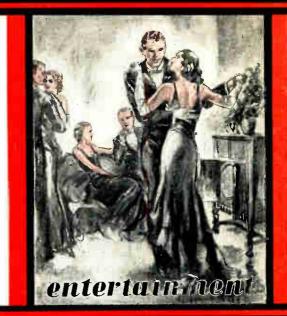
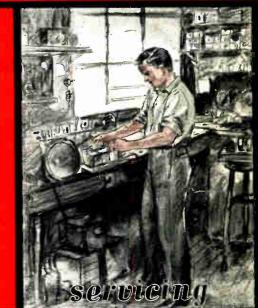
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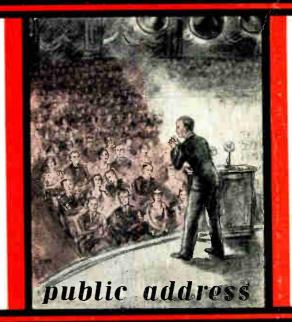
Aug.-Sept., 1932

RADIO BARGAIN NEWS

Dealers' & service men's *Buying Guide*







Federated Purchaser Inc.

25 PARK PLACE

NEW YORK, N. Y.

rldRadioHistor



Employs 1.57, 2.58, 1.47 and 1-280 Tubes Set of Arcturus Tubes..... 3.85 Set of RCA Tubes..... 4.25

Features:

• GHOST TUNING*

- Automatic Volume Control
- Built-In Antenna
- New Triple Grid Tubes
- Phonograph Jacks
- Illuminated Full Vision Dial
- **Beautiful Walnut Cabinets**
- 200 to 600 Meter Models
- 200 to 2000 Meter Models ۵
- 75 to 600 Meter Models
- Radio-Phonograph Models

* What Is Ghost Tuning?

Heretofore, every set, no matter what it sold for, picked up all man-made static, had a sizzling, swishing noise between stations, with frequent crackling and regenerative squeals. With "GHOST TUNING," Acratone engineers have eliminated these troubles 98%. Complete silence reigns between stations which come in like the snap of a whip. This new feature will be a revelation to your cars. It raises radio reception to the highest level of perfection.

Acratone Engineers have also developed the lowest priced and most compact radio-phono-

graph combination, Housin a beautiful twoed tone walnut cabinet, 20" high, 18" wide and 15" deep, with hinged top, Furnished with either 200-600 meter of 200-2000 meter of assis, Edminned with either by 2000 meter chassis, Equipped with silent in-duction motor of 78 r.p.m., Acratone Hydro-Electric Pickup, radio-phonograph switch, sepa-rate volume control for



phonograph, needle cup and arm rest.

Model 47, with 200-600 meter chas-Model 44, while 2007 sis for 110V. 60 cycle A.C. \$33.50

ACRATONE Engineers have a new complete 1933 lines of receivers incorporating all the latest radio improvements, including "Ghost Tuning" and the use of the new type 57 and 58 Triple Grid Tuning" tubes which entirely eliminate cross-talk and give a maximum of tonal quality. Automatic Volume Control, heretofore only found in the most expensive sets, is now made available to all. Of course the built-in aerial and phonograph jack features have been retained. All these features make ACRATONE the fastest selling high quality midget on the market. Sixteen models, covering every requirement, make it the most complete line of midget sets ever presented.

Duo-Wave Models 200 to 2000 Meters

This Duo-Wave Acratone was de-signed primarily for foreign councast on wave lengths above 600 and below 2000 meters. Of course and below 2000 meters. Of course it is also a splendid receiver for American stations sending on 200 and 600 meters. It is two receiv-ers in one, but unlike so-called "short and long wave sets" the Acratone is not an ordinary receiver with a short-wave convert-er, but a real dual-wave receiver.

Short and Long Wave Models

75 to 600 Meters

For those buyers who are inter-ested in short wave reception down to 75 meters, we have de-signed the ACRATONE 75 to 600 police calls, and short wave broadcast stations. By turning a knob, the set is ready to receive either 75 to 200 or 200 to 600 meter signals. No complicated changes necessary.

110V., 60 cycle Model, 110V., 60 cycle A. C. Model, Cat. No. 42, less tubes . \$18.50 Cat. No. 91, less tubes \$15.25

Cat. No.	Receiving Range	Voltage	Cycles	Ourrent	Price
38		110-120	50-60	A.C.	814.75
39	BROADCAST	110-120	25	A.C.	16.25
41	200 to 600	220-250	50-60	A.C.	15.75
23	METERS	110-120		D.C.	14.75
24		220-240		D.C.	16.25
42		110-120	50-60	A.C.	$\frac{18.50}{18.50}$
43	DUO-WAVE	110-120	25	A.C.	21.50
46	200 to 2000	220-250	50-60	A.C.	19.50
6	METERS	110-120		D.C.	18.50
32		220-240		D.C.	19.50
91	75 to 600 Short	110-120	50-60	A.C.	15.25
92	and Long Wave	110-120	25	A.C.	16.75
RADIOPHONOGRAPH COMBINATIONS					
47	200 to 600	110-120	50-60	A.C.	33.50
48	METERS	110-120	25	A.C.	37.50
49		220-250	50-60	A.C.	41.09
27	200 4 2000	110-120	50-60	A.C.	39.50
33	200 to 2000	110-120	25	A.C.	$\frac{33.30}{41.50}$
30	DUO-WAVE	220-250	50-60	A.C.	42.50

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A special built in antenna is an added feature. This unique A special outly in antenna is an added reature. This unique device allows demonstration or permanent installation any-where without the necessity of erecting an acrial or making a ground connection. Just plug in at any available A. C. outlet and tune in. This arrangement enables reception up to 1000 miles with the same splendid quality and good loud enables. Volume loud speaker volume.

Automatic Volume Control

Heretofore this feature has been incorporated in only high priced receivers. Automatic volume control was a badge of quality to receivers for discriminating people. And now ACRATONE leads again with this marvelous Superheterodyne receiver with real AUTOMATIC VOLUME CONTROL!

What Is Automatic Volume Control?

AUTOMATIC VOLUME CONTROL in radio is the same as the SUPER-CHARGER is in aviation. It maintains uniform volume over the entire wave band. When the signal strength of a station drops below good volume level, AUTOMATIC VOLUME CONTROL boosts it up to normal.

Superheterodyne Circuit

The 1932 ACRATONE SUPERHETERODYNE embraces The 1932 ACRATONE SUPERHETERODYNE embraces the most advanced design and is built for utmost selectiv-ity, with the usual ACRATONE quality. The circuit is composed of one stage of band pass pre-selector, a Triode oscillator; two stages of intermediate frequency amplifica-tion, one of which is the second detector; automatic volume control; one stage of pentode audio amplification and a full wave rectifier. One cannot visualize a more modern receiver! receiver!

Automatic and Manual Tone Regulator

Choice of automatic tone control or regulated blend of tone is incorporated in this receiver, allowing a wide range of tone color, without blast or blare. Full true tone is attained by matching each of the component parts of the receiver itself, while the accentuated bass or treble tones are brought out by the tone regulator.

Large Dynamic Speaker

A full-sized really powerful dynamic speaker is housed behind a wall of sound insulating baffle. This speaker is designed so that it will efficiently handle even the tre-mendous output of the powerful receiver without blasting or distortion.

Tubes Used

1-55, 1-56, 1-57, 1-58, 1-247 and 1-280 Set of Universal Tubes, \$3.50 Set of Arcturus Tubes, \$4.50



Selectivity

The pre-selector stage of this receiver allows but 10 K.C. to pass while its intermediates are tuned in band pass fashion, insuring extremely fine tuning. Although this makes the circuit highly selective, it does not cut side bands, which tend to distort or ruin good reception. Every stage is carefully tuned and balanced at the factory, so that no receiver which does not perform as above described passes inspection. passes inspection.

Super Sensitivity

The owner of this receiver need not listen with marvel need not listen with marvel to his neighbor's boast of world-wide radio reception. He too can enjoy the thrill with the powerful ACRA-TONE SUPERHETERO-DYNE. Distant stations come in without fading and distortion and sound like losdistortion, and sound like locals.

Cabinet

This splendid receiver is housed in a carefully finished walnut cabinet of realished walnut cabinet of real-ly enchanting design. The handsome Fleur d'Lis grill has grace and beauty of lines as well as lending to-ward simplicity, rather than elaborateness. 17 in. high, 15 in. wide, 8½ in. deep.

Spot Tuning

full vision dial behind A full vision dial behind which travels a pointer and light to give easy identifi-cation of the dial setting. The dial is geared to move slowly so that no stations are passed in tuning and greater sensitivity is the re-sult. Encircling this dial is a beautifully designed es-cutcheon which lends chara beautifully designed es-cutcheon which lends character to the receiver.

Construction

All the parts going into the manufacture of this receiver are of the highest quality obtainable. Only the best of standard equipment is used, a s s u r i n g durability and longevity. All components are securely mounted on a heavy steel chassis.



Cat. No. 35



Size of chassis: 211/2" long, 10" deep and 101/2" high. Employs: 2-58, 2-57, 4-56, 2-247 and 2-280 Tubes. Set of Universal Tubes \$7.00 Set of Arcturus Tubes 8 80



re is the Ultimate

in Radio

MODEL 35

cralone

Automatic Volume Control 12" Jensen Dynamic Speaker

Visual Tuning — Dual Rectification

Superheterodyne Circuit for Transconti-

nental Reception. Using Push-Pull Pen-tode and Variable Mu Tube ... with all Modern Radio Improve-ments. (12 Tubes in all-two 58's, two 57's, four 56's, two 247's and two 280's.)

Circles the Glob

Short-Wave Circuit from 15 to 200 Meters-for International and Other Short Wave Reception. Simply Switch Knob for Short Wave or Regular Broadcast.

055



for the price of one receiver. This marvelous new SUPER-HETERODYNE chassis is the latest product of the ACRA-TEST Laboratories and is truly the Ultimate in Radio.

This receiver has been designed and built, from the ground up, for maximum results on both short and broadcast wave bands. It does not require operation by an "expert." All wave bands are covered by the single dial, and the change from one band to another is accomplished by simple, convenient switches. "plug-in" coils to be changed. There are no

CIRCUIT

Seven tuned circuits, each of which is set at the factory for maximum sen-sitivity and selectivity. Overlapping of the closely situated amateur stations completely avoided. The superheterodyne circuit is the most stable and sensitive one known and is unsurpassable for ex-treme distance, power and selectivity.

SHIELDING

Every part mounted on the chassis is completely enclosed in an electrostatic shield, and interstage capacity is avoided. The chassis gives the appearance of a precision built instrument costing several times its price.

TUNING

Simplified single dial for all waves, full vision, illuminated. Broadcast band cali-brated in kilocycles. Smooth, positive friction vernier drive with no backlash. Visual indicator for "silent tuning." This means that you can tune in any station accurately before turning the volume on. Dualite range indicator on both models 3 with dial numerically calibrated for short waves. waves.

TONE CONTROL

A special feature is the continuously variable "selectone" which allows the op-erator to choose any tone from high treble to low base.

POWER

In this receiver you have a reservoir of power for any occasion. Local sta-tions come in with auditorium-filling vol-ume and distant stations come in like locals by the use of automatic volume control in the Model 35. The tremendous power of this set, always in reserve, is rarely put into full use.

CHASSIS

The carefully designed chassis of this receiver is made of the best grade No. 18 gauge cold rolled auto body steel. Electroplated in gold bronze finish. Each component is carefully and securely fas-tened and so spaced as to evenly distri-bute the weight.

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Terms:

20% CASH MUST ACCOMPANY ALL ORDERS. Our terms are strictly NET CASH. Remarkable values and extreme discounts given by us make it worth your while to buy that way.

Where full cash remittance accompanies the order, 2% discount may be deducted, otherwise a 20% deposit is required with all orders, balance C.O.D.

All goods are shipped f. o. b. New York.

WE SELL WHOLESALE ONLY.

RETURNING GCODS—A "Return Merchandise Tag" must be secured from us before any goods are returned. Returned goods must be shipped back in original containers. Write fully reason for return and give us complete instructions regarding adjustment. Merchandise that is defective within the limits of the manufacturer's guarantee will be repaired or replaced FREE OF CHARGE. Items misused will be repaired or replaced and a reasonable charge made for such repairs.

HOW TO ORDER—Write plainly, order by catalog number and mention items desired, quantity and price. Be sure to include sufficient postage when ordering via Parcel Post, otherwise shipment will be made by express, charges collect.

EXPORT ORDERS

Orders to be shipped outside of the United States must have full remittance plus postage as the majority of countries do not have C. O. D. service. Large orders for shipment by rallroad or steamer, must be paid in full, plus shipping charges by means of irrevocable Letter of Credit or New York draft.

All our foreign shipments are understood to be delivered Ex-Warehouse or Railroad Terminal, New York City,

RATE OF EXCHANGE

Wherever the rate of exchange on foreign money is considerable, we reserve the right to add an amount sufficient to cover this difference to merchandise shipped.

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MORE and more radio dealers and servicemen are learning that it pays to deal with Federated. We have thousands of letters in our files from pleased customers who haud our service. Federated is today considered the largest radio replacement parts house in the country. It carries a tremendous stock of over 3,000 items. With its huge purchasing power, Federated is able to buy right always, and pass big savings on to its customers. Our six branches, located at points of vantage on the Eastern seaboard, are maintained in the interest of speedy service, be-

cause we realize that speed is an important factor in our business. We employ an engineering staff composed of expert technicians in every field of radioservice, public address and transmitting, and these men are always at your service. Federated is constantly alert to the re-

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Advertising Manager



If you see any item in this catalog listed elsewhere at a lower price, we will meet this price providing it is taken from a current catalog. Simply cut out the ad and attach it to your order or state the name, issue and page of catalog in which you have seen it. We make this offer because we know that many dealers would like to concentrate their purchases with us and save transportation charges.

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Our Guarantee

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WE POSITIVELY GUARANTEE each and every item in this book to be exactly as illustrated and described. We further guarantee all merchandise to be free from defects in workmanship and material. Any part or parts proving defective will be repaired or replaced promptly.

WE GUARANTEE to give you the benefit of any reductions which may take place during the month; this assures you of rock bottom prices at all times.

Due to the tremendous volume of merchandise we handle and the small margin of profit we work on, it is impossible for us to test out each piece of apparatus before shipping, and we expect the dealers to make his own minor repairs when needed. However, we will gladly repair or replace any defective merchandise, providing the dealer pays transportation as this would wipe out our profit in most cases. For any damage to merchandise in transit we expect the dealer to handle his own claim with the transportation company.

OWING TO THE HIGH COST OF HANDLING AND THE SMALL MARGIN OF PROFIT, WE CANNOT ACCEPT ANY ORDERS FOR LESS THAN \$3.00.

We reserve the right to ship via express collect any orders on which insufficient postage has been remitted by customers.

We reserve the right to make refunds on any items out of stock.

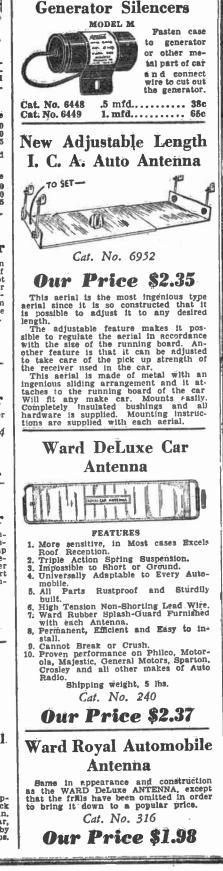
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board.







