RATIO-CONTROL** is used to provide step attenuation of the radio frequency and audio frequency output so that the output potentiometer, which is labeled "Output Control" may be used with maximum effectiveness.

**OUTPUT SELECTOR:** A control which enables the operator to select any desired output. When this is turned to the 400 cycle position the radio frequency carrier is modulated at 400 cycles and may be, as previously explained, used as a 400 cycle fixed frequency audio signal generator. When the switch is turned to the Pure radio frequency position, this 400 cycle modulation is disconnected and the output of the oscillator becomes a pure radio frequency which may be used where modulation is not desired. In the external modulation position the oscillator may be frequency modulated by proper connection to the Model OS-3 Hickok Electronic Frequency Modulator or in this position the Oscillator may be modulated from an external audio source. When the switch is turned to the 0-10,000 cycle audio frequency position the control for the variable 0-10,000 cycle audio frequency signal becomes the control for the variable 0-10,000 cycle audio frequency signal. The output of the audio frequency oscillator within these frequency ranges is constant within about one and one-quarter DB over the entire range.

**R. F. CORRECTOR:** Labeled plus and minus 0 to 5. With the R. F. corrector set at the zero position the accuracy of calibration of the main tuning dial is approximately 1/4 of 1%. However, calibration data is supplied with each oscillator which gives a setting of plus or minus of this R. F. corrector for most of the important frequencies used. If this R. F. correction is applied the accuracy of the oscillator increases to better than .2 of 1%. The R. F. corrector may also be used for varying the frequency established on the main tuning dial plus or minus approximately 5 kilocycles for testing response above and below the frequency indicated on the main tuning dial.

**CABLES:** Each oscillator comes completely equipped and supplied with all necessary connecting cables. Complete and concise operating instructions are furnished with each oscillator.

**LIST PRICE** .....\$80.00

**Dealer's Net Price** .....\$48.00

# memo

from the desk of

SAMUEL ROTH

Dear Friend:

On the occasion of our 25th anniversary, it is my distinct pleasure to send you this special limited printing of our 1935 (1st edition) Radio's MASTER.

I'm certain that as you thumb through it you will reflect nostalgically on the products of 25 years ago, and realize the tremendous strides our industry has made during the past quarter century. You'll recognize the names of a few companies that have passed from the scene, as well as many that have substantially increased in stature over the years.

From the 1935 to the 1960 edition, The MASTER truly reflects the growth of a dynamic and still maturing industry. It also mirrors the support and cooperation of manufacturers, distributors, representatives and advertising agencies. For this, I am most grateful. May I extend my heartfelt thanks and appreciation.

Cordially,



Samuel Roth  
President

May, 1960

60 Madison Avenue • Hempstead, New York







# TEST EQUIPMENT

## Model SG-4800-A SET TESTER

**MOST COMPLETE—ALL COVERAGE—ACCURATE TESTER AVAILABLE**



- Temperature Coefficient . . . All Meters . . . All Ranges Practically Zero.
- Compensated Rectifier for Laboratory Accuracy.
- Ohmmeter Accuracy not affected by change in battery voltage.
- Capacity Meter Accuracy . . . not affected by any line voltage from 100 to 125 volts.
- **OUTPUT READABLE THROUGH CONNECTION TO RECEIVER SOCKETS WITHOUT DISTURBING RECEIVER CONNECTIONS.**
- Ohmmeter operates from self-contained power pack on all high ranges. Lowest range operated from long life battery.

**Special Note:** The Multi Selector Division is designed to test sets with the latest type tubes and in addition enables the operator to make all possible voltage, current, resistance, and capacity measurement combinations and is equal to an eighty nine point switch.

### METER SCALE CLEARLY VISIBLE TO INDICATE THE FOLLOWING

D. C. Volts: 0-10, 0-50, 0-250, 0-500, 0-1000. D. C. Milliampers: 0-1, 0-5, 0-50, 0-500.  
 A. C. Volts: 0-10, 0-50, 0-250, 0-500, 0-1000. A. C. Milliampers: 0-1, 0-5, 0-50, 0-500.

OHMS: Readable as low as .05 Scales: 0-1000; 0-10,000; 0-1 MEG., 0-10 MEG.

Capacity: Readable as low as .0001 Mfds. Scales: 0-.02; 0-.2; 0-20 and 0-200 Mfds.

Output All Ranges of A. C. Volts: 0-10, 0-50, 0-250, 0-500, 0-1000.

Readable and can be used on any type of output circuit.

**SENSITIVITY . . .** A. C. and D. C. Volts and Output Meter 1000 Ohms per Volt.

Built in Power Supply for higher ranges of Ohms eliminates heavy batteries, resulting in lighter weight and extremely compact design. All lower ranges operated for two 1½ volt long life batteries.

All meter circuits terminate in Pin Jacks conveniently located around selector switch make for simplicity of operation and eliminates confusion in rapidly locating proper set of Jacks to avoid making the wrong connections.

**NOTE: CHART OF TUBE BASE CONNECTIONS IN REMOVABLE COVER FOR REFERENCE.**

Capacity Meter operates from 100-125 volts, 60 cycles. Special voltages and frequencies supplied at small extra cost.

**LIST PRICE . . . . . \$95.00**

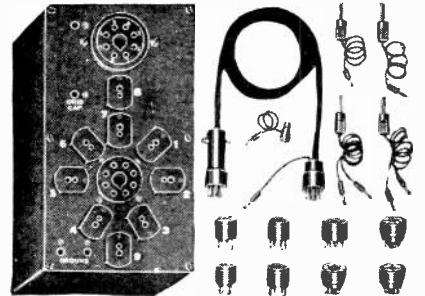
**Dealer's Net Price S. G. 4800-A Radio Set Tester Complete . . . . . \$57.00**

## MODEL S. G. 4801 RADIO SET TESTER

This unit (not illustrated) is identical with the S. G. 1800-A Set Tester as previously described except does not have the Multi Selector Unit built in.

Sizes of carrying cases are the same in both models.

For those who prefer a separate Multi Selector later we can supply the Model 5200 Multi Selector shown below with all leads and all attachments ready for use, and with panel to match the 4801 Tester.



S. G. 4801—Set Tester and carrying case, List. . \$76.00

Dealer's Net Price. . . . . \$45.60

5200—Multi Selector (illustrated), List. . . . . \$19.50

Dealer's Net Price . . . . . \$11.70

## STATIKTESTER SERVICE UNIT

**Highest Precision and Accuracy—1½ %**

The STATIKTESTER is a combination of the Hickok Set Tester, Model S. G. 4800-A and Tube Tester, Model 47-A.

Individually each one is a complete and accurate instrument. Together they make one of the finest Radio Service Units—indispensable for scientific radio testing.

### Description of Tube Tester Section of Statiktester

Applies direct current employing standard manufacturers ratings to plate, grid and screen. The only precision method of tube testing. Indicates manufacturers values in microns directly.

Reads plate current and diode current in standard manufacturers values.

Tests both sections of dual purpose tubes separately, indicating micromhos of each section. Tests both plates of rectifier tubes separately. Tests both plates of diode tubes separately.

Gas Content indicated directly on Good and Bad scale. Also indicates gas in actual microamperes. Accurately measures Cathode Leakages. (For more detailed information see Page P-35.)

**LIST PRICE . . . . . \$225.00**

**Dealer's Net Price Complete \$135.00**



### Description of Set Tester Portion of Statiktester

- Temperature coefficient of all ranges practically zero.
- Compensated rectifier for laboratory accuracy.
- All A. C. Voltages indicated on the same scale.
- Ohmmeter operates from power pack of tube tester. **NO BATTERIES.**
- Accuracy unaffected by change in line voltage.
- Multi-Selector enables operator to make all types of Dynamic and Static Measurements.
- All Dynamic and Static measurements made without disturbing receiver connections.
- 4½" meter with long scale having the following ranges:

D. C. Volts: 0-10, 0-50, 0-250, 0-500, 0-1000. D. C. Milliampers: 0-1, 0-5, 0-50, 0-500.  
 A. C. Volts: 0-10, 0-50, 0-250, 0-500, 0-1000. A. C. Milliampers: 0-1, 0-5, 0-50, 0-500.

Ohmmeter ranges: 0-100, 0-1000, 0-10,000, 0-100,000, 0-1 meg. 0-10 meg. 0-100 scale readable as low as .05 ohms.

Capacity: Low scale readable to .0001 microfarads. Scales: 0-.02, 0-.2, 0-2, 0-20, 0-200 microfarads.

Output Meter: Ranges 0-10 volts, 0-50 volts, 0-250 volts. Output meter can be used with any type of output circuit.

Sensitivity of A. C. and D. C. volt ranges 1000 ohms per volt.

Power supply of tube tester section operates Ohmmeter in Set Tester section eliminating all batteries.

All meter circuits terminate in pin jacks conveniently located so that connections to Multi-Selector can be conveniently made.

Tube Base Chart mounted in cover of tester for quick reference.

## MODEL 1955 VOLT-OHM-MILLIAMMETER

**For Alternating and Direct Currents. Accuracy Within 2%, Except As Noted.**

**For General Circuit Testing. Contains low Ohm Range. Dimensions: 7"x4½"x3¼".**

Scale ranges as follows: A. C. Volts, 0-10, 0-50, 0-250, 0-500, 0-1000. D. C. Volts, 0-10, 0-50, 0-250, 0-500, 0-1000. Ohms, .05-30, .5-10,000, 50 ohms to 1 megohm.

500 ohms to 10 megohms. D. C. Milliampers, 0-1, 0-10, 0-50, 0-250. Resistor built in to read 10 megohms with external battery. A. C. Voltmeter. Usable As

Output Meter

Scale length 3".

Knife edge pointer.

Silver etched meter dial.

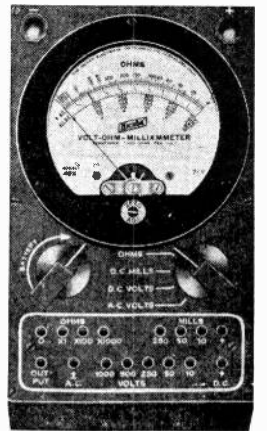
Engraved bakelite panel, steel case to match.

Unit complete, self-contained, with rheostat to adjust meter to batteries inside.

Regular leads supplied are four feet long with special insulated pin leads of proper diameter for insertion in latest radio tube sockets.

LIST PRICE \$41.00

Dealer's Net Price \$24.60

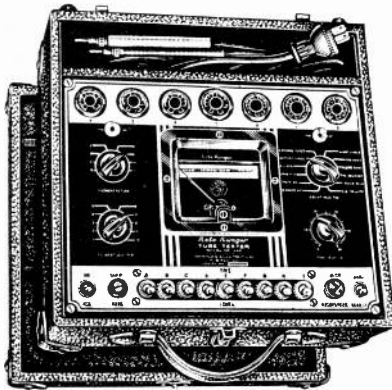




# SIMPSON



## Roto Rangers 220 TUBE and SET TESTER



The new Simpson Roto Ranger with its ingenious patented roto-dial mechanism does away with the multiple scale with its maze of figures and the necessity of determining which range is connected into the circuit. The selector switches the scale and the circuit simultaneously, providing one scale at a time.

**TUBE TESTING**—The Model 220 Tube Tester utilizes the very latest circuit which has been adopted as standard by the radio industry. Three "Good" and "Bad" dials have been incorporated; one for Cathodes, one for Diodes and one for Battery Type Tubes. Design features overcome the possibilities of early obsolescence.

**LINE VOLTAGE ADJUSTMENT**—Upon each of the dials used in tube testing and condenser testing, line voltage may be checked without returning the selector to a fixed position. **SHORT CHECK**—Testing for "shorts" is a simple matter with the Roto Ranger. After setting the correct dial in position, toggle switches are manipulated to check each element. The meter sensitivity is correct for locating shorts especially those due to thermal expansion of the elements.

**CONDENSER TESTING**—Two "Good" and "Bad" dials have been incorporated in the Model 220 for testing condensers. One of these dials indicates the condition of mica and paper condensers and the other is calibrated to show the true condition of electrolytics.

**RESISTANCE RANGES**—The instrument is provided with three very practical and useable resistance ranges: 0-100 Ohms, 0-100,000 Ohms, and 0-100 Megohms.

**VOLTAGE RANGES**—Voltage ranges, three in number, include D.C. ranges of 0-8-300-1000 volts. The sensitivity of the meter movement is 400 Microamperes and all voltage ranges are furnished with resistance of 2500 ohms per volt.

**GENERAL FEATURES**—The handsome metal panel is finished in black and silver by a new process. Carrying case is well built and covered with black "Shark" grained leatherette. Protective leather caps on all corners.

Dimensions, 12½ x 12½ x 6 in.; Shipping weight, 22 lbs.

Dealers' Net Price ..... \$57.00

## 201 & 202 VOLT-OHM-MILLIAMMETERS

Another Roto Ranger design incorporating the twelve scale rotary dial. Positively the most useful and practical instrument ever offered for use in the shop or on the job. Model 201 utilizes 6 scales for resistance and covers a complete range from .1 ohm to 20 megohms. Also provides three current ranges, making available the basic range of 200 microamperes; and three voltage ranges to 1000 volts with resistance of 5000 ohms per volt.

**MODEL 202**—The A.C.-D.C. type is especially adaptable to "Free point" testing and is provided with ranges most suitable for general testing. All voltage ranges are on the basis of 1000 ohms per volt.

### RANGES OF MODEL 201 D.C. TYPE

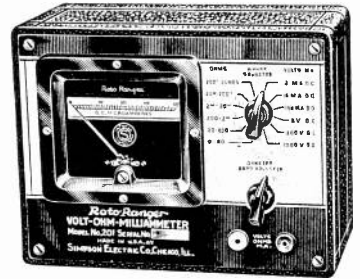
0-20 Ohms	200,000 Ohms to 20 Megohms
20-200 Ohms	0-200 Microamperes
200-2,000 Ohms	0-10-150 Milliamperes
2,000-20,000 Ohms	0-8-300-1000 Volts
20,000-200,000 Ohms	(5000 Ohms per Volt)

Model 201—Dealers' Net Price ..... \$29.50

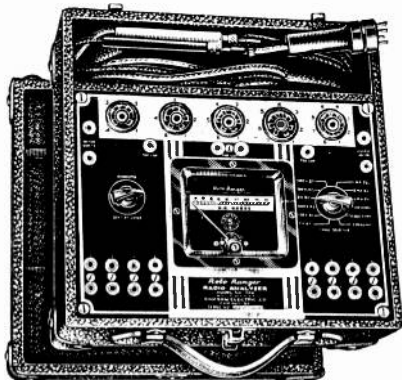
### A.C.-D.C. VOLT-OHM-MILLIAMMETER MODEL 202

Design and general features identical with Model 201. Ranges:	
0-8-130-1000 A.C. Volts	0-100 Ohms (Center scale 5)
0-8-300-1000 D.C. Volts	0-50,000 Ohms (Center scale 1400)
0-1-8-130 D.C. Milliamperes	0-2 Megohms (Center scale 21,000)

Model 202—Dealers' Net Price ..... \$32.50



## 200 RADIO SET TESTER



Gone is the complicated scale, the necessity for multiplying and dividing, the difficulty in reading, the need for cramped calibrations, the possibility of errors. The roto-dial with its twelve independent scales, eliminates the necessity of observing metric relationship in calibrating scales, with the result that every scale has an ideal, practical, useable range.

**SOCKET AND POINT TO POINT ANALYSIS.** All resistance, voltage, and current readings are secured through the 9 conductor analyzer cable, plugged into the receiver sockets. Tests can be made without removing the chassis from the cabinet. Nine pairs of circuit opening tip jacks can be connected by jumpers to the meter reading jacks. By making connections in this manner and placing analyzer plug into radio set tube socket, quick and accurate measurement of potentials of every tube element can be made.

**4½" RECTANGULAR METER.** Sockets provided for all tubes including the new 8 prong Octal base metal and glass tubes. Free point system of analysis is used, by which the receiver chassis, or any element of the tube acts as a reference point for all measurements. Meter has SIMPSON D'Arsonval movement with sapphire jeweled bearings. Knife edge pointer. Accuracy 2%.

The following scales and ranges are available:

0-8, 0-130, 0-1000 A.C. Volts
0-8, 0-300, 0-1000 D.C. Volts
0-1, 0-8, 0-130 D.C. Milliamperes
0-100 Ohms (Center scale 5)
0-50,000 Ohms (Center scale 1400)
0-2 Megohms (Center scale 21,000)

Dimensions, 12 x 12½ x 6½ in.; Shipping weight, 22 lbs.

Dealers' Net Price ..... \$49.00

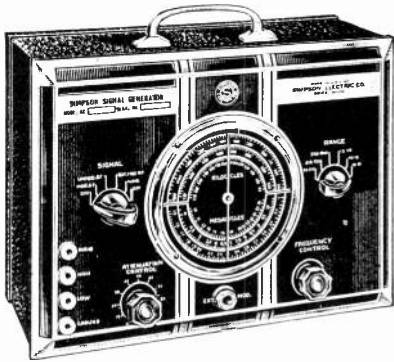




# RADIO INSTRUMENTS AND SERVICE EQUIPMENT

## 210 & 211 SIGNAL GENERATORS

FUNDAMENTAL FREQUENCY RANGE  
94 Kilocycles to 26 Megacycles



This new modern signal generator is distinguished for its fine workmanship and permanently dependable performance with a high order of accuracy. Heavy aluminum castings are employed throughout to insure proper shielding and to make a low output level possible. RANGE—Continuously variable from 94 kilocycles to 26 megacycles—ALL ON FUNDAMENTALS. Divided into 6 bands, 94-216, 215-550, 550-1500 kilocycles and 1.5-4.0, 4.0-10, 10-26 megacycles, selected by means of a 6 position rotary switch.

CALIBRATION—Each of the six bands individually calibrated at 6 points with quartz crystal oscillators. Maximum change in original calibration over long periods of time are less than 1%.

ATTENUATOR SYSTEM—A unique ladder type attenuator is used to control the output level. A low inductance tapered potentiometer allows half of the full rotation for the first 10% of the maximum volume, resulting in vernier control at the important low levels.

MODULATION—A separate tube is used to provide modulation of the carrier at 400 cycles. The separate modulating tube in the particular circuit used has resulted in exceptionally good wave form and low harmonic content as viewed on a cathode ray oscilloscope.

Size: Width, 12½"; Height, 9½"; Depth, 6"

MODEL 210 A.C. LINE OPERATED

Dealers' Net Price ..... \$49.00

MODEL 211 BATTERY TYPE

Dealers' Net Price ..... \$39.50

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Accuracy 2%

DIMENSIONS

ROUND CASE

Flange Diam. 3¼"

Body Diam. 2¾"

RECTANGULAR CASE

Width 3"

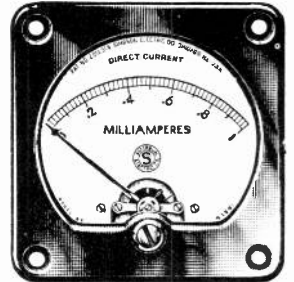
Height 3¼"

Depth Overall 1½"

Scale Length 2½"

Depth 2"

Scale 2½"



#### MODEL 25 & 26 D.C. VOLTMETERS

Range	Net	Range	Net
0-3	\$5.60	0-100	\$6.30
0-5	5.60	0-150	7.00
0-8	5.60	0-200	8.05
0-10	5.60	0-300	10.32
0-15	5.60	0-500	11.90
0-25	5.60	0-1000	16.45
0-50	5.60		

(1000 Ohms Per Volt)

0-50	7.35	0-300	9.27
0-100	7.70	0-500	10.67
0-200	8.75	0-1000	14.00

#### MODEL 25 & 26 D.C. MILLIAMMETERS

Range	Net	Range	Net
0-1	\$6.12	0-75	\$5.60
0-1.5	6.12	0-100	5.60
0-2	6.12	0-150	5.60
0-3	6.12	0-200	5.60
0-5	5.60	0-250	5.60
0-10	5.60	0-300	5.60
0-15	5.60	0-500	5.60
0-20	5.60	0-1000	5.60
0-25	5.60	15-150	8.75
		50-250	8.75

#### MODEL 25 & 26 D.C. MICROAMMETERS

Range	Net
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0-500	8.92

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Range	Net
0-1000	\$6.47
0-10,000	6.47
0-100,000	7.70
0-500,000	7.70
0-2,000,000	9.45

#### MODEL 25 & 26 D.C. AMMETERS

Range	Net	Range	Net
0-1	\$5.60	0-50	\$5.60
0-1.5	5.60	5-0-5	5.60
0-3	5.60	10-0-10	5.60
0-5	5.60	20-0-20	5.60
0-10	5.60	30-0-30	5.60
0-25	5.60		

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Range	Net	Range	Net
0-1	\$11.20	0-3	\$11.20
0-1.5	11.20	0-5	11.20
0-2	11.20		

#### MILLIAMMETERS

Range	Net
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0-250	12.60
0-500	12.60

#### MODEL 45 & 46 A.C. RECTIFIER VOLTMETERS

Range	(1000 Ohms per Volt)		(2000 Ohms per Volt)	
	Net		Net	
0-1			\$11.90	
0-2			11.90	
0-3	\$10.50		11.90	
0-5	10.50		11.90	
0-15	10.50		11.90	
0-50	10.50		11.90	
0-100	10.85		13.30	
0-150	11.55		14.35	
0-300	12.25			

#### MODEL 45 & 46 A.C. RECTIFIER MILLIAMMETERS

Range	Net	Range	Net
0-0.5	\$11.90	0-2	\$9.27
0-1	9.27	0-5	8.75

#### MODEL 55 & 56 A.C. VOLTMETERS

Range	Net	Range	Net
0-1.5	\$5.60	0-150	\$7.00
0-3	5.60	0-300	10.32
0-5	5.60	0-500	11.90
0-10	5.60	0-750	14.70
0-15	5.60	0-1000	17.50
0-25	5.60	7.5-15-150	9.97
0-50	5.60	7.5-150-750	9.97
0-100	5.60		

#### MODEL 55 & 56 A.C. AMMETERS

Range	Net	Range	Net
0-1	\$5.60	0-5	\$5.60
0-1.5	5.60	0-10	5.60
0-2	5.60	0-15	5.60
0-3	5.60	0-25	5.60

#### MODEL 55 & 56 A.C. MILLIAMMETERS

Range	Net	Range	Net
0-15	\$5.60	0-100	\$5.60
0-25	5.60	0-250	5.60
0-50	5.60	0-500	5.60



# RADIO & TECHNICAL PUBLISHING COMPANY



## MODERN RADIO SERVICING

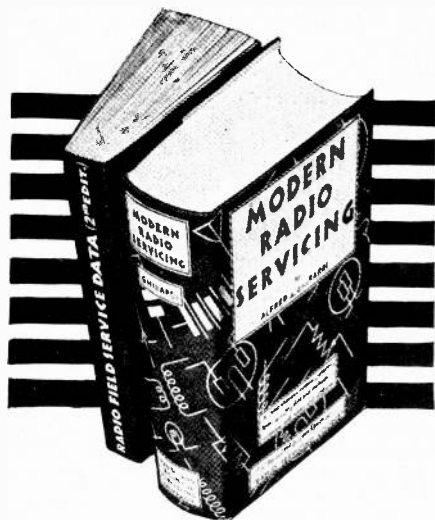
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12. Constructing Set Analyzers.
13. Commercial Set Analyzers.
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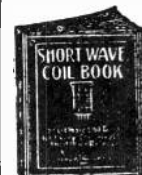
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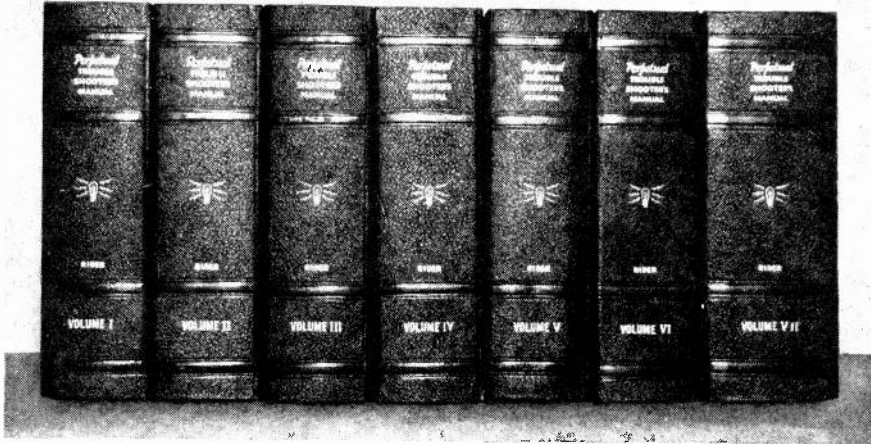
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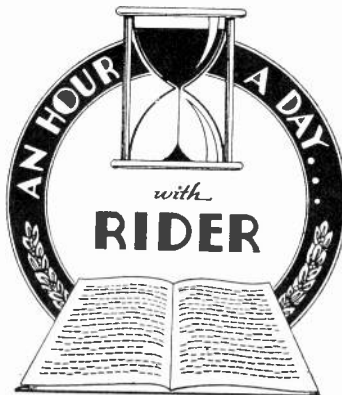
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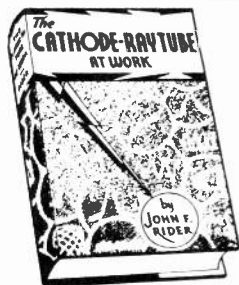
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Volume II picks up where Volume I left off and covers the auto radio field up to April 1935. No data that was issued by the manufacturers was omitted from its 416 pages. . . . Complete installation and servicing data with complete diagrams—mechanical and electrical—alignment instructions—voltage data. . . . parts lists. . . . everything that the serviceman requires when he is working on an auto receiver.

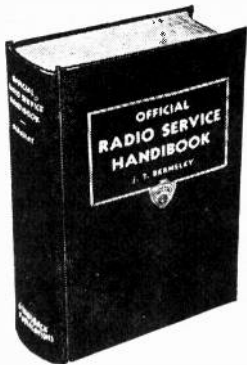
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### Servicing Receivers by means of Resistance Measurement

Diagnosing troubles in a receiver quickly is the secret of successful servicing and one way is to know the part that resistance plays in the functioning of any set. Do you know all about the resistance of the various types of transformers—what it should be and what can happen if their resistance is incorrect? Could you take the schematic of any receiver and check all the circuits with an ohmmeter? A full and clear explanation of such procedure is the subject of one chapter and this alone is worth the price of the book, which is illustrated with schematic diagrams that make the contents easy to understand.

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By M. HARVEY GERNSBACK This book tells you everything you have ever wanted to know about short-wave reception.

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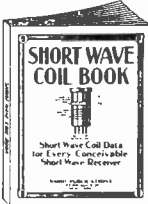


Compiled by the Editors of SHORT-WAVE CRAFT

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## SHORT-WAVE COIL BOOK



As every experimenter who has ever tried to build a short-wave set knows only too well by experience, the difference between a good and a poor receiver is usually found in the short-wave coils. Very often you have to hunt through copies of magazines, books, etc., to find the information you require.

Between the two covers of this book you now find every possible bit of information on coil winding that has appeared in print during the past two years. Only the most modern "dope" has been published here. No duplication. Illustrations galore.

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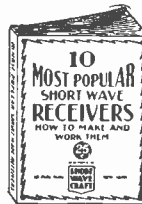


Here is a book that solves your short-wave problems—leading you in easy stages from the simplest fundamentals to the present stage of the art as it is known today. It is the only low-priced reference book on short-waves for the beginner.

75 Illustrations 40 Pages

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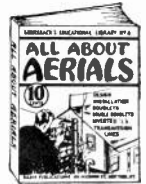
## ALTERNATING CURRENT FOR BEGINNERS



This book contains everything to give the beginner a foothold in electricity and Radio. Electric circuits are explained. Ohm's Law, one of the fundamental laws of radio, is explained; the generation of alternating current; sine waves; the units—volts, amperes, and watts are explained. Condensers, transformers, A.C. instruments, motors and generators—all these are thoroughly discussed. Housewiring systems, electrical appliances and electric lamps. 32 pages. 15,000 words.

**10c**

## ALL ABOUT AERIALS



In simple, understandable language this book explains the theory underlying the various types of aerials; the inverted "L", the Doublet, the Double Doublet, etc. 32 Pages. 15,000 words.

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## HOW TO MAKE THE MOST POPULAR ALL-WAVE 1- and 2-TUBE RECEIVERS

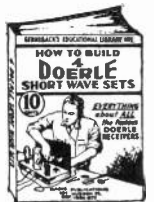


A low-priced book for the radio experimenter, radio fan, radio Service Man, etc., who wishes to build 1- and 2-tube all-wave sets powerful enough to operate a loudspeaker.

This book contains a number of excellent sets, some of which have appeared in past issues of RADIO-CRAFT. These sets are not toys but have been carefully engineered. They are not experiments. 32 pages. Over 15,000 words.

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## HOW TO BUILD FOUR DOERLE SHORT-WAVE SETS



Literally thousands of radio fans have built the famous DOERLE Short-Wave Radio Receivers. So insistent has been the demand for these receivers, as well as construction details, that this book has been specially published. 32 pages. Over 15,000 words.

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# NATIONAL Amateur Receivers and Accessories



## TRANSMITTING EQUIPMENT

### The New NATIONAL "HRO" 9-Tube Superhet Receiver

- Two-Stage Pre-Selector Built-in
- Lamb Single-Signal Crystal Filter
- Four-Gang Tuning Condenser
- Ganged Plug-in Coils
- Air-Tuned I. F. Transformers
- Carrier Intensity Meter

Two models are available, one using the 2.5-volt tubes, the other the 6.3-volt. The 2½-volt model uses 4-56's, 3-57's, 1-2B7 and 1-2A5. The 6-volt model uses 4-6DG's, 3-6C6's, 1-6B7 and 1-42.

Circuit features include **Automatic or Manual Volume Control** selected by means of a switch on the panel. A **Neon Trigger Lamp** wired across the input circuit automatically shunts the terminals whenever excessive voltages are picked up by the antenna. A **Phone Jack** is provided on the front panel as well as a send-receive switch. An **Entirely New Dial** is incorporated. It is self-indicating and direct reading to one part in 500. **Beat Frequency Oscillator** is included.

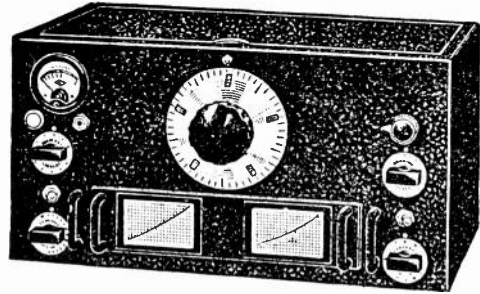
A complete set of coils is supplied with each receiver to cover the range from 1.7 Mc. to 30 Mc.

Entire receiver mounted in metal cabinet finished in black crystalline lacquer. Size 8¾"x17¼"x10". Panel for Relay Rack mounting is available. Shpg. Wt. 30 lbs.

**HRO-2 Receiver**, complete with coils, matched RCA tubes, less speaker and power supply.

**HRO-6 Receiver**, complete with coils, tubes, less speaker and power supply.

Either Type..... List Price, **\$279.50**



**Additional Set of Coils** from 550 to 900 Kc.

**Additional Set of Coils** from 900 to 1700 Kc.

List Price, Either Set..... **\$20.00**

**115V., 60 Cycles, Power Supply** for 2.5-volt tubes. List Price **26.50**

**No. 5897—115 V., 60 Cycles, Power Supply** for 2.5-volt tubes. List Price..... **26.50**

**No. 5886—115 V., 60 Cycles, Power Supply** for 6.3-volt tubes. List Price..... **34.50**

### NEW!

### National Presents the HRO JUNIOR

### NEW!

**Circuit Identical With the Standard HRO—Continuous Band-Spread—Two Stages R. F. Amplification—Ganged Plug-In Coils—Four-Gang Tuning Capacitor**

The circuit of the new HRO Junior is identical in every detail with the standard HRO, (except for the crystal filter and carrier intensity meter).

**National HRO Junior** complete with tubes, one set of coils, (10 to 20 meters, two amateur bands), less power supply and speaker.

List Price..... **\$165.00**

**Power Supply**—National Type 5897 for above receiver. Shpg. Wt. 17 lbs.

List Price..... **\$26.50**

**Coils** for 20 and 40-meter bands

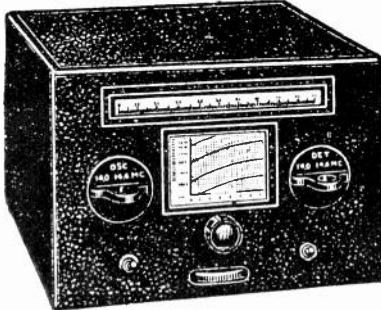
**Coils** for 40 and 80-meter bands

**Coils** for 80 and 160-meter bands

Shpg. Wt. 5 lbs. each set.

List Price..... **16.50**

### "FB-7A", "FBX-A", Receivers



- **High Selectivity and Sensitivity**
- **Uniform Gain over Entire Frequency Range**
- **Two I. F. Hi-Gain Stages**
- **Band Spread and Full Range Coils**
- **Full Range, 34 M.C. to 1500 Kc.**

These efficient S.-W. supersare well known to the trade. Employ 7 tubes (not including rectifier) in a high gain circuit. Feature high selectivity and sensitivity, uniform gain over entire range, band spread tuning, beat oscillator, etc. FBX-A is same as FB-7A except that it includes a crystal filter. Tubes used are: 1-56, 1-57, 2-58's, 1-59 and 2-24's. Full vision dial, calibration chart, plug-in coils and all controls mounted directly on front panel. In black crystalline finished metal cabinets. Shpg. Wt. 29 lbs. each. Range 34 Mc. to 1500 Kc.

**FB-7A Receiver**—Complete, less tubes, coils and power supply. List Price..... **\$62.50**

**FBX-A Receiver**—Complete, less tubes, coils and power supply. List Price..... **62.50**

**5897AB Power Supply** for use with either receiver. 115 volts, 60 cycles, less tube. List Price..... **86.50**

### "FB-7A" Coils

The regular type and the band-spread coils are interchangeable as they both are supplied in a six prong coil base. Both type coils are furnished with air dielectric condensers.



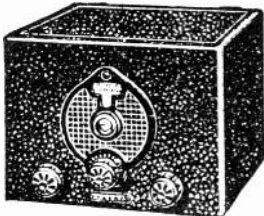
### General Coverage Coils

Catalog Number	Range	List Price Per Pair
<b>FBAA</b>	34 Mc. to 18 Mc.	<b>\$10.00</b>
<b>FBA</b>	19.5 Mc. to 11.4 Mc.	<b>10.00</b>
<b>FBF</b>	11.7 Mc. to 7 Mc.	<b>10.00</b>
<b>FBC</b>	7.3 Mc. to 4 Mc.	<b>10.00</b>
<b>FBD</b>	4.2 Mc. to 2.4 Mc.	<b>10.00</b>
<b>FBE</b>	2.5 Mc. to 1.5 Mc.	<b>10.00</b>
<b>FBF</b>	1.5 Mc. to 0.9 Mc.	<b>10.00</b>

### Band Spread Coils

<b>AB-10</b>	10-meter band	<b>\$12.00</b>
<b>AB-20</b>	20-meter band	<b>10.00</b>
<b>AB-40</b>	40-meter band	<b>10.00</b>
<b>AB-80</b>	80-meter band	<b>10.00</b>
<b>AB-160</b>	160-meter band	<b>10.00</b>

### SW-3 High-Frequency Receiver



The SW-3 Receivers employ a circuit consisting of one R.F. stage transformer coupled to a regenerative detector and one stage of impedance coupled audio. This circuit, as incorporated in the SW-3, with thorough shielding, grooved R-39 coil forms, Isolantite insulated condensers and tube sockets, etc., provides maximum sensitivity and flexibility with the smallest number of tubes and the least auxiliary equipment. The single tuning dial operates a precisely adjusted two gang condenser; the regeneration control is smooth and noiseless, with no backlash or fringe howl; the volume control is calibrated from one to nine in steps corresponding to the R scale, and is connected in the R.F.

amplifier circuit;—the features all contribute to the efficiency and ease of operation so essential to equipment of this type.

The receiver especially suitable for installations where space is limited as in semi-portable or mobile stations, on yachts, etc.

Available in three models—**ACSW-3**, for A.C. operation—**6DCSW3**, for 6-volt D.C. operation—**2DCSW3**, for 2-volt D.C. operation. A.C. Models use "60" Series Coils. D.C. Models use "10" Series Coils.

Tubes required—2-Volt A.C. Model; two 58, one 27—6-Volt D.C. Model; two 36, one 37—2-Volt D.C.; two 32, one 30.

**SW-3**—any model, without coils, phones, tubes or power supply. Shpg. Wt. 17 lbs. List Price..... **\$32.50**

**5880-AB Power Supply**, 115-V., 60-cycle, without 80 Rectifier. Shpg. Wt. 18 lbs. List Price..... **26.50**

### Plug-in Type Coils

Made of new "low-loss" R39. The "10" series are used for the new SW3 D.C.; the "60" series for the latest SW3 A.C. Band spread coils are designed to permit 50 dial division spread.



### General Coverage Coils

Catalog Number	Range	List Price Per Pair
<b>10 or 60</b>	9 to 15 meters	<b>\$5.00</b>
<b>11 or 61</b>	13.5 to 25 meters	<b>5.00</b>
<b>12 or 62</b>	23 to 51 meters	<b>5.00</b>
<b>13 or 63</b>	40 to 70 meters	<b>5.00</b>
<b>14 or 64</b>	65 to 115 meters	<b>5.00</b>
<b>15 or 65</b>	115 to 200 meters	<b>5.00</b>
<b>16 or 66</b>	200 to 360 meters	<b>5.50</b>
<b>17 or 67</b>	350 to 550 meters	<b>5.50</b>

Five additional sets of coils are available to cover up to 3000 meters.

### Band Spread Coils

<b>10A or 60A</b>	10-meter band	<b>\$5.00</b>
<b>11A or 61A</b>	20-meter band	<b>5.00</b>
<b>13A or 63A</b>	40-meter band	<b>5.00</b>
<b>14A or 64A</b>	80-meter band	<b>5.00</b>
<b>15A or 65A</b>	160-meter band	<b>5.00</b>





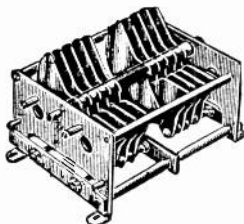
# NATIONAL *Amateur Receivers and Accessories*



## TRANSMITTING EQUIPMENT

### TRANSMITTING CONDENSERS TYPE "TMA"

(Heavy Duty)



Recently designed, the 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. The front bearing is conical; rear bearing radial with single-ball thrust. Insulation is

Isolantite, located outside of the concentrated field.

Catalogue Symbol	Capacity Mmf.	Peak Voltages	Length	Plates	List Price
TMA-300	300	3000	4 3/8"	23	\$11.00
TMA-200D	200-200	3000	6 3/8"	16-16	13.50
TMA-50A	50	6000	4 3/8"	9	6.00
TMA-100A	100	6000	6 3/8"	16	9.00
TMA-150A	150	6000	6 3/8"	23	11.00
TMA-230A	230	6000	9 3/8"	35	14.50
TMA-50DA	50-50	6000	6 3/8"	9-9	10.00
TMA-100DA	100-100	6000	9 3/8"	15-15	16.00
TMA-100B	100	9000	9 1/4"	23	12.00
TMA-150B	150	9000	12 1/2"	35	15.50
TMA-60DB	60-60	9000	12 1/4"	15-15	17.00
MA-50C	50	12000	7 1/2"	13	7.25
TMA-100C	100	12000	12 3/8"	27	11.00
TMA-40DC	40-40	12000	12 3/8"	11-11	12.00

### TYPE "TMC" CONDENSERS

Moderate Power, Compact

Also of new design, the 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 stand-off insulators. The plates are aluminum, with buffed edges. The front bearing is conical, rear bearing radial with single-ball thrust. Insulation is Steatite-Isolantite, located outside of the concentrated electrostatic field. The stator in the split stator model is supported at both ends.

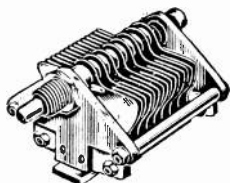
For RK-18, RK-20, RCA-800, 830, 203A, 210, Etc.

Catalogue Symbol	Capacity Mmf.	Peak Voltage	Length	Plates	List Price
TMC-50	50	3000	3"	7	\$4.00
TMC-100	100	3000	3 1/2"	13	4.25
TMC-150	150	3000	4 3/4"	21	4.75
TMC-100D	100-100	3000	6 1/4"	13-13	7.50

Air Gap = .077"

### TYPE "TMS" CONDENSERS

Low Power, Compact, Inexpensive



Type TMS is a new 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.

Front bearing is conical, rear bearing radial with single-ball thrust. Insulation is Steatite-Isolantite. Voltage ratings listed are conservative.

Catalogue Symbol	Capacity Mmf.	Peak Voltage	Length	Plates	List Price
TMS-100	100	1000	2 3/4"	10	\$2.25
TMS-150	150	1000	2 3/4"	14	2.50
TMS-250	250	1000	2 3/4"	23	2.75
TMS-50D	50-50	1000	2 3/4"	5-5	3.50
TMS-100D	100-100	1000	2 3/4"	9-9	4.25

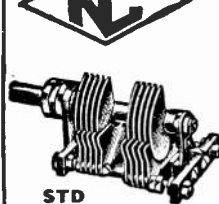
For Low C, Type 210 Amplifiers

TMSA-35	35	2000	2 3/4"	8	2.75
TMSA-50	50	2000	2 3/4"	11	3.00

H-2



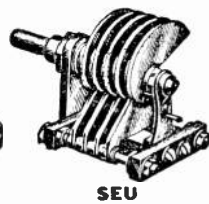
### MIDGET CONDENSERS



STD



SE



SEU

All have insulated front bearings, resulting in the elimination of possibility of shorted turns. The exclusive constant impedance pig-tail assures a perfect electrical connection. All insulating material of Isolantite—dielectric losses reduced to a minimum. Plates are of polished aluminum. Types ST, STD and SE have plates with .020" air gap; Type SEU has .055" air gap. All two bearings. ST-150, STD-50 and SE-150 extend 2 3/4" behind panel; others 2 1/4". Types not shown in the listing below can be supplied quickly.

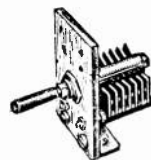
Mfrs. No.	Cap'y Mmf.	Plate Shape	Rotor	Plates Stator	List Price
ST-50	50	180°	6	5	\$1.80
ST-100	100	180°	10	10	2.25
ST-150	150	180°	15	14	2.50
STD-50	50 each	180° SLW	6 each	5 each	3.50
SE-50	50	270°	6	5	3.00
SE-100	100	270°	10	10	3.50
SE-150	150	270°	15	14	3.75
SEU-15	15	....	3	3	2.50
SEU-25	25	....	5	4	2.75

Shafts 1/8" diameter. Standard rotation clockwise, counter-clockwise on special order. Special order above with shaft extending through rear bearing for ganging.

### TYPE "UM" CONDENSERS

Ultra-Midget

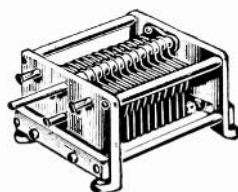
Designed for Ultra High Frequency use, these condensers are small enough to mount inside shield cans, and are particularly useful for tuning receivers, transmitters and exciters. A long shaft extension is provided, which may be cut off if not required. A balanced stator model is available, in which two stators act upon a single rotor. The UM Condenser can be mounted either by the angle foot supplied, or by spacers and bolts as illustrated.



Cat. Symbol	Capacity	List Price	Cat. Symbol	Capacity	List Price
Single-Spaced			Double-Spaced		
UM-15	15	\$1.25	UMA-25	25	\$1.85
UM-35	35	1.50			
UM-50	50	1.60			
UM-75	75	1.70			
UM-100	100	1.90	UMB-25	25	1.85

### GENERAL PURPOSE

National EMC Condensers have high electrical efficiency, and calibrations may be relied on. Insulation is Isolantite, and Peak Voltage Rating is 1000 volts. Plate Shape is SLW.



Catalogue Symbol	Capacity	No. of Plates	List Price
EMC-150	150	9	\$3.00
EMC-250	250	14	3.50
EMC-350	350	18	3.75
EMC-500	500	26	4.00
EMC-1000	1000	56	6.50

**Split-Stator Models**

EMCD-350	350-350	18-18	6.75
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# Hammarlund SHORT WAVE RECEIVERS

## TRANSMITTING AND SHORT-WAVE EQUIPMENT

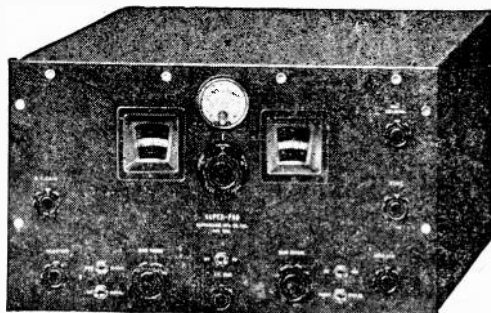
### HAMMARLUND "SUPER-PRO" RECEIVER

The new HAMMARLUND "Super Pro" is a 16 tube superheterodyne designed to meet every rigid precision specification of the professional operator and advanced amateur. Although developed for communication, air-port, police, marine, and other equally important services, "Super Pros" are so simple to operate that a novice can readily tune in stations from any point of the world.

Outstanding features are: Electrostatically shielded input; two stages tuned R.F. on all bands; three "air tuned" I.F. stages; silver plated five-band switch; calibrated tuning-dial; visible tuning meter; three audio stages; AVC and manual gain-control; "send receive" switch; band-spread tuning; continuously variable selectivity; R.F. and I.F. gain-control; audio gain-control; speaker-phone switch; panel control of beat oscillator; separate grid bias supply; C.W.—modulation switch. Complete coverage from 20 megacycles to 540 Kc. (15 to 560 meters) is provided. This range is covered in 5 bands which are changed by means of a specially designed switch with silver plated multiple contacts which automatically short circuit all coils not in actual use. The main dial is accurately calibrated in megacycles from 2.5 Mc. to 20 Mc. and in kilocycles from 540 to 2500. Only the scale in actual use is visible. This is accomplished automatically when the band switch is set. The "Super Pro" receiver consists of two major units—receiver proper and power unit.

Code	Description	List Price
SP-10	Standard "Super Pro" with power supply; tubes, and Jensen C8R communication type 8" electro dynamic speaker	\$380.00
SP-10X	Crystal "Super Pro" with power supply; tubes, and Jensen C8R communication type 8" electro dynamic speaker	410.00
SP-20	Standard "Super Pro" with power supply; tubes, and Jensen A 12 high fidelity type 12" electro dynamic speaker	405.00
SP-20X	Crystal "Super Pro" with power supply; tubes and Jensen A 12 high fidelity type 12" electro dynamic speaker	435.00

Above prices cover 110-volt, 60-cycle models, with the receiver and power supply inclosed in wrinkle finish table type metal cabinets. Above models with rack type panels and dust covers also available. Prices on request.



### HAMMARLUND "COMET-PRO" S. W. SUPERHET.

The "Comet Pro" is the popular 8 tube high frequency superheterodyne model used extensively by commercial, amateur and broadcast operators. Available in two models—standard and crystal. Outstanding features are: "Air tuned" I.F. transformers; single control "band spreading" dial; "air tuned" variable beat oscillator; oscillator switch on panel; humless phone or speaker output; head phone jack on panel; Isolantite insulation and coil forms; sensitivity of better than 1/4 high signal to noise ratio; tone control for noise suppression; smooth volume control, output three watts.

The Crystal model for C.W. and amateur phone possesses standard model advantages plus the additional selectivity and single signal feature afforded by a quartz crystal filter which may be cut in or out by means of a front panel switch.

A.C. models use the following tubes: 4 58's, 2 57's, 1 2A5 and 1 8D0. Receiver comes mounted in an attractive black crystalline finished metal cabinet. All prices are without tubes. Shpg. Wt. 51 lbs.

Standard "Pro," with Cabinet.	List Price	\$150.00
Standard "Pro," Chassis only.	List Price	135.00
"Pro," with Crystal Filter, in Cabinet.	List Price	180.00
"Pro," with Crystal Filter, Chassis only.	List Price	165.00

All of the above models are for 110-115 volts 50-60 cycle A.C. Receivers for 25 or 40 cycles, 125, 140, 230 or 250 volts are also available. All prices are complete with four sets of coils to cover 15 to 250 meters.

Additional "Pro" Coils for 8 to 16 meters, per set.	List Price	\$5.00
"Pro" Coils for 250 to 550 meters, per set.	List Price	5.00



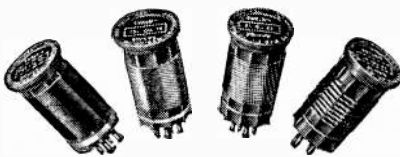
### HAMMARLUND Short - Wave Coil Forms

Made of extruded Isolantite, a material closely approximating the ideal qualities of fused quartz. Equipped with convenient black enameled wooden handle with a flat top in which is inserted a removable paper disc for writing in frequencies. A celluloid disc protects the paper, a spring ring holding the disc in place. Surface is "non-skid," eliminating troubles encountered in winding on slippery surfaces. The numerous holes provided in the form make drilling unnecessary. The form is 1 1/2" in diameter and 2 1/2" long exclusive of knob and prongs. Made in 4, 5, and 6 prong types to fit standard sockets. List Price, Each \$1.00

#### Ultra Short-Wave Coil Forms

Form is 1 1/2" in diameter and 2" long exclusive of prongs. Otherwise similar to the larger forms described on this page except that no knob is provided. Made only in five prong type to fit standard sockets. List Price, Each \$0.75

### HAMMARLUND S. W. Plug-In Coils



Maximum signal strength and greatest selectivity on all bands. The frequency ranges covered have been selected to provide the most favorable inductance to capacity 4C ratio on the important short wave bands. Four coils tuned by 140 mmf. condenser cover entire range from 17 to 270 meters. Only one additional coil required to cover broadcast band. Secondaries of 17 to 41 meter and 33 to 75 meter coils are of heavy silver plated wire. Wound on XP-53 forms.

Code SWK-4—(Kit of four, 4 prong, 2 winding coils, range 17 to 270 meters).	List Price	\$3.00
Code SWK-6—(Kit of four, 6 prong, 3 winding coils, range 17 to 270 meters).	List Price	\$3.75
Code BCC-4—(4 prong, 2 winding coil for broadcast band, 250 to 560 meters).	List Price	\$1.25
Code BCC-6—(6 prong, 3 winding coil for broadcast band, 250 to 560 meters).	List Price	\$1.50

### HAMMARLUND Low - Loss Coil Forms

Made of XP-53 dielectric, a remarkable new low loss insulating material. Rugged, durable, and most important, extremely effective. Flange grips for easy handling, and meter indexes for wave length inscriptions. Threaded shell, molded inside, to permit the mounting of trimming or padding condenser for tuning the coil to a fixed frequency or for band spread arrangements. Size 1 1/2" diameter by 2 3/8" long, exclusive of prongs.

Code SWF-4 (4 prong)	List Price, Each	\$0.35
Code SWF-5 (5 prong)	List Price, Each	.35
Code SWF-6 (6 prong)	List Price, Each	.40

### NEW Short-Wave Manual

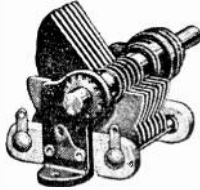
New thirty-two page, 20,000 word, high frequency guide, brimming with news about short waves and constructional details on the thirteen most popular short wave receivers and power supplies. Profusely illustrated with actual photographs, circuit diagrams and picture wiring diagrams.

Code SWM-35—NET Price	\$0.10
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# Hammarlund SHORT WAVE RECEIVERS

## TRANSMITTING AND SHORT-WAVE EQUIPMENT

### Hammarlund Midget Variable Condensers



End plates are of heavy aluminum. Brass .0225" thick is used for both rotor and stator plates with .0245" air gap. Individually tested for 500-volt breakdown. Isolantite insulation. Shafts are 1/4" diam. and extend 3/8" beyond rear frame for ganging. 1/2" bakelite knob included with each.

Type No.	Plates	Max. Cap. Mmf.	Min. Cap. Mmf.	List Price
MC-325-M	43	320	12	\$3.50
MC-250-M	34	260	10	3.00
MC-200-M	27	200	10	2.75
MC-140-M	19	140	7	2.50
MC-100-M	14	100	6	2.25
MC-75-M	11	80	6	2.00
MC-140-S	19	140	8	2.50
MC-100-S	14	100	6	2.25
MC-75-S	11	80	6	2.00
MC-50-S	7	50	5	1.60
MC-35-S	5	35	4	1.50
MC-20-S	3	20	3	1.40

### Double-Spaced Midget Condensers

Code No.	Max. Cap. Mmf.	Min. Cap. Mmf.	List Price
MC-35-MX	33	6	\$2.25
MC-50-MX	50	7	2.75
MC-20-SX	25	6	2.00
MC-35-SX	33	7	2.25
MC-50-SX	50	8	2.75

### Split Stator Midget Condensers

Code No.	Min. Cap. Per Section	Max. Cap. Mmf.	List Price
MCD-140-M	7	140	\$4.00
MCD-100-M	6	100	3.50
MCD-140-S	8	140	4.00
MCD-100-S	6	100	3.50

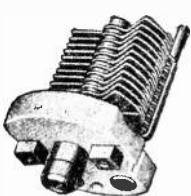
### Double-Spaced Split Stator Condensers

Code No.	Max. Cap. Mmf.	Min. Cap. Mmf.	List Price
MCD-35-MX	33	6	\$3.50
MCD-35-SX	33	6	3.50

### Band Spread Midget Condensers

Code No.	Tank Cap.	Tuning Cap.	List Price
MC-120-B	100	20	\$3.00
MC-150-B	100	50	3.25
MC-175-B	100	80	3.50

### New Air Padding Condensers

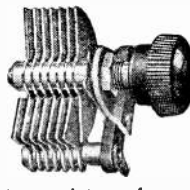


Will maintain constant capacity under any conditions of temperature, humidity or vibration. Ideal for short-wave and ultra-short-wave work. Overall dimensions of 100 Mmf. size only 1 1/2" x 3/4" x 1 1/2" high. Isolantite base.

Code No.	Min. Cap. Mmf.	Max. Cap. Mmf.	List Price
APC-100	6	100	\$1.90
APC-75	5	75	1.70
APC-50	4	50	1.50
APC-25	3	25	1.30

### Hammarlund "Star" Midget Condensers

A very popular low-priced midget variable condenser for receiving and transmitting, for short-wave tuning, regeneration, etc. Light in weight and strong in construction. Low-loss bakelite insulation. Straight-line capacity-type plates of non-corrosive aluminum. Smooth control and perfect contact. Single-hole mtg. shaft 1/4" diam., 3/8" mtg. bushing. 1 1/8" wide by 1 3/4" high. X-type—double spaced.



Code No.	Plates	Min. Cap. Mmf.	Max. Cap. Mmf.	List Price
SM-15	3	3	15	\$0.85
SM-25	4	3	25	.85
SM-50	7	4	50	.90
SM-100	14	6	100	1.00
SM-140	19	7	140	1.25
SM-35-X	11	6	35	1.00

### Flexible Insulated Shaft Coupling

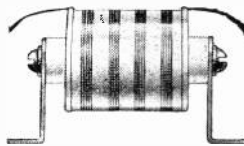


Completely insulates one condenser from another. Overall diam. 1 1/2".

Code FC  
List Price.... \$0.60

### R.F. Chokes

Low-loss R.F. choke for short and ultra-short-wave receivers and transmitters. D.C. res. 70 ohms; dist. capacity 3 Mmf.; 125 Ma.



Code CH-8—List Price..... \$1.10

### Transmitting Chokes

2 1/2 Mh. 500 Ma. 1.5 Mmf. dist. capacity. Isolantite core. Res. 8 ohms. Impedance over 500,000 ohms.

Code CH-500—List Price..... \$1.75

### Midget R.F. Chokes

Res. 35 ohms. Dist. capacity 1 Mmf. 125 Ma. Size 1 1/2" x 1/2".

Code CH-X  
List Price.... \$0.75



### New Isolantite Sockets



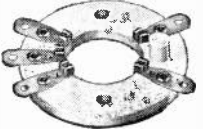
Low-cost, low-loss Isolantite sockets. Long leakage path between new-type, positive rust-proof, side-gripping contacts. Sub-panel or base mounting. Mtg. centers 1 1/2".

Code	Prongs	List Price
S-4	4 prongs	\$0.60
S-5	5 prongs	.60
S-6	6 prongs	.60
S-7	7 prongs (large)	.60
S-7B	7 prongs (small)	.60

### "Acorn" Tube Isolantite Socket

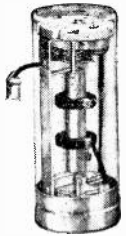
Five double-grip, silver-plated phosphor-bronze spring clips. 1 3/8" diam.

Code S-900  
List Price.... \$1.50



### Variable Coupling Air-Tuned Transformers

Designed to permit continuous variation of the mutual inductance between primary and secondary throughout a wide range of values and without otherwise affecting circuit constants. Both primary and secondary are thoroughly impregnated three-litz windings having the exceptionally high "Q" of 130 (power factor less than .008). The transformers may be used with any screen grid tubes normally used as i.f. amplifiers. Both tuning adjustments are on one side of the aluminum shield which measures 2" x 2" x 5".



Code	List Price
VT-465—465 Kc.	\$5.50
VT-175—175 Kc.	5.50

VTC—Variable coupling mechanism for panel control of up to 4 transformers. 2.50

### Air-Tuned I.F. Transformers

Precision I.F. transformers of the tuned primary, tuned secondary type with both plate and grid coils of Litz wire. Tuned to resonance by means of air dielectric variable condensers of special design. The coils have the exceptional "Q" of 115, a coupling coefficient of 0.77%, of transformers providing a gain in excess of 200 per stage. The beat frequency oscillator also employs air dielectric condensers providing a remarkable degree of "single signal" selectivity for CW reception. The shield can is 2 3/8" diameter by 5" high, mounted through bottom.

Code	List Price
ATT-175—175 Kc.	\$4.50
ATT-175—CT—Center tapped	4.50
ATT-465—465 Kc.	4.50
ATT-465—CT—Center tapped	4.50
ATO-465—Kc. Beat Oscillator	4.50

### Standard and Midget I.F. Transformers

Type "T" is a high-grade transformer designed for experimental and replacement purposes. Double-tuned with mica compression-type condensers on Isolantite. Adjustable from top of can. 465KC Litz-wound and wax impregnated. Aluminum shield-can is 2 1/2" diam. by 3 1/2" high.



Code	Frequency	Center Tapped Code	List Price
Un-tapped T-465	465 Kc.	T-465-CT	\$1.65
Un-tapped T-175	175 Kc.	T-175-CT	1.65

Beat Oscillator, Code TOB-465..... 2.00  
Type "ST" Midget

As above, but in compact aluminum can, 1 1/2" square by 2 3/4" high. Mtg. centers 1 1/2".

Code	Frequency	Center Tapped Code	List Price
Un-tapped ST-465	465 Kc.	ST-465-CT	\$1.65
Un-tapped ST-175	175 Kc.	ST-175-CT	1.65

### Isolantite Mica Trimmers

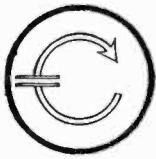


Mounted on Isolantite. Type MICS 3/8" x 3/4" base.

Code	Capacity	List Price
MEX	— 3-30 Mmf.	\$0.30
MICS-70	10-70 Mmf.	.50
MICS-140	70-140 Mmf.	.60
MICS-220	140-220 Mmf.	.70
MICS-1000	600-1000 Mmf.	1.00

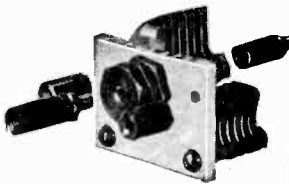
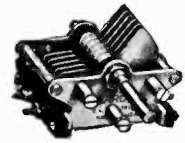
### Equalizers

Code	Material	List Price
Mica dielectric, EC-35	Mmf. 3-35	\$0.30
bronze plate, bakelite EC-80	25-80	.40

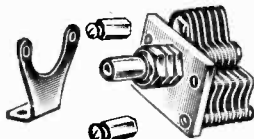


# CARDWELL CONDENSERS

FOR EVERY POWER AND PURPOSE



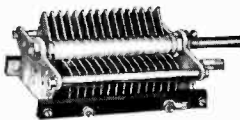
ZR-50-AS



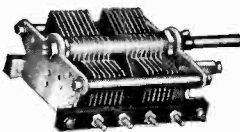
TRIM-AIR AND ACCESSORIES



MT-50-GS



MT-150-GS



MR-150-BD

## TRIM-AIR MIDGET CONDENSERS

Type	Max. Cap.	Min. Cap.	Plate Edges	Number of Plates	Air Gap (In.)	Plate Thickness (In.)	Depth Behind Panel (In.)	Insulation	Amateur Net Price
ZR-10-AS	10	1.2	Plain	3	.031	.020	3/4	Isolantite	\$ .73
ZR-15-AS	15	1.5	"	5	.031	.020	1 1/8	"	.73
ZR-25-AS	25	2.0	"	7	.031	.020	1 3/8	"	.82
ZR-35-AS	35	2.5	"	11	.031	.020	1 7/8	"	.88
ZR-50-AS	50	2.8	"	13	.031	.020	1 7/8	"	.94
ZU-75-AS	75	2.7	"	15	.020	.020	1 5/8	"	1.00
ZU-100-AS	100	3.0	"	19	.020	.020	1 3/4	"	1.03
ZU-140-AS*	140	5.0	"	27	.020	.020	1 7/8	"	1.85
ZT-30-AS	30	4.0	"	17	.070	.020	2 1/8	"	1.09
ZS-4-SS	4	1.5	Rounded Plain	5	.150	.040	1 1/4	"	1.09
ZV-5-TS†	5	1.8	"	3	.061	.040	1 1/8	"	.73

(†) Supplied with 2 segment stator, for 5 meter circuits. Extra plate also supplied, easily installed, makes it 3 plate as listed.

(\*) Double bearing—two end plates.

## ACCESSORIES FOR TRIM-AIR MIDGET CONDENSERS

MOUNTING BRACKET, with two screws and nuts.....	\$ .06
EXTRA EXTENSION SHAFT (Used for ganging)—Plus setting nut.....	.04
MOUNTING POSTS (one pair req'd per condenser, with screws and lockwashers.....)	.06

## MIDWAY RECEIVING CONDENSERS

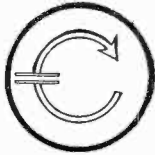
Type	Max. Cap.	Min. Cap.	Plate Edges	Number of Plates	Air Gap (In.)	Plate Thickness (In.)	Depth Behind Panel (In.)	Insulation	Amateur Net Price
MR-25-BS	25	5.0	Plain	3	.031	.025	2 5/8	Radion	\$1.35
MR-50-BS	50	6.0	"	5	.031	.025	2 5/8	"	1.41
MR-70-BS	70	7.0	"	7	.031	.025	2 5/8	"	1.50
MR-105-BS	105	8.0	"	11	.031	.025	2 5/8	"	1.56
MR-150-BS	150	9.5	"	15	.031	.025	2 5/8	"	1.62
MR-260-BS	260	11.0	"	25	.031	.025	3 5/8	"	1.65
MR-365-BS	365	13.5	"	35	.031	.025	3 5/8	"	1.94

## MIDWAY TRANSMITTING CONDENSERS

Type	Max. Cap.	Min. Cap.	Plate Edges	Number of Plates	Air Gap (In.)	Plate Thickness (In.)	Depth Behind Panel (In.)	Insulation	Amateur Net Price
MT-20-GS	20	5.0	Rounded	5	.070	.025	2 5/8	Radion	\$1.68
MT-35-GS	35	6.0	"	7	.070	.025	2 5/8	"	1.82
MT-50-GS	50	8.0	"	11	.070	.025	2 5/8	"	2.06
MT-70-GS	70	10.0	"	15	.070	.025	3 5/8	"	2.32
MT-100-GS	100	12.0	"	21	.070	.025	3 5/8	"	2.59
MT-150-GS	150	16.0	"	31	.070	.025	4 1/2	"	3.23
MG-35-GS	35	12.0	"	15	.171	.040	4 1/2	Mycalex	3.53

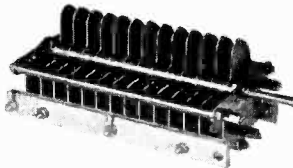
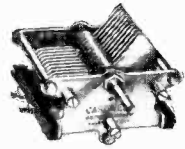
## MIDWAY DOUBLE CONDENSERS

Type	Max. Cap. Per Sec.	Min. Cap. Per Sec.	Plate Edges	Number of Plates Per Sec.	Air Gap (In.)	Plate Thickness (In.)	Depth Behind Panel (In.)	Insulation	Amateur Net Price
MR-25-BD	25	4.5	Plain	3	.031	.025	2 5/8	Radion	\$2.32
MR-50-BD	50	5.5	"	5	.031	.025	3 5/8	"	2.47
MR-70-BD	70	6.5	"	7	.031	.025	3 5/8	"	2.59
MR-100-BD	100	7.5	"	11	.031	.025	3 5/8	"	2.70
MR-150-BD	150	8.5	"	15	.031	.025	3 5/8	"	2.82
MR-260-BD	260	11.0	"	25	.031	.025	4 1/2	"	2.94
MO-180-BD	180	15.0	"	29	.050	.025	6 1/4	"	4.70
MT-20-GD	23	5.5	Rounded	5	.070	.025	3 5/8	"	2.97
MT-35-GD	35	7.0	"	7	.070	.025	3 5/8	"	3.23
MT-50-GD	50	9.0	"	11	.070	.025	3 5/8	"	3.44
MT-70-GD	70	10.0	"	15	.070	.025	4 1/2	"	3.82
MT-100-GD	100	13.0	"	21	.070	.025	6 1/4	Mycalex	4.70

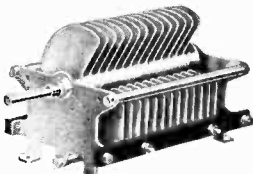


# CARDWELL CONDENSERS

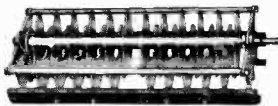
FOR EVERY POWER AND PURPOSE



XC-100-XS



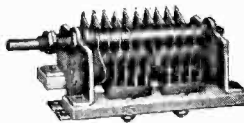
T-TYPE FRAME



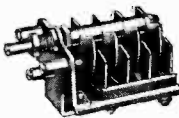
TZ-40-RD



VZ-5-RS



NP-35-GD



NA-14-NS

## STANDARD TRANSMITTING CONDENSERS

Type	Max. Cap.	Min. Cap.	Plate Edges	Number of Plates	Air Gap (In.)	Plate Thickness (In.)	Depth Behind Panel (In.)	Insulation	Amateur Net Price
XT-220-PS	220	20	Plain	21	.070	.025	4	Radion	\$2.35
XT-440-PS	440	40	"	43	.070	.025	5 3/4	"	4.12
XP-90-KS	90	16	Rounded	11	.084	.040	3	Mycalex	2.65
XP-165-KS	165	22	"	19	.084	.040	4	"	3.82
XP-290-KS	290	35	"	33	.084	.040	5 3/4	"	5.59
XP-330-KS	330	37	"	37	.084	.040	6 1/2	Radion	5.88
XE-240-KS	240	30	"	33	.100	.040	6 1/2	"	5.88
XG-25-KS	25	8	"	5	.171	.040	3	"	1.76
XG-50-KS	50	14 1/2	"	11	.171	.040	4	"	3.53
XG-110-KS	110	26	"	23	.171	.040	6 1/2	"	5.29
XK-55-KS	55	19	"	15	.230	.040	5 3/4	Mycalex	5.88
XC-18-XS	19	8.5	"	5	.200	.040	2 1/2	"	3.23
XC-40-XS	40	14 1/2	"	11	.200	.040	4	"	4.41
XC-65-XS	65	20	"	17	.200	.040	5 3/4	"	5.59
XC-100-XS	100	28	"	25	.200	.040	7 3/8	"	6.76
TJ-150-US	150	28	"	15	.168	.050	5 1/8	"	13.52
TJ-315-US	315	31	"	31	.168	.050	9 3/8	"	18.82
TC-150-US	160	38	"	19	.200	.050	7 1/4	"	14.11
TC-200-US	200	40	"	23	.200	.050	8 1/4	"	16.46
TC-300-US	300	42	"	35	.200	.050	11 1/4	"	18.82
TL-50-US	50	18	"	7	.294	.050	4 1/8	"	9.70
TL-100-US	100	26	"	15	.294	.050	7 1/2	"	12.94
TL-160-US	160	40	"	25	.294	.050	11	"	17.64
TL-200-US	200	46	"	31	.294	.050	13 1/8	"	19.40
TZ-40-RS	40	15	"	11	.500	.050	8 3/8	"	16.46
TZ-80-RS	80	26	"	21	.500	.050	13 3/8	"	23.23

## STANDARD DOUBLE TRANSMITTING CONDENSERS

XR-500-PD	500	18	Plain	21	.030	.025	4	Radion	\$3.53
XT-80-PD	80	11	"	9	.070	.025	4	"	2.94
XT-210-PD	210	22	"	21	.070	.025	5 3/4	"	4.70
XP-90-KD	95	15	Rounded	11	.084	.040	4 1/2	Mycalex	4.41
XP-165-KD	165	23	"	19	.084	.040	6 1/2	"	6.47
XP-325-KD	325	38	"	37	.084	.040	11 1/4	"	12.94
XE-240-KD	240	32	"	33	.100	.040	11 1/4	"	12.35
XG-50-KD	50	14	"	11	.171	.040	6 1/2	"	5.88
XG-110-KD	110	27	"	23	.171	.040	11 1/4	"	10.58
TJ-200-UD	200	30	"	21	.168	.050	12	"	21.17
XC-40-XD	40	14	"	11	.200	.040	7 3/8	"	7.64
XC-75-XD	75	21 1/2	"	19	.200	.040	11 1/4	"	10.00
TC-160-UD	160	38	"	19	.200	.050	12 1/4	"	20.00
TC-200-UD	200	40	"	23	.200	.050	14 1/4	"	22.34
TC-250-UD	250	40	"	29	.200	.050	17 1/4	"	24.70
TL-50-UD	45	13	"	7	.294	.050	7 3/8	"	14.70
TL-100-UD	94	26	"	15	.294	.050	13 1/8	"	20.29
TL-160-UD	160	36	"	25	.294	.050	20 1/4	"	25.87
TZ-40-RD	40	15	"	11	.500	.050	14 3/8	"	25.28

Max. and Min. Cap. and Number of Plates are Per Section on Double Condensers

## NEW ULTRA HIGH FREQUENCY DOUBLE TRANSMITTING CONDENSERS

NP-35-GD	35	5	Rounded	9	.084	.040	4 1/8	Isolantite	\$3.53
JD-28-GD*	28	5	"	11	.125	.040	6 1/8	Iso. & Myc.	9.55
JP-48-GD*	48	6	"	13	.084	.040	6 1/8	"	9.55

(\* Balanced type, Isolantite End Plates, 4 Mycalex Tie Bars—No metal frame. Designed for high frequency therapy machines.

## HIGH FREQUENCY NEUTRALIZING CONDENSERS

VZ-5-RS*	5	2	Rounded	2	.500	.050	4	Mycalex	\$9.70
NA-4-NS	4	2.5	"	2	Adj.	.040	1 7/8	"	2.12
NA-5-NS	5	2.8	"	3	.218	.040	1 7/8	"	2.12
NA-14-NS	14	5	"	8	.218	.040	3 1/8	"	2.94

(\* Air Gap and Capacity adjustable, by movement of threaded rotor bushing.



# AMATEUR EQUIPMENT

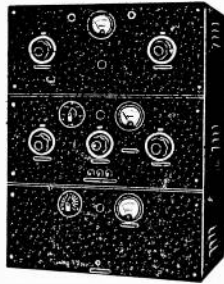
## RCA 40-WATT C. W. AND PHONE AMATEUR TRANSMITTER

The complete transmitter consists of three units and a cabinet rack.

**ACT-40-A ANTENNA UNIT**, designed for use with a resonant transmission line, single-wire non-resonant line, current or voltage-fed antennas.

**ACT-40-R R-F UNIT** contains the complete Crystal-Controlled Oscillator, which employs an RCA-47 tube; the Buffer-Doubler, which consists of an RCA-802 R-F pentode in a conventional circuit; the Power Amplifier, which employs two RCA-801 Triode tubes in push-pull, and is capable of delivering 40-watts to the antenna; and the Power Supply which employs an RCA-83 Mercury-Vapor Rectifier Tube.

**ACT-40-M MODULATOR UNIT** contains the high-gain speech amplifier, driver, modulator and power supply circuits. The input stage uses an RCA-57 to work directly from a crystal or any other high-impedance microphone. This first stage is resistance coupled to the next stage which likewise employs an RCA-57. The audio drivers, using a pair of RCA-45 tubes in push-pull are fed by resistance coupling from the speech amplifier.



The power developed by the RCA-45 tubes serves to drive the RCA-801 modulator tubes in a Class "B" circuit. Modulation is High Quality, 100% high-level, plate modulation.

**ACT-40-C CABINET RACK**, housing the complete transmitter, has a durable black crinkle finish. Measures: 19" wide, 15" deep, 26 1/4" high.

ACT-40—C.W. Telegraph Only*	\$150.50
ACT-40—C.W. Telegraph and Phone*	235.00
ACT-40-A—Antenna Unit	37.50
ACT-40-R—R-F Unit with Integral Power Supply	110.00
ACT-40-M—Modulator Unit with Integral Power Supply	84.50
ACT-40-C—Cabinet Rack	20.75

Extra Coils:	
Crystal Oscillator Coil	\$1.50
Buffer-Doubler Coil	1.50
Final Amplifier Coil	7.50

All prices are amateur's net, f.o.b. factory and do not include accessories such as tubes, microphone, key, etc. \*Supplied with coils for one band only. Specify what band desired when placing order.

## AMATEUR TRANSMITTER — 200 WATT PHONE — 260 WATT C-W TELEGRAPH

The ACT-200 represents a commercial type Amateur Transmitter, and is made available to the advanced amateur who desires the highest quality transmission, with increased power, at the lowest cost per watt output.

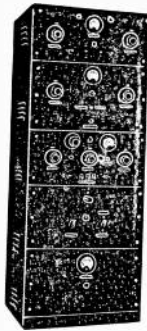
**ACT-200-A ANTENNA UNIT** employs the RCA "four-way network" circuit and may be used to feed almost any type of transmission line or antenna.

**ACT-200-P POWER AMPLIFIER** consists of a pair of RCA 838 Triodes in push-pull operating Class "C". Means have been provided for easy neutralization. Rated to deliver 260 watts output on C.W. and 200 watts output on phone. Excitation is derived from the ACT-40-R unit. Grid and plate current for tuning adjustments by means of an 0-500 D-C milliamperer meter and selector switch. Coils are available in the 20, 40, 80 and 160 meter bands. An auxiliary winding for coupling to antenna circuit provided on final amplifier coils.

**EXCITER:** The R-F Exciter contains complete crystal-controlled Oscillator employing an RCA-47, Buffer/Doubler stage using an RCA-802 and the Intermediate Amplifier having a pair of RCA-801 tubes operating Class "C" and in push-pull. This unit provides the r-f excitation by means of "link-coupling" to the power amplifier stage. Plug-in coils for 20, 40, 80, 160 meter operation. The power supply is integral and employs an RCA-83 Mercury-vapor Rectifier Tube.

**ACT-200-S POWER SUPPLY** consists of four RCA-866 tubes in a full-wave rectifier circuit, equalizing reactors, bleeder, oil-immersed capacitor, plate transformer, filament transformer for all tubes except those on the exciter unit. This later transformer also has a high-voltage winding which furnishes, through an RCA 80 Rectifier Tube, the bias voltage for the final amplifier and J pre-amplifier plate supply. A switch is provided to remove the high voltage from the Class "B" modulator and final r-f tubes. Another switch reduces the operating plate voltage to the final r-f stage and applies the plate voltage to the pre-amplifier for phone operation. This power supply unit delivers 600 milliamperes at 1250 or 1000 volts. The filament and plate transformers are tapped for 115-125 volt, 60 cycle a-c supply.

**ACT-200-M MODULATOR** consists of a driver stage using two RCA-45 tubes in push-pull and a modulator stage employing two RCA-838 zero-bias triode tubes operating Class "B". Input to driver stage is designed for use with a 500-ohm line from pre-amplifier. Driver stage is transformer coupled to grid of modulator tubes. An auto-transformer is used to couple output of modulator tubes to r-f load. Output of this transformer is designed for a 3300-ohm load such as is presented by the ACT-200-P Power Amplifier under normal operating conditions. A filter choke and capacitor for speech amplifier and driver stage plate-voltage supply is mounted on unit.



**ACT-200-G PRE-AMPLIFIER** uses two RCA-6C6 tubes in cascade and two RCA-76 tubes in push-pull. This unit is designed for use on the operating desk and is connected to the input of the modulator unit by a 500-ohm line. The power supply for this unit is obtained from the ACT-200-S power-supply unit.

**CABINET RACK:** The complete transmitter is housed in a neat metal Cabinet Rack. ACT-200-C, having a durable black crinkle finish. A full-sized rear door allows accessibility to the equipment for adjustments. A safety interlock is attached to the door, removing all high voltage from the circuits when the door is opened. The units are easily removed, being of standard rack design.

**ACCESSORIES:** Accessories necessary, but not supplied, for C. W. telegraph and telephone operation are as follows. Crystal and holder, telegraph key, standby switch, microphone. The following tubes are required: 2-RCA-801, 1-RCA-802, 4-RCA-838, 1-RCA-47, 1-RCA-83, 2-RCA-6C6, 2-RCA-76, 2-RCA-45, 1-RCA-80, 4-RCA-866.

### GENERAL SPECIFICATIONS

Power Source	115/125 V. 50/60 cycles
Total—Power Consumption	900 watts at rated output for C-W 1400 watts for phone at 100% modulation
Rated—Power Output	260 watts (C-W), 200 watts (phone)
Modulation	High quality, high level, plate modulation
Cabinet dimensions	19" wide, 15" deep, 52" high
Weight	325 pounds—complete C-W and phone
ACT-200 C-W Telegraph Only*	Net \$375.50
ACT-200 C-W Telegraph and Telephone*	475.00

\*Supplied with coils for one band only. Specify band desired when placing order.

### PRICES FOR INDIVIDUAL UNITS

ACT-200-A Antenna Unit	Net \$ 49.50
ACT-200-P R-F Power-Amplifier Unit	99.50
ACT-40-R R-F Unit with integral power supply	110.00
ACT-200-S Power-Supply Unit	96.50
ACT-200-G Pre-Amplifier Unit	27.50
ACT-200-M Modulator Unit	99.50
ACT-200-C Metal Cabinet	34.50
ACT-200 Transmitter Coils:	
Crystal Oscillator Coil	1.50
Buffer/Doubler Coil	1.50
Intermediate Amplifier Coil	1.50
Final Amplifier Grid Coil	1.50
Final Amplifier Plate Coil	7.50

## RCA AMATEUR COMMUNICATION RECEIVER ACR-175

The ACR-175 has been designed to meet the rigorous requirements of receiver performance necessary to maintain communication in the crowded popular amateur bands. An advanced degree of selectivity, sensitivity and ease of operation is now available at a popular price.

**CIRCUIT:** Superheterodyne, 460 KC., Iron-Core I.F. Transformer; crystal filter and a.v.c.

**TUBES:** 3 6K7 R-F and I-F amplifiers; 2 6J7 oscillators; 1 6L7 first detector; 1 6J1 2nd detector and a.v.c.; 1 6F5 first audio; 1 6P6 audio output; 1 6E5 tuning and signal strength indicator; 1 5Z4 rectifier ALL METAL TUBES except 6E5.



**TUNING FREQUENCY:** 500 to 60,000 K.C. continuous in four ranges.

**BAND CHANGING:** By switch. Individual coils for each band.

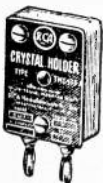
**CONTROLS:** (1) Combined Power, Tone Control and Stand-By Switch; (2) Calibrated Signal-Input Control; (3) Selectivity (crystal phasing) Control; (4) a.v.c. "on-off" switch; (5) Dual-Ratio Vernier-Tuning Control; (6) Range Switch; (7) Audio Gain Control; (8) Beat Oscillator "on-off" switch (B) Calibrated Heterodyne Control.

NET Price, Complete with Tubes, Crystal and 8" Electro-dynamic Speaker \$119.50

## NEW RCA V-CUT CRYSTAL AND CERAMIC HOLDER

Temperature coefficient 2 cycles or less per million per degree Centigrade (between 10 and 60°). Accuracy of calibration .005%. Frequencies available from 3.5 to 4.0 M.C. Will be supplied within plus or minus 5 Kc. of frequency specified in this band, or your choice from stock. The ceramic holder uses the pressure-airgap principle. Pressure contact on sides allows free oscillation in center. Electrodes of nickel silver. Standard spring contact pins. 3/4" spacing. Springs may be removed so holder fits 5-pin tube socket. Size 1 1/2"x3".

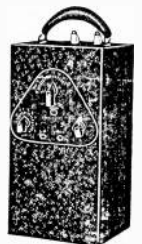
TMV-135-A—RCA V-Cut Crystal and Ceramic Holder—Amateurs' NET PRICE... \$12.00  
Ceramic Holder Only. NET PRICE.....\$2.50



## ATR-219 TRANSCEIVER

A compact battery-operated transceiver for use in the amateur 56 to 60 megacycle band. Particularly desirable for portable and mobile voice communication service. Simplicity of installation and ease of operation are attractive features of this popular priced transceiver. 55 to 60 megacycles... Unity-Coupled Push-Pull Oscillator... Class B, 100% Modulation... Speech Amplifier to insure 100% Modulation... Super-regenerative Receiver Circuit... Self-quenched Detector... Output matches either headphones or magnetic speaker.

ATR-219 TRANSCEIVER (less Accessories: Antenna, Headphones, Microphone, Batteries and Tubes.) NET PRICE... \$19.95





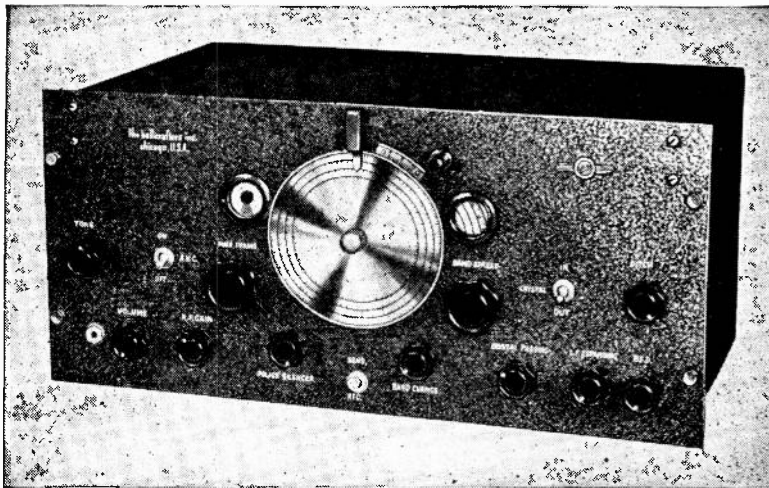
# CUSTOM-BUILT RADIOS

# halliCraFtErs



## The New 1937

# SUPER SKYRIDER



**FREQUENCY RANGE**

**5 BANDS**

40 to 16 MC  
16.5 to 6.6 MC  
6.8 to 2.7 MC  
2.9 to 1.16 MC  
1.34 to .535 MC

Band Spread Condenser is made directly in the main tuning condenser thereby reducing the number of leads and the losses incurred by the result of inductance in the leads in place of in the coils where it belongs. This increases the efficiency of the tuned circuits.

465 KC Iron Core IF's are used to bring up selectivity in the two stages of IF.

Single Signal Crystal Action.

Air Trimmed RF's making set more stable.

Illuminated Band Spread and Main Tuning Dial. The main tuning dial covers 338 degrees in place of the usual 180 degrees. Bands will cover approximately double what they did on main dial of present receiver, allowing more accurate logging.

Steatite Sockets in RF.

Improved 10 Meter Performance.

Magic Eye for field strength indication (6G5).

Duo-Micro-Vernier Band Spread Is Used. The operating frequency is immediately shown by the use of band and frequency indicator on the dial.

A Headphone Jack is provided for the use of headphones, which is in the first stage audio and arranged in such a way that the speaker or line circuit is shorted when headphones are used.

The Antenna Circuit is arranged for either doublet or conventional type antenna.

Set arranged for Rack and Panel Mounting. The panel being 8 3/4 inches high by 19 inches long.

Controls at convenient height for operating.

Tone Control and AC switch, which uses the low boost as was pioneered by us in the communication type receivers.

Set is capable of delivering 17 Watts Audio, 14 Watts Undistorted.

All Metal Tubes except the 6G5 as follows:

- A 6K7 in the R.F. preselector stage;
- A 6L7 as first detector-mixer;
- A 6C5 as the oscillator;
- A 6K7 as the first I.F. Stage;
- A 6R7 as the second detector and AVC tube and 1st AF;
- A 6K7 as 2nd I.F. Stage;
- 2 6L6's as second audio and output tubes;
- A 5Z3 rectifier;
- A 6G5 strength indicator.
- A 6K7 beat oscillator.

Pitch Control which is variable over 7000 cycles either side of zero beat.

Beat Frequency Oscillator and injector which is arranged so that the beat oscillator can be made optimum for different strengths of incoming signal.

Great Sensitivity and greater Selectivity. Improved image ratio.

Set has AVC Action.

Model S11 (Less Crystal) .....	\$89.50 Net
Model SX11 (With Crystal) .....	\$99.50 Net
Permanent Magnet Speaker in Case .....	\$12.00 Net



# CUSTOM-BUILT RADIOS

# hallicrafters

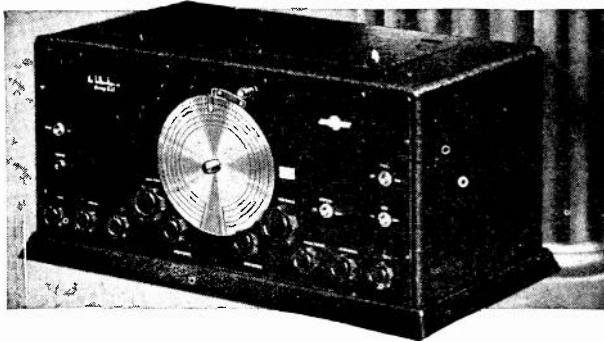


## The New

# Ultra SKYRIDER

### BAND SPREAD CONTROL

79.5 MC to 36.4  
38.3 MC to 19.6  
21.35 MC to 10.5  
11.45 MC to 5.65



### BAND SPREAD CONTROL

3.76 TO 53  
METERS

Band spread condenser is made directly in the main tuning condenser thereby reducing the number of leads and the losses incurred by the result of inductance in the leads in place of in the coils where it belongs. This increases the efficiency of the tuned circuits.

1600 KC IF's are used to improve the image ratio on the high frequency bands. The image ratio at 7 MC being better than the average receiver on the broadcast bands. The 20 meter band image rejection is better than the average receiver on the police bands.

The IF's are air trimmed and iron cored making for the ultimate in stability.

The IF's are fitted with an expander unit so that they may be broadened to receive 5 meter wabulation phones three degrees selectivity.

RF coils are mounted directly on an isolantite switch in such a manner that no leads are needed between the switch, coils and variable condenser. In all, 12 RF coils are used. Steatite sockets are used in the RF high frequency oscillator in order that greater effi-

ciency with stability can be maintained at the ultra high frequencies.

Duo-Micro-Vernier band spread is used. The operating frequency is immediately shown by the use of band and frequency indicator on the dial.

Illuminated band spread and main tuning dial. The main tuning dial covers 338 degrees in place of the usual 180 degrees.

The set is equipped to either supply a 500 ohm line or a 5000 ohm speaker. This takes care of the average run of magnetic or dynamic speakers. No DC is in the output circuit.

A headphone jack is provided for the use of headphones which is in the first stage audio and arranged in such a way that the speaker or line circuit is shorted when headphones are used.

The antenna circuit is arranged for either doublet or conventional type antenna.

Set arranged for rack and panel mounting. The panel being 8 3/4 inches high by 19 inches long.

## SPECIFICATIONS OF LATEST ENGINEERING FEATURES

Tone Control and AC Switch, using the low boost as was pioneered by us in the communication type receivers.

- AUDIO GAIN CONTROL                      RF GAIN CONTROL
- LAMB NOISE SILENCER CONTROL
- BAND SWITCH                      CRYSTAL PHASING CONDENSER
- IF EXPANDER

Pitch Control, variable over 7000 cycles either side of zero beat.

Beat Frequency Oscillator Switch and Injection Control, this is arranged so that the beat oscillator can

be made optimum for different strengths of incoming signal. Our exclusive feature.

- AVC SWITCH                      CRYSTAL SWITCH
- "SEND"—"RECEIVE" SWITCH
- MAIN TUNING CONTROL OR BAND SET
- BAND SPREAD CONTROL

Model S10		\$ 9950
(Less Crystal)	NET PRICE	
Model SX10		\$11450
(with Crystal)	NET PRICE	
Permanent Magnet		\$1200
Speaker in Case	NET PRICE	



hallicrafters **CUSTOM-BUILT RADIOS** hallicrafters

# hallicrafters



*The New*  
**SKYRIDER**  
**"Commercial"**  
**29.5 To 3000 METERS**

Band spread condenser is made directly in the main tuning condenser thereby reducing the number of leads and the losses incurred by the result of inductance in the leads in place of in the coils where it belongs. This increases the efficiency of the tuned circuits.

1600 IF's—2 stages none expanding.

Illuminated band spread and main tuning dial. The main tuning dial covers 338 degrees in place of the usual 180 degrees. Bands will cover approximately double what they did on main dial of present receiver, allowing more accurate logging.

Stearite sockets in RF.

Magic Eye for field strength indication (6G5).

Duo-Micro-Vernier band spread is used. The operating frequency is immediately shown by the use of band and frequency indicator on the dial.

A Headphone jack is provided for the use of headphones, which is in the first stage audio and arranged in such a way that the speaker or line circuit is shorted when headphones are used.

The antenna circuit is arranged for either doublet or conventional type antenna.

Set arranged for rack and panel mounting. The panel being 8 3/4 inches high by 19 inches long.

Controls at convenient height for operating.

This set has AVC action.

**FREQUENCY RANGE**  
 10.25 MC to 4.1 MC  
 4.25 MC to 1.7 MC  
 1.51 MC to .6 MC  
 620 KC to 248 KC  
 250 KC to 100 KC

Tone control and AC switch, which uses the low boost as was pioneered by us in the communication type receivers. Set is capable of delivering 4 watts audio.

All metal tubes except the 6G5 as follows:

- A 6K7 in the R.F. preselector stage;
- A 6L7 as the first detector-mixer;
- A 6C5 as the oscillator;
- A 6K7 as the 1st I.F. stage;
- A 6K7 as 2nd I.F. stage;
- A 6R7 as the 2nd detector and AVC tube and 1st AF;
- A 6K7 as the electron coupled beat oscillator;
- 2 6L6's in push pull audio (17 watts);
- A 5Z4 rectifier;
- A 6G5 strength indicator.

Pitch control which is variable over 7000 cycles either side of zero beat.

Beat frequency oscillator and injector which is arranged so that the beat oscillator can be made optimum for different strengths of incoming signal.

This set takes in long wave bands up to 3000 meters and down to 29.25 meters covering:

- 600 meter ship band
- 800 meter direction finding stations, aeroplane beacons
- Point to point service—inter-country
- NAA time tick, weather service and news
- 40 meter amateur band
- 80 meter amateur band
- 160 meter amateur band
- 124 and 175 meter police station
- 55 and 100 meter aeroplane stations
- 31 and 49 meter short wave broadcast
- Numerous other services in this range.

Model S12 less Crystal .....	NET \$ 99.50
Model SX12 with Crystal .....	114.50
Permanent Magnetic Speaker in Case ..	12.00

## The SKY-CHIEF

TREMENDOUS SENSITIVITY—LOW NOISE

Tremendous sensitivity and remarkably favorable noise ratio are provided by the iron core I.F. stage with 78 tube. This in conjunction with the super efficient preamplifier measures less than 1 microvolt. The special airplane type dial has whirling second hand. Makes short wave station selection, even in congested bands, easy and pleasant.

Tubes used include one type 78 R.F.; one type 6A7 Detector Oscillator; one type 6F7 I.F. and beat oscillator; one type 75 Second Detector AVC and Audio Amplifier; one type 4Z Output tube; one 6G5 Signal Strength indicator, and one type 80 Rectifier.

The oversize transformers and filters are used to provide smooth, brilliant humfree performance. The extremely efficient filtering system assures excellent headphone operation.

The station locator (a beat oscillator), helps in tuning weak distant stations and makes incoming C.W. signals audible. "Stand-by" switch, AVC, "on-off" switch, band spread control, band change switch, high frequency control and built-in power pack and speaker and headphone jack, all combine to make a receiver that will be highly appreciated by all amateurs.

### SPECIFICATIONS

465 KC iron core I.F. single stage;

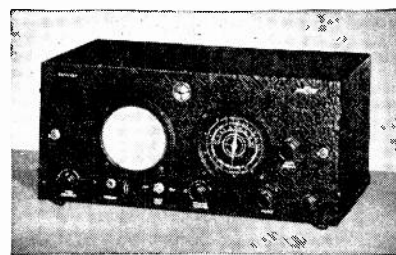
**FREQUENCY RANGE**  
 540 to 1700 KC  
 1.68 MC to 5.45 MC  
 5.4 MC to 17.6 MC

- Variable beat oscillator on the front panel
- AVC—RF and audio gain—
- Send-Receive switch
- Mechanical bandspread
- Speaker included in set cabinet
- Illuminated dial
- Band switching
- Headphone jack and all features of Super Seven which this model replaces.

**\$44.50**

NET PRICE

Complete with seven tested Raytheon tubes.



### RCA and HAZELTINE LICENSED

Designed expressly for the use of transmitting amateurs and advanced short wave listeners, the HALLICRAFTERS "Sky Chief" includes all the latest features shown in all of the high priced communication receivers.

It covers all the short-wave, broadcast, amateur and code bands with the highest efficiency. The regular broadcast band has been added to appeal to the wide field that includes amateurs and experienced short wave hobbyists.

All the features and special controls so desirable to the critical operator make it possible to get the last degree of usable sensitivity and selectivity.

Dimensions: 21 1/4 by 9 3/4 by 10 1/4 in. high. Shipping weight: 43 lbs. Equipped for 110 to 120 Volt, 60 cycle A.C. Operation.

hallicrafters **CUSTOM-BUILT RADIOS** hallicrafters

# hallicrafters

*The*  
**"Sky BUDDY"**

*A Leader In Its Class*



## 5 TUBE SUPERHETERODYNE

Another HALLICRAFTERS innovation—real junior model communication receiver at a breathtaking low price!

Equipped with five late type tubes the SKY-BUDDY is a superheterodyne of remarkable performance capabilities. The long list of features conveys some measure of its excellence.

### TUNING — IRON CORE I.F.

Tuning from 18 to 555 meters in three bands, its single iron core I.F. stage and an improved mechanical band spread system make it a receiver difficult to beat in sensitivity and selectivity even when compared with the higher-priced communication sets. Bands tuned are 16 to 5.5 Mc.; 5.5 to 1.68 Mc.; 1680 Kc. to 550 Kc. Dimensions:—17" long, 7½" high, 8¾" deep. Shipping weight 34 lbs.

Tubes used 6A7 1st detector-oscillator; 6F7 I.F. and Beat Oscillator; 75 2nd Detector and AVC; 1st Audio; 42 Power output and 80 Rectifier.

**\$29<sup>50</sup>**  
 NET PRICE

H-12B

## FEATURES

- 1) 18 to 555 meters (16.5 Mc.-544 Kc.)  
 Three Bands.
- 2) Combined I.F. and Beat Frequency Oscillator.
- 3) Iron Core I.F. (High gain greater selectivity).
- 4) 5 tubes do the work of 8.
- 5) Automatic Volume Control—  
 with on-off switch.
- 6) Greater Band spread—36 to 1.
- 7) Bands changed with switch.
- 8) Unusual stability.
- 9) Heterodyne oscillator controlled  
 from front panel, completely  
 shielded.
- 10) Rugged Metal Cabinet.
- 11) Unique dial lighting.
- 12) Improved tuning control—no  
 backlash.
- 13) Direct reading calibrated dial.
- 14) Single tuning control.
- 15) Accurate logging.
- 16) All controls on front panel.
- 17) Head phone jack.
- 18) Built-in power supply.
- 19) Built-in speaker.
- 20) Arranged for Doublet or straight  
 antenna.
- 21) Separate switch on Beat Fre-  
 quency Oscillator.

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# TRANSMITTING CONDENSERS



# TRANSMITTING RESISTORS

## HIGH-VOLTAGE TRANSMITTING OIL-IMPREGNATED OIL-FILLED CONDENSERS



**Round Can**  
 Type 1005—  
 1000 V. D.C.  
 Type 1505—  
 1500 V. D.C.  
 Type 2005—  
 2000 V. D.C.



**Square Can**  
 Type 608—  
 600 V. D.C.  
 Type 1008—  
 1000 V. D.C.  
 Type 1508—  
 1500 V. D.C.  
 Type 2008—  
 2000 V. D.C.  
 Type 2508—  
 2500 V. D.C.

Aerovox oil-filled, oil-impregnated, transmitting condensers in sturdy metal cans, either round or rectangular, are designed for that extra measure of dependable service and longer life.

Here is honest quality—inside as well as out. Inside, a thorough engineering job, based on long experience. Round can type includes special reinforcement in the winding process, relieving undue strain and providing added assurance of trouble-free service. Sections in square cans are reinforced with special clamp.

### Oil-impregnated Oil-Filled Condensers in Square Metal Cans

Cap. Mfds.	Size-Ins. D. W. L.	Net Price
<b>Type 608-600v</b>		
1	3 1/2 x 3 1/2 x 1 7/8	\$1.65
2	3 1/2 x 3 1/2 x 1 3/4	2.10
4	3 1/2 x 3 1/2 x 1 3/8	2.70

### Type 1008-1000v

1	3 1/2 x 3 1/2 x 1 7/8	1.80
2	3 1/2 x 3 1/2 x 1 3/4	2.70
4	3 1/2 x 3 1/2 x 2 1/8	3.60

### Type 1508-1500v

1	3 1/2 x 3 1/2 x 1 7/8	2.25
2	3 1/2 x 3 1/2 x 2	3.75
4	3 1/2 x 4 7/8 x 2 1/8	5.40

### Type 2008-2000v

1	3 1/2 x 3 1/2 x 1 7/8	3.15
2	3 1/2 x 4 7/8 x 1 1/4	4.20
4	3 1/2 x 4 7/8 x 3 1/8	6.60

### Type 2508-2500v

1	3 1/2 x 4 7/8 x 3	5.40
2	3 1/2 x 4 7/8 x 4 1/2	8.25

### Oil-impregnated Oil-Filled Condensers in Round Aluminum Cans

Cap. Mfds.	Size-Ins. Dia.-High	Net Price
<b>Type 1005-1000v</b>		
1	2 x 5 1/4	\$1.62
2	2 x 5 1/4	2.01
4	2 1/2 x 5 1/8	2.91
<b>Type 1505-1500v</b>		
1	2 x 5 1/4	1.71
2	2 1/2 x 5 1/8	2.34
<b>Type 2005-2000v</b>		
1	2 x 5 1/4	2.13
2	2 1/2 x 5 1/8	2.85

Mounting rings furnished with all round can units.

## AEROVOX "Slideohm" RESISTORS

**Wire-Wound Vitreous-Enameled 100 and 200 Watts**



High voltage resistors for use as bleeders or voltage dividers in transmitters. Wire wound with vitreous enamel coating. Ends of wire brazed to terminals. Conservatively rated. All units furnished with horizontal mounting brackets.

### Type 957—100 Watts

Sizes 7/8 x 6 1/2 inches.

Resistance Ohms	Net Price
1000	\$1.20
2000	1.20
3000	1.20
4000	1.20
5000	1.20
6000	1.35
7500	1.35
10000	1.35
15000	1.35
20000	1.35
25000	1.35
30000	1.50
40000	1.50
50000	1.50
60000	1.65
75000	1.65
100000	1.65

Extra Slider Bands .09 each

### Type 958—200 Watts

Size 1 1/8 x 8 1/2 inches.

Resistance Ohms	Net Price
1000	\$1.80
2500	1.80
5000	1.80
10000	1.80
20000	2.10
25000	2.10
30000	2.10
35000	2.10
50000	2.10
60000	2.10
80000	2.10
100000	2.10

Extra Slider Bands — .09 each

Other Aerovox resistors of this type in 30, 50 and 75 watt ratings also available. Prices will be furnished upon request.

## "PYROHM Junior" RESISTORS

**Wire-Wound and Vitreous-Enamel Coated**

Genuine wire-wound vitreous-enamel resistors reduced to surprisingly compact dimensions. Just the thing for space-saving assemblies, particularly for transmitters and short wave receivers.

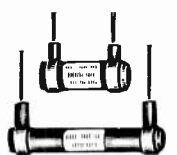
### Type 930—5 Watts

Size 1/4"x1"  
 Resistances from 100 to 10,000 ohms.  
 21c Net

### Type 931—10 Watts

Size 1/4"x1 3/4"  
 Resistances from 100 to 30,000 ohms.  
 24c Net

With Leads 2" Long



### Type 932—15 Watts

Size 1/4"x2"  
 Resistances from 100 to 15,000 ohms.  
 30c Net

### Type 933—20 Watts

Size 1/4"x3"  
 Resistances from 100 to 15,000 ohms.  
 39c Net

From 20,000 to 70,000 ohms.  
 39c Net

From 20,000 to 75,000 ohms. 45c Net  
 100,000 ohms. 60c Net

## BAKELITE CASE PAPER CONDENSERS

200 and 400 Volts D. C.



Mounted in attractive moulded bakelite cases, these units are ideal for use where a compact, high insulation resistance, non-inductive condenser is required. Bakelite case prevents leakage between the terminals and makes for neatness in a completed apparatus assembly. Widely used in experimental laboratory apparatus and amateur equipment.

Cap. Mfd.	Type 250 200 V.	Type 450 400 V.
.05	\$ .39	\$.40
.1	.42	.48
.25	.45	.51
.5	.51	.72
1.0	.69	.....

## AEROVOX HIGH-VOLTAGE MICA CONDENSERS



Type 1455, 1456 and 1457



Types 1771, 1772 and 1773



Types 1881, 1882 and 1883

Cap. Mfd.	Type 1455 1000v. D.C.	Type 1456 2500v. D.C.	Type 1457 5000v. D.C.	Type 1771 1400v. D.C.	Type 1772 3500v. D.C.	Type 1773 7000v. D.C.	Type 1881 1400v. D.C.	Type 1882 3500v. D.C.	Type 1883 7000v. D.C.
.00005	\$.21	\$.24	\$.42	\$1.35	\$1.80	\$1.95	\$3.00	\$3.24	\$3.60
.00007	.21	.24	.42	1.35	1.80	1.95	3.00	3.24	3.60
.000075	.21	.24	.42	1.35	1.80	1.95	3.00	3.24	3.60
.0001	.21	.24	.42	1.35	1.80	1.95	3.00	3.24	3.60
.0002	.21	.24	.54	1.35	1.80	2.16	3.00	3.24	3.75
.00025	.21	.24	.54	1.35	1.80	2.25	3.00	3.24	3.84
.00037	.21	.24	.66	1.41	1.86	2.55	3.00	3.30	3.84
.0005	.21	.24	.75	1.41	1.86	2.55	3.00	3.30	4.20
.001	.24	.45	.90	1.47	2.10	3.00	3.00	3.60	4.80
.0015	.27	.51	1.17	1.53	2.25	3.60	3.06	3.90	5.40
.002	.27	.57	1.35	1.59	2.55	4.20	3.12	4.20	5.70
.0025	.30	.66	.....	1.65	2.55	4.80	3.18	4.50	6.30
.003	.33	.72	.....	1.71	3.00	.....	3.24	4.80	.....
.004	.33	.90	.....	1.80	3.45	.....	3.30	5.10	.....
.005	.33	.90	.....	1.86	3.75	.....	3.36	5.40	.....
.006	.39	1.02	.....	1.92	4.05	.....	3.42	5.70	.....
.008	.45	1.20	.....	1.98	4.35	.....	3.48	6.00	.....
.01	.48	1.41	.....	2.04	4.80	.....	3.54	6.30	.....
.015	.66	.....	.....	2.10	5.70	.....	3.60	7.20	.....
.02	.72	.....	.....	2.16	6.75	.....	3.75	8.40	.....
.025	.87	.....	.....	2.40	.....	.....	4.05	.....	.....
.03	1.02	.....	.....	2.52	.....	.....	4.20	.....	.....
.04	.....	.....	.....	2.85	.....	.....	4.50	.....	.....
.05	.....	.....	.....	3.00	.....	.....	4.80	.....	.....
.075	.....	.....	.....	3.75	.....	.....	5.40	.....	.....
.1	.....	.....	.....	4.50	.....	.....	6.00	.....	.....



# WARD RESISTORS AND RHEOSTATS FOR AMATEURS

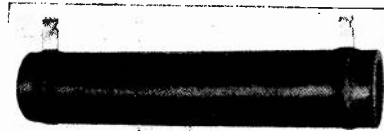
## LEONARD

## WARD

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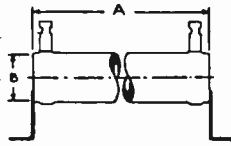


### Grid Leak Resistors



The watt dissipation rating of Vitrohm Transmitting Grid Leak Resistors provides for safe and stable operation when used with the type of tube specified in the table.

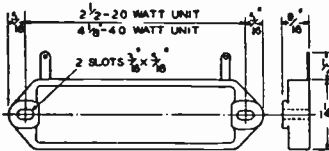
Catalog Number	Dimensions, Inches	
	A	B
507-202 507-204 507-203	3 1/2	3/4
507-223 507-227 507-224 507-263 507-225	6 1/2	1 1/8
507-279	8 1/2	1 1/8



Mounting brackets are furnished.

Cur. ma.	Tube Type	Cat. No.	Resis. Ohms	Net Price
60	10	507-202	10,000	\$0.60
40	52	507-225	15,000	.90
60	11	507-224	10,000	.90
60	03A	507-224	10,000	.90
100	04A	507-279	10,000	1.20
40	800	507-203	12,500	.60
60	825	507-224	10,000	.90
60	830	507-224	10,000	.90
40	242A	507-225	15,000	.90
60	254B	507-224	10,000	.90
24	276A	507-227	25,000	.90
60	282A	507-263*	10,000	1.20
40	R K 18	507-204	15,000	.60
80	R K 20	507-223	7,500	.90

\*Adjustohm with bare side.



### Plaque Resistors

Non-Inductive  
Non-Capacitive

	2"-20 Watt	4"-40 Watt	3"x5 3/4"-100 Watt
Shipping weight.....	2 oz.	4 oz.	6 oz.
Net Price each.....	\$0.90	\$1.20	\$1.80

Resis. Ohms	20 Watt		40 Watt		100 Watt	
	Cat. No.	Cur. m. a.	Cat. No.	Cur. m. a.	Cat. No.	Cur. m. a.
0.64	507-600	5,590	507-624	7,910	507-655	12,500
1.00	507-601	4,170	507-625	6,320	507-656	10,000
1.6	507-602	3,540	507-626	5,000	507-657	7,900
2.5	507-603	2,830	507-627	4,000	507-658	6,300
4.0	507-604	2,240	507-628	3,160	507-659	5,000
6.4	507-605	1,770	507-629	2,500	507-660	3,900
10	507-606	1,415	507-630	2,000	507-661	3,100
16	507-607	1,120	507-631	1,580	507-662	2,500
25	507-608	895	507-632	1,260	507-663	2,000
40	507-609	705	507-633	1,000	507-664	1,580
50	507-610	630	507-286	895	507-665	1,410
64	507-611	560	507-635	790	507-666	1,250
100	507-612	445	507-115	630	507-667	1,000
160	507-613	355	507-637	500	507-668	790
250	507-614	285	507-638	400	507-669	630
400	507-615	225	507-639	315	507-670	500
640	507-616	175	507-640	250	507-671	390
1,000	507-617	140	507-641	200	507-672	310
1,600	507-618	110	507-642	160	507-673	250
2,500	507-619	90	507-643	125	507-674	200
4,000	507-620	70	507-644	100	507-675	158
5,000	507-621	65	507-111	90	507-676	141
6,400	.....	.....	507-646	80	507-677	125
10,000	.....	.....	507-647	65	507-678	100

### Bleeder Resistors



When the plate potential of a radio transmitter is supplied by filtered, rectified A.C., it is common practice to connect a stabilizing resistor across the output of the plate supply. This protects the filter condensers from high peak voltages, discharges the condensers when the key is open, steadies the note and tends to eliminate chirps.

Mounting brackets are furnished.

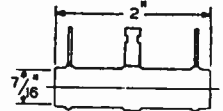
Output Voltage	Catalog No.	Units in Series	Resistance Ohms	Current m. a.	Net Price
500	507-65		25,000	20	\$0.75
1000	507-65-2	2	50,000	20	1.50
1500	507-65-3	3	75,000	20	2.25
2000	507-65-4	4	100,000	20	3.00
3000	507-65-6	6	150,000	20	4.50

The Maximum Safe Potential Across Any One Unit is 500 Volts.

### Center-tapped Resistors

Center-tapped resistors are used for obtaining the neutral of the filament circuit where a center-tap in the filament transformer is not provided.

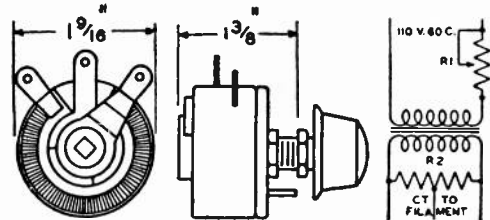
The end terminals are long solid wire leads that furnish a support for the unit when connected in the circuit.



No Mounting Brackets are furnished.

Catalog Number	Resistance Ohms	Current m. a.	Net Price
507-231	20 in Steps of 10 - 10	825	\$0.27
507-232	50 in Steps of 25 - 25	550	.27
507-233	75 in Steps of 37.5- 37.5	450	.27
507-234	100 in Steps of 50 - 50	390	.27
507-235	200 in Steps of 100 -100	275	.27

### Ring Type Rheostats



R1—Filament Primary Rheostat  
R2—Filament Center-tapped Resistor

These Ring-Type Rheostats provide a fine continuous adjustment and are for use in all current supply units.

The rheostat base and ring are of refractory material. The resistance wire, wound toroidally around the ring, is protected from mechanical damage by a baked-on vitreous enamel.

The "dead" shaft, insulated from the contact lever, permits steel panel mounting.

The rheostat is rated at 30 watts with the entire resistance in circuit.

The approximate shipping weight is 12 ounces.  
Net Price ..... \$2.40

Filament Circuit Wattage	Cat. No.	Application	Resis. Ohms	Cur. m. a.
40 to 60	507-700	For Sets using one or two tubes, each having a rating of 3.25 amps. at 10 volts.....	100	548
10 to 40	507-701	For Sets using from one to three '10 or '45 tubes.....	250	346



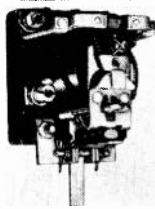
**WARD  
LEONARD**

RELAYS FOR AMATEUR TRANSMITTERS

**WARD  
LEONARD**



### Overload Relay



Ward Leonard Midget Overload Relays are specially designed for use in transmitter circuits of amateur radio stations to provide protection to the tube against overload or current surges.

The relay is adjusted for operation in the vertical position.

507-512 Opening Current 250 M.A.  
507-513 Opening Current 500 M.A.

#### Standard Features

1. D.C. Operation.
2. Continuous duty, low power consumption coil.
3. Single pole, single throw, double break.
4. Silver-to-silver contacts.
5. Mechanical latch-out.
6. Front-of-panel connected.
7. Moulded insulating base.
8. Contacts rated 6 amperes at 120 volts, 60 cycles.

### Remote Control Relays



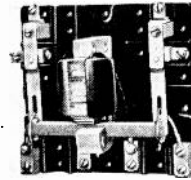
These Midget Magnetic Relays provide automatic or remote control of circuits. They are available for operation on either A.C. or D.C. circuits and can be used for practically any duty

within the limits of their ratings of 1 ampere D.C. or 4 amperes A.C. at 110 volts for double pole, single break relays.

Standard remote control relays are of the open type mounted on a moulded insulating base. They can be furnished single or double pole and single or double throw. They can also be furnished enclosed.

Design features include silver-to-silver, self-aligning contacts and continuous duty, low power consumption coils. All metal parts except contacts are cadmium plated.

### Radio Frequency Relay For Antenna Change-Over and Hi Frequency Applications

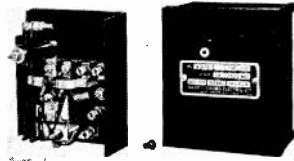


Automatic switching at the antenna for either transmission or reception. May also be used for switching directional antenna.

Connects across the 110 volt, 60 cycle primary of the H. V. transformer. Will handle frequencies up to 60 M.C.

#### Standard Features

1. Micalex insulation.
2. Moulded insulation base.
3. Silver-to-silver, 15 ampere contacts.
4. All metal parts except contacts cadmium plated.
5. Low power consumption coils.
6. Laminated magnet frames.



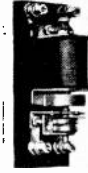
### Thermal Time Delay Relay

In applying the plate voltage the time delay is accomplished by a bi-metallic thermal element which automatically compensates for changes in room temperature. The timing is set for twenty seconds but is adjustable over a range of 15 to 45 seconds.

Silver-to-silver contacts, continuous duty coils and a moulded insulating base are used in the construction of these relays. All metal parts except contacts are cadmium plated.

The relay and thermal element are mounted in a black japanned, dust proof, sheet metal enclosure provided with knockouts for conduit or armored cable connection.

### Underload Relay



Ward Leonard Midget Underload Relays are designed for use in transmitter circuits of amateur radio stations to provide protection to class "B" modulator tubes and possible breakdown of secondary of class "B" modulator transformers should the class "C" tubes fail to hold the load due to loss of excitation. The relay is designed for operation in the vertical position as shown.

The "pick-up" may be adjusted by turning the screw at the top of the relay coil.

	Pickup M.A.	Max. M.A.
507-514	100-200	300
507-515	200-400	600

#### Standard Features

1. D.C. Operation.
2. Continuous duty, low power consumption coil.
3. Adjustable "pick-up."
4. Drop-out at 75% of "pick-up."
5. Silver-to-silver contacts.
6. Front-of-panel connected.
7. Bakelite insulating base.

### Keying Relays

Ward Leonard Keying Relays may be operated from an alternating or direct current source. Bulletin 507-507 relay will operate on two dry cells or from a 7 1-2 volt filament transformer winding.



To eliminate possible B.C.L. interference from key clicks, the relay coil voltage should not be more than 10 volts.

These relays are highly insulated against radio frequency leakage. Silver-to-silver contacts that assure long service, low wattage, continuous duty coils and the ability to handle 30 to 40 words per minute with sharp distinct response are some of the desirable features of these keying relays.

## SPECIFICATIONS and PRICES

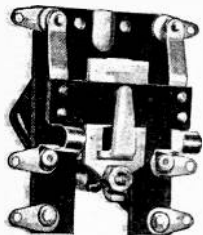
Description	Cat. No.	Poles	Throw	Break	Contacts Normal Position	Volts		Net Price	Approx. Shipping Weight, Oz.
						A.C.	D.C.		
Time Delay, Relay	507-501	S.P.	S.T.	S.B.	Open	110	.....	\$9.00	13
Remote	507-503	D.P.	S.T.	S.B.	Open	6 to 8	.....	4.80	6
Remote	507-504	D.P.	S.T.	S.B.	Open	.....	6 to 8	4.80	6
Remote	507-505	D.P.	D.T.	S.B.	.....	6 to 8	.....	5.40	7
Remote	507-506	D.P.	D.T.	S.B.	.....	.....	6 to 8	5.40	7
Keying	507-507	S.P.	S.T.	D.B.	Open	7.5	2.5	4.20	5
Keying	507-508	S.P.	S.T.	D.B.	Open	.....	6 to 8	4.20	5
Crystal Oven	507-509	S.P.	S.T.	D.B.	Open	.....	110	4.20	6
Remote	507-510	S.P.	S.T.	D.B.	Open	110	.....	4.20	6
Remote	507-511	D.B.	D.T.	S.B.	.....	110	.....	5.40	7
Overload Relay	507-512	S.P.	S.T.	D.B.	N.C.	.....	.....	5.10	6
Overload Relay	507-513	S.P.	S.T.	D.B.	N.C.	.....	.....	5.10	6
Underload Relay	507-514	S.P.	S.T.	D.B.	N.O.	.....	.....	6.00	10
Underload Relay	507-515	S.P.	S.T.	D.B.	N.O.	.....	.....	6.00	10
R. F. Relay	*507-521	D.P.	D.T.	S.B.	Open	110	.....	15.00	10
R. F. Relay	*507-522	D.P.	D.T.	S.B.	Open	220	.....	15.00	10
R. F. Relay	*507-523	D.P.	D.T.	S.B.	Open	.....	6	15.00	10

\* For additional S.P.N.O. contact add \$1.50.

# DUNCO RELAYS FOR AMATEUR USE

*"Dunco Means Dependability"*

## DUNCO RADIO RELAY

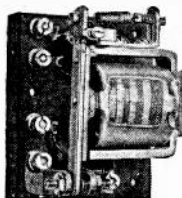


These relays have two isolated contacts for operation in low or high voltage circuits at any frequency. For the first time in an inexpensive relay, the two poles are sufficiently spaced and shielded from each other so that the amplifier input may be handled by one pole and the output from the same amplifier may be handled by the other pole without feed back. Similarly 60-cycle power currents may be handled by one pole and voice frequencies by the other without the introduction of hum. Outstanding features include: low contact resistance; single break contacts are used instead of double break to further reduce resistance; extremely fast operation suitable for bug keying; high voltage and current carrying and breaking capacity; resistance to vibration, making the relay suitable for use on autos, trains, planes, elevators, boats, etc.

Type	Operates on
RA-1	2.5 volts, 60 cycles, A.C.
RA-2	2.5 volts, 25 cycles, A.C.
RA-3	6.3 volts, 60 cycles, A.C.
RD-1	5 to 6 volts, D.C.

Any One Type, Net Price .....\$2.00

## DUNCO VACUUM TUBE RELAY



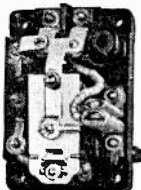
Relay type CXB51 is an ultra sensitive unit designed for direct current in the coil circuit and either direct or alternating current in the contact circuit. It has single pole, double throw contacts, making one circuit when the coil is energized and another circuit when the coil is de-energized. The coil has a resistance of 10,000 ohms and it will safely carry currents up to 18 milliamperes. Adjustments are provided that will cause the relay to operate on any desired current value down to one

milliampere. This unit is particularly adapted to operation in the plate circuit of small vacuum tubes. Contacts are rated 2 amperes at 110 volts, A.C.

Size: 2 7/8" High x 2 1/4" Wide x 2" Deep  
Dunco Relay, Type CXB51

Net Price .....\$5.50

## DUNCO TIME DELAY RELAY



This time delay relay is provided with a snap-on housing and with panel mounting studs for back of panel connections. The input terminals should be connected across the primary of the filament transformer, and the output terminals to the primary of the plate transformer. Power will then

be delivered to the plate transformer 30 seconds after the filaments are turned on, greatly increasing the life of tubes, particularly of the hot cathode mercury vapor type. This unit is suitable for use with plate transformers up to 500 watts capacity if the rectifier feeds directly into a condenser or up to 1,000 watts if a choke precedes the first condensers in the filter system.

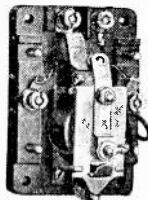
Size: 3" High x 2 1/8" Wide x 2-5/16" Deep  
Including Cover  
Dunco Relay, Type TD-96

Net Price .....\$8.80

Copyright 1936 by U.C.P. Inc.

## DUNCO MIDGET KEYING RELAY

This midget keying relay is suitable for speeds up to 40 words per minute. Contacts are large fine silver buttons assuring long life and may be easily replaced. Coil consumes only 50 milliamperes at 110 volts, 60 cycles, while contacts will interrupt currents of 6 amperes at 110 volts, A.C. The unit is designed for mounting on vertical panel and is recommended for loads up to 660 watts. The contacts are single pole, and close when the coil is energized.



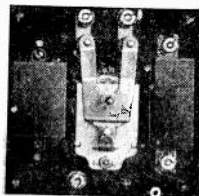
Size: 2 3/4" High x 1 7/8" Wide x 1 3/4" Deep

Dunco Relay, Type ASBX1

Net Price .....\$3.85

## DUNCO TEMPERATURE CONTROL RELAY

Dunco relay type CS-1022 has been developed for use in conjunction with mercury thermoregulators for accurate temperature control work. For operation on 110 volts, 60 cycles, it will properly control heater units up to 3,300 watts. The resonant circuit employed makes the relay extremely sensitive and resistors are used to limit the current in the thermoregulator to a safe value of about 12 milliamperes and to reduce arcing at the thermoregulator contacts. Relay is designed for vertical mounting.



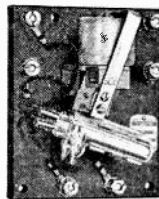
Size: 5" High x 5" Wide x 3" Deep

Dunco Relay, Type CS-1022

Net Price .....\$11.00

## DUNCO REMOTE CONTROL RELAY

This power type relay handles loads up to 20 amperes at 220 volts, or 25 amperes at 110 volts. It is of particular service in remotely controlled transmitters, receivers, motors, or other loads of any nature within its rating. Provisions are made so that the mercury contact will make when the coil is energized and break when the coil is de-energized or vice versa. An outstanding feature is that it is completely silent in operation—no humming or chatter occurs when the coil is energized. Another outstanding feature is that due to mercury to mercury contacts there is no sticking or burning of contacts. Sturdy Pyrex enclosed contacts are employed. Standard coils are for operation on 110 volts, 60 cycles, but other coils are available. This unit is designed for vertical panel mounting.



Size: 5" High x 4" Wide x 2 5/8" Deep

Dunco Relay, Type CXH-1027

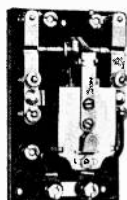
Net Price .....\$11.00

NET

H-23

# STANDARD DUNCO RELAYS

## DUNCO RATCHET RELAY



Energizing the coil of this relay moves a pawl, engaging a ratchet which moves cams to open or close the contacts. The contacts remain in the same position until the coil is de-energized and again energized. By factory adjustment of the cams the relay may be made single pole, double break; double pole, single break; or single pole, double throw, single break.

This relay may be used for applications where a number of operations must be performed in a given sequence.

Contacts are rated 20 amperes at 110 volts, A.C., non-inductive or 1/4 h.p.

Size: 5" High x 3" Wide x 2 3/4" Deep

Dunco Relay, Type CX-464

Net Price .....\$16.50

## DUNCO POLARIZED RELAY



This Dunco relay is designed for operation where the direct current in the coils must be kept as low as possible and where a reversal of the current in the coils brings about a reversal in the position of the contacts, but where no contact is made when the coils are not energized.

The relay consists of a permanent magnet and two coils arranged to give a push pull effect on the armature carrying the moving contacts.

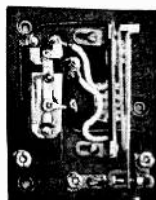
Contacts are rated 2 amperes at 110 volts, A.C., or 1/4 ampere at 115 volts D.C., on non-inductive loads. Coil resistances up to 6000 ohms (3000 ohms in each coil are available and satisfactory operation can be secured with a power consumption as low as 1/100 watt, D.C.

Size: 5" High x 3" Wide x 2 1/2" Deep

Dunco Relay, Type PM-101

Net Price .....\$16.50

## DUNCO TIME DELAY RELAY



This time delay relay is of the immediate recycling type and is compensated for changes in ambient temperature. The recycling feature is obtained by making use of both the heating and cooling times to make up the total time delay.

The timing is adjustable from 30 to 45 seconds (total).

Coil 110 Volts, 60 Cycles

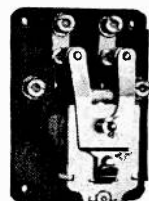
Contacts 110 volts, A.C., 6 Amperes

Size: 5" High x 4" Wide x 1 3/4" Deep.

Dunco Relay, Type TD-97

Net Price .....\$12.38

## DUNCO POWER RELAYS



These relays are rated 30 amperes at 110 volts, A.C., or 4 amperes at 115 volts, D.C. (double break types are rated 6 amperes, D.C.) on non-inductive loads. Specify coil voltage and frequency when ordering:

Type	Contact Arrangement	Size	Net Price
ABYT8	SP DB front contact	4 1/4 x 3 x 2 7/8	\$6.60
ADBT8	DP SB front contact	4 1/4 x 3 x 2 7/8	8.80
BBUK8	SP DB back contact	5 x 3 x 3	8.80
BDBK8	DP SB back contact	5 x 3 x 3	11.00
CBBP8	SP DB double throw	6 1/4 x 3 x 3	12.10
CDBP8	DP SB double throw	6 1/4 x 3 x 3	13.20

These relays may be furnished with any desired number of poles.

## OTHER DUNCO MIDGET RELAYS

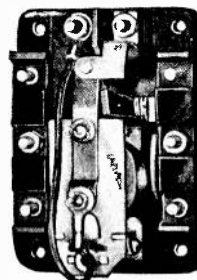
Contacts rated 6 amperes at 110 volts, A.C., 1 ampere at 115 volts, D.C. on non-inductive loads.

Coils up to 50 Volts D.C. or 135 Volts, 60 Cycles

Size: 2 3/4" High x 1 7/8" Wide x 1 7/8" Deep

Type	Contact Arrangement	Net Price
ABTX1	SP DB front contact	\$3.85
ABTX1P	SP DB front contact with pigtail	4.40
ADBX1	DP SB front contact	4.95
BCBX1	SP SB back contact	3.85
CSBX1	SP SB double throw	4.68
CDBX1	DP SB double throw	6.60

## DUNCO OVERLOAD RELAY



This overload relay is designed to pick up and open its contacts when the current in the coil is 5 amperes or more. When the armature picks up, the latch holds the contacts open, breaking the coil circuit. It is then necessary to trip the latch manually to reclose the contacts.

This relay may be used in any circuit where it is desirable to protect against overcurrent of 5 amperes. It is arranged for switch-board mounting with bakelite cover, mechanical latch, manual reset with the reset button extending through the cover.

Size: 3" High x 2 1/8" Wide x 2-5/16" Deep

Dunco Relay, Type CS-1846

Net Price .....\$5.60



# PAR-METAL

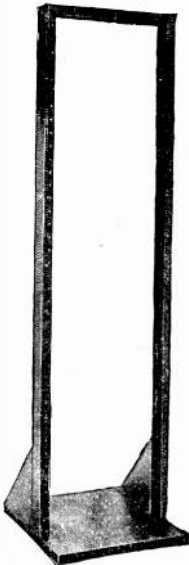
## RACKS — PANELS — CABINETS



### TYPE "L"

#### Standard Relay Racks

These sturdy steel racks are constructed of 1/4" steel, with spot welded corners. Finished in black crystalline lacquer. Racks are for use with standard 19" long panels, and are accurately drilled for mounting holes every 1 1/4". Holes tapped for 10-32 thread. Substantially braced base to prevent wobble and to keep units in correct alignment. Ideal for use with all types of Transmitters or for Public Address Systems. These Racks are NOT cheap, flimsy units built down to a price. They are used in very fine transmitters.

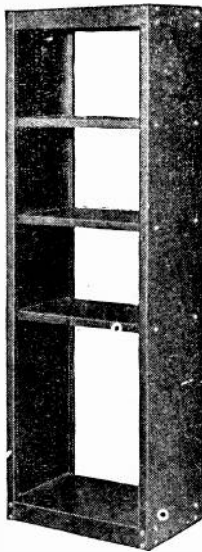


No.	Dimensions H. W. D.	Panel Space 19" Wt.	Shpg. Price
RR196	72 1/4 x 20 x 16"	7 1/4"	60 lbs. \$17.95
RR193	37 1/4 x 20 x 16"	36 1/4"	40 lbs. 14.60

### TYPE "S"

#### Sectional P.A. Rack

Suitable for public address systems where panels are not used, and where equipment may be mounted directly on the shelves. Will improve the appearance of almost any installation and is readily adaptable for most apparatus. Made entirely of sheet steel and supplied with 3 shelves in addition to the top and bottom. Additional shelves may be obtained if required. All corners are reinforced as shown. Wiring may be concealed behind channel corners at front and back. Shipped in "knocked-down" form with all necessary bolts, nuts and washers. Finished in a durable, black crystalline enamel.

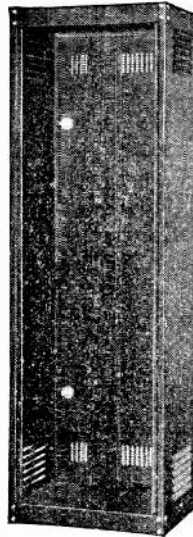


SR196	Overall Dimensions: 37 1/4 x 19 1/4 x 12 3/4". Two shelves. Shpg. Wt. 40 lbs. List Price, Each	\$14.00
SR195	Overall Dimensions: 60 1/4 x 19 1/4 x 12 3/4". Three shelves. Shpg. Wt. 60 lbs. List Price, Each	\$17.25
SR1912	Additional steel shelf 19x11". Shpg. Wt. 7 lbs. List Price, Each	\$1.65

### TYPE "H"

#### Enclosed Relay Racks

Constructed of heavy steel finished in black crystallized lacquer. Holes drilled for standard 19" panels every 1 1/4". Holes have 10-32 thread. Sides have louvres to provide ample ventilation. Back panel in form of a door with heavy latch; has two screen sections for additional ventilation. Comes knocked down, with all necessary nuts, bolts and washers. Easy to assemble. Ideal for the professional type amateur transmitter.



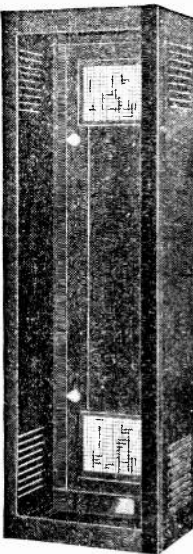
Cat. No.	Overall Size	Panel Space	Shpg. Wt.	List Price
ER203	42 x 21 x 15 1/4"	36 1/4"	75	\$33.50
ER205	66 1/2 x 21 x 15 1/4"	61 1/4"	120	44.50
ER207	82 1/2 x 21 x 15 1/4"	77"	160	52.50

Rack Shelf: Made to fit above racks. Is 12" deep and 1" high. Finished same as racks.  
No. ER2012—Shpg. wt. 9 lbs. List, \$3.00

### TYPE "C" DELUXE

#### Enclosed Relay Racks

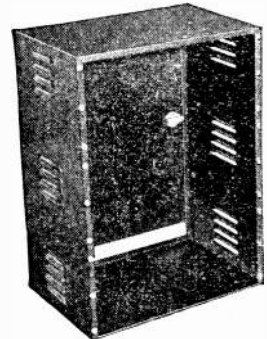
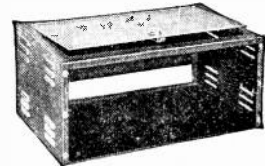
A professional type rack that has been used on many commercial installations, and makes a De Luxe job of any amateur or broadcast transmitter. All-steel construction, welded into an integral unit, to give a lifetime of service. All panel mounting screws are concealed by means of a full length corner trim on each side, as shown in the front view. Door has a grille at the top and bottom, held by 4 sturdy loose-joint hinges and two flush snap-action catches. Further ventilation is provided by louvres in both sides. Panel mounting holes are tapped 12-24 thread on multiple 1 1/4"-1/2" spacings. Finished in black ripple enamel, with corner trim in dull black. Shipped completely assembled.



R6625	Overall size: 67 1/4 x 22 x 15 1/4". Available panel space: 61 1/4 x 19". Clear inside depth: 13 1/4". Shpg. Wt. 210 lbs. List Price, Each	\$77.50
R8325	Overall size: 83 1/4 x 22 x 15 1/4". Available panel space: 77 x 19". Clear inside depth: 13 1/4". Shpg. Wt. 280 lbs. List Price, Each	\$105.00

### "ALL-PURPOSE"

#### Steel Cabinets for Rack Panels

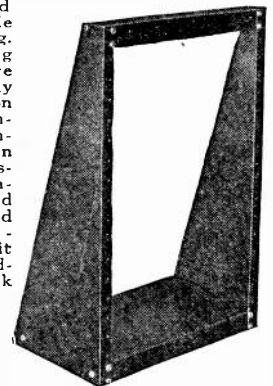


Especially designed to house receivers, transmitters, P.A. systems, etc. Afford neat, professional appearance. All take standard 19" panels. Constructed of 1/16" steel with black crystallized lacquer finish. Have doors with heavy latch for access to chassis. Sides and back have louvres for ventilation. Comes complete with panel mounting screws and washers.

SC128	Cabinet for single panel. Has door in top. 8 3/4" high and 13" deep. Shpg. Wt. 20 lbs. List Price, Each	\$8.80
SC1210	Cabinet for single panel. Door in top. 10 1/2" high, 13" deep. Shpg. Wt. 22 lbs. List Price, each	\$10.75
SC1713	Cabinet for two panels. Has door in top and door on rear panel. 17 1/2" high and 13" deep. Shpg. Wt. 34 lbs. List Price, Each	\$15.50
SC2613	Cabinet for three panels. Has door on rear panel. 26 1/4" high and 13" deep. Shpg. Wt. 42 lbs. List, Ea.,	\$16.50
SC3513	Cabinet for four 8 3/4 x 19" panels. Has door on rear panel only. Cabinet size 35 x 19 x 13" deep. Shpg. Wt. 50 lbs. List Price, Each	\$20.00

### Table Type Relay Racks

Intended for table mounting. Mounting holes are accurately tapped on 1 1/4" centers. Finished in black crystalline enamel, and shipped knocked-down. Fit all standard rack panels.



Cat. No.	H. W. D.	Panel Space	Shpg. Wt.	List Price
TR2520	25x20x12"	21x19"	60 lbs.	\$6.50
TR3220	32x20x12"	28x19"	85 lbs.	8.50





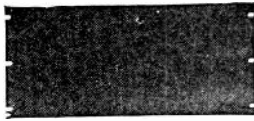
# PAR-METAL RACKS — PANELS — CABINETS



## TYPE "L"

### Steel Rack Panels

19" Long

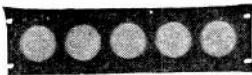


Made in accordance with standard specifications. They are 19" long and will fit the relay racks described. Constructed of 1/8" steel with black crystallized lacquer finish. Available in 12 standard sizes to fill practically every requirement.

No.	Width	Shpg. Wt. Lbs.	List Price
3600	1 3/4"	2	\$0.90
3601	3 1/2"	5	1.00
3602	5 1/4"	7	1.15
3603	7"	8	1.20
3604	8 3/4"	9	1.60
3605	10 1/2"	10	1.95
3606	12 1/4"	12	2.30
3607	14"	13	2.65
3608	15 3/4"	14	2.95
3609	17 1/2"	15	3.30
3610	19 1/4"	16	3.60
3611	21"	17	4.00

NOTE: The above sizes of panels are available in 1/8" aluminum. They are regularly carried with black crystallized finish or unfinished dull aluminum.

### Meter Panels



Of steel, with crystallized lacquer finish. Fit the standard racks. All 19" long and 5 1/4" high. For 3 or 5 meters. 2" and 3" type. Shpg. Wt. 7 lbs.

No.	Holes	Meter Size	List Price
MP32	3	2"	\$1.65
MP52	5	2"	2.45
MP33	3	3"	1.65
MP53	5	3"	2.45

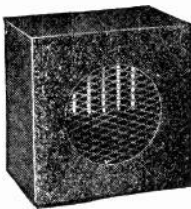
### Speaker Panels

Speaker panels are available in four sizes, to fit 6", 8", 10" or 12" speakers. The opening is covered with a steel grille, giving it a neat, professional appearance. Speaker mounting holes are not included. Finished in a durable, black crystalline enamel.

Cat. No.	Panel Size	Hole Size	Speaker Size	List Price
SP 875	8 3/4" x 19"	4 3/8"	6"	\$2.50
SP1050	10 1/2" x 19"	6 1/2"	8"	3.00
SP1225	12 1/4" x 19"	8 1/2"	10"	4.00
SP1400	14" x 19"	10 1/2"	12"	4.50

### Loud Speaker Cabinets

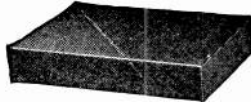
Substantially made from sheet steel, completely enclosed, with louvers in removable back cover. Speaker opening has welded grille to protect speaker against damage. Finished in black crystalline enamel.



Cat. No.	Hole Size	Spkr. Size	Cabinet Size	Shpg. Wt.	List Price
SC 996	4 3/4"	6"	9x9x6"	8 lbs.	\$3.75
SC1170	6 1/2"	8"	11x11x7"	9 lbs.	4.60
SC1380	9"	10"	13x13x8"	15 lbs.	6.50
SC1580	11"	12"	15x15x8"	20 lbs.	8.75

## HEAVY DUTY TYPE

### Blank Steel Chassis Bases



These Chassis are for heavy duty jobs. Made from 1/16" steel with welded corners and reinforcing flanges at bottom. Furnished with removable bottom plates and necessary screws. Finished in black crystalline enamel or cadmium plate as required. Will fit all Relay Racks listed.

#### BLACK CRYSTALLINE FINISH

No.	Dimensions W. L. D.	Shpg. Wt.	List Price
15280	8x17x2"	14 lbs.	\$2.70
15281	8x17x3"	15 lbs.	3.00
15282	11x17x2"	19 lbs.	3.00
15210	11x17x3"	20 lbs.	3.25
15212	13x17x2"	21 lbs.	3.50
15213	13x17x3"	22 lbs.	3.85

#### CADMIUM PLATED

No.	Dimensions W. L. D.	Shpg. Wt.	List Price
15208	8x17x2"	14 lbs.	\$2.70
15209	8x17x3"	15 lbs.	3.00
15211	11x17x2 1/2"	18 lbs.	3.15
15214	13x17x2"	21 lbs.	3.50
15215	13x17x3"	22 lbs.	3.85

## STANDARD TYPE

### Blank Steel Chassis Bases



These chassis are intended for all purposes where a heavy duty chassis is not required. Stamped from one piece of No. 20 gauge cold rolled steel; four solid sides with welded corners. Bottom edges folded in to provide additional reinforcement, and are drilled for bottom plates, which may be purchased separately. Black crystalline enamel or cadmium plated.

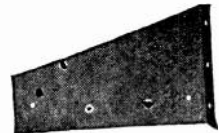
#### CADMIUM PLATED

Cat. No.	Size	Shipping Wt.	List Price
C4500	5 1/2 x 9 1/2 x 1 1/2"	2 lbs.	\$ .75
C4508	5 x 10 x 3"	3 lbs.	1.00
C4509	6 x 14 x 3"	4 lbs.	1.20
C4510	7 x 7 x 2"	2 lbs.	.90
C4511	7 x 9 x 2"	3 lbs.	1.00
C4512	7 x 11 x 2"	3 lbs.	1.10
C4513	7 x 13 x 2"	4 lbs.	1.20
C4514	7 x 15 x 3"	4 lbs.	1.40
C4515	7 x 17 x 3"	5 lbs.	1.50
C4525	10 x 12 x 3"	5 lbs.	1.40
C4524	10 x 14 x 3"	5 lbs.	1.60
C4526	10 x 17 x 3"	6 lbs.	1.70
C4527	10 x 23 x 3"	7 lbs.	2.00
C4516	12 x 17 x 2"	5 lbs.	1.90
C4517	12 x 17 x 3"	6 lbs.	2.10

#### BLACK CRYSTALLINE FINISH

Cat. No.	Size	Shipping Wt.	List Price
B4500	5 1/2 x 9 1/2 x 1 1/2"	2 lbs.	\$ .75
B4508	5 x 10 x 3"	3 lbs.	1.00
B4509	6 x 14 x 3"	4 lbs.	1.20
B4510	7 x 7 x 2"	2 lbs.	.90
B4511	7 x 9 x 2"	3 lbs.	1.00
B4512	7 x 11 x 2"	3 lbs.	1.10
B4513	7 x 13 x 2"	4 lbs.	1.20
B4514	7 x 15 x 3"	4 lbs.	1.40
B4515	7 x 17 x 3"	5 lbs.	1.50
B4525	10 x 12 x 3"	5 lbs.	1.40
B4524	10 x 14 x 3"	5 lbs.	1.60
B4526	10 x 17 x 3"	6 lbs.	1.70
B4527	10 x 23 x 3"	7 lbs.	2.00
B4516	12 x 17 x 2"	5 lbs.	1.90
B4517	12 x 17 x 3"	6 lbs.	2.10

## Steel Brackets

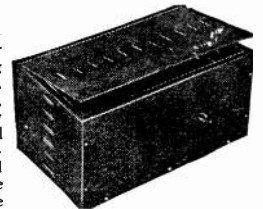


Used to re-enforce racks and panels. Of 1/16" steel with black crystallized lacquer finish. Panels must be at least 7" high. Mounting holes drilled to match H.D. Type Chassis Bases. Shpg. Wt. 3 lbs.

SB78—For 8" base.	List price per Pair	\$1.00
SB711—For 11" base.	List Price, per Pair	1.40
SB713—For 13" base.	List Price, per Pair	1.75

## Hinged Utility Steel Cabinets

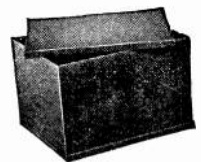
These cabinets are excellent for housing monitors, oscillators, etc. They have full piano hinged doors at the top; the front panels are removable. Finished in black ripple enamel. Shipped knocked-down.



Cat. No.	H. L. D.	For Chassis	List Price
HC788	7x 8x8"	7x 7x2"	\$3.00
HC7108	7x10x8"	7x 9x2"	3.50
HC7148	7x14x8"	7x13x2"	4.00
HC9151	9x15x11"	10x14x3"	5.00
HC1218	12x18x11"	10x17x3"	6.00

## General Utility Steel Cabinets

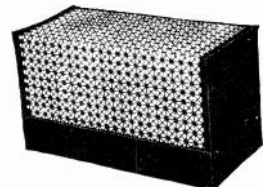
May be used for many purposes such as short wave sets, monitors, shield cans, etc. Substantially made from sheet steel, with welded reinforced corners. Tops and bottoms removable. Finished in black crystalline enamel.



Cat. No.	Size	Shpg. Wt.	List Price
UC565	5 1/2 x 6 x 5 1/2"	3 lbs.	\$1.25
UC596	5x9x6"	5 lbs.	1.80
UC8107	8x10x7"	6 lbs.	2.20
UC8101	8x10x10"	7 lbs.	2.40
UC1128	11x12x8"	9 lbs.	3.00

## Amplifier Foundation Units

These chassis bases and screen covers are similar to those supplied by us to manufacturers of professional amplifiers. Reinforced edges and corners securely spot-welded. Finished in a baked black crystalline enamel.



Cat. No.	Chassis Size	Depth of Cover	Shpg. Wt.	List Price
AF510	5x10x3"	5 3/4"	9 lbs.	\$2.40
AF615	6x14x3"	5 3/4"	10 lbs.	2.75
AF717	7x17x3"	5 3/4"	11 lbs.	3.50
AF1012	10x12x3"	5 3/4"	11 lbs.	3.50
AF1017	10x17x3"	5 3/4"	13 lbs.	4.25

# ICA INSULINE ICA

## RADIO PRODUCTS

### SECTIONAL STANDARD CONSTRUCTION RACK

Designed to suit the various needs in rack construction. Consists of a fundamental base 20"x15 3/4"x2 1/2" high and a sturdy top cover in the form of an inverted tray 20"x14 1/2"x1 1/4" high. From there on, sectional side walls cover in the form of an inverted tray each standard size panel. These sectional side walls are supplied to correspond with each standard size sectionally louvered for air ventilation.

The sections are so designed that any number of sections can be mounted together with any desired standard size panels to suit the purpose in mind while in its original state of construction, and yet permit any future modifications as the need may arise.

Backs are optional for those desiring a completely enclosed job. All parts are made of sturdy steel having a highly durable black baked crinkle finish. Complete mounting hardware furnished with each section.

**Base for ICA Sectional Standard Construction Rack:** Baked Black Crystallized finish.

**Cat. No. 3900**—Size 20"x15 3/4"x2 1/2" ..... **Net Price \$3.30**

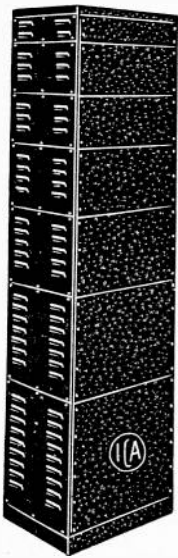
**ICA Fundamental Top Cover:** Is in the form of an inverted tray, with Baked Black Crystallized finish.

**Cat. No. 3901**—Size 20"x14 1/2"x1 1/4" ..... **Net Price \$1.95**

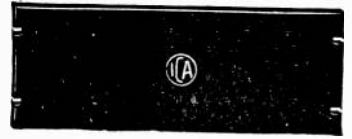
**Side Sections for ICA Sectional Standard Construction Rack:** The side sections are supplied in sets of two sides louvered for air ventilation with Baked Black Crystallized finish together with mounting brackets and the necessary screws, nuts, and lock washers.

Cat. No.	[ Size ]	Set of Two Sides Net Price
3902	3 1/2" x 14 1/2"	\$1.20
3903	5 1/4" x 14 1/2"	1.35
3904	7" x 14 1/2"	1.50
3905	8 3/4" x 14 1/2"	1.80
3906	10 1/2" x 14 1/2"	2.01
3907	12 1/4" x 14 1/2"	2.40
3908	14" x 14 1/2"	2.55
3909	15 3/4" x 14 1/2"	2.70
3910	17 1/2" x 14 1/2"	3.00
3911	19 1/4" x 14 1/2"	3.15
3912	21" x 14 1/2"	3.30

(Including angle brackets, screws, nuts and lock washers)



### STANDARD RACK PANELS COMPLETELY SLOTTED



#### BLACK CRYSTALLIZED FINISH

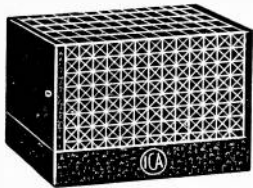
Constructed in accordance with both recognized Standard Specifications. Supplied in steel to conform to Bureau of Standards, General Radio and Western Electric Specs. Supplied in 1/8" thickness completely slotted and finished in a black crystallized enamel. Available in 12 Standard Width sizes of 19" length. The widths are 3/4" undersized for easy fit, according to standard practice.

In ordering Bureau of Standards or General Radio Specifications (available only in steel and aluminum) include the letters **BS** after the Catalog Number.

#### CRYSTALLIZED STEEL

No.	Size	Net Price
3600	13 1/4" x 19"	\$0.54
3601	3 1/2" x 19"	.60
3602	5 1/4" x 19"	.69
3603	7" x 19"	.72
3604	8 3/4" x 19"	.96
3605	10 1/2" x 19"	1.17
3606	12 1/4" x 19"	1.38
3607	14" x 19"	1.59
3608	15 3/4" x 19"	1.77
3609	17 1/2" x 19"	1.98
3610	19 1/4" x 19"	2.16
3611	21" x 19"	2.40

### AMPLIFIER CHASSIS With Metal Shield Covers



The Shield Covers are made of a sturdy heavy duty sheet metal in a perforated cane design as illustrated. Chassis are supplied undrilled. Entire ensemble is finished in a beautiful Black Crystalline Enamel.

No.	Overall Size	Net Price
3871	5" x 9 1/2" x 8 1/4"	\$1.41
3872	5" x 13 1/2" x 8 1/4"	1.62
3873	8" x 12" x 8 1/4"	2.25
3874	7" x 17" x 8 1/4"	2.25
3875	10" x 17" x 8 1/4"	2.52

### Crystallized Finished Cabinets



#### Steel, With Hinged Lids

No.	L.	W.	H.	Net Price
3825	9"	5"	6"	\$1.50
3828	12"	8"	7"	2.25
3830	14"	8"	7"	2.70
3831	18"	12"	9"	3.60

#### Chassis for ICA Cabinets

No.	L.	W.	H.	Net
1560	8 1/2"	4 3/4"	1 1/2"	\$0.45
1561	9 1/2"	7 1/2"	3"	.60
1562	11"	10"	2 1/2"	.90
1521	17"	10"	3"	1.05

### Crackle-Finished Cabinets

Same as above but with Removable Top

No.	L.	W.	H.	Net Price
3800	6"	6"	6"	\$0.75
3801	9"	5"	6"	1.11
3802	10"	8"	7"	1.50
3803	10"	8"	10"	1.65
3804	12"	11"	8"	1.95

### STEEL CHASSIS BASES



No.	Size	Net Price
1527	7" x 12" x 3"	\$0.84
1528	7" x 17" x 3"	.99
1529	7" x 23" x 3"	1.14
1520	10" x 12" x 3"	.90
1521	10" x 17" x 3"	1.05
1522	10" x 23" x 3"	1.20
1530	5" x 9 1/2" x 1 1/4"	.45
1531	7 1/2" x 11" x 2 1/4"	.51
1532	9" x 16" x 2 3/4"	.75

### Crystallized Finished Metal Panels



Both sides finished in Black Crystalline Lacquer. Thickness of Panels 1/8".

No.	Size	Net Price
3175	7" x 10"	\$0.33
3176	7" x 12"	.39
3177	7" x 14"	.42
3178	7" x 18"	.54
3179	7" x 21"	.72
3183	8" x 12"	.42
3184	8" x 14"	.45
3185	8" x 16"	.51
3186	8" x 18"	.54
3187	8" x 21"	.69
3188	10" x 14"	.90
3191	10" x 18"	.90
3192	10" x 21"	1.05

### ICA RADIO PANELS



#### Insuline (Hard Rubber)

High dielectric qualities; moisture-proof; drills easily.

No.	Size	Net Price
800	7" x 10" x 3/8"	\$0.75
801	7" x 12" x 3/8"	.84
802	7" x 14" x 3/8"	1.02
803	7" x 18" x 3/8"	1.23
804	7" x 21" x 3/8"	1.50
805	7" x 24" x 3/8"	1.71
806	7" x 26" x 3/8"	1.86
807	7" x 28" x 3/8"	1.95
808	7" x 30" x 3/8"	2.10

#### Bakelite (Black, Mahogany, Walnut)

No.	Size	Net Price
832	7" x 10" x 1/8"	\$0.66
833	7" x 12" x 1/8"	.79
834	7" x 14" x 1/8"	.92
835	7" x 18" x 1/8"	1.18
836	7" x 21" x 1/8"	1.38
837	7" x 24" x 1/8"	1.57
838	10" x 12" x 1/8"	1.18
842	7" x 10" x 3/8"	.95
843	7" x 12" x 3/8"	1.18
844	7" x 14" x 3/8"	1.38
845	7" x 18" x 3/8"	1.77
846	7" x 21" x 3/8"	2.07
847	7" x 24" x 3/8"	2.37
853	10" x 12" x 3/8"	1.74

### COIL SHIELDS



Made of aluminum with a detachable base.

No.	Inches	Net
1539	2 1/8 x 3	\$0.15
1540	2 3/4 x 3 3/8	.18
1549	3 x 4	.24

NET

# ICA INSULINE RADIO PRODUCTS

## STANDARD RELAY RACKS

These sturdily constructed, handsome relay racks are ideal for use with all types of transmitters and public address systems. Made to standard specifications for mounting any combination of 19" long panels and chassis where heights are in multiples of 1 3/4 inches. Mounting holes are accurately drilled to take the I.C.A. Standard Rack Panels, and tapped for 10 3/32" thread. Substantially braced frame and base prevent wobble and keep unit panels in correct alignment. Finished in black crystallized enamel. Shipped knockdown with necessary bolts, nuts and washers. Easily assembled.

No.	H. W. D.	Wt. Net	Net Price
39C0	3 x 19 3/4" x 16"	28 lbs.	\$9.00
39E1	6 x 19 3/4" x 16"	38 lbs.	11.10

## RELAY RACK BRACKETS

Made of auto body steel, finished in crystalline lacquer finish. Used to reinforce racks and for mounting of panels, shelves, chassis, etc.

Net Price

No. 3950—5" Base Brackets (Per Pair)	\$0.36
No. 3951—8" Base Brackets (Per Pair)	.57
No. 3952—11" Base Brackets (Per Pair)	.75

## METER PANELS

Made of steel. Finished in black crystalline lacquer. Size 5 1/4" x 1 9/16".

No.	No. Holes	Meter Size	Net Price
3351	5	2"	\$1.44
3652	3	2"	.99
3353	5	3"	1.50
3554	3	3"	1.05

## THREADED INSULEX TRANSMITTING COIL FORMS

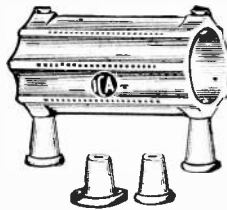
For 20 and 40 Meters

No.	Net Price
2650—Without supporting legs	\$0.60
2651—Complete with mounting legs and hardware	.93

For 80 and 60 Meters

Has beautiful glazed surface 4" O.D. x 6 1/2" long for 80 and 160 Meters.

No.	Net Price
2652—Without Supporting Legs	\$1.20
2653—With Supporting Legs	1.35



## ICA TERMINAL STRIPS

ICA Terminal Strips are specially adapted for amplifiers, mixing panels, radio sets, short wave radio sets and other uses. Made of black bakelite with specially designed nickel plated phosphor bronze screw terminals with non-removable collars.



No.	Description	Net Price
2420	2 Terminal Strip No Marking	\$0.09
2419	2 Terminal Strip Marked A&G	.11
2418	2 Terminal Strip Marked Output	.11
2417	2 Terminal Strip Marked Input	.11
2414	3 Terminal Strip No Marking	.12
2415	3 Terminal Strip Marked 1, 2, 3	.15
2413	4 Terminal Strip No Marking	.18
2408	4 Terminal Strip Marked 1, 2, 3, 4	.21
2405	5 Terminal Strip No Marking	.21
2406	5 Terminal Strip Marked 1, 2, 3, 4, 5	.24
2404	6 Terminal Strip No Marking	.24
2402	6 Terminal Strip Marked 1, 2, 3, 4, 5, 6	.27
2412	7 Terminal Strip No Marking	.30
2411	7 Terminal Strip Marked 1, 2, 3, 4, 5, 6, 7	.36

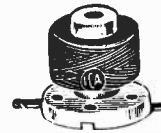
## IRON CORE R.F. CHOKE COILS



The use of Iron Cores in R. F. Choke Coils makes available the greater efficiency and inherent advantages of this new type of coil construction.

No.	Inductance	Net Price
6200	2.5 M.H.	\$0.36
6201	3.5 M.H.	.36
6202	5.5 M.H.	.39
6203	10 M.H.	.45
6204	30 M.H.	.51
6205	60 M.H.	.69
6206	80 M.H.	.69
6207	125 M.H.	.90

## R.F. CHOKES



on Insulex Forms

For all type receivers. Can be mounted almost any place.

No.	Inductance	Net Price
1777	2 1/2 M.H.	\$0.24
1776	3 1/2 M.H.	.24
1775	5 1/2 M.H.	.24
1774	10 M.H.	.27
1772	30 M.H.	.33
1773	60 M.H.	.36
1771	80 M.H.	.39

## HIGH INDUCTANCE R.F. CHOKE

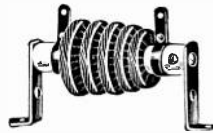
125 M.H.

Wound on Insulex Molded Form for use in R.F. Plate Filter circuits and Impedance Coupled circuits.

No. 1778.....Net Price \$0.75

## TRANSMITTING R.F. CHOKES

Tapered Sections



Has a continuous universal winding in five tapered sections. Designed for maximum impedance in amateur bands from 160 meters downward.

No.	Ind. M.H.	Curr. M.A.	Res. Ohms	Net Price
266	2.8	1000	5	\$1.20
267	5.3	500	12.5	1.05

## ICA ULTRA HIGH FREQUENCY

2 1/2-5-10 Meter Plug-in Coils



No.	Net Price
1630	\$0.39

No.	Net Price
1631	.42

No.	Net Price
1632	.45

Jack Base to take the above interchangeable plug-in coils. Complete with "Insulex" Supporting Pillars.

No.	Net Price
1633	\$0.36

Set of three plug-in coils, and jack base with mounting pillars.

No.	Net Price
1625	\$1.50

## INSULEX R.F. CHOKES

HIGH FREQUENCY WIRE WOUND



With leads for easy mounting. Designed for high-frequency receivers, and have extremely low distributed capacity.

No.	Inductance	Net Price
2277	2 1/2 M.H.	\$0.24
2278	3 1/2 M.H.	.30
2279	5 M.H.	.30
2280	10 M.H.	.36
2281	30 M.H.	.39
2282	60 M.H.	.45
2283	80 M.H.	.45

## HEAVY-DUTY TRANSMITTING CHOKE



For current to 500 Ma. Dist. cap. 1.5 mfd. Inductance 5.3 M.H. D.C. resist. 12 ohms.

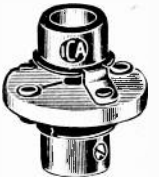
No. 278.....Net Price \$0.90

2 1/2 M.H. 1000 M.A.

No. 280.....Net Price \$1.05

## FLEXIBLE COUPLERS

Made of Flexible bakelite.



No. 2101.....Net Price \$0.21

## INSULEX FLEXIBLE COUPLERS

Utilizes a circular disc of Insulex 3/4" diameter and two 1/4" bushings.

No. 2100.....Net Price \$0.30

# ICA INSULINE ICA

## RADIO PRODUCTS

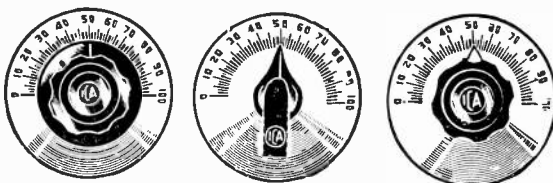
### Brass Black Satin Finish Dial Plates and Pointer Knobs with Etched Silver Numerals



TYPE A                      TYPE B                      TYPE C

Specifications		Type B		Type C		Type A		Plates Only	
Calibra.	Deg. Diam.	No.	Net	No.	Net	No.	Net	No.	Net
0-100	325	2214	\$0.36	2264	\$0.54	2273	\$0.57	2230	\$0.21
100-0	180	2215	.36	2265	.54	2274	.57	2231	.21
0-100	180	2216	.36	2266	.54	2275	.57	2232	.21
100-0	180	2217	.27	2267	.42	.....	.....	2233	.15
0-100	325	2218	.27	2268	.42	.....	.....	2234	.15
100-0	325	2219	.27	2269	.42	.....	.....	2235	.15
0-100	180	2220	.27	2270	.42	.....	.....	2236	.15

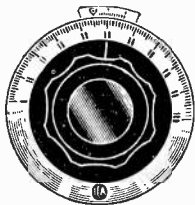
### ICA Chrome Silver Dial Plates and Pointer Knobs



TYPE C                      TYPE A                      TYPE B

Specifications		Type A		Type B		Type C		Plates Only	
Calibra.	Deg. Diam.	No.	Net	No.	Net	No.	Net	No.	Net
0-100	180	2240	\$0.39	2284	\$0.54	.....	.....	2294	\$0.30
0-100	325	2241	.39	2285	.54	.....	.....	2295	.30
0-100	180	2242	.57	2286	.75	2290	.78	2296	.45
0-100	325	2243	.57	2287	.75	2291	.78	2297	.45
0-100	180	.....	.....	2288	.96	2292	.96	2298	.51
0-100	325	.....	.....	2289	.96	2293	.96	2299	.51

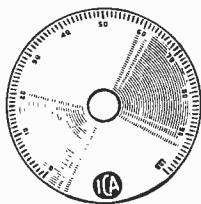
### ICA Chrome Silver Dials With Finger-Grip Flange Knobs



Beautiful, chrome silver dial plates accurately Etcho-engraved with black numerals and calibrations.

No.	Size	Degrees	Cal.	Net Price
2170	2 3/4"	325	0-100	\$0.75
2171	2 3/4"	180	0-100	.75
2168	4"	325	0-100	1.05
2169	4"	180	0-100	1.05

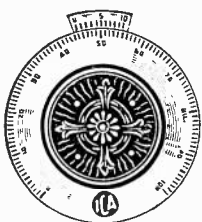
### ICA Chrome Silver Dial Plates Less Knob



2 3/4" and 4" diameter. Two types, calibrated 180 degrees 0-100 and 325 degrees, 0-100.

No.	Size	Degrees	Cal.	Net Price
2196	2 3/4"	325	0-100	\$0.36
2197	2 3/4"	180	0-100	.36
2194	4"	325	0-100	.51
2195	4"	180	0-100	.51

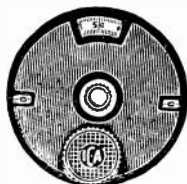
### Slow Motion Dials with Vernier Grip Knobs



Chrome-Silver 1" dial with grained satin finish and black etched numerals.

No.	Net Price
2193—325 degrees 0-100.....	\$0.99
2199—180 degrees 0-100.....	.90

### Bakelite Vernier Dials With Three Windows



Friction drive; 4" diameter. 9 to 1 ratio. For 1/4" shaft.

No. 2211.....Net Price \$0.75

#### With One Window

Vernier type. 4" diameter. 1/4" shaft. 9 to 1 ratio.

No. 2212.....Net Price \$0.75

De Luxe Vernier. 3" diameter. 1/4" shaft. 7 to 1 ratio.

No. 2213.....Net Price \$0.60

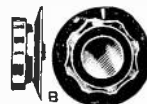
### ICA Bakelite Pointer Knobs



Ideal knob for test equipment. 5-meter trapezoids, etc. Two sizes for 1/4" shaft and set screw.

No.	Net Price
1155—1 1/4" long Black.....	\$0.075
1156—2 1/4" long Black.....	.09
1157—1 1/4" long Brown.....	.09
1158—2 1/4" long Brown.....	.12

### Finger-Grip Pointer Knobs



Flange type, with white engraved indicating lines.

No.	Net Price
1169—Less Pointer—2 3/4".....	\$0.30
1170—With Pointer—2 3/4".....	.36
1171—With Flange—2 3/4".....	.30
1172—With Flange—3".....	.39

### Finger-Grip Pointer Knobs

Moulded of black bakelite with 1/4" shaft hole. Pointer-type knob; uses a non-conducting material.



No.	Net Price
1165—Less Pointer—1 1/4".....	\$0.18
1166—With Pointer—1 1/4".....	.24
1167—Less Pointer—1 1/2".....	.24
1168—With Pointer—1 1/2".....	.30

### ICA Indicating Plates



For amplifiers, receivers, transmitters, testing equipment, etc.

No.	Marking	Deg.	Net Price
2259	1 to 6	180	\$0.05
2450	1 to 5 (Volume)	325	.09
2451	1 to 5 (Tone)	325	.09
2452	1 to 10	325	.09
2453	Off-On. with arrow	325	.09

### Tube Shields

For New '55, '57, '58, etc., Tubes. Supplied complete with base.

No. 1708  
Net Price.....\$0.12



### Set Screws Replacement for Set Screw Knobs, Etc.



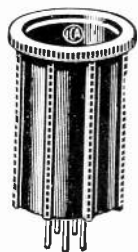
These set screws will fit all type knobs, insulated tools, flexible couplers, etc.

Available in the following sizes:

No.	Size	Net Price
318	8/32 x 7/16".....	\$2.10 per C
319	6/32 x 1/8".....	2.10 per C
320	8/32 x 3/16".....	2.10 per C
321	10/32 x 1/4".....	2.10 per C

# ICA INSULINE RADIO PRODUCTS ICA

## Transmitting Coil Forms



Amber color. Coil forms are ribbed for air space winding. Size of body is  $2\frac{1}{4}$ " diameter and  $3\frac{1}{2}$ " long.

No.	Pr.	Net Price
2670	4	\$0.36
2671	5	.39
2672	6	.42

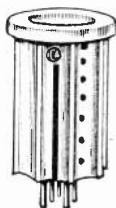
## Grooved Transmitting Coil Forms

Similar to above coil forms, but with ribs grooved for Precision Space Winding.

No.	Prongs	Net Price
2675	4-prong	\$0.51
2676	5-prong	.54
2677	6-prong	.57

## Low-Loss Insulex "Ribbed" Coil Forms

No.	Prongs	Net Price
952	4	\$0.30
953	5	.33
954	6	.36
955	7	.39



## Large Low-Loss "Ribbed" Coil Forms



Supplied in six attractive colors: red, blue, green, brown, black and orange. Size  $3\frac{3}{8}$ " x  $1\frac{1}{8}$ ".

No.	Prongs	Net Price
1051	4-prong	\$0.18
1052	5-prong	.18
1053	6-prong	.21
1054	7-prong	.24

Specify Colors Desired

## ICA Small "Ribbed" Coil Forms

Made of Amber Color Bakelite

Size:  $1\frac{1}{8}$ " diameter,  $2\frac{1}{4}$ " high.

No.	Prongs	Net Price
2158	4-prong	\$0.12
2159	5-prong	.15
2160	6-prong	.15



## ICA Universal Midget

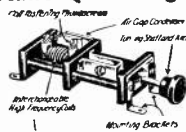


Removable shaft with lock-nut provides permanent condenser alignment. Insulated with Insulex.

No.	Cap. Mmfd.	Spacing	Net Price
111	15	.023"	\$0.51
112	25	.023"	.57
113	50	.023"	.63
114	100	.023"	.69
115	140	.023"	.90
116	35	.026"	.60
125*	35	.077"	.96
126*	50	.077"	1.20

\* X'mutt'g types for neutralizing and tuning.

## Ultra-High Frequency Constant 'Q' Tuning Coils



Synchronously varying air-dielectric cond.; constant L to C Ratio at all frequencies. Mounting form supplied with two interchangeable coils— $1\frac{1}{4}$  to 6 meters—5 to 10 meters. No. 1658..... Net Price \$2.85

## STAND-OFF INSULATORS

### Little Pete Stand-Off Insulator

Measures only 1" high. Base measures  $\frac{1}{2}$ " x  $\frac{1}{4}$ ". No. 2300..... Net Price \$3.60 per C

### Junior Pete Stand-Off Insulator



Measures  $1\frac{3}{8}$ " high. Base is  $\frac{3}{4}$ " x  $1\frac{1}{8}$ ".

No. Net Price  
2301.....\$4.20 pec C

### Big Pete Stand-Off Insulator

Measures  $1\frac{3}{4}$ " high. Oblong base  $1\frac{1}{2}$ " x  $1\frac{1}{2}$ ". No. 2302..... Net Price \$6.00 per C

### Stand-Off or Wall Insulator

Height  $2\frac{3}{8}$ " Round Base—2" diameter. No. 2303..... Net Price \$0.09 each

### Sub-Panel Stand-Off Insulators

Size  $\frac{3}{4}$ " high x  $\frac{5}{8}$ " diameter base. No. Net Price  
2305.....\$0.06 each

Size 1" high x  $\frac{3}{4}$ " base diameter with  $\frac{3}{8}$ " center hole for mounting. No. Net Price  
2306.....\$0.09 each



### ICA Sub-Panel Stand-Off Insulators

Measures  $1\frac{1}{4}$ " high x  $\frac{7}{8}$ " diameter of base. No. 2307..... Net Price \$0.12 each

## Insulex Wafer Sockets



Sub-panel or base board mounting. Low loss.

No.	Prongs	Net Price
2600	4	\$0.24
2601	5	.24
2602	6	.27
2603	7 Large	.30
2604	7 Small	.30
2605	8 Octal	.30



## Insulex Transmitting Socket

For Type 802 Tube. No. 293B..... Net Price \$0.33  
For '52, '10, '66 Tubes. No. 290B..... Net Price \$0.30  
Sub-Panel Mounting. No. 2600..... Net Price \$0.24

## Insulex Giant 5-Pin Transmitting Socket



For RCA 803, Sylvania 803A, Raytheon RK 28 Type Tubes

Easy mounting on panel or sub-panel. No. 960..... Net Price \$1.20

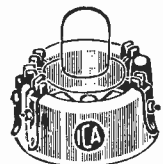
## Insulex Transmitting Socket



Panel Mounting (with bracket) No. 957—50 Watts..... Net \$1.05

Table Mounting No. 956—50 Watts..... Net \$0.90

## Acorn Tube Socket Insulex For Ultra Short Waves



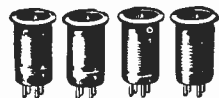
$1\frac{1}{2}$ " diam.  $\frac{3}{8}$ " high. No. 959..... Net Price \$0.60

## New and Improved Crystal Holder



Made of Insulex Will accommodate crystals up to .250" thick x  $1\frac{1}{8}$ " square. No. 414..... Net Price \$0.90

## ICA Standard Plug-In Coils and Coil Forms



**4 PRONGS—2 WINDINGS**  
Short-Wave Meters—16-36; 33-65 57-115; 108-217.  
No. 1421B..... Net Price \$0.99  
Broadcast Meters—190-310; 300-550.  
No. 1430B..... Net Price \$0.90  
No. 1440B—9.5 to 21 meters. Net Price.....\$0.39

**5 PRONGS—2 WINDINGS**  
(same as above)  
No. 1437—16-217 meters. Net Price.....\$1.20

**6 PRONGS—3 WINDINGS**  
Short-Wave Meters—16-38; 35-75; 73-137; 135-200.  
No. 1423B..... Net Price \$1.50  
Broadcast Meters—190-310; 300-550.  
No. 1424B..... Net Price \$1.11

No. 1442B—9.5 to 21 meters. Net Price.....\$0.45

**LONG-WAVE COILS**  
4 Prongs—2 Windings  
No. 1484—4 coils, 450-2000 meters. Net Price.....\$2.25

**SMALL BAKELITE FORMS**  
No. 1108B—4-prong..... Net \$0.12  
No. 1113B—5-prong..... Net .12  
No. 1114B—6-prong..... Net .12

**COIL FORM WITH PADDING CONDENSER**  
No. 1463—80 mmfd..... Net \$0.27  
No. 1464—180 mmfd..... Net .27

## ICA Ribbed Plug-In Coils and Coil Forms



**SHORT-WAVE**  
4 Prongs—2 Windings  
No. 1471—4 coils, 16-217 meters. Net Price.....\$1.11  
No. 1472—1 coil, 9.5-21 meters. Net Price.....\$0.45

**5 PRONG SHORT-WAVE**  
(2 Windings)  
No. 1465—4 coils, 13-200 meters. Net Price.....\$1.35

**6 PRONG SHORT-WAVE**  
(3 windings)  
No. 1474—4 coils, 16-200 meters. Net Price.....\$1.65  
No. 1475—1 coil, 9.5-21 meters. Net Price.....\$0.54

**COIL FORM WITH PADDING CONDENSER**  
No. 1448—5-prong; 80 mmfd. Net Price.....\$0.30  
No. 1449—5-prong; 180 mmfd. Net Price.....\$0.30

**SMALL RIBBED FORMS**  
No. 2158—4-prong..... Net \$0.12  
No. 2159—5-prong..... Net .15  
No. 2160—6-prong..... Net .15

# BLILEY CRYSTAL UNITS

## TYPE LD2 MOUNTED CRYSTAL FOR THE 40, 80, 160 METER BANDS



The type LD2 amateur frequency crystal unit is a mounted, precision, low drift crystal for the 40, 80, or 160 meter amateur bands. The crystal is carefully cut from selected Brazilian Quartz, ground to exacting precision, accurately calibrated and rigidly tested. It possesses unusual activity and has a frequency drift of less than 4 cycles/MC./°C. The mounting is of low-loss molded Bakelite and the crystal is held under constant spring pressure between two stainless steel electrodes. The unit plugs into any standard 5 prong tube socket and may be mounted in any position.

Type LD2—Within 5 KC. of specified frequency or choice from dealer's stock.....Net  
Supplied to exact integral specified KC's. .Net

**\$4.80**  
**\$5.90**

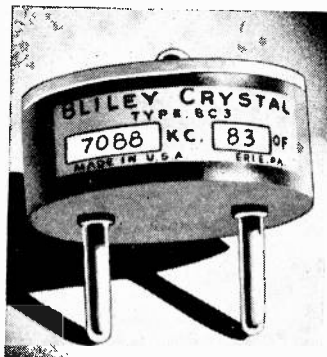
## TYPE BC3 MOUNTED CRYSTAL FOR THE 40, 80 METER BANDS

Here is a moderately priced mounted X cut crystal for the 40 and 80 meter amateur bands. The crystal has been designed for maximum efficiency and is a powerful oscillator. It has a frequency drift of only 23 cycles/MC./°C. and is thoroughly reliable in every respect.

The one-piece molded Bakelite holder is designed to plug into a standard 5 prong tube socket and may be mounted in any position. The cover plate also serves as one crystal electrode. This aids in the dissipation of heat developed by the crystal in oscillating, thereby reducing actual frequency drift.

Type BC3—Within 5 KC. of specified frequency or choice from dealer's stock.

NET  
**\$3.95**



Supplied to exact integral specified KC's.

NET  
**\$4.95**

## TYPE HF2 MOUNTED CRYSTAL FOR THE 20 METER BAND



A mounted crystal designed especially for high frequency operation. The crystal is highly active, easily excited, and fully dependable. Frequency drift is only 20 cycles/MC./°C.

The complete units are supplied in the full range of 14.0 to 15 MC. for use in the 20 meter band (14.0-14.4 MC.) and also for frequency multiplying to the 10 and 5 meter bands. The mounting is molded Victrol G, a material which has extremely low RF losses. The holder plugs into standard 5 prong tube sockets and may be mounted in any position.

Type HF2—14.0 to 14.4 MC., within 15 KC. of specified frequency .....Net

**\$6.50**

Within 5 KC. of specified frequency.....Net

**\$10.00**

14.4 to 15.0 MC., within 30 KC. of specified frequency .....Net

**\$6.50**

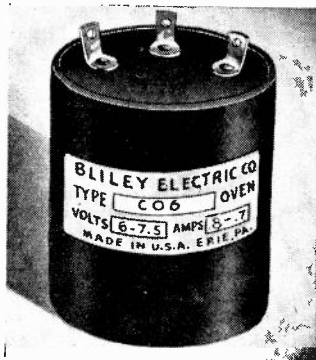
Within 5 KC. of specified frequency.....Net

**\$15.00**

## TYPE CO6 CRYSTAL OVEN FOR BLILEY HF2, BC3, LD2 UNITS

A compact temperature control unit designed for use with any standard Bliley type HF2, BC3, or LD2 unit where the addition of temperature control is desired for greater frequency stability. For this purpose, the type CO6 oven is ideal as circuit or transmitter changes are not usually required.

In application, the oven is connected by means of flexible wires to either a 6 or 7.5 V. source and is fitted over the crystal holder in the transmitter. The oven is held in position by friction and, because no clamps or screws are required, it can be readily removed and used for other Bliley Crystal Units as desired. The crystal temperature is maintained within a maximum variation of 2° C. from the preadjusted temperature of 50° C.



Type CO6

NET

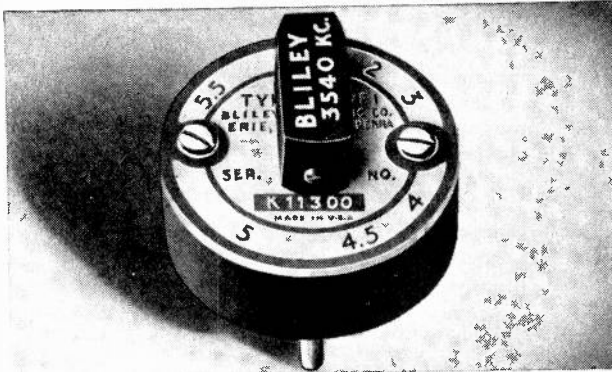
**\$3.25**

We can also supply Bliley General Communication Frequency Crystals and Mountings for any frequency from 20 KC. to 28 MC. Write regarding your requirements and we will quote promptly.

# BLILEY CRYSTAL UNITS

## VARIABLE FREQUENCY CRYSTAL UNIT

TYPE VF1



Here, at last, is an amateur crystal control unit whose frequency can be changed at will. Engineered in the Bliley laboratories, this new unit fills a long felt need in amateur communication. Dependable in every respect and easily installed, the type VF1 unit is indispensable in any amateur station.

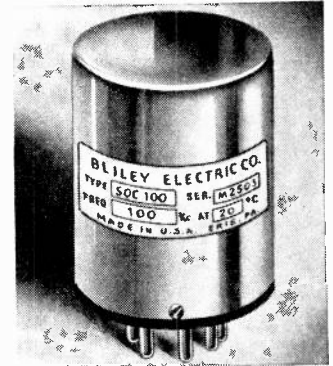
The Bliley type VF1 Variable Frequency Crystal Unit contains an 80 meter low drift crystal (drift under 4 cycles/MC./°C.) and provides positive frequency control without appreciable loss of activity or frequency stability. A mere twist of the control knob mounted directly on the holder will change the crystal frequency up to 6 KC., plus, from the fundamental frequency engraved on the crystal knob, 12 KC. when doubling, and 24 KC. when quadrupling to 20 meters. The power output of the type VF1 Unit at its minimum frequency is the same as any Bliley LD2 Unit, while at its maximum frequency the power output is decreased by not more than 20%. The specially designed Bakelite holder plugs into a standard 5 prong tube socket and may be mounted in any position.

The Type VF1 Unit can be used to replace crystal units now in use, the only circuit change recommended being a slightly higher C to L ratio crystal tank than customarily employed. With the average transmitter, no change in tuning will be required over the entire adjustable range of the VF1 Unit.

VF1—Within 5 KC. of specified minimum frequency in the 80 meter band .....	Net	<b>\$8.00</b>
Minimum frequency at exact integral specified KC's. in the 80 meter band .....	Net	<b>\$10.00</b>

## STANDARD FREQUENCY CRYSTAL UNIT

TYPE SOC100



A 100 KC. mounted crystal of high precision designed for use in frequency standards. This unit, in a simple circuit, provides reliable accuracy for calibration of frequency meters, test oscillators, radio receivers, or frequency measurements in general.

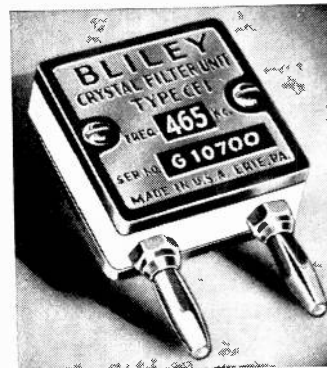
The rigidly mounted crystal has a frequency temperature coefficient of less than 3 cycles/MC./°C., which value is sufficiently low that temperature control is not necessary for general practice. Included in the aluminum shielded mounting is a tank coil of the proper characteristics for use with this crystal. The complete unit plugs into any standard 5 prong tube socket and may be mounted in any position. Full instructions furnished.

Type SOC100 .....	Net	<b>\$18.50</b>
Type SOC100X—Mounted 100 KC. X cut bar, but less tank coil .....	Net	<b>\$9.50</b>

## BLILEY CRYSTAL FILTER TYPE CF1

A scientifically designed, mounted quartz filter crystal for use in the first I.F. stage of short wave receivers. This unit, properly connected into the circuit, makes possible an extremely high degree of selectivity.

Each crystal is ground for maximum efficiency and has no spurious responses within 7 KC. of the fundamental. The low-loss ceramic holder is normally supplied with tube pins for plugging into any standard 5 prong tube socket. G.R. plugs, 3/4 inch on centers, are available if desired. Type CF1 units are supplied for I.F. frequencies of 456, 465, 500 and 525 KC. They are excellent for controlling oscillators used for radio set alignment or testing purposes.



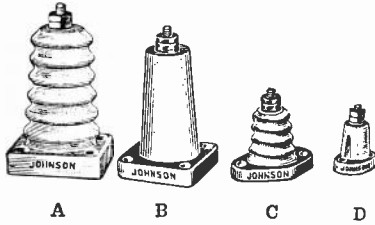
Type CF1	NET	<b>\$5.50</b>
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**We can also supply Bliley General Communication Frequency Crystals and Mountings for any frequency from 20 KC. to 28 MC. Write regarding your requirements and we will quote promptly.**

# E. F. JOHNSON COMPANY

MANUFACTURERS OF *Radio Transmitting Equipment*

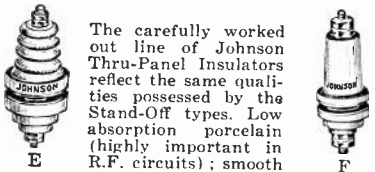
## STAND-OFF INSULATORS



The original Johnson Stand-Off Insulators are characterized by perfection of ceramic design, logical proportions and range of sizes, accuracy, and, most important, a very superior quality of porcelain and hardware. Styles B and C have unbreakable cadmium plated drawn steel bases and as usual mount in very little space. Jack types are available in most sizes.

Cat. No.	Body Height	Hardware	Style	Net Price
20	1 1/8"	10-32	D	\$0.07
20J	1 1/8"	74 Jack	D	.09
22	1 1/8"	8-32	D	.05
22J	1 1/8"	74 Jack	D	.07
24	5/8"	6-32	D	.04 1/2
60	4 1/2"	1 1/2-20	A	.39
62	2 3/4"	1 1/2-20	A	.18
65	2 3/4"	10-32	C	.12
65J	1 3/8"	74 Jack	C	.15
66	2 3/4"	1 1/2-20	B	.21
66J	2 3/4"	76 Jack	B	.33
67	4 1/2"	1 1/2-20	B	.33
67J	4 1/2"	76 Jack	B	.45

## THRU-PANEL INSULATORS



The carefully worked out line of Johnson Thru-Panel Insulators reflect the same qualities possessed by the Stand-Off types. Low absorption porcelain (highly important in R.F. circuits); smooth glazing; solid brass

nickel plated hardware with milled nuts; cushion washers, flat, large area mounting surfaces; longer bottom sections with extended leakage path; soldering terminals on jack types—are features of Johnson design.

Cat. No.	Body Height	Hardware	Net Price
40	1 1/4"	10-32	\$0.15
40J	1 1/4"	74 Jack	.18
42	7/8"	10-32	.12
42J	7/8"	74 Jack	.15
44	5/8"	6-32	.08 1/2
45	1 3/8"	10-32	.18
45J	1 3/8"	74 Jack	.21
4576J	1 3/8"	76A Jack	.33
46	2 3/8"	1 1/2-20	.33
46J	2 3/8"	76 Jack	.45
47	4 1/2"	1 1/2-20	.47
47J	4 1/2"	76 Jack	.60

45, 45J, and 4576J are Style E, others Style F.

## HANDLE INDICATORS

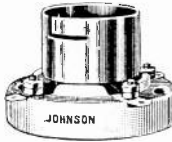


Highly attractive solid molded Bakelite controls which enhance the appearance of any equipment. "Window" design makes possible three separate scales if desired. No. 204 has 4" diameter etched scale with polished figures on black background, and fits 1/4" shaft. No. 206 is similar, with 6" scale, fits 1/4" shaft, and has removable bushing for 3/8" shaft.

No. 204—Handle Indicator.....	\$0.60
No. 206—Handle Indicator.....	.75

## TRANSMITTING TUBE SOCKETS

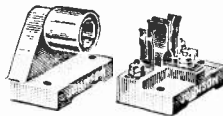
For many years the accepted "best" for mounting "UX" and "50 Watt" tubes, now also made for 5 prong tubes such as the RK28 and RCA803. All have a heavy polished nickel plated brass shell—a necessity for properly supporting transmitting tubes. Contacts are one piece, of heavy cadmium plated phosphor bronze, and make firm wiping side contact with the tube prongs. Connections may be soldered directly to contact springs. "FB" types are for vertical panel mounting and are enclosed in black finished cast aluminum cases. Bases are of fine quality low absorption porcelain.



Cat. No.	Type of Tube	Net Price
210	"UX" base	\$0.60
210FB	"UX" base	1.50
211	"50 watt"	.90
211FB	"50 watt"	2.10
216	5 prong	1.50

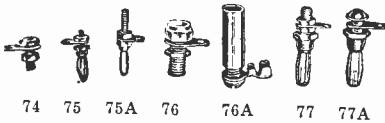
## "250 WATT" SOCKET SET

A new improved mounting for 204A, 840, and similarly based tubes. Plate terminal has "safety cup," preventing accidental displacement of the tube. White glazed low absorption porcelain bases.



No. 215—"250 Watt" Socket Set ..	\$2.10
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## PLUGS AND JACKS "BANANA SPRING" TYPE



Johnson perfected design, nickel-silver springs, and high grade nickeled brass screw machine parts with accurate threads and milled nuts, result in superior plugs and jacks of this popular type. Studs extend full length of springs. 77A Plug has long screw for mounting on ceramic coil forms, etc.

Cat. No.	Length	Thread	Net Price
74 Jack	1 1/8"	1/4-28	\$0.03 1/2
75 Plug	3/4"	6-32	.03 1/2
75A Plug	3/4"	6-32	.03 1/2
76 Jack	1 3/8"	3/4-24	.15
76A Jack	1 3/8"	1/4-20	.15
77 Plug	1 1/8"	1/4-28	.12
77A Plug	1 1/8"	10-32	.15

\*Lengths do not include screw thread.

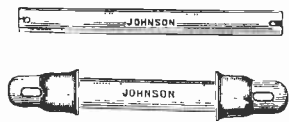


A Johnson development, to solve the need for mechanically strong, low resistance plugs and jacks, having no "wobble." Made of brass, brightly nickeled, with phosphor bronze spring giving permanent tension and smooth action. Plugs will fit into copper tubing of same size as body, and have holes in threaded ends for soldering leads. 73A plug has long screw for mounting on ceramic coil forms, etc.

Cat. No.	Length*	Thread	Net Price
70 Jack	1 1/2"	1/4-20	\$0.21
71 Plug	1 1/2"	1/4-28	.07
72 Jack	1 1/8"	10-32	.12
73 Plug	1"	10-32	.03 1/2
73A Plug	1"	10-32	.03 1/2

\*Lengths do not include screw thread.

## ANTENNA INSULATORS



These insulators are of genuine WET PROCESS porcelain with smooth white glazing. The all-porcelain types are 1" in diameter and will stand 1500 pounds pull. 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. The aluminum alloy fittings are non-corrosive.

Cat. No.	Net Price	Cat. No.	Length	Net Price	
107	7"	151	8"	15 1/4"	\$4.20
112	12"	152	12"	19 1/4"	5.10
120	20"	153	18"	25 1/4"	7.20

## STRAIN INSULATORS

The No. 32 Airplane Strain Insulator is also very useful for light guys and receiving antennas. The new No. 38 "Cruciform" Strain Insulator is specially designed for K.F. applications, having low capacity, long leakage path, light weight. Both are 1 1/2" long, of white glazed low absorption porcelain.

No. 32—Airplane Insulator .....	\$0.04 1/2
No. 38—Strain Insulator .....	.09

## TRANSPOSITION INSULATORS

Much used for both receiving and transmitting feed lines. This original Johnson insulator simplifies installation, weighs very little, does not twist the line, and has high insulating value. White glazed low absorption porcelain.

No. 31—Transposition Insulator .....	\$0.07
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## FEEDER SPREADERS

Every amateur transmitting and receiving need is supplied by these new 2", 4", and 6" feeder spreaders. 3/4" x 1/2" cross section, of white glazed low absorption porcelain.

No. 132—2" long. Net Price.....	\$0.07
No. 134—4" long. Net Price.....	.09
No. 136—6" long. Net Price.....	.12
No. 146—6" heavy duty. Net Price.....	.24

## ENAMELED COPPERWELD ANTENNA WIRE



Johnson Enameled Copperweld Antenna Wire is the ideal material for transmitting doublets, directional antenna systems, and other applications where the wire must stretch nor sag. It has a steel core, welded to a heavy copper exterior and enameled, combining high R.F. conductivity, freedom from corrosion, and almost three times the strength of ordinary enameled copper antenna wire. Supplied in 100, 150, 200, 500 and 1000 ft. coils, or in special lengths.

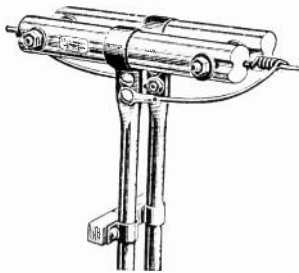
Cat. No.	B & S	Ft. per	Strength	Net per 100 ft.
346	8	22	1700 lbs.	\$2.40
348	10	34 1/2	1130 lbs.	1.50
350	12	54	720 lbs.	.90
352	14	85	400 lbs.	.60

Note: See other side for ANTENNAS



# E·F·JOHNSON·COMPANY

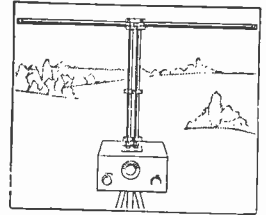
MANUFACTURERS OF *Radio Transmitting Equipment*



Type "Q" Antenna

## TYPE "Q" ANTENNA

The Johnson Type "Q" Antenna has achieved outstanding success in high frequency transmitters throughout the world because of its high efficiency. The special quarter-wave tubing transformer accurately matches line and antenna impedances. Hence the Type "Q" will radiate TWICE as much power as the common unmatched antenna-feeder system.

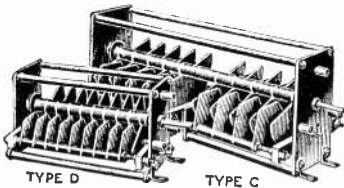


5 Meter "Q" Antenna

## SPECIAL 5 METER "Q" ANTENNA

This special form of "Q" antenna for 5 meters is designed for convenient installation with fixed or portable transmitters. May be mounted directly on the transmitter case, or suspended in the air with a transmission line back to the equipment. The 5QM is a special model, Mycalex insulated in place of porcelain.

Catalog No.	5Q	5QM	10Q	20Q	40Q	80Q
Band (meters)	5	5	10	20	40	80
Your No: Price	\$3.90	\$5.70	\$3.75	\$5.94	\$10.50	\$19.65



## VARIABLE CONDENSERS

Johnson Condensers have been especially designed for high frequency transmitting—not merely adapted from receiving condenser parts. Careful engineering has made

possible extreme values of capacity and plate spacing in comparatively small bulk. Heavy construction is used throughout—in the end plates, tie-rods, rotor and stator plates, spacers, insulation, bearings, contacts. Genuine MYCALEX and ALSMAG 196 Ceramic insulation is used—both the finest money can buy—with long path from stator to frame. The most expensive condensers to manufacture, yet averaging with the lowest in price!

### NOTE THESE UNUSUAL FEATURES!

Heaviest plates, edges smoothly rounded . . . MYCALEX and ALSMAG 196 insulation . . . Long insulation paths, few in number . . . Large laminated rotor brushes front and rear . . . Adjustable bi-metallic cone bearings . . . Heavy tie rods for ample protection and frame rigidity . . . Large diameter shaft and spacers properly located for stiffness of rotor and stator assemblies . . . Shafts extended both front and rear . . . Insulated tie-rods eliminating "short-circuit loops" . . . High capacities and wider spacings made possible by Johnson design.

### GENERAL SPECIFICATIONS

Material: Aluminum. Plates .051" thick, edges rounded and polished; ends 1/8" thick; tie-rods, 1/8" diameter; frame is satin etched finish.

Voltage Ratings: Approximate peak values.

Spacing	.060"	.089"	.175"	.250"	.350"	.500"
Voltage	2500	3500	7000	9000	11,000	13,000

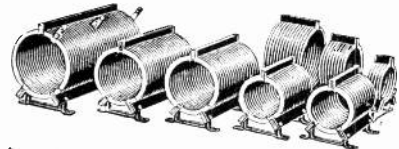
Panel Space: Type "D," 4 1/4" wide x 4" high; Type "C," 5 1/2" wide x 5 3/8" high.

Catalog numbers bearing letters "D" or "DD" are type D condensers; those with "C" or "CD" are type C condensers.

SINGLE SECTION MODELS				DUAL SECTION MODELS			
Catalog Number	Plate Spacing	Cap. Mmf.*	Net Price	Number	Plate Spacing	Cap. Mmf.	Net Price
50D35	.080"	46	\$3.90	100DD35	.080"	100	\$6.60
100D35	.080"	100	4.35	150DD35	.080"	150	7.50
150D35	.080"	150	4.80	200DD35	.080"	200	8.40
250D35	.080"	250	5.70	300DD35	.080"	300	10.20
350D35	.080"	350	6.60	70DD70	.175"	70	7.50
500D35	.080"	500	7.95	100DD70	.175"	100	8.85
50D70	.175"	50	4.50	150DD70	.175"	150	10.95
100D70	.175"	100	5.70	200DD70	.175"	200	13.20
150D70	.175"	150	6.90	50DD90	.250"	50	7.95
250D70	.175"	250	9.30	100DD90	.250"	100	10.35
350D70	.175"	350	11.85	200DD90	.250"	200	15.20
500D70	.175"	500	12.60	50CD110	.350"	50	8.22
50D90	.250"	50	5.40	100CD110	.350"	100	11.58
100D90	.250"	100	6.60	50CD130	.500"	50	9.33
150D90	.250"	150	7.80				
250D90	.250"	250	10.70				
350D90	.250"	350	12.35				
50C110	.350"	50	5.40				
100C110	.350"	100	7.00				
250C110	.350"	250	12.40				
50C130	.500"	50	5.94				
100C130	.500"	100	8.46				

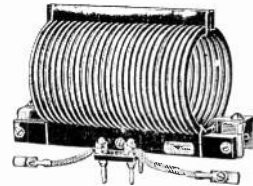
\*Capacities given in table are per section.

## "HI-Q" INDUCTORS



Plug-in and stationary types of Hi-Q Transmitting Inductors are ideal for modern amateur transmitters. High electrical efficiency is secured by proper proportions, generous conductor size, and the use of excellent hard rubber insulation correctly applied. Johnson edgewise wound copper (nickel plated) produces inductors unequalled for compactness, rigidity, and ease of adjustment. The flat surface offers excellent contact to the LC4 Clips, which can be accurately placed and readily moved.

The Plug-in series so designed that all amateur bands from 10 to 160 meters may be covered with one variable condenser with a maximum capacity of 100 Mmf. They are equipped with two No. 77 and three No. 75 plugs (two of which attach to flexible leads and LC4 Clips for an integral coupling winding) and mount on two 4576J and three 40J Johnson Insulators.



## IMPEDANCE MATCHING INDUCTORS

Inductors No. 610 and No. 611 (formerly 2402HL3 and 2202HL3), while useful for other purposes as well, are designed for use in "pi-section" impedance matching networks for amateur frequencies. For details ask for Johnson Bulletin 130.



## INDUCTOR CLIPS

LC4 Inductor Clips should be used with all "Hi-Q" Inductors, since they offer practically zero contact resistance. Made of spring phosphor bronze, nickel plated, with tinned terminal. Should be ordered separately for all except plug-in inductors.

LC4 Inductor Clip, Net Price \$0.12

Ama- teur Band Meters	Tun- ing Cap. Mmf.	Inductor**		Cat. No.	Mh.	Dimensions L x I.D.	Net Price
		Single Unit	Two Units				
<b>STATIONARY TYPES</b>							
160	100	630		610	33	7 3/4" 2 1/2"	\$3.24
160	100	620	622	611	14	4" 2 1/2"	2.16
160	200	622		620	88	9" 4"	4.05
80	75	632		622	44	6 1/2" 3 1/4"	3.09
80	50	622	624	624	21	6" 3 1/4"	2.52
80	100	624	626	626	10	5" 2 1/2"	2.10
80	200	626		628	4.4	4 3/4" 2 1/2"	1.80
40	45	634		†619	20	3 1/2" 4"	2.05
40	25	624	626	†623	8.1	2 1/4" 3 1/4"	1.65
40	50	626	628	†627	2.2	1 1/2" 2 1/2"	1.44
40	120	628		<b>PLUG-IN TYPES</b>			
20	30	636		630	74	8" 4"	4.98
20	15	626	628	632	27	8" 3 1/4"	3.75
20	30	628		634	12	8" 2 1/4"	3.30
10	25	638		636	4.3	8" 2"	3.06
				638	1 1/2	8" 2"	3.88

\*\* "Two Units" refers to two coaxial inductors in series, usually with a coupling coil between, as in balanced tank circuits.

† Generally used as coupling coils with tank coils of like diameters.

‡ Variable by means of end clips.

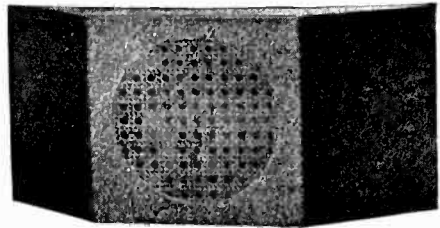
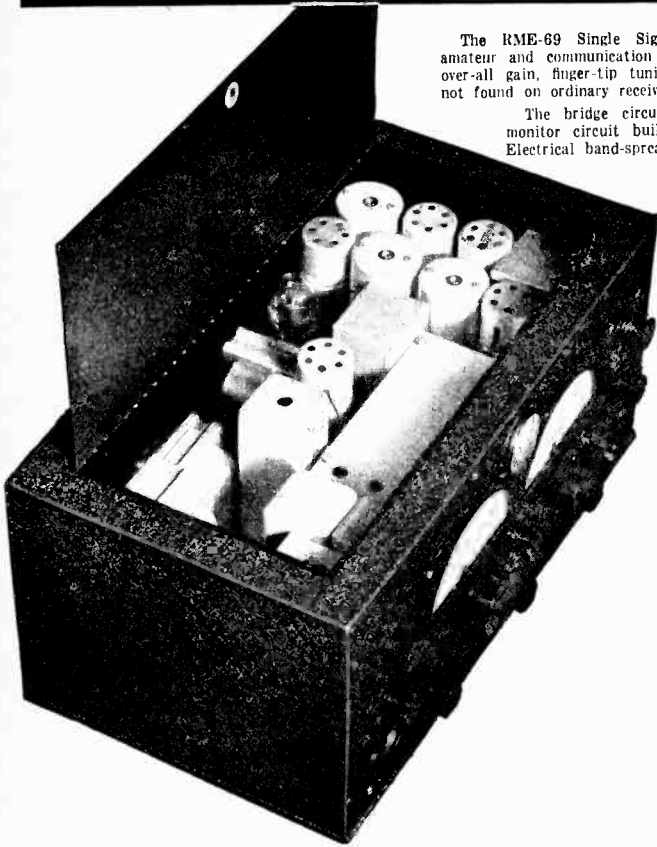
# RME

# RECEIVERS PRE-SELECTORS AMATEUR EQUIPMENT

The RME-69 Single Signal Super Receiver was designed and built as a modern receiver for amateur and communication use. It is characterized by its low background noise, exceptionally high over-all gain, finger-tip tuning mechanism, and inclusion of such individual devices which are usually not found on ordinary receivers.

The bridge circuit R and DB meter is a decided and practical innovation. So is the monitor circuit built into every set. All operating controls are adjustable from the front. Electrical hand-spread dial in addition to the main dial was considered essential. Phone jack is on the front panel, loudspeaker outlets on the rear chassis apron. Provision is made for either Marconi or doublet type antenna connections. The chassis is built of cast aluminum, solid, rigid, holding critically adjusted circuits in calibration.

A variety of optional features are available on the RME-69 for individual requirements (if desired). A noise suppressor circuit (built in at the factory only), break-in contacts provided on the monitor switch in order to simplify operating procedure, additional widening of band-spread scale for the CW ham, substitution of a lower frequency range for the regular broadcast band (ie. 170 KC to 450 KC or 150 KC to 300 KC) combination battery and AC operation, may be had on order. This extreme flexibility obtainable in the one model more than satisfies the operator when choosing a year-around receiver.



8" PM Speaker in crinkle finish cabinet.

## THESE FEATURES ARE STANDARD ON EVERY RME-69 RECEIVER

### PLANETARY VERNIER DIAL DRIVE

... giving one of the smoothest and easiest tuning devices ever placed on an all-band communication receiver. With the large tuning knob employed, rotation of the indicator is possible by mere finger touch. Every operator will welcome this innovation in tuning, especially since hours of operation will not mean hand fatigue.

### FULL ELECTRICAL BAND-SPREAD

... maintaining a separate and distinct band-spread scale. This more expensive method of tuning is adopted because it is far more practical and flexible.

### INDIVIDUAL DIAL OPERATION

... two dials, a megacycle and a band-spread, are featured on the new RME-69. These are each five inches in diameter and give adequate spacing on all divisions. They present a very attractive appearance.

### SIX BAND TUNING RANGE

... having a continuous frequency range from 550 KC to 32,000 KC (9 to 550 meters). Calibration held to exceedingly close limits. Amateur bands grouped for a minimum amount of tuning.

### CALIBRATED DECIBEL-R METER

... always in the circuit giving a continuous indication of incoming signal strength. Serving also as an output meter in checking IF frequency alignment. Calibrated in decibels and also in the customary R values.

### BUILT-IN MONITOR CIRCUIT

... serving as send-receive switch. Used primarily to monitor phone and CW quality when transmitter is on the air.

### FIXED COUPLING I.F. TRANSFORMERS

... set for optimum coupling value consistent with the desired sensitivity and highest gain. Any lowering in the degree of sensitivity which is available in the variable IF coupling units is not in keeping with progress in superheterodyne design, especially in amateur receivers.

### SIX VOLT TUBES

... of known and established characteristics and stable in operation. 1st RF-6D6; 1st Det-6C6; I.F.-2-6D6s; RF osc.-6D6; Beat osc.-6D6; 2nd Det-6B7; Audio-42; Rect.-80. Tubes included are those used for final laboratory check, assuring perfect alignment and adjustment to the receiver when shipped.

### CRYSTAL FILTER CIRCUIT

... to cope with the interference problem to the maximum degree. We believe that no superheterodyne receiver of modern design should be without such a filter. You will be surprised at the effectiveness of this circuit in the RME-69.

### QUALITY AND WORKMANSHIP

... very rugged construction throughout, solid cast-aluminum chassis base, improved design, and high quality workmanship are to be found in this new RME-69 Single Signal Super.

## PRICE ON RME RECEIVERS AND ACCESSORIES

RME-69 Single Signal Super Receiver. Housed in black crinkle steel cabinet, with 465 KC crystal, set of tubes, and 8" PM dynamic speaker in black crinkle finished baffle. 110 volt, 60 cycle model. Shipping weight fifty-eight pounds. CODE—BABEL .....Net \$151.20

RME-69 Single Signal Super Receiver only. In black crinkle steel cabinet with 465 KC crystal, 110 volt, 60 cycle model. CODE—BEZEL .....Net 134.40

RME-69 Single Signal Super Receiver only. In black crinkle steel cabinet, with 465 KC crystal, 25 to 60 cycle, 110 or 220 volt model. CODE—BIMEL .....Net 141.00

RME-69 Single Signal Super Receiver only. In black crinkle steel cabinet, with 465 KC crystal, combination 110 volt, 60 cycle and battery model. CODE—BUREN .....Net 144.00

RME-69 Single Signal Super Receiver only. In black crinkle steel cabinet, with 465 KC crystal. Battery model. CODE—BODAR .....Net 134.40

LS-1 noise silencer unit built into RME-69 Single Signal Super Receiver, any model, including one each 6L7, 6J7, 6K7, 6H6 tubes. CODE—DINAR .....ADD Net 11.40

Complete set of nine tubes. Hygrade-Sylvania. Five 6D6; one 6C6; one 6B7; one 42; one 80. CODE—CONES .....Net 4.95

Permanent magnet dynamic speaker. Eight inch diameter, dust proof model, speaker cord attached, housed in black crinkle steel cabinet. Shipping weight fifteen pounds. CODE—COMBS .....Net 11.85

Permanent magnet dynamic speaker only. Eight inch diameter, dust proof model. No housing. Speaker cord attached. Shipping weight eleven pounds. CODE—CAPER .....Net 7.80

RME-69 Super equipped with extra pair of binding posts on rear of chassis apron and wired to open B-supply circuit when working break-in. CODE—COLOR .....ADD Net 1.20

RME-69 Super equipped with extra pair of binding posts on rear of chassis apron and special relay control contacts provided on monitor switch for special break-in operation to control transmitter. CODE—CENTS .....ADD Net 2.70

Special color finish made to order on above cabinet, rack, or baffle. CODE—EXERT .....Each, Net 3.60  
(Prices subject to change without notice)

# RME RECEIVERS PRE-SELECTORS NOISE-SUPPRESSORS

## AN UP-TO-DATE . . . SIGNAL INTENSIFIER and IMAGE REJECTOR

The DB-20 Preselector in combination with the RME-69 places at your disposal the first wide range precision receiver having three matched stages of radio frequency combining five efficiently designed circuits. The results obtained are beyond anything ordinarily experienced in radio receivers for high frequency operation.

### HERE ARE THE DETAILS:

Frequency coverage is from 550 KC to 32,000 KC (9 to 550 meters) coinciding with the range incorporated in the RME-69 Receiver.

Average gain of the two stages of tuned circuits is uniform between 20 to 25 db. when used in conjunction with the RME-69.

Signal to image ratio averages 50,000 to 1.

Power supply is self-contained, not depending on the power from the receiver.

Input circuit is so designed that either a single wire Marconi type antenna or one of the doublet types may be used.

Output impedance of the unit is approximately 300 ohms so that direct connection may be made to the input of the RME-69 without mismatch.

The DB-20 has its own gain control in addition to the regular six band switch and finger-tip control mechanism.

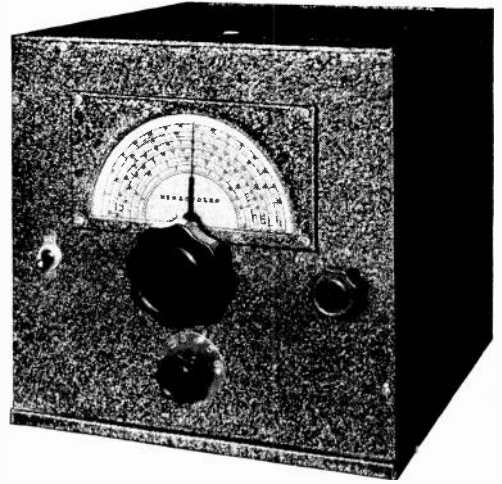
The cabinet is identical in design and finish to the regular RME-69 cabinet and matches it in every detail.

The entire unit is rigidly built and tested to RME specifications.

The tubes used in the DB-20 are: two 6K7 amplifiers and one 80 rectifier.

With the volume control on the DB-20, the incoming signal strength may be increased from the normal level of the standard RME-69 to a value 20 to 25 decibels above this level. At all times the greatly increased selectivity of the five tuned RF circuits are utilized.

Since the DB-20 has its own power supply, thus isolating it entirely from the RME-69, the only interconnecting circuit is the two-wire link which couples the output of the preselector to the receiver.



The five carefully designed RF circuits in the RME-69 and DB-20 are calibrated in megacycles throughout the entire range from 6 meters to 550 meters. The unit is rigidly built, carefully tested, and meets all operating requirements.

DB-20 Preselector in black crinkle finish; cabinet—overall dimensions 9 1/4" high, 9 3/8" wide, 10 1/2" deep, including 2-6K7 tested tubes, interconnecting plug and cord. Shipping weight twenty-nine pounds.

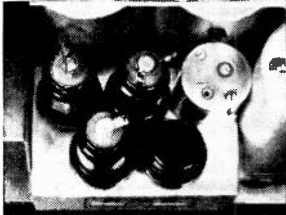
CODE—MONEL . . . . . Net \$42.60

DB-20 Preselector mounted on relay rack; aluminum panel 8 3/4" x 19" x 3 1/16"; either black or gray crinkle finish including 2-6K7 tested tubes

CODE—MINKS . . . . . Net \$52.20

(Prices subject to change without notice)

## THE RME LS-1 NOISE SUPPRESSOR



The unit shown illustrates the mounting of the four tube noise suppressor in the RME-69 Receiver. Small, compact, and well-designed, it fits into the position ordinarily occupied by the first and second IF tubes (2-6I06s). For proper installation and functioning this unit must be built in at the factory. Its purpose is to effectively cope with the ignition type of interference and similar electrical disturbances especially on the higher frequencies. When properly operated it effectively reduces the noise level and permits copying of an otherwise smothered signal. The low cost coupled with the advantages derived from this circuit makes the installation of the LS-1 suppressor well worth while.

LS-1 Noise Suppressor complete with tubes, 1-6K7, 1-6J7, 1-6L7, 1-6H6, initially installed in new receiver at factory.

CODE—DINAR . . . . . Net \$11.40

Extra cost for installation of LS-1 noise suppressor in receiver already sold, add to above.  
Net . . . . . \$4.00

(Prices subject to change without notice)

The relay rack model RME-69 mounted on an 8 3/4" x 19" x 3-16" aluminum panel either black or gray crinkle finish, is illustrated. Note the compactness and fine appearance of the assembly. The receiver itself is standard throughout and may be equipped with any of the special features outlined under the standard specifications. The model illustrated shows the LS-1 noise suppressor installed, and speaker mounted on 8 3/4" x 19" x 3-16" aluminum panel. A larger rack is available to accommodate the addition of the DB-20, which is mounted on same size panel as the speaker and inserted between the receiver and speaker panel.

RME-69 Single Signal Super Receiver with 465 KC crystal set of nine tubes, mounted on 19"x8 3/4"x3-16" aluminum panel, either gray or black crinkle finish, 60 cycle, 110 volt.

CODE—ALERT . . . . . Net \$143.70

Protecting shield cover for above. Matched finish. Size 6 1-2"x10"x17 1-2".  
CODE—ABBOT . . . . . Net 8.10

Permanent magnet dynamic speaker, 8" diameter. Dust proof model. Mounted on 19"x8 3/4"x3-16" aluminum panel. Either gray or black crinkle finish.  
CODE—ACORD . . . . . Net 16.65

Relay rack frame, furniture steel, 19 1/2" wide, 17 3/4" high, 10 3/4" deep for receiver and speaker units, black crinkle finish only.  
CODE—ADORN . . . . . Net 7.50

Same as above, 19 1/2" wide, 26 1/4" high, 10 3/4" deep, for receiver, speaker, and preselector units. CODE—ADDED . . . . . Net 8.40

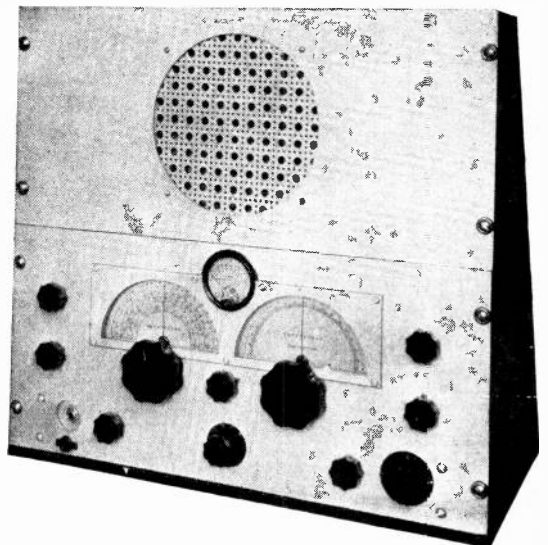
RME-69 Single Signal Super Receiver. Complete with 465 KC Crystal, set of 9 tubes, relay rack model, gray or black crinkle finish, mounted on special relay rack frame, black crinkle finish. Complete with speaker, including protecting shield cover on receiver, 60 cycle, 110 volt. Shipping weight eighty-eight pounds.  
CODE—AJURN . . . . . Net 175.95

Same as above but for 25 cycle, 110 or 220 volt operation.  
CODE—ALARM . . . . . Net 182.55

Same as above, but including DB-20 complete, mounted on panel and assembled on rack, 60 cycle, 110 volt.  
CODE—ABELL . . . . . Net 233.25

Same as above but for 25 cycle, 110 or 220 volt operation.  
CODE—AMDEX . . . . . Net 239.85

(Prices subject to change without notice)

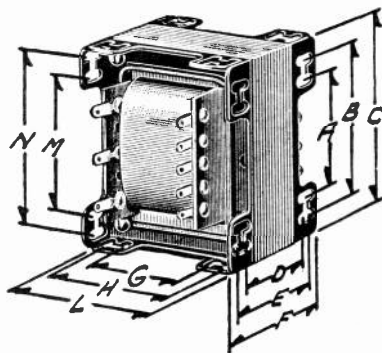


# EXACT DUPLICATES STANCOR POWER TRANSFORMERS REPLACEMENTS

These universal power transformers may be adapted to a wide range of chassis specifications. The mountings are designed to take in a wide variety of mounting requirements. The transformers are available in semi-shielded or fully shielded units. The latter are provided with 2-fibre grommets through which the leads may be brought for wiring above the chassis. Packaged with planograph diagram including standard color code.

## Universal Mounting Bracket Replacement Power Transformer

For 110 Volts, 50-60 Cycles — Bracket Dimensions



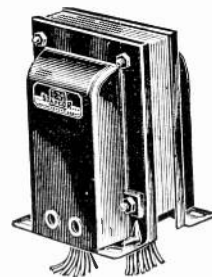
Trans	A	B	C	D	E	F	G	H	L	M	N
P-841											
P-844	2 5/8"	3 3/8"	4 1/2"	2 5/8"	3 3/4"	4 1/8"	2 3/8"	3 3/8"	3 3/4"	3 3/8"	4 1/8"
P-848											
P-929	2 3/8"	2 5/8"	3 3/4"	1 7/8"	2 1/2"	2 7/8"	1 5/8"	2 5/8"	3 1/8"	2 3/8"	3 3/8"
P-930											
P-931	2 5/8"	3 3/8"	4 1/2"	2 1/8"	3 1/4"	3 5/8"	2 3/8"	3 3/8"	3 3/4"	3 3/8"	4 1/8"

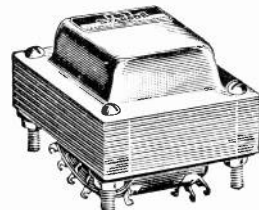
Cat. No.	Plate Volts Ma.	Fil. 1 Volts Amp.	Fil. 2 Volts Amp.	Fil. 3 Volts Amp.	Fil. 4 Volts Amp.	List Price
P-841	1200 et 150	7 1/2 et 2 1/4	7 1/2 et 2 1/4	2 1/2 et 2	1 1/2 et 6.3	\$6.90
P-844	1200 et 150	7 1/2 et 2 1/2	7 1/2 et 2 1/2	2 1/2 et 10 1/2	.....	6.95
P-848	570 et 70	5 et 3 or 2 1/2 et 3	5 et 3 or 2 1/2 et 3	2 1/2 et 10 1/2	.....	4.35
P-929	570 et 70	5 et 3 or 2 1/2 et 3	5 et 3 or 2 1/2 et 3	5 et 1/2	1 1/2 et 6.3	3.60
P-930	700 et 70	5 et 3 or 2 1/2 et 3	5 et 3 or 2 1/2 et 3	2 1/2 et 1 3/4	.....	4.00
P-931	700 et 110	5 et 3 or 2 1/2 et 3	5 et 3 or 2 1/2 et 3	2 1/2 et 3 1/2	2 1/2 et 12 1/2	5.15

## The Famous Fully Shielded, Leads - on - Bottom Replacement Power Transformer

Cat. No.	Plate Volts Ma.	Fil. 1 Volts Amp.	Fil. 2 Volts Amp.	Fil. 3 Volts Amp.	Fil. 4 Volts Amp.	Fil. 5 Volts Amp.	List Price
P-1501	600 60	5 et 3 or 2 1/2 et 3	1 1/2 et 1	1 1/2 4	2 1/2 et 4	5 et 1/2	\$4.40
P-1502	700 70	5 et 3 or 2 1/2 et 3	2 1/2 et 1 3/4	2 1/2 et 9	.....	.....	5.00
P-1503	700 120	5 et 3 or 2 1/2 et 3	1 1/2 et 1	1 1/2 5	2 1/2 et 4	2 1/2 et 3 1/2	6.25
P-1504	700 120	5 et 3 or 2 1/2 et 3	2 1/2 et 12 1/2	.....	.....	.....	5.85
P-1505	700 120	5 et 3 or 2 1/2 et 3	2 1/2 et 4	2 1/2 et 9	2 1/2 et 3 1/2	.....	6.05
P-1570	700 85	5 et 3 or 2 1/2 et 3	6.3 et 3	.....	.....	.....	5.50



## The "Half - Shell" Power Transformer Used Almost Universally Today In All Sets



This group of replacement power transformers was originally developed for the midget or mantel type of receiving sets. However, as developments in chassis in general occurred, these units have found increasing favor where the flush mounting is desirable. In installation, they are workmanlike in appearance, cover a wide range of usefulness, and are thoroughly satisfactory in operation. Each is accompanied by a planograph diagram and standard color code for wiring.

### FOR 115-VOLTS, 50-60 CYCLES FOR 2.5-VOLT TUBES

4 TUBES	
Plate.....	650 Volts C.T. @ 40 Ma.
Fil. 1.....	5 Volts @ 2 Amps
Fil. 2.....	2 1/2 Volts C.T. @ 3 3/4 Amps
Mtg. Area:	2 1/2" x 3" Mtg. Centers: 2" x 2 1/2"
<b>Cat. No. P-2750</b>	<b>List Price \$1.95</b>
4 OR 5 TUBES	
Plate.....	650 Volts C.T. @ 40 Ma.
Fil. 1.....	5 Volts @ 2 Amps
Fil. 2.....	2 1/2 Volts C.T. @ 4 1/2 Amps
Mtg. Area:	2 1/2" x 3" Mtg. Centers: 2" x 2 1/2"
<b>Cat. No. P-2750</b>	<b>List Price \$2.25</b>
4 OR 5 TUBES	
Plate.....	650 Volts C.T. @ 40 Ma.
Fil. 1.....	5 Volts @ 2 Amps
Fil. 2.....	2 1/2 Volts C.T. @ 1 3/4 Amps
Fil. 3.....	2 1/2 Volts @ 3 1/2 Amps
Mtg. Area:	2 1/2" x 3" Mtg. Centers: 2" x 2 1/2"
<b>Cat. No. P-2868</b>	<b>List Price \$2.45</b>
5 OR 6 TUBES	
Plate.....	700 Volts C.T. @ 50 Ma.
Fil. 1.....	5 Volts @ 2 Amps
Fil. 2.....	2 1/2 Volts C.T. @ 1 3/4 Amps
Fil. 3.....	2 1/2 Volts @ 3 1/2 Amps
Mtg. Area:	2 1/2" x 3 3/8" Mtg. Centers: 2 1/4" x 2 3/8"
<b>Cat. No. P-2869</b>	<b>List Price \$3.15</b>

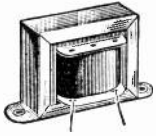
6 OR 7 TUBES	
Plate.....	700 Volts C.T. @ 70 Ma.
Fil. 1.....	5 Volts @ 3 Amps
Fil. 2.....	2 1/2 Volts C.T. @ 3 1/2 Amps
Fil. 3.....	2 1/2 Volts @ 7 1/2 Amps
Mtg. Area:	3 1/2" x 3 3/4" Mtg. Centers: 2 1/2" x 3 3/8"
<b>Cat. No. P-2859</b>	<b>List Price \$3.45</b>
8 OR 9 TUBES	
Plate.....	700 Volts C.T. @ 90 Ma.
Fil. 1.....	5 Volts @ 3-Amps
Fil. 2.....	2 1/2 Volts C.T. @ 3 1/2 Amps
Fil. 3.....	2 1/2 Volts @ 9 Amps
Mtg. Area:	3 3/4" x 4 1/8" Mtg. Centers: 2 3/4" x 3 3/8"
<b>Cat. No. P-2860</b>	<b>List Price \$4.00</b>
10 OR 12 TUBES	
Plate.....	700 Volts C.T. @ 110 Ma.
Fil. 1.....	5 Volts @ 3 Amps
Fil. 2.....	2 1/2 Volts C.T. @ 3 1/2 Amps
Fil. 3.....	2 1/2 Volts @ 14 Amps
Mtg. Area:	3 3/4" x 4 1/8" Mtg. Centers: 3" x 3 3/4"
<b>Cat. No. P-950</b>	<b>List Price \$5.50</b>

### FOR 6.3-VOLT TUBES

4 TUBES	
Plate.....	650 Volts C.T. @ 40 Ma.
Fil. 1.....	5 Volts @ 2 Amps
Fil. 2.....	6.3 Volts C.T. @ 1.6 Amps
Mtg. Area:	2 1/2" x 3" Mtg. Centers: 2" x 2 1/2"
<b>Cat. No. P-2751</b>	<b>List Price \$1.95</b>
4 OR 5 TUBES	
Plate.....	650 Volts C.T. @ 40 Ma.
Fil. 1.....	5 Volts @ 2 Amps
Fil. 2.....	6.3 Volts C.T. @ 2 Amps
Mtg. Area:	2 1/2" x 3" Mtg. Centers: 2" x 2 1/2"
<b>Cat. No. P-2771</b>	<b>List Price \$2.25</b>
5 OR 6 TUBES	
Plate.....	675 Volts C.T. @ 70 Ma.
Fil. 1.....	5 Volts @ 3 Amps
Fil. 2.....	6.3 Volts C.T. @ 2 1/2 Amps
Mtg. Area:	3 1/4" x 3 3/4" Mtg. Centers: 2 1/2" x 3 1/4"
<b>Cat. No. P-948</b>	<b>List Price \$3.60</b>
7 TO 10 TUBES	
Plate.....	700 Volts C.T. @ 120 Ma.
Fil. 1.....	5 Volts @ 3 Amps
Fil. 2.....	6.3 Volts C.T. @ 3 Amps
Mtg. Area:	3 3/4" x 4 1/8" Mtg. Centers: 2 3/4" x 3 3/8"
<b>Cat. No. P-949</b>	<b>List Price \$3.90</b>

# STANCOR

## TRANSFORMERS



### Audio Replacement Transformers

For Interstage and Pushpull Stages. Semi-shielded with cadmium-plated-frames and bottom plates.

Cat. No.	Type	Ratio	List Price	Cat. No.	Type	Ratio	List Price
Size: 2" H., 1 1/4" D., 2 3/8" L.							
A-64	Interstage	4:1	\$1.40	A-82	Interstage	2:1	\$2.30
A-64-C	P.P.	4:1	1.50	A-82-C	P.P.	2:1	2.40
Size: 2" H., 1 1/4" D., 3 3/8" L.							
A-72	Interstage	2:1	1.70	A-83	Interstage	3:1	2.30
A-72-C	P.P.	2:1	1.80	A-83-C	P.P.	3:1	2.40
A-73	Interstage	3:1	1.70	A-84	Interstage	4:1	2.30
A-73-C	P.P.	3:1	1.80	A-84-C	P.P.	4:1	2.40
A-74	Interstage	4:1	1.70	Size: 2 1/2" H., 2" D., 4 1/2" L.			
A-74-C	P.P.	4:1	1.80	A-102	Interstage	2:1	2.70
Size: 2" H., 2 1/4" D., 3 3/8" L.							
A-74-Y	Interstage	4:1	2.00	A-102-C	P.P.	2:1	2.80
A-74-YC	P.P.	4:1	2.10	A-103	Interstage	3:1	2.70
				A-103-C	P.P.	3:1	2.80
				A-104	Interstage	4:1	2.70
				A-104-C	P.P.	4:1	2.80

### Output Transformers

To Feed Into 6 to 15-Ohm Voice Coils

Cat. No.	Tubes	List Price	Cat. No.	Tubes	List Price
Size: 2" H., 1 1/4" D., 2 3/8" L.					
<b>Single Tube</b>					
A-2203	43, 45, 48, 59, 71...	\$1.10	Size: 2 1/4" H., 2" D., 4 1/2" L.		
<b>Push-Pull Tubes</b>					
A-2220	43, 45, 48, 59, 71...	1.20	<b>Push-Pull Tubes</b>		
Size: 2" H., 1 1/4" D., 3 3/8" L.					
<b>Single Tube</b>					
A-2200	43, 45, 48, 59, 71...	1.40	A-2235	2A3, 43, 45, 48, 50, 59, 71...	\$2.15
A-2227	210, 41, 112, 231...	1.40	A-2285	43, 45, 48, 59, 71...	2.15
A-2313	2A5, 49, 42, 33, 47...	1.40	Size: 2 1/4" H., 1 1/4" D., 3 3/8" L.		
A-2347	38, 89...	1.40	<b>Single Tube</b>		
<b>Push-Pull Tubes</b>					
A-2201	43, 45, 59, 71...	1.50	A-2234	2A3, 43, 45, 48, 50, 59, 71...	1.70
A-2231	210, 41, 112, 231...	1.50	<b>Push-Pull Tubes</b>		
A-2312	2A5, 49, 42, 33, 47...	1.50	A-2211	2A3, 43, 45, 48, 50, 59, 71...	1.80
A-2348	38, 89...	1.50			

### Output Chokes

To Feed Into Magnetic Speaker

Size: 2" H., 1 1/4" D., 3 3/8" L.

Cat. No.	Tubes	List Price
<b>Single Tube</b>		
C-1003	112, 171, 247...	\$1.25
<b>Push-Pull Tubes</b>		
C-1034	112, 171, 245, 247...	1.00

### A.C.-D.C. Chokes

For 4 and 5-Tube Sets

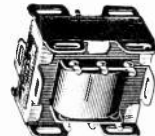
Size: 1 1/2" x 2 1/2" x 1 1/4" High  
15 Henries, 40 M.A.

Cat. No.	Ohms	List Price
C-1080	200	\$1.00
C-1325	250	1.00
C-1277	300	1.00
C-1227	350	1.00
C-1279	400	1.00
C-1333	450	1.00
C-1215	500	1.00
C-1362	550	1.00

### Filter Chokes

Size: 2" H., 1 1/4" D., 3 3/8" L.

Cat. No.	M.A.	List Price
C-1003	50	\$1.25
Size: 2 1/4" H., 1 1/4" D., 3 3/8" L.		
C-1002	75	1.55
Size: 2 1/2" H., 2" D., 4 1/2" L.		
C-1001	110	1.85



### Universal Input, Output and Choke Units

Dimensions: 2" x 2 1/4" x 2 3/8" with Universal mounting covering a wide variety and range of hole centers and mounting areas.

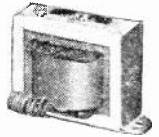
#### Universal Interstage, Tapped P.P. or Straight Audio

Cat. No.	Specifications	List Price
A-4155	For either A.C. or D.C. ....	\$2.20
<b>Universal Tapped Output</b>		
A-2855	For P.P. or straight audio; 1 to 30 ohms voice coils...	1.60
<b>Filter Choke</b>		
C-1355	Resis. —275 ohms. Induc. —20 henries. Mils —100...	1.20

### Microphone and Universal Line Matching Transformers

Horizontal Cadmium-plated Frame

Leads to lugs. Mounting centers 2 3/8"; core: 3/4" x 3/4"; dimensions: 2" x 3 3/8" x 2" high.



#### Microphone or Universal Line to Universal Line

Cat. No.	Specifications	List Price
4 sectionalized windings tapped for universal input transformer.		
A-4350	From: Single or double button microphone, 50, 125, 200, 333 or 500 ohms. To: 50, 125, 200, 333 or 500 ohms.	\$2.00

#### Microphone or Universal Line to Single Grid

Cat. No.	Specifications	List Price
Primary consists of 2 sectionalized windings.		
A-4351	From: Single or double button microphone, 50, 125, 200, 333 or 500 ohms. To: Single grid of 27, 37, 56, 76, etc.	2.00

#### Microphone or Universal Line to Push-Pull Grids

Cat. No.	Specifications	List Price
Primary consists of 2 sectionalized windings.		
A-4352	From: Single or double button microphone, 50, 125, 200, 333 or 500 ohms. To: P.P. Grids of 2-27's, 2-56's, etc.	2.00

#### Velocity or Ribbon Microphone to Universal Line

Cat. No.	Specifications	List Price
Secondary consists of 2 sectionalized windings.		
A-4353	From: 3/4 ohm velocity microphone. To: 50, 125, 200, 333 or 500 ohms.	2.00

#### Single Plate to Universal Line

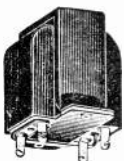
Cat. No.	Specifications	List Price
Secondary consists of 2 sectionalized windings.		
A-3250	From: Single 10,000 ohms plate of 1-27, 1-37, 1-56, etc. To: 50, 125, 200, 333 or 500 ohms.	2.00

#### Push-Pull Plates to Universal Line

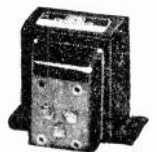
Cat. No.	Specifications	List Price
Secondary consists of 2 sectionalized windings.		
A-3251	From: P.P. 10,000 ohm plates of P.P.-27's, P.P.-37's, P.P.-56's, etc. To: 50, 125, 200, 333 or 500 ohms.	2.00

### Tube Checker Transformer

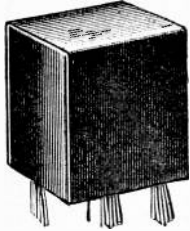
Cat. No.	Specifications	List Price
P-1834	<b>Primary:</b> Tapped for 105, 115, 125 volts, 50 60 cycle. <b>Secondary:</b> Tapped for 1.1, 1.5, 2.0, 2.5, 3.0, 3.3, 5.0, 6.3, 7.5, 12, 25 and 30 volts. 12" coded leads—core 1" x 1". <b>Bracket Dimensions:</b> Hght 2 1/2", depth 2", lgth overall 4 1/2". Hole centers 3 3/8".	\$3.20



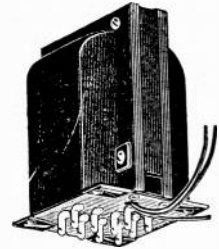
In addition to the above listings of semi-shielded units, Stancor also manufactures a complete line of fully-shielded audio replacement transformers, input and output transformers and chokes. Call or write for a complete STANCOR Catalog.



# EXACT DUPLICATES STANCOR POWER TRANSFORMERS REPLACEMENTS



Stancor exact duplicate replacement transformers are known the world over for their dependability and fine engineering and construction qualities. These transformers have been designed with a higher safety factor and better insulation, yet match exactly the physical and electrical characteristics of the originals. No further drilling is necessary; simply remove your old transformer and replace with a Stancor Exact Duplicate Unit and be assured of trouble-free service.



Radio Model	Cat. No.	List Price	Radio Model	Cat. No.	List Price	Radio Model	Cat. No.	List Price
<b>AIRLINE (Mont. Ward)</b>			<b>GREBE</b>			<b>RCA—RADIOLA—</b>		
AE-10, 62-2600, 62-2622, 62-2655, 62-2775	P-1478	\$7.45	AC-7 (Synchrophase)	P-1475	\$5.40	<b>VICTOR (cont'd)</b>		
62-29	P-1136	6.00	HS-4 (P.P. 15s)	P-1476	5.05	R-5, R-5X	P-1493	\$4.05
62-520, 62-1420	P-1070	4.30	HS-4 (Pentode)	P-1477	5.00	R-7, R-9	P-1481	4.85
62-626, 62-726, 62-2026, 62-2126	P-1358	3.90	HS-8	P-1489	4.90	R-7A	P-1482	5.05
62-060, 62-070, 62-1800	P-1405	3.90	<b>MAJESTIC</b>			R-12, RE-19, RO-23, R-8, R-10	P-1483	5.00
62-60	P-1404	4.50	21, 22, 23 (Unmounted 20 chassis)	P-954	4.80	R-11, R-21, RAE-26, RE-18, RE-18A	P-1474	5.60
62-030, 62-232, 62-3235	P-1291	5.05	51, 52 (Unmounted 50 chassis)	P-905	5.45	R-14, R-15, R-42, R-48, RE-17	P-927	6.60
62-1238, 62-1838	P-1479	5.40	71, 72 (Plate, 70 chassis)	P-790	4.90	R-17, R-18AC, R-33AC, R-51AC, RAD-50, 7-11, 7-25, 7-26X	P-791	5.40
62-1356, 62-1955	P-1016	6.05	71, 72 (Fil. 70 and 70B chassis)	P-798	4.65	R-34, R-35, R-39, RE-57, RE-73	P-718	6.35
62-20, 62-25	P-1561	5.25	71, 72 (Plate 70B chassis)	P-1486	5.05	R-44, R-46AC, R-47	P-714	5.95
62-21, 62-22, 62-30	P-1461	5.25	90, 91, 93 (90B chassis), 102 (100-B chassis), 103 (100-B chassis)	P-939	4.65	R-60, R-62	P-715	5.45
62-68, 62-49	P-1495	5.75	91, 92 (90 chassis), 101 (100 chassis)	P-757	6.90	R-66	P-883	6.50
62-010	P-1438	6.20	130, 131, 132 (130-A chassis)	P-1102	7.25	R-80, R-82, R-86	P-713	5.90
<b>ATWATER-KENT</b>			<b>PHILCO</b>			<b>SPARTON</b>		
37, 37C, 38	P-716	5.35	233 (230-A chassis)	P-906	3.55	AC-7, 62, 63	P-1373	4.20
55-Early, 55C-Early	P-918	6.30	151, 153 (Unmounted 15 chassis), 154 (Unmounted 15-B chassis), 155 (Unmounted 150 chassis) 156 (Unmounted 15 chassis)	P-789	7.45	9-A, 410, 420, 600A	P-1196	6.40
55-Late, 55C-Late	P-913	6.40	181 (Plate, 180 chassis)	P-805	5.20	610-A, 620-A	P-1196	6.40
60-1st type, 60-2nd type, 60C-1st type, 60C-2nd type	P-1066	6.05	211, 214, 215 (Unmounted 210 chassis)	P-1507	5.50	25, 26, 26AW, 30, 30A	P-1204	6.60
60-3rd type, 60C-3rd type	P-1500	4.80	251, 253, 254 (Unmounted 25 chassis), 251-B, 253-B, 254-B (Unmounted 25-B chassis)	P-1168	5.60	30B, 45	P-1204	6.60
60 Early & Late—Plate	P-1213	6.25	291 Madison, 293 Adams, 294 Monroe (290 chassis)	P-1564	7.00	35, 101, 110, 111, 111A	P-1412	7.55
70-L1 chassis, 70-L2 chassis, 70-P chassis, 72-III chassis, 72-II2 chassis, 74-I chassis, 74-L chassis, 74-P chassis, 76-L1 chassis, 76-L2 chassis, 76-P chassis	P-1068	5.80	324 (chassis 320)	P-1565	7.85	870	P-1412	7.55
80, 83	P-1088	5.80	314 (chassis 340, 340B)	P-1566	8.40	89-A	P-921	5.40
82, 85	P-1084	5.80	363 (chassis 360)	P-1567	8.00	99, 109	P-1411	7.30
84-Early, 84-Late	P-1086	5.80	<b>RCA—RADIOLA—</b>			103, 301, 301A, 564	P-1372	8.15
87-1st type, 87-3rd type, 89-1st type, 89-3rd type, 89P-1st type, 89P-3rd type	P-1089	6.30	<b>VICTOR</b>			570, 574, 578, 740, 750	P-1372	8.15
<b>BOSCH</b>			<b>RE-55 (Police Set)</b>			589	P-909	6.55
29, 825	P-859	7.20	<b>STEWART-WARNER</b>			591, 593, 931	P-864	6.45
<b>CROSLEY</b>			<b>STROMBERG-CARLSON</b>			55-55 (Police Set)	P-1569	6.40
40-S, 41-S, 42-S, 45-S, 82-S (73 chassis)	P-1015	5.40	<b>TELEVISION CORP.</b>			<b>U. S. RADIO &amp; TELEVISION CORP.</b>		
41-, 41-A, 42, 704-B, 706-Show Box Series	P-1472	5.40	<b>7</b>			<b>7</b>		
146, 146-1 (Unmounted)	P-1563	6.50	<b>8 (Series 8-A)</b>			<b>8 (Series 8-A)</b>		
<b>GENERAL MOTORS</b>			<b>8 (Series 8-B)</b>			<b>8 (Series 8-B)</b>		
110, 180, 190 (Little General MA (chassis))	P-1485	3.80	<b>9, 19 (900 chassis)</b>			<b>9, 19 (900 chassis)</b>		
211 (S-9-A chassis)	P-1271	4.30	<b>9, 19 (902 chassis)</b>			<b>9, 19 (902 chassis)</b>		
220 (S-10-A chassis)	P-1506	3.90	<b>10, 10-C (1000 chassis)</b>			<b>10, 10-C (1000 chassis)</b>		
252, 253, 254, 255, 256, 257, 258 (S-3-A chassis)	P-1492	5.30	<b>10-C (1001 chassis)</b>			<b>10-C (1001 chassis)</b>		
<b>GRAYBAR</b>			<b>10 (Gloriette-20 chassis)</b>			<b>10 (Gloriette-20 chassis)</b>		
310, 311	P-791	5.40	<b>26 (Gloritone-26 chassis)</b>			<b>26 (Gloritone-26 chassis)</b>		
340	P-715	5.45	<b>32 Series (32 chassis)</b>			<b>32 Series (32 chassis)</b>		
500, 550	P-714	5.95	<b>36, 37 (Apex)</b>			<b>36, 37 (Apex)</b>		
600	P-883	6.50	<b>ZENITH</b>			<b>ZENITH</b>		
GB-4	P-1493	4.05	<b>10, 11, 12 (Super Zenith)</b>			<b>10, 11, 12 (Super Zenith)</b>		
GB-8	P-1481	4.85	<b>52, 53, 54, 55, 60, 61, 62, 64, 67, 71, 72, 73, 77</b>			<b>52, 53, 54, 55, 60, 61, 62, 64, 67, 71, 72, 73, 77</b>		
GB-8-A	P-1482	5.05	<b>67, 71, 72, 73, 77</b>			<b>67, 71, 72, 73, 77</b>		
GB-9	P-1474	5.60	<b>67, 71, 72, 73, 77</b>			<b>67, 71, 72, 73, 77</b>		
GB-678	P-927	6.60	<b>67, 71, 72, 73, 77</b>			<b>67, 71, 72, 73, 77</b>		
GB-700, GB-770, GB-900	P-713	5.90	<b>67, 71, 72, 73, 77</b>			<b>67, 71, 72, 73, 77</b>		
GB-980, GC-11, GT-8	P-1483	5.00	<b>67, 71, 72, 73, 77</b>			<b>67, 71, 72, 73, 77</b>		
GC-13, GT-7	P-1487	4.80	<b>67, 71, 72, 73, 77</b>			<b>67, 71, 72, 73, 77</b>		

The above listings are only part of the many replacement transformers we manufacture. Write the Standard Transformer Corporation, 850 Blackhawk Street, Chicago, Ill., for your free copy of our complete Replacement Transformer Guide.

# STANCOR TRANSFORMERS

## PUBLIC ADDRESS UNITS



Stancor presents a new high-quality line of transformers designed to give a maximum amount of satisfactory and dependable service. Input types are tapped for 50 to 500 ohms impedances. Output types are intended for direct connection to voice coils of speakers. The following is only a partial listing of the public address units we have available.

### Inputs

Part No.	Type	From	To	List Price
RA-4205	Straight Audio	10000-ohm plate	Single Grid	\$3.85
RA-4206	P.P. Input	10000-ohm plate	P.P. Grids, Class "A"	4.05
RA-4207	P.P. Interstage	P.P., 10000-ohm plate	P.P. Grids, Class "A"	4.30
RA-4208	P.P. Interstage	P.P., 10000-ohm plate	P.P. parallel Class "AB"	3.90
RA-4400	High Imped.	plate choke		3.75
RA-4401	P.P. Input	1-30	2 Grids, 19 Class "B"	2.00
RA-4402	P.P. Input	56, 37, 27, 76, etc.	P.P.-45's, 50's, 2A3's Class "A"	3.00

### Inputs and Driver Transformers

Part No.	Type	From	To	List Price
RA-4415	P.P. Input	56, 37, 27, 76, etc.	P.P.-56's, 37's, 27's, etc.	3.00
RA-4404	P.P. Driver	P.P.-45's or P.P.-2A3's	P.P.-800's, 825's, 203A's Class "B"	4.50
RA-4416	P.P. Driver	P.P.-46's or 59's	P.P. Parallel 46's or 59's	3.70

### Outputs

Part No.	From	To	List Price
RA-3300	50, 125, 200, 333, 500 ohms	4, 8, 15 ohms	\$3.50
RA-3301	P.P.-2A3's P.P.-48's, P.P.-45's, Class "AB"	4, 8, 15 or 500 ohms	4.00
RA-3303	P.P.-2A5's, 33's, 41's, 42's, 47's, 49's, 89's, as pentodes; 79, Class "B", 31's	4, 8, 15 or 500 ohms	3.60
RA-3304	P.P.-71's, 45's or 50's, Class "A" or 1-53, Class "B"	4, 8, 15 or 500 ohms	3.60
RA-3305	2-53's, P.P.-Parallel, Class "B"	4, 8, 15 or 500 ohms	4.00
RA-3306	4-2A3's, or 4-45's P.P.-Parallel, Class "AB"	4, 8, 15 or 500 ohms	4.00
RA-3309	2-800's, 830B's, RK18's	500 ohms	7.00
RA-3311	P.P.-2B6's, or P.P.-6B5's	4, 8, 15 or 500 ohms	3.60

### Microphone and Line Transformers

Part No.	From	To	List Price
RA-4408	Single or double mike; 50, 125, 200, 333 or 500 ohms	Single Grid	4.00
RA-4409	Single or double mike; 50, 125, 200, 333 or 500 ohms	Push-Pull Grids	4.00
RA-3316	P.P.-10000-ohm plates	50, 125, 200, 333 or 500 ohms	4.10
RA-4412	Mike and High Imped. pick-up winding	P.P. Grids of P.P.-27's, P.P.-56's, P.P.-76's, etc.	4.30
RA-4413	10000-ohm Plate and 200 ohms	Single Grid	2.50

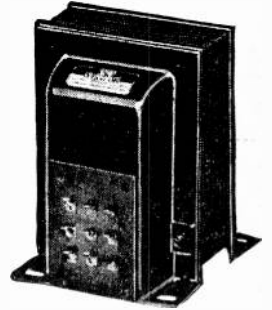
### Filter and Swinging Chokes

No.	Henries	Amperes	Ohms	List Price
RC-1400	8-40	175	100	\$3.05
RC-1403	8-25	300	80	6.70
RC-1421	25	140	160	3.10
RC-1412	15	250	60	4.10
RC-1414	10	400	60	8.85

### Exciter Lamp Transformers

Part No.	Primary	Secondary	List Price
RP-3050	105, 115	5v. @ 6A	\$4.70
RP-3051	105, 115	8.5v. @ 4A	4.70
RP-3052	105, 115	10v. @ either 7.5 or 5A	7.25

## AMATEUR TRANSMITTER UNITS



Stancor Amateur Transmitting Units are constructed of the finest materials and are designed to give dependable and lasting service. The units listed below have 110-115 volts, 50-60 cycle primaries. They are also available for 110-115 volts, 25 cycle and 220 volts, 110-115 cycle primaries. All secondary windings are center-tapped.

### Plate Transformers

Part No.	Primary	D.C. Volts Ma.	Mtg. Area	List Price
XP3010	105-115	500 or 400 at 175	4" x3 1/2"	\$8.00
XP3011	105-115	750, 500, or 600 at 250	4" x5"	15.00
XP3012	105-115	1000 or 750 at 400	6 1/2" x7"	25.00
XP3013	105-115	1250 or 1000 at 500	7" x7 1/4"	40.00
XP3014	105-115	2000 or 1500 at 250	7" x7"	35.00
XP3015	105-115	2000 or 1500 at 400	7" x7"	52.50
XP3016	115-230	3000 or 2000 at 400	7" x7 1/2"	60.00

### Filament Transformers

Part No.	Secondary Volts	Amps.	Insulation	Mtg. Area	List Price
XP3027	7.5 at 6.5	1500-v.	4" x3 1/4"	\$5.00	
XP3021	10.0 at 6.5	1500-v.	4" x3 1/4"	7.00	
XP3026	5.0 at 3.0	1500-v.	4" x3 3/8"	3.50	
XP3025	2.5 at 10.0	7500-v.	4" x3 3/8"	4.30	
XP3030	2.5 at 10.0				
XP3032	5.0 at 3.0	7500-v.	4" x3 3/8"	5.00	
	5.0 at 3.0				
	5.0 at 6.0	7500-v.	4" x3 3/8"	7.25	
XP3033	5.0 at 3.0				
	7.5 at 2.5				
	2.5 at 5.0	1500-v.	4" x3 1/4"	5.00	
XP3029	5.0 at 6.0				
	2.5 at 3.5				
	2.5 at 6.0	1500-v.	4" x3 1/4"	5.00	
XP3028	7.5 at 6.5				
	7.5 at 4.5				
	2.5 at 4.0	1500-v.	4" x3 1/4"	7.00	

### Swinging Chokes

Part No.	Henries	Ma.	Ins.	Mtg. Area	List Price
XC1400	8-10	175-0	2000-v.	3 3/8" x2 3/8" x2 3/8"	\$3.05
XC1401	8-30	200-0	2000-v.	3 3/8" x2 3/8" x2 3/8"	3.80
XC1402	8-30	250-0	2000-v.	3 3/8" x2 3/8" x3 1/4"	4.05
XC1403	8-25	300-0	3000-v.	5 1/4" x4" x3 3/4"	6.70
XC1404	5-25	400-0	5000-v.	5 1/4" x4" x4 1/4"	8.40
XC1405	5-20	500-0	5000-v.	5 3/8" x5 1/8" x3"	16.00

### Filter Chokes

Part No.	Henries	Amperes	Volts	Mtg. Area	List Price
XC1421	25	140	1000-v.	3 3/8" x2 3/8" x2 3/8"	\$3.10
XC1410	20	175	1000-v.	3 3/8" x2 3/8" x2 3/8"	3.00
XC1411	18	200	2000-v.	3 3/8" x2 3/8" x2 3/8"	3.40
XC1412	15	250	2000-v.	3 3/8" x2 3/8" x3 1/4"	4.10
XC1413	12	300	3000-v.	5 1/4" x4" x3 3/4"	7.00
XC1414	10	400	5000-v.	5 1/4" x4" x4 1/4"	8.85

## STANCOR CIRCUITS

### Sound Amplifier

Included in this booklet are circuits of amplifiers ranging in output from 3 watts to 30 watts. Various tube combinations show the possibility of a compromise between high quality and low costs. Complete parts values are given. Amplifiers actually built and tested in our own laboratories.

### Amateur Transmitter

This booklet contains circuits both for C.W. and Phone Transmitters. Includes low power and more complicated transmitters. Various combinations of tubes are used and several types of oscillator and modulator circuits are shown. Thoroughly tested and approved circuits.

List Price—Sound..... \$0.10  
List Price—Amateur..... 0.12

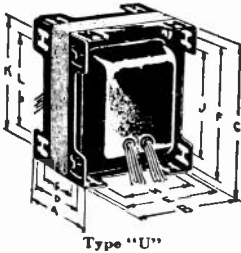


# GENERAL **PULL-PUSH** MOISTURE PROOFED TRANSFORMERS

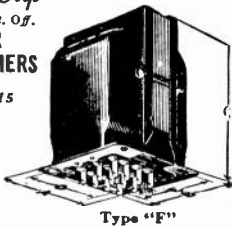


## Stock of Only 5 Transformers Services 95% of All Radios!

The wide range of adaptability of only five models "Multi-Tap" universal Power Transformers is made possible through various taps in these units which may be used singly or in combinations. The required current values can be delivered to each of the several leads in the set with any combination of tubes, as accurately as by the original power units. Easily installed. Full directions in each carton.



"Multi-Tap"  
Reg. U. S. Pat. Off.  
**POWER TRANSFORMERS**  
Patent No. 1992415



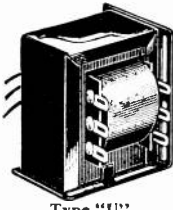
DIMENSIONS - "MULTI-TAP" UNIVERSAL POWER UNITS											
No.	A	B	C	D	E	F	G	H	J	K	L
1814	2- 9/16	3- 3/16	3-13/16	8- 1/8	2-11/16	3- 5/16	1- 1/2	1-15/16	8- 9/16	8-15/16	2- 3/16
1816	2-13/16	3- 5/16	3-13/16	8- 3/8	2-11/16	3- 5/16	1- 3/4	1-15/16	8- 9/16	8-15/16	2- 3/16
1818	2- 3/8	3- 1/8	4- 1/8	2- 5/8	2- 1/4	1- 7/8	2- 1/8	2- 1/8	3- 1/4	3-11/16	2-15/16
1820	3- 5/8	3- 3/4	4- 1/8	3- 1/4	3- 1/4	4	2- 1/8	2- 1/2	3- 1/4	3-11/16	2-15/16
1804	2- 3/8	2- 9/16	3- 1/16	8	2	110v.-120v.—50-60 cy. use No.					
1806	3- 3/8	3- 3/8	4- 1/2	2- 5/8	2- 7/8	1814, 16, 18, 20 Type "U"					
1808	3- 1/2	3- 3/8	4- 1/2	2- 5/8	2- 7/8	or 1804, 6, 8, 10 Type "F"					
1810	3- 7/8	3- 3/8	4- 1/2	2- 5/8	2- 7/8						
1850	4-3/4	3-5/4	4-1/2	4-3/8	3-1/4	4	3-3/8	2-1/2	3-1/4	3-11/16	2-15/16

No. 1804; No. 1814 for 4 TUBES		UNIT PRICES	
2-24, 27, 35, 55, 56, 57, 58, 2A6, 2A7, 2B7		2.5v.-C.T.-5.25 A	
and 1-45, 46, 47, 59, 2A3, 2A5		6.3v.-C.T.-1.60 A	
or 2-75, 76, 77, 78, 6A7, 6B7, 6C6, 6D6, 6F6,		5.0v.-C.T.-3.0 A	
and 1-41, 42, 79, 89, 6A4		650v.-C.T. at 50 MA	
1-80, 83, 523		MOCK 3 3/4 lbs. \$3.50	
or 1-82		MACAW 3 1/4 lbs. \$3.50	
No. 1806, 1816, for 5 or 6 TUBES			
3-268		1.5v.- 3.15 A	
or 3-24, 27, 35, 55, 56, 57, 58, 2A6, 2A7, 2B7, 90		2.5v.- 5.0 A	
1 or 2-27		2.5v.- 3.5 A	
2-45, 46, 47, 59, 2A3, 2A5		2.5v.-C.T.-5.0 A	
or 2-171A		5.0v.-C.T.-0.5 A	
1-80, 80M, 83, 523		5.0v.- 3.0 A	
or 1-82		2.5v.- 3.0 A	
High Voltage		650v.-C.T. at 60 MA	
No. 1806 Type "F"	MOCIA	5 lbs. \$4.50	
No. 1816 Type "U"	MACE	4 1/2 lbs. \$4.50	
No. 1808, 1818, for 7 or 8 TUBES			
4-268		1.5v.- 4.20 A	
or 4-21, 27, 35, 55, 56, 57, 58, 2A7, 2B7, 90		2.5v.- 7.0 A	
1 or 2-27		2.5v.- 3.5 A	
2-45, 46, 47, 59, 2A3, 2A5		2.5v.-C.T.-5.0 A	
or 2-171A		5.0v.-C.T.-0.5 A	
1-80, 80M, 83, 523		5.0v.- 3.0 A	
or 1-82		2.5v.- 3.0 A	
High Voltage		700v.-C.T. at 80 MA	
No. 1808 Type "F"	MODOC	6 1/2 lbs. \$5.00	
No. 1818 Type "U"	MACLE	6 1/2 lbs. \$5.00	
No. 1810, 1820, for 9 or 10 TUBES			
6-268		1.5v.- 6.5 A	
or 6-24, 27, 35, 55, 56, 57, 58, 2A6, 2A7, 2B7, 90		2.5v.- 10.5 A	
1 or 2-27		2.5v.- 3.5 A	
2-45, 46, 47, 59, 2A3, 2A5		2.5v.-C.T.-5.0 A	
or 2-171A		5.0v.-C.T.-0.5 A	
1-80, 80M, 83, 523		5.0v.- 3.0 A	
or 1-82		2.5v.- 3.0 A	
High Voltage		700v.-C.T. at 100 MA	
No. 1810 Type "F"	MOGUL	6 1/2 lbs. \$5.50	
No. 1820 Type "U"	MACRO	7 1/2 lbs. \$5.50	
No. 1850, 1960—High power up to 15 TUBES			
7-26		1.5v.- 7.35 A	
or 7-24, 27, 35, 55, 56, 57, 58, 2A6, 2B7, 90		2.5v.- 11.5 A	
or 9-C484, C485		3.0v.- 11.7 A	
2-45, 46, 47, 59, 2A3, 2A5		2.5v.- 5.0 A	
or 2-C484, C485		3.0v.- 2.6 A	
2-210, 250, C585, C586		7.5v.- 2.5 A	
2-281, C281 in parallel		7.5v.- 2.5 A	
or 2-281, C281 in series		15.0v.- 1.25 A	
High Voltage		1400v.-C.T. at 150 MA	
No. 1850 Type "U"	MUDAR	12 1/4 lbs. \$12.50	

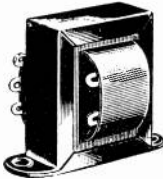
**IMPORTANT:** Fully shielded for radios having Underwriters Lab. approval. Protects set owners' fire insurance policy. No extra unused leads to become shorted. "F" type has leads to lug to protect against inability of short circuiting the unused extra windings furnished in these units. Type "U" is supplied with necessary covered wire leads in the carton.

Extra windings to meet emergency requirements are embodied on the coil. The extra 2.5 volt winding is essential for sets using 26 type tubes. The same applies to the extra 2.5, and 5.0 volt taps.

6.3 volt tubes are supplied by connecting half of 2.5 v. CT in series with 5 v. winding.



Type "U"



Type "B"

### MULTI-TAP TYPE "U" OUTPUT

No. 1337.....MAGIC (1 1/2) \$1.75  
The universal primary and the tapped secondary, from 2 to 30 ohms, in 2 ohm steps, makes it possible to feed practically any straight or push-pull output stage to any dynamic speaker.  
May be mounted on end or side. Slots in base allow wide range of adaptability without redrilling panel.

### MULTI-TAP OUTPUT TYPE "B" (or 2B)

No. 2314.....MUREX (1 1/2) \$1.75  
To match any standard output tube either singly or in push-pull to magnetic speaker or any of the standard voice coils. Overall dimensions—1 1/4"x3"x2 1/4" high. Mounting centers 2 3/8".

### INPUT AUDIO TYPE "U"

No. 3205.....MAGE (1 1/2) \$1.75  
This input audio efficiently feeds any straight or push-pull audio stage on either A.C. or D.C. sets. Dimensions same in Output and Input Audio type "U". Overall Dimensions: 2"x2 3/8"x1 1/8". Mfg. Centers: 1 1/4"x 1 1/2" or 1 1/4"x 1 1/2" to 1 1/8".

### INPUT AUDIO TYPE "B" (or 2B)

No. 3256.....MUSCI (1 1/2) \$1.75  
(Same as 3205). Overall dimensions—1 1/4"x3"x2 3/8" high. Mounting centers 2 3/8".

### MULTI-TAP FILAMENT TRANSFORMER

No. 1081.....FELIX (2) \$2.25  
Delivers 1.5, 2.5, 5.0, 6.3, 7.5 volts at 3 amps. Mfg. type "B (or 2B). Dimensions: 1 1/4"x3 3/4"x2 1/8" high. C. C. 3 1/4".

### MULTI-TAP CHOKE

No. 1076.....MYRIA (1) \$2.75  
This is a high impedance choke with five taps which in combination with a selector switch and a neon bulb constitutes an excellent short circuit turns tester when operated from a 115 volt 60 cycle source. This choke can also be used as an audio autotransformer for impedance matching purposes. Type "2A" Mfg. Size 2" high, 3 1/4" wide, 1 1/4" deep. 2 1/8" mfg. centers.

### STEP-DOWN—PRI. 220-240V 50-60 Cycle—Sec. 110V

No.	Type	Size—inch	Wt. lbs.	Wattage	Code	Price
2922	F-Jr.	3 x 3 3/8 x 3 3/8 high	4	80	SUINA	\$4.00
1909	F	3 1/4 x 4 3/8 x 4 1/2 high	8	160	RTIPA	6.25

The "F-Jr." is in mounting same as 2F, Form 31.

### STEP-DOWN—PRI. 150-160V 50-60 Cycle—Sec. 110V

No.	Type	Size—inch	Wt. lbs.	Wattage	Code	Price
2921	F-Jr.	3 x 3 x 3 3/8 high	3 3/8	80	SULLA	\$4.00
2917	F	3 7/8 x 4 3/8 x 4 1/2 high	8	160	SUMAC	6.25

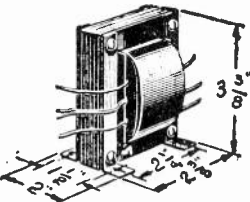
For isolated lighting plants or where supply lines are overloaded resulting in low voltage a step-up greatly increases the efficiency of the radio or utensil.

### STEP-UP—PRI. 80V 50-60 Cycle—Sec. 110V

No.	Type	Size—inch	Wt. lbs.	Wattage	Code	Price
2919	F-Jr.	3 x 3 x 3 3/8 high	3 3/8	80	SUGAR	\$3.75
1919	F	3 1/4 x 4 3/8 x 4 1/2 high	8	160	STOPE	6.00

### AUTO-RADIO POWER TRANSFORMERS

This list of GENERAL auto-radio power transformers and chokes multiplexes electrically practically every auto radio power unit now in use.



Part No.	Code	Wt.	Price
Power Transformer 135v—40 MA	413	ATURM	(2-2) \$3.00
Power Transformer 180v—40 MA	412	ARTEL	(2-2) \$3.25
Power Transformer 250v—50 MA	411	AIRSIS	(2-2) \$3.50

### AUTO-RADIO FILTER CHOKE

250 ohms—15 H at 30 MA—Mfg. "B"  
2" c.c.  
1129 AVIAN (1) \$1.40

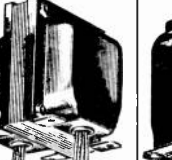
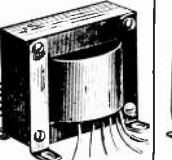
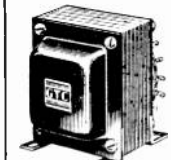
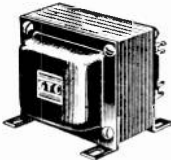




# GENERAL PULL-PUSH MOISTURE PROOFED TRANSFORMERS



Type "P"  
See note below



2.5 Volt Double Fil. Winding	
<b>FOR 4 AND 5 TUBES</b>	
2-24, 27, 35, or 3-55, 56, 57, 58, 2A6, 2A7, 2B7.....	2.5v.- 5.00A
1-45, 46, 47, 59, 2A3, 2A5.....	2.5v.-C.T. 1.75A
1-80, 83, 5Z3.....	5.0v.- 3.0 A
Plate.....	650v.-C.T. 40 MA
<b>FOR 5 AND 6 TUBES</b>	
3-24, 27, 35, or 3-55, 56, 57, 58, 2A6, 2A7, 2B7.....	2.5v.- 5.25A
1-45, 46, 47, 59, 2A3, 2A5.....	2.5v.-C.T. 1.75A
1-80, 83, 5Z3.....	5.0v.- 3.0 A
Plate.....	650v.-C.T. 50 MA
<b>FOR 6 AND 7 TUBES</b>	
3 or 4-24, 27, 35, 55, 56, 57, 58, 2A6, 2A7, 2B7.....	2.5v.- 7.0 A
2-45, 46, 47, 59, 2A3, 2A5.....	2.5v.-C.T. 3.0 A
1-80, 83, 5Z3.....	5.0v.- 3.0 A
Plate.....	700v.-C.T. 70 MA
<b>FOR 8 AND 9 TUBES</b>	
5 or 6-24, 27, 35, 55, 56, 57, 58, 2A6, 2A7, 2B7.....	2.5v.- 10.5A
2-45, 46, 47, 59, 2A3, 2A5.....	2.5v.-C.T. 3.0A
1-80, 83, 5Z3.....	5.0v.- 3.0A
Plate.....	700v.-C.T. 90 MA
<b>FOR 10 AND 12 TUBES</b>	
7 or 9-24, 27, 35, 55, 56, 57, 58, 2A6, 2A7, 2B7.....	2.5v.- 15.25A
2-45, 46, 47, 59, 2A3, 2A5.....	2.5v.-C.T. 3.0 A
1-80, 83, 5Z3.....	5.0v.- 3.0 A
Plate.....	700v.-C.T. 110 MA

Type "P"	Type "G"
No. 1550 GORBE (3) Price \$2.50 Mtg.—2½x2½ c.c. 2½x3½x3½ high	No. 1545 GRIST (3) Price \$2.50 Mtg.—2½x2½ c.c. 2½x3½x3½ high
No. 1551 GOUMLI (3) Price \$2.75 Mtg.—2½x2½ c.c. 2½x3½x3½ high	No. 1546 GRITH (3) Price \$2.75 Mtg.—2½x2½ c.c. 2½x3½x3½ high
No. 1544 GOURD (5) Price \$3.50 Mtg.—2½x3½ c.c. 3½x4½x3½ high	No. 1547 GROAT (5) Price \$3.50 Mtg.—2½x3½ c.c. 3½x4½x3½ high
No. 1555 GOYLE (5-8) Price \$4.00 Mtg.—2½x3½ c.c. 3½x4½x3½ high	No. 1548 GROUP (5-8) Price \$4.00 Mtg.—2½x3½ c.c. 3½x4½x3½ high
No. 1557 GRAIL (6-2) Price \$4.75 Mtg.—3x3½ c.c. 3½x4½x3½ high	No. 1549 GRUNT (6-2) Price \$4.75 Mtg.—3x3½ c.c. 3½x4½x3½ high

Type "H"	Type "2F"
No. 1570 GIGUE (3) Price \$2.50 Mtg.—2½x2 c.c. 3½x3½x2½ high	No. 1774 LANIA (3-8) Price \$3.00 Mtg. 2x2 c.c. 2½x2½x3½ high
No. 1571 GIPON (3) Price \$2.75 Mtg.—2½x2½ c.c. 3½x3½x2½ high	No. 1771 LAPIS (3-8) Price \$3.25 Mtg. 2x2½ c.c. 2½x3½x3½ high
No. 1573 GLACE (6-8) Price \$3.50 Mtg.—3½x2½ c.c. 2½x3½x3½ high	No. 1772 LARCH (5-10) Price \$4.00 Mtg. 2½x2½ c.c. 3½x3½x4½ high
No. 1575 GLACK (6-8) Price \$4.00 Mtg.—3½x3½ c.c. 2½x3½x3½ high	No. 1773 LARAS (5-10) Price \$4.50 Mtg. 2½x2½ c.c. 3½x3½x4½ high
No. 1577 GLAIR (7) Price \$4.75 Mtg.—3½x2½ c.c. 4½x3½x3½ high	No. 1790 LARGO (6-4) Price \$5.25 Mtg. 2½x3½ c.c. 3½x3½x4½ high

Type "F"
Specially adapted for the sets with cable wiring
No. 1624 GROIN (4-4) Price \$4.00 Mtg.—2½x1½ min. to 2½ max. c.c. 3½x3½x4½ high
No. 1641 GONAD (4-8) Price \$4.50 Mtg.—2½x2½ min. to 2½ max. c.c. 3½x3½x4½ high
No. 1625 GONDI (5-6) Price \$5.00 Mtg.—2½x2½ min. to 2½ max. c.c. 3½x3½x4½ high
No. 1631 GORAL (5-12) Price \$5.50 Mtg.—2½x2½ min. to 2½ max. c.c. 4x3½x4½ high

All half-shell "P" type are supplied with four brackets in each carton so that the units may be mounted either flush, horizontal or vertical as shown above.

**Combination 2.5v and 6.3v Single-Heater Winding**  
These require one-half the investment in stock to enable giving immediate renewal of performance in most cases of transformer trouble.

	"P"	"G"	"2F"
<b>FOR 4 AND 5 TUBES</b>	No. 1775 (3-0) HADAD Price \$2.50 Mtg. 2x2½ c.c. 2½x3x3½ high	No. 1776 (3-2) HADES Price \$2.75 Mtg. 2x2½ c.c. 2½x3x3½ high	No. 1777 (3-2) HABJI Price \$3.00 Mtg. 2x2½ c.c. 2½x3x3½ high
<b>FOR 6 AND 7 TUBES</b>	No. 1778 (5-0) HAGEN Price \$3.25 Mtg. 2½x2½ c.c. 2½x3x3½ high	No. 1779 (5-2) HAGIO Price \$3.50 Mtg. 2½x2½ c.c. 2½x3x3½ high	No. 1780 (5-2) HAGUE Price \$3.75 Mtg. 2½x2½ c.c. 3x3x3½ high
<b>FOR 8 AND 9 TUBES</b>	No. 1781 (5-8) HAIDA Price \$3.75 Mtg. 2½x3½ c.c. 3½x3½x3½ high	No. 1782 (5-10) HAKKA Price \$4.00 Mtg. 2½x3½ c.c. 3½x3½x3½ high	No. 1783 (5-10) HALMA Price \$4.25 Mtg. 2½x2½ c.c. 3½x3½x4½ high
<b>FOR 10 AND 12 TUBES</b>	No. 1784 (6-2) HALO Price \$4.50 Mtg. 3x3½ c.c. 3½x4½x3½ high	No. 1785 (6-4) HAMAL Price \$4.75 Mtg. 3x3½ c.c. 3½x4½x3½ high	No. 1786 (6-4) HANIF Price \$5.00 Mtg. 2x3½ c.c. 3½x3½x4½ high

	"P"	"2F"
<b>FOR 4 TUBES</b>	No. 1691 GUACO (2-8) Price \$1.80 Mtg. 2x2½ c.c. 2½x3x3½ high	No. 1761 LANIX Price \$2.50 Mtg. 1½x2 c.c. 2½x2½x3½ high
<b>FOR 5 TUBES</b>	No. 1717 GREBE (2-12) Price \$2.50 Mtg. 2x2½ c.c. 2½x3x3½ high	No. 1788 LASSO Price \$3.00 Mtg. 2½x2 c.c. 2½x3x3 high
<b>FOR 6 TUBES</b>	No. 1400 GRECO (3-12) Price \$3.00 Mtg. 2½x3½ c.c. 3½x3½x3½ high	No. 1789 LATES Price \$3.50 Mtg. 2½x2½ c.c. 3x3½x3½ high
<b>FOR 4 TUBES</b>	No. 1657 GUAMA (2-8) Price \$1.80 Mtg. 2x2½ c.c. 2½x3x3½ high	No. 1762 LAZAR Price \$2.50 Mtg. 1½x2 c.c. 2½x2½x3½ high

Midget Types
<b>FOR 4 TUBES</b> 2-55, 56, 57, 58, 90, 2A6 and 1-45, 46, 47, 2A5..... 2.5v.-C.T. 3.75A 1-80..... 5.0v. 2.0A Plate..... 650v.-C.T. 40MA
<b>FOR 4 TUBES</b> 2-24, 27, 35, 55, 56, 57, 2A6, 2A7, 2B7 and 1-45, 46, 47, 59, 2A3, 2A5..... 2.5v.-C.T. 5.25A 1-80..... 5.0v. 2.0A Plate..... 650v.-C.T. 40MA
<b>FOR 5 TUBES</b> 3-24, 27, 35, 55, 56, 57, 58, 2A6, 2A7, 2B7 and 1-45, 46, 47, 59, 2A3, 2A5..... 2.5v.-C.T. 7.0A 1-80..... 5.0v. 2.0A Plate..... 700v.-C.T. 50MA
<b>FOR 6 TUBES</b> 4-24, 27, 35, 55, 56, 57, 58, 2A6, 2A7, 2B7..... 2.5v.-C.T. 7.0A 1-45, 46, 47, 59, 2A3, 2A5..... 2.5v.-C.T. 1.75A 1-80..... 5.0v. 2.0A Plate..... 700v.-C.T. 60MA

6.3 VOLT TUBE	
No. 1657 GUAMA (2-8) Price \$1.80 Mtg. 2x2½ c.c. 2½x3x3½ high	No. 1762 LAZAR Price \$2.50 Mtg. 1½x2 c.c. 2½x2½x3½ high

"P"	"2F"
No. 1691 GUACO (2-8) Price \$1.80 Mtg. 2x2½ c.c. 2½x3x3½ high	No. 1761 LANIX Price \$2.50 Mtg. 1½x2 c.c. 2½x2½x3½ high
No. 1665 GRANA (2-8) Price \$2.00 Mtg. 2x2½ c.c. 2½x3x3 high	No. 1787 LARVA Price \$2.75 Mtg. 1½x2 c.c. 2½x2½x3 high
No. 1717 GREBE (2-12) Price \$2.50 Mtg. 2x2½ c.c. 2½x3x3½ high	No. 1788 LASSO Price \$3.00 Mtg. 2½x2 c.c. 2½x3x3 high
No. 1400 GRECO (3-12) Price \$3.00 Mtg. 2½x3½ c.c. 3½x3½x3½ high	No. 1789 LATES Price \$3.50 Mtg. 2½x2½ c.c. 3x3½x3½ high

"PULL-PUSH" Impregnation of coils PULLS out all moisture (by means of preheating ovens and high vacuum tanks) and PUSHES in Special 9X Moisture-proofing Wax (under high compression). Sealing is perfect. No dripping of the 9X High Melting-point Wax, and subsequent shorting under normal operation in the hottest, most humid climates. This is very essential in humid sea coast climate or where hot days followed by cool nights causes condensation on the coils.

Greater customer satisfaction means increased business for you. ALWAYS INSIST ON GENERAL Highest Efficiency "PULL-PUSH" Impregnated Transformer!—with the GTC label on the carton!

These numbers are for 110-120v.—50-60 cy. GENERAL Manufacturers to order any of these numbers for 220-240 v., 50-60 cy., or 150v.—50 cy. at \$1.00 (dist) per unit additional and for 115 v.—25-10 cycle at 60% plus the list of 110 volt—60 cycle: 220 v.—25 cy. 75% plus 110 v.—60 cy.

The Midget types are for 110 v. 60 cycle supply only. In case of 50 cycle or where voltage exceeds 110 v. select units from the other brackets shown which are built oversize.

6.3 VOLT TUBE	
No. 1657 GUAMA (2-8) Price \$1.80 Mtg. 2x2½ c.c. 2½x3x3½ high	No. 1762 LAZAR Price \$2.50 Mtg. 1½x2 c.c. 2½x2½x3½ high

SPECIAL
Stock No. 1479 UVRUO (6-4) For 10 tubes. (Dim. A-1¾", B-2½", C-3½") 6-226..... 1.5v.- @ 6.3 A 1-227..... 2.5v.-C.T. @ 1.75 A 2-171A..... 5.0v.-C.T. @ 0.5 A 1-280..... 5.0v. @ 2.0 A Plate..... 600v.-C.T. @ 80 mila
Stock No. 1474 UREL (6-2) For 7 or 8 tubes. (Dim. A-2", B-3½", C-3½") 5-24, 27, 35, 55, 56, 57, 2A0, 2A7, 2B7..... 2.5v.-C.T. @ 8.75 A 2-45, 46, 47, 59, 2A3, 2A5..... 2.5v.-C.T. @ 3.5 A 1-80, 80M, 83, 5Z3..... 5.0v.- @ 3.0 A Plate..... 700v.-C.T. @ 110 mila

SPECIAL
Stock No. 1479 UVRUO (6-4) For 10 tubes. (Dim. A-1¾", B-2½", C-3½") 6-226..... 1.5v.- @ 6.3 A 1-227..... 2.5v.-C.T. @ 1.75 A 2-171A..... 5.0v.-C.T. @ 0.5 A 1-280..... 5.0v. @ 2.0 A Plate..... 600v.-C.T. @ 80 mila
Stock No. 1474 UREL (6-2) For 7 or 8 tubes. (Dim. A-2", B-3½", C-3½") 5-24, 27, 35, 55, 56, 57, 2A0, 2A7, 2B7..... 2.5v.-C.T. @ 8.75 A 2-45, 46, 47, 59, 2A3, 2A5..... 2.5v.-C.T. @ 3.5 A 1-80, 80M, 83, 5Z3..... 5.0v.- @ 3.0 A Plate..... 700v.-C.T. @ 110 mila



# EXACT-DUPLICATES

with

## "MULTI-TAP" or "MULTI-USE"

alternates for same models

For set owners desiring Exact-duplicates physically as well as electrically for replacement transformers, the service engineer has a wide selection from the following comprehensive list of radio sets. The number following the set model number is the "Exact-duplicate" transformer. The alternate number immediately below the Exact-duplicate is a corresponding "MULTI-TAP" (page 1 form 31) or "MULTI-USE" (page 2 form 31) which are exact-duplicates

electrically and readily adaptable physically. Where no alternate is shown the Exact-duplicate only can be supplied.

On the "Multi-use" the "P" type number is specified but any of the other types with like electrical characteristics may be selected providing physical dimensions are adaptable.

For sets not herein listed, see "Multi-tap" Universal Guide-list of sets (Form 33) or Table A and B (Form 31, page 1). List prices subject to trade discount.

Name of Radio Model	Our Code Stock Word No.	Wt.	Price
<b>ALL AMERICAN MOHAWK</b>			
Lyric J.	1552 AALOO (4)		\$3.50
	1551 GOUMI (3)		2.75
<b>APEX (Also Gloritone)</b>			
36, 37.	2500 ABACA (9)	8.50	
	1808 or 1818 (6-8)	5.00	
10.	2501 ACRID (7)	6.00	
	1631 GORAL (4-12)	5.50	
20.	2502 ABACK (3)	4.25	
	1550 GORSE (3)	2.50	
32.	2503 ABAFT (7)	5.25	
	1555 GOYLE (5-8)	4.00	
8.	2504 ABAMA (6)	5.50	
	1625 GONDI (4-8)	5.00	
99.	2505 ABASE (5)	4.00	
	1612 GOBBE (4-4)	4.00	
7.	2506 ABASHI (7)	5.25	
	1625 GONDI (4-8)	5.00	
7, 25 cycle.	2507 ABATE (6)	8.50	
9.	2508 ABBA (5)	5.50	
	1625 GONDI (4-8)	5.00	
26A.	2557 ABOX (4)	5.50	
	1554 GOULD (5)	3.50	
46.	2691 ADOXA (6)	7.00	
	1806 or 1816 (4-4)	4.50	
27.	2558 AERST (6)	4.75	
	1544 GOULD (5)	3.50	
26P.	2559 AELD (8)	4.50	
	1544 GOULD (5)	3.50	
26P, 25 cy.	2704 CYRUS (14)	8.80	
<b>ATWATWER KENT</b>			
37, 38.	2509 ABBOT (6)	5.00	
	1808 or 1818 (6-8)	5.00	
55,55C, late model.	2510 ARDAL (9)	6.50	
	1555 GOYLE (5-8)	4.00	
55,55C, early model.	2511 ABEL (9)	6.50	
	1555 GOYLE (5-8)	4.00	
H1, H2, L1, L2, L.	2512 ABHOR (5)	5.75	
	1808 or 1818 (6-8)	5.00	
82F, 85F.	2513 ABOON (8)	9.25	
84 (All).	2514 ABHAM (5)	5.75	
	1806 or 1816 (1-1)	4.50	
84F.	2515 ABRIN (8)	9.25	
80, 83.	2516 ABRSS (5)	5.75	
	1514 GOULD (5)	3.50	
80F, 83F.	2517 AGERB (8)	9.25	
87, 89, 89I.	2518 ACHAN (6)	6.30	
	1810 or 1820 (7-8)	5.50	
89F.	2519 ACHO (10)	10.00	
66 (Plate).	2520 ACHY (1)	6.25	
82, 85.	2521 ACHL (5)	5.75	
	1514 GOULD (8)	3.50	
60, 60C.	2697 ACOBN (9)	6.00	
	1555 GOYLE (5-8)	4.00	

Name of Radio Model	Our Code Stock Word No.	Wt.	Price
<b>BOSCH</b>			
29, 825.	2525 BABY (10)	7.25	
28.	2526 BABOL (8)	7.50	
	1808 or 1818 (6-8)	5.00	
48.	2527 BACON (6)	6.25	
	1544 GOULD (5)	3.50	
58.	2528 BADGE (6)	6.25	
	1555 GOYLE (5-8)	4.00	
60.	2529 BAFFY (6)	7.50	
	1810 or 1820 (7-8)	5.50	
<b>BREMNER TULLY</b>			
81, 82, S-81, S-82.	2657 BAGRE (8)	5.00	
	1555 GOYLE (5-8)	4.00	
<b>BRUNSWICK</b>			
10.	2530 BALAN (5)	4.50	
	1544 GOULD (5)	3.50	
3NCB, 5NCB.	2538 BACOR (8)	5.50	
	1810 or 1820 (7-8)	5.50	
12, 12A, 16, 16A, 18, 18A, 33, 33A.	2532 BALOR (5)	6.00	
	1555 GOYLE (5-8)	4.00	
2KRO, 3KRO, 3KR6, SKR, SKRO, SKR6.	2600 GIDYA (8)	5.50	
	1808 or 1818 (6-8)	5.00	
14, 21, 31, 81, 82, S14, S21, S81, S82, 60 cycle.	2655 BALTO (11)	6.25	
	1555 GOYLE (5-8)	4.00	
14, 21, 31, 81, 82, S14, S21, S81, S82, 25 cycle.	2692 BANAL (14)	10.50	
<b>COLUMBIA</b>			
SG8.	2534 CAABA (13)	8.00	
	1555 GOYLE (5-8)	4.00	
SG9.	2535 CAROL (12)	8.00	
	1557 GRAIL (6-2)	4.75	
<b>CLARION</b>			
480.	2700 CYRBY (6)	6.50	
	1721 BICOL (6-2)	5.50	
300.	2701 CYMAR (6-4)	6.25	
90.	2702 CYCLO (5-12)	6.50	
	1625 GONDI (5-6)	5.00	
<b>EARL</b>			
All using 245 tubes.			
31, 32, 41, 32S.	2546 EAGER (7)	6.25	
	1808 or 1818 (6-8)	5.00	
<b>EDISON</b>			
R1, R2, C2 (Plate); Jr. Jc. (Chassis).	2539 EARTH (5)	5.25	
Type 8P, Models R1, R5, C1.	2540 ECLAT (12)	7.75	
	1808 or 1818 (6-8)	5.00	

Name of Radio Model	Our Code Stock Word No.	Wt.	Price
<b>EVEREADY</b>			
30 Series.	2543 EGGER (9)	6.00	
	1838 or 1818 (6-8)	5.00	
40 Series.	2544 EGGER (7)	7.50	
	1819 or 1820 (7-8)	5.50	
50 Series.	2545 EIDER (7)	6.00	
	1810 or 1820 (7-8)	5.50	
<b>FREED</b>			
65, 78, 79, 79S, 90, 95.	2546 EAGER (7)	6.50	
	1810 or 1820 (7-8)	5.50	
<b>FREED-EISEMAN</b>			
NR 85.	2547 FACET (9)	6.75	
NR 80.	2548 FADGE (10)	6.50	
	1808 or 1818 (6-8)	5.00	
<b>FRESHMAN</b>			
Q15, Q16, 3Q15, 3Q16.	2549 FAGIN (9)	7.50	
QD16S.	2550 FAGUS (9)	7.50	
41, 47.	2551 FAIRY (3)	3.75	
51.	2552 FAKIR (5)	4.25	
51A, 51B.	2553 FALX (4)	3.75	
<b>GENERAL ELECTRIC</b>			
H31, 51, 71.	2597 GIANT (9)	6.00	
	1631 GORAL (4-12)	5.50	
T11, K60.	2602 RANCE (9)	6.75	
	1803 or 1818 (6-8)	5.00	
<b>GENERAL MOTORS</b>			
S9A.	2556 GAURA (6)	5.25	
	1544 GOULD (5)	3.50	
<b>GLORITONE (See also Apex)</b>			
<b>GRAYBAR</b>			
GB700, 770, 900.	2597 GIANT (9)	6.00	
	1631 GORAL (4-12)	5.50	
GB500, 550.	2599 GIBEL (9)	6.00	
	1806 or 1816 (4-4)	4.50	
GB340.	2598 GIBUS (8)	5.50	
	1810 or 1820 (7-8)	5.50	
GB310, 311.	2600 GIDYA (9)	5.50	
	1808 or 1818 (6-8)	5.00	
GB600.	2601 GIGOT (9)	6.50	
	1625 GONDI (4-8)	5.00	
GB678.	2602 RANCE (9)	6.25	
	1808 or 1818 (6-8)	5.00	

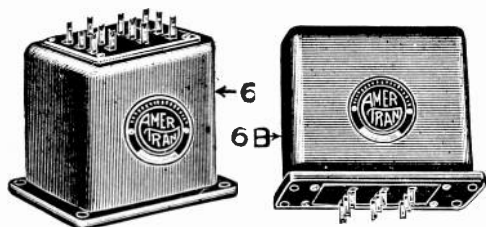




# AMERTRAN



## AMERTRAN DE LUXE PLATE - FILAMENT (POWER) TRANSFORMERS



Amertran Plate-Filament Transformers have been designed to meet the power supply requirements of practically all types of A.C. operated receivers and amplifiers up to 50 watts output.

These units are designed with a low core density and provide good regulation over a wide range of operating conditions with the result that (1) minimum hum due to stray magnetic fields is experienced, (2) voltages are very constant from no-load to full-load conditions, (3) minimum mechanical vibration of the laminations, and (4) low core loss. Shielding in these units includes not only the usual electrostatic shield or copper band placed between the primary and secondary windings but also efficient electro-magnetic shielding secured by mounting the transformer in heavy aluminum castings, these having a much lower resistance than cast iron which is frequently used.

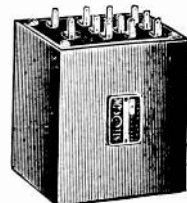
Other electrical features include low-voltage primary tap and accurate center taps on plate, rectifier filament and power tube filament windings.

GENERAL	TERM. at TOP	Type No.	W-301	WA-311	WA-321	W-313	WA-341	W-302	W-314
	TERM. at BASE	Mounting Type No.	5 W-301 B 5 B	5 WA-311 B 5 B	6 WA-321 B 6 B	6 W-313 B 6 B	6 WA-341 B 6 B	6 W-302 B 6 B	6 W-314 B 6 B
	Use With Power Tube Type	Mounting	S 45, 47, 59 79, 41, 42, 2A5	P 45, 47, 59 2A3, 2A5, 53	P 45, 47, 59 2A3, 2A5, 53	Parallel P-Pull 45, 2A3, etc.	Full Output from 83/5Z3	Class "B"	Push-Pull 250 or 210
	List Price		\$22.00	\$25.00	\$27.00	\$32.00	\$27.00	\$26.00	\$28.00
RATING	Elec. Rating		70 Va.	110 Va.	170 Va.	230 Va.	192 Va.	178 Va.	290 Va.
	Primary Winding		120/110 v. 50/60 cyc.	120/110 v. 50/60 cyc.	120/110 v. 50/60 cyc.	120/110 v. 50/60 cyc.	120/110 v. 50/60 cyc.	120/110 v. 50/60 cyc.	120/110 v. 50/60 cyc.
	Plate Winding		300-300 v. 75 mA. D.C.	400-400 v. 120 mA. D.C.	425-425 v. 160 mA. D.C.	460-460 v. 250 mA. D.C.	500-500 v. 250 mA. D.C.	550-550 v. 150 mA. D.C.	600-600 v. 160 mA. D.C.
	Rectifier Tube		2.5 v. ct	80 v. tap 5 v. ct	80 v. tap 5 v. ct	80 v. tap 5 v. ct	80 v. tap 5 v. ct	5 v. ct	100 v. tap 7.5 v. ct
	Filament Supply		3 amps.	3 amps.	3 amps.	3 amps.	3 amps.	3 amps.	2.5 amps.
	Power Tube		6.3 v. ct	2.5 v. ct	2.5 v. ct	2.5 v. ct	2.5 v. ct	2.5 v. ct	7.5 v. ct
	Filament Supply		2.5 amps.	5 amps.	5 amps.	10 amps.	5 amps.	5 amps.	2.5 amps.
	Amp. and Tuner		2.5 v.	2.5 v.	2 (2.5 v.)	2.5 v.	Conjunction With	2.5 v.	2.5 v.
	Filament Supply		5 amps.	5 amps.	5 & 10 amps.	10 amps.	Type H-532 Filament	10 amps.	10 amps.
	Bias Rectifier			1.5 v.	1.5 v.	1.5 v.			1.5 v.
	Filament Supply			1 amp.	1 amp.	1 amp.	Transformer		1 amp.

## AMERTRAN SILCOR AUDIO TRANSFORMERS

Silcor Audio Components are offered to satisfy the demand for amplifier parts of better than average quality at a moderate price.

Audio units will give uniform response within  $\pm 2$  dB from 60 to 8000 cycles; filter units give rated inductance with full rated D.C. flowing, and power units have better than 10% regulation and will deliver rated voltage continuously at full load and with a temperature rise not exceeding 55° C.



### Mixing Audio Transformers

Type	List Price
J-791 500, 333, 235, 200, 125 or 50-ohms primary to 500, 333, 235, 200, 125 or 50-ohms secondary	\$7.00

### Line-to-Grid Audio Transformers (Class "A")

J-771 500, 333, 235, 200, 125 or 50-ohms to single grid	6.50
J-781 500, 333, 235, 200, 125 or 50-ohms to push-pull grids	7.50
J-811 2000, 1000 or 500-ohm pick-up unit to single grid	7.75

### Interstage Audio Transformers (Class "A")

J-711 Detector or single plate to single grid, 1: 3 1/2 ratio	5.50
J-721 Single plate to push-pull grids, 1: 2 ratio e.s.c.	6.00
J-751 Push-pull plates to push-pull grids, 1: 1.15 ratio	7.00

### Interstage Driver Audio Transformers

J-783 Class "A" plate to Class "B" grids, 5: 1 or 2.66: 1 ratio	7.75
J-784 Class "A" plate to Class "B" grids, 3.7: 1 or 3: 1 ratio	7.75
J-785 Class "A" plate to Class "B" grids, 2.6: 1 or 2.2: 1 ratio	7.75
J-753 Class "A" plates to Class "B" grids, 2.11: 1 ratio	7.75

### Audio Reactors (Choke Coils)

Z-901 Parallel-feed audio choke, 300 henrys at 5 mA. d.c., 5000 ohms d.c. resist. With general-purpose tubes	5.50
Z-906 Parallel-feed audio choke, 32 henrys at 100 mA. d.c., 450 ohms d.c. resist. With power tubes	6.50

### Filter Reactors (Choke Coils)

Z-913 Two-section filter choke—for series or parallel connection. Series: 32 henrys at 100 mA. d.c., 450 ohms d.c. resist. Parallel: 8 henrys at 200 mA. d.c., 112 ohms d.c. resist.	6.50
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### Output Audio Transformers

Type	List Price
J-871 30 dB., 20000, 16000, 5000, 4000-ohms primary; 500 ohms and/or 15, 7 1/2, 5, 3 3/4 or 1 1/4-ohms secondary	8.00
20000 ohms: P.P.—10, 49, 38	
16000 ohms: P.P.—6A4, 41	
5000 ohms: Single—59	
4000 ohms: Single—45, 50, 71, 43	
J-872 31 dB., 14000, 12000, 3500, 3000-ohms primary; 500 ohms and/or 15, 7 1/2, 5, 3 3/4, 1 1/4-ohms secondary	8.00
14000 ohms: P.P.—2A5, 42, 47, 89, 79	
12000 ohms: P.P.—33, 59, 46, 89	
J-873 28 dB., 10000, 8000, 2500, 2000-ohms primary; 500 ohms and/or 15, 7 1/2, 5, 3 3/4, 1 1/4-ohms secondary	8.00
10000 ohms: P.P.—59, 19, 89	
Single—10, 49, 38	
8000 ohms: P.P.—31, 45, 71, 43	
2500 ohms: Single—2A3	
2000 ohms: Single: 48	
J-874 35 dB., 10000, 6000, 2500 or 1500-ohms primary; 500 ohms and/or 15, 7 1/2, 5, 3 3/4, 1 1/4-ohms secondary	8.00
10000 ohms matches: Class "B"—53	
6000 ohms: P.P.—50, 46, 59	
Single—46, 39, 33, 59	
J-875 34 dB., 5000, 3000, 1250 or 750-ohms primary; 500 ohms and/or 15, 7 1/2, 5, 3 3/4, 1 1/4-ohms secondary	8.00
5000 ohms: P.P. triodes—2A3 (self bias)	
3000 ohms: P.P. triodes—2A3 (fixed bias)	

### Line-to-Speaker Audio Transformers

J-831 34 dB. (15 watts), 500 ohms to 15, 7 1/2, 5, 3 3/4-ohms	9.00
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# AMERTRAN



## STANDARD DE LUXE TRANSFORMERS

Identified as Types D and DA, these transformers are designed to meet all usual requirements in the construction of high fidelity amplifiers. With a frequency range of 30 to 12,000 cycles and response uniform within  $\pm 1$  dB, they are of distinctly higher quality than any standard transformer previously available.

### De Luxe Mixing Audio Transformers

Type	Application	Prim. Imped.	Sec. Imped.	List Price
D-91B	Carbon mike, low-imped. pick-up or line to adj. line	500/125 200/50	500/125 200/50	\$14.00
D-66CB	Dynamic mike or 200-ohm mixer to adj. line	67/17 30/7½	500/125 200/50	18.00
D-67CB	Velocity ribbon mike to adj. line	0.2/0.05	500/125 200, 50	18.00

### De Luxe Line-to-Grid Audio Transformers

Type	Application	Prim. Imped.	Sec. Imped.	List Price
D-81B	Carbon mike, low-imped. pick-up or line to single grid	500/125 200/50	100000/25000	\$12.00
D-83B	Adj. line to P.P. 30 or 50-watt power-stage	500/125 200/50	100000/25000	17.00
D-144CD	Dynamimike or 200-ohm mixer to single grid	67/17 30/7½	50000/12500	18.00

### De Luxe Interstage Audio Transformers

Type	Prim. Matches	Sec. Matches	Turns Ratio	List Price
D-11B	Det. or single 10000-ohm amp. tube plate	Single amp. or power-tube grid	1 : 3	\$10.00
D-21B	Single 10000-ohm amp. tube plate	Push-Pull amp. or power-tube grids	1 : 2½ e.s.c.	10.00
D-22B	Single 10000-ohm amp. tube plate	Amp. or power grids	Single or Push-Pull 1 : 2 e.s.c.	17.00
D-51B	Push-Pull 10000 ohm amp. plates	Push-Pull amp. or power-tube grids	1 : 1½	12.00

### De Luxe Interstage Driver Audio Trans.

Type	Works out Class "A" Driver	Feeds into Class "B" Grids	Prim. Ohms Impedance	Turns Ratio	Sec. Ohms Impedance	List Price
DA-121B	P.P. 45 to 10, 46, 59	46 to 10, 46, 59	8000/2000	2.24/2.13 : 1	1600/400	1440/360
	59 to 10, 46, 59		4000/1000	1.58/1.5 : 1		

List Price ..... \$17.00

### De Luxe Plate-to-Line Audio Transformers

Type	Application	Prim. Imped.	Sec. Imped.	List Price
D-31B	Biased detector to adj. line	50000/12500	{500/125 200/50}	\$12.00
D-61B	Single or P.P. to adj. line	20000/5000	{500/125 200/50}	12.00

### De Luxe Line-to-Speaker Audio Trans.

Type	Application	Prim. Imped.	Sec. Imped.	List Price
D-136B	4½-watt audio-line	500/125	15/7½/5/3¾	\$14.00
D-135B	15-watt audio-line	500/125	15/7½/5/3¾	20.00

### De Luxe Output Audio Transformers

Type	Application	Prim. Imped.	Sec. Imped.	List Price
DA-101CB	Triodes 10, 12A, 46, 49, 89; pentodes 33, 38; Class "B" 49	20000/5000 12000/3000 20000/5000 12000/3000	5000/125	\$16.00
DA-65CB	Class "B" 49	12000/3000	15/7½/5/3¾/1¼	16.00
DA-105CB	Pentodes 2A5, 6A4, 33, 41, 42, 47, 89; Class "B" 79	16000/4000 14000/3500 16000/4000	500/125	16.00
D-68CB	Class "B" 79	16000/4000	15/7½/5/3¾/1¼	16.00
DA-142B	Class "B" 19, 46, 53, 59, 89	10000/2500 6000/1500	500/125 15/7½/5/3¾/1¼	20.00
DA-102B	31, 45, 50, 71, 43	8000/2000	{500/125 15/7½/5/3¾/1¼}	20.00
D-43B	31, 45, 71, 43	8000/2000	10½	12.00
DA-103B	2A3 fixed bias, 2A3 self-bias	5000/1250 3000/750	500/125 15/7½/5/3¾/1¼	20.00
DA-104B	P.P. par. 50, 2A3 fixed or self-bias	2500/625 1500/375	500 15/7½/5/3¾/1¼	25.00

### De Luxe Audio Reactors

Type	Application	Inductance (Henrys)	List Price
L-243B	01A, 26, 27, 30, 37,	300	\$8.00
L-244B	55, 56, 85, or 864	350	10.00



## AMERTRAN MINIATURE DE LUXE AUDIO TRANSFORMERS—Type OP

Frequency characteristics uniform within  $\pm 1$  dB from 30 to 12,000 cycles

Miniature De Luxe Transformers (Type OP) have been developed to meet the demand for small size, light weight, high quality audio units to be used in the construction of outside pickup and portable amplifiers. These units have frequency characteristics equalling standard De Luxe types but have slightly higher insertion loss due to their small size.

### Output Transformers

Type No.	Application	List Price
OP-362	Application—single 12A plate to adjustable line; primary impedance 10000/25000; secondary impedance 500/125, 200/50	\$16.50
OP-364	Application—single or P.P. 10000 ohm plates to adjustment line; primary impedance 20000/5000, secondary impedance 500/125, 200/50	16.50

### Interstage Transformers

OP-372	Application—plate to grid; primary impedance 10000/2500, secondary impedance 40000/10000	16.50
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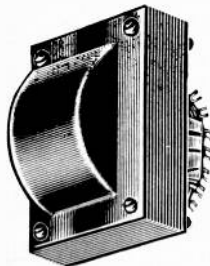
### Line-to-Grid Transformers

Type No.	Application	List Price
OP-382	Application—carbon mike or audio line to grid; primary impedance 500/125, 200/50; secondary impedance 100000/25000 with secondary unloaded	\$16.50

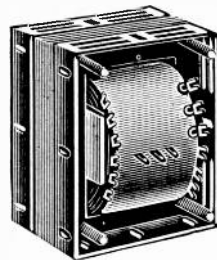
### Mixing Audio Transformers

OP-391	Application—carbon mike, pickup or line to line; primary impedance 500/125, 200/50; secondary impedance 500/125, 200/50	16.50
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# KENYON TRANSFORMERS



## KENYON POWER TRANSFORMERS



The components listed in this catalog are the result of careful design, based on complete practical knowledge of radio receiver requirements. Since they represent thoroughly satisfactory performance at a low price, they have found numerous applications in public address, amateur radio, and other branches of the field.

### HALF SHELL TYPE

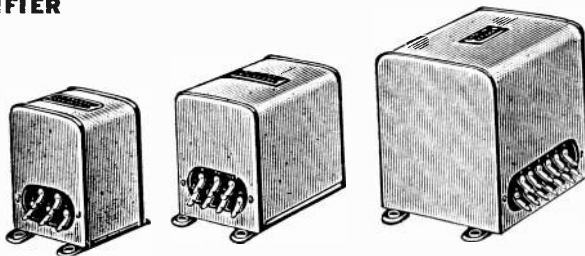
Type No.	Secondaries	Mtg. Dimensions	List Price	Type No.	Secondaries	Mtg. Dimensions	List Price
K-40	650V. C.T. 40 Ma.	2 1/4" x 2 5/8"	\$2.25	K-67-X	700V. C.T. 75 Ma.	2 1/2" x 3 1/8"	\$3.50
	5.0V. 2 Amp.				5.0V. 2 Amp.		
	2.5V. C.T. 5.5 Amp.				2.5V. C.T. 9 Amp.		
K-54	670V. C.T. 50 Ma.	2 1/4" x 2 3/8"	2.75	K-87	650V. C.T. 100 Ma.	2 1/2" x 3 1/8"	4.00
	5.0V. 2 Amp.				5.0V. 2 Amp.		
	2.5V. C.T. 7 Amp.				2.5V. C.T. 12 Amp.		
K-54-Y	670V. C.T. 50 Ma.	2 1/4" x 2 3/8"	2.75	K-87-X	650V. C.T. 100 Ma.	2 1/2" x 3 1/8"	4.25
	5.0V. 2 Amp.				5.0V. 2 Amp.		
	6.3V. C.T. 3 Amp.				2.5V. C.T. 12 Amp.		
K-67	700V. C.T. 75 Ma.	2 1/2" x 3 1/8"	3.25	K-92	800V. C.T. 115 Ma.	3 3/4" x 3"	5.75
	5.0V. 2 Amp.				5.0V. 3 Amp.		
	2.5V. C.T. 9 Amp.				2.5V. C.T. 5 Amp.		

### UNIVERSAL MOUNTING TYPE

Type No.	Secondaries	Mtg. Dimensions	List Price	Type No.	Secondaries	Mtg. Dimensions	List Price
KR-1	700V. C.T. 125 Ma.	1 1/8" to 2 1/8" x 1 1/8" to 2 7/8"	\$5.25	KR-4	580V. C.T. 85 Ma.	1 1/8" to 2 1/8" x 3/4" to 2 3/8"	\$3.75
	5.0V. 3 Amp.				5.0V. 2 Amp.		
	2.5V. 3 Amp.				2.5V. C.T. 1.75 Amp.		
	2.5V. C.T. 10.5 Amp.				2.5V. C.T. 7 Amp.		
KR-2	580V. C.T. 85 Ma.	1 1/8" to 2 1/8" x 3/4" to 2 3/8"	3.75	KR-5	1100V. C.T. 150 Ma.	3 1/8" to 3 5/8" x 1 1/8" to 2 7/8"	9.00
	5.0V. 2 Amp.				7.5V. C.T. 2.5 Amp.		
	1.5V. 4.2 Amp.				7.5V. C.T. 2.5 Amp.		
	2.5V. C.T. 1.75 Amp.				1.5V. 6.3 Amp.		
5.0V. C.T. 1.5 Amp.	2.5V. C.T. 10 Amp.						

### KENYON ALL-PURPOSE AMPLIFIER COMPONENTS

Kenyon Transformer Co., Inc., has developed the All-Purpose line of audio components as a group of transformers and reactors that would meet all the requirements imposed by Public Address, radio receiver, and amateur speech amplifier applications. They are medium price and versatile in application.



The Special Booklet showing full circuit diagrams for all purposes, using this famous line of transformers, is FREE. Call or write for your copy today.

### REACTORS

Type	Use	Ind. Ma.	Max. Res.	D.C. Case	List Price
BC110	Swinging reactor . . . . .	10	200	115 3C	\$4.75
BC-350	Filter reactor . . . . .	30	90	350 2C	4.00
BMR1	Modulation reactor . . . . .	25	125	250 3C	5.00

### POWER TRANSFORMERS (Prim. 110-V., 60-Cy.)

Type	Tubes	H.V. Secondary	L.V. Secondary	Case	List Price
B245PT	45's	375-0-375	5V. 2 Amp.	1LC	\$8.75
			2.5V. C.T. 3 Amp.		
			2.5V. C.T. 10 Amp.		
B2A3PT	2A3's 2B6's	420-0-420	5V. 3 Amp.	2LC	9.25
			6.3V. C.T. 3 Amp.		
			2.5V. C.T. 10 Amp.		
B53PT	2A3's 2B6's	420-0-420	5V. 5 Amp.	...	9.25
			2.5V. C.T. 5 Amp.		
			2.5V. C.T. 10 Amp.		
B250PT	Class B 50's	600-0-600	7.5V. C.T. 3 Amp.	...	11.50
			7.5V. C.T. 3 Amp.		
			2.5V. 10 Amp.		

### LINE-TO-GRID TRANSFORMERS

Type	Use	Case	List Price
BPR	Det. Plate or high imp. pickup; or D.B. microphone (2 windings) to single grid . . . . .	1C	\$6.35
BL2G	Universal line to P.P. grids . . . . .	1C	7.50

### INTERMEDIATE COUPLING TRANSFORMERS

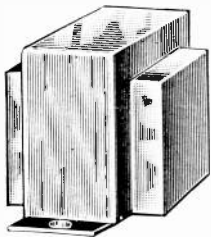
B31	Single plate to single grid; ratio 3 : 1 . . . . .	1C	5.25
B12	Single plate to P.P. grids; ratio 2 : 1 . . . . .	1C	5.75
B22	P.P. plates to P.P. grids; ratio 1.75 : 1 . . . . .	2C	6.90

### OUTPUT TRANSFORMERS (Class A)

B2250	P.P. 50, 45, 71A plates to 500-ohm line and 15-ohm line tapped at 4 and 8 ohms . . . . .	2C	7.50
B2A30	P.P. 2A3 plates (self bias) to 4000-2000-500-ohm line tapped at 4 and 8 ohms . . . . .	3C	7.50

Note—This is only a partial list. Refer to complete catalog for entire line.

# KENYON TRANSFORMERS

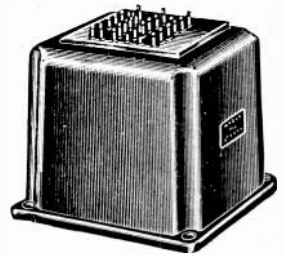


**The SILVER GROUP**

## KENYON

presents

Kenyon Transformer Co., Inc., presents this line as a low-priced high-performance transformer and reactor group for public address amplifier, amateur radio and service applications. Built to the same rigid standards of quality and dependability Kenyon has maintained throughout its transformer products.



**The LABORATORY STANDARD**

This famous line of "Laboratory Standard" Audio Transformers have been carefully designed to meet a frequency specification of plus or minus 1/4 dB. from 30 to 15,000 cycles. "Uniform dependable performance characterizes this line of precision transformers and reactors."

### Line-to-Line Transformers

Type	List
<b>C-101</b> Velocity ribbon mike to 200 or 500-ohm line.....	<b>\$2.60</b>
<b>C-103</b> 15, 8 or 4-ohm voice coil to 500 or 125-ohm line.....	<b>3.20</b>
<b>C-104</b> Crystal microphone to 200 or 50-ohm line.....	<b>2.30</b>

### Line-to-Grid Transformers

<b>C-201</b> Double-button microphone to single grid.....	<b>2.30</b>
<b>C-203</b> Velocity ribbon microphone to single grid.....	<b>2.60</b>
<b>C-204S</b> Any 200 or 500-ohm line to S. or P.P. grids.....	<b>3.00</b>

### Intermediate Coupling Transformers (Class A)

<b>C-300</b> Single plate to single grid 1:4.....	<b>2.20</b>
<b>C-303</b> Single plate to push-pull grids.....	<b>2.20</b>
<b>C-306S</b> Push-pull plates to push-pull grids.....	<b>3.30</b>

### Output Transformers (Class A)

<b>C-403</b> P.P. pentode to 8-ohm voice coil.....	<b>2.00</b>
<b>C-405</b> P.P. plates to 4 and 8-ohm voice coil.....	<b>3.00</b>
<b>C-410</b> P.P. parallel pentode to 8-ohm voice coil.....	<b>2.60</b>
<b>C-412</b> Triode pentode plate; P.P. triode or pentode; low impedance sec. tapped from .1 to 29 ohms.....	<b>2.00</b>
<b>C-413</b> Single or P.P. triode or pentode to high impedance line.....	<b>2.00</b>

### Class B and Class AB Input Transformers

<b>C-500</b> 46 or 59 driver to Class B46 or 59 grids.....	<b>2.80</b>
<b>C-502</b> 53 or 6A6 (par.) to Class B 53 or 6A6.....	<b>2.80</b>
<b>C-504S</b> P.P. 56 to Class AB 45 or 2A3.....	<b>3.00</b>
<b>C-506</b> P.P. 45's Class A to P.P. par. 46 or 59 Class B.....	<b>3.00</b>

### Class B and Class AB Output Transformers

<b>C-600</b> P.P. 46 or 59 Class B or P.P. 45 AB to 4-8 ohms.....	<b>3.20</b>
<b>C-602</b> P.P. 53, 6A6, 6B5, etc. or 79 Class B to 4 and 8 ohms.....	<b>3.20</b>
<b>C-604</b> P.P. parallel 6A6 to 4, 8 and 15 ohms.....	<b>3.20</b>
<b>C-608</b> P.P. parallel 2A3's, 45's Class AB, 46's Class B to 4-8 ohms.....	<b>5.00</b>

### Line-to-Line Transformers

Type	List
<b>KLL</b> Carb. or dyn. mike or low imp. pickup to multiple line.....	<b>\$17.25</b>
<b>KRL</b> Velocity ribbon microphone to multiple line.....	<b>17.25</b>
<b>KLS</b> 30-watt audio to match from 2 to 4000-ohm line..	<b>23.00</b>

### Multiple Line-to-Grid Transformers

<b>KLGA</b> Carb. or dyn. mike, or low imp. pickup to grid....	<b>17.25</b>
<b>KL2GA</b> Carb. or dyn. mike or low imp. pickup to 2 grids..	<b>20.00</b>

### Intermediate Coupling Transformers

<b>K21</b> Cascade one plate to one grid; ratio 2:1.....	<b>13.75</b>
<b>K12A</b> One plate P.P. grids; ratio 2.5:1.....	<b>13.75</b>
<b>K22</b> P.P. plates to P.P. grids; ratio 1.8:1.....	<b>23.00</b>
<b>KSG23</b> P.P. screen-grid plates to P.P. grids; ratio 1:1....	<b>23.00</b>

### Output Transformers

<b>KDLA</b> Plate to multiple line. 4.5 Ma. D.C. in prim.....	<b>17.50</b>
<b>K2DLA</b> P.P. plates to multiple line.....	<b>17.25</b>
<b>KPPD</b> P.P. plates of 45's to tapped voice coil line.....	<b>13.75</b>
<b>K2A3D</b> P.P. plates of 2A3's to tapped voice coil line.....	<b>13.75</b>
<b>K4A3D</b> P.P. par. plates of 2A3's to tapped V.C. line.....	<b>20.00</b>
<b>KPP845A</b> P.P. plates of 845 to multiple line.....	<b>36.50</b>

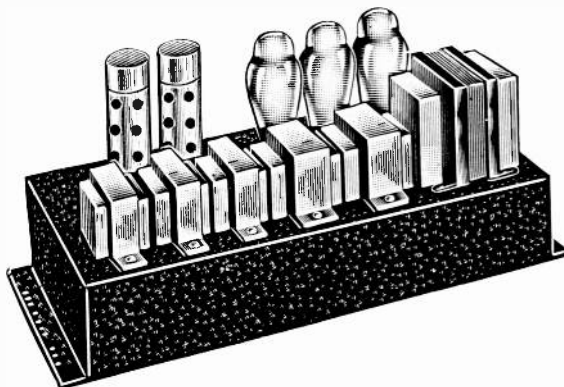
### Reactors

<b>KC40-60</b> 60 Ma. Max. 40H D.C. 500 ohms.....	<b>8.00</b>
<b>KC15-120</b> 120 Ma. Max. 15H D.C. 220 ohms.....	<b>8.00</b>

**NOTE** :—This is only a partial list. Refer to complete catalog for entire line.

## KENYON SILVER GROUP AMPLIFIER KITS

The Engineering Department of the Kenyon Transformer Co., Inc., has developed a number of amplifier units using Silver Group components. These amplifiers are offered in a kit form, which includes all transformer and reactor units and two drilled chassis. The same careful design used in the construction of the transformers and reactors of the Silver Group has been carried to these complete kits. The chassis are both provided with all transformer, reactor, and tube holes punched in the respective units.



The list price given for each kit includes two chassis (unless otherwise specified) and all transformer and reactor units necessary for the construction of the completed units. Where alternative transformers are shown, kits are supplied with lowest-priced transformer indicated unless otherwise specified. Output transformer supplied will be for voice-coil line unless otherwise specified. Both power and audio chassis have the following overall dimensions: length 19"; width 7" to 8"; height 3 1/2".

**FREE** — Complete diagrams for all models. Write or call for copy.

**SK-100.**—A low-gain, high-output unit for home phonograph or radio. Output 12-14 watts. Entire unit in a single chassis. To convert this unit to a high-gain amplifier use preamplifier SK200.  
**Transformer Kit and 1 Chassis..... List Price \$24.15**  
**SK-101.**—High-gain amplifier for public address. Can be used with any popular low-level microphone. Output 12 watts. Can be connected for Sound Truck installation.  
**Transformer Kit and 2 Chassis..... List Price \$31.20**

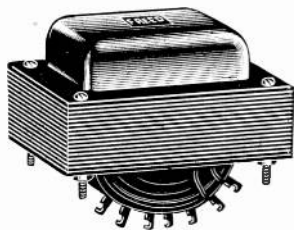
**SK-102.**—36 watts power-output and sufficient gain to work with any crystal, velocity, dynamic or inductor microphone. Has many public-address applications.  
**Transformer Kit and 2 Chassis..... List Price \$46.60**  
**SK-103.**—A popular combination for amateur radio and public address applications. Out put 20 watts, with sufficient gain for any kind of microphone. Can be converted for sound-truck installation.  
**Transformer Kit and 2 Chassis..... List Price \$39.10**

# FREED STANDARD TRANSFORMERS

## POWER-AUDIO-OUTPUT-STEP-DOWN-CHOKES

### HALF SHELL REPLACEMENT TRANSFORMERS

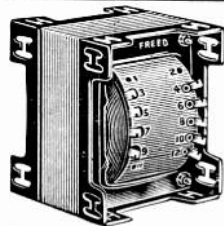
This new line of Freed Half Shell Replacement Transformers has been specially designed to serve as a standard replacement line for the majority of receivers on the market to-day using this universally adapted half-shell mounting. They are a fitting companion to the already justly acclaimed "exact duplicate" Freed Transformer line which you will find on the pages following.



Every unit is thoroughly and carefully tested and the specifications listed below are conservatively rated. The laminations are rigidly mounted and supported to forever banish mechanical hum production. The core is thoroughly impregnated against moisture and all atmospheric conditions. Careful consideration of core sizes and mounting hole spacings to facilitate ease of installation.

#### Primary—115 Volts, 50-60 Cycles

Stock No.	No. of Tubes	HV—CT		Secondary Windings				Filament		Base Dimensions		List Price
		V.	Ma.	Rectifier V.	A.	Filament—C.T. V.	A.	V.	A.	W.	D.	
501	4	650	40	5	2	2.5	3.75	...	...	2 1/2" x 3"		\$1.80
502	4	650	40	5	3	2.5	5.25	...	...	2 1/2" x 3"		2.00
512	4 or 5	640	40	5	3	2.5	1.75	2.5	5	2 3/4" x 3 3/8"		2.50
513	5 or 6	650	50	5	3	2.5	1.75	2.5	5.25	2 3/4" x 3 3/8"		2.75
525	6 or 7	700	70	5	3	2.5	3.5	2.5	7	3 1/8" x 3 3/4"		3.50
526	8 or 9	700	90	5	3	2.5	3.5	2.5	10.5	3 1/4" x 3 3/4"		4.00
550	10 or 12	700	110	5	3	2.5	3.5	2.5	15	3 3/4" x 4 1/2"		4.75
503	4	650	40	5	3	6.3	1.6	...	...	2 1/2" x 3"		\$2.00
514	6 or 7	700	70	5	3	6.3	3	...	...	3 1/2" x 3 3/4"		3.50
527	7 or 10	700	120	5	3	6.3	3	...	...	3 1/2" x 3 3/4"		4.25

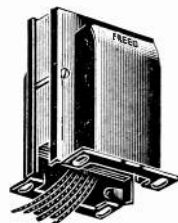


#### UNIVERSAL Mounting Type Power Transformer (10 Tubes)

Stock No.	HV—CT		—SECONDARY WINDINGS—				Dimensions		List Price
	V.	Ma.	Rectifier V.	A.	Fil.—C.T. V.	A.	H.	W.	
560	600	70	5	2	2.5	1 3/4"	3 1/4" x 3 3/4" x 3 3/4"		\$4.00
511	600	80	5	2	2.5	0.5	3 1/4" x 3 3/4" x 3 3/4"	4.00	
					1.5	6.3			(not centre tapped)
					2.5	10.5			

#### Upright Mounting Type Power Transformer

Stock No.	HV—CT		—SECONDARY WINDINGS—				Dimensions			List Price
	V.	Ma.	Rectifier V.	A.	Fil.—C.T. V.	A.	H.	W.	D.	
576	700	70	5	2	2.5	9	2.5	3	4 5/8" x 3 3/4" x 3 3/4"	\$4.50
577	700	110	5	3	2.5	15	2.5	3	4 5/8" x 3 3/4" x 3 3/4"	5.50
578	700	90	5	3	2.5	10.5	2.5	3	4 5/8" x 3 3/4" x 3 3/4"	5.00
579	700	70	5	3	6.3	3	2.5	3	4 5/8" x 3 3/4" x 3 3/4"	4.50
580	700	100	5	3	6.3	4.5	2.5	3	4 5/8" x 3 3/4" x 3 3/4"	5.50

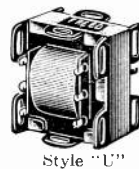


#### Audio Replacement Transformers



Style "L"

Stock No.	Type	Style No.	Ratio	Core	Mtg. Centers	List Price
485	Single	D	3:1	1/2" x 1/2"	2" x 2"	\$1.85
475	Push-Pull	L	3:1	3/8" x 3/4"	2 1/8"	1.75
476	Push-Pull	U	3:1	3/8" x 3/4"	2 1/8"	1.75
486	Push-Pull	D	3:1	1/2" x 1/2"	2" x 2"	2.15
487	Interstage P.P. to P.P.	D	1 1/4":1	1" x 1"	2" x 2"	4.00
488	'24 Tube to Push-Pull '45	D		1" x 1"	2" x 2"	3.75



Style "U"

#### UNIVERSAL Output Transformers

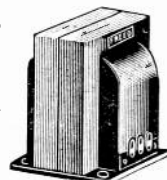
To couple any single or push-pull tubes, except Class "B." Using universal mounting style "U." Core 3/2" x 3/4". Stock No. 480. List Price \$1.75

#### Filter and A.C. - D.C. Chokes

Stock No.	Style Mt.	Henries	Mils	Res.	Core	Mtg. Centers	List Price
481	L	15	40	250	5/8" x 5/8"	2 1/2"	\$0.90
402	L	15	40	400	5/8" x 5/8"	2 1/2"	.90
403	L	15	40	500	5/8" x 5/8"	2 1/2"	.90
404	L	30	50	400	3/2" x 3/2"	3 1/2"	1.40
405	L	30	75	300	7/8" x 7/8"	3 1/2"	1.60
406	L	30	100	200	1" x 1"	3 1/2"	2.00



Style "D"



Style "M"









# JEFFERSON TRANSFORMERS

## UNIVERSAL REPLACEMENT POWER TRANSFORMERS

For all service requirements. Careful selection and combination of windings to meet the needs of the service man and experimenter. Conservatively rated and liberally constructed to give long, efficient service. Finest quality materials used throughout.

**FEATURES:** 1. All units varnish impregnated and baked. 2. Universal combination filament windings permit use of 2.5, 5 and 6.3 volt tubes. 3. Identical characteristics in various mountings. 4. Individually packed in neat blue and white box.

**FREE REPLACEMENT GUIDE:** Carefully compiled chart shows, at a glance, the proper replacement unit for nearly 1900 standard radio sets.



Fig. A

**HALF SHELL** mounting, convenient for flush mounting with solder lug terminals for sub panel wiring. Easily installed. Listing arranged in order of popularity.

5 to 8 Tubes. Pri. 115 Volts, 50-60 Cycles. Plate 340V. D.C.—50 MA. Fil. 5V.—2A. Univer. Fil. 6.3V.—2A. or 2.5V.—7A., CT.  
**Cat. No. 463-281** ..... List Price \$3.50  
 Size: 2 5/8 x 3 x 2 1/4 in. Weight: 3 1/2 lbs.

4 to 5 Tubes. Pri. 115 Volts, 50-60 Cycles. Plate 300V. D.C.—40 MA. Fil. 5V. 2A. Fil. 2.5V.—4A., CT.  
**Cat. No. 463-451** ..... List Price \$2.25  
 Size: 2 5/8 x 3 x 1 3/4 in. Weight: 2 1/2 lbs.

7 to 10 Tubes. Pri. 120-110 Volts, 50-60 Cyc. Plate 350V. D.C.—85 MA. Fil. 5V.—2A. Fil. 2.5V.—8.75A., CT; Fil. 2.5V.—3.5A. CT;  
**Cat. No. 463-271** ..... List Price \$4.50  
 Size: 3 1/4 x 3 3/8 x 2 5/8 in. Weight: 5 1/2 lbs.

5 to 7 Tubes. Pri. 115 Volts, 50-60 Cycles. Plate 340V. D.C.—70 MA. Fil. 5V.—2A. Fil. 2.5V.—8.5A., CT.  
**Cat. No. 463-421** ..... List Price \$3.50  
 Size: 3 1/4 x 3 3/8 x 2 1/2 in. Weight: 4 lbs.



Fig. C

**FULLY SHIELDED** upright type housing with leads brought out through grommeted holes in base. Color coded leads identify all the windings. Makes easy and neat appearing installation possible. Listed in order of popularity.

7 to 13 Tubes. Most popular replacement power transformer listed. Pri. 120-110 Volts, 50-60 Cycles. Plate 360 V. D.C.—125 MA. Fil. 5V.—3A. Fil. 2.5V.—1.75A., CT; Fil. 2.5V.—12.2A., CT; Univ. Fil. 6.3, 5, 2.5V.—4A., CT.  
**Cat. No. 463-361** ..... List Price \$5.00  
 Size: 3 1/2 x 3 3/4 x 5 1/2 in. Weight: 8 lbs.

7 to 11 Tubes. Pri. 120-110 Volts, 50-60 Cyc. Plate, 350V. D.C.—85 MA. Fil. 5V.—3A. Fil. 2.5V.—9A., CT; Univ. Fil. 6.3, 5, 2.5V.—3.5A., CT.  
**Cat. No. 463-351** ..... List Price \$4.50  
 Size: 3 1/2 x 3 3/4 x 4 1/2 in. Weight: 5 1/2 lbs.

5 to 7 Tubes. Pri. 115 Volts, 50-60 Cycles. Plate 320 V. D.C.—60 MA. Fil. 5V.—2A. Univ. Fil. 6.3V.—2A. and 2.5V.—7A., CT.  
**Cat. No. 463-381** ..... List Price \$3.50  
 Size: 2 23/32 x 3 1/4 x 3 1/8 in. Weight: 3 1/2 lbs.

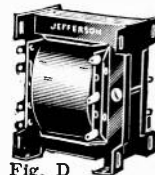


Fig. D

**UNIVERSAL** type bracket which permits transformer to be mounted in horizontal or vertical position. Clearly marked solder lug terminals.

7 to 13 Tubes. Universally mounted transformer. Same electrical characteristics and same windings as 463-361 described in adjacent column.  
**Cat. No. 463-261** ..... List Price \$5.00  
 Size: 3 7/8 x 4 1/2 x 3 3/8 in. Weight: 7 1/4 lbs.

7 to 11 Tubes. Identical electrically with the 463-351 described at left. Ideal for replacement in order type sets.  
**Cat. No. 463-251** ..... List Price \$4.50  
 Size: 3 3/8 x 4 x 3 1/4 in. Weight: 5 1/4 lbs.

Replacement transformer for sets using '26 tubes. Pri. 120, 110 Volts, 50-60 Cycles. Plate 320V. D.C.—75 MA. Fil. 5V.—2A. Fil. 2.5V.—3.5A., CT; Fil. 5V.—0.6A., CT; Fil. 1.5V.—4.3 A; Fil. 1.5V.—1.2A., CT.  
**Cat. No. 463-241** ..... List Price \$4.50  
 Size: 3 3/8 x 4 x 3-15/64 in. Weight: 4 1/2 lbs.

Note: This transformer is also available in fully shielded housing (Cat. No. 463-341) at the same price.

**DOUBLE HALF SHELL** transformers with filaments for the new 6.3 volt tubes. Coded leads are brought out through grommeted holes in lower half shell. The lower shell need not necessarily be used if mounting is more convenient without.

7 to 11 Tubes. Transformer has same electrical characteristics as 463-351 described above.  
**Cat. No. 463-371** ..... List Price \$4.50  
 Size: 3 1/4 x 3 3/8 x 2 5/8 in. Weight: 5 1/2 lbs.

7 to 13 Tubes. Identical electrically with 463-361 described above.

**Cat. No. 463-461** ..... List Price \$5.00  
 Size: 3 1/2 x 4 1/2 x 2 5/8 in. Weight: 7 1/2 lbs.

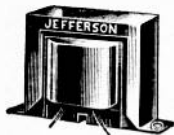


Fig. DD

### FILTER CHOKES

Smoothing and swinging filter chokes in both open and shielded type construction. Rated in actual inductance with full D.C. flowing.

Cat. No.		Mtg.	Hen.	DC.MA.	Resist.	Size	Wt.	Price
466-420	DD		15	30	515	2 7/8 x 1 3/8 x 1 3/8	1/2	\$0.90
466-390	DD		20	50	425	3 1/4 x 1 7/8 x 2	1	1.30
466-290	EE		50	60	1400	2 7/8 x 2 3/8 x 3 1/2	2 1/2	1.75
466-400	DD		8	80	245	3 1/4 x 1 7/8 x 2	1	1.20
466-410	DD		10	100	275	3 1/4 x 2 1/4 x 2	1 1/4	1.45
466-260	DD		5	120	150	2 7/8 x 1 7/8 x 2 3/8	1	1.00
466-220	DD		10	150	200	4 x 2 1/8 x 2 1/2	2 1/4	1.75
SWINGING CHOKES								
466-190	EE		8-2.7	50-150	80	2 7/8 x 2 7/8 x 3 1/4	2 1/4	2.25
466-300	EE		6-3	120-200	75	2 3/4 x 2 3/8 x 3 1/8	2 3/4	2.50

### JEFFERSON 466-210 CHOKE

A special value filter choke of open type construction having high inductance and liberal capacity. Inductance 15 henries designed to carry 150 MA. D.C. and has a D.C. resistance of 425 ohms. Size: 3 x 2 5/8 x 4 1/4 in. Weight 3 1/2 lbs.

**Cat. No. 466-210** ..... List Price \$1.75

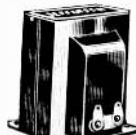


Fig. EE

### BUILD YOUR OWN AMPLIFIER

Powerful amplifiers, simple to construct and easy to wire, with assurance of superior performance are built using the Jefferson amplifier chassis and following circuits developed in the Jefferson laboratory. Send for detailed information:

- Bulletin PA-2 20 Watt—Class B 5's
- Bulletin PA-4 15 Watt—PP 2B6's
- Bulletin PA-5 15 Watt—2A3's
- Bulletin PA-6 38 Watt—Par. P.P. 45's
- Bulletin PA-8 15 Watt—HiGain P.P. 2A3's
- Bulletin PA-9 20 Watt—D.C. Convertible
- Bulletin PA-10 18 Watt—6F6 Metal Tube
- Bulletin PA-11 20 Watt—P.P. 6B5's
- Bulletin PA-12 60 Watt—P.P. 6L6's

### CQ!

### AMATEURS

Jefferson Amateur Filament, Plate, Driver, Modulation and Mixing Transformers are known the world over for their high quality and dependability. Write or call for complete catalog listing these transformers.



Fig. GG

# JEFFERSON TRANSFORMERS



Fig. E



Fig. F



Fig. G

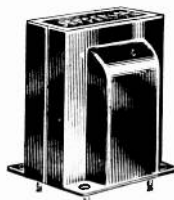


Fig. H

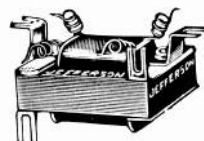


Fig. J



Fig. P

## AUDIO COUPLING TRANSFORMERS

The latest Jefferson coupling transformers, designed for practically all audio uses. High quality, precision built units featuring cores of high grade silicon steel laminations, annealed after stamping, vacuum dried and impregnated coils and careful assembly to rigid test specifications.

Cat. No.	Fig.	Primary	Secondary	Dimensions	Ratio	List Price
<b>STRAIGHT AUDIOS</b>						
467-164	J	56, 27, 30, 2B7, etc., Class "A"	1-56, 27, 45, 47, etc., Class "A"	3 1/8 x 1 3/8 x 2 1/8"	1 to 2	\$1.25
467-401	E	56, 27, 30, 2B7, etc., Class "A"	1-56, 27, 45, 47, etc., Class "A"	2 7/8 x 1 5/8 x 1 3/4"	1 to 2	1.05
467-403	E	56, 27, 30, 2B7, etc., Class "A"	1-56, 27, 45, 47, etc., Class "A"	3 1/4 x 1 7/8 x 2 "	1 to 3	1.30
467-116	F	56, 27, 30, 2B7, etc., Class "A"	1-56, 27, 45, 47, etc., Class "A"	2 7/8 x 2 7/8 x 2 1/2"	1 to 5	2.00
467-405	E	56, 27, 30, 2B7, etc., Class "A"	1-56, 27, 45, 47, etc., Class "A"	3 1/4 x 2 1/8 x 2 "	1 to 4	1.55
<b>PUSH PULL INPUTS</b>						
467-402	E	56, 27, 30, etc., Class "A"	PP-71, 45, 47, 42, etc., Class "A"	2 7/8 x 1 5/8 x 1 3/4"	1 to 2	1.10
467-404	E	56, 27, 30, etc., Class "A"	PP-71, 45, 47, 42, etc., Class "A"	3 1/4 x 1 7/8 x 2 "	1 to 3	1.40
467-406	E	56, 27, 30, etc., Class "A"	PP-71, 45, 47, 42, etc., Class "A"	3 1/4 x 2 1/8 x 2 "	1 to 4	1.65
467-408	E	56, 27, 30, etc., Class "A"	PP-71, 45, 47, 42, etc., Class "A"	4 x 2 1/8 x 2 1/2"	1 to 4	2.05
467-105	F	56, 27, 30, etc., Class "A"	PP-71, 45, 47, 42, etc., Class "A"	2 3/4 x 3 x 3 1/8"	1 to 4	2.60
467-168	G	Universal Class "A"	Single or P.P., Class "A"	2 3/8 x 2 1/8 x 2 "	1 to 3	1.60
<b>INTERSTAGE PUSH PULL</b>						
467-454	Case	"Humfree" Class "A"--	Balanced Windings	2 3/4 x 2 3/4 x 3 3/4"	1 to 4	5.00
467-455	H	Series--Parallel Primary--	Ct. Sec. Windings	2 3/4 x 2 1/2 x 3 1/8"	1.75/2 to 1	3.00
<b>OUTPUT TRANSFORMERS</b>						
467-409	E	7000/cf. Ohms--2 Watts	4 to 6 Ohms (71, 45, etc.)	2 7/8 x 1 7/8 x 1 3/4"	Weight	1.00
467-170	G	Universal/PP--4 Watts	1 to 30 Ohms (Tapped)	2 3/8 x 2 1/8 x 2 "	1 lb.	1.60
467-410	E	7000/Ct. Ohms--3 1/2 Watts	6 to 8 Ohms (71, 45, etc.)	3 1/4 x 1 7/8 x 2 "	1 lb.	1.15
467-176	G	Universal/PP--6 Watts	1 to 30 Ohms (Tapped)	2 3/8 x 2 1/2 x 2 "	1 1/8 lbs.	2.00
467-425	E	Universal/PP--4 Watts	1 to 30 Ohms (Tapped)	2 7/8 x 2 1/8 x 2 3/8"	1 lb.	1.55
467-411	E	14000/Ct. Ohms--6 Watts	10 to 15 Ohms (42, 47, etc.)	3 1/4 x 2 1/8 x 2 "	1 1/4 lbs.	1.30
467-459	E	Midget Univ. PP--2 Watts	7000 to 2, 3, 6, 9 Ohms	2 3/8 x 1 3/8 x 1 1/8"	1/2 lb.	1.35
<b>DRIVER'S (CLASS "B" OR "AB")</b>						
467-458	E	Single 30 (56) Class "A"	Single 19 (Class "B")	2 7/8 x 1 7/8 x 1 3/4"	1/2 lb.	1.50
467-428	P	PP76's (56's) Class "A"	P.P. 53's (6A6's) Class "B"	2 7/8 x 2 1/8 x 2 1/2"	1 1/2 lbs.	2.35
467-271	P	Single or PP. 59 (46) Class "A"	P.P. 59's (46's) (or 4) Class "B"	2 3/4 x 3 1/8 x 3 1/8"	2 1/2 lbs.	3.00
467-461	H	Single 6F6 Class "A"	P.P. 6F6's (AB--Pentode)	2 3/4 x 2 1/8 x 3 1/8"	2 1/2 lbs.	3.00
<b>MICROPHONE TRANSFORMERS</b>						
467-414	E	D. B. Mike (200-0-200)	Single Grid	3 1/4 x 1 7/8 x 2 "	1 lb.	1.40
467-413	E	Single B. Mike (200)	Single Grid	3 1/4 x 1 7/8 x 2 "	1 lb.	1.30
467-263	F	D. B. Mike (200-0-200)	Single Grid	2 7/8 x 3 x 2 1/2"	1 1/2 lbs.	2.00
467-262	F	D. B. Mike (200-0-200)	Single Grid	2 3/4 x 3 1/8 x 3 1/8"	2 1/2 lbs.	3.75
467-261	F	Single B. Mike (200)	Single Grid	2 7/8 x 3 x 2 1/2"	1 1/2 lbs.	1.90
467-421	Hum Free	D. B. Mike or Line 50, 100, 200, 400	Single or P.P. Grids	2 3/4 x 2 3/8 x 4 1/8"	DeLuxe	8.00
<b>MIXING TRANSFORMERS</b>						
467-178	P	200/500 Ohm Line	Single or P.P. Grids	2 7/8 x 3 x 2 1/2"	1 1/2 lbs.	2.50
467-177	P	25,000 Ohm (Preamp. Plate)	200/500 Ohm Line	2 7/8 x 2 1/8 x 2 1/4"	1 1/2 lbs.	2.50
467-438	E	250/500/1000 Ohm--12 Watt	3, 6, 9, 15 Ohm Voice Coil	4 x 2 1/8 x 2 1/2"	2 1/4 lbs.	2.95

THIS REPRESENTS ONLY PARTIAL LISTING OF AVAILABLE JEFFERSON UNITS



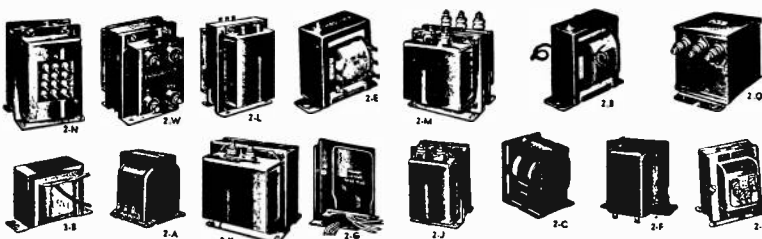
# Transmitter Transformers

## Filament Transformers—Chokes

# THORDARSON

Rugged heavy construction where it counts. "Power and then some." When you specify Thordarson transformers you insure yourself against shortwatt heat producing transformers. The finest line of transmitting and filament transformers ever made. When you "Buy-Thordarson" you save money and get better results.

All Thordarson filter chokes are listed at measured inductances. Heavily insulated to fit service recommended.



### AUTO TRANSFORMERS

For increasing or decreasing primary supply voltage. Tapped at 60 V., 80 V., 90 V., 100 V., 110 V., 120 V., 125 V.

Type No.	Capacity V. A.	H	W	D	Mtg. Flg.	Wt. Lbs.	Net Price
T-8211	500	6 1/4	4 1/2	7	2W	13	\$ 6.00
T-8212	1000	6 3/4	5 1/2	7 1/2	2M	18 3/4	9.00
T-8213	2000	7 1/2	6 3/4	7 1/2	2M	36	12.00

### INPUT CHOKES

These chokes are effectively designed to provide maximum inductance swing at economical cost, yet they sufficiently limit peak rectifier current. For use next to rectifier tubes in choke input filters, mainly in conjunction with mercury vapor rectifier tubes.

**5H. at 80 M.A.**—7 H. at 0 m.a.—138 ohms—1600 volt ins.; 2B mtg.; 2"x2"x2 3/4" high. Wt. 1 lb. T-5751..... Net \$0.90

Same as T-5751 but 2F mounting. T-5752..... Net \$1.05

**4.2 H. at 120 M.A.**—7.8 H. at 0 m.a.—160 ohms—1600 volt ins.; 2F mtg.; 2"x2"x2 1/2" high. Wt. 1 lb. T-4991..... Net \$0.81

**10 H. at 150 M.A.**—30.3 H. at 0 m.a.—200 ohms—2000 volt ins.; 2G mtg.; 3 1/2"x3 3/4"x4 5/8" high. Wt. 5 lbs. T-7429..... Net \$2.85

Same as T-7429 but 2D mounting. T-6405..... Net \$3.00

**12.9 H. at 250 M.A.**—26.9 H. at 0 m.a.—121 ohms—1600 volt ins.; 2G mtg.; 3 3/4"x3 3/4"x5 5/8" high. Wt. 7 3/4 lbs. T-7551..... Net \$3.60

**25.6 H. at 400 m.a.**—40 H. at 0 m.a.; 118ohms; 3000 volt ins.; 2K mtg.; 6 3/4"x6 3/4"x7 1/2" high. Wt. 33 lbs. T-5517..... Net \$10.80

**8.2 H. at 500 m.a.**—17 H. at 0 m.a.; 70 ohms; 5000 volt ins.; 2J mtg.; 5"x5 1/2"x6 1/2" high. Wt. 23 lbs. T-6316..... Net \$8.40

Same as T-5753 but 2F mounting. T-5754..... Net \$1.35

**5 H. at 200 M.A.**—10.6 H. at 0 m.a.—80 ohms—1600 volt ins.; 2F mtg.; 2 1/2"x3"x3 1/2" high. Wt. 3 lbs. T-6749..... Net \$1.95

**12.3 H. at 280 M.A.**—38.4 H. at 0 m.a.—156 ohms—5000 volt ins.; 2J mtg.; 4"x4 1/4"x6 1/4" high. Wt. 11 lbs. T-6315..... Net \$5.10

**42 H. at 15 M.A.**—2100 ohms—1600 v. ins.; 2B mtg.; 1 1/2"x2 3/8"x2 1/2" high. Wt. 3/4 lb. T-7430..... Net \$0.90

**10 H. at 75 M.A.**—2.6 ohms—1600 v. ins.; 2C mtg.; 1 1/2"x2 1/2"x2 1/2" high. Wt. 1 1/4 lbs. R-105..... Net \$1.05

**22 H. at 35 M.A.**—4.05 ohms—1600 v. ins.; 3B mtg.; 2"x2 1/2"x2 1/2" high. Wt. 1 1/4 lbs. T-1892..... Net \$1.05

Same as T-1892 but 2F mtg. T-6808..... Net \$1.20

Same as T-6807 but 2A mtg. R-198..... Net \$1.50

Same as T-6807 but 2F mtg. T-1607..... Net \$1.35

### FILAMENT TRANSFORMERS

#### MULTIPLE SECONDARY

**6.3 V. at 2.5 Amp.** Tapped at 5 volts and 2.5 volts—1600 volt ins.; 2E mtg.; 2"x2 3/8"x2 1/4" high. Wt. 1 1/4 lbs. T-6185..... Net \$1.20

**7.5 V. at 2.5 and 7.5 V. at 2.5 Amp.**—1600 volt ins.; 2E mtg.; 2 3/4"x3"x3 1/4" high. Wt. 3 1/4 lbs. T-5466..... Net \$1.95

**6.3 V. at 3 Amp.—2.5 at 3.5 Amp. and 5 V. at 3 Amp.** (no CT)—1600 volt ins.; 2G mtg.; 3 1/4"x3 3/8"x4 5/8" high. Wt. 4 1/2 lbs. T-7984..... Net \$2.85

**5 V. at 6 Amp.** (no CT)—2.5 V. at 14 Amp. and 2.5 V. at 3.5 Amp.—1600 volt ins.; 2G mtg.; 3 3/4"x3 1/2"x4 5/8" high. Wt. 5 lbs. T-6994..... Net \$2.85

**5 V. at 3 Amp. and 5 V. at 3 Amp.** for dual 83 rect. etc.—3000 volt ins.; 2D mtg.; 2 1/2"x3"x3 1/4" high. Wt. 4 lbs. T-7585..... Net \$3.30

**5 V. at 3 Amp. and 2.5 V. at 10 Amp.** for 83 and 866's, etc.—3000 volt ins.; 2N mtg.; 3 3/8"x3 3/4"x4 1/4" high. Wt. 5 lbs. T-6421..... Net \$3.60

**5 V. at 6 Amp.—5 V. at 3 Amp. and 5 V. at 3 Amp.** for 83 bridge rectifier—5000 volt ins.; 2N mtg.; 3 3/8"x4 1/4" high. Wt. 6 lbs. T-7046..... Net \$4.65

**7.5 V. at 6.5 Amp.—7.5 V. at 4.5 Amp. and 2.5 V. at 4 Amp.**—1600 volt ins.; 2N mtg.; 3 3/8"x4 1/4"x4 3/8" high. Wt. 8 lbs. T-6417\*..... Net \$5.40

All primaries 115 volts 50-60 cycles except those marked with (\*), which have primary taps of 105, 110 and 115 volts. All secondaries center trapped unless otherwise noted.

#### SINGLE SECONDARY

**2.5 V. at 3.5 Amp.**—1600 volt ins.; 2B mtg.; 1 1/2"x2"x2 3/4" high. Wt. 1 lb. T-5061..... Net \$0.90

**2.5 V. at 5 Amp.**—1600 volt ins.; 2E mtg.; 2"x2"x2 3/8" high. Wt. 1 lb. T-5469..... Net \$1.20

**2.5 V. at 10 Amp.**—1600 volt ins.; 2B mtg.; 2 1/2"x3"x3 3/4" high. Wt. 3 lbs. T-5455..... Net \$1.50

Same as T-5455 but 2D mtg.; 2 1/2"x3"x3 3/4" high. Wt. 3 1/2 lbs. T-6432\*..... Net \$2.40

**2.5 V. at 10 Amp.**—7500 volt ins.; 2D mtg.; 3 3/8"x3 3/4"x4 1/4" high. Wt. 5 lbs. T-6433\*..... Net \$3.30

**11 V. at 15.5 Amp.**—1600 volt ins.; 2L mtg.; 4 1/2"x4 1/2"x6 1/4" high. Wt. 13 lbs. T-6419..... Net \$5.40

**5 V. at 4 Amp.**—1600 volt ins.; 2 1/2"x3"x3 1/2" high. Wt. 2 1/2 lbs. T-6399..... Net \$2.10

**5.25 V. at 12 Amp.**—1600 volt ins.; 2D mtg.; 3 3/8"x3 1/2"x4 1/4" high. Wt. 5 lbs. T-7423\*..... Net \$3.00

**5.25 V. at 20 Amp.**—1600 volt ins.; 2D mtg.; 3 3/8"x3 3/8"x4 1/2" high. Wt. 6 lbs. T-7424\*..... Net \$4.20

**5 V. at 25 Amp.**—10,000 volt ins.; 2M mtg.; 5 1/2"x6 1/4"x7 1/2" high. Wt. 19 lbs. T-6420..... Net \$10.80

**6.3 V. at 5 Amp.**—1600 volt ins.; 2D mtg.; 2 1/2"x3"x3 1/2" high. Wt. 3 1/2 lbs. T-7360\*..... Net \$2.25

**11 V. at 10 Amp.**—1600 volt ins.; 2D mtg.; 3 3/8"x4 1/4"x4 3/8" high. Wt. 8 lbs. T-6415\*..... Net \$4.50

**7.5 V. at 2.5 Amp.**—1600 volt ins.; 2D mtg.; 2 1/2"x3"x3 1/2" high. Wt. 2 1/2 lbs. T-6413\*..... Net \$1.95

**7.5 V. at 2.5 Amp.**—5000 volt ins.; 2D mtg.; 2 1/2"x3 3/4"x4 1/4" high. Wt. 4 1/2 lbs. T-7525..... Net \$3.60

**7.5 V. at 6.5 Amp.**—1600 volt ins.; 2D mtg.; 3 3/8"x3 3/8"x4 1/4" high. Wt. 5 lbs. T-6435..... Net \$3.00

**10 V. at 8 Amp.**—1600 volt ins.; 2D mtg.; 3 3/8"x3 3/8"x4 1/4" high. Wt. 5 lbs. T-6414\*..... Net \$3.30

**11 V. at 10 Amp.**—1600 volt ins.; 2D mtg.; 3 3/8"x4 1/4"x4 3/8" high. Wt. 8 lbs. T-6415\*..... Net \$4.50

**10 V. at 6.5 Amp.—10 V. at 3.25 Amp.—7.5 V. at 1.25 Amp. and 2.5 V. at 5 Amp.**—1600 volt ins.; 2N mtg.; 4 1/2"x4 1/2"x6 1/4" high. Wt. 12 lbs. T-6416\*..... Net \$6.90

**2.5 V. at 10 Amp.—2.5 V. at 5 Amp. and 2.5 V. at 5 Amp.** for 66 bridge rectifier—10,000 volt ins.; 2Q mtg.; 5 1/2"x7 5/8"x5 1/2" high. Wt. 15 lbs. T-8514\*..... Net \$10.50

### SMOOTHING CHOKES

For use as first choke with condenser input filter, or as second choke for choke input filters. Inductance is high enough for efficient filtering, while resistance is low as possible to allow good power supply regulation.

**12 Henries at 130 M.A.**—231 ohms—1600 volt insulation; 2F mounting; 2 1/2"x3"x3 1/2" high. Weight 3 1/4 pounds. T-1700B..... Net \$1.95

**7.2 H. at 120 M.A.**—2.90 ohms—1600 v. ins.; 3B mtg.; 2"x2 3/8"x2 1/2" high. Wt. 1 lb. T-7549..... Net \$0.81

**23.6 H. at 280 M.A.**—1.90 ohms—5000 v. ins.; 2J mtg.; 4 1/2"x4 1/2"x6 3/4" high. 13 lbs. T-6408..... Net \$6.00

Same as 1700B but 2D mtg. T-1700..... Net \$2.10

**19.7 H. at 150 M.A.**—2.75 ohms—2000 v. ins.; 2D mtg.; 3 3/8"x4"x4 1/2" high. 6 3/4 lbs. T-6409..... Net \$3.30

**12.9 H. at 250 M.A.**—1.21 ohms—1600 v. ins.; 2B mtg.; 3"x3 3/8"x4 1/2" high. 7 1/2 lbs. T-5450..... Net \$3.00

Same as T-7549 but vertical mtg.; 2"x2"x2 3/8" high. Wt. 40 lbs. T-5319..... Net \$0.81

**20 H. at 380 M.A.**—1.60 ohms—5000 v. ins.; 2K mtg.; 6"x6 3/8"x7 3/8" high. 25 lbs. T-6407..... Net \$9.60

**16.5 H. at 500 M.A.**—1.10 ohms—5000 v. ins.; 2K mtg.; 6 1/2"x6 3/8"x7 3/8" high. 27 lbs. T-6410..... Net \$10.20

**17 H. at 650 M.A.**—70 ohms—5000 v. ins.; 2K mtg.; 6 3/8"x7 3/8" high. Wt. 40 lbs. T-7215..... Net \$14.40

Complete Thordarson Amplifier and Power Transformers listed on pages J-27 to J-32 inclusive



### OUTPUT MODULATION TRANSFORMERS

Thordarson modulation transformers are designed to reflect the correct plate load to the modulator tubes as specified by tube manufacturers. Primary and secondary windings are low resistance and will carry the rated current continuously. Secondaries are made to carry the plate current of the modulated stage; therefore, the cores are exceptionally large to prevent saturation. Only high grade mica is used for insulation, all windings are vacuum impregnated and the large types are sealed in compound.

Type No.	Tube Type	Class	Ohms Impedance		Max. D.C. Sec. M.A.	Max. Audio Pwr. Watts	Mtg. Fig.	Dimensions			Wt. Lbs.	Net Price
			Pri.	Sec.				H.	W.	D.		
T-6769	1-19	B	10,000	2,700	50	10	2F	2 3/8	2	2	1	\$ 1.65
T-6759	1-53-6A6-RK34	B	10,000	3,000	100	20	2F	3	2 1/2	2 1/2	2	1.80
T-8470	2-6L6 2-35T	AB B	3,800	2,500 5,000 7,500	250 200 150	75	2D	6 1/4	4 3/4	5 1/2	13	6.00
T-7202	2-2A3 2-45	AB AB	5,000	3,000 5,000	125	50	2D	5	4 1/2	4 1/2	5	3.90
T-6426	2-46 or 59 2-250	B AB	5,800	5,000 10,000	100	40	2D	4	3 3/4	3 3/8	5	3.60
T-6699	4-46 or 59 4-250	B AB	2,900	500-3,500 6,250	215	150	2Q	6 1/4	5 3/8	8	20	9.00
T-6425	2-210	B	8,600	5 or 10,000	200	40	2D	4 5/8	3 3/8	4 1/2	8	5.40
T-6424	2-203A-830-B 2-242A	B B	8,000	2,500 10,000	400 200	300	2Q	7 1/4	5 3/8	8 3/4	28	13.20
T-6735	4-203A-4-838	B	4,000	4, 6 or 8,000	500	650	2K	8	6 1/4	8	40	24.00
T-6430	2-204A	B	8,800	5,000	500	700	2P	12 1/4	9 1/4	7 3/8	85	75.00
T-6423	2-800 2-RK18-30-31	B B	12,500	5,000 20,000	200 100	150	2Q	6 1/4	5 3/8	8	20	9.00
T-7084	2-801 2-210 2-35T	B B B	10,000	4,500 6,250 12,500	200	150	2Q	6 1/4	5 3/8	8	20	9.00
T-8225	2-805 2-11203A 2-822	B B B	8,000	4,000 6,000 8,000	500	650	2K	8	6 3/4	8	40	24.00
T-7511	2-838	B	10,000	2,500 10,000	400 200	300	2Q	7 1/4	5 3/8	8 3/4	28	13.20
T-8208	2-50T	B	6,000	5,000 20,000	200 100	150	2Q	6 1/4	5 3/4	8	20	9.00
T-8209	2-50T	B	20,000	2,500 10,000	400 200	300	2Q	7 1/4	5 3/4	9 1/4	22	14.40
T-8210	2-150T	B	11,000	4,000 9,000	500 330	650	2Q	9 3/4	7 3/8	7 3/8	38	24.00

### GRID MODULATION TRANSFORMERS

Designed specially for suppressor or control grid modulation, these Transformers have low resistance secondaries—and vacuum impregnated coils.