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The new Sonochorde Electro Dy-namic Speak-er represents a distinct advance in sound repro-duction and mechanical mechanical design. A new method of cone suspen-sion allows for a small air gap re-sulting in a highly con-centrated magnetic ducking ring which balanc-cycles A.C. Operation. es out the in-duced A.C. current in the voice coil r built into every unit. Uses 280 rectifier tube, heavy duty power transformer and flier system con-tisining 20 Mfd. electrolytic condenses Operates without hum from the A.C. lines Reproduces speech and music with re-markable fidelity and is capable of handling ing extreme power without distortion. *Cat. No. 540* design. A new method of the Cat. No. 540 Our Price \$9.50 Also Furnished With 2,500 Ohm D.C. Field Cat. No. 541 **Our Price \$3.95 Utah Dynamic Auto** Speaker 8 in. FULL DYNAMI(SPEAKERS of Utah's high tandard. ('oit field Ceakers sup-lied with 12 'n, leads. List Price. \$10.00 Available for use with 112A, 171A, 23, or 238 tubes in SINGLE or PUSH-PULL OUTPUT, housed in an attractive metal case with movable side-brackets which facilitate mounting at any desirable angle Туре Cat. No. 105 Single 171, 233, 236, 238 106 P.P. 236, 238 A.C. Field Exciter Here is a unit that has been lookthat has been look-ed for far and wide and is finally pre-sented to you as an efficient field exciter. It uses 2-280 tubes in paral-let, giving an out-put cf 110 mils at 160 volts. It is to run either dy-namic apeakers or suitable to use this to run either dy-namic speakers or dynamic units. It is built small and com-pact and to take as little space as pact an possible. Cat. No. 85 Our Price \$5.50 Less Tubes

Dynamic Speaker

Sonochorde A.C.

Speaker as above with Exciter LESS TUBES

161

Page 8

Cat. No. 110

\$13.25

Offered for the

RCA Photophone Dynamic Speaker With 6 Volt Field for **Public Address Auto Trucks**

Genuine Photophone Speaker with 6 volt field coil for use with a 6 or 12 volt battery. For electioneering and advertising trucks.

OPERADIO Automobile Dynamic

"The Lasi Word in Auto Dynamics"



For Push-Pull 238



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Electro-Dynamic Speaker

2500 ohm Field 10 in. Diameter s ohm Volce Cell

These units contain suitable push-puil transformers and are absolutely hum-free. Connect directly to the set - no outside

As most standard manufactured A.C. sets are engineered for D.C. speakers of this ohmage, the possibilities for replacement with this really good speaker are

The wise merchant or repairman will take advantage of this exceptional "buy". Never before offered at a cut price. The available quantity at this price is limited.





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Chassis

Magnetic Speaker

We Can Furnish	Cone	s and	Voice
Assemblies for	the	Follo	owing
Standard Dyna		Speak	
Standard Dyna	ALLC	Shear	CI.9
			Our
Make of Speaker	Size 11"	Cat. No.	
Atwater Kent Colonial 33	11	552	\$2.75
	%9	553	2.25
Decatur Eveready	9″ 9″	554	1.90
		555	1.90
Eveready Farrand	11" 7"	556	2.25
Farrand Ind. Dyn.	11"	557 558	2.25 1.35
First National	9//	559	1.35
	8.,	228	1.90
Freed-Eisemann		-	0.70
NR80, NR87		560	2.70
Jensen DC7	10//	F 01	0.07
Concert	10″	561	2.25
Kolster	11"	4269	.15
Magnavox		562	2.25
Majestic 70, 90	7"	563	1.80
Newcomb-Hawley	7"	564	2.25
Oxford	-	565	$1.95 \\ 2.25$
Oxford	11"	566 567	
Philco, any model Pearlco		568	1.50 1.90
	7"	569	2.25
Sterling	11"	570	2.25
Stromberg Carlson	9"	571	1.90
Symington Symington	11"	572	2.25
Peerless copper coil	110	573	1.60
Peerless copper coil	9"	574	1.00
	11"	575	2.10
Peerless copper coil Peerless copper coil	15"	576	2.50
Peerless wire wound		010	6.00
coll	7#	577	1.45
Peerless wire wound		911	1.49
coll	9″	578	1.65
Peerless wire wound		940	1.05
coil	15"	579	2.75
Temple	7"	580	2.40
Temple	10"	581	2.75
Temple Auditorium	10	582	2.75
Utah	7"	583	1.90
RCA 106	6	584	2.00
RCA 108		585	2.00
RCA 105		586	2.00
VICTOR RE32, etc		580 6519	1.35
Wright DeCoster	:. 8″	588	2.25
Wright DeCoster	10"	589	2.25
Zenith	11"	589	2.25
	**	J 71	N.440

Victor Cone and Voice Coil

For Victor Models R32, R52, **RE45 and RE75**

These are the famous Stevens Burtex cones edged with soft velour. Voice coil and leads for quick installation and precisely fitted.



Cat. No. 6519



Phonotex Diaphragm for Kolster Magnetic and Dynamic Speakers

11½ in. Diaphragm with soft leather border. Cat. No. 4269

15c ea. Can be used for re-placement on other magnetic speakers.



Cat. No. 4269A-Voice Coil for Above, 35c

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Page 10

ARCTURUS A-C DETECI TYPE 12 ARCTURU ARCTURU RCTURU RCTURU

CLURUS CLURUS CLURUS TUBES Arcturus Blue Tubes Give You All These Sales Advantages

August-September, 1932

Quick-Action—Arcturus pioneered the original quick-action tube. Immunity to Overloads—Arcturus Blue Tubes resist overload as high as 50%. Less Ham— Comparative tests show that Arcturus Tubes have 52% less hum than other tubes. Long Life—Arcturus Tubes have established an unchallenged world's record for long life. Life-Like Tone—Comparison in any receiver shows the improved tone of Arcturus Blue Tubes.

ARCTURUS TUBES Arcturus Radio Tubes have earned a reputa-tion for absolute depend-ability. Their country-wide popularity is based 127-124—Screen 132-2-Volt Detector Grid The star of the Arcturus line. Acts in 7 seconds. Specially constructed to diminish hum. Screen Grid on extreme efficiency of Another 7 second Arc-turus tube. operation and unusual length of service. List Price, \$2.35 List Price, \$1.65 Arcturus Tubes carry List Price, \$1.05 \$1.25the endorsement of the 87c Federated Purchaser and 56c are guaranteed for a period of six months from date of sale. Additional Arcturus Tubes List Net No. Туре \$.43 \$.85 Amplifier 136----126 1.10 .59 133-2-Volt Power Amplifier 145 2.75 5.20**6-Volt Screen** Half Wave Rectifier 181 3.28 Pentode Power Amplifier 6.20 150 Grid 1.65 .87 2V. Automobile Tube 130 List Price, \$2.80 2.551.25 Detector-Amplifier **UX099** List Price, \$2.80 1.43 Detector-Amplifier 1.75 **UV099 \$1.48** .42 Detector-Amplifier Detector-Amplifier80 **\$1.48** 101A .82 1.55 012A 1.66 Screen Grid Amplifier 3.15 122 .95 .51 071A Power Amplifier87 2 Volt Amplifier 1.65 131 137— .55 Full Wave Rectifier 1.05 180 138---Auto **New Arcturus Tubes 6-Volt General** Pentode \$.66 Detector-Amplifier \$1.30 56 Triple Grid Amplifier-Detector. 1.65 .87 Purpose 57 List Price, \$2.80 Triple Grid Super-Control Am-58 List Price \$1.80 plifier 1.65 .87 \$1.48 1.30 .69 Amplifier 82 95c .82 Class B Amplifier 1.55 46 1.48 Super-Control R.F. Pentode 2.80 134 Wunderlich 8.00 1.76 Type "PZ" 551 Variable 15 Volt A.C. Types The tubes below all take 15 volts for lighting the filament. Mu (247) Net List Туре No. This is the new "Vari-able Mu" tube. Its use will climinate cross talk, Detector\$4.00 \$2.12 26 Pentode 1.59 Amplifier 3.00 28 Arcturus developed and established the standards on the "PZ" Pentode tube. distortion, hum and re-ceiver hiss. Amplifier 3.00 1.59 48 Power Amplifier 3.00 1.59 List Price, \$1.65 30 List Price, \$1.60 1.59 High Mu 3.00 32 87c 85c 3.97 Screen Grid 7.50 22

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4.50

2.00

1.65

6.00

2.50

4.00

7.50

4.50

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2.02

.87

.53

2.19

1.75

.87

1.75

1.08

PHOTO-ELECTRIC Radiotron UX-867

EATING AND DATA A n o de S u p p l y Voltage (maximum)200 Volta Anode Current (maximum) 20 Microamperes

Window Diameter-Approximate Sensitivity

1.25 inches Approximate Sensitivity Dynamic-25 Microsmperes-lumen Statio-30 Microsmperes-lumen Maximum Overall Dimeusions Socket, UX or Navy Type Diameter 29/16 in. For Experimental Purposes Only Photo-Electric Radiotron UX-867 is a highly sensitive, general purpose photo-cell of the central anode type: An output of from 1 to 5 volts can be obtained with excellent fidelity. USES FOB U-Se7 This tube can be used for talking movie sound equipment, for light intensity measurement, for television purposes and also for burglary alarm, and for ex-perimental purposes. Cat. No. 867 - List Price \$37.50

Our Price \$2.95

A. C. Field Exciter For Dynamic Speakers and Units

226 Det. Amp. 227 Det. Amp.

221 Det. Amp. 230 2-Volts Det.

231 2-Volt Amplifier 232 2-Volt Screen Grid.

233 2-Volt Pentode

This exciter is of the latest type, designed for either the '82 or '83 mercury vapor rectifiers. A switch is provided by which the exciter may be adapted for either of these tubes. depending upon the output required. The '82 tube delivers as much as two 280's, and the '83 gives an additional increase of 40% over the '82.



Less Tube

1.65

1.05

1.65

1.65

2.35

2.80

.65

.53

.35

.38

.65

.65

.72

.79

484 Sparton

551 Multi Mu

585 Sparton 588M Mercury

686 Sparton

866 Half Wave Rect. ..

BH125 Full Wave Rect.,

Special Pur-			
pose Triad			
Tubes			
Туре	List	Our Price	
T-Tel T-864	\$7.50 3.50	\$3.38 1.58	
T-866 C.N.A. Pec 2	7,50	3.38 9.00 13.50	
Pec 3 Pec 7		13.50 18.00 13.50	
2050 T-34	7.50 2.75	4.05 1.49	
T-46 T-82	1.60 1.25	.87 .68	
Complete		-	
folder sent on request			

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Page '12

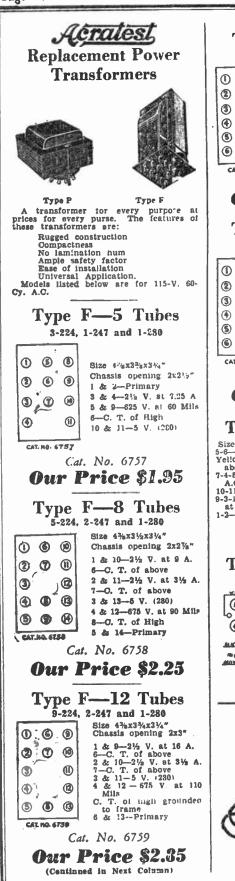




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A REAL PROPERTY AND





(Continued from First Column) Acratest Type P-9 Tubes **Step-Down** 6-224. 2-247 and 1-280 Size 4x3%x3%" Transformer Chassis opening 2-11/16x 1 2" Input: 220-250 Volt. 50-6\$. 9 1 & 8-Primary 2 & 3-730 V. at 75 Mils Volt. 50-63. Cycle, A. C. Ontpnt---110-120 Volt Rated at 150-160 Watt ۲ O. T. of high grounded 1 9 & 10-5 V. (280) 150-160 Watt For use in lo-calities where 220 volt, 60 cycle A.C. 4 & 11-21/2 V. at 101/2 A. 5 & 12-21/2 V. at 3 A. 1 6-C. T. of above current is sup-plied. These Transformers CAT NO. STED (.al. No. 6760 adapt current of that voltage to A. C. Radio or o ther Electrical Our Price \$1.95 Cat. No. 3157 Appliance which consumes up to 160 watts. En-cased and easily Shipping wgt.: 6¹/₄ lbs. Type P—12 Tubes 9-224, 2-247 and 1-280 mounted. Size 4x374x4" Our Price \$3.15 8 Chassis opening 2-11/16x 1 & 9-21/2 V. at 16 A. 2-C. T. of shove 4 & 5-5 V. (280) 3 & 10-21/2 V. at 31/2 A. 11 & 12-675 V. at 110 Mils (C. T. of bird, show ۲ 0 **Kolster-Earl Power** (1) Transformer (2) For Replacement in Receivers Using 226, 227, 171A and 239 Tubes. 1 1 C. T. of high grounded 6 & 13-Primary CAT. NO. 6761 1 & 2-Primaty C.al. No. 6761 & 4-Fil. 0 3 320. E Our Price \$2.85 22 5 & 7--Plate -C. T. of Plate 6 11 312 1 13 8 & 9-5V. (171A) TYPE F--9 TUBES 31224, 3-227, 3-247 and 1-280 10 & 11-215V Size 3%x3%x5½" 5-6-2½V. at 12A Yellow-C.T. of 12A. 12 & 13-1½V (226) 3½ in. long, 3 in. wide. 3½ in. tall. Weight 3 lbs. Ac.T. above. 7-4-8-21/2V. at 3 A.C.T. 10-11-5V at 2A. 9-3-12-High, 350V. at 80 mils. 1-2--Primary 0 \odot A very popular replacement trans-former which can be used in many of the early A. C. receivers like Earl, Freed, Kolster, Philharmonic, King, etc. Mourt- \bigcirc \bigcirc 3 \odot (9) \bigcirc ing Brackets. \$2.85 Cat. No. 6243 \$1.95 Cat. No. 2559 TYPE F---6 TUBES **Filco Replacement** 2-224, 1-227, 2-171 and 1-280 Size 3%x3½x5%. Size 3%x3½x5%". 7-9-2½ V. at 6A. Yellow Lead-C.T. of above. 6-8-10-2½V. at 3 **Power Transformers** 0 0 0 The Most Com-۲ plete Set-up ٢ 6 6-8-10-24V. at a A.C.T. 1-2-280 5V. at 2A. 3-4-5-High, 200V. at 75 mils. Primary-Black and Green Ever Offered $\textcircled{\blue}{\blue}$ ۲ ALACI the Serviceman Ο ۲ \$2.85 \$2.85 Cat. No. 2600 each Radiart Step-Down Transformer For Models Part No. Cat. No. 4234 20, 220 Primary 220 to 250 Ad-4321 3516 65 2600 justable Becondary 5117 70 6248 3868 76, 77 6242 110-125. Cap. 160 Watts. 3271 82,86 6241 92, 95, 95E, 6243 3752 296, 296E *al*. No. 111, 112, 211, 212 6244 4446 2576 90 4938 6247 5362 6247 90 **Our Price \$4.25** 500 Series 3106 2620

Two

Page 13



The primary is tapped at 106, 115 and 55 volts to take care of any voltage con-125 ditions.



System of the second second

4-226, 1-227, 2-171A and 1-280 Tubes Complete Hook-up enclosed with each transformer.



This transformer is designed primarily for the earlier model receiver for which it is very often difficult to obtain replace-ments because of the discontinuance of manufacture. Five to seven tubes can be operated in connec-tion with this power unit as follows: 2 to 4 No. 226, 1 No. 227, 1 or 2 No. 171A, i No. 280, The high voltage is 600, center tapped, 75 MA. As-sembled in brackets for quick installation for quick installation and equipped with solder lugs providing convenient m e t h o d of v connecting into WorldRadioHistory

Cat. No. 6830 **Our Price \$2.95** Do not cenfuse this transformer with surplus and reelaimed transformers which we and other mail order houses have been selling for as low as \$1.95. This transformer is the surrent product of one of the largest transformer manufac-turers in the country who have been making quality products for 15 years. The original manufacturers' specifications have been not only adhered to but a greater safety factor added and the transformer finished better all around, so that it has eye value besides standing up under the severest tests. When you install this transformer in a set you may rest assured that it will stay installed as long as the set lasts. The electrical characteristics of this transformer are as follows: 1½ Voits for 5-226 tubes; 5 V. O. T. for 280 rectifier and 800 V. O. T. at 150 mils high. Can is 4½x5x5½ inches, Weight 8 lbs.

BRAND NEW

VICTOR

Replacement

For Models:

and RE-75

Surplus Victor Power Transformer

These transformers have been removed from discontinued Vistor Amplifiers, and are guaranteed to be in perfect working order. They are seratched here and there due to handling, but mechanically per-fect. A marvelous buy at \$1.95.



General Purpose Replacement Power Transformer 1234567 For Kolster, Brandes, Earl, Freed, Amrad and Atwater Kent and Atwater Kent Sets Using— Sets Using— Extra heavy 2½ V. winding will supply fila-ment voltage for up to 9-227 or 224 tubes. Size in. ្លាំព. Cat. No. 3728 \$2.50

Two No. 10 wires: 2½ V. (227, 224). Two stranded tinned wires on one side:

Stranded Main copper wire on same side: O. T. of high. Two No. 18 wires on same side: 5 volts copper wire on same

(280).
Pair of Ne, 20 twisted wires on same side: 110 V. tap of primary.
(227, 224).
Pair of No. 22 wires on same side: Primary 120 V.
Two No. 18 wires en same side: 2½ Volts (245).

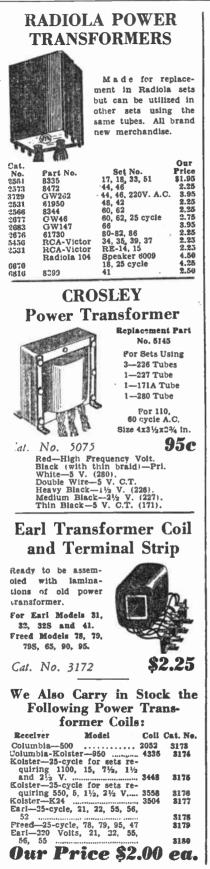
Pair of twisted No. 15 wirest C. T., of 21/2 V. (245).

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WorldRadioHistory





WorldRadioHistory

Cost we by



600 V. C. T. at 50 Mils. 5 V. at 2 amp.

\$1.85

Page 18



ACRATEST Audios are already ranked among Much care is exercised to the finest available. see that only the highest quality core and coil go into their construction. Exacting engineers constantly watch the output of the production belt to see that each transformer is laboratory tested, as a poor product is a dangerous enemy. This precision sounds costly, but geat volume production and minimized returns help combat high price.



Shielded Push Pull Audio Transformers Permalloy Laminations

crales



Cel. Description

Choke

Small heavy duty 20 henry choke, 125 Mils, matches 2545 choke, 125 Mils, matches above transformers.....



Midget Dynamic Speaker Output Transformer

This type of transformer is standard equipment on such midget dynamic speak-ers as Rola. Jensen, Oxford, Quam, Mag-invox, Utah and others. These trans-formers are extremely popular because of their efficiency and small size, 1%22 in. A good many speakers used in midget sets have an early edition of this trans-former which proved unsatisfactory and resulted in poor quality, and burnt-out. Replace them with the new and improved type. They are all designed for standard voice coll. Cat. Our

Cat. No.	Description	Price
6282	Single tube output for use with 171A and 245	.70
6283	Single Pentode output for use	.70
6984	with 233 and 247 Push-Pull Output fer use with 171A and 245	,70
6235	171A and 245 Push-Pull Pentode output for use with 233 and 247	.70

THORDARSON -**30 Henry Choke**



100 Mils at 200 ohms 2x2x3½ in. Weight 2 lbs. Cat. No. 7186



Concertone Sealed Audio Transformer For Highest Quality Reproduction Over Entire Musical Scale Cat. No. 6030

Our Price \$1.95

Outr Price \$1.35 Concertone Sealed transformers are de-signed to amplify, evenly and uniformly, all notes within the musical scale on either A.C. or D.C. Sets. The Concertone transformers have that flicety of bal-ance, which comes trom sufficient wind-ing and large core, to get even amplifica-tion factor at low frequencies, yet such that the capacities of the secondary is low encugh to prevent resonant peaks at the higher frequencies. The use in audio circuits gives increased a good volume of clear, pure and undis-toted reproduction of programs, with all the vital narmonics and rich overtones on exential to true tonal quality. The primary impedance is extremely high and exactly correct for A.C. tubes.

Shielded Universal **Output Transformer** For Use With All Types of Tubes, Coupled to Either Voice Coil or High Impedance



This shielded out-This shielded out-put transformer is recommended for use with No. 171, 245, 247 or 250 tubes in single or push-pull amplification with any of present day dynamic speakers. A comprehensive chart is supplied with each transformer shows the hook-up with any Cat. No. 6029 Width, 3-1/16" Length, 2-11/16" Height, 3'4" Mounting Hole 222-1/16". Centers, Weight, 2'4 lass weight, 2'4 lass and speaker tow, medium or high this unit is also ondary for magnetic speaker providing a simple method of op-erating an additional speaker when it is desired that one be located at some dis-tance from the receiver.



T.C.A. Push-Pull Input **Audio Transformer**

Standard input replacement au-dio transformer used in Push Pull used in Push Pull formation em-ploying 171, 246 and 250 type tubes. Core is of permalicy steel 1 a m in a tions bound by con-venient mounting bracket which also serves as a shield. Dimen-sions: 2x2x3½".



Cat. No. 3639

Page 19



Page 20

August-September, 1932







No Liquid, Lightweight—Long Life, Compact

SELF HEALING

SELF HEALING Surge limiting characteristics. Unlike wax paper condensers the chemical fea-tures of these condensers are such that they will limit high voltage surges when the set is turned on or off thus preventing to a large extent burnt out tubes and paper condensers. While only rated at 500 volts peak, these units will withstand momentary over-voltages as high as 600 volts without pro-ducing any detrimental effects on the con-denser. The electrolyte of Dry Farads condensers is such that when the con-denser is broken down due to the applica-tion of over-voltage, it will heal itself as soon as the over-voltage is removed.

Summary of Why Acratest Dry Farads Should Be Used:

- 1. Low cost per microfarad per volt rating.
- 2. High voltage rating ...
- 3. Low Voltage leakage.
- 4. No liquids to run or leak out.
- 5. Long life.
- 6. Saving of space, less space required per microfarad than paper or similar condensers.
- 7. Filtering action is very nearly equal to that of paper condensers of the same capacity.
- 8. Complete recovery from break-down when over-voltage is rcmoved.
- 9. Can be mounted in any position.
- 10. Low power factor.
- 11. Minimum chemical action on dielectric film.
- 12. Unaffected by ordinary temperature.

The aluminum can type is furnished in standard size cans for quick replacement.

	Multiple Anode Upright Units, Type M Peak Volts 500 Mounted with Rings
Cht. No. Chp. 5314 14 Mfd. 5316 16 Mfd. 5318 18 Mfd. 5324 24 Mfd. 5324 24 Mfd. 5323 32 Mfd. 5335 36 Mfd. 5336 36 Mfd. 5354 54 Mfd.	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
	Single Section Electrolytic Condensers Type I— Inverted Diameter 13%" Peak Volts 500
5304 4. 1 5308 8. 1 6540 4-4 1	
	C Bias Condensers for Pentode Tubes Peak Our
Cat. No. Ca 3805 5 1 5810 10 1	p. Volts Anodes Price Ald. 50 1 \$.27

These low voltage tubulars embody all the characteristics of the 600 volt Acra- test Electrolytics. They are hermetically enclosed in a non-hygroscopic tube sealed at both ends. Connections are made by means of the pigtalis at each end. Polar- ity is indicated by the wax color at the ends, the positive having red war and the negative black. These units are nighly efficient as C Blases for Pentode tubes. Cat. Cap. Peak 7.5 66 % in. O.D.22% in. 20 6644 7.5 25 % in. O.D.22% in. 20 6645 10. 25 % in. O.D.22% in. 20 6645 10. 25 % in. O.D.22% in. 20 6646 25. 25 % in. O.D.22% in. 20 6647 2. 60 % in. O.D.22% in. 25 6649 7.5 60 % in. O.D.22% in. 25 6649 7.5 60 % in. O.D.22% in. 25 6650 10. 50 % in. O.D.22% in. 25 6669 7.5 60 % in. O.D.22% in. 30 6662 1. 200 % in. O.D.22% in. 30 6663 1. 200 % in. O.D.22% in. 30 6663 2. 200 % in. O.D.22% in. 30 6664 1. 400 % in. O.D.22% in. 30 6665 3. 400 1 in. O.D.22% in. 30 6665 3. 400 1 in. O.D.22% in. 30 6664 3. 000 1 in. O.D.22% in. 30 6665 3. 400 1 in. O.D.22% in. 30 6665 3. 400 1 in. O.D.22% in. 33 6726 3. 500 % in. O.D.22% in. 33 6726 3. 500 1 in O.D.22% in. 33 6726 5. 500 % in O.D.22% in. 33 6727 5. 500 % in O.D.22% in. 33 6728 5. 500 1 in O.D.22% in. 33 6729 5. 500 1 in O.D.22% in. 35 6739 For 6 and 8 Mid. Condensers 6497 For 6 and 8 Mid. Condensers	Tubular Pigtail Electrolytics			
6644 7.5 25 % in. OD.22% in. 8 .20 6645 10. 25 34 in. OD.22% in. 20 6646 25. 25 % in. OD.22% in. 20 6647 2. 50 % in. OD.22% in. 25 6649 7.5 50 % in. OD.22% in. 25 6649 7.5 50 % in. OD.22% in. 25 6669 7.5 50 % in. OD.22% in. 30 6661 5. 100 % in. OD.22% in. 30 6662 1. 200 % in. OD.22% in. 30 6663 2. 200 % in. OD.22% in. 30 6663 2. 200 % in. OD.22% in. 30 6664 1. 400 % in. OD.22% in. 30 6665 3. 400 1 in. OD.22% in. 30 6665 3. 500 % in. OD.22% in. 30 6664 3. 500 % in. OD.22% in. 30 6665 3. 400 1 in. OD.22% in. 30 6724 .5 600 % in. OD.22% in. 33 6726 3. 500 1% in. OD.22% in. 33 6726 3. 500 1 in OD.22% in. 33 6726 3. 500 1 in OD.22% in. 33 6726 3. 500 1 in OD.22% in. 33 6727 5. 500 % in. OD.22% in. 33 6728 3. 500 1 in OD.22% in. 33 6728 3. 500 1 in OD.22% in. 33 6728 4. 600 1 in OD.22% in. 33 6728 5. 500 % in. OD.22% in. 33 6728 6. For 4 Mfd. Condensers 6496 For 4 Mfd. Condensers 6497 For 6 and 8 Mfd. Condensers	These low voltage tubulars embody all the characteristics of the 500 volt Acra- test Electrolytics. They are hermetically enclosed in a non-hygroscopic tube sealed at both ends. Connections are made by means of the pigtails at each end. Polar- tity is indicated by the wax color at the ends, the positive having red wax and the negative black. These units are nighly efficient as C			
6644 7.5 25 % in. O.D.x2% in. 20 6645 10. 25 34 in. O.D.x2% in. 20 6646 25. 25 % in. O.D.x2% in. 20 6647 2. 50 % in. O.D.x2% in. 25 6649 7.5 50 % in. O.D.x2% in. 25 6649 7.5 50 % in. O.D.x2% in. 25 6669 7.5 50 % in. O.D.x2% in. 25 6669 1. 50 % in. O.D.x2% in. 30 6661 5. 100 % in. O.D.x2% in. 30 6662 1. 200 % in. O.D.x2% in. 30 6663 2. 200 % in. O.D.x2% in. 30 6663 3. 200 % in. O.D.x2% in. 30 6664 1. 400 % in. O.D.x2% in. 30 6665 3. 400 1 in. O.D.x2% in. 30 6665 3. 400 1 in. O.D.x2% in. 33 6726 3. 500 % in. O.D.x2% in. 33 6726 3. 500 1% in. O.D.x2% in. 33 6728 3. 500 1 in O.D.x2% in. 33 6728 3. 500 1 in O.D.x2% in. 33 6728 3. 500 1 in O.D.x2% in. 33 6729 3. 500 1 in O.D.x2% in. 33 6729 5. 500 % in. O.D.x2% in. 33 6729 5. 500 % in. O.D.x2% in. 33 6729 5. 500 % in. O.D.x2% in. 53 6729 6. and 8 Mid. Condensers 6496 For 4 Mfd. Condensers 6497 For 6 and 8 Mid. Condensers	Cat. Cap. Peak			
Cardboard Condensers Cat. No. 6496 For 4 Mfd. Condensers 6497 For 6 and 8 Mfd. Condensers Our Price 5c Each Acratest	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	\$.20 .20 .25 .25 .25 .30 .30 .30 .30 .30 .30 .37 .33		
Cat. No. 6496 For 4 Mfd. Condensers 697 For 6 and 8 Mfd. Condensers Our Price 5c Each Acratest				
No. 6496 For 4 Mfd. Condensers 6497 For 6 and 8 Mfd. Condensers Our Price 5c Each Acratest	Cardboard Conden	sers		
No. 6496 For 4 Mfd. Condensers 6497 For 6 and 8 Mfd. Condensers Our Price 5c Each Acratest				
Acratest	No. 6496 For 4 Mfd. Condensers	r8		
	Our Price 5c E	ach		

Cardboard Container **Electrolytic Condensers** SINGLE SECTION UNITS WITH WIRE LEADS PEAK VOLTS 500 Servicemen who in the past ave been handlcapped in have been handlcapped in making replacements now have available, through the fore-sight of the Federated Serv-ice and engineering depart-ments, a new type of electro-lytic condenser. This unit is housed in a cardboard con-tainer and is extremely handy as a replacement. The canactive list. The capacities listed are in standard size container for replacement of any drytype condenser in a card-board container. Furnished with two 6-in, wire leads.

Cat. No.	Capacity	Size	Our Price
6491	1 Mfd.	$1 \times 1 \times 2$	\$.30
6492	2 Mfd.	1 x 1 x 2	35
6493	4 Mfd.	1½x%x 4	.40
6494	6 Mfd.	1½x1x4	,50
6195	8 Mfd.	1½x1x4	.60

Acratest "Power" Filter **Electrolytic Condensers**

800 volts working, 1000 volts peak

These newly developed electrolytics make pos-sible the construction electrolytics make pos-sible the construction of transmitters and power amplifiers at ex-tremely low cost. These condensers a re very compact for their ca-pacity enabling their use in any outfit.



2. Lov 3. Pu	h capacity / leakage, ncture-pro 7. Exceller	5. Long lifed.
Cat. No. 6931 6932 6933	Capacity 2 mfd. 4 mfd. 8 mfd.	Size Net Price 134 x 214 x 5" High \$.85 1.05 1.05 1.95

Features



Acralest

NON-INDUCTIVE

 Acratest has set a high standard of accuracy and efficiency for all paper dielectric condensers. In general all our new condensers are wound non-inductively of pure linen paper and tinfoll, especially processed to insure maximum insulation resistance in excess of that required by the N. E. M. A. standards. All condensers are conservatively rated to insure long life performance and

maximum results.

• It is our aim to be of utmost service to both dealer and service man and therefore carry the largest and most complete line or condensers available. Every standard type of condenser is carried in stock by us which permits the service man to replace and repair sets in as brief a time as possible.