Type No.	Modulator Tubes	Class	Ohms Impedance		Max. D.C. Pri. M.A.	Max. Audio Pwr. Watts	Mtg. Fig.	Dimensions			Wt. Lbs.	Net Price
			Pri.	Sec.				H.	W.	D.		
T-6773	1-46 or 59	A	6,300	5,400	32	10	2D	3	2 1/2	2 1/2	2	\$ 2.40
T-6774	P.P. 45-2A3	AB	5,000	5,000	60	20	2D	3 1/2	2 3/4	3	3 1/2	3.00

### DOUBLE SECONDARY TRANSFORMERS FOR PLATE AND SCREEN MODULATION OF PENTODES

Developed by Thordarson for more efficient modulation of pentode tubes, the double secondary transformers allow complete modulation without wasting a large percentage of the audio and D.C. power in screen resistors.

Type No.	Modulator Tubes	To Plate & Screen of	Ohms Impedance		Max. D.C. Pri. M.A.	Max. Audio Pwr. Watts	Mtg. Fig.	Dimensions			Wt. Lbs.	Net Price
			Pri.	Sec.				H.	W.	D.		
T-7994	42's or 2A5's Class AB	2-802	8000	5000 plate 800 screen	100 50	40	2G	4 3/8	3 3/8	3 3/4	5	\$3.30
T-7861	46's or 59's Class B	1-RK20 or 1-804	5800	13300 plate 532 screen	75 40	40	2D	4	3 3/4	4 1/4	7	4.80
T-7826	801's Cl. B	2-RK20 or 2-804	10000	6600 plate 264 screen	150 120	100	2Q	6 1/4	5 3/8	8	20	9.60
T-7827	800's Cl. B	1-803 or 1-RK28	12500	13300 plate 2130 screen	150 100	200	2Q	7 1/4	5 3/8	8 3/4	28	13.20

### MODULATION TRANSFORMERS FOR USE WITH P.A. AMPLIFIERS

Another Thordarson development which makes it possible to use any P.A. amplifier as a modulator, or the regular speech amplifier to modulate a low power stage for local contacts. This is particularly useful for 5 and 10 meter experiments.

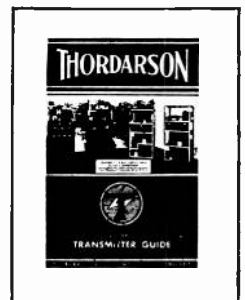
Type No.	Pri. Ohms	Secondary Ohms Load	Max. D.C. Sec. M.A.	Max. Watts	Mtg. Fig.	Dimensions			Wt. Lbs.	Net Price
						H	W	D		
T-7352	500	5000-6000-7000-8000-9000-10000	215	80	2Q	6 1/4	5 3/8	8	20	\$ 9.60
T-8322	500	5000-6000-7000-8000-9000-10000	150	30	2N	4 3/8	3 3/8	4 1/4	8	4.80

### PLATE SUPPLY TRANSFORMERS—50-60 CYCLE PRIMARIES

Thordarson plate transformers are rated in D.C. voltages from a 2 section filter, including the voltage drop through the rectifier tubes. If chokes other than those specified in matched power supplies are used, the D.C. voltage may differ from the rating. This rating is for CONTINUOUS SERVICE and may be safely exceeded by as much as 20% in amateur installations where the service is intermittent. All plate transformers rated at 1000 volts D.C. or higher have electrostatic shield between primary and secondary.

Type No.	Sec. A.C. Load Volts	D.C. Volts	D.C. M.A.†	Pri. Volts		Mtg. Fig.	Dimensions			Wt. Lbs.	Net Price
				Pri. V.A.	Pri. V.A.		H.	W.	D.		
T-6280	725-0-725	525	150	110	125	2L	6 1/4	4 1/2	4 1/2	10 3/4	\$ 5.40
T-7041	725-0-725	525	250	110	210	2L	6 1/4	4 1/2	5	15	6.00
T-5383	465-0-465	400	150	115	90	2G	5	3 3/4	4 1/2	7 1/4	4.20
T-8460	515-0-515	400	250	115	190	2G	5 3/4	4 1/2	5	12	5.40
T-6095	545-0-545	450	250	115	140	2D	6 1/4	4 1/2	4 3/4	13 1/4	6.00
T-6257	750-0-750	625	200	115	180	2E	6 3/4	4 1/2	3 3/4	12 3/4	6.00
T-5448	800-0-800	680	150	115	130	2E	6 3/4	4 1/2	3 3/4	10 1/4	4.80
T-7127	800-0-800	600	250	110	240	2L	6 1/4	4 1/2	4 1/2	14 1/2	7.20
T-6412	980-0-980	750	350	110	400	2M	8	6 3/4	6 3/4	29 1/4	10.80
T-6411*	1600-0-1600	1250	280	110	520	2M	8	6 3/4	7 1/2	36 1/4	13.80
T-7033*	1290-0-1290	1000									
	1620-0-1620	1250	500	110	900	2S	11	6 3/4	6 3/4	41 1/2	24.00
	1330-0-1330	1000									
T-5489	1270-0-1270	1000	400	115	600	2M	8	6 3/4	6 3/4	32 3/4	13.20
T-6282	1335-0-1335	1000	500	110	750	2S	11	6 3/4	6 3/4	41 1/2	21.00
T-7351*	2275-0-2275	1750	500	110	1300	2S	11	6 3/4	7 1/2	53	28.80
T-6283	1950-0-1950	1500									
T-6284	2350-0-2350	2000	250	110-220†	740	2S	11	6 3/4	6 3/4	41	21.60
T-6284	2420-0-2420	2000	500	110-220†	1500	2S	11	6 3/4	8 3/4	71	33.60
T-6285	3630-0-3630	3000	380	110-220†	1750	2S	11	6 3/4	10	83	39.00
T-7584	710-0-710	525	150	115	250	2L	6 3/4	4 3/4	4 3/4	15	8.40
	710-0-710	525	150								

\*Bias tap at 30 volts. †Variation in secondary voltages obtained by changing primary taps. ‡Primary for 110 or 220 volts, or 220 volt tap may be used on 110 volts to reduce sec. voltage 50%. †D.C. volts measured out of filter with choke input. If transformer is used with bridge rectifier (choke input) current should be reduced to 50% of this rating. NOTE—All transformers 60% additional for 25 cycle primary. 30% Additional for 220 Volt, 50-60 cycle primary.



### Build It Now!

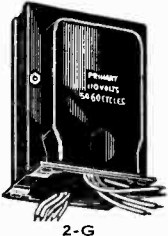
Now is the time to build that transmitter. Send today for your copy of the Thordarson Transmitter Guide No. 344. Get on the air, with quality and punch, by using one of the many practical hookups shown. It costs you only 15c. Order your copy today. We can supply you.



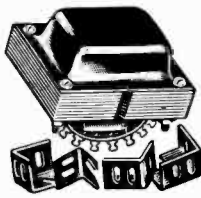
# POWER TRANSFORMERS RECEIVERS AND AMPLIFIERS

# THORDARSON

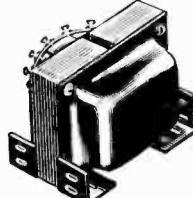
THORDARSON TRANSFORMERS COST YOU LESS MONEY. The name THORDARSON on a transformer or choke, has been a guarantee of full value for every penny spent for almost half a century. DON'T BE MISLED. Every THORDARSON transformer you buy has 38% more content of copper and other essential materials. These mighty, stamina packed power producers, today as well as 40 years ago, live up to their heritage. A THORDARSON transformer on any job will surpass its guarantee. Whether you are a serviceman, radio engineer or "Ham"—demand POWER BY THORDARSON.



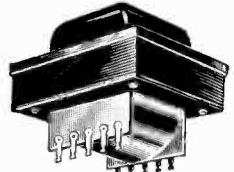
2-G



2-U



2-U



2-H

### Half Shell Mounting TYPE 2H

**4 Tubes—2.5 Volts**  
For 2-57, 58; 1-2A5; 1-80;  
Secondary—560 V. C.T.  
at 30 m.a.; 2.5 V. at 3.5  
amps. C.T.; 5 V. at 2  
amps. 3 3/4"x3 1/4"x2 1/2"  
high, Wt.—3 lbs.  
**T-6049** . . . . . List \$2.00

**5 Tubes—6.3 Volts**  
For 2-76; 2-42; 1-80; Secondary—610 V. C.T. at 125 m.a.; 6.3 V. at 2 amps. C.T.; 5 V. at 2 amps. 3 1/2"x3 1/2"x3 3/8" high, Wt.—6 lbs.  
**T-7547** . . . . . List \$3.75

**4 to 5 Tubes—2.5 Volts**  
For 2-24, 27, or 3-56, 57; 1-47, 2A5; 1-80; Secondary—620 V. C.T. at 40 m.a.; 2.5 V. at 5 amps. C.T.; 5 V. at 2 amps. 3 1/2"x3"x3" high, Wt.—4 lbs.  
**T-5002** . . . . . List \$2.75

**4 or 5 Tubes—6.3 Volts**  
For 2 or 3-77, 78, 6K7, 6F5; 1-42, 6F6; 1-80, 5Z4; Secondary—600 V. C.T. at 50 m.a.; 6.3 V. at 2 amps. C.T.; 5 V. at 2 amps. 3 1/2"x2 1/2"x3" high, Wt.—4 lbs.  
**T-7020** . . . . . List \$2.75

**5 to 9 Tubes—2.5 Volts**  
For 4-24, 27, or 7-56, 57; 1-47, 2A5; 1-80; Secondary—700 V. C.T. at 70 m.a.; 2.5 V. at 8.5 amps. C.T.; 5 V. at 2 amps. 3 1/2"x3 1/4"x3 3/8" high, Wt.—5 lbs.  
**T-4900** . . . . . List \$3.25

**6 to 9 Tubes—2.5 Volts**  
For 6-27, 24, or 9-56, 57; 1-47, 2A5; 1-80; Secondary—700 V. C.T. at 70 m.a.; 2.5 V. at 7 amps. C.T.; 2.5 V. at 1.5 amps. C.T.; 5 V. at 2 amps. 3 1/2"x3 1/4"x3 3/8" high, Wt.—5 lbs.  
**T-6362** . . . . . List \$3.50

**6 to 8 Tubes—6.3 Volts and 2.5 Volts**  
For 5 or 6-76, 77, 78, 6C5, 6K7, 6F5; 2-47, 2A5, 45; 1-80; Secondary—700 V. C.T. at 70 m.a.; 6.3 V. at 3 amps. C.T.; 2.5 V. at 4 amps. C.T.; 5 V. at 2 amps. 3 1/2"x3 1/4"x3 3/8" high, Wt.—5 lbs.  
**T-7021** . . . . . List \$3.50

### U P R I G H T S H I E L D E D M O U N T I N G TYPE 2G

**4 or 5 Tubes—6.3 Volts**  
For 2 or 3-76, 77, 78, 6C5, 6K7, 6F5; 1-42, 6F6; 1-80, 5Z4; Secondary—680 V. C.T. at 55 m.a.; 6.3 V. at 1.5 amps. C.T.; 5 V. at 2 amps. 3 1/2"x3 1/4"x3 3/8" high, Wt.—6 lbs.  
**T-7078** . . . . . List Price \$3.00

**6 to 8 Tubes—6.3 Volts**  
For 5 or 6-76, 77, 78, 6C5, 6K7, 6F5; 1-42, 6F6; 1-80, 5Z4; Secondary—770 V. C.T. at 70 m.a.; 6.3 V. at 2.5 amps. C.T.; 5 V. at 2 amps. 3 1/2"x3 1/4"x3 3/8" high, Wt.—6 1/2 lbs.  
**T-7061** . . . . . List Price \$4.00

**10 Tubes—1.5 Volts**  
For 5-26; 2-27; 2-71A; 1-80; Secondary—650 V. C.T. at 70 m.a.; 1.5 V. at 1 amp.; 1.5 V. at 4 amps.; 2.5 V. at 3 amps. C.T.; 5 V. at 5 amps. C.T.; 5 V. at 2 amps. 3 1/2"x3 1/4"x4 1/8" high, Wt.—7 lbs.  
**T-5601** . . . . . List Price \$4.50

**7 to 11 Tubes—2.5 Volts**  
For 5-27, 24, or 9-56, 57; 1-47, 2A5; 1-80; Secondary—700 V. C.T. at 70 m.a.; 2.5 V. at 9 amps. C.T.; 2.5 V. at 1.5 amps. C.T.; 5 V. at 2 amps. 3 1/2"x3 1/4"x4 1/8" high, Wt.—7 lbs.  
**T-5602** . . . . . List Price \$4.25

**11 Tubes—2.5 and 1.5 Volts**  
For 7-26; 1-27; 2-45, 47, 2A5; 1-80; Secondary—700 V. C.T. at 105 m.a.; 2.5 V. at 3 amps. C.T.; 2.5 V. at 1.75 amps. C.T.; 1.5 V. at 5 amps.; 1.5 V. at 1 amp.; 5 V. at 3 amps. 3 1/2"x3 1/4"x5" high, Wt.—8 lbs.  
**T-5603** . . . . . List Price \$5.50

**8 to 12 Tubes—2.5 Volts**  
For 5-24, 27 or 9-56, 57; 2-47, 2A5; 1-80; Secondary—700 V. C.T. at 105 m.a.; 2.5 V. at 12 amps. C.T.; 5 V. at 3 amps. 3 1/2"x3 1/4"x5" high, Wt.—8 lbs.  
**T-5604** . . . . . List Price \$5.25

**11 to 13 Tubes—6.3 Volts**  
For 8 to 10-76, 6C6, 6D6, 6C5, 6K7, 6F7; 2-42, 6F6; 1-80, 5Z3, 5Z4; Secondary—745 V. C.T. at 145 m.a.; 6.3 V. at 4.5 amps. C.T.; 5 V. at 3 amps. 3 1/2"x3 1/4"x5" high, Wt.—8 lbs.  
**T-7062** . . . . . List Price \$5.50

**10 to 15 Tubes—2.5 Volts**  
For 7-24, 27 or 12-56, 57; 2-47, 2A5; 1-80; Secondary—700 V. C.T. at 110 m.a.; 2.5 V. at 9 amps. C.T.; 2.5 V. at 3 amps. C.T.; 2.5 V. at 3 amps. C.T.; 5 V. at 3 amps. 3 1/2"x3 1/4"x5" high, Wt.—9 lbs.  
**T-5605** . . . . . List Price \$5.75

### S P E A K E R F I E L D S U P P L Y

Secondary will furnish: 115 V. D.C. from 50 to 250 m.a. for 1 to 6 fields; 5 V. at 3 amps. for 83. 3 1/2"x3 1/4"x3 3/8" high, Wt.—5 1/2 lbs.  
**T-6797** . . . . . List Price \$4.25

**10 Tubes—6.3 Volts**  
For 6-76, 6C6, 6J7, 6C5, etc.; 2-42, 6F6, etc.; 1-82; 1-83, 5Z3, 5Z4; Secondary—880 V. C.T. at 125 m.a. (Bias tap for 38 V.); 6.3 V. at 3.3 amps. C.T.; 2.5 V. at 3 amps.; 5 V. at 3 amps. 3 1/2"x3 1/4"x5" high, Wt.—8 lbs.  
**T-7428** . . . . . List Price \$6.50

**9 to 14 Tubes—2.5 Volts**  
For 5 to 9-56, 57; 2 to 4-2A3; 1-83, 5Z3; 1-80; Secondary—700 V. C.T. at 200 m.a.; 2.5 V. at 15 amps. C.T.; 5 V. at 2 amps.; 5 V. at 3 amps. 3 1/2"x4 1/8"x5" high, Wt.—10 lbs.  
**T-6793** . . . . . List Price \$8.00

**11 Tubes—3 Volts**  
Sparton B2649-B2339; For 8-425; 2-482B, 483; 1-80; Secondary—700 V. C.T. at 80 m.a.; 3 V. at 10 amps. C.T.; 5 V. at 2.5 amps. C.T.; 5 V. at 2.5 amps. C.T.; 4 1/2"x3 1/4"x4 1/8" high, Wt.—7 1/2 lbs.  
**T-3770-C** . . . . . List Price \$6.00

**8 Tubes—6.3 Volts**  
For 5-76, 6C6, 6D6, 6K7; 2-42, 6F6; 1-83, 5Z3, 5Z4; Secondary—775 V. C.T. at 200 m.a.; 6.3 V. at 3 amps. C.T.; 5 V. at 3 amps. 3 1/2"x4 1/8"x5" high, Wt.—10 lbs.  
**T-6935** . . . . . List Price \$7.00

**11 Tubes—6.3 and 2.5 Volts**  
For 5-76, 6D6; 4-2A3; 1-82; 1-83; Secondary—870 V. C.T. at 250 m.a. (Bias tap at 80 V.); 6.3 V. at 1.5 amps. C.T.; 2.5 V. at 10 amps. C.T.; 2.5 V. at 3 amps.; 5 V. at 3 amps. 3 1/2"x4 1/8"x5" high, Wt.—10 1/2 lbs.  
**T-7550** . . . . . List Price \$8.00

**8 Tubes—7.5 and 2.5 Volts**  
For 2-50; 5-56; 1-83; Secondary—1100 V. C.T. at 150 m.a.; 7.5 V. at 2.5 amps. C.T.; 2.5 V. at 5 amps. C.T.; 5 V. at 3 amps. 3 1/2"x4 1/8"x5" high, Wt.—10 1/2 lbs.  
**T-6826** . . . . . List Price \$6.50

**4 Tubes—7.5 Volts**  
For 2-50; 1-83; 1-82; Secondary—1480 V. C.T. at 140 m.a. (Bias tap at 150 V.); 7.5 V. at 2.5 amps. C.T.; 5 V. at 3 amps.; 2.5 V. at 3 amps. 3 1/2"x4 1/8"x5" high, Wt.—12 lbs.  
**T-8382** . . . . . List Price \$10.00

**6 Tubes—7.5 Volts**  
For 4-50; 1-83; 1-82; Secondary—1480 V. C.T. at 200 m.a. (Bias tap at 150 V.); 7.5 V. at 5 amps. C.T.; 5 V. at 3 amps.; 2.5 V. at 3 amps. 3 1/2"x5 1/4"x5" high, Wt.—14 lbs.  
**T-8385** . . . . . List Price \$12.00

### 8 to 12 Tubes—2.5 Volts

For 5-27, 24, or 9-56, 57; 2-47, 2A5; 1-80; Secondary—700 V. C.T. at 80 m.a.; 2.5 V. at 12 amps. C.T.; 5 V. at 2 amps. 3 1/2"x3 1/4"x3 3/8" high, Wt.—6 lbs.  
**T-5003** . . . . . List \$3.75

### 7 to 12 Tubes—2.5 Volts

For 5-24, 27, or 9-56, 58; 2-47, 2A5, 45; 1-80; Secondary—700 V. C.T. at 80 m.a.; 2.5 V. at 9 amps. C.T.; 2.5 V. at 3 amps. C.T.; 5 V. at 2 amps. 3 1/2"x3 1/4"x3 3/8" high, Wt.—6 lbs.  
**T-6363** . . . . . List \$4.00

### 7 to 10 Tubes—2.5 Volts

For 4-27, 24 or 7-56, 58; 2-47, 2A5; 1-80, 5Z3; Secondary—700 V. C.T. at 70 m.a.; 2.5 V. at 7 amps. C.T.; 2.5 V. at 3.5 amps. C.T.; 5 V. at 3 amps. 3 1/2"x3 1/4"x3 1/2" high, Wt.—5 lbs.  
**T-7542** . . . . . List \$3.60

### 5 to 9 Tubes—2.5 Volts

For 4-24, 27 or 7-56, 57; 1-42, 2A5; 1-80, 5Z3; Secondary—700 V. C.T. at 70 m.a.; 2.5 V. at 9 amps. C.T.; 5 V. at 3 amps. 3 1/2"x3 1/4"x3 1/2" high, Wt.—5 lbs.  
**T-7541** . . . . . List \$3.35

For 25 Cycle, 115 Volt primary add 60%. 60 Cycle, 220 Volt primary add 30%

See Pages H-25 and H-26 for complete listing of Thordarson Transmitting Transformers





Experience has proven that no audio transformer can equal THORDARSON for consistent, long lived, trouble free audio power. From the brand new THORDARSON Tru-Fidelity units to the regular THORDARSON replacement audio transformers, distortionless power is guaranteed when you use "POWER BY THORDARSON."

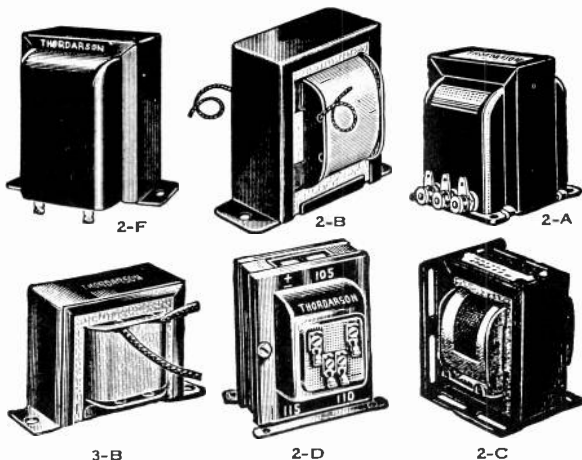
Thordarson audio transformers give widest frequency response of any low priced commercial transformers due to special Thordarson features.

1. Thordarson designed and patented winding equipment gives better space factor (more turns in same winding space).

2. Thordarson coil impregnation excludes moisture, prevents corrosion and electrolysis common in salty, humid climates (seaboard and tropics).

3. Thordarson high permeability core material gives improved low frequency response.

The primary and secondary impedances shown in the tabulation are the recommended load impedances for the windings. This should not be confused with either the absolute impedance value, which is dependent on both frequency and loading, nor with the D.C. resistance of the winding which is no indication of the merit of the transformer.



### PLATE TO GRID INTERSTAGE TRANSFORMERS—One Plate to One Grid—Class A

These items are the highest quality for use in high grade receivers and amplifiers, and are offered in several mounting styles. The primary and secondary windings of T-7574 are electrostatically shielded from each other, with the shield connected to an external terminal.

Type No.	Application	Ratio	Imped. Pri.	Imped. Sec.	Pri. M.A.	Mtg. Fig.	H.	W.	D.	Mtg. Holes	Wt. Lb.	List Price
T-5738	10,000 ohm plate to grid	3:1	10,000	90,000	8	2F	3	2 1/2	2 1/2	2 1/8	2	\$3.25
T-5737						2B	3	2 1/2	2	2 1/8	1 3/4	3.00
R-300						2A	3	2 1/2	2 1/2	2x2 1/8	2	3.50
T-5736	Similar to above but smaller	3.2:1	10,000	100,000	8	2F	2	2 3/8	2	2 3/8	1 1/2	2.00
T-2999						2B	2	2 3/8	2	2 3/8	1 1/4	1.75
T-8604						3B	2	2 3/8	2	2 3/8	1 1/4	1.75
R-100	10,000 ohm plate to grid	3:1	10,000	90,000	8	2C	2	2 3/8	1 1/2	Univ.	1	1.75
T-7574	10,000 ohm plate to grid Static Shield between primary and secondary.	2:1	10,000	40,000	8	2F	2	2 3/8	2	2 3/8	1 1/2	2.50

### PUSH-PULL INPUT TRANSFORMERS—One Plate to Two Grids

These items are highest quality in choices of mountings. By connecting primary and secondary of T-7431 in series, it may be used as a push-pull impedance to secure ratios of 1 to 1, 1 to 2, or 1 to 4. It is used in this manner in T-7518 and T-7530 amplifiers which are catalogued on page J-32.

Type No.	Application	Ratio	Imped. Pri.	Imped. Sec.	Pri. M.A.	Mtg. Fig.	H.	W.	D.	Mtg. Holes	Wt. Lb.	List Price
T-5741	10,000 ohm plate to P. P. grids	3:1	10,000	90,000	8	2F	3	2 1/2	2 1/2	2 1/8	2	\$3.50
T-5740						2B	3	2 1/2	2	2 1/8	1 3/4	3.25
T-4304						2A	3	2 1/2	2 1/2	2x2 1/8	2	3.75
T-5739	Similar to above but smaller	3.2:1	10,000	100,000	8	2F	2	2 3/8	2	2 3/8	1 1/2	2.25
T-3391						2B	2	2 3/8	2	2 3/8	1 1/4	2.00
T-8603						3B	2	2 3/8	2	2 3/8	1 1/4	2.00
R-101						2C	2	2 3/8	1 1/2	Univ.	1 1/2	2.25
T-7431	10,000 ohm plate to P. P. grids	1:1	10,000	10,000	8	2F	3	2 1/2	2 1/2	2 1/8	2	3.50
T-5742*	10,000 ohm plate to P. P. grids	3:1	10,000	90,000	8	2B	3	2 1/2	2	2 1/8	1 3/4	3.25
T-5743*						2F	3	2 1/2	2 1/2	2 1/8	2	3.50
T-7197	8,000 ohm plate to P. P. grids (Single 45 to P. P. 845's)	2.7:1	8,000	44,000	40	2D	3 1/2	2 1/8	3	3 3/8	3 1/4	5.00

### PUSH-PULL INTERSTAGE TRANSFORMERS—Two Plates to Two Grids

T-5397 and T-6434 are designed for Class A only (no grid current). T-5870 and T-6791 may be used for either Class A or AB.

Type No.	Application	Ratio	Imped. Pri.	Imped. Sec.	Pri. M.A.	Mtg. Fig.	H.	W.	D.	Mtg. Holes	Wt. Lb.	List Price
T-5397	P. P. 10,000 ohm plates to P. P. power tube grids Cl. A.	1.3:1	20,000	33,800	8**	2F	3	2 1/2	2 1/2	2 1/8	2	\$3.75
T-6434						2B	3	2 1/2	2	2 1/8	1 3/4	3.50
T-5870	P. P. 10,000 ohm plates to P. P. or P. P. par. Cl. A or Cl. AB tubes	1.5:1	20,000	45,000	10**	2F	3	2 1/2	2 1/2	2 1/8	2	3.75
T-6791						2B	3	2 1/2	2 1/2	2 1/8	1 3/4	3.50
T-7557	P. P. 45's to 845's P. P. Cl. A	1:2.35	16,000	88,000	40**	2D	3 1/2	2 1/8	3	3 3/8	3 3/4	5.00

\*High peak for power detector. \*\*Per side.

### VOLTAGE CHANGERS AND BOOSTERS

Trouble-free Thordarson Voltage Changers. Primary is equipped with cord and plug. Secondary has standard receptacle for convenient attachment to devices.

Type	Primary	Secondary	Rating Watts	Mtg. Fig.	Wt. Lbs.	List Price
T-2604			80	2V	5	\$4.50
T-5010	220-250	110-125	125	2V	6 1/2	5.50
T-4015	Volts,	Volts,	175	2V	7 1/2	6.50
T-5011	60 cycles	60 cycles	250	2V	10	7.50
T-6107	90 or 100 Volts, 60 cycles	115 Volts, 60 cycles	150	2V	5	5.00

See Pages H-25 and H-26 for complete listing of Thordarson Transmitting Transformers.

## Hot off the Press

**THORDARSON RADIO SERVICING GUIDE** — 32 pages!! Crammed full of truly helpful radio servicing hints and suggestions. Profusely illustrated. 1936 is and 1937 will be banner radio servicing years. You can earn more money by reading this great new THORDARSON GUIDE. Send for your copy TODAY—only 15c.



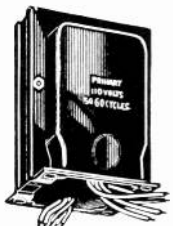




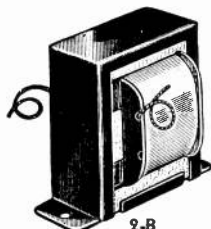
**PRACTICAL—MODERN—EFFICIENT.** These Thordarson transformers are ideally suited for radio receiver and amateur work. Complete data on turns ratios, impedance ratios, currents and capacities is given here. Designed for specific load impedances, these transformers do not impair efficiency by a number of taps or unused windings.



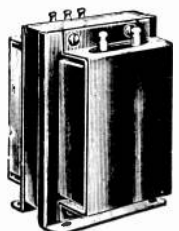
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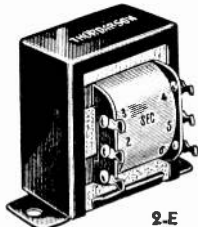
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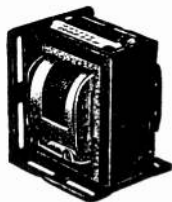
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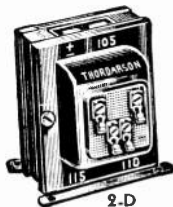
2-L



2-E



2-C



2-D

### OUTPUT TRANSFORMERS TO LINE OR SPEAKER (HIGH LEVEL)

Class A, AB and B

Type No.	Tube Type	Class	Ohms Impedance		Max. Audio Pri. Power Mtg.			Dimensions			Wt. Lbs.	List Price
			Pri.	Sec.	M. A. Watts	Fig.	H.	W.	D.			
T-5872	2A3 PP 48 PP	AB A	3,000	4-8-15-500	60	30	2F	3 1/2	2 7/8	3	3 1/4	\$4.00
T-6754	2A3 PP 45 PP 19 PP	AB AB B	5,000	4-8-15-500	60	30	2F	3 1/2	2 7/8	3	3 1/4	4.00
T-6792	2A3 PP Par. 45 PP Par.	AB AB	1,500	4-8-15-500	80	40	2F	3 1/2	2 7/8	3	3 1/4	4.00
T-6594	2A5-42 PP 50 PP 79 PP	AB A B	8,000	4-8-15-500	55	40	2F	3 1/2	2 7/8	3	3 1/4	4.00
T-7575	2B6, 6B5 PP 6A6, 6N7 6F6 PP	A B AB	10,000	4-8-15-500	45	40	2F	3 1/2	2 7/8	3	3 1/4	4.00
T-8458	6L6 PP	AB	3,800	4-8-15-500	160	60	2G	4 3/8	3 3/8	3 3/4	6	6.00
T-6760	19-30-49 31	B A	10,000	4-8-2000	15	10	2F	2 3/8	2	2 1/8	1 1/2	3.75
T-8101	19-30-49 31	B A	10,000	2-4-8	15	8	2B	2	1 3/8	1 3/8	3/4	1.65
T-6751	2A5-47 79	A B	14,000	4-8-15-500	40	20	2F	3	2 1/2	2 1/2	2	3.50
T-6748	45-71-43 53	A B	8,000	4-8-15-500	36	25	2F	3	2 1/2	2 1/2	2	3.50
T-3399	45-71 53	A B	8,000	8	25	15	2B	2 3/8	2	2	1 1/4	1.60
T-6752	46-59 6F6 PP 53 PP Par.	B AB B	5,800	4-8-15-500	60	30	2F	3 1/2	2 7/8	3	3 1/4	4.00
T-6753	46-59 PP Par.	B	2,900	4-8-15-500	120	60	2G	4	3 3/8	3 3/8	5	6.50
T-8384	50 PP	AB	5,000	4-8-15-500	80	45	2G	4 3/8	3 3/8	3 1/2	5 1/4	6.00
T-8387	50 PP Par.	AB	3,000	4-8-15-500	160	90	2G	5	3 7/8	3 3/8	7 1/2	8.00
T-6167	845 PP	AB	8,000	500	150	110	2L	6 1/4	4 1/4	4 1/2	11	12.00
T-6755	800 PP	B	12,500	500	150	110	2L	6 1/4	4 1/4	4 1/2	11	12.00
T-5701	Univ. Single or PP Tubes	A	4,000/7,000 8,000/10,000 14,000 CT	Adjust- able .1 to 29	36	8	2E	2 1/2	2	2	1 1/2	2.00
R-107	Univ. Single or PP Tubes	A	4,000/7,000 8,000/10,000 14,000 CT	Adjust- able .1 to 29	36	8	2C	2 1/2	2 1/8	1 1/8	1 1/2	2.25
T-6806	2A5-42	A	7,000	10 or 2,000 500	25	5	2F	2 3/8	2	1 7/8	1	2.50
T-6125	Univ. Single Tube	A	Adjustable 2,500/4,000 5,000/6,000, 7,000	500	60	10	2E	3	2 1/2	2	1 3/4	3.50
T-6126	Univ. PP Tubes	A	Adjustable 8,000/10,000 12,000/14,000 CT	500	55	10	2E	3	2 1/2	2	1 3/4	3.50

### LINE TO SPEAKER TRANSFORMERS

Type No.	Application	Impedance in Ohms		Mtg. Fig.	Dimensions			Mtg. Holes	Wt. Lb.	List Price
		Pri.	Sec.		H.	W.	D.			
T-5381	Line to voice coil	500/250	4/8/15	2D	3 3/4	2 7/8	3	1 7/8 x 2 1/8	3 1/2	\$4.50
T-6048	Line to voice coil 1 to 6 may be con. in par. to 500 ohm line.	500/1,000 1,500/2,000 2,500/3,000	(pri. as 500 ohm) .06 to 8.; (pri. as 1000 ohm) .12 to 16, etc.	2E	3	2 1/2	2	2 7/8	1 3/4	3.00
T-7674	Line to multiple spkrs. (autotransformer).	500	500/250/166/125/ 100/84	2E	3	2 1/2	2	2 7/8	1 3/4	3.00

### TRANSCIVER TRANSFORMERS

Smallest practical size. Light weight. Easy to mount. Efficient.

T-7259	Plate and single button microphone to grid.	2B Mtg.	2 x 1 1/8 x 1 1/8	1/2 lb.	List \$1.65
T-7258	Pentode plate to low or high impedance phones or oscillator	2B Mtg.	2 x 1 1/8 x 1 1/8	1/2 lb.	List 1.65

### EXCITER LAMP TRANSFORMERS

50-60 Cycle

Type No.	Pri. Volts	Secondary		V. A.	Mtg. Fig.	Dimensions			Mtg. Holes	Wt. Lb.	List Price
		Volts	Amps.			H.	W.	D.			
T-6437	110/115/120	10	7.5/5	75	2E	4	3 3/4	3 1/2	3 1/4 x 2 1/2	5 3/4	\$5.00
T-6438	110/115/120	8.5	4	35	2E	3 3/4	3	2 3/4	2 1/4 x 1 3/8	3 1/2	4.00
T-6439	110/115/120	27	1	27	2E	3 3/4	3	2 3/8	2 1/4 x 1 3/8	3 1/2	4.00

See Pages H-25 and H-26 for complete listing of Thordarson Transmitting Transformers.



**Tru-Fidelity by Thordarson**—the most sensational audio development since the dynamic speaker. Stupendous! History Making! For the first time, full range—clear—yes, perfect audio reproduction is available. Others have tried, Thordarson has succeeded and brings you laboratory perfection in commercial production with Tru-Fidelity. Some of the features are: ● Wide range frequency response ● High permeability core ● Special coil construction for low distributed capacity and leakage reactance ● Maximum shielding from external fields through case design (additional shielding cases unnecessary) ● Electrostatic shielding between primary and secondary coils ● Capacitively and inductively balanced for use on equalized transmission lines ● Effect of stray fields neutralized ● Line coupling transformers reflect proper impedance on all taps, reducing line reflection ● Ingenious mounting permits above panel, sub-panel or combination wiring ● Single hole mounting bushing permits rotation without disturbing connecting leads.

### Line, Mixer, or Microphone to Single Grid

PRIMARY—500\*/333/250/200\*/125/50 ohms; Max. operating level plus 10 D. B.; Max. D. C. 100 m. a. per side; Max. D. C. unbalance 0.5 m. a.; SECONDARY—75,000/18,750 ohms.  
**T-9000**.....List Price \$14.50

### Push-Pull Tubes to Line or Mixer

PRIMARY—20,000/5000 ohms for 56, 76, 864, 6C6 or 6J7 triodes, etc.; Max. operating level plus 20 D. B.; Max. D. C. 10 m. a. per side; Max. D. C. unbalance 0 m. a.; SECONDARY—500\*/333/250/200\*/125/50 ohms.  
**T-9001**.....List Price \$14.50

### Single Tube to Line or Mixer

PRIMARY—20,000/5000 ohms for 56, 76, 864, 6C6 or 6J7 triodes, etc.; Max. operating level plus 15 D. B.; Max. D. C. unbalance 8 m. a.; SECONDARY—500\*/333/250/200\*/125/50 ohms.  
**T-9002**.....List Price \$14.90

### Single Plate to Single Grid (No D. C. in primary)

PRIMARY—10,000/2500 ohms for 56, 76, 864, 6C6 or 6J7 triodes, etc.; Turns ratio 1 to 2 overall; Max. operating level plus 15 D. B.; Max. D. C. unbalance 0 m. a.; SECONDARY—40,000/10,000 ohms.  
**T-9003**.....List Price \$10.00

### Single Plate to Push-Pull Grids (No D. C. in primary)

PRIMARY—10,000/2500 ohms for 56, 76, 864, 6C6 or 6J7 triodes, etc.; Turns ratio 1 to 2 overall; Max. operating level plus 15 D. B.; Max. D. C. unbalance 0 m. a.; SECONDARY—40,000/10,000 ohms.  
**T-9004**.....List Price \$11.50

### Push-Pull Plates to Push-Pull Grids

PRIMARY—20,000/5000 ohms for 56, 76, 864, 6C6 or 6J7 triodes, etc.; Turns ratio 1 to 1.5 overall; Max. operating level plus 20 D. B.; Max. D. C. unbalance 0 m. a.; Max. D. C. 10 m. a. per side; SECONDARY—45,000/11,250 ohms.  
**T-9005**.....List Price \$12.50

### Crystal Microphone or Photo Cell to Line

PRIMARY—250,000/62,500 ohms; Max. D. C. unbalance 0 m. a.; SECONDARY—500\*/333/250/200\*/125/50 ohms.  
**T-9006**.....List Price \$15.50

### Push-Pull Power Tubes to Line

PRIMARY—5000/3000/1250/750 ohms (p. p. 2A3, etc.); Max. operating level plus 32 D. B.; Max. D. C. 60 m. a. per side; Max. D. C. unbalance 5 m. a.; SECONDARY—500\*/333/250/200\*/125/50 ohms.  
**T-9007**.....List Price \$14.50

### Push-Pull Power Tubes to Voice Coil

Same as T9007 except secondary impedances 1.25/3.75/5/7.5/10 or 15 ohms.  
**T-9008**.....List Price \$14.50

### Audio Reactor

For parallel feed audio circuits, etc.; 300 henries at 8 m. a. D. C. or 75 henries at 16 m. a. D. C.; D. C. res. 4000/1000 ohms.  
**T-9009**.....List Price \$10.00

### Line or Microphone to Line or Mixer

PRIMARY—500\*/333/250/200\*/125/50 ohms; Max. operating level plus 10 D. B.; Max. D. C. unbalance 0.5 m. a.; Max. D. C. 100 m. a. per side; SECONDARY—500\*/333/250/200\*/125/50 ohms.  
**T-9010**.....List Price \$12.50

### Line or Microphone to Push-Pull Grids

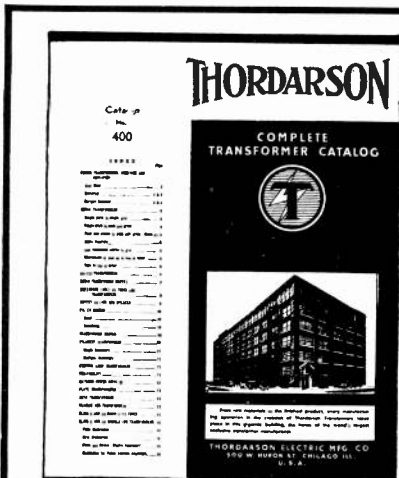
PRIMARY—500\*/333/250/200\*/125/50 ohms; Max. operating level plus 20 D. B.; Max. D. C. unbalance 0.5 m. a.; Max. D. C. 10 m. a. per side; SECONDARY—150,000/37,500 ohms.  
**T-9011**.....List Price \$18.50

### Line to Voice Coil

PRIMARY—500\*/333/250/200\*/125/50 ohms; Max. operating level plus 32 D. B.; SECONDARY—1.25/3.75/5/7.5/10/15 ohms.  
**T-9012**.....List Price \$14.50

\*Indicates inductive and capacitive balance to center tap for use on balanced transmission lines.

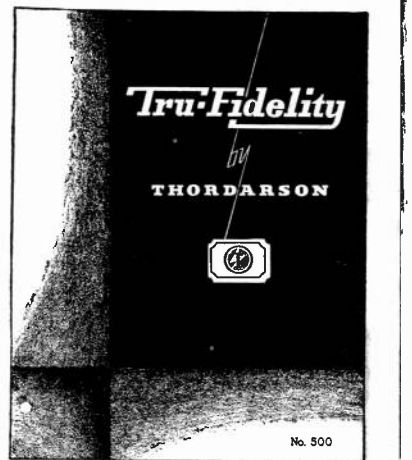
All Tru-Fidelity Transformers 2½" x 3½" x 4" high overall. Weight 4¼ lbs.



**CATALOG No. 400.** No radio station or service shop is complete without this big valuable FREE catalog. Conveniently indexed, gives complete specifications and prices on every radio transformer (except Tru-Fidelity) built by Thordarson, the world's largest exclusive transformer manufacturer. Mounting types and sizes clearly illustrated on back cover for speedy reference. An entire transformer industry in one big FREE catalog. Send for your copy.



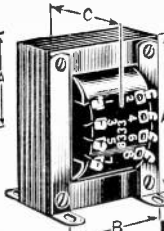
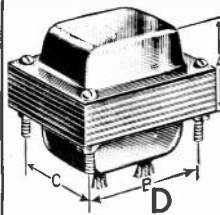
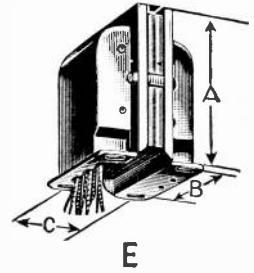
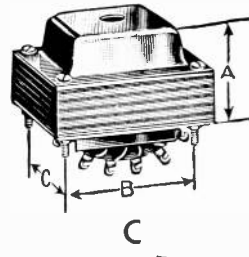
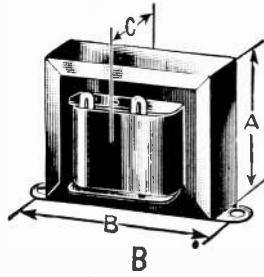
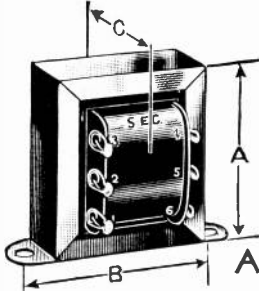
Look inside for the secret. Rugged construction, beautiful symmetry — precision manufacturing and laboratory perfected design. Tru-Fidelity — the ideal audio transformer. Note perfect shielding.



**CATALOG No. 500.** Tru-Fidelity by Thordarson! The ideal, sought during 40 years of precision transformer building, is realized at last! Send today for your FREE catalog No. 500. Profusely illustrated, legible charts, technical and non-technical descriptions, unusual photographs. Catalog shows working curves, schematic hook-ups, cut away transformer views and uses. One page devoted to listings and prices. Send now for your copy FREE.

See Pages H-25 and H-26 for complete listing of Thordarson Transmitting Transformers.

# UTAH Replacement Transformers



## 2 1/2 Volt—2 Filaments 4 & 5 Tube Sets — 40 Mill. Drain

650 volts AC, center tapped. 5 volts, 2 amps.; 2 1/2 volts, 4 amps. C mounting. Dim. 1 1/2"x2 1/2"x3".

**No. 2000 \$1.48**

Same as above but dim. 1 5/8"x2 1/2"x3", and D mounting.

**No. 2002 \$1.70**

## 2 1/2 Volt — 2 Filaments 5-8 Tube Sets — 50-75 Mill. Drain

700 volts AC, center tapped, 50 mills. 5 volts, 2 amps.; 2 1/2 volts, 5 amps. Style C. Dim. 1 3/4"x2 1/2"x3".

**No. 2004 \$1.80**

700 volts AC, 60 mills. 5 volts, 2 amps.; 2 1/2 volts, 6 amps. Style C. Dim. 1 3/4"x2-13/16"x3".

**No. 2006 \$2.10**

700 volts CT., 75 mills. 5 volts, 3 amps.; 2 1/2 volts, 8 amps. Style C. Dim. 1 7/8"x3 3/8"x3 3/4".

**No. 2008 \$2.25**

Also available in Style E **\$3.50**

## 2 1/2 Volt—3 Filaments 6-12 Tube Sets - 75-200 Mill. Drain

720 volts, 100 mills. 5 volts, 3 amps.; 2 1/2 volts CT. 4 amps.; 2 1/2 volts CT. 7 amps. Style C. Dim. 2 1/8"x3 3/8"x3 3/4".

**No. 2010 \$2.75**

Same specs. but Style E. Dim. 4 1/2"x3 1/2"x3 3/8".

**\$4.00**

750 volts, 125 mills. 5 volts, 3 amps.; 2 1/2 volts CT. 4 amps.; 2 1/2 volts CT. 9 amps. Style C. Dim. 2 1/8"x3 3/4"x4 1/2".

**No. 2012 \$3.10**

Same specs. but Style E. Dim. 5 1/4"x3 1/2"x4".

**\$4.35**

800 volts, 160 mills. 5 volts, 3 amps.; 2 1/2 volts CT., 5 amps.; 2 1/2 volts CT., 10 amps. Style C. Dim. 2 3/8"x3 3/4"x4 1/2".

**No. 2014 \$4.60**

Same specs. but Style E. Dim. 5 1/4"x3 3/4"x4".

**\$5.85**

850 volts, 210 mills. 5 volts, 3 amps. 2 1/2 volts CT., 8 amps. 2 1/2 volts CT., 14 amps. Style C. Dim. 2 7/8"x3 3/4"x4 1/2".

**No. 2016 \$6.90**

Same spec. but Style E. Dim. 5 1/4"x4 1/4"x4".

**\$8.15**

## 6.3 Volt — 2 Filaments 4-5 Tube Sets — 40 Mill. Drain

650 volts, 40 MA. 5 volts, 2 amps.; 6.3 volts CT., 1.6 amps. Style C. Dim. 1 1/2"x2 1/2"x3".

**No. 2001 \$1.48**

Same specs. but dimensions 1 5/8"x2 1/2"x3".

**\$1.55**

Also available Style D **\$1.70**

## 5-8 Tube Sets — 50-75 Mill. Drain

700 volts, 50 mills. 5 volts, 2 amps.; 6.3 volts CT., 2 amps. Style C. Dim. 1 3/4"x2 1/2"x3".

**No. 2005 \$1.80**

Also available Style D **\$1.95**

700 volts, 60 mills. 5 volts, 2 amps.; 6.3 volts CT., 2 1/2 amps. Style C. Dim. 1 3/4"x2-13/16"x3 3/8".

**No. 2007 \$2.10**

Also available Style D **\$2.25**

700 volts, 75 mills. 5 volts, 3 amps.; 6.3 volts CT., 3.2 amps. Style C. Dim. 1 7/8"x3 3/8"x3 3/4".

**No. 2009 \$2.25**

## 6-12 Tube Sets - 75-160 Mill. Drain

Same specs. but Style E. Dim. 4 1/2"x3 3/4"x3 3/8". **Price \$3.50**

720 volts at 100 mills. 5 volts, 3 amps.; 6.3 volts CT., 4 amps. Style C. Dim. 2 1/8"x3 3/8"x3 3/4".

**No. 2011 \$2.75**

Same specs. but Style E. Dim. 4 1/2"x3 1/2"x3 3/8".

**\$4.00**

750 volts, 125 mills. 5 volts, 3 amps.; 6.3 volts CT., 5 amps. Style C. Dim. 2 1/8"x3 3/4"x4 1/2".

**No. 2013 \$3.10**

Same specs. but Style E. Dim. 5 1/4"x3 1/2"x4".

**\$4.35**

800 volts, 160 mills. 5 volts, 3 amps.; 6.3 volts CT., 6 amps. Style C. Dim. 2 3/8"x3 3/4"x4 1/2".

**No. 2015 \$4.60**

Same specs. but Style E. Dim. 5 1/4"x3 3/4"x4 1/2".

**\$5.85**

## 2 1/2 and 6.3 — 3 Filaments 75 to 160 Mill. Drain

700 volts, 75 mills. 5 volts, 3 amps.; 2 1/2 volts CT., 3 amps.; 6.3 CT., 2 amps. Style C. Dim. 1 7/8"x3 3/8"x3 3/4".

**No. 2200 \$2.37**

Same specs. but Style E. Dim. 4 1/2"x3 3/4"x3 3/8".

**\$3.60**

720 volts, 100 mills. 5 volts, 3 amps.; 2 1/2 volts CT., 4 amps.; 6.3 volts CT., 2.8 amps. Style C. Dim. 2 1/8"x3 3/8"x3 3/4".

**No. 2201 \$2.75**

Same specs. but Style E. Dim. 4 1/2"x3 1/2"x3 3/8".

**\$4.00**

750 volts, 125 mills. 5 volts, 3 amps.; 2 1/2 volts CT., 4 amps.; 6.3 volts CT., 3.5 amps. Style C. Dim. 2 1/8"x3 3/4"x4 1/2".

**No. 2202 \$3.10**

Same specs. but Style E. Dim. 5 1/4"x3 1/2"x4".

**\$4.35**

800 volts, 160 mills. 5 volts, 3 amps.; 2 1/2 volts CT., 5 amps.; 6.3 volts CT., 4 amps. Style C. Dim. 2 3/8"x3 3/4"x4 1/2".

**No. 2203 \$4.60**

Same specs. but Style E. Dim. 5 1/4"x3 3/4"x4".

**\$5.85**

## Audio Transformers

Specify whether for Single or Push Pull Secondary.  
All audios are Style B

Transformer No.	Sec.	Ratio		List Price
		Total Pri.	Total Sec.	
7320	Single or P.P.	Small	1.50	
7235		Med.	2.00	
7607		Large	2.40	
8300	Single Plate Primary	Single Grid	1 to 3	1.05
8301		P. P. Grids	1 to 3	1.15
8302		Single Grid	1 to 4	1.05
8303		P. P. Grids	1 to 4	1.15
8304		Single Grid	1 to 3	1.25
8305		P. P. Grids	1 to 3	1.35
8306		Single Grid	1 to 4	1.25
8307		P. P. Grids	1 to 4	1.35
8308		Single Grid	1 to 2	1.90
8309		P. P. Grids	1 to 2	2.00
8310		Single Grid	1 to 3	1.90
8311		P. P. Grids	1 to 3	2.00
8312		Single Grid	1 to 4	1.90
8313		P. P. Grids	1 to 4	2.00
8314		Single Grid	1 to 2	2.40
8315		P. P. Grids	1 to 2	2.50
8316	Single Grid	1 to 4	2.40	
8317	P. P. Grids	1 to 4	2.50	
8318	P.P.	P. P. Grids	1 to 4	2.50
8319		P. P. Grids	1 to 3	2.90
8320		P. P. Grids	1 to 3	3.00



Most Complete Transformer Line in the World!

## UTC LINEAR STANDARD COMPONENTS

UTC, FOR MORE THAN THREE YEARS, HAS PIONEERED

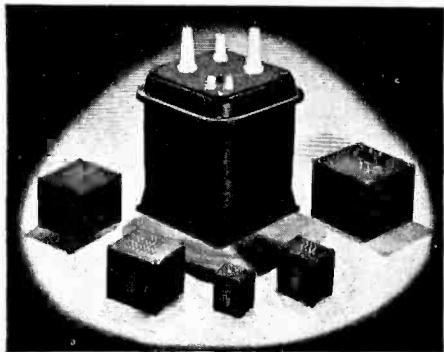
- High Permeability Cast Shield . . . maximum shielding from inductive pickup.
- True Hum Balancing Coil Structure . . . maximum neutralization of stray fields.
- Balanced Variable Impedance Line . . . permits highest fidelity on every tap of a universal unit . . . no line reflections or transverse coupling.
- Reversible Mounting . . . permits above chassis or subchassis wiring.
- Full Electrostatic Shielding Between Windings . . . brought out to separate terminal.
- Multiple Coil, Semi-Toroidal Coil Structure . . . minimum distributed capacity and leakage reactance.
- Precision Winding . . . accuracy of windings 1%, perfect balance of inductance and capacity; exact impedance reflection.
- Hiperm-Alloy . . . a stable high permeability nickel-iron core material.
- High Fidelity . . . UTC Linear Standard transformers are the only audio units with a guaranteed uniform response, from 30 to 20,000 cycles  $\pm$  1 db.

UTC LINEAR STANDARD Components represent the closest approach to the ideal transformer from the standpoint of uniform response, low wave form distortion, high efficiency, thorough shielding and dependability.

The multiple tap windings used on input to grid, plate to line, mixing and output audio transformers make possible a wide combination of impedance connections without impairing the audio range or efficiency of each unit.

UTC engineers have spent considerable time studying the many annoying hum pickup difficulties which are prevalent in high gain A.C. operated amplifying equipment. As a result, a special grade of high permeability cast iron has been developed to house all UTC Linear Standard units.

In addition, the LS-10, LS-12 and LS-14 low level input transformers use the new UTC HIPERM-ALLOY MAGNETIC FILTER making possible a transformer with the lowest hum pickup of any available commercially.



### OVERALL DIMENSIONS

Mtg. Dim.	L	W	H
LS-1 1-15/16x2-7/16	2-9/16	3-3/16	3-11/16
LS-2 2-11/16x3-11/16	3-1/2	4-3/8	4-5/8
LS-3 4-3/16x5-1/32	5	5-3/4	5-3/16
LS-4 5-3/4x5-3/4	6-7/16	6-7/16	5-3/8
LS-5 7-1/4x7-1/4	8	8	6-1/2

LS-10 Primary will match 500, 333, 250, 200, 125, or 50 ohm line as required for carbon, dynamic, ribbon, or other microphones and for low impedance pickups. Secondary in two sections; overall impedance 60,000 ohms. LS-1.....15.00

LS-11 Primary will match a high impedance photo electric cell to one or two grids. LS-1.....15.00

LS-12 Primary will match 500, 333, 250, 200, 125, or 50 ohm line as required for carbon, dynamic, ribbon, or other microphones and for low impedance pickups. Secondary in two sections; overall impedance 120,000 ohms. LS-1.....20.00

LS-14 Primary will match one or more dynamic microphones, low impedance pickups, or parallel mixers. Primary impedance 60, 33, 30, 22, 15, 10, 5.5, or 2.5 ohms. Secondary in two sections; overall impedance 60,000 ohms. LS-1.....20.00

LS-18 Primary designed for 500, 333, 250, 200, 125, or 50 ohm line to 2-50 watt grids. LS-2.....22.00

### COUPLING TRANSFORMERS

LS-20 Cascade, single plate to single grid. Turn ratio 2:1 overall. LS-1.....10.00

LS-21 Input, one plate to two grids. Turn ratio 1 1/2:1 each side of center. Primary and secondary each in two sections. LS-1.....13.00

LS-22 Input, two plates to two grids. Turn ratio 1.6:1 each side of center. Primary and secondary each in two sections. Maximum operating level  $\pm$  25 DB. LS-2.....22.00

LS-23 Input, two screen grid plates to two grids. Effective ratio 1:1. LS-2.....20.00

LS-24 Single plate or line to one or two grids. One primary winding will match single plate of tubes like 01A, 12A, 30, 31, 26, 27, 37, 55, 56, 85, or W.E. 262A. Another primary winding designed for a carbon or voice coil microphone or a low impedance pickup. Secondary in two sections. Total secondary impedance 60,000 ohms. LS-1.....20.00

### MIXING AND MATCHING TRANSFORMERS

LS-30 Mixing, carbon or moving coil microphone or low impedance pickup to a variable impedance line. Primary and secondary windings will match 500, 333, 250, 200, 125 or 50 ohm lines. LS-1.....15.00

LS-32 Mixing, one or more moving coil microphones or extremely low impedance pickups to a variable impedance line. Primary impedances 60, 38, 30, 22, 15, 10, 5.5, 2.5 ohms. Secondary impedances 500, 333, 250, 200, 125, 50 ohms. LS-1.....20.00

LS-33 15 watt audio line matching transformer. Input designed for 500, 333, 250, 200, 125, 50 ohms. Output designed for 500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2 ohms. LS-2.....15.00

LS-34 30 watt audio line matching transformer. Input designed for 500, 333, 250, 200, 125, 50 ohms. Output designed for 500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2 ohms. LS-3.....20.00

LS-35 60 watt audio line matching transformer. Input designed for 500, 333, 250, 200, 125, 50 ohms. Output designed for 500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2 ohms. LS-4.....30.00

LS-36 200 watt audio line matching transformer. Input designed for 500, 333, 250, 200, 125, 50 ohms. Output designed for 500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2 ohms. LS-5.....50.00

LS-37 Crystal microphone or pickup or high- $\mu$  triode or diode detector to line. Primary in two sections; overall impedance 130,000 ohms. Secondary 500, 333, 250, 200, 125, or 50 ohms. LS-1.....15.00

### BRIDGING TRANSFORMERS

LS-150 Primary 4000 ohms bridging a 50 to 500 ohm line of any level up to plus 21DB. Secondary 500, 333, 250, 200, 125, 50 ohms. LS-1.....15.00

LS-151 Primary 16,000 ohms bridging a 50 to 500 ohm line of any level up to plus 24DB. Secondary 500, 333, 250, 200, 125, 50 ohms. LS-1.....15.00

### A PRIME AND CLASS B INPUT TRANSFORMERS

LS-4 Primary designed for 500, 333, 250, 200, 125 or 50 ohm lines to two class B 4E, 50 or 210 grids operating at a maximum level of  $\pm$  32 DB. LS-2.....25.00

LS-5 Primary designed for 500, 333, 250, 125 or 50 ohm lines to two 203A, 805, or 838 class 11 grids. LS-2.....30.00

LS-6 Push pull 45 or 50 triode plates to push pull 845A prime grids. LS-2.....22.00

LS-7 Push pull 56, 6C5, or 6C6 triodes to 45, 42, 6L6, or 6FG tubes in AB. LS-2.....22.00

LS-46 Push pull 45 or 50 plates to 2-210, 2-830, 2-800, 2-RK 18 grids in class B. LS-2.....15.00

LS-47 Push pull 2A3 plates to 2-203A, 805 or 838 grids in class B. LS-2.....20.00

LS-48 Push pull 845 plates to 2-204 or 810 grids in class B. LS-4.....35.00

### LOW LEVEL CLASS A OUTPUT TRANSFORMERS

LS-50 From a single plate like the 01A, 12A, 30, 31, 26, 27, 37, 55, 56, 85, W.E. 262A to 500, 333, 250, 200, 125 or 50 ohm line. LS-1.....15.00

LS-51 From push pull plates like the 01A, 12A, 30, 31, 26, 27, 37, 55, 56, 85, W.E. 262A to 500, 333, 250, 200, 125 or 50 ohm line. LS-1.....15.00

### SPECIAL A PRIME AND CLASS B OUTPUT TRANSFORMERS

LS-65 From two class B 210 or 801 plates to high and low impedance loads. High impedance load 5000, 3500, 2500, 2100, 1250, or 600 ohms. Low impedance load 30, 20, 15, 10, 7.5, 5.5, 2.5, 1.2 ohms. Secondary windings will handle 60 watts audio power. LS-4.....35.00

LS-66 Two class B 203A or 838 plates to 5000, 3500, 2500, 2100, 1250, or 600 ohms. Secondary windings will handle 260 watts audio power. LS-5.....70.00

LS-205 Two class B 805 plates to 6000, 5000, 4000, 1800, 1500 or 1000 ohms. Special casting.....100.00

LS-67 Two class B 203A or two Class B 838 plates to 10,000 ohms or 2500 ohms (split secondary). Secondary will handle 260 watts audio power. LS-5.....70.00

LS-68 Two class B 203A plates to 500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5.5, 2.5, 1.2 ohms. LS-5.....70.00

LS-69 Two 819 or 204A plates to 6000, 5000, 4000, 1800, 1500, or 1000 ohms. Secondary will handle up to 1000 watts audio power. Special casting.....200.00

### POWER TRANSFORMERS

LS-70 For use with P.P. class A 2A3, 59, 45, 47 tubes or class B 53 tubes. Primary tapped for 100, 105, 110, 115, 120, 125 volts 60 cycles A.C. Secondaries: 425 volts each side of center at 200 MA, also tapped at 375 volts each side of center. 2 1/2 V.C.T. 3A, 2 1/2 V.C.T. 3A, 2 1/2 V.C.T. 5A, 2 1/2 V.C.T. 12A, 5 V.C.T. 3A, 6.3 V.C.T. 1A; 6.3 V.C.T. 3A. LS-4.....25.00

LS-72 For use with self or fixed bias 6L6 tubes. Primary tapped for 100, 105, 110, 115, 120, 125 volts. Secondaries: 450 volts each side of center at 250MA, also tapped at 400 volts each side of center. 6.3 V.C.T. 4A, 6.3 V.C.T. 3A tapped at 2 1/2 V.C.T. 3A; 2 1/2 V.C.T. 3A; 5 V.C.T. 3A. LS-4.....25.00

LS-73 For use with four fixed bias 6L6 tubes. Primary tapped for 100, 105, 110, 115, 120, 125 volts. Secondaries 450 volts each side of center at 500 MA, also tapped at 400 volts each side of center. 6.3 V.C.T. 6A, 6.3 V.C.T. 4A tapped at 2 1/2 V.C.T. 3A, 2 1/2 V.C.T. 10A, 5 V.C.T. 6A. LS-5.....35.00

LS-180 Plate and filament transformer for a pre-amplifier. Primary 110 volts. Secondaries: 225 volts each side of center at 15 MA, 6.3 V.C.T. at 2 Amps, 6.3 volts 4 Amps, for 84 rectifier. LS-1.....10.00

### FILTER AND AUDIO REACTORS

LS-90 Hum-bucking split tapped filter choke. 50 henrys 50 MA; 510 ohms D.C. in series. 12.5 henrys 100 MA; 127.5 ohms D.C. in parallel. LS-2.....8.50

LS-91 Hum-bucking split tapped filter choke. 14 henrys 125 MA; 200 ohms D.C. in series. 3.5 henrys 250 MA; 50 ohms D.C. in parallel. LS-2.....8.50

LS-94 Split winding parallel feed audio choke. 320 henrys 3 MA; 6400 ohms in series. 80 henrys 6MA; 1600 ohms D.C. in parallel. LS-1.....10.00

LS-95 Split winding parallel feed audio choke. 520 henrys 5 MA; 3600 ohms D.C. in series. 180 henrys 10 MA; 900 ohms D.C. in parallel. LS-2.....20.00

### FILAMENT TRANSFORMERS

LS-80 Filament transformer for two 800 mercury vapor rectifier tubes. Primary tapped for 100, 110, 120, 220, 230, 240 volts, 50-60 cycles A.C. Secondary: 2 1/2 V.C.T. 10A, 12,000 volts insulation. LS-3.....15.00

LS-82 Filament transformer for two 872 mercury vapor rectifier tubes. Primary tapped for 100, 110, 120, 220, 230, 240 volts, 50-60 cycles A.C. Secondary: 5 V.C.T. 20 amps, 12,000 volts insulation. LS-3.....20.00

LS-88 Filament transformer for 6.3 volt heater tubes. Primary tapped for 105, 115, 125 volts, 50-60 cycles. Secondary: 6.3 V.C.T. 2 amps, 2500 volts insulation. LS-1.....7.50

LS-89 Filament transformer for WE 262 A or 271 A tubes. Primary tapped for 105, 115, 125 volts, 50-60 cycles. Secondary 10 V. C. T. 1.5 amps, 2500 volts insulation. LS-1.....7.50



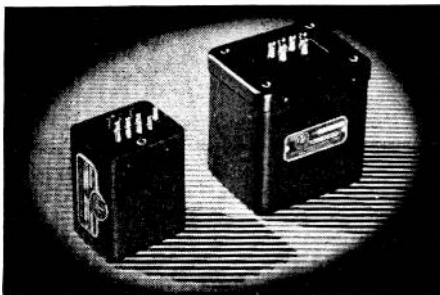
Most Complete Transformer Line in the World!

CLASS A AND CLASS B OUTPUT TRANSFORMERS

- \*LS-6L1, 6600 ohms plate to plate for push pull 6L6's self bias 30 watts output to 500, 333, 250, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2 ohms. LS-3 case 30.00
\*LS-6L2, 6600 ohms plate to plate for same tubes as LS-6L1 to 6000, 5000, 4000, 1800, 1500, 1000, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2 ohms. LS-3 case 30.00
\*LS-6L3, 6600 ohms plate to plate, for same tubes as LS-6L1 to 30, 20, 15, 10, 7.5, 2.5, 1.2 ohms. LS-3 case 20.00
\*LS-6L4, 3800 and 3300 ohms plate to plate, for 3800 ohms two 6L6's fixed bias, 60 watts output; for 3300 ohms, four 6L6's self bias, 60 watts output to 500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2 ohms. LS-4 case 35.00
\*LS-6L5, 3800 and 3300 ohms plate to plate, for same tubes as LS-6L4 to 6000, 5000, 4000, 1800, 1500, 1000, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2 ohms. LS-4 case 35.00
\*LS-6L7, 3800 and 3300 ohms plate to plate, for same tubes as LS-6L4 to 30, 20, 15, 10, 7.5, 5, 2.5, 1.2 ohms. LS-4 case 25.00
\*LS-2451, 6000 ohms plate to plate and 3500 ohms plate to plate, for 6000 ohms class A prime 45's self bias, and class B 46's, 59's; class A WE 252A's, for 3500 ohms, class A prime 45's fixed bias, to 500, 333, 250, 200, 125, 50, 30, 15, 10, 7.5, 5, 2.5, 1.2 ohms. LS-2 case 20.00
\*LS-2452, 6000 ohms plate to plate and 3500 ohms plate to plate, for same tubes as LS-2451 to 6000, 5000, 4000, 1800, 1500, 1000, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2 ohms. LS-2 case 20.00
\*LS-2453, 6000 ohms plate to plate and 3500 ohms plate to plate, for same tubes as LS-2451, to 30, 20, 15, 10, 7.5, 5.5, 2.5, 1.2 ohms. LS-2 case 14.00
\*LS-4451, 3000 ohms plate to plate and 1750 ohms plate to plate, for 3000 ohms four 45's in push pull parallel A prime self bias. Four WE 252A's class A, four 46's or 59's in class B; for 1750 ohms, four 45's in push pull parallel A prime fixed bias to 500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5.5, 2.5, 1.2 ohms. LS-4 case 30.00
\*LS-4453, 3000 ohms plate to plate and 1750 ohms plate to plate for same tubes as LS-4451 to 30, 20, 15, 10, 7.5, 5.5, 2.5, 1.2 ohms. LS-4 case 20.00
\*LS-52, 8000 ohms plate to plate for class A, push pull 50's, 45's, 6F5 pentodes or triodes. Single 211, 843, 842, 205D, 48 to 500, 333, 250, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2 ohms. LS-2 case 20.00
\*LS-54, 8000 ohms plate to plate for same tubes as LS-52, to 30, 20, 15, 10, 7.5, 5, 2.5, 1.2 ohms. LS-2 case 14.00
\*LS-55, 5000 ohms plate to plate and 3000 ohms plate to plate, for 5000 ohms self bias push pull 2A3's, push pull WE 275A's, single 71A, 6B5, or single 59 triode; for 3000 ohms fixed bias push pull 2A3's, single WE 52A, 300A to 500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2 ohms. LS-2 case 20.00
\*LS-56, 5000 ohms plate to plate and 3000 ohms plate to plate for same tubes as LS-55 to 6000, 5000, 4000, 1800, 1000, 50, 20, 15, 10, 7.5, 5, 2.5, 1.2 ohms. LS-2 case 20.00
\*LS-57, 5000 ohms plate to plate and 3000 ohms plate to plate for same tubes as LS-55 to 30, 20, 15, 10, 7.5, 5, 2.5, 1.2 ohms. LS-2 case 14.00
\*LS-58, 2500 ohms plate to plate or 1500 ohms plate to plate, for 2500 ohms four 2A3's in push pull parallel self bias circuit; for 1500 ohms, four 2A3's in push pull parallel fixed bias circuit. WE 300A's to 500, 333, 250, 200, 125, 60, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2 ohms. LS-4 case 30.00
\*LS-60, 2500 ohms plate to plate or 1500 ohms plate to plate, for same tubes as LS-58, to 30, 20, 15, 10, 7.5, 5, 2.5, 1.2 ohms. LS-4 case 20.00
\*LS-61, 10,000 ohms plate to plate or 6000 ohms plate to plate, for 10,000 ohms push pull 59 triodes, push pull 6B5's, push pull 71A's, single 210, 41, 268A, 2A3, class B 49's, 53's, 79's, 89's; for 6000 ohms in class A push pull WE 52A's, single 31, 46, 59 pentode; in class B push pull 46's, push pull 59's, to 500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2 ohms. LS-2 case 20.00
\*LS-63, 10,000 ohms plate to plate or 6000 ohms plate to plate, for same tubes as LS-61, to 30, 20, 15, 10, 7.5, 5, 2.5, 1.2 ohms. LS-2 case 14.00
\*LS-64, 18,000 ohms plate to plate, for class A push pull 845's, 50 watts maximum to 500, 333, 250, 200, 125, 50, 30, 20, 15, 10, 7.5, 5, 2.5, 1.2 ohms. LS-4 case 35.00

\*Note: These transformers incorporate the new UTC Feedback (patent applied for) Windings, which reduces harmonic distortion, increases available power and reduces plate resistance tremendously. No resistors or condensers are necessary.

UTC HIPERM ALLOY COMPONENTS



This new group of transformers, specifically designed for portable use, are extremely compact and light in weight. The fidelity of these units measures up to high quality broadcast standards, being uniform in response from 30 to 20,000 cycles. A unique feature developed to make possible the small size of these units is the elimination of all extended mounting flanges or feet. These are replaced by simple threaded metal inserts in the case allowing mounting with terminals either up or down, so that the units can be mounted either on rack panel or metal chassis with no waste space.

COUPLING TRANSFORMERS

- HA-105 Cascade, single plate like 01A, 12A, 30, 31, 26, 27, 37, 55, 56, WE262A, 864, 57 triode, 77 triode to a single grid. Turn ratio 2:1 over all. H-1 9.00
HA-106 Input, single plate like 01A, 12A, 30, 31, 26, 27, 37, 55, 56, 85, WE262A, 864, 57 triode, 77 triode to push pull grids. Turn ratio 1 1/2:1 each side of center. H-1 11.00
HA-107 Input, two push pull plates like 01A, 12A, 30, 31, 26, 27, 37, 55, 56, 85, WE262A, 864, 57 triodes, to push pull grids. Turn ratio 1 1/2:1 overall. Primary and secondary in two sections. H-2 15.00

INPUT TRANSFORMERS (TO ONE OR TWO GRIDS)

- HA-100 Variable impedance line to single grid. Primary will match 500, 333, 250, 200, 125, or 50 ohm line, as required, for carbon or voice coil microphones electro-magnetic or oil damped pickups. Secondary impedance 60,000 ohms. H-1 12.50
HA-101 Variable impedance line to single or push pull grids. Primary will match 500, 333, 250, 200, 125, or 50 ohm line, as required, for carbon or voice coil microphone, electro-magnetic or oil damped pickups. Secondary in two sections for series or parallel connection. Overall impedance of windings in series 120,000 ohms. Impedance of each winding 30,000 ohms. H-1 15.00
HA-103 Dynamic voice coil microphone to single grid, secondary impedance 90,000 ohms. H-1 12.50

FILTER AND AUDIO

- HC-115 Split winding parallel feed audio choke. May also be used as a push pull audio choke, 400 henrys 2.5 MA; 7000 ohms in series, 100 henrys 5 MA; 1750 ohms in parallel. Capacity of windings for push pull connection 20 MA each side. Inductance with no unbalanced D.C. 500 henrys. H-1 8.50
HC-116 Split winding parallel feed audio choke. May also be used as a push pull audio choke 600 henrys 8 MA; 4000 ohms D.C. in series, 150 henrys 16 MA; 1000 ohms in

OVERALL DIMENSIONS

- H1 Case 1 7/8 x 2 3/4 x 3
H2 Case 2 3/8 x 3 x 3 3/8

MOUNTING DIMENSIONS

- H1 1 3/8
H2 1-11/16 x 2 3/8

MIXING, MATCHING AND OUTPUT TRANSFORMERS

- HA-108 Variable impedance line for mixing carbon or voice coil microphones, electro-magnetic or oil damped pickups to a variable impedance line. Primary and secondary windings will match 500, 333, 250, 200, 125, or 50 ohm line. H-1 12.50
HA-110 Matching, dynamic voice coil microphone to a 500, 333, 250, 200, 125, or 50 ohm line. H-1 12.50
HA-111 Matching, crystal microphone or pickup to a 500, 333, 250, 200, 125, or 50 ohm line. H-1 12.50
HA-112 Matching, high impedance photo electric cell to a 500, 333, 250, 200, 125 or 50 ohm line. H-1 12.50
HA-113 Output, from a single plate like the 01A, 12A, 30, 31, 26, 27, 37, 55, 56, 85, WE262A, 864, 57 triode, 77 triode, to a 500, 333, 250, 200, 125, or 50 ohm line. H-1 12.50
HA-114 Output, from push pull plates, like 01A, 12A, 30, 31, 26, 27, 37, 55, 56, 85, WE262A, 864, 57 triodes, 77 triodes to a 500, 333, 250, 200, 125 or 50 ohm line. H-1 12.50

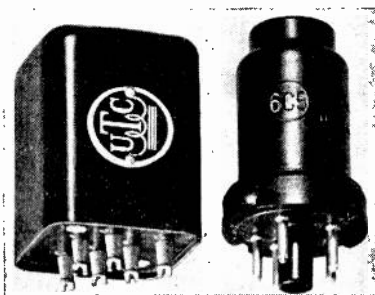
PRE-AMPLIFIER POWER AND FILAMENT TRANSFORMERS

- HF-122 Plate and filament supply for a portable pre-amplifier using 6 volt heater tubes. Primary 115-60 cycles A.C. Secondaries 220 each side of center at 15 MA, 6.3 V.C.T. at 1.2 amps, 6.3 volt .4 amps for 84 rectifier. H-1 12.00
HF-123 Plate and filament supply for a portable pre-amplifier or tuner using 6 volt heater tubes. Primary 115-60 cycles Secondaries 275 each side of center at 35 MA, 6.3 V.C.T. at 2 amps, 6.3 volt .4 amps for 84 rectifier. H-1 10.00
HF-124 Filament transformer. Primary 115-60 cycles, Secondary 6.3 V.C.T. 1.2 amps. H-1 7.50
HF-125 Filament transformer—primary 115-60 cycles, Secondary 2 1/2 V.C.T. 5 amps. H-1 7.50
HF-126 Filament transformer. Primary 115-60 cycles, Secondary 10 V.C.T. 1.2 amps. For use with WE 262A tubes. H-1 7.50

CHOKES

- parallel. Capacity of windings for push pull connection 40 MA each side. Inductance with no unbalanced D.C. 1000 henrys. H-1 15.00
HC-117 Hum-bucking tapped filter and audio choke 60 henrys 15 MA; D.C. resistance 3000 ohms, alloy core. H-1 8.50
HC-127 Hum bucking tapped filter and audio choke 60 henrys 40 MA. D.C. resistance 1000 ohms, alloy core. H-2 15.00

ULTRA COMPACT HIGH FIDELTY AUDIO UNITS



- A-10 Multiple line or microphone to single grid, primary 500, 333, 250, 200, 125 or 50 ohms, secondary 50,000 ohms. 10.00
A-12 Multiple line or microphone to 2 grids, primary 500, 333, 250, 200, 125 or 50 ohms, secondary 80,000 or 20,000 ohms. 10.00
A-14 Dynamic microphone to 1 or 2 grids, primary 30 ohms, secondary 50,000 or 12,500 ohms 9.00
A-16 Single plate (6C6, 955, 262A, etc.) to single grid, primary 15,000 ohms, secondary 60,000 ohms. 8.00
A-18 Single plate (6C6, 955, 262A, etc.) to 2 grids, primary 15,000 ohms, secondary 80,000 or 20,000 ohms 9.00
A-20 Multiple line or microphone to multiple line.

The UTC ULTRA COMPACT audio units, designed as companion units for acorn and small metal type amplifier tubes, measure up to high quality broadcast standards. These units are the smallest wide range audios in their class and their development was made possible through the use of the most permeable of the new UTC core materials HIPERM ALLOY No. 4. Frequency response + or - 2 db from 30 cycles. Weight: approximately 5 1/2 ozs.

Overall dimensions: height 1-15/16 in. (including clearance for lugs 2 1/4 in.); width 1-7/16 in.; depth 1-7/16 in. Mounting dimensions 1 1/4 in. between center.

Shielding: The UTC ULTRA COMPACT series of audio units employ a true hum balancing coil structure which combined with a special magnetic structure afford a maximum of inductive shielding. Separate electrostatic shields grounded to the core are brought out to a separate lug on the bakelite terminal strip.

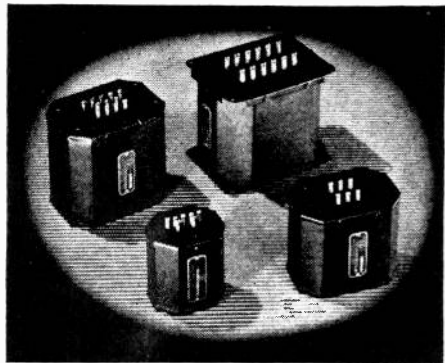
- primary 500, 333, 250, 200, 125 or 50 ohms, secondary 500, 333, 250, 200, 125 or 50 ohms. 10.00
A-22 Dynamic microphone to multiple line, primary 30 ohms, secondary 500, 333, 250, 200, 125 or 50 ohms 9.00
A-24 Single plate 6C6, 955, 262A, etc., to multiple line, primary 15,000 or 3,750 ohms, secondary 500, 333, 250, 200, 125 or 50 ohms 10.00
A-26 Push pull plates (6C6, 955, 262A, etc.) to multiple line, primary 30,000 or 7,500 ohms, secondary 500, 333, 250, 200, 125 or 50 ohms. 10.00
A-28 Bridging transformer, primary 4000 ohms, secondary 500, 333, 250, 200, 125 or 50 ohms 10.00
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. 450 henrys. 7.00



Most Complete Transformer Line in the World!

UTC PUBLIC ADDRESS COMPONENTS

The Public Address series of audio, filter and power units described below are designed to satisfy the demand for a popular priced quality line having the many exclusive and Universal features associated with UTC products...



MOUNTING DIMENSIONS

Table with columns for (With Flange) and (Without Flange) dimensions for PA-1, PA-2, and PA-3.

OVERALL DIMENSIONS

Table with columns for L, W, H dimensions for PA-1, PA-2, and PA-3.

INPUT TRANSFORMERS, CLASS A

- PA-131 Transformer from 1 plate to 1 grid. 3:1 ratio. PA-132 From 1 plate to 2 grids. 2:1 ratio each side. Split sec. PA-133 From 2 plates to 2 grids. 1:1.5 ratio each side. Primary and secondary each in two sections. PA-134 From 2 50, 60C triode, 6C5, or similar tubes to push pull 45's, 2A3's or 6L6's self or fixed bias. PA-135 500, 200, or 50 ohm line to push pull grids. PA-136 Single plate or pickup and carbon mike or low impedance pickup to one or two grids.

MIXING, MATCHING TRANSFORMERS

- PA-137 Mixing 500, 200, or 50 ohm line to 500, 200 or 50 ohm line. PA-138 Audio line matching. Will handle 20 watts audio power. Input 500 or 200 ohm line. Output 16, 8, 5, 3 and 1.5 ohms. PA-139 Audio line matching. Will handle 30 watts audio power. Input 500 or 200 ohm line. Output 16, 8, 5, 3, 1.5 ohms.

REACTORS

- PA-40 Filter choke. 12 henrys. Max. D.C. 200 MA. Resistance 110 ohms. PA-41 Class B input filter choke for 40, 53, and 59 tubes. Max. D.C. 200 MA. Resistance 100 ohms. PA-42 Filter choke. 15 henrys. Max. D.C. 165 MA. Resistance 375 ohms. PA-43 Filter choke. 30 henrys. Max. D.C. 100 MA. Resistance 375 ohms. PA-44 Parallel feed audio choke. 250 henrys. Max. D.C. 153 MA. Resistance 4500 ohms. PA-45 Center tapped audio choke for P.P. 245, 59, 2A3 and 250 tubes. Over all inductance 50 henrys. Max. D.C. 125 MA. Resistance 725 ohms. PA-46 Center tapped audio choke for P.P. connection. Overall inductance 300 henrys. Max. D.C. 10 MA. Resistance 4750 ohms. PA-47 High inductance filter choke 100 lys. maximum D.C. 50 MA. resistance 2500 ohms.

CLASS A OUTPUT TRANSFORMERS

- PA-140 From a triode plate like 864, 27, 112A, 55, 30 to 500, 200 or 50 ohms. PA-141 From push pull inode plates like 864's, 27's, 112A's, 30's to 500, 200 or 50 ohms.

POWER AND FILAMENT TRANSFORMERS

- PA-21 Plate transformer for single 45, 47, 59 or class B 79 tubes. Primary 115 V. A.C. 60 cycles. Secondaries: 300-0-300 at 75 MA.; 2 1/2 V.C.T. 3 A.; 6.3 V.C.T. 2.5 A.; 2 1/2 V.C.T. 6A. PA-22 Plate transformer for push pull 45, 59, 47, 2A3 tubes, or class B 53's. Pri. 115 V. A.C. 60 cycles. Secondaries: 400-0-400 at 125 MA.; 2 1/2 V.C.T. 5 A.; 2 1/2 V.C.T. 10 A.; 5 V.C.T. 3 A. PA-23 Plate transformer for class B 40 or 59 tubes. Primary 115 V. A.C. 60 cycles. Secondaries: 570-0-570 at 150 MA.; 2 1/2 V.C.T. 5 A.; 2 1/2 V.C.T. 10 A.; 5 V. 3 A. PA-24 Plate transformer for push pull 250 tubes and tuner. Primary 115 V. A.C. 60 cycles. Secondaries: 600-0-600 150 MA.; 2 1/2 V.C.T. 10 A.; 7 1/2 V.C.T. 2.5 A.; 1 1/2 tapped at 5 V. 3 A.; 5 V.C.T. 3 A. PA-42 Plate transformer for class B 6A6 and A prime 42 tubes. Pri. 115 V. A.C. 60 cycles. Secondaries 400-0-400 at 125 MA.; 2 1/2 V.C.T. 6 A.; 6.3 V.C.T. 4 A.; 5 V.C.T. 3 A. PA-428 Power transformer for push pull 6L6 tubes self or fixed bias primary 115 V. A.C. 60 cycles. Secondaries 450-0-450 at 250 MA.; 6.3 V.C.T. 4A V. 6.3 V.C.T. 3A also tapped for 2 1/2 V-3A; 2 1/2 V.C.T. 3A; 5 V.C.T. 3A. Taps on high voltage winding for bias supply rectifier. PA-25 Secondary. 2 1/2 V.C.T. 10 Amps. PA-26 Secondary. 5 V.C.T. 3 Amps. PA-27 Secondary. 6.3 V.C.T. 2.5 Amps. PA-28 Secondary. 7 1/2 V.C.T. 3 Amps.

CLASS A AND CLASS B OUTPUTS

- PA-15 8000 ohms plate to plate for class A in push pull; 250's, 245's, 43's, single; 211, 813, 842, 205D, 47, to 500, 200, 16, 8, 5, 3, 1.5 ohms. PA-2 case. PA-16 5000 ohms plate to plate or 3000 ohms plate to plate, for 5000 ohms in push pull; self bias 2A3's, W.E. 275A's; single; 59 triode or

- 71A; for 3000 ohms in push pull; fixed bias 2A3's, single W.E. 52A, to 500, 200, 16, 8, 5, 3, 1.5 ohms. PA-2 case. PA-17 2500 ohms plate to plate or 1500 ohms plate to plate, for 2500 ohms, four 2A3's in push pull parallel self bias; for 1500 ohms, four 2A3's in push pull parallel fixed bias, to 500, 200, 16, 8, 5, 3, 1.5 ohms. PA-3 case. PA-18 4000 ohms plate to plate, for four 250's in push pull parallel, to 500, 200, 16, 8, 5, 3, 1.5 ohms. PA-3 case. PA-19 10,000 ohms plate to plate or 6000 ohms plate to plate, for 10,000 ohms, class A push pull 59 triodes, 71A's, 6B5's, single 210, 41, 268A, 2A3. Class B push pull 49's, 53's, 79's, 89's; for 6000 ohms, class A push pull 52A's, single 31, 46, 59 pentode. Class B push pull 40's, 59's, to 500, 200, 16, 8, 5, 3, 1.5 ohms. PA-2 case. PA-710 20,000 ohms plate to plate or 14,000 ohms plate to plate, for 20,000 ohms, push pull 210's; for 14,000 ohms, push pull 47's, 2A5's, 42's used as pentodes, to 500, 200, 16, 8, 5, 3, 1.5 ohms. PA-2 case. PA-245 6000 ohms plate to plate and 3500 ohms plate to plate, for 6000 ohms, class A prime 45's self bias, Class B 46's and 59's, Class A W.E. 252A's; for 3500 ohms, class A prime 45's fixed bias, to 500, 200, 16, 8, 5, 3, 1.5 ohms. PA-2 case. PA-445 3000 ohms plate to plate and 1750 ohms plate to plate, for 3000 ohms four 45's in push pull parallel A prime self bias. Four W.E. 252A's in push pull parallel class A. Four 40's or 59's in push pull parallel class B; for 1750 ohms, four 45's in push pull parallel A prime fixed bias, to 500, 200, 16, 8, 5, 3, 1.5 ohms. PA-3 case.

- \*PA-216 6000 ohms plate to plate for push pull 6L6's self bias. 35-40 watts output, to 500, 200, 16, 8, 5, 3, 1.5 ohms. PA-3 case. \*PA-415 3800 and 3300 ohms plate to plate, for 3800 ohms, two 6L6's fixed bias, 60 watts output; for 3300 ohms, four 6L6's self bias. 60-80 watts output, to 500, 200, 16, 8, 5, 3, 1.5 ohms. PA-4 case. \*These transformers incorporate the new UTC Feedback (patent applied for) Winding, which reduces harmonic distortion, increases available power and reduces resistance tremendously. No resistors or condensers are necessary.

BALANCE COILS

- The new UTC development which permits paralleling mercury vapor rectifier tubes with equal current distribution. PA-10B Center tapped choke to equalize the load between two 80's, 81's, 523's, 83's, etc. PA-2 case. PA-11B Center tapped choke to equalize the load between two 866's, 866A's, PA-3 case. PA-12B Center tapped choke to equalize the load between two 872's, 872A's, PA-5 case.



UTC VARITONE UNITS

The UTC Varitone is a revolutionary audio device which permits full control of the frequency response of any audio amplifier or receiver. Using this device, tone correction can be effected for defects in acoustic conditions or overall audio response. It is also possible to produce new tonal effects from phonograph recordings and radio reception and to bring back notes which would otherwise be lost completely. Due to the high equalization obtainable with the Varitone, some loss in gain is effected. If the amplifier or receiver does not have gain to spare, it may be necessary to add an additional stage of audio frequency amplification. The Varitone is made in five types, as follows:

VT-1 This Varitone is incorporated with a universal audio transformer. Two primaries are provided. One is suitable for working from a single or double button microphone a low impedance pickup, or a line; the other primary is designed to work out of the plate of a tube or from a high impedance pickup. The secondary winding is center-tapped and is equally suitable for working into one or two grids. List Price 8.50

VT-2 The VT-2 is a varitone control unit, incorporated with an impedance matching device so that it can be connected directly across a 200 or 500 ohm line, or low impedance

pickup or mike, or in shunt with the plate circuit of any triode or a high impedance pickup. The circuit is not changed in any other way. The VT-2 is solely an addition for tone correction. The original audio circuits are not disturbed. List Price 6.00

VT-3 The VT-3 is a complete self-contained unit which does not use external control. The components are adjusted so that 10 db. equalization is effected at 80 and 7000 cycles. This unit is connected directly from plate to B plus of first audio triode. No other alteration is made. List Price 5.00

VT-4 The VT-4 is a complete self-contained wired unit including a variable control so arranged that with the control at one end high fidelity performance is effected and with the control at the other end the high response is reduced to diminish static, line noises, and heterodyne whistles. The unit is connected directly from plate to B plus of first audio triode. This unit is designed to work in the plate circuit of low impedance tubes such as 01A, 12A, 30, 31, 26, 27, 37, 55, 85, 262A, 864, 57 triode, 6C5 triode, 77 triode, etc. List Price 6.00

VT-5 The VT-5 is similar to the VT-4 except that it is designed to work out of high impedance tubes such as all screen grid tubes, all pentodes, 2A6, 40, 75, other hi mu triodes, etc. List Price 6.00



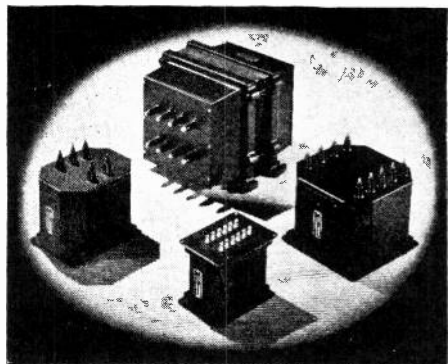


Most Complete Transformer Line in the World!

## UTC TRANSMITTING COMPONENTS

The transmitting type of UTC Class B audio filter and power components have been developed for and are now widely used by Commercial Telephone, Telegraph, Communication and Broadcast systems. They are particularly well adapted for use in AMATEUR TRANSMITTER applications.

All audio, filter and power units are fully shielded in symmetrically housed cases and present a thoroughly professional appearance when grouped in finished equipment. PA type cases may be mounted with terminals on top or below the chassis. All units are fully impregnated and then sealed in their cases with a special heat dissipating compound.



### Mounting Dimensions

PA-1	1-15/16x2-7/16
PA-2	2-7/16x3-1/8
PA-3	3-1/16x4-5/16
PA-4	3 3/4 x 5-7/32
PA-5	4 3/4 x 6 5/8
PA-6	7x7

### Overall Dimensions

	L	W	H
PA-1	2 1/2	3	3
PA-2	3-1/16	4 1/2	3
PA-3	3 3/8	4 7/8	4 1/4
PA-4	6	4 1/2	4 3/4
PA-5	7	5 5/8	5 1/2
PA-6	7 1/4	7 3/4	7 1/2

### PLATE TRANSFORMERS

Primary 105, 115, 220, 230 Volts A.C. 50-60 Cycles

PA-110	515 or 625 each side of center at 200 MA 400 VDC or 500 VDC. PA-3	5.00
PA-111	750 or 950 each side of center at 350 MA; DC. voltage 600 or 750. PA-4	18.00
PA-112	1250 or 1500 each side of center at 500 MA; DC. voltage 1050 or 1250. PA-6	35.00
PA-113	1750 or 2100 each side of center at 500 MA; DC. voltage 1500 or 1750. PA-6	47.50
PA-114	1750, 2350, 3000 or 3500 each side of center at 500 MA; DC. voltage 1500, 2000, 2500 or 3000. UTS mtg.	76.00
PA-114	3500, 4000 each side of center at 500 MA; 3050 VDC or 3500 VDC. UTS Case	100.00
PA-115	C bias plate transformer for class B 203A's, 830B's, 800's, or 210's using one or two 82 rectifiers. PA-3	10.00
PA-116	1250 or 1500 each side of center at 300 MA; DC. voltage 1050 or 1250. PA-5	25.00
PA-117	3500 or 3000 each side of center at 1 ampere, 2620 VDC or 3050 VDC. UTS case	115.00
PA-118	1750 or 2400 each side of center at 325 MA; DC. voltage 1500 or 2000. PA-6 mtg.	39.00
PA-119	1500 or 1750 each side of center at 1 amp. DC voltage 1250 or 1500. UTS case	76.00

Note: Operating the above transformers on 115 volt line the DC output voltage can be reduced to half of normal value, for reduced power operation, by switching to the 220 volt tap.

### CLASS B INPUT SMOOTHING CHOKES

PA-101	Swinging action 5 to 25 henrys, current range 15 to 150 MA, ohmic resistance 115. PA-2 case	5.00
PA-103	Swinging action 5 to 25 henrys, current range 20 to 200 MA, ohmic resistance 110. PA-3 case	8.00
PA-105	Swinging action 6 to 30 henrys, current range 25 to 250 MA, ohmic resistance 90. PA-4 case	12.00
PA-107	Swinging action 20 to 100 henrys, current range 25 MA to 250 MA, ohmic resistance 240. PA-5 case	20.00
PA-109	Swinging action 5 to 25 henrys, current range 75 to 500 MA, ohmic resistance 60. PA-5 case	20.00
PA-1C	Swinging action 5 to 25 henrys, current range 100 to 1000 MA, ohmic resistance 50. UTS case	35.00

J-38

### TRAP RESONANT SMOOTHING CHOKES

Smoothing Chokes Have an Off Center Tap for Hum Bucking Arrangements

PA-100	Inductance 8 henrys, DC output 150 MA, ohmic resistance 115. PA-2 case	5.00
PA-102	Inductance 10 henrys, DC output 200 MA, ohmic resistance 110. PA-3 case	8.00
PA-104	Inductance 12 henrys, DC output 250 MA, ohmic resistance 90. PA-4 case	12.00
PA-106	Inductance 35 henrys, DC output 250 MA, ohmic resistance 240. PA-5 case	20.00
PA-108	Inductance 10 henrys, DC output 500 MA, ohmic resistance 60. PA-5 case	20.00
PA-1S	Inductance 10 henrys, DC output 1000 MA, ohmic resistance 50. UTS case	35.00

### MODULATION CHOKES

150	Inductance 30 henrys, DC output 125 MA, ohmic resistance 550. PA-3 case	12.50
151	Inductance 30 henrys, DC output 200 MA, ohmic resistance 425. PA-5 case	20.00
152	Inductance 30 henrys, DC output 400 MA, ohmic resistance 300. PA-5 case	32.50

### UTC CONTROLLED CARRIER COMPONENTS

The UTC Variator controlled carrier modulation system:

- Increases blanket DX coverage many times.
- Almost doubles Class C tube ratings and will double to quadruple Class B linear tube ratings.
- Allows power consumption saving of 50% or over.
- Reduces interference between stations tremendously.
- Increases Fidelity.

UTC bulletin IICC gives full details on this new system of transmission.

The Essential Variator Unit Required for Controlled Carrier Modulation Is Now Available in Six Types to Take Care of Transmitters from 25 to 800 Watts input.

### CV VARIATORS FOR CONTROLLED CARRIER CLASS C

CV-1	25 to 50 watts maximum input controlled class C. List Price	7.50
CV-2	50 to 100 watts maximum input controlled class C. List Price	10.00
CV-3	100 to 170 watts maximum input controlled class C. List Price	15.00
CV-4	170 to 300 watts maximum input controlled class C. List Price	20.00
CV-5	300 to 500 watts maximum input controlled class C. List Price	25.00
CV-6	500 to 800 watts maximum input controlled class C. List Price	33.00

### AV AUTOTRANSFORMERS FOR CV VARIATORS—115-170 VOLTS AC

	List Price	
AV-1	for use with CV-1	5.00
AV-2	for use with CV-2	6.00
AV-3	for use with CV-3	7.00
AV-4	for use with CV-4	9.00
AV-5	for use with CV-5	12.00
AV-6	for use with CV-6	15.00

### UTC VARIPOWER AUTOFORMERS

These units are designed to serve three functions, namely, to effect reduced power for transmitter operation, to take care of line voltage variations from 95 to 130 volts, and to permit minor voltage variation from other transformers. Taps are provided at 55, 75, 95, 100, 105, 110, 115, 120, 125, and 130 volts.

VC-1	150 watt output rating	6.00
VA-2	250 watt output rating	7.50
VA-3	500 watt output rating	10.00
VA-4	1000 watt output rating	15.00
VA-5	2000 watt output rating	20.00

### OUTPUT TRANSFORMERS FOR SEPARATE PLATE AND SCREEN MODULATION OF PENTODES

These new modulation transformers are designed for maximum efficiency with the new RF pentodes. Separate secondary windings are provided thus allowing full audio output and obviating the wasteful losses of a screen dropping resistor.

PA-503	Class B 6AG or 53 plates to a single RK-23 or 25 for separate plate and screen modulation. PA-2	7.00
PA-504	Class B 801's or 210's to a single 804 or RK-20 for separate plate and screen modulation. PA-3	12.50
PA-505	Class B 800's or 35T's to a single 803 or RK-28 for separate plate and screen modulation. PA-4	18.00

### CLASS B OUTPUT TRANSFORMERS FOR R.F. SERVICE

PA-801	Primary tapped 10,000 ohms or 8,000 ohms for 838's, 210's, 1602's, RK-18's. Secondary 7500, 6250, 4500, 3250 ohms. PA-3	12.50
PA-800	Primary 12,500 ohms for 800's, RK-18's, 35T's. Secondary 10,000, 7500, 5000, 3500 ohms. PA-4	18.00
PA-830	Primary 7600 ohms for 838's or 830B's with plate voltage of 1000 V. Secondary 10,000, 2500 ohms. PA-5	22.50
PA-838	Primary tapped 11,200 ohms or 9000 ohms for 838's, 203A's, 242A's, 211's, 845's A.B. Impedance based on 1250 V. Plate Voltage. Secondary 10,000, 2500 ohms. PA-5	25.00
PA-805	Primary 8200 ohms for 204A's or HF-300's with 1750 V. plate voltage or 805's with plate voltage 1500 V. Secondary 6250, 4000, 3000. PA-6	50.00
PA-850	Primary 11,000 ohms for 150T's or HF-200's operating with 2000 V. plate voltage. Secondary 9000, 6000, 4500 ohms. PA-6	50.00
PA-438	Primary tapped 5600 ohms or 4500 ohms for push pull parallel tubes with 1250 V. plate voltage, 838's, 203A's, 242A's, 211A's, 845's A.B. Secondary 6000, 4000, 3000 ohms. PA-6	50.00

### FILAMENT TRANSFORMERS

Types PA-34 to PA-127 Tapped at 105-115, 220, 230 Volts A.C., 50-60 Cycles

PA-34	2 1/2 V.C.T. 10 amps. for 2-860's—5000 V. insulation. PA-2	7.50
PA-120	2 1/2 V.C.T. 10 amps. for 2-860's—10,000 V. insulation. PA-3	9.00
PA-121	5 V.C.T. 20 amps for 2-872's—10,000 V. insulation. PA-3	14.00
PA-122	7 1/2 V.C.T. at 6.5 amps. for 2-800's, RK-18's, 825's, 210's, 5000 Volt insulation. PA-3	11.00
PA-123	2-7 1/2 V.C.T. 6.5 amp. windings for 800's, RK-18's, 825's, 210's—5000 V. insulation. PA-3	14.50
PA-124	10 V.C.T. 7 amps. for 2-203 A's, 242 A's, 211's, 845's, 852's, 860's, 217 C's. 10,000 V. insulation. PA-3	12.00
PA-126	2-14 V.C.T. 12.5 amp. windings tapped at 11 or 10 volts, 5000 V insulation—for 01 A's, 49's, HF-200's, HF-300's or F100 A's. PA-4	20.00
PA-127	2 1/2 V.C.T. at 10 amps, 10,000 volt insulation, 2-10 V.C.T. 3.5 amp. windings, 5000 V. insulation. PA-3	15.00
PA-128	5 V.C.T. 12 amps. for 3-35T's, 2-50T's or 1-150 T. 7000 V. insulation. PA-3	10.00
PA-129	7 1/2 V.C.T. 23 amps. for 2-300T's or other 7 1/2 volt tubes. PA-3	12.50
PA-29	Secondaries, 2 1/2 V.C.T. 5 A., 2 1/2 V.C.T. 5 A., 5 V.C.T. 3 A. PA-2	6.25
PA-30	Secondaries, 2 1/2 V.C.T. 5 A., 7 1/2 V.C.T. 2.5 A., 7 1/2 V.C.T. 2.5 A. PA-2	6.75
PA-31	Secondaries, 2 1/2 V.C.T. 5 A., 5 V.C.T. 3 A., 7 1/2 V.C.T. 2 1/2 A. PA-2	6.75
PA-32	Secondaries, 5 V.C.T. 3 A., 5 V.C.T. 3 A., 5 V.C.T. 3 A. PA-2	6.75
PA-33	Secondaries, 5 V.C.T. 3 A., 7 1/2 V.C.T. 2 1/2 A., 7 1/2 V.C.T. A. PA-2	6.75

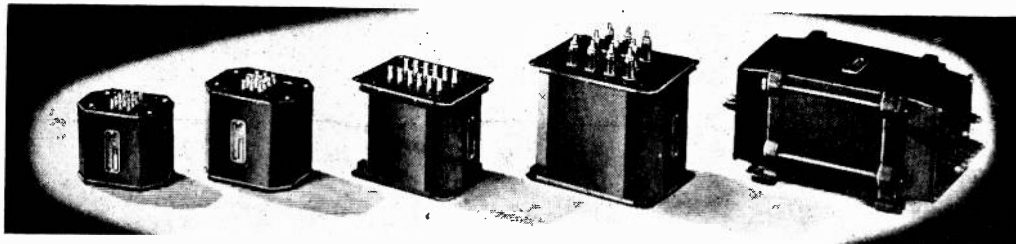
Note: Types PA-29, 30, 31, 32, 33 are insulated for 2000 volts. Primaries designed only for 115 volts A.C., 50-60 cycles.

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Most Complete Transformer Line in the World!

UTC VARIMATCH MODULATION TRANSFORMERS WILL MATCH ANY MODULATOR TUBES TO ANY RF LOAD



VM-1

VM-2

VM-3

VM-4

VM-5

The Varimatch transformer will not only match PRESENT available modulator tubes, but any tube that may be released at a FUTURE date. All you have to decide is the DC input to your RF stage. Then just pick the VARIMATCH output transformer that will handle the maximum audio power required. These transformers will also match the line impedance output of PA or similar amplifiers direct to the Class C tubes.

Pri. Ohms P to P	SECONDARY RF LOAD IMPEDANCES AVAILABLE										AUDIO LOAD IMPEDANCE		
	1070	1950	2150	3920	3920	4300	6350	6550	7900	8600	11400	200	350
2000	1070	1950	2150	3920	3920	4300	6350	6550	7900	8600	11400	200	350
3000	1620	2950	3240	5500	5900	6500	9400	10000	11800	13000	17000	300	520
4000	1380	1850	2160	2850	3450	4300	5500	7300	8650	12500	17400	250	400
5000	1750	2300	2700	3500	4300	5400	7000	9150	10800	15700	21600	300	500
6000	1070	2140	2180	2750	3620	4250	4300	5150	6350	8300	8600	200	370
7000	1250	2400	2500	3200	4280	5000	5050	6000	7200	9700	10000	230	430
8000	1440	2760	2900	3700	4900	5650	5800	6900	8400	10000	12000	270	500
9000	1620	2950	3100	3240	3900	4150	6200	6500	7750	9400	12500	300	550
10000	1800	2300	3500	4300	4600	6100	6900	7100	8600	10500	14000	330	600
12000	2070	2150	2750	4250	4320	5150	7250	8300	8700	12500	17400	370	400
14000	2440	3200	4900	6000	9700							430	
16000	2780	3700	5600	6900	11000							500	
18000	3140	4150	6300	7750	12500							550	

VM-1 Will handle any power tubes to modulate a 20 to 60 watt Class C stage. Maximum audio output 30 watts. 8.00

VM-2 Will handle any power tubes to modulate a 40 to 120 watt Class C stage. Maximum audio output 60 watts. 12.50

VM-3 Will handle any power tubes to modulate a 100 to 250 watt Class C stage. Maximum audio output 125 watts. 20.00

VM-4 Will handle any power tubes to modulate a 200 to 600 watt Class C stage. Maximum audio output 300 watts. 32.50

VM-5 Will handle any power tubes to modulate a 450 watt to 1 KW plus, Class C. Maximum audio output 600 watts. 70.00

The secondaries of all Varimatch transformers are designed to carry the Class C plate current.

Intermediate P.P. primary impedance values available in addition to those shown.

THE VARIMATCH TRANSFORMER NEVER BECOMES OBSOLETE

VARIMATCH INPUT TRANSFORMERS

- PA-49 Push pull 45, 59 or 6L6 plates to push pull 845A prime grids. PA-2.....7.50
- PA-50AX Single 53, 56, 6C5 6C6 triode, 6A6 to Class B 53, 6A6 or 6E6 grids or single 89 to Class B 89 grids. PA-1.....5.50
- PA-51AX Single 46 or 6L6 to Class B 46 or 59 grids. Single 45, 59, 2A3 or 6L6 to Class B 46 or 59 grids. Single 49 to Class B 49 grids. Single 37, 76, 6C6 or 6C5 triode to Class B 19 or 79 grids. Single 30 to Class B 19 or 79 grids. Single 89 to Class B 19 or 79 grids. Single 2A5, 42, 45 triode plate to A prime 45's, 2A5's or 42's. PA-1.....5.50
- PA-52AX Push pull, 45, 59, 2A3 or 6L6 plates to 2-46 Class B grids. Push pull 45, 59, 2A3 or 6L6 plates to 4-46 or 59 Class B grids. Push pull 2A3's to 2-841 Class B grids. PA-2.....6.50
- PA-53AX Push pull 42, 45, 50, 59, 2A3 or 6L6 plates to two 210, 801, RK-18, 35T or 800 Class B grids. Push pull 2A3 plates to two 838, 203A, 50T, 35T, 211A, 242A, 830B, 800, RK-18, 801 or 210 Class B grids. PA-2.....7.50
- PA-59AX 500, 200 or 50 ohm line to two 805, 838, 203A, 830B, 800, RK-18, 801 or 210 Class B grids. PA-2.....7.50
- PA-208AX Push pull parallel 2A3, 45, 59, 59 or 6L6 to four 805, 838, or 203A Class B grids. Push pull parallel 2A3, 45, 50, 59, 6L6 or two 211A, 845 plates to Class B 204A, HF-300 or 849 grids. Push pull parallel 2A3, 45, 50 or two 50T, 211A, 845 plates to Class B 159T or HF-200 Class B grids. PA-3.....17.50
- PA-512 500, 200 or 50 ohm line to two 150T, HF-300, HF-200, 204A or 849 Class B grids. PA-3.....20.00

PLATE TRANSFORMERS

- CS-200 450 each side of center at 150 MA; 5V-3A; 2 1/2 V-10A, CV mtg. ....6.50
- CS-201 500 each side of center at 200 MA; 2 1/2 V.C.T. 14 A; 5 V.C.T. 3 A; CD mtg. ....8.00
- CS-202 600 each side of center at 200 MA; 2 1/2 V-10A; 7 1/2 V-3A; 5V-3A. CD mtg. ....10.00
- CS-203 800 each side of center at 150 MA; 660 V. P.S. CD mtg. ....7.50
- CS-204 800 each side of center at 250 MA; 650 V. DC. CD. mtg. ....11.00
- CS-205 750 or 850 each side of center at 350 MA; DC. voltage 600 or 750. PA-4 mtg. ....17.00
- CS-206 1250 or 1500 each side of center at 500 MA; DC. voltage 1050 or 1250. PA-6 mtg. ....32.00
- CS-207 1750 or 2100 each side of center at 500 MA; DC. voltage 1500 or 1750. PA-6 mtg. ....43.50

- CS-208 1750, 2350, 3000 or 3500 each side of center at 500 MA; DC. voltage 1500, 2000, 2500 or 3000 .....65.00
- CS-209 1250 or 1500 each side of center at 200 MA; DC. voltage 1050 or 1250. PA-5 mtg. ....20.00
- CS-210 1750 or 2400 each side of center at 325 MA; DC. voltage 1500 or 2000. PA-6 mtg. ....35.00
- CS-212 475 each side of center at 500 MA; 5 V.C.T. 6A, for 4-6L6's fixed bias, etc. DC. voltage 400 CD mtg. ....14.00
- CS-213 1250 or 1500 each side of center at 1A; DC. voltage 1050 or 1250. PA-5 mtg. ....23.00
- CS-214 1500 or 1750 each side of center at 1 amp. DC. voltage 1250 or 1500. UTS mtg. ....65.00

Note: Using a bridge type rectifier DC. voltages indicated above are doubled but permissible current drain is reduced one-third.

FILAMENT TRANSFORMERS

- CS-401 2 1/2 V.C.T. 20 A; 5 V.C.T. 3 A; 7 1/2 V.C.T. 6 1/2 A; 2500 V. insulation. ....8.50
- CS-402 10 V.C.T. 6 1/2 A; 10 V.C.T. 6 1/2 A; 7 1/2 V.C.T. 2 1/2 A; 2 1/2 V.C.T. 5A; 2500 V. insulation. CD mtg. ....11.50
- CS-403 11 V.C.T. tapped at 12 and 14 volts at 10 A. 5000 V. insulation. CD mtg. ....8.50
- CS-404 2 1/2 V.C.T. 12 A; 5000 V. insulation; 10 V.C.T. 6 1/2 A. CD mtg. ....8.00
- CS-405 5 V.C.T. 20 A; 7000 V. insulation. CD mtg. ....7.50
- CS-406 5 V.C.T. 20 A; 10,000 V. insulation. CD mtg. ....10.00
- CS-407 2 1/2 V.C.T. 12 A; 7000 V. insulation. CV mtg. ....4.50
- CS-408 7 1/2 V.C.T. 6 1/2 A; 5000 V. insulation. CV mtg. ....4.50
- CS-409 10 V.C.T. 6 1/2 A; 5000 V. insulation. CV mtg. ....5.00
- CS-410 5 V.C.T. 3 A; 5 V.C.T. 3 A; 5 V.C.T. 6 A; 5000 V. insulation. CV mtg. ....5.00
- CS-411 2 1/2 V.C.T. 6 A; 2 1/2 V.C.T. 6 A; 2 1/2 V.C.T. 12 A; 10,000 V. insulation. CD mtg. ....10.00
- CS-412 6.3 V.C.T. 5 A; 5 V.C.T. 8 A. CV mtg. ....5.00
- CS-413 5 V.C.T. 12 Amps. for 3-35 T's, 2-50 T's or 1-150 T. CV mtg. ....5.00
- CS-414 7 1/2 V.C.T. 23 Amps. for 2-300 T's CD mtg. ....8.50

- CS-415 11 V.C.T. tapped at 10 volts at 8 A. 7000 V. insulation. CV mtg. ....6.50
- CS-130 Chromshield Exciter lamp transformer primary tapped for 105, 115, 125 volts, 50-60 cycles. Secondary 8 1/2 and 10 volts at from 4 to 8 amps. ....5.00
- LM-1 2 1/2 V.C.T. 20 A; 2500 V. insulation. OT mtg. ....3.00
- LM-2 7 1/2 V.C.T. 6.5 A; 2500 V. insulation. OT mtg. ....3.50
- LM-3 10 V.C.T. 6 1/2 A; 2500 V. insulation. OT mtg. ....4.40
- LM-4 6.3 V.C.T. 5 A; 5 V.C.T. 6 A; 2500 V. insulation. OT mtg. ....4.00
- LM-5 2 1/2 V.C.T. 12 A; 5000 V. insulation. OT mtg. ....3.50
- LM-6 5 V.C.T. 3 A; 5 V.C.T. 3 A; 5 V.C.T. 6 A; 2500 V. insulation. OT mtg. ....4.00
- LM-7 Three 7 1/2 V.C.T. 2 1/2 Amp. windings; 2500 V. insulation. OT mtg. ....4.00
- LM-8 2 1/2 V.C.T. 5 A; 2 1/2 V.C.T. 5 A; 5 V.C.T. 3 A; 2500 V. insulation. OT mtg. ....3.50
- LM-9 2 1/2 V.C.T. 5 A; 5 V.C.T. 3 A; 7 1/2 V.C.T. 3 A; 2500 V. insulation. OT mtg. ....4.00
- LM-10 2 1/2 V.C.T. 5 A; 7 1/2 V.C.T. 3 A; 7 1/2 V.C.T. 3 A; 2500 V. insulation. OT mtg. ....4.00
- LM-11 5 V.C.T. 3 A; 7 1/2 V.C.T. 3 A; 7 1/2 V.C.T. 3 A; 2500 V. insulation. OT mtg. ....4.00
- LM-12 2 1/2 V.C.T. 5 A; 5 V.C.T. 3 A; 6.3 V.C.T. 3 A; 2500 V. insulation OT mtg. ....4.00

SMOOTHING CHOKES

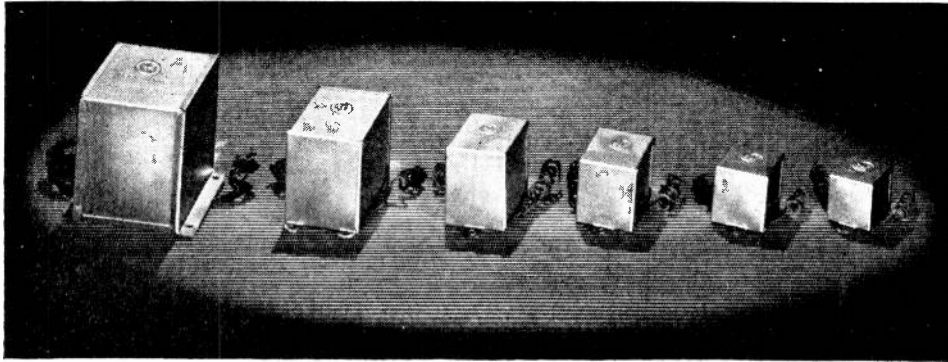
- CS-301 12 Henry, 200 MA; D.C. resistance 140 ohms. CV mtg. ....5.00
- CS-302 12 Henry, 300 MA; D.C. resistance 105 ohms. CD mtg. ....7.50
- CS-303 12 Henry, 500 MA; D.C. resistance 70 ohms. CD mtg. ....13.00

INPUT SWINGING CHOKES

- CS-304 5/25 Henry, 200 MA; D.C. resistance 140 ohms. CV mtg. ....5.00
- CS-305 5/25 Henry, 300 MA; D.C. resistance 105 ohms. CD mtg. ....7.50
- CS-306 5/25 Henry, 500 MA; D.C. resistance 70 ohms. CD mtg. ....13.00



Most Complete Transformer Line in the World!



## UTC CHROMSHIELD TRANSFORMERS

### CLASS A INPUT TRANSFORMERS

- CS-1 1 plate to 1 grid. 3½:1 ratio. C-2 mtg. 2.35
- CS-2 1 plate to 2 grids. split secondary. 2:1 ratio. C-2 mtg. 2.50
- CS-3 Push pull plates to push pull grids. 1.8:1 ratio. C-3 mtg. 2.75
- CS-4 Low or high impedance pickup to grid. Pri. 500, 1000, 2000, 4000 ohms. C-2 mtg. 3.00
- CS-5 Single or double button mike to 1 grid. C-2 mtg. 2.50
- CS-6 Single or double button mike to 2 grids. C-2 mtg. 3.00
- CS-7 Ribbon velocity mike to grid. C-2 mtg. 3.50
- CS-10 Single plate and carbon mike to one or two grids. C-2 mtg. 3.50
- CS-1P Single power detector plate to single grid. 3:1 ratio. C-4 mtg. 3.50
- CS-2P Single power detector plate to push pull grids. 1½:1 ratio. C-4 mtg. 3.75
- CS-2W Single plate to push pull grids. Wide range response, 1:1 ratio. C-3 mtg. 3.50

### MATCHING TRANSFORMERS

- CS-8 Ribbon velocity mike to 500 or 200 ohms. C-2 mtg. 3.50
- CS-9 Mixing carbon mike. 500 or 200 ohm line. C-3 mtg. 3.50
- CS-26 Single 26, 56, 27, 55, 77, 6C5 triode or 864 plate to 500 or 200 ohms. C-2 mtg. 3.00
- CS-27 Push pull 26, 56, 27, 55, 77, 6C5 triodes or 864 plates to 500 or 200 ohms. C-3 mtg. 3.50
- CS-28 Line to speaker matching transformer. Input 4000 ohms and 500 ohms. Output 15, 8, 4, and 2 ohms. Will handle up to 15 watts. C-4 mtg. 4.50
- CS-282 Line to speaker audio matching transformer. Input 2000, 500 or 200 ohms; output 15, 8, 4, 2 ohms. Will handle 30 watts. C-5 mtg. 7.00

### A PRIME AND CLASS B INPUT TRANSFORMERS

- CS-29 Driver plate to 53, 6A6, 49, 79 or 89 grids. C-4 mtg. 2.75
- CS-30 Driver 46 or 59 plate to 46 or 59 grids. C-4 mtg. 2.75
- CS-291 Single 2A3, 45, 42, 2A5, 6F6, 6D5 triode plate to push pull A prime 2A3, 45, 42, 2A5, 6F6, 6D5 grids. C-3 mtg. 3.75
- CS-292 Push pull 53 or 6A6 triode plates to two or four class B 53 or 6A6 grids. C-3 mtg. 3.25
- CS-293 Push pull triode 56, 37, 57, 77, 6C6, 6F5 plates to two or four A prime 45, 2A3, 42, 2A5, 6F6, 6D5, 6L6 grids. C-3 mtg. 3.50
- CS-294 Push pull 2A3 or 45 plates to two class B 210 or 801 grids. C-4 mtg. 5.00
- CS-295 Push pull 2A3 or 59 plates to four 46 or 59 class B grids. C-4 mtg. 5.00

### OUTPUT TO VOICE COIL

- CS-11 Single 250, 245, 59, 6F6 triode, 71A to 15, 8, 4, or 2 ohm voice coil. C-3 mtg. 2.50
- CS-12 Single 18, 20, 33, 41, 42, 47, 2A5, 59, or 6F6 metal pentode, and 89 or 6D5 triode plate to 15, 8, 4, or 2 ohm voice coil. C-3 mtg. 2.50

- CS-13 Push pull 250, 245, 59, 6F6 triode or 71A plates to 15, 8, 4, or 2 ohm voice coil. C-4 mtg. 3.00
- CS-14 Push pull 18, 20, 33, 41, 42, 47, 2A5, 59, 6F6 metal pentode, 89, or 6D5 triode plates to 15, 8, 4, or 2 ohm voice coil. C-4 mtg. 3.00
- CS-15 Push pull 2A3 or 6D5 plates to 15, 8, 4, or 2 ohm voice coil. C-4 mtg. 3.00
- CS-16 Push pull 48 plates to 15, 8, 4, or 2 ohm voice coil. C-4 mtg. 3.00
- CS-31 Push pull 6B5, 6A6, 53, 49, 79, 89 plates or 6F6 metal pentodes or triodes self bias to 15, 8, 4, or 2 ohms. C-4 mtg. 3.25
- CS-32 Push pull 46, 59, 6F6 triode fixed bias plates to 15, 8, 4, or 2 ohms. C-4 mtg. 3.25

### OUTPUT TO LINE AND VOICE COIL

- CS-17 Single 250, 245, 59, 6F6 triode, 71A to 500, 15, 8, 4, or 2 ohms. C-3 mtg. 3.00
- CS-18 Single 18, 20, 41, 47, 2A5, 59, 6F6 pentode, or 89 6D5 triode plate to 500, 15, 8, 4, or 2 ohms. C-3 mtg. 3.00
- CS-19 Push pull 250, 245, 59, 6F6 triode or 71A plates to 500, 15, 8, 4, or 2 ohms. C-4 mtg. 3.50
- CS-20 Push pull 18, 20, 33, 41, 42, 2A5, 59, 6F6 pentode, 89 triode plates to 500, 15, 8, 4, or 2 ohms. C-4 mtg. 3.50
- CS-21 Push pull 2A3, 6D5 plates to 500, 15, 8, 4, or 2 ohms. C-4 mtg. 3.50
- CS-36 Push pull 46, 59, 6F6 triode fixed bias plates to 500, 15, 8, 4, or 2 ohms. C-4 mtg. 3.75
- CS-35 Push pull 6A6, 6B5, 53, 49, 79, 89 plates or 6F6 metal pentodes or triodes self bias to 500, 15, 8, 4, or 2 ohms. C-4 mtg. 3.75
- CS-341A Push pull parallel class B 53, 6A6, or 6F6 metal pentodes or triodes self bias to 6B5, 6F6 metal pentodes or triodes self bias to 500, 15, 8, 4, 2 ohms. C-5 mtg. 7.50
- CS-452 Push pull parallel 2A3 or 45A prime plates to 500, 15, 8, 4, 2 ohms. C-5 mtg. 7.50
- CS-456 Push pull self bias 6L6's AB to 500, 15, 8, 4, 2 ohms. C-5 mtg. 7.50
- CS-457 Push pull fixed bias or four self biased 6L6's, AB to 500, 15, 8, 4, 2 ohms. 10.00

### OUTPUT TO RF LOADS

- CS-22 Single 250, 245, 59, 6F6 triode, 71A to 4000 or 2000 ohms. C-4 mtg. 2.75
- CS-23 Single 18, 20, 33, 41, 42, 2A5, 59, 6F6 pentode or 89 triode plate to 4000 or 2000 ohms. C-3 mtg. 2.75
- CS-24 Push pull 250, 245, 59, 6F6 triode, 71A to 4000 or 2000 ohms. C-4 mtg. 3.25
- CS-25 Push pull 18, 20, 33, 41, 42, 47, 2A5, 59, 6F6 pentode or 89 triode plates to 4000 or 2000 ohms. C-4 mtg. 3.25
- CS-33 Push pull 6A6, 6B5, 53, 49, 79, 89 plates or 6F6 metal pentodes or triodes self bias to 5000 or 3500 ohms. C-4 mtg. 3.50
- CS-34 Push pull 46, 59, 6F6 triode fixed bias plates to 5000 or 3500 ohms. C-4 mtg. 3.50
- CS-453 Push pull 2A3 or 45A prime plates to 5000, 7500, 10,000 ohms. C-5 mtg. 5.00
- CS-454 Class B 210 plates to 5000, 7500, 10,000 ohms. C-6 mtg. 8.50
- CS-455 Push pull parallel 2A3 or 45A prime plates to 5000, 7500, 10,000 ohms. C-5 mtg. 7.50

Gleaming chromium plated! Welded cases! Vacuum treated and humidity proof. Transformers fully clamped internally. All outputs with a variety of impedances! Trim professional units all physically symmetrical and with uniform mounting arrangements.

CHROMSHIELD transformers, acclaimed by Public Address Engineers, actually COST LESS than many other lines. Check the prices below!

### Seven Chromshield Cases

Type	L	W	H	Mounting Dimen.
C-1	3	1½	1½	2 7/8
C-2	3¾	1¾	2 1/8	2 7/8
C-3	3¾	2	2¼	3¼
C-4	4½	2½	2¾	3¾
C-5	5	2¾	3¾	1 1/8 x 4 1/2
C-6	6	3¾	4¼	1 1/2 x 5 3/4
C-7	4¾	4¾	4½	3 1/8 x 4 1/2

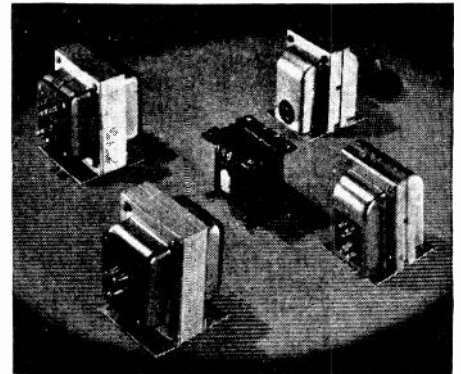
### HUMIDITY PROOF CHROMSHIELD TRANSCEIVER AUDIO TRANSFORMERS

All Chromshield Transceiver Units Fit in the C1 Case

- CS-101 Interstage audio 4:1 ratio. 1.95
- CS-102 Single plate to 2 grids, 2½:1 ratio. 2.00
- CS-103 Single or double button mike to 1 grid. 2.00
- CS-104 Single plate and carbon mike to 1 grid. 2.25
- CS-105 Velocity mike to 500 or 200 ohms. 2.25
- CS-106 Single 56, 6C6, 6C5, 864 plate to 500 or 200 ohms. 2.25
- CS-107 Driver plate to 19, 49, 79, 89 grids. 2.25
- CS-108 Class B 19, 49, 79, 89 plates to 5000 or 3500 ohms. 2.75

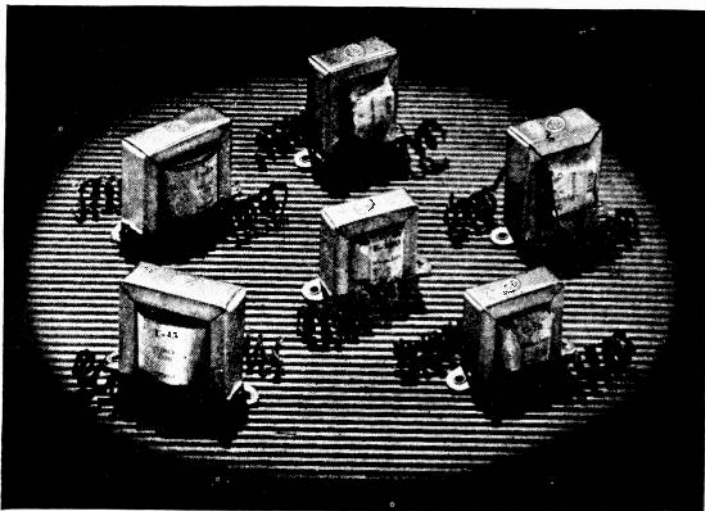
### FILTER AND AUDIO CHOKES, FILAMENT TRANSFORMERS

- CS-37 Filter choke. 25 henrys 30 MA; resistance 900 ohms. C-2 mtg. 2.00
- CS-38 Filter choke. 15 henrys 60 MA; resistance 240 ohms. C-2 mtg. 2.00
- CS-39 Filter choke. 20 henrys 90 MA; resistance 400 ohms. C-4 mtg. 2.50
- CS-40 Filter choke. 30 henrys 75 MA; resistance 350 ohms. C-4 mtg. 3.00
- CS-41 Filter choke. 10 henrys 150 MA; 95 ohms. C-4 mtg. 3.00
- CS-42 Class B input choke. Max. D.C. 175 MA. C-4 mtg. 3.00
- CS-43 Center tapped audio choke for push pull triode plates. Resistance 12,000 ohms. C-3 mtg. 3.50
- CS-44 Detector plate shunt choke. Max. D.C. 3 MA. C-2 mtg. 2.25
- CS-45 Pri. 115 A.C. Sec. 2½ V.C.T. 6 A. C-2 mtg. 1.75
- CS-46 Pri. 115 A.C. Sec. 6.3 V.C.T. 3 A. C-2 mtg. 2.25
- CS-47 Pri. 115 A.C. Sec. 2½ V.C.T. 12 A. C-3 mtg. 2.25
- CS-48 Pri. 115 A.C. Sec. 5 V. 4 A. C-3 mtg. 2.25
- CS-49 Pri. 115 A.C. Sec. 7½ V.C.T. 3 A. C-3 mtg. 2.25
- CS-50 Plate transformer for small power tubes, Class A and B. Pri. 115 V.A.C. 60 cycles. Secondaries: 300-0-300 at 75 MA; 5 V.C.T. 3 A., 6.3 V.C.T. 2½ A., 2½ V.C.T. 6 A. C-7 mtg. 7.00
- CS-51 Plate transformer for push pull power tubes Class A and B. Pri. 115 V.A.C. 60 cycles. Secondaries: 400-0-400 at 125 MA; 2½ V.C.T. 5 A., 2½ V.C.T. 10 A., 5 V.C.T. 3 A. C-7 mtg. 9.00
- CS-52 Plate transformer for push pull 6 volt power tubes Class A and B. Pri. 115 V.A.C. 50-60 cycles. Secondaries: 400-0-400 at 125 MA; 6.3 V.C.T. 5 A., 2½ V.C.T. 6 A., 5 V.C.T. 3 A. C-7 mtg. 8.50





Most Complete Transformer Line in the World!



**SILCHROME Replacement Audio, Filament and Filter Components**

are built to highest standards ever set for material of this type. All coils are accurately machine wound, vacuum impregnated and sealed, and finished with a beautiful silver coil wrapper bearing the lead code. The laminations used are of high grade silicon steel annealed for maximum permeability. The entire lamination structure is housed in a chromium plated channel frame bearing the UTC medallion . . . the mark of quality and reliability.

UTC SILCHROME Components are the finest units in the replacement field . . . and yet . . . THEY COST NO MORE!

**OPEN CHANNEL FRAME AUDIO TRANSFORMERS**

Horizontal Mounting Centers, 2-13/16"  
L., 3-5/16"; W., 1 1/2"; H., 2"

- U-31 1 plate to 1 grid 3:1 ratio.....1.75
- U-32 1 plate to 2 grids 2:1 ratio.....1.85
- U-32X 1 plate to 2 grids 2:1 ratio split secondary.....1.90
- U-33 2 plates to 2 grids 1.75:1 ratio.....2.00
- U-47 Single power pentode to single voice coil.....1.50

- U-247 Push pull power pentodes to single voice coil.....1.60
- U-45 Single power triode to single voice coil.....1.50
- U-245 Push pull power triodes to single voice coil.....1.60

**UNCASED UTC MIGHTY MITE AUDIO TRANSFORMERS**

For Transceivers—For Compact Head Amplifiers  
For Pee Wee and Aeroplane Receivers  
Horizontal Mounting Centers, 2 3/8"  
L., 2 7/8"; W., 1 3/8"; H., 1-11/16"

- U-41 Interstage audio 4:1 ratio.....1.50
- U-51 Single plate to two grids 2 1/2:1 ratio.....1.55
- UPM Single pentode 18, 20, 33, 41, 42, 2A5 plate to 4000 and 2000 ohms.....2.75
- UTM Single triode 71, 45, 50 plate to 4000 and 2000 ohms.....1.75
- UMG Double button mike to 1 grid.....1.60
- UTG Single plate and carbon mike to single grid.....1.65
- UVO Velocity mike to 500 and 200 ohms.....2.00
- UHO Single 56, 27, or 864 plate to 500 and 200 ohms.....2.00
- UPPM Push pull triodes 71, 45, 50 to 4000 and 2000 ohms.....1.75
- UTTM Push pull pentodes 18, 20, 33, 41, 42, 2A5, 47 to 4000 and 2000 ohms.....1.75
- U30B Driver 30 plate to Class B 19, 49, 79, 89 grids.....1.75
- U19B Class B 19, 49, 79 or 89 plates to 5000 or 3500 ohms.....1.75

**PEE WEE DYNAMIC SPEAKER OUTPUTS**

- Horizontal Mounting Centers, 2 3/8"  
L., 2 7/8"; W., 1 3/8"; H., 1-11/16"
- MA-1 Single power pentode to voice coil.....1.25
  - MA-2 Push pull power pentodes to voice coil.....1.35
  - MA-3 Single power triode to voice coil.....1.25
  - MA-4 Push pull power triodes to voice coil.....1.35

**UTC ALL-PURPOSE REPLACEMENT OUTPUT TRANSFORMERS**

Due to their ingenious mounting arrangement, these transformers will easily fit a Rola, Wright De Coster Jensen, Utah, Magnavox, and other small dynamic speakers.

These units are compact. The mounting centers are from 3/4" to 2 3/8"; the height 1 1/8". A fine grade of silicon core material is used and each unit has a high degree of efficiency. A tapped secondary winding will match voice coils from two to eight ohms. A top lug terminal bracket is supplied so that field coil leads may be soldered directly to each unit.

- US-47 Single power pentode like 18, 20, 33, 41, 42, 57, 2A5 to single voice coil.....1.50
- UPP-47 Push pull power pentodes like 18, 20, 33, 41, 42, 47, 2A5 to single voice coil.....1.50
- US-45 Single power triode like 71, 45, or 59 to single voice coil.....1.50
- UPP-45 Push pull power triodes like 71, 45, or 59 to single voice coil.....1.50
- UPP-48 Push pull 48's to single voice coil.....1.50
- UPPO Compact type Universal output for single and push pull triodes or pentodes to any voice coil.....1.50

**UNIVERSAL REPLACEMENT INPUT AND OUTPUT TRANSFORMERS**

- UR-1 Interstage, 1 plate to 1 grid, 3:1 ratio.....1.75
- UR-2 One plate to two grids, 2:1 ratio.....1.85
- UR-3 Push pull plates to push pull grids. 1.75:1 ratio.....2.00
- USO Universal output—single and push pull triodes and pentodes Class A, push pull triodes Class B to voice coils from .1 to 30 ohms.....1.75

**UNCASED FILTER CHOKES AND FILAMENT TRANSFORMERS**

- PC-1 10 henrys, 40 MA; 200 ohms D.C......95c
- PC-2 15 henrys, 35 MA; 300 ohms D.C......95c
- PC-3 16 henrys, 30 MA; 450 ohms D.C......95c
- PC-4 20 henrys, 25 MA; 600 ohms D.C.....1.10
- PC-5 25 henrys, 25 MA; 1000 ohms D.C.....1.25
- PC-6 12 henrys, 60 MA; 205 ohms D.C.....1.25
- PC-7 20 henrys, 80 MA; 450 ohms D.C.....2.00
- PC-8 1 henry, 250 MA; 40 ohms D.C.....2.50
- PC-9 8 henrys, 150 MA; 105 ohms D.C.....2.50
- PC-10 Class B input choke. Max. D.C. 165 MA.....2.50
- UTF Pri. 105, 115, 125 A.C. Secondary (tapped at 1.1, 1 1/2, 2, 2 1/2, 3.3, 5, 6.3, 7.5, 12.6, 15, 25, 30 volts.....3.00
- PC-11 Parallel feed choke. Max. D.C. 3 MA.....1.75
- PC-12 15 henrys, 250 MA; 120 ohms D.C.....5.50
- PC-13 Class B input choke. Max. D.C. 350 MA.....5.50

- FT-1 Pri. 115 A.C. Secondary 2 1/2 V.C.T. 3 A.....1.25
- FT-2 Pri. 115 A.C. Secondary 6.3 V.C.T. 1.2 A.....1.25
- FT-3 Pri. 115 A.C. Secondary 2 1/2 V.C.T. 6 A.....1.50
- FT-4 Pri. 115 A.C. Secondary 6.3 V.C.T. 2 1/2 A.....1.75
- FT-5 Pri. 115 A.C. Secondary 2 1/2 V.C.T. 10 A.....1.75
- FT-6 Pri. 115 A.C. Secondary 5 V. 3 A.....1.75
- FT-7 Pri. 115 A.C. Secondary 7 1/2 V.C.T. 3 A.....1.75

**FLYWEIGHT UNIVERSAL OUTPUT**  
Overall Size 1 3/4" x 1 1/8"; Horizontal Mounting  
Centers, 2-1/16"

FUO For single or push pull power tubes to voice coils from 1/10 to 30 ohms.....1.25

**MIXING AND MATCHING TRANSFORMERS**

U-21 Mixing 50 or 200 ohm line to 50 or 200 ohm line.....1.60  
ULM Line matching to voice coil 250, 500 or 2000 ohms to 15, 8, 4, or 2 ohms. Will handle 15 watts audio.....2.75

**OPEN CHANNEL FRAME AUDIO TRANSFORMERS**

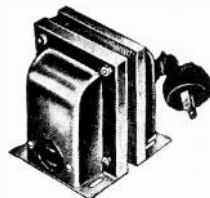
Vertical Mounting Centers, 2-13/16"  
L., 3-5/16"; W., 1 1/2"; H., 2"

- S-31 1 plate to 1 grid 3:1 ratio.....1.75
- S-32 1 plate to 2 grids 2:1 ratio.....1.85

**UNCASED UTC MIGHTY MITE AUDIO TRANSFORMERS**

Vertical Mounting Centers, 2 3/8"  
L., 2 7/8"; W., 1 3/8"; H., 1-11/16"

- S-41 Interstage audio 4:1 ratio.....1.50
- S-51 Single plate to two grids 2 1/2:1 ratio.....1.55
- USMG Head phone or single button mike 75 or 100 ohms to single grid.....1.60



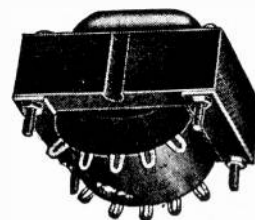
**CHROMSHIELD STEP DOWN TRANSFORMERS**

220-240 to 110-120 Volts,  
50-60 Cycles

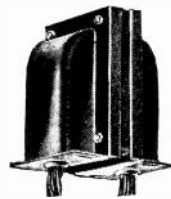
- CS-120 85 Watt capacity.....4.50
- CS-121 125 Watt capacity.....5.50
- CS-122 175 Watt capacity.....6.50
- CS-123 250 Watt capacity.....7.50

**UNIVERSAL FLUSH TYPE and SHIELDED REPLACEMENTS**

All UM, UH and DF mountings have removable Universal brackets which permit horizontal, vertical or flush mounting. (See cuts DF mounting.)



UM Mounting



VE Mounting

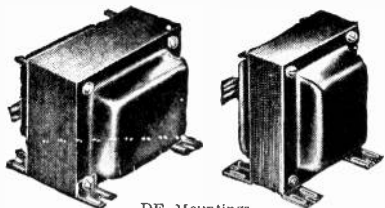
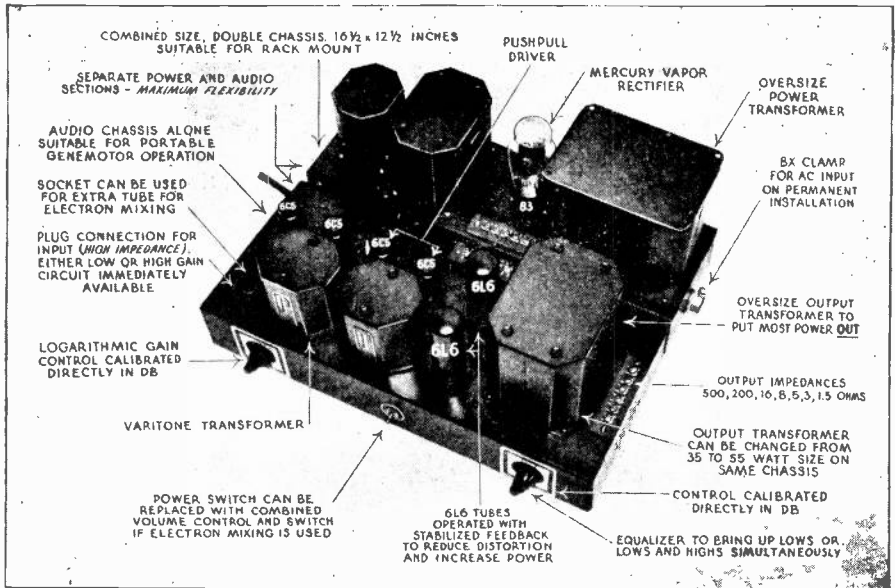
- UMX For short wave sets and tuners. Secondaries: 500 V.C.T., 40 MA. 5 volts, 2 amps, 2 1/2 V.C.T., 5 1/2 amps. Dimensions 2 1/2 x 3. Mounting centers 2 1/2 x 2. UM mtg. 2.00
- DFX Same as UMX but DF mounting.....2.00
- UMO For 4 tube sets. Secondaries: 600 V.C.T., 45 MA, 5 volts, 2 amps, 2 1/2 V.C.T. 5 1/2 amps. Dimensions 2 1/2 x 3. Mounting centers 2 1/2 x 2. UM mounting.....2.25
- DFO Same as UMO but DF mounting.....2.25
- UM-1 For 5 tube suits. Secondaries: 650 V.C.T., 55MA, 5 volts, 2 amps, 2 1/2 V.C.T., 7 amps, UMT mtg. Dimensions 2-13/16 x 3 3/8. Mounting centers 2 1/2 x 2-13/16.....2.50
- DF-1 Same as UM-1 but DF mounting.....2.50
- UM-2 For 6 tube sets. Secondaries: 680 V.C.T., 60 MA, 5 volts, 2 amps, 2 1/2 V.C.T. 9 amps, UM mtg. Dimensions 2-13/16 x 3 3/8. Mounting centers 2 1/2 x 2-13/16.....2.75
- DF-2 Same as UM-2 but DF mtg.....2.75
- UM-3 For seven tube sets. Secondaries: 700 V.C.T., 75 MA, 5 volts, 2 amps, 2 1/2 V.C.T. 10 1/2 amps. Dimensions: 3 1/8 x 3 3/8. Mounting centers 2 1/2 x 3 3/8.....3.25
- DF-3 Same as UM-3 but DF mtg.....3.25
- VE-3 Same as UM-3 but VE mtg.....3.75
- UM-4 For seven tube sets. Secondaries: 700 V.C.T., 75 MA, 5 volts, 2 amps, 2 1/2 V.C.T. 9 amps, 2 1/2 V.C.T. 3 amps. Dimensions 3 3/8 x 3 3/8. Mounting centers 2 1/2 x 3 3/8.....3.50



# Most Complete Transformer Line in the World

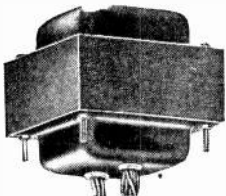
## UTC UNIVERSAL BEAM POWER AMPLIFIER KITS

- DF-4 Same as UM-4 but DF mtg. 3.50
- VE-4 Same as UM-4 but VE mtg. 4.00
- UM-4X For eight tube sets. Secondaries: 650 V.C.T., 100 MA, 5 volts, 2 amps, 2½ V.C.T., 12 amps. Dimensions 3½ x 3¾. Mounting centers 2½ x 3¼. 4.00
- DF-4X As UM-4X but DF mtg. 4.00
- VE-4X As UM-4X but VE mtg. 4.50
- UM-5 For ten tube sets and Power amplifiers. Secondaries: 750 V.C.T., 100 MA, 5 volts, 3 amps, 2½ V.C.T., 3 amps, 2½ V.C.T., 12 amps. Dimensions: 3½ x 3¾. Mounting centers 2½ x 3¾. 4.50
- DF-5 Same as UM-5 but DF mtg. 4.50
- VE-5 Same as UM-5 but VE mtg. 5.00
- UM-6 For ten to twelve tube sets and power amplifiers. Secondaries: 800 V.C.T., 125 MA, 5 volts, 3 amps, 2½ V.C.T., 12 amps. Dimensions 3¾ x 4%. Mounting centers 3 x 3¾. 5.50
- DF-6 Same as UM-6 but DF mtg. 5.50
- UM-7 For receivers and power amplifiers using 2A3 and 45 Power tubes. Secondaries: 850 V.C.T., 200 MA, 5 volts, 3 amps, 2½ V.C.T., 5 amps, 2½ V.C.T., 14 amps. Dimensions 3¾ x 4%. Mounting centers 3 x 3¾. 7.50
- DF-7 Same as UM-7 but DF mtg. 7.50
- UM-8 For high power receivers and amplifiers using class B 46, 59 or similar tubes. Secondaries: 1100 V.C.T., 175 MA, 5 volts, 3 amps, 2½ V.C.T., 5 amps, 2½ V.C.T., 10 amps. Dimensions 3¾ x 4%. Mounting centers 3 x 3¾. 8.75



DF Mountings

- DF-8 Same as UM-8 but DF mounting. 8.75
- UH-1 For 4 or 5 tube sets. Secondaries: 600 V.C.T., 50 MA, 5 volts, 3 amps, 6.3 V.C.T., 2 amps. Dimensions 2½ x 3. Mounting centers 2 x 2½. 2.50
- DH-1 Same as UH-1 but DF mounting. 2.50
- UH-2 For seven tube sets. Secondaries: 700 V.C.T., 75 MA, 6.3 V.C.T., 3 amps, 2½ V.C.T., 3 amps, 5 volts, 3 amps. Dimensions 3¾ x 3¾. Mounting centers 2½ x 3¾. UM mounting. 4.00
- DH-2 Same as UH-2 but DF mounting. 4.00
- VE-12 Same as UH-2 but VE mounting. 4.50
- UH-3 For ten tube sets. Secondaries: 750 V.C.T., 100 MA, 6.3 V.C.T., 4 amps, 2½ V.C.T., 4 amps, 5 volts, 3 amps. UM mounting. Dimensions 3¾ x 3¾. Mounting centers 2½ x 3¾. UM mounting. 5.00
- DH-3 Same as UH-3 but DF mounting. 5.00
- VE-13 Same as UH-3 but VE mounting. 5.00
- UH-4 For amplifiers and receivers using 45, 2A3, 6A3, 42, 6L6 tubes. Secondaries: 800 V.C.T., 125 MA, 5 volts, 3 amps, 2½ V.C.T., 5 amps, 6.3 V.C.T., 2 amps, 6.3 V.C.T., 3 amps. Dimensions: 3¾ x 4%. Mounting centers 3 x 3¾. 6.00
- DH-4 Same as UH-4 but DF mounting. 6.00
- UH-5 For heavy duty power amplifiers using 45, 2A3, 6A3, 42, 6L6 tubes. Secondaries: 850 V.C.T., 200 MA, 5 volts, 3 amps, 2½ V.C.T., 5 amps, 6.3 V.C.T., 2 amps, 6.3 V.C.T., 4 amps. UM mtg. 8.00
- DH-5 Same as UH-5 but DH mounting. 8.00
- UH-7 For heavy duty power amplifiers using 6A3, 6F6, 6L6 tubes. Secondaries: 950 V.C.T., 250 MA, 5 volts 3 amps, 2½ volts 3 amps, 6.3 V.C.T., 4 amps, 6.3 V.C.T., 4 amps. UM mounting. 10.50
- DH-7 Same as UH-7 but DF mounting. 10.50
- UH-6 For receivers and amplifiers using 45, 6A3 power tubes. Secondaries: 750 V.C.T., 200 MA, 5 volts 3 amps, 6.3 V.C.T., 5 amps, 2½ V.C.T., 10 amps. Dimensions 3¾ x 4%. Mounting centers 3 x 3¾. 7.50
- DH-6 Same as UH-6 but DF mounting. 7.50



**PAK-1** Self bias amplifier kit. 35 watt operation. Output transformer impedances 500, 200, 16, 8, 5, 3, 1.5 ohms. Includes all accessories such as resistors, condensers, sockets, calibration plates, chassis, dust covers, hardware . . . except tubes. All fully mounted. List Price. . . . 75.00  
**PAK-1X** Same as PAK-1 but with Varimatch modulation output transformer. Impedances available are 220, 408, 1180, 2350, 2400, 3000, 4000, 4670, 4750, 5500, 7000, 9150, 9470 ohms. List Price . . . . . 75.00

**PAK-2** Fixed bias amplifier kit. 55 watts operating condition. Output transformer with impedances of 500, 200, 16, 8, 5, 3, 1.5 ohms. Includes all accessories such as resistors, condensers, sockets, calibration plates, chassis dust covers, hardware except tubes. All fully mounted. List Price. . . . 80.00  
**PAK-2X** Same as PAK-2, but with Varimatch modulation output transformer. Impedances available are: 237, 380, 1310, 1750, 2060, 2700, 3270, 4100, 5200, 6900, 8200, 11900, 16500 ohms. List Price . . . . . 80.00

### UTC CHROMSHIELD AMPLIFIER KITS

**CAK-1** This kit consists of a two-stage amplifier using push pull 56 tubes into push pull 2A3 or 45 tubes. The input transformer, type CS-10, accommodates either a high impedance plate such as the detector tube of a radio receiver, or a pick-up, or a single button mike, double button mike or line. The output transformer, type CS-21, has secondary impedances of 500, 15, 8, 4 and 2 ohms. The overall gain is approximately 48 DB. The power output is 14 watts peak, 10 watts normal. The frequency response is unusually good for PA and general broadcast programs. This amplifier can be used with metal tubes using 6C5's in place of the 56's and 6F6's triode connected in place of the 45 or 2A3 tubes. The list price of complete kit including all accessories. . . . . 32.75

power of 30 watts is available. Harmonic distortion up to 10 watts is under 3%, up to 30 watts under 7%. The overall gain is more than 80 DB. The CS-452 output transformer has secondary impedances of 500, 15, 8, 4 and 2 ohms. The list price of complete kit including all accessories. . . . 44.50  
**CAK-5** The CAK-5 kit is unusually popular because of its simple construction involving a minimum number of tubes. The new 6B5 power tubes are used in the output stage providing a peak power output of 22 watts and a normal output of 15 watts. The input to this amplifier is high impedance and is fed into a 6A6 tube cascaded which in turn is transformer coupled to 6B5's. The overall gain is approximately 100 DB. The CS-35 output transformer has secondary impedances of 500, 15, 8, 4 and 2 ohms. The list price of complete kit including accessories . . . . . 31.25

**CAK-2** The CAK-2 amplifier is very popular for transmitter and PA work, as it provides a stable high gain amplifier that is light in weight and reasonable in cost. The input is arranged to match the new crystal microphones, or other high impedance input.  
 This unit incorporates a 6A6 tube cascaded feeding 6A6 tube parallel connected. The second 6A6 drives an output 6A6 tube in class B using a special driver transformer. The type CS-35 output transformer has secondary impedances of 500, 15, 8, 4 and 2 ohms. The list price of complete kit including all accessories. . . . . 36.00

**CAK-6** This amplifier is a single stage high power prime unit designed to convert standard receivers using a single output tube to a high power, high fidelity unit. The input transformer is designed to work directly from any standard output tube in a radio receiver, which if a pentode must be reconnected for triode operation. A separate bias rectifier is provided to effect ideal, fixed bias. A prime operation. The harmonic content is less than 1% up to 5 watts, less than 5% up to 18 watts. The CS-19 output transformer has impedances of 500, 15, 8, 4 and 2 ohms. The list price of complete kit including all accessories. . . . . 26.00

If type CS-33 modulator output transformer having secondary impedances of 5000 and 3500 ohms is desired, use designation CAK-2X.  
**CAK-3** The CAK-3 kit is a simply constructed unit very popular in the PA and transmitter fields. It has a high impedance input and consists of a 57 tube transformer coupled to a 46 tube which in turn drives a pair of 46 tubes in class B. The tonal quality and overall fidelity are excellent. The power output is 40 watts peak, 28 watts normal, and the overall gain 75 DB. The CS-36 output transformer has impedances of 500, 15, 8, 4 and 2 ohms. The list price of complete kit including all accessories . . . . . 35.00

**CAK-7** The CAK-7 pre-amplifier kit has been designed to take advantage of the ideal characteristics of the new metal tubes when applied to pre-amplifier service. These tubes have low harmonic content and low hum level. This amplifier will work on any 110 Volts 25 to 60 cycle AC or DC line. These identical 6C5 tubes are used. One is a rectifier, the other two are used as transformer coupled amplifiers. The overall gain is 55 DB. The input transformer is designed to work from any standard microphone or line. The output transformer is tapped for a 500 or 200 ohm line. The list price of complete kit including all accessories. . . . . 22.00

**CAK-4** This kit is unusually popular because of its high power output and its simplicity of construction. The circuit consists of a high impedance input, a 57 tube transformer coupled to push pull 56 tubes driving four type 2A3 or 45 tubes in A prime. A separate bias rectifier is provided to permit maximum power from the output stage with low distortion. A peak power of 40 watts and normal

**CAK-8** The CAK-8 super power amplifier kit employs the new metal tubes in all audio stages resulting in reduced tube noise, positive shielding and increased strength and compactness. A gain of 95 DB and a power output of 35 watts is available. The output transformer type CS-31A has secondary impedances of 500, 15, 8, 4 and 2 ohms. The list price of complete kit including all accessories . . . . . 42.75

# AEROVOX HI-FARAD ELECTROLYTIC CONDENSERS

"USE THE QUALITY STANDARD"

## CARDBOARD TUBE CONDENSERS



Type PR5—525v. Surge Pk.  
450v. Working

Cap. Mfds.	Size-Ins. Dia.-Long	List Price
2	3/4 x 2 1/4	\$0.65
8	1 1/8 x 2 3/4	.95
<b>Type PR2—200v. D.C. Working</b>		
4	3/4 x 2 1/4	\$0.65
6	7/8 x 2 1/4	.75
8	7/8 x 2 1/4	.80
10	7/8 x 2 1/4	.90
<b>Type PR50—50v. D.C. Working</b>		
5	3/4 x 2 1/4	\$0.50
10	3/4 x 2 1/4	.65
20	7/8 x 2 1/4	.75
25	7/8 x 2 1/4	.80
50	1 1/4 x 2 3/4	1.20
<b>Type PR25—25v. D.C. Working</b>		
5	3/4 x 2 1/4	\$0.50
10	3/4 x 2 1/4	.50
20	3/4 x 2 1/4	.60
25	7/8 x 2 1/4	.65
50	1 1/4 x 2 3/4	.95

## CARDBOARD BOX BY-PASS CONDENSERS



With Two Color-Coded Wire Leads

Cap. Mfds.	Size-Ins. L. W. D.	Price List
4	4 1/2 x 1 3/4 x 3/4	\$0.75
8	4 1/2 x 1 3/4 x 1 1/8	.95
<b>Type PB-50—50v. D.C. Work.</b>		
5	2 3/8 x 1 1/8 x 1 1/8	\$0.50
10	2 3/8 x 1 1/8 x 1 1/8	.65
25	2 3/8 x 1 1/8 x 1 1/8	.80
<b>Type PB-25—25v. D.C. Work.</b>		
5	2 3/8 x 1 1/8 x 1 1/8	\$0.50
10	2 3/8 x 1 1/8 x 1 1/8	.50
25	2 3/8 x 1 1/8 x 1 1/8	.65

## UNIVERSAL MOUNTING CONDENSERS



Furnished with mounting rings for universal mounting. A wide selection of capacities in single and multiple section units for general service.

Capacity Mfds.	Size-Ins. D. H.	List Price
4	1 3/8 x 2 3/8	\$0.85
8	1 3/8 x 4 1/8	1.05
5-15	2 1/2 x 4 1/8	2.30
8-8	2 1/2 x 4 1/8	1.80
8-16	2 1/2 x 4 1/8	2.35
8-8-8	3 x 4 1/8	2.70
9-9-18	3 x 4 1/8	3.75
8-8-8-8	3 x 4 1/8	3.60
9-9-18-18	3 x 4 1/8	5.25

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## SPACE-SAVER MIDGET ELECTROLYTIC CONDENSERS



Type PBS Single Section



Type PBS Triple Section

These Midget Electrolytics are made possible by a tried, tested, perfected process, whereby far greater capacity is attained from a given bulk, without impairing the working voltage or service life.

All units are encased in heavy cardboard containers, thoroughly impregnated and fully sealed. Box has flanges for ready mounting. Wire leads are color-coded for polarity.

### Single Section Condensers

Type PBS5—525v. Surge Pk. 450v. D.C. Working				Type PBS2—250v. Surge Pk. 200v. D.C. Working			
Cap. Mfds.	Size-Ins. L. W. D.	List Price		Cap. Mfds.	Size-Ins. L. W. D.	List Price	
2	2 7/8 x 3/4 x 1/2	\$0.65		4	2 7/8 x 3/4 x 1/2	.65	
4	2 7/8 x 1 x 5/8	.75		6	2 7/8 x 1 1/8 x 5/8	.75	
6	2 7/8 x 1 1/4 x 5/8	.90		8	2 7/8 x 1 1/8 x 5/8	.80	
8	2 7/8 x 1 1/2 x 5/8	.95		10	2 7/8 x 1 1/4 x 5/8	.90	
10	3 1/8 x 1 1/2 x 5/8	1.15		12	2 7/8 x 1 1/2 x 5/8	.95	
12	3 1/8 x 1 1/2 x 5/8	1.30		16	2 7/8 x 1 1/2 x 5/8	1.05	

### Double Section Condensers With Four Leads

Type PBS5—525v. Surge Pk. 450v. D.C. Working				Type PBS2—250v. Surge Pk. 200v. D.C. Working			
Cap. Mfds.	Size-Ins. L. W. D.	List Price		Cap. Mfds.	Size-Ins. L. W. D.	List Price	
4-4	2 7/8 x 1 1/4 x 1 1/4	\$1.20		4-4	2 7/8 x 3/4 x 1 1/8	\$0.90	
4-8	2 7/8 x 1 1/2 x 1 1/8	1.35		4-8	2 7/8 x 1 1/8 x 1 1/8	1.15	
8-8	2 7/8 x 1 1/2 x 1 1/8	1.50		8-8	2 7/8 x 1 1/8 x 1 1/8	1.25	
				8-16	2 7/8 x 1 1/2 x 1 1/4	1.45	

### Triple Section Condensers With Six Leads

Type PBS5—525v. Surge Pk. 450v. D.C. Working				Type PBS2—250v. Surge Pk. 200v. D.C. Working			
Cap. Mfd.	Size-Ins. L. W. D.	List Price		Cap. Mfds.	Size-Ins. L. W. D.	List Price	
8-8-8	3 x 1 1/2 x 1 1/4	\$2.20		8-8-8	2 7/8 x 1 1/8 x 1 1/8	\$1.90	

## MIDGET CAN-TYPE ELECTROLYTIC CONDENSERS

Ultra-compact metal can electrolytic condensers for general replacement purposes and assemblies where space is at a minimum. These units are one-half the size of other types of can-type electrolytics of the same capacities and voltage ratings. Inverted mounting. Two color-coded wire leads. Hermetically sealed, leakage and seepage proof.



Type GLS

Type GLS—525v. Surge Pk. 450v. D.C. Working				Type GLS 250—300v. Surge Pk. 250v. D.C. Working			
Cap. Mfds.	Size-Ins. Dia.-High	List Price		Cap. Mfds.	Size-Ins. Dia.-High	List Price	
4	1x2 3/8	\$0.85		4	1x2 3/8	\$0.75	
8	1x2 1/2	1.05		8	1x2 1/2	.95	
12	1x3 3/8	1.40		12	1x2 1/2	1.15	
16	1x4 3/8	1.55		16	1x3 3/8	1.35	

## CARDBOARD BOX CONDENSERS

Type P5—525 Volts Surge Pk. 450 Volts D.C. Working



Type P5 Two Leads

Cap. Mfds.	Size D. W. L.	List Price
16	3 1/2 x 1 3/8 x 2 5/8	\$0.55
2	3/4 x 1 3/8 x 2 5/8	.65
4	3/4 x 1 3/8 x 4 1/8	.75
6	1 1/8 x 1 3/8 x 4 1/8	.90
8	1 1/8 x 1 3/8 x 4 1/8	.95
10	1 1/4 x 1 3/8 x 4 1/8	1.15
18	1 1/4 x 1 3/8 x 4 1/8	1.30
16	1 1/4 x 1 3/8 x 4 1/8	1.45
<b>Type PBMS—525 Volts Surge Pk. 450 Volts D.C. Working</b>		
4-4	1 1/4 x 1 1/8 x 4 1/8	1.20
4-8	1 1/4 x 1 1/8 x 4 1/8	1.35
8-8	1 1/4 x 1 1/8 x 4 1/8	1.50



Type PBMS Four Leads

## WIRE LEAD CONDENSERS

These inverted mounting, aluminum can condensers are made in single and double section units with separate terminal leads.

525v. Surge Pk. 450v. D.C. Working.



Type GL5—Single Section With Two Leads

Cap. Mfds.	Size-Ins. Dia.-High	List Price
4	1 3/8 x 3 1/4	\$0.85
8	1 3/8 x 4 1/4	1.05
12	1 3/8 x 4 1/4	1.40
16	1 3/8 x 5 1/4	1.55

Type 2GL5—Double Section With Four Leads

Cap. Mfds.	Can. Size-Ins. Dia.-High	List Price
4-4	1 3/8 x 4 1/4	\$1.30
4-8	1 3/8 x 5 1/4	1.45
8-8	1 3/8 x 5 1/4	1.60

Type 3GL5—Triple Section With Six Leads

Cap. Mfds.	Can. Size-Ins. Dia.-High	List Price
4-4-4	1 3/8 x 3 1/4	\$2.00
8-8-8	1 3/8 x 4 1/4	2.40

Type 3GL250—Triple Section With Six Leads 300v. Surge Pk.—250v. D.C. Work.

Cap. Mfds.	Can. Size-Ins. Dia.-High	List Price
8-8-8	1 3/8 x 3 1/4	\$2.10
8-8-16	1 3/8 x 3 1/4	2.35
8-16-16	1 3/8 x 4 1/4	2.60

## INVERTED MOUNTING CONDENSERS

These standard size, inverted units are furnished in either grounded negative mounting or insulated mounting.



Type G5—525v. Surge Pk. 450v. D.C. Working

## GROUNDING MOUNTING

Cap. Mfds.	Size-Ins. Dia.-High	List Price
4	1 3/8 x 2 3/8	\$0.85
6	1 3/8 x 2 3/8	1.00
8	1 3/8 x 4 1/8	1.05
10	1 3/8 x 4 1/8	1.25
12	1 3/8 x 4 1/8	1.40

## INSULATED MOUNTING TYPE I-5

Cap. Mfds.	Size-Ins. Dia.-High	List Price
2	1 3/8 x 1 3/8	\$0.75
4	1 3/8 x 2 3/8	.85
6	1 3/8 x 2 3/8	1.00
8	1 3/8 x 4 1/8	1.05
10	1 3/8 x 4 1/8	1.25
12	1 3/8 x 4 1/8	1.40
16	1 3/8 x 5 1/4	1.55

**NOTE:** We can AEROVOX supply any Electrolytic, Mica, or Paper Condenser not listed in this Catalog. Send for complete AEROVOX Catalog.

# AEROVOX PAPER and MICA CONDENSERS

"USE THE QUALITY STANDARD"

## TUBULAR PAPER CONDENSERS



Aerovox cartridge condensers 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.

List Prices			
Cap. Mfd.	Type 484 400v	Type 684 600v	Type 1084 1000v
.001	\$0.15	\$0.15	\$0.20
.002	.15	.15	.20
.003	.15	.15	.20
.004	.15	.15	.20
.005	.15	.15	.20
.006	.15	.15	.20
.008	.15	.15	.20
.01	.15	.15	.20
.015	.15	.17	.20
.02	.15	.17	.24
.03	.15	.17	.27
.04	.15	.20	.30
.05	.15	.20	.35
.06	.20	.23	.37
.075	.20	.23	.40
.1	.20	.25	.40
.15	.25	.30	
.2	.25	.35	
.25	.25	.35	
.3	.30	.45	
.4	.35	.50	
.5	.35	.50	
1.	.50		

### Dual Section Units

.01-.01	.33	.35
.05-.05	.40	.45
1-1	.47	.52
.25-.25	.70	.85

## UNCASED PAPER-WOUND CONDENSERS

Non-inductively wound. Wrapped in black varnished paper, ends sealed with pitch, and provided with insulated wire leads eight inches long.

Type SU—Short Units		
Cap. Mfd.	Size—Ins.	Price List
400v		
.1	2x 7/8 x 1/4	\$0.35
.25	2x1 x 7/8	.40
.5	2x1 7/8 x 7/8	.50
1.	2x1 7/8 x 1 1/8	.75
600v		
.1	2x1 x 7/8	.40
.25	2x1 1/8 x 7/8	.50
.5	2x1 7/8 x 7/8	.60
1000v		
.1	2x1 1/8 x 1/2	.60

Type MU—Medium Units		
Cap. Mfd.	Size—Ins.	List Price
400v		
1.	8 1/4 x 1 7/8 x 1/2	\$0.75
2.	8 1/4 x 1 7/8 x 3/8	1.15
600v		
1.	8 1/4 x 1 7/8 x 1 1/8	.90
2.	8 1/4 x 1 7/8 x 1 1/8	1.35

## AUTO-RADIO CONDENSERS



### Suppressor Condensers

Type 1120—1.0 Mfd.	List Price \$0.70
Type 1140—0.5 Mfd.	List Price \$0.50
Type 1141—5-.5 Mfd.	List Price \$0.80

### Suppressor Condenser for FORDS



Type 1150—Cap. 5 Mfd.	List Price \$0.50
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### Ammeter Condensers



Type	Cap.	List Price
1160	.5	\$0.45
1170	1.0	.65

### Dome Light Filter Condenser



Type 1180	List Price \$1.00
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### Oil-Filled Vibrator Condensers



#### Type 1130—One Lead

Cap. Mfd.	Cap. Mfd.	List Price, Each
.007	.04	\$0.45
.01	.05	
.02	.06	
.03	.07	

#### Type 1131—Two Leads

Cap. Mfd.	Cap. Mfd.	List Price, Each, Either Type
.007	.01	\$0.45
.01	.01	

### Oil-Impregnated

### Vibrator Condensers



Type	Cap.	List Price
1135	.01	\$0.60
1135	.5	.65

### Tubular Paper Vibrator Condensers



Type 1684—1600 W.V.D.C.			
Cap. Mfd.	List Price	Cap. Mfd.	List Price
.007	\$0.30	.03	\$0.50
.01	.30	.04	.55
.02	.40	.05	.55

## MICA CONDENSERS

### MIDGET MICA CONDENSERS With Wire Leads

#### Type 1468



Midget size 7/8" x 1 1/8" provided with wire leads. Test volts 500.

Cap. Mfds.	List Price	Cap. Mfds.	List Price
.00004	\$0.15	.00015	\$0.20
.00005	.15	.0002	.20
.00007	.15	.00025	.20
.000075	.15	.0005	.20
.0001	.15		

#### Type 1467



Compact, size 1 1/8" square, provided with wire leads. Test volts 500.

Cap. Mfd.	List Price	Cap. Mfd.	List Price
.00004	\$0.15	.0002	\$0.20
.00005	.15	.00025	.20
.00007	.15	.0005	.20
.000075	.15	.001	.25
.0001	.15	.002	.30
.00015	.20	.0025	.40

#### Type 1460



Popular type mica condenser. Size 1 1/4" x 3/4". Two soldering lug terminals. Test volts 900.

Cap. Mfd.	List Price	Cap. Mfd.	List Price
.00004	\$0.15	.00025	\$0.20
.00005	.15	.0005	.20
.0001	.15	.001	.25
.00015	.20	.002	.30
.0002	.20		

#### Type 1450



High voltage. 1,000 volts D.C. test. 1 1/4" square.

Cap. Mfd.	List Price	Cap. Mfd.	List Price
.0001	\$0.25	.003	\$0.40
.0002	.25	.004	.45
.00025	.25	.005	.45
.00037	.25	.006	.55
.0005	.25	.01	.70
.001	.30	.02	.95
.002	.35		

NOTE: We can supply any AEROVOX Paper or Mica Condensers not listed above. Write for a complete AEROVOX Catalog.

## STAMPED METAL CASE PAPER CONDENSERS



200 Volts D.C. Working		
Type	Cap.	List Price
260	.1	\$ .47
260	.25	.57
260	.5	.70
260	1-1	.65
260	.25-.25	.75
260	1-1-1	.85
261	1.0	.90
261	.5-.5	1.00

400 Volts D.C. Working		
Type	Cap.	List Price
460	.05	\$ .45
460	.1	.50
460	.25	.60
460	.5	.75
460	1-1	.68
460	1-1-1	.95
461	1.0	1.00
461	.5-.5	1.10
461	.25-.25-.25	1.20

## EXACT DUPLICATE PAPER-WOUND REPLACEMENT CONDENSERS



Part No.	Cap. Mfds.	List Price
ATWATER-KENT		
37 Filter	.5	\$0.90
37 Bypass	.25-.25-.25	1.35
COLONIAL		
1728-SA	1-1-1-25-1	1.25
1748-SA	1-1-5-1	.90
SPARTON		
5032	1.	.90
5033	.25	.90

## AEROVOX INTERFERENCE FILTERS

Aerovox Interference Filters are made in three styles. Designed to be installed between apparatus which causes interference, and line, or between the line and a radio receiver to prevent interference in the line affecting the set.



Type IN-26

The IN-24 and IN-44 are designed for all general installations. The IN-25 can be installed at any wall outlet. The screw which mounts it on the wall plate serving as the ground. The Type IN-26 is designed for insertion in extension leads.

Type No.	D.C. W.V.	List Price
IN-24	200	\$4.75
IN-25	200	1.75
IN-26	200	2.25
IN-44	400	5.50





# AEROVOX RESISTORS QUALITY BUILT

## AEROVOX CARBON RESISTORS



AEROVOX carbon resistors employ a special solid molded composition, non-hygroscopic body, quite unaffected by humidity changes. Slight positive temperature co-efficient is just sufficient to compensate a negative potential coefficient. These features serve to protect the unit against heavy short period overloads.

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### FEATURES OF AEROVOX CARBON RESISTORS

- Solid molded carbon element.
- Accurate resistance values and wattage ratings based on R.M.A. standards.
- Non-inductive—showing no appreciable change in resistance value on high frequencies.
- Non-Hygroscopic—unaffected by humidity changes.
- Absolutely noiseless and permanent on and off full load. Power ratings exceptionally conservative.
- Low in price for the highest quality carbon resistors obtainable.

#### Type 1096— $\frac{1}{3}$ Watt

Size  $\frac{1}{8}$ "x $\frac{1}{2}$ "

#### Type 1095— $\frac{1}{2}$ Watt

Size  $\frac{1}{4}$ "x1"

#### Type 1094—1 Watt

Size  $\frac{1}{4}$ "x $\frac{3}{4}$ "

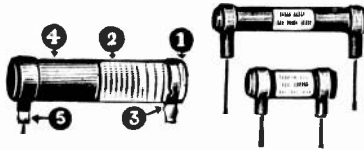
Resistance	Resistance
100 Ohms	15000 Ohms
150 Ohms	17500 Ohms
200 Ohms	20000 Ohms
250 Ohms	25000 Ohms
300 Ohms	30000 Ohms
400 Ohms	40000 Ohms
500 Ohms	50000 Ohms
600 Ohms	60000 Ohms
750 Ohms	70000 Ohms
800 Ohms	75000 Ohms
900 Ohms	100000 Ohms
1000 Ohms	125000 Ohms
1250 Ohms	150000 Ohms
1500 Ohms	200000 Ohms
1750 Ohms	250000 Ohms
2000 Ohms	300000 Ohms
2500 Ohms	400000 Ohms
3000 Ohms	500000 Ohms
3500 Ohms	750000 Ohms
4000 Ohms	1 Meg.
5000 Ohms	1 1/2 Meg.
6000 Ohms	2 Meg.
7500 Ohms	2 1/2 Meg.
8000 Ohms	3 Meg.
9000 Ohms	5 Meg.
10000 Ohms	10 Meg.
12500 Ohms	

ALL SIZES—ALL WATTAGES

List Price, Each .....\$0.20

## "PYROHM JUNIOR" RESISTORS

Wire-Wound Vitreous-Enameled



1. Crack-proof refractory tubing for heat dissipation.
2. Quality resistance wire space wound under tension.
3. Copper terminal band clamped to tubing. Wire ends wrapped and brazed to same.
4. Heavy vitreous-enamel coating for permanent seal against moisture, oxidation and mechanical damage.
5. Pigtail soldered to terminal band for positive, non-breakable connection.
6. New ultra-compact size.

#### Type 930—5 Watt

Size  $\frac{1}{4}$ "x1"

#### Type 931—10 Watt

Size  $\frac{1}{4}$ "x $\frac{3}{4}$ "

#### Type 933—20 Watt

Size  $\frac{1}{8}$ "x3"

Resistance	List Prices		
	5 Watts	10 Watts	20 Watts
100 Ohms	\$0.35	\$0.40	\$0.65
125 Ohms	.35	.40	
150 Ohms	.35	.40	
200 Ohms	.35	.40	
250 Ohms	.35	.40	.65
300 Ohms	.35	.40	
350 Ohms	.35	.40	
400 Ohms	.35	.40	
450 Ohms	.35	.40	
500 Ohms	.35	.40	.65
600 Ohms	.35	.40	
700 Ohms	.35	.40	
750 Ohms	.35	.40	.65
800 Ohms	.35	.40	
1000 Ohms	.35	.40	.65
1250 Ohms	.35	.40	.65
1500 Ohms	.35	.40	.65
1750 Ohms	.35	.40	
2000 Ohms	.35	.40	.65
2500 Ohms	.35	.40	.65
3000 Ohms	.35	.40	.65
3500 Ohms	.35	.40	
4000 Ohms	.35	.40	.65
4500 Ohms	.35	.40	
5000 Ohms	.35	.40	.65
6000 Ohms	.35	.40	.65
7000 Ohms	.35	.40	.65
7500 Ohms	.35	.40	.65
8000 Ohms	.35	.40	.65
9000 Ohms	.35	.40	.65
10000 Ohms	.35	.40	.65
12000 Ohms	.35	.40	
12500 Ohms	.35	.40	.65
14300 Ohms	.35	.40	
15000 Ohms	.35	.40	.65
16000 Ohms	.35	.40	
17500 Ohms	.35	.40	
18000 Ohms	.35	.40	
20000 Ohms	.35	.40	.75
25000 Ohms	.35	.40	.75
30000 Ohms	.35	.40	.75
40000 Ohms			.75
45000 Ohms			
50000 Ohms			.75
75000 Ohms			.75
100000 Ohms			1.00

## "SLIDEOHM" RESISTORS

Vitreous-Enameled



#### Type 954—50 Watt

Size  $\frac{1}{2}$ "x4"

Resistance	List Price	Resistance	List Price
100 Ohms	\$1.35	4500 Ohms	\$1.35
200 Ohms	1.35	5000 Ohms	1.35
300 Ohms	1.35	6000 Ohms	1.50
400 Ohms	1.35	7000 Ohms	1.50
500 Ohms	1.35	7500 Ohms	1.50
750 Ohms	1.35	8000 Ohms	1.50
800 Ohms	1.35	10000 Ohms	1.50
1000 Ohms	1.35	12000 Ohms	1.50
1500 Ohms	1.35	15000 Ohms	1.50
2000 Ohms	1.35	20000 Ohms	1.50
2500 Ohms	1.35	25000 Ohms	1.50
3000 Ohms	1.35	30000 Ohms	1.70
3500 Ohms	1.35	40000 Ohms	1.70
4000 Ohms	1.35	50000 Ohms	1.70

#### Type 956—75 Watt

Size  $\frac{5}{8}$ "x6"

Resistance	List Price	Resistance	List Price
100 Ohms	\$1.75	5000 Ohms	\$1.75
200 Ohms	1.75	6000 Ohms	2.00
300 Ohms	1.75	7000 Ohms	2.00
400 Ohms	1.75	7500 Ohms	2.00
500 Ohms	1.75	8000 Ohms	2.00
750 Ohms	1.75	10000 Ohms	2.00
800 Ohms	1.75	12000 Ohms	2.00
1000 Ohms	1.75	15000 Ohms	2.00
1500 Ohms	1.75	20000 Ohms	2.00
2000 Ohms	1.75	25000 Ohms	2.00
2500 Ohms	1.75	30000 Ohms	2.25
3000 Ohms	1.75	40000 Ohms	2.25
3500 Ohms	1.75	50000 Ohms	2.25
4000 Ohms	1.75	60000 Ohms	2.50
4500 Ohms	1.75	75000 Ohms	2.50

Extra Slider Bands—10c each

#### Type 957—100 Watt

Size  $\frac{7}{8}$ "x6 1/2"

Resistance	List Price	Resistance	List Price
1000 Ohms	\$2.00	20000 Ohms	\$2.25
2000 Ohms	2.00	25000 Ohms	2.25
3000 Ohms	2.00	30000 Ohms	2.50
4000 Ohms	2.00	40000 Ohms	2.50
5000 Ohms	2.00	50000 Ohms	2.50
6000 Ohms	2.25	60000 Ohms	2.75
7500 Ohms	2.25	75000 Ohms	2.75
10000 Ohms	2.25	100000 Ohms	2.75
15000 Ohms	2.25		

#### Type 958—200 Watt

Size 1 1/8"x8 1/2"

Resistance	List Price	Resistance	List Price
1000 Ohms	\$3.00	30000 Ohms	\$3.50
2500 Ohms	3.00	35000 Ohms	3.50
5000 Ohms	3.00	50000 Ohms	3.50
10000 Ohms	3.00	60000 Ohms	3.50
20000 Ohms	3.50	80000 Ohms	3.50
25000 Ohms	3.50	100000 Ohms	3.50

Extra Slider Bands—15c each



# EXACT DUPLICATE CONDENSERS

## For Replacement in Refrigerators, Oil-Burners and Other Motor Driven Equipment



### ELECTROLYTIC MOTOR STARTING CONDENSERS

A concise list of popular types of condensers arranged according to name and original part number of manufacturers for whom the various units were originally made. This listing is especially intended for those engaged in servicing electric refrigerators, oil burners and other fractional horsepower motor equipment employing condensers.