Official Refrigeration Service Manual



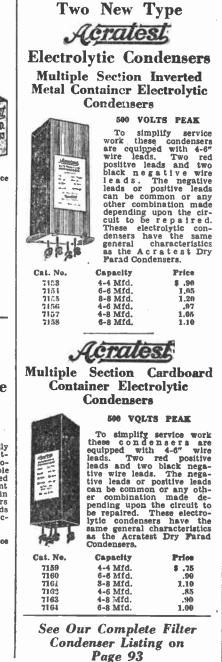
Compared with servicing a radio set or wiring a house for electricity, the servicing

electricity, the servicing of a refrigerator is ab-surdy simple, once you get the hang of it. In this Refrigeration Manual every part is carefully explained; dia-grams are furnished of every known machine; special care is given to the servicing end. The tools needed are illustrated and explained; there are trouble shooting charts, and other service data. OVER 1,000 DIAGRAMS; 352 pages; 9 x 12 flexible; loose-leaf leatherette bind-cr and complete service data. Regular List Price \$5.00

Regular List Price \$5.00 Our Price \$4.00

Standard Condensers A complete series of con-densers to fill almost any by-pass requirement. Very useful and employed in al-most all popular circuits. Very practical, conservative-ly rated and will continu-ously operate at the D.C used under proper condi-used under proper condi-used under proper condi-used under free-Actales CAPLONED. ORHONG VOD3 300V.D.C. dom from leakage and the utmost durability. **Our Price** Cap. D.C.W.V. 200 \$0.18 .1 .25 .5 200 200 .22 .29 1. 200 .54 .22 .25 2. 200 .1 .25 .5 300 330 300 .82 .45 .65 .21 .27 .37 .45 .25 1 300 300 400 5423 2. .1 .25 .5 400 100 1. 400 600 600 37 Acrales NON-INDUCTIVE **High Voltage** Filter Condensers This series is especially designed for high volt-age condensers, a pro-vision made for suitable mounting. Can be used either for replacement or for the amateur in designing transmitters and such other fields where high voltage sec-tions are required. HIVOLTAR CONDENSER CAP LMFD NORTH WORK 1000 Y.D.C. U Cat. No. 3060 3062 Cap. D.C.W.V. **Our Price** 400 400 400 \$0.58 1.44 2.25 4. 8063 3064 1. 500 .63 8065 8066 500 500 .85 2. 4. 1. 2. 1.70 600 600 600 .81 1.22 2.26 3067 3068 3069 4. .60 3070 .5 600 1. 800 8071 8072 2. 800 1000 1.78 3078 .8 .76 8074 1. 2. 1000 1.80 2.85 1000

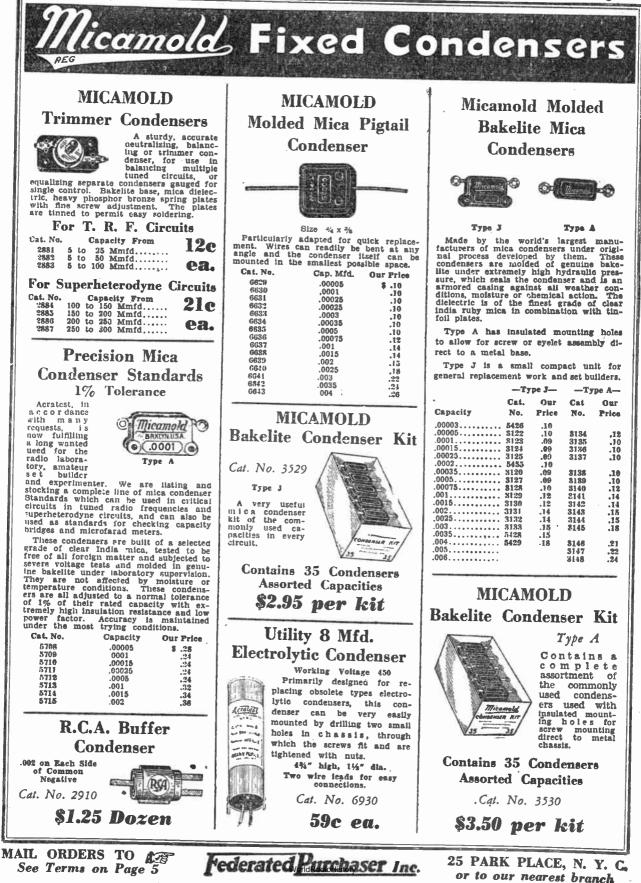
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Page 24

'August-September, 1932





Service States

Page 25

See Terms on Page 5

Page 26

August-September, 1932



Type Filter Condensers Type GF, Rated at 400 V: D.C. (220 rms. A.C.)

A brand new type of filter condens-er of the manu-facturer's type, at a very attractive price. Solder-lug tarmingia make



price. Solder-lug terminals make connections to these condensers a trifling matter of a few seconds. Excellently in-sulated and built to stand up, they are unexcelled for use in circuits demanding full load duty.

Our Cat.			IE EAMO
	an a stan	Size, in.	Price
No. Type	Capacity		
	.10 Mfd.		\$0.24
		%x1%x1	.27
5278 GF 25	.25 Mfd.		
	.50 Mfd.	%x1%x1	.82
		9/ D	.43
5275 GF 100	1 Mfd.	%x2 x1%	
	2 Mfd.	1%x2 x1%	.65
5276 GF 200		17848 44/4	4 66
5277 GF 400	4 Míd.	1 13/16x2x1%	1.80

Non-Inductive Compact **By-Pass Condensers**

Type GB, Rated at 200 V. D.C. (120 rms. A.C.)

Now, a brand new type of by-pass condenser of the m a n u f a C-turer's type, at a y ery attractive p rice. Inverted shell construction, the



price. Inverted shell construction, small and neat, they are effective to the nth degree. Providing unimpeded radio frequency paths and non-leaking direct current obstacles, type GB should be in your specifications. For continuous operating voltages up to 200 volts D.C. (120 rms. A.C.) Our Net

5266 GB 10 .10 MId. /4x13/4x1 .21 5267 GB 25 .25 Mfd. 3/x13/4x1 .22 5268 GB 50 .50 Mfd. 3/x13/4x1 .22 5969 GB 100 1 Mfd. 3/x2 x13/6 .33 5969 GB 100 2 Mfd. 1/4x2 x13/6 .34	5267 GB 25 5268 GB 50 5269 GB 100 5270 GB 200	Capacity Size. in. .10 Mfd. 3/4x13/4x1 .25 Mfd. 3/4x13/4x1 .50 Mfd. 3/4x13/4x1 .10 Mfd. 3/4x2 .11 Mfd. 3/4x2 .11 Mfd. 1/4x2 .11 Mfd. 1/4x2	.56
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Non-Inductive Uncased Filter Condensers

For Continuous Operating Voltage up to 600 V. D.C. (400 rms. RAC)

Without doubt the neat-est uncased condenser made, type NU is also electrically perfect. The condenser winding is im-pregated in a non-hygroscopic compound



by regated in a non-hygroscopic compound and the whole is wrap-ped in a waxed paper the condenser absolutely moisture-proof. If you nave been looking for a truly dependable uncased condenser to employ in all your repair work, we fully recommend type NU as the finest obtainable. Equipped with rub-ber covered wire leads that won't pull out, it is a real 'ob that you will always use in preference to others. Our Net

		ir Net
Our Cat.		
No. Type		Price
	.10 Mfd. 2x1 1/18x 3/16	\$0.21
5278 NU 10	in part outly 1/	.24
5279 NU 25	.25 Mfd. 2x11/4x 1/4	
5280 NU 50	50 Mfd. 2x1%x 1/2	.30
5281 NU 100		.46
		.66
5282 NU200	3 Mfd. 3x134x11/2	
5982 NTT 400		1.25

	Non-Inductive 1000	FLECHTHEIM Superior
	Volt High Voltage Units Type HSM Rated at 1900 V. D.C. (660 rms. RAC)	Transmitting Condensers Type TH: For Continuous Operating Voltage up to 2000 Volts D.C. (1600 rms. RAC)
2	methods of production have substantially re- duced manufacturing costs and have at the same time improved the quality of the finished	Porcelain insula- tors do not make the con denser! There are adver- tised many nonde- script brands of
	product. Type HBM rep- resents the highest per- fection in the art of making high voltage filter condensers of this	condensers "equip- ped with porcelain insulators." It does not pay to buy in- ferior ones - exag- gerated claims are made for them and
	Excellent for use with restriction of the second se	a dubious replace- ment policy tops these claims. It, is best to get a con-
l	Our Our Net	for its dependance constitution of wrong liable manufacture. You can't go wrong
	No. 1790 (2014) 213/1611/16 (2015) 5259 HSM3 .05Mid. 213/1611/16 (2015) 5260 HSM10 .10Mid. 213/1611/16 (2015) 5261 HSM25 .20Mid. 213/1611/16 (2015) 5262 HSM50 .50Mid. 213/1613/16 (2015) 5263 HSM100 1Mid. 213/1613/16 (2015) 5264 HSM200 2Mid. 4%23/123/4 (2015)	Cat. No. Type Capacity Sise, in. Firce Frice 6323 TH 100 1 Mfd. 6x3/x33/4 67.00 \$3.75 6323 TH 200 2 Mfd. 6x6 x33/4 12.50 6.75 6324 TH 400 4 Mfd. 6x6 x6 22.00 11.90 Type TH is in use by hundreds of Type TH is in use by hundreds of
	0680 HEM201 2hfd. 2x1%x2% 1.60 5265 HBM400 4Mfd. 4%x2%x13/16 2.86 6681 HBM401 4Mfd. 2x2%x2% 2.86 Non- Inductive	without doubt the Dest volume of the second of the mitting condenser procurable. Now, in its new form, containing the special cyl- indrical windings as employed in the high- indrical windings of condensers, it is better
	1400- Inductive	in every respect. Heavily bushed porce-

Midget Condensers

BALANCE Condensets Fights electrical efficiency and handy to use Fightsheim Midge Cond for who find them rejudication of the second work-grid, plate-block interse resistance coup-traiting and other fung-totage of 500 votes D.C. these of 500 votes D.C. these dittle units can be used wherever a low power-factor high test ondenser is needed. Infinitely small test ondenser is needed. Infinitely s



at. No.	Туре	Capacity	Our Price
6091	M-A	.0001	\$0,20
6092	M-B	.0002	.20
6093	M-C	.00025	.20
6094	M-D	.0005	.20
6095	М-В	.001	.23
6096	M-P	002	.22
6097	M-G	.004	.95
6098	M-H	.005	
6099	M-J	.005	.25
6100	M-K	.01	.28
6101	M-L	.02	.30
6102	M-M	.05	.38

Non-Inductive High Tension Transmitting Condensers

Because of their small size and light weight they are ex-cellent for use in portable outfits, aircraft transmit-ters, ctc. Absolute-ly the best 1000-volt transmitting condenser on the market and very



(Continued in next column)



in getting Figentheim's. Cat. No. Type Capacity Size, in. Pirce Price 6322 TH 100 1 Mfd. 6x3¼x3¼ \$7.00 \$8.75 6323 TH 200 2 Mfd. 6x6 x3½ 12.50 6.76 6324 TH 200 2 Mfd. 6x6 x6 22.00 11.90 Type TH is in use by hundreds of broadcasting and amateur stations and is without doubt the best 2000-voit trans-mitting condenser procurable. Now, in its new form, containing the special cyl-indrical windings as employed in the high-er voltage types of condensers, it is better in sultators provide an ample factor of insultation safety preventing short-circuit to grounded case. List Our

Type T: Continuous Operating Volt-age up to 1500 Volts D.C. (1000 rms. RAC)

"Imitation is the sincerest form of flattery." This well known ex-pression is stat-ed here for reaeq nere for rea-son that many manufacturers have time and and again tried to copy our transmitting condensers. However in the field of in the field of transmitting con-densers Flechtdensers has heim has been the true pioneer. We have invalu-

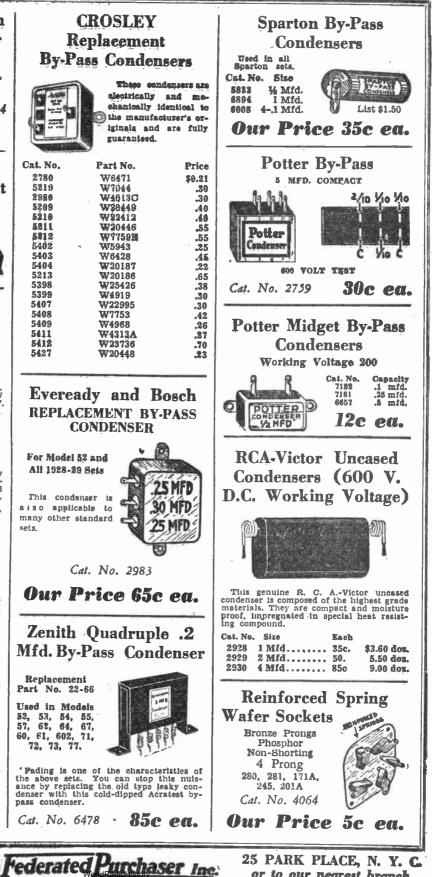


We have invalu-able knowledge which we infuse in the scientific manu-facture of our condensers. No one can possibly make a really dependable con-denser better or more cheaply. It is need-less to pay more, yet more questionable to pay less. There are cheaper condens-ers on the market, but you get exactly what you pay for, more probably even less. When you buy a Flechtheim con-denser, you can rest assured of honest value. value. 1.ist Out

Cat. No. Type Capacity Size, in. Price Price 6331 T 100 1 Mfd. 5¼x434x1 \$3.76 52.25 6332 T 200 2 Mfd. 5¼x434x2 6.50 3.50 6333 T 400 4 Mfd. 5¼x434x4 11.00 6.00 For the more advanced amateurs, Type T. familiar to thousands of them, is still the best bet for use with the 50 watten with 1000 volts of rectified A.C. on the plate. Also improved in its construction, this type condenser is now better than ever. ever.

(Continued from preceding column) List Our No. Type Cap'ty Size, 12. Price Price 8325 TO 100 1 Mid. 4%213/21%13.20 \$1.65	
6325 TC 200 2 Mfd. 4753752134 0.00 2.00 6327 TC 400 4 Mfd. 4752737234 9.00 5.00 Here is brand-new type of condenser for low power transmitters. Type TC is now more compact, better insulated and	
of improved design. Type TC: For Continuous Operating Voltages up to 1000 Volts D.C. (759 rms. RAC)	





or to our nearest branch

Page 27



WorldRadioHistory



WorldRadioHistory

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leadquarters For Genuine	M	ajes	ti	r	Repl	acem Parts	ent
Our Prices a	s Low	as 80%	of	f R	egular	List	
MP 5EOP	tems ent Trans.	For Models 180	Part . No. 619	List Price \$8.00	Our Price \$1.50	MA NO	ST C BR 620 No.
- PAR .	Trans.	180	620	8.00	1.50		and the second
5464 Filam	ent Trans.	70 Series	61	- 8.00	2.50	Cat. No. 54	69
Cat. No. 5458 5468 Plate	Transformer	70 Series	67	8.00	1.50		* <i>*</i>
and the second se	Plate Trans.	90 Series	436	10.00 5.00	2.95 1.50	STITE D	
SIL ROMA THE	le Choke : Plate Trans.	90B, 100B	180	12.00	5.25	MAJES	IC
CHO 28' 5465 Filter	Choke, Mils	70 Series	66	5.00	1,50	TI NEPLACE	FORMER
	le Filter Choke. Mils	90 Series	281	5.00	1.50	Cat. No. 54	Ģ1
Cat. No. 5459	Maia	ata Dr I	laga	1	MATE	STIC I.	F
Majestic Resistors		estic By-F enser Bl				Transfo	
		pacity Mode		1	Supernet		
	5447	55 70 55 90 .5 180	71 71 71	5		1	Nọ.
Cat. No. 3466 25c ea.	54-18	.5 160				Q.	818
at. No. Size Part No. 6659 1000 ohms 5467 2170 ohms 102	30c e	IL. MAJO	PRACHAEP.		B. C. L. I.		5c
5466 3600 ohms 399					Used in Maje 175 K.C. Alumi leads.	stic Supers and num housing, wi	th 4 wi
ynamic Speaker Cable	12:14	Dural	h-Pull	1	234 in. long, 1	3% in. wide, 2%	in. tall.
Part No. 119 Cat. No. 4398 25c		Tran	sform sform	- t	4 Gan	g Conden	ser
8 Wire Cable	Cat. No. Typ		Part	No.	- All		35
(Chassis to Pack) Pack No. 209, Model 90	2653 Input 5470 Outpu 6463 Outpu 6550 Straig	t 80 ht Audio 70, 71	. 72, 90,	34 34	O'LL STOR	HATER	
Cat. No. 4396 60C	6813 Input 6814 Phono	90 62	1, 02 155 171	51	V-b-s	Cart and	1
	Our P	rice \$1.	50 e	a.	Cat. No. 4		45c
lajestic "A" Replace-					A high qualit; and mechanical as a leader.	refinements that	stamp
ment Condenser	Yaxley	1/4 Ohm	Hun	a	The individua	sections of this matched. Oare	fine un ul shiel
For Majestic "A"	(A)	Bu	icker		ing. Compensa section. Capaci	ting condensers ty, .00035.	in ear
Cat. No, 5031	6	Majestic	Part No.	106	Aleo funciolo d	in 2-gang same	Canadity
\$2.25 each		Cal.	No. 346	19		in 3-gang, same . No. 4370	
Exact replicas of the orig- inals and mode of the high- est grade materials. Fully guaranteed.	86		25 c			Price 6	5c

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Page 31

CLASS B TRANSFORMERS Audios – Chokes **Power Supply** (Circuit Diagrams Free With Each Item)

Wilh Lach Item) Class B Amplifiers, a recont develop-ment, have already won the enthusiastic scceptance by servicemen, engineers and amateurs. Every radio enthusiast is an-xious to build his own Class B Amplifier, but they have been hampered in secur-ing the special parts going into its make-up. Below we have assembled a complete line of audio transformers, power trans-formers, and chokes especially designed for Class B operation. Particular care was taken 1: their design to insure best tone quality. The best silicon steel is used for the cores and pure electrolytic copper wire for the colls.

Class B Power

Transformer Supplies filament and plate for 10 tubes. Has 3-21/2 volt windings. For the '82 Rectifier Cat. No. 7125 Electrostatically shielded. \$2.85 **Class B Coupling** Transformer For a Single 46 into2-46's Cat. No. 7127 \$1.95 For 2-227 or 56's into 2-46's Cat. No. 7144 \$1.95 For 2-245's into 2-46's Cat. No. 7128 \$1.95 Class **B First Choke** Cat. No. 7126 95c **Class B** Second Choke Cat. No. 7129 95c

Acratest Special **Matching Transformers** For Mixer Panels

Iscellaneous Items

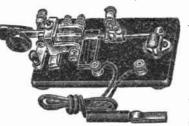


Each of transformers of these WATO designed for a par-ticular purpose, in connection with pub-ic address and stu-dio use. With these dio use. With these transformers as a basis, input and out-put mixing parts may be constructed at exceptionally low cost. Excellent fre-quency response and the primary consider-gn.

high efficiency were th stions in their design.

Cat.N 7131	Description Microphone to 200 or 500 oh m line transformer. Two or more of these may be used for two or more microphones on one line	Price \$4.50
7132	Microphone to 50 ohm transformer. Four of these trans- formers, with their secondaries in series for 4 mikes into 200 ohms. Diagram fur- nished	\$4.50
2625	Plate of 232, 224 or 257 Tube to 200 or 500 ohms input transformer. Primary impedance 250,000 ohms	\$2.75
7133	Plate of 230, 227 or 56 Tube to 200 or 500 ohm input trans- former	\$4.50
7134	4000 and 500 ohm ine to from cne to six 15 ohm voice colls	\$4.50
	New U. S.	<i>v</i>
- Co	rps "Speed B	119??

Corps "Speed Bug Wireless Key



Cat. No. 246

The SPEED-BUG was made for and ap-proved by U. S. Army Signal Corps and contains all the improvements over for-mer sending machines. Enables sharper, clearer, smoother and faster onceration.

\$10.50

Entores singlet, treater, andourer and faster operation. Will establish reputation for yourself as a good sender. It is truly a Bug for the operator who insists on having the best.

best. You can send signals as slow as eight words per minute or as fast as you desize. Its ease of manipulation actually rests the arm and encourages good sending without extra effort.

THE WINCHESTER **Electric Pick-Up**



Remarkable n e w features and precision workmanship which assure superiority for the new WIN-CHESTFIR PICK-UP.

Beauty of Appearance: Highly polished bakelite throughout.

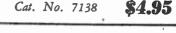
Dakelite throughout. Twin Spring Compensation: An ingeni-ous construction by which the pressure of the Pick-Up on the record is under minute control. The control provided permits adjustment from the full weight of the Pick-Up on the record to feather-weight contact.

Ball Bearing Tracking: The needle is able to follow the record grooves no mat-ter how light the contact. Rotating Head: Permits of easy and rapid needle change and eliminates loose joints liable to cause chatter.

Volume Control: Smooth and 'silent in operation.

Construction: Ruggedly built to pro-vide an enduring service. Minimum wear on vital parts, avoiding all risk of chatter. Construction:

Faithfulness of Reproduction: A matchvery low frequencies to extreme high fre-quencies, with total absence of needle scratch.



I. C. A. Code Practice Set



List Price \$2.50

Attaches to any r a d i o. Simplest and lowest priced code practice set. Easy way to learn Wireless learn wireless telegraphy. Can be attached to any radio set and need not be dis-connected from set to receive broadcast stations

Complete

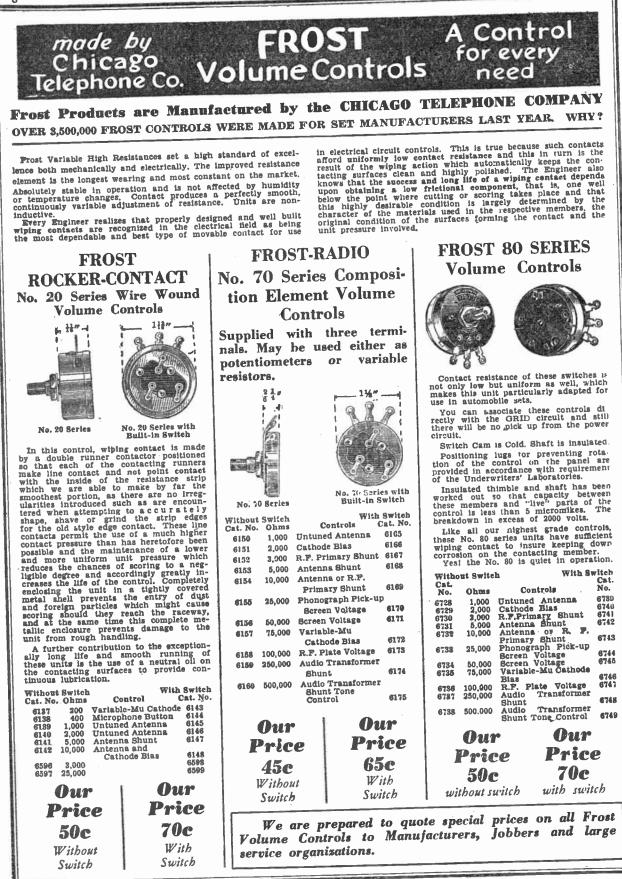
\$1.47 broadcast stations as the adapters of the I. O. A. Code Fractice Set fit directly under tubes of any radio receiver. Supplied complete with International Morse Code chart and wiring diagram. The ideal thing for the boy, experimenter and amateur.



A high resistance type milliammeter used in the plate circuit for visual tun-ing. The circuit is brought to resonance when the needle swings to its furthest position. The transluscent dial is illu-minated through the rear window. Comes complete with cable leads, attachment studs and nuts. studs and nuts.

Page '32

August-September, '1932



_14"

Our

Price

\$1.50

1.25

.80

1.25

Genuine Zenith Volume

Controls



1 2 3 4 3 1

FROST-RADIO

No. 1880 Series

FROST-RADIO No. 40 Series Composition Element Volume Controls

The No. 40 series have been in use by several of the argest set man-ufacturers in the coun-try for the past year and a half and in every case have given complete satisfaction. The high insulation No. 40 Series Supplied with 1 in. shaft and %-in. thread. Sence of inductance and any appreciable where de-tuning cannot be tolerated. A positive wiping action between the

A positive wiping action between the relatance element and the disc, limited in degree and uniformly distributed over the entire arc of rotation is obtained by a flexing disc firmly secured and accur-ately positioned over frosted cone carry-ing the resistance element.

The narrow contacting surface and polishing action, together with the hard resistance element, obtain unusually smooth resistance progressions and to maintain true curve forms regardless of whether near the high or low limits specified.

Cat. No.	Ohms	Cat. No.	Ohms
6180	1,000	6185	25.000
6181		6186	
6182		6187	
6183	5,000	6188	
6184	10,000	6189	
	6190	500.000	

Our Price 50c ea. FROST 40 Series Dual **Potentiometers** No. 40 Series No. 40 Series Tandem with Switch Tandem Combination Cat. No. Size and Description 5160 10,000 ohm Antenna Taper-50,000 ohm Screen Grid Taper with 1 in. shaft.....\$1.25 5535 Same as above, with 2 in. shaft 1.25 6811 10,000 ohm Antenna Taper-25,000 ohm Screen Grid Taper, with 1 in. shaft.... 1.25 6112 10,000 ohm Antenna Taper-25,000 ohm Screen Grid Taper, with switch and 1 in. shaft 1.45



Tone Control the keynote of 1931 Radio. All the bet-Radio. All the bet-ter types of sets are provided with tone control. That is the outstanding difference between present sets and those of the last year or two. A radio set is obso-lete without Tone Control. iete without fone Control. Table model begutifully finished in black and gold; felted base; long connecting cord and

handy disc connectors.





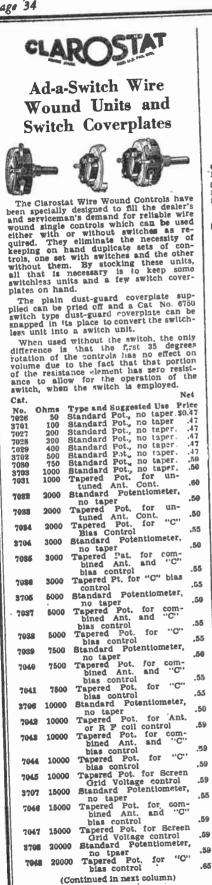
Cat. No. 4357 List Price, \$1.80



Enclosed in a beautiful black and gold crystalline case, with wire and adapters. Can be installed in a jiffy.

Cat. No. 6961 **95c**

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6518 2000 ohm for phonograph of trai-Our Price \$1.75





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Page 37

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	Type B-2: 2 Inches			C-80	2,500 3,000	141 129	80c	Cat. No.	Resis- tance in Ohms	Cap. in Milliam- peres	
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B03 B05 B075	3 5 7,5	2,800 2,225 1,800	•	C-70 C-75 C-80	7,000 7,500 8,000	84 82 79	.87 .87 .87	5658 5659	50 50	137 122	0
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3-50 3-60	5,000 6,000	75 71 64		Type D-1	Resistance in Ohma	Milli- amperes	Price Each	4785 5653 5654	1500 1600 1700	23 22 21	Price
8-70 8-72 8-75	7,000 7,200 7,500	60 59 58		D-2 D-8	100 200 300	865 610 500		5665 5666	1800 1900	20 ,20 19,8	24c
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-7.5	500 750	316 259	100	D-400 D-509 D-609	40,000 50,000 60,000	43 39 35	1.29 1.47 1.62	Cat. No.	Ohm	s Cat. 3	No. Ohm
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August-September, 1932

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A CRATEST carbon resistors are the result of years of A experimenting to produce a resistor that will be ab-solutely moisture proof and stay permanent regardless of atmospheric conditions.

The Acratest resistors all have a highly glazed surface which makes them non-hygroscopic in character and the only resistance of its kind that will not absorb moisture. These resistors are a solid molded mass, strong and durable.

Another very important feture of these units is the fact that they have no voltage co-efficient. They are conservatively rated and the temperature rise in opera-

tion is unusually low. Tin wire leads are soldered to the caps of the resistors which are forced on under a high pressure, thus insuring a permanent, noiseless con-tact. This is a very important feature in resistors as it

eliminates any possibility of poor contact. All resistors are laboratory tested and labeled with the proper resistance value and will maintain their ac-curacy under the most trying conditions.

Acratest resistors are guaranteed to be the finest on the market, noiseless, unbreakable, moisture proof and

durable. The 2 watt resistors, 1 watt and ½ watt all the same characteristics.

O N	NE-HA	LF WA Size			Acres			Acratost	
Ohus 100 150	Ohma 3,000 4,000	OL:ms 40,000 40,000 50,000	Ohras 500,000 600,000 750,000	ON WA Size	TT	Orms	Ohma		hms
200 250 350 400 700 750 875 1,200 1,250 1,500 2,500 2,500	4,100 5,000 6,000 7,500 10,000 12,000 15,000 25,000 30,000 (Urad an 1	30,000 70,000 80,000 100,000 125,000 150,000 200,000 250,000 350,000 400,000 Condenser Mile	1 meg. 2 meg. 3 mcg. 4 meg. 5 meg. 5 meg. 7 meg. 8 meg. 9 meg. 10 meg.	100 150 200 350 400 500 600 650 700 750 875 1,000	$\begin{array}{c} 1,250\\ 1,500\\ 2,000\\ 2,500\\ 3,000\\ 4,000\\ 4,400\\ 5,000\\ 6,000\\ 7,000\\ 7,500\\ 10,000\end{array}$	$\begin{array}{c} 12,000\\ 15,000\\ 20,000\\ 25,000\\ 30,000\\ 40,000\\ 50,000\\ 60,000\\ 70,000\\ 75,000\\ 80,000\\ 100,000\\ 100,000\\ \end{array}$	25,000 150,000 200,000 250,000 350,000 400,000 600,000 600,000 1 meg. 1½ meg. 2 meg. 3 meg.	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	0,000 0,000 0,0 ∕ 0 0,000 0,000 5,000 0,000 0,000 0,000
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A RE BARO	AL GAIN				a statest	SS 1 Carbo tail F One D	watt Watt on Pig- cesistors Each of collowing	1,000 7,500 60,000 20 1,500 12,500 70,000 1,250 10,000 70,000 1,250 10,000 80,000 2,000 15,000 100,000 <i>Cat. No. 6515</i> \$3.50 per kit of	25
C.		4600—7c att Units		A A	- Contractor		rtment:	Carbon Resistor Ki Contents: 36 3/-Watt Carbon P Resistors	igtail
Ohms 100 120 300 350 400 500 600 700 750	Ohms 1,000 1,250 1,550 2,000 2,500 3,000 4,000 6,000 7,000	$\begin{array}{c} 7,500\\ 10,000\\ 12,000\\ 15,000\\ 20,000\\ 25,000\\ 30,653\\ 40,300\\ 50,000\\ 50,000\\ 80,003\\ 70,000 \end{array}$	Obms 75,000 80,000 125,000 200,000 250,000 250,000 6,000 750,000 1 Meg. 2 Meg.	Ohms 100 150 200 401 520 750 750 1.000 1,250	Ohms 1,500 2,000 2,500 4,009 5,009 7,509 10,609 C.al.	Ohms 15,000 20,000 25,000 30,000 40,000 50,000 75,000 100,000 No. 3507	Ohms 150,000 200,000 250,000 500,000 1 meg. 2 meg. 3 meg.	500 5,000 40,000 2 750 6,000 50,000 50,000 50 1,000 7,000 30,000 50 50 1,250 10,000 75,000 70 10 1,500 12,500 100,000 12 2,000 150,000 22 2,500 20,000 150,000 350,000 360,000 40	G: Ohms 150,000 500,000 500,000 550,000 1 Meg. 2 Meg. 3 Meg. 4 Meg. 5 Meg.
75c	per		Asst.	Ę		kit of	33	\$2.85 kit of 30	6
MAIL See	ORDER Terms	S TO A on Page	5 5	Fede	rtea	Purcha	ISER In	25 PARK PLACE, N or to our nearest b	

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Laboratory Model and **Speed Control** Clarostat

Especially adapted to con-trol of variable speed motor in television and other precise work. May also be used as a heavy-duty vari-able resistor for laboratory work. Provided with heavy metal cas-ins, protected

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screw binding posts, and short-circuit but-ton. Carrying capacity of 80 watts. Resistance Carrying Range Capacity %-10 ohms 80 watts 200 to Cat. No. Model 6545 Laboratory 6546 Laboratory

100,000 ohms 80 watts 6547 Speed Control 25-500 ohms 80 watts

Our Price \$2.94 ea.