Manufacturers' Part No.	Aerovox Type No.	Cap. Mfd.	Can Sizes in Inches L. W. D. or D. H.	List Price
<b>APEX ELEC. MFG. CO.</b>				
88021*	101	115	3/2x3/2x2	\$5.00
<b>BALDOR ELECTRIC CO.</b>				
.....	152	150	4/2x4/2x1 1/8	6.40
.....	153	115	4/2x4/2x1 1/4	5.00
<b>BLACK &amp; DECKER</b>				
0-4270	102	75	2/2x4/8	4.00
<b>CENTURY ELEC. CO.</b>				
.....*	103	80	4/2x4/2x1 1/4	4.00
.....*	104	115	4/2x4/2x1 1/4	5.00
.....*	105	150	4/2x4/2x1 9/8	6.40
.....*	154	80	2 x4/8	4.50
<b>DELCO PRODUCTS CORP.</b>				
1061445†	106	115	2/2x4/8	5.00
1062558†	107	80	2/2x4/8	4.00
1062880†	108	29	2/2x4/8	5.40
1062882†	109	80	2/2x4/8	4.00
1062883†	110	115	2/2x4/8	5.00
1062888†	111	95	2/2x4/8	4.50
1063865*	112	115	3/2x3/2x2	5.00
1063866*	113	29	3/2x3/2x2	5.50
1063990*	114	115	3/2x3/2x2	5.00
1063991*	115	29	3/2x3/2x2	5.50
1063993*	116	100	3/2x3/2x2	4.60
1063868*	117	100	3/2x3/2x2	4.60
1066301*	118	90	3/2x3/2x2	4.35

<b>ELECTRIC PRODUCTS CO.</b>				
.....*	119	115	4/2x4/2x1 1/4	5.00
<b>EMERSON ELEC. MFG. CO.</b>				
.....*	120	115	4/2x4/2x1 1/4	5.00
K5633129	121	100	4/2x4/2x1 1/4	4.60
01206	122	115	2/2x4/8	5.00
.....†	123	115	2/2x4/8	5.00

<b>FAIRBANKS MORSE CO.</b>				
F46981	124	300	9/8x2 1/2 x4 3/4	19.00

<b>GENERAL ELECTRIC CO.</b>				
H4206674-GR5	125	115	2/2x4/8	5.00
H4206674-GR7	126	135	2/2x4/8	5.80
.....*	141	115	2/2x5/4	5.50

<b>GRIGSBY GRUNOW CO.</b>				
22846	127	110	3 x4/8	5.00
23907	128	110	2/2x4/8	5.00

Manufacturers' Part No.	Aerovox Type No.	Cap. Mfd.	Can Sizes in Inches L. W. D. or D. H.	List Price
<b>MARATHON ELEC. MFG. CO.</b>				
.....*	129	175	4/2x4/2x1 7/8	7.40
.....*	130	115	4/2x4/2x1 1/4	5.00
.....*	155	150	4/2x4/2x1 1/8	6.40
<b>OHIO ELECTRIC CO.</b>				
.....†	131	100	2/2x4/8	4.50
.....†	132	115	2/2x4/8	5.00
.....†	133	25	2/2x4/8	5.40
<b>ROBBINS &amp; MYERS</b>				
.....*	134	75	4/2x4/2x1 1/4	4.00
.....*	135	115	4/2x4/2x1 1/4	5.00
<b>SUNLIGHT ELEC. MFG. CO.</b>				
17177	136	115	3 x4/8	5.00
5201729	140	115	2 x4/8	5.00
5201040	142	100	2/2x4/8	4.50
5201042	143	115	2/2x4/8	5.00
5201044	144	80	2/2x4/8	4.00
5201731	146	80	2 x4/8	4.00
5201733	147	100	2 x4/8	4.50
5201734	148	135	2 x4/8	5.80
5203421	149	65	2 x4/8	10.90
5204001	150	20	2 x4/8	4.20
5204009	151	15	2 x4/8	2.50
<b>WAGNER ELECTRIC CO.</b>				
.....*	137	115	3/2x3/2x2	5.00
HD-4500-D2*	138	115	3/2x3/2x2	5.00
HD-4500-D3*	139	25	3/2x3/2x2	5.50
HD-5223-1	156	100	3/2x3/2x2	4.50
HD-5326-A1	157	100	3/2x3/2x2	4.50

\* These units are furnished with insulating containers for insulating the condenser from the motor.  
† These units are insulated internally from can.

The following list of condensers, cross-indexed according to Aerovox Type Numbers, are exact counterparts of other units having different type numbers, and may be used interchangeably in connection with different motors and other equipment for which they were designed:—

Type Nos.	Type Nos.
101—112—114	120—104—119—130—135—153
104—119—120—130—135—153	123—132
107—109	130—104—119—120—135—153
109—107	132—123
112—101—114	135—104—119—120—130—153
113—115	146—154
114—101—112	152—155
115—113	153—104—119—120—130—135
116—117	154—146
117—116	155—152
119—104—120—130—135—153	



### INDUSTRIAL OIL CONDENSERS (Paper-Wound Type)

FOR REPLACEMENT USE IN ELECTRICAL REFRIGERATORS, OIL BURNERS AND OTHER ELECTRICAL APPLIANCES



Manufacturers' Part No.	Aerovox Type No.	Cap. Mfd.	Can Sizes in Inches L. W. D. or D. H.	List Price
<b>BALDOR ELECTRIC CO.</b>				
BE-102	501	2	1/4x4/2x4 1/2	\$4.80
BE-103	502	3	1/4x4/2x4 1/2	5.75
BE-104	503	4	1/4x4/2x4 1/2	6.70
BE-106	504	6	1/8x4/2x4 1/2	7.80
BE-108	505	8	2/8x4/2x4 1/2	9.15
BE-202	506	2	1/8x3/2x3	4.80
BE-203	507	3	1/8x3/2x3	5.75
BE-301	508	1	4/8x3/8x1	3.30

Manufacturers' Part No.	Aerovox Type No.	Cap. Mfd.	Can Sizes in Inches L. W. D. or D. H.	List Price
<b>BALDOR ELECTRIC CO.</b>				
BE-302	509	2	4/8x3/8x1 1/4	3.75
BE-303	510	3	4/8x3/8x1 3/8	4.10
BE-304	511	4	4/8x3/8x1 5/8	4.50
BE-306	512	6	4/8x3/8x2	5.75
BE-308	513	8	4/8x3/8x2 1/2	6.95
BE-401	514	1	4/8x3/8x1	3.20
BE-402	515	2	4/8x3/8x1	3.45

(Continued on next page)



## EXACT DUPLICATE REPLACEMENT CONDENSERS

For Use in Electrical Refrigerators, Oil Burners and Other Motor Driven Equipment

### INDUSTRIAL OIL CONDENSERS

(Continued from Preceding Page)

Manufacturers' Part No.	Aerovox Type No.	Cap. Mfd.	Can Sizes in Inches L. W. D. or D. H.	List Price
<b>BALDOR ELECTRIC CO.</b>				
BE-403	516	3	4 7/8 x 3 1/8 x 1 1/4	3.75
BE-404	517	4	4 7/8 x 3 1/8 x 1 3/8	4.10
BE-405	518	5	4 7/8 x 3 1/8 x 1 1/2	4.65
BE-406	519	6	4 7/8 x 3 1/8 x 1 5/8	4.95
BE-408	520	8	4 7/8 x 3 1/8 x 1 7/8	5.55
BE-501	521	1	3 1/2 x 3 1/2 x 1 1/8	2.90
BE-502	522	2	3 1/2 x 3 1/2 x 1 1/4	3.35
BE-503	523	3	3 1/2 x 3 1/2 x 1 3/8	3.80
BE-504	524	4	3 1/2 x 3 1/2 x 1 3/4	4.65
BE-505	525	5	3 1/2 x 3 1/2 x 2 1/8	5.10
BE-601	526	1	4 1/2 x 4 1/2 x 1 3/8	3.15
BE-602	527	2	4 1/2 x 4 1/2 x 1 1/2	3.50
BE-603	528	3	4 1/2 x 4 1/2 x 1 3/4	3.95
BE-604	529	4	4 1/2 x 4 1/2 x 1 1/2	4.75
BE-605	530	5	4 1/2 x 4 1/2 x 1 5/8	5.15
BE-606	531	6	4 1/2 x 4 1/2 x 1 3/4	5.55
BE-608	532	8	4 1/2 x 4 1/2 x 1 3/4	7.10

<b>CENTURY ELEC. CO.</b>				
.....	614	3.75	3 x 1 3/8 x 4	6.50

<b>CLEVELAND STEEL PROD. CO.</b>				
.....	533	2	2 x 5 1/8	3.50

DELCO PRODUCTS CORP.				
047727	534	8.5	4 7/8 x 3 1/8 x 3 1/2	8.30
1055074	535	3.5	4 7/8 x 3 1/8 x 1 3/4	5.05
1055347	536	2.6	1 7/8 x 3 1/8 x 2 1/4	4.25
1055955	537	4.4	4 7/8 x 3 1/8 x 2 1/4	5.65
1057535	538	8.5	4 7/8 x 3 1/8 x 3 1/2	8.30
1057536	539	5.2	4 7/8 x 3 1/8 x 2 1/2	6.05
1057537	540	4.4	4 7/8 x 3 1/8 x 2 1/4	5.65
1057538	541	3.5	4 7/8 x 3 1/8 x 2	5.05
1057539	542	2.6	4 7/8 x 3 1/8 x 1 5/8	4.25
048753	612	3	3 1/8 x 4 7/8 x 1 1/2	3.50
1055546	602	6	4 x 1 5/8 x 5	5.45
1064150	612	3	3 1/8 x 4 7/8 x 1 1/2	3.50
1071305	546	3.5	2 x 1 1/8 x 5	4.55
1071306	547	1	2 x 1 1/8 x 5	3.25

EMERSON ELEC. MFG. CO.				
ESA-102	548	1	4 7/8 x 3 1/8 x 1 1/2	4.30
ESA-202	549	2	4 7/8 x 3 1/8 x 2 1/4	6.05
ESA-302	550	3	4 7/8 x 3 1/8 x 3	7.85
ESA-402	551	4	4 7/8 x 3 1/8 x 3 3/4	9.65
ESA-502	552	5	4 7/8 x 3 1/8 x 4 1/2	11.45
ESA-602	553	6	4 7/8 x 3 1/8 x 5 1/4	13.20
ESA-702	554	7	4 7/8 x 3 1/8 x 6	14.95
ESA-802	555	8	4 7/8 x 3 1/8 x 6 3/4	16.75
ESA-902	556	9	4 7/8 x 3 1/8 x 7 1/2	18.85
ESA-6012	557	6	4 7/8 x 3 1/8 x 6	5.75
ESA-7012	558	7	4 7/8 x 3 1/8 x 2 1/4	6.50
ESA-8012	559	8	4 7/8 x 3 1/8 x 2 1/2	6.95
ESA-9012	560	9	4 7/8 x 3 1/8 x 2 3/4	7.40
ESA-10012	561	10	4 7/8 x 3 1/8 x 3	8.15
ESA-12012	562	12	4 7/8 x 3 1/8 x 3 3/4	9.10
ESA-14012	563	14	4 7/8 x 3 1/8 x 3 7/8	10.15
ESA-16012	564	16	4 7/8 x 3 1/8 x 4 1/4	11.20

<b>GRIGSBY GRUNOW CO.</b>				
25036	565	8	2 1/2 x 5 1/8	4.85

HOWELL ELEC. MOTORS				
.....	566	4	1 x 4 x 5	5.30
.....	567	6	1 1/2 x 4 x 5	6.70
.....	568	8	2 x 4 x 5	8.50

<b>HOME SANITATION CO.</b>				
.....	569	4	1 x 2 x 5	2.95
.....	570	4	2 x 2 x 5	4.25

<b>HOLTZER CABOT CO.</b>				
28650	571	6	4 7/8 x 3 1/8 x 2	5.75

LELAND ELECTRIC CO.				
1170-1	572	4	4 7/8 x 3 1/8 x 2	5.40
1170-2	573	4.5	4 7/8 x 3 1/8 x 2 1/8	5.65

Manufacturers' Part No.	Aerovox Type No.	Cap. Mfd.	Can Sizes in Inches L. W. D. or D. H.	List Price
<b>LELAND ELECTRIC CO.</b>				
1170-3	574	5	4 7/8 x 3 1/8 x 2 1/4	5.95
1170-4	575	6	4 7/8 x 3 1/8 x 2 1/2	6.50
1170-5	576	8	4 7/8 x 3 1/8 x 3 1/8	8.00
1170-6	577	10	4 7/8 x 3 1/8 x 3 3/4	9.45
1170-7	578	3	4 7/8 x 3 1/8 x 1 3/4	5.05
1170-8	579	2	4 7/8 x 3 1/8 x 1 3/8	4.00

<b>MARATHON ELEC. CO.</b>				
.....	580	1	4 7/8 x 3 1/8 x 1 1/2	4.50
.....	581	4	4 7/8 x 3 1/8 x 3 1/8	8.00
.....	582	5	4 7/8 x 3 1/8 x 3 5/8	9.00

MASTER ELEC. MFG. CO.				
50938	583	2.7	4 7/8 x 3 1/8 x 1 3/4	4.80
50939	584	3	4 7/8 x 3 1/8 x 1 3/4	5.05
50940	585	5.5	4 7/8 x 3 1/8 x 2 3/4	7.25
60292	586	2	4 7/8 x 3 1/8 x 1 3/4	4.65
60323	587	4	4 7/8 x 3 1/8 x 2 7/8	6.90
60200	588	3	1 3/4 x 4 3/4 x 5	5.05
60201	589	2	1 1/4 x 4 3/4 x 5	3.55
60199	590	4	2 1/4 x 4 3/4 x 5	6.00

OHIO ELECTRIC CO.				
4364A	591	2.5	2 x 5 1/8	3.70
4364B	592	3	2 x 5 1/8	4.10
4365A	593	2.25	4 7/8 x 3 1/8 x 2 3/8	5.00
4365B	594	4.5	4 7/8 x 3 1/8 x 1 3/4	5.10
4365C	595	4.5	4 7/8 x 3 1/8 x 3 1/8	7.50
4365D	596	8.5	4 7/8 x 3 1/8 x 2 3/4	7.20
4365E	597	10	4 7/8 x 3 1/8 x 3	8.15
4365F	598	12	4 7/8 x 3 1/8 x 3 3/8	9.10
4365G	599	12	4 7/8 x 3 1/8 x 5	12.80
4365H	600	10	4 7/8 x 3 1/8 x 4 1/8	11.30
4351	612	3	3 1/8 x 4 7/8 x 1 1/2	3.50
4375	602	6	1 3/8 x 4 x 5	4.60

ROBBINS & MYERS				
.....	603	2	1 3/8 x 4 1/2 x 2 1/8	4.65
.....	604	3	1 1/8 x 4 1/2 x 2 1/8	5.65
.....	605	8	1 3/4 x 4 1/2 x 4 1/2	1.10
.....	606	5	2 3/4 x 4 1/2 x 2 1/8	3.00
.....	607	5	4 7/8 x 3 1/8 x 1 1/2	4.64
.....	608	12	4 7/8 x 3 1/8 x 2 1/2	7.95

SUNLIGHT ELEC. MFG. CO.				
5000455	609	5	3 3/4 x 3 3/8 x 2	7.45
5000456	610	6	3 3/4 x 3 3/8 x 2 1/4	7.95

<b>TIMKEN SILENT AUTO CO.</b>				
3528Q17	612	3	3 1/8 x 4 7/8 x 1 1/2	3.50

<b>WAGNER ELECTRIC CO.</b>				
HD-3444	615	5	3 3/4 x 3 3/8 x 1 1/2	7.00

<b>WESTINGHOUSE ELEC. &amp; MFG. CO.</b>				
799966	613	5.2	3 1/8 x 4 7/8 x 2	6.00

<b>WILLIAMS OIL-O-MATIC</b>				
EM398A	611	4	4 7/8 x 3 1/8 x 2	5.40

NOTE:—When ordering any of the above condensers please give Aerovox Type number only.

The following list of condensers, cross-indexed according to Aerovox Type Numbers, are exact counterparts of other units having different type numbers, and may be used interchangeably in connection with different motors and other equipment for which they were designed:—

Type Nos.	Type Nos.
557—512	512—557
559—513	513—559
561—597	518—597
562—598	534—538
597—561	537—540
598—562	538—534
601—543—545—612	540—537
607—518	543—545—601—612
612—543—545—601	545—543—601—612

#### NOTE: WRITE US FOR A COMPLETE AEROVOX INDUSTRIAL CONDENSER REPLACEMENT CATALOG

Replacement condensers not listed in the above and preceding page can also be furnished on special order. When ordering units not listed, kindly send us a sample of the unit which has failed in service, together with all available data such as manufacturers' part number, capacity, voltage, ratings, etc.





# MALLORY DRY ELECTROLYTIC CAPACITORS

## Dry Electrolytic Round Can Filter Units

Type RS



● Modern in construction, these units are of reduced size and inaugurate many new features. They are for use whenever round can units are desired

**Type RS**—Single Section.  
**Type RN**—Common Cathode.  
**Type RM**—Multiple Separate Section.

Type	Cap.	Wkg. V.	Max. Surge	Size	List Price*
RS 201	4	250	300	2 3/4" x 1"	\$0.75
RS 203	8	250	300	2 3/4" x 1"	.95
RS 205	12	250	300	2 3/4" x 1"	1.10
RS 211	4	450	525	2 3/4" x 1"	.85
RS 213	8	450	525	2 3/4" x 1"	1.05
RS 215	12	450	525	3" x 1"	1.40
RN 231	4-8	250	300	3" x 1"	1.30
RN 232	8-8	250	300	3" x 1"	1.45
RN 235	8-8-8	250	300	3" x 1 3/8"	2.10
RN 241	4-8	450	525	3" x 1"	1.45
RN 242	8-8	450	525	3" x 1 3/8"	1.60
RN 245	8-8-8	450	525	3 1/2" x 1 3/8"	2.30
RM 251	4-8	250	300	3" x 1 3/8"	1.30
RM 252	8-8	250	300	3" x 1 3/8"	1.45
RM 255	8-8-8	250	300	3 1/2" x 1 3/8"	2.10
RM 257	8-8-16	250	300	3 1/2" x 1 3/8"	2.35
RM 259	8-16-16	250	300	3 1/2" x 1 3/8"	2.60
RM 261	4-8	450	525	3" x 1 3/8"	1.45
RM 262	8-8	450	525	3" x 1 3/8"	1.60
RM 265	8-8-8	450	525	4" x 1 3/8"	2.30

\* Prices include palnut and flat washer.  
 Prices on other hardware listed on this page.

## Dry Electrolytic Round Can Bypass Units

● Type BN units are made in two different mounting arrangements, and, while only one capacity and voltage rating is listed, they may be secured in various ratings on request.



Type	Cap.	Wkg. V.	Max. Surge	Size	List Price
BN 225	10-10	50	75	1 3/4" x 1"	\$0.95
BN 226	10-10	50	75	1 3/4" x 1"	1.00

## Dry Electrolytic Large Round Can Units

● Designed primarily for replacement use covering old style wet electrolytics.



Type	Cap.	Wkg. V.	Max. Surge	Size	List Price
MN 272	8-8	450	525	2 1/2" x 4 3/8"	\$1.80
MN 273	5-15	450	525	2 1/2" x 4 3/8"	2.30
MN 275	8-8-8	450	525	3" x 4 3/8"	2.70
MN 277	8-8-8-8	450	525	3" x 4 3/8"	3.60

## Dry Electrolytic Cardboard Carton Filter Units

● Developed for all applications where dry electrolytic carton type filter condensers are required, these units represent the greatest advance in practical design and electrical superiority ever offered in this field.



**Type CS**—Single Section.  
**Type CN**—Common Cathode.  
**Type CM**—Multiple Separate Section.

Type	Cap.	Wkg. V.	Max. Surge	Size	List Price
CS 121	4	250	300	1 1/2" x 3/4" x 2 1/8"	\$0.65
CS 123	8	250	300	1 1/2" x 3/4" x 2 1/8"	.80
CS 125	12	250	300	1 1/2" x 1" x 2 1/8"	1.00
CS 130	2	450	525	1 1/2" x 3/4" x 2 1/8"	.65
CS 131	4	450	525	1 1/2" x 3/4" x 2 1/8"	.75
CS 133	8	450	525	1 1/2" x 1" x 2 1/8"	.95
CS 135	12	450	525	1 1/2" x 1 1/8" x 2 1/8"	1.30
CN 140	4-4	250	300	5/8" x 1" x 3"	.90
CN 141	4-8	250	300	5/8" x 1" x 3"	1.15
CN 142	8-8	250	300	5/8" x 1 1/4" x 3"	1.30
CN 145	8-8-8	250	300	7/8" x 1 1/4" x 3"	1.95
CN 150	4-4	450	525	3/4" x 1 1/8" x 3"	1.20
CN 151	4-8	450	525	3/4" x 1 1/8" x 3"	1.35
CN 152	8-8	450	525	3/4" x 1 1/8" x 3"	1.50
CN 155	8-8-8	450	525	1 1/2" x 1 1/4" x 3"	2.20
CM 160	4-4	250	300	3/4" x 1 1/8" x 3"	.90
CM 161	4-8	250	300	3/4" x 1 1/8" x 3"	1.15
CM 162	8-8	250	300	3/4" x 1 1/8" x 3"	1.30
CM 165	8-8-8	250	300	1 1/8" x 1 1/8" x 3"	1.95
CM 170	4-4	450	525	3/4" x 1 1/8" x 3"	1.20
CM 171	4-8	450	525	3/4" x 1 1/8" x 3"	1.35
CM 172	8-8	450	525	1 3/8" x 1" x 3"	1.50
CM 175	8-8-8	450	525	1 1/2" x 1 1/4" x 3"	2.20

## Dry Electrolytic Tubular Audio Bypass Units

● These units are designed especially for bypassing the cathode bias resistors in Audio Frequency and other low-voltage circuits where dry electrolytic condensers are applicable.



(TS—Single Section Type)

Type	Cap.	Wkg. V.	Size	List Price
TS 101	10	25	1 3/4" x 3/4"	\$0.50
TS 102	20	25	2 1/4" x 3/8"	.60
TS 105	5	50	1 3/4" x 3/4"	.50
TS 106	10	50	2 1/4" x 3/8"	.65

(TN—Dual Common Cathode Type)

Type	Cap.	Wkg. V.	Size	List Price
TN 110	5-5	25	1 3/4" x 3/4"	.75
TN 111	10-10	25	2 1/4" x 3/8"	.75
TN 112	5-5	35	1 3/4" x 3/8"	.75
TN 113	5-5	50	2 1/4" x 3/8"	.75

## "Terminal Connector" and Accessories for Types RS, RN and RM

● These accessories afford a practical method of installing Standard Mallory round can units in any style of mounting.

Type	Description	List Price
A-017	For clamp mounting on 1" cans...	\$0.05
015-1	For 1/8" hole mounting on 1" cans...	.03
015-2	For standard bolt mounting both 1" and 1 1/8" cans...	.03
A-016	Terminal Connector...	.05



# MALLORY CONDENSERS

## Wet Electrolytic Units

### Type WE



● Mallory Wet Electrolytic units include all late features and are of the regulating type. The interior of the container is treated to prevent its formation when an A.C. component is present.

Supplied with lug positive and container negative in the sizes shown below.

The special "A" washer is required when using 1" cans in replacing 1 3/8" cans of the clamp mounting type. Always mount in an upright position. Prices include palnut for mounting.

Type	Cap.	Wkg. V.	Size	List Price
WE 447	4	475	1" x3 7/8"	\$0.80
WE 847	8	475	1" x4 1/2"	.95
WE 1247	12	475	1 3/8" x4 1/2"	1.15
WE 1647	16	475	1 3/8" x4 1/2"	1.35
WE 1847	18	475	1 3/8" x4 1/2"	1.50
WE 3540	35	400	1 1/2" x4 1/2"	1.75

## Tubular Bypass Units

### Paper Dielectric



● Tubular bypass condensers, although generally the smallest condenser unit in the radio receiver, are nevertheless just as important to its proper operation as any other component.

All Mallory units will be found to be safely rated (three papers for 400 volts, etc.), and are manufactured with the same degree of care and precision allotted to other Mallory products.

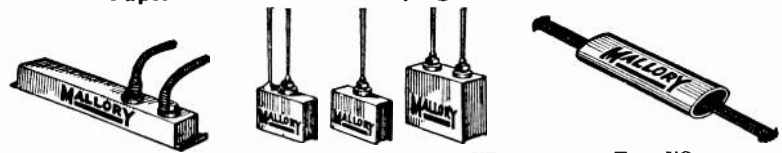
Since R.F. impedance is of paramount importance, great care is taken to insure a low impedance contact between the unit and its lead wires. Non inductive wound.

All units are thoroughly impregnated under high vacuum, oil-treated, and completely filled with a special high temperature moisture-resisting compound.

Type	Capacity	Size	List Price
<b>Working Voltage—600 D. C.</b>			
TP 401	.0001	1 3/8" x 1 1/2"	\$0.15
TP 402	.00025	1 3/8" x 1 1/2"	.15
TP 403	.0005	1 3/8" x 1 1/2"	.15
TP 404	.001	1 3/8" x 1 1/2"	.15
TP 405	.002	1 3/8" x 1 1/2"	.15
TP 408	.005	1 3/8" x 1 1/2"	.15
TP 409	.006	1 3/8" x 1 1/2"	.15
TP 410	.01	1 3/8" x 1 1/2"	.15
TP 412	.02	1 3/8" x 1 1/2"	.15
TP 415	.05	1 3/8" x 1 1/2"	.20
TP 416	.06	1 3/8" x 1 1/2"	.20
TP 418	.1	2 1/8" x 1 1/2"	.25
TP 420	.25	2 1/8" x 1 1/2"	.35
TP 432	.5	2 3/8" x 1 1/2"	.50
<b>Working Voltage—400 D. C.</b>			
TP 421	.01	1 3/8" x 1 1/2"	.15
TP 423	.02	1 3/8" x 1 1/2"	.15
TP 426	.05	1 3/8" x 1 1/2"	.15
TP 428	.1	1 3/8" x 1 1/2"	.20
TP 430	.25	2 1/8" x 1 1/2"	.25
TP 431	.5	2 3/8" x 1 1/2"	.35
<b>Working Voltage—200 D. C.</b>			
TP 436	.05	1 3/8" x 1 1/2"	.15
TP 438	.1	1 3/8" x 1 1/2"	.15
TP 440	.25	1 3/8" x 1 1/2"	.25
TP 441	.5	2" x 1 1/2"	.35
TP 443	1.0	2 3/8" x 1 1/2"	.50

## Auto Vibrator Condensers

### Paper Dielectric — Oil Impregnated and Oil Filled

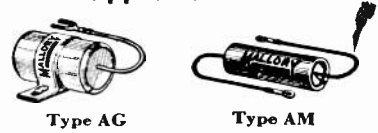


Type VL Fig. 4      Type VB Fig. 1      Type VB Fig. 2      Type VB Fig. 3      Type VO Fig. 5

Type	Cap.	Wkg. V.	Size	Fig.	List Price
VB 470	.0075	1600	7/8" x 5/8" x .3	1	\$0.45
VB 471	.01	1600	7/8" x 5/8" x .3	1	.45
VB 472	.0125	1600	7/8" x 3/4" x .3	1	.60
VB 473	.015	1600	7/8" x 1 1/8" x .3	2	.60
VB 474	.02	1600	7/8" x 1 1/8" x .3	1	.65
VB 475	.03	1600	1" x 1 1/8" x 1 1/2"	2	.70
VB 476	.04	1600	1" x 1 1/8" x 1 1/2"	3	.95
VB 477	.05	1600	1" x 1 1/8" x 1 1/2"	4	.95
VL 478	.01	2000	3 3/8" x 1 1/2" x 3/8"	3	.65
VL 479	.5	200	3 3/8" x 1 1/2" x 3/8"	4	.65
VO 480	.5	120	2 1/2" x 3/4" x 3/8"	5	.45

● The vibrator field constitutes the most severe service for which paper condensers are specified. These condensers must operate under extreme temperature conditions, excessive vibration and unusually high and continuous peak voltages. With the exception of Types VL479 and VO480, low voltage units, all vibrator condensers described on this page are not only oil impregnated but are also oil filled. **No other type of condenser will give satisfactory service in this field.**

## Auto Generator Suppressor Units



Type AG      Type AM

Type	Cap.	Size	List Price
AG 451	.5	2 1/8" x 3/4"	\$0.50
AG 452	1.0	2 3/4" x 1 1/2"	.75
AM 454	.5	2 1/2" x 3/4"	.45

### Working Volts—200

## Paper Dielectric Oil Filled Tubular Units



● Non-inductive, oil impregnated and oil filled, extremely low R. F. impedance and power factor, carefully and effectively sealed, they readily prove their value in all "tough" circuits.

### Working Volts—2,000

Type	Cap.	Size	List Price
OT 458	.0025	1 3/8" x 5/8"	\$0.55
OT 459	.005	1 3/8" x 5/8"	.55
OT 460	.0075	1 3/8" x 5/8"	.55
OT 461	.01	1 3/8" x 5/8"	.55
OT 462	.0125	1 3/8" x 5/8"	.55
OT 463	.015	2 1/8" x 5/8"	.60
OT 464	.02	2 1/8" x 5/8"	.60
OT 465	.03	2 1/8" x 5/8"	.65
OT 466	.04	2 3/8" x 5/8"	.70
OT 467	.05	2 3/8" x 5/8"	.75



## A.C. Electrolytic Capacitors For Motor Starting Service

Type	Cap.	Wkg. V.	Size Dia	List Price
MS 540	60	110	2"	\$3.70
MS 541	70	110	2"	3.95
MS 542	80	110	2"	4.20
MS 543	100	110	2"	4.70
MS 544	115	110	2"	5.20
MS 545	135	110	2 1/2"	6.00
MS 546	150	110	2 1/2"	6.60
MS 547	100	150	2 1/2"	7.00
MS 548	30	220	2 1/2"	5.60
MS 549	40	220	2 1/2"	7.20

## FREE! New Condenser Manual

The 1936 Mallory Condenser Service & Replacement Manual contains 96 pages of information that is of invaluable aid to you. A free copy will be sent to dealers or servicemen who write to P. R. Mallory & Co., Inc., at Indianapolis, Indiana, on business letterhead.



# SPRAGUE

## CONDENSERS



### Aluminum Can Type Dry Electrolytics



The chief troubles with ordinary dry electrolytic condensers—open contacts and short circuits—are now definitely eliminated in these units by an exclusive Sprague process. Cased in substantial aluminum can containers with mounting brackets. Can be mounted in any position—impervious to heat and moisture—stable in operation—give finest performance under all operating conditions.

### Standard Can Type (Dry)

Continuous Working Voltage—475 Volts  
Maximum Surge Voltage—600 Volts

Cat. No.	Cap. Mfd.	Dimensions Diam. Ht.	List Price
AC-2	2	1" x 3 1/4"	\$1.10
AC-4	4	1" x 3 3/4"	1.25
AC-6	6	1" x 4"	1.45
AC-8	8	1 1/8" x 4 1/8"	1.50
AC-10	10	1 1/8" x 4 1/8"	1.80
AC-12	12	1 1/8" x 4 1/8"	2.05
AC-16	16	1 1/8" x 4 1/8"	2.30

Inverted Units—Screw Type (Dry)  
Continuous Working Voltage—475 Volts  
Maximum Surge Voltage—600 Volts

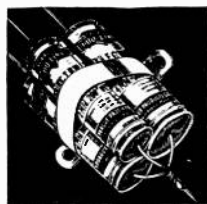
Cat. No.	Cap. Mfd.	Dimensions Diam. Ht.	List Price
SC-4	4	1" x 3"	\$1.25
SC-6	6	1" x 3"	1.45
SC-8	8	1 1/8" x 4 1/8"	1.50
SC-88	8-8	1 1/8" x 4 1/8"	2.40
CS-88	8-8	4 Leads	2.40

### "500" Wet Electrolytics

D.C. Peak Voltage—500 Volts

Cat. No.	Cap. Mfd.	Diam.	List Price
WC-4	4	1"	\$0.80
WC-6	6	1"	.85
WC-8	8	1"	.95
WC-10	10	1 1/8"	1.05
WC-12	12	1 1/8"	1.15

### Low Voltage Tubular Condensers Dry Electrolytics



Universally used in present A.C. - D.C. Sets. Specially made to withstand heat prevalent in midget receivers.

Specially designed mounting straps enabling you to make any special multiple section with common cathode or common anode or any other combination. Will fit anywhere.

Cat. No.	Cap. Mfd.	D.C. Volt.	List Price
ST-22	2	200V.	\$0.55
ST-42	4	200V.	.65
ST-82	8	200V.	.80
ST-122	12	200V.	.95
ST-162	16	200V.	1.05
ST-252	25	200V.	1.25
ST-44	4-4	200V.	.90
ST-48	4-8	200V.	1.15
ST-88	8-8	200V.	1.25
ST-812	8-12	200V.	1.40
ST-816	8-16	200V.	1.45
ST-21	2	100V.	1.50
ST-41	4	100V.	.60
ST-81	8	100V.	.70
ST-121	12	100V.	.85

# SPRAGUE

## "600" LINE

**GUARANTEED!**

Sprague "600" Line and Emergency Unit Condensers are fully guaranteed against defects in materials and workmanship. The voltage ratings and capacity ratings on all condensers are absolutely as specified. **WE GUARANTEE THIS UNCONDITIONALLY.** And finally, the Sprague "600" Line is YOUR guarantee to the customer.



### Multiple Units Dry Electrolytics

Constructed under the same special process as the single units. Double screw nut; positive connections for use with soldering lugs. Extremely low power factor and low leakage.

Working Voltage—475  
Maximum Voltage—600

Cat. No.	Cap. Mfd.	Dimensions Diam. Ht.	List Price
AC-88	8-8	1 1/8" x 4 1/8"	\$2.40
AC-444	4-4-4	1 1/8" x 4 1/8"	2.80
AC-888	8-8-8	3" x 4 1/2"	4.00
AC-615	5-15	2 1/2" x 4 1/2"	3.35
AC-9918	9-9-18	3" x 4 1/2"	5.80
AC-9936	9-9-18-18	3" x 4 1/2"	8.15

### Metal Cased By-Pass Condensers

Bathtub Type

400-volt working range. 600-peak. Enclosed in a drawn-metal case. Moisture and heat-proof.



Cat. No.	Cap. Mfd.	Dimensions	Mtg. Dim.	List Price
BP-1	.1	1 1/8" x 1/2" x 1/2"	2 1/8"	\$0.50
BP-25	.25	1 1/8" x 1/2" x 1/2"	2 1/8"	.60
BP-50	.5	2" x 3/4" x 1 1/8"	2 3/8"	.75
BP-10	1.0	2" x 1 1/4" x 1 1/8"	2 3/8"	1.00
BP-21	.1-1	1 1/8" x 1/2" x 1/2"	2 1/8"	.65
BP-225	.25-.25	2" x 3/4" x 1 1/8"	2 3/8"	.80
BP-250	.5-.5	2" x 1 1/4" x 1 1/8"	2 3/8"	1.00
BP-31	.1-1-1.2	2" x 3/4" x 1 1/8"	2 3/8"	.85

### Famous Sprague Midgets

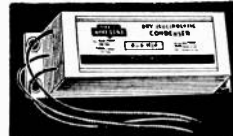


Unexcelled as general by-pass stopping and grid condensers. Ideal for midget sets and automobile radio receivers. Non-inductive.

Cat. No.	Cap. Mfd.	Dimensions	Mtg. Dim.	List Price
MC-31	.0001	2"	2"	\$0.25
MC-325	.00025	2"	2"	.25
MC-34	.0004	2"	2"	.25
MC-35	.0005	2"	2"	.25
MC-21	.001	2"	2"	.25
MC-24	.004	2"	2"	.25
MC-25	.005	2"	2"	.25
MC-26	.006	2"	2"	.25
MC-11	.01	2"	2"	.25
MC-12	.02	2"	2"	.30
MC-15	.05	2"	2"	.30
MC-16	.06	2"	2"	.35
MC-1	.1	2"	2"	.35

### Cardboard Type Dry Electrolytics

Trouble-proof condensers. Can be safely installed in any radio. Pig-tail leads have push-back insulation.



Working Voltage—475 Volts  
Maximum Voltage—600 Volts

Cat. No.	Cap. Mfd.	Dimensions	List Price
DC-2	2	2 1/8" x 1 1/8" x 1 1/8"	\$0.95
DC-4	4	4 1/8" x 1 1/8" x 1 1/8"	1.15
DC-6	6	4 1/8" x 1 1/8" x 1 1/8"	1.30
DC-8	8	4 1/8" x 1 1/8" x 1 1/8"	1.35
DC-24	2-4	4 1/8" x 1 1/8" x 1 1/8"	1.65
DC-44	4-4	4 1/8" x 1 1/8" x 1 1/8"	1.80
DC-46	4-6	4 1/8" x 1 1/8" x 1 1/8"	1.95
DC-48	4-8	4 1/8" x 1 1/8" x 1 1/8"	2.00
DC-66	6-6	4 1/8" x 1 1/8" x 1 1/8"	2.15
DC-68	6-8	4 1/8" x 1 1/8" x 1 1/8"	2.20
DC-88	8-8	4 1/8" x 1 1/8" x 1 1/8"	2.20
SR-88	8-8	4 Leads	2.20
SR-44	4-4	4 Leads	1.80

### Spraco Extra Safety Factor Dry Electrolytics



Of compact, tubular shape, Spraco 450 Volt Dry Electrolytics may be used to replace much larger old style condensers of equal capacity. Self-supporting. Insulated leads with push-back wire.

Conservatively rated at 450 Volts with extra safety factor.

Cat. No.	Cap. Mfd.	Dimensions	List Price
RE-1	1	1/2" x 2 1/2"	\$0.55
RE-2	2	1/2" x 2 1/2"	.65
RE-4	4	1/2" x 2 1/2"	.75
RE-6	6	1 1/8" x 2 1/2"	.90
RE-8	8	1 1/8" x 2 1/2"	.95
RE-44	4-4	1 1/8" x 2 1/2"	1.20
RE-88	8-8	1 1/8" x 2 1/2"	1.50

### Cartridge By-Pass Condensers



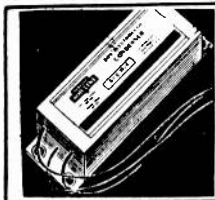
Wound non-inductively. Impregnated by a special Sprague process and encased in a moisture-proof tube, with ferruled caps and secured pigtail leads. These are the smallest compact tubulars on the market.

Test Voltage—1200  
Working Voltage—600

Cat. No.	Cap. Mfd.	Dimensions Lgth. Diam.	List Price
TC-31	.0001	3/8" x 3/8"	\$0.25
TC-325	.00025	3/8" x 3/8"	.25
TC-34	.0004	3/8" x 3/8"	.25
TC-35	.0005	3/8" x 3/8"	.25
TC-21	.001	3/8" x 3/8"	.25
TC-22	.002	3/8" x 3/8"	.25
TC-23	.003	1" x 3/8"	.25
TC-24	.004	1" x 3/8"	.25
TC-25	.005	1" x 3/8"	.25
TC-26	.006	1 1/8" x 3/8"	.25
TC-11	.01	1 1/8" x 3/8"	.25
TC-12	.02	1 1/8" x 3/8"	.30
TC-13	.03	1 1/8" x 3/8"	.30
TC-14	.04	1 1/8" x 3/8"	.30
TC-15	.05	1 1/8" x 3/8"	.30
TC-16	.06	1 1/8" x 3/8"	.35
TC-1	.1	1 1/8" x 3/8"	.35
TC-2	.25	1 1/8" x 3/8"	.45
TC-5	.5	1 1/8" x 3/8"	.60

The booklets Sprague "Tell-U-How" and "Facts You Should Know About Condensers"—will be supplied free, upon request, with each order, as long as they last.





# SPRAGUE

## CONDENSERS



### Interference Filter Condensers & Chokes

Especially designed for interference elimination. Used as indicated by the Interference Analyzer listed at the right. Quick and easy way of checking man-made static.



**Type IF-11**  
A Dual condenser for silencing larger type motors such as found on refrigerators, large fruit juice extractors, oil burners, sign flashers, printing press motors, lathes and drill presses, etc. In obstinate cases of interference a choke may be required, but in 80% of the cases the condenser alone will suffice. See diagrams II and III for suggested installation.

IF-11.....List Price \$2.50

### Type IF-50

Individual unit oil-impregnated, oil-filled condenser for small motors requiring higher-capacity units. Two may be connected in series when necessary. Oil-impregnated condensers are always best.



IF-50.....List Price \$1.75



### SPRAGUE INTERFERENCE ANALYZER

Show Customers Just Where Interference Originates — Eliminate It! — With self-built interference filters at savings of 1/3 to 1/2 of cost. At last—a quick, practical way for eliminating radio interference from ANY electrical device. No more guessing. No lost time. First you actually eliminate the noise with the Analyzer. You show customers just what proper filtering of appliances will do. Then, from the instruction sheet, you learn what Sprague filter condensers or chokes to install to insure exactly the same results as those obtained with the Analyzer. Inexpensive—will quickly pay for itself in new business it helps you build.

Complete with Adapters  
NET Price to Servicemen.....\$9.75

### Types IF-33 and IF-21

A compact Tubular, 2-lead condenser for eliminating interference from fractional horse-power motors such as found in mixers, small fans, humidifiers, beer pumps, portable electric tools, hair driers, etc. See Diagram 1.



No.	List Price
IF-33.....	\$0.75
IF-21.....	1.00

### Type CH-1

Specially designed choke will carry up to 10 amps. Equivalent approximately to use on 1-horsepower motor. The choke is enclosed in a sturdy metal can, self-mounting.



CH-1.....List Price \$1.35

### Metal Boxes

Sprague furnishes a standard metal cut-out box, 6"x6"x3 1/2" to house various individual Sprague interference units used in a filter system.

NET to servicemen.....\$0.88

### NEW! SPRAGUE "TINY-MIKE"

#### Dry Electrolytics

Have full capacity and 450-volt working voltage. Small enough to fit any space and large enough not to over-heat. The answer to the demand for popular-priced replacement condensers of real quality.



Cat. No.	Cap. Mfds.	Voltage	Dimensions Sizes	List Price
TM-1	1	450-v.	3/8 x 1/2 x 2 1/2	\$0.55
TM-2	2	450-v.		.65
TM-4	4	45-v.	1 x 1 x 2 1/2	.75
TM-6	6	450-v.	1 1/8 x 1 1/8 x 2 1/2	.90
TM-8	8	450-v.		.95
TM-10	10	450-v.	1 1/8 x 1 1/8 x 2 1/2	1.15
TM-44	4-4 (4 Leads)	450-v.	1 1/8 x 1 1/8 x 2 1/2	1.20
TM-88	8-8 (8 Leads)	450-v.	2 x 1 1/8 x 2 1/2	1.50

### NEW IMPROVED "EC" CONDENSERS



Double Tested. Highest Voltage. Smallest, most compact electrolytic condensers; may be used to replace old style electrolytics or single sections of multiple units.

475 Volts—Working; 600 Volts—Peak

Cat. No.	Mfd.	Dimensions Inches	List Price
EC-50	.5	2 1/8 x 1 x 3/8	\$0.80
EC-75	.75	2 1/8 x 1 x 3/8	.85
EC-1	1	2 1/8 x 1 1/8 x 9/16	.85
EC-2	2	2 1/8 x 1 1/8 x 9/16	.95
EC-4	4	2 1/8 x 1 1/8 x 1 1/8	1.15
EC-6	6	2 1/8 x 1 1/8 x 1 1/8	1.30
EC-8	8	2 1/8 x 1 1/8 x 1 1/8	1.35

K-10

### Transmitting Condensers

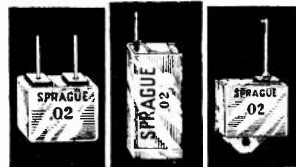


On the label of every Sprague Transmitting Condenser, you will find the capacity, maximum D.C. working voltage and maximum surge voltage—also, depending upon whether choke input or condenser input filter is used, the maximum voltage rating

delivered by the secondary of the transformer for which these condensers can safely operate in accordance with A.R.R.L. standards. Moreover, you're assured of ample safety factor.

Cat. No.	Cap. Mfd.	D.C. W. V.	List Price
OT-11	1	1000V.	\$2.50
OT-21	2	1000V.	4.00
OT-22	2	2000V.	6.50
OT-41	4	1000V.	6.00
OT-27	2	700V.	3.50
OT-115	1	1500V.	4.00
OT-215	2	1500V.	5.25
OT-12	1	2000V.	4.75
OT-13	1	3000V.	10.00

### Oil - Impregnated Vibrator Condensers



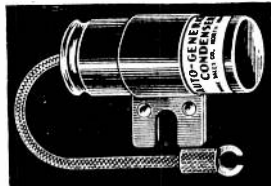
Type FR Type AR Type LR



Eliminate your troubles due to broken down vibrator condensers by replacing with this new Oil-Impregnated Condenser capable of withstanding voltages in vibrators. Housed in specially designed metal cans fully sealed.

Cat. No.	Cap. Mfd.	Dimensions	List Price
AR-11	.01	1 1/2" x 1 1/2" x 1 1/2"	\$0.45
AR-12	.02	1 1/2" x 1 1/2" x 1 1/2"	.45
AR-13	.03	1 1/2" x 1 1/2" x 1 1/2"	.45
AR-14	.04	1 1/2" x 1 1/2" x 1 1/2"	.45
AR-15	.05	1 1/2" x 1 1/2" x 1 1/2"	.45
MV-11	01	3" x 1 1/2" x 1 1/2"	.45
FR-11	.01	1" x 1" x 1 1/2"	.45
FR-12	.02	1" x 1" x 1 1/2"	.45
LR-27	.007	1 1/2" x 1 1/2" x 1 1/2"	.45
LR-11	.01	1 1/2" x 1 1/2" x 1 1/2"	.45
LR-12	.02	1 1/2" x 1 1/2" x 1 1/2"	.45
TR-11	.01	Tubular	.45
TR-12	.02	Tubular	.45

### Auto Radio Condensers



Test Volts—600  
Working Volts—400

Cat. No.	Cap. Mfd.	List Price
AR-1	1.0	\$0.80
AR-2	.5	.60
Ford Type	.5	.60
AR-25	.5-.5	.75

### Short Wave, High Frequency Oil Impregnated



A substitute for mica condensers. Sturdy. Self-supporting. Unusually small. Metal-encased. Non-inductive. Low-power factor. Impregnated with special oil. Guaranteed.

Cat. No.	Cap. Mfd.	Dim. D L	List Price
SW-22	.002	1500 1/2" x 1 1/2"	\$0.45
SW-25	.005	1500 1/2" x 1 1/2"	.45
SW-11	.01	1500 1/2" x 1 1/2"	.70
SW-12	.02	1500 1/2" x 1 1/2"	.75
SW-15	.05	1000 1/2" x 2 1/4"	.80
SW-1	0.1	1000 1/2" x 2 1/4"	.90

# SPRAGUE

## CONDENSERS

# NEW!

### A Complete 450 VOLT LINE Made by SPRAGUE — Guaranteed by SPRAGUE

With the addition of these 450-VOLT line units, Sprague offers the finest, most complete line of replacement condensers for EVERY need. These "450-volt line" condensers are constructed with the same care and precision as the famous "600 line." They are competitively priced, despite the precision construction.



### TYPE "LA" ALUMINUM CAN DRY ELECTROLYTIC

These sturdy Dry Electrolytics are offered at a price within the reach of all. Cased in durable aluminum containers with mounting brackets. Fit in any mounting hole—may be used to replace cans of much larger size. Polarity clearly indicated on label.

**Continuous Working Voltage 450 Volts  
Maximum Surge Voltage 525 Volts**

Cat. No.	Dimensions	Cap. Mfd.	Voltage	List Price
LA-2	1" x 3 1/2"	2	450	\$0.75
LA-4	1" x 3 1/2"	4	450	.85
LA-6	1" x 4 1/2"	6	450	1.00
LA-8	1 1/2" x 4 1/2"	8	450	1.05
LA-10	1 1/2" x 4 1/2"	10	450	1.25
LA-12	1 1/2" x 4 1/2"	12	450	1.40
LA-16	1 1/2" x 4 1/2"	16	450	1.55

### TYPE "LA" MULTIPLE UNITS

Similar to above but with multiple units in single can.

**Continuous Working Voltage 450 Volts  
Maximum Surge Voltage 525 Volts**

Cat. No.	Dimensions	Cap. Mfd.	Voltage	List Price
LA-515	2 1/2" x 4 1/2"	5-15	450	\$2.30
LA-88	2 1/2" x 4 1/2"	8-8	450	1.80
LA-816	2 1/2" x 4 1/2"	8-16	450	2.35
LA-444	2 1/2" x 4 1/2"	4-4-4	450	2.15
LA-888	3" x 4 1/2"	8-8-8	450	2.70
LA-9918	3" x 4 1/2"	9-9-18	450	3.75
LA-8888	3" x 4 1/2"	8-8-8-8	450	3.60
LA-8836	3" x 4 1/2"	8-8-18-18	450	4.85
LA-9936	3" x 4 1/2"	9-9-18-18	450	5.25



### TYPE "LS" SCREW CAN INVERTED UNITS

A popular unit with many replacement uses, thanks to its small size and durable construction. Packed with hardware for insulating can from mounting. May also be used with Sprague special mounting clamp for upright mounting or for mounting where can extends through base panel. Polarity plainly marked.

**Working Voltage 450 Volts  
Maximum Surge Voltage 525 Volts**

Cat. No.	Dimensions	Cap. Mfd.	Voltage	List Price
LS-2	1" x 3 1/2"	2	450	\$0.75
LS-4	1" x 3 1/2"	4	450	.85
LS-6	1" x 4 1/2"	6	550	1.00
LS-8	1 1/2" x 4 1/2"	8	450	1.05
LS-10	1 1/2" x 4 1/2"	10	450	1.25
LS-12	1 1/2" x 4 1/2"	12	450	1.40
LS-16	1 1/2" x 4 1/2"	16	450	1.55
LS-44	1 1/2" x 4 1/2"	4-4	450	1.30
LS-48	1 1/2" x 4 1/2"	4-8	450	1.45
LS-88	1 1/2" x 4 1/2"	8-8	450	1.60
LC-44	1 1/2" x 4 1/2"	4-4	450	1.30
(4 Leads)				
LC-88	1 1/2" x 4 1/2"	8-8	450	1.60
(4 Leads)				

### TYPE "LD" CARDBOARD CONTAINER DRY ELECTROLYTIC



A standard unit for general use. Special mounting flanges may be used or clipped off as desired. Moisture proof cardboard casing. Pigtail leads with

push-back insulation. Competitive in price—reliable in operation.

**Working Voltage 450 Volts  
Maximum Surge Voltage 525 Volts**

Cat. No.	Dimensions	Cap. Mfd.	Voltage	List Price
LD-2	2 1/2" x 1 1/2" x 1 1/2"	2	450	\$0.65
LD-4	4 1/2" x 1 1/2" x 1 1/2"	4	450	.75
LD-6	4 1/2" x 1 1/2" x 1 1/2"	6	450	.90
LD-8	4 1/2" x 1 1/2" x 1 1/2"	8	450	.95
LD-10	4 1/2" x 1 1/2" x 1 1/2"	10	450	1.15
LD-12	4 1/2" x 1 1/2" x 1 1/2"	12	450	1.30
LD-16	4 1/2" x 1 1/2" x 1 1/2"	16	450	1.45
LD-44	4 1/2" x 1 1/2" x 1 1/2"	4-4	450	1.20
LD-48	4 1/2" x 1 1/2" x 1 1/2"	4-8	450	1.35
LD-88	4 1/2" x 1 1/2" x 1 1/2"	8-8	450	1.50
LD-444	4 1/2" x 1 1/2" x 1 1/2"	4-4-4	450	1.80
LD-888	4 1/2" x 1 1/2" x 1 1/2"	8-8-8	450	2.20
LR-44	4 1/2" x 1 1/2" x 1 1/2"	4-4	450	1.20
(4 Leads)				
LR-48	4 1/2" x 1 1/2" x 1 1/2"	4-8	450	1.35
(4 Leads)				
LR-88	4 1/2" x 1 1/2" x 1 1/2"	8-8	450	1.50
(4 Leads)				

### TYPE "BH" AND TYPE "BT" "600" LINE

Using the new  
ALUMINIZED  
CARTON



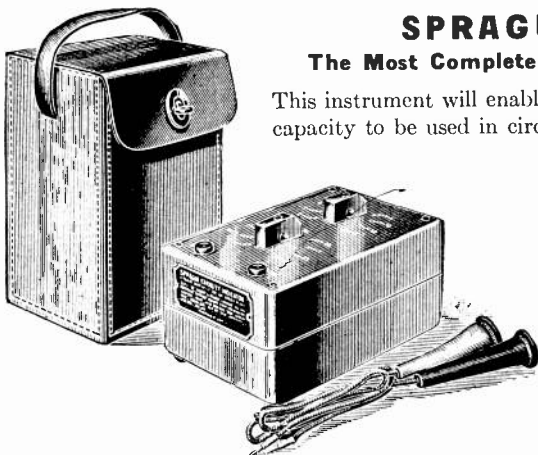
These units are square instead of round for simplicity in making substitute replacements—**The Sprague Way.** (See multiple strap mountings on other side). Hundreds of combinations for A.C.-D.C. set replacements made possible by the use of these condensers.

**New Sprague  
Cat. No.  
"Square"**

Cat. No.	Dimensions	Cap. Mfd.	Voltage	List Price
BH-5	2 1/2" x 3/4" x 3/4"	5	25	\$0.50
BH-10	2 1/2" x 3/4" x 3/4"	10	25	.65
BH-510	2 1/2" x 3/4" x 3/4"	10	50	.65
BH-25	2 1/2" x 7/8" x 7/8"	25	25	.65
BH-525	2 1/2" x 1 1/8" x 1 1/8"	25	50	.80
BH-100	2 1/2" x 1" x 1"	10-10	25	.75
BT-22	2 1/2" x 3/4" x 3/4"	2	200	.55
BT-42	2 1/2" x 3/4" x 3/4"	4	200	.65
BT-82	2 1/2" x 1" x 1"	8	200	.80
BT-122	2 1/2" x 1 1/8" x 1 1/8"	12	200	.95
BT-162	2 1/2" x 1 1/8" x 1 1/8"	16	200	1.05
BT-252	2 1/2" x 1 1/4" x 1 1/4"	25	200	1.25
BT-21	2 1/2" x 3/8" x 3/8"	2	100	.50
BT-41	2 1/2" x 3/8" x 3/8"	4	100	.50
BT-81	2 1/2" x 7/8" x 7/8"	8	100	.60
BT-121	2 1/2" x 1" x 1"	12	100	.75
BT-44 (4 Leads)	2 1/2" x 1 1/2" x 1 1/2"	4-4	200	.90
BT-48 (4 Leads)	2 1/2" x 1 1/2" x 1 1/2"	4-8	200	1.15
BT-88 (4 Leads)	2 1/2" x 1 3/4" x 1 3/4"	8-8	200	1.25
BT-812 (4 Leads)	2 1/2" x 2" x 1 1/2"	8-12	200	1.40
BT-816 (4 Leads)	2 1/2" x 2" x 1 1/2"	8-16	200	1.45

# SPRAGUE

## CONDENSERS



### SPRAGUE CAPACITY INDICATOR

**The Most Complete Condenser Analyzer on the Market at Minimum Cost**

This instrument will enable you to do better and more accurate work. Tells you the correct capacity to be used in circuit in a jiffy — saves time — saves money — insures better work.

Measures from .00025 mfd. to 16 mfd. Bakelite case 7x high, 4½" wide, 3" deep, with test leads, Surge Arrestor, and Instruction Folder. Optional — Carrying case (genuine cowhide, extra durable) \$2.25 extra.

Priced at less than the cost of the component parts if you were to attempt to build one yourself. Hundreds in use. Have you ever been in doubt about the correct capacity of a defective paper tubular or dry electrolytic condenser—**THEN BUY AN INDICATOR.**

**NET to Servicemen . . . . . \$8.90**

### SPECIAL REPLACEMENT SECTION ■ DRY ELECTROLYTIC CONDENSERS

**JUST A FEW OF THE EXACT DUPLICATES FOR MOST POPULAR RECEIVERS**

Manufacturer	Mfg. Part Number	Cap. Mfd.	Voltage	Sprague Part No.	List Price	Manufacturer	Mfg. Part Number	Cap. Mfd.	Voltage	Sprague Part No.	List Price
Atwater Kent	24955	8-8-8 Mfd.	150v.	KM-888	<b>\$1.75</b>	General Elec.	6487	4-4 Mfd.	350v.	D1026	<b>\$2.10</b>
United American Bosh	CE954	4 Mfd.	450v.	D1115	<b>2.75</b>	General Household (Grunow)	27151	10 Mfd.	150v.	D1082	<b>2.20</b>
		8 Mfd.	475v.					20-4 Mfd.	100v.		
Colonial Radio	R-8357	2 Mfd.	25v.	D1036	<b>2.25</b>	RCA Victor	66155-1	4 Mfd.	25v.	D1026	<b>2.00</b>
		16-4-1 Mfd.	150v.					4-4 Mfd.	300v.		
Crosley Radio	W-29150A	5 Mfd.	10v.	D1035	<b>1.30</b>	" "	66197-2	4 Mfd.	150v.	RM-55	<b>.75</b>
		8 Mfd.	450v.					4 Mfd.	25v.		
" "	29150B	8 Mfd.	25v.	D572	<b>2.10</b>	Stewart-Warner	83734	8-8 Mfd.	350v.	D720	<b>1.50</b>
		29150C	6 Mfd.					300v.	CM-68		
Emerson	W-27488	8 Mfd.	25v.	CM-68	<b>.95</b>	" "	66140-1	4-4 Mfd.	150v.	D1636	<b>2.00</b>
		6 Mfd.	300v.					8-8 Mfd.	300v.		
" "	W-27488	8 Mfd.	25v.	IR-55	<b>.75</b>	" "	66140-1	10 Mfd.	25v.	D1636	<b>2.00</b>
		5-5 Mfd.	35v.					IR-55	<b>.75</b>		

Write for complete List of Sprague Exact Duplicates. Space not available here for complete listing.

### SPRAGUE UNCASED CONDENSERS

#### PAPER DIELECTRIC



These condensers are ideal for replacement purposes. They are triple impregnated and use moisture proof insulation. These condensers are particularly well constructed and the sizes are such as to be applicable for their uses with a minimum of time and effort. Made the Sprague Way.

Sprague Cat. No.	Dimensions	Cap. Mfd.	Voltage	List Price
UC-14	2" x 1 3/8" x 1 1/2"	1	400	<b>\$0.75</b>
UC-24	2" x 1 1/2" x 3 1/2"	2	400	<b>1.15</b>
UC-24	3 1/4" x 1 1/2" x 5 1/2"	2	400	<b>1.15</b>
UC-16	2" x 1 1/8" x 3 3/8"	1	600	<b>1.90</b>
UC-26	3 1/4" x 1 1/8" x 3 3/8"	2	600	<b>1.35</b>
UC-18	3 3/4" x 1 1/8" x 1"	1	800	<b>1.25</b>
UC-28	4 1/4" x 1 1/8" x 1 3/8"	2	800	<b>2.00</b>
UC-11	4 1/4" x 1 1/8" x 3 3/8"	1	1000	<b>1.50</b>
UC-21	4 1/4" x 2" x 1 1/2"	2	1000	<b>2.50</b>

### FREE!

With the aid of these two straps furnished free upon request Sprague Standard Condensers can be used as standard replacements for odd combinations as are used in A.C.-D.C. sets and where special spacings for mounting is necessary.

**Type A strap** clamps on any Sprague Cardboard Condenser and permits a variable range of mounting hole spacings.

**Type B clamps** several Sprague Cardboard Condensers together so as to make one complete compact unit. "Another Sprague Service."



### MOTOR STARTING CONDENSERS

#### For Electric Refrigerators

#### EXACT DUPLICATE REPLACEMENT TYPES

In addition to types listed below, you can get any capacity and voltage rating in types shown in the photo to the left. When ordering condensers other than those shown below, be sure and specify the name of either the Motor Manufacturer, Refrigerator Manufacturer and also capacity voltage and size of condenser. The special part number that appears on the condenser will be of considerable assistance to us in insuring your getting the correct replacement.

**Condensers listed below are of the universal type and will take care of 95% of your requirements on replacements for motor starting condensers.**

Working Voltage 110 Volts

Sprague Part No.	Capacity	Dimensions	List Price
A2134	80 Mfd.	2" diam. x 4 1/8" high	<b>\$4.00</b>
A2096	80 Mfd.	2 1/2" diam. x 4 1/8" high	<b>4.00</b>
A2093	80 Mfd.	2 1/8" x 3 3/8" x 4 1/8"	<b>4.00</b>
A2135	100 Mfd.	2" diam. x 4 1/8" high	<b>4.50</b>
A2097	100 Mfd.	2 1/2" diam. x 4 1/8" high	<b>4.50</b>
A2094	100 Mfd.	2 1/8" x 3 3/8" x 4 1/8"	<b>4.50</b>
A2136	115 Mfd.	2" diam. x 1 1/8" high	<b>5.00</b>
A2098	115 Mfd.	2 1/2" diam. x 1 1/8" high	<b>5.00</b>
A2095	115 Mfd.	2 1/8" x 3 3/8" x 4 1/8"	<b>5.00</b>



# TOBE NOISE FILTERS CONDENSERS

## ELIMINATE RADIO NOISE TROUBLE AT ITS SOURCE!

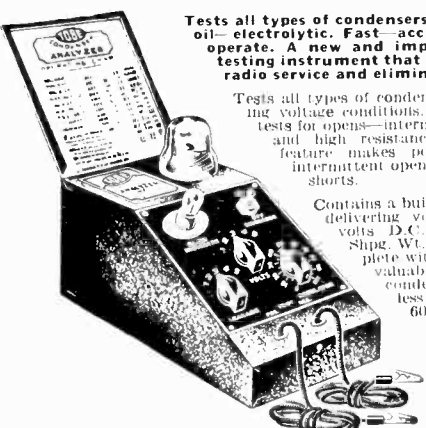
The TOBE Filterettes listed below are backed by a competent engineering staff with many years' experience and may be depended upon to eliminate all types of interference. TOBE Engineers were pioneers in the work of stopping all types of radio interference, and their work in this field is largely responsible

for the interest in this problem today. If we do not list a Filterette which appears to meet your requirements, we will be glad to obtain it for you if you will send us the name of the appliance which is causing interference, together with its voltage and amperage ratings.

### THERE IS A TOBE FILTERETTE FOR EVERY TYPE OF EQUIPMENT

<p><b>Junior Filterette</b></p>  <p>Use on vacuum cleaners, hair dryers, cash registers, sewing machines, drink mixers. Prongs and receptacle for plug-in connection. App. by Underwriters' Labs.</p> <p>110-volts A.C. or D.C.</p> <p>List Price ..... \$2.25</p>	<p><b>Senior Filterette</b></p>  <p><b>ALL-WAVE</b></p> <p>Use on portable electrical appliances producing short-wave noise. Standard attachment cap and receptacle. Use on any appliance up to 5 amps at 110-volts A.C. or D.C.</p> <p>List Price ..... \$5.50</p>	<p><b>OB-110 Filterette</b></p> <p><b>ALL-WAVE</b></p>  <p>Use on all oil burners to kill all-wave interference. Mounted in cut-out box. Detachable element to mount on pipe or flat surface.</p> <p>Approved by Underwriters for operation at 4 amps, 110-volts A.C. or D.C. Instructions furnished for installing on any oil burner.</p> <p>List Price ..... \$9.50</p>	<p><b>JA Filterette</b></p>  <p>Use on same appliances as Junior Filterette for permanent connection where attachment cord is brought out of motor frame. Screw terminals for connections. Maximum noise reduction as installation is at noise source.</p> <p>List Price ..... \$2.75</p>	<p><b>RF-2 Power Line Filterette</b></p> <p><b>ALL-WAVE</b></p>  <p>For eliminating all-wave radio noise reaching the receiver through its power line connection. Has remote contact and attachment cap for plug-in connection.</p> <p>List Price ..... \$4.95</p>
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## TOBE CONDENSER ANALYZER



Tests all types of condensers—mica—paper—oil—electrolytic. Fast—accurate—simple to operate. A new and improved condenser testing instrument that greatly simplifies radio service and eliminates guess work.

Tests all types of condensers under operating voltage conditions. Makes accurate tests for opens—intermittents—shorts—and high resistance leaks. Latest feature makes positive check for intermittent opens and intermittent shorts.

Contains a built-in power supply delivering voltages up to 700 volts D.C. 3 1/2" x 4 1/2" x 7 1/2". Ship. Wt. 5 lbs. Comes complete with instructions and valuable handbook on condenser testing, but less 01-A tube 110 v. 60-cycle model.

Dealer's NET Price  
**\$11.40**

## TOBE ALL-WAVE AERIAL KITS



Reduce noise—increase signal strength—fit all radios. Designed to keep man-made static out of the receiver on all frequencies.

Wave-band switches mounted on the receiver transformer match the impedance of the aerial to that of receiver input. This feature maintains high signal strength, and allows the system to be used with any make of radio, with excellent results. May be erected as a straight wire aerial or as a doublet. Complete instructions are furnished.

Kit includes one aerial transformer, 50 ft. weather-proof twisted pair lead-in wire, one receiver transformer, 75 ft. No. 14 solid enameled aerial wire, 25 ft. insulated ground wire, two lead-in strips, one ground clamp, one nail-it knob, four porcelain insulators.

**Model 34** ..... List Price \$6.95  
**Model 35**—same as above less aerial wire and hardware. Includes only two transformers and transmission wire described above. List Price \$4.95

### TOBE AUTOMATIC ALL-WAVE AERIAL, MODEL 37

is the latest aerial kit from the TOBE Engineering Laboratories. Efficiently covers all frequencies automatically without the use of switches on the receiver transformer. The same impedance matching is accomplished, as above, between the aerial and input of any make of receiver. Kit includes one aerial transformer, one receiver transformer with noise eliminating Faraday shield, one 72 ft. length weather-proof twisted pair lead-in wire.

**Model 37** ..... List Price \$5.50

## ELECTROLYTIC REPLACEMENT CONDENSERS

Each condenser is exact to the original in length of leads, dimensions of condenser arrangement. In most cases peak voltage ratings have been increased so that these replacements are far superior to the originals.

Many of the condensers listed below are suitable for use in special brand radios by referring to the color code of internal connections on the label of each TOBE condenser as a guide.

<p><b>APEX</b></p> <p>Model 5, Part No. 6201 4-4-12 Mfd. Card. Box AP-2—List ..... \$2.10</p> <p><b>ATWATER-KENT</b></p> <p>Model 155 Part No. 24602 8-8-8 Mfd. Card. Box AK-2—List ..... \$1.50</p> <p>Model 155 Part No. 24955 8-8-8 Mfd. Card. Box AK-3—List ..... \$1.50</p> <p>Model 275-825 Part No. 26158 8-14-8 Mfd. Card. Box AK-4—List ..... \$2.00</p>	<p><b>CROSLY (Cont'd)</b></p> <p>Model 146 Part No. 26896A 6 Mfd., 12 Mfd. Card. Box</p> <p>C-5—List ..... \$1.75</p> <p>Model Travette 99 Part No. W28068 12 Mfd. Card. Box</p> <p>C-6—List ..... \$0.95</p> <p>Model 160 Part No. 28468 8 Mfd., 12 Mfd. Metal Can.</p> <p>C-8—List ..... \$1.90</p> <p>Models 164, 170 Part No. W29097 8-8-8 Mfd. Metal Can.</p> <p>C-9—List ..... \$2.20</p> <p>Models 166, 172 Part No. W29264 16-16-8 Mfd. Metal Can.</p> <p>C-12—List ..... \$2.00</p>	<p><b>EMERSON (Cont'd)</b></p> <p>Models 20A, 25, 25A Part No. HC-31 4-4 Mfd. Card. Box</p> <p>EM-3—List ..... \$1.00</p> <p>Model 250 Part No. KC56 8-8 Mfd. Card. Box</p> <p>EM-4—List ..... \$1.25</p> <p><b>GENERAL ELECTRIC RCA-VICTOR</b></p> <p>Models K40A, 27, 17M, 18W, Part No. 3538 4-4 Mfd. Card Tube</p> <p>GE-2—List ..... \$1.00</p> <p>Models K40A, 27, 17M, 18W, Part No. 3536 5-5 Mfd. Card Tube</p> <p>GE-3—List ..... \$0.75</p> <p>Models L50, L51, 22S, 22W, Part No. 6518 8 Mfd., 8 Mfd. Card. Box</p> <p>GE-4—List ..... \$1.55</p> <p>Models L50, L51, 22S, 22W, Part No. 6511 4-8 Mfd., 10 Mfd. Card. Box</p> <p>GE-5—List ..... \$1.60</p> <p>Models K63, 120, 220, 37, 38, Part No. 6487 4-1-10 Mfd. Card. Box</p> <p>GE-6A—List ..... \$2.00</p>	<p><b>G.E.-RCA (Cont'd)</b></p> <p>Models K52, K53, K58, 110, 115, Part No. 7589 4 Mfd., 4 Mfd. Card. Box</p> <p>GE-7A—List ..... \$1.05</p> <p>Models K66, 220, 222 Part No. 6691 8-4-4 Mfd. Card. Box</p> <p>GE-10—List ..... \$2.20</p> <p>Models M65, 221 Part No. 6703 8-4-4 Mfd. Card. Box</p> <p>GE-11—List ..... \$1.95</p> <p>Models K64, M65, 121, 122, Part No. 6703 8-1-4 Mfd. Card. Box</p> <p>GE-12—List ..... \$1.95</p> <p><b>GRUNOW</b></p> <p>Models 501, 550 Part No. 27151 4-8-20 Mfd., 4 Mfd. Card. Box</p> <p>GR-2—List ..... \$2.25</p> <p>Model 6D Part No. TH30091-1 8-8-8-12-12 Mfd. Card. Box</p> <p>GR-3—List ..... \$3.25</p>	<p><b>KADETTE (Cont'd)</b></p> <p>Model F Jr Part No. A426 2-7 Mfd. Card. Box</p> <p>K-5—List ..... \$0.90</p> <p>Model F Jr. Part No. A427 3.5-3.5-3.5 Mfd. Card. Box</p> <p>K-6—List ..... \$1.20</p> <p><b>MAJESTIC</b></p> <p>Models 310, 320, 330 Part No. 7489-1 16 Mfd. Card. Box</p> <p>MJ-2—List ..... \$1.45</p> <p>Models 380, 381, Part No. 8755 4-8 Mfd. Card. Box</p> <p>MJ-3—List ..... \$1.35</p> <p>Models 15, 25, 150 Part No. 4713-D (Dual Unit)</p> <p>8-8 Mfd. Card. Box</p> <p>MJ-4—List ..... \$1.75</p> <p>Models 300, 302, 304, Part No. 7278 7 Mfd., 10 Mfd. Card. Box</p> <p>MJ-5—List ..... \$1.25</p> <p>Models 400A, 411A, 413A, Part No. 9661 8-16 Mfd., 10 Mfd. Card. Box</p> <p>MJ-6—List ..... \$2.25</p>	<p><b>MAJESTIC (Cont'd)</b></p> <p>Models 440, 500 Part No. 10536 6-4-10 Mfd. Card. Box</p> <p>MJ-7—List ..... \$1.85</p> <p>Models 55, 59, 75 Part No. 10827 8-8 Mfd., 10 Mfd. Card. Box</p> <p>MJ-8—List ..... \$1.95</p> <p><b>MOTOROLA</b></p> <p>Models 44, 66, 77A Part No. 48200 4-8 Mfd. Card. Box</p> <p>MO-2—List ..... \$1.15</p> <p>Models 44 (T60 Pack) Part No. 8123 8-12 Mfd. Card. Box</p> <p>MO-3—List ..... \$1.40</p> <p><b>SPARTON</b></p> <p>Models 61, 62 Part No. A-9550 5-5-25 Mfd. Card. Box</p> <p>Type SP-2—List \$2.10</p> <p><b>STEWART-WARNER</b></p> <p>Models R111, R115 Part No. 81959S 4-5-9 Mfd., Card. Box</p> <p>ST-2—List ..... \$1.40</p> <p>Models R111, R115 Part No. 81959S 4-13-7 Mfd. Card. Box</p> <p>ST-3—List ..... \$1.95</p>
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# DRY ELECTROLYTIC CONDENSERS STANDARD CARDBOARD CONTAINERS



## "LITTLE GIANT" DRY ELECTROLYTICS

The Original Ultra Compact Drys

"Little Giant" features:

1. UNUSUAL COMPACTNESS
2. FULL CAPACITIES
3. LOW POWER FACTOR
4. MINIMUM LEAKAGE

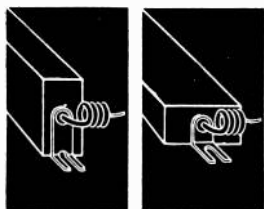


### TYPE LG5—525 VOLTS S.P.

Catalog Number	Capacity Mfd.	Working Volts D. C.	Dimensions Inches	List Price
LG5-2	2	450	2-7/16x 3/4 x 1/2	\$.65
LG5-4	4	450	2-7/16x1 1/4 x 9/16	.75
LG5-6	6	450	2-7/16x1 1/2 x 11/16	.90
LG5-8	8	450	2-7/16x1 3/4 x 11/16	.95
LG5-10	10	450	3-3/16x1 1/4 x 11/16	1.15
LG5-12	12	450	3-3/16x1 1/2 x 11/16	1.30
LG5-16	16	450	2-7/16x1-3/16x1	1.45
LG5-16	4+4	450	2-7/16x1-3/16x1	1.20
LG5-48	4+8	450	2-7/16x1-7/16x1 1/4	1.35
LG5-88	8+8	450	2-7/16x1-7/16x1 1/4	1.50
LG5-888	8+8+8	450	2 1/2 x 1 1/2 x 1 1/2	2.20

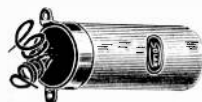
### TYPE LG2—250 VOLTS S. P.

Catalog Number	Capacity Mfd.	Working Volts D. C.	Dimensions Inches	List Price
LG2-4	4	200	2-7/16x 3/4 x 1/2	\$.65
LG2-6	6	200	2-7/16x 3/4 x 1/2	.75
LG2-8	8	200	2-7/16x13/16 x 9/16	.80
LG2-10	10	200	2-7/16x1 1/4 x 9/16	.90
LG2-12	12	200	2-7/16x1 1/2 x 11/16	.95
LG2-16	16	200	2-7/16x1 1/4 x 11/16	1.05
LG2-20	20	200	2-7/16x1 1/2 x 11/16	1.20
LG2-25	25	200	3-3/16x1 1/4 x 11/16	1.25
LG2-30	30	200	3-3/16x1 1/2 x 11/16	1.40
LG2-44	4+4	200	2-7/16x1-3/16x13/16	.90
LG2-48	4+8	200	2-7/16x1-3/16x13/16	1.15
LG2-88	8+8	200	2-7/16x1-3/16x13/16	1.25
LG2-816	8+16	200	2-7/16x1-3/16x1	1.45
LG2-1216	12+16	200	2-7/16x1-3/16x1	1.50
LG2-1616	16+16	200	2-7/16x1-7/16x1 1/4	1.65
LG2-888	8+8+8	200	2-7/16x1-7/16x1 1/4	1.90



LITTLE GIANTS now supplied  
with FLEX MOUNT  
ON SINGLE VALUES  
New - Novel - Practical

Moveable Universal Tabs  
combining reliable operation  
with ease of mounting. The  
box either flat or on edge.



## TYPES DC & DS



Type DS

### GENERAL REPLACEMENT

Type DC

#### DC—C'b'd Boxes—Flanges and Leads—175 V.

No.	Capacity Mfd.	Connections	Size Inches	List Price
DC-720	4+4	Neg. com.	2 3/4 x 1 x 3/4	\$0.85
DC-0572	8+4	Neg. com.	3 x 1 x 1	.95
DC-730	8+8	Separate	3 x 1 1/2 x 1	1.20
DC-732	8+8	Neg. com.	3 x 1 x 1	1.20
DC-748	16+8	Neg. com.	4 1/4 x 1-5/16 x 3/8	1.35
DC-754	16+16	Neg. com.	3 x 2 x 1	1.55
DC-760	25+5	Neg. com.	3 x 2 x 1	1.40

## TYPE T CARTRIDGE ELECTROLYTICS



Encased in impregnated tubes, with 2" bare wire leads. High capacity in small space at low cost. Dual units are supplied with negative common lead at one end; two positive leads at other end.

### TYPE T—CARTRIDGE MOUNTING

No.	Capacity Mfd.	D.C. Peak Voltage	Dimensions Inches	List Price
DT-855	.5	500	1 1/4 x 3/4	\$0.55
DT-856	1	500	1 1/4 x 3/4	.55
DT-857	2	500	2 1/4 x 3/4	.65
DT-858	4	500	2 1/4 x 1	.75
DT-859	4	350	2 1/4 x 1	.95
DT-859A	8	500	3 x 1	.90
DT-860	8	350	2 3/4 x 1	.60
DT-866	4	175	1 1/4 x 3/4	.75
DT-868	8	175	2 1/4 x 3/4	.85
DT-869	4+4	175	2 1/4 x 1	.50
DT-873	5	60	1 1/4 x 3/4	.65
DT-874	10	60	1 1/4 x 3/4	.80
DT-875	25	60	1 1/4 x 3/4	.50
DT-878	5	35	1 1/4 x 3/4	.50
DT-879	10	35	1 1/4 x 3/4	.65
DT-882	25	35	2 1/4 x 3/4	.75
DT-884	5+5	35	2 x 1	.95
DT-885	10+10	35	2 1/2 x 1	.75

## STANDARD SIZE PLAIN CARDBOARD BOXES



There are quality units available with lugs or leads as listed. The boxes are completely wax-filled and moisture proof.

### SINGLE SECTIONS—TWO TERMINALS

Lugs No.	Leads No.	Capacity Mfg.	D.C. Peak Voltage	Dimensions Inches	List Price
DA-602	DA-0602	2	500	2 1/4 x 1 5/16 x 3/8	\$0.65
DA-604	DA-0604	4	500	2 1/4 x 1 5/16 x 3/8	.75
DA-606	DA-0606	6	500	4 1/4 x 1 5/16 x 3/8	.90
DA-608	DA-0608	8	500	4 1/4 x 1 5/16 x 3/8	.95
DA-610	DA-0610	10	500	4 3/4 x 1 3/8 x 1/4	1.15
DA-612	DA-0612	12	500	4 3/4 x 1 3/8 x 1/4	1.30
DA-616	DA-0616	16	500	4 3/4 x 1 3/8 x 1/4	1.45

If mounting flanges are required, specify letter A in addition to above catalog numbers.

### MULTIPLE SECTIONS—WITH FLANGES 4 7/8" MTG. CENTERS

Lugs No.	Leads No.	Capacity Mfg.	D.C. Peak Voltage	Dimensions Inches	List Price
DJ-354	DJ-0354	4+4*	500	4 3/8 x 1 3/8 x 1/4	\$1.20
DJ-358	DJ-0358	4+8*	500	4 3/8 x 1 3/8 x 1/4	1.35
DJ-362	DJ-0362	8+8*	500	4 3/8 x 1 3/8 x 1 7/16	1.50
DJ-369	DJ-0369	8+8+8†	500	4 3/8 x 2 1/8 x 1 7/16	2.20

\*Separate Sections

†Neg. common

### DS—"Standard" Cartridge—Plain with Mtg. Ring.

No.	Cap. Mfd.	Peak V.	Conn.	Size In.	List Price
DS-D-488	8+8	500	Neg. com.	1 3/8 dia. x 4 3/4	\$1.50
DS-D-348	4+8	350	Neg. com.	1 3/8 dia. x 3 1/2	1.25
DS-D-388	8+8	350	Neg. com.	1 1/4 dia. x 4 3/4	1.40
DS-D-381	8+16	350	Neg. com.	1 3/8 dia. x 4 3/4	1.70
DS-D-288	8+8	220	Neg. com.	1 dia. x 4 3/4	1.25
DS-D-281	8+16	220	Neg. com.	1 1/4 dia. x 4 3/4	1.45
DS-D-188	8+8	175	Neg. com.	1 dia. x 4 3/4	1.20
DS-D-181	8+16	175	Neg. com.	1 1/4 dia. x 3 1/2	1.35
DS-D-182	8+24	175	Neg. com.	1 1/4 dia. x 4 3/4	1.50
DS-D-3A88	8+8	350	Pos. com.	1 3/8 dia. x 4 3/4	1.40

# Guaranteed!



## DRY ELECTROLYTIC CONDENSERS

### TYPE D STANDARD ROUND INVERTED CANS

Offered in one standardized size for mounting in a  $\frac{3}{8}$ " hole. Cans are fully insulated from sections. Flexible wire leads are provided for each section; polarity is clearly indicated.

#### TYPE D—Inverted Cans $1\frac{1}{2}$ " Diam. by $4\frac{3}{8}$ " High

No.	Capacity Mfd.	D.C. Peak Voltage	List Price
D-804	4	500	\$0.85
D-808	8	500	1.05
D-810	10	500	1.25
D-812	12	500	1.40
D-814	4+4	500	1.30
D-818	4+8	500	1.45
D-820	8+8	500	1.60



### MULTIPLE SECTIONS IN GROUNDED ROUND CANS

Wax filled. Negative terminals grounded to can. Solar screw and solder terminal. Mounting rings included.

#### TYPE DP, $2\frac{1}{2}$ " DIAMETER CANS

Catalog No.	Capacity Mfd.	D.C. Peak Volts	List Price
DP-2508	8+8	500	\$1.80
DP-2515	5+15	500	2.30
DP-2524	8+16	500	2.35
DP-2526	8+18	500	2.60
DP-2538	8+8+8	500	2.70



#### TYPE DQ, 3" DIAMETER CANS

Catalog No.	Capacity Mfd.	D.C. Peak Volts	List Price
DQ-2608	8+8	500	\$1.80
DQ-2624	8+8+8	500	2.70
DQ-2636	9+9+18	500	3.75
DQ-2638	8+8+8+8	500	3.60

#### TYPE DR, $3\frac{1}{4}$ " DIAMETER CANS

DR-2720	9+9+18+18	500	\$5.25
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### TYPE DI, $1\frac{3}{8}$ " DIAMETER MOLDED SCREW BASE CANS

Supplied with  $\frac{7}{8}$ " molded screw bases and lug terminals. Can height,  $3\frac{1}{8}$ ". Grounded can.

Catalog No.	Capacity Mfd.	D.C. Peak Voltage	Connections	List Price
DI-854	8	500		\$1.05
DI-857	12	500		1.40
DI-859	16	500		1.55
DI-862	4+4	500	Neg. Com.	1.30
DI-866	4+8	500	Neg. Com.	1.45
DI-869	8+8	500	Neg. Com.	1.60
*DI-873	4+4+4	500	Neg. Com.	1.90
*DI-877	8+8+8	500	Neg. Com.	2.40



### TYPE DE COMPACT 1" DIAMETER CANS

Cans are grounded, and have lug terminal. A  $\frac{5}{8}$ " diameter screw base is standard. Insulating hardware is listed as H-35 below.

Catalog No.	Capacity Mfd.	D.C. Peak Volts	Height	List Price
DE-904	4	500	$3\frac{1}{4}$ "	\$0.85
DE-908	8	500	$4\frac{1}{4}$ "	1.05
DE-914	4	220	$3\frac{1}{4}$ "	.75
DE-918	8	220	$3\frac{1}{4}$ "	.90
DE-926	16	220	$4\frac{3}{8}$ "	1.15



## WET ELECTROLYTIC CONDENSERS

### EXACT REPLACEMENTS

Catalog No.	Original Part No.	Cap. Mfd.	D.C. Peak Volts	Can Diam.	List Price
W-4	103-4	8	400	1"	\$1.00
W-6	103-7	8	350	1"	.95
<b>COLONIAL</b>					
4 $\frac{3}{8}$ " High, Inverted					
W-14	R12451	8	300	$1\frac{3}{8}$ "	\$0.90
W-16	R12478	8	400	$1\frac{3}{8}$ "	1.00
W-45	R13903	24	450	$1\frac{1}{2}$ "	1.70
W-46	R14573	16	350	$1\frac{3}{8}$ "	1.25
<b>CROSLLEY</b>					
$1\frac{1}{2}$ " x $4\frac{3}{8}$ " Inverted					
W-18	W36057	40	350		\$2.00
W-19	W36055	35	450		2.00
<b>GENERAL ELECTRIC</b>					
$1\frac{3}{8}$ " x $4\frac{3}{8}$ " Inverted					
W-47	T-18-J-57-9	16	330		\$1.25
<b>RCA</b>					
$1\frac{3}{8}$ " x $4\frac{3}{8}$ " Inverted					
W-24	68597-5	10	460		\$1.25
W-48	68597-10	30	510	$1\frac{1}{2}$ " x 5" can	2.00
<b>STEWART-WARNER</b>					
$1\frac{3}{8}$ " x $3\frac{1}{8}$ " Inverted					
W-49	88033	8	350		\$0.90
W-50	88007	8	250		.90
<b>WELLS-GARDNER</b>					
4 $\frac{3}{8}$ " High, Inverted					
W-51	44X17	20	150	1"	\$1.25
W-52	44X11E	18	290	$1\frac{3}{8}$ "	1.50
<b>ZENITH</b>					
$1\frac{3}{8}$ " x $4\frac{3}{8}$ " Inverted					
W-42	22-125	8	500		\$1.00
W-44	22-231	8	500		1.00

### WET ELECTROLYTICS

#### ROUND INVERTED CANS, $1\frac{1}{2}$ " DIAMETER BY $4\frac{3}{8}$ " HIGH

Catalog No.	Capacity Mfd.	D.C. Peak Voltage	List Price
ZV-278	8	600	\$1.50
Z-204	4	500	.90
Z-208	8	500	1.00
Z-210	10	500	1.10
Z-212	12	500	1.20
Z-222	20	500	1.50
Z-224	30	500	2.00
Z-111	16	350	1.20



#### ROUND INVERTED CANS, 1" DIAMETER

Catalog No.	Mfd.	Peak Volts	Height	List Price
ZK-80	8	500	$4\frac{3}{8}$ "	\$1.00
ZK-40	4	500	$3\frac{1}{8}$ "	.90
ZM-12-350	12	350	$3\frac{1}{8}$ "	1.10
ZM-168	8	300	$3\frac{1}{8}$ "	.90
ZM-178	8	200	$3\frac{1}{8}$ "	1.80
ZM-16-200	16	200	$3\frac{1}{8}$ "	1.00

### WET ELECTROLYTIC HARDWARE

H-20—Set of insulating hardware for $\frac{3}{4}$ " diameter mounting stud (2 insulating fibre washers and grounding lug) .....	\$0.07
H-35—Set of insulating hardware for $\frac{5}{8}$ " diameter mounting stud .....	.05

*Reliable in Every Climate!*



# PAPER CONDENSERS



## HANDY COMPACT "TOM THUMB" CONDENSERS

These are uncased units sealed in varnished wrappers.

Cat. No.	Cap. Mfd.	Compact Size	List Price
<b>200 V. WORKING—400 V. TEST</b>			
TT-32	.25	2 x 3/4 x 1 1/2	\$0.30
TT-33	.5	2 x 1 1/4 x 1 1/2	.40
TT-34	1.	2 x 1 1/2 x 1 1/2	.60
TT-35	2.	2 x 1 3/4 x 1 1/2	.95
TT-36	4.	2 x 1 3/8 x 1 1/2	1.70
<b>400 V. WORKING—800 V. TEST</b>			
TT-22	.25	2 x 7/8 x 1 1/2	.40
TT-23	.5	2 x 1 1/4 x 1 1/2	.50
TT-24	1.0	2 x 1 1/2 x 1 1/2	.75
TT-25	2.0	2 x 1 3/4 x 1 1/2	1.15
TT-26	4.0	2 x 1 3/8 x 1 1/2	2.00
<b>600 V. WORKING—1200 V. TEST</b>			
TT-01	.1	2 x 1 1/2 x 1 1/4	.40
TT-025	.25	2 x 1 1/2 x 1 1/4	.50
TT-05	.5	2 x 1 1/2 x 1 1/4	.50
TT-1	1.0	2 x 1 3/4 x 1 1/4	.90
TT-2	2.0	2 x 1 3/4 x 1 1/4	1.35
TT-4	4.0	2 x 1 3/4 x 1 1/2	2.70
<b>1000 V. WORKING—2000 V. TEST</b>			
TT-11	.1	2 x 1 1/2 x 1 1/4	.60
TT-12	.25	3 x 2 x 3/8	.75
TT-13	.5	4 3/8 x 2 x 3/8	1.00
TT-14	1.0	4 3/8 x 2 1/4 x 3/8	1.50
TT-15	2.0	4 3/8 x 2 1/2 x 1 1/8	2.50

Lead Color Code—Black, 200 V. Yellow, 400 V. Blue, 600 V. Red, 1000 V.

## DRAWN SHELL CANS



In dual units, the center lug is common. In other multiple units the can is the common terminal.

No.	Cap.	Volts W.	List Price
P-1509	.1	400	\$0.50
P-1511	.1+.1	400	.65
P-1513	.1	600	.60
P-1625	.25	400	.60
P-1821	.5	400	.75
P-1822	.25+.25	400	.80
P-1823	.1+.1+.1	400	.85
P-1831	.25	600	.70
P-1925	.5+.5	400	1.00
P-1930	.5	600	.95
P-1931	.1+.1+.1	600	1.25

## SPARTAN REPLACEMENT ROUND METAL CANS



Catalog No.	Capacity Mfd.	List Price
SPR-25	.25	\$0.60
SPR-5	.5	.75
SPR-1	1.0	1.00

## SEALDTITE



### TUBULAR PAPER

Catalog No.	Cap. Mfd.	Dimensions Inches	List Price
<b>200 VOLTS D.C. WORKING</b>			
S-0227A	.05	1/8 x 1 3/8	\$0.15
S-0235	.1	1/8 x 1 3/8	.20
S-0242	.2	1/8 x 2	.25
S-0245	.25	1/8 x 2	.25
S-0261	.5	1/8 x 2	.35
S-0266	1.0	1/8 x 2	.50
<b>400 VOLTS D.C. WORKING</b>			
S-0219	.01	1/8 x 1	.15
S-0223	.02	1/8 x 1 3/8	.15
S-0228	.05	1/8 x 1 3/8	.15
S-0238	.1	3/8 x 1 3/4	.20
S-0243	.2	3/8 x 2	.25
S-0256	.25	3/8 x 2	.25
S-0263	.5	1 x 2	.35
S-0267	1.0	1 1/8 x 2	.50
<b>600 VOLTS D.C. WORKING</b>			
S-0202	.0001	3/8 x 1	.15
S-0203	.00025	3/8 x 1	.15
S-0204	.0005	3/8 x 1	.15
S-0211	.001	3/8 x 1	.15
S-0212	.002	3/8 x 1	.15
S-0215	.005	7/8 x 1	.15
S-0216	.006	1/2 x 1	.15
S-0221	.01	1/2 x 1	.15
S-0224	.02	1/2 x 1 3/8	.15
S-0230	.05	1/2 x 1 3/8	.15
S-0240	.1	3/4 x 1 3/8	.20
S-0244	.1	3/8 x 2	.25
S-0257	.25	1 1/8 x 2	.35
S-0265	.5	1 1/8 x 2	.50

### SEALDTITE DUALS

Catalog No.	Cap. Mfd.	Volts Work.	Dimen. Inches	List Price
SS-0307A	.01+.01	600	1/2 x 1 3/8	\$0.35
SS-0308A	.05+.05	400	3/4 x 1 3/8	.40
SS-0309A	.05+.05	600	1 1/2 x 2	.45
SS-0310A	.1+.1	200	3/4 x 1 3/8	.40
SS-0312A	.1+.1	400	1 1/2 x 2	.45
SS-0313A	.1+.1	600	1 1/2 x 2	.50
SS-0316A	.25+.25	200	1 1/2 x 2	.50

## TYPE UM PAPER TRANSMITTING CONDENSERS



In sprayed metal containers with flanges and porcelain stand-off terminals.

Catalog No.	Cap. Mfd.	V. W.	Size	List Price
UM-01	1.0	600	4 x 4 1/4 x 1	\$2.25
UM-02	2.0	600	4 x 4 1/4 x 1	3.00
UM-03	4.0	600	4 x 4 1/4 x 1 3/4	4.00
UM-04	0.5	1000	4 x 4 1/4 x 1	2.25
UM-06	1.0	1000	4 x 4 1/4 x 1	2.50
UM-08	2.0	1000	4 x 4 1/4 x 1 3/4	3.75
UM-1	4.0	1000	4 1/2 x 4 1/4 x 2 1/8	5.00

## FORD GENERATOR SUPPRESSOR



No.	List Price
RF-0132	\$0.60

## DOMINO



### PAPER CONDENSERS MOLDED IN BAKELITE

Special flat units, resistant to heat and moisture. A new Solar development.

Catalog No.	Cap. Mfd.	Volts Work.	Size	List Price
MP-4101	.001	1000	A	\$0.25
MP-4103	.002	1000	A	.25
MP-4105	.003	1000	A	.25
MP-4107	.004	1000	B	.25
MP-4109	.005	1000	B	.25
MP-4111	.006	1000	B	.30
MP-4113	.008	1000	C	.30
MP-4115	.01	1000	C	.35
MP-4121	.001	600	A	.20
MP-4123	.002	600	A	.20
MP-4125	.003	600	A	.20
MP-4127	.004	600	A	.20
MP-4129	.005	600	A	.20
MP-4131	.006	600	A	.20
MP-4133	.008	600	B	.20
MP-4135	.01	600	B	.25
MP-4137	.02	600	B	.30
MP-4139	.05	600	C	.30
MP-4141	.01	400	A	.20
MP-4143	.02	400	A	.25
MP-4145	.05	400	B	.25
MP-4147	.1	400	C	.25
MP-4151	.01	200	A	.18
MP-4153	.02	200	A	.20
MP-4155	.05	200	B	.20
MP-4157	.1	200	C	.20
MP-4159	.15	200	C	.25
MP-4161	.2	200	C	.30
MP-4162	.25	200	C	.30

### DOMINO ASSORTMENT

KMP-4—1 Mfd. 400 V.; 2—.05 Mfd. 600 V.; 2—.02 Mfd. 600 V.; 2—.01 Mfd. 600 V.

List Price .....\$2.70

SIZE A = 1 1/2 in. x 5/8 in. x 1/4 in.  
 SIZE B = 1 1/2 in. x 3/4 in. x 1/8 in.  
 SIZE C = 1 1/2 in. x 3/4 in. x 3/8 in.

PLAY SAFE WITH DOMINOES!

## GENERATOR SUPPRESSORS



No.	Capacity	List Price
P-2702	.25	\$0.40
P-2705	.5	.50
P-2708	1.0	.70

## AUTO AMMETER CONDENSERS



No.	Capacity	List Price
P-2722	.5	\$0.45
P-2724	1.0	.65

## VIBRATOR CONDENSERS



No.	Capacity	List Price
S-0287	.007	\$0.45
S-0289	.02	.45
S-0293	.01	.60
S-0295	.007	.45

## DOME LIGHT FILTER



No.	List Price
RF-0143	\$0.80

# Guaranteed!





# MICA AND TRIMMER CONDENSERS



## BAKELITE MOLDED MICA CONDENSERS

Highest quality of materials and workmanship. MW and MT types have 1 1/4" tinned copper leads.

Capacity Mtd.	MW 3/4" sq.		MT 5/8" sq.		MO 7/16"x1 1/16"	
	No.	List Price	No.	List Price	No.	List Price
.000025			MT-1306	\$0.20	MO-1406	\$0.20
.00003			MT-1307	.20	MO-1407	.20
.00004			MT-1308	.15	MO-1408	.15
.00005	MW-1210	\$0.15	MT-1310	.15	MO-1410	.15
.0001	MW-1216	.15	MT-1316	.15	MO-1416	.15
.0002	MW-1218	.15	MT-1318	.15	MO-1418	.15
.00025	MW-1219	.20	MT-1319	.20	MO-1419	.20
.0003	MW-1220	.20	MT-1320	.20	MO-1420	.20
.0004	MW-1221	.20	MT-1321	.20		
.0005	MW-1222	.25	MT-1322	.25		
.001	MW-1227	.30	MT-1327	.30		
.002	MW-1233	.40				
.003	MW-1235	.45				
.004	MW-1237					

## TRIMMER CONDENSERS

Smallest size, highest quality types for neutralizing and balancing circuits. Maintain adjustments permanently.



Type TPC—Single Ceramic base 5/8"x1 3/16" "Perma-set" Trimmer.

Cat. No.	Cap. Range	List Price
TPS-A30	3-30 mmf.	\$0.25
TPS-F70	5-70 mmf.	.30
TPS-F140	50-140 mmf.	.35
TPS-F180	80-180 mmf.	.35



Type TY—Single Bakelite Base 1/2"x25/32" All-Wave Set Type.

Cat. No.	Cap. Range	List Price
TY-30	3-30 mmf.	\$0.25



Type TYM—Same as TY, but with mounting tab.

Cat. No.	Cap. Range	List Price
TY-M30	3-30 mmf.	\$0.30



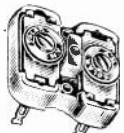
Type TR—Standard Ceramic Base, 1 3/16" Diameter, 15/16" Mounting Center

Cat. No.	Cap. Range	List Price
TR-70	40-70 mmf.	\$0.40
TR-140	60-140 mmf.	.50
TR-220	60-220 mmf.	.60
TR-460	150-400 mmf.	.65
TR-600	300-600 mmf.	.70
TR-800	400-800 mmf.	.75



Type TQ—Similar to TR except that base is Bakelite.

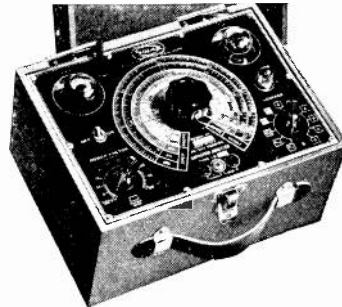
Cat. No.	Cap. Range	List Price
TQ-1000	500-1000 mmf.	\$0.65
TQ-1200	600-1200 mmf.	.70
TQ-1400	700-1400 mmf.	.75
TQ-1600	1000-1600 mmf.	.80
TQ-1800	1200-1800 mmf.	1.00
TQ-2000	1400-2000 mmf.	1.10



Type TD—Dual ceramic base 1 21/64" square. Fits standard coil shields.

Cat. No.	Cap. Range	List Price
TD-200	15-70 mmf.	\$0.40
TD-204	35-140 mmf.	.40
TD-211	35-220 mmf.	.45
TD-217	75-500 mmf.	.50
TD-222	115-700 mmf.	.60

## PRECISION CAPACITOR-ANALYZER AND RESISTANCE-BRIDGE



Your Eyes  
and the  
MAGIC TUBE  
see all,  
know all

*Quick as a Wink*

Capacity, power factor, leakage, resistance—directly on the panel. The highly-sensitive GE5 Cathode-Ray tube is used for balancing. Dials are color-coded to match settings. A refined and extended Wien Bridge, built into instantly useful form for the laboratory, shop and field.

### HERE IS WHY YOU WILL LIKE IT

- Measures Capacity of electrolytic, paper, mica and air condensers. Range .00001 to 50.0 mfd.
- Measures Power Factor of any electrolytic condenser, directly on a scale, in percentage.
- Measures Resistance—directly in ohms, of resistors of all types. Range 50 to 2,000,000 ohms.
- Measures Insulation Resistance of condensers and insulation. Tests are made at voltages up to 450 volts D.C., provided by built-in power supply.
- Detects Defective Condensers—directly indicates leaky, shorted, wrong capacity units, and "intermittents."
- Is a Useful Continuity Meter—for any circuits.
- Color-Coded Scales mean fool-proof operation. 45 linear inches of scales mean accuracy.
- Direct Reading of all measurements eliminates extra charts and annoyances.
- Cathode-Ray Tube Balancing—the magic GE5 tube gives sensitive visual balance "quick as a wink."
- Self-Contained—Compact—Portable.

TYPE CB-1-60  
110 Volts, 60 Cycles  
List Price, less tubes.....\$32.00

TYPE CB-2-U  
110-220 Volts, 25-60 Cycles  
List Price, less tubes.....\$40.00

Cat. No. List Price  
CBN Leakage Neon Tube..... \$1.00

## SOLAR "ELIM-O-STAT" MEANS INTERFERENCE ELIMINATION



To help eliminate disturbances, the Solar Manufacturing Corporation has developed a complete line of Elim-O-Stats to be used in connection with practically all types of electrical equipment. Some of these Elim-O-Stats are also excellent suppressors of noise when used at the radio receiver power-outlet. It is particularly important to note that Solar Elim-O-Stats have been designed to cope with radio interference encountered in the operation of sensitive radio receivers, including short-wave and all-wave types.

### RADIO RECEIVER ELIM-O-STATS

- RA—For radio sets, 110 A.C.-D.C. 5 amps.....List Price \$0.40
- RB—Particularly effective in certain circuits. More effective than RA, 110 A.C.-D.C., 5 amps.....List Price \$0.75
- RN—Especially effective for all-wave sets. Easy to connect, 110 A.C.-D.C., 3 amps.....List Price \$5.00

### APPLIANCE ELIM-O-STATS

- AD—For small appliances, 110 A.C.-D.C., 5 amps.....List Price \$1.25
- AF—More effective than AD. Can filter a number of appliances. Capacitive-inductive, 110 A.C.-D.C., 5 amps.....List Price \$4.00
- AG—Special for all-wave, 110 A.C.-D.C., 3 amps.....List Price \$5.00
- AH—Similar to AG. Larger current rating, 5 amps.....List Price \$6.50

*Reliable in Every Climate!*



DRY ELECTROLYTIC

EXACT REPLACEMENTS

0202

A.C.-D.C. (Various Sets): DC-0202, 14+8 Mfd., 200 V. + Dual 10 Mfd., 35 V., Silver.Cbd. Tube  $1\frac{1}{8}\times4$ . . . . \$2.20

0421

ATWATER KENT: DC-0421, Orig. No. 24955, 8+8+8 Mfd., 150 V. Cbd. Box,  $3\frac{1}{2}\times1\frac{1}{8}\times1\frac{1}{8}$ . . . . \$1.75

0424

DC-0423, 8+8 Mfd., 300 V. Rect. Can,  $2\frac{1}{2}\times2\frac{1}{8}\times1\frac{1}{8}$ . . . . \$1.70

DC-0424, Orig. No. 24602, 8+8+8 Mfd., 150 V. Cbd. Box,  $1\frac{1}{8}\times1\frac{1}{8}\times3\frac{3}{4}$ . . . \$1.75

BELMONT: DC-0429, Orig. No. 119-24, 4+5 Mfd., 200 V., Cbd. Tube,  $1\frac{1}{8}\times3\frac{3}{4}$ . \$ .90

0437

DC-0433, Orig. No. C-525-C, 5+25 Mfd., 100 V. Cbd. Box,  $2\frac{1}{2}\times1\frac{1}{8}\times1\frac{1}{8}$ . . . \$1.40

DC-0437, Orig. No. C-525-B, 5+25+5 Mfd., -100 V. Cbd. Box,  $2\frac{1}{2}\times1\frac{1}{8}\times1\frac{1}{8}$ . \$1.75

0440

DC-0439, Orig. No. 119-6, 8+8 Mfd., 400 V. Cbd. Box,  $3\frac{1}{2}\times2\times1\frac{1}{4}$ . . . \$1.50

CHEVROLET: DC-0440, Orig. No. 601814, 10+10 Mfd., 350 V. + Dual 4 Mfd., 50 V. Cbd. Box,  $2\frac{1}{2}\times2\times2$ . \$2.45

DC-0440-A, Orig. No. 30326, 8+8 Mfd., 350 V. + 12 Mfd., 25 V. Cbd. Box,  $2\frac{1}{2}\times2\times2$ . . . . \$1.95

0441

COLONIAL: DC-0441, Orig. No. R-8053, 8+8+8 Mfd., 200 V. Cbd. Box,  $2\frac{1}{2}\times2\frac{1}{2}\times1\frac{1}{8}$ . . . . \$1.90

DC-0442 (Silvertone), Orig. No. R14036, 6+6+5 Mfd., 200-100-25 V., Cbd. Box,  $\frac{7}{8}\times1\frac{1}{4}\times3$  + Flange. . . . \$1.25

0444

DC-0444, Orig. No. R14996, 6+8 Mfd., 200-350 V. Cbd. Tube,  $1\times3\frac{3}{8}$  + Bracket. \$1.25

DC-0445, Orig. No. R-8357, 8+20 Mfd., 150-20 V. Cbd. Box,  $2\frac{3}{8}\times1\frac{3}{4}\times1\frac{1}{4}$ . \$1.35

0446

DC-0446, Orig. No. R15117, 6 Mfd., 225 V., Cartridge,  $1\times2\frac{3}{4}$  + Bracket. \$ .80

DC-0447, Orig. No. R-8449, 8+8 Mfd., 150 V. + 35 Mfd., 20 V. Cbd. Box,  $2\frac{1}{8}\times2\times1\frac{1}{4}$ . \$2.10

0448

DC-0448 (Silvertone), Orig. No. R15401, 6+6+5 Mfd., 200-100-25 V., Cbd. Tube,  $1\frac{1}{4}\times3\frac{1}{2}$ . \$1.25

DC-0455, Orig. No. R-10673, 8+8+25 Mfd., 150-20 V. Cbd. Box,  $2\frac{1}{2}\times2\times1\frac{1}{8}$ . \$1.85

0462

CONTINENTAL (Admiral): DC-0462, Orig. No. P-950, 4+8 Mfd., 450 V., Cbd. Tube,  $1\frac{1}{4}\times3\frac{1}{2}$ . \$1.35

DC-0463, Orig. No. P358, 8+8 Mfd., 200 V., Cbd. Tube,  $1\frac{1}{4}\times3\frac{1}{2}$ . \$1.25

0467

CROSLEY: DC-0464, Orig. No. W-27676, 4+4 Mfd., 175 V., Cbd. Box,  $2\frac{3}{8}\times1\times1$ . \$ .85

DC-0467, Orig. No. W-27488, 8 Mfd., 25 V. + 6 Mfd., 400 V. Cbd. Box,  $2\frac{3}{4}\times1\frac{1}{8}\times1\frac{1}{4}$ . \$1.25

0469

DC-0469, Orig. No. W-25857-B, 8 Mfd., 25 V. + 8 Mfd., 200 V. Cbd. Box,  $2\frac{3}{4}\times1\frac{1}{4}\times1\frac{1}{4}$ . \$ .95

DC-0471, Orig. No. W-27677-A, 8+8 Mfd., 25 V. Cbd. Box,  $2\frac{3}{8}\times1\frac{1}{8}\times1\frac{1}{8}$ . \$ .75

0473

DC-0473, Orig. No. W-28978-A, 12 Mfd., 150 V. Rd. Can,  $2\frac{3}{8}\times1\frac{1}{8}$ . \$ .95

DC-0475, Orig. No. W-29097-A, 8+8+8 Mfd., 250-350-450 V. Inv. Can,  $4\frac{3}{8}\times1\frac{1}{2}$ . \$2.25

0423

0429

0433

0439

0440-A

0442

0445

0447

0455

0463

0464

0471

0475

0477

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0486

0490

0501

0503

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0532

CROSLEY (continued)  
DC-0477, Orig. No. W-29150-A, 7+6+8 Mfd., 450-400-25 V. Inv. Can,  $4\frac{3}{8}\times1\frac{1}{8}$ . \$1.95

DC-0479, Orig. No. W-29264-A, 16+16+8 Mfd., 125-100-20 V. Rd. Can,  $3\frac{1}{2}\times1\frac{1}{8}$ . \$2.35

DC-0481, Orig. No. W-29804, 8+16+16 Mfd., 125 V. Rd. Can,  $4\frac{1}{8}\times1\frac{3}{8}$ . \$2.50

DC-0483, Orig. No. W-30419, 8 Mfd., 250 V. + 8 Mfd., 20 V. Rd. Can,  $3\frac{1}{8}\times1\frac{3}{8}$ . \$1.60

DETROLA: DC-0486, 4+18+7 Mfd., 135 V. Cbd. Box,  $3\frac{1}{4}\times1\frac{1}{8}\times1\frac{1}{8}$ . \$1.75

DC-0488, Orig. No. 3229B, 6+16 Mfd., 100 V., Cbd. Tube w. Mtg. Ring,  $1\times4\frac{1}{2}$ . \$1.10

ELECTRICAL RESEARCH LABS. (ECLA-SENTINEL): DC-0484, Orig. No. 2279, 8+20 Mfd., 150 V. Cbd. Box,  $2\frac{1}{2}\times1\frac{1}{4}\times1\frac{1}{4}$ . \$1.50

DC-0490, Orig. No. 1110, 4 Mfd., 350 V., Cartridge,  $\frac{7}{8}\times2\frac{3}{4}$ . \$ .70

DC-0492, Orig. No. 2627, 8+4+5 Mfd., 450-450-50 V., Silver Tube,  $1\frac{1}{8}\times1\frac{1}{8}+$  Mtg. Ring. \$1.65

EMERSON: DC-0501, Orig. No. GGC-137, 8+16 Mfd., 175 V. + Dual 5 Mfd., 35 V. Cbd. Box,  $4\times1\frac{1}{8}\times1$ . \$2.10

DC-0502, Orig. No. KC-68, 4+8+16 Mfd., 175 V. Cbd. Box,  $4\frac{3}{8}\times1\frac{1}{2}\times1$ . \$1.80

DC-0503, Orig. No. 2DC-203, 8+16 Mfd., 150 V. Cbd. Box,  $2\frac{1}{2}\times2\times1$ . \$1.35

DC-0505, Orig. No. 2DC203, 8+16 Mfd., 150 V., Flanged Cbd. Box,  $1\times2\times2\frac{1}{2}$ . \$1.35

DC-0509, Orig. No. 2DC300, 8+16 Mfd., 150 V., Cbd. Tube w. Bracket,  $1\frac{1}{4}\times3\frac{1}{2}$ . \$1.35

FADA: DC-0511, Orig. No. 20-43, 16+16+5 Mfd., 100-100-25 V., Cbd. Box,  $1\frac{1}{8}\times2\times3$  + Flange. \$1.65

DC-0512, Orig. No. 4-1343MS, 10+10 Mfd., 25 V., Rd. Can,  $1\frac{1}{8}\times1$ . \$ .85

DC-0514, Orig. No. 4-1362-MS, 8+16 Mfd., 200 V. Rd. Can,  $1\frac{3}{8}\times3\frac{3}{8}$ . \$1.60

DC-0516, Orig. No. 4-1450-MS, 16+8 Mfd., 250 V. + 8 Mfd., 150 V. Rd. Can,  $1\frac{1}{8}\times4\frac{1}{8}$ . \$2.55

GALVIN: DC-0523, Orig. No. 1388, 8+8 Mfd., 350 V. + 25 Mfd., 25 V. Cbd. Box,  $2\frac{1}{4}\times1\frac{1}{2}\times1\frac{1}{2}$ . \$2.25

DC-0524, Orig. No. 8426, 4+8 Mfd., 350 V. + 5 Mfd., 200 V. Cbd. Box,  $1\frac{1}{8}\times1\frac{1}{8}\times2\frac{1}{2}$ . \$1.85

DC-0525, Orig. No. 1424, 2+4 Mfd., 250 V. Cbd. Box,  $1\frac{1}{8}\times1\times1$ . \$1.10

DC-0526, Orig. No. 34, 2.7+6.91+10 Mfd., 250-200-125 V. Cbd. Box,  $4\frac{1}{4}\times1\frac{1}{4}\times1$ . \$1.50

DC-0527, Orig. No. 1468, 6+4 Mfd., 200 V. + 6 Mfd., 125 V. Cbd. Box,  $2\frac{7}{8}\times1\frac{1}{2}\times1$ . \$1.70

DC-0528, Orig. No. 2188, 8+8 Mfd., 300 V., Std. Can,  $1\frac{1}{8}\times3\frac{1}{8}$ . \$1.50

DC-0529, Orig. No. 1540, 3+5 Mfd., 200 V. + 6 Mfd., 12 V. Cbd. Box,  $1\frac{1}{8}\times1\frac{1}{8}\times1\frac{1}{8}$ . \$1.45

GENERAL ELECTRIC: DC-0532, Orig. No. 3533, 4+4 Mfd., 175 V. Cart.,  $1\frac{1}{8}\times1$ . \$ .85

0479

0483

0488

0484

0492

0502

0505

0511

0514

0524

0526

0528

0529

Guaranteed!



# EXACT REPLACEMENTS

# DRY ELECTROLYTIC



**GENERAL ELECTRIC (continued)**  
 DC-0533, Orig. No. 7589, 4+4 Mfd., 450 V. Cbd. Box, 3 3/4 x 1 1/2 x 1 ..... \$1.20

**GRIGSBY-GRUNOW (MAJESTIC):**  
 DC-0534, Orig. No. 10536, 4+6+10 Mfd., 350-350-25 V. Cbd. Box, 4 1/4 x 1 1/4 x 1 1/4 ..... \$1.85

DC-0536, Orig. No. 11200, 2+4 Mfd., 450 V. Inv. Can, 4 1/2 x 1 1/2 ..... \$1.20

DC-0537, Orig. No. 11017, 16 Mfd., 450 V. Inv. Can, 4 3/4 x 1 1/4 ..... \$1.55

DC-0538, Orig. No. 10827, 8+8 Mfd., 350 V. + 10 Mfd., 25 V. Cbd. Box, 4 1/4 x 1 1/4 x 1 1/4 ..... \$2.05

DC-0539, Orig. No. 9661, 16+8 Mfd., 140 V. + 10 Mfd., 15 V. Cbd. Box, 4 1/4 x 1 1/4 x 1 1/2 ..... \$1.90

DC-0540, 8+16 Mfd., 125 V. Cbd. Box, 2 3/4 x 1 3/8 x 1 ..... \$1.35

DC-0541, 12+16 Mfd., 125 V. Cbd. Box, 2 3/4 x 1 3/8 x 1 ..... \$1.45

DC-0542, 16+16 Mfd., 125 V. Cbd. Box, 2 3/4 x 1 3/8 x 1 ..... \$1.55

DC-0543, Orig. No. 7824, 8 Mfd., 300 V. + 16 Mfd., 450 V. Cbd. Box, 4 x 1 3/4 x 1 1/2 ..... \$2.10

**GRUNOW:** DC-0544, Orig. No. 27151, 10+4+25 Mfd., 100 V. + 4 Mfd., 25 V. Rec. Can, 2 1/8 x 1 3/8 x 1 1/8 ..... \$2.20

DC-0544-A, Orig. No. 27151, 8+4+20 Mfd., 100 V. + 4 Mfd., 25 V. Cbd. Box, 2 3/8 x 1 3/4 x 1 1/8 ..... \$2.00

DC-0544-B, Orig. No. 30091-1, 8+8 Mfd., 500 V. + 8 Mfd., 525 V. + Dual 12 Mfd., 35 V. Cbd. Box, 2 3/4 x 2 3/4 x 1 3/8 ..... \$3.60

**INTERNATIONAL:** DC-0546, Orig. No. A-407, 4+4 Mfd., 175 V. Cbd. Box, 2 7/8 x 1 x 3/4 ..... \$3.85

DC-0548, Orig. No. A-412, 30+10 Mfd., 150 V. Cbd. Box, 3 1/2 x 2 x 3/4 ..... \$2.10

DC-0550, Orig. No. A-427, 3.5+3.5 Mfd., 120 V. + 3.5 Mfd., 35 V. Cbd. Box, 2 1/4 x 1 1/4 x 3/8 ..... \$1.30

DC-0552, Orig. No. A-430, 4+10+10 Mfd., 100 V. Cbd. Box, 3 3/4 x 1 1/4 x 1 ..... \$1.70

**NOBLITT-SPARKS (Arvin):** DC-0555, Orig. No. 17-4707, 12+12 Mfd., 25 V. F. B. Can, 3 3/4 x 3 1/2 ..... \$4.75

DC-0556, Orig. No. 17-4201, 12+4 Mfd., 100 V. Cbd. Box, 4 3/4 x 1 1/4 x 1 1/4 ..... \$2.00

DC-0558, Orig. No. 17-4184, 12+4 Mfd., 450 V. Inv. Can, 4 1/4 x 1 1/2 ..... \$2.15

DC-0560, Orig. No. 17-2253, 12+12 Mfd., 25 V. + 1.0 Mfd., 200 V. Cbd. Box, 2 1/2 x 1 3/8 x 1 ..... \$1.50

DC-0562, Orig. No. 17-4787, 2+6 Mfd., 450 V. Inv. Can, 3 1/2 x 1 1/2 ..... \$1.35

DC-0564, Orig. No. 17-4716, 12+12 Mfd., 450 V. Inv. Can, 4 3/8 x 1 1/2 ..... \$2.30

**RCA:** DC-0587, Orig. No. 66185, Dual 5+8+8 Mfd., 30-280-350 V. Cbd. Box, 4 1/2 x 1 3/4 x 1 1/4 ..... \$2.70

DC-0588, Orig. No. 3536, 5+5 Mfd., 25 V. Cart., 2 1/2 x 3/8 ..... \$3.75

DC-0590, Orig. No. 3538, 4+4 Mfd., 175 V. Cart., 1 3/4 x 1 ..... \$3.85



**RCA (continued)**  
 DC-0592, Orig. No. 6487, 4+4+10+4 Mfd., 350-250-150-25 V. Cbd. Box, 3 3/4 x 1 1/2 x 1 1/2 ..... \$2.00

DC-0594, Orig. No. 6492, 1.0 Mfd., 250 V. + 3.6 Mfd., 100 V. Cart., 1 1/2 x 2 1/2 ..... \$3.75

DC-0596, Orig. No. 7589, 4+4 Mfd., 450 V. Cbd. Box, 3 3/4 x 1 1/2 x 1 ..... \$1.20

**SPARTON (SPARKS-WITHINGTON):**  
 DC-0603, Orig. No. A-8907, 8 Mfd., 200 V. Cbd. Box, 2 3/4 x 1 3/8 x 1 1/8 ..... \$3.80

DC-0607, Orig. No. A-9550, 5+25+5 Mfd., 175 V. Cbd. Box, 1 3/8 x 1 3/8 x 2 1/8 ..... \$1.95

DC-0609, Orig. No. A-11093, 5+25+5 Mfd., 175 V. Cbd. Box, 2 3/8 x 2 1/8 x 1 1/8 ..... \$1.95

DC-0610, Orig. No. A-11223, 8+8 Mfd., 450 V. Inv. Can, 4 3/4 x 1 3/8 ..... \$1.60

DC-0612, Orig. No. A-10001, 6+10 Mfd., 250 V. + 4 Mfd., 200 V. Cbd. Box, 3/4 x 2 3/8 x 2 3/8 ..... \$1.90

**STEWART-WARNER:** DC-0613, Orig. No. 8565, 40 Mfd., 100 V. Cbd. Box, 2 3/4 x 1 1/4 x 1 1/4 ..... \$1.50

DC-0614, Orig. No. 81959, 4+13+7 Mfd., 150 V. Cbd. Box, 3 1/8 x 1 3/8 x 1 1/8 ..... \$1.95

DC-0615, Orig. No. 85768, 4 Mfd., 150 V. Rec. Can, 2 3/8 x 7/8 x 7/8 ..... \$3.70

DC-0616, Dual No. 83111, 8+8 Mfd., 225 V. + Dual 5 Mfd., 20 V. Cbd. Box, 4 1/4 x 1 3/8 x 1 1/4 ..... \$2.15

DC-0617, Orig. No. 85764, 40 Mfd., 100 V. Rec. Can, 2 3/4 x 1 1/4 x 1 1/8 ..... \$1.60

DC-0618, Orig. No. 83962, 10 Mfd., 25 V. + 5 Mfd., 350 V. Cbd. Box, 2 1/4 x 1 1/4 x 1 1/8 ..... \$1.35

DC-0619, Orig. No. 85692, 4 Mfd., 150 V. Cbd. Box, 2 3/8 x 3/8 x 3/8 ..... \$3.60

DC-0620, Orig. No. 83734, 8+8 Mfd., 350 V. Cbd. Box, 3 1/4 x 1 3/8 x 1 1/4 ..... \$1.50

DC-0622, Orig. No. 81901, 8 Mfd., 150 V. Cbd. Box, 3 1/2 x 1 1/4 x 1 ..... \$3.75

DC-0627, Orig. No. 83803, 12 Mfd., 25 V. Cartridge, 3/4 x 3 ..... \$3.55

DC-0629, Orig. No. 85583, 16 Mfd., 450 V. F. B. Can, 1 3/4 x 4 3/4 ..... \$1.55

DC-0632, Orig. No. 89053, 10 Mfd., 25 V. Cartridge, 3/4 x 3 ..... \$3.50

DC-0634, Orig. No. 89186, 4 Mfd., 150 V. Cartridge, 3/8 x 2 3/8 ..... \$3.60

DC-0636, Orig. No. 89755, 4 Mfd., 250 V. Cartridge, 3/4 x 2 3/4 ..... \$3.65

**UNITED MOTORS:** DC-0621, Orig. No. 6201, 4+12+4 Mfd., 150 V. Cbd. Box, 2 3/8 x 1 3/8 x 1 1/4 ..... \$1.70

DC-0623, Orig. No. 6508, 8+8 Mfd., 340 V. + Dual 4 Mfd., 25 V. Cbd. Box, 2 3/4 x 1 3/8 x 1 1/2 ..... \$2.25

**TRAV-LER:** DC-0640, Orig. No. 50A, 46+10 Mfd., 150-100 V. Silver Cbd. Tube, 1 3/8 x 4 1/8 ..... \$1.30

**ZENITH:** DC-0643, Orig. No. 525-P, 5+25+5 Mfd., 100 V. Cbd. Box, 2 3/8 x 1 3/4 x 1 ..... \$1.75



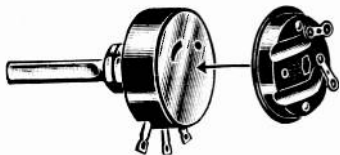
*Reliable in Every Climate!*

# NEW TYPE

# ELECTRAD

# VOLUME CONTROLS

## NEW ELECTRAD CARBON TYPE CONTROLS



Controls are of the perfected Graphite-on-Bakelite type. "W" after the specification number indicates wire-wound type. Resistance element is baked in to outer rim of Bakelite ring. Structure permits 300 degrees of continuous rotation. Special alloy floating contact travels without noise. Control is easily mounted and switch may be readily attached.

### TABLE OF SPECIFICATIONS

Spec. No.	Total Resist.	Taper	Spec. No.	Total Resist.	Taper
204W	10	D	281	~200,000	D
269W	20	D	998	250,000	A
270W	30	D	208	250,000	E
271W	50	D	203	500,000	E
272W	100	D	206	1,000,000	E
273W	200	D	999	2,000,000	E
274W	400	D			
991W	500	D			
282W	600	D			
275W	800	D			
276W	1,000	D			
992W	1,500	D			
232W	2,000	D			
233W	3,000	D			
277W	4,000	D			
234W	5,000	D			
278	5,000	E			
993W	6,000	D			
994W	7,500	D			
560	7,500	E			
283	10,000	D			
995W	10,000	D			
996	10,000	F			
240	10,000	C			
573	12,000	A			
875	12,500	H			
201	15,000	C			
899	20,000	C			
279	25,000	D			
280	25,000	E			
241	30,000	F			
997	40,000	A			
205	50,000	D			
202	75,000	A			
242	100,000	E			

Spec. No.	Total Resist.	Taper
894	500,000	E
895	1,000,000	E
898	2,000,000	E

List Price, Each ..... \$1.00

### TAPPED CONTROLS

Spec. No.	Total Resist.	Taper
894	500,000	E
895	1,000,000	E
898	2,000,000	E

List Price, Each ..... \$1.50

### FADER UNITS

Spec. No.	Total Resist.	Taper
890	30,000 each side	E
891	250,000 " "	E
892	500,000 " "	E
897W	200 " "	D

List Price, Each ..... \$1.50

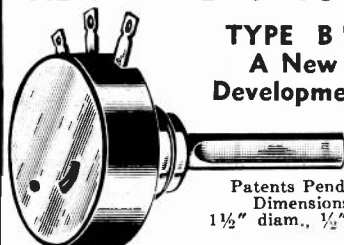
  

### DUAL CONTROLS P.P. GRIDS

Spec. No.	Total Resist.	Taper
893T	500,000 each unit	E
896T	250,000 " "	E
874T	2 Meg. " "	E

List Price, Each ..... \$2.50

## NEW ATTENUATORS



**TYPE BN**  
A New Development

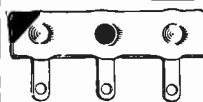
Patents Pending  
Dimensions  
1 1/2" diam., 1/2" deep

The Electrad BN Attenuators replace the Electrad Attenuator Types TN, LN and U. These new BN Attenuators have advantages of greater attenuation, true logarithmic attenuation and lower noise level.

This attenuator involves a new principle in design, which makes it possible to obtain a substantially constant impedance unit whose attenuation is linear in dB and continuously variable over the entire range.

The attenuation is accomplished by means of an infinitely variable ladder network. Total attenuation—60 DB. Rating 1 1/2 watts.

Type No.	Line Impedance in Ohms	List Price
BN 15	15	\$3.00
BN 50	50	3.00
BN 100	100	3.00
BN 200	200	3.00
BN 500	500	3.00
BN 3000	3000	3.00
BN 4000	4000	3.00
BN 5000	5000	3.00
BN 7000	7000	3.00
BN 10000	10000	3.00



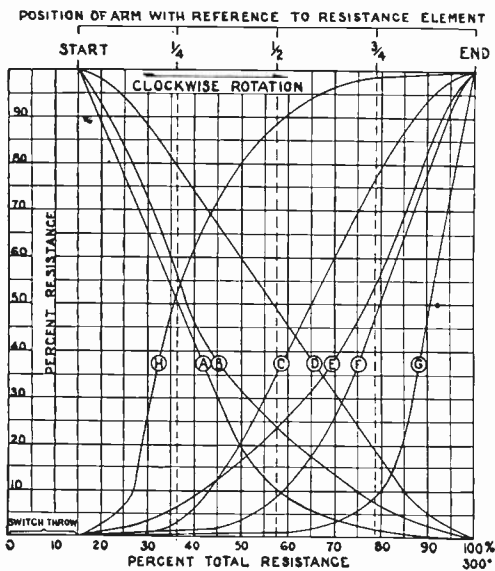
**CENTER TAP RESISTORS**  
Type FC

Moisture resistant.  
Center tap accurate to ± 1%.  
Size 1 1/2" long, 3/8" wide.

Ohms	Volts	Ohms	Volts
10	4.5	50	10
15	5.5	75	12
20	6.5	100	14
30	7.5	200	20

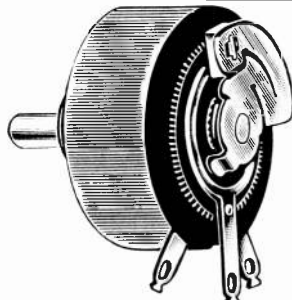
List Price, Each ..... \$0.25

## Standard Switches for Above Controls No. 101 ..... List Price, Each, \$0.50



## ELECTRAD Power Rheostats

Vitreous enameled rheostats applicable as speed controls for small motors, temperature controls and general voltage and current regulators. Ruggedly designed and constructed for long life at rated current loads. The contact shoe, of special metal graphite composition, contacts the wirewound element on the outside surface. This insures smooth, noiseless action and long life.



Type 2X 25-WATT RATING		Type 5X 50-WATT RATING		Type 10X 100-WATT RATING							
Ohm Amp.	Ohm Amp.	Ohm Amp.	Ohm Amp.	Ohm Amp.	Ohm Amp.						
1	5.0	60	.64	.5	10	40	1.1	1	10.0	60	1.29
1.5	4.0	80	.56	1.0	7	50	1.0	2	7.1	100	1.00
2	3.5	100	.50	1.5	5.8	75	.81	3	5.8	150	.81
3	2.9	150	.40	2	5	100	.70	6	4.1	200	.71
4	2.5	200	.35	2.5	4.5	150	.58	8	3.5	300	.58
6	2.0	300	.29	3	4.1	200	.50	10	3.2	600	.41
8	1.8	400	.25	4	3.5	300	.41	15	2.6	750	.36
10	1.6	600	.20	5	3.1	400	.31	20	2.2	1000	.32
15	1.3	750	.18	6	2.9	500	.31	30	1.8	1500	.26
20	1.1	1000	.16	8	2.5	800	.25				
30	.9	1500	.13	10	2.2	1000	.22				
40	.8	2000	.11	15	1.8						
				20	1.6						
				25	1.4						
				30	1.3						

List Prices

Up to 1 ohm ..... \$4.50  
Above 1 ohm-750 ..... 4.00  
Above 750-2000 ..... 4.50

List Prices

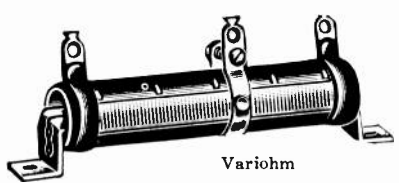
Up to 2 ohms... \$5.00  
Above 2-500 ..... 4.50  
Above 500-1000 ..... 4.75

List Prices

Up to 3 ohms... \$7.50  
Above 3-750 ..... 7.00  
Above 750-1500... 7.50

Also available in 150-watt rating up to 2000 ohms.

# TRUVOLT ELECTRAD VARIOHM



Variohm

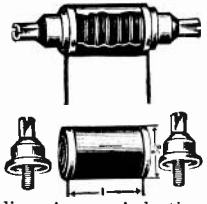
## VITREOUS ENAMELED ADJUSTABLE LUG RESISTORS

Monel metal end lugs are used to insure against weak connections with the resistance wire. The adjustable lug has been designed to provide long life without undue wear of the resistance wire. The ratings of Electrad Vitreous Resistors are based on a load in watts that will produce not more than 250°C. (450°F.) rise at the hottest point on a two-terminal resistor suspended in one foot free air. All tolerances ± 5%. Also available in 200 watts.

Type 2AV 5/8" x 2 1/2" TUBE 25 WATTS			Type 5AV 5/8" x 4 1/2" TUBE 50 WATTS			Type 8AV 5/8" x 6 1/2" TUBE 80 WATTS			Type 10AV 1 1/8" x 6 1/2" TUBE 100 WATTS		
Ohms	Max. Cur.	List	Ohms	Max. Cur.	List	Ohms	Max. Cur.	List	Ohms	Max. Cur.	List
5	2450	\$0.85	100	740	\$1.35	100	865	\$1.75	100	1000	\$2.00
10	1730	.85	500	330	1.35	500	545	1.75	500	445	2.00
25	1090	.85	1000	234	1.35	500	387	1.75	1000	100	2.25
100	545	.85	1500	190	1.35	1000	270	1.75	3000	180	2.00
500	245	.85	2000	165	1.35	1500	223	1.75	5000	140	2.00
1000	173	.85	3000	135	1.35	2000	190	1.75	10000	100	2.25
1500	141	.85	5000	104	1.35	2500	173	1.75	15000	81	2.25
2000	122	.85	10000	74	1.50	5000	122	1.75	20000	70	2.25
2500	109	.85	15000	60	1.50	10000	86	2.00	25000	63	2.25
5000	77	.85	20000	50	1.50	15000	70	2.00	30000	57	2.50
10000	54	.95	25000	45	1.50	20000	61	2.00	40000	50	2.50
15000	23	1.10	30000	43	1.70	30000	50	2.25	50000	44	2.75
20000	20	1.10	40000	37	1.70	40000	43	2.25	60000	36	2.75
25000	18	1.10	50000	34	1.70	50000	39	2.25	75000	36	2.75
						100000	16	2.50	100000	17.3	2.75

Type No. 3 EXTRA ADJUSTABLE LUGS —For 25, 50, 80-Watt Variohms ..... List Price, Each \$0.10  
 Type No. 6 EXTRA ADJUSTABLE LUGS —For 100- and 200-Watt Variohms ..... List Price, Each .15

## ELECTRAD PRECISION RESISTORS



Winding is non-inductive. Impregnated with moisture-excluding compound. Useful as voltmeter-multipliers, resistor-elements of laboratory instruments and custom-built apparatus. Accuracy of plus or minus 1%. Dimensions: 3/8" diameter x 1" long.

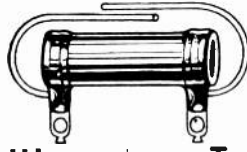
Ohms	MA.	List
1	1225	\$0.85
50	173	.85
100	122	.85
1000	38	.90
4500	18	1.00
5000	17	1.00
10000	12	1.00
15000	10	1.10
20000	8.6	1.35
25000	7.7	1.35
30000	7	1.35
40000	6.1	1.35
50000	5.5	1.35
75000	4.4	1.60
100000	3.8	1.85
125000	3.4	2.10
150000	3.1	2.35
200000	2.7	2.35
250000	2.4	2.60
300000	2.2	2.85
400000*	1.9	3.00
500000*	1.7	3.40
750000*	1.3	4.50
1000000*	1.0	5.25

\*These resistors are wound on 8 section forms to provide the higher dielectric strength necessary for 1 1/2 watt or 1000 volt rating in these values. Overall length for these types is 1 1/4 inches.

**FERRULE TERMINALS**  
 For resistors described above.  
 List Price, Per Pair—\$0.25

## ELECTRAD FIXED RESISTORS

Vitreous enameled resistors with monel metal lugs, rapid heat dissipation.



Have positive lug contacts, long life and permanent resistance value. Tolerance ± 5%.

Type 1 HJ 5/16" x 1 3/4" Ceramic Tube 10 WATT RATING			Type 2 HJ 1/2" x 2" Ceramic Tube 20 WATT RATING		
Ohms	MA.	Volts	Ohms	MA.	Volts
1	3150	3	25	895	22
10	1000	10	50	633	32
15	800	12	100	447	44
25	630	16	250	282	70
50	450	22	500	200	100
100	315	31	750	165	122
250	200	50	1000	141	141
500	141	70	1250	126	157
750	115	85	1500	115	173
1000	100	100	2000	100	200
1500	81	122	2500	89	222
2500	63	158	3000	81	240
5000	45	222	5000	63	315
10000	31	316	10000	44	440
15000	14	212	12500	40	500
20000	12	245	15000	37	550
25000	11	274	25000	15	388
			35000	13	458
			50000	11	548
			75000	9	670
			100000	7.5	775
			5-15000 ohms		List \$0.65
			15000-50000		List .75
			50000-100000		List 1.00
					List Price Each \$0.40

Type 5 HJ 3/4" x 4 1/2" CERAMIC TUBE, 50 WATT RATING					
Ohms	MA.	Volts	Ohms	MA.	Volts
20	1581	36	7000	84	590
50	1000	50	8000	79	630
100	707	70	10000	70	700
250	447	111	12000	65	780
500	316	157	12500	63	790
750	258	192	15000	57	850
1000	223	200	20000	50	1000
1500	182	275	25000	44	1100
2000	158	315	30000	22	670
2500	141	350	50000	17	865
3000	129	375	75000	14	1060
5000	100	500	100000	12	1225
5-5000 ohms					List Price Each \$1.10
5000-25000					List Price Each 1.25
25000-100000					List Price Each 1.45

## TRUVOLT ADJUSTABLE RESISTORS



Truvolt patented construction offers greater radiating surface, cooler operation, a heat conducting copper core which insures more uniform heat distribution. Tolerance ± 5%. Also available in 25-50 and 75-watt ratings.

### TYPE A 10 WATTS 3/8" x 1 3/4"

Type	Ohms	MA.	Volts
A-.02	2	2200	4.5
A-.1	10	1000	10
A-.15	15	815	12
A-.25	25	630	16
A-.5	50	450	22
A-.75	75	360	27
A-1	100	315	31
A-3	300	180	55
A-5	500	141	70
A-10	1000	100	100
A-15	1500	81	122
A-20	2000	70	141
A-25	2500	63	158
A-30	3000	56	173
A-50	5000	45	222
A-100	10000	31	316
A-150	15000	26	388
A-250	25000	16	400

List, All Values ..... Each \$0.50  
 Extra Sliders.....List, Each .10

New

**ELECTRAD**

**REPLACEMENT**

# Volume Controls

**USING NEW CONTACT CARBON CONTROL DEVELOPMENT**

Manufacturer	Control No.	List Price	Manufacturer	Control No.	List Price	Manufacturer	Control No.	List Price
<b>Philco—(Cont.)</b>			<b>R-C-A Victor—(Cont.)</b>			<b>RCA-Victor—(Cont.)</b>		
32	2495P	\$2.00	C-6-2, C-6-8, T-6-1, T-6-7, T-7-5, C-7-6, D-7-7, T-8-14, C-8-15, T-8-16, C-8-17, D-8-28, C-9-4, C-9-6, D-9-19 C-6-12, T-6-11	2536	\$1.50	R-78 Late, RAE 84 Sensitivity	2514P	\$2.00
34	2497P	2.00	H-6	2538P	2.00	80, 82, 86 Remote	724	1.50
35 Batt., 36 Batt.	975T	2.50	T-6-9	M2547P	2.00	RE-80 Phono	2369P	2.00
37	2487T	2.50	T-6-9	2544	1.50	RE-81 Phono	2429	1.50
38 Batt., 38 (Code 123), 38-A Batt.	2568	1.50	R-7-LW	2512	1.50	R-90, R-90-P, 260, 261, 280, R-90, R-90-P, 260, 261, 280, 380, 380-HR Sensitivity	2066P	2.00
38 (Code 124), 124	2419	1.50	BT-7-8, BC-7-9	2543	1.50	91-B	2511	1.50
39	2569P	2.00	Rad. 7-11, Rad. 7-26-X, Rad. 33, Rad. 33-DC, Rad. 51-DC, Rad. 18, Rad. 18-DC	402	1.50	R-92 Phono	2333G	1.50
40-DC	282W	1.00	7-23	240	1.00	R-93 Phono	2329P	2.00
44, 50A	2494P	2.00	Rad. 7-25, Rad. 7-54, Rad. 17, Rad. 41, Rad. 41-DC, Rad. 50	401	1.50	RC-98	2349P	2.00
46-DC, 46-E-DC	2090T	2.50	R-8, R-10, R-11, R-12, RE-18, RE-18-A, RE-19, R-21, RO-23, RAE-26, Superett B	385	1.50	R-104	783PG	2.00
50, 50-A	1823T	2.50	T-8-14, C-8-15, T-8-16, C-8-17, C-9-4, C-9-6, D-9-19	2551	1.50	M-107	2354P	2.00
53	832P	2.00	Tone Control	2534P	2.00	112	2367PG	2.00
54	2508P	2.00	D-8-28, D-9-19 Phono Control	2331	1.50	112A	2509PG	2.00
57	835P	2.00	CRD-9-AC, CRD-9-DC	406	1.50	M-116	2072	1.50
59	2507P	2.00	Phono Control	2545	1.50	121, 122, 221	917	1.50
60, 66, 261, 505	833P	2.00	9-18, 9-54, 9-56, Rad. 64	2548	1.50	121 Tone	919P	2.00
62	233W	1.00	T-10-1, C-11-1, D-11-2, C-13-2	380P	2.00	123	2071P	2.00
65	2567	1.50	T-10-1, C-11-1, D-11-2 Tone	2548	1.50	126-B	2341	1.50
70, 70-A Early, 90, 90-A—2, 45's, 270, 270-A, 370-A, 470, 470-A, 570, 570-A	1824T	2.50	R-11, RAE-26 Tone	5707T	3.50	128, 128-E, ACR-136, 143 (1934 prod.), 224, 224-E, 242 (1934 prod.), 322, 322-E, 341	2106	1.50
70 Late, 70-A Late, 90 (2-47's)	2506	1.50	C-13-2, C-15-3 Tone	2556	1.50	128, 224, 322 Tone	2555	1.50
73, 76	2081	1.50	R-14, R-15, RE-17, R-42, Rad. 48	400	1.50	135-B, 235-B, 236-B	2360	1.50
80	2087P	2.00	C-15-3	2073PG	2.00	135-B, 235-B Tone	2554	1.50
81	2503	1.50	Rad. 16, Rad. 20	2430	1.50	142-B, 241-B	2378	1.50
84	2502P	2.00	FT-16-A-1, PT-16-A-2, PT-17-A-1, PT-17-A-2	2073PG	2.00	143 (1934 prod.), 242 (1934 prod.), 341 Tone	2553P	2.00
90 (1-47), 91 (1-47), 490	2488	1.50	Phono Control	2430	1.50	143 (1935 prod.), 143 (1935 prod.), 242 (1935 & 1934 prod.), 243 (1935 prod.)	2541	1.50
92, 95	480	1.50	R-17-M, R-18-W, R-27, 102, RE-18, RE-18-A, RE-20	2073PG	2.00	Sensitivity	2061PG	2.00
97	2501P	2.00	PT-33 Phono	2334	1.50	210, 310	918	1.50
116-X (Code 122), 660	2403P	2.00	RE-20, RE-28, R-50, R-55, RAE-59, RAE-79	413	1.50	220, 222	920P	2.00
144, 506	2046P	2.00	Rad. 21, Rad. 22	2327	1.50	220 Tone	921P	2.00
200, 201, 509	2500P	2.00	R-22, 114	2065PG	2.00	240 (Early), 262 (1935 prod.), 263	2080	1.50
255	2404P	2.00	RAE-26, RAE-59, RAE-79	2428P	2.00	262 (1935 prod.), 263 Bass Tone	2542	1.50
268	2413	1.50	Phono	976PG	2.00	262 (1935 prod.), 263 Treble Tone	2550	1.50
280	2402P	2.00	R-28	2328PG	2.00	262, 263, 281, 381 Sensitivity	2368	1.50
281	2420P	2.00	R-28-BW	2075PG	2.00	281, 381	2343	1.50
281	2416P	2.00	R-28-P, RE-40-P, 110, 111, 115	2340	1.50	281, 381 Tone	2557	1.50
281	2486P	2.00	CE-29	2344	1.50	300	2336PG	2.00
281	2406P	2.00	M-30	2338	1.50	300 Phono	2353	1.50
620, 630	2356P	2.00	M-32	1706T	2.50	301 Phono	2352	1.50
623 Early	2407P	2.00	R-32, RE-45, R-52, RE-75, RE-154, RE-156	272W	1.00	321, 322, 322-E, 340, 340-E, 341 Phono	2370P	2.00
623 Late	2421P	2.00	33-A	2348P	2.00	330	2332	1.50
640	2405P	2.00	M-34, M-105	366T	2.50	331 Phono	2427P	2.00
641	2408P	2.00	R-34, R-35 Micro-Synchronous, R-39 Micro-Synchronous, RE-57 Micro-Synchronous, RE-73	381G	1.50	380, 380-HP	2351P	2.00
642	2412P	2.00	Rad. 35, Rad. 39, R-51, RAE-68, Rad. 80, Rad. 82, Rad. 86, Clock Model	773	1.50	AR-5006	2062P	2.00
643	2411P	2.00	E-35, RE-45, RE-75, E-135	725T	2.50	S. G. Batt.	205	1.00
650	2166P	2.00	Phono	2063	1.50	Radiola Superett Tone	379	1.50
651	2422P	2.00	R-35, 39, 57 Remote Control	743PG	2.00			
680 (Bass Compensation)	2410	1.50	R-37, R-37-P, R-38, R-38-P, 120, 124, 331	2339P	2.00			
680	2409	1.50	RE-40	2345	1.50			
700	2516P	2.00	RE-40, RE-40-P, 310 Phono	403	1.50			
800 (Code 122), 802	2517P	2.00	R-43, R-43 (Tone)	408	1.50			
805	2565	1.50	Rad. 41, Rad. 46, Rad. 47	661P	2.00			
806, 809	2566	1.50	Rad. 46-DC	404	1.50			
3005	2417P	2.00	RE-59 Phono	405	1.50			
N Ford Auto.	2079P	2.00	Rad. 63, Rad. 62	407	1.50			
			Rad. 64, Rad. 67	2335	1.50			
			Rad. 66	2377	1.50			
			R-70	2510	1.50			
			R-71-B	862	1.50			
			R-73, R-75, RE-80	2330	1.50			
			R-73-A, R-75-A	863	1.50			
			RE-73 Phono	2570	1.50			
			R-74 Tone	2127T	2.50			
			R-76, R-77 Tone	861	1.50			
			R-78 Early					
			R-78 Late, RAE-84					

New

ELECTRAD

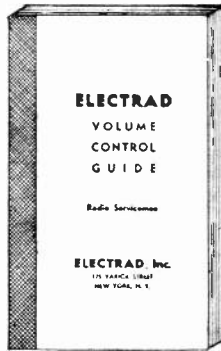
REPLACEMENT

Volume Controls

USING NEW CONTACT CARBON CONTROL DEVELOPMENT

Table listing manufacturers (Sears-Roebuck, Sparton, Stewart-Warner, Stromberg-Carlson, U.S. Radio and Television, Zenith) and their respective control models and list prices.

ELECTRAD 1937 VOLUME CONTROL GUIDE—FREE



A 100-page alphabetical listing of all radio sets for which Electrad Standard or Replacement Controls are made. Contains manufacturer's name, model number of set, resistance value of control, and list price.

Electrad, Inc., 175 Varick St., New York, N. Y.

### THE ABC OF GOOD VOLUME CONTROL

Highly polished non-rotating metal band contacts the resistor over a large area. Result, low contact resistance with light pressure, low noise level, no resistance change or wear.

Resistor strip on inner circumference of Bakelite case has longest possible length to insure smooth volume control and low noise level.

Oilless wood bearing provides the contact pressure and glides over the polished metal band when control is rotated. Permanently quiet and smooth turning.

These exclusive Centralab contact features are covered by U. S. A. patent Nos. 1653745, 1660879, 1704154, 2041380.

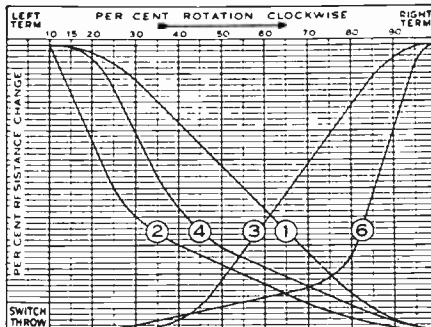
Case diameter 1 3/8". Depth 9/16". Soft aluminum shaft 2 1/4" long, milled flat. May be cut to exact length needed.

Catalog Without Switch	Number With Switch	Usual Circuit Location	Resistance Ohms	Curve
72-118	62-118	Voltage Divider	500	1
72-107	62-107	Voltage Divider	1000	1
72-101	62-101	Voltage Divider	2000	1
72-108	62-108	Voltage Divider	3000	1
72-109	62-109	Voltage Divider	4000	1
72-110	62-110	Voltage Divider	5000	1
70-204	52-204	Antenna Shunt	5000	6
72-139	62-139	Voltage Divider	7500	1
72-114	62-114	Antenna, C-bias	10000	1
72-113	62-113	Antenna, C-bias of One Tube	10000	3
70-205	52-205	Antenna, C-bias of Two Tubes	10000	4
72-100	62-100	Antenna Shunt	10000	6
72-115	62-115	Antenna, C-bias	15000	3
79-006	99-006	Antenna, C-bias	15000	4
72-119	62-119	Antenna, C-bias	20000	3
72-111	62-111	Voltage Divider	25000	1
70-206	52-206	C-bias	25000	4
72-102	62-102	Antenna Shunt	25000	3
72-103	62-103	Voltage Divider	50000	1
72-117	62-117	Tone Control	50000	6
72-123	62-123	Tone Control	75000	6
70-202	52-202	C-bias	75000	4
72-104	62-104	Voltage Divider	100000	1
72-122	62-122	Audio Grid or Tone	100000	6
72-136	62-136	Audio Grid or Tone	150000	6
72-120	62-120	Audio Grid or Tone	200000	1
72-131	62-131	C-bias	200000	4
72-121	62-121	Audio Grid or Tone	250000	6
72-138	62-138	Tapped Audio Grid	250000	6
72-105	62-105	Audio Grid or Tone	500000	6
72-106	62-106	Voltage Divider	500000	1
70-203	52-203	Series in R. F. Plate	500000	2
72-134	62-134	Tapped Audio Grid	500000	6
72-140	62-140	Audio Grid or Tone	750000	6
72-116	62-116	Audio Grid or Tone	1 Meg.	6
72-135	62-135	Tapped Audio Grid	1 Meg.	6
72-137	62-137	Audio Grid or Tone	2 Megs.	6
72-132	62-132	Audio Grid or Tone	3 Megs.	6

STANDARD RADIOHM (Less Switch).....\$1.00 | STANDARD RADIOHM (With Switch).....\$1.50

### STANDARD RESISTANCE CURVE CHART

Every Centralab Control is made to a particular curve that is numbered and charted on the right. This chart indicates the percent resistance change with rotation. The ten heavy vertical lines represent every 10% the knob is rotated, the LEFT TERM indicating the minimum volume end of rotation; maximum volume is indicated at the right. The figures at the top show percentage of clockwise rotation. The usual application of the curves are as follows: (1) Voltage divider with uniform resistance change, (2) "C" bias rheostat, (3) Antenna and "C" bias of one tube, (4) Antenna and "C" bias of two tubes, (6) Audio grid, antenna shunt, or tone control. When ordering volume controls refer to this chart to obtain the proper one for your needs.

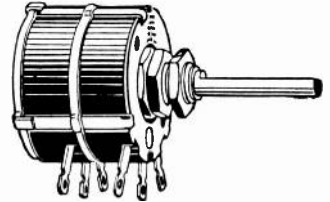


### TWIN REPLACEMENT CONTROLS

Two resistances completely insulated from each other and from the shaft and bushing.

There are so many possible combinations in Twin Controls that most replacements are adapted to only one model set. The ones listed are the most popular and the ones used most frequently.

74-601	—Back base	25,000 Ohms
	—Shaft base	10,000 Ohms
74-602	—Back base	50,000 Ohms
	—Shaft base	10,000 Ohms
4010805	—Both Bases	100,000 Ohms
4010807	—Both Bases	250,000 Ohms
4010804	—Both Bases	500,000 Ohms
List Price		\$2.50



### COMMERCIAL "L" PAD

10-Watt

Suitable for output circuits where the power is not more than 10 watts. Generally used as a voice-coil control for Dynamic Speakers. When used in multiple circuits the unit gives a constant impedance, and thus does not affect the adjustment of other sections of the circuit. The wire-wound resistance units permit maximum power-rating. Diameter 3 1/2". Depth 2".

Part No.	Resistance in Ohms	Part No.	Resistance in Ohms
94-001	15	94-004	200
		94-005	500
List Price			\$5.00



### CONSTANT IMPEDANCE "T" PAD

Containing 2 wire-wound sections, gives constant resistance to the input and output circuits. A tapered graphite section gives even attenuation of volume level. Dust and moisture-proof case. Furnished with Bakelite knob. Shipping weight 8 oz.

Part No.	Ohms	Part No.	Ohms
93-003	200	93-002	500
List Price, Each			\$7.00



### POWER RHEOSTATS

Maximum dissipation by complete air circulation. Core and frame is all metal insulated with treated asbestos. Black bakelite knob. Bushing 3/8" x 1/2" long. Shaft 1/4" x 1/2" long. Resistance strip 2" diameter.

25 WATTS		GIANT—50 WATTS	
Part No.	Resistance in Ohms	Part No.	Resistance in Ohms
48-002	2	48-851	5000
48-006	6	List Price, Each	\$2.75
48-150	150	GIANT—75 WATTS	
48-400	400	47-277	50
48-810	1000	47-278	150
48-850	5000	47-279	300
List Price, Each	\$2.00	47-280	500
		47-281	1000
		List Price, Each	\$3.00

### SENIOR GAIN CONTROLS

Dust-proof case and fully insulated shaft and bushing are used. Control gives a uniform attenuation for audio amplifiers. Case 2 3/4" x 1 3/8". Bushing 3/8" x 3/4" long. Shaft 1/4" x 3/16". Complete with dial and knob.



Part No.	Ohms	Attenuation
1-010-850	1,000,000	50 Db.
1-010-851	500,000	50 Db.
List Price, Each		\$5.00



# Centralab

## Special Replacement Controls

Exact duplicates of the original in mechanical and resistance specifications, but not necessarily in appearance

Some model radio receivers require controls with dual resistances or special mechanical requirements, and these are listed as special controls. Other receivers, such as Philco, Majestic and RCA have had such wide spread distribution that controls especially made for them are preferred by the service man.

These are also listed under Centralab Special Replacements although a standard replacement will frequently answer the purpose equally well by simply cutting the shaft to proper length. Where either a special or standard replacement may be used, both are listed in Centralab's 1936 Guide.

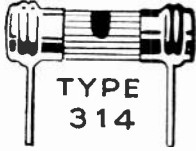
Make and Model No.	Part No.	Price	Make and Model No.	Part No.	Price
All American 70, 73-75	70-501	\$2.50	General Electric M51, M56	2211903	2.00
All American B-80	74-548	3.00	General Electric Co., J-125 Twin	1210900	2.50
All American Model "D" Twin	5011911	3.00	General Motors A, B, 150, 160	74-514	2.50
Allied Radio Corp. S. G. 9	75-525	3.00	General Motors A, B, 150, 160, 1001 (Tone)	70-019	1.50
Allied Radio Corp. S. G. 10	82-028	2.00	General Motors 1001, 160	74-517	\$2.50
American Bosch 28, 29	72-207	1.50	General Motors R-1-A (Converter) 281	74-532	2.50
American Bosch 48, 49, 18AA Late	74-510	2.50	General Motors Radio Corp. S-4A	52-011	2.00
American Bosch 54, DC	72-167	1.50	General Motors, 18, 110, 120A, 130, 140, 180,		
American Bosch 58, 49	74-557	2.50	190 Above serial 29M	74-535	2.50
American Bosch 60, 61, 62	72-166	1.50	General Motors Radio Corp., 110, 120, 130		
American Bosch 48, 49 Early	74-501	2.50	Twin Late Series	74-539	2.50
Atwater Kent Co. 37, 38, 40, 41, 42, 43, 44, 15,			General Household Utilities Co., Chassis 11-C	1210010	1.50
47, 52, 53	72-112	1.50	General Household 580, 581, 640, 641, 680, 681,		
Atwater Kent Early L-1, L-2, F, P	1010902	2.50	Chassis 50, 67, 6J	2211906	2.00
Atwater Kent Co. Late F Series, L2, P, 75, Q2	71-521	2.50	General Household Utilities Co., 901, 902, S.A.	2211905	2.00
Atwater Kent Co. 80, 83	2011905	2.00	General Household 660, Chassis 6A, 6C, 650,		
Atwater Kent Co. 636	51-122	1.50	651, 661, 662	2211901	2.00
Atwater Kent 61, 61C, H-1, H-2, 72	25-426	2.50	General Household 620, 621, 720, 721, Chassis		
	1210007	1.50	6HR, 7DB	2015900	2.00
Belmont Radio Corp., 404	2011338	2.00	General Household 750, 751, 752, 753, 7D	2211902	2.00
Belmont Radio Corp., 880 Auto	2211004	2.00	General Household 1241, Chassis 12A	1210010	1.50
Belmont Radio Corp., 541	2211011	2.00	Goodrich Silvertown Tire & Rubber Co.		
Belmont Radio Corp., 640	2211018	2.00	"Mantola"	55-003	2.00
Belmont Radio Corp., 555	2211019	2.00	Graybar Electric Co. 678	74-526	2.50
Belmont Radio Corp., 755	2211020	2.00	Graybar Electric Co. 989	1210900	1.50
Belmont Radio Corp., 775	2211022	2.00	Grebe A. H. Early SK4, AC	74-515	2.50
Belmont Radio Corp., 1070	72-169	1.50	Grigsby-Grunow-See Majestic		
Bremer-Tulley, 7-70, 7-71	55-004	2.00			
Brunswick-Balke 10, Midket	55-010	2.00	Howard Radio Co., "M"	72-185	1.50
Bulova Watch Co., M-501	74-524	2.50	Howard Radio Co., 846, 1846	1010557	1.50
Bulova Watch Co., Clock Model	74-558	2.50	Howard Radio Co., 99	2011409	2.00
Canadian Westinghouse 80	25-417	2.00	Jackson Bell Jewell 547	55-014	2.00
Canadian Westinghouse 71 Early	55-004	2.00	Jesse French & Sons G, Jr. H-1	75-507	3.00
Colonial Radio S.G.-32 AC	82-028	2.00	Kennedy, Collin B. 12 S.G., 10, 20	76-008	2.50
Columbia Radio C-31-101			Kimball K	74-513	2.50
Columbia Screen Grid 8-10 Oxford Chromo-			King Mfg. Co. 109, 100P	61-001	1.50
tropic			Kingston Products Co., 4 T Batt., 400, 400A		
Crosley Radio Corp., 41-A, 42, 61, 602, 608,			Coronado	1010220	1.50
609, 610, 704, 705, 706	51-037	1.50	Kolster Radio Corp., K42 to 45	76-006	2.50
Crosley Radio Corp. 40S, 41S, 42S, 82S, 71A	70-503	2.50	Kolster Radio Corp. 930 Phono. Comb.	75-525	3.00
Crosley Radio Corp. 27, 28, 30-31, 33, 34, 40,			Lincoln Radio Corp. S. W. 33	74-576	2.50
41, 42, 82-S, 315	72-019	1.50	Majestic (Grigsby-Grunow) 70, 70-B, 71, 72	72-180	1.50
Crosley Radio Corp. 55, 126	72-055	1.50	Majestic (Grigsby-Grunow) 180, 181 Combination	74-561	2.50
Crosley Radio Corp. 75, 76DC, 77	72-047	1.50	Majestic (Grigsby-Grunow) 90, 90-B, 91, 92,		
Crosley Radio Corp. 143-1	2013901	2.00	93 Volume	70-063	1.50
Crosley Radio Corp. 40S, 41S, 42S, 82S, 71A,			Majestic (Grigsby-Grunow) 90, 90-B, 100,		
Late Models	74-511	2.50	100-B, 91, 92, 101, 103 Equalizer	78-007	1.50
Crosley 128	2115900	2.00	Majestic (Grigsby-Grunow) 100, 101 Combination	74-562	2.50
Crosley 124, 125	2111905	2.00	Majestic (Grigsby-Grunow) 100-B, 102, 103	25-421	2.50
Crosley Radio Corp., 84	72-048	1.50	Majestic (Grigsby-Grunow) 130-A, 130, 131,		
Crosley Radio Corp., 804 Spec.	1010987	1.50	132	72-181	1.50
Earl Radio 21, 22 AC	25-416	2.50	Majestic (Grigsby-Grunow) 50, 51, 52	74-523	2.50
Earl Radio 271	76-006	2.50	Majestic (Grigsby-Grunow) 20, 31, 230-A	75-537	3.00
Earl Radio Mfg. 31, 32S, 33, 315, 317,	74-506	2.50	Majestic (Grigsby-Grunow) 20, 21, 22, 23	2011908	2.00
Edison Radio C-1, C-2, R1, R2, SRC3,			Majestic (Grigsby-Grunow) 60, 160, 61, 62,		
M-5-6 Front	24-008	1.50	163	72-073	1.50
Edison Radio C-1, C-2, R1, R2, SRC3,			Majestic (Grigsby-Grunow) 15, 150, 151, 153,		
M-5-6 Rear	26-021	1.50	154, 156	55-010	2.00
Edison Radio C-4, R4, R5, R6, R7, R12,			Majestic (Grigsby-Grunow) 15-B	55-010	2.00
Abbey Jr.	74-512	2.50	Majestic (Grigsby-Grunow) 155	55-010	2.00
Edison Radio R6, R7, Early Model	64-306	2.50	Majestic (Grigsby-Grunow) 15, 55, 150 Tone,		
Edison Radio Phono. Comb., 8-P	76-003	3.00	56, 57, 58	41-060	1.50
Electrical Research 14A, 27A	5011007	3.00	Majestic (Grigsby-Grunow) 25, 251, 253, 254,		
Emerson Radio & Phono. Corp., D-85, 39-59			Early (Tone) 25B, 251B, 253B, 254B	41-065	1.50
Twin, AC & DC	5011910	3.00	Majestic (Grigsby-Grunow) 25-B, 251-B,		
Emerson Radio & Phono. Corp. F6D	5015001	3.00	253-B, 254-B, 35, 351, 353	2011910	2.00
"Erla," Electrical Research 225, 271, 271-A	75-506	3.00	Majestic (Grigsby-Grunow) 35, 351, 353		
Fada Radio & Electric Co. 30, 30A, 31, 10, 11,			(Tone)	41-085	1.50
Fada Radio & Electric Co. 50, 70, 71, 72	70-017	1.50	Majestic (Grigsby-Grunow) 55, 56, 57, 58	55-010	2.00
Fada Radio & Electric Co. 25, 15M, 15MZ,	70-059	1.50	Majestic (Grigsby-Grunow) 200, 201, 203, 204	72-156	1.50
Fada Radio & Electric Co. 16, 17, 32, 18DC	79-019	1.50	Majestic (Grigsby-Grunow) 210, 211, 214, 215	72-155	1.50
Fada Radio & Electric Co., 35, 35Z, 75, 77	72-001	1.50	Majestic (Grigsby-Grunow) 220, 221, 223	72-163	1.50
Fada Radio & Electric Co. 35B, 40 AC, 35C	72-168	1.50	Majestic (Grigsby-Grunow) 260, 300, 300-A,	62-064	2.00
Fada Radio & Electric Co. 43, 76Z, KF, KG	74-513	2.50	310-A, 310-B, 77, 291, 292, 294, 303,		
Fada Radio & Electric Co. 35B, Wire wound	74-541	2.50	304, 307, 311, 314, 315, 321, 336	1010961	1.50
Fada Radio & Electric Motor set	76-007	2.00	Majestic (Grigsby-Grunow) 290, 310-A, 310-B,		
Federal Radio Corp. L	2011315	2.00	291, 293, 294, 311, 314, 315 (Tone)	33-015	2.00
Freed-Eiseman Radio NR-90S, 657, 879	74-514	2.50	Majestic (Grigsby-Grunow) 300, 300-A, 320,		
Freed-Eisemann Radio Corp., NR55, 56	74-506	2.50	330, 77, 303, 304, 307, 324, 321, 336		
Freshman Radio 3Q, 15, 16, N12, 17, 2M, QD,	25-416	2.50	(Tone)	33-036	2.00
16-S	41-200	1.50	Majestic (Grigsby-Grunow) 340, 360, 390, 344,		
Freshman Radio 21, AC, 32	25-416	2.50	363, 393	51-123	1.50
Galvin Motorola K-40	70-036	1.50	Majestic (Grigsby-Grunow) 370, 371, 373	2112901	2.00
General Electric T-41, RC3	74-526	2.50			
General Electric J-80, J-85, S-132, K-62, K-82	1210900	1.50			
General Electric B-1	72-013	1.50			
General Electric 106	1220002	1.50			

Make and Model No.	Part No.	Price	Make and Model No.	Part No.	Price
Majestic (Grigsby-Grunow) 380, 381	2111906	\$2.00	R.C.A. Victor M-143, M-242, M-243, M-226	1210006	1.50
Majestic (Grigsby-Grunow) 400, 411, 411-A, 413, 413-A	37-006	2.00	R.C.A. Victor 262	1220002	\$1.50
Majestic (Grigsby-Grunow) 120, 121	74-548	2.50	R.C.A. Victor 119, 125	2211014	2.00
Majestic (Grigsby-Grunow) 120-B, 123	74-558	2.50	R.C.A. Victor 118, 211	2211903	2.00
Majestic (Grigsby-Grunow) 110, Auto	72-088	1.50	R.C.A. Victor R-90-P, 261, 380	2211904	2.00
Majestic (Grigsby-Grunow) 111, Auto	30-017	1.50	R.C.A. Victor C6-2, C7-6, C8-15, C8-19, C8-20, C9-4, D7-7, D9-19, T6-1, T6-7, T6-8, T7-5, T8-14, T8-18, T9-10	1210912	1.50
Majestic (Grigsby-Grunow) 116, Auto	28-046	1.50	R.C.A. Victor C11-1, C11-3, C13-2, D11-2, T10-1	1210913	1.50
Majestic (Grigsby-Grunow) 66, Auto	2011093	2.00	R.C.A. Victor C15-3, C15-4, D22-1	1210914	1.50
Majestic (Grigsby-Grunow) 66 (Tone), Auto	1010111	1.50	Rogers Majestic 15	41-060	1.50
Majestic (Grigsby-Grunow) 440	2111037	2.00	Rogers Majestic 15	55-010	2.00
Majestic (Grigsby-Grunow) 460	1010962	1.50	Rogers Majestic 25	55-014	2.00
Majestic (Grigsby-Grunow) 460 (Tone)	2012900	2.00	Scott Transformer Co. DeLuxe A. V. C. Super	1210901	1.50
Majestic (Grigsby-Grunow) 490	1010107	1.50	Sears Roebuck & Co., 1506	55-039	2.00
Majestic (Grigsby-Grunow) 500	2012901	2.00	Sears, Roebuck & Co., 1721, 1722, 1732, 1721X, 1722X, 1732X	4010943	2.50
Majestic (Grigsby-Grunow) 570 (Tone)	2012020	2.00	Silver-Marshall Masterpiece "Q"	1210911	1.50
Majestic (Grigsby-Grunow) 600	33-129	2.00	Silver-Marshall "Y," "X"	33-003	2.00
Majestic (Grigsby-Grunow) 800	1010965	1.50	Sparks-Withington (Sparton) 750D, 870, 69, 79-A, 101, 110AC, 301, 589, 591, 593, 930, 931	1010963	1.50
Majestic (Grigsby-Grunow) 800 (Tone)	2011912	2.00	Sparton 89-A, 111-A, 564, 570, 574, 600, 610, 620, 737, 740, 870	1010964	1.50
Majestic (Grigsby-Grunow) 118 Ford	1010983	1.50	Sparton 410-20-30	75-543	3.00
Majestic 25, 251, 253, 254 Early	55-014	2.00	Splitdorf—See Edison	75-507	3.00
Montgomery-Ward & Co. AE-10	74-509	2.50	Sterling Radio F-1-60, 8 Tube, G	28-031	1.50
Montgomery Ward & Co. Monarch, Air Line	79-014	1.50	Stewart-Warner Corp., 900 Series	30-010	1.50
Montgomery Ward & Co., 1711	62-010	2.00	Stewart-Warner Corp. R-100 Series, 950, 935, 110 Series	4010901	2.50
Montgomery Ward 07A, 62-103-105	1010033	1.50	Stewart-Warner 950 DC	1210003	1.50
Montgomery Ward & Co., 62-187	5011004	3.00	Stromberg-Carlson Tele. 635, 636	72-161	1.50
Montgomery Ward & Co., 197 Triple	7011001	3.00	Stromberg-Carlson Tele. 635, 636	72-162	1.50
Montgomery-Ward Co. 77, 95, 62-120	306-002	2.00	Stromberg-Carlson Tele. 641, 42, 52, 54	72-159	1.50
Montgomery Ward & Company 2955	25-423	2.50	Stromberg-Carlson Tele. 641, 42, 52, 54	72-160	1.50
National Carbon Co. 50 Series	74-503	2.50	Stromberg-Carlson Tele. 846, 848	72-205	1.50
Philco 14, 49	2221900	2.00	Stromberg-Carlson Tele. 846, 848	72-206	1.50
Philco 15, Late, 91	1210907	1.50	Stromberg-Carlson Tele. 12, 14	72-042	1.50
Philco 15 Early	1010979	1.50	Stromberg-Carlson Tele. 638	72-210	1.50
Philco 16	2211900	2.00	Stromberg-Carlson Tele. 638, 39, 40	72-209	1.50
Philco 17	2221903	2.00	Stromberg-Carlson 48, 49, 50, 51	75-545	3.00
Philco 18, 118	2221900	2.00	Temple Corp. 8-61-81-91, 5-55	74-515	2.50
Philco 19 Vol., Late	1210906	1.50	Transformer Corp. 40, 100, G-102	55-004	2.00
Philco 20, 21, 41 DC, 42 DC, 77	74-579	2.50	Transformer Corp. 300, 340	306-001	2.00
Philco 35, 36 (Batt.)	4010907	2.50	Transformer Corp. AC-220, 25-220	51-084	1.50
Philco 30, 96, 111, 111A, 112, 112A	72-177	1.50	Wells-Gardner (Gulbransen) 9-in-line Early	78-005	1.50
Philco 37 (Batt.)	74-557	2.50	Wells-Gardner (Gulbransen) WG24, 291, CG, 9-in-line, Club, Late	74-509	2.50
Philco 38, 38A (Batt.)	1010980	1.50	Wells-Gardner (Gulbransen) 80-8 Tube	25-423	2.50
Philco 39	2025900	2.00	Wells-Gardner (Gulbransen) 10- 13, Series, Phono, 237J	55-005	2.00
Philco 70 Lacy "X," 370	75-544	3.00	Wells-Gardner (Gulbransen) 5 Tube DC, 90DC Series	74-555	2.50
Philco (40) D.Z.	1010977	1.50	Wells-Gardner (Gulbransen) 022, 122 Vol.	72-174	1.50
Philco 43	2021908	2.00	Wells-Gardner (Gulbransen) 022, 122 N.S.	51-058	1.50
Philco 44, 118	2021907	2.00	Wells-Gardner (Gulbransen) 06A, 5E Series	306-002	2.00
Philco 46 (D.C.)	74-560	2.50	Wells-Gardner (Gulbransen) 06A, 10A, Tone Series	41-148	1.50
Philco 47 (D.C.) 71	51-095	1.50	Wells-Gardner & Co., 27A	1010033	1.50
Philco 48 (D.C.) 51, 51A, 52	51-076	1.50	Wells-Gardner & Co., 20B	2011010	2.00
Philco 50, 50A	74-559	2.50	Wells-Gardner & Co., 6 U Auto	2011059	2.00
Philco 53	2021904	2.00	Wells-Gardner & Co., 56T1, 56T2, 56T3	2011125	2.00
Philco 54	2011911	2.00	Wells-Gardner & Co., 5G	2215001	2.00
Philco 57	2021905	2.00	Wells-Gardner & Co., OD, 2C, 7G	5011005	3.00
Philco 60, 261	2021001	2.00	Wells-Gardner & Co., 6T Triple	7011001	3.00
Philco 65	1010978	1.50	Wells-Gardner & Co., 6R, 6S, Cadillac (Car Radio)	9011005	2.00
Philco 66	2021001	2.00	Wells-Gardner & Co., 6Q	9011074	2.00
Philco 70, 90 (2-47's)	1010975	1.50	Wells-Gardner & Co., 60, 63, 72, 360	79-014	1.50
Philco 70, 90 (2-45's), 470, 70A	74-579	2.50	Wells-Gardner & Co., 10A, 20A, 30A	1010012	1.50
Philco 76	1010982	1.50	Westinghouse Electric WR-4	74-526	2.50
Philco 80	2021906	2.00	Westinghouse Electric WR-2	72-013	1.50
Philco 81, 81A	1020903	1.50	Westinghouse Electric & Mfg. Co., WR-15	1210900	1.50
Philco 84, 84B	2021909	2.00	Zenith Radio 50, 60, 70-1-2-3-7, 712-22-32-72, 70 Series 41, 42, 412, 422	75-614	3.00
Philco 86, 87, 511	24-016	1.50	Zenith Radio 52, 53, 54, 57, 522-32-42, 70, 102, 112, 212, 11, 12	62-042	2.00
Philco 89, 19 Early	2011921	2.00	Zenith Radio 2017	75-503	3.00
Philco 89 Late	1020904	1.50	Zenith Radio Corp. 35, 730	306-002	2.00
Philco 89, with Switch Type Control	2021911	2.00	Zenith Radio Corp., 205-7-H, Hudson and Essex Car Radio	41-148	1.50
Philco 90 (1-47), 490	1010976	1.50	Zenith Radio Corp., 5903	1010086	1.50
Philco 91	1010981	1.50	Zenith Radio Corp., 1601	1010358	1.50
Philco 95	24-264	1.50	Zenith Radio Corp., 2057-H, Hudson & Essex Car Radio	1010447	1.50
Philco 116B (Code 121), 201, 16	2221906	2.00	Zenith Radio-Ford Car Radio	2011075	2.00
Philco 116X (Code 122), 660	2221908	2.00	Zenith Radio Corp., 860, 5617	2011113	2.00
Philco 144	2221902	2.00	Zenith Radio Corp., 5510	2011242	2.00
Philco 29, 45, 28	2221901	2.00	Zenith Radio Corp., 5619	2011301	2.00
Philco 200, 201	2221910	2.00	Zenith Radio Corp., 5903-A, 5904	2011344	2.00
Philco Ford Car Radio N. G. 122	2221904	2.00	Zenith Radio Corp., 5704-A	2015002	2.00
Philco "G" Dodge Car Radio	2011922	2.00	Zenith Radio Corp., 5619A	2015026	2.00
Philco 805 Car Radio	1010988	1.50	Zenith Radio Corp., 5309, 95-54, 9 Tube	2015027	2.00
Philco 806, 809 Car Radio	1010989	1.50		2211017	2.00
Philco 610	2021910	2.00			
Philco 611 AC-DC	2011923	2.00			
Philco 620, 630	2221905	2.00			
Philco 640	2221909	2.00			
Philco 650	2221907	2.00			
Philco 623 (Batt.)	2015901	2.00			
Philco 641	2211908	2.00			
Philco 643	2225900	2.00			
Philco 700	1020906	1.50			
Philco 800 (Code 122), 802 Car Radio	2211907	2.00			
Philco 808 Car Radio	1210915	1.50			
Pilot Radio & Tube Corp. K-117	74-526	2.50			
Pilot Radio & Tube Corp., 210 Series	2011423	2.00			
Pilot Radio & Tube Corp., 360 Series	5011011	3.00			
R.C.A. Victor R-37P, 38P, 120, 140, 141, 141E, 240, AVR-1, 330, 331	1210901	1.50			
R.C.A. Victor RC-78A, R7, R-9, RAE-84	1210902	1.50			
R.C.A. Victor RC-78 Twin	4220900	3.00			
R.C.A. Victor R-32, RE-45, 52, 75, 145	74-600	2.50			
R.C.A. Victor 21, 22	72-013	1.50			
R.C.A. Victor 4 Circuit RC3, 48, R15, RE16, RE17, R42, R48	74-526	2.50			
R.C.A. Victor RE-57, RE-73, R-14, RE-34, 42	74-524	2.50			
R.C.A. Victor R-8, R-12, R-11, R-26, R-10, RE-18, RE-18A, RE-19, R-21, R-37, R-38	1210900	1.50			

See the Centralab Volume Guide for Details of these and other Replacement Controls



TYPE 316



TYPE 314



TYPE 310

### CENTRALAB CARBON RESISTORS

	Resistance in Ohms			
100	1,500	14,000	125,000	
200	2,000	15,000	150,000	
300	2,500	17,000	200,000	
400	3,000	20,000	250,000	
500	3,500	25,000	300,000	
600	4,000	30,000	400,000	
750	5,000	40,000	500,000	
800	6,000	45,000	750,000	
900	7,500	50,000	1 Meg.	
1,000	8,000	55,000	1.5 Meg.	
1,100	9,000	60,000	2 Meg.	
1,200	10,000	70,000	3 Meg.	
1,300	12,000	75,000	4 Meg.	
1,400	13,000	100,000	5 Meg.	