New Improved Ground Aerial

The Underground Aerial That Makes Neception Better



A new installation that overcomes all difficulties of overchead serials—yet i oses nothing in volume and im-proves the tone qualities of radio reception. By being placed in the ground it does away with unsightly over-head wires, eliminating the head wires, eliminating the risk incidental to installing them and lightning hazard diminishes electrical inter-ference and static; the new sub-anterna is permanent-once installed no further attention is necessary. Easy to install. Note illustration. installation new



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۷	Wire Wound Resistors & Voltage Dividers at unheard of prices						
	ire Wound		General Utility Voltage	Filament Series and Crid Resistors			
Res Cat. No. 3928 3950 3974 3910 3909 3902 3916 4703 3975 3932 3991 3993 3934 3935	istance on Lava Tub Marchard Tub Marchard Control Strategy of the Strategy of	Baked es Value 10 \$0.25 50 .25 100 .40 50 .30 25 .20 6 .20 10 .30 25 .25 100 .40 50 .30 25 .25 100 .40 50 .30 25 .25 50 .25 5	bividers 50 Waits 17,500 Ohms Tapped at 3400. SCO. 6500. 4 a m. long. 3- in. diam. On bated lava Unbe. Cat. No. 3913 25cc This voltage divider has many uses and splitections in electric sets, B eliminators, transmitters and amplifers. Will stand up with a wide safety factor. Made by a nationally known manufacturer to self for a repair job. 17,660 OHMS C.T.	Grid Resistors For Atwater-Kent 61 D.C. Set Cat. No. 6008 95C Per Set of 3 Other AK Resistors Cat. No. Ohms 7165 50 C.T. 7166 1000 7167 800 Edison Base Resistor 20 Ohms for Bosch 48 D.C.			
3935 3969 3969 3921 3894 3937 3938 3878 3931 3971 3942 3855 3861 3859 3904 3943 3944 3945 3994 3945 3994 3945 3994 3945 3994 3945 3994 3945 3994 3945 3994 3945 3917 5677 3940 3970 3946	$\begin{array}{c} 300 & 2 \text{ in.} \\ 400 & 2 \text{ in.} \\ 500 & 2 \text{ in.} \\ 500 & 2 \text{ in.} \\ 600 & 2 \text{ in.} \\ 2100 \text{ C. T. } 2 \text{ in.} \\ 750 & 2 \text{ in.} \\ 750 & 2 \text{ in.} \\ 781 & 1 \text{ in.} \\ 800 & 2 \text{ in.} \\ 900 & 3 \text{ in.} \\ 900 & 3 \text{ in.} \\ 920 & 3 \text{ in.} \\ 1000 & 2 \text{ in.} \\ 1500 & 2 \text{ in.} \\ 1500 & 2 \text{ in.} \\ 1500 & 2 \text{ in.} \\ 2000 & 2 \text{ in.} \\ 2500 & 2 \text{ in.} \\ 2650 & 1 \frac{1}{2} \text{ in.} \\ 35000 & 2 \text{ in.} \\ 5000 & 2 \text{ in.} \\ 5000 & 6 \text{ in.} \\ 50000 & 4 \text{ in.} \\ 30000 & 4 \text{ in.} \\ 30000 & 6 \text{ in.} \\ 50000 & 6 \text{ in.} \\ 5000 & 6 \text{ in.} \\ 50000 & 6 \text{ in.} \\ 5000 $	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1,000 Ohm 10 Watt Wire Wound Resistors Suitable for bias for 245 tubes; and used for many other purposes, 10 watts, 11/2 in. long.	Can be used for conversion of an A.C. set, screen grid and 245 filament supply. Bimply hook 3 in series, making a total of 60 ohms. Cat. No. 5848 85C HY-WATT CARBON Resistors on Lava Tubes 5 WATT- 1124 INCHES LONG Cat. No. Ohms Color Soft 10,000 Green Soft 65,000 Black 4707 10,000 Black Soft 50,000 Black 8055 20,000 D. Green Soft 50,000 Black 8055 20,000 D. Green Soft 500,000 Red 4708 25,000 Black Soft 12 Meg. Black 8056 20,000 D. Gray 3975 100 Black 8056 65,000 L. Gray 3955 30,000 Orange Bost 50,000 D. Gray 3975 30,000 Orange Bost 50,000 D. Gray 3975 30,000 Orange Bost 50,000 L. Gray 3955 30,000 Orange Bost 50,000 L. Gray 3955 30,000 Orange			
	ard-Leonard Voltage I 50 Ohms- Original resist. Grebe SEC For converting A where screen grid Ccit. No. 44	Regulator 300 Watts or as used in a Receiver. L.O. sets to D.C. i tubes are used	Resistor Used for taking off "C" Voltage from and B Eliminator. 10 Watts. Tapped at 90, 90, 360 ohm. 2% in, long.	Replacement Resistance Strip for Atwater Kent 37 Volume Control Also Used in AK 36, 38, 40 Burnt out or defective strip replaced in o jiffy. Cat. No. 3713			



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No. 1 St. Washington Lec.

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enameled for the best grade of the best grade of electrical refractory t u bings which have the same co-efficient of expension as the porcelain enamel and wire, permitting safe therry loads without fear of injury to the resistor. We use the highest grade of resistance wire, wound on refractory fubes. Acratest resistor contact points are securely made by a scientific process, whereitering any possibility of open circuits caused frequently by poor joint contacts. Fired at 1200 Deg. Fahrenheit, durable and pernanent. A large assortment carried in stock to meet every requirement. Cat. Tube Our No. 3078 **Ohms** 100 Size 2 in. 3 in. 3 in. Wattage Price 10 25c 10 10 200 3288 250 250 500 25e 25e 3679 10 10 3680 3681 750 10 25c 10 10 10 25c 25c 25c 25c 3682 800 3683 1.000 3685 3686 1,500 2,000 10 3687 3,000 5,000 7,500 10 10 10 25e 25e 25e 3689 7,500 8,600 10,000 12,500 15,000 16,000 25c 30c 80c 2926 10 25 25 25 10 25 50 50 3690 \$691 3 In. 3693 30c 25c 30c 3 in. 2 in. 3852 20,000 25,000 30,000 3603 3 in. 4 in. 45c 8694 3695 4 in. 75 55e 55e 3696 40,000 50,000 5 in. 5 in. 3697 3000 Ohm Davohm Resistor Precision Wire Wound on grooved Lava SUPER DAVOHM Tube. Accuracy 99% Cat. No. 5699 Price 25c VOLTAGE VARIABLE DIVIDER 10 10 VARIABLE SLIDERS Cat. No. 3967-10,000 Ohms, 4 Silders, 41/2 in. long. Cat. No. 3915-25,000 Ohms, 4 Silders, 51/4 in. long. This variable wire wound resistance de-signed for heavy duty work can be used on any radio circuit such as B eliminators, amplifiers, electric sets, etc. When the desired voltage is obtained it can be set and it will not vary due to the positive contact and absence of chemical proper-ties such as used in other types of vari-able resistance. This unit aside from be-ing electrically perfect, is low in price and will take the place from 3 to6 resis-tance. List \$1.50. Especially adapted for Freshman and Earl Sets. -10,000 Ohms, 4 Sliders, Cat. No. 8967-Our Price 80c ea. 25 PARK PLACE, N. Y. C. rederated Purchaset Ine. or to our nearest branch



Acratest



Acratest vitreous enameled resistors are made of the best

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Page 47

August-September, 1932



Features:

frame cad-

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2. Shaft,

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Cat. No.

5292

5208

3294

Gangs

Two

Four

Three

i. Steel



BAKELITE Wafer Sockets Special construction conmakes short circuits аге half or flashovers impossible. Cat. No. 4062-4 Prong-201A, 226, 113A, 171A, 245, 210, 250, 280, 281, 230, 232, 231, 234, 82. Cat. No. 4068-3 Prong-327, 224, 46, 83, 56, 236, 237, 238, 289, 247. Cat. No. 6934-6-Prong-57, 55, 55 6c ea., 60c doz. **Genuine Eby Sockets** REGULAE TYPA Cat. No. Prongs Price 5878 5574 546 .16 .16 .22 6035 Eby UY and UX Sockets are the stand-ard of quality. They can be mounted above or below metal. Bakelite or wood panels. Molded of genuine Bakelite with a built-in guide for the tube prongs. Phosphor bronze contacts so designed that their spring action cannot be damaged no matter how often the tubes are in-serted or withdrawn. Standard packages of ten of ten. SUB-PANEL TYPE Cat. Proves Price No. 5875 .16 .16 .20 5876 56 6936 means **Our Price Base Mounting Sockets** Phosphor bronze springs and knurled posts, 4-Prong-Cat. No. 5675 5-Prong-Cat. No. 5676 6-Prong---Cat. No. 6937 Our Price 12c ea. Sub-Base Mounting Sockets 4-Prong---Cat. No. 4080 5-Prong-Cat. No. 4081 6-Prong-Cat. No. 6938 Oat. No. 4080 Sub Base Mount 12c ea., \$1.20 doz.

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ACRATEST JR. **Precision-Built Variable**

compensators. throughout; %-in shaft; .00035 capacity.

Cat. No.							Price
5721	Three	Gang. Gang Gang			•		1.35

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The reproduction of this am-plifier is excellent and is par-ticularly recommended for re-cording, medium sized public address systems and sound

cording, medium sized public address systems and sound cars. The response from this amplifier is good from 30 to 10,000 cycles. This amplifier will fill an au-ditorium or theatre seating up to 3,000 people; will operate 3 auditorium dynamic speak-ers at maximum and can handle up to 6 such speakers with tremendous power.

This amplifier consists of three stages. The first stage uses a 58 as a high gain voltage am-plifier. This stage acts as a per-amplification unit, which gives added power to micro-phone or phonograph input. This stage is coupled by a bal-anced bridge of resistors to a 56 intermediste amplifier which is transformer coupled to a pair of 250 tubes. The secondary of this trans-former is equalized to keep the amplifier from reaching distor-tion levels and maintains pure tonal quality under all condi-tions. The input transformer provides for phonograph, raprovides for phonograph, ra-

These Acratone Amplifiers have been continuous on test for over a month to assure long life and their ability to meet vary-ing conditions. The heavy duty power transformer is con-structed for an extremely large safety margin. An electrostatic shield is used between the primary and high voltage winding to reduce the capacity and remove all possibility of orcing be-tween. The temperature rise over a period of 24 hours was 42 degrees Centigrade from normal room temperature.

This amplifier will fill a hail, theatre, stadium or an audi-torium seating up to 4,500 peo-ple. It is capable of filling to maximum 4 auditorium type speakers but will handle 6 to 8 such speakers with ample power. Special output is pro-vided for use with exponen-tial horns, equipped with dy-namic units.



LOFTIN-WHITE "245" Amplifier (Lloensed) For Use in Home Phonograph Reproduction and Small **Public Address Systems**



Employs 1--'45, 1--'24, 1--'80 Tubes Completely Assembled and Tested (less tubes)

This fob is ideal for home use as a recording amplifier or phonograph am-plifier. For commercial purposes this unit is recommended for use as a line booster or speech amplifier.

TECHNICAL INFORMATION TECHNICAL INFORMATION When used with a microphone, no addi-tional amplification is necessary. This is due to the inherent characteristics of these amplifications. The high impedance secondary of the "mike" transformer au-tomatically increases the gain of this system and compensates for the low input voltage of the microphone.

The output of the "245" Amplifier is conservatively rated at 3 watts.

"245" AMPLIFIER-Completely Wired and Tested (less tubes)



Loftin-White Single

Pentode Amplifier The single 247 (Pentode) amplifier: Uses 1-224, 1-247 and J-280. The output of this unit is about 4 watts. For high gain this unit is recommended for use in the same purposes as the 243 amplifier.

Cat. No. 82

Our Price \$14.95

The Loftin-White '250' (Licensed)

For Theatres, Public Address and Microphone Amplification

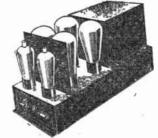
Employs 1--30, 1--31 Tubes The "250" Amplifier will successfully do the work that much higher-priced ampli-ders have been doing in the past. For phonograph reproduction this model can be relied upon to deliver sufficient volume to fill a hall containing up to 1,500 peoplé.

The undistorted output of this unit is 6 watts. For small public address systems this job is used extensively. The ampli-fler is adaptable for phonograph, micro-phone and radio inputs. The output of the "250" is from 6 to 8 watts. undistorted to 8

The output of and watts, undistorted. "230" AMPLIFIER-Wired and Tested (less tubes)

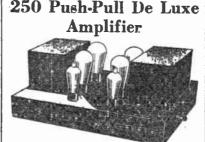
Cat. No. 78 **Our Price \$19.95**

The Midget 250 Push- | 224-247 Double Push-**Pull Amplifier**



This unit is the most recent develop-duction of the large power tubes. Up to this time to procure great volume, amplifiers were necessarily large and ex-pensive, which involved critical layout, israe transformers, chokes, etc., as well as heavy filter systems to eliminate hum and distortion, by the use of a new method of direct coupling, it eliminates the other commonly known evils of the push pull feed, 2-250's in push pull, 2-dits rectifiers. The output is rated at ly watts. The surve on the amplifier is 4-bed at the grave of the shows only a 4-bed by at 10 kCC. Power consum-ption is only 125 watts at 110 volts 60 sycles. At this remarkably low price, we over a new power which ers-to the other commonder the majority of the other at 20 kCC. Power consum-tion is only 125 watts at 110 volts 60 sycles. At this remarkably low price, we over a in performance the majority of the units selling at much higher prices. Set size-13" x 6" x 8%". Suitable for Phone, Mike and Eadlo Input *Cat. No. 285*

Cat. No. 285 Less Tubes



\$24.50

The output is rated at 15 watts and has a tapped output of 9, 15, 500 and 4000 ohms. The input is adaptable to Microphone, Radio and Phonograph which are built into the amplifier. This is the last word in Loftin. White arrolifica-tion, and uses 3-234's in push pull feed-ing 2-350's in push pull yith 2-231's as rectifiers. At 400 cycles, the gain is 125 DB. It is ideal for large installa-tions where zeveral speakers are used. The unusually high gain eliminates the necessity of a pre-amplifier for micro-phone. Due to tha new method of di-rect coupling used in the unit a degree of tone quality and volume is attained which has never before been offered. At full volume, the percentage of dis-tortion is abeut 7% and the amplifier ranges from 30 to 9000 cycles. Mounted in a strong steel crystal (black) finished chassis the unit is the last word in amplifiers from every angle. A tapped output with engraved symbols makes for ease of operation. The input is also tapped for microphole, radio and phonograph inputs. The gain control is built in. Size-19° x 10° x 8'2″.

is used to the set of the set of

Cat. No. 79WorldRadioH 942.50 Loss Tubes

Pull Automobile Amplifier

Page SI

Amplifier This unit is the outcome of experi-menting for a high gain amplifier at low cost and low power consumption. It has an output of 7.5 watts. The job will operate from any 60 watt generator of the conventional type or from the new much advertised and used 110 voit generator designed to work from a 6 voit storage battery. This last ulit is no larger than a "B" battery. Previous to this a large and expensive amplifier was necessary to procure the same amount of volume and combined with this a power supply consisting of several storage batteries and a large gen-erator, or a gasoline driven motor was needed. All this has been eliminated by the use of the above described ampli-fier. Size-19" x 10" x 7½". Suitable for Phone, Mike and Radie Input Cat. No. 288

Cat. No. 288 \$29.50 Less Tubes

Push-Pull Pentode

Amplifier



The new A.C. Pentode Double Pich Pull Amp. uses 2-224 in push pull amplifica-tion resistance coupled to 2-247 pentodes in push pull. This unit has gain of 66 DB overall, making an ideal amplifier for microphone installation in medium sized halls, small parts and indoor or outdoor amusement resorts. The power output is 7.5 watts undistorted, with a quality of tone unusual in comparison to the average pentode amplifier. The pnit is equipped with a matching transformer input for phone radio or mirdrophone, making an ideal arrangement for general purposes. Mounted on heavy steel base mishing in black crystal. Size-10° x 10° x 8½" high. Suitable for Phone, Mike and Radio Input Cat. No. 286

Cat. No. 286 \$29.50 Less Tubes

DC High Gain Amplifier



Has an undistorted output of 2.5 watts. Uses 1-237 and 2-257 output tubes in publ publ. This output is equivalent to the output of the average 245 amplifier. A tone control is supplied to vary the tone to any degree desired. The circuit is a high gain two stage unit taking advan-tage of the new D. C. pentodes and giving a tone quality never before ac-complished on D. C. at this volume. It is ideal for microphone input. Véry compact, it has the unusually low current tone unor the same power. Size-11%" x 8½" 5''. Has an undistorted output of 2.5 watts. x 5". Suitable for Phono, Mike and Radio Input

Cat. No. 287

\$17.50

August-September, 1932

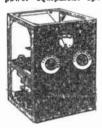
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TT III

Designed by

10 Watt Transmitter

The low power universal transmitter desthe low power universal transmitter des-cribed in this article represents the most advanced design for this class of equip-ment. The circuit employs a '24 speech amplifier, resistance coupled to a penamplifier, resistance coupled to a pen-tode modulator which feeds into a pen-tode oscillator. The rectifier is a full-wave '80 type tube. The output of this transmitter is rated at 10 watts. The power equipment specified has a 75 per cent overload safety



Cat. No. 126



factor. The anten-na system is of the na system is of the absorption type. The oscillator is of the well-known Hartley design, with slight modifica-tions, readily noted from the schematic diagram. The Hei-sing or plate modu-lation system is sing or plate modu-lation system is used. An important feature of the de-elgn is the fact that one power source of blas are used throughout. A convenient switch on the front panel

Complete with Tubes with Tubes A convenient switch on the front panel per m its rapid thange from C.W.. to phone. The switch, when on "phone." shorts the key and cuts in the modulator. When at "C. W.." position, it cuts out the modulator and speech amplifier, so that only the oscillator is used, with key control. A calibrated listening monitor or a wave-meter should be used to check the wave-length accuracy.

The universal 10-watt transmitter is built on a rugged aluminum frame, 10 inches The universal 10-wait transmitter is built on a rugged aluminum frame, 10 inches wide by 14 inches high by 9 inches deep. The microphone and the key are connect-ed to bunding poists at the back of the transmitter. The frame is grounded, while the antenna is connected to a binding post located alongside of condenser (31). The switch for changing over from phone to C.W. is conveniently located on the front panel. This panel also carries the milliammeter, the microphone gain con-trol, the tuning dials for the variable con-densers (27 and 31), and the microphone and line switches. and line switches.

The Universal Transmitter designed by Messrs. Werner and Biair is exceedingly efficient. The following are a few of the stations worked during the first week the transmitter was on the air: EAR116 (Spain), 40-meter C.W.; W4IU (North Carolina), 160 - meter phone; W8ACI (Pennsylvania), 160-meter phone; W7LZ (Oregon), 40-meter C.W.; W2ZZAT, Expedition in Yucatan, kept schedule on 80-meter C.W. Although the cutput of this transmitter is only 10 watts, it is capable of reaching out to very great distances, not only on C.W. but also on phone. Incidentally, this job is light, compact, and comparatively inexpensive. (This transmitter is fully described in an article by Mr. Werner in the Angust 1983 issue of "Short Wave Craft.")

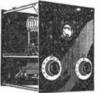
Federated Purchaser has been hesitant about entering the Transmitter field because it feit that it is a highly spe-cialized branch of the radio industry in itself. We feit that when we did decide to offer transmitting appar-stus, it would not be of the ordinary run, but extraordinary equipment de-signed and constructed by experts in the field. We have been fortunate in securing the services of two ploneers of the key and phone, G. Leonard Werner and Haskel Blair, who have designed and built transmitting ap-paratus for many years and who are up to the minute on the subject. The equipment described on this page was designed and built under their per-sonal supervision, and incorporate the last word in transmitter design. In inaugurating this department, we have featured only such items for which there is a general demand, of simple construction and easy to operaic, yet extremely efficient. If yeu are inter-ested in building or having ns build for yon any special transmitting ap-paratus, or wish to ask any questions on the subject, we will be giad to have you write to Messrs. Werner and Blair, who will give your letters their pef-sonal attention. If you know of any other items which should be featured in this department, tell us.

50 Watt Hartley Oscillator

This oscillator is

This occillator is one of the most efficient circuits in radio today, and we offer this efficiently made job to the exper-imenter, commer-cial and amateur operator. This

cial and amateur operator. This job is complete-iy wired and is supplied with 20. 40 and 80 meter coils. The latest and foremost equipment is



Cat. No. 129 \$55.00

and foremost equipment is used in its con-struction, and it is so designed as to be adaptable Less Tubes to be adaptable for phone work. The filament is center tapped where the keying is done. It uses one 50 watt tube as oscillator.

Listening Monitor

We are offering at this time a new de-velopment, it consists of: a completely wired unit employing the long sought for band spread on the 20, 40, and 80 meter channels. On each of these bands, we have almost a 100 degree spread. It em-ploys the new type 230 tube and the entire unit including A and B batterles in a nestly crackled finished metal can No. 5X29X6. A Burgess 2 volt battery and a small 22½ volt battery with a 230 tube will be supplied for \$2.00 extra.

Cat. No. 131

\$9.00

Less Tubes and Batteries

W2PN

50 Watt Transmitter

50 watt phone and C.W. crystal control transmitter, complete with power supply.



Consists of 210 crys-tal oscillator, 2-210 frequency doublers, 2-50 watters -type 511) in parallel as modulators, modu-iating a 511 as the final amplifier. An 80 m et er funda-mental crystal is suppled a; are volt meters, milliammeters and antenna meter. All controls, switch-es, volumo regulat-ors, jacks, etc., are es, volumo ors, jacks, es, volumo regulat-ors, jacks, etc., are conveniently brought out on the bakelite paneling. Equipment such as Cardwell, Flechtheim, Thordar-son is used.

KOLSTER Push-Pull 245 **Power Amplifier and** Matched Dynamic Speaker

For radio, phonograph, public address systems for lecture and Concert Halls and small auditoriums. Reproduces speech and music with marvelous fidelity of tone.



The amplifier has two stages using the 227 in the first and two 245 tubes in the push-pull stage with a 280 rectofier. Kol-ster Dynamic Speaker to match. For 115 volts, 60 cycle alternating current. Cat. No. 102

Our Price \$16.95 (Less Tubes)

Screen Grid R. F. Tuner

This unit consists of complete R. F. sec-This unit consists of complete K. F. Sec-tion to be coupled to any audio unit. Uses 4 space 224 tubes and will operate on either A. C. or D. C. current. The condenser gang is completely shielded as are the R. F. colls. A fine adjustment of the volume may be obtained from the volume control which is included in the unit. unit.

\$13.50 Cat. No. 132 Less Tubes

Brand

New in Original

Factory

Sealed

Cases :

Great News for Battery

Complete With Eight Radiotrons

Set Buyers !

RADIOLA 28 8 Tube Super

Cat. No. 28

List Price, \$260

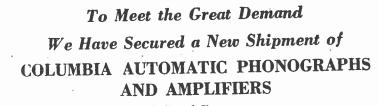
Our

Price

\$13.75

Including 8 R.C.A.

Radiotrons



This DeLuxe Columbia Automatic Record Changer and electrically operated Phonograph is the greatest buy we have ever offered to the public. The size of the re-orders from customers who originally pur-chased a single sample, is definite proof to us that it is satisfactory universally. Built into a handsome selected walnut cabinet, it consists of a Columbia l=227, 2--245s and 1--280 tube, giving tremendous volume without distortion; a Role 12" Auditorium Dynamic Speaker; and in addition to all this, an automatic record-changing device which records con-secutively. secutively.

Just think what you get for only \$29.50. Why, the record-changing device alone is worth more, to say nothing of the Amplifier and Dynamic Speaker and Pick-up and the gorgeous walnut console cabinet in which this outfit is housed.

This unit has many uses. A serviceman or a dealer could find excellent use for it in his own place for demonstrating records and for making records of your customers' voices for home talking amplifiers.

for home talking emplifiers. Any number of organizations in your home town or neighborhood can use this equip-ment; dance halls, clubs, restaurants, and innumerable others. Another good sugges-tion which has been put into use by several of our customers has been the addition of a tuner to this phonograph. All the vol-tages can be obtained from the power am-plifier already installed. There is sufficient space to the right of the amplifier on the bottom of the cabinet so that a tuner could be built into it, and with a remote con-tol device such as is used in automobiles, the tuning dial could be placed underneath the lid right alongside of the record-chang-ing device. It has proved very satisfactory ours has used several of these machines for that purpose.

POWERIZERS

R-25 and R-28

ABC Eliminators and Power

Amplifiers for Radiola



Beautiful Walnut veneered cabinet. Spacious ledge for records. 8 ft. electric cord 20 fet. cable to Radio set. Will make a phonograph combination of any radio. RCA-Victor electric motor and Victor pick-up. Radio-record transfer radio. RCA-Victor electric motor and Victor pick-up. Radio-record transfer control; phonograph turntable, starts and stops automatically.

We Carry the Largest As-sortment of Wire in the Mail **Our** Prices Order Business. See Below Market. Are Pages 76, 77 and 78.

raising hinged upper section of receiver. Tubes used and furnished with receiver are 7 UX-199 Radiotrons and 1 UX-120 Radiotron. Same tubes used whether re-ceiver is operated by batteries or eliminators.

Radiola 28

Rau. Second Ha. heterodyne in distinguished and graceful two tone ma-

hogany cabi-net. A m p l e compartment

for all bat-teri directly

ceiver is operated by bintottics eleminators. Just the set for the home without elec-tricity, for sailboats, tourist camps, houses on wheels, etc. Will work anywhere with-out external connections. Fully selfcontained.

is very sensitive and This set powerful and yet uses dry cells throughout. Employs twelve 1½ V. No. 6 Dry Cells.—Cat. No. 6656 Three 22½ V. B. Batteries.—Cat. No. 6685—and two 45 V. B. Batteries.

Cat. No. 6905

\$22.25

PARTIN LIBEART NT

RADIO SET ANALYZERS

How to Use The

by L. You do Md ŵ

Au. 10

COMPLETE WITH ALL BATTERIES, TUBES AND RADIOLA 103 SPEAKER READY TO PLAY

Cat. No. 128

Radio Set Analyzers AND HOW TO USE THEM

With Full Instructions and Descriptions of Set Analyzers, Tube Check-

and Descriptions of Set Analyzers, Tube Check-ers, Oscillators, Etc. By L. VAN DER MEL This book explains thororughly the opera-tion of set analyzers, tube checkers, oscilla-tors and other testing equipment. For every radio man this book is extremely helpful. It covers every phase of covers every phase of testing and gives you valuable short cuts.

Our Price 50c



Size: 19x5¼ x5¾. Weight: 16¾ lbs. List: 384.00. (Less tubes.)

You can now convert at very little cost Radiola 28's and 25's to modern Power Amplified all-electric receivers by using this Powerizer Power Pack.

Inis Powerizer Power Fack. This Pack is a double action Unit when used with these receivers. It does away with all batteries, supplying complete A, B and C current for all the 199 tubes in the set in addition to supplying a stage of 210 Power Aimplification in place of the 120 tube, giving unsurpassed tone and tre-mendous volume. It is a revelation.

This Powerizer approved by RCA. Very simple to connect. Uses the UX-210 and 280 tubes. Operates on 110-120 Volts, 50-60 Cycle A.C. current.

R-25-Cat. No. 4481 For Radiola 25 R-28-Cat. No. 4482 For Radiola 28 **Our Price \$18.75**



ished chrome. Model Q R Q is a single-button, 200 ohm carbon microphone with high sen-sitivity and clear, natural reproduction. The button is solid 24-karat Gold faced, giving it extremely long life.





Baby Mike is a genuine single-button carbon microphone of 200 resistance. ohma ohms resistance. It is mounted in a die-cast mount-ing 3½ inches high-a replica of the regular Broadcast models. It may be con-nected to ampli-fiers or direct to almost any radio set in the market

List Price \$7.50

ket. Baby Mike is a beautiful minia-ture microphone, finlshed in attrac-tive polished chrome.

It is shipped to you securely packed and completely furnished with prong rdapter for connection to tube, pin plugs for connection to jacks or winding posts, 23-ft. cord, detailed instruction sheet— in short, everything needed to hook up ready to enjoy the fun.

Our Price \$3.95

Universal Model "LL"

An extra rugged, neavy ty pe, two-button broadcast mic-rophone. The entire essembly is of high carbon steel, ground to within .001 of an inch accuracy. The disphragm is alloy of exactly the proper hardness and stretch to secure the best re-sults. Pure gold con-tacts are placed on each side. The ma-terials used and the precision of manu-facture combine to make this model stand out as the su-perlative microphone reproducing a range fr om 30 to 7,000 cycles. cycles

Net wt., 21/4 lbs. Packed wt., sked wt., Cat. No. 211 List Price

\$75.00

Model "LL" is 3% inches in diameter by 1% inches thick and is standard 200 ohms per button. Polished chrome finish.

Our Price \$44.10



"A" microphone incor-porates improvements that lift the perform-ance of this most re-fined single-button mi-crophone above any-thing previously con-sidered possible. The new type of perforated protective facing more than doubles the effec-tive ärea of the dia-bhrasm. tive stea of the dia-phragm. Model "A" is con-structed with Bolid 24 Kt. goig faced button and highest grade car-bon granules which re-duce hiss to a mini-mum. Equipped with an extremely thin, light weig ht disphragm which is is los gold faced. The scientific damping permits Model "A" to handle frequencies from 100 to 3,000 cycles. The single button is 200 ohm resistance. Mo diameter by 1% in. bb



Net weight 1 lb Packed weight 1½ lbs. List Price \$15.00

Our Price

\$8.82 The single button is 200 ohm resistance. Model "A" is 8 in. in diameter by 1¼ in. thick. It is beauti-fully plated in polished chrome and can be mounted in various ways. Model K Desk stand or 5¼ in. suspension ring recommended recommended.

Universal Model "BB" 1933 Value-New Super-Design



The super-microphone in every sense of the word. No other 2-but-ton microphone can ton microphone can give such superlative value for such a low price. Model "BB" is nearly twice as heavy as any other micro-phone in its class. Built to be the user the section

Cal. No. 209 Net weight 1 lb. Packed weight 1½ lbs.

List Price \$25.00

Our

chone in its class. Built to hair-line precision. An idea cf the rugged-ness can be obtained by the fact that Model "BB" is 2 in. in dis-meter by 2 in. thick. It is built especially for volce-pickup. pub-iso address work and for amateur broadcas-ters, experimenters, halls, call rooms, greak-er wagons, ct. Fin-ished, nighly polished



Price \$14.70 bised in beautifully fin- **ished**, highly polished chrome plate. Model "BB" has ex-tra heavy 24 - kt. Pure Gold Spot Cen-ters, Duralumin Disphragm and has a frequency range of from 70 to vell over 4,000 cycles, 200 ohms per button. Owing to the large size and weight of Model "EB." is recommended that Model "L' desk stand be used for mount-ing instead of Model "K." cspecially when covers are used. covers are used.

All Microphones are shipped in original factory sealed containers. Due to the delicate construction of these instruments, repairs and adjustments are made by the factory only.



A substantial, sol-id, two-button broad-cast microphone, with a very minimum of hiss. Model "KK" is carefully constructed of the finest mate-rials with a 24-Kt. pure gold spot center alloy diaphragm has a thickness of only .002 in.



Net weight, 1% 1bs Packéd weight, 2 Cat. No. 210

List Price \$50.00

Our

tendion. Disphragm has a thickness of only .002 in. The frequency range of Model "KK" is all that can be desired in a carbon microphone, namely from 50 bo well over 8000 cyclés. The buttons are of 200 ohms résistance each. Entire microphone finished in 24-Et. pol-ished gold. It is 2½ in. in diameter and 11¼ in. thick. Each unit is carefully laboratory tested before shipment. before shipment

Universal Model X Two

Button Microphone A Sensational Microphone at a Sensational Price



At a Softwarional Tree A two-button mic-rophone listing at only \$10.00. Model "X" sets a new high tandard for quality at a price that de-fies competition. Model "X" confirms the reputation for quality and perfor-mance that character-izes all i Diameter, 212" Thickness, over all, 1" Weight packed, 1 lb. Polished Nickel Plate Deen climinated to enable us to offer this premericable microphone at this popular price.

price. Faithful, truly natural tone. Pure Gold Contacts. Duralumin non-breakable dia-phragm. 200 ohms per button. Very low hiss level. Scientifically Dampied. Fre-quently range from 1,000 to 4,000 cycles. Model "X" is ruggedly built and finished in non-corrosive, polished nickel plate. Can be mounted in any Universal mount-ing. Diameter, 2½ in. Overall thickness, 1 in. price ing. 1 m.

Nowhere can a better microphone be purchased at anywhere near this aston-ishingly low price.

Cat. No. 524 List Price \$10.00 **Our Price \$5.88**

FEDERATED PURCHASER is the premier radio replacement parts house in the U. S. A. 3,000 items carried in stock.