All resistances have flexible wire leads 1½" long, and are R.M.A. color-coded. Types 316 and 314 individually labeled and packed in cartons of ten.

**Type 316**—Resistor, size ¼" x 1¾", rating 1 to 1½ watts.....\$0.20

**Type 314**—Resistor, size ¼" x 1", rating ½ to 1 watt ..... .18

**Type 310**—Resistor, size ⅛" x ⅝", rating ¼ to ½ watt..... .15

### MOTOR RADIO SPARK NOISE SUPPRESSORS

Centralab Suppressors insure top efficiency for both the radio and the motor. They are designed with long resistors and minimum capacity, they have the best possible ratio of R.F. to D.C. resistance. A resistance of only 10,000 ohms gives adequate noise suppression, and this low D.C. resistance insures full motor efficiency. Mechanically they are very strong, and will withstand high voltage, heat, vibration, and all kinds of weather.

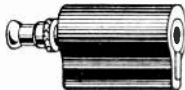
Suppressor design is simple enough when only radio is considered, but to design one that will permanently maintain full motor efficiency along with good radio reception is a difficult problem.

Every motor ignition spark is followed by a train of radio frequency waves. Resistances of proper value located at the plugs and the common distributor cable damp these waves so they do not radiate.

#### Part No.

#### List Price

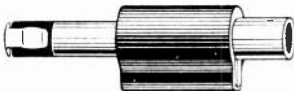
327—Screw on plug type. Will fit most popular cars.....	\$ .30
307—Bracket type. For older types of cars .....	.30
329—Distributor type. Placed in series with center distributor cable. ....	.30
304—Snap on plug type. Snaps on plug at any desired angle. ....	.30
305—Snap on plug cable end type. Replaces regular cable end .....	.30
338—Cable type. To be inserted in cable near spark plug.....	.30



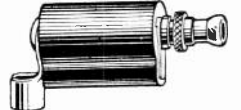
No. 327



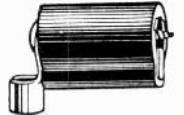
No. 307



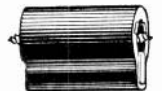
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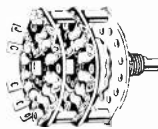
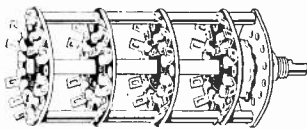
No. 304



No. 305



No. 338



### ASSEMBLED SELECTOR SWITCHES

For convenience, these Selector Switches are completely assembled and individually cartoned. All sections 1½" between mounting centers. One inch spacers between sections for 3 and 4 gang switches. One-half inch spacers for two gang. Index spacers ⅛" in all switches. Standard brass bushing ⅜" diameter x ¾" long. One-quarter inch diameter steel shaft extends ⅜" from bushing. Brass mounting nut ½" across flats and shakeproof lockwasher supplied on bushing. All switches have adjustable index feature. Supplied with shorting or non-shorting contact teeth.

All Centralab Selector Switches are supplied with an "adjustable stop" index. This permits selection of from two to eleven positions for any Selector Switch. The utility of any given switch is thus increased immensely.

To change the number of available positions it is only necessary to remove the mounting nut and lockwasher. The adjustable stop is then inserted in any one of nine index holes, giving a choice of from two to eleven positions. It is not necessary to disconnect a switch from its circuit if a change is necessary after it is installed. Sufficient clearance from the mounting panel to rotate the stop is the only requirement.

Part Number	Description	Price			
Shorting	Non-Shorting				
Gangs	Poles	Positions			
1400	1401	1	1	2 to 6	\$1.15
1402	1403	1	1	2 to 11	1.30
1404	1405	1	2	2 to 5	1.15
1406	1407	1	3	2 to 3	1.30
1408	1409	1	4	2	1.30
1410	1411	2	2	2 to 6	\$1.70
1412	1413	2	2	2 to 11	2.00
1414	1415	2	4	2 to 5	1.70
1416	1417	2	6	2 to 3	2.00
1418	1419	2	8	2	2.00
1420	1421	3	3	2 to 6	\$2.20
1422	1423	3	3	2 to 11	2.50
1424	1425	3	6	2 to 5	2.20
1426	1427	4	4	2 to 6	\$2.75
1428	1429	1	4	2 to 11	3.00
1430	1431	4	8	2 to 5	3.50

### BAR KNOB



Molded in black bakelite. Sturdy construction with square grip for easy turning. 1¼" maximum diameter. Use with dial types listed at the right.

Part No. K120 ..... Price \$0.15

### DIAL PLATES

When used with bar knob will make any panel attractive. Made of 24 gauge aluminum 1⅞" in diameter. Black background, natural aluminum numerals ¼" high for easy reading. 30° angle between all numerals agrees with index action of all switches.

Part No.	Numbered	Price
K115	1 to 5	\$0.15
K116	1 to 6	.15
K117	1 to 10	.15
K118	1 to 11	.15



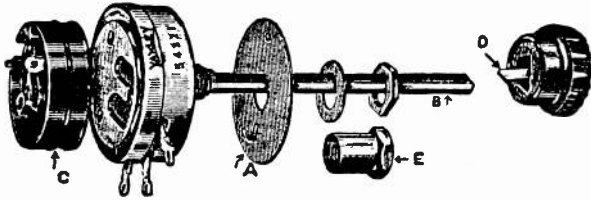
# YAXLEY

APPROVED RADIO PRODUCTS

# UNIVERSAL

## Volume Controls

### YAXLEY Volume Controls



The New Yaxley replacement volume controls incorporate such exclusive features as an adjustable grid bias, universal 3-inch aluminum shaft, 4-inch long extension shaft, spiral hex shoulder nut, knob spacer, special attachable switch, and completely enclosed control. All of these features definitely determine the quality of workmanship and minimize the time spent in servicing receivers.

\* Have adjustable bias feature. W.W.—Wire Wound.

### UNIVERSAL Single Controls

Control No.	Type	Resistance Ohms	Taper	Yaxley Curve No.	List Price
V	W.W.	60	linear	IV	\$1.00
W	W.W.	100	linear	IV	1.00
X	W.W.	200	linear	IV	1.00
A	W.W.	500	left	I	1.00
B	W.W.	1000	left	I	1.00
*C	W.W.	2000	right	II	1.00
*C12	W.W.	2000	left	I	1.00
*D	W.W.	3000	right	II	1.00
*D7	W.W.	3000	...	VII	1.00
*D12	W.W.	3000	left	I	1.00
*E	W.W.	5000	right	II	1.00
*E7	W.W.	5000	...	VII	1.00
*E12	carbon	5000	left	I	1.00
*F	W.W.	7500	right	II	1.00
*F7	W.W.	7500	...	VII	1.00
F12	carbon	7500	left	I	1.00
*G	W.W.	10M	right	II	1.00
*G7	W.W.	10M	...	VII	1.00
G12	carbon	10M	left	I	1.00
*H	W.W.	15M	right	II	1.00
*H7	W.W.	15M	...	VII	1.00
H12	carbon	15M	left	I	1.00
Y	carbon	20M	left	I	1.00
J	carbon	25M	right	II	1.00
K	carbon	50M	right	II	1.00
K12	carbon	50M	left	I	1.00
Z	carbon	75M	right	II	1.00
Z12	carbon	75M	left	I	1.00
L	carbon	100M	left	I	1.00
M	carbon	250M	left	I	1.00
N	carbon	500M	left	I	1.00
O	carbon	1 Meg.	left	I	1.00
P	carbon	2 Meg.	left	I	1.00

### YAXLEY Linear Controls

Control No.	Type	Resistance Ohms	Taper	Yaxley Curve No.	List Price
A400P	W.W.	400	linear	IV	\$1.00
*A2MP	W.W.	2000	linear	IV	1.00
*A5MP	W.W.	5000	linear	IV	1.00
Y5MP	carbon	5000	linear	IV	1.00
*A10MP	W.W.	10000	linear	IV	1.00
Y10MP	carbon	10000	linear	IV	1.00
*A20MP	W.W.	20000	linear	IV	1.00
Y25MP	carbon	25000	linear	IV	1.00
Y50MP	carbon	50000	linear	IV	1.00
Y100MP	carbon	100000	linear	IV	1.00
Y200MP	carbon	200000	linear	IV	1.00
Y250MP	carbon	250000	linear	IV	1.00
Y500MP	carbon	500000	linear	IV	1.00
Y1000MP	carbon	1000000	linear	IV	1.00

\* Have adjustable bias feature. W.W.—Wire Wound.  
Note: Knob, extension shaft and large hex shoulder nut are extra.

### YAXLEY Universal Dual Controls

Control No.	Type	Resistance	
		Front	Rear
CE	W.W.	2,000	5,000
GG	W.W.	10,000	10,000
GK	H. R.	10,000	50,000
LM	H. R.	100,000	250,000
MN	H. R.	250,000	500,000
NN	H. R.	500,000	500,000
DRP119	W.W.	3,000	10,000
DRP169	W.W.	7,500	10,000

List Price..... \$2.50

### Universal "Tapped" Controls

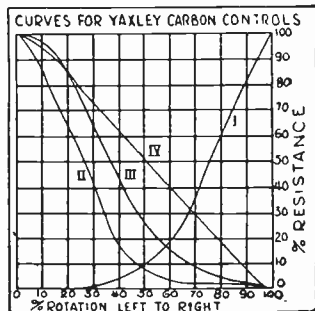
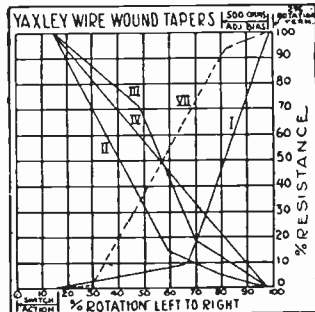
The following thirteen Universal tapped controls are a complete listing and include all the types the serviceman requires for his replacement needs. They will correctly replace any type of tapped control now in use.

Mfrs. No.	Res. Ohms	Tapped At
TRP600	6,000	2,500
TRP601	30,000	6,000
TRP602	63,000	3,000
TRP603	250,000	C.T.
TRP604	350,000	25,000
TRP605	350,000	75,000
TRP606	500,000	100,000
TRP607	500,000	C.T.
TRP608	1 Meg.	20,000
TRP609	1 Meg.	C.T.
TRP610	1 Meg.	200,000
TRP611	1 Meg.	170,000
TRP612	2 Meg.	25,000

List Price, Each..... \$1.50

### YAXLEY Volume Control Tapers

The graphs shown below illustrate the various tapers used on Yaxley wire-wound and carbon element volume controls.

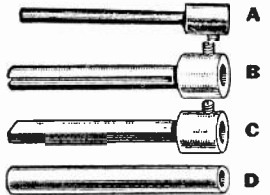


### Attachable Switches



No.	Type	List Price
9	S.P.S.T.	\$0.50
8	S.P.D.T.	.60
7	D.P.S.T.	.60

### Extension Shafts



Type A—Length 4", 1/2" diam., 1/8" flat.  
RS-242—1/2" diam., 1/8" flat.  
RS-243—1/2" diam., 1/8" flat.  
RS-244—1/2" diam., 1/8" flat.  
Any Size List Price, each 30c

### SPECIAL EXTENSION SHAFTS

Type B—2" long, 1/4" diameter with 1/8" slot. Enclosed in tight fitting tube (D).  
Type C—2" long, 1/4" wide, 1/8" thick. Tongue shaped and fitted with tube (D). For use in auto receivers.  
RS-245—List Price..... \$0.35  
RS-246—List Price..... \$0.35

### Hex Shoulder Nuts

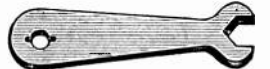
11260-2—For 3/4" panels.  
List Price..... \$0.20  
11260-12—For 1/2" panels.  
List Price..... \$0.15

### Adjustable Mounting Brackets



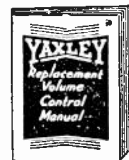
RB-248—1 1/4" centers.  
RB-249—2 1/2" centers.  
List Price..... Each \$0.20

### FREE TOOL OFFER



### Volume Control Wrench

Repairs damaged threads. Tightens nuts in close quarters. Fits control bushings and nuts. No. 178—List Price... \$0.20  
Or sent FREE with an order for six Yaxley Controls.



FREE!  
NEW EDITION  
VOLUME 2  
YAXLEY  
VOLUME CONTROL  
GUIDE

A complete manual for servicemen.

# YAXLEY

APPROVED RADIO PRODUCTS

# REPLACEMENT VOLUME CONTROLS

Name and Model	Type No.	List Price
<b>A. C. DAYTON CO.</b>		
XL-50, XL-60, XL61.....	M	\$1.00
XL-63, XL-65, XL-66.....	L	1.00
<b>ALL-AMERICAN MOHAWK</b>		
S-6, S-7, S-8.....	G	1.00
D-11, D-19, H-19, D-29.....	DRP189	2.50
S-40, U-55.....	Y	1.00
SW-8, SA-65.....	N	1.00
SA-90, SA-91, SA-110, SA-130, Lyric K.....	N	1.00
Lyrics, 60, 61, 62, 65, 66, 80, 83, 84, 85, 86, 88.....	SRP170	1.50
<b>AMRAD</b>		
AC-6, AC-6C.....	M	1.00
Concerto, Nocturne, Opera, Sonata.....	H12	1.00
Bel-Canto, Aria, Duet, Minuet, Srenata, Symphony.....	K12	1.00
<b>ATWATER KENT</b>		
37, 38, 40, 40F, 41DC, 42, 42F, 43, 44, 45, 46, 47, 52, 53, 56, 57 (Strip Only).....	SRP239	.50
55, 55C, 55F, 60, 60C, 61, 61C, 66 (Strip Only).....	SRP241	.50
55, 55C, 55F, 60, 60C, 66, (Late Models, Dual Control).....	GE	2.50
67, 67C, 228Q.....	L	1.00
70, 72, 74, 75, 76 (Chassis D1, D2, F, Li, I2, P Requires RB248 Mounting Bracket).....	CE	2.50
72 (H1, H2 Chassis).....	LM	2.50
80, 80F, 83, 83F, 90, 90F.....	E	1.00
82, 82F, 86, 86F.....	A550P	1.00
82Q, (1st), 84, 84D, 84F (Early), 84Q, 89, 89F, 89P.....	N	1.00
84, 84F (Late), 87, 94, 94F.....	SRP254	1.50
87D.....	CE	2.50
92, 92F, 96, 96F, 99, 99F, 99P, 145, 155, 165, 185, 185A, 188, 188F, 165Q.....	N	1.00
206, 217, 228, 275, 310, 315, 318, 325, 376.....	N	1.00
246, 260, 260F, 266, 387, 424, 427, 427D, 448, 469.....	N	1.00
510, 525, 534, 555, 558, 559.....	N	1.00
511.....	TRP606	1.50
612, 627, 636, 667, 708, 711, 756, 788, 808, 812, 825.....	N	1.00
854, 944.....	Y	1.00
469, 469F, 480, (1st Types) Tone Beam.....	SRP287	1.50
<b>BOSCH</b>		
7, 7-C, 20-L, 31, 32, 36, 37, 73, 74.....	G12	1.00
10, 46-AC, 60, 63, 96, 116, 126, 136, 146, 166, 176, 242, 243, 250, 313.....	N	1.00
58, 62-DC.....	D	1.00

● **NOTE! PRICES DO NOT INCLUDE SWITCH OR ACCESSORIES.** ●

Name and Model	Type No.	List Price
28, 29.....	SRP179	1.50
40, 41, 251, 350, 355, 360, 370.....	N	1.00
<b>BREMER TULLY</b>		
6, 8-16, 8-17, 8-12, 8-13.....	N	1.00
8-21, 8-22.....	E12	1.00
81, 82.....	J	1.00
S-81, S-82.....	A3MP	1.00
<b>BRUNSWICK RADIO</b>		
S-14, S-21, S-31.....	A3MP	1.00
14DC, 21DC, 31DC.....	A5MP	1.00
14, 21, 31AC.....	J	1.00
11, 12, 16, 33 ("D" Chassis under No. 25000).....	SRP255	1.50
11A, 12A, 16A, 18, 33A ("D" Chassis above No. 25000).....	SRP273	2.00
With Switch		
<b>COLONIAL</b>		
16-5, 16-6, 17-5.....	Q	1.00
601, 602, 603, 604, 650, 651, 655, 656, 657, 658.....	N	1.00
T-345, T-397, C-399, C-495.....	H12	1.00
32-AC, 32-DC.....	GK	2.50
46, 52.....	H	1.00
47, 48, 62, 73.....	H7	1.00
65.....	U	1.00
250-AC-DC, AC-SW250, AC-DC300, AC-SW300, 501, 501-AC, AC-700, AC-701, AC-702.....	N	1.00
<b>CROSLLEY</b>		
4-29, 5-38, 6-60, 6-85.....	R	1.00
30-S, 31-S, 33-S, 34-S, 40-S Late, 41-S Late, 42-S Late, 82-S.....	SRP188	1.50
41-A, 42 Early 608AC, 609 Gem Chest, 610 Gem Box, 704, 705, 706.....	SRP185	1.50
53, 54, 55, 56, 57, 58.....	SRP263	1.50
60-S, 61-S, 62-S, 63-S.....	SRP188	1.50
72-7H2, 72LB-7H2, 72-7H3, 72-LB-7H3.....	O	1.00
77, 77-B, 77-L, 84-C, 84-D.....	SRP226	1.50
98, 99 Auto.....	UC504	1.00
181, 184.....	O	1.00
704-A, 704-B.....	SRP185	1.50

Name and Model	Type No.	List Price
804 Jewel Box.....	AIMP	1.00
DeLuxe Fiver.....	N	1.00
5M3, 124, 125, 133, 135, 141, 147, 148, 155.....	E7	1.00
50-5H1, 50LB-5H1, 61-6H2, 61-LB-6H2.....	UC504	1.00
95 (Roamio), 96 (Auto).....	UC504	1.00
51S, 60, 75.....	S	1.00
120.....	G7	1.00
129.....	F7	1.00
159, 163, 166, 167, 172, 169 (Revised), 174, 176.....	E7	1.00
146-1, 150 (Tone), 157, 158, 160, 164, 168, 175, 179, 180.....	UC534	1.00
173, 173-5.....	N	1.00
129-1, 131, 137, 169, 154.....	SRP262	1.50
48, 77-1.....	SRP233	1.50
122.....	D7	1.00
123.....	SRP264	1.50
121A, 126, 126-1.....	SRP264	1.50
132-1, 136-1, (Tone).....	Z12	1.00
<b>DETROLA</b>		
4-D.....	G12	1.00
Super Midget 5 Tube.....	K12	1.00
<b>EARL</b>		
21-AC, 22-AC.....	DRP240	2.50
24-DC, 31-DC, 32-DC, 41, 42.....	K	1.00
<b>EDISON RADIO</b>		
C-1, M-6 Front Unit, E-175, (Hum).....	HU20	1.00
R-4, R-5 (Requires Circuit Change).....	G12	1.00
R-100, RV-695.....	S	1.00
<b>EMERSON</b>		
H-5, 26, 30-AW, 30-LW, 33-AW, 33-LW, 250, 250-AW, 250-LW, 300, 321-AW, 321-LW, 350-LW, 409, 410, 411, 415, 416, Mickey Mouse.....	Y	1.00
50-L, 50-M, S-50, L-755, M-755, S-755.....	E7	1.00
40, 77, 375, 375-LW.....	O	1.00

Name and Model	Type No.	List Price
<b>ERLA</b>		
61, 62, 63, 335.....	H	1.00
81, 82.....	G	1.00
37, 38, 39.....	L	1.00
<b>EVEREADY</b>		
1, 2, 3.....	SRP179	1.50
Series 30, 40.....	A550P	1.00
Series 50 (1-2).....	DRP117	2.50
Series 50 (Type 3).....	DRP242	2.50
<b>FADA</b>		
7-AC.....	G12	1.00
35, 35Z.....	D12	1.00
43, KF, KG.....	DRP119	2.50
45, 45Z, (KU); 61, 66 (KX); 171, 173 (KOC).....	F	1.00
48-KW, 49-KW.....	N	1.00
73 (RE), 74, 76, (RA); RC79; 83, 88, 89 (RA).....	O	1.00
78-10, 79-10.....	O	1.00
105, 106, 107, (RY); RS (112).....	G12	1.00
133, 134, 135, RW.....	O	1.00
10, 10Z, 11, 11Z, 16, 16Z, 30, 30Z, 32, 32Z (Early), 50, 50Z, 70, 70Z, 71, 72.....	SRP258	1.50
15M, 15MZ, 16, 16Z (Late) 17, 18, 32, 32Z (Late) 20, 20Z, 25, 25Z, 75, 77.....	SRP257	1.50
41, 42, 44, 46, 47.....	O	1.00
761, 762, 764, 766, 767.....	DRP119	2.50
<b>FREED EISEMANN</b>		
NR-60, NR-70.....	M	1.00
NR-78, NR-79.....	M	1.00
NR-80 AC, NR-85 AC.....	E12	1.00
<b>GENERAL ELECTRIC</b>		
T-12—See R.C.A. Model R-5		
S-22, S-22-X, Volume—See R.C.A. Model R-7		
H-32—See R.C.A. Model R-50		
S-42—See R.C.A. Model R-9		
M-51, M-56—See R.C.A. Models, 118, 211.		
C-61 Auto—See R.C.A. Model M-123.		
K-62, J-85, S-132—See R.C.A. Model R-11, R-12, R-10.		
<b>GENERAL MOTORS</b>		
216, 217, 219, 250.....	K12	1.00
Volume Control for S-2A, S-2B, 252, 253, 254, 255, 256, 257, 258.....	G	1.00
5050, 5053, Day Fan Jr. Six.R Tone Control for 252, 253, 254, 255, 256, 257, 258.....	K12	1.00
A5005, A-5020, A5010, A5903.....	K12	1.00

## FREE

A new and up-to-date volume control manual, the most comprehensive yet published, is offered FREE of charge by the P. R. Mallory Company, manufacturers of Yaxley controls. No serviceman or dealer can afford to pass up this opportunity. Technical data, curves, hints, etc., are only a few examples of the information it contains. Write today to P. R. Mallory & Co., Inc., at Indianapolis, Indiana, on your business stationary for your copy.

# YAXLEY

APPROVED RADIO PRODUCTS

# REPLACEMENT VOLUME CONTROLS

Name and Model	Type No.	List Price
<b>GRAYBAR</b>		
4.....Y		1.00
Midjet 8.....A5MP		1.00
311—See R.C.A. Model R33		
600—See R.C.A. Model R66		
700, 770, 900—See R.C.A. Model R80, R82, R86.		
<b>CRUNOW RADIO</b>		
500.....O		1.00
Chassis 11-A, 1151, 1152...O		1.00
750, 751, 752, 753.....TRP610		1.50
1101.....P		1.00
650, 651.....TRP610		1.50
<b>KENNEDY</b>		
20.....A10MP		1.00
62, 62A, 66, 66-A.....N		1.00
26.....GK		2.50
24.....T		1.00
44, 48.....G12		1.00
Royal.....G		1.00
266B, 366B, 563A.....N		1.00
<b>KOLSTER-COLUMBIA</b>		
K-20, 21, 22, 23, 24, 25, 27, 28, 37.....Y		1.00
K-70, 72, 80, 82, 90, 92...H12		1.00
K-110, 120, 122, 130, 132...N		1.00
K-43.....DRP244		2.50
B10, B15, B16.....Y		1.00
<b>MAJESTIC</b>		
70 and 70B.....G12		1.00
20, 21, 22, 23.....A5MP		1.00
15, 15B, 150.....G7		1.00
90, 91, 92, 90B.....Z		1.00
30 Chassis (Requires RS-242).....DRP122		2.50
100 Chassis.....DRP222		2.50
160 Chassis.....SRP223		1.50
200 Chassis.....N		1.00
210 Chassis.....M		1.00
200 Chassis: Tone Control. K12		1.00
210 Chassis: Tone Control. L		1.00
180, 181.....DRP222		2.50
25 Chassis: Tone Control. L		1.00
150 Chassis: Tone Control. K12		1.00
55, 59, 66, 75, 77, 85, 86, (800), 95 (520), 105 (520), 195 (500), 211, 214, 215, (210).....M		1.00
90, 91, 92, 93 Equalizer.....SRP160		1.50
151, 153, 154, 155, 156.....G-7		1.00
221, 223, (220), 303, 304, 307, (300, 300A), 311, 314, 315.....M		1.00

● **NOTE!** PRICES DO NOT INCLUDE SWITCH OR ACCESSORIES. ●

Name and Model	Type No.	List Price
61, 62 (60).....SRP223		1.50
121, 123 (120, 120B).....GG		2.50
201, 203, 204 (200).....N		1.00
251, 253, 254 (25).....F		1.00
251B, 253B, 254B (25-B).....F12		1.00
329, 330, 340, 360, 390, 460, 490, 500, 570, 600, 998...M		1.00
411, 411A, 413, 413A.....Y		1.00
<b>PHILCO</b>		
10.....TRP603		1.50
10 (122), 14, 18, 28, 29, 45, 45C, 91 (226), 118, 144, 503, 507.....TRP605		1.50
16 (121), 17A (Run 4).....TRP604		1.50
19, 30, 44, 60, 66, 89, 95, 96, 96A, 504, 505, 610, 700, 800, 1290 (Series), 1289AC N		1.00
20, 20A, 41DC, 42DC, 70, 70A, 77, 77A, 220, 220A, 270, 270A, 470, 470A.....DRP114		2.50
70, 70A (2nd type), 71.....O		1.00
35, 35B, 37.....CE		2.50
38, 53, 57, 59, 80, 81, 84...Y		1.00
50, 50A.....CE		2.50
51, 51A, 52.....E12		1.00
90, 90A (1-47).....N		1.00
90, 90A (2-45's).....DRP114		2.50
90, 90A (2-47's).....O		1.00
91 (121, 122).....O		1.00
111, 111A, 112, 112A (2-45's), 211, 211A, 212, 212A.....N		1.00
296, 296A, 490.....N		1.00
82, 86, 87, 511, 512, 531, 551, 571.....G12		1.00
76, 76A.....X		1.00
65.....A2MP		1.00

**RCA VICTOR CO.**

R4, R6, R7AC, R7DC, R7LW, R7A, R9AC, R9DC, RE16A.....SRP134		1.50
R8AC, R10AC, R11AC, R12AC, RE19AC, R20, R21, RO23.....SRP153		1.50
R22.....A5MP		1.00
R14, R15, RE17, 42, 48.....DRP116		2.50
17M, R18W.....Y200MP		1.00
Radiola 17.....SRP145		1.50
60, 62.....SRP138		1.50
66.....SRP139		1.50
64, 67, 9-18, 9-54.....SRP141		1.50
44, 46AC, 47.....SRP142		1.50

Name and Model	Type No.	List Price
18AC, 18DC, 33AC, 41AC, 41DC.....SRP144		1.50
M34.....SRP251		1.50
RE20, 21, 22, R43, R50, R55, RAE59, RAE79 (requires RB-24S).....K12		1.00
R27, 102.....UC509		1.00
R28, R28P, R28-BW, R28-BWC.....A3MP		1.00
M32, R73A, R75 (2A5)....P		1.00
R32, RE45, R52, RE75....DRP115		2.50
R35, RE39, RE57.....DRP250		2.50
R37, R37P, R38, R38P, 120, 124, 223, 330, 331...TRP607		1.50
RE40, RE40-P.....A3MP		1.00
R70.....F		1.00
R71, R72.....Y50MP		1.00
74, 76, 77, RE81, 300.....K		1.00
R75 (47 Output), RESO...A10MP		1.00
R78, RAES4.....TRP601		1.50
80.....A5MP		1.00
82, 86.....Y5MP		1.00
100, 101, 301, 310.....E		1.00
110, 111, 115, 210.....D		1.00
118, 121, 122, 127, 128, 140, 141, 141E, 143, 211, 221, 224, 240, 262 (requires ex. Shaft No., RS243).....TRP603		1.50
320, 321, 322, 327, 340, 340E, 341.....TRP603		1.50
R7, R9, RE20, R50, R55, RAE59, R70, RAE79, (Tone).....N		1.00
R11, R12, RE16A, RE18, RF18A (Tone).....Y200MP		1.00

**SPARTON**

5, 9.....H		1.00
10 (requires RS244).....A2MP		1.00
15.....UC500		1.00
41.....J		1.00
16, 16AW, 17, 18, 27, 28, Triolion), 111X, 750A, 750X, 870A, 870X.....G		1.00
69, 79, 89, 89A, 99, 101, 109, 110, 301DC, 589, 591, 593, 931.....SRP154		1.50
103, 111A, 235, 564, 570, 574, 578, 600, 610, 620, 737, 740, 750, 870.....SRP258		1.50
35, 25, 26, 26AW, 45 (Visionola).....E		1.00
13, 14, 14A, 15X, 33, 34, 36, 40, 42, 43, 54, 61, 62, 65, 66, 67, 68, 71, 71B, 72...M		1.00
74, 75A, 76, 78, 80, 83, 84, 85X, 86X, 104, 478, 691...M		1.00
410AC, 420AC, 420DC....DRP246		2.50

Name and Model	Type No.	List Price
<b>STEWART WARNER</b>		
R100, A, B, E, 950 Series...SRP245		1.50
R101A, B.....E7		1.00
R102A, B, E.....G7		1.00
R104A, B, E.....N		1.00
<b>STROMBERG CARLSON</b>		
12, 14, 27AC.....SRP213		1.50
22, 22A.....SRP216		1.50
10, 11, 16DC, 17DC, 25, 26AC.....SRP260		1.50
638 (Rear Control).....SRP269		1.50
641, 642, 652, 654, 846, 848, (Rear Control).....SRP900		1.50
641, 642, 652, 654 (Front).....SRP960		1.50
635, 636 (Rear Control)....SRP901		1.50
635, 636, 638 (Front).....SRP961		1.50
846, 848 (Front Control)....SRP962		1.50
29 (Vol. and Tone).....N		1.00
37.....MM		2.50
38, 39, 40, 41.....MM		2.50
37, 38, 39, 40, 41 (Tone)....UC503		1.50
48, 49, 50, 51.....DRP245		2.50
60, 64.....P		1.00
68.....G		1.00
64, 68 (Tone).....M		1.00
<b>U. S. RADIO &amp; TELEVISION</b>		
20, 25, 26, 26P, 80.....G12		1.00
Apex 31, 32, 33DC, 29, 49, 99, G-12		1.00
Gloriatone Early 27.....UC500		1.00
Gloriatone 28, Apex 41, 43, 46, 47, 42, 44, 48, 48A...A400P		1.00
8, 10.....O		1.00
Gloriatone Late 27.....G12		1.00
<b>ZENITH RADIO</b>		
14 (1st).....L		1.00
15, 16, 39, 33, 34, 35, 35A, 342, 352, 352A, 362, 353DC, 34P, 342P, 40A, 41, 42, 422, 35PX, 35-APX, 352PX, 352APX, 37A.....SRP261		1.50
52, 53, 54, 60, 61, 62, 64, 67...SRP261		1.50
10, 102, 112, 122.....SRP261		1.50
602, 613, 622, 642, 672....SRP261		1.50
50, 60, 70 Series (Dual)....DRP221		2.50
50, 60, 70 Series (Single)...SRP261		1.50
91, 92 (Type 1).....A5MP		1.00
230, 240, 245.....N		1.00
410, 411, 420, 430, 440....TRP606		1.50
460, 462, 474, 475, 476B, 500, 501, 503, 514, 515, 516, 600, 604, 606, 610, 616, 618.....N		1.00
701, 702, 715, 755, 758, 760, 765, 767, 770B, 775B....N		1.00

This is only a partial listing of Yaxley Replacement Controls. Unless otherwise specified all items on these pages are volume controls. See special FREE offer on adjacent page.

# Precision controls



# for control precision

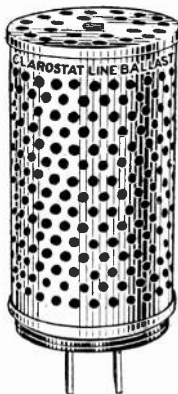
## CLAROSTAT REPLACEMENT LINE BALLASTS

Available in a wide variety of types to meet the requirements of receivers designed to include a Line Ballast. See the CLAROSTAT VOLUME CONTROL REPLACEMENT GUIDE for complete list of receivers.

The Clarostat Line Ballasts will maintain the normal voltage across the primary of the power transformers of these sets within the allowable limits for efficient operation in spite of line voltage fluctuations over a range of from 95 to 135 volts.

The body dimensions of these units are  $1\frac{3}{4}$  in. in diameter and  $3\frac{1}{8}$  in. in length.

LIST PRICE.....\$2.50



Manufacturer	Ballast Type No.
Majestic, 60 cycle	
70-71 Power Pack 7P6, 1928	1516
Power Pack 7B6, 1929	1508
180-181 Power Pack 8P6	1012
90-91-92-100	1210

For complete list of receivers and recommended Line Ballast see Clarostat VOLUME CONTROL REPLACEMENT GUIDE.

## AD-A-SWITCH — SERIES "U"

Power Switch Unit Attachable to Series "C" and "W" Controls

AVAILABLE SWITCHES FOR SERIES "C" AND "W" CONTROLS

SINGLE POLE SINGLE THROW—Series U

SINGLE POLE DOUBLE THROW—Series U-1 (3-Way)

DOUBLE POLE SINGLE THROW—Series U-2

THREE WIRE—Series U-3

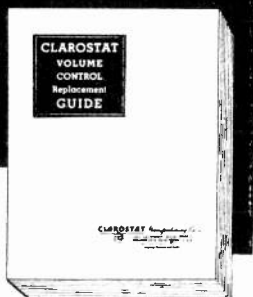
FOUR WIRE—Series U-4

Listed as standard by Underwriters Laboratories

LIST PRICE ALL SWITCHES — \$5.00

# Free!

Just issued. A most complete and practical Volume Control Replacement Guide. 80 pages of indispensable data.



Lists hundreds of sets and their exact duplicate replacement controls.

Indicates respective applications for composition-element and wire-wound controls.

Provides many pages of useful data on volume controls, circuits, resistance calculations, tapers, etc.

Enables you to handle any volume control replacement in a positive, fool-proof, profitable manner.

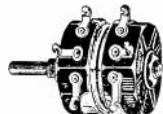
GET YOUR COPY! Just drop us a postcard or letter requesting Guide. Your jobber can furnish standard and exact duplicate controls specified.

## CONSTANT IMPEDANCE CONTROLS

These units are finding wide acceptance in many laboratory and commercial applications where they are being used in place of much more expensive controls. While they are not suited for close measurements in laboratory work, they will be found entirely satisfactory for the general run of laboratory and practically all commercial applications.



"T" Pad Control



"L" Pad Control

The "T" PAD maintains a constant impedance both at the source and load terminals and can be used in any circuit requiring such characteristics. Recommended for use as master level controls, mixer and output controls.

LIST PRICE \$3.50

The "L" PAD maintains a constant impedance only at the source terminals with the load terminals connected to associated apparatus. Recommended for use as a volume control for individual speakers in multi-speaker installations.

LIST PRICE \$3.00

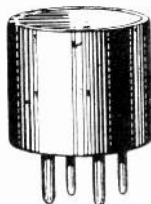
The TYPE "CISM" CONTROL maintains a constant impedance at the load terminals only and is intended for use as a mixer control in broadcasting and recording systems.

All controls are equipped with standard bushing,  $\frac{3}{8}$  x  $\frac{3}{8}$ " length and  $1\frac{1}{2}$ " insulated shaft.

LIST PRICE \$3.00

## CLAROSTAT CONVERSION RESISTOR PLUG

This unit fits standard four-prong socket and permits the use of Eveready Air Cell Batteries with battery receivers that originally employed a ballast tube. No tools, no soldering. Just take the ballast tube out and put in this conversion resistor. NOTE: To be used only to convert battery operated receivers using ballast tubes and must not be used with dry cell batteries.



LIST PRICE \$1.00

### LIST OF CONVERSION RESISTOR PLUGS

Model of Set	Plug Type	Model of Set	Plug Type
MONTGOMERY (Air Line)	WARD	SEARS ROEBUCK (Silvertone)	
Models 62-91	100	Models 1712, 1713, 1714,	
" 77,95	110	1854, 1857	140
PHILCO		" 1710, 1711A,	
Models 34, 34A, 38, 38A, 39, 39A		7090A, 1711,	150
" (38 & 38A using type 15 transformer tube)	120	" 1850, 1851	160
" (38, 38A using type 1C6 transformer tube)	130	SENTINEL	
COLONIAL	160	Models 660, 6200, 6234, 6241	110
Model 659		" 7700, 7732, 7741	130

## VOLTAGE REGULATORS

Clarostat Automatic Line Voltage Regulators are designed for line voltage regulation in connection with standard receivers not equipped with line ballasts.

Type No.	Rating Watts	For use with Sets of
O	50	Up to 60 Watts
A	100	60 to 100 Watts
B	150	100 to 150 Watts
C	200	150 to 200 Watts
D	250	200 to 250 Watts
E*	100	60 to 100 Watts

NOTE\*: For use with 220v. sets.

LIST PRICE \$1.75









# Precision controls



# for control precision

## CLAROSTAT WIRE WOUND CONTROLS (SERIES W)

Wherever a dependable rheostat or potentiometer is required for delicate control purposes, yet capable of handling a considerable current, CLAROSTAT wire-wound controls are the logical choice. They are quiet in the first place and remain quiet. Available in any required taper.

Control No.	Resis. ohms	Characteristics of Resis. Element & suggested use
W-1	50	Std. potentiometer
W-2	100	Std. pot.
W-3	200	Std. pot.
W-4	300	Std. pot.
W-5	400	Std. pot.
W-6	500	Std. pot.
W-7	750	Std. pot.
W-8	1000	Std. pot.
W-9	1000L	Tapered pot. for untuned antenna control.
W-10	1000V	Tapered pot. for C bias control.
W-11	2000	Std. pot.
W-12	2000L	Tapered pot. for untuned antenna control.
W-13	2000V	Tapered pot. for C bias control.
W-14	2000W	Tapered pot. for screen grid control.
W-15	3000	Std. pot.
W-16	3000U	Tapered pot. for comb. ant. & C bias cont.
W-17	3000V	Tapered pot. for C bias control.
W-18	3000W	Tapered pot. for screen grid control.
W-19	5000	Std. pot.
W-20	5000U	Tapered pot. for comb. ant. & C bias cont.
W-21	5000V	Tapered pot. for C bias control.
W-22	5000W	Tapered pot. for screen grid control.
W-23	7500	Std. pot.
W-24	7500U	Tapered pot. for comb. ant. & C bias cont.
W-25	7500V	Tapered pot. for C bias control.
W-26	7500W	Tapered pot. for screen grid control.
W-27	10000	Std. pot.
W-28	10000N	Tapered pot. for antenna or R.F. coil control.
W-29	10000U	Tapered pot. for comb. ant. & C bias cont.
W-30	10000V	Tapered pot. for C bias control.
W-31	10000W	Tapered pot. for screen grid control.
W-32	15000	Std. pot.
W-33	15000U	Tapered pot. for comb. ant. & C bias cont.
W-34	15000V	Tapered pot. for C bias control.
W-35	15000W	Tapered pot. for screen grid & phono pickup
W-36	20000	Std. pot.
W-37	20000U	Tapered pot. for comb. ant. & C bias cont.
W-38	20000V	Tapered pot. for C bias control
W-39	20000W	Tapered pot. for screen grid & phono pickup
W-40	25000	Std. pot.
W-41	25000W	Tapered pot. for screen grid & phono pickup
W-42	30000	Std. pot.
W-43	40000	Std. pot.
W-44	50000	Std. pot.

LIST PRICE ALL UNITS EXCEPT Nos. W-40 to W-44.....\$1.00  
 LIST PRICE Nos. W-40, W-41, W-42.....1.30  
 LIST PRICE Nos. W-43, W-44.....1.40

## CLAROSTAT COMPOSITION ELEMENT CONTROLS (SERIES C)

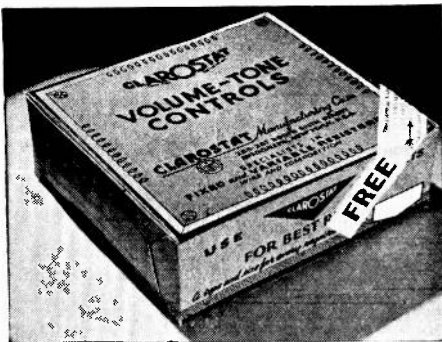
Available in linear and tapered resistance ranges of from 1000 ohms to 5 megohms. The resistance element comprises a specially developed carbon body material precisely applied to a thin moisture-proof base. These controls are highly efficient, noiseless and are unaffected by temperature, humidity and climatic changes.

Control No.	Resis. ohms	Characteristics of Resis. Element & suggested use
C-9	1000L	Tapered pot. for untuned antenna control.
C-12	2000L	Tapered pot. for untuned antenna control.
C-16	3000U	Tapered pot. for comb. ant. & C bias cont.
C-20	5000U	Tapered pot. for comb. ant. & C bias cont.
C-24	7500U	Tapered pot. for comb. ant. & C bias cont.
C-27	10000	Std. pot.
C-28	10000N	Tapered pot. for antenna or R.F. coil control.
C-29	10000U	Tapered pot. for comb. ant. & C bias cont.
C-30	10000V	Tapered pot. for C bias control.
C-33	15000U	Tapered pot. for comb. ant. & C bias cont.
C-34	15000V	Tapered pot. for C bias control.
C-37	20000U	Tapered pot. for comb. ant. & C bias cont.
C-38	20000V	Tapered pot. for C bias control.
C-40	25000	Std. pot.
C-41	25000W	Tapered pot. for screen grid & phono pickup
C-44	50000	Std. pot.
C-45	50000W	Tapered pot. for screen grid & phono pickup
C-46	50000Z	Tapered pot. for tone control.
C-47	75000	Std. pot.
C-48	75000V	Tapered pot. for C bias control.
C-49	100000	Std. pot.
C-50	100000N	Tapered pot. for R. F. shunt control.
C-51	100000Z	Tapered pot. for tone & audio shunt control
C-52	200000	Std. pot.
C-53	200000Z	Tapered pot. for tone and A.V.C. control.
C-54	200000V	Tapered pot. for C bias control.
C-55	250000	Std. pot.
C-56	250000Y	Tapered pot. for audio transformer shunt.
C-57	300000	Std. pot.
C-58	500000	Std. pot.
C-59	500000Y	Tapered pot. for audio transformer shunt.
C-60	500000Z	Tapered pot. for tone and A.V.C. control.
C-61	1000000	Std. pot.
C-62	1000000Y	Tapered pot. for audio transformer shunt.
C-63	1000000Z	Tapered pot. for tone and A.V.C. control.
C-64	2500000Z	Tapered pot. for tone and A.V.C. control.
C-65	15000000Z	Tapered pot. for tone and A.V.C. control.
C-66	20000000Z	Tapered pot. for tone and A.V.C. control.
C-67	30000000Z	Tapered pot. for tone and A.V.C. control.
C-68	40000000Z	Tapered pot. for tone and A.V.C. control.
C-69	50000000Z	Tapered pot. for tone and A.V.C. control.
C-70	100000T	Tapered pot. for ant. and C bias control
C-71	250000U	Tapered pot. for ant. and C bias control
C-72	250000V	Tapered pot. for C bias control.

LIST PRICE ALL UNITS \$1.00

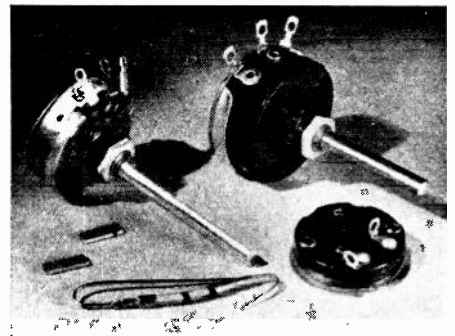
Either type is supplied with  $\frac{3}{8}$ " bushing and a 2" long special soft alloy shaft milled for push-on knobs. A shim is supplied to take special push-on knob. The ingenious CLAROSTAT AD-A-SWITCH may be added to any unit by simply removing the back plate and slipping on the switch member.

## CLAROSTAT VOLUME CONTROL REPLACEMENT KITS



For convenience, economy and satisfaction in servicing radio sets, Clarostat Volume Control Replacement Kits are available in the composition-element and the wire-wound types. You save in three ways through using these kits:

- (1) Time-saving — you're always ready to service the most popular sets.
- (2) Cash-saving — you enjoy the quantity prices on the volume controls and switches contained in the kit, along with the five free resistors.



(3) Labor-saving — these are standard Clarostat controls, which means no kicks and return calls to make good, when you install these trouble-proof components.

Stock both kinds, the composition-element and the wire-wound assortments, and you are ready for nine-tenths of the most popular makes and models of radio sets.

Each kit contains five different and most called for resistance values, plus five FREE  $\frac{1}{2}$ -watt flexible resistors applied externally for desired bias resistance. Also three Ad-A-Switch units that snap on any Clarostat Volume Control as the power switch feature. The controls are supplied with milled aluminum shafts that may be readily cut to any desired length. Shims are included, so as to fit the half-round shafts to certain off-standard knobs.

Series "C" Composition-Element Volume Control Kit \$6.50

Series "W" Wire-Wound Volume Control Kit \$6.50

# IRC INSULATED Metallized RESISTORS



1/2 Watt Type BT-1



1 Watt Type BT-1



2 Watt Type BT-2

... THE WORLD'S FINEST RESISTORS ...  
**NOW AT THE LOWEST PRICES**  
**IN IRC HISTORY!**

Insulated Metallized Resistors—developed by IRC—represent the outstanding resistance improvement in the history of radio. Millions are used annually for even the most critical applications in radio, sound and electrical equipment. Unexcelled for radio service and amateur uses, you will find them doubly attractive at today's new low prices. You can insure your reputation for good work by using the best on EVERY job.

The time proved Metallized resistance principle is retained in these new units. The ingenious sealed and Insulated construction insures lower operating temperatures with proportionately higher wattage dissipation. Insulated Resistors are conveniently small, sturdy, light in weight and fully sealed. Also, they have an exceptionally low noise level plus maximum protection against humidity.

They last longer—they're noise free, crack-proof and trouble free. Use them anywhere—even metal parts of the chassis can't short them.

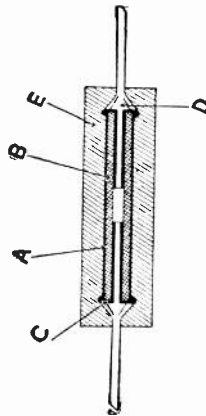
The finest, most reliable resistors ever offered.

**IRC INSULATED RESISTORS ARE BOTH COLOR CODED AND IMPRINTED WITH RESISTANCE VALUE AND WATTAGE RATING FOR QUICK, EASY IDENTIFICATION**

**NOTE THE CONSTRUCTION**



- A**—Famous Metallized Type Resistance Element. Completely Moisture-proof. Sealed Throughout.
- B**—Glass Tube.
- C**—Enclosed positive contact cannot be broken or become "open."
- D**—Highly tinned, flexible leads for quick, easy soldering.
- E**—High voltage insulating compound moulded around Metallized Element, sealing it from moisture and protecting unit against short circuiting.



**1/2 WATT**  
 (Type BT-1/2)—3/8" long x 3/16" diameter. Made in all practical ranges. Carried in stock in all ranges shown on the accompanying list from 100 ohms to 10.0 megohms. **LIST PRICE 17c**

**1 WATT**  
 (Type BT-1)—1 1/4" long x 1/4" diameter. Made in all practical ranges. Carried in stock in all ranges shown on accompanying list from 1 ohm to 20.0 megohms. **LIST PRICE 20c**

**IMPORTANT NOTE:** On orders for BT-1 Resistors under 300 ohms, Type BW-1 Wire Wound Insulated Resistors will be supplied. See complete description below. (\*)

**2 WATT**  
 (Type BT-2)—1 3/4" long x 3/8" diameter. Made in all practical ranges. Carried in stock in all ranges shown on accompanying list from 450 ohms to 10 megohms. **LIST PRICE 30c**

**(\*) INSULATED WIRE WOUND RESISTORS**  
**1 WATT**

(Type BW-1)—1 1/2" long by 1/4" diameter. These are **INSULATED** wire wound resistors similar in appearance to the BT-1 Metallized units. Made in the low ranges, they offer new opportunities for stabilized inexpensive resistor applications in meters, as cathode bias resistors or for air cell battery use. They are most appropriate for use as center tap resistors, enabling many combinations of values to be obtained through parallel and series arrangements. Supplied on all orders for Type BT-1 Resistors under 300 ohms. **LIST PRICE 20c**

**STANDARD STOCK RANGES**

Subject to the minimum and maximum values shown for each of the various types of Type "BT" and Type "F" Metallized Resistors.

Ohms	Ohms	Ohms	Ohms	Meg.
1	250	3,000	20,000	0.25
2	300	3,500	22,500	0.3
3	350	4,000	25,000	0.4
5	400	5,000	30,000	0.5
7.5	450	6,000	35,000	0.6
10	500	7,000	40,000	0.75
15	600	7,500	50,000	1.0
20	750	8,000	60,000	1.5
25	800	9,000	65,000	2.0
30	1,000	10,000	70,000	3.0
40	1,250	11,000	75,000	4.0
50	1,500	12,000		0.1 meg. 5.0
100	2,000	12,500		0.125 " 6.0
150	2,250	15,000		0.15 " 7.0
200	2,500	17,500		0.2 " 10.0



**HANDY NEW INSULATED RESISTOR KITS**

Each kit contains only the most popular ranges from which you can obtain hundreds of additional values by combining resistors in series or in parallel. Attractively designed with slide tray so that you can see exactly what units you have at a glance.

**KIT No. 10**  
 Contains 10-1 Watt Type BT-1 IRC Insulated Resistors in quick moving ranges. **LIST \$2.00**

**KIT No. 11**  
 Contains 10-1/2 Watt Type BT-1/2 IRC Insulated Resistors. **LIST \$1.70**

**KIT No. 12**  
 Contains 20-1 Watt Type BT-1 Insulated Resistors, in frequently used ranges, all in handy permanent container. Kit includes RMA resistor color code chart, and also shows at a glance ranges of units that have been used so they may be re-ordered. **LIST \$4.00**



**NEW!**  
**TYPE ABA**  
**10-WATT**  
**ADJUSTABLE**

This new IRC midget adjustable has dozens of uses in amateur radio and service work. Use ABA's for odd range low power units — use them anywhere to complete a hurry-up job where you may not have the exact needed range in 1/2, 1 or 2-watt resistors. Small enough to fit in anywhere. See listing and price included on IRC Wire Wound page M-2.

**RESIST-O-CHEST**

This is the most popular, most useful kit ever offered. Supplies space for a complete stock of several hundred resistors and other small parts. **RESIST-O-CHEST** is 8 1/2" high, 4 3/4" wide by 5 1/2" deep. Your own list of resistor ranges can be marked on gummed labels which are included. Handy formulas, computation chart permanently attached to Chest. Supplied complete with 50-1 Watt IRC Type "BT-1" Insulated Resistors—two each of the 28 most popular ranges which every radio man uses frequently. You pay only the new low cost of the resistors. The Resist-O-Chest is FREE. List price of resistors \$11.20. **\$6.72** (Net, including FREE Chest) (Chest sold separately for \$1.50 list, 90c net)

**GET ONE FREE!**





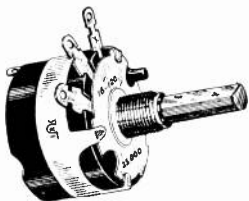


# Metallized CONTROLS

VOLUME — TONE — POTENTIOMETER

IRC Volume Controls are an advanced development of the same resistance engineering principles which have proved so successful in the famous IRC Metallized Type Resistors as well as in IRC Volume Controls

which, for several years past, have been made exclusively for leading radio set and equipment manufacturers. To both servicemen and amateurs they now bring the 10 most important features ever offered in a Control.



(Type "C" Volume Control with Switch)

## 1. "KNEE ACTION" CONTACT

Made of 5 separate silver plated phosphor bronze springs.

## 2. "NO JUMPING"

No jumping or shifting of points of contact. Each contactor invariably follows the same smooth "path" across the resistance element.

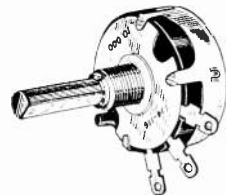
## 5. NO OBSTRUCTIONS

IRC contact method on tapped controls eliminates obstructions in path of contactor. Smoother adjustment—no noise.

## 6. DUST-PROOF CASE

## 7. CORROSION-PROOF

All electrical contacts are proofed against corrosion and oxidation.



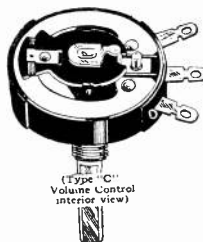
(Type "C" Volume Control without Switch)

## 3. METALLIZED TYPE RESISTANCE ELEMENT

Permanently bonded to moisture-proof Bakelite base.

## 4. MOISTURE-PROOF

The Bakelite base of the resistance element cannot absorb moisture—nor will moisture damage the Metallized type resistance coating.



(Type "C" Volume Control interior view)

## 8. SMALL—BUT NOT TOO SMALL

Minimum size for universal application and maximum performance.

## 9. PROTECTED TERMINAL

Deeply set in molded Bakelite casing.

## 10. AMAZINGLY SMOOTH

### A TYPE FOR EVERY RADIO NEED

### IRC METALLIZED TYPE VOLUME CONTROL

without switch (plain cover)—

List Price \$1.00

Resistance	Type No. Without Switch	Curve	Usual Application
500 Ohms	11-103	A	Potentiometer Voltage Divider
1,000 "	11-108	A	Potentiometer Voltage Divider
2,000 "	11-110	A	Potentiometer Voltage Divider
3,000 "	11-112	A	Potentiometer Voltage Divider
4,000 "	11-113	A	Potentiometer Voltage Divider
5,000 "	11-114	A	Potentiometer Voltage Divider
5,000 "	13-114	C	Antenna Control
10,000 "	16-116	F	*Antenna Grid Bias of 1 Tube
10,000 "	11-116	A	*Antenna Grid Bias Control
10,000 "	14-116	D	*Antenna Grid Bias of 2 Tubes
10,000 "	13-116	C	Antenna Control
15,000 "	14-118	D	*Antenna Grid Bias Control
15,000 "	16-118	F	*Antenna Grid Bias Control
20,000 "	16-119	F	*Antenna Grid Bias Control
25,000 "	14-120	D	*Grid Bias Control
25,000 "	11-120	A	Potentiometer Voltage Divider
25,000 "	16-120	F	Antenna Control
50,000 "	11-123	A	Potentiometer Voltage Divider
50,000 "	13-123	C	Tone Control
75,000 "	13-125	C	Tone Control
75,000 "	14-125	D	*Grid Bias Control
100,000 "	11-128	A	Potentiometer Voltage Divider
100,000 "	13-128	C	Tone or Audio Circuit Control
200,000 "	11-129	A	Potentiometer Voltage Divider
200,000 "	14-129	D	*Grid Bias Control
250,000 "	13-130	C	Tone or Audio Circuit Control
500,000 "	13-133	C	Tone or Audio Circuit Control
500,000 "	11-133	A	Potentiometer Voltage Divider
500,000 "	13-133X	C	Tapped Tone Compensation
1.0 Meg	13-137	C	Tone or Audio Circuit Control
1.0 "	13-137X	C	Tapped Tone Compensation
2.0 "	13-139	C	Tone or Audio Circuit Control
3.0 "	13-140	C	Tone or Audio Circuit Control

\*A 300 ohm BT-1/2 (1/2-Watt) insulated metallized resistor is included without additional charge on every Control indicated by an asterisk (\*). Certain controls such as those used for most Grid Bias purposes require a fixed minimum resistance of this sort at the clockwise end (maximum volume position) of the rotation in order to obtain the proper bias for maximum volume. This fixed resistance is not critical, a 300 ohm fixed resistor generally being used for the purpose. Thus, when replacing such a Volume Control, attachment of the BT-1/2 Insulated Resistor supplied will allow maximum volume and increase the load capacity, throwing part of the load on the external resistor.

### IRC METALLIZED TYPE VOLUME CONTROL

without switch (plain cover)—

List Price \$1.00

### SWITCH PRICES

No. 21—List Price	50c
Complete cover and switch, Single Pole, Single Throw—	
No. 22—List Price	60c
Complete cover and switch, Double Pole, Single Throw—	
No. 23—List Price	60c
Complete cover and switch, Single Pole, Double Throw—	

### 4 STANDARD CURVES

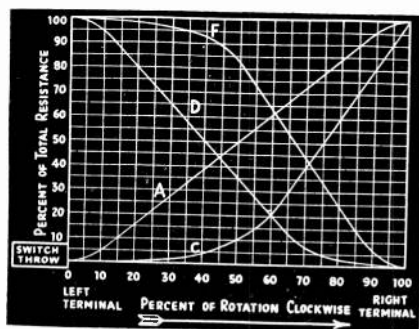
IRC Controls are regularly supplied in four standard curves which are as follows:

**CURVE A**—Used as potentiometer or rheostat in any circuit where uniform resistance change is required.

**CURVE C**—A logarithmic curve with very gradual change in resistance from left terminal. Used as audio circuit control or antenna shunt control.

**CURVE 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.

**CURVE F**—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. Generally used where the control changes the grid bias of only one or two tubes. Must not be used with heavy currents.



# FOR BEST PRECISION



# RESULTS USE PRODUCTS

## IRC PRECISION WIRE WOUND RESISTORS

*Designed for Use in Radio and Electrical  
Equipment That Aims at Perfection*

Designed to meet the most exacting demands for accuracy and durability. Especially adapted for use as meter multipliers, and shunts in increasing the range of single range volt-meters and milliameters, and for other equipment such as faders, gain control pads, etc. Normal tolerance is 1%. Closer tolerances may be obtained at slightly higher prices as follows: for 1/2% tolerance add 10%; for 1/4% of 1% add 15%; for 1/10 of 1% add 25%.



Type WW-4



Types WW-1 and WW-2

0.1; 0.5; 1; 10; 25; 50; 100; 200; 250; 300 and 500 ohms .....		
1,000; 1,500 and 2,000 ohms .....		
2,500 ohms .....		
4,000; 5,000; 7,500 and 10,000 ohms 12,500 and 15,000 ohms .....		
20,000; 22,500; 25,000; 30,000; 40- 000 and 50,000 ohms .....		
60,000 and 75,000 ohms .....		
0.1 meg .....		
0.125 meg .....		
0.15; 0.175 and 0.2 meg .....		
0.225 and 0.25 meg .....		
0.3 meg .....		
0.4 meg .....		
0.5 meg .....		

WW-4 List	WW-1 List
\$ .85	\$1.15
.90	1.15
.90	1.25
1.00	1.25
1.10	1.35
1.35	1.60
1.60	1.90
1.85	2.10
2.10	2.40
2.35	2.65
2.60	2.90
2.85	3.15
3.00	3.15
3.40	3.65

### Type WW-2 2-15/16" x 7/8"

	List
0.6 meg .....	\$ 4.25
0.75 meg .....	4.50
0.9 meg .....	4.75
1.0 meg .....	5.25
1.5 meg .....	7.50
2.0 meg .....	10.00
2.5 meg .....	12.50

For list prices of odd ranges not shown, use same price as given for next higher size.

Type WW-3 (9/16" x 9/16") with wire leads or lug terminals obtainable on special order at same price as WW-4. Made in all ranges from 1 ohm to 0.15 meg.

WW-4 with wire lead terminals instead of lugs is available on special order.

## IRC MOTOR RADIO NOISE SUPPRESSORS

*"Built for Long, Satisfactory Service on  
the Toughest Noise Suppression Jobs"*



MCB Cable End Type MS Spark Plug Type MC Cable Type



MCA Cable End Type MD Distributor Type

The famous Metallized type resistance element is encased and sealed in a sturdy ceramic. Throughout, the units are of solid, vibration-proof construction made without springs, steel wool or other intermediate parts to loosen or corrode even under the most severe operating conditions. Made in the five types illustrated for easy application on every auto radio or other noise suppression job.

"MCB" CABLE END TYPE—Eliminates splicing cable. Recommended for Buicks and other cars having recessed plugs.

"MD" DISTRIBUTOR TYPE—Spring terminal snaps into distributor socket. Cable is plugged into socket terminal of suppressor.

"MC" CABLE TYPE—A convenient unit for use where cable may be spliced.

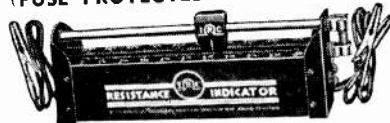
"MCA" CABLE END TYPE—Especially recommended for Fords and all cars where a small light-weight unit for convenient cable type installation is required.

"MS" SPARK PLUG TYPE—A sturdy unit which meets the most exacting demands for spark plug noise suppression.

All Types—List 30c each

## IRC DUAL RESISTANCE INDICATOR

(FUSE PROTECTED)



*Quickly Tells the  
Proper Resistance  
Value for Best Results  
in Any Circuit*

Few service tools will prove so useful -- and in so many

ways. Enables you to check and replace even the "dead" resistors and all others—including those which may have changed in value. Also useful for measuring or determining resistance values for volume controls; as calibrated potentiometer or voltage divider or as temporary standard resistor.

Two scales permit accurate readings from 100 to 100,000 ohms. Range may be extended indefinitely by adding fixed resistors in series. Convenient fuse guards resistance strips from accidental overloads. Indicator has sturdy metal case; ball-bearing slide; convenient tapered clips. The handiest service tool of all. Get one today!

LIST \$4.50

Type "F" Metallized Resistors need no introduction to servicemen and amateurs throughout the world. For many years they have been famous for their quality and dependability in a wide variety of applications.

1/2 WATT (Type F-1/2). Supplied in all practical ranges from 50 ohms to 5 megohms.

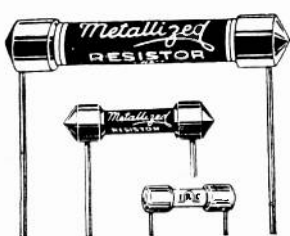
List 17c

1 WATT (Type F-1). Supplied in all practical ranges from 100 ohms to 10 megohms.

List 20c

2 WATTS (Type F-2). Supplied in all practical ranges from 50 ohms to 5 megohms.

List 30c



## IRC Type F

*Metallized*

## RESISTORS



# RESISTORS OHMITE RHEOSTATS



## OHMITE VITREOUS ENAMELLED RHEOSTATS

Every particle of material in the rheostats is either porcelain or metal: there is nothing to smoke or char. All models have insulated shafts and provision to keep the units from turning. Wire is wound over a porcelain core which is fused to porcelain base by vitreous enamel. Contact shoe is of metal-impregnated carbon-graphite. Ratings are for open air use. A trouble-free unit of small size and high wattage rating. Ohmite rheostats are also available in 300- and 500- watt sizes.

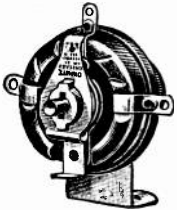
### INSULATED SHAFTS AND BUSHINGS

MODEL "H"—25 Watt Diameter 1 1/2": depth behind panel 1 1/2".					MODEL "K"—100 Watt Diameter 3 1/2": depth behind panel 1 1/2".						
Stk. No.	Total Ohms Resist.	Max. Current Mils.	List Price	Stk. No.	Total Ohms Resist.	Max. Current Mils.	List Price	Stk. No.	Total Ohms Resist.	Max. Current Mils.	List Price
0140	1	5000	\$4.50	0152	125	445	\$4.00	0140	0.5	12500	\$7.50
0141	2	3450	4.00	0153	175	375	4.00	0141	1	10000	7.50
0142	3	2880	4.00	0154	250	315	4.00	0142	2	7070	7.50
0143	6	2040	4.00	0155	350	267	4.00	0143	3	5750	7.50
0144	8	1770	4.00	0156	500	222	4.00	0144	5	4450	7.50
0145	10	1580	4.00	0157	750	173	4.00	0145	7.5	3650	7.00
0146	15	1290	4.00	0158	1000	155	4.50	0146	10	3150	7.00
0147	25	1000	4.00	0159	1500	129	4.50	0147	16	2500	7.00
0148	35	845	4.00	0160	2500	100	4.50	0148	25	2000	7.00
0149	50	709	4.00	0161	3500	84	4.75	0149	50	1420	7.00
0150	75	575	4.00	0162	5000	70	4.75	0150	75	1150	7.00
0151	100	500	4.00					0151	100	1000	7.00

MODEL "J"—50 Watt Diameter 2 1/2": depth behind panel 1 1/2".					MODEL "L"—150 Watt Diameter 4": depth behind panel 1 1/2".						
Stock No.	Total Ohms Resist.	Max. Current Mils.	List Price	Stock No.	Total Ohms Resist.	Max. Current Mils.	List Price	Stock No.	Total Ohms Resist.	Max. Current Mils.	List Price
0308	0.5	10000	\$5.00	0321	150	575	\$4.50	0524	0.5	15000	\$9.50
0309	1	7070	5.00	0322	225	470	4.50	0525	1	12500	9.50
0310	2	5000	5.00	0323	300	405	4.50	0526	2	8950	9.50
0311	4	3500	4.50	0324	500	315	4.50	0527	3	7070	9.50
0312	6	2880	4.50	0325	800	250	4.75	0528	5	5480	9.50
0313	8	2500	4.50	0326	1000	220	4.75	0529	7.5	4470	9.00
0314	12	2040	4.50	0327	1600	176	4.75	0530	10	3880	9.00
0315	16	1760	4.50	0328	2500	140	4.75	0531	15	3163	9.00
0316	22	1500	4.50	0329	3500	119	5.00	0532	25	2450	9.00
0317	35	1190	4.50	0330	5000	100	5.00	0533	35	2070	9.00
0318	50	1000	4.50	0331	8000	79	5.00	0534	50	1735	9.00
0319	80	790	4.50	0332	10000	70	5.00	0535	75	1415	9.00
0320	125	630	4.50					0536	100	1225	9.00

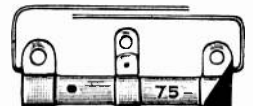
## OHMITE BAND SWITCH



Contains no organic material. Made of porcelain, vitreous-enamel and metal. Each switch has 3 contacts. Mounting brackets and bakelite knobs are furnished with the switches. Efficient because of their low-loss, porcelain construction, low-contact resistance, and high current-carrying ability.

List Price, Complete with Knob and Mounting Bracket.....\$3.00

## OHMITE CENTER-TAPPED RESISTORS



Center-tapped resistors are usually used across radio tube filaments to provide an electrical center when the transformer has no center-tap of its own.

### "WIRE WATT"—1 Watt

Res. Ohms.	Max. Volts	Res. Ohms	Max. Volts
10	3.15	40	6.3
15	3.85	50	7.0
20	4.4	75	8.5
25	5.0	100	10.0
30	5.3	200	11.0

List Price, Each.....\$0.35

### "RED DEVIL"—10 Watt

Res. Ohms.	Max. Volts	Res. Ohms.	Max. Volts
10	10.0	40	20.0
15	12.5	50	22.3
20	14.0	75	27.3
25	15.5	100	31.5
30	17.2	200	44.5

List Price, Each.....\$0.50

## "MULTIVOLT" Tapped Vitreous Enamelled Resistors



Each resistor has 10 equal sections. Each unit furnished with mounting brackets. Voltage rating given is per section.

150 Watts Size 8 1/2" x 1 1/4". Mounting Centers 9 1/4".					75 Watts Size 6 1/2" x 3/4". Mounting Centers 7 1/4".				
Stk. No.	Res. Ohms	Max. Mils.	Max. Volts	List Price	Stk. No.	Res. Ohms	Cur. Mils.	Max. Volts	List Price
1601	100	1225	12	\$3.53	1401	100	865	9	\$2.75
1602	500	548	26	3.50	1402	500	387	19	2.75
1603	1000	385	38	3.50	1403	1000	274	27	2.75
1604	2500	245	60	3.50	1404	2500	173	43	2.75
1605	5000	173	85	3.50	1405	5000	122	61	2.75
1606	10000	122	120	4.00	1406	10000	86	86	2.75
1607	15000	100	150	4.00	1407	15000	70	105	2.75
1608	20000	86	170	4.00	1408	20000	61	120	2.75
1609	25000	77	190	4.00	1409	25000	50	125	2.75
1610	30000	63	190	4.00	1410	30000	44	130	3.00
1611	40000	50	200	4.00	1411	40000	33	130	3.00
1612	50000	40	200	4.00	1412	50000	24	120	3.00
1613	75000	26	200	4.75					
1614	100000	17	175	4.75					



## "CORDOHM" Line Cord Resistor For A.C.-D.C. Sets

Replaces the internal voltage dropping resistor in older A.C.-D.C. sets thereby keeping the heat produced outside of the receiver. A third element in the line cord reduces the line voltage to that required by the tubes.

Stock No.	Voltage Drop	Ohms	Stock No.	Voltage Drop	Ohms
C-330	18.0 to 24.0	330	C-180	53.0 to 61.0	180
C-290	25.0 to 31.5	290	C-160	62.0 to 68.9	150
C-250	32.0 to 44.5	250	C-135	69.0 to 75.2	135
C-220	45.0 to 52.0	220			

List Price, Any Value.....\$0.55



# DEPENDABLE MUTER PRODUCTS

## MUTER WHEATSTONE RESISTANCE BRIDGE

For Use by Servicemen, Factories, High Schools and Colleges

Range .01 Ohms to 11 Megohms

The simplest and most convenient method for measuring resistance with accuracy has been by the use of the decade type Wheatstone bridge. Formerly such instruments have been too expensive for general use. The Muter Certified Resistance Bridge was developed to meet the popular demand for an inexpensive resistance bridge of sufficient accuracy for all practical purposes.

**Description**—The Muter Certified Bridge is contained in a beautiful solid walnut case, 9 3/4" x 8 1/4" x 5 3/8" overall, fitted with polished nickel-plated brass hardware, and complete with internal battery. It combines all the features of appearance, ruggedness, simplicity of operation, wide range, accuracy, portability, and reasonable cost. The component resistors of the ratio arm are adjusted to an accuracy of 1/4 of one per cent and the resistors of the rheostat are adjusted to 1/2 of one per cent, providing an accuracy in measurements of approximately one per cent in the intermediate steps of the multiplier, decreasing to approximately five per cent at the extremes. Provision is made by suitable binding posts for the use of an external battery, or the use of the rheostat as a decade box.



**Stock No. 1200**—Muter Certified Resistance Bridge ..... **List Price \$49.50**

**Note**—The accuracy of the standard type of bridge described above is sufficient for all practical purposes. For special requirements the same bridge is available with ratio arms adjusted to 1/10 of 1 per cent and rheostat resistors adjusted to 1/4 of 1 per cent, giving an overall accuracy of 1/2 of 1 per cent for the intermediate multiplier steps. This special type is S-1200, with a list price of \$59.50.

## "100 BEST SELLERS" ORIGINAL EQUIPMENT CANDOHMS

Candohm patented armored wire-wound resistors are found in practically all radio sets today. Make replacements with genuine Muter units exactly the same as the ten million they have supplied to set manufacturers' specifications. **Look for the set manufacturers' part number stamped in the metal candohm case,** which makes it easy to order. We can supply any Candohm and if the one required is not listed here, give name of set and manufacturers' part number. Do not order by model. If unable to locate part number, send actual unit to be replaced.



U. S. PATENT NO. 1,789,150

Cat. No.	Part No.	Total Ohms	List Price	Cat. No.	Part No.	Total Ohms	List Price	Cat. No.	Part No.	Total Ohms	List Price	Cat. No.	Part No.	Total Ohms	List Price
<b>BELMONT</b>				<b>EMERSON</b>				<b>STEWART-WARNER</b>				<b>U. S. Radio (Grunow)—Cont'd</b>			
†5307	R-258	350	\$0.35	*6201	HR38	1,500	\$0.35	8103	83963	2,300	\$0.70	*8726	3622	4,300	\$0.85
†5308	R-261	40,500	1.20	*6202	HR36	310	1.40	8104	84196	900	.85	†8732	4145	20,900	1.00
†5313	R-268	2,480	.50	6203	UR-90	15,000	.50	8105	84273	31,745	1.40	8735	4353	8,300	.85
5320	1012	31,050	1.40	6209	QOR-162	12,000	.50	<b>T. C. A. (Clarion)</b>				8736	4477	12,725	1.00
5332	106-13	14,275	1.00	6211	QQR-171A	25,100	.85	*8301	1819	15,100	1.00	8746	5374	5,000	.50
5333	106-14	5,800	.70	<b>GRIGSBY (Majestic)</b>				*8304	4268	15,580	1.20	8747	5463	7,050	1.00
<b>COLONIAL</b>				†6607	7818	2,640	.70	8305	4289	19,200	1.20	8761	6199	1,050	.50
†5604	R-7165	8,000	.70	*6608	8292	2,850	.70	8310	4435	250	.35	8768	27416	32,272	1.20
5606	R-7280	3,500	.85	6609	8647	400	.50	8311	4445	350	.35	8772	27448	22,000	1.40
5616	R-11697	1,900	.70	*6611	8986	4,406	1.50	†8316	P-4947	4,190	.70	8781	29115	4,460	.70
<b>CROSLLEY</b>				*6612	9239	10,700	1.20	8317	P-4948	4,300	.85	8784	29641	9,092	1.70
*5701	20176B	900	.85	6613	9472	3,850	.85	<b>UNITED AMERICAN BOSCH</b>				8791	30393	3,000	.70
*5705	20452B	4,295	1.20	*6617	10145	21,702	1.20	†8601	104418	27,000	1.00	<b>WELLS-GARDNER</b>			
*5707	20909	10,000	.85	*6618	10252	10,000	.50	8606	107236	25,300	1.40	9002	90971C	15,738	1.90
*5710	21955	6,500	.85	*6619	10355	2,300	.70	<b>U. S. RADIO (Grunow)</b>				†9016	91084	160	.85
*5711	21956	3,160	.50	†6620	10636	41,750	1.40	*8700	1752	22,600	2.80	*9017	98002	39,050	1.20
*5714	22574	6,415	1.00	†6622	11013	40,775	1.90	*8708	1959	23,800	2.80	†9025	98020	41,000	1.00
*5715	22574A	3,205	1.00	†6624	11451	20,931	1.50	*8709	2303	3,640	.70	<b>ZENITH</b>			
*5728	28471	33,500	.70	†6627	12047	21,513	1.90	†8710	2381	16,000	1.20	9203	63-163	320	.35
†5730	28755A	274	1.40	<b>INTERNATIONAL</b>				*8711	2715	5,535	.85	9204	63-173	750	1.20
†5738	31883	33,500	.85	*8800	R-302	1,500	.35	†8712	2811	4,500	1.20	9210	63-236	500	.50
5739	32301	25,000	.85	*8801	R-303	310	1.40	†8713	2811A	4,450	1.20	†9212	63-251	2,405	1.20
<b>ERLA</b>				†8802	R-304	135	.35	†8715	3111	6,825	1.40	†9213	63-252	7,500	1.00
†6104	9036	45,400	1.20	6803	R-310	90	.35	†8720	3360	24,300	1.50	9218	63-298	250	.35
6108	9310	190	1.00	6808	R-329	4,600	.50	†8722	3371A	3,200	.50	9219	63-302	1,875	.50
6109	9438]	145	.85	<b>SPARTON</b>				†8725	3621	3,315	1.40	†9221	63-308	15,290	1.40
6121	1068	50,320	1.20	7901	A-4915	110	.35	<b>U. S. Radio (Grunow)</b>				9238	63-433	39,240	1.00
6125	1332	7,000	.70	7902	A-5502	200	.35	<b>U. S. Radio (Grunow)</b>							
				7903	A-4974	1,250	.35	<b>U. S. Radio (Grunow)</b>							

\* 1st 25 Best Sellers.

† 2nd 25 Best Sellers.

No prefix 3rd 50 Best Sellers.

**Note**—The above list of "100 Best Sellers" Original Equipment Candohms has been carefully selected from among the many different units we have furnished manufacturers as original equipment. The popularity of the set models for which these particular units were used and the large quantity produced explains why a very high percentage of Candohm replacements are confined to this list. Our general Catalog contains many hundreds of other Candohms we have supplied to manufacturers and gives the individual resistance sections instead of total ohms as in the above list. The "1st 25 Best Sellers" are indicated by the prefix "\*" to our catalog number, the "2nd 25" by the prefix "†" and the remaining fifty have no prefix to the catalog number. Identify Candohms by the manufacturers' part number stamped in the metal case but order by our catalog number. Candohms are supplied in individual boxes showing catalog number.

# DEPENDABLE MUTER PRODUCTS

## Midget Knife Throw Switches



### Single Pole Single Throw

Base 1 1/4" long, 1/2" wide.  
Jobbers' standard quantity 50.  
Weight per 100 is 2 lbs.

Stock No. 1900.....List Price \$0.15



### Single Pole Double Throw

Base 1 1/4" long, 1/2" wide.  
Jobbers' standard quantity 50.  
Weight per 100 is 2 1/2 lbs.

Stock No. 1925.....List Price \$0.25

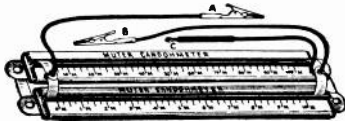


### Double Pole Double Throw

Base 1 1/4" long, 1" wide.  
Jobbers' standard quantity 25.  
Weight per 100 is 5 lbs.

Stock No. 1950.....List Price \$0.40

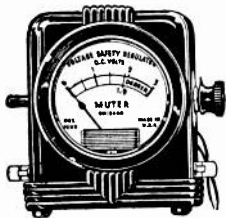
## Candohmer Resistance Indicators



**Description**—An accurate uniform wire-wound resistor insulated from and enclosed in metal housing with exposed slot permitting contact with resistor. Furnished with insulated handle test prods. Has two scales, the upper one to determine approximate value, the lower to permit more accurate reading within that range. Serves to determine proper resistance to replace a defective resistor; useful as a voltmeter multiplier to secure high voltage readings with low-range voltmeter; also serves as calibrated resistor for use in experimental work. Packed in individual boxes 1 3/4"x1"x7 1/2" with complete instructions for use. Approximate weight 7 oz. Jobbers' standard quantity 10.

Stock No.	Range in Ohms	List Price
1700	0 to 10,000 and 0 to 100,000.....	\$2.00
1701	0 to 100 and 0 to 1,000.....	1.75

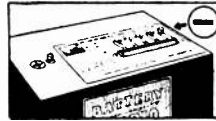
## Muter Voltage Safety Regulator



**Description**—The Muter Voltage Safety Regulator greatly increases the life of tubes and batteries on any radio set using "30 Series" tubes and a 3-volt battery. A slight over-voltage on "30 Series" tubes greatly shortens their lives which the Safety Regulator prevents by keeping the voltage at approximately 1.9 to 2 volts.

The Safety Regulator is variable so that it will take care of all types of sets using "30 Series" tubes, and is equipped with a special voltmeter to accurately check tube voltage at all times. The size of the molded bakelite case is 4 1/2" high, 3 1/2" wide, and 1 3/4" deep. Packed in individual cartons with complete and simple instructions for operation. Weight each 12 oz. Jobbers' stand. quantity 4.  
Stock No. 4200.....List Price \$5.00

## Voltage Regulator for Air-Cell Batteries



**Description**—All 2-volt tubes either 30-31-32-33 or 34 are made to operate on voltages from 1 1/2 to 2 volts only. Any fraction above two volts will greatly reduce the life of the tubes and battery. A new battery actually has 3 volts therefore the Voltage Regulator must be used to reduce this to 2 volts. The set (-) or negative wire is first connected to the No. 1 terminal thus giving the required 2 volts at the set. As set volume drops the negative wire is moved from No. 1 to No. 2 terminal etc. Weight each 1 1/2 oz.

Stock No. 795.....List Price \$0.50

## Manufacturers' Type Soldering Lug

Actual  
Size



Easy  
Soldering

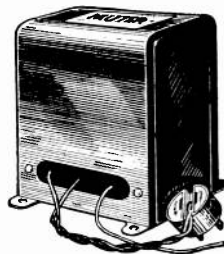
List Price

Stock No. 475 —(Per package of 100).....\$0.25

Stock No. 475A —(Per package of 500)..... 1.00

Stock No. 475B —(Per package of 1000)..... 1.75

## Dependable Interference Filter



**For the suppression of all types of man-made static.** Noises from electrical devices can be effectively overcome by attaching Filter to set. Best results are obtained by using a filter in each offending apparatus. Its capacity is sufficient to take care of noises due to operation of motors up to 1/2 H.P., oil burners, flasher signs, thermostats, and other high frequency disturbances. It operates on any 110-volt circuit, either A.C. or D.C. Metal case is 2 3/4"x2 3/4"x4" finished in black. Shpg. wt. 1 1/4 lbs. Complete instructions.

Stock No. 1400.....List Price \$3.00

## De Luxe All-Wave Tuning Selector



Accurate impedance matching selector for coupling doublet antenna to any receiver, providing most efficient reception of both long and short waves. Contains a noise-reduction shield, eliminating much man-made static. Two 4-position adjustable switches permit matching antenna impedance as well as radio receiver input impedance, greatly improving volume and selectivity, as well as reducing interference. Genuine black bakelite case 3 1/2"x4 1/2"x2".

Stock No. 1850.....List Price \$2.50

## Little Ajax All-Wave Tuning Coupler



**Description**—Little Ajax is an inexpensive yet extremely efficient coupling device to connect any radio to a doublet antenna. It has three taps to adjust the aerial for quiet short-wave reception or efficient broadcast reception and sharp tuning on all bands. Standard antennas can be converted to the doublet type at a small cost by using Little Ajax. The case is genuine bakelite 2 1/2" in diameter. Wire leads provide easy means of attaching. Packed in individual boxes containing complete instructions for use and construction of a doublet antenna. Weight 2 oz. each. Jobbers' standard quantity 24.  
Stock No. 1800—Little Ajax All-Wave Tuning Coupler.....List Price \$1.00

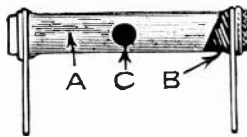
# Carbon Resistors

## GENERAL REPLACEMENT RESISTORS

Moisture-Proof. Will Resist All Climates and Weathers

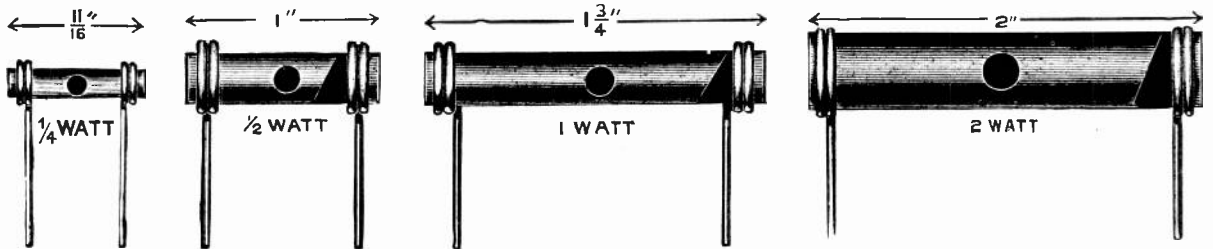
No ordinary service or overload can damage the resistor. The resistance material is molded in a solid form and fired at a high temperature. They are RMA color-coded for easy identification. **Guaranteed accuracy, 10% plus or minus.** Resistance values read approximately the same at any normal voltage. As no moisture can possibly penetrate, age cannot change the resistance value. Accidental breakage is also eliminated.

### R. M. A. STANDARD COLOR CODE CHART



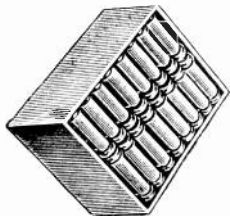
**A**—Body color represents first significant figure.  
**B**—End color represents second significant figure.  
**C**—Dot color represents the number of ciphers following the first two figures.

A	B	C
Body Color	End Color	Dot Color
0 Black	0 Black	.0 Black
1 Brown	1 Brown	0. Brown
2 Red	2 Red	00. Red
3 Orange	3 Orange	000. Orange
4 Yellow	4 Yellow	0,000. Yellow
5 Green	5 Green	00,000. Green
6 Blue	6 Blue	000,000. Blue
7 Violet	7 Violet	0,000,000. Violet
8 Gray	8 Gray	00,000,000. Gray
9 White	9 White	000,000,000. White



THE ILLUSTRATIONS ARE ACTUAL SIZE

1/4 WATT		1/2 WATT		1 WATT		2 WATT	
List Price . . . . . \$0.20		List Price . . . . . \$0.20		List Price . . . . . \$0.20		List Price . . . . . \$0.30	
100 Ohms	750 Ohms	4,400 Ohms	22,500 Ohms	100,000 Ohms	1.5 Meg.		
150 Ohms	875 Ohms	5,000 Ohms	25,000 Ohms	125,000 Ohms	2 Meg.		
200 Ohms	1,000 Ohms	6,000 Ohms	30,000 Ohms	150,000 Ohms	2.5 Meg.		
250 Ohms	1,250 Ohms	7,000 Ohms	35,000 Ohms	180,000 Ohms	3 Meg.		
300 Ohms	1,500 Ohms	7,500 Ohms	40,000 Ohms	200,000 Ohms	3.5 Meg.		
350 Ohms	1,750 Ohms	8,000 Ohms	45,000 Ohms	250,000 Ohms	4 Meg.		
400 Ohms	2,000 Ohms	9,000 Ohms	50,000 Ohms	350,000 Ohms	5 Meg.		
450 Ohms	2,250 Ohms	10,000 Ohms	60,000 Ohms	400,000 Ohms	6 Meg.		
500 Ohms	2,500 Ohms	12,500 Ohms	70,000 Ohms	500,000 Ohms	7 Meg.		
600 Ohms	3,000 Ohms	15,000 Ohms	75,000 Ohms	600,000 Ohms	8 Meg.		
650 Ohms	3,500 Ohms	17,500 Ohms	80,000 Ohms	750,000 Ohms	9 Meg.		
700 Ohms	4,000 Ohms	20,000 Ohms	90,000 Ohms	1 Meg.	10 Meg.		



## CARBON RESISTANCE KITS

### 36 POPULAR SIZE RESISTORS

These kits consist of the thirty-six most popular value resistors, enabling the serviceman to make practically any resistor repair regardless of any unusual value resistance needed. Any combinations can be made up. Simply specify thirty-six of any of the resistance values listed above. **Accuracy guaranteed within 10%, and most values are actually within 5%.**

1/4 WATT		1/2 WATT		1 WATT		2 WATT	
List Price . . . . . \$6.48		List Price . . . . . \$6.48		List Price . . . . . \$6.48		List Price . . . . . \$9.72	

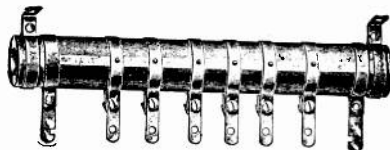
# ATLAS WIRE WOUND-TUBULAR RESISTORS



## ATLAS HEAVY DUTY ADJUSTABLE VOLTAGE DIVIDERS S-I-X OUTSTANDING REASONS W-H-Y

YOU GET FAR MORE FOR YOUR MONEY WHEN YOU BUY ATLAS VARIABLE RESISTORS:

- 1—FULLY PACK WIRE-WOUND—NOT SPACE-WOUND.
- 2—HEAVIER WIRE AND MORE OF IT—FULL SAFE WATTAGE RATING.
- 3—HEAVY DUTY CHROME-OXIDE COATING—SAFELY DISSIPATING HIGH HEAT
- 4—FROM ONE TO SIX BANDS SUPPLIED FREE WITH EVERY RESISTOR—EFFECTING A CONSIDERABLE SAVING.
- 5—ACCURATELY WOUND RESISTANCE VALUES—WELL WITHIN 5% TOLERANCE
- 6—LARGE, OVERSIZE NON-HYGROSCOPIC TUBING—AFFORDING PLENTY OF AREA FOR HEAT DISSIPATION.



75 Watts—Size 5 1/4" x 3/4"  
COATED ADJUSTABLE TYPE

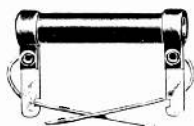
All Adjustable Resistors  
are Supplied with  
Mounting Brackets Attached

**IMPORTANT**  
Do not order values above  
maximum ohmages listed

10 to 200 WATTS											
Type	Watts	Dimensions	Bands	Ohms	List	Type	Watts	Dimensions	Bands	Ohms	List
VA	10	2" x 1/2"	1	100 to 10M	\$0.45	VH	75	5 1/4" x 3/4"	6	50 to 25M	\$1.80
VB	20	2 1/2" x 3/8"	1	100 to 15M	.60	VH	75	5 1/4" x 3/4"	6	26M to 75M	1.95
VC	25	3" x 5/8"	1	100 to 20M	.75	VI	100	8" x 5/8"	6	50 to 25M	2.15
VD	30	4" x 3/8"	2	20 to 25M	.85	VI	100	8" x 5/8"	6	26M to 100M	2.30
VE	35	4" x 5/8"	3	20 to 30M	1.00	VJ	150	9 1/2" x 1"	6	50 to 25M	2.60
VF	40	4 1/2" x 3/4"	3	20 to 40M	1.30	VJ	150	9 1/2" x 1"	6	26M to 100M	3.00
VG	50	5 1/4" x 3/4"	4	20 to 50M	1.50	VK	200	11" x 1 1/2"	6	100 to 25M	3.15
						VK	200	11" x 1 1/2"	6	26M to 50M	3.25
						VK	200	11" x 1 1/2"	6	51M to 100M	3.85

NOTE—Extra Bands—Add 10c each to cost

### 5 and 10-Watt Wire-Wound Resistors with PIGTAILS and LUGS



10  
Resistors  
of each  
Ohmage in  
Standard  
Cartons

Moisture Proof—Triple Insulation  
Tolerance within 2%—64 Standard Ohmages

Type SPT-5 (5 watts)—Size 1 3/4" x 3/8"		Type SPT-10 (10 watts)—Size 1 3/4" x 3/8"	
Ohms	List Price	Ohms	List Price
5	\$0.28	5	\$0.30
10	.28	10	.30
15	.28	15	.30
20	.28	20	.30
25	.28	25	.30
30	.28	30	.30
40	.28	40	.30
50	.28	50	.30
75	.28	75	.30
100	.28	100	.30
125	.28	125	.30
150	.28	150	.30
175	.28	175	.30
200	.28	200	.30
225	.28	225	.30
250	.28	250	.30
275	.28	275	.30
300	.28	300	.30
350	.28	350	.30
400	.28	400	.30
450	.28	450	.30
500	.28	500	.30
600	.28	600	.30
700	.28	700	.30
750	.28	750	.30
800	.28	800	.30
850	.28	850	.30
900	.28	900	.30
1000	.28	1000	.30
1100	.28	1100	.30
1200	.28	1200	.30
1250	.28	1250	.30

### 10-20-25 WATTS WIRE-WOUND RESISTORS Special Black Enamel—Fixed Resistors

Moisture Proof—Triple Insulation—Tolerance within 2%  
64 Standard Ohmages—5 to 50000 Ohms



Type	Size	Watts	Ohms
SP-10	2" x 1/2"	10	5 to 50000
SP-20	2" x 3/8"	20	5 to 50000
SP-25	2 1/2" x 3/8"	25	5 to 50000

List Price		List Price	
Ohms	Watts	Ohms	Watts
5	\$0.30	10	\$0.45
10	.30	15	.45
15	.30	20	.45
20	.30	25	.45
25	.30	30	.45
30	.30	40	.45
40	.30	50	.45
50	.30	75	.45
75	.30	100	.45
100	.30	125	.45
125	.30	150	.45
150	.30	175	.45
175	.30	200	.45
200	.30	225	.45
225	.30	250	.45
250	.30	275	.45
275	.30	300	.45
300	.30	350	.45
350	.30	400	.45
400	.30	450	.45
450	.30	500	.45
500	.30	600	.45
600	.30	700	.45
700	.30	750	.45
750	.30	800	.45
800	.30	850	.45
850	.30	900	.45
900	.30	1000	.45
1000	.30	1100	.45
1100	.30	1200	.45
1200	.30	1250	.45

NOTE.—For any other ohmage than those listed above—add 5c to cost.  
**BE SURE TO SPECIFY TYPE WHEN ORDERING**

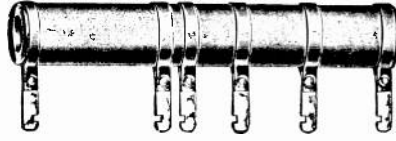


# ATLAS VOLTAGE DIVIDERS

## STANDARD REPLACEMENTS

The immediate choice of radio servicemen who know and appreciate honest quality.  
 Atlas Voltage Dividers are built to entirely eliminate a major source of trouble—open-circuit dividers.

**FAST SERVICE  
 PROMPT DELIVERY**



**PACK WIRE-WOUND  
 CHROME-OXIDE COATED**

**QUALITY RESISTORS THAT HAVE NO SUBSTITUTE**

Type	Total Resistance	Sections	List Price
<b>AIRLINE</b> Model 2955	23973 Ohms	150-11250-9473-3100	<b>\$1.35</b>
<b>ALL-AMERICAN MOHAWK</b>	6200 "	900-300-1000-2000-2000	<b>1.30</b>
<b>AMRAD</b> Model 7 A.C. Model 70 Model 82	4080 " 8600 " 2175 "	2175-1555-350 5000-3600 475-300-1000-700	<b>1.15</b> <b>1.10</b> <b>1.15</b>
<b>APEX</b> Model 7 Model 7 Model 8  Model 10  Model 27 Model 31 Model 48 Gloritone 99A Models 500-502 Model 1009	4300 " 3315 " 4450 "  6825 "  23800 " 37600 " 2970 " 21300 " 20950 " 17635 "	1100-3200 870-1800-225-290-200 500-1000-1200-600-600-550  2500-0-425-600-1800-1000-500  10700-8400-4700 10700-8400-3500-15000 70-2200-700 300-10000-11000-3000 10650-10000-300 75-60-17500	<b>1.30</b> <b>1.40</b> <b>1.40</b>  <b>1.40</b>  <b>1.35</b> <b>1.30</b> <b>1.40</b> <b>1.05</b> <b>1.35</b> <b>1.35</b> <b>1.35</b>
<b>ARGUS B195</b>	5505 "	4000-0-160-700-0-65-280	<b>2.60</b>
<b>BALKITE 180B</b>	10800 "	6000-3000-1800	<b>1.35</b>
<b>BOSCH</b> Model Essex 4 Model 48 Model 49 Model 54 Model 58 Model 60 Model 62 Model 260R Model 370E	21900 " 4400 " 4400 " 20 " 5130 " 4790 " 4250 " 7180 " 27000 "	10000-11500-400 950-1450-2000 1950-800-1650 20 950-180-1950-2050 1300-2380-160-950 1400-2600-250 3700-2270-1510 1000-12000-8000-6000	<b>1.50</b> <b>1.10</b> <b>1.25</b> <b>1.10</b> <b>1.30</b> <b>1.30</b> <b>1.30</b> <b>1.25</b> <b>1.35</b>
<b>BRANDES</b> Model B-10 Model B-16	8540 " 2955 "	5600-0-10000-140-1800 2500-45-410	<b>1.30</b> <b>1.25</b>
<b>BREMER-TULLY</b> Model 640 Model 820	16720 " 13400 "	3000-560-6500-5000-1660 4900-5500-3000	<b>1.40</b> <b>1.25</b>
<b>BROWNING DRAKE</b> Model 54	15300 "	850-4500-3450-3900-2600	<b>1.40</b>
<b>BRUNSWICK</b> Model DC Model PR8-B17 Model 5KR7-3KR-2KR Model 3NC-8 5NC-8 Model 3NWS Model 3NWS Model P.14	66 " 9100 " 3940 " 1290 " 7780 " 3040 " 10700 "	30-36 1900-200-2500-4000-500 1600-0-1900-440 400-350-350-190 2200-300-4000-1280 1500-1000-250-130-160 300-100-700-2600-7000	<b>3.35</b> <b>1.30</b> <b>1.30</b> <b>1.35</b> <b>1.30</b> <b>1.30</b> <b>1.20</b>
<b>COLONIAL</b> Model 28 A.C. Model 28 A.C. Model 28 A.C. Model 31 A.C. Model 31 D.C. Model 32 D.C. Model 33 Model 33 A.C. Model 36 D.C.	7200 " 15500 " 125000 " 111000 " 60 " 34.9 " 420 " 121000 " 176 "	1000-4000-2200 8500-7000 50900-50000-25000 37000-370000-37000 Large, filament resistor 34.9 210-210 60000-50000-11000 4-36-136	<b>1.25</b> <b>1.25</b> <b>1.50</b> <b>1.25</b> <b>2.50</b> <b>2.50</b> <b>.55</b> <b>1.50</b> <b>1.70</b>

Type	Total Resistance	Sections	List Price
<b>COL. KOLSTER</b> Model 300 Model 500 Model 920 Model 931 Model 940 Model 950 Model 950 Model 961C5	2340 Ohms 2650 " 2060 " 9035 " 2955 " 13110 " 50000 " 8050 "	2000-140-500 2100-120-430 1650-410 6000-2200-135-700 2500-45-410 9000-3200-140-70-700 30000-20000 7200-60-90-700	<b>\$1.25</b> <b>1.25</b> <b>1.10</b> <b>1.35</b> <b>1.25</b> <b>1.30</b> <b>1.40</b> <b>1.30</b>
<b>CROSLLEY</b> Fiver Model 158 Model 76 D.C. Model 704 Model 705	32400 " 25000 " 52.7 " 5000 " 140 "	24000-8400 10000-15000 5-47.7 1525-3475 95-45	<b>.50</b> <b>.50</b> <b>1.62</b> <b>.95</b> <b>.95</b>
<b>D. C. RESISTOR</b>	360 "	45-315	<b>.75</b>
<b>DAY FAN</b>	8100 "	1000-3700-2050-100-50-1200	<b>2.15</b>
<b>DAY FAN JR.</b>	6300 "	2000-3000-1300	<b>1.30</b>
<b>EARL</b> Models 31-32 Models 31-32	4750 " 5000 "	4000-0-750 5000	<b>1.30</b> <b>1.25</b>
<b>EDISON</b> Model D.C. Model D.C. Model R1 Model R2	31 " 32 " 1500 " 12500 "	24-3 1/2-3 1/2 20-6-6 750-750 12500	<b>1.95</b> <b>1.95</b> <b>.70</b> <b>1.30</b>
<b>ERLA</b>	18100 "	100-14600-3400	<b>1.30</b>
<b>FADA</b> Model 18 D.C. Model 82 D.C.	250 " 25 "	10-200-40 15-10	<b>1.25</b> <b>1.95</b>
<b>FEDERAL E</b>	2685 "	135-2000-200-350	<b>1.75</b>
<b>FREED</b> Model 958 Model 958	4750 " 5990 "	4000-0-750 5000	<b>1.30</b> <b>1.25</b>
<b>FREED EISEMAN</b> Model NR60 Model NR80 Model NR80 Model NR85 Model NR85	6350 " 3750 " 4350 " 2350 " 4250 "	2000-350-0-4000 2000-1750 4000-0-350 2000-350 1900-2000-0-350	<b>1.40</b> <b>1.25</b> <b>1.30</b> <b>1.10</b> <b>1.35</b>
<b>FRESHMAN</b> Model G Model G60S Model H60S Model N	10950 " 11390 " 9300 " 18190 "	300-1250-4300-3090-2100 1899-4500-3900-2000 4099-3899-1599 2299-6999-3399-4500-1500	<b>1.30</b> <b>1.30</b> <b>1.30</b> <b>1.30</b>
<b>GENERAL MOTORS</b> Model Model 251 Model S1A	5187 " 19370 " 40900 "	890-59-1863-2000-465 4890-7690-6900 15000-25000	<b>1.30</b> <b>1.10</b> <b>1.10</b>
<b>GOLDEN LEUTZ</b>	41000 "	9000-3500-4000-4500-11000-9000	<b>2.30</b>
<b>GREBE</b> Model A.C. 6 Model A.C. 6 Model A.C. 6 Model S.K. 4	2500 " 7090 " 9150 " 2930 "	2500 6399-95-695 5999-2899-750 677-2209-62	<b>.70</b> <b>1.30</b> <b>1.30</b> <b>1.30</b>
<b>GULBRANSON</b> Model 8 A.C.	24905 "	3199-9475-11250-189	<b>1.40</b>
<b>HALSON</b> Model Model	360 " 425 "	339-39 375-59	<b>1.10</b> <b>1.10</b>
<b>HOWARD</b> 135 A.C.	29600 "	1600-12700-16000	<b>1.30</b>
<b>KENNEDY</b> Model 29B Model 32	4250 " 5750 "	2999-1599-750 2899-130-1810-750	<b>1.25</b> <b>1.30</b>

# ATLAS VOLTAGE DIVIDERS

## EXACT DUPLICATES



ATLAS WIRE-WOUND TUBULAR RESISTORS have been generally acclaimed throughout the world as standard resistors designed especially to meet all radio requirements. They are used widely in service and replacement work.

**MOST COMPLETE LINE  
PACKED IN INDIVIDUAL BOX**



**PACK WIRE-WOUND  
CHROME-OXIDE COATED**

**MADE TO EXACT SPECIFICATIONS**

Type	Total Resistance	Sections	List Price
<b>KOLSTER</b>			
Model 6H	6440 Ohms	940-5000-500	<b>\$1.25</b>
Model 6J	7120 "	3000-3000-220-900	<b>1.30</b>
Model 21K	1115 "	90-125-900	<b>1.25</b>
Model 22K	7120 "	3000-3000-220-60-840	<b>1.30</b>
Model 24K	7835 "	3400-3800-55-80-140-360	<b>1.20</b>
Model 38K	4430 "	3600-55-75-700	<b>1.25</b>
Model 42K	3580 "	840-140-2600	<b>1.25</b>
Model 43K	2980 "	1600-1000-380	<b>1.30</b>
Model 44K	2550 "	1450-650-200-350	<b>1.35</b>
Model 48K	5600 "	1500-2000-100-2000	<b>1.30</b>
Model 70K	8290 "	3000-3000-200-200	<b>1.30</b>
Model 90K	16250 "	6000-7000-3000-250	<b>1.30</b>
Model 250K	8650 "	7800-60-90-700	<b>1.10</b>
<b>LANG D.C.</b>	233 "	30-27-27-27-15-80	<b>1.40</b>
<b>MAJESTIC</b>			
Model 20	12550 "	0-150-800-0-7500-4200	<b>1.85</b>
Model 25 D.C.	83 "	1 1/2-20-60-0-1 1/2	<b>3.80</b>
Model 30	19461 "	2350-3800-3160-0-101-750	<b>1.85</b>
Model 50	33620 "	140-250-0-23000-10000-230	<b>1.85</b>
Model 60	12700 "	6500-0-4300-600-0-500-800	<b>1.85</b>
Model 163	21400 "	4390-5700-4100-6000-500-80	<b>1.85</b>
Model 200	13790 "	7000-3500-3000-110-180	<b>1.30</b>
Model 250	82 "	45-15-2-0-20	<b>3.80</b>
Model 290	28610 "	230-0-3700-2400-18000-180-700-0-400	<b>2.00</b>
Model 300	25532 "	230-0-4900-72-20000-220-110	<b>1.85</b>
Model 360	29050 "	1500-9000-125-18000-200-225	<b>1.85</b>
Model 460	21778 "	10900-9000-364-1800-131-480	<b>1.85</b>
<b>NORDEN HAUCK</b>			
Model	755 "	775	<b>.70</b>
Model	6000 "	6000	<b>.80</b>
Model	14000 "	6500-6000-1500	<b>1.40</b>
Model 550	23000 "	8000-2500-3000-2500-7000	<b>1.40</b>
<b>PEERLESS K70</b>	19000 "	2500-8000-8500	<b>1.40</b>
<b>PHILCO</b>			
Model 20	5107 "	1400-187-75-0-2470-975	<b>1.30</b>
Models 30-76-77-77A	1050 "	250-800	<b>.70</b>
Model 70	3610 "	180-70-0-2300-1060	<b>1.30</b>
Model 85	4750 "	2100-1000-150-1500	<b>1.30</b>
Model 87	4582 "	3785-157-0-640	<b>1.30</b>
Model 511	20700 "	12500-5500-0-300-2400	<b>1.40</b>
<b>R.C.A. RADIOLA</b>			
Model 17	9100 "	1900-200-2500-4000-500	<b>1.30</b>
Model 18	3940 "	1400-0-1900-440	<b>1.30</b>
Model 28	2800 "	2000-300-500	<b>1.30</b>
Model 30A	6700 "	3000-2000-300-500-900	<b>1.30</b>
Models 31-33 D.C.	580 "	80-500	<b>1.15</b>
Model 41	25300 "	12300-8000-5000	<b>1.30</b>
Models 42-48	4865 "	3200-830-120-715	<b>1.25</b>
Models 44-46	2580 "	500-0-1460-540-0-80	<b>1.30</b>
Models 44-46	8400 "	2800-900-3600-1100	<b>1.30</b>
Models 46-47	2080 "	1460-540-0-80	<b>1.30</b>
Models 60-62	1290 "	400-350-350-190	<b>1.35</b>
Model 64	3040 "	1590-1000-250-130-160	<b>1.30</b>
Model 64	7780 "	1280-4000-300-2200	<b>1.30</b>
Model 64-67	4470 "	310-3850-310	<b>1.00</b>
Model 67	4930 "	2100-900-210-115-215-100	<b>1.35</b>
Model 67	8335 "	1435-3490-300-3200	<b>1.30</b>
<b>SILVER MARSHAL</b>			
Model 651	9720 "	3800-4200-730-990	<b>1.30</b>
<b>SIMPLEX</b>			
Model	1390 "	430-210-750	<b>.80</b>
<b>SONORA</b>			
A-36	21000 "	14090-7000	<b>1.30</b>
B-31	6950 "	750-1200-1500-3500	<b>1.25</b>

Type	Total Resistance	Sections	List Price
<b>SPARTAN D.C.</b>	Ohms	54	<b>\$1.38</b>
<b>SPLITDORF</b>			
Model	1500 "	750-750	<b>.70</b>
Model	13200 "	650-150-4500-5400-2500	<b>1.40</b>
Model 171	11550 "	2000-3500-4000-150-2000	<b>1.35</b>
<b>SPLITDORF ABBEY</b>			
Model	11500 "	2500-3000-3000-3000	<b>1.30</b>
Model	13500 "	2500-3000-3000-3000-2000	<b>1.40</b>
<b>STEINITE</b>			
Model 26	16000 "	8000-8000	<b>1.00</b>
Model 40	27200 "	1190-1270-1170-3000	<b>1.50</b>
Model 50-102	25870 "	8100-11750-5200-827	<b>1.40</b>
Model 70	22440 "	10000-10000-2440	<b>1.40</b>
Model 991	2500 "	1000-1000-250-0-250	<b>1.25</b>
<b>STERLING</b>			
Model 41	5350 "	4000-450-900	<b>1.30</b>
Model 41	29000 "	20000-9000	<b>1.30</b>
<b>STEWART WARNER</b>			
Model 950	3250 "	850-2400	<b>.95</b>
Model 950	3330 "	1110-2220	<b>.50</b>
Model 950	15500 "	10000-5500	<b>1.25</b>
<b>STROMBERG CARLSON</b>			
Models 10-11	4500 "	400-100-4000	<b>1.40</b>
Models 10-11	10000 "	4570-3250-2000	<b>1.40</b>
Model 12	11025 "	4000-4000-3025	<b>1.40</b>
Model 12	6370 "	5000-100-1210-260	<b>1.40</b>
Model 20	3285 "	1575-900-0-60-0-750	<b>1.40</b>
Model 25	4900 "	4000-100-800	<b>1.35</b>
Model 25	9300 "	1800-3000-4500	<b>1.35</b>
Model 403 A.A.	5500 "	3000-2500	<b>1.30</b>
Model F23	3770 "	3000-70-700	<b>1.35</b>
Model F23	5500 "	3000-2500	<b>1.30</b>
Model G35	9270 "	2500-3000-3000-770	<b>1.30</b>
Model C38 D.C.	10 "	10	<b>1.40</b>
Model C38 D.C.	12 "	12	<b>1.40</b>
Model C38 D.C.	30 "	30	<b>1.40</b>
Model C38 D.C.	200 "	200	<b>1.40</b>
Model C38	9000 "	2500-6000-500	<b>1.15</b>
Models 641-651	19300 "	7800-4500-3000-4000	<b>1.40</b>
Model 642	9750 "	1450-4000-3000-1300	<b>1.30</b>
Model 642	11000 "	7800-3200	<b>1.15</b>
Model 846	9200 "	3200-4000	<b>1.30</b>
Model 846	6380 "	330-1700-4350	<b>1.35</b>
<b>TEMPLE</b>			
Model 7-60	21600 "	8000-1600-8000-4000	<b>1.40</b>
Model 8-60	6850 "	900-5200-750	<b>1.30</b>
<b>THORDARSON</b>			
Model R171	13000 "	2000-3000-3000-3000-2000	<b>1.40</b>
<b>VICTOR</b>			
Models 9-18	3670 "	630-1500-1000-250-130-160	<b>1.35</b>
Model R925	3400 "	1400-2000	<b>1.10</b>
Models R32, 45, 52 & 75	4325 "	2000-1350-200-775	<b>1.59</b>
<b>ZANEY GILL VITATONE</b>			
Model 54	18450 "	2100-7500-7500-1350	<b>1.30</b>
<b>ZENITH</b>			
Model 10	24500 "	6000-7500-8500-2500	<b>1.35</b>
Model 10	Power Pack		
Model 11	22700 "	12000-5200-5500	<b>1.40</b>
Model 11	7200 "	3200-1200-1200-1600	<b>1.35</b>
Model 12	7500 "	1000-3500-1000-2000	<b>1.40</b>
Model 18	35300 "	13000-11000-9500-1800	<b>1.55</b>
Model 50	6090 "	850-2350-2800	<b>1.30</b>
Model 90	13000 "	3000-10000	<b>.45</b>
Model 91	6400 "	2800-3600	<b>.60</b>
Model 91	8000 "	3000-5000	<b>.60</b>

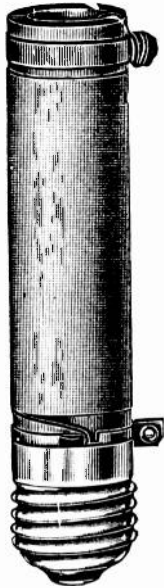


# ATLAS RESISTORS

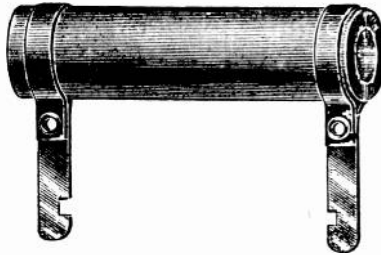
FOR SPECIAL REQUIREMENTS

We recommend Atlas Pack-Wound Heavy-Duty Chrome-Oxide Coated Resistors for Ship Instruments, Meters, Laboratory Equipment, Transmitting and Radio Receivers or any requirement where dependable resistors are essential

Every Mechanical Advantage to produce the Highest Efficiency Possible is represented in these Specially Designed Types.



**ACCURATE**  
2% TOLERANCE



**NON-POROUS**  
A QUALITY PRODUCT

### SINGLE OR TAPPED UNITS

Type	Watts	Dimensions	Ohms	List	Type	Watts	Dimensions	Ohms	List
AB	5	1" x 3/8"	5 to 25M	<b>\$0.30</b>	HI	60	5" x 1"	20 to 25M	<b>1.15</b>
BC	5	2" x 3/8"	5 to 25M	<b>.35</b>	HI	60	5" x 1"	26M to 50M	<b>1.20</b>
CD	10	2" x 1/2"	5 to 25M	<b>.40</b>	IJ	75	6" x 3/8"	20 to 50M	<b>1.35</b>
CD	10	2" x 1/2"	26M to 50M	<b>.45</b>	IJ	75	6" x 3/8"	51M to 100M	<b>1.45</b>
DE	20	2" x 3/8"	5 to 25M	<b>.55</b>	JK	100	8" x 3/8"	20 to 50M	<b>1.65</b>
DE	20	2" x 3/8"	26M to 50M	<b>.60</b>	JK	100	8" x 3/8"	51M to 100M	<b>1.80</b>
EF	25	3" x 5/8"	5 to 25M	<b>.70</b>	KL	150	9 1/2" x 1"	20 to 50M	<b>1.90</b>
EF	25	3" x 5/8"	26M to 50M	<b>.75</b>	KL	150	9 1/2" x 1"	51M to 100M	<b>2.15</b>
FG	35	4" x 5/8"	10 to 25M	<b>.90</b>	LM	200	11" x 1 1/4"	20 to 100	<b>2.20</b>
FG	35	4" x 5/8"	26M to 50M	<b>.95</b>	LM	200	11" x 1 1/4"	150 to 25M	<b>2.40</b>
GH	50	4" x 3/4"	10 to 25M	<b>1.00</b>	LM	200	11" x 1 1/4"	26M to 100M	<b>2.65</b>
GH	50	4" x 3/4"	26M to 50M	<b>1.10</b>					

Edison Base Types are available only in 1/2" tube diameter. 50, 75, 100-Watt Ratings

**NOTE:** ADD 10c TO COST FOR EACH ADDITIONAL TAP  
ADD 20c TO COST FOR HEAVY MOUNTING BRACKETS  
ADD 30c TO COST FOR EDISON BASE TYPE

## ATLAS HEAVY-DUTY CHROME-OXIDE COATED TRANSMITTING BLEEDER RESISTORS WITH CENTER TAP

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.

4 or 8 Sections.



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

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.

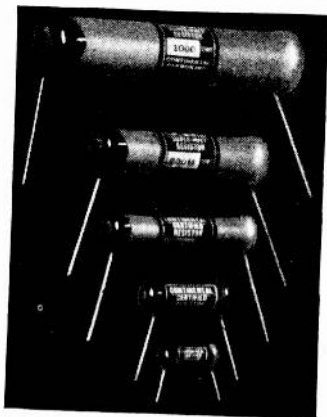
100 Watts—Size 8"x3/8"				150 WATTS—Size 9 1/2"x1" (Continued)			
Type	Ohmage	Resistance	List	Type	Ohmage	Resistance	List
SF	5000	2500-0-2500	<b>\$1.95</b>	TGB	20000	10000-0-10000	<b>\$2.20</b>
SFA	10000	5000-0-5000	<b>1.95</b>	TGC	50000	25000-0-25000	<b>2.45</b>
SFB	15000	7500-0-7500	<b>1.95</b>	TGD	100000	50000-0-50000	<b>2.45</b>
SFC	20000	10000-0-10000	<b>1.95</b>	<b>200 WATTS—Size 11"x1 1/4"</b>			
SFD	30000	15000-0-15000	<b>1.95</b>	UH	5000	2500-0-2500	<b>2.50</b>
SFE	40000	20000-0-20000	<b>2.10</b>	UHA	10000	5000-0-5000	<b>2.50</b>
SFF	50000	25000-0-25000	<b>2.10</b>	UHB	15000	7500-0-7500	<b>2.50</b>
SFG	100000	50000-0-50000	<b>2.10</b>	UHC	20000	10000-0-10000	<b>2.50</b>
<b>150 WATTS—Size 9 1/2"x1"</b>				UHD	30000	15000-0-15000	<b>2.50</b>
TG	5000	2500-0-2500	<b>2.20</b>	UHE	40000	20000-0-20000	<b>2.70</b>
TGA	10000	5000-0-5000	<b>2.20</b>	UHF	50000	25000-0-25000	<b>2.70</b>
				UHG	100000	50000-0-50000	<b>2.70</b>

Add 40c to Cost for Non-Inductive Bleeders

# CONTINENTAL RESISTORS

## CONTINENTAL "INSULATED" CARBON RESISTORS

Exclusive "Triple-Coated" 1000-Volt Insulation: Protects against Shorts to Sub-Panel and Wiring. Permanent Resistance Value. Oxygen-Welded "Copper-Bonded" Leads. Non-Inductive.



### Stock Resistor Values

10	900	8,500	65,000	900,000
15	1,000	13,000	70,000	1 megohm
25	1,250	11,000	75,000	1.5 megohms
50	1,500	12,500	100,000	2 megohms
75	1,750	15,000	125,000	2.5 megohms
100	2,000	17,500	150,000	3 megohms
150	2,250	20,000	200,000	3.5 megohms
250	2,500	22,500	250,000	4 megohms
350	3,000	25,000	300,000	5 megohms
400	3,500	30,000	350,000	6 megohms
450	4,000	35,000	400,000	7 megohms
500	4,500	40,000	450,000	8 megohms
600	5,000	45,000	500,000	9 megohms
700	6,000	50,000	600,000	10 megohms
750	6,500	55,000	700,000	
800	7,500	60,000	800,000	



### "DIAL COLOR CODE" and RESISTOR CABINET

Here's one of the most useful service units ever made available to the Radio trade. The serviceable cardboard cabinet holds 35 continental 1/2 or 1-watt resistors in rack formation for easy accessibility. On the cover is a dial-operated color-code chart giving exact resistance values almost automatically.

Special: 35 Continental Carbon Resistors (either 1/2 or 1-watt) complete in cabinet with "Dial Color Code."

Code 135D 1 Watt.....List Price \$7.00

Code 135G 1/2 Watt.....List Price 5.95

Type No.	Watts	Size	List Price	Type No.	Watts	Size	List Price
H5	5	3 x 1 1/4 in.	\$0.50	G4	1/2	1 x 1/4 in.	\$0.17
E2	3	2 x 3/8	.30	K7	1/4	5/8 x 1/8	.17
D2	1	1 1/4 x 1/4	.20				

## RESISTOR MERCHANDISING HELPS

### "Metal-Pac" Resistor Kit

Includes: Choice of twenty-five 1/4, 1/2, or 1-watt standard CONTINENTAL insulated carbon resistors, Colors Code Indicator Disc, and a lacquered steel carrying case for your tool box.

Purchase CONTINENTAL Molded Carborite Resistors in this convenient form. Any assortment with any duplication of values from the longer list of stock values will be furnished on request. Standard kits contain the following 25 certified resistors:

250 ohms	5,000 ohms	50,000 ohms
500 ohms	6,000 ohms	60,000 ohms
1,000 ohms	10,000 ohms	75,000 ohms
1,500 ohms	12,500 ohms	100,000 ohms
2,000 ohms	15,000 ohms	250,000 ohms
2,500 ohms	20,000 ohms	500,000 ohms
3,000 ohms	25,000 ohms	1 megohm
4,000 ohms	30,000 ohms	2 megohms
	40,000 ohms	

An advantage of the "Metal-Pac" is the impression it makes on your customers—parts which are obviously treated with care must be more important and valuable than loose items in a tool box.

Code No.	Resistors	List Price
125 D	25 1-watt	\$5.00
125 G	25 1/2-watt	4.25
125 K	25 1/4-watt	4.25

## SERVICE RESISTOR DRAWER CABINET

Servicemen will find ready use for this practical four-drawer resistor cabinet in which may be indexed and stored 500 resistors. The cabinet is made of heavy material, leatherette finish. The drawers slide smoothly. Convenient charts are provided for determining parallel resistor values and volt or current limits of resistors of standard watt sizes. Drawer partitions permit easy separation of the various resistor values.



This cabinet is FREE with the purchase of 70 CONTINENTAL Carbon 1-watt Insulated Resistors. Two each of the following popular sizes are supplied with the cabinet: 150, 250, 400, 500, 1,000, 1,500, 1,750, 2,000, 2,500, 3,000, 3,500, 4,000, 5,000, 6,000, 7,500, 8,500, 10,000, 12,500, 15,000, 17,500, 20,000, 25,000, 30,000, 40,000, 50,000, 60,000, 75,000, 0.1 megohm, 0.15 megohm, 0.25 megohm, 0.3 megohm, 0.5 megohm, 1 megohm, 2 megohms, 3 megohms.

CONTINENTAL Service-Resistor Drawer Cabinet, size 7x10x6 in. deep, with 70 one-watt resistors.

Code No. 170.....List Price \$14.00



# CONTINENTAL SUPPRESSORS

## AUTO-RADIO SUPPRESSORS AND FILTER UNITS

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 withstand the most severe service. The resistance value has been scientifically determined and is not changed after years of the most adverse conditions. Sparking across the terminals is eliminated by careful shaping of the electrodes and cases.



**WHEEL STATIC SUPPRESSORS**  
CODE W55 LIST \$0.35 A PAIR



**FORD V 8 DISTRIBUTOR SUPPRESSORS**  
Type T-14 for 1935 and previous models. ALL MODELS LIST \$0.30  
Type T-15 for 1936 Models.



**TYPE T17—UNIVERSAL TYPE WITH INSULATING TUBING**  
For all Ford V-8 Models. Addition of Insulating Tubing to Small-1936 Brush makes it fit 1935 Models.  
LIST PRICE.....\$0.30

### NEW AUTO-RADIO VIBRATOR CONDENSERS



Buffer condensers rated for 1500 volts D.C. and flash tested at 3000 volts. Type T are tubular and Type V are rectangular in sealed metal containers.



TAE Cat.	Capacity	Size	VAE List
TAE11	.01	1 3/4 x 1/2 in. dia.	\$0.40
TAE12	.02	1 5/8 x 5/8 in. dia.	.45
VAE11	.01	1 x 7/8 x 3/8 in.	.45
VAE12	.02	1 x 7/8 x 3/8 in.	.45
VAE13	.03	1 x 1 1/8 x 3/8 in.	.45
VAE14	.04	1 x 1 1/8 x 3/8 in.	.45

### SUPPRESSORS

ALL Models ..... List \$0.30



Type S-21 Universal Spark Plug Suppressor—with "U" terminal.



Type S-27—Suppressor—Thread will fit all spark plugs. Most universal type yet devised. Ferrule nut is removable.



Type C-11 Cable Suppressor — meets requirements where it is necessary to cut ignition cable.



Type S-20A Spark Plug Suppressor — for Buick Packard, and Chrysler cars. Takes place of terminal on ignition cable.



Type T-13 Distributor Suppressor—fits all distributors.

### CONTINENTAL AUTO-RADIO FILTER CONDENSERS

This new line of equipment has been specially designed to give the serviceman a means of easily eliminating every cause of noise interference in auto-radio installation—at the actual source of the interference.



GB05F6



GB025, GB05, GB1



GB05F



GB05C

Cat.	Application	Capacity	Size	List
GB025	Generator and coil	.25	1 3/4 x 3/4 in.	\$0.40
GB05	Generator and coil	.5	1 3/4 x 3/4 in.	.50
GB1	Generator and coil	1.0	2 x 1 in.	.70
GB1A	Generator and coil	1.0	2 1/4 x 1 1/4 in.	.80
GB05C	Ammeter to ground	.5	2 x 7/8 in.	.50
GB05H	Dome light filter	.5	3 x 1 in.	.80
GB05HC	Dome light filter, can type	.5	3 1/4 x 1 1/4 in.	.80
GB05DH	Dome light filter, can type	.5-.5	3 1/4 x 1 1/4 in.	1.00
GB05F	Ford V-8 coil	.5	1 3/4 x 3/4 in.	.60
GB05F6	Ford V-8 coil—1936	.5	1 3/4 x 3/4 in.	.50
GB035H	Dome light filter, solder lug type	.5	2 x 1 in.	.60



GB035H



GB05H



GB05DH, GB05HC



GB1A

# CONTINENTAL FILTERCONS

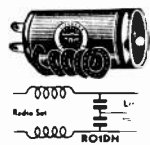
## FILTERCONS for the Reduction of Man-Made Static

Radio interference largely consists of electrical disturbances radiated from some apparatus or device connected to the power supply line. Filtercons, of three slightly different types, are designed to keep electrical interference from reaching a radio through the power supply line. For the most quiet reception a modern noise reduction aerial is also advisable.

Filtercons serve three purposes: Used between a radio and the supply outlet with a grounded capacity network, interference is rejected by choke coils and by-passed to ground. Another type of Filtercon, for use close to electrical apparatus, simply diverts interference to the ground. Suppression Filtercons, used at the source of interference, suppress its radiation.

### Interference Rejection Filtercons

RO1DH is for use between a radio set and the power outlet. It is particularly effective with all-wave receivers using ungrounded doublet type aerials in eliminating the pick-up of interference through the power supply. Plug-in type for 110-120 v, 50-60



cycle A.C. and D.C. lines. The built-in inductances will safely carry 5 amperes. Size 1 3/8" diameter, 2 5/8" body length

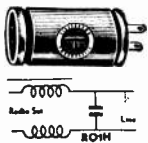
**Filtercon RO1DH. List Price..... \$1.00**

R305DH is a larger rejection type Filtercon, for use in stores where sets are demonstrated, and for use in public places where severe interference is experienced. Contains two large chokes and two large condensers. It is provided with a flexible ground lead, a soft rubber plug and cord, and an outlet for connection of a receiver. For 110-220 v, A.C. or D.C. 660 watt capacity. Size 2 1/2" diameter, 4 3/8" high. Aluminum container.



**Filtercon R305DH. List Price.....\$3.00**

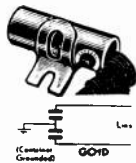
RO1H is a special rejection type Filtercon for use where it is convenient to ground the neutral side of the power supply system. The chokes tend to reject incoming interference, and the condenser diverts it to the grounded neutral wire of the power line. Convenient



plug-in type for 110-120 v, A.C. or D.C. Rated to carry 5 amperes. Size 1 3/8" diameter, 2 5/8" body length. Aluminum container.

**Filtercon RO1H. List Price..... \$ .80**

### Interference Diverting Filtercons



GO1D is a dual capacity Filtercon with a grounded case for mounting permanently on the frame of a motor which is causing electrical interference. For 110-120 v, A.C. or D.C. Size 3/4" diameter, 2 1/8" long.

**Filtercon GO1D. List Price..... \$ .50**

FO1D is a dual capacity Filtercon of the plug-in type with a flexible ground lead. It is suitable for all types of electrical equipment which cause a mild degree of interference. For 110-120 v, A.C. or D.C. Size 2 3/8" by 1 3/4" diameter.



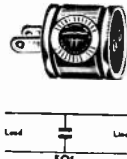
**Filtercon FO1D. List Price.....\$ .80**



FO5D is a large dual capacity Filtercon with flexible wire leads for use with rural generating plants and industrial equipment causing disturbance to sets. It serves to provide a convenient path for radio interference to be diverted to the ground. Its special low-power factor condensers place no extra load on the line. Aluminum container. Size 4 3/8" by 2 1/4" diameter. For 32-110-220 v, A.C. or D.C. power supply lines.

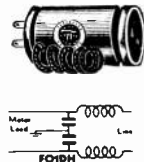
**Filtercon FO5D. List Price.....\$2.50**

FO1 is a compact filter condenser for use across a line where the neutral wire is grounded. It relieves light interference from fans, sewing machines, etc. For 110-120 v, A.C. or D.C. Size 1 3/4" by 1 3/8" diameter.



**Filtercon FO1. List Price..... \$ .40**

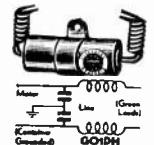
### Noise Suppression Filtercons



FO1DH, a plug-in Filtercon for elimination of interference from motors under 300 watts on 110-120 v, A.C. or D.C. Size 2 3/4" by 1 3/8" diameter.

**Filtercon FO1DH. List Price.....\$1.00**

GO1DH, same as GO1D, but with wire-in leads and grounded frame. Used on exhaust fan motors, etc.



**Filtercon GO1DH. List Price.....\$1.50**



F505DH, a large plug-in suppressor with heavier choke coils for use on heater pads, flat-irons, refrigerators, mangles, hair driers, etc., under 550 watts at 110-120 v. Size 4 3/8" by 2 1/2" diameter. Plug and cord.

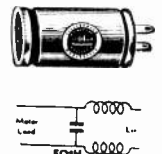
**Filtercon F505DH. List Price.....\$4.00**

F1005DH, a heavy-duty wire-in interference suppression unit for circuits up to 10 amperes, A.C. or D.C., or 1 kw. on 110-120 v, 2 kw. on 220 v. Excellent for stokers, oil burners, neon signs, and for use between the meter and load fuse blocks of residential dwellings disturbed by interference coming in on the power supply line. This Filtercon suppresses severe interference. Size 4 3/8" by 3" diameter.



**Filtercon F1005DH. List Price..... \$5.00**

FO1H is a fast selling plug-in Filtercon for suppressing interference of sewing machine motors, electric razors, drink-mixers, cash registers, etc. 300-watt capacity. 110-120 v, A.C. or D.C. Size 2 3/8" by 1 3/8" diameter.



**Filtercon FO1H. List Price..... \$ .80**

## BROADCAST AND SHORT WAVE AERIAL SUBSTITUTE

Aerial Filtercon R21H—A practical substitute aerial for use where a regular antenna is difficult to install or cannot be used. R21H is designed to divert radio signals picked up by the ordinary electric lighting system to the radio receiver without diverting the low frequency current. An r-f choke prevents the receiver's primary transformer-by-pass-condenser from shunting the radio signal to the neutral grounded side of the line. Where the electric system is completely shielded in conduit, it is unlikely that it carries radio signals; hence, the Filtercon only functions where the power lines pick up signals. Plug-in type, four foot connecting wire. Size 1 3/4" x 1 3/8" diameter. For use on any 110-120 A.C. or D.C. line, for sets up to 150 watts.

**Filtercon R21H. List Price..... \$ .50**



# WIRT COMPANY

## RESISTORS CONTROLS

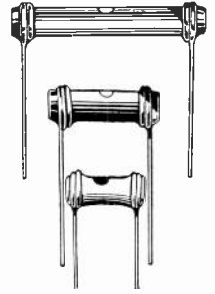
### CARBON COMPOSITION FIXED RESISTORS

RMA Color-Coded  
Any Resistance

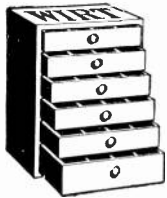
Watts	List Price
2	\$.30
1	.20
1/2	.20
1/4	.20
1/8	.20

FIVE REASONS WHY WIRT FIXED RESISTORS ARE SPECIFIED BY BEST KNOWN RECEIVING SET MANUFACTURERS

- Voltage coefficient:** Guaranteed well within 10%. By actual test 3% up to 500,000 ohms and not greater than 10% of any value.
- Noise:** Less than one microvolt when measured on an amplifier having a gain of 65 dB.
- Humidity:** After 100 hours in 90% relative humidity at 105° F. resistance change guaranteed under 10%—average of 1000 recorded tests under 3%.
- Life:** Contrary to custom WIRT laboratory life tests are made at 100% overload, instead of at a fraction of rated wattage. A batch of resistors recently removed from test after 4240 hours continuous 100% overload showed average resistance change of 2.81%.
- Accuracy:** Resistors are individually tested by advanced methods to insure accuracy.



### NOW! WIRT RESISTORS IN THE NEW LIFETIME CABINET



AND WHAT A CABINET! It is made by a leading manufacturer of small cabinets, of carefully selected, well seasoned bass wood, with corners daddoed and glued for strength; varnished and rubbed to give a beautiful natural wood finish.

It has six drawers, each one having three removable partitions, making four compartments. The upper five drawers are one inch deep and the bottom one is one and one-half inch deep. All are six inches wide and five and one-half inches long. Drawer guides, bottoms, and partitions are made of three-ply laminated wood, to prevent warping. The knobs are brass and securely fastened.

It is just such a cabinet as radio repair men would be glad to buy for the storage of such parts as condensers, bolts, nuts and small tools. BUT—it is given to you at this time absolutely free with your purchase of the selected assortment of ONE HUNDRED WIRT CARBON RESISTORS, which are packed in the cabinet for shipment.

The carbon resistors in these new Wirt Lifetime Cabinets are subjected to the same rigid tests as the millions supplied to the leading manufacturers for use in receiving sets. The assortment is made up of resistance values, which the serviceman will need to repair radio sets now in use. A complete list will be found below. The cabinets are uniform in size. Two or more can be placed side by side to make a chest of drawers of any desired storage capacity. Anticipate your resistor requirements. Build up a unit large enough to store all of your small parts. You will appreciate this suggestion once you see these cabinets.

### R. M. A. COLOR-CODED ONE-WATT CARBON RESISTOR ASSORTMENT

In making up the contents of these cabinets we were faced with the problem of supplying a balanced assortment. We were not satisfied to rely solely upon our judgment, but consulted a number of our distributor outlets.

The following list is the result of this investigation:

Ohms	Quantity	Ohms	Quantity	Ohms	Quantity	Ohms	Quantity
300	2	2,000	4	20,000	4	100,000	8
100	4	2,500	2	25,000	8	200,000	2
500	4	3,000	2	30,000	2	250,000	8
600	2	5,000	4	40,000	2	500,000	8
1,000	4	10,000	8	50,000	8	1,000,000	4
1,500	2	15,000	4	75,000	2	2,000,000	2
<b>Total 100</b>							

If you feel that you should not purchase one hundred resistors at one time ask your jobber about our offer covering fifty units.

### AUTO RADIO IGNITION SUPPRESSORS

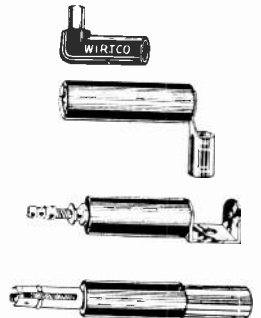


All metal parts made of rugged unfinished brass. Ceramic casing is glazed wet process high-tension porcelain with internal threads to engage threaded terminals. Terminals are securely fastened in casings by special moisture and heat resisting dielectric cement. Resistor pills are sprayed with molten copper and tinned, then double impregnated with a special moisture-proofing compound. Resistance value 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 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.

Made in two kinds of casings—Ceramic and Bakelite.

Illustrated at left are, from top to bottom, first, Model 910; second, 902 and 904; and third, Model 906.

Illustrated at right are, from top to bottom, first, Model 908; second, Model 901; third, Model 914 and 916; and fourth, Model 915.



#### CERAMIC CASINGS

No.	List, Each
910 Distributor Type, Standard for all Distributors	\$0.40
902 Bracket Type, for all Standard Work	.40
904 Ford V8, Special Resistance for Ford V8 cars.	.40
906 Cable Type, for splicing in cable	.40

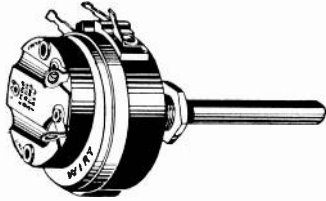
#### BAKELITE CASINGS

No.	List, Each
908 Elbow Type, with terminal molded in	\$0.40
901 Elbow Type, with terminal attached to casing.	.30
914 Bracket Type, Standard	.30
916 FV-8	.30
915 Distributor Type, Standard	.30

# WIRT COMPANY

## RESISTORS CONTROLS

### WIRT HIGH RESISTANCE VOLUME CONTROL



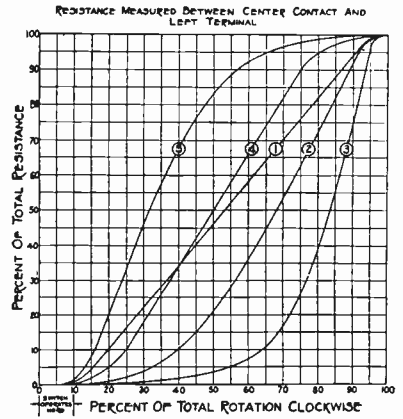
**General Characteristics:** The resistance element is composed of an insulating base material into whose surface is fused, by chemical and thermal action, special resistance materials. This fusion takes place at high temperatures and forms a resistance section which is highly resistant to electrical, chemical or mechanical action.

**Mechanical Characteristics:** Resistance element is impervious to mechanical wear. Contact of ample area, under constant spring tension. Rugged molded bakelite case. Long aluminum shafts which can be easily cut to any desired length. The addition of a 110 volt A. C. switch to the control is accomplished simply by changing the cover plate.

**Electrical Characteristics:** The microphonic noise generated during rotation is entirely negligible for any application. The change in electrical resistance after 50,000 cycles of rotation (over 9 year's life at 15 cycles per day) is less than 5% at any point of the resistance curve, and less than 2% for the total resistance element. Will safely and continuously dissipate 1 watt. Not affected by any climate.

**The Resistance Tapers** shown at right are standard stock tapers and some of them will generally meet any service requirement.

### TYPICAL APPLICATION OF STANDARD TAPERS



Curve No.	Circuit Application	Clockwise Rotation
1	Any voltage divider circuit or R. F. coil shunt.....	Decreasing
2	Audio grid or tone control...	Increasing
3	Antenna and "C" bias (2 tubes).....	Decreasing
	Audio Grid.....	Increasing
4	Antenna and "C" bias (1 tube).....	Increasing
5	"C" bias rheostat.....	Decreasing

### STANDARD REPLACEMENT VOLUME CONTROLS

Resistance Value in ohms	Taper Curve No.	Cat. No. without Switch	Cat. No. with Switch	Resistance Value in ohms	Taper Curve No.	Cat. No. without Switch	Cat. No. with Switch
5000	1	5-1	5-1-S	75000	4	75-4	75-4-S
5000	4	5-4	5-4-S	100000	1	100-1	100-1-S
10000	1	10-1	10-1-S	100000	4	100-4	100-4-S
10000	4	10-4	10-4-S	200000	3	200-3	200-3-S
10000	5	10-5	10-5-S	200000	4	200-4	200-4-S
15000	1	15-1	15-1-S	250000	1	250-1	250-1-S
15000	4	15-4	15-4-S	250000	4	250-4	250-4-S
20000	1	20-1	20-1-S	500000	2	500-2	500-2-S
25000	1	25-1	25-1-S	500000	3	500-3	500-3-S
25000	3	25-3	25-3-S	500000	4	500-4	500-4-S
25000	4	25-4	25-4-S	1000000	1	1000-1	1000-1-S
25000	2	25-2	25-2-S	1000000	5	1000-5	1000-5-S
50000	1	50-1	50-1-S	3000000	1	3000-1	3000-1-S
50000	4	50-4	50-4-S	3000000	5	3000-5	3000-5-S
75000	1	75-1	75-1-S				

#### List Prices

Standard Control with Insulated Shaft.....	Each
Standard Control as above, but with Switch.....	\$1.50
Separate Switch Assembly.....	.50

### WIRTHY FIXED RESISTORS



**WIRTHY RESISTORS** are wound on ceramic tubes and protected by either VITREOUS ENAMEL, PHENOCOTE, or BAKED ENAMEL.

**VITREOUS ENAMEL** Units are made of the same material and in the same way as the standard WIRT Enameled Units, which have been adopted as standard by leading users of resistors.

**PHENOCOTE**—A special material developed in our laboratories, which is baked on the units at a high temperature, insuring resistance to moisture and heat.

**BAKED ENAMEL** Units are covered with a superior enamel which is baked on at a high temperature.

#### SIZE: 3/8" x 1 3/4" — RATING 10 WATTS

Stock Resistance Values in Ohms						
1	7.5	25	75	250	750	7500
2	10	30	100	300	1000	10000
3	12	35	125	400	1200	12000
4	15	40	150	500	1500	15000
5	20	50	200	600	2000	20000

#### List Prices

Resistance	Phenocote or Baked Enamel		Vitreous Enamel	
	Monel Metal Leads Each	Monel Metal Leads Each	Monel Metal Leads Each	Monel Metal Leads Each
1 to 25,000 ohms.....	\$0.38	\$0.45		

#### SIZE: 1/2" x 2" — RATING 20 WATTS

Stock Resistance Values in Ohms						
5	100	400	800	1500	2500	5000
10	150	500	850	1750	2750	6000
25	200	650	1000	1850	3000	7000
50	250	700	1100	2000	3500	7500
75	300	750	1200	2250	4000	8000

#### List Prices

Resistance Ohms	Phenocote or Baked Enamel		Vitreous Enamel	
	Monel Metal Leads Each	Monel Metal Leads Each	Monel Metal Leads Each	Monel Metal Leads Each
5 to 650.....	\$0.38	\$0.45		
700 to 2750.....	.46	.54		
3000 to 15000.....	.55	.65		
25000 to 35000.....	.68	.80		
40000 to 75000.....	.72	.85		
80000 to 100000.....	.80	.95		

#### SIZE: 3/8" x 1" — RATING 5 WATTS

Resistance	List Prices	
	Phenocote or Baked Enamel	Vitreous Enamel
1 to 10,000 ohms.....	\$0.30	\$0.38

#### SIZE: 3/4" x 4" — RATING 50 WATTS

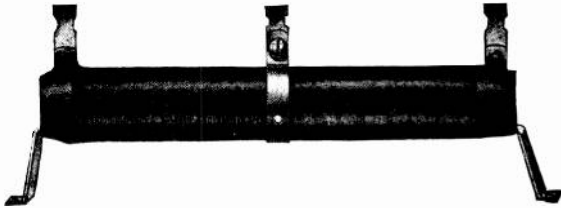
Stock Resistance Values in Ohms						
10	500	2000	5000	9000	17500	50000
20	700	2250	6000	10000	20000	60000
50	750	2500	7000	12000	25000	75000
100	1000	3000	7500	12500	30000	100000
250	1500	4000	8000	15000	40000	

Resistance Ohms	List Prices		List Prices	
	Phenocote or Baked Enamel	Vitreous Enamel	Monel Metal Leads Each	Tab Term Each
10 to 1000.....	\$0.66	\$0.60	\$0.77	\$0.70
1500 to 7000.....	.79	.72	.94	.85
7500 to 10000.....	1.00	.90	1.15	1.05
12000 to 50000.....	1.00	.91	1.18	1.07
60000.....	1.10	1.00	1.30	1.18
75000 to 100000.....	1.20	1.10	1.45	1.30

# WARD LEONARD

## Standard ADJUSTOHM Resistor Values Bare Side for Adjustment

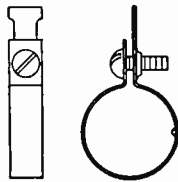


Loosening the screw on the band permits adjustment of the resistance to the desired value. Potentiometer connections can be obtained by using end terminals and band connections.

The vitreous enamel, covering most of the unit, provides protection against mechanical damage and prevents the wire from shifting.

### Extra Bands

Price of resistor includes end brackets for mounting and one adjustable band. Extra bands are furnished at 10 cents each for units of the 25 and 50 Watt sizes and 15 cents each for units of larger sizes.



25 WATTS 2" x 5/8"				50 WATTS 4 1/2" x 3/4"			
Resis. Ohms	Catalog Number	Cur. m. a.	List Price	Resis. Ohms	Catalog Number	Cur. m. a.	List Price
1	507-560	4500	\$0.85	5	507-564	2840	\$1.35
3	507-561	2580	.85	10	507-565	2000	1.35
5	507-562	2000	.85	25	507-348	1250	1.35
10	507-563	1410	.85	50	507-349	900	1.35
15	507-342	1150	.85	75	507-350	730	1.35
25	507-343	900	.85	100	507-351	630	1.35
50	507-344	630	.85	250	507-352	400	1.35
75	507-345	510	.85	500	507-130	280	1.35
100	507-242	450	.85	750	507-131	230	1.35
200	507-243	320	.85	1,000	507-597	200	1.35
300	507-244	250	.85	1,250	507-132	180	1.35
400	507-245	220	.85	1,500	507-133	160	1.35
500	507-246	200	.85	2,500	507-134	125	1.35
750	507-247	160	.85	3,000	507-135	115	1.35
850	507-248	150	.85	3,500	507-136	105	1.35
1,000	507-249	140	.85	4,000	507-353	100	1.35
1,250	507-250	125	.85	5,000	507-137	90	1.35
1,500	507-251	110	.85	7,000	507-138	70	1.50
2,000	507-252	100	.85	8,000	507-354	60	1.50
2,500	507-253	90	.85	9,000	507-355	55	1.50
3,000	507-254	80	.85	10,000	507-139	50	1.50
3,500	507-255	75	.85	15,000	507-356	35	1.50
4,000	507-256	70	.85	20,000	507-357	25	1.50
5,000	507-257	65	.85	25,000	507-358	20	1.50
6,000	507-258	55	.95	30,000	507-359	17	1.70
7,500	507-259	50	.95	40,000	507-360	13	1.70
8,500	507-346	48	.95	50,000	507-361	10	1.70
10,000	507-347	45	.95				

75 WATTS 6 1/2" x 3/4"				100 WATTS 6 1/2" x 1 1/8"				160 WATTS 8 1/2" x 1 1/8"				200 WATTS 10 1/2" x 1 1/8"			
Resis. Ohms	Catalog Number	Cur. m. a.	List Price	Resis. Ohms	Catalog Number	Cur. m. a.	List Price	Resis. Ohms	Catalog Number	Cur. m. a.	List Price	Resis. Ohms	Catalog Number	Cur. m. a.	List Price
10	507-566	2830	\$1.75	10	507-726	3160	\$2.00	100	507-180	1260	\$2.50	100	507-571	1400	\$3.00
15	507-567	2280	1.75	15	507-727	2580	2.00	200	507-181	900	2.50	250	507-572	900	3.00
25	507-568	1790	1.75	25	507-728	2000	2.00	500	507-182	570	2.50	500	507-573	630	3.00
50	507-569	1270	1.75	50	507-729	1410	2.00	1,000	507-270	400	2.50	1,000	507-574	450	3.00
75	507-570	1070	1.75	75	507-730	1150	2.00	1,500	507-379	330	2.50	1,500	507-575	365	3.00
100	507-362	900	1.75	100	507-731	1000	2.00	2,000	507-380	280	2.50	2,000	507-576	310	3.00
250	507-363	570	1.75	250	507-732	632	2.00	2,500	507-271	250	2.50	2,500	507-577	280	3.00
500	507-364	400	1.75	500	507-733	447	2.00	3,000	507-381	230	2.50	3,000	507-578	260	3.00
750	507-365	330	1.75	750	507-734	365	2.00	3,500	507-382	210	2.50	3,500	507-579	240	3.00
1,000	507-260	280	1.75	1,000	507-735	316	2.00	4,000	507-383	200	2.50	4,000	507-580	220	3.00
1,500	507-366	230	1.75	1,500	507-736	258	2.00	4,500	507-384	185	2.50	4,500	507-581	210	3.00
2,000	507-367	200	1.75	2,000	507-737	227	2.00	5,000	507-272	180	2.50	5,000	507-582	200	3.00
2,500	507-261	180	1.75	2,500	507-738	200	2.00	7,500	507-385	145	2.50	7,500	507-583	170	3.00
3,000	507-368	160	1.75	3,000	507-739	181	2.00	10,000	507-273	100	2.50	10,000	507-584	140	3.00
3,500	507-369	150	1.75	3,500	507-740	168	2.00	15,000	507-274	65	2.90	15,000	507-585	115	3.50
4,000	507-370	140	1.75	4,000	507-741	158	2.00	20,000	507-386	50	2.90	20,000	507-586	75	3.50
4,500	507-371	130	1.75	4,500	507-742	150	2.00	25,000	507-275	40	2.90	25,000	507-587	60	3.50
5,000	507-262	120	1.75	5,000	507-743	141	2.00	30,000	507-387	33	2.90	30,000	507-588	50	3.50
7,500	507-372	80	2.00	7,500	507-744	116	2.25	35,000	507-276	28	2.90	35,000	507-589	45	3.50
8,000	507-373	75	2.00	8,000	507-745	112	2.25	40,000	507-388	25	2.90	40,000	507-590	40	3.50
10,000	507-263	60	2.00	10,000	507-746	100	2.25	50,000	507-277	20	2.90	50,000	507-591	30	3.50
15,000	507-264	40	2.00	15,000	507-747	67	2.25	60,000	507-177	16	3.25	60,000	507-592	25	3.50
20,000	507-374	30	2.00	20,000	507-748	50	2.25	70,000	507-389	14	3.25	75,000	507-593	20	3.50
25,000	507-265	24	2.00	25,000	507-749	40	2.25	80,000	507-178	12	3.25	100,000	507-594	15	3.50
30,000	507-375	20	2.25	30,000	507-750	33	2.50	100,000	507-179	10	3.25	125,000	507-595	12	3.75
35,000	507-266	17	2.25	35,000	507-751	29	2.50					150,000	507-596	10	3.75
40,000	507-376	15	2.25	40,000	507-752	25	2.50								
50,000	507-267	12	2.25	50,000	507-753	20	2.50								
60,000	507-377	10	2.50	60,000	507-754	17	2.75								
70,000	507-378	9	2.50	70,000	507-755	14	2.75								



# JACKS

# YAXLEY SWITCHES

APPROVED RADIO PRODUCTS

# SWITCHES

## YAXLEY Push Button Switches



For use in test equipment or on special laboratory apparatus. Long-life springs used throughout, insuring positive contacts at all times. Finest type of insulation used. Bakelite button.

### Non-Locking Type

- No. 2001—S.P.S.T.  
List Price.....\$0.90
- No. 2003—S.P.D.T.  
List Price.....\$1.00
- No. 2006—D.P.D.T.....\$1.50

### Locking Type

- No. 2001-L—S.P.S.T.  
List Price.....\$0.90
- No. 2003-L—S.P.D.T.  
List Price.....\$1.00
- No. 2006-L—D.P.D.T.  
List Price.....\$1.50

Also available in break contact type.

## YAXLEY Jack Switches



**Single Pole—Single Throw**  
Type 720—2-spring.  
List Price.....\$0.70

**Single Pole—Double Throw**  
Type 730—3-spring.  
List Price.....\$0.85

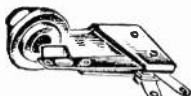
**Type 732—3-spring.** Same as Type 730 but with center neutral position.  
List Price.....\$0.85

**Double Pole—Single Throw**  
Type 740—4-spring.  
List Price.....\$0.95

**Double Pole—Double Throw**  
Type 760—6-spring.  
List Price.....\$1.25

**Type 762—Same as Type 760,** but with center neutral position.  
List Price.....\$1.20

## YAXLEY Junior Jacks



Same construction as jack switch, except has hole for receiving any standard jack. Mount in  $\frac{3}{16}$ " hole on panels not over  $\frac{3}{16}$ " thick.

**Type 701—"Open Circuit"**  
One Insulated Spring.  
List Price.....\$0.40

**Type 702—"Closed Circuit"**  
Two Insulated Springs.  
List Price.....\$0.55

**Type 702A—"Two Circuit"**  
For use on insulated panels.  
List Price.....\$0.55

## YAXLEY JACKS

### Midget Jacks



Especially compact size. Type A1 Infant Jack, illustrated at left. Others as per illustration at right. Mount in  $\frac{3}{8}$ " hole.

No.	Type	List
A-1	Open Circuit.....	\$0.25
A-2	Circuit Closing.....	.40
A-2A	Two-Circuit.....	.50
A-3A	Circuit Reversing....	.60

### Insulated Tip Jack



Bakelite Cap. Red and Black for Positive and Negative. Phone tips nests all the way in jack. Mounts in  $\frac{1}{4}$ " hole. Shpg. Wt. 2 oz.

No. 422  
List, Per Pair \$0.25

### Metal Type Tip Jacks



#### Round Head Type

Mounts in  $\frac{3}{8}$ " hole. Tinned solder lug terminal.

No. 416—List...\$0.10

#### Hexagon Head Type

Mounts in  $\frac{1}{4}$ " hole. Nickel-plated brass.

No. 417—List...\$0.10

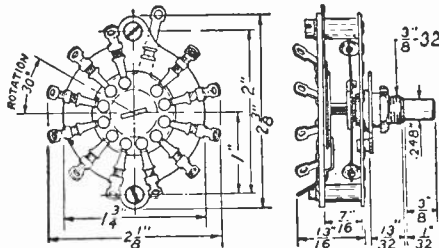


#### Insulated Tops

Round bakelite head type; mounts in  $\frac{1}{4}$ " hole in panel up to  $\frac{3}{8}$ " thick. Red, Black, Green; specify color.

List Price, Each \$0.15  
List Price, Pair. \$0.25

## YAXLEY Gang Switches



### Important Explanation

A 2-circuit, 2-point single-gang switch is similar in performance to a Double-Pole, Double-Throw Switch. A 1-circuit, 11-point switch would be similar to a single-pole, 11-throw

switch, etc. All contacts are silver-plated and the insulation is of the finest quality obtainable.

### Non-Shorting

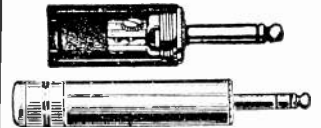
Type No.	Type No.	Single Gang Switches	Two-Gang Switches	Three-Gang Switches	Four-Gang Switches	List Price
1216	1316	1-circuit. 1 to 6 points	2-circuit. 1 to 6 points each circuit	3-circuit. 1 to 6 points each circuit	4-circuit. 1 to 6 points each circuit	1.60
1211	1311	1-circuit. 1 to 11 points	2-circuit. 1 to 11 points each circuit	3-circuit. 1 to 11 points each circuit	4-circuit. 1 to 11 points each circuit	1.75
1215	1315	2-circuit. 1 to 5 points each circuit	4-circuit. 1 to 5 points each circuit	6-circuit. 1 to 5 points each circuit	8-circuit. 1 to 5 points each circuit	2.00
1213	1313	3-circuit. 1 to 3 points each circuit	6-circuit. 1 to 3 points each circuit	8-circuit. 1 to 3 points each circuit		2.10
1212	1312	4-circuit. 1 to 2 points each circuit	8-circuit. 1 to 2 points each circuit			2.25
1226	1326	2-circuit. 1 to 6 points each circuit	2-circuit. 1 to 6 points each circuit	3-circuit. 1 to 6 points each circuit	4-circuit. 1 to 6 points each circuit	2.20
1221	1321	2-circuit. 1 to 11 points each circuit	2-circuit. 1 to 11 points each circuit	3-circuit. 1 to 11 points each circuit	4-circuit. 1 to 11 points each circuit	2.35
1225	1325	4-circuit. 1 to 5 points each circuit	4-circuit. 1 to 5 points each circuit	6-circuit. 1 to 5 points each circuit	8-circuit. 1 to 5 points each circuit	2.50
1223	1323	6-circuit. 1 to 3 points each circuit	6-circuit. 1 to 3 points each circuit	8-circuit. 1 to 3 points each circuit		2.75
1222	1322	8-circuit. 1 to 2 points each circuit	8-circuit. 1 to 2 points each circuit			3.00
1236	1336	3-circuit. 1 to 6 points each circuit	3-circuit. 1 to 6 points each circuit	4-circuit. 1 to 6 points each circuit	8-circuit. 1 to 6 points each circuit	3.50
1231	1331	3-circuit. 1 to 11 points each circuit	3-circuit. 1 to 11 points each circuit	4-circuit. 1 to 11 points each circuit	8-circuit. 1 to 11 points each circuit	
1235	1335	6-circuit. 1 to 5 points each circuit	6-circuit. 1 to 5 points each circuit	8-circuit. 1 to 5 points each circuit		
1246	1346	4-circuit. 1 to 6 points each circuit	4-circuit. 1 to 6 points each circuit	4-circuit. 1 to 11 points each circuit	8-circuit. 1 to 11 points each circuit	
1241	1341	4-circuit. 1 to 11 points each circuit	4-circuit. 1 to 11 points each circuit			
1245	1345	8-circuit. 1 to 5 points each circuit	8-circuit. 1 to 5 points each circuit			

## YAXLEY Etched Dial Plates

No.	Marking	No.	Marking
372	1 to 2	383	Off 1 to 3
373	1 to 3	384	Off 1 to 4
374	1 to 4	385	Off 1 to 5
375	1 to 5	386	Off 1 to 6
376	1 to 6	387	Off 1 to 7
377	1 to 7	388	Off 1 to 8
378	1 to 8	389	Off 1 to 9
379	1 to 9	390	Off 1 to 10
380	1 to 10		
381	1 to 11	List Price.	
382	1 to 12	Any Type...\$0.15	



## YAXLEY Phone Plugs



No. 75—Bakelite housing. Screw terminals with coin slots. For phones, speakers, etc.

List Price, Each.....\$0.50

No. 75TC—Same as above, but with inside loop for tie cord connection.

List Price, Each.....\$0.60

No. 75A—Same as No. 75, but with heavy nickel shell.

List Price.....\$2.25

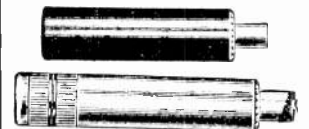
No. 76—Three-way microphone plug. Bakelite shell.

List Price.....\$1.00

No. 76A—Same as above, but with heavy duty nickel shell.

List Price.....\$2.50

### Extension Jacks



No. 100—Extension jack fibre shell. For No. 75 plug.

List Price, Each.....\$0.75

No. 100A—Same as above, but with heavy duty nickel shell. For No. 75A plug.

List Price, Each.....\$2.50

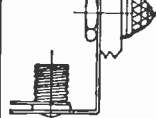
No. 101—Extension jack, fibre shell. For No. 76 microphone plug.

List Price, Each.....\$1.50

No. 101A—Same as above, but with heavy duty nickel shell. For No. 76A plug.

List Price.....\$2.75

### Pilot Light Bracket



Excellent indicator. Choice of green, red or amber. Specify color desired.

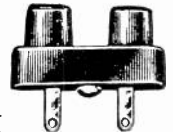
No. 310—

List Price \$0.30

No. 311—Jewels

List Price.....\$0.20

### Moulded Twin Tip Jacks



Shorting Type

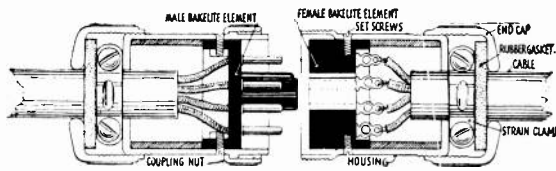
No. 432—Circuit is automatically closed when the tips are removed. Moulded bakelite with single hole mounting. Red or black. Specify color.

List Price, Each.....\$0.30

**Note** We can supply any Yaxley product not listed on this page. Let us know your requirements.

# AMPHENOL

## AMERICAN PHENOLIC PRODUCTS



CUT-AWAY VIEW OF OCTAL CONNECTOR

### OCTAL CONNECTORS

The 8 contact plug follows the principle of the octal metal tube base and has the bakelite keyed pilot to guide prongs and contacts together. A sturdy, compact connector with metal shell locking ring and gasket cap, cadmium plated. A standardized universal plug—when less than 8 conductor cable is used merely cut off the prongs not required or omit wiring them. Bakelite elements, male or female, are interchangeable in either housing or chassis connector. An especially efficient screw clamp adjustable to any cable diameter with rubber gasket washer fits under end gasket caps to relieve contacts of any cable strain. Illustrations half actual size.

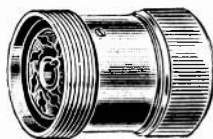
Cat. No. 08M



Cable Type—Male

List Price..... \$1.25 ea.

Cat. No. 08F



Cable Type—Female

List Price ..... \$1.25 ea.



#### Chassis Connector

With lock washer and hex locking nut. Requires 1 1/2" chassis hole.

Type	List
P08M—Male...	\$0.60 ea.
P08F—Female...	.60 ea.

ardized universal plug—when less than 8 conductor cable is used merely cut off the prongs not required or omit wiring them. Bakelite elements, male or female, are interchangeable in either housing or chassis connector. An especially efficient screw clamp adjustable to any cable diameter with rubber gasket washer fits under end gasket caps to relieve contacts of any cable strain. Illustrations half actual size.

### CABLE AND MICROPHONE TYPE CONNECTORS

#### Chassis Type



With knurled ring, lock washer and hex locking nut. Requires 5/8" chassis hole.

Type	Contacts	List
PC3F	3 Female	\$0.50 ea.
PC4M	4 Male	.55 ea.
PC4F	4 Female	.55 ea.

These interchangeable, compact connectors are ideal for microphone and sound equipment work. Sturdy bronze contacts, moulded in genuine bakelite, are housed in heavy brass shells finished in polished chrome. The gasket cap at the end of the type MC connectors contains a Para rubber ring which expands against the cable when the cap is tightened and seals the plug against the entrance of moisture and dirt. All male and female threads are 5/8"-27, the standard for this industry, so that they may be screwed into microphone housings, rings or to the top of stands. Bakelite elements are interchangeable so that either male or female may be used in the same shell. In the three contact type, the contact most widely spaced from the other two is grounded to the brass shell of the connector with a flush screw. In connecting the cable the shield or neutral should always be connected to this contact. In case it is not desired to ground the shell, the bakelite element may be rotated slightly, bringing another threaded hole into place, which is insulated from all contacts.

#### Cable Type



Female	List	Male
MC3F 3 Cont.	\$1.00 ea.	MC3M 3 Prong
MC4F 4 Cont.	1.10 ea.	MC4M 4 Prong

#### Stand Type—Female



Often used with MCM connectors for microphone stand work. 5/8"-27 female thread.

Type	Contacts	List
SC3F	3	\$1.00 ea.
SC4F	4	1.10 ea.

#### Connector Chain and Cap

Protects against dirt and tampering. For use on plugs, chassis or wall outlets.

Type	Fits	List Ea.
CCC3	MC and PC mike type...	\$0.50
CCC8	Octal Chassis type...	.50



### AMPHENOL Cable Connectors

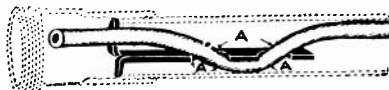
Made of our regular AMPHENOL sockets, snugly covered by a steel cap that fits tightly, but may be pried with an ordinary screw driver. Diameter 1 1/4", length 1 1/2". Shields and protects cable.

Female	List
PF4 4 Cont.	\$25.00 C
PF5 5.....	25.00 C
PF6 6.....	25.00 C
PF7 7 small.	25.00 C



Male	List
PM4 4 Pr.	\$25.00 C
PM5 5.....	25.00 C
PM6 6.....	25.00 C
PM7 7 small	25.00 C

### CABLE STRAIN RELIEF



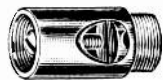
Relieves strain on the soldered cable connections. May be installed between mike and stand, connector and stand or connector and Side Cable Outlet.

CSR3—Cable Strain Relief—List. \$0.25 ea.

### SIDE CABLE OUTLET

Designed to be placed between a microphone and stand having 5/8"-27 threads. Its purpose is to provide an outlet for the microphone cable where it is not desired to run it through the stand tubing. Efficient cable grip relieves strain.

SC03—Side Cable Outlet—List Price ..... \$0.75 ea.



### AMPHENOL Cable Connector Covers

AMPHENOL makes two types of Cable Connector Covers, one for cable to cable connection, and other for cable to chassis connection. The former is illustrated at left, the latter at right. They consist of two sections: male and female, made of threaded steel.

The cable to cable type consists of two shielding shells which slip over our regular Cable Connectors and serve to lock the two sections together. By using soft rubber washers these shells can be made moisture proof. Diameter overall 1 1/2", length 2 1/2".

The cable to chassis type has the same design as the cover listed above, except that the female section has a flange to fit under an AMPHENOL socket, when mounted on a chassis. Diameter 1 1/2", length 1 1/2".

C-CAB	Cable Type	\$25.00 C
C-CHA	Chassis Type	25.00 C

All illustrations half actual size.



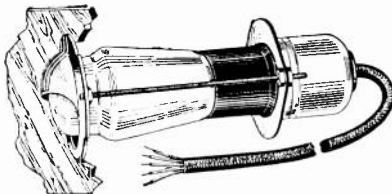
# AMPHENOL

REG. U. S. PAT. OFF.

# AMERICAN PAENOLIC PRODUCTS

## AMPHENOL SOCKET ASSEMBLY FOR MAGIC EYE

The AMPHENOL mounting assembly consists of the mounted tube socket, its protective shell, a 22" five-wire coded cable, and the one-megohm target to plate resistor already wired on the socket. (All necessary hardware for assembling with an attractive modernistically styled escutcheon included.) The AMPHENOL mounting assembly makes possible the application of the electron ray tube or Magic-Eye to sets employing automatic volume control, but lacking a tuning indicator.



Tuning by eye is made possible. The ear alone cannot determine the proper tuning point on automatic volume control sets. With this assembly and the electron ray tube, visual tuning can be put on such receivers. With the set in tune the electron eye illumination narrows; when out of tune it broadens.

**MEA-6**

**Socket Assembly for MAGIC-EYE**  
List Price ..... \$1.25

### AMPHENOL Socket

#### Sub-Panel Type



Cadmium-plated contacts, made of brass alloy with two ears for soldering, maintains firm, low resistance contact with tube prongs. Socket held to chassis by tempered steel ring. No rivet is necessary. Fits any chassis from .030 to .065 inches thick.

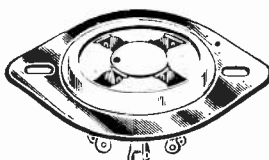
Type	Contacts	O.D.	List
S4	4	1 1/4"	\$11.00 C
S5	5	1 1/4"	11.00 C
S6	6	1 1/4"	11.00 C
S7S	7 small	1 1/4"	11.00 C
S7L	7 large	1 3/8"	11.00 C
S7C	7 comb.	1 3/8"	14.00 C
S8	8 octal	1 1/4"	14.00 C

Price includes retainer ring.

### AMPHENOL STEATITE SOCKETS

**High Mechanical Strength.**—Breakage, a common fault in Ceramic sockets is practically eliminated in this AMPHENOL product. The metal adapter plate takes the full strain of riveting or mounting and the Ceramic portion itself is held with a heavy resilient spring that places no strain on the Steatite.

**Ease of Mounting.**—The steel plate can be screwed or riveted to the panel, or using the spacers can be mounted above the panel. The best and neatest mounting is made by discarding the adapter plate and reassembling the socket into chassis.



**Perfect Insulation.**—This is an AMPHENOL socket of exceptionally high electrical resistivity. Will definitely improve the results of R. F.

amplifiers on wavelengths below 30 meters. Extremely low moisture absorption. Diameter 1 1/4", thickness 3/8". Cadmium plated steel plate mounting center 1 1/2" to 2".

Type	Contacts	List
RSS4	4	\$40.00 C
RSS5	5	40.00 C
RSS6	6	40.00 C
RSS7S	7 small	40.00 C
RSS7L	7 large	50.00 C
RSS8	8 octal base	50.00 C

### AMPHENOL Plug

#### Chassis Type

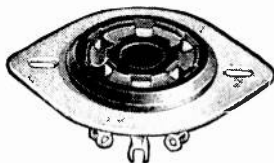


This high quality plug has the AMPHENOL feature of versatile mounting. A retainer ring holds the plug into position. This plug is also available mounted in a Cadmium plated steel plate and in a heavy aluminum shell. Plug diameter 1 1/4". Standard RMA prong spacing.

Type	Prongs	List
CP4	4	\$11.00 C
CP5	5	11.00 C
CP6	6	11.00 C
CP7	7	11.00 C

Price includes retainer ring.

### AMPHENOL Socket Replacement Type

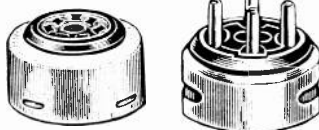


Same as our regular type S, listed above. Comes set in cadmium plated steel adapter

plate. It fits any rivet hole spacing from 1 1/2" to 2". The adapter plate may be removed.

Type	Contacts	List
RS4	4	\$12.00 C
RS5	5	12.00 C
RS6	6	12.00 C
RS7S	7 small	12.00 C
RS7L	7 large	12.00 C
RS7C	7 combination	15.00 C
RS8	8 octal base	15.00 C

### AMPHENOL Sockets and Plugs For Above Chassis Type



Sockets and plugs mounted in a heavy aluminum shell which raises 3/8" above sub-panel—thus shielding all socket connections. Fastened by screw or bolt through center.

Sockets	Contacts	List	Plugs
ACS4	4	\$12.00 C	ACP4
ACS5	5	12.00 C	ACP5
ACS6	6	12.00 C	ACP6
ACS7S	7 small	12.00 C	ACP7
ACS7L	7 large	12.00 C	
ACS7C	7 comb.	15.00 C	
ACS8	8 octal	15.00 C	

### AMPHENOL Plug Replacement Type

The same mounting as our Replacement Socket, using chassis type plug listed above.



Type	Prongs	List
RCP4	4	\$12.00 C
RCP5	5	12.00 C
RCP6	6	12.00 C
RCP7	7	12.00 C

### AMPHENOL Rubber Plug Handle

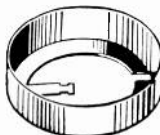


Fits snugly over all PF and PM style connector plug caps described on page N-5. For easy removal of plugs in recessed or hard to get at positions. Made of tough, flexible rubber. Will pull the tightest plug easily. Diameter overall, 1 1/2"; length 3".

RPH—List Price \$15.00 C

### AMPHENOL Socket Accessories

Tube Shield Base, 1 1/2" for standard tube shields. Fits under top of AMPHENOL sockets and chassis plugs. Has lug for soldering to chassis if desired. Punched from .016 cadmium plated steel.



Type	Diameter	List
TSB1	1 1/2"	\$3.50 C

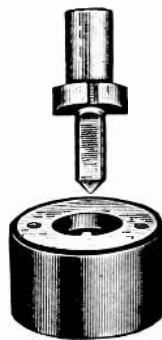
All illustrations half actual size.

### Laboratory Chassis Die

For punching AMPHENOL socket holes in chassis or metal plates. In the experimental laboratory this punch and die is practical, inexpensive and reasonably fast.

Type LD1 for small base sockets, LD2 for large base sockets, and LD3 for Microphone connectors.

Type	Hole	List
LD1	1 1/4"	\$10.00 ea.
LD2	1 1/2"	10.00 ea.
LD3	3/8"	3.00 ea.

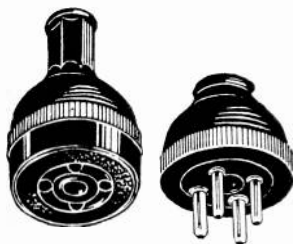


**BINDING POSTS  
CABLE CONNECTORS  
SPEAKER PLUGS**

**EBY  
QUALITY**

**MOULDED SOCKETS  
KNOBS and DIALS  
TERMINAL STRIPS, ETC.**

**RUBBER CAPPED  
Male & Female  
PLUGS**



**Model 99-515 Model 97-505**

Rubber capped male and female plugs furnished in two sizes of black rubber caps, as pictured above. 505 (small), 515 (medium length). Cable hole 5/16". Furnished for 4, 5, 6 or 7 conductors.



**Model 28**

**SPEAKER PLUG**

One piece moulded black bakelite. A moulded Speaker Plug with prongs securely fastened in. Each individual conductor protected with moulded insulation to prevent shorts from pushed back braid.

Cat. No.		List
28 A	4 Prong	<b>\$0.12</b>
28 B	5 Prong	<b>.12</b>
28 C	6 Prong	<b>.12</b>
28 DN	7 Prong .750 Lay't	<b>.12</b>

**MOULDED SOCKETS**



**No. 12 Moulded Socket**

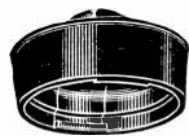
Both the No. 8 and No. 12 Eby Moulded Sockets are made with Eby recess ring, moulded through contact holes. Furnished in Black Bakelite finish.

The Type 12 has entire shell and base moulded in one piece. Contact designations moulded on the top and bottom of the base close to terminals.



**No. 8 Moulded Socket**

No. 8 is very similar, but the base consists of separate, laminated Bakelite plate... Both sockets for use where severe service is likely to be encountered.



**Socket Cable Connector,  
Disassembled View**



**SOCKET CABLE  
CONNECTORS**

**Assembled  
View**



This Eby Moulded Socket arrangement is the safest and most satisfactory method of connection to hot wires. Fitting together by means of a convenient bayonet arrangement, the assembled unit matches the moulded Male Plug Connector and provides a quick method of make and break multiple circuit connections.

Cat. No.	No. of Prongs	List Price
<b>Type 8</b> —1 11/16" Mtg. Centers		
8A	4	<b>\$0.20</b>
8B	5	<b>.25</b>
8C	6	<b>.25</b>
8DN	7 .750" dia. layout	<b>.25</b>
8DO	7 .855" dia. layout	<b>.25</b>
8E	8 octal	<b>.30</b>

Cat. No.	No. of Prongs	List Price
<b>Type 12</b> —1 11/16" Mtg. Centers		
12A	4	<b>\$0.30</b>
12B	5	<b>.30</b>
12C	6	<b>.40</b>
12BC	Com. 5 & 6 prong	<b>.40</b>
12DO	7 .855" dia. layout	<b>.40</b>
12DNO	Com. lg. & sm. 7 prong	<b>.40</b>
12E	8 octal	<b>.45</b>

Cat. No.	No. of Prongs	Hole	List Price
11A	4	Small Cap 5/16"	<b>\$0.30</b>
11B	5	Small Cap 3/8"	<b>.35</b>
11C	6	Small Cap 7/16"	<b>.40</b>
11DN	7	.750" dia. lay't 1/2"	<b>.40</b>
11DO	7	.855" dia. lay't 1/2"	<b>.40</b>

**KNOBS AND TERMINAL NUTS**



**E-18**

1/4" Insert and Set Screw. Filled arrow. Black only. List **.15**



**E-17**

1/4" Insert and Set Screw. Filled arrow. Black only. List **.12**



**E-280**

Height 15/32", 1/4" Hole. Two-tone Walnut on y. List **\$0.10**

List

No. S-312-3—1/4" Insert	<b>\$0.65</b> ea.
No. S-312-1—No Insert	<b>.60</b> ea.
Width 2 15/16"	
No. S-311-3—1/4" Insert	<b>\$0.50</b> ea.
No. S-311-1—No Insert	<b>.45</b> ea.
Width 2 1/16"	

Above knobs have skirt base.

No. S-310-3—1/4" Insert	<b>\$0.50</b> ea.
No. S-310-1—No Insert	<b>.45</b> ea.
Width 2 3/8"	
No. S-309-3—1/4" Insert	<b>\$0.40</b> ea.
No. S-309-1—No Insert	<b>.35</b> ea.
Width 1 7/8"	

No. S-308-3—1/4" Insert	<b>\$0.30</b> ea.
No. S-308-1—No Insert	<b>.25</b> ea.
Width 1 3/16"	

With Set Screw. Black only



**S-505**

2" Rheostat Dial  
List **\$0.25**  
1/4" Plain Insert with set screw. Graduations 100 to 0. Black only.



**E-127**

1 1/4" Ornamental Top; Set Screw Type  
1/4" Plain Hole with Set Screw. Walnut only List **\$0.10**



**E-110**

1 1/4" Two-tone Knob—1/4" Hole. No Insert. No Skirt. Set Screw Type. List **\$0.14**



**E-292**

1 1/4" Bar Knob Black or Walnut List **\$0.12**



**E-293**

2 1/4" Bar Knob Black or Walnut List **\$0.15**

**INSTRUMENT DIALS & KNOBS**

# BINDING POSTS CABLE CONNECTORS SPEAKER PLUGS



# MOULDED SOCKETS KNOBS and DIALS TERMINAL STRIPS, ETC.



**Type 21-S  
Moulded  
Twin Posts**

## TWIN and TRIPLE BINDING POSTS

These binding posts consist of standard Eby units mounted on moulded or laminated Bakelite Strips to form neat assemblies for making connections.

The standard insulated binding posts are used on all but the Type 22-S unit. Moulded units are furnished regularly in Black finish; laminated units in Brown.

Cat. No.	Type Material	List Price
<b>Twin Post Units</b>		
21-R*	Mld'd Ant., Gnd.	<b>\$0.35</b>
21-S*	Mld'd Ant., Gnd.	<b>.35</b>
22-R	Lamin. Ant., Gnd.	<b>.25</b>
22-S†	Lamin. A. G.	<b>.20</b>

### Triple Post Units

21-T	Mld'd L. Ant., S. Ant., Gnd.	<b>\$0.45</b>
22-T	Lamin. L. Ant., S. Ant., Gnd.	<b>\$0.30</b>

## TERMINAL STRIPS



### New, Improved Types

These strips are equipped with new type lug shown above. Stamped thread, consisting of six or more turns, insures lasting contact without slightest danger of stripping. Supplied with from 1 to 8 terminals. Screws 6/32 thread.

Cat. No.	No. of Terminals	List Price
TS-561	1	<b>\$0.10</b>
TS-562	2	<b>.15</b>
TS-563	3	<b>.15</b>
TS-564	4	<b>.20</b>
TS-565	5	<b>.20</b>
TS-566	6	<b>.20</b>
TS-567	7	<b>.25</b>
TS-568	8	<b>.25</b>

Above list prices are for strips unmarked.

## NON-REMOVABLE HEAD BINDING POSTS



Junior or Corporal



Sergeant or Captain

These famous Eby binding posts prevent loss of tops or errors due to a shift of knobs to wrong terminals. The all-metal posts have a milled slot in the base to serve as the lower contact, and a sliding shoe, operated by the knob to serve as the upper contact.

The insulated posts are provided with holes in the stud to receive the wire or pin tip lead.

Because of the special milled construction in the all-metal posts and the proper placement of the hole in the insulated ones, even a fine wire can be clamped securely without any danger of breaking or shearing.



Buddy or Sergeant S.S.



Junior P-3 or Commander P-3



Commander P-4

### Binding Post General Characteristics

Trade Name	Height Closed	Cap. Dia.	Type of Finish	Material	List Price
<b>Metal Binding Posts</b>					
Midget	7/16"	5/16"	Note 2	Brass	<b>\$0.15</b>
Corporal	9/16"	3/8"	Note 2	Brass	<b>.15</b>
Buddy	9/16"	3/8"	Note 2	Brass	<b>.15</b>
Sergeant	3/4"	3/8"	Note 2	Brass	<b>.25</b>
Sergeant SS	3/4"	3/8"	Note 2	Brass	<b>.25</b>
Captain	1"	3/8"	Note 2	Brass	<b>.35</b>
<b>Insulated Binding Posts</b>					
Ace	29/32"	1/2"	Black	Composition	<b>.15</b>
Junior*	11/16"	1/2"	Black	Composition	<b>.16</b>
Junior P-4†	11/16"	1/2"	Black	Note 1	<b>.25</b>
Junior P-3	11/16"	1/2"	Black	Note 1	<b>.25</b>
Ensign	11/16"	1/2"	Black	Composition	<b>.20</b>
Comm'der	3/4"	3/8"	Black	Composition	<b>.35</b>
Comm. P-4	3/4"	3/8"	Black	Note 1	<b>.45</b>
Comm. P-3	3/4"	3/8"	Black	Note 1	<b>.45</b>

Note 1: Composition top and Bakelite base.

Note 2: List prices given are for tumbled nickel finish

Note \*: Available in plain top and following standard markings:—Ant.; Gnd.; Input.; Output;—;—.

Note †: Available with 3 lengths of extensions on base, i. e. 1/32", 1/16" and 1/8". In ordering please specify base extension desired.

## SINGLE, TWIN and TRIPLE TIP JACKS



**Type 17, Moulded  
Twin Jacks**



**Type 18  
Laminated  
Twin Jacks**



**Cat. No. 49M**

For making quick connections and for use with speakers and phonograph units.

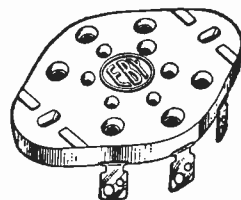
The moulded units are furnished regularly in Black. They can also be supplied in Brown finish on special quantity orders. Laminated units furnished only in Brown finish.

Cat. No.	Mounting Hole	List Price	Specify whether Red or Black Bakelite Top desired.
49M	19/64	<b>\$0.12</b>	

Cat. No.	Type Material	Mtg. Cen.	List Price
<b>Twin Jacks</b>			

17 Speaker	Moulded	*	<b>\$0.25</b>
17 Phono	Moulded	*	<b>.25</b>
17 Plain	Moulded		<b>.25</b>
18 Speaker	Laminated	1 11/16"	<b>.10</b>
18 Plain	Laminated	1 11/16"	<b>.10</b>

\*Note: Mounting screw at center. Jack centers 1 5/16". Jack centers on all except No. 17 units 7/8".



## LOW LOSS SOCKETS

Of highest quality ceramic material for ultra high frequency use. Exposed surface glazed, underside unglazed. Special contacts of highest grade phosphor bronze, hot tinned. Socket adapted for mounting on chassis at 1-11/16" or 1-27/32" centers.

### Low Loss Sockets

Cat. No.	No. of Prongs	List Price
13A	4	<b>\$0.50</b>
13B	5	<b>.50</b>
13C	6	<b>.55</b>
13DN	7 .750" dia. layout	<b>.55</b>
13DO	7 .855" dia. layout	<b>.55</b>
13E	8 octal	<b>.60</b>

## MOULDED PLUG CABLE CONNECTORS



**Disassembled View**

Eby Male plugs available with bayonet socket demountable moulded caps as illustrated. These plugs are made to match Eby No. 8 and No. 12 moulded tube sockets (See opposite page) and can be used with any standard tube socket, including octal.

### Two-Piece Moulded Male Plugs — Black

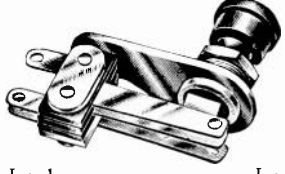
Cat. No.	No. of Prongs	Hole	List Price
<b>Without Soldering Lug Terminals</b>			
7A	4	5/16"	<b>\$0.15</b>
7B	5	3/8"	<b>.20</b>
7C	6	7/16"	<b>.25</b>
7DN	7 .750" dia. lay't	1/2"	<b>.25</b>
7DO	7 .855" dia. lay't	1/2"	<b>.25</b>
7E	8 As illustrated	1/2"	<b>.30</b>

# UTAH Switches - Jacks - and Plugs

Utah switches, jacks and plugs are of the finest quality materials and workmanship throughout. Uniformly tempered steel. Cadmium plated springs that retain their tension permanently. Positive, low re-

sistance, non-corrosive contacts, the finest possible insulation, all go to make a quality product. And they cost no more than inferior products.

## Push Button Switches



Non-Lock		Locking	
422M	Single Pole	422AM	
90c	Make Contact	90c	
422B	Single Pole	422AB	
90c	Break Contact	90c	
433	Single Pole	433A	
\$1.00	Double Throw	\$1.00	
444M	Two Pole	444AM	
\$1.20	Make two Circuits	\$1.20	
444B	Two Pole	444AB	
\$1.20	Break two Circuits	\$1.20	
666	Double Pole	666A	
\$1.50	Double Throw	\$1.50	
555	Make two Circuits	555A	
\$1.30	Break one on push	\$1.30	
676	Double Pole	676A	
\$1.65	Double Throw	\$1.65	
	Make before Break		

## Imp Tap Switch



502— 2 pt.	
503— 3 pt.	
504— 4 pt.	
505— 5 pt.	
506— 6 pt.	
507— 7 pt.	
508— 8 pt.	
509— 9 pt.	
510—10 pt.	
511—11 pt.	
512—12 pt.	

Bushing 3/8" long. Shaft 9/16 from end of bushing. Complete break between makes.

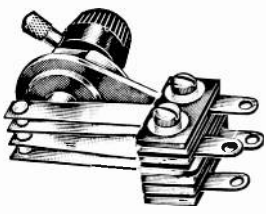
Price \$1.00

## Imp Short Jacks



1	Open Circuit	
	Output type	25c
2A	Single Closed	
	Circuit type	30c

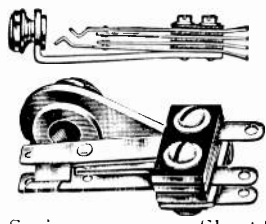
## Jack Switches



322	Single Pole	2
75c	Single Throw	75c

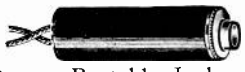
333	Single Pole	3
85c	Double Throw	90c
344	Double Pole	4
99c	Single Throw	\$1.00
355	5 Springs	55
\$1.10	2 Make—1 Break	\$1.15
366	Double Pole	6
\$1.25	Double Throw	\$1.25
306	Three Pole	66
\$1.25	Single Throw	\$1.25
388	Four Pole	88
\$1.60	Single Throw	\$1.60
333B	Single Pole—Double Throw	7
85c	Center Off	90c
366B	Double Pole—Double Throw	8
\$1.20	Center Off	\$1.25
399B	Three Pole—Double Throw	9
\$1.55	Center Off	\$1.60
312B	Four Pole—Double Throw	12
\$1.95	Center Off	\$2.00

## Jacks



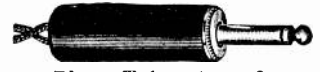
Long Spring		Short Spring	
101	Single Open Circuit	501	
50c		40c	
102	Single Closed Circuit	502	
60c		55c	
102A	Two Circuit	502A	
60c		55c	
103	Single Circuit	503	
70c	Filament Control	65c	
103A	Circuit Reversing	503A	
70c		65c	
133	Two Circuit	533	
70c		65c	
104	Interstage	504	
80c		75c	
104A	Two Circuit	504A	
80c	Filament Control	75c	
105	Two Circuit	505	
90c	Filament Lighting	85c	
106	Interstage	506	
\$1.00	Filament Control	95c	

## Portable Jack



No. 12	Portable Jack	75c
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## Plugs

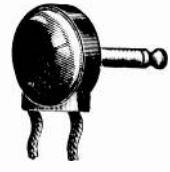


Phone Plug—Takes 1 or 2 sets phone tips No. 4—50c

Same as above but shielded for High Velocity microphone use. No. 7—\$1.00



Three Circuit microphone plug No. 6—75c



Flat Plug No. 2—50c

## Tip Jacks



Brass nickel plated short terminal No. 15—10c



Heavier and stronger than usual tip jack. No. 11—30c



Plug for use with Standard Tip Jacks ..... No. 5—15c

## Midget Rheostats



Available in 1/2-1-2-3-6-10-15-20-25-30-40-50-75-200-400-500 - 1000 - 1500 ohms 1 watt. MR—Rheostat. MP—Potentiometer.

## Heavy Duty Units

SW is 25 watt rheostat available in 1-2-3-6-10-15-20-30-40-50 -60 -75 -100-200-250-300-400-500 ohms.

PW is potentiometer—15 watt—available 100-150-200-250-300-400-500-1M -2M -3M -5M -7 1/2M -10M -20M-50M ohms.

SW—\$1.75 PW—\$2.75

# CROWE DIALS ESCUTCHEONS

## CROWE "MICROMASTER" BAND - SPREAD UNITS FOR PRECISION TUNING

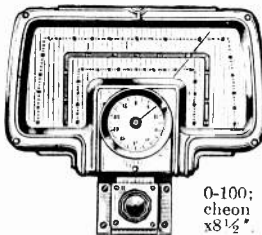
### Four Bands — Three Sizes



Nos. 316, 317 and 318 Crowe Micromasters have Croglas non-breakable and non-inflammable and non-inflammable convex crystals. Four-channel kilocycle scale as illustrated. Two-speed planetary drives: 44 to 1, and 9 to 1. The secondary pointer magnifies each degree of condenser travel about sixteen times. Two walnut bakelite knobs and bronze escutcheon included.

- No. 316 Crowe MICROMASTER**  
Diameter of scale  $3\frac{3}{4}$ "  
**List Price** ..... \$5.40
- No. 317 Crowe MICROMASTER**  
Diameter of scale  $3\frac{1}{4}$ "  
**List Price** ..... \$5.80
- No. 318 Crowe MICROMASTER**  
Diameter of scale  $2\frac{3}{4}$ "  
**List Price** ..... \$5.00

### $8\frac{1}{4}$ -Inch Modernistic



Combines beauty and fine band-spread tuning. Peach and brown pyrolin scale, approximately  $3" \times 6"$ ; is calibrated 0-100; bronze escutcheon is about  $5\frac{3}{4}" \times 8\frac{1}{2}"$ . Entire face of unit protected by glass crystal. Two-speed planetary drive: 100 to 1 and 18 to 1 in 360°. Secondary pointer moves about 36 times as fast as the main pointer. Complete with two brown Bakelite knobs.

- No. 481 Crowe MICROMASTER**  
**List Price** ..... \$10.00

### $5\frac{1}{4}$ -Inch — Four Bands



**No. 404 large two-speed Crowe Micromaster unit** for hair-line tuning. Allows exact repeat logging of high-frequency stations. Visible diameter of scale  $5\frac{1}{4}"$ . Same bandspread features as No. 316, but much slower speed. Crowe planetary drive slow ratio of about 100 to 1; fast ratio about 24 to 1 in 360°. Ratio of slow pointer to fast pointer about 25 to 1. Complete with convex glass crystal, two brown Bakelite knobs, and bronze escutcheon.

- List Price** ..... \$8.50
- Always Specify:** (1) Whether unit is to fit  $\frac{1}{4}"$  or  $\frac{3}{8}"$  condenser shaft; (2) whether condenser closes on the left or right; (3) Your choice of the scales listed with each unit.

## STANDARD CROWE AIRPLANE DIALS — LESS BAND - SPREAD

### $3\frac{1}{2}$ -Inch — 0-100

**No. 150 Crowe Wedge Drive Airplane Dial.** Visible diameter of scale  $3\frac{1}{2}"$ . Smooth serviceable unit with geared connection to pointer. Ratio about 14 to 1 in 360°. Has two pilot light sockets, and bronze escutcheon; black or peach 0-100 scale, or black 2-channel scale 0-100 and 1500-550.



- List Price** ..... \$3.20

### $5\frac{1}{4}$ -Inch — Two-Speed

**No. 389 Crowe  $5\frac{1}{4}$ -in. Airplane Dial** — Two-speed planetary drive: 80 to 1, and 15 to 1 in 360°. It has 0-100 or kilocycle scale, 2 brown Bakelite knobs, and pilot light sockets.



- List Price** ..... \$4.75

### Midget Dial — $2\frac{1}{4}$ -Inch

**Two or Four-Channel Friction Drive**



- No. 180 Crowe Friction Drive Unit with Pilot Socket** — Visible diameter of scale  $2\frac{1}{4}"$ . Ratio about 7 to 1 in 360°. Two-channel 0-100 or 4-channel kilocycle scale, with convex glass crystal and bronze escutcheon.
- List Price** ..... \$1.80

### All-Star Dial

**No. 123 Popular Medium Size Crowe Wedge Drive Unit.** Visible diameter of scale  $2\frac{3}{4}"$ . Ratio about 14 to 1 in 360°. Peach or black scales calibrated as illustrated or 0-100. Has convex glass crystal and bronze escutcheon.



- List Price** ..... \$3.00

### Medium-Sized Types

**No. 381 Medium Size Crowe Friction Drive** — Exactly same as No. 379, shown on the right, except larger size. Bronze escutcheon as illustrated. Visible diameter of



- scale  $2\frac{3}{8}"$ .  
**List Price** ..... \$2.25

### Two-Inch Midget

**No. 379 Friction Drive Unit** — Ratio 10 to 1 in 360°. Diameter of scale  $2"$ . Peach and brown scale calibrated two-channel 0-100 or four-channel in kilocycles. For  $\frac{1}{4}"$  shaft



- only. Complete with convex glass and bronze escutcheon.  
**List Price** ..... \$1.75

### Two-Inch Midget

**No. 125 Crowe Friction Drive Airplane Dial for Small Receivers** — Diameter of scale  $2"$ . Ratio  $3\frac{1}{2}$  to 1 in 360°. Double-end pointer, 4-channel kilocycle calibration. Black or peach. Convex glass and bronze escutcheon.



- List Price** ..... \$1.50

### Rectangular Dials

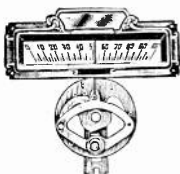
**No. 154 Rectangular Crowe Wedge Drive Unit** — Visible portion of scale  $2\frac{3}{8}" \times 3"$ . Ratio about 14 to 1 in 360°. Peach 4-band - kilocycle scale; convex glass crystal and bronze escutcheon.

- List Price** ..... \$3.40

**No. 166** — Same as No. 154, except has double-end pointer covering 180° in both channels of an 0-100 scale.  
**List Price** ..... \$2.50

## CROWE FAN - STYLE WEDGE - DRIVE TUNING UNITS EXACT REPLACEMENT FOR MANY POPULAR RECEIVERS

**Horizontal Type with Moving Pointer**



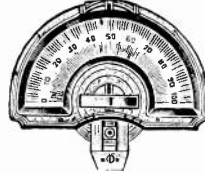
- No. 133** — Horizontal Type with Pointer Moving in front of 0-100 scale. Visible portion of scale  $\frac{3}{4}" \times 1\frac{1}{4}"$ . Has bracket for clip-on type socket. Complete with bronze escutcheon.  
**List Price** ..... \$2.20

**Rotating Fan-Type Unit Pointer Style Escutcheon**



- No. 46** — Rotating Fan-Type Unit. Outside diameter of scale  $3\frac{3}{8}"$ . Calibrated 0-100. Ratio 12 to 1 in 360°. Complete with pointer style bronze escutcheon.  
**List Price** ..... \$1.50

**Moving Shadow Semi-Circle Type**



- No. 132** — Large Semi-circular Type with Moving Shadow Indicator. Visible width of scale  $1\frac{1}{4}"$ . Calibrated 0-100. Ratio 12 to 1 in 360°. Complete with pilot light socket and bronze escutcheon.  
**List Price** ..... \$2.60

**Moving Shadow Small Semi-circle Type**

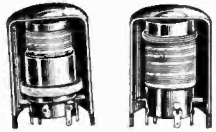


- No. 52** — Small Semi-circular Type with Moving Shadow Indicator. Visible width of scale  $\frac{1}{2}"$ . Overall size of escutcheon  $3\frac{1}{4}" \times 4\frac{1}{2}"$ . Calibrated 0-100. Ratio 10 to 1 in 360°. Complete with pilot light socket and bronze escutcheon.  
**List Price** ..... \$2.00

# GUTHMAN Coils

## SHIELDED ANTENNA AND R.F. COILS

175 to 500 Meters



Wound on a 1" diam. by 2 1/8" long coil-form. The proper relation between the shield and coil insures the minimum of loss. Can size is 1 1/2" diam. by 2 1/4" high with 1 3/4" mtg. centers, utilizing two 6/32 spade bolts. Shield can be soldered to the chassis.

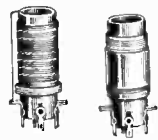
### Low Impedance Primary

- A-1007**—Bank-wound Litz secondary antenna-coil. **List Price** ..... \$0.55  
**B-1007**—Bank-wound Litz secondary R.F. coil. **List Price** ..... \$0.55

### High Impedance Primary

- A-1018**—Bank-wound Litz secondary antenna-coil. **List Price** ..... \$0.65  
**B-1018**—Bank-wound Litz secondary R.F. coil. **List Price** ..... \$0.65

## UNSHIELDED ANTENNA AND R.F. COILS



These coils are supplied on a standard 1/2" diam. by 2 1/4" long coil-form. Mounting bracket and dowel, together with brass mounting-screw and bolt, are furnished, enabling mounting of coil in any position.

### Low Impedance Primary

- A-1008**—Bank-wound Litz secondary antenna-coil. **List Price** ..... \$0.45  
**B-1008**—Bank-wound Litz secondary R.F. coil. **List Price** ..... \$0.45

### High Impedance Primary

- A-1001**—Bank-wound Litz secondary antenna-coil. **List Price** ..... \$0.55  
**B-1001**—Bank-wound Litz secondary R. F. coil. **List Price** ..... \$0.55  
**A-100**—Straight solenoid plain enamel secondary antenna-coil. **List Price** ..... \$0.50  
**B-100**—Straight solenoid plain enamel secondary R.F. coil. **List Price** ..... \$0.50

All coils, shielded and unshielded, listed above are thoroughly impregnated and impervious to moisture. Matched to .00035 mfd. variable condenser. Each coil is furnished with a wiring diagram showing connections for circuit that coil is designed for.

## Unshield Antenna R.F. & Oscill. Coils

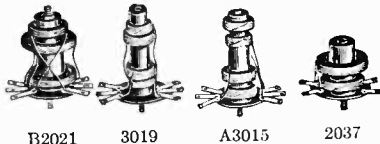
15-55 & 200-550 Meters



High-gain unshielded R.F., antenna and oscillator coils, with the short-wave section space-wound on threaded bakelite tubing. Tuning range from 15 to 55 and 200 to 550 meters, with a standard .000365 mfd. (usually called .00035 mfd.) variable condenser. Complete with wiring diagram.

No.		List Price
A-2050	R.F. Coil	\$1.15
B-2050	Antenna Coil	1.15
O-3090	Oscillator Coil	1.00

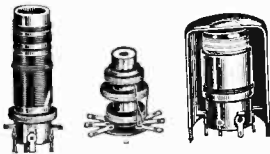
## ANTENNA AND OSCILLATOR COILS FOR SUPER HETS



Lateral-wound antenna and oscillator-coils for superheterodyne use. Coils can be used separately or in pairs. The broadcast coils are wound on 1/2" diam. by 1" long special dowel, while the combination S.W. and Broadcast coils are wound on a 3/8" diam. by 1 3/8" long dowel. Wiring diagram and instructions are furnished with each coil for use with a .00035 tuning condenser. Broadcast coils cover from 550 to 1500 Kc., while S.W. coils cover from 550 to 1500 Kc. and 1500 to 4000 Kc.

No.		List Price
2037	Antenna Broadcast coil	\$0.83
A-3015	Ant. S.W. and Broadcast coil	.95
O-3019	Broadcast Osc. coil 465 Kc.	.80
O-3039	Broadcast Osc. coil 262 Kc.	.90
O-3014	Broadcast Osc. coil 175 Kc.	.80
O-3040	Broadcast Osc. coil 115 Kc.	.90
O-3015	B'cast & S.W. Osc. coil 465 Kc.	1.05
O-3041	B'cast & S.W. Osc. coil 262 Kc.	1.20
O-3042	B'cast & S.W. Osc. coil 175 Kc.	1.05
O-3043	B'cast & S.W. Osc. coil 115 Kc.	1.20

## SHORT-WAVE AND BROADCAST ANTENNA AND R.F. COILS



The most popular types of short-wave and broadcast coils. Diagrams are included with each coil. Matched to .00035

mfd. condenser. High impedance primary.

### Unshielded

Plain enamel secondary with S.W. shunt to cover 75 to 200 meters and 200 to 545 meters. 1/4"x2 1/4" long.

**A-120-Antenna B-120-R.F. List, \$0.55 Ea.**

Special S.W. and Broadcast coils. High gain. Both primary and secondary lateral winding. Cover 80 to 200 and 200 to 545 meters. Wound on dowel 1/2"x1 1/2" long.

**A-2021-Antenna B-2021-R.F. List, \$1.00 Ea.**

### Shielded

Bank-wound Litz secondary tap for S.W. 120 to 200 and 200 to 545 meters. Coil 1"x2 1/8" long. Shield can 1 1/4"x2 1/4" high. Two 6/32 spade bolts for mtg. with centers of 1 3/4".

**A-1022-Antenna B-1022-R.F. List, \$0.80 Ea.**

## Midget Antenna R.F. and Oscillator Coils

1 1/4"x1 3/8" high.

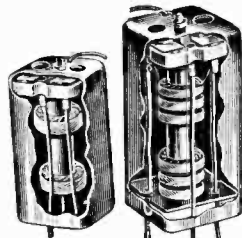


Designed for Superheterodyne and T.R.F. receivers. Newest type litz wire sectional winding with low R.F. resistance and distributed capacity. For use with .00035 condensers. Desirable for auto radio construction as well as home receivers. Furnished with complete wiring diagrams.

No.		List Price
A-2098	Ant. Coil	\$0.70
B-2098	R.F. Coil	.70
O-3098	Osc. Coil	.60

## INTERMEDIATE FREQUENCY TRANSFORMERS

Single and Double Tuned



Large De Luxe

This is a complete line of all I.F. transformers necessary for replacement work and new set design. They can be used in any combination required for the necessary number of I.F. stages and are interchangeable for broadcast, short-wave, and long-wave receivers regardless of the type of second detector employed. Litz wire is used where improved results are obtained thereby, while the most efficient windings possible are used on the other coils. The **De Luxe** units are supplied with the new triple section series wound construction. In this construction R.F. resistance and distributed capacity have been reduced to a minimum with a resulting maximum "Q". This type of winding is also supplied in the **Regular** units numbered 3104, 3013, 3013X, and 3106. The remainder will not perform more efficiently with the sectional winding and consequently are supplied with regular lateral wound primaries and secondaries. With all units, the best practical sensitivity and selectivity will be obtained. The tuning condensers are of the mica compression type, mounted on Isolantite bases, and are adjustable from the top of the shield can. The coils are wound on special dehydrated forms and are thoroughly impregnated and impervious to moisture. All units are individually boxed with enclosed wiring diagram. (Prices are given for any frequency.)

### Regular Four-Lead I.F. Transformers

Peak in Kc.	D. T. De Luxe	D. T. Large Size	S. T. Large Size	D. T. Regular	S. T. Regular
465	3107x	3018x	3054x	3103x	3058x
456	3107	3018	3054	3103	3058
380	3120	3112	3113	3106	3114
262	.....	3052	3055	3104	3059
175	.....	3012	3056	3032	3013
115	.....	3053	3057	3051	3061
<b>List Price</b>	<b>\$2.00</b>	<b>\$1.50</b>	<b>\$1.20</b>	<b>\$1.25</b>	<b>\$1.20</b>

### FIVE LEAD I.F. TRANSFORMERS (TAPPED)

Peak in K.c.	D. T. Large Size	S. T. Large Size	D. T. Regular	S. T. Regular
465	3070x	3062x	3074x	3066x
456	3070	3062	3074	3066
265	3071	3063	3075	3067
175	3072	3064	3076	3068
115	3073	3065	3077	3069
<b>List Price</b>	<b>\$1.60</b>	<b>\$1.25</b>	<b>\$1.50</b>	<b>\$1.25</b>

### Shield Can Sizes

Single and double tuned large size 2 1/4" diam. x 3" high round can. 1 1/4" Mtg. Centers. Two 6/32 spade bolts.

Double tuned regular size. 1 3/8"x1 3/8"x3" high square can. 1 3/8" Mtg. Centers.

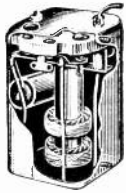
Single tuned regular size. 1 3/8"x1 3/8"x2 1/2" high square can. 1 3/8" Mtg. Centers.

Double tuned de luxe size. 1 3/8"x1 3/8"x5" high square can. 1 3/4" Mtg. centers.

# GUTHMAN Coils

## REPLACEMENT COILS FOR MAJESTIC

These units are designed to fit in perfectly with the chassis that they are designated for. In a few cases the actual size and appearance are not identical, but the mechanical and electrical properties and mounting arrangements are as required. Where shielding and other attachments are to be combined with the coil forms provision is made on the replacement unit to fit in perfectly with such accessories. The coils, themselves, are wound according to the latest advancement in coil winding and are a decided improvement over the method used by the manufacturer at the time the original coils were designed. These have been developed in conjunction with the original Majestic chassis and have been approved by men formerly in authority with the Majestic Service and Replacement Department. They are not to be confused with replacement coils only, where, in many cases, it is almost impossible to replace these coils in their original Majestic assemblies.



3907-3908



10148

Complete Assembly for **Chassis Model No. 20:** First I.F. Transformer, including Trimmer Condenser, Shield Can, Bypass Condenser, and four leads coded Black, Red, Yellow and Green. **Part No. M-3908**..... **List Price \$2.40**

Complete Assembly for **Chassis Model No. 20:** Second I. F. Transformer leads coded Black, Red, Yellow and White with Red tracer. Specifications same as M-3908. **Part No. M-3907**..... **List Price \$2.50**

Complete Assembly for **Chassis Model No. 460:** First I.F. Transformer, including Trimmer Condenser, Shield can, and four leads coded Green, White, Red and Brown. **Part No. M-10148**..... **List Price \$1.40**

Complete Assembly for **Chassis Model No. 460:** Second I.F. Transformer, including coil Shield Can with Center Mounting Screw and Six Flexible leads coded Green, Yellow, Red, Brown, Orange, and White with Red Tracer. **Part No. M-10253**..... **List Price \$0.80**

Complete Assembly Antenna Coil for **Chassis Model Nos. 15 and 15B.** **Part No. M-4430**..... **List Price \$1.00**

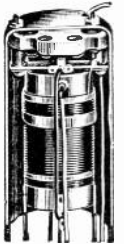
Complete Assembly R.F. Coil for **Chassis Model Nos. 15 and 15B.** **Part No. M-4431**..... **List Price \$1.00**

Complete Assembly for **Chassis Model Nos. 15, 15B and 150:** First I.F. Transformer and Composite Oscillator including Trimmer Condensers, Three Sets of Coils, Shield Can, and seven leads coded Yellow, Red, Orange, Blue, White with Red tracer, and two Green leads. **Part No. M-4428**..... **List Price \$2.40**

Complete Assembly for **Chassis Model Nos. 55 and 15** using local distance switch: First I.F. Transformer including Trimmer Condenser, Shield Can, and five leads coded Green, Red, Yellow, Black and Blue. **Part No. M-4429**..... **List Price \$1.60**

Complete Assembly for **Chassis Model Nos. 15, 15B and 150** without local distance switch: First I. F. Transformer. Other specifications the same as M-4429 but with only four leads coded Green, Red, Yellow and Black. **Part No. M-8384**..... **List Price \$1.40**

Complete Assembly for **Chassis Model No. 111 (Auto Set):** First I.F. Transformer including Trimmer Condenser, Shield Can, and six leads coded White, Black, Blue, Yellow, Red and Green. **Part No. M-8323**..... **List Price \$1.90**

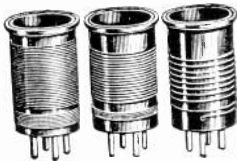


4428



10253

### SHORT-WAVE PLUG-IN COILS



S. W. Plug-in Coil Kit, 16 to 36 meters, 33 to 65 meters, 55 to 115 meters, 108 to 217 meters.

Cat. No.	List Price
2030—4 coils, 4-prong.....	\$1.50
2150—4 coils, 5-prong.....	1.75
2160—4 coils, 6-prong.....	2.25

Broadcast Coil Kit, 190 to 310 meters, 300 to 550 meters.

Cat. No.	List Price
2065—2 coils, 4-prong.....	\$1.20
2151—2 coils, 5-prong.....	1.50
2161—2 coils, 6-prong.....	1.75

Ultra S. W. Coil, 9.5 to 21 meters.

Cat. No.	List Price
2064—4-prong.....	\$0.50
2152—5-prong.....	.75
2162—6-prong.....	1.00

2060—4-prong—coil form.....	0.18
2061—5-prong—coil form.....	.18
2062—6-prong—coil form.....	.18

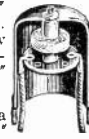
### R.F. CHOKE COILS



Unshielded R. F. Choke

The unshielded R.F. chokes are wound on a 1/4" diameter by 3/4" long special impregnated dowel form with a 1" round bakelite wafer for mounting lugs. Either the bracket or mounting screw can be utilized, giving universal mounting. The untuned transformer has 5" coded leads.

The shielded chokes are furnished in a special alloy shield can. This can is 1 1/2" in diameter. Two 6-32 spade bolts with mounting centers of 1 3/4" can be used for mounting, as well as a single screw located in the center of the top of the can. If necessary the can may be soldered direct to the chassis.



Inductance	Unshielded		Shielded	
	Part No.	List Price	Part No.	List Price
2.5 Milli Henry	2012	\$0.25	2112	\$0.35
5.5 Milli Henry	2013	.25	2113	.35
6.0 Milli Henry	2014	.25	2114	.35
8.0 Milli Henry	2036	.30	2136	.40
16.0 Milli Henry	2010	.35	2110	.45
30.0 Milli Henry	2038	.45	2138	.55
60.0 Milli Henry	2016	.65	2116	.75
80.0 Milli Henry	2039	.80	2139	1.00
Untuned Transformer	2024	.65	2124	.75

### Short-Wave Shunts

With these shunts, receivers designed for the 200- to 550-meter band can be made to include the 75- to 200-meter short-wave bands. One short-wave shunt is needed for each antenna and R.F. coil in the set. Diagram is enclosed showing how to connect in the circuit. Size: 3/8" x 3/4".

**No. 2048—Short-Wave Shunt—List Price.....\$0.30**

### COIL KITS

Practically anyone with a fair knowledge of radio circuits can easily assemble these receivers with the aid of the comprehensive circuit diagrams included with each kit.

**Kit 310.—7 Tube Super A.C.—I.F. 175 Kc.**—Employs the following tubes: 2-58s, a 2A7, 55, 2-A5s and an 80. **List Price.....\$4.80**

**Kit 400.—5 Tube Auto Set—I.F. 175 Kc.**—Employs the following tubes: two 6D6, a 6A7, a 75 and a 41. **List Price.....\$4.50**

**Kit 402.—5 Tube All-Wave Superheterodyne—I.F. 456.**—Employs the following tubes: a 6A7, a 6D6, 75, 42 and an 80. Band coverage: 17.5 Mc. to 540 Kc. **List Price.....\$6.00**

**Kit 305.—Tube A.C.—D.C. Super—(1500 to 540 Kc.) (20 to 5.5 Mc.) I.F. 456 Kc.**—Employs the following tubes: a 6A7, 78, 77, 43 and a 12Z3. **List Price.....\$5.00**

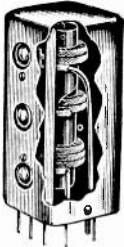
**Kit 305.**—Same as above, but employs the following tubes: a 2A7, 58, 2B7 2A5 and an 80, for A.C. only. **List Price.....\$5.00**

**Kit 308.—5 Tube A.C. Super I.F. 456 Kc.**—Employs the following tubes: a 2A7, 58, 2B7, 2A5 and an 80. **List Price.....\$4.00**

We have attempted to show only a few of the popular replacement coils that we are manufacturing. We are continually adding to this list, and will attempt to duplicate any samples that you will send in—giving the manufacturer's name and the model number, together with whatever additional information you can furnish.

# GUTHMAN Coils

## TRIPLE-TUNED I. F. TRANSFORMERS



Overall size  $1\frac{3}{4} \times 1\frac{3}{4} \times 4\frac{1}{8}$ " with  $1\frac{3}{4}$ " mtg. centers. Complete with wiring diagrams. Positively the best I. F. transformer on the market today. Laboratory curves on these units bring out the following salient features:

1. Flat top—good fidelity.
2. Narrow Skirts—10 Kc. selectivity.
3. Easy and stable frequency adjustment.
4. High sensitivity.
5. Easy tuning.

The band width on these units at one thousand times the signal is less than at one hundred times the signal on a good double tuned I. F. Still the top of flat allowing distant stations to be tuned in with good tone quality and without local interference. Sectional windings with triple section Ceramic base trimmer.

**No. 3358**—456 Kc. Input. **List Price**..... **\$2.25**  
**No. 3359**—456 Kc. Output. **List Price**..... **2.25**

## HIGH GAIN COMPACT BROADCAST AND POLICE BAND COIL



High impedance primary triple section litz wire secondary, for use with .000365 condenser. Covers a range of 75 to 200; and 200 to 540 meters. Band switching may be accomplished with a double pole single throw switch preferably of the wafer type. Coils are wound on a  $\frac{3}{8}$ " diameter x  $1\frac{1}{2}$ " long, impregnated form, with a single hole mounting bracket.

**Our No. A-1066**—Antenna coil.  
**List Price**..... **\$0.60**  
**Our No. B-1066**—Interstage R. F. coil.  
**List Price**..... **.60**



Special 456 Kc. Oscillator for cut plate oscillator section .000365 mfd. variable condenser. Complete with diagrams. Overall size:  $\frac{3}{8} \times 2$ ", unshielded.

**No. 3021**—**List Price**..... **\$0.40**



Shielded oscillator coils for cut plate oscillator section .000365 mfd. variable condenser. Complete with diagrams. Can size:  $1\frac{1}{8} \times 2\frac{1}{4}$ " with  $1\frac{1}{8}$ " mtg. centers.

**No. O-3030**—175 Kc. **List Price**..... **\$0.55**  
**No. O-3187**—456 Kc. **List Price**..... **.55**



Unshielded three band antenna and oscillator coils for use with 420 mmfd. variable condenser. Complete with diagrams showing hook-up switch and padders required. Range 5.7 to 18 meg.c. 6000 to 1650 Kc.; 1725 to 540 Kc. Overall size:  $\frac{1}{2} \times 2\frac{1}{2}$ ".

**No. A-2071**—Antenna. **List Price**..... **\$1.75**  
**No. O-3126**—456 Kc. Osc. **List Price**... **1.50**

## 18 TO 2.5 MEGACYCLE COILS



Space wound on threaded bakelite for use with 420 mmfd. variable condenser. Complete with wiring diagram, showing padder and switch required. Overall size:  $\frac{3}{8} \times 2\frac{1}{4}$ ".

**No. A-3049**—Antenna coil. **List Price**..... **\$0.40**  
**No. O-3049**—456 Kc. Oscillator. **List Price**..... **.40**

## IRON CORE HIGH GAIN I. F. TRANSFORMERS

Provide Greatly Improved Sensitivity and Selectivity

**Our No. 3383X**—465 Kc. Frequency.  
**Our No. 3383** —456 Kc. Frequency.  
**Our No. 3384** —370 Kc. Frequency.  
**Our No. 3385** —262 Kc. Frequency.  
**Our No. 3386** —175 Kc. Frequency.



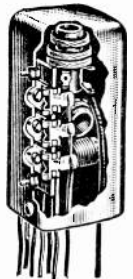
**List Price**..... **\$2.00**

The special iron core construction insures higher gain and greater selectivity. Gain is twice that of air core type. Selectivity is so improved that receivers having normally poorer than 10 Kc. separation, can with the use of these transformers, be converted into receivers having positive 10 Kc. or better separation. Complete instructions supplied for replacing ordinary I. F.'s with these new units. Only one of the I. F.'s in the receiver need be replaced. Metal Shield  $1\frac{1}{4}$ " square x  $3\frac{1}{2}$ " high. Spade bolt mounts. Double tuned balancing condensers.

## SHIELDED ALL-WAVE COILS COMPLETE WITH COMPENSATORS

1725 to 540 Kc.—6000 to 1650 Kc.—18 to 5.7 Megacycles. These all wave coil units are the last minute developments according to set manufacturers specifications. Units are adapted easily in either two or three gang receivers. Specially constructed to minimize radio frequency losses. Oscillator adapted for 456 Kc. use. To be used with a 420 mmfd. variable condenser, that does not have any compensators. Oscillator coils require following padding condensers:

1725 to 540 Kc.—500 mmfd. semi-variable,  
 6000 to 1650 Kc., .01 mmfd. fixed condenser,  
 1800 to 5.7 megacycles, .01 mfd. fixed condenser.



Use three section six-pole, three-position switch for three-gang set; and four-pole, three-position switch for two-gang set. Recommended I. F.'s to be used with this unit. (Our Nos. 3358 and 3359 triple tuned.) Complete with hook-up diagram. Hook-up diagram shown for all leads. Complete with trimming condensers in shield can  $1\frac{3}{4}$ " sq. x 4" high, with  $1\frac{1}{4}$ " mounting centers.

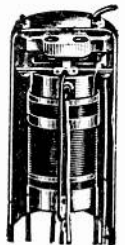
**Our No. A-2200**—Antenna coil. **List Price**..... **\$2.40**  
**Our No. B-2200**—R. F. coil. **List Price**..... **2.40**  
**Our No. O-3200**—Oscillator coil. **List Price**..... **2.25**

## COMPOSITE UNITS

High-gain composite coil used as combination I. F. and oscillator. Designed for the special tracking section on the variable condenser for 175 Kc. circuits.

Finds popular use in 5- and 6-tube superheterodyne receivers. Top tuning. Mounted in a shield  $1\frac{1}{8}$ " in diameter by  $3\frac{1}{4}$ " in height. Equipped with two spade mounting bolts.

**No. 3094**—**List Price**..... **\$2.10**



## PRESELECTOR COIL

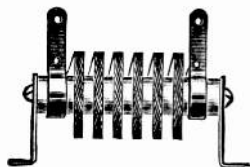
For multi-band sets where greater selectivity is required on broadcast band. Replaces antenna coil and requires additional section on 420 mmfd. variable condenser. Complete with wiring diagram. Overall size:  $1 \times 2\frac{3}{4}$ ".

**No. 2056**—**List Price**..... **\$1.25**





# GUTHMAN Coils



## HEAVY DUTY TRANSMITTING CHOKE

Designed for high power transmitting tubes where maximum continued plate current does not exceed 500 milliamperes D.C. Will stand, approximately 50% intermittent overloading. Especially adaptable for amateur bands. Has high impedance with consequent low losses. Inductance 2.5 millihenries D.C. resistance, 8 ohms, distributed capacity less than 1.5 mmfd. Overall size  $1\frac{1}{2}'' \times 2\frac{3}{8}''$ . Six universal wound pies on low loss ceramic core. Has hole tapped at each end for fastening brackets. These brackets may be removed and machine screws used for single hole mounting.

**No. 2128—List Price** ..... \$1.50



## MIDGET R. F. CHOKE

Small size choke, light in weight, that can be supported by soldering lugs, mounted at either end. Five section pie winding, with a low distributed capacity and losses. Current carrying capacity 125 milliamperes D.C. Distributed capacity less than 1 mmfd. Inductance  $2\frac{1}{2}$  Mh. Wound on ceramic form  $\frac{1}{2}''$  diameter x  $1\frac{1}{8}''$  long.

**Our No. 2129—List Price** ..... \$0.50

## TRANSMITTER CHOKE



Low loss choke, particularly adapted as a radio frequency filter for plate circuits of mercury rectifiers, in tank circuits of low power transmitters, etc. Wound on ceramic single hole mounting. Current carrying capacity 70 Ma.

**Our No. 2040—List Price** ..... \$0.35

## PRIMARY REPLACEMENT WINDING



High impedance silk enamel windings for replacing burned out antenna primaries. Sliding of collar permits variation of coupling in relation to secondary. Every serviceman should have a set of these for emergency repairs.

**Our No. 6000—For  $1\frac{1}{4}''$  outside diameter of secondary coil. List Price** ..... \$0.27

**Our No. 6001—For 1" outside diameter of secondary coil. List Price** ..... .24

**Our No. 6002—For  $\frac{7}{8}''$  outside diameter of secondary coil. List Price** ..... .23

**Our No. 6003—For  $\frac{3}{4}''$  outside diameter of secondary coil. List Price** ..... .21



## CARTRIDGE TYPE "A" CHOKE COIL

This is the latest development in an auto choke coil, and is hermetically sealed. It is impervious to moisture, and has a complete electrical insulation over the entire unit. The cartridge measures  $\frac{7}{8}''$  diameter x  $2\frac{5}{8}''$  long, and has an inductance of 30 microhenries, and a D.C. resistance of .3 ohms.

**Our No. 2127—List Price** ..... \$0.50



## UNIVERSAL COUPLER

Matches any aerial using a two-wire lead-in to any receiver input circuit impedance. Increases effectiveness of the aerial and decreases noise pickup of lead-in. Installed at the receiver. Diagram included.

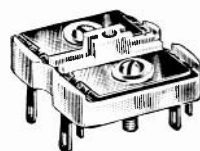
**2031—List Price** ..... \$0.60

## TRIMMER AND PADDER CONDENSERS

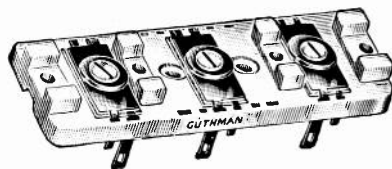
Guthman condensers are designed for maximum efficiency and contain features superior to any others on the market. Only Clear India Ruby Mica is used and the bases are the most efficient ceramics available. A 4-61 adjusting screw is used (finer than 90% of competitive makes) giving an extra close adjustment in varying the capacity. The bushings are firmly embedded in the base, and, together with the method of anchoring the plates, Guthman condensers will have no shifting or change of capacity after installation. They are used by leading radio engineers and set manufacturers all over the world. All types can be furnished in special combinations on order.



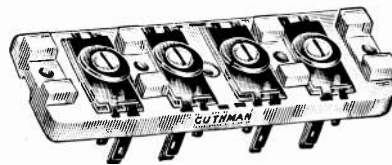
**Single Unit Overall Size**  
 $1\frac{1}{8}'' \times 1\frac{1}{8}'' \times \frac{1}{8}''$



**Double Unit Overall size**  
 $1\frac{1}{8}'' \times 1\frac{1}{8}'' \times \frac{1}{4}''$



**Triple Unit Overall size:  $3\frac{1}{8}'' \times 1\frac{1}{8}'' \times \frac{1}{4}''$**



**Quadruple Unit Overall size:  $3\frac{1}{8}'' \times 1\frac{1}{8}'' \times \frac{1}{4}''$**

No. of Plates	Working Range a. Sec. mmfd.	Max. Range a. Sec. mmfd.	Single Section		Dual Section	
			No.	List Price	No.	List Price
2	20-90	15-110	C24	0.30	C 7	\$0.45
3	50-180	40-210	C23	.35	C 1	.50
4	100-300	85-340	C25	.40	C26	.60
5	170-410	150-440	C29	.50	C34	.70
6	200-600	180-620	C33	.60	C11	.80
7	300-675	260-720	C36	.70	C37	.90
8	325-850	300-900	C40	.90	C41	1.10

No. of Plates	Working Range a. Sec. mmfd.	Max. Range a. Sec. mmfd.	Triple Section		Quadruple Section	
			No.	List Price	No.	List Price
2	20-90	15-110	C19	\$0.60	C20	\$0.75
3	50-180	40-210	C21	.65	C22	.80
4	100-300	85-340	C27	.80	C28	1.00
5	170-410	150-440	C31	.90	C32	1.10
6	200-600	180-620	C34	1.00	C35	1.20
7	300-675	260-720	C38	1.10	C39	1.30
8	325-850	300-900	C42	1.30	C53	1.50

## EQUALIZING OR ALIGNING CONDENSERS

Size (overall):  $\frac{5}{8}'' \times \frac{1}{2}'' \times \frac{1}{8}''$ . Capacity Range: 3 to 35 mmfd. Guthman No.

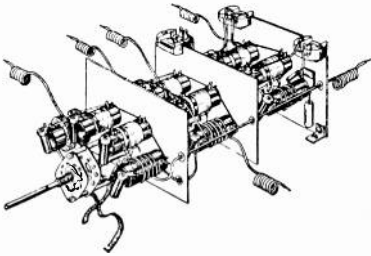
**List Price**  
C-44—Ceramic Base ..... \$0.20  
C-45—Bakelite Base ..... .15



# Meissner

## COILS

### MULTI-WAVE ASSEMBLY



The unit embodies all coils, range switch, shunt trimmers, series padders, A.V.C., by-pass condensers and necessary shielding. It is in fact the entire "Front End" of an all-wave set, exclusive of the gang condenser and tubes. Aligned and padded. No adjustments necessary.

**ALIGN-AIRE (air dielectric) Trimming Condensers used on all bands**, except the ultra-high frequency band, which requires no trimmers. R.F. stage is used on all bands except the ultra high-frequency bands. Available in five different combinations.

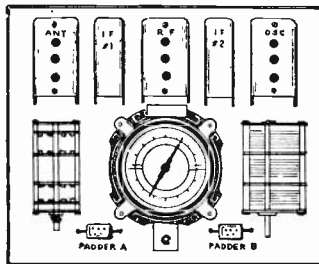
For Use with 260 mmf. Condenser

5 BAND		4 BAND	
3.8 to 9.9 meters	9.7 to 25.	3.8 to 9.9 meters	9.7 to 25.
24. to 68.	67. to 200.	24. to 68.	67. to 200.
190. to 555.			
Model No. 7515	List \$21.00	Model No. 7514	List \$17.50

For Use with 410 mmf. Condenser

5 BAND		4 BAND		3 BAND	
7.5 to 20.	16.4 to 51.	7.5 to 20.	16.4 to 51.	16.4 to 51.	48.5 to 177.
48.5 to 177.	167. to 555.	7.5 to 20.	16.4 to 51.	16.4 to 51.	48.5 to 177.
732. to 2140		167. to 555.		167. to 555.	
Mod.No. 7505	List \$21.00	Mod.No. 7504	List \$17.50	Mod.No. 7503	List \$16.00

### A.C. SUPER-HET RECEIVER KITS



#### BROADCAST "6"

175-550 Meters

#### COMPLETE COIL AND TUNING KIT

- 1 Shielded Antenna Coil.....Cat. No. 6862
  - 1 Shielded R.F. Coil.....Cat. No. 6864
  - 1 Shielded Oscillator Coil.....Cat. No. 4243
  - 1 Padder Condenser; 4" Calibrated Dial.....Cat. No. 18247
  - 1 Ferrocort (Iron-Core) Input I.F. Transformer.....Cat. No. 5740
  - 1 Ferrocort (Iron-Core) Output I.F. Transformer.....Cat. No. 5742
  - 1 Three-Gang .000365 Tuning Condenser.....Cat. No. 15122
- Complete with all wiring instructions.

Kit Number 7506.....List \$11.25

Complete Detailed Instruction Book for any of above Models.....10c each

#### BROADCAST AND SHORT-WAVE "6"

18-55 and 175-550 Meters

#### COMPLETE COIL AND TUNING KIT

- 1 Shielded 2-Band Antenna Coil.....Cat. No. 7476
- 1 Shielded 2-Band R.F. Coil.....Cat. No. 7478
- 1 Shielded 2-Band Oscillator Coil.....Cat. No. 7480
- 2 Ferrocort I.F. Transformers.....Cat. No. 5740—Cat. No. 5742
- 1 3-Gang Condenser, .000365 Mfd.....Cat. No. 15122
- 1 Wave-Change Switch.....Cat. No. 17297
- 1 4" Calibrated Dial.....Cat. No. 18247
- 2 Padders.....Complete wiring instructions.

Kit Number 7509.....List \$15.50

#### BROADCAST AND POLICE "6"

75-550 Meters

#### COMPLETE COIL AND TUNING KIT

- 1 Shielded 2-Band Ant. Coil.....Cat. No. 7467
  - 1 Shielded 2-Band R.F. Coil.....Cat. No. 7471
  - 1 Shielded 2-Band Osc. Coil.....Cat. No. 7475
  - 2 Padders.....Cat. No. 5740
  - 1 Ferrocort (Iron-Core) I.F. Input.....Cat. No. 5740
  - 1 Ferrocort (Iron-Core) I.F. Output.....Cat. No. 5742
  - 1 .000365 Three-Gang Tuning Condenser.....Cat. No. 15122
  - 1 Wave-Change Switch.....Cat. No. 17297
  - 1 Calibrated 4" Dial.....Cat. No. 18247
- Complete with all wiring instructions.

Kit Number 7507.....List \$15.50

### 14-TUBE "COMMUNICATIONS" RECEIVER KIT

5 Bands—3.8 to 555 Meters

#### Utilizing the MEISSNER Completely Assembled Tuning Unit

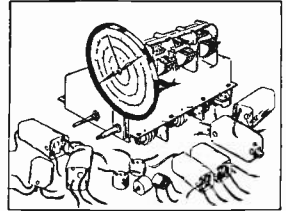
Especially designed for the Radio Amateur who wants a receiver to cover all the bands. The five, ten, twenty, forty, eighty, one hundred and sixty, and the broadcast band.

Every "proven" development in circuit design is incorporated. The completely wired and accurately balanced and aligned tuning assembly, includes the Meissner multi-wave coil assembly, band-change switch, variable gang condenser, tube sockets for tuning unit (3), and a calibrated 6" Aeroplane dial with "Micro-master" mechanical band spread.

The complete Coil Kit consists of the following: Completely wired tuning unit as described above. Noise Silencer I.F. Transformer. Beat Frequency Oscillator Transformer. Matched Pair of Crystal Filter Transformers. FERROCART (Iron-Core) I.F. Output Transformer. Band Expansion I.F. Transformer, FERROCART (Iron-Core). 6 Shielded R.F. Chokes. Complete set of diagrams and instruction sheets.

Kit No. 7502—Complete as described above.....List \$50.00  
Completely Wired Tuning Unit Only

Model No. 7512.....List \$35.00



**Some of the Outstanding Features:**  
Crystal Filter—Beat Frequency Oscillator with cut-out switch and pitch control—Noise Silencer Circuit—Variable Electrical Band Expansion—Amplified A.V.C.—Variable Sensitivity Control—FERROCART (Iron-Core) I.F. Transformers—Audio Volume Control—Fourteen New Metal Tubes—P.P. Output using the new "Beam" 6L6 Metal Tubes—Five Bands 3.8 to 555 Meters.

### ALL-WAVE "12"—5 Bands—7.5 to 2140 Meters

For the Custom Set Builder and Experimenter—Has the Meissner Completely Assembled Tuning Unit. This receiver incorporates the latest improvements in customer-built receivers. Utilizes 12 Metal Tubes.

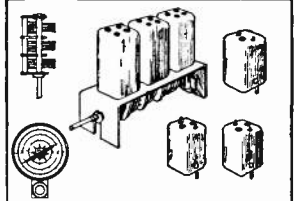
Complete detailed blue prints, wiring instructions, panel and chassis template and parts list furnished. No aligning, adjusting or meters for testing necessary. Complete coil kit consisting of: Completely wired tuning unit consisting of Multi-wave coil assembly, wave change switch, variable condenser, tube sockets for tuning circuit, and calibrated 6" two-speed aeroplane dial. Noise Silencer I.F. Transformer. Beat Frequency Oscillator Transformer. Ferrocort (Iron-Core) Interstage I.F. Transformer. Ferrocort (Iron-Core) Output I.F. Transformer. 5 Shielded Radio Frequency Chokes. Band Expansion I.F. Transformer. Complete set of blue prints with detailed wiring instructions.

Kit No. 7501—Complete as above, except tubes.....List \$43.50  
Completely Wired Tuning Unit Only

Model No. 7511.....List \$31.25

### MEISSNER ALL-METAL "8"

Four Bands—15-550 Meters



The tuning assembly comes already wired with all coils, condensers and trimmers, and the band-change switch, completely and accurately balanced and adjusted. No complicated test apparatus or meters required.

**Features:** Four Bands—continuous 15-550 meters. 8 All-Metal Tubes. Ferrocort (Iron-Core) I.F. Transformers. Meissner COIL Assembly (Ant., R.F. and Oscillator), pre-balanced. Beat Frequency Oscillator with cut-out switch. A.V.C. with cut-out switch. Sensitivity Control, Tone Control. Detailed Blue Prints and Complete Wiring Diagrams.

#### COMPLETE COIL KIT

- 1 Meissner Coil Assembly with wave-change switch
- 1 3-Gang Variable 410 Mmf. Condenser
- 1 5" Two-Speed Aeroplane Dial (calibrated)
- 1 Beat Frequency Oscillator Transformer
- 1 Ferrocort (Iron-Core) Input I.F. Transformer
- 1 Ferrocort (Iron-Core) Output I.F. Transformer

Kit Number 7508.....List \$25.00

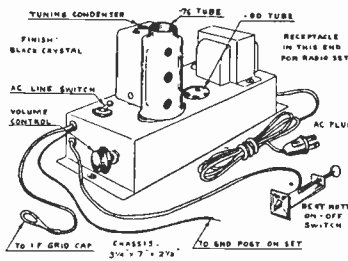
COIL ASSEMBLY ONLY

Model No. 5780.....List \$13.50

.....10c each

# Meissner COILS

## BEAT FREQUENCY OSCILLATOR



All-wave receivers that are being sold today require a station finder for the inexperienced consumer. With this unit which is completely self-contained with its own power supply, stations are easily located. It is simplicity itself in installation. No tampering and unbalancing of the radio receiver. Just plug it into the A. C. outlet and with a simple connection to the radio you can, by means of the switch furnished, cut the oscillator signal (whistle) in or out at will. The oscillator signal is a boon to all DX hunters. The unit is completely assembled and furnished with detailed wiring instructions.

Tubes required: 1 Type -76  
1 Type -80

Catalog Number 6350 ..... List \$11.50

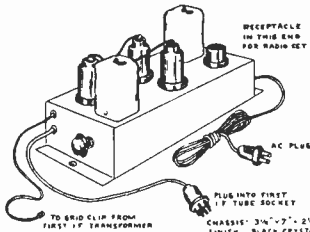
A battery-operated model, similar in every respect to the above unit, is available. Only one type 30 tube is used.

Catalog Number 6370 ..... List \$5.00

Note: These units are designed to operate on 456-465 Kc. Other frequencies available on special order.

## NOISE SILENCER

This new development of J. J. Lamb of QST is undoubtedly the greatest step towards noise elimination. It will greatly eliminate man-made noises, static and other forms of interference. Short-wave reception, generally conceded as noisy, is made enjoyable. This silencer will so effectively cut out noises that unbelievable reception of weak signals is attained through abnormally high local noise levels.



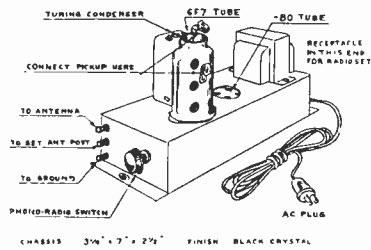
Will operate with any superheterodyne receiver, regardless of the number of I.F. stages. The additional stage of I.F. in the silencer, making a four-tube unit, compensates for any losses.

Supplies its own power and does not drain or unbalance the receiver it is used with. It is furnished completely assembled and supplied with detailed diagrams and instructions so that with the simplest tools it is only a matter of a few minutes to wire. Supplied in two frequencies, for 456-465 Kc. I.F. sets requiring a six-prong adapter and for 175 Kc. I.F. sets requiring a five-prong adapter.

Meissner No. 7516 for 456-465 Kc. .... List \$11.50

Meissner No. 7517 for 175 Kc. .... List \$11.50

## PHONOGRAPH OSCILLATOR



Here is a unit thousands of radio owners have wanted! A simple, efficient, practical method of connecting a phonograph to their present radio without in any way affecting the radio set's performance, and one which can be switched in and out at will.

The Meissner Phonograph Oscillator is completely self-contained, with its own power supply. This makes installation extremely simple. Just one connection, and with a flip of the special switch furnished, you can listen to your favorite artist's recordings or to the regular broadcast program. In actuality the oscillator performs as a miniature broadcast station, and you tune your radio to its frequency just as you would to a broadcasting station.

Anyone can wire this completely assembled adapter in a few minutes. Detailed instructions are furnished.

Tubes required: 1 Type 6F7  
1 Type 80

Catalog Number 6360 ..... List \$11.50

## REMOTE CONTROL UNIT

Invalids and people generally bed-ridden find great difficulty in tuning even where it is possible to place the radio set near them. With this unit the radio set can be placed anywhere in the room. Due to its compactness and extreme light weight it is very easily handled and makes an ideal unit.

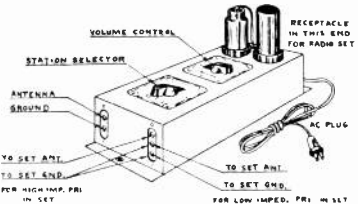
Another great market that can use these units are public restaurants, grills, taverns, etc., where control of their radio is desirable at a convenient point, yet the radio often must be placed out of reach.

Armchair lovers will find it a further aid to their comfort. Also quite often it is desirable to place the radio out of the way in a corner where it is not easily accessible.

The Meissner Remote Control unit is self-powered and is built on the standard Meissner Adapter Unit chassis. It is completely assembled and ready to wire. Complete detailed diagrams and instructions are furnished.

This unit is designed for broadcast reception and will operate with any receiver on the market.

Meissner No. 7520 ..... List \$11.50



## DOUBLET ANTENNA "BUILD-YOUR-OWN" UNITS



Modern All-Wave radios demand the proper antenna installation for perfect installation, and radio men are confronted with the problem of what antenna system to carry. With these couplers anyone can build their own doublet antenna system.

The "Doublet" is universally accepted as the simplest of All-Wave antenna systems for the following reasons: Noise-free, equally efficient on all wave bands, easy to install, and very efficient. It will reduce to a minimum noise interference.

With these couplers, and using standard stock antenna wire, insulators, etc., you can assemble your own doublet antenna at a considerable saving.

### Antenna Coupler

Model 5370 ..... List \$1.50

### Set Coupler

with built-in Wave Switch

Model 6826 ..... List \$1.00

Complete instructions furnished.

## UNIVERSAL ANTENNA COUPLER UNSHIELDED



Designed for use with any antenna system for aiding in short-wave reception and noise-reduction. A transmission (twisted pair) lead-in is necessary if one is not being used at present. May be installed inside the receiver. Complete instructions are furnished.

Model NY202 ..... List \$0.60

## SHIELDED WAVE TRAPS

(440-470 Kc.)

SIZE: 1 1/8" DIA. x 2 1/4"

Designed to eliminate code and any other interference by tuning the coil to provide resonance to the undesired frequency.

### Standard Model

Air-Core Mica Tuned.

Size 1 1/8" Dia. x 2 1/4"

Model No. 7474 ..... List \$1.00

### DeLuxe Model

Ferrocort (Iron-Core) permeability tuned providing increased gain and selectivity over a wider inductance range.

Size 1 1/8" x 1 3/4" x 2 1/2"  
Model No. 7523 ..... List \$2.00



## DOUBLE DOUBLET ANTENNA "BUILD-YOUR-OWN" UNITS



For those who wish to install the most efficient antenna system for all-wave reception, the "Double-Doublet" is the system to use. This new type noise-reducing antenna system is a considerable improvement over the ordinary antenna or the Doublet system. The Double Doublet antenna system is actually two Doublet antennas combined. This produces uniform efficient response throughout the entire short-wave band.

The unusual design of the special double-doublet set coupler is one of the main reasons for the unusual performance obtained. The double-doublet antenna system is of particular advantage where your customer is specially interested in short-wave.

This system naturally requires more space for installation, but is always preferable to the single doublet when space and profit permits.

### Double-Doublet Set Coupler

Model 7494 ..... List \$2.00

### Antenna Coupler

Model 5370 ..... List \$1.50  
Complete instructions furnished.

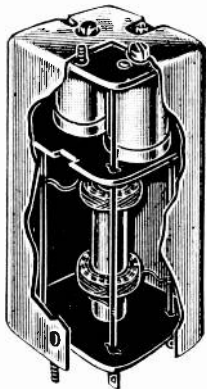
# Meissner

## CONDENSERS

### Two Major Developments in Radio Introduced by Meissner: Align-Aire and Ferrocart I. F. Transformers

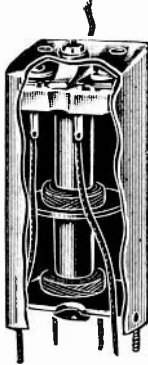
#### ALIGN-AIRE I.F. TRANSFORMERS

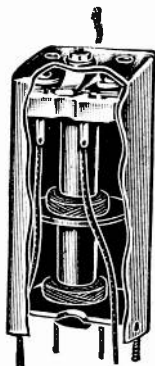
MEISSNER Engineers introduce a new line of I.F. Transformers embodying the MEISSNER "ALIGN-AIRE" condensers. 3600 degrees of micrometer **smooth tuning**, substantially linear, enables the serviceman to align the transformer **easily and accurately**. Once the aligning is done, it remains **permanently stable**, independent from changes of temperature, extreme humidity or violent vibrations. The special **low-loss** compound used in this unit improves the radio performance. Absolute **absence of microphonic noises** is one of the unusual features of "ALIGN-AIRE". There is absolutely no chance of short circuit, since no dust can enter the trimmers. In short, "ALIGN-AIRE" is the type of I.F. transformer the trade has been waiting for.



#### FERROCART I.F. TRANSFORMERS

FERROCART is the iron-core for high frequency transformers the engineers have been dreaming about for years, an iron-core which **improves selectivity, doubles the gain, increases signal and lowers set noise**. After years of research, pure soft iron of microscopically fine particles, has been developed to answer the engineers' requirements. Each particle is insulated from every other particle and in an extremely small space a core is developed in accordance with the best accepted practice for reducing core losses to the ultimate. The year 1936-1937 will find this phenomenal material in the ultra-modern radio receiver.

	Ferrocart Align-Aire Number	Align-Aire Air-Core Number	Freq. Kc.	Range Kc.	Use	Ferrocart Mica Cond. Number	Single Pi Mica Cond. Number
	6631	6630	175	170-180	Input	5728	5700
	5977	5979	175	170-180	In-stage	5981	5983
	6633	6632	175	170-180	Output	5730	5702
			175	170-180	Output CT	5933	3731
	6635	6634	262	250-265	Input	5732	5704
	5967	5971	262	250-265	In-stage	5973	5991
	6637	6636	262	250-265	Output	5734	5706
			262	250-265	Output CT	6001	6003
	6639	6638	370	360-380	Input	5736	5708
	5993	6011	370	360-380	In-stage	6047	6059
	6641	6640	370	360-380	Output	5738	5710
			370	360-380	Output CT	6089	6091
	6643	6642	456	440-470	Input	5740	5712
	6123	6129	456	440-470	In-stage	6131	6133
	6645	6644	456	440-470	Output	5742	5714
	6139	6163	456	440-470	Output CT	3736	3736
6239	6243	3000	2900-3100	Input	6253	4260	
6239	6243	3000	2900-3100	In-st ge	6253	4261	
6241	6247	3000	2900-3100	Output	6257		
	<b>List Price</b>	<b>List Price</b>				<b>List Price</b>	<b>List Price</b>
	<b>\$4.50</b>	<b>\$3.75</b>				<b>\$2.00</b>	<b>\$1.25</b>



#### VARIABLE SELECTIVITY I.F. TRANSFORMERS HIGH FIDELITY (Iron Core)

The Meissner Band Expanding Ferrocart (Iron-Core) I.F. Transformer has been designed to meet the need for a unit to provide facilities for obtaining the razor-sharp selectivity required for efficient foreign or CW reception and to provide the broad band width necessary for high-fidelity reception of local stations. It is electrically variable and no shafts or can controls are required. Merely a two or three-position switch.

Two of these units may be used very efficiently to provide single signal selectivity for the QRM-ridden "ham," and by a turn of the switch the receiver is converted for reception of high-fidelity programs of the finest quality.

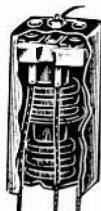
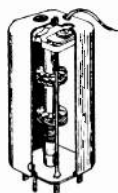
Meissner No.	Type Tuning	No. Pos.	Size	List Price
7410	Mica	2	1 3/8 x 3 1/2	\$3.00
7412	Mica	3	1 3/8 x 3 1/2	3.00
7414	Align-Aire	2	2 x 2 x 4 1/2	5.50
7416	Align-Aire	3	2 x 2 x 4 1/2	5.50

Stocked in 456 Kc. only

Other frequencies upon request

Copyright 1936 by U. C. P., Inc.

SIZE: 1 3/8 x 1 3/8 x 3 1/2"



Size 1 3/8" x 1 3/8" x 3 1/2"  
MEISSNER Part No.

#### TRIPLE PI I.F. TRANSFORMERS

The three pi winding I.F. Transformer is highly efficient but has its limitations of application. Transformers of this type should never be used for frequencies below 325 Kc. They should not be used in amplifiers requiring three 456 Kc. transformers because of I.F. instability and oscillation trouble. Three 370 Kc. transformers may at times be used in an amplifier if special precaution is observed, but they are not recommended for general use. These MEISSNER Transformers, like the Ferrocart and Single pi air core units, are double tuned.

Working Rating	Operating Extremes	Set Position
370 Kc.	360-380 Kc.	Input
370 Kc.	360-380 Kc.	Output
5724	440-470 Kc.	Input
5726	440-470 Kc.	Output
<b>List Price, Any Type</b> ..... \$1.35		

#### TRIPLE TUNED I.F. TRANSFORMERS

MEISSNER Triple Tuned I.F. Transformer is the transformer to use for intermediate stages. It provides high sensitivity, flat-top good-fidelity, easy tuning, narrow skirts (10 Kc. selectivity) and stable frequency adjustment.

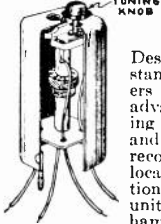
No.	Use	List Price
6588	456 Kc. Input	\$2.25
6860	456 Kc. Output	2.25



Size 2" x 2" x 5"

# Meissner COILS

SIZE: 1 1/8" x 1 1/8" x 3 1/2"



## Beat Frequency Oscillators

Designed to be used with the standard line of I.F. transformers in super-het receivers. The advantage of "beat-note" tuning for easily locating distant and foreign stations is well recognized. The necessity of a local signal generator in reception of CW signals makes this unit a requirement for every ham receiver.

### ALIGN-AIR TRIMMER (air tuned)

No.	Freq. Kc.	Range Kc.
6771	175	170-180
6773	262	250-265
6777	370	360-380
6779	456	440-470
6793	3000	2900-3100

### MICA TRIMMER

No.	Range Kc.
6747	170-180
6749	250-265
6751	360-380
6753	440-470
6757	2900-3100

List Price, Ea. \$3.25

List Price, Ea. \$1.75

## Crystal Filter Transformers

SIZE: 1 1/8" x 1 1/8" x 3 1/2"



These units are sold in pairs to provide most efficient operation of the crystal filter circuit through the use of a low impedance link circuit. Available in four standard frequencies, each pair is carefully matched and tested. The leads are color coded and a connection diagram is supplied with each set of coils.

### ALIGN-AIR TRIMMER (air tuned)

No.	Freq. Kc.	Range Kc.
7455	175	170-180
7456	262	250-265
7457	370	360-380
7458	456	440-470
7459	3000	2900-3100

### MICA TRIMMER

No.	Range Kc.
7450	170-180
7451	250-265
7452	360-380
7453	440-470
7454	2900-3100

List Price, Pr. \$8.00

List Price, Pr. \$4.00



## Noise Silencer I.F. Transformers

SIZE: 1 1/8" x 1 1/8" x 2 3/8"

The noise silencer I.F. transformer is a special closely coupled I.F. transformer with a center-tapped secondary. It has been specially designed for use in connection with the noise-silencer circuit recently developed by James Lamb. This unit is single tuned as recommended by the designer and in every respect has been engineered to give utmost performance in this circuit.

### ALIGN-AIR TRIMMER (air tuned)

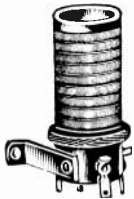
No.	Freq. Kc.	Range Kc.
685	175	170-180
6859	262	250-265
6867	370	360-380
6869	456	440-470
6881	3000	2900-3100

### MICA TRIMMER

No.	Range Kc.
6760	170-180
6849	250-265
6851	360-380
6767	440-470
6853	2900-3100

List Price, Ea. \$4.00

List Price, Ea. \$1.50



### UNSHIELDED MEISSNER

No.	List Price
6861	\$0.40
6863	.40
7485	.45
7486	.45
1353	.55
1354	.55

## R.F. AND ANTENNA COILS

The coils listed here have been carefully selected by our engineering department from the hundreds of various types and specifications which we have been supplying to the leading set manufacturers. The serviceman will find that with this carefully selected list over 90% of the T.R.F. receivers on the market can be efficiently serviced. Wherever possible always replace the entire set of coils. Coils are wound on a 3/8" outside diameter by 2 1/4" long coil form. Can size is 1 1/8" diameter by 2 1/2" high with 1 1/4" mounting centers.



### SHIELDED MEISSNER

No.	List Price
6786	\$0.50
6788	.50
1085	.55
1084	.55
6862	.65
6864	.65

### BROADCAST BAND

Use	Antenna	Low Imp. Pri.—Enamel Sec.
Use	R.F.	Low Imp. Pri.—Enamel Sec.
Use	Antenna	Low Imp. Pri.—Litz Sec.
Use	R.F.	Low Imp. Pri.—Litz Sec.
Use	Antenna	High Imp. Pri.—Litz Sec.
Use	R.F.	High Imp. Pri.—Litz Sec.

### BROADCAST AND POLICE BAND 75-200 AND 200-550 METERS

Shielded units are furnished complete with trimmers.

### UNSHIELDED MEISSNER No.

No.	List Price
7482	\$1.00
7483	1.00

### BROADCAST AND SHORT-WAVE BAND 15-55 AND 190-550 METERS

Shielded units are furnished complete with trimmers.

### UNSHIELDED MEISSNER No.

No.	List Price
7477	\$1.00
7479	1.00

### SHIELDED MEISSNER No.

No.	List Price
7467	\$1.50
7471	1.50

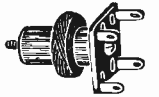
### SHIELDED MEISSNER No.

No.	List Price
7476	\$1.50
7478	1.50

## Unshielded Oscillator Coils

Broadcast Band (190 to 550 meters)

Especially impregnated to resist severe climatic conditions.



For Use With .000365 (or 350 mmfd.) Tuning Condenser

MEISSNER No.	Working Rating	Padder Value	List Price
3732	175 Kc.	900 mmfd.	\$0.60
6590	262 Kc.	686 mmfd.	.60
6592	370 Kc.	500 mmfd.	.60
4034	456 Kc.	350 mmfd.	.60

Broadcast and Police Band Meissner No. 7484—456 Kc. List Price \$1.00

Broadcast and Short-Wave Band The frequency is 456 Kc. Meissner No. 7481..... List \$1.00

## Shielded Oscillator Coils

Broadcast Band SIZE: 1 1/8" DIA. x 1 1/4"

These Osc. coils are shielded for complete assurance of perfect performance. They are thoroughly impregnated (not dipped) by the famous Meissner method. Available in all standard frequencies. For use with .000365 mfd. tuning condenser.



Excellent for Pentagrid These osc. coils can be used with any of our R.F. & Ant. coils; and any I.F. amplifier.

Cat. No.	Work Rating	Padder Value	List Price
4242	175 Kc.	900 mmfd.	\$0.75
7487	262 Kc.	686 mmfd.	.75
7488	370 Kc.	500 mmfd.	.75
4243	456 Kc.	350 mmfd.	.75

Broadcast and Police Band SIZE: 1 3/4" x 1 3/4" x 3" Meissner No. 7475..... List \$1.50

Broadcast and Short-Wave Band SIZE: 1 3/4" x 1 3/4" x 3" Meissner No. 7480..... List \$1.50

## PRIMARY WINDING

For replacing defective antenna primaries. High impedance.



No.	Use	List Price
6850	1 1/4" O.D. coil	\$0.27
6852	1" O.D. coil	.24
6854	7/8" O.D. coil	.23
6856	3/4" O.D. coil	.21

## Ferrocart (Iron-Core) R.F. and Antenna Coils



SIZE: 1 1/4" x 1 1/4" x 2 1/4"

Furnished in two types. One for standard outdoor antennas and the other for indoor and under-car auto antennas. Designed to operate with a .000365 mmfd. variable condenser.

Complete instructions are furnished, together with circuit improvements recommended.

### MEISSNER

No.	Type	List Price
1496	Antenna—High Imp.	\$1.50
7411	Antenna—Low Imp.	1.50
1497	R.F. Coil—High Imp.	1.50

## Adjustable Inductance Ferrocart (Iron-Core) Antenna Coil

Meissner again leads the field with this universal adjustable inductance FERROCART (iron-core) antenna coil. With this coil, tracking in the condenser when replacing an antenna coil becomes extremely simple.

Meissner No. 7413..... List Price \$2.00 Similar to above units; size 1 1/4" x 1 1/4" x 2 1/4".

## Midget Antenna and R.F. Coils

SIZE: 1 1/8" x 1 1/8" x 1 1/4"



A new design in R.F. coils of extreme small size (1 1/8" x 1 1/8" x 1 1/4") made especially for compact T.R.F. & Supers. The overall gain, however, is not affected. The Litz wire four bank winding permits the use of a 1/2" core form with a resultant low distributed capacity. For use with a .000365 mfd. tuning condenser.

Meissner No. 2436—Antenna..... List \$0.75  
Meissner No. 2437—R.F..... List .75

## Pre-Selector Coils

SHIELDED SIZE: 1 1/4" x 1 1/4" x 3"

The preselector coil will add selectivity to any set. It consists of two windings; a primary and two secondaries. It is a band pass unit, tuned with a .000365 tuning condenser. Many receivers on the market that do not have a stage of R.F. can be considerably improved by the installation of this unit. No additional tube is necessary.

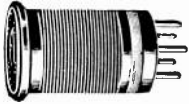


Meissner No. 6797 List Price..... \$1.25

# Meissner

## COILS

### PLUG IN COILS



Use .00014 mfd. Tuning Condenser

High grade bakelite coil forms, precision windings and careful individual testing guarantee the user perfect performance.

Meter Range	4 Prongs		5 Prongs		6 Prongs	
	Meissner No.	List Price	Meissner No.	List Price	Meissner No.	List Price
10- 27	2887	\$0.50	2865	\$0.50	2876	\$0.75
22- 55	2888	.50	2864	.50	2875	.75
45- 95	2886	.50	2866	.50	2877	.75
85- 200	2889	.50	2867	.50	2878	.75
Kit of 4	3893	1.85	3896	1.85	3898	2.75
100- 245	2884	.75	3888	.75	2896	.90
627- 570	2883	.75	3889	.75	2897	.90
Kit of 2	3892	1.40	3894	1.40	3899	1.75
420- 690	3880	.75	4-prong coils contain primary and secondary; 5-prong coils are interchangeable with band-spread coils, 6-prong coils contain primary, secondary and tickler.			
627-1000	3881	.75				
940-1500	3882	.75				
1380-2220	3883	.75				
Kit of 4	3900	2.75				

### BAND SPREAD PLUG-IN COILS

Ceramic Base Trimmer To be Used with .00014 Condenser 5-Prong Base



MEISSNER No.	Range	List Price
2925	20 Meter (20.8-21.5), 14.43-13.95 Mc.	\$0.80
2924	40 Meter (38.8-42.8), 7730-7000 Kc.	.80
2926	80 Meter (69.0-83.0), 4350-3610 Kc.	.80
2927	160 Meter (143-175), 2100-1713 Kc.	.80
3895	Kit of 4 above coils packed in single box.	3.00
2935	19 Meter (18.3-19.9), 16.4-15.1 Mc.	\$0.80
2932	25 Meter (25.18-25.8), 11.80-11.62 Mc.	.80
2933	31 Meter (26.7-31.5), 11.25- 9.52 Mc.	.80
2934	49 Meter (47.6-51.6), 6.3 - 5.8 Mc.	.80
3897	Kit of 4 above coils packed in single box.	3.00

Complete Line of All-Star Sr. and Jr. Coils in Stock.

### RADIO FREQUENCY CHOKES



Air-Core Shielded and Unshielded

Small, compact, lattice wound coils using silk covered enameled wire. Units are wound to accurate inductance and

have high R.F. impedance. Hole in center of maple dowel provides mounting with a #6 screw on Unshielded chokes. Shielded chokes are mounted by means of the screw extending below the bottom of can. Size of can 1 1/4" diameter x 1" high.

UNSHIELDED			SHIELDED		
MEISSNER Part No.	Inductance	List Price	MEISSNER No.	Inductance	List Price
1994	2.5 MH	\$0.25	5582	2.5 MH	\$0.45
4551	5.5 MH	.25	5584	5.5 MH	.45
4210	6.0 MH	.25	5586	6.0 MH	.45
2078	8.0 MH	.35	5588	8.0 MH	.50
1995	16.0 MH	.35	5590	16.0 MH	.50
2330	30.0 MH	.50	5592	30.0 MH	.75
3347	60.0 MH	.60	5594	60.0 MH	.80
2709	80.0 MH	.60	5596	80.0 MH	.80

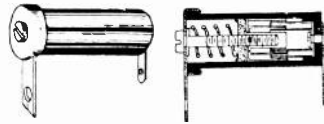
### FERROCART (Iron-Core) UNSHIELDED

Iron-core FERROCART Choke coils, because of the greater "Q" increases the gain and selectivity. Has a lower distributed capacity than any other type of R.F. choke. Furnished with brass mounting screw.



MEISSNER No.	Inductance	List Price	MEISSNER No.	Inductance	List Price
6834	2.5 MH	\$0.60	6842	30 MH	\$0.85
6836	3.5 MH	.60	6844	60 MH	1.00
6838	5.5 MH	.65	6846	80 MH	1.15
6840	10 MH	.75	6848	125 MH	1.50

### ALIGN-AIRE TRIMMERS



The requirements imposed upon aligning condensers used in connection with modern receivers are, LOW LOSS, STABILITY, under extreme climatic conditions and mechanical abuse, EASE OF ADJUSTMENT and above all ELIMINATION OF "DRIFTING."

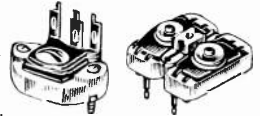
and ABSENCE OF MICROPHONIC NOISES. To those who have felt that such a unit has hitherto been unavailable, MEISSNER offers the Align-Aire Condenser. They are suitable for numerous applications and can be mounted in various positions.

These trimmers are an air-dielectric type condenser. Mounted in a low loss container. Firm electrical connection. Automatic frictions, locking at any capacity setting, permanent in adjustment. Micro-adjustment. Ten turns are required to cover the complete range of the trimmer.

MEISSNER No.	Capacity	Size	List Price
15230	1- 12 mmf.	3/8" x 1 1/4"	\$0.50
15232	3- 25 mmf.	3/8" x 1 1/4"	.60
15240	25- 50 mmf.	1" x 1 1/2"	.75
15200	55-110 mmf.	1" x 1 1/2"	1.25

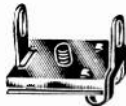
### JUNIOR and DUAL TRIMMERS

MEISSNER Junior and Dual Trimmers are the latest development in trimmer design. Special alloy plates give uniform performance under all conditions. Best Mica available is used.



JUNIOR TRIMMER				DUAL TRIMMER			
Meissner No.	No. of Plates	Extreme Range Mmf.	List Price	Meissner No.	No. of Plates	Extreme Cap. Mmf.	List Price
14061-4	2	7- 80	\$0.30	13276	2	15-110	\$0.45
14063-4	3	27- 180	.35	13277	3	40-120	.50
14065-4	4	55- 325	.40	13278	4	85-340	.60
D-2500	5	110- 500	.50	13279	5	150-440	.70
15247	7	500-1250	.75	14068	6	180-620	.80

### ALIGNING CONDENSERS



MEISSNER Equalizing or Aligning Condensers have many unique features which make them superior.



Available with Ceramic or Bakelite Base.

MEISSNER Part No.	Capacity Range	Base	List Price
14015	3-30 mmfd.	Ceramic	\$0.20
14012	3-30 mmfd.	Bakelite	.15

### TRANSMITTING CHOKES

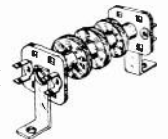
Tapered Six Section Winding Dist. Cap. 1 mmf. Metal Mounting Brackets Ceramic Dowel



MEISSNER No.	Rating	Inductance	Resistance	List Price
3019	1000 MA	2.8 MH	5	\$1.50
3022	500 MA	5.5 MH	12.5	1.50
3025	200 MA	5.9 MH		1.50

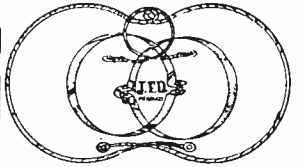
### 5 AND 10 METER CHOKES

Designed for high frequency work and are particularly adaptable in 5 and 10 Meter sets. Plate Choke wound on an impregnated dowel in a three pt winding. Filament choke is wound of solid enamel wire on a bakelite tube.



MEISSNER No.	Used as a Plate Choke	List Price
3495	Used as a Plate Choke	\$0.60
4656	Used as a Filament Choke	.45

# JFD PRODUCTS



## DRIVE CABLE & CORD FOR RADIO SETS—By the Spool

### 901—No. 1 Cable

Made of Phosphor Bronze; has 42 strands and used in 95% of radio sets on market.

25 ft. spool .....	List, \$1.18
50 ft. spool .....	List, 2.25
100 ft. spool .....	List, 4.00

### 902—No. 2 Cable

Made of Phosphor Bronze; has 18 strands, knitted, and will afford good service.

25 ft. spool .....	List, \$0.65
50 ft. spool .....	List, 1.40
100 ft. spool .....	List, 2.60



## HEAVY LINEN CORD

### 903—No. 3 Heavy Cord

Exactly as original used in Silver Marshall, Philco, Brunswick and other make sets, both as to texture and thickness. Made of the finest black linen, braided, with a breaking strength of 200 lbs. per ft.

25 ft. spool .....	List, \$1.66
50 ft. spool .....	List, 3.00
100 ft. spool .....	List, 5.63



### 904—No. 4 Light Cord

Exactly as original used in RCA, Sonora and other make sets, both as to thickness and texture. Made of the finest black linen, braided, with a breaking strength of 150 lbs. per foot.

25 ft. spool .....	List, \$1.50
50 ft. spool .....	List, 2.69
100 ft. spool .....	List, 5.06

## SPECIAL HEAVY DUTY DRIVE CORD

### 905—No. 5 Special Heavy Cord

Exactly as original, used in all Kolster and Grebe sets and where extra strong drive cord is required. Made of the finest gray linen, braided, with a breaking strength of 300 lbs. per foot.

25 ft. spool .....	List, \$2.00
50 ft. spool .....	List, 3.60
100 ft. spool .....	List, 7.00



## PHOSPHOR BRONZE BELTING

### 801—No. 1 Phosphor Bronze Belting

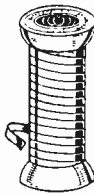
Exactly the same as used in Atwater Kent, Colonial, Crosley, Steinite and many other sets.  $\frac{1}{8}$ " wide x .005" thick.

100 ft. spool .....	List, \$4.85
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### 802—No. 2 Phosphor Bronze Belting

Used in Brunswick and Silver-Marshall sets.  $\frac{1}{8}$ " wide x .006" thick.

100 ft. spool .....	List, \$7.00
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## DRIVE CABLES—BANDS, BELTS AND CORDS

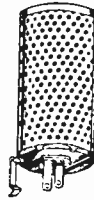
A complete line of made-up dial cables, belts, bands and cords carried in stock. Any not listed below can be obtained on order.

Make of Set	Model	List Price
Atwater Kent	35, 37	\$0.25
Atwater Kent	44	.40
Atwater Kent	46	.25
Bosch	48A	.25
Bosch	58, 60	.25
Brunswick	15, 22 Front	.40
Brunswick	15, 22 Rear	.40
Brunswick	14, 21	.25
Colonial	31, 32	.35
General Motors	All	.40
Kolster*	6J	.40
Kolster	43, 41	.50
Majestic No. 1	70, 71, 72	.20
Majestic No. 2	70, 71, 72	.15
Majestic	15B, Lazyboy	.25
Majestic	52, 60	.25
Philco	71	.25
Philco	91	.25
R.C.A.	44, 46, 47	.30
R.C.A.†	16, 17, 18, 33	.30
Sparton	All	.30
Steinitz	All	.30

\*Heavy cord with beads on ends; springs.

†Linen cord.

## LINE BALLAST REPLACEMENTS



These ballasts will replace the originals in every respect. They are wound with a special alloy wire having a very high temperature coefficient of resistance which results in excellent self-regulating action. Ballast, not listed, can be furnished on request.

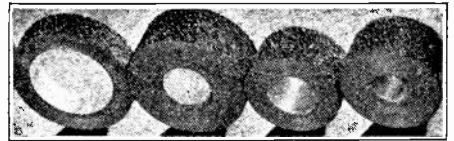
Cat. No.		Cat. No.	
BALDWIN	5300	MAJESTIC 70	5000
BELMONT	5400	MAJESTIC 90	5100
BREMER-TULLY		MAJESTIC 180	5200
S81, S82	6000	PEERLESS 71, 72	6600
BRUNSWICK	6100	SCOTT AC10	6650
CLARION 51, 53, 55	6150	SILVER-MARSHALL	
GREBE SK4, HS5	6200	30, 30B, 60, 60B, 75,	
HAMMARLUND		75B, 95	6700
ROBERTS		SIMPLEX	6750
HIQ 30	6300	SONORA	
HIQ 31	6350	A30, A32, A40	6800
KENNEDY 426, 526, 626,		A36, A44, A46	6850
726, 826, 632, 1030	6400	STEWART-WARNER	
KYLECTRON K-71,		900	6900
K-72	6500	950	7000
		R100	7100
		UNITED-REPRODUCER	
		21, 22, 23, 24, 25	7200

LIST PRICE, ANY ABOVE TYPES. EACH ..... \$2.50

RESISTANCE WIRE FOR ALL BALLASTS CUT TO EXACT SIZE AND PACKED IN INDIVIDUAL ENVELOPES.

List Price, Each ..... \$0.40

## DIAL DRIVE FRICTION RUBBERS



Atwater Kent	Stewart Warner
No. 1. Small	102-104
No. 2 Large for gear	105-120 No. 1 small
R. C. A.	105-120 No. 2 large
All numbers	113-114 Converter
	126

## Kennedy, Olsen and others

List Price, Each	10c	100 ASSORTED	
24 ASSORTED		List Price	\$5.75
List Price	\$1.50		

## METAL TUBE DATING KIT



Equally effective on both metal and glass tubes.

Paper labels usually used, either drop off from moisture or burn off from heat, particularly as developed by the metal tube.

When stamped with this outfit, date is on to stay.

Not affected by heat or moisture.

Your own rubber stamp may be used to impress your name. Metal cabinet (5½ x 3¼ x 3¼) contains ink, solvent, pad, brush and dater.

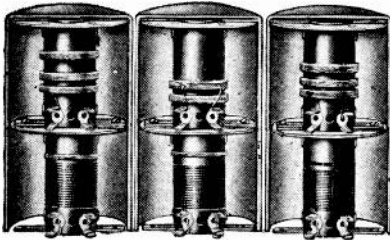
LIST PRICE, EACH ..... \$4.75

# MILLER QUALITY PRODUCTS

# Miller

## RADIO PRODUCTS

### ALL WAVE COILS



### Miller "Select-Ur-Band" Coils

A new series and type of coil designed to meet the exacting demands of the experimenter and custom set builder for a high quality receiver covering one or more bands and using one or more RF stages or only a mixer stage. The Miller No. 727 "Select-Ur-Band" Coils are truly flexible in their application and may be assembled to suit your individual requirements. For a superheterodyne they are for use with a 465 KC intermediate frequency amplifier. Each coil of each band is a separate unit and all are so designed that any pair may be assembled in a single shield. All coils are wound on  $\frac{7}{8}$ " dia. x  $1\frac{3}{4}$ " long bakelite tubing and are of correct form factor and of proper wire size to give maximum efficiency. The primaries are of the high impedance type designed for use with pentode type RF tubes. With the Miller "Select-Ur-Band" Coils it is possible to lay out an all-wave receiver and build it with only one or two bands to start—then add the other bands as desired. The use of the new Miller "Select-Ur-Band" Coils enables the experimenter or constructor to modernize old receivers by utilizing the 465 KC intermediate frequency amplifier and audio of the old receiver and installing an all wave or skip-band tuner.

The range of the individual bands is as follows:

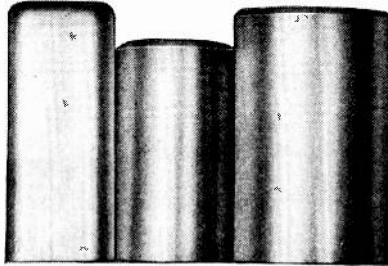
Cat.	KC	Meters	Osc.	Series Pad
X X-727	140-425	2100-700	.00012 uf.	
A A-727	535-1500	560-200	.0004 uf.	
B B-727	1500-4500	200-67	.001 uf.	
C C-727	3750-11,000	80-27	.003 uf.	
D D-727	8500-23,000	35-13	.01 uf.	
E E-727	12,500-36,000	24-8	none	

Any two coils may be assembled—easily, using only a screw driver—to provide the bands required in a single coil shield and, of course, groups of two bands each may be used. Coils are not furnished assembled in shields, as they may be purchased separately and easily assembled to meet your particular requirements.

Cat. No.	Purpose	List Price
<b>BAND X</b>		
X-727 A	—Antenna Coil	\$1.25
X-727 RF	—RF Coil	1.25
X-727 C	—Oscillator Coil—465 KC I.F.	1.25
<b>BAND A</b>		
A-727 A	—Antenna Coil	1.00
A-727 RF	—RF Coil	1.00
A-727 C	—Oscillator Coil—465 KC I.F.	1.00
<b>BAND B</b>		
B-727 A	—Antenna Coil	1.00
B-727 RF	—RF Coil	1.00
B-727 C	—Oscillator Coil—465 KC I.F.	1.00
<b>BAND C</b>		
C-727 A	—Antenna Coil	1.00
C-727 RF	—RF Coil	1.00
C-727 C	—Oscillator Coil—465 KC I.F.	1.00
<b>BAND D</b>		
D-727 A	—Antenna Coil	1.00
D-727 RF	—RF Coil	1.00
D-727 C	—Oscillator Coil—465 KC I.F.	1.00
<b>BAND E</b>		
E-727 A	—Antenna Coil	1.00
E-727 RF	—RF Coil	1.00
E-727 C	—Oscillator Coil—465 KC I.F.	1.00

### COIL SHIELDS AND SWITCH

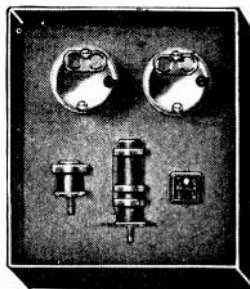
L-727 $2\frac{1}{2}$ " Dia. x 4" Long Aluminum	
Coil Shield	.40
S-727 $2\frac{1}{2}$ " Dia. x $2\frac{1}{2}$ " Long Aluminum	
Coil Shield	.25
No. 605 6 Pole, 5 Position Band Switch	2.40
No. 805 8 Pole, 5 Position Band Switch	3.20



### Aluminum Coil Shields

All Miller Coil Shields are of finest quality drawn aluminum with a beautiful Oakite Satin finish and are supplied with spade bolts for mounting to the chassis.

Cat. No.	Description	List Price
No. S-74	— $1\frac{1}{4}$ " Dia. x 2" Long— $1\frac{1}{8}$ " Mounting Center	\$.20
No. S-51	— $1\frac{1}{2}$ " Square x $3\frac{1}{2}$ " Long— $1\frac{3}{8}$ " Mounting Center	.25
No. S-31	— $1\frac{5}{8}$ " Dia. x 3" Long— $1\frac{1}{8}$ " Mounting Center	.20
No. S-41	— $1\frac{7}{8}$ " Dia. x 3" Long— $1\frac{1}{8}$ " Mounting Center	.25
No. S-21	— $2\frac{1}{8}$ " Dia. x $3\frac{1}{2}$ " Long— 2" Mounting Center	.35
No. S-727	— $2\frac{1}{2}$ " Dia. x $2\frac{1}{2}$ " Long— 2" Mounting Center	.25
No. L-727	— $2\frac{1}{2}$ " Dia. x 4" Long— 2" Mounting Center	.40



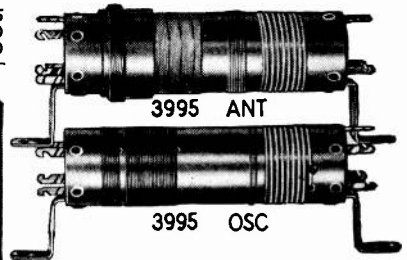
### No. 680 6-Tube Super Coil Kit

With Band Pass  
(540 to 1600 KC.)

This coil kit is ideally suited for those who wish to build an economical, compact, midget superheterodyne having good selectivity and sensitivity. The type 5480 antenna-band-pass coil provides a high degree of image frequency rejection. The signal frequency and oscillator coils are for use unshielded and consequently effect a material saving in chassis space. Our No. 312-C intermediate frequency transformers give this receiver a very high degree of selectivity and sensitivity. The No. 680 coil kit consists of:

Quantity	Description	List Price
1	No. 5480-ABP Antenna-Band-Pass Coil	\$.75
1	No. 5480-C Oscillator Coil	.50
1	No. 312-C-2 Input I.F. Transformer	1.50
1	No. 312-C-4 Output I.F. Transformer	1.50
1	.0004 uf. Osc. Padding Condenser	
	3% Tol.	.25
1	No. 680 Blue Print	.25
<b>Miller No. 680 6-Tube Super Coil Kit, List Price</b>		<b>\$4.50</b>

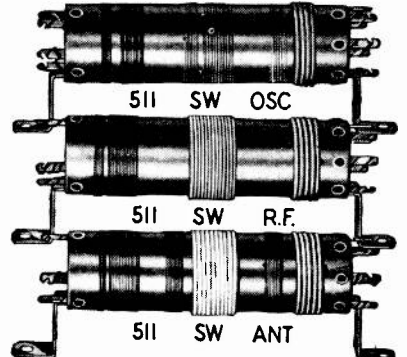
### No. 3995 Five Tube Skip Band Super Coil Kit



(200 to 550 Meters and 16 to 55 Meters.)

The coils in this kit have been designed to meet the demand for a simple inexpensive receiver which will cover both the standard broadcast and the foreign and domestic short-wave bands. Band switching is accomplished by means of a 4 pole, 2 position switch. The receiver is tuned with a 2 gang .000365 variable condenser. The broadcast band antenna coil is of bank-wound Litz construction and the short-wave secondary coils are wound in threads in the bakelite form. The use of 465 KC intermediate frequency provides a high image frequency ratio. The oscillator coil is designed for use with the pentagrid converter type circuit. The following parts are included in the coil kit:

Quantity	Description	List Price
1	No. 3995 B.C. & Short Wave Antenna Coil	\$1.75
1	No. 3995 B.C. & Short Wave Oscillator Coil	1.25
1	No. 512-C-2 Input I.F. Transformer	1.45
1	No. 512-C-4 Output I.F. Transformer	1.45
1	.0004 3% Mica Padding Condenser	.25
1	.01 3% Mica Padding Condenser	.60
1	No. 3995 Blue Print	.25
<b>Miller No. 3995 Skip Band Coil Kit, List Price</b>		<b>\$7.00</b>



### Three Band Short Wave Coils

(12 to 200 Meters.)

These coils are identical with those used in our No. 301 and No. 302 coil kits. The oscillator coil is designed for use with a 465 KC I.F. amplifier. Three separate coils are wound on a single high-grade bakelite form and the spacing between coils is great enough to prevent dead spots and excessive absorption effects. While not designed to be shielded, they may be used with partitions between coils providing that clearance of at least one inch from the partition or chassis to the coil is maintained. When used with a .000365 mfd. variable condenser the three bands are: 12 to 35 meters—35 to 75 meters—75 to 200 meters.

The oscillator circuit requires the use of the following values of series padding condensers: For the 12 to 35 meter band, .01 uf. For the 35 to 75 meter band, .003 uf. For the 75 to 200 meter band, .0016 uf.

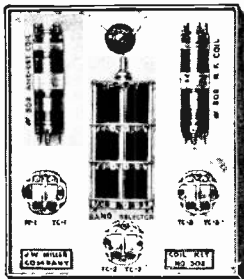
Quantity	Description	List Price
No.	511-SW-ANT Antenna Coil	\$2.00
No.	511-SW-RF RF Coil	2.00
No.	511-SW-OSC Oscillator Coil	2.00





# Miller

## RADIO PRODUCTS



### No. 302 Short Wave Pre-Selector Coil Kit

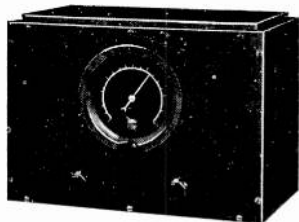
(12 to 200 Meters.)

The Miller No. 302 Pre-Selector Coil Kit enables you to construct a highly efficient unit using two stages of tuned radio frequency amplification to be used ahead of any short-wave or all-wave receiver. The Miller Pre-Selector will give a tremendous increase in sensitivity, and it will actually bring in stations which you are now unable to receive. The two additional stages of signal frequency tuning will prevent all image frequency interference. By increasing the signal voltage to the mixer tube of superheterodyne type receivers, the pre-selector will materially reduce background noise when receiving weak stations. Regardless of the number of tubes or the type of receiver you are now using, the Miller Pre-Selector will positively bring in more DX reception. Provision has been made for the incorporation of coils for the broadcast band. For this purpose our No. 5480 series coils are highly recommended. The coils have been designed for use with either a single wire or doublet type antenna.

The Miller Pre-Selector Coil Kit is especially recommended to the amateur and DX fan who realizes that additional signal frequency gain is the one sure way to bring in those weak and barely audible signals. A self-contained power supply and an extra position on the band switch for shunting the antenna around the pre-selector directly to the receiver are among the many conveniences offered by the new Miller Pre-Selector. Complete detailed data may be yours for the asking.

The Miller No. 302 Pre-Selector Coil Kit contains the following parts:

	List Price
1 No. 302 S.W. Antenna (12 to 200 Meters).....	\$2.00
1 No. 302 S.W. RF Coil (12 to 200 Meters).....	2.00
1 No. 302 Output Choke Coil.....	.50
1 No. 605 Band Selector Switch.....	2.40
3 No. 35 Dual Trimmer Condensers (@ .50).....	1.50
1 Blue Print and Complete Instruction Data.....	.25
Miller No. 302 Pre-Selector Coil Kit, List Price.....	\$8.00
If Broadcast Band Coils are desired, order:	
1 No. 5480-A Antenna Coil.....	\$.60
1 No. 5480-RF RF Coil.....	.70

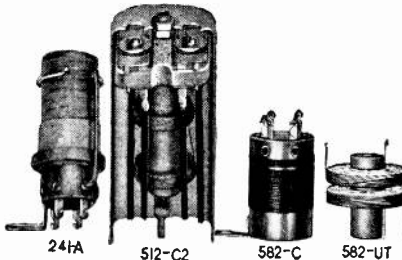


### Complete Pre-Selector

The Miller No. 302 Pre-Selector described above is also available completely wired and factory tested, housed in an attractive metal cabinet with airplane type dial. Com-

plete with tubes and power supply. If you would prefer to buy your equipment "tailor-made," here is a real opportunity.

	Net Price
Model 302 Pre-Selector Complete—12 to 200 Meters.....	* \$24.00
Model 302 Pre-Selector Complete—12 to 540 Meters.....	* 26.25
Model 302 Pre-Selector Complete—8 to 200 Meters.....	* 26.25

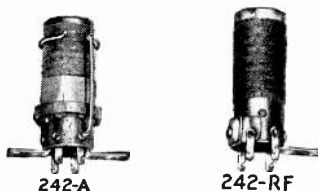


### No. 582 Five Tube Economy Superheterodyne Coil Kit

(540 to 1700 KC.)

This coil kit may be utilized to construct a very economical and efficient five tube superheterodyne using the autodyne type oscillator circuit. The standard double tuned shielded I.F. transformer for the input stage and an untuned self-resonant I.F. transformer coil for the output stage provide maximum gain and selectivity. The intermediate frequency amplifier operates at 465 KC. The coils are for use with a .000365 mfd. 2 gang variable condenser to cover the frequency range from 540 to 1700 KC. The coil kit consists of the following parts:

	List Price
1 No. 241-A Antenna Coil.....	\$.60
1 No. 582-C Oscillator Coil.....	.30
1 No. 512-C-2 Input I.F. Transformer.....	1.45
1 No. 582-UT Output I.F. Transformer.....	.75
1 .0004 3% Mica Padding Condenser.....	.25
1 No. 582 Blue Print.....	.25
Miller No. 582 Economy Super Coil Kit, List Price.....	\$3.50



### No. 242-A, No. 242-RF Litz Bank-Wound Coils

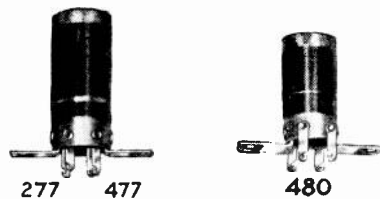
	List Price
No. 242-A Antenna Coil.....	\$.80
No. 242-BP Band-Pass Coil.....	.70
No. 242-RF RF Coil.....	.80
No. 277 Oscillator Coil (Available for all frequencies).....	.70

### Unshielded Bank-Wound Coils

We can also supply these coils identical with those listed above except designed for use unshielded and being particularly desirable for use in 4 tube TRF receivers where it is necessary that the selectivity be of the highest order.

	List Price
No. 241-A Antenna Coil.....	\$.60
No. 241-BP Band-Pass Coil.....	.50
No. 241-RF RF Coil.....	.60
No. 277 Unshielded Oscillator Coil (Available for all frequencies).....	.50

### OSCILLATOR COILS



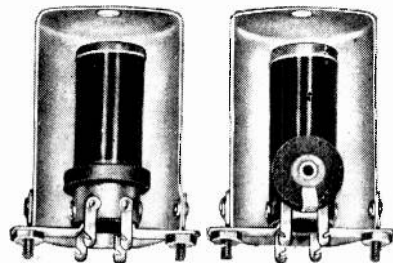
### Solenoid Oscillator Coils

The above oscillator coils are designed for use with pentagrid converter tubes or the 6L7 mixer. The 277 series are particularly designed for use with the No. 242 antenna and RF coils, while the 477 type are recommended for use with the 472 type coils. However, these units will track with any of our standard coils when the proper oscillator padding condenser is incorporated in the circuit. The 480 series shown above is recommended for use with the 5261 type coil or in any receiver in which space is at a minimum. All the above coils are available for use with any of the popular intermediate frequency amplifiers and may be obtained for use either shielded or unshielded. However, it is important that you specify whether the shielded or unshielded coil is desired upon ordering. If no specifications are given, the shielded type coil will be shipped. The shielded coils are supplied with the proper shields as listed below:

- 480 Type (1 5/8" x 3" Shield)
- 277 Type (1 7/8" x 3" Shield)
- 477 Type (2 1/4" x 3 1/2" Shield)

For use with standard .000365 mfd. variable condenser to cover the band from 540 to 1600 KC. Available for use with the following intermediate frequency amplifiers:

	List Price	Shielded Unshielded
<b>480 SERIES</b>		
No. 480-M for 132 1/2 KC.....	\$.70	\$.50
—Requires .0016 Mfd. Series Pad.		
No. 480-K for 175 KC.....	.70	.50
—Requires .001 Mfd. Series Pad.		
No. 480-H for 262 1/2 KC.....	.70	.50
—Requires .0006 Mfd. Series Pad.		
No. 480-C for 465 KC.....	.70	.50
—Requires .0004 Mfd. Series Pad.		
<b>277 SERIES</b>		
No. 277-M for 132 1/2 KC.....	.70	.50
—Requires .0016 Mfd. Series Pad.		
No. 277-K for 175 KC.....	.70	.50
—Requires .001 Mfd. Series Pad.		
No. 277-H for 262 1/2 KC.....	.70	.50
—Requires .0006 Mfd. Series Pad.		
No. 277-C for 465 KC.....	.70	.50
—Requires .0004 Mfd. Series Pad.		
<b>477 SERIES</b>		
No. 477-M for 132 1/2 KC.....	.85	.50
—Requires .0016 Mfd. Series Pad.		
No. 477-K for 175 KC.....	.85	.50
—Requires .001 Mfd. Series Pad.		
No. 477-H for 262 1/2 KC.....	.85	.50
—Requires .0006 Mfd. Series Pad.		
No. 477-C for 465 KC.....	.85	.50
—Requires .0004 Mfd. Series Pad.		



	List Price
No. 5261-A Antenna Coil.....	\$.80
No. 5261-BP Band-Pass.....	.70
No. 5261-RF RF Coil.....	.80



# Miller

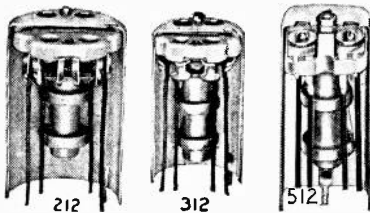
## RADIO PRODUCTS



### Air Core I.F. Transformers

### Standard I.F. Transformers

### Variable Selectivity Type I.F. Transformers



	List Price
No. 212—2 1/2" x 3 1/2" Aluminum Shield	\$1.60
No. 312—1 5/8" x 3" Aluminum Shield	1.50
No. 412—1 7/8" x 3" Aluminum Shield	1.55
No. 512—1 1/2" Sq x 3 1/2" " Shield	1.45

*The Miller* **IRON CORE**  
I.F. TRANSFORMER

WINS THE APPROVAL  
OF RADIO EXPERTS

*Everywhere*

### Iron Core I.F. Transformers

Radio engineers have long recognized that the use of an iron core would greatly increase the "Q" (figure of merit) of radio frequency transformers, providing the eddy current losses could be materially reduced below that encountered when a solid or laminated iron core is used.

Such a material is now available and consists of a finely divided magnesium alloy imbedded in a ceramic body. This core material is well known under the trade name of "Crolite Magicore" and differs from the older types of cores, using powdered iron in a bakelite binder, in that it lends itself readily to the extrusion process of manufacture and permits a high degree of uniformity in production. It neither rusts nor corrodes and does not alter its characteristics with age.

Miller Iron Core I.F. Transformers have approximately twice the selectivity and gain of the older air core types, and a single stage intermediate amplifier using Miller Iron Core Transformers can be designed to have the selectivity and gain of a two stage air core type with approximately half the inherent noise level, resulting in a better signal-to-noise ratio.

Miller No. 612 series of iron core intermediate frequency transformers are available for all standard frequencies:

	List Price
No. 612—1 1/2" Sq. x 3 1/2" Aluminum Shield	\$2.00

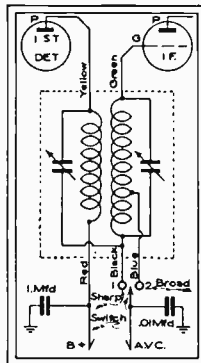
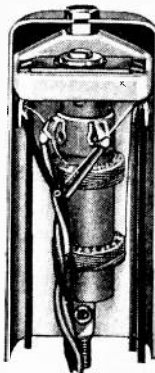


BEAT FREQUENCY OSCILLATOR

### Beat Frequency Oscillators

For use in superheterodyne receivers allowing the reception of CW signals or for easily locating distant stations by tuning the receiver to the "zero beat" produced between the received signal and the local beat oscillator. Beat frequency tone is adjusted by the trimmer knob at top of shield. Specify intermediate frequency code letter when ordering.

	List Price
No. 212 Type	\$1.75
No. 312 Type	1.75
No. 412 Type	1.75
No. 512 Type	1.75

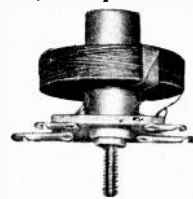


Miller Variable Selectivity Intermediate Frequency Transformers have been designed to meet the combined demand for both the high degree of selectivity so necessary for good DX reception and for a bandwidth great enough for the reception of high fidelity programs broadcast from nearby stations. This has been accomplished by a simple electrical method of changing coupling devised by Miller Engineers. It is the most simple and efficient method available and does not require any form or type of mechanical adjustment control. A single pole double throw switch is all that is required with a single stage I.F. amplifier. The two positions of the switch provide for sharp or broad tuning. See Circuit Diagram No. 215. Available in several sizes and in all the standard frequencies:

	List Price
No. F#612 Iron Core—1 1/2" Sq. x 3 1/2" Aluminum Shield	\$2.50
No. F#512 Air Core—1 1/2" Sq. x 3 1/2" Aluminum Shield	2.00
No. F#412 Air Core—1 7/8" x 3" Aluminum Shield	2.00
No. F#312 Air Core—1 5/8" x 3" Aluminum Shield	2.00
No. F#212 Air Core—2 1/8" x 3 1/2" Aluminum Shield	2.00

### Intermediate Frequency Transformer

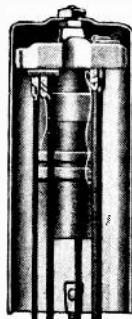
61—A bi-filar type for use when extremely tight coupling is desired. Bi-filar construction consists of primary and secondary wires placed parallel and wound as one wire. For 175 KC only. List Price.....\$ .75



### I.F. Transformers For "QST" Noise Silencer

A closely coupled single tuned intermediate frequency transformer is necessary for the proper operation of the noise silencer described by James Lamb in the February 1936 issue of "QST" and our No. 712 series has been especially designed for use in this circuit.

Available for all standard frequencies these units are assembled in a small square aluminum shield 1 1/2" square x 3 1/2" long. Specify intermediate frequency when ordering.



	List Price
No. 712 Noise Silencer Transformer	\$1.50

MILLER Intermediate Frequency Transformers are so carefully made and checked with such frequent manufacturing inspections and laboratory tests that they run uniform in characteristics and do not require matching. One of the features most desirable to the manufacturer or home constructor is the fact that every Miller Intermediate Transformer is peaked at the proper frequency before leaving the factory. This adjustment when made, allows for the normal stray capacities found in the average receiver and unless excessive lead capacity is introduced by a grid wire shielding, only a slight touch of the trimmer is necessary to properly align the I.F. amplifier.

### Code Numbers for Use in Ordering

We supply these units in several popular intermediate frequencies and have adopted a code to facilitate easy cataloging of the various frequencies, as follows:

132 1/2 KC—Code Letter—M
175 KC—Code Letter—K
262 1/2 KC—Code Letter—H
465 KC—Code Letter—C
525 KC—Code Letter—Q

(Special frequencies to order at slight increase in price.)

In addition to this, the various units are supplied for use in any of the various stages and are given a number corresponding to their respective placement, as for instance:

**No. 1 Input Stage**—Consists of sharply tuned intermediate frequency transformer with copper ring shield between primary and secondary (except on the No. 612 iron core series). For use only as the input stage where two or more stages of intermediate frequency amplification are employed.

**No. 2 Interstage**—May be used as the interstage transformer in a two stage amplifier or as the input stage in a single stage amplifier. Coupling adjusted at slightly below optimum value to obtain proper selectivity and gain. May also be used as the output transformer in any amplifier in which the second detector is a non-current consuming load, such as a bias detector of any type.

**No. 3 Diode Transformer**—Output transformer designed to feed any full wave diode detector. Secondary center tapped to provide equal secondary voltage to either diode plate. Coupling adjusted for maximum input to low impedance loads.

**No. 4 Output Transformer**—Designed to use in output stage feeding any half-wave diode detector. Closely coupled for maximum energy transfer at such loads.

**No. 5 Beat Frequency Oscillator**—An efficient electron coupled type beat frequency oscillator transformer for CW use and to make DX station logging quicker and simpler. Has beat note adjustment knob on top of shield.

**EXAMPLE OF THE USE OF PRECEDING CODE:** Suppose it is desired to order a set of intermediate frequency transformers to operate at 175 KC with a diode second detector. Furthermore, the large standard units are desired. It will be noted that the unit number for this size is No. 212. As the frequency desired is 175 KC, referring to the letter code we find 175 KC to be designated by the letter "K." As we desire three units consisting of an input transformer, an interstage transformer, and an output transformer for a diode detector, we would order as follows:

1 Only No. 212-K-1.	1 Only No. 212-K-2.
1 Only No. 212-K-3.	



# Miller

## RADIO PRODUCTS



### RF CHOKES



No. 4537  
2.5M.H. 125MA  
D.C. Resistance 23. Ohms

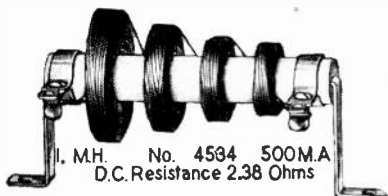
### Pi Wound High Frequency Chokes

#### For Low Power Transmitters and Receivers

Duo-lateral pi wound construction on ceramic forms and provided with convenient terminals. These chokes are of the low-loss type and are ideally suited for ultra high frequency receivers and transmitters.

These resistor size chokes are available in two sizes and are rated at 125 MA continuous duty. Ideal for high frequency receivers and transmitter oscillator circuits. Liberal wire size prevents possibility of burn-out under rated current conditions.

No. 4537	2 1/2 MH HF Choke—125 MA	
	23 Ohms DC Res.	\$ .60
No. 4538	5 MH HF Choke—125 MA	
	34 Ohms DC Res.	.75

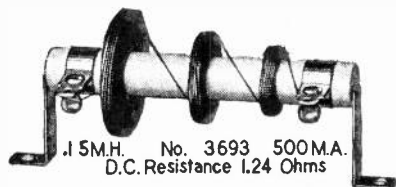


1. MH. No. 4534 500MA  
D.C. Resistance 2.38 Ohms

### Heavy Duty Chokes For the High Power Transmitter

The following heavy duty high frequency chokes are recommended for use in the high power transmitter. They are pi wound on ceramic forms 1/2" in diameter x 3 1/2" long and are provided with snap-in brackets. Both ends of the form are tapped for 6/32 machine screws and the brackets may be removed to provide single screw mounting. All hardware is of cadmium plated brass.

		<b>List Price</b>
No. 4534	1 MH HF Choke—500 MA	
	2.38 Ohms DC Res.	\$1.90
No. 4535	1.5 MH HF Choke—500 MA	
	3.15 Ohms DC Res.	2.10
No. 4536	4 MH HF Choke—500 MA	
	5.52 Ohms DC Res.	2.25



1.5M.H. No. 3693 500MA.  
D.C. Resistance 1.24 Ohms

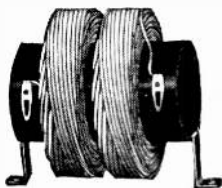
### High Frequency Chokes For Diathermy Equipment

An especially designed high frequency choke for use on high power oscillator circuits operating in the 2 1/2 to 15 meter range, generally used in diathermy equipment oscillators. The No. 3693 choke consists of three narrow pies duo-lateral wound on a ceramic dowel 1/2" in diameter x 3 1/2" long. The unit is supplied with snap-in brackets and both ends of the form are tapped with a 6/32 thread so that any special type of mounting may be used. All hardware is cadmium plated brass. Scientifically designed with the pies tapering in size to pro-

vide proper RF dissipation. Used as standard equipment by many of the leading diathermy equipment manufacturers.

We will gladly make special chokes to meet the requirements of manufacturers of equipment for which our standard units are not adaptable.

		<b>List Price</b>
No. 3693	.15 MH HF Choke—500 MA	
	1.24 Ohms DC Res.	\$1.75
No. 3694	.54 MH HF Choke—500 MA	
	1.84 Ohms DC Res.	2.00



### Line Filter Chokes

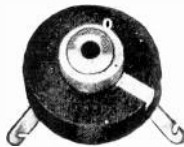
Duo-lateral wound line filter chokes developed by Miller Engineers to insure maximum filter efficiency. May be used with receivers, transmitters, rotating or vibrating equipment, motors, and in general wherever it is desired to eliminate high frequency disturbance pick-up from the power supply. A line filter will increase the selectivity of many receivers by preventing the power line from acting as an antenna. When used for transmitters Miller Line Filters will prevent feed-back through the power lines and eliminate carrier radiation through the wiring system. These units have been carefully tested and are conservatively rated. In each type the wire size has been chosen to insure minimum resistance and voltage loss. These filter chokes are especially recommended to radio servicemen and electricians for installation in sign flashers, diathermy and similar equipment which produces serious disturbances in neighboring radio receivers. Complete instructions and circuits are furnished with each choke. Miller Line Filter Chokes are available in two types—singles and doubles.

#### SINGLE DUO-LATERAL WOUND LINE FILTER CHOKES

		<b>List Price</b>
No. 7825	Max. Current 2 Amps	\$1.00
No. 7826	Max. Current 5 Amps	2.50
No. 7827	Max. Current 10 Amps	3.25
No. 7828	Max. Current 20 Amps	4.00
No. 7829	Max. Current 30 Amps	5.00

#### DOUBLE DUO-LATERAL WOUND LINE FILTER CHOKES

		<b>List Price</b>
No. D7826	Max. Current 5 Amps	\$3.75
No. D7827	Max. Current 10 Amps	5.00
No. D7828	Max. Current 20 Amps	6.00
No. D7829	Max. Current 30 Amps	7.50



### Radio Frequency Chokes

The following Miller Radio Frequency Chokes are wound on specially treated wooden dowels with bakelite terminal plates and tinned soldering lugs. They are for single hole mounting and are duo-lateral wound. The low distributed capacity of these units makes them very efficient in radio frequency circuits wherever these inductance values are satisfactory. They are quite small and compact, the bakelite terminal plate being only 1 1/8" in diameter.

		<b>List Price</b>
No. 610	RF Choke—.166 MH	\$ .20
No. 620	RF Choke—.675 MH	.20
No. 630	RF Choke—1.540 MH	.23
No. 640	RF Choke—2.742 MH	.25
No. 650	RF Choke—4.450 MH	.27
No. 660	RF Choke—6.500 MH	.30
No. 670	RF Choke—9.300 MH	.35
No. 680	RF Choke—12.200 MH	.40
No. 690	RF Choke—16.000 MH	.45
No. 1000	RF Choke—20.000 MH	.50

### ELIMINATE Line Noise



### NEW MILLER ALL-WAVE LINE FILTER

The Miller Line Filter marks an outstanding achievement in the field of radio noise suppression. It is the most efficient noise filter yet devised—the result of extensive research and field testing, combined with entirely new manufacturing methods. It incorporates both inductive and capacitive filtering, which radio engineers agree is the only effective method of complete line filtering. Duo-lateral wound chokes and oil impregnated paper dielectric condensers result in an unparalleled lifetime efficiency.

Anyone can install the Miller Line Filter by simply plugging it in between the power supply and radio. No tools are needed and the unit requires no adjustment or attention. The connections are plainly marked in embossed letters on each end of the case. The filter is completely enclosed in a handsome metal case finished in Kem-Art satin black with polished chromium plated end plates. Shipping weight 16 ozs.

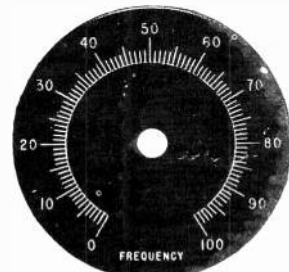
Max. Current 2 Amps. List Price No. 7818 Line Filter.....\$4.00



No. 80F

### Rectifier Plate RF Filter Choke

A unit consisting of two radio frequency chokes assembled in an aluminum shield 1 1/2" dia. x 2" long with spade bolts for mounting. Designed for use in the rectifier plate leads to suppress radio frequency interference generated in this circuit, particularly when mercury vapor type tubes are used, and is desirable in any sensitive receiver. Maximum current capacity 100 MA. No. 80-F Filter Choke—List Price.....\$ .75



### Engraved Bakelite Dials

Available for either 180° or 270° clockwise rotation of shaft. Engraved 0 to 100. Any one word engraved at slight extra cost. If not specified will be shipped plain.

		<b>List Price</b>	
		Plain	With Word Engraved
No. 629	3 1/2" Diameter	\$ .75	\$ .90
No. 628	2" Diameter	.75	.90



No. 730

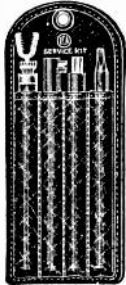
### Bakelite Dial Pointers

For use with dials shown above. List Price No. 730—2 1/4" Long.....\$ .15  
No. 731—1 1/4" Long......12

# ICA INSULINE ICA

## RADIO PRODUCTS

### NEUTRALIZING AND ALIGNING TOOL KIT

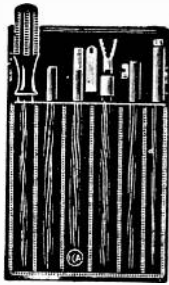


Contains: 3 insulated screw drivers with metal nib (6", 5", 2 1/2"). 2 metal nut wrenches (3/4", 1/2"). Alligator side wrench; 1/4" square nut insulated wrench; 1/4" hexagon metal side wrench; 1/4" hexagon slotted insulated wrench; metal screw driver; 3/8" hexagon insulated nut wrench; 6" insulated screw driver.

**No. 998**—With black leatherette carrying case.  
**List Price**.....\$3.50

### "DE LUXE" NEUTRALIZING & ALIGNING TOOL KIT

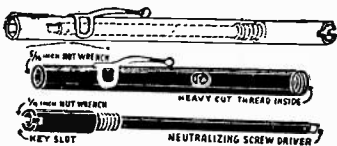
Complets for Every Service Need



Designed to include, besides all the tools contained in our famous No. 998, two new and absolutely essential tools which are the I. C. A. No. 997 Magic Tuning Alignment Tool and the newly developed I. C. A. Flexible Screw Driver, for hard to reach spots, making a total of fourteen tools most of which telescope into one another forming six units when assembled into the attractive black leatherette carrying case.

**No. 994**..Tools complete with carrying case  
**List Price**.....\$4.50

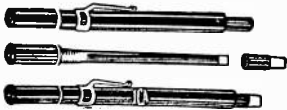
### 4-IN-1 NEUTRALIZING TOOLS, SCREW-DRIVERS, WRENCHES



Made of Fenoline—fully insulated.

**No. 10\*9**—Complete as above.  
**List Price**.....\$3.69

### 5-IN-1 NEUTRALIZING AND COMPENSATING TOOL



Has extra all metal screw driver.

**No. 1022**.....**List Price** \$1.00

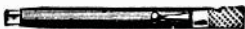
### NEUTRALIZING TOOLS WITH METAL NIBS



Sturdy and unbreakable.

**No. 996**.....**List Price** \$1.00

### ICA INSULOID COLORED NEUTRALIZING SCREW-DRIVER



With Grip-Rite Handle and Pocket Clip

**No. 1028**.....**List Price** \$0.30

### FORK TYPE NEUTRALIZING WRENCH AND SCREW-DRIVER



**No. 1024**.....**List Price** \$0.40

### ICA MAGIC TUNING ALIGNING TOOL



Consists of bakelite rod with a brass cylinder at one end and an iron core at the other. Inserting the brass cylinder into a coil lowers its inductance, while inserting the end with the iron increases the inductance. For checking all-wave receivers without disturbing the adjustment of the trimmer capacities.

**No. 997**.....**List Price** \$0.90

### 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. 925**.....**List Price** \$1.50

### SHORT-O-TESTER

To Check Circuit and Continuity



Contains a 2 1/2-volt lamp and a small flashlight battery that will indicate an open or closed circuit when the leads are placed across the terminals. Will test the continuity of practically any circuit used in radio receivers. Complete with Battery and 2 1/2-volt bulb.

**No. 1030**.....**List Price** \$1.50

### BAKELITE SCREW-DRIVER

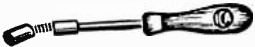


Made entirely of 3/8" bakelite rod with a sturdy blade for neutralizing and adjusting condensers, radio receivers or for use in places where a metal screw driver cannot be used electrically.

**No. 1029**.....**List Price** \$2.45

### FLEXIBLE SHAFT SOCKET WRENCH

With Oval-Shaped Socket



**No. 915**.....**List Price** \$2.00

### ICA BALANCING TOOL



Enables serviceman to neutralize any radio without having to remove chassis from cabinet.

**No. 1026**.....**List Price** \$3.40

### INSULATED AND HEXED NEUTRALIZING WRENCHES

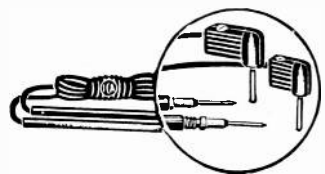
Made of hexed sturdy black "Fenoline"—so made that when one part wears out or breaks you saw off that part and continue using the neutralizing wrench.

**No. 935**—6" long.....**List Price** \$0.20

**No. 985**—8" long.....**List Price** .25

### ICA PENCIL TYPE TEST LEADS

With Finger-Grip Molded Tips

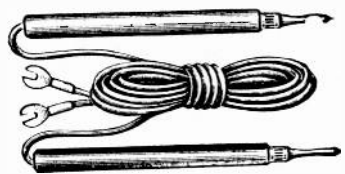


The Molded Finger Grip Tips are provided with set screws for easy renewal of wire. Length of test leads is 65 inches.

**No. 373**.....**List Price** \$1.25

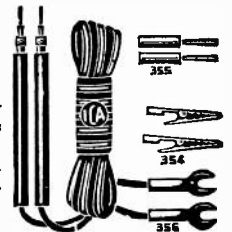
### LABORATORY TYPE TEST LEADS

With Heavy-Duty Laboratory Detachable Sharp Point Ends



**No. 375**.....**Price List** \$0.80

### TEST LEADS



Flexible, rubber-covered, kinkless wire, black and red, fitted into slim handles. Insulated for 5000 volts.

**Phono. Needle-Point Leads—54" Long**  
**No. 379**—Clips.....**List Price** \$0.60  
**No. 381**—Terminals.....**List Price** .50  
**No. 382**—Phone Tips.....**List Price** .50

**De-Luxe Leads—50" Long**  
**No. 354**—Clips.....**List Price** \$0.60  
**No. 355**—Tips.....**List Price** .50  
**No. 356**—Terminals.....**List Price** .50

**Long Pointed Leads—50" Long**  
**No. 369**—Tips.....**List Price** \$0.50  
**No. 383**—Lugs.....**List Price** .50  
**No. 370**—Clips.....**List Price** .60

**Heavy Duty Leads**  
**No. 388**—Clips.....**List Price** \$0.90  
**No. 400**—Phono. Plugs, insulated handles.  
**List Price**.....\$1.00

# ICA INSULINE ICA

## RADIO PRODUCTS

### ICA SELF-ALIGNING PUNCHES



**New Laboratory Design**  
No Center Guide Holes  
to Drill

Utilizes the new **Patented Spring Design**. Punches clean cut round holes in sheet metal-chassis, etc. For Condenser and Socket Mounting Holes, etc. Sturdy, heavy-duty Punches.

No.	For	Hole	List Price
755	For	3/4" Hole	\$3.50
756	For	7/8" Hole	3.50
757	For	1 3/8" Hole	4.50
758	For	1 3/4" Hole	4.50
759	For	1 1/2" Hole	4.50

### ALL-PURPOSE ANVIL

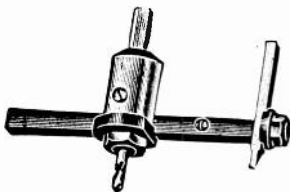
Designed to fit ICA Self-Aligning Punches. A strong, sturdy tool, weighs 4 lbs. Size 5 3/4" diameter at base by 3" high.



No. 750 ..... List Price \$2.50

### ALL-PURPOSE CIRCLE CUTTER

Will Cut Holes from 3/4 to 8 Inches



All parts are made of hardened steel. A high quality sensitive and sturdy tool for any Machine Shop, Laboratory, or Serviceman's bench.

No. 775 ..... List Price \$4.00



### RIVET & EYELET PUNCH SET

It is designed to make possible the resetting of any size eyelet or rivet used in radio sets.

Complete with ample assortment of eyelets and rivets.

No. 785 ..... List Price \$2.00

### LOCK SOCKET WRENCH AND SCREW DRIVER SET

Contains 8 different size sockets—1 screw driver and handle, 1 Hex Handle and extension.



No. 999 ..... List Price \$1.50

### ICA DE LUXE SOLDERING IRONS

#### 105-120 VOLT SOLDERING IRONS



#### 60-WATT IRON

No. 1960-A ..... List Price \$3.50

#### 85-WATT IRON

No. 1962-A ..... List Price \$4.00

#### 115-WATT IRON

No. 1961-A ..... List Price \$5.00

### SHIELDED PLUG



For amplifiers, transmitting, microphones, etc. Outside diameter 1 1/2".

No.	Prong	List Price
1130	4 Prong	\$0.50
1131	5 Prong	.50
1132	6 Prong	.55
1133	7 Prong	.55
1134	8 Prong	.65

### SHIELDED PLUG RECEPTACLE

Receptacle sockets for above plugs.

No.	Prong	List Price
1138	4 Prong	\$0.60
1139	5 Prong	.60
1140	6 Prong	.65
1141	7 Prong	.70
1142	8 Prong	.75



### POLARIZED SHIELDED MICROPHONE PLUG & SOCKET NON-BREAKABLE

Same shielded housing as above.

No.	Prong	List Price
1908	3 Way Plug	\$0.75
1909	3 Way Socket	1.00



### BAKELITE INSULATED TIP JACKS

Moulded of Low-Loss Bakelite

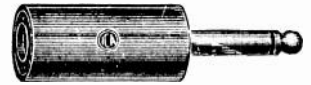
No.	List Price
1889—Black	\$0.10
1890—Red	.10

### ICA BAKELITE BANANA TYPE JACKS

These jacks are designed to take the banana type plugs which are used for transmitting and receiving coils, test leads, etc.

No.	List Price
1891—Black	\$0.10
1892—Red	.10

### DOUBLE PHONE PLUG



This Phone Plug is molded of black bakelite and the hardware is of brass, nickel plated.

No. 24 ..... List Price \$3.40

### SHIELDED DOUBLE PHONE PLUG



Nickel Barrel

Brass Shell Nickel Plated

Same as No. 24 Plug except that it has a brass nickle shell for shielding purposes.

No. 25 ..... List Price \$1.00

### 3-WAY MICROPHONE PLUG



The ICA 3-Way Microphone Plug has connections for 3-wire cable for microphone use.

No. 1901 ..... List Price \$0.75

### SHIELDED 3-WAY MICROPHONE PLUG



Shielded Nickel Barrel

Same characteristics as No. 1901 Plug except that barrel is made of nickel plated shell.

No. 1900 ..... List Price \$1.25



### ICA JACKS

Small & Compact

Parts made of high grade brass. Springs of phosphor bronze, nickel-plated. Supplied with insulated shoulder washers for metal panel mounting.

No.	List Price
325 Single Open Circuit	\$0.25
1905 3 Way Microphone Jack	.50

### ICA PORTABLE JACKS



Barrel molded of Black Bakelite.

No. 1911 ..... List Price \$0.40



### ICA 3-WAY MICROPHONE JACK

Small compact size where minimum space is important. High insulation factor and positive contact.

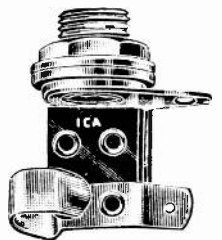
No. 1902 ..... List \$0.50

### ICA SINGLE OPEN CIRCUIT JACK

These jacks are made very small to fit into the smallest possible space. Bakelite washers are used to prevent leakage.

No. 362 ..... List \$0.25

Single Closed Circuit  
No. 353 ..... List \$0.30



# ICA INSULINE ICA

## RADIO PRODUCTS

### Improved Bakelite Sockets

Special spring-bronze nickel-plated contacts for positive contact.



No.	List Price
2480—4 Prongs.....	\$0.25
2481—5 ".....	.30
2482—6 ".....	.35
2483—7 " (comb.).....	.40
2489—8 " (octal).....	.40

### Sub-Panel Mounting



Same as above.

No.	List Price
2484—4 Prongs.....	\$0.20
2485—5 ".....	.25
2486—6 ".....	.25
2487—7 " (comb.).....	.30
2488—8 " (octal).....	.35

### Button Type

2494—4 Prongs.....	\$0.20
2495—5 ".....	.25
2496—6 ".....	.25
2497—7 " (comb.).....	.25
2498—8 " (octal).....	.30

### Headphone Adapters



3-ft. cable to toggle-switch and 2 tip-jack receptacles for headphones. Switch keeps proper potentials on tube and cuts off speaker of receiver.

### For Power Tubes

No.	List Price
2580—4 Prongs.....	\$2.50
2581—5 ".....	2.50
2582—6 ".....	2.50
2589—8 ".....	2.50

### For Push-Pull Output Tubes 2 Adapters

No.	List Price
2583—4 Prongs.....	\$3.00
2584—5 ".....	3.00
2585—6 ".....	3.00
2587—8 ".....	3.00

### Universal Adapters

Prongs not required can easily be removed by hand or left in the adapter.



No. 2027—4 P.	
No. 2028—5 P.	
No. 2029—6 P.	
No. 2030—7 P.	
List.....	\$0.25
No. 2031—8 P.	
List.....	\$0.35

### ICA EXACT DUPLICATE REPLACEMENT COILS

#### For Majestic Receivers

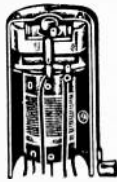


Exact duplicate, both electrically and physically. Sizes, Mounting Holes, Trimmers and Leads are strictly adhered to.

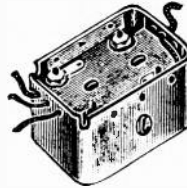
No.	Maj. No.	Model	List Price
4101	4428	15—1st—Complete Ass'y	\$2.35
4102	8384	15—2nd—Complete Ass'y	1.50
4103	3908	20—1st—Complete Ass'y	2.35
4104	3906 (3907)	20—2nd—Complete Ass'y	2.50
4105	4429	55—2nd—Complete Ass'y	1.50
4106	4439	60—1st—Complete Ass'y	2.75
4107	4464 (4467)	60—2nd—Complete Ass'y	2.50
4108	10148	460—1st—Complete Ass'y	1.50

### REPLACEMENT LINE BALLASTS

#### For Majestic — Stewart Warner — Brunswick



Exact duplicates of the original ballasts. Made to exact specifications, both physically and electrically. Units are enclosed in air cooling perforated metal cases.



No.	List Price
4200—For Majestic 70 series.....	\$2.00
4201—For Majestic 90 series.....	2.00
4202—For Majestic 180 series.....	2.00
4203—For Stewart Warner 900 series.....	2.00
4204—For Stewart Warner 950 series.....	2.00
4205—For Stewart Warner R100 series.....	2.00
4206—For Brunswick Receivers.....	2.00

### NEW!

## ICA "TRIPLEX"

### Radio and Telegraph Code Practice Set

#### TRI-SIGNAL

### Blinker Light Radio Signal Telegraph

Composed of a High Frequency Buzzer-Blinker-Light and telegraph sounder. Easy and economical to operate. Only 2 Standard Flashlight Batteries needed.



When the two sets are connected, messages can be sent or received by either set.

No.	List Price
70—Single Unit (less Batteries)	\$1.50
71—Double Unit (with 50 feet wire—less Batteries)	3.25

### AUXILIARY SPEAKERS

An ideal extra speaker for homes, hospitals, schools, restaurants, institutions, etc. Easily attachable to any home or auto radio. Used on call systems. Multiple Radio receiving systems. Public address school installations, Amplifiers, etc.

An excellent 3" high-impedance magnetic speaker encased in a handsome Black Bakelite cabinet.

No. 50.....	List Price \$4.75
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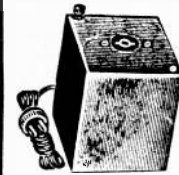
### Antennatrol—All-Wave Variable Antenna Coupler



Eliminates interfering stations; operates as noise reducer with outside aerial or by itself as indoor aerial. Easily installed.

No. 4394.....	List Price \$1.00
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### All-Wave Filtervolt



250 watts for 32, 110 and 220-volt A.C.-D.C. circuits.

No. 338	List Price \$4.00
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### ICA Filtervolt, Jr.

Eliminates noises caused by small electrical appliances and motors. May be installed at radio or source of interference.



No. 94.....	List Price \$2.50
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### Voltage Regulators



No.	List Price
92—Universal.....	\$0.75
99—Heavy-duty.....	1.50

A.C.-D.C.: 110, 220-volt, all eyes.

### Reducers

220-volt to 110-volt  
30-40-50-60 watts List Price \$1.50

### Universal All-Wave Doublet Coupler

For Doublet Short-Wave Antenna System with All-Wave Receivers. Only one aerial necessary.



No.	List Price
636—With Shield Can.....	\$0.90

### ICA Liquid Crystallin

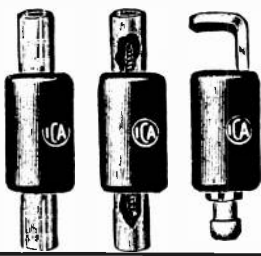


No.	Oz.	Can	List Price Per Can
2801	2		\$0.35
2807	8		1.10
2804	16		2.00

(1 pt.)

# ICA INSULINE RADIO PRODUCTS ICA

## WIRE WOUND IGNITION SUPPRESSORS



120 Ohms D.C.

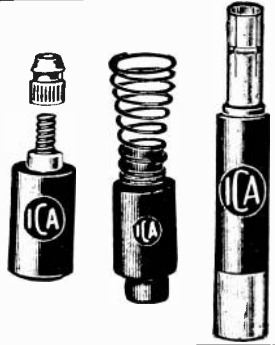
Made of cotton covered wire, wound and enclosed in a Bakelite, moisture proof case.

The low ohmage will absolutely not retard speed of motor. Perfect Noise elimination.

No.	List Price
2351 Spark Plug Suppressor	\$0.50
2352 Cable Type Suppressor	.50
2353 Distributor Suppressor	.50

## ICA UNIVERSAL SUPPRESSORS

Made of Bakelite. Eliminates interference caused by spark plugs and distributor. Will fit any car.



No.	List Price
378 For Spark Plug	\$0.25
351 For Ford Car	.25
352 Distributor Suppressor	.30
4461 Brush Type for Ford	.30



## ICA FRONT WHEEL NOISE SUPPRESSORS

Eliminates all noises created by the static pick-up of the front wheels. Installed in hub caps. Simple—effective.

No. 4475 ..... Per Pair, List Price \$0.50

## ICA INTERFERENCE CONTROL

### A Scientifically Designed Auto Radio Noise and Spark Plug Suppressor Eliminator

A highly efficient easily installed ignition noise eliminator which **does not interfere** in any way with the functions of the **car ignition system**. Consists of a combination high-frequency filter and an adjustable balancing circuit that completely eliminates the use of spark plug suppressors.

No. 4454 ..... List Price \$2.25



## ICA MASTER DISTRIBUTOR SUPPRESSOR



Only one ICA Super Distributor Filter is required for each car, for complete filtering of ignition noises.

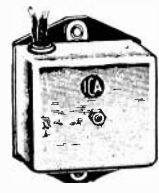
Consists of a number of separately wound R.F. Chokes. The Super Filter is placed in the distributor head only, eliminating the necessity for individual resistors or suppressors on the spark plugs.

No. 4457 ..... List Price \$2.25

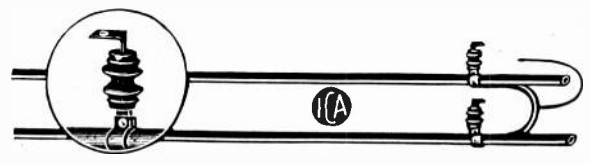
## ICA "A" LINE R. F. FILTER

Recommended for auto radios which have no line filters built in, and for auto radios which pick up noise with the antenna lead disconnected. Line noises, such as hum, hash, or ripple, can be eliminated by the use of ICA "A" Line R.F. Filters in the "A" line and other leads entering the auto radio.

No. 4455 ..... List Price \$1.25



## THE ICA "ZEPHYR" MODEL AUTO ANTENNA



Fits Running Boards of all make cars. This new "Zephyr" Auto Antenna is made of a special fully enclosed, oval shaped heavy gauge metal tubing with a permanent black baked enamel finish. The oval shape of the tubing affords an unusually large signal pick-up surface. The channel is completely enclosed preventing mud, dirt, water from accumulating on the antenna. The mounting brackets are molded into a flexible, sturdy semi soft rubber insulator, thus assuring permanent, flexible and perfect insulation.

The antenna is 48" long and is supplied complete with four brackets. Complete with shielded lead-in wire and hardware. Packed in individual cartons.

No. 4501 ..... List Price \$2.00

## "TWIN ZEPHYR" AUTO ANTENNA

Similar to No. 4501 Antenna, but designed for installation under both running boards. Retains all the advantages of the single antenna, but has double the surface, resulting in much greater pick-up and improved radio sensitivity.

No. 4502—Completely Wired ..... List Price \$4.00

## ICA "AIRFLOW" AUTO ANTENNA

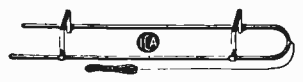
The New ICA "Airflow" Antenna was developed along the lines of the new modern trend for smooth, neat, flowing lines. It has proved to be the best and most efficient aerial for use with the present steel Turret-Top cars. Mounts on rubber vacuum cup insulators. No top drilling is necessary. The Airflow is not affected by rain or snow. Cannot be shorted out by dust, dirt, mud, ice or water.



Unlike other antennas the "Airflow" will operate efficiently in places where reception is weak due to mineral deposits in the ground. Will work as well on all type cars. Simple—Sturdy. Assures more distance and volume with less noise. Complete with heavy duty shielded lead in cable and instructions.

No. 4465 ..... List Price \$5.00

## ICA DOUBLET AUTO ANTENNA



Easily and quickly installed under the running board of any car. Made of heavy gauge tubing with a baked enamel corrosion-resisting finish. The mounting brackets are adjustable and insulated with highest quality rubber. No drilling is necessary, the brackets attaching readily to existing bolts under the running board. Antenna is 48" long. Complete with shielded lead-in and adjustable brackets.

No. 4345 ..... List Price \$1.85

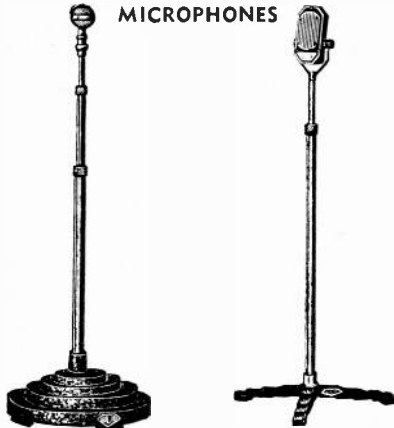
## ICA TWIN DOUBLET AUTO ANTENNA

Same as No. 4345. Mounts under both Running Boards, double surface affords increased pick-up and performance.

No. 4452 ..... List Price \$3.70

# BUD RADIO PRODUCTS

## BUD FLOOR STANDS for CRYSTAL, VELOCITY & DYNAMIC MICROPHONES



Insulated against rattling or dropping of adjustable stems. Positive and smooth acting chuck type lock. Telescoping stems finished in polished chromium plate. Two section stands adjustable 35" to 66". Three section 24" to 66". Heavy cast bases are finished in durable black crackle enamel. Adjustable stem has 3/8-27 thread. On stands supplied with ring, the ring is 6" dia. with E-Z hooks finished in black crackle enamel.

- No. 585—List Price \$12.50**  
Two section; modernistic base, base dia. 12". Weight 12 lbs.
- No. 823—List Price \$14.00**  
Same as No. 585, complete with 6" Microphone ring and 8 springs.
- No. 587—List Price \$13.50**  
Three section; modernistic, 12" dia. base. Weight 12 lbs.
- No. 592—List Price \$15.00**  
Same as No. 587, complete with 6" microphone ring and 8 springs.
- No. 583—List Price \$11.50**  
Three section; tripod base, leg spread 17". Weight 9 1/2 lbs.
- No. 597—List Price \$13.00**  
Same as No. 583, complete with 6" microphone ring and 8 springs.
- No. 586—List Price \$10.50**  
Two section; tripod base, leg spread 17". Weight 9 1/2 lbs.
- No. 598—List Price \$12.00**  
Same as No. 586, complete with 6" microphone ring and 8 springs.
- No. 584—List Price \$8.50**  
Two section; modernistic 10" dia. base. Weight 8 1/2 lbs.
- No. 840—List Price \$10.00**  
Same as No. 584, complete with 6" microphone ring and 8 springs.

### MICROPHONE SADDLE

An ideal mounting for crystal or dynamic microphones which permits microphone to be tilted to any angle and locked in place. Mounting hole threaded 3/8-27 to fit microphone stand. Made from aluminum casting.

**No. 503..... List Price \$2.00**  
Black Crackle Finished.

**No. 504..... List Price \$2.50**  
Chromium Plated Finish.

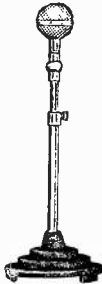
### DUPLEX MICROPHONE FIXTURE

For using two microphones on one stand. Made of heavy brass tubing and finished in chromium plate. Supplied with two swivel joints for tilting microphones. Mounting hole tapped 3/8-27 to fit microphone stand.

**No. 839—List Price \$6.00**

## DESK & BANQUET STANDS

Ruggedly built for use on tables, desks, pulpits, etc. Heavy cast base of modernistic design is finished in black crackle enamel and will not tip easily. Stems are chromium plated finish. Adjustable types have thumb nut locking device. Stem is threaded 3/8-27. Where rings are supplied, they are also finished in black crackle.



- No. 588—List Price \$1.50**  
Height 6". Base Dia. 5". Weight 2 lbs.
- No. 602—List Price \$2.75**  
Same as No. 588, complete with 5" octagonal ring and 8 springs.
- No. 589—List Price \$2.00**  
Height 8". Base Dia. 6". Weight 3 1/4 lbs.
- No. 603—List Price \$3.50**  
Same as No. 589, complete with 6" microphone ring and 8 springs.
- No. 590—List Price \$4.35**  
Height adjustable 10" to 16". Base Dia. 6". Weight 3 1/2 lbs.
- No. 803—List Price \$5.75**  
Same as No. 590, complete with 6" microphone ring and 8 springs.
- No. 591—List Price \$5.10**  
Height adjustable 13" to 22". Base Dia. 6". Weight 3 1/2 lbs.
- No. 802—List Price \$6.50**  
Same as No. 591, complete with 6" microphone ring and 8 springs.

## BUD DESK STANDS



These beautiful stands are preferred by most amateurs and are ideal for portable P.A. installations. Ruggedly constructed. Modernistic designed base casting. Black crackle finish.

- No. 817—List Price \$2.00**  
Height 9". Base Dia. 5". 5" octagonal microphone ring.
- No. 818—List Price \$2.50**  
Height 10". Base Dia. 6". 6" round microphone ring.
- No. 819—List Price \$3.00**  
Height 13". Base Dia. 6". 6" diameter round microphone ring.

## ECONOMY & UTILITY FLOOR STANDS

Heavy cast base of modernistic design, is 10" in dia. and finished in lustrous black crackle enamel. Stems are heavy gauge brass seamless tubing. Chromium plated finish. Positive thumb nut locking device. Two section stands are adjustable 33" to 66". Three section 24" to 66".

- No. 557—List Price \$7.50**  
Two section; modernistic, 10" dia. base. Wt. 8 1/2 lbs.
- No. 558—List Price \$9.00**  
Same as No. 557, complete with 6" microphone ring and 8 springs.
- No. 834—List Price \$9.50**  
Three section; 10" dia. base. Supplied with crystal microphone saddle (as illustrated). Weight 8 1/2 lbs.
- No. 822—List Price \$8.75**  
Three section; 10" dia. base. Complete with 5" octagonal microphone ring and 8 springs.



## MICROPHONE RINGS

Solid metal casting with E-Z hooks for attaching springs. Complete with 8 rust-proof microphone springs and suspension ring for hanging from ceiling.



- No. 800—List Price \$2.50**  
6" round ring. Chromium Plated finish.
- No. 801—List Price \$2.00**  
6" round ring. Black crackle finish.
- No. 820—List Price \$1.50**  
5" octagonal ring. Black crackle finish.

## MICROPHONE PLUGS

Polarized three prong plug. Contact blades insulated with moulded bakelite.



- No. 628—List Price \$ .75**  
Bakelite Microphone Plug.
- No. 629—List Price \$1.00**  
Microphone Plug with armored cord grip.
- No. 386—List Price \$ .75**  
Shielded microphone plug with cord grip and hook to lock to connector. Same as illustrated.

## MICROPHONE CONNECTORS

Polarized connector to fit three prong plug. Contacts are of phosphor bronze. Moulded bakelite insulation. Diameter 1 1/2".



- No. 387—List Price \$1.00**  
Shielded connector with cord grip and hook to lock to plug. Same as illustrated.
- No. 630—List Price \$1.35**  
Moulded bakelite body connector.
- No. 5073—List Price \$2.00**  
Bakelite connector with mounting bracket to fit standard electric switch box.

## PHONE & MICROPHONE PLUGS

- No. 230—List Price \$ .40**  
Duplex; takes 2 cords with tips; bakelite handle.
- No. 282—List Price \$ .75**  
Same as above with shielded metal handle.
- No. 1057—List Price \$ .75**  
Three way mike plug; bakelite handle
- No. 284—List Price \$1.05**  
Same as No. 1057 with shielded metal handle.

## PORTABLE PHONE & MICROPHONE CONNECTORS

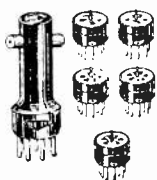
- No. 1039—List Price \$ .40**  
Two way; fits No. 230 plug; bakelite handle.
- No. 279—List Price \$ .80**  
Same as No. 1039 with shielded metal handle.
- No. 1059—List Price \$ .65**  
Three way; fits No. 1057 mike plug; bakelite handle.
- No. 283—List Price \$ .95**  
Same as No. 1059 with shielded metal handle.
- No. 1058—List Price \$ .40**  
Three way microphone jack for panel mounting.
- No. 1038—List Price \$ .25**  
Two way microphone jack for panel mounting.





# RADIO BUD PRODUCTS

## 7 PRONG ANALYZER PLUG AND ASSOCIATE ADAPTERS



For 8 wire cable to analyze glass and metal tube circuits. Has dual grid studs. Small 7 prong base for closely shielded sockets. Moulded Bakelite, sturdily built with latch type lock.

No. 815—Complete with 5 adapters as illustrated and 5 ft. 8 wire cable attached to plug.

List Price ..... \$5.75

No. 814—Same as above with 8 prong cable plug attached to other end of cable and mounting socket.  
List Price ..... \$6.35

No. 869—Analyzer plug only.  
List Price ..... \$1.50

No. 816—Plug with 5 ft. 8 wire cable attached.  
List Price ..... \$2.50

No. 794—Same as No. 816 with 8 prong cable plug attached and 8 prong mounting socket.  
List Price ..... \$3.50

### ADAPTERS

With latch lock stud to fit analyzer plugs listed above.

No.		List Price
1078L	7 on 4 prong glass tube	\$0.75
1079L	7 on 5 prong glass tube	.75
1080L	7 on 6 prong glass tube	.75
1081L	7 on 7 large glass tube	.75
1085L	7 on 8 prong metal tube	1.00
540	7 on 5 prong metal tube	1.00
541	7 on 5 (6F5) metal tube	1.00
542	7 on 6 prong metal tube	1.00
543	7 on 7 prong metal tube	1.00

## TUBE TESTING ADAPTERS



For Octal Base Tubes

The adapters described here-with will test all the metal and metaglass tubes released to date in testers not equipped to test these tubes.

No. 483—Complete kit consisting of 3 adapters and a dual grid cap with lead to test octal based tubes.  
List Price ..... \$4.00

No. 414—Complete kit of six adapters for making individual tests of octal based tubes. Complete with grid clip adapter. This kit recommended by RCA and other tube manufacturers.  
List Price ..... \$5.00

No. 411—Tests 5Z4, 5Y3, 5W4 in 80 socket.  
List Price ..... \$1.00

No. 412—Tests 6C5, 6D5 in 41 socket, 6L6, 6F6 in 42; 25A6 in 43; 6B6, 6Q7 in 75; 6J7 in 77; 6K7, 6A8, 6L7 in 78, and 6R7 in 85 socket.  
List Price ..... \$1.00

No. 413—Tests 6N7 in 6A6 socket.  
List Price ..... \$1.00

No. 415—Tests 6A8, 6C5, 6D5, 6F6, 6J7, 6L7 in 36 socket.  
List Price ..... \$1.25

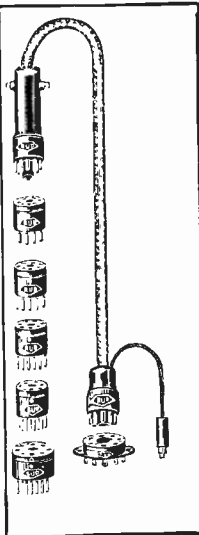
No. 417—Tests 6H6 in 85 socket.  
List Price ..... \$1.00

No. 418—Tests 6C5 in 37 socket, 6X5 in 84 socket.  
List Price ..... \$1.00

No. 422—Tests 6F5 in 75 socket.  
List Price ..... \$1.00

No. 1271—Tests 25Z6 in 25Z5 socket.  
List Price ..... \$1.00

No. 1272—Tests 6P7 in 6F7 socket.  
List Price ..... \$1.00



## OCTAL ANALYZER PLUG AND ASSOCIATE ADAPTERS

New 9 wire plug for analyzing metal or metaglass tube circuits. Moulded Bakelite; sturdily built. Adapters screw lock securely to plug. Dual grid stud for metal or glass tube grid caps.

No. 498—Complete with adapters as illustrated.  
List Price ..... \$10.00

No. 491—Analyzer plug only.  
List Price ..... \$1.75

No. 424—Plug with 5 ft. 9 wire cable attached.  
List Price ..... \$4.00

No. 423—Complete analyzer cable, same as illustrated (less adapters).  
List Price ..... \$5.00

No. 497—8 prong, octal cable plug, as illustrated. Dia. 1 1/4".  
List Price ..... \$0.75

### ADAPTERS

Wired all circuits straight through according to new R.M.A. numbering system.

No.		List Price
341	8 on 4 prong glass tube	\$1.00
342	8 on 5 prong glass tube	1.00
343	8 on 6 prong glass tube	1.00
344	8 on 7 small glass tube	1.00
345	8 on 7 large glass tube	1.00
536	8 on 5 prong metal tube	1.00
537	8 on 5 (6F5) metal tube	1.00
538	8 on 6 prong metal tube	1.00
539	8 on 7 prong metal tube	1.00

## METAL TUBE MODERNIZING ADAPTERS

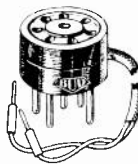


Any set having glass bulb tubes such as listed below can use metal tubes with the associate modernizing adapter. Greater selectivity and stability result. No tube shields necessary.

Cat. No.	Glass Tube Replaced	New Metal Tube Used
427	80	5Z4 or 5Y3
428	41 or 42	6D5
429	6A6	6N7
430	6A7	6A8
431	37 or 76	6C5
431	76	6F5
432	6C6 or 77	6J7
432	41 or 42	6F6
432	6D6 or 78	6K7 or 6L7
433	6F7	6P7
434	25Z5	25Z6
432	75	6B6
431	84	6X5

List Price, Each ..... \$0.50

## EAR PHONE AND LOUD SPEAKER ADAPTERS



Enable you to listen to DX at any time without disturbing the rest of the family. Also ideal for people who are hard of hearing. Can also be used for adding additional speakers or reading receiver output.

Cat. No.		List Price
262	4 Prong	\$0.75
162	5 Prong	.75
364	6 Prong	.75
572	Sm. 7 Prong	.75
573	Lge. 7 Prong	.75

## Phonograph or Microphone Adapters

These adapters enable you to connect a microphone or phonograph pick-up to any radio set. Place adapter under detector tube.

Cat. No.		List Price
245	4 Prong	\$1.00
299	5 Prong	1.00
247	6 Prong	1.00
246	Sm. 7 Prong	1.00
248	Lge. 7 Prong	1.00
244	8 Prong	1.00

## NEUTRALIZING AND ALIGNING TOOLS

### NEUTRALIZING WRENCH



Inside of tube is broached. If end breaks part can be cut off.

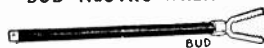
No. 254—5 1/4" long.	List Price	\$0.20
No. 255—8" long.	List Price	\$0.25
No. 256—12" long.	List Price	\$0.35

### DE LUXE ADJUSTABLE NEUTRALIZING TOOL

No metal parts. Made of high di-electric, hard rolled fibre. Screw driver slides into one end of handle.

No. 236—Adjustable. 7" to 10".	List Price	\$0.60
237—Adjustable. 11" to 17".	List Price	\$0.80

### BUD NEUTRO-WRENCH



Alligator jaw type for knurled and hex head trimmers. Metal blade screw driver at other end.

No. 285—List Price ..... \$0.40

### NEUTRALIZING SCREW DRIVER

Hard rolled fibre handle.



No.		List Price
235—No metal ends.	List Price	\$0.35
287—With metal blade.	List Price	\$0.30

### BUD BALANCING TOOL AND ATTACHMENT



Enables working in close quarters and neutralizing sets without having to pull the chassis.

No. 281—List Price ..... \$0.40

### 4-IN-1 NEUTRALIZING AND ALIGNING TOOL



No.		List Price
118		\$0.60
119M—Majestic Attachment.	List Price	\$0.15
119C—Crosley Attachment	List Price	\$0.25

# RADIO BUD PRODUCTS



## BUD SECTIONAL CABINET RELAY RACK

A new innovation in rack design! Permits building a cabinet rack to your required height without having any waste space. You can have a complete rack starting from 3 1/2" high and progressing in multiples of 1 1/4" to any desired height. Additional sections can be added at any time. A screw driver is the only tool necessary for assembling. Foundation consists of a ruggedly built base 20 1/4" x 15 3/4" x 2 1/2" high on which the side sections are mounted and a formed top cover 19 1/4" x 14 1/8" x 1/2" high.

Side wall sections are 14 1/2" deep with front and back flanges, drilled and tapped for 10-32 screw to fit both W.E. and Amateur type rack panels. Sides are louvred for ample ventilation and made in various heights to fit standard rack panels.

Back dust covers can be supplied to fully enclose cabinet and are made of cane design perforated sheet steel with re-enforced edges, for additional ventilation. All parts heavy gauge cold rolled steel finished in durable black crackle enamel, and furnished with all necessary hardware.

No.	List Price
1300—Base Assembly—Size 20 1/4" x 15 3/4" x 2 1/2" .....	\$4.50
1301—Top Cover—Size 19 1/4" x 14 1/8" x 1/2" .....	2.50

### SIDE WALL SECTIONS

Consist of two side wall sections complete with mounting brackets, bolts, nuts, etc.

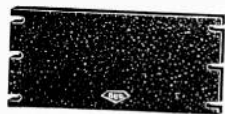
Cat. No.	Size	List Price
1302	3 1/2" x 14 1/2" in.	\$2.00
1303	5 1/4" x 14 1/2" in.	2.25
1304	7" x 14 1/2" in.	2.50
1305	8 3/4" x 14 1/2" in.	3.00
1306	10 1/2" x 14 1/2" in.	3.35
1307	12 1/4" x 14 1/2" in.	4.00
1308	14" x 14 1/2" in.	4.25
1309	15 3/4" x 14 1/2" in.	4.50
1310	17 1/2" x 14 1/2" in.	5.00
1311	19 1/4" x 14 1/2" in.	5.25
1312	21" x 14 1/2" in.	5.50

### DUST COVER BACK, SECTIONS

Slotted to fit standard rack drilling.

Cat. No.	Size	List Price
1313	3 1/2" x 19 in.	\$.75
1314	5 1/4" x 19 in.	.90
1315	7" x 19 in.	1.00
1316	8 3/4" x 19 in.	1.25
1317	10 1/2" x 19 in.	1.50
1318	12 1/4" x 19 in.	1.75
1319	14" x 19 in.	2.00
1320	15 3/4" x 19 in.	2.25
1321	17 1/2" x 19 in.	2.50
1322	19 1/4" x 19 in.	2.75
1323	21" x 19 in.	3.00

## RELAY RACK PANELS



Made of high grade steel 1/4 in. thick, 19 in. long, and finished in beautiful baked on black crackle enamel. Widths are 3/8 in. undersized for

easy fit. Supplied with amateur rack notching (first notch 7/8 in. from end) or with notches to fit W. E. rack (first notch 1/4 in. or 1 1/2 in. from end).

Indicate Type Wanted by Using "A" After Catalog Number for Amateur or "W" for Western Electric.

No.	Size	Nt. Wt.	List
No. 1250	1 3/4" x 19 in.	1.04 lbs.	\$ .90
No. 1251	3 1/2" x 19 in.	2.04 lbs.	1.00
No. 1252	5 1/4" x 19 in.	3.25 lbs.	1.15
No. 1253	7" x 19 in.	4.25 lbs.	1.20
No. 1254	8 3/4" x 19 in.	5.25 lbs.	1.60
No. 1255	10 1/2" x 19 in.	6.25 lbs.	1.95
No. 1256	12 1/4" x 19 in.	7.25 lbs.	2.30
No. 1257	14" x 19 in.	8.25 lbs.	2.65
No. 1258	15 3/4" x 19 in.	9.25 lbs.	2.95
No. 1259	17 1/2" x 19 in.	10.25 lbs.	3.30
No. 1260	19 1/4" x 19 in.	11.25 lbs.	3.60
No. 1261	21" x 19 in.	12.25 lbs.	4.00

## METER PANELS

With three and five meter holes to fit any standard relay rack. Made of 1/8 in. thick steel, 19 in. long and 5 1/4 in. high with baked on Black Crackle finish. Hole diameter 2 1/8 in. to fit 3 in. meters and 2 1/4 in. to fit 2 in. meters. Specify "A" to fit amateur rack or "W" to fit Western Electric rack.

No.	Holes	dia.	List Price
No. 440	3	2 1/4"	\$1.75
No. 441	5	2 1/4"	2.50
No. 442	3	2 1/8"	1.75
No. 443	5	2 1/8"	2.50

## BUD STANDARD RELAY RACKS

An ideal unit for that "ham" transmitter or public address system. Made to standard specifications. 1/2 inch steel channels braced with 1/2 inch steel brackets make a rigidly constructed sturdy job, and will hold units in correct alignment. These racks are intended for mounting standard 19 inch panels whose heights are multiples of 1 1/4 inches. Holes are accurately drilled and tapped for 10-32 thread. These universally drilled racks will fit either telephone or amateur type notched rack panels. Finished in black crackle enamel. Shipped knocked down with necessary bolts, nuts and washers. Easy to assemble.

No. 1263—Over-all height 38 1/2 in.—width 20 in.—depth 3 in. Base width 24 in.—depth 17 in. Panel space 31 1/2 in. Net Weight 22 lbs. List \$15.00

No. 1264—Over-all height 73 1/2 in.—width 20 in.—depth 3 in. Base width 24 in.—depth 17 in. Panel space 66 1/2 in. Net Weight 32 lbs. List \$18.50

## DELUXE RELAY RACKS

General specifications same as above except uprights are heavy duty channel iron supported by 3/4 inch thick angle iron base. Finished in black crackle enamel. Shipped knocked down with necessary bolts, nuts and washers. Easy to assemble.

No. 1265—Over-all height 72 1/2 in.—width 20 in. depth 3 in. Base width 20 in.—depth 15 in. Panel space 66 1/2 in. Net weight 90 lbs. List \$27.50

## MIDGET RELAY RACKS

Just the rack you have wanted to set on your table. It is an ideal unit for that low power transmitter, amplifier, P. A. system, or test panel.

Made of heavy gauge sheet steel. Finished in baked on black crackle enamel. Drilled to fit standard 19 in. rack panels. Light in weight and sturdily built. Shipped knocked down with necessary self tapping screws. Easy to assemble.

No. 1248—Over-all height 25 in.—width 20 in.—depth of base 10 in.—panel space 21 in. List \$6.50

No. 1249—Over-all height 32 in.—width 20 in.—depth of base 12 in.—panel space 28 in. List \$8.50

## CHASSIS MOUNTING BRACKETS



These brackets are made of heavy gauge sheet metal. Finished in black crackle enamel. They are 6 1/2 in. high to fit 7 in. or larger panels, have a 1 in. flange for mounting on panel and will fit chassis from

8 in. to 13 in. deep. Brackets fasten securely to side of chassis.

No.	Height	Length	List Price
No. 458	6 1/2"	8"	\$1.00 per pr.
No. 459	6 1/2"	11"	1.50 per pr.
No. 460	6 1/2"	13"	1.75 per pr.

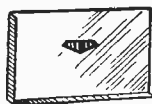
## RACK MOUNTING BRACKETS



For mounting shelves and chassis to rack panels. Are triangular in shape, so that they may be used in numerous ways. Made from heavy gauge cold rolled steel. Finished in black crackle enamel.

No.	Height	List Price
No. 1266	5 in. Brackets	\$.60 per pr.
No. 1267	7 in. Brackets	.80 per pr.
No. 1268	9 in. Brackets	1.00 per pr.

## INTER-STAGE SHIELDS



These shields are ideal for use on receiver and transmitter chassis for eliminating inter-stage coupling and isolating component parts. Made of 20 gauge electro zinc coated steel. Folded on front and bottom for fastening to panel or chassis.

No.	Height	Length	List Price
No. 1246	5 1/2 in. high, 7 in. long		\$ .30
No. 1247	5 1/2 in. high, 10 in. long		.40
No. 1245	6 1/2 in. high, 10 in. long		.45

# BUD RADIO PRODUCTS

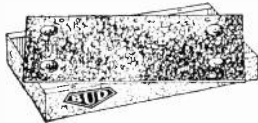
## STEEL CHASSIS BASES

Made of heavy gauge bright finish cold rolled sheet steel. Ends are folded down and spot welded. Folded over on bottom to attach bottom plate. Supplied undrilled in the following sizes.



ELECTRO ZINC COATED		BLACK CRACKLE FINISHED	
Cat. No.	List Price	Chassis Size - Inches	New List Price
776	\$.70	5 x 9 <sup>1</sup> / <sub>2</sub> x 11 <sup>1</sup> / <sub>2</sub>	788 - \$.70
1191	.80	7 x 7 x 2	789 - .80
1192	.85	7 x 9 x 2	790 - .85
1193	.95	7 x 11 x 2	791 - .95
1194	1.05	7 x 13 x 2	646 - 1.05
1198	.85	5 x 13 <sup>1</sup> / <sub>2</sub> x 2 <sup>1</sup> / <sub>2</sub>	647 - .85
1189	1.40	7 x 15 x 3	649 - 1.40
1066	1.05	4 x 17 x 3	1068 - 1.05
1199	1.25	7 x 17 x 2 <sup>1</sup> / <sub>2</sub>	648 - 1.25
1195	1.40	10 x 12 x 3	652 - 1.40
779	1.50	10 x 14 x 3	653 - 1.50
774	1.40	8 x 17 x 2	650 - 1.40
775	1.50	8 x 17 x 3	651 - 1.50
769	1.50	10 x 17 x 2	654 - 1.50
1196	1.60	10 x 17 x 3	655 - 1.60
1197	2.00	10 x 23 x 3	656 - 2.00
770	1.80	11 x 17 x 2	657 - 1.80
771	1.85	11 x 17 x 3	658 - 1.85
661	2.00	12 x 17 x 2	663 - 2.00
662	2.25	12 x 17 x 3	664 - 2.25
772	2.25	13 x 17 x 2	669 - 2.25
773	2.35	13 x 17 x 3	660 - 2.35

## CHASSIS BOTTOM PLATES



These plates make excellent dust covers and conceal the wiring and component parts in the chassis. Four formed bosses act as feet and eliminate marring or scratching of table.

Zinc Coated	Black Crackle	Bottom Plates Listed Fit the Following Size Chassis Bases	New List Price
667	680	5 x 9 <sup>1</sup> / <sub>2</sub>	\$.40
668	681	7 x 7	.45
669	682	7 x 9	.50
670	683	7 x 11	.55
671	684	7 x 13	.60
672	685	5 x 13 <sup>1</sup> / <sub>2</sub>	.45
513	516	7 x 15	.65
1067	1069	4 x 17	.50
673	686	7 x 17	.65
674	687	8 x 17	.70
675	688	10 x 12	.65
514	517	10 x 14	.75
676	689	10 x 17	.80
677	690	11 x 17	.85
678	691	12 x 17	.90
679	692	13 x 17	1.00
515	518	10 x 23	1.05

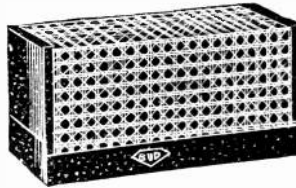
## BUD BOX TYPE SHIELDS

These shields are recommended to shield transformers, audio chokes, variable gang condensers, etc., and isolate them from other circuits in the instrument, thereby eliminating magnetic and electrostatic interference. Made from cold rolled sheet steel. All seams and corners spot welded for rigidity. Formed flanges on bottom to attach to chassis. Finished in black crackle enamel. Size 4<sup>1</sup>/<sub>2</sub> x 7<sup>1</sup>/<sub>2</sub> x 5 in. high.



No. 1244 Price \$1.10

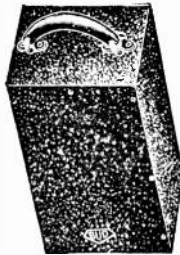
## AMPLIFIER FOUNDATION KIT



An amplifier built on these foundation kits will have real professional appearance. Chassis is formed from heavy-gauge cold-rolled steel. Corners are folded over and welded. Shield cover is sheet metal perforated in cane design. Finished in black crackle. Chassis furnished undrilled.

No.	Overall size - Inches	Chassis Height	List Price
699	5x 9 <sup>1</sup> / <sub>2</sub> x 8 <sup>1</sup> / <sub>2</sub>	2 <sup>1</sup> / <sub>2</sub> in.	\$2.35
1125	5x 13 <sup>1</sup> / <sub>2</sub> x 8 <sup>1</sup> / <sub>2</sub>	2 <sup>1</sup> / <sub>2</sub> in.	2.65
1126	7x 17 x 8 <sup>1</sup> / <sub>2</sub>	2 <sup>1</sup> / <sub>2</sub> in.	3.50
1127	10x 17 x 8 <sup>1</sup> / <sub>2</sub>	3 in.	4.15
1128	10x 12 x 8 <sup>1</sup> / <sub>2</sub>	3 in.	3.50

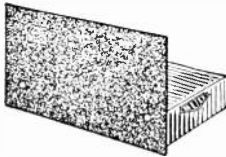
## METAL CARRYING CASES



Ideal for housing portable transceivers, amplifiers, etc. Removable front and rear panels. Ruggedly constructed yet light in overall weight. Black crackle finished. All seams and corners re-enforced and spot welded. Substantial leather carrying handle.

Cat. No.	Size - Inches	List Price
1096	W. L. x H. 6 x 7 x 12	\$2.60
1097	7 x 7 <sup>1</sup> / <sub>2</sub> x 15	3.40
1100	7 x 10 x 10	2.85

## METAL PANELS



Heavy gauge cold rolled steel, finished on both sides in beautiful black crackle enamel.

Cat. No.	Size	New List Price
1200	7 x 8 inches	\$.40
1201	7 x 10 inches	.50
1202	7 x 12 inches	.60
1203	7 x 14 inches	.65
1204	8 x 14 inches	.70
1205	8 x 16 inches	.80
1187	8 x 18 inches	.90
1188	8 x 19 inches	1.15
700	9 x 15 inches	.75

## ALUMINUM PANELS

Made of 16 gauge aluminum and have a bright polished finish. Easy to drill.

Cat. No.	Size	List Price
984	7 x 10 inches	\$.80
985	7 x 12 inches	1.00
986	7 x 14 inches	1.20
987	7 x 16 inches	1.40
988	7 x 18 inches	1.60
989	7 x 19 inches	1.65
990	7 x 21 inches	1.80
991	7 x 24 inches	2.00
992	7 x 30 inches	2.50

## METAL BOX CABINETS



Excellent for housing Monitors, oscillators, receivers, etc. Front and back panels removable. Black crackle finish.

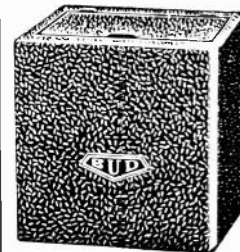
Cat. No.	Size - Inches	List Price
1098	W. L. x H. 6 x 6 x 6	\$1.15
1099	5 x 6 x 9	1.70
879	7 x 8 x 10	2.25
1124	6 x 7 x 12	2.25
880	8 x 10 x 10	2.75
881	8 x 11 x 12	3.00
882	7 x 9 x 15	3.25

## CHASSIS DECKS

These mounting bases will fit Bud metal box cabinets. Made of rust proof zinc coated steel and sturdily constructed. Can be mounted to panel any height from bottom.

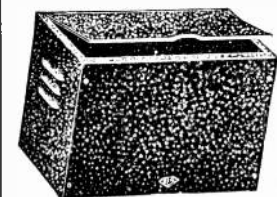
Cat. No.	Fits No.	1098 Cabinet	List Price
522	Fits No. 1098 Cabinet		\$.40
523	Fits No. 1099 Cabinet		.35
524	Fits No. 879 Cabinet		.55
525	Fits No. 1124 Cabinet		.45
526	Fits No. 880 Cabinet		.65
527	Fits No. 881 Cabinet		.75
528	Fits No. 882 Cabinet		.60

## METAL CABINETS



Made from heavy gauge, cold-rolled sheet steel. All joints are spot welded. Hinged lid. Supplied with undrilled sub-base. Black crackle finish. Back of cabinet removable.

Cat. No.	Size	List Price
870	7 <sup>1</sup> / <sub>2</sub> x 7 <sup>1</sup> / <sub>2</sub> x 7 in.	\$3.00
871	7 <sup>1</sup> / <sub>2</sub> x 10 x 7 in.	3.50
872	7 <sup>1</sup> / <sub>2</sub> x 10 x 7 in.	4.00



Made from heavy gauge sheet steel, all corners re-enforced and spot welded. Hinged lid, louvres on side. Removable front panel. Black crackle finish.

Cat. No.	Size - Inches	List Price
993	W. L. x H. 6 x 10 x 7	\$2.75
994	7 <sup>1</sup> / <sub>2</sub> x 12 x 7	3.25
995	7 <sup>1</sup> / <sub>2</sub> x 14 x 7	3.50

# BUD RADIO PRODUCTS

## SHORT WAVE PLUG-IN COIL FORMS

**MADE OF LOW LOSS  
BAKELITE**

Supplied with disc in top which permits writing in wave-length range, and makes identification positive. These forms are supplied in 4, 5, and 6 prong units to fit standard tube sockets. All sizes have eight ribs moulded on wall of coil forms which give low loss air core windings.



### GIANT COIL FORMS

2 1/4" in diameter. 3 1/4" winding space.

No.	Prong	List Price
734	4 Prong	\$0.60
735	5 Prong	.65
736	6 Prong	.70

Same as above, but threaded 12 turns per inch for space winding coils.

No.	Prong	List Price
1221	4 Prong	\$0.85
1222	5 Prong	.90
1223	6 Prong	.95

### SENIOR COIL FORMS

1 1/2" in diameter. 2 1/2" winding space.

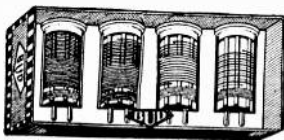
No.	Prong	List Price
125	4 Prong	\$0.30
126	5 Prong	.30
310	6 Prong	.35

### JUNIOR COIL FORMS

1 1/4" in diameter. 2 1/8" winding space.

No.	Prong	List Price
594	4 Prong	\$0.20
595	5 Prong	.25
596	6 Prong	.25

### LO-COIL KITS



#### SENIOR

Wound on 1 1/2" diameter coil forms. Covers wave-length of 16 to 200 meters when tuned with .00014 mfd. condenser. Each kit has 4 coils.

No.	Prong	Windings	List Price
222	4 Prong	2 Windings	\$2.50
918	6 Prong	3 Windings	3.20
916	5 Prong	2 Windings	3.00

Secondary tapped for electron coupled circuits.

#### JUNIOR

Wound on 1 1/4" diameter forms. Wave-length range, 11 to 210 meters with .00014 mfd. condenser. 4 coils to kit.

No.	Prong	Windings	List Price
354	4 Prong	2 Windings	\$1.85
356	6 Prong	3 Windings	2.70

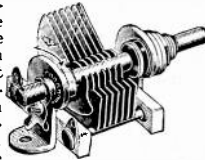
### SUPERHETERODYNE

Consists of 8 coils. 4 detector coils and 4 oscillator coils to track with I.F. transformers tuned 465 KC. Wave-length range 13 to 200 meters with .00014 mfd. condenser.

No. 397	List Price	\$5.00
---------	------------	--------

## MIDGET CONDENSERS

A superior built condenser for mid line tuning. Positive wiping contact with screw adjustment eliminates mechanical noises on high frequencies. Isolantite insulation. Soldered brass plate assemblies. Heavy aluminum end plates with closely fitted bearings for smooth operation. Carefully designed and constructed for maximum efficiency. Extended shaft from rear for ganging several units.



Cat. No.	Max. Cap. mmfd.	Min. Cap. mmfd.	Plates	List Price
926	15	3	3	\$1.15
900	20	3	3	1.15
902	35	4	5	1.25
903	50	5	7	1.35
904	80	6	11	1.55
905	100	6	14	1.85
906	140	7	19	2.00
907	150	7	21	2.10
908	200	9	27	2.30
909	250	10	33	2.45
910	325	12	43	2.90

### DUAL SPACED MIDGET CONDENSERS

Spacing between plates .060".

Cat. No.	Max. Cap. mmfd.	Min. Cap. mmfd.	List Price
565	15	4	\$1.50
897	35	6	1.55
898	50	7	2.00
899	75	8	2.50
941	100	10	3.00

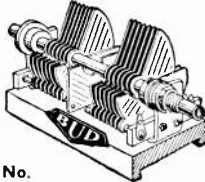
### NEUTRALIZING CONDENSERS

Cat. No.	Max. Cap. mmfd.	Air Gap	List Price
567	4	.200"	\$1.40
564	8	.180"	1.50
565	15	.060"	1.50
566	35	.095"	2.00
897	35	.060"	1.55

### BAND-SPREADING CONDENSERS

Cat. No.	Tank Cap. mmfd.	Tuning Cap. mmfd.	List Price
894	100	20	\$2.75
895	100	50	3.00
896	100	80	3.25

### DUAL MIDGET CONDENSERS



With extension shaft for ganging several units. Size of mounting base 3 5/8" long, 1 3/4" wide.

No.	List Price
911—Capacity per section, 100 mmfd.	\$3.00
912—Capacity per section, 140 mmfd.	3.50

### DOUBLE SPACED DUAL CONDENSERS

Spacing between plates .060".

No.	List Price
913—Capacity per section, 35 mmfd.	\$3.00
942—Capacity per section, 20 mmfd.	3.00

### TRANSMITTER COILS

Oscillator, Buffer Doubler combination coils to cover the amateur bands. Wound to specifications of ALL STAR Transmitter. Wound on BUD GIANT BAKELITE plug-in coil forms.

No.	Capacity	List Price
1273	160 Meter "A" Coil	\$2.50
1274	80 Meter "B" Coil	2.00
1275	40 Meter "C" Coil	2.00
1276	20 Meter "D" Coil	2.00

## BUD MIDGET CONDENSERS

These condensers are of the straight line frequency type. Panel or base mounting. Isolantite insulation. Closely fitted single end bearing for constant and definite capacity. Soldered brass plate assemblies.



Cat. No.	Max. Cap. mmfd.	Min. Cap. mmfd.	Plates	List Price
324	10	2	2	\$0.80
328	15	3	3	.85
323	20	3	3	.85
322	35	4	5	1.00
148	50	5	7	1.10
901	80	6	11	1.15
321	100	6	14	1.25
396	140	7	19	1.45
320	150	7	21	1.50

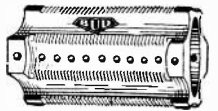
### SINGLE BEARING DUAL-SPACED CONDENSERS

Spacing between plates .060".

Cat. No.	Max. Cap. mmfd.	Min. Cap. mmfd.	List Price
327	6	2	\$0.85
311	15	4	1.10
319	35	6	1.25
312	50	7	1.40

### TRANSMITTER TANK FORMS

Made in three sizes to cover the inductance requirements of the amateur frequency spectrum. These forms are grooved for No. 10 wire or smaller and drilled with sufficient holes for wires and supports. Isotex is a special moulded low loss properties having exceptional low loss properties. All forms are glazed.



No.	List Price
383—20 or 40 meter form is grooved twenty-four turns in 4" of winding space. Size 2 1/2" O. D. x 5" long	\$1.00
384—20 or 40 meter form with supports	1.90
376—80 meter form is grooved thirty-two turns in 5" of winding space. Size 3" O. D. x 6" long	1.50
377—80 meter form with supports	2.40
393—160 meter form is grooved forty-eight turns in 6" of winding space. Size 4" O. D. x 7 1/4" long	2.00
394—160 meter form with supports	2.90

### HY-FREQUENCY CRYSTAL HOLDER

Ideal for use with transmitters operating on high frequencies (500-7000 KCS.). Will hold crystals up to 1 1/2" square and .25" thick. Housing made of moulded bakelite with nickel plated fittings. Tube prong contacts spaced 3/4" apart. Mounts in 5 or 6 prong socket.



No.	List Price
763—With tube prongs	\$1.50
762—With banana plugs	1.75

### BUD CRYSTAL HOLDER

For use with crystals covering frequencies from 500 to 4000 KCS. Made of glazed isotex (ceramic). Lapped in plates. Holds crystals 1 1/2" square. Pressure type. Moisture-proof, dust-proof.

No.	List Price
764—Banana Plug contacts	\$1.75
754—Tube Prong contacts	1.75
765—Mounting base for No. 764 and No. 762 Crystal holders	.65

# RADIO PRODUCTS

### HY-FREQUENCY R.F. CHOKES

For H.F. receivers and low powered transmitters. Wound with Isotex wire on Isotex core. Extremely low distributed capacity.

Cat. No.	Inductance	List Price
920	2.5 M.H.	\$0.50
922	5.5 M.H.	.65
923	8. M.H.	.75
924	10. M.H.	.85

### LATTICE-WOUND R.F. CHOKES

Low D.C. resistance, high impedance. Moisture proof; low distributed capacity. Wound on Isotex.

No.	M.H.	List Price	No.	M.H.	List Price
1212	2.5	\$.40	1217	16	\$.55
1213	3.4	.40	1218	30	.55
1214	5.5	.40	1219	60	.60
1215	8.	.45	1220	80	.65
1216	10.	.45			

### MAGICORE "HY-Q" R.F. CHOKES

These new metallic alloy core chokes have nearly double Q factor of air core coils. High permeability with minimum hysteresis. Wound with silk covered enamel wire.

SHIELDED		
Cat. No.	Inductance	List Price
1277	1.5 M.H.	\$0.85
1278	2.5 M.H.	.85
1279	3.4 M.H.	.90
1280	5.5 M.H.	.90
1281	8 M.H.	1.00
1282	10 M.H.	1.00
1283	16 M.H.	1.15
1284	30 M.H.	1.15
1285	60 M.H.	1.30
1286	80 M.H.	1.45
1287	125 M.H.	1.80
UNSHIELDED		
1288	1.5 M.H.	\$0.70
1289	2.5 M.H.	.70
1290	3.4 M.H.	.75
1291	5.5 M.H.	.75
1292	8 M.H.	.85
1293	10 M.H.	.85
1294	16 M.H.	1.00
1295	30 M.H.	1.00
1296	60 M.H.	1.15
1297	80 M.H.	1.30
1298	125 M.H.	1.65

### TRANSMITTER R.F. CHOKES

Exceptionally low power loss, no transmission bands. Continuous winding of six lateral wound tapered sections. Low D.C. resistance.

Ind. 2.8 MH.; 5 ohms D.C. Res.; rating 1000 M.A. ... List \$2.00

No. 568

Ind. 5.3 MH.; 12 1/2 ohms D.C. Res.; rating 500 M.A. ... List \$1.75

No. 569

5-METER INTERRUPTER COIL  
Low-frequency Oscillator in 5-meter circuits.

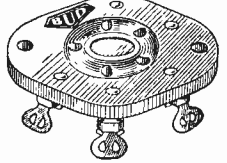
No. 452 ... List \$1.00

#### JACK NAME PLATES

For identifying input and output circuits. Polished letters on black satin background. Fit on 3/4" dia. bushings. 1 1/4" diameter.

No.	Marking	List Price
1180	Microphone	\$0.15
1181	Phono Pick Up	.15
1182	Phones	.15

### ISOTEX SOCKETS



Moisture-proof, high surface resistance. Low loss effect. Sub-panel, base-mounting. Size 2 1/4" x 1 1/8".

No.	List Price	No.	List Price
954 4 Pr.	\$.40	957 7 Sm.	\$.50
955 5 Pr.	.40	958 7 Lge.	.50
956 6 Pr.	.45	959 8 Pr.	.55

### BUD TUBE SOCKETS

Made of Bakelite  
Are constructed of the finest materials throughout, using genuine phosphor bronze contacts. Top is grooved for tube guide. Excellent for regular as well as experimental work. Used as standard equipment by manufacturers of test equipment.



#### PANEL MOUNT

No.	List Price
268 4 Prong	\$0.20
269 5 Prong	.25
270 6 Prong	.25
271 7 Prong Lge.	.25
983 7 Prong Sm.	.25
1060 5, 6, Sm. 7 Pr. Comb.	.35
1061 7 Prong Combination	.30
1062 4, 5, 6 Prong Comb.	.35
1063 8 Prong, Octal	.30

#### BUD COMBINATION BASE OR PANEL MOUNT SOCKETS

Made of Bakelite

No.	List Price
264 4 Prong	\$0.30
265 5 Prong	.30
266 6 Prong	.35
267 7 Prong (Reg.)	.40
885 7 Prong (Small)	.40

### BUD TOGGLE SWITCHES

For controlling radio sets, small motors, lamps, etc. Underwriter approved. Rated 3 amps. at 125 volts or 1 amp. at 250 volts. Supplied in nickel plated or statutory bronze finish. Made by H&H for BUD. Packed 5 to Carton.



Cat. No.	Description	Shank Length	List Price
1003	S.P.S.T.	1 1/8"	\$0.35
1004	S.P.S.T.	1 1/4"	.40
1005	S.P.S.T.	1 3/8"	.50
1006	S.P.D.T.	1 1/8"	.55
1007	D.P.S.T.	1 1/8"	.60
1008	D.P.S.T.	1 1/4"	.65
1009	D.P.D.T.	1 1/8"	.85
1010	D.P.D.T.	1 3/8"	.90

1077 Closes 3 circuits for R.C.A., etc. 1/4" .60

### BUD ROTARY SWITCHES

Positive contact rotary power switch, underwriter approved. Rated 3 amps. at 125 volts and 1 amp. at 250 volts. Copper plated steel encased, Bakelite insulation. Shafts are 1 1/8" long. Made by H&H for BUD.



Cat. No.	Description	Shank Length	List Price
499	S.P.S.T.	3/4"	\$0.40
1070	S.P.S.T.	1"	.45
1071	S.P.D.T.	3/4"	.50
1072	S.P.D.T.	1"	.60
1073	D.P.S.T.	3/4"	.75
1074	D.P.S.T.	1"	.85
1075	D.P.D.T.	3/4"	.90
1076	D.P.D.T.	1"	1.00

### PUSH BUTTON SWITCH

Two circuit non-indicating slow make and quick break momentary contact switch. One circuit is "ON" and the other is normally "OFF."

No. 743 ... Price \$0.60

### FLEXIBLE COUPLINGS

For ganging units or shaft extensions. Fit 3/4" diameter shafts.



No.	Dia.	Insulation	List Price
855	1 1/2"	Bakelite	\$0.35
845	1"	Fibre	.35
795	1 1/8"	Isotex	.45

#### High Voltage Type

Glazed Isolantite Rod Insulation

No. 741—3 1/4" long ... List \$0.90

No. 740—1 1/4" long ... List \$0.80

### JACKS

Small, compact spring brass contacts, nickel plated. Supplied with insulating washers.

No. 232—Open circuit ... \$0.25

No. 233—Single closed circ. ... \$0.30

### GIANT SOCKETS

For Transmitting Tubes  
Base made of Isotex, glazed top and sides to resist moisture. Snug fitting machined jack type contacts.

226—50 watt size ... \$1.00

227—For RK28, 803, etc. ... 1.50



### SHIELDED CABLE PLUGS AND SOCKETS

Prongs and contacts insulated in Bakelite. Shielded by metal cap. Cord grip.



#### PLUGS

No.	List Price
705 4 Prong	\$0.50
706 5 Prong	.55
707	6 Prong .55
708	7 Prong .60
709	8 Prong .65

#### SOCKETS

No.	List Price
701	4 Prong \$0.60
702	5 Prong .60
703	6 Prong .65
704	7 Prong .70
710	8 Prong .75

### BUD TUNING DIALS

For Use on Transmitters and Other Equipment

Made of heavy gauge brass, spun and chrome plated. Black numerals. Large fluted knob. Insulated from shaft.

Vernier Type—180 Deg.			
No.	Dia.	Calibra.	List Price
163	2 3/4"	0-100	\$1.25
164	2 3/4"	100-0	1.25
165	4"	0-100	1.75
166	4"	100-0	1.75
Indicator Type—180 Deg.			
711	1 3/4"	0-100	\$0.85
712	1 3/4"	100-0	.85
713	2 3/4"	0-100	1.00
714	2 3/4"	100-0	1.00
715	4"	0-100	1.50
716	4"	100-0	1.50

### DIAL PLATES

Raised polished numerals and dial divisions on black satin background. Made of tempered aluminum.

No.	Dia.	Deg.	Calibra.	List Price
1175	3"	180	0-100	\$0.25
1176	3"	180	100-0	.25
1177	2"	180	0-100	.20
1178	2"	180	100-0	.20
1179	2"	325	0-100	.20

### OSCILLATOR ETCHED NAME PLATES

High quality aluminum used. Raised polished letters on black satin finish. For transmitters, amplifiers, etc. Furnished with following inscriptions:

Oscillator	Receiver	Amplifier
Plate Volts	Send-Receive	Plate Voltage
Microphone	Power Ampl.	Off-On
Input	Neutralizer	Class "B" Mod.
Monitor	Fader	Grid Current
Send	Antenna	Crystal Osc. Plate
Selector	Key	Microphone Current
Crystal Osc.	A.C. Input	200-Ohm Input
CW-Phone	Transceiver	200-Ohm Output
200-Ohm	Speech Ampl.	500-Ohm Input
500-Ohm	Gain Control	500-Ohm Output
Tone Control	Grid	Radio
Output	Modulator	Record
Freq. Meter	Doubler	Speaker
Beat Osc.	Transmitter	List Price ... \$0.10

### EVER-READY TEST LEADS

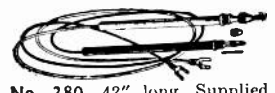
Made of the finest quality insulated flexible wire. Black lead is negative red positive.

No. 280—42" long. Supplied with spade terminals or phone tips. List Price ... \$0.50

No. 184—42" long. Removable needle point inserted into the chuck; penetrates the insulation without injury; spade or phone tip terminals. List Price ... \$0.50

No. 1841—42" long. Long fixed needle point; spade or phone tip terminals. List Price ... \$0.50

No. 621—De-Luxe Test Leads—60" long. Heavy duty with removable tips; phone tip terminals; handles are polished hard rolled fibre; extremely flexible. Continuity test tips are the chuck type. List Price ... \$1.25



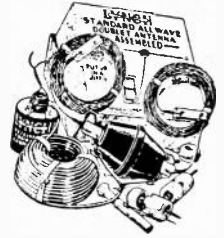
# LYNCH ALL-WAVE ANTENNA EQUIPMENT

## LYNCH ASSEMBLED HI-FI ALL WAVE ANTENNA SYSTEMS

There has been an increasing demand for a completely assembled Lynch HI-FI antenna system, due to the excellent performance of the kits which have been sold.

Two Lynch HI-FI assembled systems are now available—the "Standard" HI-FI system, which includes 50 feet of the famous Lynch Giant Killer Cable and the "Junior" HI-FI system which is identical, except for the lead-in wire, a high-grade twisted pair, and other minor details as shown in the parts list. Both outfits are guaranteed to out-perform any other antenna system, regardless of price.

Both outfits are noise-reducing on all waves, and are ready for hanging. Either type may be installed in a jiffy.



### "JUNIOR" SYSTEM

Consists of:

- 1 HI-FI Coupling System with 50-ft. Twisted Pair Transmission Line.
- 41 ft. Doublet 7/22 Copper Wire.
- 2 Commercial Type Insulators.
- 1 3-inch Emily Screw Eye.
- 2 Nail-it Knobs.
- 1 4-inch Porcelain Lead-in Tube.

- No. 1150— 50-ft. Twisted Pair Lead-in..... List \$6.75
- No. 1151—100-ft. Twisted Pair Lead-in..... List 8.25

**Note**—Above kits available without the Receiver Coupler (for sets with built-in Coupler).

- No. 1150-A—With 50-ft. Lead-in Cable..... List \$5.00
- No. 1151-A—With 100-ft. Lead-in Cable..... List 6.50

### "STANDARD" SYSTEM

Consists of:

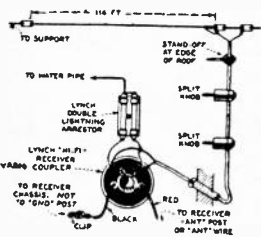
- 1 HI-FI Coupling System with 50-ft. Giant Killer Cable.
- 41 ft. Doublet, made of Heavy HI-MHO Wire.
- 2 Navy Type Insulators.
- 1 3-inch Emily Screw-Eye.
- 2 Nail-it Knobs.
- 1 4-inch Porcelain Lead-in Tube.

- No. 1003— 50-ft. Giant Killer Cable..... List \$8.50
- No. 1004—100-ft. Giant Killer Cable..... List 11.50

**Note**—Above kits available without the Receiver Coupler (for sets with built-in Coupler).

- No. 1003-A—With 50-ft. Giant Killer Cable—List \$6.75
- No. 1004-A—With 100-ft. Giant Killer Cable—List 9.75

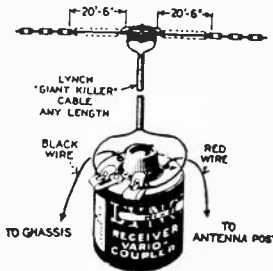
### LYNCH HI-FI "SIMPLEX" ALL-WAVE ANTENNA KIT



Recommended where plenty of space for the horizontal portion of the antenna is available. 125 feet will be necessary. This kit comprises: 125 ft. Lynch HI-MHO (heavy grade) Antenna Wire, 35 ft. Lynch Giant Killer Cable, 1 Lynch HI-FI Receiver Coupler, 3 Nail-it Knobs, 1 Porcelain Lead-in Tube, 1 Lynch Double Lightning Arrestor, and complete instructions.

- No. 1010..... List \$7.00
- No. 1011 as above, but 50 ft. Cable..... List \$8.00
- No. 1012 as above, but 100 ft. Cable..... List \$11.00

### LYNCH HI-FI ALL-WAVE "DUPLEX" COUPLING KIT



Especially suited for use where the area is limited. The total length of the antenna itself is less than 50 ft. The transmission line may be any length and many installations with lines of more than 400 ft. are giving excellent results. The standard kit comprises: 1 HI-FI Duplex Antenna Coupler, 1 HI-FI Receiver Coupler, and 50 ft. Lynch Giant Killer Cable.

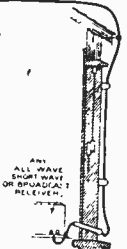
- |                                       |                   |
|---------------------------------------|-------------------|
| <b>Cat. No.</b>                       | <b>List Price</b> |
| 1001                                  | \$6.75            |
| 1002 as above, but 100 ft. Cable..... | 9.75              |

### LYNCH "GIANT-KILLER" KIT



Includes all of the fundamental material for the very latest type of antenna system and the additional units necessary for securing the results obtained from the Lynch HI-FI System may be added at any time. The standard kit includes: 35 ft. of Giant Killer Cable, 50 ft. of Lynch HI-MHO (heavy grade) Antenna Wire, 3 Lynch Commercial-type Insulators, 1 Stand-off Insulator, 2 Nail-it Knobs, 1 Porcelain Lead-in Tube, and complete instructions.

- |                 |                                 |                   |
|-----------------|---------------------------------|-------------------|
| <b>Cat. No.</b> |                                 | <b>List Price</b> |
| 1040            | 35 ft. Giant Killer Cable.....  | \$3.50            |
| 1041            | 50 ft. Giant Killer Cable.....  | 4.40              |
| 1042            | 100 ft. Giant Killer Cable..... | 7.40              |
| 1040-A          | With Booster Coupler.....       | 5.00              |
| 1041-A          | With Booster Coupler.....       | 5.90              |
| 1042-A          | With Booster Coupler.....       | 8.90              |

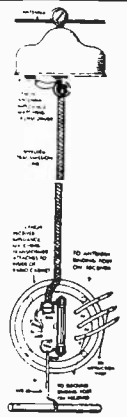


### LYNCH NO-STAT BROADCAST KIT

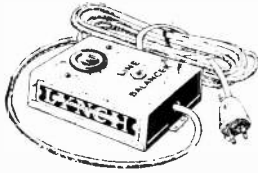
For Broadcast Reception Only

The most satisfactory antenna system for use with regular broadcast receivers (not all-wave or short-wave receivers) is the now famous Lynch NO-STAT system, which is particularly easy to install and very reasonable in price. The Lynch NO-STAT Coupling System is used in conjunction with the horizontal portion of any existing antenna. The standard kit comprises: 1 Lynch NO-STAT Antenna Coupler, 1 Lynch NO-STAT Receiver Coupler, 50 ft. of Lynch NO-STAT Shielded Transmission Line.

- |                 |                                  |
|-----------------|----------------------------------|
| <b>Cat. No.</b> | <b>List Price</b>                |
| 1050            | 50 ft. NO-STAT Cable..... \$6.00 |
| 1051            | 75 ft. NO-STAT Cable..... 6.50   |
| 1052            | 100 ft. NO-STAT Cable..... 7.00  |



# LYNCH ALL-WAVE ANTENNA EQUIPMENT



## LYNCH Filteradio

A filter for eliminating line noises. May be used with any type of line, whether A.C. or D.C., or a supply in which a motor-generator or inverter is used. Good for any line that does not exceed 250 volts.

Maximum current rating 10 amps. Shipping Weight 4 lbs.  
**No. 1750** ..... **List Price \$5.00**



## Booster Coupler

Increases signal when used with any doubler system in which antenna transformer is not used. Shpg. Wt. 2 lbs.

**No. 1706** ..... **List Price \$1.50**



## LYNCH "Giant-Killer" Cable

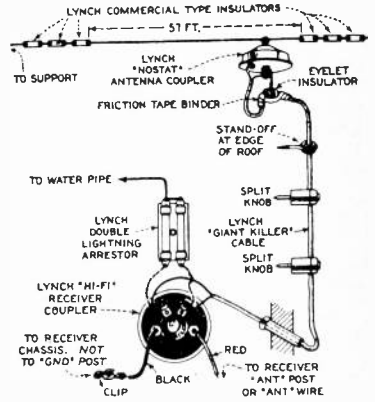
### Improved Type

Low-loss, noise-reducing lead-in cable with heavy rubber covering. For receivers and transmitters up to 500 watts. Shpg. Wt., 50-ft. coil, 2 lbs.

**No. 1060** 50-ft. coil ..... **List Price \$3.00**  
**No. 1061** 100-ft. coil ..... " " **6.00**  
**List Price Per Ft.** ..... **.06**

## LYNCH "Marconi Type" All-Wave System

The kit includes all of the necessary equipment for making a quarter-wave antenna with a noise-reducing lead-in and suitable impedance matching. The standard kit includes: 1 Lynch No-Stat Antenna Coupler, 1 Lynch HI-FI Receiver Coupler, 60 ft. of Lynch HI-MHO (heavy grade) Antenna Wire, 6 Lynch Navy Standard Insulators, 1 Eyelet Insulator, 1 Stand-off Insulator, 2 Nail-it Knobs, 1 Porcelain Lead-in Tube and 1 Lynch Double Lightning Arrester, also complete instructions.



**No. 1020** 35 ft. Giant Killer Cable ... **List Price \$7.90**  
**No. 1021** 50 ft. Giant Killer Cable ... " " **8.80**  
**No. 1022** 100 ft. Giant Killer Cable ... " " **11.80**

## Antenna Insulators



Extremely low loss insulators made to meet high standards.

**No. 1330** Kit of 8. Shpg. Wt. 3 lbs.  
**List Price, Commercial Type** ... **\$1.25**  
**No. 1320** Kit of 8. Shpg. Wt. 3 lbs.  
**List Price, Navy Standard** ... **2.00**

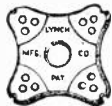
## Transposition Blocks

High resistance with minimum electrical losses. For receiving and transmitting aeri-als. Light in weight, yet durable.



**No. 1300** Kit of 10  
**List Price** ..... **\$2.75**

## Cage Aerial Spreaders



Made of a good grade ceramic material that is both rugged and light in weight. For receiving and transmitting. Shpg. Wt. 2 lbs.

**No. 1310** Kit of 10.  
**List Price** ..... **\$2.75**

## 3-Hole Insulators



Made of fine quality ceramic material for minimum leakage and electrical loss. Resists moisture, thereby reducing antenna losses. 3" (long)x1/2"x1/2". All holes approximately 1" apart. Glazed finish.

**No. 1331** ..... **List Price Each \$0.10**

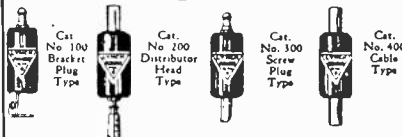
## LYNCH Auto Super Filtastat



Takes the place of all suppressors. Easy to install, more economical, and furnishes greater efficiency. When the Lynch Super-Filtastat is installed, no more care is needed to eliminate noise than with carbon suppressors. The procedure is the same. For ease in installing both cable and distributor types are available.

The Lynch Super-Filtastat, which is a single 350-ohm unit, works better than 180,000 ohms of ordinary suppressors.  
**No. 1800** Super Filtastat Distributor Type ..... **List Price \$2.75**  
**No. 1801** Super-Filtastat Cable Type ..... **2.75**

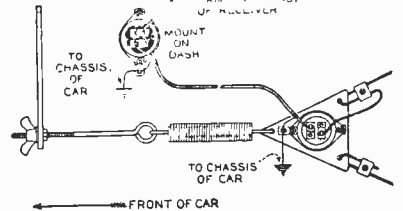
## LYNCH Filtastat Ignition Filters



A new wire-wound inductance unit of low resistance (250 ohms), designed to replace the old carbon-type suppressors (15,000 to 25,000 ohms). For installation on each sparkplug and distributor head where desired and on cars where Lynch Super-Filtastats cannot be used.

**List Price, Each** ..... **\$0.55**

## LYNCH Noise-Free Auto Antenna Systems



**KIT A-1**—Consists of 25 ft. of 42 strand copper wire (1/8" diam.), 2 rear axle assemblies, 1 fly-wheel housing insulator assembly with tension adjuster, 10 ft. of lead-in wire and all necessary connections. Shpg. Wt. 4 lbs.  
**List Price** ..... **\$3.50**  
**KIT A-2**—Contains 1 Lynch auto antenna impedance matching transformer, 1 receiver impedance matching transformer and 10 feet of Lynch Nostat shielded transmission line. Wt. 2 lbs.  
**List Price** ..... **\$5.00**  
**KIT A-3**—Complete under-car installation. Contains all material of above kits. Shpg. Wt. 4 lbs.  
**List Price** ..... **\$8.00**

## LYNCH Arrestors



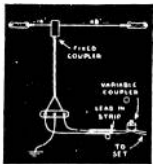
Every radio installation should be provided with a lightning arrester and a suitable installation should have an arrester at the location of each receiver.

**No. 1340** Lightning Arrestor ..... **List Price \$0.50**  
**1350** Single Lightning Arrestor with Mount ..... **.75**  
**1360** Double Lightning Arrestor with Mount ..... **1.25**

## BELDEN ALL-WAVE ANTENNA SYSTEMS



Covering a wide range of receivers, reception conditions, and installation problems, extensive research made by Belden engineers has resulted in the recommendation of 4 carefully designed and distinctly different antenna systems. For ease of erection, efficiency of signal pick-up, and the suppression of "man-made" interference, one or the other of these systems will be found unsurpassed at practically any location.

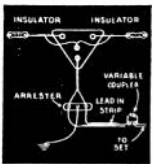


**8906**—In this antenna system, the short leg responding to the higher frequencies is balanced against the long leg having resonant peaks which complement those of the short leg. A balancing coupler at the junction of the lead-in and aerial matches the antenna to the characteristic surge impedance of the line, which is reflected in the balanced coupler at the receiver. A variable capacity in the secondary circuit of the receiving coupler permits accurate matching of the antenna signal to the receiving circuit. A switch on this coupler converts the antenna to a conventional "T" type for broadcast reception. The twisted pair lead-in largely cancels the pick-up of unwanted interference. The shape of this antenna facilitates running it between a house and a single pole or adjoining building, with the advantage of a short lead-in. Completely assembled. Packed in display carton. Contains:

- 1—18' Coil 7x24 Beldenamel Aerial Wire
- 1—16' Coil 7x21 Beldenamel Aerial Wire
- 1—75' Coil Twisted Pair Lead-in 8834
- 1—25' Coil Twisted Pair Interior Lead-in Wire
- 1—Antenna Balancing Coupler
- 1—25' Coil Single Conductor Ground Wire 818
- 6—Insulated Staples
- 2—6" Stand-off Insulators

- 1—Type "C" Ground Clamp 8897
- 2—Porcelain Nail-on Knobs
- 2—Glass Insulators 8814
- 1—Double Lead-in Strip 8813
- 1—Doublet Lightning Arrester 8950
- 1—All-Wave Receiver Variable Coupler 8919
- 1—Instruction Sheet

**LIST PRICE \$7.00**

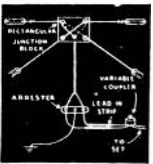


**8917**—Belden All-Wave Doublet Antenna System. A doublet type antenna is the accepted standard for all-wave reception with modern receivers. This twisted pair untuned transmission line (lead-in) offers the greatest freedom from ground level interference. When installed according to instructions, this set will permit any short-wave or all-wave receiver to function at its best. A switch in the special Belden coupler employed with this doublet converts it to a conventional "T" antenna on broadcast frequencies. Completely assembled in display carton. Contains:

- 2—37' Coils 7x24 Beldenamel Aerial Wire
- 1—75' Coil Twisted Pair Lead-in 8834
- 1—25' Coil Twisted Pair Interior Lead-in Wire
- 1—Triangular Cross-over Junction Block
- 1—25' Coil Single Conductor Ground Wire 818
- 6—Insulated Staples
- 2—6" Stand-off Insulators

- 1—Type "C" Ground Clamp 8897
- 2—Porcelain Nail-on Knobs
- 2—Glass Insulators 8814
- 1—Double Lead-in Strip 8813
- 1—Doublet Lightning Arrester 8950
- 1—All-Wave Receiver Variable Coupler 8919
- 1—Instruction Sheet

**LIST PRICE \$6.70**



**8912**—Belden Double Doublet Antenna System. The all-wave double doublet was developed with two primary considerations: first, to reduce the pick-up of "man-made" static and, second, to secure a uniform signal response over the short wave and broadcast channels. Where local conditions will permit its installation with sufficient height to clear surrounding objects, better results may be obtained than with the ordinary type doublet. Complete instructions accompany each system. Aerial and transmission line assembled. Packed in display carton. Contains:

- 2—39' Coils 7x24 Beldenamel Aerial Wire
- 2—17' Coils 7x24 Beldenamel Aerial Wire
- 1—75' Coil Twisted Pair Lead-in 8834
- 1—25' Coil Twisted Pair Interior Lead-in
- 1—25' Coil Single Conductor Ground Wire 818
- 1—Rectangular Cross-over Junction Block
- 6—Insulated Staples
- 4—Glass Insulators 8814

- 3—6" Stand-off Insulators
- 2—Porcelain Nail-on Knobs
- 1—Type "C" Ground Clamp 8897
- 1—Doublet Lightning Arrester 8950
- 1—Double Lead-in Strip 8813
- 1—All-Wave Receiver Variable Coupler 8919
- 1—Instruction Sheet

**LIST PRICE \$6.00**



**8914**—Belden All-Wave Junior Aerial Kit complete, unassembled. Provides excellent reception on broadcast and short-wave bands. Also suitable for amateur transmitters up to 50 watts where maximum radiation and low losses are most important. Each arm of doublet should be cut to a length in feet equal to 0.39 times the wave length in meters to which transmitter is tuned. Unassembled. Contains:

- 2—50' Coils 14 Solid Beldenamel Aerial Wire
- 1—50' Coil Twisted Pair Lead-in Wire 8824
- 3—3" Glass Insulators 8814

- 2—Porcelain Nail-on Knobs
- 2—Screw-eyes

**LIST PRICE \$2.00**

### BROADCAST KITS — These Kits Are Unexcelled for Broadcast Reception

**8902**—Beldenamel 75-ft. Aerial Kit contains:

- 1—75' Coil 7x22 Beldenamel 8820
- 1—35' Coil Rubber Lead-in Wire 8852
- 1—Belden Arrester 8896

- 1—12" Belden Lead-in Strip 8890
- 1—Type "C" Belden Ground Clamp 8897
- 2—3" Glass Insulators 8814

- 2—Porcelain Nail-on Knobs
- 2—Galvanized Screw-eyes
- 1—Instruction Sheet

**LIST PRICE \$1.70**

**8904**—Belden 75-ft. Bare Copper Aerial Kit.

Contains 75' 7x22 Bare Copper Aerial 830; otherwise same as 8902.

**LIST PRICE \$1.55**

**8908**—Belden 75-ft. Bare Copper Aerial Kit contains:

- 1—5' Coil 7x21 Bare Copper Aerial 830
- 1—25' Coil 18, Stranded Rubber Lead-in Wire
- 1—Belden Arrester 8896

- 1—Type "C" Belden Ground Clamp 8897
- 1—12" Belden Lead-in Strip 8890
- 2—Porcelain Insulators

- 2—Porcelain Nail-on Knobs
- 1—Instruction Sheet

**LIST PRICE \$1.35**

**8909**—Belden Aerial Kit

Contains 75' 7x24 Bare Copper Aerial 840; otherwise same as 8908.

**LIST PRICE \$1.20**

**8910**—Belden Aerial Kit

Contains 75' 7x26 Bare Copper Aerial 800; otherwise same as 8908.

**LIST PRICE \$1.10**

**8905**—Belden Aerial Kit contains:

- 1—57' Coil 7x26 Bare Copper Aerial 859
- 1—25' Coil 18 Solid Rubber Lead-in Wire
- 1—Lightning Arrester 8896

- 1—Lead in Strip 8890
- 1—Type "C" Ground Clamp 8897
- 2—Porcelain Nail-on Knobs

- 2—Porcelain Insulators
- 1—Instruction Sheet

**LIST PRICE 95c**





**ANTENNA  
SYSTEMS**

# Belden

**WIRE  
and  
CABLE**

## AERIAL WIRE



\*Note: Solid Beldenamel 10, 12, and 14 is widely used as the modern bus wire in wiring of amateur transmitters and winding inductances for high frequency circuits. Its low "skin" effect, ductility, and extremely flexible enamel insulation have long made it the choice of leading amateurs as hook-up, as well as aerial wire.

Stranded Beldenamel				List	Stranded Tinned Copper				List	Stranded Bare Copper (Cont.)				List
8820	75 ft.	7x22	in carton	\$ .65	835	100 ft.	7x22		\$ .75	870	75 ft.	7x23		\$ .40
8821	100 ft.	7x22	in carton	.85	836	1000 ft.	7x22	on spool	7.50	871	100 ft.	7x23		.55
8822	150 ft.	7x22	in carton	1.25	844	100 ft.	7x24		.55	872	1000 ft.	7x23	on spool	5.50
8823	1000 ft.	7x22	on spool	8.20	845	1000 ft.	7x24	on spool	5.50	843	50 ft.	7x24		.25
8824	1000 ft.	7x20	on spool	15.80	Stranded Bare Copper				840	75 ft.	7x24		.35	
8825	100 ft.	7x20	in carton	1.60					820	1000 ft.	7x20	on spool	10.80	841
Solid Beldenamel*					829	50 ft.	7x22		.35	842	1000 ft.	7x24	on spool	4.50
8826	1000 ft.	10	on spool	15.00	830	75 ft.	7x22		.50	859	50 ft.	7x26		.20
8827	1000 ft.	12	on spool	9.90	831	100 ft.	7x22		.70	860	75 ft.	7x26		.25
8828	100 ft.	12	in carton	1.05	832	1000 ft.	7x22	on spool	6.70	862	1000 ft.	7x26	on spool	3.35
8829	100 ft.	14	in carton	.65	873	50 ft.	7x23		.30					
8832	1000 ft.	14	on spool	6.40										

### All-Rubber Lead-in and Ground Wire

All-Rubber Lead-in Wire consists of 7 strands of tinned copper insulated with special durable finish rubber compound. It is easily stripped from the wires, leaving the conductor clean and ready for quick splicing and easy soldering.



8850	50 ft.	14-3/64"	wall in carton	.85
8851	250 ft.	14-3/64"	wall on spool	4.10
8852	50 ft.	16-1/32"	wall in carton	.50
8853	250 ft.	16-1/32"	wall on spool	2.15
816	500 ft.	16-1/32"	wall on spool	4.05
812	1000 ft.	16-1/32"	wall on spool	7.90
817	100 ft.	18-1/32"	wall on spool	.90
818	500 ft.	18-1/32"	wall on spool	3.35
814	1000 ft.	18-1/32"	wall on spool	6.45
819	100 ft.	18-1/32"	wall on spool	.75
809	100 ft.	18 solid tinned 1/32"	rubber wall on spool	.70
808	500 ft.	18 solid tinned 1/32"	rubber wall on spool	3.00

### New! Belden "Long Life" Duprene Sheathed Lead-in

Size 16 tinned, stranded wire with 1/32" wall of special Belden Duprene compound. (D)uprene is Du Pont's new heat, oil, and age resisting synthetic rubber.)

887	100-ft. spool	1.55
888	500-ft. spool	7.30



### Belden Shielded Lead-in Wire

Standard Belden All-Rubber Lead-in Wire equipped with over-all shield of fine mesh tinned copper. Use with line matching transformers or auto-transformers between antenna and receiver.

8856	50 ft.—14-4/64"	rubber wall in carton	1.80
8854	250 ft.—14-4/64"	rubber wall on spool	8.50
8894	50 ft.—16-1/32"	rubber wall in carton	1.15
8895	250 ft.—16-1/32"	rubber wall on spool	6.00
8858	250 ft.—16-4/64"	rubber wall on spool	6.60

### Belden Twisted Lead-in Wire



Doublet style twisted lead-in designed for low impedance transmission line coupling between antenna system and receiver. 8834 and 8839 consist of two conductors size 20 (10x30 tinned), each with paper wrap and 1/32" wall. Color coded, with over-all braid of black cotton, weatherproofed.

8834	80-ft. coil	1.65
8839	500-ft. spool	10.40
8841	100-ft. spool, Low loss, transmission line, 19 solid Belden-amel. Intended for low power amateur transmitters and for antenna systems operating between 15 and 200 meters, surge impedance 93 ohms.	9.60

## HOOK-UP WIRE — PLAIN AND SPECIAL

Flexible colorrubber hook-up wire—1/64" wall of colored rubber (natural, green, blue, red, brown, or yellow).

8880	18 (16x30 tinned)	25 ft.	1.30
8882	18 (16x30 tinned)	100 ft.	.85
8881	18 (16x30 tinned)	1000 ft.	6.45

8881 furnished in natural, brown or red only. Especially suitable for power pack, audio amplifier, and plate circuits where high voltage insulation is the requirement.

Easy-slip back insulation. With cotton wrap and .010" wall of rubber, colored braid, lacquered. Furnished in green, blue, red, yellow, or black.

8884	20 Solid tinned	25 ft.	.31
8886	20 Solid tinned	100 ft.	.95
8883	20 Solid tinned	1000 ft.	7.30

This is the most popular wire for use by radio servicemen because of the time saving effected by the convenient push-back insulation.

Easy-slip back insulation. Consists of double wrap of Celanese; colored cotton braid lacquered. Furnished in green, blue, red, yellow, or black.

8940	20 Solid tinned	25 ft.	.35
8967	20 Solid tinned	100 ft.	.95
8941	20 Solid tinned	1000 ft.	.80

Flexible push-back wire for auto-radio chassis wiring.

Construction same as 8940. Same colors.

8942	20 (10x30 tinned)	25 ft.	.35
8968	20 (10x30 tinned)	100 ft.	1.00
8943	20 (10x30 tinned)	1000 ft.	8.85

Intended for use in wiring cathode heater on filament circuits where currents in the order of 3 to 8 amperes must be carried with negligible voltage drop.

Construction same as 8940. Same colors.

8944	18 Solid tinned	25 ft.	.35
8978	18 Solid tinned	100 ft.	1.05
8945	18 Solid tinned	1000 ft.	9.10

For portable and auto-radio filament circuit wiring.

Construction same as 8940. Same colors.

8946	18 (16x30 tinned)	25 ft.	.40
8979	18 (16x30 tinned)	100 ft.	1.15
8947	18 (16x30 tinned)	1000 ft.	11.00

Heavy duty push-back wire for use in filament circuits of transmitters, large amplifiers, or multi-tube receivers.

Filament lead wire. Double wrap of Celanese; colored cotton braid lacquered. Red or black.

8938	14 (41x30 tinned)	25 ft.	.65
8769	14 (41x30 tinned)	100 ft.	2.04
8939	14 (41x30 tinned)	500 ft.	9.60

Heavy duty hook-up wire for power transformers and contact sets, where high heat may be encountered. Also used for condenser leads.

Double wrap varnished cambrle tape, colored cotton braid, lacquered. Green, blue, red, yellow, or black.

8880	20 (10x30 tinned)	25 ft.	.45
8981	20 (10x30 tinned)	100 ft.	1.20
8982	20 (10x30 tinned)	1000 ft.	11.00

Shielded plate or grid wires in many compact receivers and amplifiers are essential to reduce stray coupling and feed-back. This fine mesh shielded rubber insulated wire is recommended.

1/64" rubber with over-all tinned copper shield.

8885	18 (16x30 tinned)	100 ft.	1.70
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## ARRESTERS, LEAD-IN STRIPS, GROUND CLAMPS AND COUPLERS



- 8950—Large Belden Porcelain Air Gap Type Doublet Arrestor. List .35 ea.
- 8896—Belden Standard Size Bakelite Resistor Type Arrestor designed to effectively dissipate destructive charges induced in the aerial system. Listed as standard by Underwriters. Furnished with \$100.00 guarantee. Complete with wood screws in carton. List .25 ea.
- 8891—Belden Large Size Arrestor; otherwise like 8896. List .50 ea.
- 8811—15 in. Single Lead-in Strip, tough rubber weatherproof insulation. Clips soldered on both ends. Packed in individual carton. List .15 ea.
- 8890—12 in. Single Lead-in Strip with tough rubber weatherproof insulation. Clips soldered on both ends. 25 in carton. List .10 ea.
- 8812—12 in. Single Lead-in Strip. Lacquered braid, weatherproof insulation, and screw type connections. 25 in carton. List .10 ea.
- 8813—12 in. Double Lead-in Strip. Lacquered braid, weatherproof insulation, and screw type connections. 10 in carton. List .25 ea.
- 8814—Belden Glass Insulators. Sturdy, 3 in. over-all length, constructed with fins to extend path of discharge, as well as to provide added strength. Two in carton. List .20 pr.
- 8852—Belden Biter Type Ground Clamp. 8 1/4 in. long. Packed 25 in carton. List .15 ea.
- 8897—Belden "C" Type Ground Clamp. Fits pipe up to 1 1/4 in. in diameter. Packed 25 in carton. List .15 ea.
- 8919—Belden All-Wave Receiver Variable Coupler makes it possible to match the doublet antenna to all broadcast and short-wave receivers. A switch converts doublet to a conventional "T" antenna on broadcast frequencies. In individual cartons. List \$2.15 ea.



**RUBBER SHEATHED SHIELDED MICROPHONE CABLE**



This cable is designed especially for the rough use accorded flexible weatherproof microphone cables used with portable public address and broadcast pick-up systems outdoors or on stages. In the descriptions which follow, each type of cable has specific applications, although it may be used for other purposes. It is recommended that those applications specified be followed as closely as possible; e.g., low capacity is an extremely important factor in 1 or 2 conductor cable for crystal microphones which Belden accomplishes with special

For ribbon and crystal microphones within 50 feet of a high gain amplifier, single-button carbon microphones, and low impedance transmission lines up to 1000 feet.

Number	Con-ductors	Length in Ft. on a Spool	Outside Dimen. of Cable	List
8924	1	100	.250"	\$ 5.40
8951	1	1000	.250"	52.20 M'

For single or multiple cell crystal microphones, photo-electric cells, and dual ribbon microphone circuits, employing the shield as a common conductor. This wire has exceptionally low capacity, hence, offers the least attenuation of high frequencies in crystal and ribbon microphone circuits.

8948	2	100	.350"	\$10.55
8949	2	500	.350"	105.51 M'
8952	2	1000	.350"	108.00 M'

For double-button carbon microphone circuits, using the shield as the grounded or diaphragm connection, and for low impedance, 50 to 500-ohm transmission lines. Excellent for coupling a pre-amplifier to a power amplifier at any distance up to 2000 feet, employing the shield as a ground to prevent pick up of transient interference. This is a light, durable cable of good quality.

Number	Con-ductors	Length in Ft. on a Spool	Outside Dimen. of Cable	List
8877	2	100	.280"	\$ 6.70
8878	2	500	.280"	67.50 M'
8879	2	1000	.280"	69.50 M'

For double-button carbon microphones feeding a mixer panel or circuits in which the diaphragm of the carbon microphone must be above ground potential, yet shielded from transient fields.

8874	3	100	.280"	\$ 7.20
8925	3	500	.280"	72.00 M'
8926	2	1000	.280"	74.40 M'

wall of low capacitance high insulation resistance rubber. Low capacity is relatively unimportant in carbon microphone circuits or low impedance transmission lines. Belden Shielded Microphone Cable is the established standard of quality, offering to its users the maximum service and highest efficiency in microphone circuits. Number of conductors does not include the shield which may be used as a conductor.

For electro-dynamic microphones requiring a d-c field supply and a transmission line in the same cable. Also used for remote control circuits in conjunction with microphone transmission lines.

Number	Con-ductors	Length in Ft. on a Spool	Outside Dimen. of Cable	List
8846	4	100	.345"	\$ 9.10
8845	4	500	.345"	93.60 M'

Extensively used for condenser microphone transmission line and power supply to microphone head amplifier.

8928	5	100	.390"	\$11.00
8934	5	500	.390"	113.80 M'

For condenser microphone circuit with remote control switch at the microphone or pilot light at microphone.

8847	6	100	.430"	\$12.95
8848	6	500	.430"	134.40 M'

Popular as an acid resisting analyzer cable with au'o-radio test instruments.

8927	7	100	.430"	\$14.15
8933	7	250	.430"	146.40 M'

**MULTIPLE CONDUCTOR CABLE**



**All-Rubber Cord**—This is the popular Belden parallel all-rubber lamp cord advertised extensively to relieve "Corditis." Supplied in brown. Use it to replace frayed receiver cords, extensions of supply outlets, and for test equipment requiring power line connection.

No.	No. Cond.	Length Spool	Specifications Individual Wires	O.D.	List
8860	2	100	2, 18 (41x34 bare) cotton	.125"x.230"	\$ 2.40

Cable Specifications  
Parallel All-Rubber



**Glazed Cotton Multiple Conductor Cable**—For permanent installation of speakers, remote control equipment, and multiple circuit, 500-ohm transmission lines. Cables with 2 No. 16 are provided for use where high current must be carried with a low potential drop. Modern metal tube analyzer cables may be assembled with the 8 or 9-conductor cable.

8953	3	100	20 (10x30 tinned) paper wrap—1/64" rubber wall	.225"	\$ 4.30
8889	4	100	with color coded glazed cotton braid lacquered	.275"	5.40
8984	4	100	2, 16 (26x30 tinned)	.300"	6.00
8855	5	100	5, 20 (10x30 tinned)	.300"	6.50

Brown glazed cotton braid over-all

All with paper wrap and 1/64 in. rubber wall with color coded glazed cotton braid lacquered

Construction same as 8889. Cabled with fillers for roundness and flexibility—brown glazed cotton braid over-all

8985*	5	100	2, 16 (26x30 tinned)	.325"	\$ 7.90
			3, 20 (10x30 tinned)		
8956*	6	100	2, 16 (26x30 tinned)	.350"	9.00
			4, 20 (10x30 tinned)		
8857*	7	100	2, 16 (26x30 tinned)	.380"	10.30
			5, 20 (10x30 tinned)		
8958*	8	100	2, 16 (26x30 tinned)	.400"	11.40
			6, 20 (10x30 tinned)		
8859*	9	100	2, 16 (26x30 tinned)	.430"	13.45
			7, 20 (10x30 tinned)		

\*Construction same as 8855

**Rubber Sheathed Multiple Conductor Cable** Especially suitable for the new permanent magnetic dynamic speakers and long parallel circuits of magnetic speakers.

No.	Length No. Cond. Spool	Specifications Individual Wires	O.D.	List
8972	2 250	18 (41x34 bare) cotton serve, 1/64" rubber wall, color coded	.245"	\$ 9.60

Cabled with fillers—wrap of cotton—rubber sheath over-all For electro-dynamic speakers in which one audio circuit serves also as the return lead of the field supply and for speakers with a center-tapped input transformer requiring a three-wire conductor.

8973	3 250		.265"	\$12.95
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Construction same as 8972

8974	4 250	2, 16 (26x30 tinned)	.300"	\$16.05
		2, 20 (10x30 tinned)		

Construction same as 8972

8975	5 250	2, 16 (26x30 tinned)	.350"	\$20.40
		3, 20 (10x30 tinned)		

**Shielded Multiple Conductor Cable**—For temporary indoor installations of low impedance or carbon microphone transmission circuits. The small outside diameter of this wire makes it convenient to install. The close mesh shield effectively prevents pick-up of hum or transient impulses from nearby electrical equipment.

20 (10x30 tinned), paper wrap, 1/64 in. rubber wall, glazed cotton braid lacquered color coded. Conductors cabled with tinned copper shield over-all.

8962	2 100		.215"	\$ 4.45
8960	2 500		.215"	44.40 M'
8963	3 100		.230"	5.90
8961	3 500		.230"	58.80 M'
8964	4 100		.260"	7.20

For permanent installation of low impedance audio transmission lines (speech input cable) preceding a power amplifier. 19 solid Beldenamel with 2 serves cotton, color coded with soft cotton braid, waxed. Conductors twisted with tinned copper shield over-all

8965	2 100		.165"	\$ 3.70
8966	2 500		.165"	34.80 M'

**MAGNET WIRE**



A special feature of Belden Magnet Wire for the radio trade is its special put-up on small size metal spools, which are encased in attractive metal protective sleeves—an excellent package for the serviceman or amateur set builder. Belden Magnet Wire is uniform in gauge throughout its entire length, carefully inspected, and wound in one continuous length on the spool.

Size	Beldenamel		Double Cotton Covered		Double Silk Covered	
	1/4 Lb. Spool	1/2 Lb. Spool	1/4 Lb. Spool	1/2 Lb. Spool	1/4 Lb. Spool	1/2 Lb. Spool
14	19 ft.	39 ft.	19 ft.	39 ft.		
16	30 ft.	60 ft.	30 ft.	60 ft.		
18	50 ft.	100 ft.	50 ft.	95 ft.	50 ft.	100 ft.
20	80 ft.	160 ft.	75 ft.	150 ft.	80 ft.	160 ft.
22	125 ft.	250 ft.	115 ft.	235 ft.	125 ft.	250 ft.
24	200 ft.	400 ft.	180 ft.	360 ft.	195 ft.	395 ft.
26	315 ft.	635 ft.	280 ft.	560 ft.	310 ft.	620 ft.
28	505 ft.	1010 ft.	430 ft.	860 ft.	490 ft.	980 ft.
30	805 ft.	1610 ft.	645 ft.	1295 ft.	765 ft.	1535 ft.
32	1275 ft.	2550 ft.	965 ft.	1930 ft.	1190 ft.	2380 ft.
34	2030 ft.	4065 ft.	1350 ft.	2700 ft.	1785 ft.	3570 ft.
36	3220 ft.	6440 ft.	1675 ft.	3355 ft.	2685 ft.	5370 ft.
38	5120 ft.	10245 ft.				
40	8140 ft.	16285 ft.				

8887—Belden Litz Wire—100-ft. spool, 20x38 stranded Belden-amel with double wrap of green silk.

**LEAD WIRE FOR TEST PRODS**



Extra flexible lead wire 18 (65x36 tinned copper with wrap of flexible colored "Cellophane"), 3/64 in. wall of special durable rubber insulation. Furnished in red or black.

8809—Seven feet each color 8899 wound parallel on sleeve spool. Ideal for replacing short lengths furnished with present test equipment, permitting reaching into chassis when tester is placed on floor.....List \$ .40

8899—100 feet, red or black, on spool.....List \$1.80

**FLEXIBLE INDOOR AERIAL WIRE**



Specially designed for midget receivers. 8840—20 Flexible Indoor Aerial Wire made up of 60 strands 38 soft and 5 strands 36 Hard Drawn Bare Copper Wire twisted, cotton wrap, and brown rayon braid, 100-ft. spool List \$1.00

8842—20 Flexible Indoor Aerial Wire made up of 60 strands 38 soft and 5 strands 36 Hard Drawn Bare Copper Wire with a double wrap of brown soft cotton, 60-ft. spool.....List \$ .45

8843—1000-ft. spool. Otherwise same as 8842. ....List \$5.40

**ELECTRICAL CORDS**



A modern power supply cord for replacement on radios, lamps, fans, etc. Consists of the new small Belden Soft Rubber Plug and 7 1/2-ft. Belden No-Fray Cord in green, grey, ivory, black, or brown—stripped, tinned, easy to attach.

1725—10 Belden All-Rubber Lamp Cords in carton (specify color). List \$ .30

1737—Belden Soldering Iron Replacement Cord. Special heavy duty cord with "Long-Wear" twine braid, Belden Unbreakable Soft Rubber Plug. ....List \$ .40

**BELDEN HEAD PHONE CORDS**



Made with special extra flexible tinsel conductors, over-all durable mercerized cotton braid. "Y" arm sections 15-in. coupled in series.

8872—5-Ft. Head Phone Set—pin tips all ends. List \$ .70

8873—5-Ft. Head Phone Set—spade tips on four phone ends, pin tips plug end. ....List \$ .70

8870—5-Ft. Magnetic Speaker Cord—pin tips both ends List \$ .45

8871—5-Ft. Magnetic Speaker Cord—pin tips one end, spade tips opposite end .....List \$ .45

BELDENAMEL MAGNET WIRE			DOUBLE COTTON WHITE MAGNET WIRE			DOUBLE SILK WHITE MAGNET WIRE		
Size	Spools		Size	Spools		Size	Spools	
	1/4 Lb. List Pr.	1/2 Lb. List Pr.		1/4 Lb. List Pr.	1/2 Lb. List Pr.		1/4 Lb. List Pr.	1/2 Lb. List Pr.
14	\$0.29	\$0.46	14	\$0.31	\$0.50	14		
16	.29	.46	16	.31	.50	16		
18	.29	.46	18	.34	.55	18	\$0.44	\$0.80
20	.29	.46	20	.36	.59	20	.46	.84
22	.31	.46	22	.40	.65	22	.49	.94
24	.31	.46	24	.44	.75	24	.56	1.06
26	.33	.50	26	.52	.85	26	.66	1.22
28	.35	.55	28	.60	1.05	28	.78	1.38
30	.38	.62	30	.70	1.25	30	.90	1.65
32	.43	.64	32	.85	1.50	32	1.20	2.10
34	.52	.78	34	1.05	1.90	34	1.60	2.90
36	.64	1.00	36	1.35	2.40	36	2.20	4.25
38	.82	1.28						
40	1.20	1.76						

**BELDEN A.C., D.C. RESISTANCE CORDS**

A line cord into which a voltage drop resistor is incorporated, thus reducing the line voltage to that needed for the tube filaments. The construction affords a permanent strain relief for the resistance wire and a maximum dissipation of heat. All cords are coded with colored tracers so that resistance can be easily determined. With each cord is a data sheet explaining how to determine proper resistance to be used. Equipped with a Belden Unbreakable Soft Rubber Plug. These cords must not be cut.



Number	Length	Resistance (Ohms)	Color Marker (in outer braid)	List
8920	6 ft.	135	Olive	\$ .60
8921	6 ft.	165	Maroon	.60
8976	6 ft.	180	Orange	.60
8929	6 ft.	220	Blue	.60
8977	6 ft.	250	Grey	.60
8922	6 ft.	290	Black	.60
8923	6 ft.	330	Light Brown	.60

**AUTO-RADIO WIRES AND SHIELDING**

**BELDEN AUTO-RADIO SHIELDING**  
For use in shielding automotive wires in making automobile radio installations. Tinned copper shielding furnished on spools. 8931 fits over 7 mm. spark plug cables.

Number	Length	Shielding	List per Ft.
8930	50 ft.	13/64 in. inside diameter	\$ .035
8935	250 ft.	13/64 in. inside diameter	.05
8931	50 ft.	3/8 in. inside diameter	.05
8937	250 ft.	3/8 in. inside diameter	.05
8932	50 ft.	25/32 in. inside diameter	.13
8936	250 ft.	25/32 in. inside diameter	.13

**BELDEN AUTO-RADIO SHIELDED LOW CAPACITANCE LEAD-IN WIRE**

C876—100 ft. 18 (16x30 tinned) cotton wrap with 1/2 in. wall rubber cabled with jute fillers and shielding over-all—O.D. .500 in. Per Ft. List \$ .10  
8888—100 ft. 18 (16x30 tinned) cotton wrap with four cotton braids waxed and shielding over-all—O.D. .250 in. ... Per Ft List \$ .05  
8971—100 ft. 18 (16x30 tinned) same as 8888 with rubber sheath over-all—O.D. .325 in. (See Belden 8924 for similar characteristics and smaller O.D.) ..... Per Ft. List \$ .07

**BELDEN SHIELDED IGNITION CABLE**

For use on radio equipped automobiles.  
7778—7 mm. Belden Aircraft Standard Ignition Cable with tinned copper shield. Per Ft. List \$ .12  
781—7 mm. commercial automotive grade ignition cable with tinned copper shield .....Per Ft. List \$ .075

**BELDEN SHIELDED PRIMARY WIRES**

For use on battery leads and other auto-radio installations which must be shielded from the high tension system radiations.  
7782—12 Shielded Primary (19x25 tinned), wrap colored "Cellophane," .031 in. wall of rubber, glazed cotton braid lacquered, and an over-all tinned copper shield. Per Ft. List \$ .06  
7784—14 Shielded Primary (19x27 tinned), wrap colored "Cellophane," .027 in. wall of rubber, glazed cotton braid lacquered, and an over-all tinned copper shield ..... Per Ft. List \$ .05  
7786—16 Shielded Primary (19x29 tinned), wrap colored "Cellophane," .022 in. wall of rubber, glazed cotton braid lacquered, and an over all tinned copper shield ..... Per Ft. List \$ .04

**BELDEN FABRIC LOOM**

Specially constructed loom, shielded with tinned copper wire, used on any automobile wire or cable; also very satisfactory for shielding the antenna lead from the top of the car to set. Inner surface is smooth, making it easy to slip over all wires.  
7787—3/8 in. I.D. Shielded Fabric Loom, 50-ft. coil, in carton. Per Ft. List \$ .07  
7788—1/2 in. I.D. Shielded Fabric Loom, 50-ft. coil, in carton. Per Ft. List \$ .09

# TACO

## ANTENNA SYSTEMS

### TACO DeLuxe Self-Selecting Antenna



#### CONTENTS OF KIT

Antenna Transformer, Set Transformer, 2 Stand-off Insulators, 2 30-ft. rolls Aerial Wire, 1 75-ft. roll Down-lead Cable, 1 Screw Eye Insulator, 2 Aerial Insulators. Attractively boxed with complete instructions.

No. 152 Transmission Line  
 75-ft. Roll..... \$ 2.00  
 100-ft. Roll..... 2.50  
 500-ft. Roll..... 10.00

This truly DeLuxe Antenna both from mechanical as well as electrical standpoint is the latest achievement of TACO'S engineers. Every conceivable safeguard for long trouble-free operation is assured by the thorough tests conducted both in the laboratory and in the field and TACO'S long experience as the pioneer and leader in the antenna market backs our unconditional warranty.

Through the use of precision built transformers no interference can upset the maximum results in broadcast and all short wave bands. This noise-reduction makes radio reception possible in heretofore impossible locations. The dual, electrically interconnected transformer systems assure the perfect matching to any radio receiver regardless of make or design, providing the maximum sig-

nal transfer from aerial to radio set. The short span, maximum 60 ft., makes installation easy in any location. Heavily tinned, especially designed TACO aerial wires and the unique no-loss crossbar topping the antenna transformer housing makes it virtually impossible for even a hurricane to damage a TACO aerial, once erected — always functioning.

The DeLuxe Antenna is complete — transformers, aerial wires, transmission line, insulators, screw eyes, no extras to buy. Completely factory wired, soldered and tested under laboratory conditions ready to be strung up.

TACO DeLuxe Antenna is self-selecting and fully automatic and comparative tests indicate the greatest signal-to-noise ratio of any system on the market. Let your own test substantiate our claim.

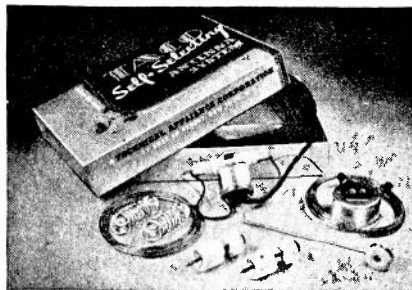
Cat. No. 200 TACO DeLuxe Antenna System—List Price.....	<b>\$6.75</b>
Cat. No. 201—TACO Antenna Transformer only .....	<b>2.25</b>
Cat. No. 200X—TACO DeLuxe European All-Wave Antenna System (140KC—25 MC). Uses Cat. No. 203 Transformer	<b>\$7.00</b>
Cat. No. 203—TACO (140 KC—25MC) Set Transformer only	<b>2.75</b>
Cat. No. 202—TACO Set Transformer only .....	<b>2.50</b>
Cat. No. 200D—TACO DeLuxe All-Wave Antenna System (140 KC—25MC) for sets equipped for Doublet Antenna. Uses Cat. No. 204 Set Transformer.....	<b>\$6.75</b>
Cat. No. 204—TACO Doublet Set Transformer only.....	<b>2.50</b>

### ALL-WAVE SELF-SELECTING TACO STANDARD ANTENNA SYSTEM

#### DESCRIPTION

Any radio receiver requires a good antenna for maximum performance. This is especially true of the modern radio, which in reality is three or four receivers in one. The TACO Standard Antenna System has been designed to operate with these radio sets. It provides equally efficient transmission on all wave bands, which is not true of the single wire antenna customarily used.

For best results the antenna should be erected as high as possible, out of the noise area. Because of the construction of this system, it is possible to locate the aerial itself at a considerable distance from the receiver.



#### FEATURES

- Completely soldered at factory for easy installation.
- Maximum signal pick-up.
- No switching required for long or short waves.
- Durable non-corrosive materials used.

#### CONTENTS OF KIT

2 30-ft. coils of Antenna Wire  
 1 Antenna Transfer Unit  
 1 75-ft. coil of Transmission Line  
 2 Antenna Insulators  
 2 Stand-off Insulators  
 1 Screw-eye Insulator  
 1 Set Transformer  
 1 Display Box

No. 152 Transmission Line  
 75-ft. Roll..... \$ 2.00  
 100-ft. Roll..... 2.50  
 500-ft. Roll..... 10.00

Cat. No. 500  
 TACO Standard Antenna  
 List Price ..... **\$4.50**

Cat. No. 500X  
 TACO European Antenna (140 KC—25MC). List Price..... **\$4.75**

### TACO Noise Rejector



#### VARIABLE IMPEDANCE MATCHING ANTENNA UNIT

- Have your radio set operate with its antenna, not against it.
- Maximum signal strength on all waves without noise.
- Guaranteed to improve short-wave reception.
- Use on any doublet antenna regardless of make or design.
- Positively eliminates background noises.

Cat. No. 79  
 TACO Noise Rejector—List Price..... **\$2.50**

### TACO Line Filter



Do not permit an otherwise perfect reception to be spoiled by crashes and clicks reaching the set through the power line. TACO No. 104 Line Filter positively eliminates this annoyance. Operates on AC or DC, 110 to 250 Volts. Neat, Compact and Efficient.

Cat. No. 104  
 TACO Line Filter—List Price..... **\$4.00**

# TANCO

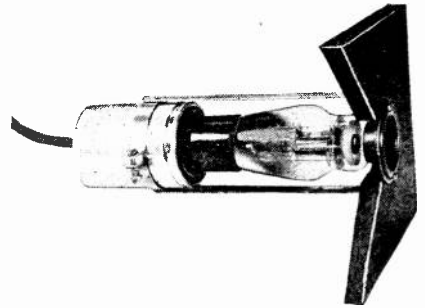
## RADIO PRODUCTS

### TUNING INDICATOR With New Intensifier Screen

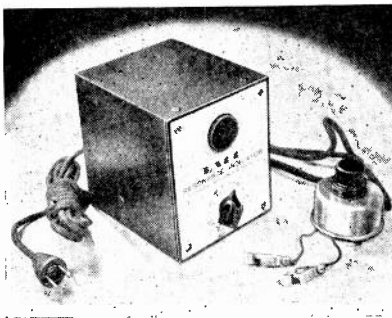
Simple, effective, inexpensive means of modernizing any set by adding electron-ray feature for **precise visual tuning**. Especially desirable for those good sets lacking tuning meter, or other visual tuning indicator. TACO INTENSIFIER SCREEN prevents light from striking target, thereby bringing out full illuminosity of eye. Installed in an hour or less.

The TACO TUNING INDICATOR makes

use of Type 6E5 electron-ray tube. The electron-ray tube target, viewed through bezel window of set panel, presents bright, luminous disk with variable black sector. At point of greatest resonance or sharpest tuning of any given signal, black sector narrows or disappears entirely, leaving solid luminous disk. A truly super-sensitive device especially ideal for tuning in your favorite stations.



**Cat. No. 130**  
**TACO TUNING INDICATOR, Less Tube, List Price..... \$1.50**  
Standard Package: 12 units      Shipping Weight: 6 lbs.



### RESONANCE INDICATOR

A dozen testing instruments in one. A high-resistance, high-sensitivity electron-eye meter and indicator, positively indispensable to the competent service man, no matter how elaborate his present test equipment. Likewise useful in the laboratory and for experimental pursuits. Attractive to critical set owners and radio amateurs as a means of precise tuning. Beyond doubt the **most** instrument for the **least** money.

The TACO Resonance Indicator is an application of the TACO Tuning Indicator described above. In addition to the 6E5 electron-eye tube, it employs two 6H6 tubes, one as a voltage-doubler, and the other as a linear diode detector.

#### TWELVE APPLICATIONS

- (1) Tuning or resonance meter for any set;
- (2) Ideal means of aligning R.F. and I.F. stages;
- (3) Quantitative output meter;
- (4) Check on antenna efficiency;
- (5) Means for locating inductive interference;
- (6) Check for "opens" and "shorts" in transformers;
- (7) Test for condensers and resistors;
- (8) Simple capacity meter;
- (9) Simple resistance meter;
- (10) Bridge indicator in place of galvanometer;
- (11) High-resistance, super-sensitive indicator;
- (12) a device of endless uses, limited only by user's ingenuity.

**Cat. No. 125—TACO RESONANCE INDICATOR, Complete, less Tubes..... \$11.50**

### ALL-WAVE LINE FILTER

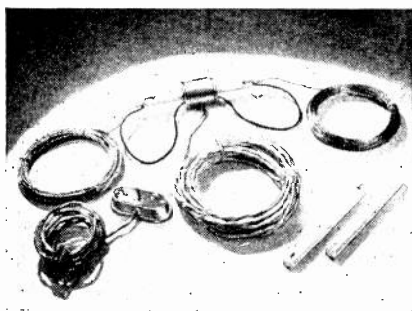
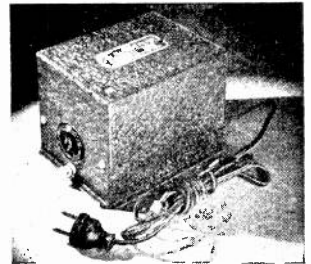
In many localities the noisy-background interference reaches the all-wave set not only via the antenna system, but—and often to a far greater extent—through the power line supplying the set. No radio set, regardless of price or make can render its best performance unless an all-wave filter of the R.F. choke type is employed in the power supply line.

The TACO H-F All-Wave Line Filter fulfills the

**Cat. No. 100**  
**TACO H-F ALL-WAVE LINE FILTER (110 Volts) List Price..... \$7.50**

**Cat. No. 101**  
**TACO H-F ALL-WAVE LINE FILTER (240 Volts) List Price..... \$7.50**

requirements of present-day reception. It is so designed that line noises falling in the broadcast, amateur, and extremely low-wave bands, are automatically and completely filtered out, in order that positively noiseless current supply is available to the super-sensitive all-wave set. To install, merely plug this device between radio set and base receptacle, or between noise-producing appliance and line.



### TACO Master Foundation Kit

**Cat. No. 301**  
**List Price..... \$6.00**

Consisting of

- |  |  |
|--|--|
| 1 Transfer Unit                                      | 1 60-ft. coil 7/20 tinned copper aerial wire |
| 1 35-ft. coil No. 18 twisted-pair transmission cable | 1 22-ft. coil 7/20 tinned copper aerial wire |
| 2 7-inch Navy-type insulators                        | 1 Double Lightning Arrestor.                 |

#### Receiver Couplers

**Cat. No. 302—For Exposed Wiring, List... \$2.50**  
**Cat. No. 303—For Conduit Wiring, List.... 2.50**

### ALL-WAVE SELF-SELECTING

## MASTER

### ANTENNA SYSTEM

The sensible and economical solution of the radio problem facing apartment houses, hotels, club houses, hospitals and other multi-set buildings. One simple aerial and transmission line, together with a set coupler or outlet for each radio, serves up to 25 sets. Does away with usual jungle of aerials, poles and festooned downleads, constituting menace to life and property, as well as unsightly mess. TACO Master Antenna System provides efficient broadcast, amateur and short-wave reception with modern all-wave sets. Minimum background noise.

**SIMPLICITY**—System comprises Foundation Kit for aerial and transmission line, including necessary aerial wire, insulators,

antenna transfer unit, lightning arrestor and transmission line cable, together with as many set couplers as number of outlets desired. One aerial and transmission line can serve up to 25 outlets. System readily installed by electrical contractor or competent radio service man. Simple components, simple system, simple mechanical and electrical work.

**LOW COST**—As inexpensive as it is simple, yet efficient. Inconspicuous neutral tone transmission line cable and neat exposed wiring outlets permit wiring any existing building. No objectionable wires. Nothing to mar inside or outside walls. In buildings under construction, concealed wiring in conduit may be installed at low cost.

#### TACO Master Parts

In addition to the TACO Master Foundation Kit and Couplers, the following parts may be required for any desired installation:

- |  |                    |
|--|--------------------|
| <b>No. 304—Aerial Wire 7/20 Tinned Copper Wire, per 100 ft.....</b>                              | <b>List \$1.75</b> |
| <b>No. 305—Transmission Line No. 18 Twisted-Pair Neutral Buff-Covered, per 500-ft. roll.....</b> | <b>12.50</b>       |
| <b>No. 306—Transmission Line No. 18 Twisted-Pair Black-Covered, per 500-ft. roll.....</b>        | <b>12.50</b>       |

- |  |                    |
|--|--------------------|
| <b>No. 307—Porcelain-insulated Screw-eyes for supporting transmission line and branch lines, each.....</b> | <b>List \$1.10</b> |
| <b>No. 308—Navy-Type Low-Loss Wet Process Porcelain Insulators, 7" long, each.....</b>                     | <b>.25</b>         |
| <b>No. 309—Double Lightning Arrestor.....</b>  | <b>.50</b>         |

# Birnbach Products

## NO. 375—ALL-WAVE ANTENNA Pat. No. 9911 and other Pats. Pending



Factory connected and soldered assembly which eliminates the possibility of incorrect and poor connections. Every unit is designed to give the utmost in service and durability and greatly reduces man-made interference and background noises. The Antenna Transformer matches the impedance of the Transmission Line. The noise reducing transmission cable conveys the signal without loss to the Receiver Coupler which automatically adjusts itself to the frequency tuned in by the receiver. No switching is required for either shortwave or broadcast reception.

**Contents:** 1 Complete Antenna Soldered Assembly consisting of: 2 coils Aerial Wire, 1 No. 467 Antenna Transformer, 1 coil Transmission Cable, 1 No. 905 Receiver Coupler, 2 No. 666 Porcelain Insulators White, 2 No. 669 Porcelain Nail-It Knobs, 2 No. 617 Self-locking Screw Terminal Window Lead-in Strips, 1 No. 615 Ground Clamp, 1 Instruction Sheet.

**List Price**

**No. 375—All-Wave Antenna**.....each \$4.25

**No. 376—All-Wave Antenna** for sets with built-in serial selectors (Contents same as above, **less coupler**) each \$3.50

## NO. 150—ALL-WAVE ANTENNA

All-Wave reception depends upon an efficient noise reducing antenna.

Birnbach engineers have contributed greatly with the newly designed Navy type Insulators, Center Insulators, All-Wave Coupler, and Transmission Cable. The All-Wave Coupler does not require a switching device for reception of broadcast and short wave stations.

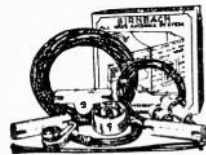
**List of Parts:** 2 50-ft. Coils No. 14 Solid Enamel Wire, 1 50-ft. Coil Stranded Transmission Cable, 1 Birnbach All-Wave Coupler, 1 Birnbach Center Insulator, 2 Birnbach New Navy-Type Insulators, 2 Birnbach All-Wave Lead-in Strips, 1 7" Screw Eye Insulator, 1 Ground Clamp, 2 Nail-It Knobs. Complete instructions.

**No. 150—Birnbach All-Wave Antenna**..... **List Price \$3.75**  
**No. 152—Does Not Include Coupler.**

The Birnbach No. 152 All-Wave Antenna possesses all the efficient noise reducing qualities of the No. 150 All-Wave Antenna, and is intended for use with All-Wave Receivers having terminals for doublet antennas.

**List of Parts:** 2 40-ft. Coils 7/24 Stranded Bare Aerial Wire, 1 50-ft. Coil Stranded Transmission Cable, 1 Birnbach Center Insulator, 2 Birnbach New Navy Type Insulators, 2 Birnbach All-Wave Lead-in Strips, 2 Nail-It Knobs, 1 7" Screw Eye Insulator, 1 Ground Clamp, Complete Instructions.

**No. 152—Birnbach All-Wave Antenna**..... **List Price \$2.75**



## Receiver Coupler

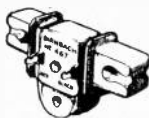
Increased signal strength and reduction of noises are the marked characteristics of the No. 905 Birnbach All-Wave Coupler. It permits the proper coupling of the doublet antenna and the all-wave receiver, without disturbing the wiring of the receiver. Comes complete with instructions and has one hole mounting.



**No. 905—Receiver Coupler**  
**List, Each \$1.00**

## Antenna Transformer

The No. 467 Antenna Transformer is ideal for replacement on all antenna systems as it matches the transmission line impedance through the antenna. It is made of a high tensile strength ceramic body with a cavity for the antenna transformer. The Antenna Transformer matches the antenna to the transmission line impedance without loss of signal strength. The broadcast and short-waves automatically choose the proper circuit when the receiver is tuned.

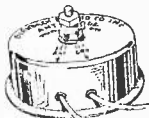


Patent No. 9911

**No. 467—Birnbach Antenna Transformer**..... **List Price \$1.25**

## Antenode

Birnbach Antenode is designed for use as an indoor aerial. The use of the Antenode instead of the regular noisy aerial gives better selectivity, reduction of static, and a better tone quality. Easily installed by the layman. Put up in an attractive box with simple instructions included.



**No. 755—Birnbach Antenode**..... **List Price Each \$0.75**

## ANTENNA KITS



**No. 501—Aerial Kit**.....each \$1.40  
75 ft. 7/24 Copper Aerial Wire  
40 ft. R.C. Lead-in Wire  
15 ft. Birnbach Flexible R.C. Wire  
1 No. 611 Lead-in Strip  
1 No. 650 Lightning Arrester  
1 No. 630 Ground Clamp  
2 No. 666 Porcelain Insulators  
2 No. 669 Nail-It Knobs  
2 No. 665 Galvanized Screw Eyes  
6 Insulated Staples  
Std. Pkg. 24 Weight 65 lbs.

## Lightning Arrester



A low price Lightning Arrester designed for easy installation. Comes complete with nickel-plated hardware and instructional

**No. 65—Std. Pkg. 100**..... **Each \$0.12 1/2**

## Doublet Arrester



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.

**No. 2650—Std. Pkg. 25**..... **Each \$0.35**

**No. 555—Aerial Kit**.....each \$0.62 1/2

50 ft. 7-Strand Cop. Aerial Wire  
25 ft. R.C. Lead-in Wire  
2 No. 666 Porcelain Insulators  
2 No. 669 Nail-It Knobs  
1 No. 600 Ground Clamp  
1 No. 611 Lead-in Strip  
Std. Pkg. 24 Weight 38 lbs.

**No. 505—Aerial Kit**.....each \$0.80

75 ft. 7-Strand Cop. Aerial Wire  
25 ft. R.C. Lead-in Wire  
1 No. 65 Lightning Arrester  
2 No. 666 Porcelain Insulators  
2 No. 669 Nail-It Knobs  
1 No. 600 Ground Clamp  
1 No. 611 Lead-in Strip  
Std. Pkg. 24 Weight 48 lbs.

**No. 500—Aerial Kit**.....each \$1.00

75 ft. 7/26 Copper Aerial Wire  
25 ft. R.C. Lead-in Wire  
1 No. 650 Lightning Arrester  
1 No. 611 Lead-in Strip  
1 No. 600 Ground Clamp  
2 No. 666 Porcelain Insulators  
2 No. 669 Nail-It Knobs  
2 No. 665 Galvanized Screw Eyes  
Std. Pkg. 24 Weight 50 lbs.



**No. Porcelain Screw Eyes**

**List Price**  
663—3".....per 100 \$6.00  
664—7".....per 100 8.00  
667—12".....per 100 20.00

**Bakelite Eyes**

963—3".....per 100 \$6.00  
964—7".....per 100 8.00

## Lightning Arrester



Made of brown glazed porcelain body with nickel-plated hardware. Suitable for outdoor or indoor use. Complete with mounting screws and instructions.

**No. 650—Std. Pkg. 50**..... **List Price Each \$0.25**

## All-Wave Coupler

Increased signal strength and reduction of noises are the marked characteristics of the No. 904 Birnbach All-Wave Coupler. It permits the proper coupling of the doublet antenna and the all-wave receiver, without disturbing the wiring of the receiver. Comes complete with instructions and has one hole mounting.



**No. 904—All-Wave Coupler**  
**List, Each \$1.00**

## Glass Insulators



Made of crystal clear glass. Have a smooth surface which prevents dirt or ice to collect.

**No. Length List Price**  
660—3".....per 100 \$5.00  
660—3 3/4".....per 100 8.00  
661—3 3/4" Flat Type.....per 100 8.00  
662—3 3/4".....per 100 8.50  
659—4 1/2".....per 100 12.00

## Porcelain Insulator Nail-It Knobs

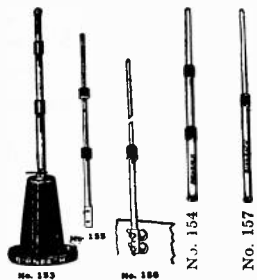


**No. List Price**  
669—Porcelain Nail-It Knobs.....per 100 \$4.00  
666—Brown Porcelain Insulators.....per 100 4.00



# Birnbach Products

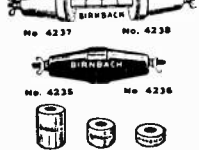
## ULTRA-HIGH FREQUENCY ANTENNAS



They cover all requirements for stationary or portable use. The Nos. 156 and 157— $\frac{1}{4}$ -wave antennas can be used on  $2\frac{1}{2}$  meters as a  $\frac{1}{2}$ -wave antenna. The Nos. 153, 154 and 155— $\frac{1}{2}$ -wave antennas can be used as a  $\frac{1}{4}$ -wave 10-meter antenna. Operation on a wavelength from  $2\frac{1}{2}$  to 10 meters is possible by the proper choice of antenna. Two types of mountings are available:—standoff mounting, having  $\frac{1}{4}$ -20 threaded bushing on No. 154 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. Constructed of Hard Drawn Aluminum Tubing.

- List Price**
- No. 152—3 Section, 36" closed, 102" open with No. 4450 Insulator... **\$2.50**
  - 154—3 Section, 36" closed, 102" open without standoff mounting... **2.00**
  - 155—3 Section, 36" closed, 102" open, binding post mounting... **2.00**
  - 156—2 Section, 26" closed, 50" open binding post mounting... **1.00**
  - 157—2 Section, 26" closed, 50" open, 10-32 threaded bushing... **1.10**
  - 164—Taper Lock Bushings, brass N. P. for  $\frac{3}{8}''$  or  $\frac{1}{2}''$  dia. Tubes... **.10**

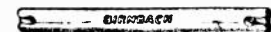
## TRANS. LEAD-IN INSULATORS



Cone is  $2\frac{1}{4}''$  high and made of low absorption, highly vitrified glazed porcelain. All lead-in insulators come complete with brass nickel-plated hardware and lead and cork washers to permit a water-tight seal to be made both indoors and outdoors. Highly vitrified, unglazed porcelain bushings are available in three sizes,  $1''$ ,  $\frac{1}{2}''$  and  $\frac{3}{4}''$  high by  $\frac{3}{4}''$  diameter with a  $\frac{1}{4}''$  diameter hole.

- List Price**
- No. 4235—Lead-in Insulator, 10" rod... each **\$0.90**
  - 4236—Lead-in Insulator, 15" rod... each **1.00**
  - 4237—Lead-in Insulator, 10" rod with bushings... each **1.20**
  - 4238—Lead-in Insulator, 15" rod with bushings... each **1.50**
  - 4240—Bushing, 1" long,  $\frac{3}{4}''$  diameter... each **.05**
  - 4241—Bushing,  $\frac{1}{2}''$  long,  $\frac{3}{4}''$  diameter... each **.05**
  - 4242—Bushing,  $\frac{1}{4}''$  long,  $\frac{3}{4}''$  diameter... each **.05**

## STEATITE ANTENNA INSULATORS



Steatite gives the required physical strength and insulation value to withstand strains up to 1500 lbs. and powers up to 1 Kw. when 2-12" Insulators are connected in series. The leakage path is long and the cross section as small as consistent with the strength required.

- List Price**
- No. 470—Steatite Antenna Insulator, 7" long... each **\$0.50**
  - 471—Steatite Antenna Insulator, 12" long... **.70**

## FEEDER SPREADERS



They are available in 2", 4", and 6" lengths. Highly vitrified, low absorption, high tensile strength porcelain is used with a smooth white glaze overall.

- List Price**
- No. 462—Feeder Line Spreader, 2" long... each **\$0.12**
  - 464—Feeder Line Spreader, 4" long... **.15**
  - 469—Feeder Line Spreader, 6" long... **.20**

## AIRPLANE INSULATOR



The Airplane Insulator is useful where heavy compression loads are applied on an insulator. It is ideal for use on all mobile antenna installations, particularly on aircraft, as it is shaped for the least air resistance.

- List Price**
- No. 473—Std. Pkg. 100... each **\$0.07**

## TRANSPOSITION BLOCKS



It is constructed of high tensile ceramic, glazed over its entire surface, making it smooth and increasing the surface insulation which is a necessity at high frequencies where the insulation must be of the best.

- List Price**
- No. 456—Standard Package (25) Transposition Block ea. **\$0.12**

## DOUBLET TRANSMITTING AND RECEIVING INSULATORS



Birnbach Antenna Insulators possess high insulation value and a long leakage path. The No. 468 and No. 668 Insulators can be used on transmitting antennas up to 50 watts when used singly and up to 100 watts when two are used in series. They will withstand a pull of 500 lbs.

- List Price**
- No. 468—Center Insulator Standard Package (10) **\$0.25**
  - No. 668—Navy Type Insulator Standard Package (25) **\$0.15**

## STEATITE CONE STANDOFF INSULATORS

A complete range of heights having threaded holes and jacks is available. Condenser, coils, tube sockets and high frequency apparatus can be mounted on them with a minimum of labor and expense. They are available only in a white glaze Steatite.



No.	Threaded Holes					Mtg. Hole	Std. Pkg.	List Price each
	A	B	C	D	E			
430	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	6-32	6-32	$\frac{1}{4}$	100	<b>\$0.10</b>
431	1	$\frac{7}{8}$	$1\frac{1}{2}$	8-32	8-32	$\frac{1}{4}$	50	<b>.15</b>
431J	1	$\frac{7}{8}$	$1\frac{1}{2}$	8-32	$\frac{1}{4}$ -28	$\frac{1}{4}$	50	<b>.20</b>
432	$1\frac{1}{2}$	$\frac{7}{8}$	$\frac{5}{8}$	10-32	10-32	$\frac{1}{4}$	50	<b>.20</b>
432J	$1\frac{1}{2}$	$\frac{7}{8}$	$\frac{5}{8}$	10-32	$\frac{1}{4}$ -28	$\frac{1}{4}$	50	<b>.25</b>
433	$2\frac{3}{4}$	$1\frac{1}{4}$	$\frac{3}{4}$	$\frac{1}{4}$ -20	$\frac{1}{4}$ -20	$\frac{1}{4}$	25	<b>.25</b>
433J	$2\frac{3}{4}$	$1\frac{1}{4}$	$\frac{3}{4}$	$\frac{1}{4}$ -20	$\frac{3}{4}$ -24	$\frac{1}{4}$	25	<b>.50</b>

## STANDOFF INSULATORS

The sizes range from  $\frac{3}{8}''$  to  $4\frac{1}{2}''$  high in five properly graduated heights and together with the large variety of hardware available, every need is covered.



No. 4450  
No. 4450J



No. 4275  
No. 4275J



No. 866  
No. 866J



No. 966  
No. 966J



No. 405

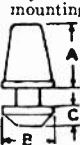


No.	Mtg. Hole					Hardware	Std. List Price Pkg.	each
	A	B	C	D	E			
405	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	$1\frac{1}{2}$	$\frac{1}{4}$	6-32	100	<b>\$0.06<math>\frac{1}{2}</math></b>
966	1	$1\frac{1}{8}$	$\frac{7}{8}$	1	$\frac{1}{4}$	8-32	50	<b>.07<math>\frac{1}{2}</math></b>
966J	1	$1\frac{1}{8}$	$\frac{7}{8}$	1	$\frac{1}{4}$	No. 403 Jack	50	<b>.10</b>
866	$1\frac{1}{2}$	$1\frac{1}{2}$	$1\frac{1}{8}$	$1\frac{1}{4}$	$\frac{1}{4}$	10-32	25	<b>.12</b>
866J	$1\frac{1}{2}$	$1\frac{1}{2}$	$1\frac{1}{8}$	$1\frac{1}{4}$	$\frac{1}{4}$	No. 403 Jack	25	<b>.15</b>
866SJ	$1\frac{1}{2}$	$1\frac{1}{2}$	$1\frac{1}{8}$	$1\frac{1}{4}$	$\frac{1}{4}$	No. 395 Jack	10	<b>.35</b>
4275	$2\frac{3}{4}$	$2\frac{3}{4}$	2	2	$\frac{1}{4}$ -20	No. 399 Jack	10	<b>.30</b>
4275J	$2\frac{3}{4}$	$2\frac{3}{4}$	2	2	$\frac{1}{4}$ -20	No. 399 Jack	10	<b>.55</b>
4450	$4\frac{1}{2}$	$3\frac{1}{2}$	$2\frac{1}{2}$	$2\frac{1}{2}$	$\frac{1}{4}$ -20	No. 399 Jack	5	<b>.50</b>
4450J	$4\frac{1}{2}$	$3\frac{1}{2}$	$2\frac{1}{2}$	$2\frac{1}{2}$	$\frac{1}{4}$ -20	No. 399 Jack	5	<b>.75</b>

For Stand-off Insulators with Wing Nuts add **\$0.05** to List Price. Specify White or Brown Glaze.

Highly vitrified, low absorption porcelain is used throughout. They are ideal for use as terminals on all kinds of high frequency and high voltage, low frequency devices. They come supplied with cork mounting washers which permit a secure and shakefree installation to be made with a minimum breakage. Brass nickel-plated hardware is supplied.

## FEEDTHRU STANDOFF INSULATORS



No.	Mtg. Hole					Hardware	Std. List Price Pkg.	each
	A	B	C	D	E			
458	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	$\frac{1}{2}$	$\frac{1}{4}$	6-32	25	<b>\$0.12</b>
478	1	$\frac{3}{4}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{1}{4}$	10-32	25	<b>.20</b>
478J	1	$\frac{3}{4}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{1}{4}$	No. 403 Jack	25	<b>.25</b>
4125	$1\frac{1}{4}$	$\frac{3}{4}$	$\frac{3}{8}$	$\frac{3}{8}$	$\frac{1}{4}$	10-32	25	<b>.25</b>
4125J	$1\frac{1}{4}$	$\frac{3}{4}$	$\frac{3}{8}$	$\frac{3}{8}$	$\frac{1}{4}$	No. 403 Jack	25	<b>.30</b>
4234	$2\frac{3}{4}$	2	1	1	$\frac{1}{4}$ -20	No. 399 Jack	10	<b>.55</b>
4234J	$2\frac{3}{4}$	2	1	1	$\frac{1}{4}$ -20	No. 399 Jack	10	<b>.80</b>

For Stand-off Insulators with Wing Nuts add **\$0.05** to List Price. Specify White or Brown Glaze.

## CORK WASHERS

No.	Standard Package	List Price
12—For No. 405 Insulator	1000	<b>\$3.75</b>
13—For No. 458 Insulator	1000	<b>3.75</b>
14—For No. 478 or No. 4125 Insulator	1000	<b>3.75</b>
15—For No. 4234 or No. 766 Insulator	1000	<b>10.00</b>
Cork Washers for No. 966 Insulator	1000	<b>4.25</b>



# Birnbach Products



## Kinkless Test Leads

These Test Leads are designed to eliminate all the disadvantages found in ordinary test leads. Birnbach Kinkless Lead Wire, which is extremely flexible and will not kink or break down in service under rough usage and repeated bendings, is used throughout.

No.	List Price
21—Needlepoints and Lugs.....	\$0.50
21—Needlepoints and Pin Tips.....	.50
21—Pin Tips and Lugs.....	.50
21—Pin Tips and Pins.....	.50
22—Needlepoints and Alligator Clips.....	.75
22—Solderless Pin Tips and Alligator Clips.....	.75
22—Solderless Pin Tips and Solderless Pin Leads.....	.75

## Kinkless Test Lead Wire for Replacement

Red and Black

No.	List Price
64—25-ft. package.....	\$0.75
66—100-ft. Spool.....	2.15
67—500-ft. Spool.....	10.50



## Headset Phone Cords

These cords are closely woven and are very durable and strong.

No.	List Price
104—5-ft., Pin Tips on both ends.....	\$0.69
105—5-ft., Pin & Spade Tips.....	.60
107—5-ft., Pin & Eye Tips.....	.60
108—8-ft., Pin & Eye Tips.....	.75
109—10-ft., Pin & Eye Tips.....	1.00



## Speaker Cords

Made of stranded wire, insulated with rubber, with a closely woven brown mercerized cotton overall.

No.	List Price
102—5-ft., Pin Tips on both ends.....	\$0.35
103—5-ft., Pin & Spade Tips.....	.35
106—5-ft., Pin & Eye Tips.....	.35
113—10-ft., Pin & Eye Tips.....	.55
114—20-ft., Pin & Eye Tips.....	.75
701—5-ft., 4-wire Crosley Pin & Eye Tips.....	.60



## Speaker Extension Cords

These Extension Cords are 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
166—10-ft.....	each \$0.70
120—20-ft.....	each .90
121—30-ft.....	each 1.20
122—40-ft.....	each 1.40
123—50-ft.....	each 1.60
124—100-ft.....	each 3.00
151—Bakelite Extension Cord Connector, only.....	each .30

## Magnet Wire

Birnbach Magnet Wire is made of thoroughly annealed pure copper wire. Genuine Italian silk is used for silk insulated wire and unbleached cotton for cotton insulated wire. The enameled wire has a coating of extra flexible enamel of high dielectric strength. All wires come in continuous lengths.



Gauge (B&S)	List Prices per Spool					
	D'ble. Cotton		Plain Enameled		Double Silk Covered	
	1/4 lb. Spool	1/2 lb. Spool	1 lb. Spool	1/4 lb. Spool	1/2 lb. Spool	1 lb. Spool
14	\$0.26	\$0.45	\$0.83	\$0.22	\$0.41	\$0.70
16	.27	.47	.85	.23	.42	.72
18	.28	.52	.88	.24	.43	.74
20	.31	.57	.98	.25	.44	.77
22	.35	.65	1.12	.26	.46	.81
24	.41	.77	1.34	.28	.49	.85
26	.49	.92	1.62	.33	.59	1.06
28	.58	1.12	1.90	.35	.62	1.12
30	.69	1.32	2.26	.38	.70	1.28
32	.85	1.63	3.10	.42	.76	1.40
34	1.22	2.30	4.36	.48	.87	1.62
36	1.68	3.18	5.98	.55	1.02	1.91
38	5.00	9.00	17.50	.64	1.18	2.22

## Radex Slipback Hookup Wires



Available in either stranded or solid tinned copper conductor. It has a covering of rubber over a cotton wrap and is then covered with a bright color cotton braid and dipped into paraffin.

Size	No.	*25-ft. Coils	
		Solid	Stranded
20	280	\$0.30	281
18	282	.35	283
16	284	.45	285
14	286	.60	287

\*Coils without cartons, deduct 2c from list price.

Size	100-ft. Spools		500-ft. Spools		1000-ft. Spools	
	Solid	Stranded	Solid	Stranded	Solid	Stranded
20	380	\$0.95	381	\$1.10	490	\$4.50
18	382	1.10	383	1.20	482	5.50
16	384	1.80	385	2.00	484	9.00
14	386	2.25	387	2.50	486	10.50
					481	\$5.25
					483	6.00
					582	10.50
					584	17.50
					585	20.00
					587	22.00

Colors: Black, Red, Blue, Yellow, Green

## Birntech Slipback Wire

Either solid or stranded tinned copper conductor insulated with a cotton wrap over which a cotton braid is closely woven, and then saturated with paraffin. It recommends itself for hooking-up of Radio Receivers, Public Address Systems, Sound Systems, etc.

Size	No.	*25-ft. Coils		100-ft. Spools	
		Solid	Stranded	Solid	Stranded
20	80	\$0.25	81	\$0.30	84
18	82	.30	83	.35	86
					87
					88
					89
					91
					92
					94
					93
					95

\* Coils without cartons, deduct 2c. from list price.

Colors: Red, Black, Green, Blue, Yellow

## AC-DC Antenna Wire

It is ideal as an indoor antenna of AC-DC Universal Receivers, loopantennas, and flexible leads.

No.	List Price
2125—25-ft. hank.....	each \$0.25
2103—100-ft. spool.....	each .85
2500—500-ft. spool.....	each 4.00
2000—1000-ft. spool.....	each 7.50



## Ground Rods



Radiator or water pipe grounds do not always give a low resistant ground which is so necessary for the reduction of man-made static. These Ground Rods, driven into the ground, will afford a highly efficient permanent ground. Copper plated.

No.	Std. Pkg.	List Price
616—4-ft.....	12	each \$0.50
618—6-ft.....	12	each .75

## Stranded Colored Rubber Wire

It is constructed of carefully annealed stranded tin-copper conductors with a cotton wrap, and insulated with a special grade of non-cracking live colored rubber compound. It strips readily and is available in various colors for easy identification.



No.	List Price	List Price
16 Strands No. 30 B&S Current Carrying Capacity 3 Amperes		
25-Ft. Coil	1000-ft. Spool	
No. 18—1-64		
Black	225—\$0.30	1225—\$9.00
Red	226— .30	1226— 9.00
Green	227— .30	1227— 9.00
White	228— .30	1228— 9.00
Brown	229— .30	1229— 9.00
Yellow	230— .30	1230— 9.00

No.	List Price	List Price
26 Strands No. 30 B&S Current Carrying Capacity 6 Amperes		
25-Ft. Coil	100-ft. Coil	
Color	No. Price	List Price
Black	425—\$0.45	1440—\$1.50
Red	426— .45	1441— 1.50
Green	427— .45	1442— 1.50
White	428— .45	1443— 1.50
Brown	429— .45	1444— 1.50
50-ft. Coil	500-ft. Spool	List Price
Color	No. Price	No. Price
Red	440—\$0.85	2440—\$7.00
Black	441— .85	2441— 7.00
Green	442— .85	2442— 7.00
White	443— .85	2443— 7.00
Brown	444— .85	2444— 7.00

## Filament and Colored Hookup Wire

No.	Stranded	Price
782—25-ft., No. 14, 3/4" Red		\$0.65
783—25-ft., No. 14, 3/4" Black		.65
786—500-ft., Spool, No. 14, 3/4" Red or Black.....		13.00
No. 12		
41 Strands No. 28 B&S Current Carrying Capacity 20 Amperes		
No. Stranded		Price
784—25-ft., No. 12, 3/4" Red		\$0.90
785—25-ft., No. 12, 3/4" Black		.90
787—500-ft. Spool, No. 12, 3/4" Red or Black.....		18.00

## Lamp Cord

All our Lamp Cord is constructed of cotton wrapped stranded copper wire and insulated with the best grade of live rubber. Birnbach Zip Cord is an all rubber covered insulated parallel cord which has a cotton strip imbedded between conductors, which can be separated by starting with a knife and pulling the cotton strip down the center. Connects easily and cannot fray. Sanitary and neat.

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# Birnbach Products

## RUBBER SHIELDED MICROPHONE CABLE



A tinned copper shield is woven over all conductors, and then cotton-wrapped. A heavy wall of tough polished rubber is placed overall. It is a weatherproof cable, ideal for outdoor use, and will withstand hard and rough usage.

No.	List Price
772—2 Conductor . . . 100-ft. spool, each	\$8.00
1772—2 Conductor . . . 250-ft. spool, each	19.00
773—3 Conductor . . . 100-ft. spool, each	9.50
1773—3 Conductor . . . 250-ft. spool, each	23.50
774—4 Conductor . . . 100-ft. spool, each	11.25
1774—4 Conductor . . . 250-ft. spool, each	27.50
775—5 Conductor . . . 100-ft. spool, each	13.75
1775—5 Conductor . . . 250-ft. spool, each	32.25
776—6 Conductor . . . 100-ft. spool, each	15.00
1776—6 Conductor . . . 250-ft. spool, each	36.75

### Cotton-Covered Shielded Microphone Cable

780—3 Conductor . . . 100-ft. spool, each	\$8.00
1780—3 Conductor . . . 250-ft. spool, each	19.00

## CRYSTAL MICROPHONE CABLE



871—100-ft. Spool, 2 Braid . . . . . each	\$4.40
1871—250-ft. Spool, 2 Braid . . . . . each	10.00
874—100-ft. Spool, 4 Braid . . . . . each	6.00
1874—250-ft. Spool, 4 Braid . . . . . each	14.00

## RUBBER MICROPHONE CABLE UNSHIELDED



Consists of individual flexible tinned copper conductors, each insulated with a heavy wall of colored rubber for easy identification. A heavy wall of tough polished rubber is placed overall. It is a weatherproof cable, ideal for outdoor use, and will withstand hard and rough usage.

No.	List Price
788—2 Conductor . . . 100-ft. spool, each	\$6.00
789—2 Conductor . . . 250-ft. spool, each	13.50
790—3 Conductor . . . 100-ft. spool, each	7.00
791—3 Conductor . . . 250-ft. spool, each	16.00
792—4 Conductor . . . 100-ft. spool, each	8.00
793—4 Conductor . . . 250-ft. spool, each	18.50

## FIXTURE WIRE

A flexible stranded rubber insulated wire with a closely woven cotton braid overall.

No.	List Price
565—1000 ft. No. 20 Single Conductor . . . ea.	\$8.00
566—1000 ft. No. 18 Single Conductor . . . ea.	9.00
569—500 ft. No. 20 Twisted Pair . . . . . ea.	8.25
568—500 ft. No. 18 Twisted Pair . . . . . ea.	9.00

Colors: White or Brown.

## VARNISHED TUBING (Spaghetti)

A quality Varnished Tubing with a high dielectric strength. Used to cover and insulate Bus Wire.

No.	List Price
300—Varnished Tubing, 30' length, ea., 50.12 1/2	

Colors: Black, Red, Yellow, Green, Brown.

## BUS BAR WIRE

No.	Cut to 2-ft. lengths.	List Price
2010—No. 10 Round Tinned . . . per 100 lgths		\$4.50
2012—No. 12 Square Tinned . . . per 100 lgths		4.00
2013—No. 12 Round Tinned . . . per 100 lgths		3.50
2014—No. 14 Square Tinned . . . per 100 lgths		3.50
2015—No. 14 Round Tinned . . . per 100 lgths		3.00

Special Prices 1000-length Lots

## EOI TRANSMISSION CABLE



This cable has a surge impedance of 72 ohms, which accurately matches the impedance at the center of the half wave Hertz Antenna. The construction is such that it can be used in any required length up to 1000 ft., with negligible losses, and can handle any power up to 1 Kw. Moisture absorption of rubber as measured by percentage change, in capacity, after 30 days in water—less than 5%. Attenuation—less than 1.5 Db. per 1000 ft. of line at 3500 Kc., 4.0 Db., 7 Mcs., 5.2 Db. at 14 Mcs.

No.	List Price
953—Transmission Cable, 1000-ft. coil.	\$90.00
954—Transmission Cable, 500-ft. reel.	45.00
955—Transmission Cable, 250-ft. reel.	22.50
956—Transmission Cable, 100-ft. spool.	10.00

## BATTERY CABLES

Birnbach Battery Cable is constructed of individual rubber insulated stranded conductors, cotton braided and color coded.



No.	100-Ft. Spools	List Price Each
172—2 Conductor Cable . . . . .		\$3.75
173—3 Conductor Cable . . . . .		4.00
174—4 Conductor Cable . . . . .		5.50
175—5 Conductor Cable . . . . .		6.50
176—6 Conductor Cable . . . . .		7.50
177—7 Conductor Cable . . . . .		8.50
178—8 Conductor Cable . . . . .		12.00
179—9 Conductor Cable . . . . .		14.00
180—10 Conductor Cable . . . . .		16.00
182—12 Conductor Cable . . . . .		18.00

All cables available in special lengths

## SHIELDED BATTERY CABLE



Constructed of flexible stranded conductors covered with quality rubber compound and braided with cotton, color-coded. A tinned copper shield is woven overall.

No.	List Price
972—2-Conductor Cable, 100-ft. spool, ea.	\$5.00
973—3-Conductor Cable, 100-ft. spool, ea.	7.00
974—4-Conductor Cable, 100-ft. spool, ea.	8.50
975—5-Conductor Cable, 100-ft. spool, ea.	10.00
976—6-Conductor Cable, 100-ft. spool, ea.	12.00
977—7-Conductor Cable, 100-ft. spool, ea.	15.00

All cables available in special lengths

## JACKS AND PLUGS



Large area of contact is one of the outstanding features of Birnbach Jacks and Plugs. The Jacks and Plugs are made of brass, nickel-plated and come complete with nut and lug, or screw and lug, depending upon type chosen.

No.	List Price
395—Giant Jack, 3/8" Mounting Hole. . . ea.	\$0.25
396—Giant Plug with 10-32 Threaded Hole. . . . .	
397—Giant Plug with 1/4"-20 Threaded Hole. . . . .	.25
398—Giant Plug, 1/2"-28 Threaded Shank. . . . .	.25
399—Giant Jack, 1/2" Mounting Hole. . . ea.	.25
400—Plug, 6-32 Threaded Shank, 1/2" Long. . . . .	.06
401—Plug, 6-32 Threaded Hole. . . . .	.07
403—Jack, 1/4" Mounting Hole. . . . .	.06

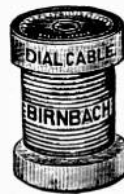
## A.C.-D.C. RESISTANCE CORDS



No.	Sets having following tubes	List Price Each
35—135-ohm cord	25Z5-43-4 (6.3 volt)	\$0.70
36—160-ohm cord	25Z5-43-3 (6.3 volt)	.70
34—180-ohm cord	12Z3-43-4 (6.3 volt)	
	25Z5-43-2 (6.3 volt)	.70
37—220-ohm cord	12Z3-43-3 (6.3 volt)	.70
41—250-ohm cord	12Z3-43-2 (6.3 volt)	
	25Z5-3 (6.3 volt)	.70
38—290-ohm cord	12Z3-3 (6.3 volt)	.70
45—300-ohm cord . . . . .		.70
39—330-ohm cord . . . . .	4 (6.3 volt)	
	2 (6.3 volt)	.70
40—350-ohm cord 12Z3-1	1 (6.3 volt)	
	3 (6.3 volt)	.70
47—390-ohm cord	2 (6.3 volt)	.70

## DIAL CABLE

This Phosphor-Bronze Dial Cable is constructed of 42 strands over a linen thread center. Due to its high tensile strength it will not stretch. The all-linen dial cable is the finest available for replacement purposes. The 25, 50, and 100 ft. lengths are put up on attractive wooden spools.



No.	PHOSPHOR BRONZE	List Price
1025—25-ft. spool . . . . .	each	\$1.50
1050—50-ft. spool . . . . .	each	2.75
1051—100-ft. spool . . . . .	each	5.00
1052—1000-ft. spool . . . . .	each	40.00

## LINEN DIAL CABLE

No.	Heavy	List Price
2025—25-ft. spool . . . . .	each	\$1.50
2051—100-ft. spool . . . . .	each	5.00
2052—1000-ft. spool . . . . .	each	40.00

No.	Light	List Price
3025—25-ft. spool . . . . .	each	\$1.30
3051—100-ft. spool . . . . .	each	4.50
3052—1000-ft. spool . . . . .	each	35.00

## WING NUTS

Standoff Insulators can be used as binding posts by substituting our brass nickel-plated Wing Nut instead of nut supplied.



No.	Standard Package	List Price
6—6-32 thread . . . . .	per 100	\$5.00
8—8-32 thread . . . . .	per 100	5.00
10—10-32 thread . . . . .	per 100	5.00
11—1/4"-20 thread . . . . .	per 100	5.00

## PORCELAIN TUBES



To bring a lead-in into a building without breaking, we advise our Porcelain Tubes, which require a 3/4" diam. hole for installation.

No.	Standard Package	List Price
42—2" . . . . .	per 100	\$2.50
43—3" . . . . .	per 100	3.00
44—4" . . . . .	per 100	4.00
46—6" . . . . .	per 100	5.00
48—8" . . . . .	per 100	7.00

# Birnbach Products

## 7MM HIGH TENSION CABLE



Useful in reducing interference from auto secondary circuits instead of the unshielded spark distributors. Also used as photo electric cell leads and wherever a low loss shielded lead is required.

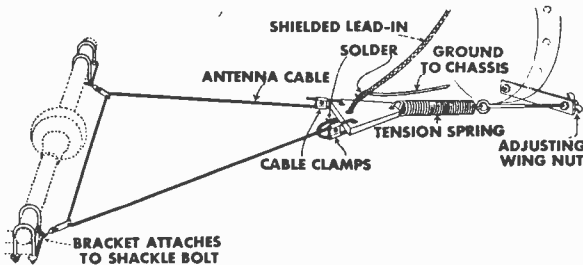
**List Price**  
**No. 781-7MM Shielded Secondary Wire..... \$9.00**  
**1600-7MM High Tension Unshielded Cable 5.50**

## SHIELDED LOW TENSION WIRE

It is constructed of stranded tinned copper wire and has two layers of cambric insulation and a high lacquer finish cotton braid with a closely woven tinned copper shield. Is oil, heat, and moisture-proof.

**List Price**  
**No. 1800-Shielded Low Tension Wire No. 16..... \$5.50**  
**1818-Shielded Low Tension Wire No. 18..... 4.75**  
**1820-Shielded Low Tension Wire No. 20..... 4.25**

## AUTO ANTENNAS



**\$225** ★ For Turret-Top Cars  
 ★ Easy to Install  
**List** ★ Shielded Lead-in  
 ★ Reduces Noise  
**Cat. No.** ★ Bakelite Insulators  
**302** ★ Rugged, Permanent  
 ★ Out of Sight

**\$190** ★ For Turret-Top Cars  
 ★ Easy to Install  
**List** ★ Lacquered Lead-In  
 ★ Bakelite Insulators  
 ★ Rugged, Permanent  
**Cat. No.** ★ Out of Sight  
**303** ★ Low Cost

## AUTO RADIO COPPER SHIELDING



Used for shielding leads of interference creating circuits; and for bonding motor block and other parts of the automobile to the chassis, where floating power is used.

**BARE**  
**No. List Price**  
**860-1/4"-50-ft. spool. each \$1.75**  
**861-3/8"-50-ft. spool. each 2.00**  
**862-3/2"-50-ft. spool. each 4.50**

**TINNED**  
**No. List Price**  
**863-1/4"-50-ft. spool. each \$2.00**  
**864-3/8"-50-ft. spool. each 2.25**  
**865-3/2"-50-ft. spool. each 5.00**

## IGNITION FILTER



Birnbach Ignition Filter completely eliminates all ignition and high-tension circuit interference. The only Ignition Filter having these features:

**Only 120 Ohms D.C. Copper-Wound Inductance Less Gasoline Consumption Perfect Motor Idling**

Filter encased in a heat resistant moisture-proof bakelite shell. Brackets fit any spark plug. Positive electrical contact.

**List Price**  
**No. List Price**  
**350-Spark Plug Filter..... each \$0.55**  
**351-Cable Type Filter..... each .55**  
**352-Distributor Filter..... each .55**  
**353-Ignition Filter, Screw Type..... each .55**  
**354-Master Filter, Cable or Distributor Type..... each 2.75**

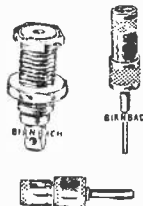
## BATTERY AND TEST CLIPS



Battery Clips—Made of extra heavy gauge steel heavily lead-coated. Test clips are made of steel, cadmium-plated. The Alligator Clip is made out of heavy-gauge steel, nickel-plated.

**List Price**  
**Amps. Pkgs. each**  
**27-Midget Test Clip..... 5 50 \$0.07**  
**28-Pee-Wee Test Clip..... 10 50 .10**  
**29-Battery Clip, Medium..... 25 50 .17**  
**30-Battery Clip, Large..... 50 30 .18**  
**31-Alligator Clip..... 50 10 .07**

## PHONE TIPS AND TACKS



No. 402 Phone Tip is ideal for replacement on headset, speaker and extension cords. Nos. 23 and 24 Solderless Phone Tips are designed for easy insertion of wire through the hole at the end of the tip and brought through the side hole and then wrapped around the groove.

**List Price**  
**No. List Price**  
**402-Carton, 100 Phone Tips... per 100 \$0.90**  
**416-Envelope, 4 Phone Tips... per env. .06**  
**23-Junior Solderless Phone Tip... per 100 5.00**  
**24-Senior Solderless Phone Tip... per 100 6.00**  
**26-Phone Tip Jack..... per 100 6.00**

## AUTO RADIO SHIELDED LEAD-IN

Consists of a stranded tinned copper conductor, insulated with rubber and braided with cotton and with a tinned copper braid overall.



**List Price**  
**No. List Price**  
**799-Auto Radio Shielded lead-in, 1/4" d.am., 100 ft. \$7.00**  
**800-Auto Radio Shielded lead-in, 1/2" d.am., 100 ft. 13.50**

## AUTO RADIO SHIELDED LOOM



Tinned copper braid over a weather-proof loom. Used to shield auto antenna lead-in and grouped leads against

interference; also, in shielding the output of signal generators.

**List Price**  
**No. List Price**  
**1316-3/8" inside diam..... per 100 ft. \$7.40**  
**1516-1/2" inside diam..... per 100 ft. 12.00**  
**1038-3/8" inside diam..... per 100 ft. 14.00**  
**1716-3/4" inside diam..... per 100 ft. 15.60**  
**1012-1/2" inside diam..... per 100 ft. 18.00**

## LACQUERED AUTO WIRE

Constructed of a stranded tinned copper conductor for easy soldering, with a heavy wall of live rubber over which a cotton braid is woven. A high gloss lacquered finish covers this braid.



**Colors: Red, Black, Green, Brown, Yellow, Blue**  
**List Price**  
**No. List Price**  
**3425-25-ft. coil..... each \$0.45**  
**3450-50-ft. coil..... each .90**  
**3460-100-ft. coil..... each 1.80**  
**3600-500-ft. spool..... each 8.00**

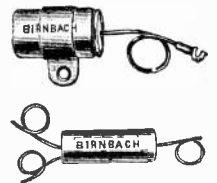
## INSULATED STAPLES and TACKS



These are essential for the securing of lead-in, ground, and other wires for installations.

**List Price**  
**No. Per Box Std. List**  
**R 100-Plain... 100 1000 \$2.75**  
**D 57-Plain... 50 1000 3.00**  
**C 40-Colored, 40 1000 3.50**  
**C 41-Perfection Tacks— 1000 3.00**  
 White or Brown....

## AUTO NOISE FILTER

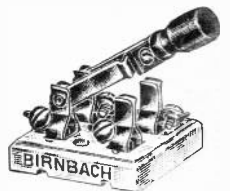


These are specially designed for the elimination of noise created by generator commutator, electrical windshield wiper, horn, and especially dome, tail, and stop light cables.

**List Price**  
**No. List Price**  
**355-Auto Noise Filter 1/2 Mfd..... each \$0.50**  
**356-Auto Noise Filter 1 Mfd..... each .60**  
**357-Ammeter Filter..... each .50**  
**358-Dome Light Inductance Capacity Filter..... each .80**

## KNIFE SWITCHES

Made of nickel-plated brass on a porcelain base. Special spring brass material used assures perfect contact. Screw terminals located conveniently for easy connections in circuit. Two-hole mounting.



**List Price**  
**No. Pole Throw Std. Pkg. List Price**  
**6100-Single Single 25 each \$0.17 1/2**  
**6102-Single Double 10 each .20**  
**6103-Double Single 10 each .35**  
**6104-Double Double 10 each .45**  
**6105-Triple Double 10 each .87 1/2**

## SPRING CLIPS

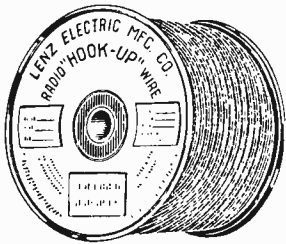


Will hold a wire, up to No. 10 B&S Gauge, in a secure contact. Ideal for temporary hookups requiring simple and inexpensive terminals. The twin clips have facility for connecting two wires in a temporary or permanent connection. All clips are nickel-plated.

**List Price**  
**No. Std. Pkg. List Price**  
**32-Spring Clip-1" long 100 per C \$1.00**  
**33-Twin Clip-1 3/4" long 100 per C 3.50**

# LENZ

**WIRES** *Quality Products* **CABLES**



## RADIO HOOK-UP WIRE

Consists of push-back non-fraying insulation, thoroughly saturated in MOISTURE-PROOF compound effective in reducing leakage. Has high insulation resistance and other essential dielectric properties. Can be furnished in SOLID or STRANDED, WAXED or LACQUERED. Neatly packed in attractive cartons or supplied on spools. Colors: Blue, Orange, Green, Brown, Slate, Red, Yellow, White and Black. If color is not specified, BLACK will be furnished.



### WAXED HOOK-UP WIRE (BRADAX) DOUBLE COTTON BRAIDS WAXED

No. 22 SOLID TINNED COPPER				
Cat. No.	Put-up	Std. Pkg.	Wt. in lbs.	List Price Each
1010	25' carton...	20	.14	\$0.25
1011	50' carton...	15	.24	.44
1012	100' spool...	10	.45	.86
1013	1000' spool...	1	4.7	7.25

No. 22 STRANDED TINNED COPPER				
Cat. No.	Put-up	Std. Pkg.	Wt. in lbs.	List Price Each
1016	25' carton...	20	.14	.28
1017	50' carton...	15	.24	.49
1018	100' spool...	10	.45	.96
1019	1000' spool...	1	4.7	8.30

Coils furnished without cartons—deduct two cents each from list price.

No. 20 SOLID TINNED COPPER				
Cat. No.	Put-up	Std. Pkg.	Wt. in lbs.	List Price Each
1022	25' carton...	20	.17	.28
1023	50' carton...	15	.31	.49
1024	100' spool...	10	.58	.96
1025	1000' spool...	1	6.1	8.30

No. 20 STRANDED TINNED COPPER				
Cat. No.	Put-up	Std. Pkg.	Wt. in lbs.	List Price Each
1028	25' carton...	20	.17	\$0.31
1029	50' carton...	15	.31	.56
1030	100' spool...	10	.58	1.10
1031	1000' spool...	1	6.1	9.65

Coils furnished without cartons—deduct two cents each from list price.

No. 18 SOLID TINNED COPPER				
Cat. No.	Put-up	Std. Pkg.	Wt. in lbs.	List Price Each
1035	25' carton...	20	.17	.33
1036	50' carton...	15	.35	.60
1037	100' spool...	10	.7	1.17
1038	1000' spool...	1	7.7	10.40

No. 18 STRANDED TINNED COPPER				
Cat. No.	Put-up	Std. Pkg.	Wt. in lbs.	List Price Each
1041	25' carton...	20	.17	.37
1042	50' carton...	15	.35	.68
1043	100' spool...	10	.7	1.34
1044	1000' spool...	1	7.7	12.10

Coils furnished without cartons—deduct two cents each from list price.

### WAXED HOOK-UP WIRE (LENZITE)

Two Wraps Cellulose Acetate Textile Plus One Cotton Braid Waxed

No. 22 SOLID TINNED COPPER				
Cat. No.	Put-up	Std. Pkg.	Wt. in lbs.	List Price Each
1310	25' carton...	20	.14	\$0.25
1311	50' carton...	15	.24	.44
1312	100' spool...	10	.45	.86
1313	1000' spool...	1	4.7	7.25

No. 22 STRANDED TINNED COPPER				
Cat. No.	Put-up	Std. Pkg.	Wt. in lbs.	List Price Each
1316	25' carton...	20	.14	.28
1317	50' carton...	15	.24	.49
1318	100' spool...	10	.45	.96
1319	1000' spool...	1	4.7	8.30

No. 20 SOLID TINNED COPPER				
Cat. No.	Put-up	Std. Pkg.	Wt. in lbs.	List Price Each
1322	25' carton...	20	.17	.28
1323	50' carton...	15	.31	.49
1324	100' spool...	10	.58	.96
1325	1000' spool...	1	6.1	8.30

No. 20 STRANDED TINNED COPPER				
Cat. No.	Put-up	Std. Pkg.	Wt. in lbs.	List Price Each
1328	25' carton...	20	.17	\$0.31
1329	50' carton...	15	.31	.56
1330	100' spool...	10	.58	1.10
1331	1000' spool...	1	6.1	9.65

No. 18 SOLID TINNED COPPER				
Cat. No.	Put-up	Std. Pkg.	Wt. in lbs.	List Price Each
1335	25' carton...	20	.17	.33
1336	50' carton...	15	.35	.60
1337	100' spool...	10	.7	1.17
1338	1000' spool...	1	7.7	10.40

No. 18 STRANDED TINNED COPPER				
Cat. No.	Put-up	Std. Pkg.	Wt. in lbs.	List Price Each
1341	25' carton...	20	.17	.37
1342	50' carton...	15	.35	.68
1343	100' spool...	10	.7	1.34
1344	1000' spool...	1	7.7	12.10

Coils furnished without cartons—deduct two cents each from list price.

### LACQUERED HOOK-UP WIRE (LENZAC)

Two Wraps Cellulose Acetate Textile Plus One Cotton Braid Lacquered

No. 22 SOLID TINNED COPPER				
Cat. No.	Put-up	Std. Pkg.	Wt. in lbs.	List Price Each
1350	25' carton...	20	.14	\$0.28
1351	50' carton...	15	.24	.48
1352	100' spool...	10	.45	.93
1353	1000' spool...	1	4.7	8.00

No. 22 STRANDED TINNED COPPER				
Cat. No.	Put-up	Std. Pkg.	Wt. in lbs.	List Price Each
1360	25' carton...	20	.14	.30
1361	50' carton...	15	.24	.53
1362	100' spool...	10	.45	1.04
1363	1000' spool...	1	4.7	9.05

No. 20 SOLID TINNED COPPER				
Cat. No.	Put-up	Std. Pkg.	Wt. in lbs.	List Price Each
1370	25' carton...	20	.17	.30
1371	50' carton...	15	.31	.54
1372	100' spool...	10	.58	1.05
1373	1000' spool...	1	6.1	9.20

No. 20 STRANDED TINNED COPPER				
Cat. No.	Put-up	Std. Pkg.	Wt. in lbs.	List Price Each
1380	25' carton...	20	.17	\$0.33
1381	50' carton...	15	.31	.61
1382	100' spool...	10	.58	1.20
1383	1000' spool...	1	6.1	10.60

No. 18 SOLID TINNED COPPER				
Cat. No.	Put-up	Std. Pkg.	Wt. in lbs.	List Price Each
1391	25' carton...	20	.17	.36
1392	50' carton...	15	.35	.66
1393	100' spool...	10	.7	1.29
1394	1000' spool...	1	7.7	11.63

No. 18 STRANDED TINNED COPPER				
Cat. No.	Put-up	Std. Pkg.	Wt. in lbs.	List Price Each
1395	25' carton...	20	.17	.40
1396	50' carton...	15	.35	.74
1397	100' spool...	10	.7	1.46
1398	1000' spool...	7	7.7	13.28

Coils furnished without cartons—deduct two cents each from list price.

### LACQUERED HOOK-UP WIRE (BRALAC)

Double Cotton Braids Lacquered

No. 22 SOLID TINNED COPPER				
Cat. No.	Put-up	Std. Pkg.	Wt. in lbs.	List Price Each
1050	25' carton...	20	.14	\$0.28
1051	50' carton...	15	.24	.48
1052	100' spool...	10	.45	.93
1053	1000' spool...	1	4.7	8.00

No. 22 STRANDED TINNED COPPER				
Cat. No.	Put-up	Std. Pkg.	Wt. in lbs.	List Price Each
1060	25' carton...	20	.14	.30
1061	50' carton...	15	.24	.53
1062	100' spool...	10	.45	1.04
1063	1000' spool...	1	4.7	9.05

No. 20 SOLID TINNED COPPER				
Cat. No.	Put-up	Std. Pkg.	Wt. in lbs.	List Price Each
1070	25' carton...	20	.17	.30
1071	50' carton...	15	.31	.54
1072	100' spool...	10	.58	1.05
1073	1000' spool...	1	6.1	9.20

No. 20 STRANDED TINNED COPPER				
Cat. No.	Put-up	Std. Pkg.	Wt. in lbs.	List Price Each
1080	25' carton...	20	.17	\$0.33
1081	50' carton...	15	.31	.61
1082	100' spool...	10	.58	1.20
1083	1000' spool...	1	6.1	10.60

No. 18 SOLID TINNED COPPER				
Cat. No.	Put-up	Std. Pkg.	Wt. in lbs.	List Price Each
1220	25' carton...	20	.17	.36
1221	50' carton...	15	.35	.66
1222	100' spool...	10	.7	1.29
1223	1000' spool...	1	7.7	11.63

No. 18 STRANDED TINNED COPPER				
Cat. No.	Put-up	Std. Pkg.	Wt. in lbs.	List Price Each
1230	25' carton...	20	.17	.40
1231	50' carton...	15	.35	.74
1232	100' spool...	10	.7	1.46
1233	1000' spool...	1	7.7	13.28

Coils furnished without cartons—deduct two cents each from list price.

# LENZ

**WIRES *Quality* PRODUCTS CABLES**

## Shielded Rubber Jacketed Microphone Cables



Conductors all color-coded. Braided with tinned copper shield. Heavy Jacket Tough Black Polished Rubber applied overall. Will withstand severe service. Adaptable to carbon, condenser, and moving coil microphones. **POSITIVELY WATERPROOF**—excellent for field microphones.

Cat. No.	Put-up	Approx. O.D.	Std. Pkg.	Wt. Ea. Lbs.	List Price Each
1185	100-ft. spool, 2-conductor	11/16"	1	7.5	\$7.65
1186	250-ft. coil, 2-conductor	11/16"	1	18.7	18.70
1186A	500-ft. coil, 2-conductor	11/16"	1	37.4	37.20
1187	100-ft. spool, 3-conductor	11/16"	1	9.5	9.35
1188	250-ft. coil, 3-conductor	11/16"	1	23.7	23.18
1188A	500-ft. coil, 3-conductor	11/16"	1	47.4	46.16
1180	100-ft. coil, 4-conductor	3/4"	1	10.0	11.25
1181	250-ft. coil, 4-conductor	3/4"	1	25.0	27.50
1181A	500-ft. coil, 4-conductor	3/4"	1	50.0	54.80
1182	100-ft. coil, 5-conductor	3/4"	1	10.5	13.15
1183	250-ft. coil, 5-conductor	3/4"	1	26.0	32.15
1183A	500-ft. coil, 5-conductor	3/4"	1	52.0	64.10
1189	100-ft. coil, 6-conductor	3/4"	1	15.0	14.90
1190	250-ft. coil, 6-conductor	3/4"	1	37.0	36.60
1190A	500-ft. coil, 6-conductor	3/4"	1	74.0	73.00

## Shielded Rubber Jacketed Microphone Cables Light Weight

Cat. No.	Put-up	Approx. O.D.	Std. Pkg.	Wt. Ea. Lbs.	List Price Each
1800	100-ft. spool, 2-conductor	11/16"	1	3.6	\$6.20
1801	250-ft. coil, 2-conductor	11/16"	1	7.5	15.05
1802	500-ft. coil, 2-conductor	11/16"	1	15.0	29.90
1810	100-ft. spool, 3-conductor	11/16"	1	5.0	7.45
1811	250-ft. coil, 3-conductor	11/16"	1	12.5	18.10
1812	500-ft. coil, 3-conductor	11/16"	1	25.0	36.00

## Special Extra Flexible Shielded Rubber Jacketed Microphone Cable

Conductors of EXTRA FLEXIBLE CONSTRUCTION. Closely woven tinned copper shield, heavy Jacket Tough Black Polished Rubber overall.

Cat. No.	Put-up	Approx. O.D.	Std. Pkg.	Wt. Ea. Lbs.	List Price Each
1192	100-ft. spool, 3-conductor	11/16"	1	6.4	\$9.85
1193	250-ft. coil, 3-conductor	11/16"	1	16.0	24.15
1193A	500-ft. coil, 3-conductor	11/16"	1	32.0	48.10

## Crystal Microphone Cable Shielded—Rubber Jacketed



The conductor is of stranded copper, extremely flexible. Insulation consists of Cellulose Acetate treated textile. A closely woven tinned copper shield is applied, over which is placed a durable, high quality rubber jacket.

### SINGLE CONDUCTOR

Cat. No.	Put-up	Approx. O.D.	Std. Pkg.	Wt. Ea. Lbs.	List Price Each
1252	100-ft. spool	1/2"	3	3.0	\$7.50
1253	250-ft. spool	1/2"	1	6.75	18.00
1253A	500-ft. coil	1/2"	1	13.5	35.80

### TWO-CONDUCTOR

Cat. No.	Put-up	Approx. O.D.	Std. Pkg.	Wt. Ea. Lbs.	List Price Each
1254	100-ft. spool	1/4"	1	3.55	\$10.00
1255	250-ft. spool	1/4"	1	8.80	24.00
1255A	500-ft. coil	1/4"	1	17.6	47.80

## Shielded Cables



Flexible tinned copper conductors plus good grade of rubber insulation. Each conductor braided with color-coded cotton braid, thoroughly saturated in **MOISTURE-PROOF** compound, **CLOSELY WOVEN** tinned copper shield overall. Especially adaptable to **AUTO RADIO, PUBLIC ADDRESS SYSTEMS** and **SOUND RECORDING EQUIPMENT.**

### NO. 20 FLEXIBLE R.C. COTTON Braid CONDS.

Cat. No.	Put-up	No.	Std. Wt. Ea. Pkg. Lbs.	List Price Each
1110	100-ft. spool, 2-conductor	No. 20	3 3.3	\$4.80
1111	250-ft. spool, 2-conductor	No. 20	1 7.4	11.65
1111A	500-ft. coil, 2-conductor	No. 20	1 14.8	23.10
1112	100-ft. spool, 3-conductor	No. 20	3 4.7	6.50
1113	250-ft. spool, 3-conductor	No. 20	1 10.7	15.95
1113A	500-ft. coil, 3-conductor	No. 20	1 21.4	31.70
1114	100-ft. spool, 4-conductor	No. 20	3 5.6	8.15
1115	250-ft. coil, 4-conductor	No. 20	1 13.1	20.05
1115A	500-ft. coil, 4-conductor	No. 20	1 26.2	39.90
1116	100-ft. spool, 5-conductor	No. 20	3 6.5	9.85
1117	250-ft. coil, 5-conductor	No. 20	1 14.8	24.20
1117A	500-ft. coil, 5-conductor	No. 20	1 29.6	48.20
1118	100-ft. spool, 6-conductor	No. 20	3 7.5	11.40
1119	250-ft. coil, 6-conductor	No. 20	1 16.6	27.85
1119A	500-ft. coil, 6-conductor	No. 20	1 33.2	55.50

### NO. 18 FLEXIBLE R.C. COTTON BRAID CONDS.

Cat. No.	Put-up	No.	Std. Wt. Ea. Pkg. Lbs.	List Price Each
1120	100-ft. spool, 2-conductor	No. 18	3 3.8	\$5.10
1121	250-ft. spool, 2-conductor	No. 18	1 8.6	12.40
1121A	500-ft. coil, 2-conductor	No. 18	1 17.2	24.60
1122	100-ft. spool, 3-conductor	No. 18	3 5.4	6.95
1123	250-ft. coil, 3-conductor	No. 18	1 12.7	16.95
1123A	500-ft. coil, 3-conductor	No. 18	1 25.4	33.70
1124	100-ft. spool, 4-conductor	No. 18	3 7.0	8.50
1125	250-ft. coil, 4-conductor	No. 18	1 16.2	20.85
1125A	500-ft. coil, 4-conductor	No. 18	1 32.4	41.50
1126	100-ft. spool, 5-conductor	No. 18	3 8.2	10.20
1127	250-ft. coil, 5-conductor	No. 18	1 19.6	25.00
1127A	500-ft. coil, 5-conductor	No. 18	1 39.2	49.80
1128	100-ft. spool, 6-conductor	No. 18	3 9.8	11.50
1129	250-ft. coil, 6-conductor	No. 18	1 23.0	28.35
1129A	500-ft. coil, 6-conductor	No. 18	1 46.0	56.50



## Shielded Cables Cotton Braid Overall

Cat. No.	Put-up	No.	Std. Wt. Ea. Pkg. Lbs.	List Price Each
1160	100-ft. spool, 2-conductor	No. 20	3 3.5	\$5.60
1161	250-ft. spool, 2-conductor	No. 20	1 8.0	13.80
1161A	500-ft. coil, 2-conductor	No. 20	1 16.0	27.40
1162	100-ft. spool, 3-conductor	No. 20	3 4.9	7.40
1163	250-ft. spool, 3-conductor	No. 20	1 11.1	18.20
1163A	500-ft. coil, 3-conductor	No. 20	1 22.2	36.20
1164	100-ft. spool, 4-conductor	No. 20	3 6.0	9.10
1165	250-ft. coil, 4-conductor	No. 20	1 14.0	22.40
1165A	500-ft. coil, 4-conductor	No. 20	1 28.0	44.60
1166	100-ft. spool, 5-conductor	No. 20	3 7.3	10.95
1167	250-ft. coil, 5-conductor	No. 20	1 15.5	26.95
1167A	500-ft. coil, 5-conductor	No. 20	1 31.0	53.70
1168	100-ft. spool, 6-conductor	No. 20	3 8.0	12.50
1169	250-ft. coil, 6-conductor	No. 20	1 18.0	30.85
1169A	500-ft. coil, 6-conductor	No. 20	1 36.0	61.50

Cat. No.	Put-up	No.	Std. Wt. Ea. Pkg. Lbs.	List Price Each
1170	100-ft. spool, 2-conductor	No. 18	3 4.2	6.00
1171	250-ft. coil, 2-conductor	No. 18	1 9.5	14.55
1171A	500-ft. coil, 2-conductor	No. 18	1 19.0	28.90
1172	100-ft. spool, 3-conductor	No. 18	3 6.2	8.15
1173	250-ft. coil, 3-conductor	No. 18	1 13.0	19.85
1173A	500-ft. coil, 3-conductor	No. 18	1 26.0	39.50
1174	100-ft. spool, 4-conductor	No. 8	3 7.4	9.60
1175	250-ft. coil, 4-conductor	No. 18	1 17.2	23.60
1175A	500-ft. coil, 4-conductor	No. 18	1 34.4	47.00
1176	100-ft. spool, 5-conductor	No. 18	3 8.7	11.30
1177	250-ft. coil, 5-conductor	No. 18	1 20.0	27.90
1177A	500-ft. coil, 5-conductor	No. 18	1 40.0	55.60
1178	100-ft. spool, 6-conductor	No. 18	3 10.4	12.75
1179	250-ft. coil, 6-conductor	No. 18	1 24.5	31.45
1179A	500-ft. coil, 6-conductor	No. 18	1 49.0	62.70

# LENZ

**WIRES Quality Products CABLES**

## SHIELDED LEAD-IN AND GROUND WIRE

### FREE STRIPPING RUBBER

Consists of FLEXIBLE tinned copper conductors, heavy wall of FREE STRIP rubber and CLOSELY WOVEN tinned copper shield. Shield can be grounded, reducing interference, resulting in better reception.



No. 18 Flexible $\frac{1}{32}$ " R.C.				
Cat. No.	Put-up	Std. Wt. Ea. Pkg. Lbs.	Std. Wt. Ea. Pkg. Lbs.	List Price Each
1100	50-ft. carton.....	5	1.1	\$1.25
1101	250-ft. spool.....	1	5.9	6.00
1101A	500-ft. spool.....	1	11.8	11.80

No. 16 Flexible $\frac{1}{32}$ " R.C.				
Cat. No.	Put-up	Std. Wt. Ea. Pkg. Lbs.	Std. Wt. Ea. Pkg. Lbs.	List Price Each
1102	50-ft. carton.....	5	1.4	\$1.50
1103	250-ft. spool.....	1	7.2	7.15
1103A	500-ft. spool.....	1	14.4	14.10

No. 14 Flexible $\frac{1}{32}$ " R.C.				
Cat. No.	Put-up	Std. Wt. Ea. Pkg. Lbs.	Std. Wt. Ea. Pkg. Lbs.	List Price Each
1104	50-ft. carton.....	5	1.8	\$1.75
1105	250-ft. spool.....	1	9.0	8.50
1105A	500-ft. spool.....	1	18.0	16.80

### RUBBER JACKETED SHIELDED LOW CAPACITY CABLE

#### SINGLE CONDUCTOR



Outer rubber jacket insures **Positive Weatherproofing**. Excellent interference eliminator on broadcast band. Suggest ends be sealed after installation to prevent moisture absorption.

Cat. No.	Put-up	Std. Wt. Ea. Pkg. Lbs.	Std. Wt. Ea. Pkg. Lbs.	List Price Each
1198	50-ft. coil $\frac{5}{8}$ " O.D.	1	10.0	\$8.60
1198A	50-ft. coil $\frac{5}{8}$ " O.D.	1	4.0	4.95
1199	100-ft. coil $\frac{5}{8}$ " O.D.	1	20.0	16.65
1199A	100-ft. coil $\frac{5}{8}$ " O.D.	1	8.0	9.50

### TWO CONDUCTOR RUBBER JACKETED SHIELDED SHORT WAVE TRANSMISSION LEAD-IN

#### APPROXIMATELY $\frac{5}{8}$ " O.D.



Properly installed this cable is truly a half-wave transmission lead-in. Suggests ends be sealed after installation to prevent moisture absorption and consequent DB. drop.

Cat. No.	Put-up	Std. Wt. Ea. Pkg. Lbs.	Std. Wt. Ea. Pkg. Lbs.	List Price Each
1200	50-ft. coil 2 cond.	1	10.0	\$9.40
1201	100-ft. coil 2 cond.	1	20.0	18.15

### SHIELDED LOW CAPACITY CABLE



For auto antennae lead-in and short-wave converters. Extremely low capacity between conductor and shield permits shield grounding without excessive loss of signal.

Cat. No.	Put-up	Std. Wt. Ea. Pkg. Lbs.	Std. Wt. Ea. Pkg. Lbs.	List Price Each
1194	50-ft. coil $\frac{1}{2}$ " O.D.	3	4.0	\$5.60
1195	100-ft. coil $\frac{1}{2}$ " O.D.	1	8.0	10.60
1196	50-ft. coil $\frac{3}{4}$ " O.D.	3	2.5	4.15
1197	100-ft. coil $\frac{3}{4}$ " O.D.	1	5.0	7.90

### SHIELDED LEAD-IN AND GROUND WIRE

#### With Waxed Cotton Braid Under Shield

Consists of FLEXIBLE tinned copper conductors, heavy wall of FREE STRIP rubber, plus WAXED COTTON BRAID and CLOSELY WOVEN tinned copper shield.

NO. 18 FLEXIBLE $\frac{1}{32}$ " R.C.				
Cat. No.	Put-up	Std. Wt. Ea. Pkg. Lbs.	Std. Wt. Ea. Pkg. Lbs.	List Price Each
1118	50-ft. carton.....	5	1	\$1.50
1118A	250-ft. spool.....	1	5.5	7.20
1118B	500-ft. spool.....	1	11.0	14.20

NO. 16 FLEXIBLE $\frac{1}{32}$ " R.C.				
Cat. No.	Put-up	Std. Wt. Ea. Pkg. Lbs.	Std. Wt. Ea. Pkg. Lbs.	List Price Each
1116	50-ft. carton.....	5	1.3	\$1.70
1116A	250-ft. spool.....	1	7	8.30
1116B	500-ft. spool.....	1	14.0	16.40

NO. 14 FLEXIBLE $\frac{1}{32}$ " R.C.				
Cat. No.	Put-up	Std. Wt. Ea. Pkg. Lbs.	Std. Wt. Ea. Pkg. Lbs.	List Price Each
1114	50-ft. carton.....	5	1.6	\$1.95
1114A	250-ft. spool.....	1	8.5	9.20
1114B	500-ft. spool.....	1	17.0	18.20

### BLACK POLISHED RUBBER COVERED LEAD-IN AND GROUND WIRE

Conductor consists of stranded clean tinned copper wire. Insulation—high quality live rubber easily stripped. Put up in attractive CARTONS and on SPOOLS.

NO. 18 STRANDED, $\frac{1}{32}$ " WALL RUBBER				
Cat. No.	Put-up	Std. Wt. Ea. Pkg. Lbs.	Std. Wt. Ea. Pkg. Lbs.	List Price Each
1094	50-ft. carton....	15	.45	\$0.50
1095	100-ft. spool.....	10	.95	.86
1096	1000-ft. spool....	1	5.0	7.50

NO. 16 STRANDED, $\frac{1}{32}$ " WALL RUBBER				
Cat. No.	Put-up	Std. Wt. Ea. Pkg. Lbs.	Std. Wt. Ea. Pkg. Lbs.	List Price Each
1097	50-ft. carton....	15	.90	\$0.60
1098	100-ft. spool....	10	1.75	1.10
1099	1000-ft. spool....	1	17.8	10.00

### INDOOR AERIAL

EXTREMELY FLEXIBLE conductor, tightly woven brown cotton braid. Will not kink and can be easily concealed. Also suitable for loop aerials.

Cat. No.	Put-up	Std. Wt. Ea. Pkg. Lbs.	Std. Wt. Ea. Pkg. Lbs.	List Price Each
1089	20-ft. carton....	20	.05	\$0.15
1090	60-ft. carton....	5	.16	.50
1091	125-ft. carton....	5	.30	.86
1092	1000-ft. spool....	1	2.75	5.60

### TRANSMISSION LINE FOR ALL-WAVE DOUBLET ANTENNA SYSTEM

#### NOT SHIELDED



Excellent for short-wave reception. Conductors are of solid copper, insulated with a heavy coating of enamel, and weatherproof cotton braid, color coded.

Cat. No.	Put-up	Std. Wt. Ea. Pkg. Lbs.	Std. Wt. Ea. Pkg. Lbs.	List Price Each
1260	100-ft. spool.....	5	1	\$1.65
1261	500-ft. spool.....	1	5	7.60



#### SHIELDED

Ideal for short-wave reception. Conductors are of solid copper, insulated with a heavy coating of enamel, over which is placed a weatherproof cotton braid, color coded. A closely woven bare copper shield is placed over all for grounding interference.

Cat. No.	Put-up	Std. Wt. Ea. Pkg. Lbs.	Std. Wt. Ea. Pkg. Lbs.	List Price Each
1262	100-ft. spool.....	5	2.25	\$3.00
1263	500-ft. spool.....	1	11.25	14.15

### TWISTED PAIR BRAID OVERALL DOUBLET TRANSMISSION CABLE

BLACK weatherproof braid overall suitable as transmission line for DOUBLET ANTENNA SYSTEM required on "ALL WAVE" RADIO RECEIVERS.



Cat. No.	Put-up	Std. Wt. Ea. Pkg. Lbs.	Std. Wt. Ea. Pkg. Lbs.	List Price Each
1264	100-ft. spool.....	5	2.45	\$2.55
1265	500-ft. spool.....	1	11.90	12.05

### SHIELDED IGNITION CABLE

No. 16 7MM rubber wall lacquered braid plus overall shield. Effective in reducing interference in auto secondary circuit. Can also be used as photo electric cell leads.



Cat. No.	Put-up	Std. Wt. Ea. Pkg. Lbs.	Std. Wt. Ea. Pkg. Lbs.	List Price Each
1295	100-ft. spool.....	1	8.0	10.90



# ANTENNA SYSTEMS and ACCESSORIES



# WIRE and CABLE

## ALPHA MICROPHONE CABLE

### ALPHA SHIELDED MICROPHONE CABLE



Rubber Jacket

Adaptable for all indoor and outdoor microphones. Each conductor is of stranded copper and rubber covered. A shield of fine tinned copper is over the grouped conductors. Overall is a jacket of Para Rubber.

No.	Per Spool	List Price
1249	100 Ft.—1-conductor (crystal)	\$6.25
1250	100 Ft.—2-conductor	7.50
1251	100 Ft.—3-conductor	9.00
1252	100 Ft.—4-conductor	10.40
1253	100 Ft.—5-conductor	11.75
1254	100 Ft.—6-conductor	13.25

### ALPHA UNSHIELDED MICROPHONE CABLE



Rubber Jacket

For use in indoor permanent or portable P.A. systems, sound recording and auto radios. Effective in the prevention of pickup interference. Each conductor of this cable is extra flexible, insulated with live rubber and color coded. Overall is a sheath of Para Rubber.

No.	Per Spool	List Price
1244	100 Ft.—2-conductor	\$4.00
1245	100 Ft.—3-conductor	5.75
1246	100 Ft.—4-conductor	7.50

### ALPHA SHIELDED MULTIPLE CONDUCTOR CABLE



radios. Effective in the prevention of pickup interference. Each conductor of this cable is extra flexible.

No.	Per Spool	List Price
1256	100 Ft.—2-conductor	\$4.90
1257	100 Ft.—3-conductor	6.25
1258	100 Ft.—4-conductor	7.50
1259	100 Ft.—5-conductor	8.50
1260	100 Ft.—6-conductor	10.00
1261	100 Ft.—7-conductor	12.00

For use in indoor permanent or portable P.A. systems, photo electric cell circuits, sound recording and auto

### ALPHA BATTERY CABLE

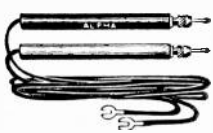


Each conductor of Alpha Battery Cables is stranded, insulated with live rubber and covered with a colored cotton braid—easily distinguished

from each other and non-confusing while making the necessary connections. Over all is a heavy cotton braid.

No.	100-Foot Spools	List Price
1182	2-wire	\$3.10
1183	3-wire	4.10
1184	4-wire	5.25
1185	5-wire	6.00
1186	6-wire	7.00
1187	7-wire	8.00
1188	8-wire	12.00
1189	9-wire	14.00
1190	10-wire	15.50
1192	12-wire	18.00

### ALPHA SUPER "HI-TENSION" TEST LEADS



Can readily be connected for testing circuit defects and all devices such as meters, batteries, transformers, etc. An insulation of Alpha Super "Hi-Tension" heavy rubber is over an extremely flexible tinned copper wire (Alpha No. 1635 Test Prod wire). Constructed to withstand rough usage and repeated bendings. Handles are of sturdy fibre. Overall length 50". Red and Black leads for easy identification.

No.	Needle Point Prods	List Price
2171	With spade terminals	\$0.60
2172	With phonetip terminals	.60
2173	With alligator clips	.75
	<b>Solderless Prods</b>	
2175	With spade terminals	.60
2176	With phonetip terminals	.60
2177	With alligator clips	.75

### ALPHA E-Z STRIP POWER CORDS



This is the modern and ideal power supply cord for replacement on radios, lamps, fans, etc. It is made of 6 feet of Alpha E-Z strip all rubber parallel cord (Underwriters' approved) with a small unbreakable soft rubber attachment plug. Free end stripped and tinned ready to attach.

No.	List Price	
2101	Power Cord	\$0.28

Furnished in brown unless otherwise specified.

### WINDCHARGER CABLE



No.	Per Coil	List Price
1286	100 Ft.—14-solid	\$2.00
1288	100 Ft.—12-solid	2.65
1290	100 Ft.—10-solid	3.75
1292	100 Ft.—8 solid	5.75

No.	Per Coil	List Price
1295	100 Ft.—12-solid	2.75
1297	100 Ft.—10-solid	3.75
1299	100 Ft.—8-solid	6.00

## ALPHA AUTOMOTIVE CABLES

### ALPHA LACQUERED PRIMARY WIRE



Adapted for automobile head, tail, side, dashboard lamps, horn, etc. Oil, moisture and heat proof.

No.	Per Spool	Stranded	List Price
1983	100 Ft.—No. 10	1/16"	\$5.50
1989	100 Ft.—No. 18	1/16"	1.50
1990	500 Ft.—No. 18	1/16"	7.00
1991	100 Ft.—No. 18	1/16"	1.65
1992	500 Ft.—No. 18	1/16"	7.65
1995	100 Ft.—No. 16	1/16"	2.10
1996	500 Ft.—No. 16	1/16"	9.70
1997	100 Ft.—No. 14	1/16"	2.75
1998	500 Ft.—No. 14	1/16"	12.50
1999	100 Ft.—No. 12	1/16"	3.60

### ALPHA SHIELDED IGNITION CABLE



Lacquered Ignition Cable covered with a close tinned shielding. Designed for auto radio installation.

No.	List Price	
1241	100 Ft.—No. 16-7 MM Auto Radio Lead-In	\$8.50

### ALPHA LACQUERED IGNITION CABLE



A combination of extra flexible tinned copper, high grade rubber, and a lacquered braid make this ignition cable moisture, heat and oil proof.

No.	List Price	
1981	100 Ft.—No. 16-7 MM	\$4.15

### ALPHA AUTO RADIO SHIELDED LEAD-IN WIRE



An auto antenna lead-in shielded to reduce interference of ignition pickup. Flexible tinned copper, rubber covered, built up with cotton fillers and closely braided tinned copper shielding overall.

No.	List Price	
1239	100 Ft.—1/4" dia., per spool	\$6.25
1240	100 Ft.—1/2" dia., per spool	10.65

### ALPHA BRAIDED SHIELDING



An all purpose shielding for speaker leads, lead-ins, amplifier wires, auto radio installations. Can be stretched in width or length for snug covering.

No.	Bare	List Price
1226	50 Ft.—1/4" per spool	\$1.65
1227	50 Ft.—3/8" per spool	2.90
1228	50 Ft.—1/2" per spool	4.50
Tinned		
1230	50 Ft.—3/8" per spool	1.65
1231	50 Ft.—1/2" per spool	2.00
1232	50 Ft.—3/4" per spool	2.35
1232-D	250 Ft.—3/4" per coil	10.65
1233	50 Ft.—1/2" per spool	5.00

### ALPHA ARMORED CABLE



Extensively used in automotive wiring, portable P. A. Systems, oil burner installations, etc. Heat, oil and moisture proof.

No.	Single Conductor	List Price
1975	100 Ft.—per spool	\$2.40
Duplex		
No.	List Price	
1978	100 Ft.—per spool	\$4.15

### ALPHA SHIELDED LOOM

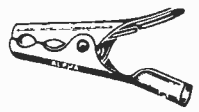


For auto installations. A flexible non-collapsible seamless cotton and fibre tubing furnished with a compound to resist oil, water and gasoline. Overall is a close tinned copper shield.

No.	List Price	
1236	50 Ft.—3/8" inside dia., per coil	\$6.50
1237	50 Ft.—5/8" inside dia., per coil	5.00
1238	50 Ft.—3/4" inside dia., per coil	3.50

### ALPHA BATTERY AND TEST CLIPS

For protection against rust and corrosion, these clips are completely cadmium plated. Spring law for permanent contact.



No.	Standard Amps.	Pkg.	List Price
2070	Solderless Test Clips	50	\$0.07
2071	Midget Test Clips	5	.07
2072	Pec-Wee Test Clips	10	.07
2073	Battery Clips (medium)	25	.10
2074	Battery Clips (large)	50	.17
2075	Alligator Clips	50	.07





**ANTENNA  
SYSTEMS  
and  
ACCESSORIES**



**WIRE  
and  
CABLE**

**ALPHA ALL - WAVE SYSTEMS**

**FOR SHORT WAVE, STANDARD BROADCAST,  
POLICE AND AIRCRAFT SIGNALS**

The ALPHA DOUBLET ANTENNA is an expertly designed aerial system for all types of All-Wave receivers. The great advantage of the double type antenna system is its efficiency in eliminating noises between the antenna and the receiver and the greater reception it affords. The ALPHA wire and accessories used have been particularly designed for this doublet antenna system.

**KIT No. 25—Contents:**

- 1—Alpha All-Wave Antenna Coupler No. 51
- 2—30-Ft. Coils No. 15 Solid Enamel Aerial Wire
- 1—50-Ft. Coil Transmission Cable No. 1149
- 3—Glass Insulators No. 2020
- 2—Glazed Porcelain Nail Knobs No. 2031
- 1—Strap Type Ground Clamp No. 2012
- 2—Weatherproofed Window Lead-In Strips No. 2002
- 1—7" Bakelite Screw Eye No. 2055

**KIT No. 25** ..... **List Price \$3.00**

**KIT No. 24**—All-Wave Doublet Antenna System—same as Kit No. 25, except without No. 51 Alpha All-Wave Antenna Coupler.

**KIT No. 24** ..... **List Price \$2.10**



**KIT No. 31—Contents:**

- 1—Alpha All Wave Antenna Coupler No. 51
- 2—46-Ft. Coils 7/26 Aerial Wire
- 1—110-Ft. Coil Transmission Cable No. 1136
- 1—Alpha Triangular Antenna Block No. 2069
- 1—Doublet Screw-Type Window Lead-in Strip No. 2004
- 1—25-Ft. Coil Heavy Flexible Rubber Covered Wire
- 4—Glass Insulators No. 2020
- 2—7" Bakelite Screw Eyes No. 2055
- 2—Glazed Porcelain Nail Knobs No. 2031
- 1—"C" Type Pipe Clamp No. 2011
- 6—Insulated Staples No. 2041

**KIT No. 31** ..... **List Price \$4.75**

**KIT No. 30**—Alpha All-Wave Doublet Antenna System—same as Kit No. 31, except without No. 51 Alpha All-Wave Antenna Coupler.

**KIT No. 30** ..... **List Price \$3.75**

**ANY AERIAL SYSTEM DUPLICATED**

**ALPHA TWISTED AND BRAIDED  
TRANSMISSION CABLE**



This is the doublet style transmission lead-in designed for coupling low impedance between the aerial system and radio receiver. Each conductor is twisted tinned stranded flexible wire insulated with "Hi-Tension" color-coded rubber. The conductors are made into a twisted pair with an overall cotton braid heavily waxed and weatherproofed.

No.	List Price
1146—500 Ft. .... per spool	\$10.00
1147—110 Ft. .... per coil	2.20
1148—100 Ft. .... per coil	2.00
1149—50 Ft. .... per coil	1.00
1150—80 Ft. .... per coil	1.60

**ALPHA RUBBER JACKET  
TRANSMISSION CABLE**



This is a NEWLY developed and PERFECTED doublet style transmission cable. Each conductor is stranded tinned wire insulated with 1/32" live color-coded rubber. The conductors are twisted and overall is a rubber jacket of Hevea.

No.	List Price
1135—500 Ft. .... per spool	\$12.50
1136—110 Ft. .... per coil	2.75
1137—100 Ft. .... per coil	2.50
1138—50 Ft. .... per coil	2.35
1139—80 Ft. .... per coil	2.00

**ALPHA EOI AMATEUR  
TRANSMISSION CABLE**



For amateur transmitters and receivers. The surge impedance of 72 ohms matches the impedance at the center of the half-wave Hertz Antenna. Can be used in any desired length up to 1000 feet, with negligible loss. Handles up to 1 Kw. power.

No.	List Price
1153—100 Ft. .... per spool	\$10.00
1154—250 Ft. .... per reel	22.50
1155—500 Ft. .... per reel	45.00
1156—1000 Ft. .... per reel	90.00

**ALPHA PHOSPHOR BRONZE  
DIAL CABLE**



Made of 42 strands phosphor bronze wire with a linen center for extra flexibility. Is guaranteed not to warp or stretch.

No.	List Price
1269—25 Ft. .... per spool	\$1.25
1270—50 Ft. .... per spool	2.25
1271—100 Ft. .... per spool	4.00
1275—500 Ft. .... per spool	18.75
1277—1000 Ft. .... per spool	36.00

**ALPHA UNBREAKABLE SOFT  
RUBBER PLUG**



Made of sturdy live soft rubber. Unbreakable, easy to attach.

No.	List Price
1964—Soft Rubber Plug.	\$0.09

**ALPHA ALL - WAVE  
ANTENNA COUPLER**



This coupler is entirely automatic. Controls the impedance that may exist between the doublet antenna and receiver. Suitable for broadcast as well as short-wave reception.

No.	List Price
51—Antenna Coupler.	\$1.00

**ALPHA DOUBLET  
LEAD - IN STRIP**



This Doublet Lead-In Strip consists of two separate lacquered weatherproof lead-ins with screw terminals, held apart by two riveted fibre pieces. Strips are staggered, preventing cross contact.

No.	List Price
2004—Doublet Screw Type Lead-In Strip.	each \$0.18

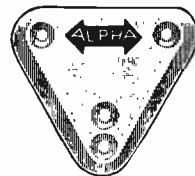
**ALPHA DOUBLET  
LIGHTNING ARRESTER**



For complete protection on doublet antenna systems. Individually boxed.

No.	List Price
2000—Doublet Lightning Arrester.	each \$0.30

**ALPHA TRIANGULAR ANTENNA  
JUNCTION  
BLOCK**



For Doublet Type Antenna Systems. Acts as a junction block or center insulator between aerial and lead-in. Constructed of high-grade glazed ceramic.

No.	List Price
2069—Triangular Antenna Junction Block.	each \$0.12½

**ALPHA SUPER "HI-TENSION"  
TEST PROD LEAD WIRE**



For use in construction of analyzers, oscillators and all types of testing apparatus and wherever an EXTRA FLEXIBLE insulated wire is required. An extremely flexible stranded tinned copper wire is insulated with ALPHA SUPER "HI-TENSION" HEAVY RUBBER. A very close cotton warp protects the conductor from oxidation.

No.	List Price
1631—25 Ft. .... per carton	\$0.55
1633—100 Ft. .... per spool	1.65
1635—500 Ft. .... per spool	8.00

Colors: Red and Black.

# ALPHA

**ALPHA LACQUERED RUBBER COVERED HOOK-UP AND LEAD-IN WIRE  
Lacquered Braid**



A superior type of stranded tinned copper wire, rubber insulated with a highly lacquered cotton braid. For a point to point soldering connection where a low loss dielectric is required. It is not a push-back wire, but will strip easily and clean. It is also ideally suited for a lead-in, being impervious to weather conditions.

No. 20 Stranded $\frac{1}{4}$ "		
No.	Length	List Price
1511	25 Ft.	per carton \$0.33
1513	100 Ft.	per spool 1.25
1515	500 Ft.	per spool 5.50
Colors: Black and Red		
No. 18 Stranded $\frac{1}{4}$ "		
1521	25 Ft.	per carton \$0.40
1523	100 Ft.	per spool 1.55
1525	500 Ft.	per spool 7.25
Colors: Black and Red		
No. 18 Stranded $\frac{3}{32}$ "		
1531	25 Ft.	per carton \$0.45
1533	100 Ft.	per spool 1.65
1535	500 Ft.	per spool 7.65
Colors: Black, Red, Green, Yellow, Blue, Brown and White.		
No. 16 Stranded $\frac{3}{32}$ "		
1541	25 Ft.	per carton \$0.50
1543	100 Ft.	per spool 2.20
1545	500 Ft.	per spool 10.00
Colors: Black and Red		

**ALPHA "HI-TENSION" COLORED RUBBER FLEXIBLE WIRE**

Free stripping, easy point to point wiring for all radio and electrical uses. The "Hi-Tension" rubber used contains the very best of pure Hevea making it unsurpassed in dielectric strength, elasticity, longlife and insulating qualities.



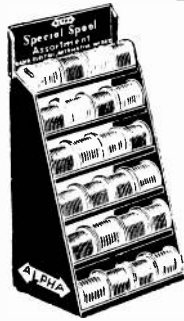
Tinned C. W. Rubber— $\frac{1}{4}$ "		
No.	Length	List Price
1601	25 Ft.—No. 18-16/30	per carton \$0.30
1603	100 Ft.—No. 18-16/30	per spool 1.00
1605	500 Ft.—No. 18-16/30	per spool 9.00
Colors—Black, Red, Green, Yellow, Blue, Brown and White.		
Tinned C. W. Rubber— $\frac{3}{32}$ "		
1621	25 Ft.—No. 16-26/30	per carton \$0.42
1623	100 Ft.—No. 16-26/30	per spool 1.50
1625	500 Ft.—No. 16-26/30	per spool 14.00

**ALPHA AC-DC RESISTANCE LINE CORDS**



These line cords are built with a third element voltage drop resistor or to take care of reducing line voltage and also increase life of coils and condensers as well as eliminate heat generated by the receiver. Equipped with a soft rubber unbreakable attachment plug.

No.	Ohms	Individually Boxed	
		For Sets with Following Tubes	For Sets with Following Tubes
1174	135	4-6.3-Volt Tubes, 1-43, 1-25Z5	
1175	160	4-6.3-Volt Tubes, 1-43, 1-25Z5	
1175B	180	4-6.3-Volt Tubes, 1-43, 1-12Z3	
1176	220	2-6.3-Volt Tubes, 1-43, 1-25Z5	
1176B	250	2-6.3-Volt Tubes, 1-43, 1-12Z3	
1177	290	3-6.3-Volt Tubes, 1-25Z5	
1178	330	3-6.3-Volt Tubes, 1-12Z3	
1179	360	2-6.3-Volt Tubes, 1-12Z3	
		1-6.3-Volt Tube, 1-12Z3	
		3-6.3-Volt Tubes	
List Price for above Cords..... each \$0.60			



**ALPHA SPECIAL SPOOL ASSORTMENT**

On Attractive Metal Spools INCLUDING PUSHBACK, HOOK-UP, RUBBER COVERED AUTOMOTIVE SHIELDED, LEAD-IN, FIXTURE AND LAMP WIRES

No.	Description	Feet Per Spool	List Price
9801	No. 22—Solid Pushback Wire-Assorted Colors.....	100	
9802	No. 20—Solid Pushback Wire-Assorted Colors.....	75	
9804	No. 18—Solid Pushback Wire-Assorted Colors.....	60	
9805	No. 16—Solid Pushback Wire-Assorted Colors.....	40	
9806	No. 14—Solid Pushback Wire-Assorted Colors.....	35	
9811	No. 22—Stranded Pushback Wire-Assorted Colors.....	75	
9812	No. 20—Stranded Pushback Wire-Assorted Colors.....	60	
9814	No. 18—Stranded Pushback Wire-Assorted Colors.....	50	
9815	No. 16—Stranded Pushback Wire-Assorted Colors.....	35	
9816	No. 14—Stranded Pushback Wire-Assorted Colors.....	25	
9819	No. 18—Stranded $\frac{1}{4}$ " Alpha "Hi-Tension" Colored Rubber Wire-Assorted Colors.....	75	
9822	No. 18—Stranded $\frac{3}{32}$ " R. C. Wire-Black	75	
9824	No. 16—Stranded $\frac{3}{32}$ " Alpha "Hi-Tension" Colored Rubber Wire-Black and Red.....	50	
9827	No. 14—Stranded $\frac{3}{32}$ " R. C. Wire-Black	35	
9828	No. 18—Solid $\frac{1}{4}$ " R. C. Lead-In Wire-Black.....	70	
9830	No. 18—Stranded $\frac{3}{32}$ " R. C. Lacquered Braid-Assorted Colors.....	40	
9834	No. 20—Stranded $\frac{3}{32}$ " R. C. Shielded Lead-In.....	10	
9837	Alpha "Super Hi-Tension" Test Prod Colored Rubber Wire-Black and Red.....	35	
9840	AC-DC Indoor Aerial Wire.....	100	
9841	No. 18—Twisted Pair Lamp Cord.....	30	
9843	No. 18—Stranded, R. C. Cotton Covered Indoor Wire-Assorted Colors.....	60	
9845	No. 18—Parallel Silk-Assorted Colors.....	30	
9848	No. 20—Junior E-Z Strip All Rubber Parallel Lamp Cord-Brown.....	40	
9870	No. 18—Plain Tinned Copper.....	100	
9875	No. 18—Annunciator (Bell) Wire.....	100	
List Prices for above.....each, per spool \$0.63			

**ALPHA BUS-BAR WIRE**



Alpha tinned Bus-Bar Wire is cut in uniform 2-ft. lengths.

No.	Description	List Price
2078	10-round.....each	\$0.05
2080	12-round.....each	.03
2081	14-square.....each	.03
2082	14-round.....each	.02

**ALPHA ALL RUBBER AND SERVICE CORD**

For use in shops, garages, on portable tools, refrigerators, etc. Made of heavy rubber jacket to withstand rough usage. Will not kink.

No.	Description	List Price
1961	250 Ft.—No. 18-2 All Rubber Cord.....	per spool \$8.25
1962	250 Ft.—No. 18-2 SJ Service Cord (with filler).....	11.00

**ALPHA E-Z STRIP THE NEW TYPE LAMP CORD**



An all rubber parallel cord approved by the National Board of Fire Underwriters. This new type of lamp cord is of a tough rubber that strips easy and splits exactly down through the center by pulling apart. No braid to fray. For radio, clocks, lamps, etc.

No.	Description	List Price
1966	100 Ft.....	per spool \$2.75
1967	250 Ft.....	per spool \$6.25
Colors—Brown, Ivory, Green and Black.		

**ALPHA "LACTIV" WIRE PUSHBACK**

Easy pushback, easy soldering and small outside diameter make this an ideal radio hook-up wire. Specifications as follows: Bright tinned copper, a serving, special compound of rubber insulation, a colored cotton braid treated with insulating wax.



Solid			List Price
1411	25 Ft.—No. 22.....	per carton	\$0.23
1413	100 Ft.—No. 22.....	per spool	.25
1415	1000 Ft.—No. 22.....	per carton	7.00
1421	25 Ft.—No. 20.....	per carton	.28
1423	100 Ft.—No. 20.....	per spool	.95
1425	1000 Ft.—No. 20.....	per spool	7.65
1431	25 Ft.—No. 18.....	per carton	.35
1433	100 Ft.—No. 18.....	per spool	1.10
1435	1000 Ft.—No. 18.....	per spool	10.00
1441	25 Ft.—No. 16.....	per carton	.45
1443	100 Ft.—No. 16.....	per spool	1.80
1445	1000 Ft.—No. 16.....	per spool	14.75
1451	25 Ft.—No. 14.....	per carton	.60
1453	100 Ft.—No. 14.....	per spool	2.10
1455	1000 Ft.—No. 14.....	per spool	19.00

Stranded			List Price
1301	25 Ft.—No. 22-7/30.....	per carton	\$0.26
1303	100 Ft.—No. 22-7/30.....	per spool	.93
1305	1000 Ft.—No. 22-7/30.....	per spool	7.65
1311	100 Ft.—No. 20-10/30.....	per spool	.33
1313	100 Ft.—No. 20-10/30.....	per spool	1.10
1315	1000 Ft.—No. 20-10/30.....	per spool	9.00
1321	25 Ft.—No. 18-10/30.....	per carton	.40
1323	100 Ft.—No. 18-10/30.....	per spool	1.25
1325	1000 Ft.—No. 18-10/30.....	per spool	12.00
1331	25 Ft.—No. 16-26/30.....	per carton	.50
1333	100 Ft.—No. 16-26/30.....	per spool	2.00
1335	1000 Ft.—No. 16-26/30.....	per spool	18.00
1341	25 Ft.—No. 14-41/30.....	per carton	.65
1343	100 Ft.—No. 14-41/30.....	per spool	2.10
1345	1000 Ft.—No. 14-41/30.....	per spool	21.00

Colors  
Nos. 22-20-18—Stranded and Solid—Black, Red, Green, Yellow, Blue, Brown and White  
Nos. 16-14—Stranded and Solid—Black and Red only.

**ALPHA FILAMENT LEAD WIRE**



Consists of No. 14—11/30 tinned copper stranded, heavy insulation and braid overall, impregnated.

No.	Length	List Price
1641	25 Ft.....	per carton \$0.60
1645	500 Ft.....	per spool 12.50

**ALPHA FLEXIBLE LAMP CORD AND FIXTURE WIRE**



Silk—Cotton—Single—Parallel—Twisted  
For use on lamps, Radio A.C. or D.C. Lines, ground and aerial connections, etc.

No.	Description	List Price
1701	1000 Ft.—No. 18— $\frac{1}{8}$ " Cotton Single Conductor.....	\$10.00
1702	500 Ft.—No. 18— $\frac{1}{8}$ " Cotton Single Conductor.....	5.15
1705	500 Ft.—No. 18— $\frac{1}{8}$ " Cotton Twisted Pair.....	9.50
1711	250 Ft.—No. 18— $\frac{1}{8}$ " Cotton Twisted Pair (app.).....	7.00
1801	1000 Ft.—No. 20— $\frac{1}{8}$ " Cotton Single Conductor.....	8.25
1802	500 Ft.—No. 20— $\frac{1}{8}$ " Cotton Single Conductor.....	4.35
1851	250 Ft.—No. 18— $\frac{1}{8}$ " Parallel Silk (approved).....	6.90
1901	500 Ft.—No. 18— $\frac{1}{8}$ " Parallel Silk (N. I. B.).....	8.90

# ANTENNA SYSTEMS and ACCESSORIES



# WIRE and CABLE

## ALPHA LEAD-IN STRIPS



These are unquestionably the finest type of lead-in strips. Fully covered weatherproof braid with several dips of lacquer insulation.

No.	List Price
2002 12" Clip Type—Riveted and Soldered	\$0.06 1/2
2005 12" Screw Type—Positive Contact	.08

## FAHNESTOCK SPRING BATTERY CLIPS



No.	List Price
2076 Spring Clip 1"—1 Clip, 100 per carton	\$1.00
2077 Twin Clips 1 3/4"—Clips, 100 per carton	3.50

## ALPHA SCREW EYES



No.	List Price
2051 3" Bakelite—per 100	\$5.00
2052 3" Porcelain—per 100	4.75
2055 7" Bakelite—per 100	5.50
2056 7" Porcelain—per 100	5.25

## ALPHA RADIO LIGHTNING ARRESTER



Made of high quality material. Thoroughly sturdy. Designed for indoor or outdoor use.

No.	List Price
2001 Lightning Arrester—Packed in individual cartons—each	\$0.18

## ALPHA ANNUNCIATOR (BELL) WIRE

Pure copper, two cotton serves reversed and heavy paraffine impregnation are the components used in our wire. Supplied in assorted colors.

No.	List Price
1970—25-ft.—per coil	\$0.14
1971—1 1/2-pound—per carton	.19
1972—1 1/2-pound—per carton	.37
1974—7-pound—per spool	4.75

## ALPHA SPAGHETTI TUBING



A superior varnished tubing for radio work. It will retain its dielectric flexibility indefinitely.

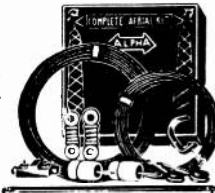
Takes up to a No. 14 wire. Colors—Black, Yellow, Red, Green and Brown.

No.	List Price
2091 30' Lengths—each	\$0.10 1/2

We carry a complete line of Alpha Spaghetti Tubing as well as Saturated Sleeving in all sizes.

## ALPHA 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.



### Aerial Kit No. 301

50-ft. 7-strand Copper Aerial Wire  
25-ft. R. C. Lead-In Wire  
1 No. 2022 Porcelain Insulators  
2 No. 2031 Porcelain Nail Knobs  
1 No. 2012 Copper Ground Clamp  
1 No. 2002 Weatherproof Lead-In Strip  
Kit No. 301..... List Price \$0.70

### Aerial Kit No. 307

75-ft. 7 23 Bare Copper Aerial Wire  
35-ft. No. 16 Solid R. C. Lead-In Wire  
15-ft. Indoor Wire  
2 No. 2021 Glass Insulators  
1 No. 2001 Lightning Arrester  
1 No. 2002 Weatherproof Lead-In Strip  
1 No. 2012 Copper Ground Clamp  
6 No. 2041 Insulated Staples  
2 No. 2031 Porcelain Nail Knobs  
2 Galvanized Screw Eyes  
Kit No. 307..... List Price \$1.50

### Aerial Kit No. 314

100-ft. 7 22 Bare Copper Aerial Wire  
50-ft. No. 16 Stranded R. C. Lead-In Wire  
25-ft. Indoor Wire  
1 No. 2001 Lightning Arrester  
2 No. 2021 Glass Insulators  
1 No. 2005 Screw Type Lead-In Strip  
1 No. 2011 "C" Type Ground Clamp  
2 No. 2051 Bakelite Screw Eyes  
2 No. 2031 Porcelain Nail Knobs  
6 No. 2041 Insulated Staples  
2 Wood Screws  
Kit No. 314..... List Price \$2.35

### Aerial Kit No. 304

75-ft. 7 24 Bare Copper Aerial Wire  
25-ft. R. C. Lead-In Wire  
1 No. 2001 Lightning Arrester  
1 No. 2002 Weatherproof Lead-In Strip  
2 No. 2031 Porcelain Nail Knobs  
1 No. 2012 Copper Ground Clamp  
1 No. 2020 Glass Insulators  
2 Galvanized Screw Eyes  
2 Wood Screws  
Kit No. 304..... List Price \$1.10

### Aerial Kit No. 303

75-ft. 7 27 Bare Copper Aerial Wire  
25-ft. R. C. Lead-In Wire  
1 No. 2012 Copper Ground Clamp  
2 No. 2022 Porcelain Insulators  
2 No. 2031 Porcelain Nail Knobs  
1 No. 2002 Weatherproof Lead-In Strip  
2 Galvanized Screw Eyes  
Kit No. 303..... List Price \$0.85

### Aerial Kit No. 310

75-ft. 7 22 Bare Copper Aerial Wire  
35-ft. No. 16 Stranded R. C. Lead-In Wire  
1 No. 2001 "C" Type Ground Clamp  
1 No. 2001 Lightning Arrester  
2 No. 2021 Glass Insulators  
1 No. 2005 Screw Type Lead-In Strip  
2 No. 2031 Porcelain Nail Knobs  
2 No. 2051 Bakelite Screw Eyes  
6 No. 2041 Insulated Staples  
2 Wood Screws  
Kit No. 310..... List Price \$1.75

Standard package—20 kits per carton. We are equipped to make up kits to your own specifications.

## ALPHA PURE COPPER AERIAL WIRE



All Alpha Aerial Wire is properly annealed to assure required flexibility and tensile strength.

No.	List Price
1000 100-ft.—7 20	\$1.50
1005 100-ft.—7 22	1.00
1009 75-ft.—7 22	.80
<b>Individually Boxed Enamel Stranded</b>	
1040 100-ft.—No. 10	\$2.10
1045 100-ft.—No. 12	1.25
1055 100-ft.—No. 14	.80
<b>Tinned Stranded</b>	
1015 100-ft.—7 22	\$0.95
1019 75-ft.—7 22	.70
<b>Bare Stranded</b>	
1020 100-ft.—7 20	\$1.35
1025 100-ft.—7 22	.85
1029 75-ft.—7 22	.65
1035 100-ft.—7 22	.70
1039 75-ft.—7 23	.55
<b>Tinned Solid</b>	
1060 100-ft.—No. 10	\$2.00
1065 100-ft.—No. 12	1.20
1070 100-ft.—No. 14	.75

For other sizes than above see price sheet.

## ALPHA A.C.-D.C. ANTENNA WIRE

This is a very fine flexible wire covered with cotton braid. Is an ideal replacement wire for universal midgeet receivers. Also used as indoor and loop wire.



No.	List Price
1281 25-ft.—per reel	\$0.22
1282 100-ft.—per spool	3.00
1283 500-ft.—per spool	.75
1284 1000-ft.—per spool	5.75

## ALPHA LEAD-IN AND GROUND WIRE

Both our solid and stranded are insulated with live Hevea rubber that is a superior conductor is well suited for quick soldering.

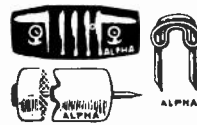
No.	Solid	List Price
1101	500-ft.—No. 16—3/32"	\$4.50
1105	per spool—No. 16—3/32"	.48
1111	500-ft.—No. 18—1/8"	3.50
1112	per spool—No. 18—1/8"	.42
<b>Stranded</b>		
1114	1000-ft.—No. 20—1/16"	\$5.50
1114E	500-ft.—No. 20—1/16"	3.00
1115	per spool—No. 14—1/8"	8.20
1117	100-ft.—No. 14—1/8"	1.90
1118	50-ft.—No. 14—1/8"	.90
1121	500-ft.—No. 16—1/16"	4.90
1124	per spool—No. 16—1/16"	1.00
1125	50-ft.—No. 16—1/16"	.55
1130	100-ft.—No. 18—1/16"	.85
1131	500-ft.—No. 18—1/16"	3.90
1132	per spool—No. 18—1/16"	.42
1133	per carton—No. 18—1/16"	.22
1134	1000-ft.—No. 18—1/16"	6.25

## ALPHA GUY WIRE

Extensively used on all transmitter and receiver poles and towers. Twisted galvanized steel wires having extremely high tensile strength.

No.	List Price
2195 25-ft.—per coil	\$0.28
2196 50-ft.—per coil	.56

## INSULATORS NAIL KNOBS—STAPLES



No.	List Price
2022 3 1/2" Glazed Porcelain Insulators—100 per carton	\$4.00
2031 Glazed Porcelain Nail Knobs—100 per carton	3.25
2041 Insulated Staples—50 per box	.12
2043 Colored Staples—40 per box	.12

## ALPHA GROUND CLAMP



Heavy gauge copper is used. This ground clamp makes a quick and positive connection.

No.	List Price
2012 Strap Type. 3/8" to 2" pipe	\$0.07

## ALPHA PIPE CLAMP



Is of neat appearance. Attaches the ground wire to the pipe easily and securely. Will last indefinitely.

No.	List Price
2011 "C" Type Ground Clamp—each	\$0.08

## ALPHA GLASS INSULATORS



Is of great tensile strength, moisture proof, waterproof and weatherproof.

No.	List Price
2020 3"—100 per carton	\$5.00
2021 3 3/8"—100 per carton	7.00

## ALPHA SHIELDED LEAD-IN AND GROUND WIRE

Made to reduce interference caused by motors, high tension wires or other apparatus that radiate inductive impulses. To obtain best results ground the shield separately. Consists of a STRANDED TINNED CONDUCTOR, FREE STRIP RUBBER AND SHIELDED WITH VERY FINE FLEXIBLE TINNED COPPER.



No.	List Price
1201 250-ft.—No. 14—1/8"	\$10.00
1205 50-ft.—No. 14—1/8"	2.00
1211 250-ft.—No. 16—1/16"	7.00
1215 50-ft.—No. 16—1/16"	1.40
1221 500-ft.—No. 18—1/16"	9.50
1225 500-ft.—No. 20—1/16"	8.25

# ESICO

## Green Label Electric Soldering Irons

**GENERAL INFORMATION:** These irons are extraordinarily high-quality tools. They are packed in green label boxes to differentiate from Esico Industrial Irons, which have orange labels. They have one-piece blued steel cases. Rich



dark mahogany handles. Replaceable forged copper tips. They are wound in voltages ranging from 32 to 250 volts and can be used on both A.C. or D.C. current. (Nick Nacks 105-120 volts only.)

**55 WATTS**

**"NICK NACK"**



**CAT. No. 15**

Tip  $\frac{1}{16}$ " in Diameter      Weight 6 Oz.      Length  $11\frac{3}{4}$ "

**List Prices — Iron Complete \$1.10    Extra Tip 20c    Element 50c**

**65 WATTS**

**"MIDGET"**



**CAT. No. 16**

Tip  $\frac{1}{16}$ " in Diameter      Weight 7 Oz.      Length  $11\frac{1}{4}$ "

**List Prices — Iron Complete \$1.75    Extra Tip 30c    Element \$1.25**



**100 WATTS**

**"JUNIOR"**

**CAT. No. 17**

Tip  $\frac{1}{16}$ " in Diameter      Weight 9 Oz.      Length  $12\frac{1}{4}$ "

**List Prices — Iron Complete \$2.75    Extra Tip 30c    Element \$1.35**



**150 WATTS**

**"TROPHY"**

**CAT. No. 18**

Tip  $\frac{1}{8}$ " in Diameter      Weight 18 Oz.      Length  $12\frac{1}{2}$ "

**List Prices — Iron Complete \$5.00    Extra Tip 45c    Element \$2.50**

### COPPER TIPS FOR MIDGET OR JUNIOR IRONS

**CAT. No.  
JM 2**

Tip  $\frac{3}{8}$ " in Diameter  
Fits either  
Midget or Junior



**Price  
30c**



**CAT. No.  
JM 3**

Tip  $\frac{5}{8}$ " in Diameter  
Fits either  
Midget or Junior



**Price  
30c**

# ESICO

## Industrial Electric Soldering Irons

### GENERAL INFORMATION FOR PLUG TIP IRONS:

These irons can be used on both A.C. or D.C. current and are wound in voltages ranging from 32 to 250 volts. The tips are the plug type, held by a set screw, which is easily removed for making tip replacements. It is not necessary to return these irons to the factory for repairs. Elements and other parts are easily replaced. For soldering, these irons cannot be surpassed as ample heat is delivered



to the tip for fastest work. For durability, their construction is such, with a one-piece heavy-gauge steel case, mounted element and a positive grip handle, that through use, the parts cannot fail to give unlimited service, regardless of the hardest use imposed upon them. Each iron is equipped with a 6" cord and attachment plug. A metal stand is supplied with every tool.



**No. 55**  
**65 WATTS**

Tip  $\frac{3}{8}$ " in Diameter

**List Prices — Iron Complete \$5.00**  
**Extra Tip 25c Element \$2.25**

Equal to copper of  $\frac{1}{2}$  lb. Length overall, 10". Weight exclusive of cord, 8 oz. For light work, such as soldering fine wires, radio factory use, tool kits, and especially suitable for use of operators where a light short tool is required.



**No. 95**  
**110 WATTS**

Tip  $\frac{3}{8}$ " in Diameter

**List Prices — Iron Complete \$5.50**  
**Extra Tip 32c Element \$2.75**

Equal to copper of  $\frac{3}{4}$  lb. Length overall, 12". Weight exclusive of cord, 10 oz. For electrical and radio factories, telephone switchboards, telephone repair work, fuses, tool kits, light manufacturing, delicate instruments, radio and electrical experimental laboratories.



**No. 125**  
**130 WATTS**

Tip  $\frac{5}{8}$ " in Diameter

**List Prices — Iron Complete \$7.75**  
**Extra Tip 65c Element \$3.50**

Equal to copper of 1 lb. Length overall, 12 $\frac{1}{2}$ ". Weight exclusive of cord, 16 oz. For light tin work, automobile repairs and general factory soldering. A very handy general factory soldering. A very handy tool because of its shortness.

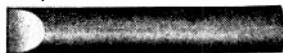
**No. 205**  
**200 WATTS**  
Tip  $\frac{5}{8}$ " in Diameter



**List Prices — Iron Complete \$8.75**  
**Extra Tip 70c Element \$3.75**

Equal to copper of 1 $\frac{1}{2}$  lbs. Length overall, 14". Weight exclusive of cord, 24 oz. For medium tin work, automobile repairs, patterns and general factory work. Suitable for small branders.

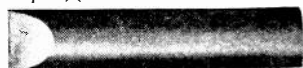
**No. 355**  
**310 WATTS**  
Tip  $\frac{7}{8}$ " in Diameter



**List Prices — Iron Complete \$10.25**  
**Extra Tip 25c Element \$5.00**

Equal to copper of 3 lbs. Length overall, 14 $\frac{1}{2}$ ". Weight exclusive of cord, 41 oz. For very heavy sheet metal work, tinsmiths, automobile radiators, refrigerators and branding purposes.

**No. 505**  
**500 WATTS**  
Tip 1 $\frac{1}{8}$ " in Diameter



**List Prices — Iron Complete \$12.25**  
**Extra Tip \$1.75 Element \$6.00**

Equal to copper of 5 lbs. Length overall, 14 $\frac{1}{2}$ ". Weight exclusive of cord, 54 oz. For very heavy soldering, large tanks or cans, roofs and objects of large area. Very large branders.



# KRAUTER

The choice of skilled mechanics

## Supreme Brand Pliers

The first requisite of quality pliers is good steel . . . Krauter Supreme Brand Pliers are drop-forged from an extra high grade steel especially chosen as best adapted for quality pliers after rigid testing and experimenting extending over a period of several years.

All Krauter Pliers are heat-treated and hardened in automatic furnaces where the temperature is regulated automatically, and the possibility of human error is entirely eliminated. The result of using this Supreme quality steel and the extreme accuracy in tempering make the Krauter Supreme Brand Pliers unequalled for durability, gripping and cutting power. The teeth do not mash down or crumble and the cutting edges will not dent or nick.

## New Industrial Finish Pliers

**INDUSTRIAL FINISH** is a Krauterized, non-smudging-black lasting finish impregnated into the metal by a special process. It is not just a baked lacquer.

Many industrial trades using pliers do not need the finely nicked and highly polished finish on their pliers. By eliminating certain grinding and polishing operations on the Industrial Finish Pliers, it has been possible to offer these pliers at a greatly reduced price. The Industrial Pliers are drop-forged from the same extra high grade steel used on the highly finished pliers, have the same careful tempering and pass the same rigid tests.

## "Griptite" Combination Pliers

NEW PATTERN



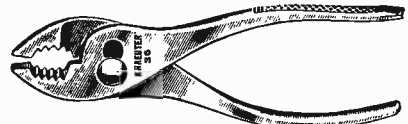
No. 356

Supreme Full Nickel Finish and Industrial Finish

These are of new design with slightly tapered nose, and are fitted with special non-slipping serrated edge wire cutters. The two larger sizes have three slip-joint adjustments which give a wider range of parallel grips on large nuts.

Length	Wt. per doz.	Industrial Finish		Supreme Full Nickel Finish	
		No.	Price Each	No.	Price Each
5 1/2 in.	3 1/2 lbs.	565 1/2	\$ .60	356	\$ .80
6 in.	5 3/4 lbs.	566	.65		.85
8 in.	8 1/2 lbs.	568	.85		1.10
10 in.	13 lbs.	5610	1.00		1.40

## Combination Pliers — Dull Nickel



Nos. 36—38—310

Dull Nickel Finish Only

These well-made dull nickel finish pliers are designed to meet the demand for medium priced good quality pliers that will give good service.

Length	Wt. per Doz.	Dull Nickel		Price Each
		No.	Price Each	
6 in.	5 3/4 lbs.	36		\$ .30
8 in.	8 1/2 lbs.	38		.50
10 in.	13 lbs.	310		.70

## Ignition Pliers — Straight Handles



No. 743—4 1/2"

Dull Nickel Finish Only

Designed to replace 10 to 12 piece sets of ignition wrenches. For use on distributor, generator, magneto, and dash panel connections, and any small nut.

Length	Wt. per Doz.	Dull Nickel	
		No.	Price Each
4 1/2 in.	3/4 lbs.	743	\$ .50

## "Sure-Grip" Ignition Pliers

NEW PATTERN



No. 643—5"

Supreme Full Nickel Finish and Industrial Finish

A handy little plier to replace 10- or 12-piece sets of ignition wrenches. Has bulldog grip, slip joint adjustment, serrated teeth, narrow nose, and thin, strong, shaped handles.

Can be used to advantage on distributor, generator, magneto, carburetor, dash panel connections, and on any small or awkwardly placed nuts.

Instantly adjustable and a marvelous time saver.

Length	Wt. per doz.	Industrial Finish		Supreme Full Nickel Finish	
		No.	Price Each	No.	Price Each
5 in.	7/8 lbs.	435	\$1.00	643	\$1.25

## Combination Side Cutting Pliers

Supreme Full Nickel and Industrial Finish

A very popular automotive combination slip-joint plier. Has side cutter suitable for cutting insulated or bare wire. Small groove in nose for holding cotter pins.



No. 1973

Length	Wt. per Doz.	Industrial Finish		Supreme Full Nickel Finish	
		No.	Price Each	No.	Price Each
5 1/2 in.	4 lbs.	9735 1/2	\$1.35	1973	\$1.65
7 in.	6 3/4 lbs.	9737	1.60		1.90

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# KRAEUTER

The choice of skilled mechanics

## Hy-Power Side Cutting Pliers



No. 1801

Supreme Kraeuter Finish & Industrial Finish

Useful for heavy duty jobs of wire cutting and twisting. Very strongly constructed and have extra tough jaws.

Length	Wt. per doz.	Industrial Finish		Supreme Kraeuter Finish	
		No.	Price Each	No.	Price Each
6 in.	5 $\frac{1}{4}$ lbs.	8016	\$1.50	1801	\$1.75
7 in.	8 $\frac{1}{4}$ lbs.	8017	1.75		2.00
8 $\frac{1}{2}$ in.	11 $\frac{1}{2}$ lbs.	8018 $\frac{1}{2}$	2.00		2.25

## Auto Electricians' Pliers



No. 1831

Supreme Kraeuter Finish & Industrial Finish

Used extensively for electrical and general wiring work around the car. Strongly constructed with sturdy wire cutters.

Length	Wt. per doz.	Industrial Finish		Supreme Kraeuter Finish	
		No.	Price Each	No.	Price Each
4 in.	2 $\frac{1}{4}$ lbs.	8314	\$1.10	1831	\$1.20
5 in.	3 $\frac{1}{4}$ lbs.	8315	1.15		1.40
6 $\frac{1}{2}$ in.	5 $\frac{1}{4}$ lbs.	8316	1.35		1.55
7 in.	6 $\frac{3}{4}$ lbs.	8317	1.50		1.65
8 in.	9 $\frac{1}{2}$ lbs.	8318	1.60		1.80

## Electrician's Diagonal Cutting Pliers



No. 4601

Supreme Kraeuter Finish & Industrial Finish

Longer jaws and made especially for close cutting. Forged from special plier steel and finely fitted for exact work.

Length	Wt. per doz.	Industrial Finish		Supreme Kraeuter Finish	
		No.	Price Each	No.	Price Each
4 $\frac{1}{2}$ in.	2 lbs.	6014 $\frac{1}{2}$	\$1.25	4601	\$1.65
5 in.	3 lbs.	6015	1.40		1.75
5 $\frac{1}{2}$ in.	3 $\frac{3}{4}$ lbs.	6015 $\frac{1}{2}$	1.60		1.90
6 in.	5 lbs.	6016	1.70		2.00
7 $\frac{1}{2}$ in.	6 $\frac{3}{4}$ lbs.	6017 $\frac{1}{2}$	1.90		2.50

## Extra Heavy Diagonal Cutting Pliers



No. 4611

Supreme Kraeuter Finish & Industrial Finish

Designed to meet the demand for a larger and more powerful diagonal cutter. Is practically unbreakable. Joint is extra heavy and rigid.

Length	Wt. per doz.	Industrial Finish		Supreme Kraeuter Finish	
		No.	Price Each	No.	Price Each
6 $\frac{1}{2}$ in.	6 lbs.	6116 $\frac{1}{2}$	\$1.70	4611	\$2.00

## "DREADNOUGHT" LINEMEN'S PLIERS

### Heavy Duty — Lap-Jointed



No. 2801

Supreme Kraeuter Finish Only

Powerful and durable—wonderful strength and cutting power. Drop forged—perfectly hardened, accurately fitted.

Length	Wt. per Doz.	No.	Price Each
6 in.	5 $\frac{3}{4}$ lbs.	2801	\$2.00
7 in.	8 $\frac{1}{4}$ lbs.		2.25
8 $\frac{1}{2}$ in.	11 $\frac{1}{2}$ lbs.		2.75

### With Stripping Notch

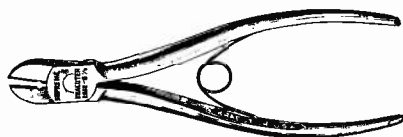


No. 2801-S

Supreme Kraeuter Finish Only

Extensively used on electrical outside lighting fixtures, for cutting and stripping the asbestos insulation on 14 gauge wire without injury to the wire.

Length	Wt. per Doz.	No.	Price Each
6 in.	5 $\frac{3}{4}$ lbs.	S-2801	\$2.25
7 in.	8 $\frac{1}{4}$ lbs.		2.75
8 $\frac{1}{2}$ in.	11 $\frac{1}{2}$ lbs.		3.00



No. 2612

## Radio Pliers

Supreme Kraeuter Finish Only

Diagonal cutting pliers specially developed for close cutting in radio and radio tube work. Complete with spring and stripping notch.

Length	Wt. per doz.	No.	Price Each
6 in.	5 lbs.	2612	\$1.95

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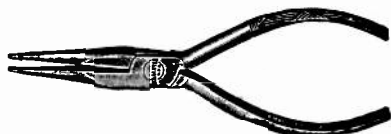
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# KRAEUTER

The choice of skilled mechanics

## Long Nose Chain Pliers



No. 1691

Supreme Kraeuter Finish Only

Designed for use as a half-round nose, chain nose and flat nose plier. Made without cutter.

Length	Wt. per Doz.	No.	Price Each
6 in.	3¼ lbs.	1691	\$1.15

## Long Nose Side-Cutting Chain Pliers



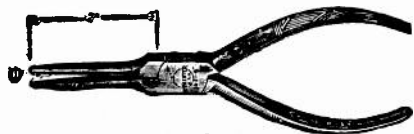
No. 1681

Supreme Kraeuter Finish and Industrial Finish

The long slender jaws are milled inside, and the side-cutters are built to cut. An easy operating plier with sturdy joint.

Length	Wt. per doz.	Industrial Finish		Supreme Kraeuter Finish	
		No.	Price Each	No.	Price Each
6 in.	3¼ lbs.	6816	\$1.25	1681	\$1.50

## Long Fine Needle Nose Pliers



No. 1621

Supreme Kraeuter Finish and Industrial Finish

This pattern is especially made for difficult and odd jobs where no other plier will answer. Especially useful for auto mechanics and vulcanizers. Its capacity for fine work is unusual. The long, fine nose is very carefully tempered.

Length	Wt. per doz.	Industrial Finish		Supreme Kraeuter Finish	
		No.	Price Each	No.	Price Each
6 in.	3¼ lbs.	6216	\$1.15	1621	\$1.35

## Needle Nose Side Cutting Pliers



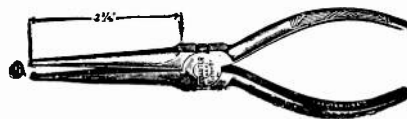
No. 1661

Supreme Kraeuter Finish and Industrial Finish

A fine slender nosed, tapered point plier. Handy on all ignition work and on generators, starters, switch work, etc.

Length	Wt. per doz.	Industrial Finish		Supreme Kraeuter Finish	
		No.	Price Each	No.	Price Each
6 in.	3¼ lbs.	6616	\$1.25	1661	\$1.50
Without Cutters		6716	1.15	1671	1.40

## Extra Long Nose Pliers



No. 1771

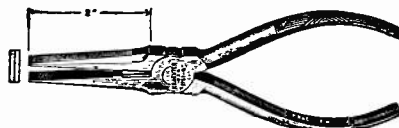
Supreme Kraeuter Finish and Industrial Finish

Very popular with auto mechanics and repair men. Especially good for radiator repair work and in places difficult to reach. Used on auto ignition work on generators, starters, switch work, etc., and on speedometer repair work.

Length	Wt. per doz.	Industrial Finish		Supreme Kraeuter Finish	
		No.	Price Each	No.	Price Each
7 in.	3½ lbs.	7717	\$1.20	1771	\$1.50
With Side Cutters		7817	1.40	1781	1.65

## Extra Long Reach Flat Nose Pliers

SIDE CUTTING



No. 1751

Supreme Kraeuter Finish Only

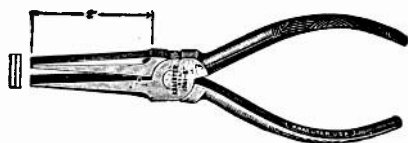
An appropriate tool for electrical workers and very useful for special work. The long, flat nose is nicely tapered and beveled. The cutting edges are superior.

Length	Wt. per Doz.	No.	Price Each
6 in.	3½ lbs.	1751	\$1.55

## Extra Long Reach Flat Nose Pliers

Supreme Kraeuter Finish and Industrial Finish

The long, flat nose is nicely tapered and beveled. No cutter. Adaptable to all the uses of a flat nose plier with the added feature of an extremely long nose.



No. 1741

Length	Wt. per Doz.	Industrial Finish		Supreme Kraeuter Finish	
		No.	Price Each	No.	Price Each
6 in.	3½ lbs.	7416	\$1.15	1741	\$1.40

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# T O O L S



## De Luxe

With Lumarith SUPER-GRIP Handles, Substantially Non-Inflammable



CHROME — NICKEL — MOLYBDENUM BLADES

Blade Length	Blade Diameter	Weight Per Dozen	No.	List, Dozen
4"	1/4"	2 1/4 lbs.	R144	\$10.80
6"	1/4"	2 3/4 lbs.	R146	12.00
6"	3/8"	4 lbs.	R5166	15.00
8"	1/2"	4 3/4 lbs.	R5168	16.80

One-half dozen in a box

### Electric or Radio



Blade Length	Blade Diameter	Weight Per Dozen	No.	List, Dozen
4 1/2"	3/16"	1 1/4 lbs.	R412	\$9.00
6 1/2"	1/8"	1 1/2 lbs.	R612	10.20
8 1/2"	1/8"	2 3/8 lbs.	R812	12.00
10 1/2"	3/16"	2 3/8 lbs.	R1012	15.00

One-half dozen in a box.

### MINIATURE—Magnetized



No. 1620. Twelve miniature de luxe screw drivers mounted on display card; each with pocket clip. Four each of 1 1/2", 2 1/4" and 3 1/4" with 1/8" round blades. Weight per doz. cards, 9 lbs. List per card \$3.00

## SUPER-GRIP

### No. F215—Machinists' Type BLADE THROUGH HANDLE

Steel bushing welded on blade.



U. S. Pat. No. 2,046,733

Blade Length	Blade Diameter	Weight Per Dozen	No.	List, Dozen
4"	1/4"	2 1/2 lbs.	F215	\$4.20
5"	1/4"	2 3/4 lbs.	F215	4.80
6"	3/8"	4 1/2 lbs.	F215	6.00
8"	3/8"	7 3/4 lbs.	F215	7.20
10"	3/8"	8 lbs.	F215	9.00
12"	3/8"	9 lbs.	F215	11.00

One-half dozen in a box.

### No. F216—Electric or Radio—Wood Handle



Blade Length	Blade Diameter	Weight Per Dozen	No.	List, Dozen
4 1/4"	3/16"	1 1/4 lbs.	F216	\$2.50
6 1/2"	1/8"	1 1/2 lbs.	F216	3.00
8 1/2"	1/8"	2 lbs.	F216	4.80
10 1/2"	3/16"	3 1/4 lbs.	F216	6.00
12 1/2"	3/16"	3 3/4 lbs.	F216	7.80

One dozen in a box.

## VIKING

TRADE MARK

Composition insulated handles, molded under heavy pressure, on tool steel blades. Hexagon guard prevents fingers slipping on blade in electrical work.

Patent No. 1,979,460

### No. V120—Machinists' Type



Blade Length	Blade Diameter	Weight Per Dozen	No.	List, Dozen
2"	3/16"	1 1/2 lbs.	V120	\$1.40
3"	3/16"	1 3/4 lbs.	V120	1.70
4"	1/4"	2 1/4 lbs.	V120	2.00
5"	1/4"	3 lbs.	V120	2.40
6"	5/16"	4 3/4 lbs.	V120	3.00

One dozen in a box.

### No. V220—Electric or Radio



Blade Length	Blade Diameter	Weight Per Dozen	No.	List, Dozen
3 1/2"	3/16"	1 1/2 lbs.	V220	\$1.70
4 1/2"	3/16"	2 lbs.	V220	2.00
5 1/2"	3/16"	2 1/4 lbs.	V220	2.40
6 1/2"	3/16"	2 1/2 lbs.	V220	3.00
8 1/2"	3/16"	3 lbs.	V220	3.60
10 1/2"	3/16"	3 3/4 lbs.	V220	4.20

One dozen in a box.

### No. V220I—Electric or Radio INSULATED BLADE



Blade Length	Blade Diameter	Weight Per Dozen	No.	List, Dozen
3 1/2"	3/16"	1 1/2 lbs.	V220I	\$2.20
4 1/2"	3/16"	2 lbs.	V220I	2.40
5 1/2"	3/16"	2 1/4 lbs.	V220I	3.00
6 1/2"	3/16"	2 1/2 lbs.	V220I	3.60
8 1/2"	3/16"	3 lbs.	V220I	4.20
10 1/2"	3/16"	3 3/4 lbs.	V220I	4.80

Packed one dozen in a box

### No. V620—Miniature Display



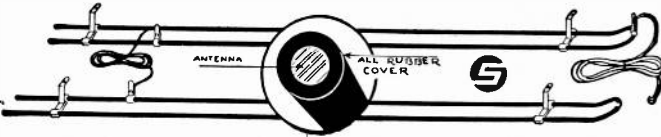
Magnetized

No. V620. Twelve miniature Viking black and mahogany composition handle screw drivers mounted on card, each with pocket clip. Four each on 1 1/2" 2 1/4" and 3 1/4" lengths. Weight per dozen cards, 9 lbs. List per card \$1.20



## New SNYDER "Rubber Set" TROMBONE ANTENNAS

**SINGLE UNIT  
MODEL AR-38R  
List Price \$1.75**

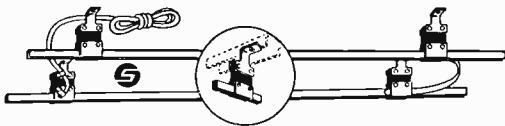


**DUAL UNIT  
MODEL AR-39R  
List Price \$ 3.25**

These **New Snyder** "Sealed In Rubber" **Trombone Antennas** are free from leakage of moisture, ice or slush. Designed for all under-car installations, and for any make of car or receiver. Available in single or dual units.

**No drilling.** They are easily installed beneath the running boards of any car. Signal pickup is equal to that of any roof antenna when used on both running boards. Each unit comes complete with hardware and lead-in wire.

### "Tur-Top" INVERTED CHANNELS Antenna



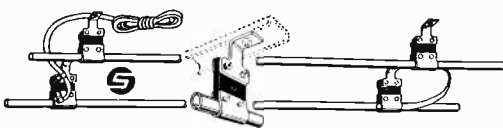
- **Adjustable All-Ways!**
- **All Parts Fully Cadmiumized (Rust-Proof)**
- **No Drilling** (Quick and Easy Installation)
- **Non-Fading and Non-Directional**
- **Rigidly Constructed for Under-Car Service**
- **Cannot Short or Rattle** (Heavy Rubber Insulation)
- **Completely Assembled at the Factory**

**New Inverted Channel Construction** avoids accumulation of mud, stones, slush or ice.

Completely Insulated with **Heavy Flexible Rubber Blocks** Special **7 M/M. Braided and Shielded Lead-In Cable**

**AR-26A** Single Running-Board Outfit..... **List Price \$1.85**  
**AR-26** Dual Outfit for both Running-Boards... " " **3.50**

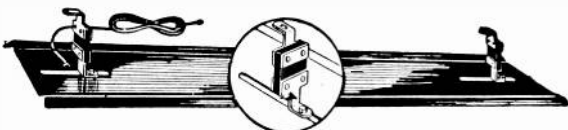
### "Tur-Top" TUBULAR CHANNELS Antenna



The same rigid construction as the AR-26 Model, with the exception of **Antenna Tubing**, which is **completely closed**. Tubing is made of **special heavy gauge alloy steel**.

**AR-28A** Single Running-Board Outfit..... **List Price \$2.00**  
**AR-28** Dual Outfit for both Running-Boards... " " **3.75**

### Metal Running-Board Antennas



Complete with triple springs and attachments.

**AR-15-X** One-Piece, Non-Adjustable..... **List Price \$1.00**  
**AR-15-F** Complete with Ground Flap..... " " **1.75**  
**AR-16S** Special Inter-Locking Model. 50" maximum extension..... " " **1.75**  
**AR-16SF** Complete with Ground Flap..... " " **2.25**

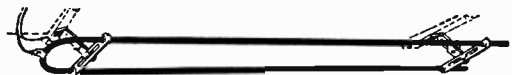
### "Ski-Pole" TROMBONE JR. Antenna



Designed for any type of car or receiver. Installation is quickly made to two bolts beneath running-board brackets. Heavy Alloy Steel Rod and Brackets; **Rubber** Insulation. **No Drilling** (2-Point Quick Installation).

**AR-33** "Ski-Pole" Complete, Enameled Outfit.... **List Price \$1.10**  
**AR-34** All Cadmium-Plated Outfit..... " " **1.40**

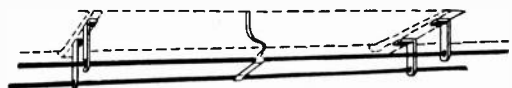
### "Du-Pole" TROMBONE SR. Deluxe Antenna



This **noise-reducing** aerial is designed for any type of car or receiver. Adjustable to **any height or angle**. Installation is made directly to either two or four bolts beneath running-board brackets. **No drilling.** The **Trombone** is made of **extra heavy-gauge rod**, treated especially for auto-radio sub-car mount installation. Made to withstand the rigors of under-car service. Mountings are of heavy-gauge steel, **cadmium-plated**. **Heavy-duty rubber** grommets are inserted in aerial-support brackets for proper insulation. Equipped with 5 ft. of **7 M/M. shielded lead-in cable**, attachable to the antenna with special formed clamp.

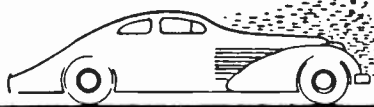
**AR-30** Enameled with Cadmiumized Hardware... **List Price \$1.55**  
**AR-31** All Cadmium-Plated Outfit..... " " **1.85**

### "Di-Rod" Parallel Antenna Kits



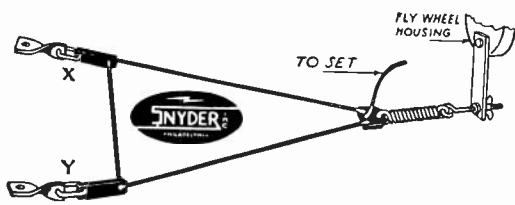
A **Leader** auto-radio antenna kit, made to sell at a real low price. Consists of 2 **heavy-gauge rods**, in parallel, both connected with a section of strip steel, rigidly enforced to avoid vibration. **No drilling.** Adjustable to any width and length of running-board. Installation in less than 10 minutes to all 4 bolts of running-board brackets. No additional hardware necessary. Mountings are of extra heavy-gauge steel; rigid **rubber** grommets inserted for proper insulation. One complete kit to a carton.

**AR-35** Completely Enameled Kit..... **List Price \$1.00**  
**AR-36** All Cadmium-Plated Kit..... " " **1.40**



## AUTO RADIO AERIALS FOR ALL CARS

### TRIANGLE ANTENNA KITS



A complete set of equipment for a **Housing-to-Rear** triangle antenna installation. Consists of special 42-strand copper wire (1/8" diameter), two rear axle insulator assemblies, one flywheel housing insulator assemble, with tension adjuster, lead-in cable and other hardware necessary for quick and easy installation.

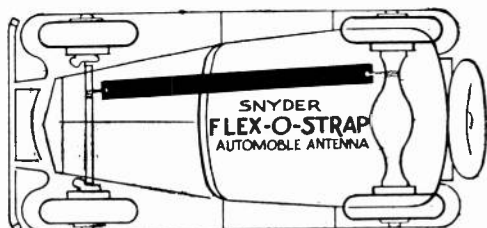
- AR-19 Standard Model.....List Price \$1.25
- AR-19X With Heavy Shielded Lead....." " 1.50

### DE LUXE MODELS

De Luxe models are equipped with genuine Bakelite insulators and extra heavy 7 m, m shielded lead-in cable.

- AR-19S De Luxe Model Outfit.....List Price \$1.75
- AR-20 Without Shielded Cable....." " 1.50

### FLEX-O-STRAP ANTENNAS



For under-car axle-to-axle mounting. Weatherproof.

- AR-4 —44" long, 3" wide.....List Price \$0.75
- AR-5 —50" long, 3 1/2" wide....." " 1.00
- AR-6 —50" long, 6" wide....." " 1.50
- AR-8 —60" long, 3 1/2" wide....." " 1.25
- AR-9 —60" long, 6" wide....." " 1.75
- AR-9B —60" long, 8" wide....." " 2.75

### FLEX-O-FRAME ANTENNAS



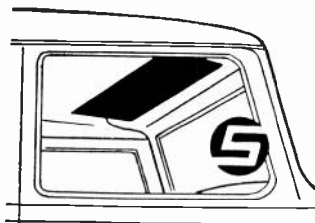
A heavy black, weather-proof rubberized fabric covering a durable metal frame. Contains **sheet copper**, 36" long, 8" wide. Complete with springs and attachments. Provides ample pickup with noiseless reception.

- AR-13 Complete with attachments.....List Price \$2.00
- AR-13F With Ground-Pick Flap....." " 2.25

- AR-21 Suspension Model, without Metal Frame.....List Price \$1.60
- AR-22 Suspension Model, with End Flap....." " 1.75

### UNIVERSAL ANTENNAS

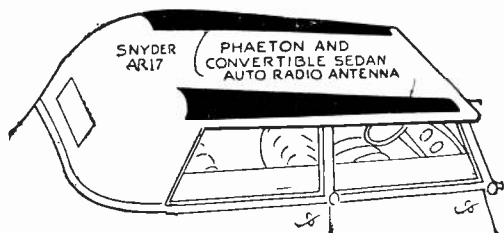
For Inside Car or Top Mounting



Can be installed anywhere in the car. Made of heavy leatherette, completely weatherproof. No tools necessary for mounting. 32" long, 10" wide.

- AR-10 —Black or brown.....List Price \$1.25
- AR-10D —Heavy weatherproof fabric....." " 1.50
- AR-11 —Bow covering, to match lining....." " 1.25
- AR-11X —Bow-covered 15"x30"....." " 1.50
- AR-7 —Rigid type 18"x26" gray and tan....." " 1.25
- AR-14 —Imitation leatherette 33"x12"....." " .75

### For Roadsters, Phaetons and Convertibles



A most ingenious and new type of auto-radio antenna made especially for roadster, phaetons and convertible cars. Two to set. Can be slipped into the top side padding and is equally efficient when top is lowered. Invisible after installed. Contains our special sheet copper, which affords the necessary flexibility and pick-up strength. Made in brown and taupe felt to match top linings.

- AR-12—(Two to set).....List Price \$1.75 Pair

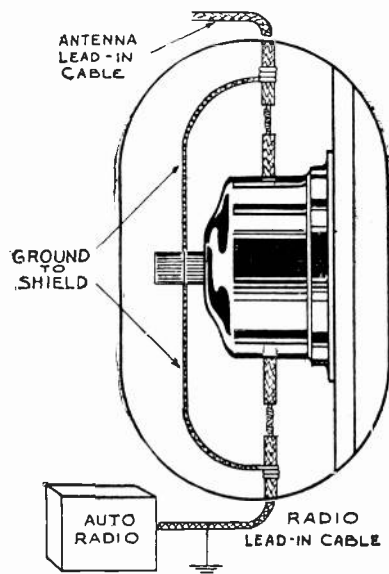
Same as the AR-12 Model, but made in double length for Phaetons and Convertible Sedans.

- AR-17—(Two to set).....List Price 2.25 Pair

### THE SNYDER TRANSIFIER

#### THREE-PURPOSE AUTOMOBILE RADIO ATTACHMENT

Designed Especially for New Cars with All-Steel Tops



- (1) **Noise Suppressor**—Decreases motor noises induced by ignition systems.
- (2) **Signal Booster**—Increases volume and signal pickup strength
- (3) **Chassis Antenna**—Replaces old method of aerial installations. No other wiring necessary. Quickly and easily installed to any model receiver in any make of automobile.

- Model 17E—Complete unit.....List Price \$1.25
- " 18E— with 5 ft. 7 m/m shielded lead-in cable....." " 1.60

**Best For  
Auto Radios**



**Best For  
Farm Radios**

If you do not find the vibrator you want listed, send to us for latest COMPLETE RADIART DATA SHEET covering over 100 different vibrators for all vibrator-operated Radio Sets.

Set and Model	Type	List Price	Set and Model	Type	List Price
ACRATONE (Federated Purchaser)—UJ-42D-43D	5300	\$4.50	CLINTON—1935 Models	5300	4.50
460-49-51-92-92A-94A	2867	4.50	801-802-803	5300	4.50
259B-200B	4260	4.50	COLONIAL—106 B Power Sup.	3313	4.75
40	3888	4.50	150 (sync.)	3283	5.50
L7-XG-Z4-Z5-167D-167B-168B-168D	5410	5.00	150 (non-sync.), 164-164B	3263	4.50
ADDISON—531-631	2867	4.50	CONSOLIDATED—51	3317	5.75
N655	4608	5.50	CONTINENTAL—U6	5300	4.50
ADMIRAL—U6	5300	4.50	L7-Z541-AZ593-M551-M587	5110	5.00
L7-XG-Z4-Z5	5410	5.00	1935 Models	5410	5.00
AIRCASLE—603	3375	4.50	COR—A255-A455	4613	5.25
U6	5300	4.50	CORONA—105-122	5300	4.50
611 (Sync.)-L7-XG-Z4-Z5	5410	5.00	CORONADO (See Gamble)		
611	4320	4.50	CROSLY—98-99-102-103-5A1-119	3317	5.75
AIR-CHIEF—66	3308	5.50	4A1-5A3-6B1	3789	5.00
AIR-LINE (See Montgomery Ward)			A15J-A266	5300	4.50
AIRMASTER—31B-34B-49B-50B	4403	5.00	A16G-A366	3461	5.25
63BT-63BC-68DTE-68DCE	5413	5.00	1935 & '36 Models H.II.	5411	5.00
AIR-MATE—5T (1934)	3315	5.25	6615-435-546-636	5111	5.00
4T	3461	5.25	DELCO (U.M.S.)—626-627-628-629	3461	5.25
ALL-AMERICAN MOHAWK—A60-U50-U'500	2867	4.50	630-631-632-633-500	5321	4.50
ARCADIA (Also see Wells-Gardner)—6U	3417	4.50	634-635	4613	5.25
032-062A	3443	5.00	6010 (U.M.S.)	4403	5.00
072-072A-172	3318	5.75	DETROLA—6A-1100-1100A	3442	4.75
ARVIN (Noblitt-Sparks)—7-17-17A-27-37-17B-17C-18-28-33...	3262	4.50	1534-1935 Models (3 leads)	2657	4.50
10A-20A-30A-30B-16-20B	2867	4.50	6M (1935 plug-in), 6R	4260	4.50
15-25-35-45 1st series	3261	4.50	I11-112	5300	4.50
15-25-35-45 2nd series	2867	4.50	ELECTRIC AUTOLITE—062-062A	3443	5.00
280M-28EM-18FW-331M	5300	4.50	ELECTRONIC—B Eliminator	2867	4.50
6V I1H	5409	5.00	FEDERATED PURCHASER (See Acratone)		
AUBURN—980525-526	4611	5.25	FIRESTONE—R1322 (R132)	4414	5.50
AUTOCRAT—5	2867	4.50	R1332 (R133)-1314-Travler	4260	4.50
518-618	3417	4.50	R1413	5300	4.50
530-505-518-618-S (1936)	5300	4.50	FORD (Majestic)—Plug-in Pack	3312	10.00
AUTOMATIC—Tom Thumb	2867	4.50	Standard Pack	3310	8.25
1933 Models	2867	4.50	Head Only	3442	4.75
1934 Models	3398	4.75	Plug-in Vibrator	3263	4.50
1935 Models	2867	4.50	40-11805	3442	4.75
Junior-Senior	3398	4.75	Glove Box Police	3442	4.75
Junior Twin Six	3227	5.00	FORD (Phileo)—All Models	3320	4.00
S6-A5	3398	4.75	FORD (Lincoln)	3263	4.50
A600-A1600	2867	4.50	FORD (Zenith)	3263	4.50
(1936 Models) A5-J70-J50-J60-A1-J80	3227	5.00	FREED—A7-A9	3318	5.75
AUTO ROLA—J50-J60-J80	3227	5.00	GALVIN MFG. CORP. (See Motorola)		
BALDWIN—Chassis 54-64	5300	4.50	GAMBLE (Coronado)—2681-500-670	4260	4.50
BALKEIT—Chassis 54-64, U' 6	5300	4.50	670	3363	4.50
L7-XG-Z4-Z5-GT156BA	5410	5.00	580-680-880C	4220	4.50
BELMONT (Freshman)—660 (head)	3442	4.75	34BT-31BT, 1935 Models, 49B-50B	44C3	5.00
660 (pack)	3314	8.00	GAROD—B37	5300	4.50
1932 Models	3444	5.00	GENERAL ELECTRIC—B40-C41-B52	3319	5.50
670-667	3263	4.50	C61	4415	6.50
566-668-880-666	5300	4.50	C60	3417	4.50
670A-600-880A-880B-880C	4320	4.50	D50-D51-D52	3283	5.00
580-680-680A-680B-680C	4320	4.50	D72	3836	4.50
BLACKHAWK—6U-64	3417	4.50	N60	5300	4.50
BOSCH (United American Bosch)—524-634-634A	4260	4.50	M51-S745	5400	5.00
140 2nd & 3rd series	3283	5.50	GENERAL TRANSFORMER—B Eliminator	3226	4.50
150 1st series	3318	5.75	GILFILLAN—All 1933-34-35-36 Models	3263	4.50
150 2nd series	3283	5.50	X-RX	5300	4.50
160-45 (sync.)	3283	5.50	GLOCE—1936 Models	5300	4.50
45 (non-sync.)	3263	4.50	GOODYEAR—Wings (5 tube)	4260	4.50
45A-45C	3283	5.50	Wings 880 A-B-C, 580-680-690	4320	4.50
78, 79 1st series	3263	4.50	GOLD MEDAL (Golden Tone)—U6	5300	4.50
79 2nd series	4260	4.50	GRAHAM—A355-A555	4613	5.25
189HB-189HR (police)	5406	5.00	GRAYBAR—150	3283	5.50
536-636-637-736-737-738-838	5321	4.50	GREDE—61R	2867	4.50
B.O.P.—980383-980393	3313	4.75	GULDRANSEN (See Wells-Gardner)		
980441-980455-980459	3315	5.25	GRUNOW—1936 Models (sync.), C25	4611	5.25
BUICK—544245-544246-1291344-1291345	3461	5.25	1936 Models (non-sync.), G14-G18	5300	4.50
980507-980508-980509	4611	5.25	HARLEY-DAVIDSON—Police	4505	5.50
980525-980526	4611	5.25	Highwayman	3263	4.50
CAVALCADE—Chassis 54-64	5300	4.50	670	3263	4.50
3511	5410	5.00	HOWARD—HAG	5106	5.00
CHAMPION—500-600	5300	4.50	HIDSON TERRAPLANE—Majestic Head	3442	4.75
CHEVROLET—364441	3313	4.75	5011D-6511E-650-660	2867	4.50
600153-600249-600565-600566	3315	5.25	Zenith 1933-34 Models	2867	4.50
601038	4614	5.25	666-668-680-IIG	5300	4.50
601176-601177-601525-601574	3461	5.25	RCA Victor Models	5300	4.50
601586-601662-601814	3461	5.25	INTERNATIONAL—K60-K6	5300	4.50
985100-985200	5321	4.50	JACOBS—II.II.	5411	5.00
985300	4611	5.25	KADETTE—1934 Models	3263	4.50
985400	4613	5.25	KARADIO—57-150-160-180-35	3261	4.50
CLARION—100	2867	4.50	65-66-68-88-Sheriff	3261	4.50
100 Ar, TC50 (4 prong)	4260	4.50			
TC50 (6 prong)	3263	4.50			

# RADIART REPLACEMENT VIBRATORS (Continued)

Set and Model	Type	List Price	Set and Model	Type	List Price
<b>KNIGHT</b> —F9511-F9551-F9515-F9741		2867	<b>RCA VICTOR</b> —(Continued)		
GU900 (6 volt Amp.)		2837	RS60	4403	5.00
U6-H9766-8897		5300	GBK6-CBT8-SBK6-NBT6	4417	5.00
9737-G9881-68882-F9737		2837	RB-1-63	5300	4.50
F9951		3444	<b>RELANCE</b> —U6	5300	4.50
6824-G9875-G9876-H9817-H1587		4608	L7-X6-Z4-Z5	5410	5.00
G9751-H9850-L7-X6-Z4-Z5-46		5410	<b>REMINGTON</b> —U6	5300	4.50
<b>LAFAYETTE</b> —S17702-062-062A		3443			
B62		3883	<b>REMLER</b> —27	2867	4.50
L30-L23-6U-B51		3417	35	3261	4.50
J41-JA2-D45-D46-B90		5300			
6S-LW10 (4 prongs)		4260	<b>ROGERS</b> —918	3317	5.75
AM20-LW10 (6 prongs)		3263			
L22		2819	<b>SERENADER</b> —3A61-3A02	3442	4.75
J60-9682		4608	<b>SETCHELL-CARLSON</b> —40-41-50-51-52-410-510	5409	5.00
C60		3888	44-45-60-60S-66-66S-68-68S-70-70S-71-80	5304	4.50
<b>LARKIN CO.</b> —91-16		2867	<b>SILVER MARSHALL</b>	4320	4.50
<b>LAUREHK</b> —AM-6		5300			
<b>LEWOL</b> —9101-9102		2867	<b>SILVERTONE</b> (Sears Roebuck)—4400-1400A	5406	5.00
9682		4608	3400-7157-7167-1869-1949A	5300	4.50
<b>LYRIC</b> (Canada)—G9-A60		2867	7128 (4 prong)	4260	4.50
<b>MAJESTIC</b> —06-116-116A		3442	7128 (6 prong)	3261	4.50
66 Complete (pack) Standard		3310	7117-1859-1859A	3283	5.50
66 Complete (pack) 84 Volt		3311	1933 Models (lead type)	2867	4.50
Ford Majestic Head		3442	<b>SIMPLEX</b> —T	2819	5.00
Hudson Terraplane		3442	1935 Auto—6 volt House Set	3679	5.00
<b>MALLORY ELIMINATOR</b> —Types 1 to 6 inc.		3443	1935 non-sync. Auto	4260	4.50
Types 10 to 14 inc.		3318	TA	4501	5.25
<b>MARCONI</b> —48		2867	Q	5300	4.50
<b>MARCONI</b> (Ford)		3263	5DB-PB-DB-GB-FB	5410	5.00
<b>MELBURN</b> —50		5300	<b>SOLAR</b> —062-062A	3443	5.00
<b>MISSION BELL</b> —10A-11-12-14-16-25A		2867	<b>STAR</b> —062-062A	3443	5.00
<b>MONARCH</b> —54-64-YUG		5300	6U	3417	4.50
L7-X6-Z4-Z5-U6		5410	<b>STEWART RADIO</b> —50-60	2867	4.50
<b>MONTGOMERY WARD</b> —87		2867	<b>STEWART-WARNER</b> —1112-1171-1172-1311-1312-1314	4260	4.50
(62-166), (62-118), (6U), 199-202		4612	1315-1316-1317-1318-1319-131-133	2867	4.50
Auto Radio		3143	1121-1122-1123-R112	4260	4.50
62-199 (5Y)		3883	1181-1182-1183-R117-R118-R131-R133-R1132	4414	5.50
236-242-62		5300	R132-R1322	5331	4.50
III-7 prong		5422	1601 to 1609 36 Auto, 143-1431-R160	3318	5.75
<b>MOTOMASTER</b> —G11		5300	<b>STROMBERG CARLSON</b> —33-33A	5409	5.00
<b>MOTOROLA</b> —Motorola Police		5313	115 IIII	3320	4.00
34		4260	<b>STUDEBAKER</b> —AC206	5300	4.50
50-60		5300	<b>SUPERTONE</b> —U6-54-64	5410	5.00
80-90-Golden Voice		5310	L7-X6-Z4-Z5	3263	4.50
88-61		3144	<b>TIFFANY TONE</b> —535-536	2867	4.50
77		3145	<b>TRA-VION</b> —5 tube	5300	4.50
77A-4A-66		4532	<b>TRAV-LER</b> —54-64-542-642	4260	4.50
55-55A		4607	1034-35, All Models	5411	5.00
44		3290	1935-IIIH Set	3318	5.75
57-62-75-79-100-110		3815	<b>TROPIC-AIRE</b> —06W-06X	2867	4.50
Dual Six and Twin Eight		3417	<b>TROY</b> —TR80-86	5300	4.60
GM62-GM79-GM110		3815	68		
<b>MUSICAIRE</b> —34B-31B-49B-50B		4403	<b>TRUETONE</b> (See Western Auto)		
63BT-63BC-68BT-68BC-66LTI-66-6-6-6		5413	<b>TRUE VALUE</b> —6U	3417	4.50
<b>MUSIC MASTER</b> —Ten-Ten		2867	<b>UNITED AMERICAN BOSCH</b> (See Bosch)		
<b>NOBLITT-SPARKS</b> (See Arvin)			<b>UNITED MOTORS</b> —2035-4036	3313	4.75
<b>NORTHERN ELECTRIC</b> —33-40		3319	4037-4038	3315	5.25
61		3-63	<b>UTAH</b> —B Eliminator (non-sync.)	3313	4.75
<b>OLDSMOBILE</b> —393884-393885		3161	<b>WARWICK</b> —1934 Auto	2867	4.50
405045-405046-405057-405062-405063		3461	511-618	4318	4.50
982006-982007-982008		4613	605-600-550-560	5300	4.50
<b>PACIFIC</b> —101-102		2867	1935-36 Models II, III	5409	5.00
101B-101C-102B		5300	<b>WELLS-GARDNER</b> (Where DeVry carbon point vibrator is the original equipment, replace transformer. Special Radiart net price \$1.50.)		
1936 Models IIII		5409	6L-6R	5300	4.50
682		4608	YC22-ZCZ1-Z6W1-06Z	2819	5.00
<b>PHILCO</b> —Police (810PB-811PB)		5322	25Y1-5Y	3883	5.00
Prior to 1936		3320	062-062A	3443	5.00
817-818-819-818K		5320	072-072A-06X	3318	5.75
816		5323	06W (1st series), 06W (2nd series)	3318	5.75
<b>CT11</b> Chrysler, Dodge, Plymouth, DeSoto		5323	26T1 (6U)-26S1 (6S)-26R1	3117	4.50
<b>CT10</b> Chrysler Deluxe, DeSoto Airflow		5323	7Q-7S	5122	5.50
<b>FT9</b> Ford		5323	5H	5111	5.00
<b>HT11X</b> Hupmobile		5323	5X-6KB	5400	5.00
<b>LT14X13</b> Lincoln Zephyr		5323	<b>WESTERN AUTO</b> (Trueone)—D740 (Bosch), I78	3263	4.50
<b>NT12X</b> Nash and Lafayette		5323	580-678A-680-880-D741-D742-D733-D739	4320	4.50
<b>NT12X2</b> Nash, NT15 Nash		5323	880 1937 Model	4260	4.50
<b>PHXD</b> Packard, PT14 Packard		5323	8752 (6Z1), 8733 (N6Z2), D732-D733	2867	4.50
<b>MT14X4</b> Pierce Arrow		5323	8620-0621-S621-062A	3443	5.00
<b>RT14X</b> Reo		5323	8740 (CT1)-670 (CS)	3417	4.50
<b>ST12</b> , <b>ST15</b> Studebaker		5323	8735 (25Y1)-5Y	3883	5.00
37-81431, 1937 Studebaker		5323	062 (3rd series)	2819	5.00
<b>PHONOLA</b> —3A61-3A62		3442	S737-S737C-R131-R1312-670-D743-D744	4260	4.50
<b>PILOT</b> —605		5300	S745	5100	5.00
253-255		5411	<b>WESTINGHOUSE</b> —WR25-WR26 (4 prong)	4260	4.50
<b>PONTIAC</b> —544245-544246-544267-544268		3461	WR25-WR26 (6 prong)	3263	4.50
544289-544290-544291-544297-544298		3461	WR592-WR503	5300	4.50
983506-983507		4613	WR500-WR501	4260	4.50
<b>RADIART</b> —3310 Majestic B Eliminator		2867	WR500-WR501	3319	5.50
<b>RADIETTE</b> —54-64		5300	<b>WILCOX-GAY</b> —4B6 Roadmate, 5F8-890, 5F8-790	4263	4.50
<b>RCA VICTOR</b> —5M-GM-6M2		5406	<b>WURLITZER</b> —460-A60	2867	4.50
M34-M105-M116-AR4229		3319			
M107		3417	<b>ZENITH</b> —7-460-462-650HD-660TD-650HE-651HD-661TE	2867	4.50
H6 (Hudson), RSC3-1		4260	Junior 7, (Ford) 664	3263	4.50
M123		4415	6M90-6R0-7M91S-7M91D-5915-5M90-6M92-6M91-7M91	5300	4.50
M101		3883	4V31-4V59-6V27-6V59-6V62	5411	5.00
M109		3896	4B106-4B131-4B132-6B107-6B129-6B164	5411	5.00
DeLuxe		3319	664-666-668	3865	4.50

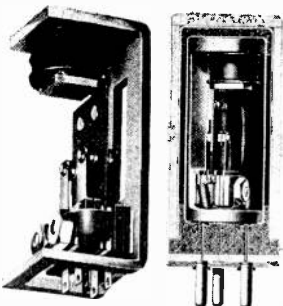
Radiart Utility Three Lead Non-Synchronous Type 3200

List Price \$3.75

# ELECTRONIC

## ONLY ELECTRONIC VIBRATORS OFFER THESE FEATURES

Solenoid Actuating Magnet  
 Three-Piece Center Reed Assembly  
 Spring Temper Monel Side Reeds  
 Square Porcelain Bushings  
 Formed Steel Frame  
 Tungsten Contacts  
 Phosphor Bronze Straps  
 High Dielectric Spacer for Reed Insulation



Solenoid Actuating Coil  
 Tungsten Contact Points  
 Double "Shield Can"  
 Felt Insulation Throughout  
 3 Lead Construction  
 Vibrating Reed  
 Single Pole Stack Construction  
 "External Can" of heavy gauge zinc  
 Moulded Sponge Rubber Caps  
 Cushion Vibrator

Make	Model	Type List No.	Price	Make	Model	Type List No.	Price
<b>ACRATONE</b>							
40, 250B, 259B, 260B		453	\$3.75				
49, 51, 92, 92A, 94A, 460		400	3.50				
42D, 43D, 44D, U6		454	4.50				
167B, 168B, 167D, 168D		714	5.00				
<b>ADDISON</b>							
531, 631		400	3.50				
N655		717	5.50				
<b>ADMIRAL</b>							
U6		454	4.50				
<b>AIRCASTLE</b>							
330P, BA41, 611 Syn		714	5.00				
603		400	3.50				
611		442	4.25				
U6		454	4.50				
<b>AIR CHIEF</b>							
66		703	5.00				
<b>AIRLINE</b>							
Auto Radio		460	3.75				
15V1, 5Y1, 62-199		706	5.50				
16S1, 6S		454	4.50				
62-118, 62-166		438	4.50				
87		400	3.50				
670		442	4.25				
<b>AIRMATE</b>							
5A1934		700	5.00				
4T1935		704	5.35				
<b>ALL-AMERICAN MOHAWK</b>							
U50, U500		700	5.00				
A60		400	3.50				
<b>ALLIED</b>							
F9541, F9551		400	3.50				
H9726		453	3.75				
<b>ARCADIA</b>							
6S		454	4.50				
6U		450	3.75				
5Y, 25V1		706	5.50				
062, 062A		460	3.75				
06W, 072, 072A, 172		710	5.50				
26U1		438	4.50				
V622, Z6Z1		400	3.50				
<b>ARVIN</b>							
7, 17, 17A, 17B, 17C, 27, 37, 45B		400	3.75				
10A, 20A, 20B, 30A, 30B, 16,		706	5.50				
15 2nd Series, 25 2nd Series,		35 2nd Series, 45 2nd Series,	400				
15 1st Series, 25 1st Series,		35 1st Series, 45 1st Series,	452				
18, 28, 33		446	4.00				
61B, 62B		716	5.25				
<b>A. T. R.</b>							
Inverter 6		422	6.50				
<b>ATWATER KENT</b>							
126, 136, 416, 446, 556		454	4.50				
424, 534, 534 2nd Series		703	5.00				
666, 776		470	4.00				
816		724	5.25				
237Q, 467Q		467	4.00				
<b>AUBURN</b>							
ASA		701	4.85				
A53		708	5.60				
980525, 980526		718	5.35				
<b>AUDIOLA</b>							
A6, 56, 57		703	5.00				
B6 (4 Prong)		454	4.50				
B6 (6 Prong), 345, 346 (6 Prong), 347 (6 Prong)		449	3.75				
C6, 64, 74		467	4.00				
2357 1st Series, 3356 1st Series		445	4.50				
2357 2nd Series, 3356 2nd Series		400	3.50				
346 (4 Prong), 347 (4 Prong)		453	3.75				
<b>AUTOCRAT</b>							
5		400	3.50				
505		454	4.50				
518, 618		438	4.50				

Make	Model	Type List No.	Price	Make	Model	Type List No.	Price
<b>CHRYSLER</b>							
C6, CU, CV, CZ, CT2, CT11, D, E, G, G122, R, 02861, 36-5159, 36-3157		P450	\$3.75				
<b>CHRYSLER-AIRFLOW</b>							
C1, C2, C3, CT5 DeLuxe		P450	3.75				
<b>CLARION</b>							
TC-15		400	3.50				
TC50 (4 Prong), 100, 110		453	3.75				
TC50 (6 Prong)		452	3.75				
<b>CLINTON</b>							
1935 Models		453	3.75				
1936 Models		443	4.25				
<b>COLONIAL</b>							
106 "B" Power Supply		400	3.50				
130 Non Syn., 164, 164B		452	3.75				
A30 Syn		707	5.00				
349, 355, 359, 361		704	5.35				
360		443	4.25				
<b>CONSOLE</b>							
6A		705	5.00				
<b>CONSOLIDATED</b>							
U6		701	4.85				
<b>CONTINENTAL</b>							
51		454	4.50				
<b>CORD</b>							
A245, A255		704	5.35				
<b>CORONADO</b>							
670, 670A		442	4.25				
<b>CORONA</b>							
105, 122		454	4.50				
<b>CORSEY</b>							
98, 99, 5A1, 102, 103, 119, 701		485	4.85				
A166, 4A1, 5A3, 6B1, 156, 708		5.60					
<b>DE FOREST-CROLEY (CAN.)</b>							
51, 513, 510, 513C, 513D		701	4.85				
<b>DELCO</b>							
500, 630		453	3.75				
625, 626, 627, 628, 629		704	5.35				
631, 632, 633		443	4.25				
634, 635		713	5.35				
<b>DE SOTO</b>							
SE, SF, SG, CT5		P450	3.75				
<b>DETROLA</b>							
1936 Sync		723	5.00				
6M, 6R		454	4.50				
1104, 1100A, 6A		410	3.75				
1934 Models, 1935 Models		400	3.50				
1935 Plug In		467	4.00				
<b>DE WILD</b>							
52, 61, 61X, 640, Motortone		400	3.50				
517		443	4.25				
A605, A606, 607, 608		453	3.75				
<b>DOUGL</b>							
G122, DU, E, G, R		P450	3.75				
<b>ECHOPHONE</b>							
1935 Models		468	4.00				
<b>ELECTRIC AUTO LITE</b>							
062, 062A		460	3.75				
072, 072A, 3722A		710	5.50				
<b>ELECTRONIC</b>							
B, Blin, 331		400	3.50				
<b>EMERSON</b>							
1A		452	3.75				
5A, DeLuxe		706	5.50				
640, 1933 Models		703	5.00				
667, 965, 975, KS38		470	4.00				
666, 668, 680, H6		700	5.00				
E, E128, 2A, 6A		455	4.50				
<b>EMPIRE ELECTRIC PRODUCTS</b>							
60		400	3.50				
<b>ERLA</b>							
500, 560, 600, 601, 602, 603, 400		3.50					
5500		453	3.75				
7M, 11M, 10M, 10MF		446	4.00				
31, 34B		716	5.25				
<b>FADA</b>							
101, 102, 104, 104B		400	3.50				
166		453	3.75				
266		454	4.50				
<b>FAIRBANKS-MORSE (See Audiola)</b>							
C6, 64, 74		467	4.00				
346 (4 Prong), 347 (4 Prong)		453	3.75				
346 (6 Prong), 347 (6 Prong)		449	3.75				
<b>FEDERATED PURCHASER</b>							
42D, 43D, 44D		454	4.50				
92, 92A, 94A, 460, 40		400	3.50				
259B, 260B		703	5.00				
453		707	5.75				
<b>FIRESTONE</b>							
131, 131A, 5 Tube, 6 Tube, R1332		466	4.25				
DeLuxe, R1322		709	5.35				
Traxler		453	3.75				
RCA1, 143		440	4.25				
<b>FORD</b>							
F, N, T, Phlico		P450	3.75				
Glove Box Police, 118, Majestic		410	3.75				
5601M, Majestic Plug In, Zenith		470	4.00				
RCA1		456	4.00				
Utah Repl.		452	3.75				
<b>FORD MARCONI (CANADA)</b>							
Majestic, Marconi, Majestic, (Utah Carter Pack)		452	3.75				
Mt8, FT9		P450	3.75				
Phico		410	3.75				
Phico 1936 Models		P454	4.00				
<b>FREED</b>							
A7, A9		710	5.50				

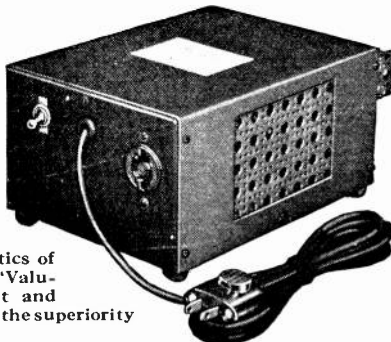
LISTING CONTINUED ON REVERSE SIDE

Make	Model	Type List No.	Price	Make	Model	Type List No.	Price	Make	Model	Type List No.	Price	Make	Model	Type List No.	Price				
LEWAL	9101, 9102.	400	\$3.50	PHILCO—Continued				SIMPLEX				TRUETONE—Continued							
9682 (Hald.)	717	5.50		811P, C, D, E, F, G				TA.	400	\$3.50	062 3rd Series, D732, D733,								
LYRIC	A60, 460.	400	3.50	G122, H, H122, J,				Auto, DB, DBK, DF, DFK,	706	5.50	Z6Z1	400	\$3.50	5V, 25V, D735	706	5.50			
MAJESTIC	G-24, 40-18805, 66, 116,	410	3.75	PAD, PBD, R, FN, Q,				5DB (Hald.) 1935 Syn.			6R, 6S, 670, R131, R1311,			R1312	466	4.25			
16A, 118, Twin 6.	452	3.75		EF Elim., EG Elim.,				PBT-1935	714	5.00	6U			453	3.75				
Utah Unit.	452	3.75		1934 Models, T	P450	\$3.75		1935 Non Syn. Q	454	4.50	580, 670A, 680, 880, D736,			D739, D741, D742	442	4.25			
MALLORY	5, 6, Non Syn. B.	460	3.75	624B (Hald.), 624F (Hald.)	720	5.25		SPARTON	460	3.75	178, D740 (Bosch)			TRUEVALUE	452	3.75			
Syn. B.	710	5.50		816				D686, H686, S676, 1936			6U			UNITED MOTORS	453	3.75			
MARCONI	48	400	3.50	817, 818, 818K, 819, 819H.	P454	4.00		Models.	457	4.00	1935 Non Syn. 500, 630.			Plug in Sync., 626, 627, 628,			629	704	5.35
FORD	45	452	3.75	PIERCE-ARROW				33, 33A	400	3.50	631, 632, 633			634, 635	443	4.25			
45	454	4.50		ME, MT3, DeLux, Philco.	P450	3.75		36	700	5.00	2035, 4036			4037, 4038	400	3.50			
MELBURN	45, 50	454	4.50	PILOT				333	452	3.75	4037, 4038			UNITED SCIENTIFIC	453	3.75			
MIDWEST	Auto	400	3.50	PLA-RIGHT				STAR	453	3.75	605, 606, 607, 608.			640	459	4.75			
MISSION BELL	10A, 11, 12, 14, 16, 25A.	400	3.50	PLYMOUTH				6U	460	3.75	UTAH			Half Wave Eliminators	460	3.75			
5, 19, 19A, 19B	460	3.75		E, G, G122, PJ, Q, R,				062, 062A	460	3.75	UTAH "B" ELIM.			Non Syn.	400	3.50			
MONARCH	Chassis 54, 64.	456	4.00	Philco.	P450	3.75		STEWART RADIO	400	3.50	WARWICK			511, 618	441	4.25			
U6	454	4.50		POWERTONE				50, 60	400	3.50	550	454	4.50	1934 Models.	400	3.50			
MONTGOMERY-WARD	5Y, 62-199	706	5.50	500				STEWART WARNER	710	5.50	Sync. Models	723	5.00	WELLS-GARDNER	460	3.75			
87	400	3.50		RADIART				33, 1933 Models, 1934			06W, 06W 2nd Series, 072,			072A, 06X.	710	5.50			
60	453	3.75		B. Elim., Majestic.	400	3.50		Models, 33A, 33X.	710	5.50	5V	706	5.50	6S, 26S1, Z6U1	453	3.75			
Auto Radio.	460	3.75		RADIETTE				STUDEBAKER	P450	3.75	Series 6U	450	3.75	V6Z2, Z6V1, Z6Z1	400	3.50			
U6	454	4.50		54, 64.	453	3.75		AC206, AC236, AC265.	P450	3.75	6N, 6R, 61	454	4.50	GK.	723	5.00			
670	442	4.25		5M, 6M, 6M2.	719	5.00		SUPERTONE	454	4.50	6U, Z6S1	438	4.50	WESTINGHOUSE					
62-118, 62-166.	438	4.50		63, M109, RS63-1.	456	4.00		TATRO L			WR26, WR500, WR501	453	3.75	WR502, WR503.	458	4.00			
MOTOROLA	Plate Antenna, 34.	453	3.75	101, 104, 108, RC166.	706	5.50		6A, H465, I465, J665, JJ565.	705	5.00	WR25	452	3.75	WESTINGHOUSE (CANADA)	702	5.35			
S6, 44A, 66, 66A, 77A.	705	5.00		AR4229, H34, M105, M116, 702.	5.35		II465.	707	5.00	A43, A44	400	3.50	WILCOX GAY	464	4.00				
44, 55, 55A.	711	5.60		BC6-6 (Hald.), BT6-5	715	5.00		M4616, O4626, P4626.	717	5.50	1935 Models.	400	3.50	Roadmate, Roadmaster.	400	3.50			
50, 60, 65.	454	4.50		110, (Hald.)	443	4.25		Q5636, R5636, S5636.	717	5.50	4B6, 4B6-2, 5F8-90.	452	3.75	5F8-790	442	4.25			
61, 88.	445	4.50		M123	722	5.60		TIFFANY TONE (HORN)	470	4.00	3R6	442	4.25	WILSON	443	4.25			
62, 79.	458	4.00		RS166	716	5.25		535, 536, 1936 Models.	470	4.00	A60, 461	400	3.50	WURLITZER	700	5.00			
710	5.50			EG37A1	706	5.50		26S1	453	3.75	U50, U500.	700	5.00	ZENITH	7, 460, 462, 650HD, 660TD,				
Dual 6, Twin 8	438	4.50		RELIANCE				670, 670A	442	4.25	68	400	3.50	Junior 7	470	4.00			
GM57, GN75, GM100, 57,	439	4.50		U6	454	4.50		TRANSITONE	P450	3.75	68, TR86	470	4.00	666, 1737, D737B, D737C,					
F100	405	4.50		REMINGTON				TRAVLER	443	4.25	D740 (Wells-Gardner),			D743, D743W, D744	454	4.50			
80, 90.	405	4.50		REMLER				TIGER	446	4.00	6K, D745	723	5.00	062, 062A, D690, D691	460	3.75			
Police	421	6.50		27	400	3.50		TRA-AEON	400	3.50	06W	710	5.50	Series, 06X.					
MUSIC MASTER	Ten-Ten, 101, 102.	400	3.50	35	452	3.75		5 Tube			TROY	454	4.50	661TE	400	3.50			
NASH	J., C. D., G. Philco, AC989,	P450	3.75	REO				TROPIC (IRE)			68	470	4.00	661TE	470	4.00			
AC1089, AC1189,				RT3, DeLux, Philco.	P450	3.75		TROPHY			68	470	4.00	6M91, 7N191, 6E3, 6M92,					
AC1289.				ROGERS (CANADA)	701	4.85		64	466	4.25	76, 176	712	5.00	5M90, 6511H1, 2057	443	4.25			
NASH LAFAYETTE	110	P450	3.75	SEARS-ROEBUCK				76, 176	712	5.00	WILSON	443	4.25	4V31, 4V59, 6V27, 6V59,					
NORTHERN ELECT. (CANAD.)	33, 40.	702	5.35	4185A, 7117.	705	5.00		TRA-AEON	400	3.50	WILSON	443	4.25	6V62	712	5.00			
61	452	3.75		712S (4 Prong)	453	3.75		5 Tube			WURLITZER	700	5.00	5610, 5616, 1935 Models.	458	4.00			
PACIFIC	101, 102, 1935 Models.	400	3.50	712S (6 Prong)	452	3.75		TROPIC (IRE)			ZENITH	7, 460, 462, 650HD, 660TD,							
1936 Models.	454	4.50		1933 Lead Type.	400	3.50		Series, 06X.	710	5.50	Junior 7	470	4.00						
682 (Hald.)	717	5.50		1935 Models.	468	4.00		TROY	454	4.50	661TE	400	3.50						
PACKARD	1933-1934, PA, PB, PHD,	P450	3.75	SENTINEL				TRUETONE	470	4.00	666, 1737, D737B, D737C,								
PHXD, PT5, PT14.				600, 602, 603.	400	3.50		D740 (Wells-Gardner),	454	4.50	D743, D743W, D744	454	4.50						
PACKARD-BELL	25	470	4.00	40, 41, 50, 51, 52, 410, 510, 715	5.00			6K, D745	723	5.00	062, 062A, D690, D691	460	3.75						
PATHFINDER	3060	400	3.50	4400, 4400A, HX6.	719	5.25		SHERIDAN	400	3.50	SILVERTONE								
PHILCO	3, 5, 6, 7, 8, 9, 10, 11, 51,	700, 800, 802, 805, 806,		1869, 7157, 7167.	454	4.50		7068A, 1933 Models.	400	3.50	7068A, 1933 Models.	400	3.50						
807, 808, 800, 810,				SILVERTONE				1934 Models.	453	3.75	1935 Models 3400.	468	4.00						
810PA, 810PB, 810PV.				1859	705	5.00		1935 Models 3400.	468	4.00	1859	705	5.00						

Also a Complete Line of Vibrators for 32-Volt Sets. Write Factory for Latest Replacement Guide.

## ELECTRONIC CONVERTERS

Designed to convert 6, 12, 32 and 110 Volt D.C. into 110 volts A.C., and are available in 16 models—each specifically designed for a particular type of converting job. They have many exclusive features and carry a liberal guarantee. Check the operating characteristics of each model on the "Valu-graph" chart at right and determine for yourself the superiority of these units.



**MODEL 10G**—Converts 32 volts D.C. to 110 volts A.C. Designed primarily for Standard 110 volt A.C. radios in rural districts. Anyone using current from 32 volt power plants can now use any quality A.C. receiver. List \$25.00.

**MODEL 21**—Converts 110 volts D.C. to 110 volts A.C. The most universal, all-purpose Converter made by Electronic. It will operate from direct current any A.C. equipment (except Neon signs and electric clocks) which come within its wattage rating. Check carefully the chart showing the outstanding characteristics of this superior converter model. List Price \$30.00.

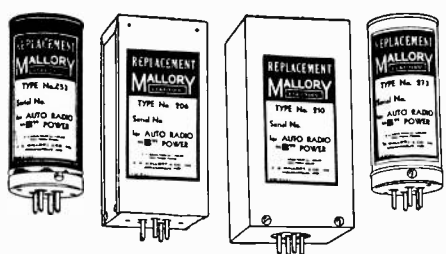
Prices for Other Models Comparable to Those of Nos. 10G and 21.

## ELECTRONIC VALUGRAPH CHART

Model No.	D. C. Input Voltage	Output Voltage	Output Frequency	Rated Maximum Output W. at Full Load	Rated Intermit. Output W. at Full Load	% Efficiency at Full Load	% Regulation	Current Drain at Full Load	Minimum Load	Power Factor	Radio Frequency Suppression	Dimension in Inches	Shipping Weight	Best Adapted for
10G	32	110	60	100	100	85	80	3.7	85%	Yes	4½x6½x9	13½	1 lb.	Radio
13	32	110	60	100	100	82	80	3.9	60	Yes	4½x6½x9	13½		Radio—small syn. motors, etc.
13H	32	110	60	100	100	82	80	3.9	60	Yes	4½x6½x9	13½		Hammond Organ Console
14	32	110	60	180	200	85	80	5.5	60	Yes	9½x6½x10	17½		Amplifier—P.A.—Radio
15	32	110	60	100	100	78	77	4.	60	No	4½x6½x9	14½		Sound on Film—Amplifier
20	110	110	60	150	200	85	91	1.6	85	Yes	4½x6½x10	16		Radio
21	110	110	60	150	150	80	80	1.1	50	Yes	4½x6½x9	13½		Radio—small syn. motors, etc.
21H	110	110	60	150	150	80	80	1.1	50	Yes	4½x6½x9	13½		Hammond Organ Console
22	110	110	60	300	350	87	85	3.15	80	Yes	9½x6½x10	18½		Radio—P.A.—Amplifier
23	110	110	60	500	750	87	83	5.3	60	No	9½x6½x10	18½		Coin operated phonographs
24	110	110	60	100	150	80	80	1.14	60	No	4½x6½x9	17		Sound on Film—Amplifier
25	6	300	DC	30	40	57	80	9.	..	Yes	3½x5½x8½	9		Mobile transmitter—P.A., etc.
30	6	110	60	50	65	85	84	9.8	60	Yes	4½x6½x9	13		Radio—P.A.
31	6	110	110	15	20	60	75	4.1	60	No	3x6x6	6¼		Fence Controller
40	32	110	110	15	20	80	75	5.	60	Yes	3x6x6	6¼		Fence Controller
50	12	110	60	75	100	85	84	7.4	60	Yes	4½x6½x9	13		Radio—P.A.

# MALLORY REPLACEMENT VIBRATORS

## REPLACEMENT VIBRATOR CHART for All Popular Auto Radio Receivers



Over two million of the three million automobile radio receivers in service derive their "B" power from Mallory Vibrators.

Every care has been taken to make the following listing complete. If the unit you require is not listed it is because it has not been field-tested or approved. This testing and proving is going on constantly. We suggest, in these cases, that you write us—sending us the old unit and you will receive complete information promptly.

Name and Model No.	Type No.	List Price	Name and Model No.	Type No.	List Price	Name and Model No.	Type No.	List Price	Name and Model No.	Type No.	List Price
<b>AIRLINE</b>			<b>BLACKHAWK</b>			<b>CLARION</b>			<b>FADA</b>		
Auto Radio.....	206	\$5.00	6U.....	253	\$4.50	100AR.....	294	\$4.50	101-102-104-104B.....	221	\$4.75
87.....	292	4.50	<b>BOSCH (American Bosch)</b>			TC 50—4-prong Socket...	294	4.50	166.....	253Y	4.50
62-118.....	253	4.50	524A-634-634A.....	253Y	4.50	TC 50—6-prong Socket...	296	4.50	<b>FAIRBANKS-MORSE</b>		
62-136, 62-138.....	F253	5.25	140 (Ed. 2 & 3).....	271	5.50	<b>COLONIAL</b>			346-347.....	297	4.50
62-166.....	253	4.50	150 (Edition 1).....	219	5.75	106B3-Power Supply.....	221	4.75	<b>FIRESTONE</b>		
62-199.....	286S	5.50	150 (Edition 2).....	271	5.50	150.....	271	5.50	R-1322 (R-132).....	289Y	5.50
<b>ALL-AMERICAN MOHAWK</b>			160.....	271	5.50	164.....	220B	5.00	R-1332 (R-133).....	294	4.50
A60.....	292	4.50	45A, 45C.....	271	5.50	164B.....	296	4.50	Travler (1314).....	294	4.50
<b>ARCADIA</b>			79.....	253	4.50	<b>CROSLEY</b>			<b>FORD (Majestic)</b>		
26U 1.....	253	4.50	<b>BUICK-OLDS-PONTIAC</b>			119.....	F223	6.75	40-18805.....	220B	5.00
062, 062A.....	206	5.00	393884-393885.....	273C	5.50	98, 99, 102, 103, 5A1.....	223	5.75	Glove Box Police.....	220B	5.00
072, 072A.....	211	5.75	405045-405046.....	273C	5.50	159.....	F223	6.75	<b>FORD (Phileo)</b>		
06W (1st).....	210	5.75	405057.....	273C	5.50	<b>DELCO</b>			All.....	250	4.50
25Y1.....	286S	5.50	405062.....	273C	5.30	626, 627, 628, 629.....	273C	5.50	FORD (Lincoln).....	296	4.50
V622, Z6Z1†.....	292	4.50	544245-544246.....	273C	5.50	630, 500.....	294	5.50	<b>FREED</b>		
26B1, 26B5.....	F253	5.25	544267-544268.....	273C	5.50	2035, 4036.....	221	4.75	A7, A9.....	210	5.75
<b>ARVIN</b>			980393.....	221	4.75	4037, 4038.....	222	5.25	<b>GALVIN MFG. CORP. (see "Motorola")</b>		
15, 25, 35, 45 (1st Series)...	296	4.50	980441.....	222	5.25	4050, 4051.....	F223	6.75	<b>GENERAL ELECTRIC</b>		
15, 25, 35, 45 (2d Series)...	292	4.50	980455-980459.....	222	5.25	6010.....	281	5.50	B-40-C41.....	273*	5.50
10A, 20A, 30A, 20B, 30B, 16	292	4.50	980507-980508.....	273D	5.50	<b>DETROLA</b>			B52 Arm-Rest Model.....	273*	5.50
7, 17, 17A, 27, 37.....	294	4.50	980509.....	273D	5.50	6A-1100-1100A.....	220B	5.00	C60.....	253	4.50
<b>ATWATER KENT</b>			982006-982007.....	273C	5.50	6M, 6R.....	294	4.50	C61.....	224	6.50
666.....	296	4.50	982008.....	273C	5.50	1934, 1935.....	292	4.50	D50-D51-D52.....	287M	5.50
776.....	296	4.50	983506-983507.....	273C	5.50	<b>DEWALD</b>			D72.....	294	4.50
816.....	226	5.25	<b>CADILLAC</b>			52.....	221	4.75	<b>GILFILLAN</b>		
<b>AUDIOLA</b>			96W Standard.....	210	5.75	61.....	292	4.50	All 1933-34-35.....	296	4.50
23-S-7 (1st Series).....	312T	5.00	96W Master.....	237	5.75	606, 607.....	294	4.50	<b>GOODRICH TIRE &amp; RUBBER CO.</b>		
23-S-7 (2nd Series).....	292	4.50	2721 (062).....	206	5.00	605.....	253Y	4.50	Winz 5-tube.....	294	4.50
33-S-8 (1st Series).....	312T	5.00	2722 (072A).....	211	5.75	<b>ELECTRIC AUTO-LITE</b>			Wings 670.....	294	4.50
33-S-8 (2nd Series).....	292	4.50	61*2.....	253	4.50	062-062A.....	206	5.00	<b>GRAYBAR</b>		
33-A-6.....	225	5.75	56VI.....	221	4.75	072-072A.....	211	5.75	150 (Chassis).....	271	5.50
33-S-8 (1st Series).....	F312	6.00	<b>CHEVROLET</b>			<b>EMERSON</b>			<b>GREBE</b>		
33-S-8 (2nd Series).....	F221	5.75	354441.....	221	4.75	365-667.....	296	4.50	61-R.....	292	4.50
34S, 347.....	297	4.50	803153-800566.....	222	5.25	5A.....	277S	5.50	<b>GULBRANSEN</b>		
C6, 64, 74.....	294	4.50	633249-800565.....	222	5.25	678.....	222	5.25	362-362A.....	206	5.00
<b>AUTOMATIC</b>			631039.....	273C	5.50	6A.....	253Y	4.50	072-072A.....	211	5.75
1933-1934-1935.....	292	4.50	631176.....	273C	5.50	<b>ERLA-SENTINEL</b>			06W (1st Series).....	210	5.75
AR600.....	292	4.50	631177.....	273C	5.50	5500.....	294	4.50	06W (2d Series).....	237	5.75
JR.....	292	4.50	601574.....	273C	5.50	630-602-603.....	292	4.50	5Y.....	286S	5.50
JR-Twin Six.....	292	4.50	631662.....	273C	5.50	5600.....	F253	5.25	V6Z2-Z6Z1†.....	292	4.50
<b>BELMONT</b>			985100-985200.....	294	4.50	<b>FREE!</b>			CAUTION note at end of table.		
660.....	292	4.50	985300.....	273D	5.50	<p>To Authorized Dealers and Service Men: A complete Auto Radio Service Manual containing over 200 diagrams, service hints, etc. For your free copy write to P. R. Mallory &amp; Co., Indianapolis, Indiana, on your business stationery.</p>					
1932 Models.....	311S	4.75	<b>CLARION</b>								
580-650-670A-880A, B, C.....	294	4.50	<b>CLARION</b>			<b>DEWALD</b>			<b>EMERSON</b>		

\* Requires Special Cup Adapter. The prefix letter "F" designates Vibrator designed for 32-volt service. The prefix letter "G" designates Vibrator designed for 12-volt service.



# MALLORY

# REPLACEMENT VIBRATORS

## MALLORY REPLACEMENT VIBRATOR CHART For all Popular Auto Radio Receivers (Continued)



Type 206



Type 210



Type 235



Type 253T



Type 271



Type 212



Type 294



Type 233



Type S302

Name and Model No.	Type No.	List Price	Name and Model No.	Type No.	List Price	Name and Model No.	Type No.	List Price	Name and Model No.	Type No.	List Price
<b>HALSON</b>			<b>MONTGOMERY WARD</b>			<b>SENTINEL (Erla)</b>			<b>TROPIC-AIRE</b>		
199.....	220B	\$5.00	87.....	292	\$4.50	5500.....	294	\$4.50	06W (1st Series).....	210	\$5.75
Roadmaster.....	220B	5.00	62-118 (6U).....	253	4.50	602-603.....	292	4.50	06A (2d Series).....	237	5.75
<b>HARLEY-DAVIDSON</b>			Auto Radio.....	206	5.00	5600.....	F253	5.25	06X.....	210	5.75
All.....	271HD	5.50	62-136, 62-138.....	F253	5.25	<b>SIMPLEX</b>			<b>TROY</b>		
<b>HUDSON TERRAPLANE</b>			62-199 (5Y).....	286S	5.50	T.....	292	4.50	TR-86.....	296	4.50
Majestic Head.....	220B	5.00	62-166.....	253	4.50	P.....	F221	5.75	<b>TRUETONE</b>		
650HD, 651HE.....	292	4.50	<b>MOTOROLA</b>			<b>SPARTON</b>			~732 (V6Z1), ~S-733 (V6Z2)†		
660TD, 661TE.....	292	4.50	34.....	294	4.50	33-33A.....	292	4.50	~630 (06Z), S-691 (06Z-A)	206	5.00
666, 668, 680.....	294	4.50	88.....	302S	5.00	333.....	292	4.50	S-740 (6U).....	253	4.50
H6.....	294	4.50	61.....	303S	5.00	36.....	F225	5.25	S-735 (25Y1).....	286S	5.50
<b>INTERNATIONAL</b>			77.....	230	5.75	<b>STAR</b>			~743, 1312 (R-131).....		
K-60 (K-6).....	296	4.50	77A.....	270B	5.50	062 062A.....	206	5.00	670 (6S).....	253	4.50
<b>KARADIO</b>			55.....	231	5.75	6 U.....	253	4.50	<b>UNITED MOTORS SERVICE</b>		
57, 65, 66, 88, 150, 160, 180	298	4.50	44.....	235	5.75	<b>STEWART WARNER</b>			2035-4036.....		
<b>KNIGHT</b>			44A.....	270B	5.50	1171, 1172, 1181, 1182, 1183	294	4.50	4037-4038.....	222	5.25
F9541.....	292	4.50	62, 79, 110.....	253T	4.50	R-117, R-118.....	294	4.50	500, 630.....	294	4.50
F9551.....	292	4.50	50, 60, 80, 90.....	294	4.50	R-112, 1121, 1122.....	292	4.50	626-627-628-629.....	273C	5.50
6V (Chassis 6820).....	285XS	6.00	66.....	270B	5.50	1311, 1312, 1314, 1315, 1316, 1317, 1318, 1319.....	294	4.50	4050.....	F223	6.75
<b>LARKIN COMPANY</b>			Dual 6 and Twin 8.....	253	4.50	R-131.....	294	4.50	4051.....	F223	8.75
91.....	292	4.50	57, 75, and 100.....	253T	4.50	R-132, R-1322.....	289Y	5.50	6010.....	281	5.50
<b>"LEWOL"</b>			<b>MUSIC MASTER</b>			R-133, R-1332.....	294	4.50	<b>WELLS-GARDNER</b>		
9101.....	292	4.50	Ten-Ten.....	292	4.50	R-132, R-1332.....	294	4.50	V6Z2†.....	292	4.50
9102.....	292	4.50	<b>PACIFIC</b>			<b>STROMBERG-CARLSON</b>			V6Z1†.....		
9682.....	285XS	6.50	101.....	292	4.50	33.....	236	5.75	25Y1.....	286S	5.50
<b>LINCOLN (Ford)</b>			102.....	292	4.50	<b>L'TATRO</b>			25Y1 (12-volt).....		
MAJESTIC	296	4.50	~82.....	285XS	6.00	Admiral F293.....	F204	5.00	062-062A.....	206	5.00
66, 116, 116A, 118.....	220B	5.00	<b>PHILCO</b>			Captain F913.....	F204	5.00	072-072A.....	211	5.75
40-18805 (Ford).....	220B	5.00	All.....	250	4.50	Commander F83.....	F204	5.00	06W (1st Series).....	210	5.75
490.....	F220C	6.00	<b>RAIART</b>			Console or Table—Model 6A, K665, 1665, H465, I465.....	275	5.50	06W (2d Series).....	237	5.75
<b>MALLORY ELIMINATOR</b>			B. Eli.....	292	4.50	Governor N54.....	F211	6.25	26U1 (6U).....	253	4.50
Type 1.....	201	5.00	Majestic Replacement Unit	292	4.50	Governor N74.....	F251	5.25	26B1, 26B5.....	F253	5.25
Type 2.....	202	5.00	<b>RADIETTE</b>			Lt. Governor N54.....	F211	6.25	26S1 (6S).....	253	4.50
Type 3.....	203	5.00	Chassis 54, 64.....	294	4.50	Lt. Governor L74.....	F251	5.25	<b>WESTINGHOUSE</b>		
Type 4.....	204	5.00	<b>RCA VICTOR</b>			Pilot J5, G63.....	F204	5.00	WR-25, WR-26 (4-prong Socket).....	294	4.50
Type 5.....	205	5.00	M34-M105.....	273*	5.50	President 084.....	F211	6.25	WR-25, WR-26 (6-prong Socket).....	296	4.50
Type 6.....	206	5.00	M116 (Arm-Rest Model).....	273*	5.50	President 094.....	F251	5.25	WR-500-501.....	253Y	4.50
Types 7, 10C, 10CA, 10P, 10PC, and 10ST.....	210	5.75	M107.....	253	4.50	F725, D625, C625.....	F251	5.25	<b>WILCOX-GAY</b>		
Types 11, 11M, 11C, 11CD, 11P, and 11PC.....	211	5.75	AR 4229.....	273*	5.50	Recorder P54 (Table).....	F251	5.25	4B6.....	292	4.50
Types 12, 12C, and 12PC.....	212	5.75	H 6 (Hudson).....	294	4.50	Recorder P 64 (Console).....	F251	5.25	Roadmate.....	292	4.50
Types 13 and 13S.....	213	5.75	RS63-1.....	294	4.50	~6226, ~6236, V5226, ~5226, T6216.....	F251	5.25	<b>WURLITZER</b>		
Types 14, 14C, and 14PN.....	214	5.75	M123.....	224	6.50	R5236, ~5636, ~4626, Q4626, M4616 (1st Series).....	275XS	6.00	460-A60.....	292	4.50
<b>MISSION BELL</b>			M101, M104, M108.....	287M	5.50	R5236, O5636, ~4626, Q4626, M4616 (2nd Series).....	285XS	6.00	<b>ZENITH</b>		
10A, 11, 12, 14, 16, 25A.....	292	4.50	M101, M104, M108.....	G287M	6.50	<b>TIFFANY TONE (Herbert Horn)</b>			7.....		
<b>SEARS-ROEBUCK</b>			M109.....	294	4.50	535, 536.....	296	4.50	460-462 (2057).....	292	4.50
7128 4-prong Socket.....	294	4.50	<b>TRAVLER</b>			<b>WILCOX-GAY</b>			650 H10-651 HE, 600 TD- 661 TE.....		
7128 6-prong Socket.....	296	4.50	54, 64.....	294	4.50	Ford.....			296		
7117-1859-A.....	271	5.50	<b>WELLS-GARDNER</b>			666, 668, 680.....			294		

\* Requires Special Cup Adaptor. Supplied with Vibrator at \$0.50 List, or separately at \$1.00 List.  
 † CAUTION! If the vibrator being replaced in one of these radio sets is a 2-prong 250-volt vibrator, it will be necessary to replace the power transformer with one of a later type. This transformer is available from the Radio Set Manufacturer.  
 The prefix letter "F" designates Vibrator designed for 32-volt Service.  
 The prefix letter "G" designates Vibrator designed for 12-volt Service.  
 See Page K-8 for Mallory Replacement Vibrator Condensers.

# UTAH Replacement Vibrators

Type	Wiring Diagram	Price	Code	Type	Wiring Diagram	Price	Code	Type	Wiring Diagram	Price	Code
NP4		4.50	ACE	SP51		5.25	AFT	SP61		6.50	ALP
NP6		4.50	ACT	SP52		5.25	ALA	SP62		5.00	AND
NP41		4.00	ADA	SL5		5.25	ANY	SP66		5.00	ANN
NL3		4.50	ADD	SL51		5.50	APE	SP6		5.00	ANT
NL3U See Note		3.75	ADE	SP53		5.50	ALE	SLH		5.50	APT
NP42		4.50	ADO	SP5		5.00	ALF	32NP61		5.00	ARC
NP43		4.50	ADZ	SP55		5.00	ALL				

The new Utah Replacement Vibrator line offers the advantages of meeting all requirements for all makes of automobile radios with but 18 vibrators. Listed here are a number of popular makes of auto-

mobile radios and the Utah vibrator that will serve each particular model. A catalog containing complete listings for all makes, including farm radios will be sent on request.

## ARVIN

7-17A-17B-17C-27-37-18-28-33 ..... NP4  
10A-16-20A-30A-30B-15-25-35-45-  
2nd Series ..... NL3  
15-25-35-45-45 1st Series ..... NP6

## ATWATER KENT

666-776-926-936 ..... NP6  
126-136-416-446 ..... NP4  
424-534-816 ..... SL5

## AUDIOLA (Fairbanks-Morse)

23S7-33S6, 5 leads ..... SLH  
S6-S7 (3 leads) ..... NL3  
33-A6 ..... SL5  
345-346-347 (6 prong) ..... NP6  
346-347-C6-64-74 ..... NP4

## BELMONT

(Freshman)-660 ..... NL3  
566-666-668-670A ..... NP4

## BOSCH

524-634-634A-79-2nd Series  
536-636-637-736-737-738-838 ..... NP4  
140-2nd-3rd Ser., 150-1st-2nd Ser.,  
160-45 Sync. .... SP53  
45 Non-Sync.-78-79 1st Ser. .... NP6

## CROSLY

98-99-102-103-119-5A1 ..... SL5  
4A1-5A3-6B1 ..... SP6

## DETROLA

1100-1100A-6A ..... NL3  
1934-1935-3 lead models ..... NL3  
1935 Plug-in-6M ..... NP4  
1935 Sync. .... SP53

## EMERSON

1A ..... NP6  
2A-5A-6A ..... NP4  
5A-Sync.-De Luxe ..... SP62  
667-965 ..... NP6  
678-1-678-2 1933 Models ..... SL5

## ERIA-SENTINEL

602-603-600 ..... NL3  
5500-7M-10M-11M ..... NP4

## FIRESTONE

1332-1314 Travler ..... NP4

## FORD-MAJESTIC

..... NL3

## FORD-PHILCO

..... NP41

## FORD-LINCOLN

..... NP6

## FORD-ZENITH

..... NP6

## GENERAL ELECTRIC

B40-B52-C41 (C61-old) ..... SL51

## GENERAL ELECTRIC—Continued

C60-N60-D72 ..... NP4  
D50-D51-D52 ..... SP62  
C61-Plug-in-123 DeLuxe ..... SP61

## GOODYEAR (Wings)

5 tube-880 ..... NP4  
6-prong ..... NP6

## HOWARD

670A ..... NP6  
HA6

## HUDSON-TERRAPLANE

Majestic-Zenith-1933-1934 Models ..... NL3  
Zenith-1935 Models ..... NP42

## HUDSON-RCA-H6

..... NP4

## KARADIO

65-66-88-Sheriff ..... NP4  
150-160-180 ..... NP6

## MAJESTIC

Lead Type Pack ..... NL3  
Plug-In Pack ..... NP6

## MOTOROLA

34-Dual 6-Twin 8-57-75-100-F57-F75-  
F100-GM57-GM75-GM100-62-79-  
110 ..... NP4  
50-60-80-Golden Voice ..... NP42  
44-55-55A-77 ..... SLH  
66-116-116A-Ford-Hudson Terraplane ..... NL3  
44A-66-77A ..... SP53  
44A-66-77A ..... SP53

## PACIFIC

101-102 ..... NL3  
1936 Models ..... NP42

## PHILCO

All Models to 1936 ..... NP41  
1936 Models 817-818-818K-819 ..... NP4  
816 ..... NP41

## RCA VICTOR

RS-63-1-109-M107-H6 ..... NP4  
M34-M105-M116-De Luxe ..... SL51  
M101-104-108-166-5M-6M-6M2 ..... SP62

## SIMPLEX

T-TA ..... NL3  
5-DB-1935T-1936-PB Series ..... SP55  
TA-1st and 2nd Series ..... SP62  
Q ..... NP4

## SPARTON

33-33A ..... NL3  
36 ..... SL5

## SPARTON—Continued

296-333 ..... NP6  
D686-H686-S676 ..... NP42

## STEWART WARNER

R1112-1121-1122 ..... NL3  
1112-1171-1172-1181-1182-1183-  
R117-R117-R1311-1312-1313-1314-1315-  
1316-1317-1318-1319-131-133 ..... NP4  
R132-1322 ..... SP62  
1112-DeLuxe 1936 Models ..... NP43

## TRUETONE (Western Auto)

6R-Z6Z1-062-3rd Series ..... NL3  
6U-6S-R131-131R-S743 ..... NP4  
5Y-25Y1 ..... SP62

## UNITED MOTOR SERVICE

Buick-Olds-Pontiac-Division  
393884-85-405045-046-405057-062-063-  
544245-246-267-268-289-290-291-  
297-298-982006-007-008-983506-507-  
1291344-345 ..... SP51  
980507-508-509-525 ..... SP52  
980393 ..... NL3  
980441-455-459 ..... SL5

## G.M.S. Chevrolet Division

364441 ..... NL3  
600153-566-249-565 ..... SL5  
601038-176-177-525-574-586-662-814-  
985400 ..... SP51  
985300 ..... SP52  
9985100-200 ..... NP42

## G.M.S. Delco Division

626-627-628-629-634-635 ..... SP51  
630-631-632-633-500 ..... NP42  
634-635 ..... SP52  
2035-4036 ..... NL3  
4037-4038 ..... SL5

## WELLS-GARDNER

6U-6S-26U1-26S1-6N ..... NP4  
6R-6I ..... NP42  
O6W1-O6W2-O72-O72A-O6X ..... SL4  
V62Z-Z6Z1-Z6W1 ..... NL3  
5V Ser.-25 Y1 ..... SP62

## ZENITH

7-460-462-650HD-651HE-660TD-  
661TE ..... NL3  
Jr7-Ford ..... NP6  
664-666-668-5M90-6M92-6M91  
6M90-7M91-680-All 1935 Models ..... NP42  
4V31-4V59-6V27-6V62 ..... SP62

# WARD

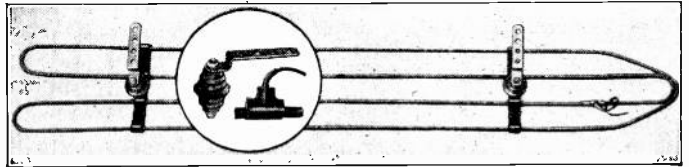
# AUTOMOBILE ANTENNAS

**"YOUR AUTO RADIO IS ONLY AS GOOD AS YOUR AERIAL!"**

## WARD MODEL 4 R. C. STREAMLINE

The Most Efficient  
**SINGLE AERIAL**

- Approved for all Radio Sets and all Automobiles
- Note the Ward Magic Bracket and the Molded Lead Wire Connection
- 10-Minute Installation—No Drilling of Running Boards
- 100% Rubber Covered
- Maximum Efficiency and Performance



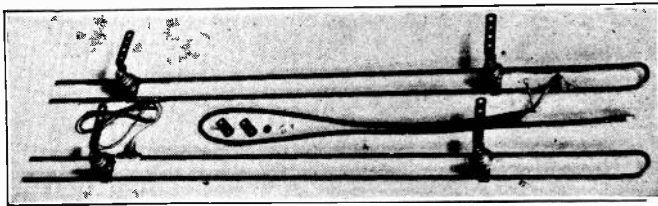
Sealed in Leak-Proof Rubber

6 Lbs. Individually Packed  
10 to Master Carton—62 Lbs.

Model 4 R. C.  
Streamline

List Price ..... **\$2.95**

## The "LONG-RANGE TWINS"



**MODEL HPR**  
Complete with 66"  
Approved Low-Loss  
Lead Wire

List Price **\$4.00**

- THE "LONG-RANGE TWINS" produce pick-up power practically equivalent to that of any roof aerial. All leakage from moisture, slush or ice is absolutely eliminated. Magic leak-proof bracket and heavy rubber insulation in these new "Twins" are the greatest combination ever devised for the preservation of signal strength efficiency. This aerial has been designed to add grace and beauty to the new streamlined automobile. Weight: 6 lbs. individually packed, 10 to a master carton, 62 lbs.

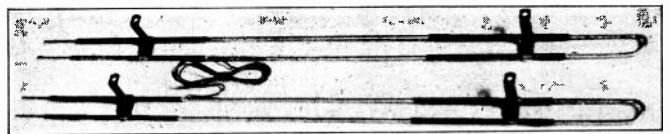
**PERMANENT CONSTRUCTION  
SIMPLE INSTALLATION  
NO DRILLING**

Ward presents these new twins sealed in rubber with the assurance that their performance will make them popular with every auto radio owner. This is the first rubber-protected twin aerial ever manufactured in the popular price class.

## WARD DUAL MARVELWAVE

- THE BEST BUY ON THE MARKET! All the benefits of Ward engineers' eight years experience in building auto aerials, at a price that meets all competition. Same no-drilling quick-installation features as all other Ward aerials. Rubber Insulated—Rustproof Finish.

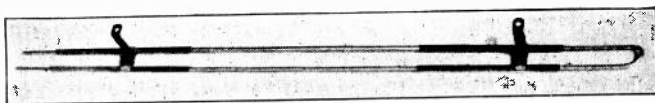
High efficiency guaranteed on any make of auto radio. A quality aerial throughout. You can depend on it to give you years of satisfactory service.  
6 lbs. individually packed, 10 to a master carton, 62 lbs.



**MODEL 2MW**

List Price **\$2.75**

## WARD SINGLE MARVELWAVE



**MODEL 1MW**

List Price **\$1.50**

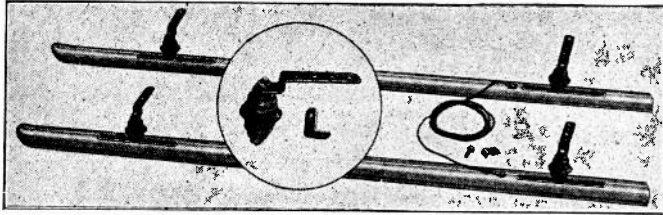
- THE SINGLE MARVELWAVE is built for average duty, giving more efficiency than any other single aerial ever made.\* Equipped with Adjustabacket features which mean same easy installation as other Ward aerials. Many of the features of our better aerials are incorporated in the Single Marvelwave. Recommended where a dual aerial is not required.  
3 lbs. each individually packed, 10 to a master carton, 31 lbs.  
\* Excepting the Ward Magic Super Antenna.

# WARD

# AUTOMOBILE ANTENNAS

## Ward Invention Doubles Signal Strength Efficiency

# The New Duo Magic-Ski Auto Aerial



Model 2-Ski **\$3.50**  
List Price . . .

While the bracket is only two inches in length, it is so scientifically designed to give a leakage path many times its length.

The bracket definitely segregates the antenna from the car, thereby allowing the antenna to become an integral part of the radio circuit. The scientific combination of the bracket and antenna reduces capacity to car to new low levels, giving added ground capacity, which is directly responsible for such outstanding high efficiency and performance.

- **No Drilling**—Attaches to any automobile without drilling the running board.
- **Quick Installation**—In less than ten minutes the New Duo Magic-Ski can be installed in any car.
- **Permanent Construction**—Cannot rattle or short, because of superior sturdy construction.
- **Approved by leading engineers**—The New Duo Magic-Ski Auto Aerial was submitted to leading manufacturers of auto radios and motor cars, including several who manufacture their own antenna, all of whom commended this excellent accomplishment.
- **Efficient under all weather conditions**—and because of unique narrow streamline design, mud, slush or ice will not accumulate, thereby assuring uninterrupted radio reception.
- **No Fading—Non-Directional**—Due to the great increase in signal strength, fading and directional effects are non-existent.

# Ward Mono-Magic Ski Auto Aerial

**AMERICA'S MOST EFFICIENT SINGLE ANTENNA SAME CONSTRUCTION AS WARD DUO MAGIC-SKI**  
For a single antenna with 73 per cent of roof efficiency, this antenna has greater pickup than any single antenna made. Serves a definite need for guaranteed signal strength at small cost.



Being a single or half-section of THE NEW WARD DUO MAGIC SKI it bears all the same features of construction. The identical insulation parts are used. Shipping Weight, Each—3 lbs. 10—32 lbs.

Model 1-Ski **\$2.00**  
List Price . . .

# The New Improved MAGIC-SUPER Auto Aerial



No. 1M Ward Magic Super Auto Antenna **\$3.50**  
List Price . . . . .

**MOLDED OF LEAK-PROOF RUBBER FOR HIGHER EFFICIENCY**—The Ward Magic Super Auto Antenna is the most efficient under-car antenna on the market. Sturdy molded rubber construction, eliminating short circuits, Magic Pick-up Flap, increasing volume 22% to 40% by utilizing Ground Waves, Two-Point Suspension and Adjustabackets, simplifying installation, make the Magic Super Antenna mighty as the Turret Top itself! Adaptable to all cars and all auto radios. Weight 4 lbs. each. Individually packed for shipping 12 to a master carton—50 lbs., including Adjustabackets.

# WARD Approved Low-Loss LEAD WIRE

**NO LOSS . . . NON-SHORTING . . . NO WATER LOGGING . . .** Constructed of heavy lacquered lead wire with waterproof, shielded loom, protected by a processed Braid . . . definitely assures no loss through capacity, and no shorting or water logging.

Male plug-in to fit all makes of radios. Heavy construction. Mass production enables this low price.

All Magic-Ski Aerials may be ordered with Lead Wire permanently attached at no additional cost.



Model No. List Price  
AL-66—66" long . . . 75c each  
AL-36—36" long . . . 60c each

# RADIO BATTERIES

Burgess "B" and "C" Batteries are Available with Combination Fahnestock Clip and Plug-in Connections

## New BURGESS Portable "B" Battery



Small efficient Portable "B" Batteries, especially designed for use in trans-receivers, portable radio equipment, laboratory and medical instruments. Despite their small size

they have a long life.

**No. A30BP**—45-volt "B". Uses 30 cells. Size  $2\frac{5}{8} \times 4\frac{3}{8} \times 4\frac{1}{8}$ " Shpg. Wt. 4 lbs.

**List Price**.....\$1.44

**Type Z30P**—45-volts "B". Uses 30 cells. Size  $3\frac{1}{2} \times 1\frac{1}{2} \times 4\frac{1}{4}$ ".

**List Price**.....\$1.50

## BURGESS Flat Batteries

For Analyzers and Flashlights



Large

**No. 532**—4½ volts. Size  $2\frac{3}{4} \times 2\frac{1}{2} \times 1\frac{1}{2}$ ". Has brass contact springs on top.

**List Price**.....30c

**No. 432**, same as Eveready 751. 4½ volts. Size  $2\frac{1}{2} \times 2 \times 1\frac{1}{2}$ ". Has brass contact springs on top

**List Price**.....30c

## BURGESS BATTERIES



BURGESS batteries are the choice of most experimenters, radio amateurs and others to whom performance and reliability are important. Because of their uniformity Burgess Batteries assure uniform tone quality, better reception, and maximum economy.

Burgess No.	Volts	D.	Size, Inches W.	H.	Shpg. Wt. Each	Unit Pkg. Quan.	List Price
<b>SUPER "B" BATTERIES</b>							
21308	45	4½	8	8¼	16	6	\$2.95
22308	45	3¾	8	8¼	10½	6	1.95
<b>STANDARD "B" BATTERIES</b>							
10308	45	4¾	8	8¼	14	6	\$2.25
2308	45	3½	8	8¼	11	6	1.75
5308	45	2½	4½	6¾	11	5	1.50
5156	22½	2½	4½	2¾	5	4	.85
4156	22½	2½	3¾	2¾	2	4	.75
2156	22½	4½	6¾	3½	5	5	1.50
<b>Police Radio Type</b>							
21305	45	4½	8	8¼	15	6	\$3.60
<b>AIRCRAFT RADIO BATTERY</b>							
5966	135	2¾	9¾	7¾	9	1	\$7.25
<b>STANDARD "C" BATTERIES</b>							
5360	4½	2¾	¾	2¾	1	4	\$0.40
2370	4½	1¾	¾	3	2	10	.40
5540	7½	1¾	¾	2¾	3	4	.65

## BURGESS "A" and "B" Midget Batteries



Use these new Burgess Midgets in your portable receivers. They are recommended for Amateur Clubs, Hospitals, Radio Stations, Construction Gangs—for any users of portable transmitters or receivers. They are Midget in size and weight, but they deliver a **powerful**, even current.

The Burgess 3-volt "A"—only  $1\frac{3}{8} \times 2\frac{1}{4} \times 3\frac{3}{4}$ " and weighs only 8 oz. The Burgess 45-volt "B"—only  $1\frac{1}{2} \times 3\frac{3}{8} \times 4\frac{1}{8}$ " and weighs just 14 oz.—less than an ordinary 4½-volt "C" battery—but it will give 22 hours of intermittent service. Rated capacity—13-watt-hours.



**T2FL—3.0-Volt "A" Battery**  
**List Price**.....\$0.35

Milliamperes Drain....	60	80	125	250
Hours per Day	Amperes-Hour Capacity			
3	4.2	4.0	3.7	2.0
6	4.4	3.4	3.3	1.4
24	3.0	2.4	2.4	1.4

The above figures are based on 1.8-volt end point per 3.0-volt battery.

**X30FL—45-Volt "B" Battery**  
**List Price**.....\$2.30

Milliamperes Drain....	1	3	10	25
Hours per Day	Amperes-Hour Capacity			
3	.38	.351	.31	.25
6	.38	.351	.31	.25
24	.38	.351	.31	.25

All Amperes-Hour capacities are based on 1.13-volt end point for each cell in series.  
30 cells—45-volt battery=34-volt end point.



## BURGESS "Power House" 3-Volt "A Pack"

**For Use with 2-Volt Radio Receivers**  
**400 Hours Service**—Based on ½-ampere discharge 3 to 8 hours per day using an end point voltage of 1.8 volts per 3.0-volt battery.

The Burgess Power House is scientifically designed for 2-volt tubes. Costs less than 1c per hour to operate. Developed in the laboratory, proved in service, this new dry "A" places radio on a high plane of convenience, reliability, and economy. There is no recharging; no servicing; no filling with water; nothing to spill; no creeping or dangerous liquids. It embodies a revolutionary "Close Pak" cell construction with expansion areas. Under intermittent service, "Chrome the Preservative" gives this new pack remarkable recuperative powers. **It is necessary that a suitable resistor be used to step down the voltage to the required 2-volts.**

**Burgess 20F2 "Power House"** (size  $11\frac{1}{2} \times 4\frac{1}{2} \times 6\frac{3}{4}$ ") without the resistor.  
**List Price**.....\$3.30

**Resistor**—For voltage control, having four positions and a switch which can readily be moved from one position to the next. This is essential on receivers without a built-in voltage regulator.

**List Price**.....\$0.25

## BURGESS "Little Six" Dry Batteries

Replacing the now obsolete Standard No. 6 type of battery, the new Burgess Little-Six saves 40% in weight and 30% in space, but retains all of the electrical capacity of the No. 6 cell. The Little-Six is a combination of size F cells, which are made of seamless drawn zinc cans, connected in parallel. Under typical conditions 40 watt-hours of service at 1½ volts may be obtained. Absolutely leakproof. Has adequate voids to collect any electrolyte which is accidentally spilled. It can be used successfully wherever Standard No. 6 cells are employed, and maintains a higher voltage than the Standard No. 6 cells. Wt. 1 lb., 6 oz. Size  $2\frac{3}{4} \times 2\frac{5}{8} \times 4\frac{1}{4}$ ".



**A special type of Little-Six is made for Radio "A" use.** This is ideal where uniform power, high sensitivity and hairline selectivity are desired. The Ignition Type Little-Six is the one most commonly used for general service.

**4FH** (Screw Terminal) Ignition type.....**List Price** \$0.35  
**4FH** (Spring Clip) Ignition type.....**List Price** .35  
**4FA** (Screw Terminal) Radio "A" type.....**List Price** .40

## BURGESS Uni-Cel Batteries

Ideal for Testers, Analyzers or fountain pen flashlights, Burgess Uni-cel batteries are available in two sizes—No. 1, small size, and No. 2, large size.

**List Price, Each**.....\$0.10



# RADIO BATTERIES

## EVEREADY Radio Batteries

All EVEREADY "B" and "C" BATTERIES are now equipped with both the new plug-in connecting socket as well as the regular clip type connectors.

### Layerbilt "B" Batteries



**Exclusive flat-cell construction eliminates waste space**... Concentrates the power-making materials. Layerbilt batteries cost more initially than round-cell batteries, but last from 50% to 100% longer. Will give good service all the way down to 24 volts. Sell your customers "Layerbilt" batteries—the millions of advertising dollars that have, and are, being spent to inform the receiver owners about the superiority of the "Layerbilt" makes it easy. **Particularly recommended for "Air Cell" Receivers.**

#### Medium Size

No. 485—45 Volts

List Price, each ..... \$1.89  
Package Lot (6), each ..... 1.76

Height 8", length 8 1/2", width 3 1/8". Weight 11 lbs. Terminals to give +22 1/2 and +45 volts. Equipped with both clip type and plug-in connections. Plug included. 9 1/2 lbs.

#### Large Size

No. 486—45 Volts

List Price, each ..... \$2.39  
Package Lot (6), each ..... 2.23

Height 8", length 8" width 4 1/8". Weight 16 lbs. Terminals to give +22 1/2 and +45 volts. Equipped with both clip type and plug-in connections. Plug included. 14 1/4 lbs.

### "A" Batteries

#### Dry Cell

Standard 1 1/2-V.

No. 7111

List Price Each ..... \$0.40  
Pkg Lot (25) .37

Recovers rapidly during a short period of rest. Size 2 3/8" x 6". Weight 2 lbs. 2 ozs.



**No. 6 Eveready Columbia Igniter**

List Price ..... \$0.35

### Eveready Air Cell "A" Battery



An air-depolarized, constant voltage, non-rechargeable primary battery, especially designed and guaranteed ONLY for use as the "A" Battery for Air-Cell Receivers. High capacity of 600 ampere-hours is sufficient for at least 1000 hours' operation. Activated for service by filling with water. Length 9 1/2", width 6 1/2", height overall 10 1/2". Weight, dry, 23 lbs.

No. A-600... List Price \$5.95

**For Heavy-Drain Air-Cell Receivers which consume excessive "A" current.**

No. SA-850... List Price \$7.50

### Large Size "B" No. 570—45 Volts



A low-priced heavy-duty round cell battery. Weight 13 3/4 lbs.

List Price, each ..... \$1.69  
Package Lot (6), each ..... 1.59

No. 572, Medium Size, each 1.15  
Package Lot (6), each ..... 1.07

### "B" for Oscillators, Ohmmeters, V.-T. Voltmeters, Portable Radio Receivers



Standard equipment in hundreds of test instruments. It matches in height and depth the standard No. 6A battery—and is about twice as wide as one 6A. Tapped at 22 1/2 and 45. Weight 3 1/4 lbs. Height 6 3/8", length 4 7/8", width 2 1/2".

No. 762, 45 Volts, List Price \$1.35  
Package Lot (5), each ..... 1.27

### "C" for Test Equipment "B" for Radio Receivers No. 768—22 1/2 Volts



List Price, each ..... \$0.85  
Package Lot (5), each ..... .80

Tapped at -3, -4 1/2, -16 1/2, -22 1/2. Excellent for Ohmmeters, small service oscillators, as well as for "B" replacement in portable receivers, noise locators, etc. Used extensively as "C" battery for 120, 31, 71A tubes on 135 volts. Shelf life over 8 months. Size: height 2 3/4", length 4 1/8", width 2 1/2".

### Midget "C" for Oscillators No. 763—22 1/2 Volts

The smallest of the 22 1/2-volt "C" batteries for use with one or two-tube test oscillators or in portable two-tube short-wave receivers. Size: length 3 3/8", width 2", 2 1/2" high. Six-months' shelf life.

List Price, each ..... \$0.75  
Package Lot (5), each ..... .71

### Test Set and Flashlight Batteries

No. 703—Large 4 1/2 Volts

Same size as Burgess No. 532, 3-cell. Size: 2 3/8" x 2 1/8" x 1 1/8".  
List Price ..... \$0.30

No. 751—Medium

Same size as Burgess No. 432, 3-cell. Size: 2 1/4" x 2" x 1 1/8".  
List Price ..... \$0.30

No. 750—Medium

2-cell. Size: 2 3/8" x 1 1/8" x 3/8".  
List Price ..... \$0.15

### Unit Cells

No. 950—Standard

Tubular. Size 1 1/4" x 2 3/8".  
List Price ..... \$0.10

No. 935—Baby

Tubular. Size 1" x 1 1/8".  
List Price ..... \$0.10

No. 915—Penlight Type

Tubular Sgl. Cell. Size 3/8" x 1 1/8".  
List Price ..... \$0.05

### "C" Bias No. 773—7 1/2 Volts



List Price, each ..... \$0.65  
Package Lot (5), each ..... .59

Brass posts and one flexible terminal. Height 2 3/4", length 4", width 7/8".

### Standard "C" No. 771—4 1/2 Volts Plug-In Terminals



Contains 3 special "C" Battery cells of the same size and composition as those in the 22 1/2-volt No. 768 "C" Battery. Weight 9 oz.

List Price, each ..... \$0.30  
Package Lot (5), each ..... .29

### 4 1/2-Volt General Purpose Battery

#### No. 761-2 Fahnestock Terminals

Designed to meet a wide variety of applications where a 4 1/2-volt battery is required. Not recommended for use as a "C" battery, as the size and composition of the cells are not so well suited for this work as the special "C" battery cell used in "C" batteries. Where a 4 1/2-volt "C" battery is required, use the standard plug-in "C" battery, No. 771. Weight, 14 ozs.

#### No. 761-T—4 Brass Screw Terminals

Same as No. 761, except for Terminals.

List Price, No. 761 or 761-T. \$0.30  
Package Lot (5), each ..... .29

### Ohmmeter "C"

No. 781—4 1/2 Volts

Used in Analyzers, and in majority of ohmmeters requiring 4 1/2 volts. Extremely long life on intermittent 1-milliamperer drain. Used in Zenith, Operadio and RCA battery radio sets as "C" bias. Size: height 2 3/8", length 2 1/2", width 3/4".

List Price, each ..... \$0.40  
Package Lot (5), each ..... .37

# Mueller Electric Co.

## MUELLER BATTERY AND TEST CLIPS



**No. 45 Pee-Wee**

A very small test clip for radio, ignition, meter and similar work.  $1\frac{1}{2}$ " long. Jaw Spread  $\frac{1}{2}$ ". Steel, Cadmium plated.



**No. 21-A**

A large heavy duty battery charging clip. Lead coated copper shunt protects spring. 4" long. Jaw spread  $1\frac{1}{4}$ ". Steel, Lead plated.



**No. 48-B**

A small test and battery clip for radio use and general testing purposes. 2" long. Jaw spread  $\frac{3}{8}$ ". Steel, Cadmium plated.



**No. 27**

A high grade test clip with meshing teeth on three sides of jaws. For laboratory and shop test work.  $2\frac{1}{4}$ " long. Jaw spread  $\frac{3}{8}$ ". Steel, Cadmium plated.

### COPPER CLIPS AND LARGER SIZES

Any of the above clips (except No. 85 Alligator) may be had made of solid copper. Prices on application. Also the following larger sizes

- No. 11-A**—100 Ampere. Steel, Lead coated.  $5\frac{5}{8}$ " long.
  - No. 11**—100 Ampere. Solid Copper.  $5\frac{5}{8}$ " long.
  - No. 33**—200 Ampere. Solid Copper.  $7\frac{1}{4}$ " long.
- (Above furnished with lug connections.)



**No. 24-A**

A medium sized battery clip. Stands erect on battery post. Lead coated, copper shunt protects spring.  $2\frac{7}{8}$ " long. Jaw spread 1". Steel, lead plated.

### ALLIGATOR CLIP

With or Without Rubber Insulator



**No. 85 Clip—No. 87 Insulator**

**No. 85**—A very small clip with slender, elongated jaws for getting into tight places in radio or electrical test work. Teeth really mesh. Screw and barrel connection.

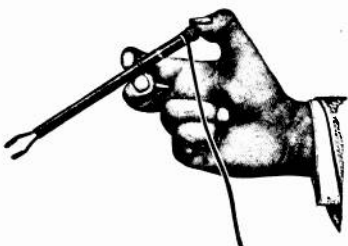
**No. 87**—Insulators. Red and black. Cover entire clip, except nose. Prevent shorts and shocks.

### CLAMPIPE GROUND CLAMP



Heavy construction, will not bend or lop over when applied. Patented design gives 5-point contact and rigid hold on pipe. Large screw case hardened to dig into clean metal. Takes pipes  $\frac{3}{8}$ " to  $1\frac{3}{8}$ " O. D. Packed 10 in a box.

## THE No. 83 SNAPPER



### A TRIPLE THREAT RADIO TOOL

The Snapper is an elongated, completely insulated electric test clip. It lends itself also to a variety of other applications as described below.

The long tube of insulating material is fitted with spring contact jaws on the far end. The jaws are operated by a push of the thumb on the near end as illustrated.

### IT MAY BE USED AS

1. A "Deep Sea" Electric Test Clip
2. An Electric Contact Prod
3. A Starter and Retriever for Screws and Nuts

### UNIVERSAL COPPER, RADIO FREQUENCY CLIP



**No. 45-C**

Entirely non-ferrous clips with phosphor bronze springs and brass screws. Will not heat up on high frequency circuits. No. 45-C Clip with No. 47 Insulator is an ideal combination for use on transmitters and helices.

### RUBBER INSULATORS FOR MUELLER UNIVERSAL CLIPS



To prevent short circuit, and electric shock rubber insulators may be had to fit any size clip. Packed  $\frac{1}{2}$  red,  $\frac{1}{2}$  black, to designate polarity. 10 in a box.

SEE REVERSE SIDE FOR YOUR NET PRICES

# Mueller Electric Co.

**SNAPPER No. 83: Retail List Price \$0.75; Net Price \$0.50**

## MOST POPULAR SIZES OF CLIPS

Code No.	DESCRIPTION	Length of Clip	Spread of Jaws	PRICE EACH IN LOTS OF			Shipping Weight in Lbs. Per 100
				Retail Price	10	100	
45	5-AMPERE PEE WEE CLIP, WITH SCREW, STEEL, CADMIUM-PLATED	1½"	½"	\$.05	\$.03	\$.02¾	1
48-B	10-AMPERE CLIP, WITH SCREW, STEEL, CADMIUM-PLATED	2"	9/16"	.05	.03½	.03	2
27	10-AMPERE CLIP, WITH SCREW, STEEL, CADMIUM-PLATED	2 5/16"	9/16"	.12½	.08¾	.07½	3
24-A	25-AMPERE CLIP, WITH SCREW, STEEL, CADMIUM-PLATED	2 7/8"	1"	.10	.06½	.05½	7
21-A	50-AMPERE CLIP, WITH SCREW, STEEL, LEAD-PLATED	4"	1 1/4"	.17	.12	.09½	15
11-A	100-AMPERE CLIP, WITH LUG, STEEL, LEAD-PLATED	5 5/8"	1 1/8"	.50	.35	.30	33
85	ALLIGATOR CLIP, WITH SCREW AND BARREL, STEEL, CADMIUM-PLATED	2 3/8"	½"	.07	.05	.04	2

## SOLID COPPER CLIPS

45-C	10-AMPERE CLIP, SOLID COPPER, PHOSPHOR BRONZE SPRING, BRASS SCREW	1½"	3/8"	\$.10	\$.07	\$.06	2
48-C	10-AMPERE CLIP, WITH SCREW, SOLID COPPER	2"	9/16"	.10	.07	.06	2
24	25-AMPERE CLIP, WITH SCREW, SOLID COPPER	2 7/8"	1"	.20	.14	.12	7
21	50-AMPERE CLIP, WITH LUG, SOLID COPPER	4 1/2"	1 1/4"	.50	.35	.30	19
11	100-AMPERE CLIP, WITH LUG, SOLID COPPER	5 7/8"	1 1/8"	.85	.60	.51	36
33	200-AMPERE CLIP, WITH LUG, SOLID COPPER	7 1/4"	2"	1.35	.95	.81	55

## RUBBER INSULATORS (Also listing clips each will fit.)

Insulator Code No.	FOR USE WITH CLIP NUMBER:	PRICE EACH IN LOTS OF			Shipping Weight in Lbs. Per 100
		Retail Price	10	100	
87	85 ALLIGATOR CLIP	\$.05	\$.03	\$.02¾	1
47	45 PEE-WEE 45-C SOLID COPPER	.07½	.05¼	.04½	2
74	95 FOR 7MM IGNITION CABLE	.08	.05½	.04¾	4
49	48-B 48-C SOLID COPPER 82 NEEDLE CLIP	.09	.06¼	.05¼	4
29	27 27-C SOLID COPPER	.11	.07¾	.06½	5
90	SPECIAL 27 CLIP FOR 7MM IGNITION CABLE	.11	.07¾	.06½	5
26	24-A 24 SOLID COPPER	.20	.14	.12	10
23	21-A 21 SOLID COPPER	.32	.22	.19	16
13	11-A 11 SOLID COPPER	.60	.42	.36	24
35	33 SOLID COPPER	.70	.50	.42	30

## JUMPERS, CARRIER, GROUND CLAMP

Code No.	DESCRIPTION	PRICE EACH IN LOTS OF			Shipping Weight in Lbs. Per 100
		Retail Price	10	100	
89	CLIP JUMPER	\$.20	\$.15	\$.12½	17
57	TAP-TITE CONNECTOR	.20	.15	.12	15
77	JUMPING JACK CONNECTOR	.14	.10	.08½	8
73	COCK-EYED CARRIER	.35	.25	.19	19
58	CLAMPIPE GROUND CLAMP	.08	.05½	.04¾	9

The above prices apply to the Mueller Products described on the reverse side of this page.

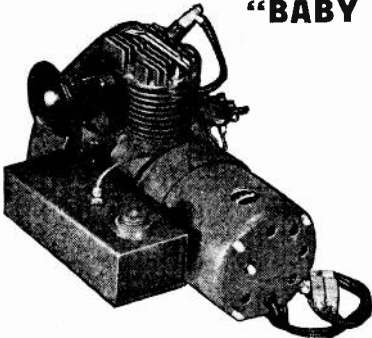
**ASSORTMENTS— All Mueller Products may be assorted to obtain quantity prices.**



# Pioneer POWER SUPPLY DEVICES

## "BABY JUMBO" PORTABLE ELECTRIC POWER PLANTS WITH PUSH-BUTTON STARTING

6, 12, 32, and 110-Volt—5/8 H.P. 4-Cycle, Single Cylinder Engine  
For Farm—Boats—Camps—Trailers—Contractors—Roadside Stands



Anyone can now enjoy the convenience and comfort of electricity—and he doesn't have to be a master mechanic to do it. This energetic little "plant" is extremely simple in design. It's sturdily built for long life under heavy-duty service. The complete unit is easily moved about—it weighs only 46 pounds. It will furnish current for a lighting system, charge batteries, run electrically-driven tools, and operate the washing machine, cream separator, water pumps, and other belt-driven machines.

**Fuel Consumption**—Fifteen hours on one gallon at 150 watts. Oil consumption, 2 ounces in 10 hours.

**Generator**—Self-excited, two-pole for highest efficiency. Armature mounted directly on crankshaft, outer end supported in oil-less self-aligning bearing. Surplus oil for 1000 hours' operation. Easily removable cover provides ready inspection of commutator, brushes, and bearings.

**Starting**—A touch of the push button automatically starts the motor, with current provided by the storage battery. An emergency rope-pull starter is also provided.

### NEW "CUB" TYPE "LB" PLANTS 6 or 12 Volts, 200 Watts PUSH BUTTON STARTING BATTERY IGNITION

PIONEER now furnishes this remarkable plant at the amazingly low list price of \$44.95. The engine is the same as those used on the popular plants shown at the right, with the exception that the small current for the ignition is taken from the storage battery. For installations where engines of this type are satisfactory, the type LB plants have no equal.

Code	Output—200 Watts Type No.	For use with	Weight—49 Lbs. Type No.	List Price
Feign	LB6X	For use with 6-volt batteries		\$44.95
Felon	LB12X	For use with 12-volt batteries		44.95

Furnished with carrying handle. Wooden base \$1.00 additional to List Price.

### STANDARD MODEL with HIGH TENSION MAGNETO

Code	Type No.	For Use With	Output Wt. Watts Lbs.	List Price
Fable	L6	6-volt batteries	150 46	\$49.95
Fanny	L6M	6-volt batteries (Marine Type)	150 49	55.00
False	L6X	6-volt batteries	200 49	55.00
Fatal	L6XM	6-volt batteries (Marine Type)	200 52	59.95
Facer	L12	12-volt batteries	150 46	55.00
Famed	L12X	12-volt batteries	250 49	59.95
Favor	L12XM	12-volt batteries (Marine Type)	250 52	64.45
Faint	L32	32-volt batteries	250 49	59.95
Fairy	L32R	For operation of 32-volt lights or D.C. appliances without batteries	250 49	59.95
Faker	L110	For operation of 110-volt lights or D.C. appliances without batteries	250 49	59.95

Wooden base and carrying handle furnished on Marine Type units. If wanted on other types add \$4.00 to List Price.

**Accessories**—All plants for use with storage batteries are furnished complete with ammeter, cutout relay, leads, and battery clips. Simply fill with gas and oil, connect with battery, press the starter button, and it goes to work.

## "BLUE DIAMOND" 110-VOLT A.C. GAS-ELECTRIC PLANT

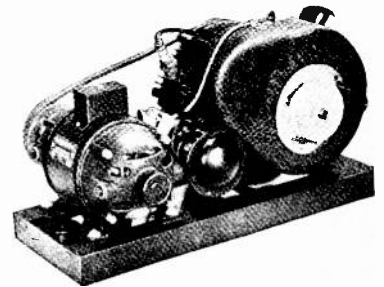
110 Volts—300 Watts—60 Cycles A.C.

Operates Standard A.C. "City" Electrical Appliances

This new PIONEER "Blue Diamond" Gas-Electric Plant furnishes "city" electricity! 110 volts—A.C.—300 watts—60 cycles! Standard A.C. electrical appliances can be used! The "Blue Diamond" Unit is ideal for farms, camps, summer homes, etc., because it will supply plenty of current for lights, as well as 50 watts D.C. which will keep all 6-volt batteries charged. It's a perfect power plant for mobile radio units and public address systems! A.C. radio equipment gives better, more powerful performance and requires less investment. Batteries are not needed, eliminating breakage and acid spilling. The "Blue Diamond" Gas-Electric Unit will operate 12 hours on one gallon of gas—weighs only 72 pounds—is extremely compact.

List Price, only \$79.95

Generator only for the "Blue Diamond," speed 3600 R.P.M. Code—Bluge. List Price \$45.00.  
Filter for use with these generators. Code—Blufi. List Price \$7.50.



### 32 VOLTS D.C. 800 WATTS

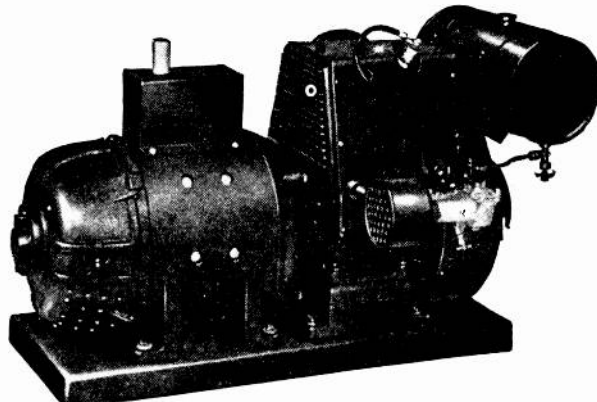
Push Button Starting  
Self Excited

Larger capacity than the popular "Baby Jumbo," for use with 32-volt storage batteries. The engine is the 4-cycle, single cylinder, air cooled type, with high tension magneto ignition. Weighs 195 lbs. Overall dimensions, 30" long, 17" wide, 17" high. Complete with starter, ammeter and cutout. Code Golde. List Price, \$149.50. The "Gold Crown" Plant to deliver 110 volts D.C., regardless of load, is similar to the above. This unit is equipped with a hand crank starter and can be used without batteries. Less ammeter, cutout and push button starter. Capacity 800 watts. Code Golsr. List Price \$157.50.

Larger capacity plant 1500 watts, 110 volts D.C. units with hand crank starter. Weight 280 lbs. Overall dimensions 37" long, 18" high, 18" wide. Code Golft. List Price \$267.50.

## "GOLD CROWN" GAS-ELECTRIC PLANTS

110-VOLT A.C. 60-CYCLE  
1800 R.P.M.



Sufficient alternating current for practically any purpose can be generated with these sturdy, reliable plants. The 4-cycle, air cooled engine with automatic speed control assures a constant frequency of 60-cycle with no flicker. Furnished with hand crank starter. Self-excited, no batteries required. Engine and generator mounted on heavy cast iron base.

110-Volt A.C. Plant with  
Hand Crank Starter  
Output 110 Volts A.C.

Code	Capacity	List Price
Golsi	600 watts	\$165.00
Golth	1000 watts	240.00
Golac	1500 watts	290.00

Net weight 280 lbs. Overall dimensions, 37" long, 18" wide, 21" high. Prices slightly higher in West and South.

# Pioneer

## POWER SUPPLY DEVICES

### PIONEER ROTARY CONVERTERS



Converts 6, 12, 32, 110, 220 Volts  
Direct Current to 110 Volts  
Alternating Current

Rotary converters with and without filters for operation of: Public Address Systems, Power Amplifiers, Radio Receivers, Electric Phonographs, A. C. Motor, Neon Signs, and any other similar apparatus requiring a reliable source of A. C.

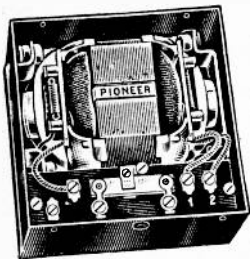
Here's a PIONEER double-wound rotary converter of dynamo construction with separate D. C. and A. C. windings. Less heating and longer brush life result from the engineered PIONEER converter design! The double-wound converter results in more efficient commutation than is obtainable with "tapped" winding.

Converters are rated in volt amperes—the Power Factor of the load determines the size of converter to be used—all PIONEER converters are engineered for the apparatus with which they are to be used.

CODE	INPUT		OUTPUT		LIST PRICE		
	Type No.	D.C. Volt.	D.C. Current	A.C. Volt.	Volt-Amps	Ltrs Filter	With Filter
Daily	640	6	13.3 amps	110	40	\$44.00	\$51.50
Dance	650	6	19. "	110	60	55.00	59.00
Darky	1240	12	7.5 "	110	40	32.50	40.00
Daunt	1280	12	11.8 "	110	80	44.00	47.00
Deaf	1212	12	17.5 "	110	120	51.00	54.50
Debar	1213	12	20.0 "	110	160	66.00	77.00
Debit	3240	32	2.78 "	110	40	31.00	38.50
Decay	3280	32	4.7 "	110	80	34.00	38.50
Defer	3211	32	5.6 "	110	110	37.00	41.50
De ty	3215	32	7.8 "	110	150	41.50	46.00
Delta	3220	32	10.0 "	110	200	45.50	50.50
Delve	3225	32	13.0 "	110	250	49.50	55.50
Demos	3230	32	15.0 "	110	300	55.50	64.50
Denim	1140	110	0.8 "	110	40	31.00	33.50
Dense	1180	110	1.30 "	110	80	34.00	33.50
Depot	1111	110	1.78 "	110	110	37.00	41.50
Depth	1115	110	2.23 "	110	150	41.50	46.00
Derby	1120	110	2.80 "	110	200	45.50	50.50
Derma	1125	110	3.55 "	110	250	49.50	55.50
Deter	1130	110	3.85 "	110	300	55.50	64.50

All Pioneer 6 and 12-volt converters operate on ball bearings. Can be supplied on other units—add \$3.50 to the list price.

### PIONEER GEN-E-MOTOR Auto "B" Eliminators New Compact Models



Complete with built-in filter units, for use as battery eliminators for auto receivers using "B" batteries, and for installation in auto sets where it is desired to remove the filter system used with the old vibrator unit. The entire unit is housed in a sturdy metal case measuring 2 1/4" x 5 1/4" x 5 1/4". The Gen-E-Motor is floated in rubber, assuring complete freedom from vibration. The armature is supported by two sets of ball bearings. Shpg. Wt. 7 1/4 lbs.

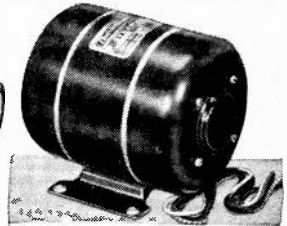
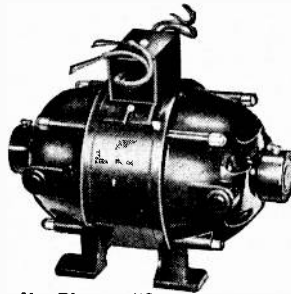
Code	No.	Output Volts	M.A.	Battery Drain	List Price
Baggy	5135-A	135	30	1.80	\$18.00
Balmy	5180-A	180	30	2.50	18.00
Balsa	5200-A	200	40	3.15	18.00
Bandy	5225	225	50	4.3	18.00
Banjo	5250	250	50	4.7	18.00

The above units may be furnished with intermediate tap for 50c additional. Add "T" to code word. Shipping weight 7 1/4 lbs.

### Model "H" For Amplifiers and Sound Trucks

Code	No.	Output Volts	M.A.	Battery Drain	List Price
Basic	7565	265	75	7.75	\$31.00
Baste	7300	300	100	9.5	34.00

### PIONEER DYNAMOTORS



Use Pioneer "Silent Band" Dynamotors for Better Performance in Sound Systems, Police Units, Aircraft, Marine and Broadcast Service.

#### FEATURES.

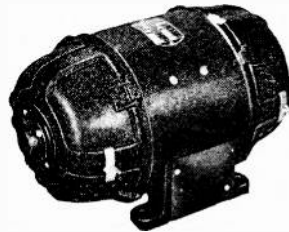
No ripple or voltage variation.  
Nothing to adjust!  
Compact, light weight, and completely enclosed in dust-tight case.  
Welded steel ring construction—end brackets of tough, high quality malleable iron.  
Armature, dynamically balanced, runs on grease-sealed bearings insures quiet, smooth operation.

Code	Type No.	Output		Input		Wt. Lbs.	SIZE			List Price
		Volts	M.A.	Volts	A.		L <sub>2</sub> th Ins.	Width Ins.	Hgt. Ins.	
Gavel	E1W272	250	50	6	4.7	7 1/2	5 1/2	4 3/4	4 3/4	\$35.00
Gayal	E2W353	250	50	6	4.8	9 1/4	6 1/2	4 3/4	4 3/4	40.00
Galea	E1W339	250	100	6	7.5	7 1/2	5 1/2	4 3/4	4 3/4	35.00
Gecko	E2W397	250	150	6	13.2	9 1/4	6 1/2	4 3/4	4 3/4	40.00
Genet	E2W351	300	100	6	9.7	9 1/4	6 1/2	4 3/4	4 3/4	40.00
Gatch	E2W243	300	150	6	14.0	9 1/4	6 1/2	4 3/4	4 3/4	40.00
Genus	E2W256	350	150	6	15.2	9 1/4	6 1/2	4 3/4	4 3/4	42.00
Giant	E2W438	400	125	6	14.2	9 1/4	6 1/2	4 3/4	4 3/4	42.00
Gaily	E3W143	500	100	6	15.0	11	6 3/4	4 3/4	4 3/4	47.50
Girth	RA0W158	300	200	6	18.0	16	8	5 1/4	5 1/4	75.00
Given	RA1W201	400	225	6	23.0	17 1/2	8 1/2	5 3/4	5 3/4	82.50
Glade	RA1W189	500	200	6	27.0	17 1/2	8 1/2	5 3/4	5 3/4	85.00
Glair	RA1W331	600	200	6	31.0	17 1/2	8 1/2	5 3/4	5 3/4	87.50
Grate	RA1W549	750	125	6	25.0	17 1/2	8 1/2	5 3/4	5 3/4	90.00
Ghint	RA3W550	750	250	12	24.0	23 1/4	9 1/4	5 3/4	5 3/4	97.50
Gonad	RA2W475	1000	150	12	23.0	19 1/4	8 1/2	5 3/4	5 3/4	105.00
Grist	RA3W534	1000	250	12	32.0	23 1/4	9 1/4	5 3/4	5 3/4	115.00

All units may be furnished for any D.C. input other than listed above at an addition of 15% to list price. Add "X" to code word and follow with input voltage re wired.

List Price Standard Filter for "E" units... \$19.50  
List Price Transient Filter for "RA" units... \$25.00  
"EA" units, using aluminum wherever possible to reduce weight \$10.00 additional to list price of corresponding "E" unit.  
Most "RA" units may be furnished in "DA" frame at 15% less than "RA" list. Prices Slightly Higher in West and South

### TYPE M ROTARY CONVERTER



Less Filter and Remote Control. Output 110 Volts A.C.

Designed for the most exacting requirements—the Pioneer Model M converter furnishes 60 cycles at 1800 R.P.M. with a pure sine wave. Up to 1300-volt amps prices on request.

### MODEL JW-GEN E-MOTOR . WITHOUT FILTER

It is being used with remarkable success to replace vibrators in auto radio receivers—as it can be easily installed usually within the set itself. It is excellent for this service because it is extremely compact (1 1/2" x 5 1/2" x 2 1/2") and can be used without circuit alterations—complete instructions included.

Supplies a uniform voltage output, eliminating noisy or weak reception.



Code	No.	Output Volts	M.A.	Battery Drain	List Price
Abate	JW-18	180	30	2.5	\$13.00
Abbey	JW-20	200	40	3.15	13.00
Abhor	JW-25	225	50	4.3	13.00
Abide	JW-50	250	50	4.7	13.00
For 32-Volt Radios					
About	JW-32	210	45	.7	\$16.50

Shipping weight, each 6 lbs.

**"A" BATTERY  
ELIMINATOR**

**ATR**

**BATTERY  
CHARGER**

Manufactured by American Television & Radio Co.

DEALERS AND RADIO SERVICEMEN — "INCREASE YOUR SALES"

ATR AUTO RADIO "A" BATTERY ELIMINATOR

Specially Designed for Demonstrating and Testing Auto Radio Sets on Regular A.C. Lines,  
105-125 Volts 50-60 Cycles

Equipped with:

ON-OFF SWITCH  
PILOT LIGHT INDICATOR  
10-AMPERE FUSE  
RUBBER MOUNTING FEET  
6-FT. ALL-RUBBER CORD SET

Cabinet is of heavy gauge metal having attractive black wrinkled finish.

Size 7½"x7½"x5".

Shipping Weight 20 Lbs.



DEALERS' PRICE

**\$12<sup>95</sup>**  
NET  
COMPLETE

Packed one to a carton.

- Eliminates Storage Batteries and Battery Chargers.
- Prevents the Possibility of Spoiling a Sale Because of a Run-Down Battery.
- Operates the Set at Maximum Efficiency at All Times.
- Delivers Pure Direct Current at the Correct Voltage for the Proper Operation of Any Auto Radio Set.
- Equipped with Full-Wave Dry-Disc Type Rectifier Assuring Noiseless, Interference-Free Operation and Extreme Long Life and Reliability.
- Fully Automatic and Fool-Proof.

**Other Suggested Uses:** As a power supply for field coils, exciter lamps, and relays.

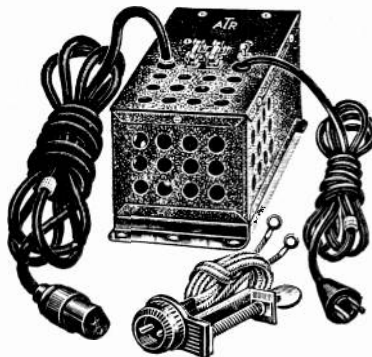
In the laboratory, for supplying various low D.C. voltages by simply using rheostat in one side of the A.C. cord.

## ATR AUTOMATIC TAPERING BATTERY CHARGERS

FOR KEEPING AUTO BATTERIES FULLY CHARGED RIGHT IN THE CAR! !

An Automotive Necessity — Needed More Now Than Ever Before  
Makes Cold Weather Starting Easy

- LOW PRICED
- THREE SIZES
- ECONOMICAL
- EFFICIENT
- CONVENIENT
- FOOL PROOF



- NOISELESS
- RUGGED CONSTRUCTION
- LONG LIFE
- NO RADIO INTERFERENCE

The additional appliances—such as auto radios, spot lights, heaters, fans, cigarette lighters, etc.—operated from the battery of the modern automobile impose a severe drain on the battery making the normal "hard starting" in cold weather still more difficult.

The ATR Automatic Tapering CHARGER solves this problem by boosting or charging the battery right in the car conveniently and economically. No need to remove the battery! Simply attach plug to dash receptacle which connects to ammeter and frame of car and flip the charger toggle switch "ON." Cannot overcharge battery due to automatic tapering charge feature.

Operates from any 110 volt 50-60 cycle A.C. line. Utilizes a full-wave dry disc type rectifier assuring extreme long life and reliability.

ATR Standard Charger—Model 450. Maximum charging rate 4½ amperes.	List Price
Packed one to a carton. Shipping weight, 8 lbs. Complete as illustrated .....	*\$ 9.67
ATR DeLuxe Charger—Model 600. Maximum charging rate 6 amperes.	
Packed one to a carton. Shipping weight, 9 lbs. Complete as illustrated .....	*11.45
ATR Master Charger—Model 1000. Maximum charging rate 10 amperes.	
Packed one to a carton. Shipping weight, 13 lbs. Complete as illustrated .....	*14.25

All above ATR Chargers taper off in the charging current rate to approximately one half as battery becomes charged; come completely equipped with polarized dash receptacle and plug, fuses, 9 feet D.C. cord, 12 feet A.C. cord, On-Off toggle switch, and complete instructions.

Special Note: All ATR prices 10% higher west of the Rockies.

D.C. - A.C.  
INVERTERS

• **ATR** •

FULL WAVE  
VIBRATORS

Manufactured by American Television & Radio Co.

A.C. CURRENT ANYWHERE • IN CARS . . . ON FARMS . . . IN D.C. DISTRICTS

WITH NEW **ATR** D.C. - A.C.  
1936 MODEL INVERTERS

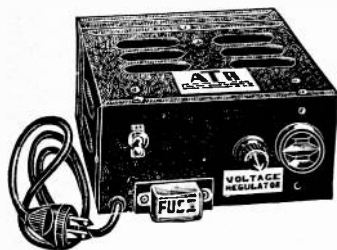
FEATURING

- Quiet Radio Operation
- Long Life Vibrators
- Four Point Voltage Regulators

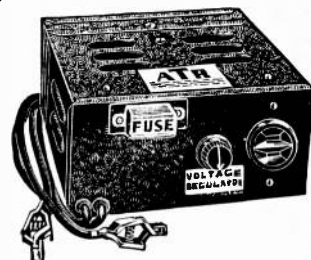
FOR OPERATING

STANDARD 110-VOLT OR 220-VOLT A.C.  
RADIO, PUBLIC ADDRESS SYSTEMS,  
ELECTRICAL TESTING EQUIPMENT

Vacuum Cleaners, Fans, Mixers, Hair Dryers,  
Curling Irons, Medical Appliances, Etc.



Cut showing general appearance of all ATR Inverters except Types 6 and 12.



Cut showing general appearance of Types 6 and 12 Inverters only.

PROVEN — DEPENDABLE — GUARANTEED

A simple, inexpensive device for producing standard 110- or 220-volt alternating current from 6-volt storage batteries. 32-watt power for operating standard A.C. devices at an efficiency of approximately 80%; the current input being proportional to the load. There are no rotating parts, and the only element that moves is the vibrator which plugs in just like a radio tube.

APPROVED AND RECOMMENDED BY LEADING RADIO AND ELECTRICAL MANUFACTURERS

SPECIFICATIONS: A COMPLETE LINE

Type	D.C. Input	A.C. Output 50-60 Cycles	Wattage Max. Output	Without Filter		With Filter	
				Code Word	List Price	Code Word	Price List
6	6-volts	110-volts	50-watts	ATSIX	\$18.50	SIFIL	\$22.50
6-S	6-volts	220-volts	50-watts	ATWSX	18.50	STFIL	22.50
12	12-volts	110-volts	100-watts	ATWEL	18.50	TWFIL	22.50
12-S	12-volts	220-volts	100-watts	AWELT	18.50	WETFL	22.50
32	32-volts	110-volts	100-watts	ATHIR	18.50	THIFL	22.50
32-S	32-volts	220-volts	100-watts	ATEEN	18.50	THIFL	22.50
50	50-volts	110-volts	125-watts	ATFIF	18.50	FIFIL	22.50
50-S	50-volts	220-volts	125-watts	AFIFY	18.50	FITFL	22.50
90	90-volts	110-volts	200-watts	ANINE	18.50	NIFIL	22.50
90-S	90-volts	220-volts	200-watts	ANITW	18.50	NITFL	22.50
110	110-volts	110-volts	200-watts	AHUND	18.50	HUFIL	22.50
110-S	110-volts	220-volts	200-watts	AHRED	18.50	HUTFL	22.50
150	150-volts	110-volts	200-watts	AHUF1	18.50	HEFIL	22.50
150-S	150-volts	220-volts	200-watts	AHUFT	18.50	HETFL	22.50
220	220-volts	110-volts	200-watts	ATWEN	18.50	TWEFL	22.50
220-S	220-volts	220-volts	200-watts	ATITY	18.50	TITFL	22.50

Special Inverters for various D.C. Inputs and A.C. Outputs can be supplied. External Filter Units for Inverters not so equipped or adequately filtered are available as follows: Type 321 Filter, for all Inverters except Types 6 and 12, List Price \$5.95; Type 612 Filters, for Types 6 and 12 Inverters, List Price \$5.95. Replacement vibrators, any type, List Price \$4.95.

FEATURES: THE ATR D.C.-A.C. INVERTER HAS THE FOLLOWING OUTSTANDING FEATURES:

1. Dependability
2. Guaranteed Long Life
3. Quiet Operation
4. Fuse Protection
5. Compactness
6. No Oiling or Greasing
7. More Power
8. Higher Efficiency
9. Rugged Construction
10. Plug-in Full Wave Vibrator Unit\*
11. Four-Point Voltage Regulator\*\*
12. Six Foot All-Rubber Cord and Plug
13. On-Off Switch
14. Resilient Mounting Feet
15. Attractive Brown Crackle-Finished Metal Cabinet

\* Improved Plug-In Vibrator Unit of new design and construction having 1/4" diameter contacts assures increased long life and reliable service.

\*\* Four Point Voltage Regulator makes possible the correct output voltage for minimum to maximum loads and also helps compensate for input voltages which are lower or higher than normal.

WEIGHTS AND DIMENSIONS: For all ATR Inverters overall dimensions and weights are approximately: 7 3/4" x 8" x 3 3/8"; net wt., 17 lbs.; weight, packed for shipment, 19 lbs.

### ATR Full Wave Vibrators for All ATR Inverters

These plug-in vibrator units are of the non-synchronous heavy duty type and are of new design and construction having 1/4" diameter tungsten contacts which assure increased long life and reliability. Shipping weight 1 lb. Type 6, 12, 32, 50, 90, 110, 110-2, 150 and 220. (When ordering, be sure to specify type desired.)

List Price—Each **\$4.95**

Special Note: All ATR prices 10% higher west of the Rockies.



# Katolight Jr. Kato A.C. Plants



# Kato 32 Volt Plants Kato Diesel Plants

## KATOLIGHT JR. 110 VOLT 60 CYCLE A.C. POWER PLANT

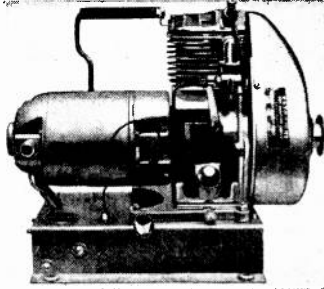
The **Katolight Jr.** plants, furnish a constant source of standard 110 volt 60 cycle A.C. current for light and power in small summer homes, construction camp buildings, trailer, sound trucks, etc. They are easily installed. Equipped with convenient terminal panel for simple connection to line or load. It is unnecessary to bolt plants down, just set on floor or pedestal, connect wires and PLANT IS READY TO GO.

**Fuel Consumption:** 10 hours to one gallon of gasoline at 300 watts. Oil consumption 2 oz. for each 10 hours operation.

**Engine:** 3/4 h.p. air cooled, single vertical cylinder with L head, 4-cycle type, speed 3600 r.p.m. Flyball type governor, splash type lubrication. Ball bearings on crankshaft.

**Generator:** Armature connected to engine shaft, self excited, high speed ball bearings. JRA3 will charge 6 volt battery up to 10 amps. JR35 up to 20 amperes.

**Equipment:** Convenient terminals, generator filter condenser, ignition cable shielded, suppressor, carrying handle, V-belt pulley, muffler and instruction manual.



Model	Code	Watts	Volts	Cycles	Weight	List Price
JRA3	Kora	300	110	60	50	\$87.50
*JR35	Kris	350	110	60	55	98.00

\*The Model JR35 is self cranking by connecting to one 6 volt battery. JRA3 must be cranked by hand.

**Electric Starting Hand Switch** (code ESHS) or Remote Control (REMOTE) can be attached to Model JR35. These may be attached or detached to plants at any time after leaving factory by anyone. See prices below. Battery cables and connectors furnished with either control. Batteries not included.

**Special Muffler (SPMF)** and noise reducing cover should always be used on sound truck installations.

## 110 VOLT 60 CYCLE SINGLE PHASE KATO LIGHT AND POWER PLANTS

Capacities from 300 to 10,000 Watts

**KATO AC lighting plants** are ideal for use any where that regular high line service is not available and will furnish a steady source of standard 110 volt 60 cycle AC current wherever it is desired at low costs.

**Models 20A and 22A** crank from one 6 volt battery; **Model 12A** cranks from two 6 volt batteries and all other models crank with three to five batteries. Cranking feature is made possible by the use of a heavy excitation winding. This winding may be used, after the plant has attained running speed, to charge batteries, furnish power for operation of small DC appliances, etc.

Plants may be equipped with remote control, to start and stop from convenient places, by simply pressing push button.

**KATO plants** up to and including the 2000 watt model use a four cycle Aircooled magneto ignition single cylinder engine. Accurate mechanical governor assures minimum voltage variation between no load and full load. The larger plants are powered with two and four cylinder water cooled continuous duty engines.

**Engine and Generators** are mounted on common base, direct connected with flexible type coupling which assures a steady non-flickering light. Speed 1800 R.P.M.

Code Word	Watts	Weight	Model	List Price
ABBE	300	127	20A	\$158.00
ABAY	450	164	22A	185.00
ABATE	550	180	12A	205.00
ABBAY	750	260	24A	298.00
ABBOT	1000	260	26A	330.00
ABEAR	1500	330	28A	380.00
ABIDE	2000	360	30A	490.00

**Electric Starting Hand Switch:** For use wherever switch may be placed within 15 feet of plant ..... List Price \$12.00

**Remote Control:** For use in starting and stopping plant by use of push buttons located in convenient places ..... List Price \$35.00

**Special Muffler:** Necessary for sound truck installations. List Price \$9.00

## KATOLIGHT JR. 6-12-32 VOLT D.C.

The **Katolight Jr.** is made in five efficient, inexpensive Direct Current plants for operating D.C. lights and appliances or for charging 6, 12 or 32 volt D.C. battery sets.

One of the advantages of Direct Current is the fact that it can be stored in batteries and then drawn as needed. This means that the plant does not have to be operated each time power is wanted, as is the case with the A.C. plant.

Models JR32 and JR10 have magneto ignition engines and may be run independent of battery if desired. Models JDS6, JDS12 and JDS32 are equipped with battery ignition engine and must be used with battery, to supply the ignition for the engine. All other features same as A.C. plants.

The **Katolight Jr. 32 Volt Models** can be used with five 6 volt auto batteries connected in series for operating lights and radio without running engine 32 volt appliances having 1/4 h.p. motors, such as washing machines, automatic water pumps, etc., may also be operated from the batteries. Katolight plants burn gasoline or kerosene.

Model No.	Code Word	Watts	Volts	Weight	List Price
JR32	KARS	150	6	50	\$59.95
JDS12	KARE	200	12	50	59.95
JDS32	KASE	300	32	50	65.00
JR32	KODE	300	32	50	72.00
JR10	KIDE	300	110	50	78.00

The 32 volt and 110 volt models may be furnished with Remote Control if desired. The 32 volt models are self-starting by simply pressing button on plant.

Mounted on rubber feet, not necessary to bolt down.

## KATO 32 VOLT LIGHTING PLANTS

These plants are suitable for use in connection with any standard set of 14, 15 or 16 farm lighting plant battery cells.

Model	Code	Watts	Volts	Weight	List Price
30D	Date	600	32	220	\$190.00*
31D	Daisy	800	32	225	235.00*
32D	Dandy	1250	32	260	298.00*
33D	Daily	1700	32	290	348.00*

A **KATO 32 volt plant** will charge a 160 ampere hour battery in from three to five hours. A battery of this size will supply current without running plant in many homes from three to seven days with one charge.

**KATO 32 volt plants** are started by pushing a button on switchboard. They use an aircooled single cylinder four cycle engine with high tension magneto ignition.

The **KATO 32 volt plant** is efficient. The user can save fuel, as, when the batteries are being charged, the plant works at full capacity.

**Two Compartment tank**, for starting on gasoline and running on kerosene ..... List Price \$8.00\*

## Kato Diesel Light Plant

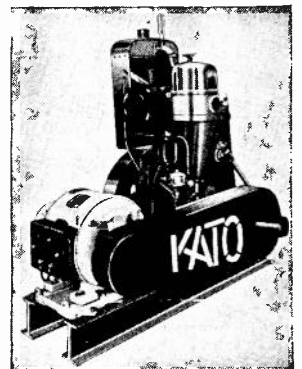
2, 3, 5, 6 Kilowatt

A diesel plant is an economical investment for anyone with a load requirement of 2000 watts and more.

The **Kato Diesel plant** runs on fuel oil or Diesel oil, the cheapest fuel obtainable. Fuel consumption is only about one half pint per horse power per hour.

The **Kato-Diesel-Light** consists of a full diesel engine, close connected by multiple V belts to AC or DC generator. The complete unit is mounted on a welded channel steel base.

Write for prices and specifications.



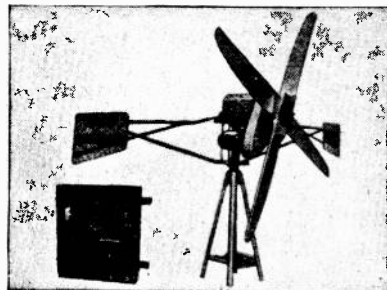
PRICES SUBJECT TO CHANGE WITHOUT NOTICE

# KATO 32 Volt and 6 Volt AIRCHARGER



# KATO KONVERTERS AND GENERATORS

## Kato 32 Volt 800 Watt Step-up Drive AIRCHARGER



Here is the most practical, small and inexpensive 32 volt wind-driven lighting plant yet placed on the market. It has a capacity of 800 watts which is reached in a wind of only 20 miles per hour. The unit cuts in and begins charging in a 6 mile an hour wind.

The Kato Aircharger is equipped with an efficient generator, built especially for this purpose. It is driven by a four blade 10 ft. diameter propeller connected to the generator by multiple V belts. The turntable is free-swinging, fast in action, as it is mounted on ball bearings. Large bearings are used on the propeller counter shaft. The two main mast pipes are made of welded seamless steel tubing, rigid, sturdy and durable.

The Kato Aircharger is self-governing and the generator is triply protected from burning out by being differentially wound, has an automatic charge control relay, uses side vane governing.

It is fully equipped and complete with generator, tower, propeller, step-up drive, turntable, ammeter, charge control relay, fuses, terminal, etc.

The Kato 32 volt Aircharger may be used either as an independent lighting plant system and a sole source of electric current—or it may be used in connection with a standard 32 volt engine driven lighting plant.

The Kato Aircharger may be mounted on the roof of some fairly high building, or on a regular windmill tower. It is necessary that the winds get a good clear sweep at the propeller from all directions.

**KATO 32 Volt 800 Watt Step-up Drive Aircharger..... \$186.00†**

## KATO SELF GOVERNING 6 VOLT AIRCHARGER

The latest thing in 6 volt Airchargers—equipped with new, efficient, self governing propeller.

The Kato 6 volt Direct Drive Aircharger is complete with special 6 volt low speed windmill generator, having a capacity of 12 amperes in very low wind speeds. Stub tower, suitable for mounting on either a flat or gable roof. Large tail vane for holding the unit squarely in the wind. AND Kato's new, efficient, practical and rugged self governing propeller.

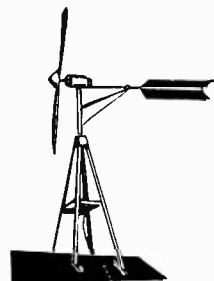
The Propeller is absolutely self governing. A simple adjustment permits varying speed to predetermined value.

**Price, complete Charger, with Tower and Propeller..... \$33.50†**

**Kato Self Governing Propeller, Suitable for use with any popular 6 volt Aircharger..... \$ 7.50†**

**Generator, Vane, Turntable, Collector Ring, Brush, Cutout Panel..... 24.60†**

**Tower and Adjustable mounting feet..... 5.60†**



## KATO KONVERTERS

6, 12, 32, 110 Volts D.C. to 110 Volts 60 Cycle A.C.

Model	Watts Capacity	Input Voltage	Wght.	Code	Price Less Filter	Price With Filter
46	40	6	27	REED	\$44.00	\$51.50
66	60	6	27	REEM	55.00	59.00
92	80	12	27	REAL	44.00	47.00
129	120	12	27	REAK	51.00	54.50
10	80	32	27	RABAT	34.00	38.50
131	110	32	27	RAIN	37.00	41.50
181	150	32	27	RANT	41.50	46.00
231	200	32	30	RAN	45.50	50.50
281	250	32	30	RAY	49.50	55.50
331	300	32	33	RANK	55.50	64.50
20	80	110	27	RAVEN	34.00	38.50
221	110	110	27	RUN	37.00	41.50
261	150	110	27	RAMP	41.50	46.00
311	200	110	30	RUNT	45.50	50.50
361	250	110	30	RAID	49.50	55.50
411	300	110	33	RADIX	55.50	64.50
611	500	110	85	RACE	111.00	125.00

NOTE:—32 volt input Konverters may also be furnished in the larger sizes, ranging from 500 to 1500 watts. However, low voltage Konverters of these large sizes are not recommended due to the heavy drain.

Kato Konverters may also be furnished for 220 volt D.C. input at a \$2.00 increase in price from 110 volt D.C. quotations. For other special voltages add \$3.00 to above quotations.

Kato Konverters enable people with direct current, such as furnished from farm lighting plants and municipal D.C. plants to use the latest things in radio, electric phonographs, amplifiers, etc.

The filter is not necessary for operating amplifying equipment, neon signs, etc., only necessary for radio operation. When ordering, if the filter is not desired, add "LF" to code word or model number.

The Kato Konverter is unchanging in style. These units are not only suitable for your present radio and amplifying equipment, but they will be suitable for any future new and improved models.

300 watt sizes and smaller come complete with D.C. attachment cord and A.C. receptacle. To install just plug into a light socket. 25 and 50 cycle A.C. generators and Konverters built upon specification.

## KATO

### Separate and Self Excited Alternating Current Generators

Kato A.C. Generators Will Provide a Constant Source of Standard A.C. Current

Model	Frame	Watt Cap.	Wght.	Speed R.P.M.	Rheostat Extra	Rails Extra	List Price†
Separately Excited							
6AGS	85	100	19	3600	\$6.20	\$4.50	\$16.80
8AGS	112	200	30	3600	6.20	4.50	26.70
10AGS	1800	200	38	1800	6.20	4.50	24.40
12AGS	798	600	85	1800	6.20	4.50	53.40

The fields of above generators must be supplied with DC at 6, 12 or 32 volts. Specify field voltage when ordering.

#### Self-Excited Revolving Armature Type

16AG6	85	75	19	3600	6.65	4.50	21.50
18AG6	112	150	30	3600	6.65	4.50	35.50
18AG	1800	150	38	1800	6.65	4.50	32.25
20AG*	2179	300	44	1800	6.65	4.50	62.25
22AG*	2179	450	46	1800	6.65	8.80	85.00
23AG*	798	550	70	1800	6.65	8.80	115.00
24AG*	527	750	87	1800	6.65	8.80	145.00
26AG*	527	1000	89	1800	6.65	10.00	150.00
28AG*	7	1500	140	1800	13.30	10.00	182.70
30AG*	7-1880	2000	165	1800	13.30	12.20	200.00

\*DC may be taken from exciter armature winding. Maximum Capacity about 20% of A.C. rating. Exciter voltage of models 16AG to 22AG 15 volts, 23AG to and including 45AG 36 volts. D.C. generators and motors built to specifications.