Universal Model "KK" A Top-Notch Double-Button Broadcast Microphone

Only supreme per-formance and year after year dependa-bility can explain the fact that the im-proved Model "KK" continues to be the most popular and fastest selling \$50.00 mitrophone on the market market. A substantial, sol-

Universal Condenser Microphones

The model herewith illustrated is the result of exhaustive experiments produce a microphone for film and disc recording, in nim and disc recording, in which field 90% of the pro-duction of this model is used. Universal Condenser Microphones are in use in nearly all parts of the civi-lized world in film record-ing and in broadcast studies ing an studios.

Universal Condenser Mic-models, Model 1440 and 2440 rophones are made in two --the first having a single stage of amplification and in the second, a 2 stage amplifier is used. They are otherwise the same in size and appearance. Following ore detail descriptions: and appearance. Follo are detail descriptions:

to

and appearance. Following are detail descriptions: A single stage microphone using a 440 tube with an out put of approximately Minus 15, D. B., with an al-most flat response from 32 to 7000 cycles. Amplifier drawn in one piece without seams or rivets. Amplifier base casting of bronze with transmitter head ring of brass. Neat and business-like in appearance, finished in beautiful statuary bronze piate. Bat-tery required 6V "A" and 200V "B." The output is designed to (see into a 200 ohm load, or the input terminals of an ampli-fier, where a carbon microphone has pre-viously been used. The current consump-tion on the 200 volt tap is only .2 mil-liampere with filament current of .25 amp. Sizz 6 inches by 3 inches. Net weight: 11 lbs. Packed weight, 17 lbs. Complete with 'S' feet Euther Covered Shielded Cable

Shielded Cable

Cat. No. 242. List Price \$300



A two-stage microphone using two 440 tubes with an output of approximately Plus 2 D. B. This model is the same in every particular as Model No. 1440, ex-cept the current consumption on the 200 volt tap is only .4 milliampere with fila-ment current of .5 amp. Size 6 inches by 6 inches by 3 inches. Net weight, 12 lbs. Packed weight, 18 lbs. Complete with 25 feet Rubber Covered Schleded Cable

Shielded Cable

Cal. No. 243

List Price \$330 Our Price \$205.80

Universal Suspension Rings

Made of solid brass, for suspending mi-crophones from cellings or beams. For use especially with Models "A". "BB". "KK." or "LL," etc. Beautifully finished in polished chromium. Size 5¼ in, diameter by ½ tn. wide by ½ in. h i ck - B suspension springs included. Cat. No. 3636 \$1.47 Size 6½ in. diameter by ½ in. wide by ½ in. thick-8 suspension springs included. Cal. No. 3621

Our Price \$2.35

Universal Desk Type Mountings MODEL "K" DESK MOUNT WITHOUT COVERS

Mode: "K" is 5 inches in diameter and is used for mounting Model "A", or "KK" microphones on 4 points of suspension, using 8 springs—the ideal way to suspend a microphone. It may be used for the new heavy "BB" but is not recommended for this new larger unit.

The base is set in moulded rubber ring forming a cushion against vibration and preventing damage to polished surfaces.

The entire unit is beautifully finished in chrome plate. Provided with a finger ring for carrying. Cable passes through the hollow base.



An extra heavy floor stand, with ex-tra heavy base weighing 18 pounds, so that all possibil-ity of tip ping is eliminated. The top ring is 6% inches in diameter, four point suspension to accom-modate all large mic-tophones now in use. Totat extended height, 6 leet. It is use. Total extended height. 6 leet. It is smoothly operated with very positive ciamp lock, prevent-ing falling of stand while extended. Fin-ished in Statuary Bronze. making a fine studio encerfine studio appear-

Cat. No. 333

Our Price \$8.50

Extra Heavy Condenser Microphone **Floor Stand**

Built especially for condenser micro-phones. An idea of its ruggedness can be attained from the main body tube which is 2 inches in diameter. The entire as-sembly is statuary bronze plated and pre-sents a fine studio appearance. A finnge at top allows for easy mounting. The ad-justment lock screw is firm and positive and locks. or releases by the slightest thumb pressure. Net weight, 21% lbs. Packed weight, 28 lbs.

Cat. No. 244 List Price \$40.00

WorldRadioHistory



Model "K" Desk Mount with Covers and Letter Shield

POLISHED CHROME FINISH

Desirable protection from the curious is ge-cured by the beautifui-ly turned and screened covers of the covered Model "K". The covers are sprung into posi-tion, eliminating trick mechanisms which are liable to rattle. Makes a substantial and busi-ness - 11 k e sopearance. Same stand and frame as on Model "K" with-out covers. protection Desirable



Cat. No. 230 out covers. 8 Suspension Springs Included. List \$9.00

- **Our Price \$5.29**
- Model "L" Desk Mount with Covers and Letter Shield

The same type of covers as described for Model "K" are fitted to the 6½ inch diameter of the Model "L" mounting. Extra room is provided inside the ring and screened covers to allow freedom of movement without danger of jar or short-ing of wires. Polished chrome finish, it is most attractive and business-like in appearance. Full instructions for mount-ing. Call letters furnished. Any letter can be mounted at no extra cost.

Net weight 31/2 lbs.; Packed weight 41/2 lbs.

Cal. No. 232

8 Suspension Springs Included

List Price \$16.00 **Our Price \$9.51**

MODEL "L" DESK MOUNT WITHOUT COVERS

Model "L" is 61/2 inches in diameter and is used for mounting Model "LL". 387 W. or New Type "BB". or other large, heavy types of microphones. An ex-tremely well-built and attractively finish-ed in chrome plate mount following the lines of Universal's general designs. [Pro-sents a highly professional appearance.

Entire assembly 101/2 inches high. Net weight, 3 lbs. Packed weight, 41/2 lbs. 8 Suspension Springs Included. List \$10.00

Cat. No. 239



Banquet Stand

Our Price \$5.50



A beautifully fin-ished stand of Statuished stand of Statu-ary Bronzz. adjust-able from 12 inches to 24 inches. The top ring is 6 ½ inches in diameter, f our point suspen-sion, built to accom-modate sny ia rg microphone on the market. Can also furnish top ring of 5¼ inches in dia-meter, three point suspension to accom-modate smaller mic-rophones now in use. modate smaller inte-rophones now in use. Weight of base, 6 pounds, so that there is no possibil-ity of damage being caused by tipping.



75.00 44.10 "KK" 210 "LL" 223 100.00 58.80 Note: All Bullet Type Microphones sup-plied with cable as shown. Shipped with-

Note: All Bullet Type Microphones sup-set batters. Universal Bullet Type Microphones are the last word in appearance and per-formance for the lowest possible cost. Especially recommended for use in pub-lic address work of all kinds where ele-gance of appearance, beauty of design, and true reproduction of voice and sound are demanded. Carfell tests have shown that the hiss five of universal Bullet Type micro-phones is far below any background noise encountered in public address or similar work, making the proved per-tor microphones especially favored for that type of work. Universal Bullet Type Microphones con-sist of a tube with a center partition royiding space for a standard 1½ voit No. 6 dry cell batteryl. Microphones at alt imas. Adjustment scraw, operated through side of tube, permits microphone at alt imas. Adjustment scraw, operated through to permit easy battery replace-ment. Rubber cushions and spring ten-sion sides make a very rugged assembly that permits a great deal of handling tormance. Finished in highly polished aluminum

Finished in highly polished aluminum and chrome plate.



their excellent performance and appearance. Their design is based on over thirty-five years experience in the telephone manufacturing field and they are guaranteed to give complete satisfac-tion when used in proper circuits. They are not designed for commercial broad-casting use, but are intended for amateur and general apparatus work. These micro-phones are very sensitive and rugged in construction. Available in two different standard styles complete with cord.

Universal Torpedo Type Microphones



This new type of Universal Microphone is supplied to meet the supplied to meet the supplied to microphones which in themselves are fully protected, are more compact, and can be quickly demounted. Torpedo Type Microphones of the design illustrated are supreme in this field. They combine in one instrument the recognized outstanding quality of tested Universal microphone performance with the special features demanded. features demanded.

Connection is made to three spring jacks into which telephone pin terminals are plugged. Not supplied with cord. The polished chrome plated perforated and screened cup housings are of heavy brass and are firmly isstened. Can not be re-moved accidentally. Supplied in standard Models "BB," "KK" and "LL."

Model	Cat.	List	Our
	No.	Price	Price
Forpedo ''BB''	226	\$30.00	\$17.64
Forpedo ''KK''	228	\$55.00	\$32.84
Forpedo ''LL''	229	\$80.00	\$17.04

Universal Single Button "Handi-Mike"

Pre-eminent for all uses where a hand mi-crophone of single-button construction is desired. It is intended for voice only and in this field it has maxi-mum volume with clear and clean-cut speech re-production.

mum volume with clear and clean-cut speech re-production. The singie-button Handi-Mike is built in two models-"Regular" The universally enthusi-astic praise this micro-phone is receiving is es-tablishing it without competition for superior home recording. Handi-Mike is finish-ed in beautifully polished with an "off" and "on" toggie switch, 15-foot cord, and provided with an eye as shown for hanging while in or out of use.

List Price \$10.00

Universal Double-Button "Handi-Mike"

Our Price \$5.88

Cat. No. Regular No. 213,

Modei

Cat. No. 214, for Home

Recording

Same size and appearance as the Single Button Mike.

An exceptionally clear, highly damped hand microphone, designed particularly for uses where clarity of reproduction plus general adaptability and portability are important requisites—a microphone that is outstanding for its superior reproduc-tion qualities. Especially recommended where microphone must be used in close proximity to loud speakers, such as home talkie installations and music trucks, etc. The double-button Handi-Mike is 200

The double-button Handi-Mike is 200 nms per button. It is finished in beau-fully polished chrome and comes equip-ed with a 6-ft. silk braid covered cable. tifully red

Cat. No. 227

Our Price \$8.82



Universal Model "W" is the amallest completely protected and workable single-button microphone manufactured. Sup-plied particularly for the many special uses requiring a small, very sensitive compact microphone that can be depended upon to give fuli quality performance. A favorite type for use in hidden positions such as a detectophone, or on the coat lapel. High sensitivity, light weight and com-pactness are the outstanding features of this model. 200 ohms. Equipped with Pure Gold Spot Center Diaphragm. com-pletely enclosed, protecting it against in-jury during handling and use. 1% in. in diameter. ½ in. thick.

The Super-Sensitive Midget Microphone

Microphone Universal Model "Y" is even lighter. Emailer and more sensitive than Model "W." described above. It is of the same general construction as Model "W." ex-cept that the front face of the micro-phone is the disphragm proper. Model "Y" is extremely sensitive. When placed in any hidden position, it will pick up sounds and conversations. Frecom-mended for use where high sensitivity and extreme compactness are necessary. Should be placed in protected locations, behind screen or grill work. Suitable for use with some of the less expensive types of ear phones. Because of the exposed dia-phrarm, great care must be esercised in handling.



Manufactured by Kellogg Switchboard & Supply Co.

Kellogg Switchboard & Supply Co. This fine microphone is being used by RCA-Victor in their S750 radio and phono-graph combinations. Its extremely fine response curve makes it suitable for home recording, public address and amateur broadcasting. The entire casing and haudle is of steel in gun metal finish, making it sturdy and rugged. It requires but 10 mils of current which may easily be obtained from a 1½ volt dry cell or power pack. For home broadcasting it is not necessary to use a coupling trans-former with this mike as it will perform perfectly when inserted in series with the cathode of the detector tube. This mike is menufactured for RCA by Kellogg Switchboard and Supply Co., whose equip-ment is standard in 90 per cent of the world's broadcasting stations.

Two

tions

Microphone Shielded



A New Super Hydro Double | Action Pick-up

15.200



Can be used in combination Eadie and honograph Broadcasting Stations, Pub-ice Address Systems, Laboratory and Ex-perimental Work. This unit is very efficient with much greater output and we recommend it as a competitive unit, against any make, re-structible type. Market State of material obtainable unconditionally guaranteed. Beautifu interverse Movement All workmanship Precision Built, with unconditionally guaranteed. Beautifu interverse Movement or armature while in riding position will prolong the life of the record materially and allow for any warp. In the record. The area the warp. Rubber in subter in the screw may come in case of nubber piece mounted in a case of nubber piece mounted in a case of other screw may come in case of other screw may come i

in case of drop or sudden pressure on needle point. The magnetic flux is equal on nil four sides of the Pole Pieces, giving a posi-tive magnetic center and air gap at both ends of the armature. The New Super Hydro brings out the fundamentals lost in nost pickups and with less scratch and a full round tone.

STANDARD PHONOGRAPH PICKUP WITH VOLUME CONTROL

10" overall length, 7%" from center pin to needle point.

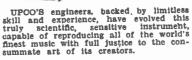
at. No. Type 5979Regular High Impedance 6898*200 Ohm Impedance

Our Price \$4.75 • Can be used on Victor and similar re-ceivers. Can be connected drirectly to miorophone input transformer.

Standard Theatre Balanced Pickup

151/2" overall length. Arm is balanced for required type \$5.25





WorldRadioHistory

Acraphone Microphone Input Stages

These units each contain the well known Acratest Microphone Input Transformers, Transformers, microphone



Brown Crackle Finished

Steel Case

button curbutton cur-rent control and cutout switch to pre-serve the life of the micro-phone. Frephone. Fre-quency tange 30 to 7000 cycles. Input, standard microphone pedance; output, 400,000 ohms. Com-

ohms. Com-pletely shielded to avoid feed-back. The unit is housed in a handsomely finished black crackle steel box. A volume control with an "on-off" switch for turna-ing current off the microphone are in-cluded. The volume control has a very fine adjustment not ordinarily found in other input stages. Battery compartment for 1½ to 6 volts.

Cat. No. 6528 For Single Button Mikes



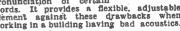
Universal Tone Control

A new accessory that means much added value. The tone control is used across the buttons of any microphone to change the tone to fit adverse condi-tions. Shrill, high pitched voices may be toned down to normal, and gruff, deep voices may be tuned to more pleasing positions in the voice frequencies. The tone control also



The tone control also permits an adjustment in public address and loud speaker installations that eliminates the "feed speaker instaliations that eliminates the "feed dat. No. ing echo following the 220 pronunciation of certain words. It provides a flexible, adjustable elèment against these drawbacks when working in a building laving bad acoustics.

Bize. 2½x2½x4½" Net weight, 1 lb.



Our Price \$4.70

Instrument Littlefuses (Low Voltage) (L This line is designed especi-ally for the protection of such delication such delicate equipment as galvanometers, INSTRUMENT galvanometers, INSTRUMENT microammeters, and milliam-stand milliam-tubes testers, Pais. issued and pending. radio "B" circuits, small radio and rec-tifier tubes, etc. See also "Where to use-A Littelfuse." Description Max. Resis. and Load 5 Mil Cat. Rating Our No. Amps. Application M.A. Load Price 6643 1/100 Use for galvano-meters, micro-and 0-1 miland 0-1 mil-liammeters. 0-5 0-5 thermo-couples. 5 138 .12 6644 1/32 0-1 to 0-5 mil-liammeters. 0-5 -5 to 0-15 m. a. thermo-couples. 15 65 .12 0-10 to 0-50 milliammeters. 6645 3/8 milliammeters. 0-50 to 0-100 m. a. thermo-couples. Radio "B" circuits in auto and bat-tery sets. Un-derwriters approved 0-500 to 0-750 milliammeters. 100 16 .09 6646 1 0-600 to 1 amp. thermo-couples. Small rectifiers. 1000 .36 .06 **Assorted Carton of** Instrument Littelfuses Carton con-tains 50 Instru-ment Littelfuses SAVEI of various sizes and mountings in the proportions most gen-erally used. In-structions for structions for use on each carton. Attrac-tively colored and makes an contents are as colored Contents ideal counter display. follows: 5-1/32 amp. 5-1/16 amp. 10-1/3 amp. 10-1/4 amp. 5-No. 1010 Mountings 5 pr. No. 1012 Gryp-Connectors Weight, 1 lb. Cat. No. 6649

List Price \$8.30

\$4.80 per box

Single Pole Mounting for Littlefuses



For Instrument Litteffues, Black moulded bakelite base 1½x%z3/15". Tinned, shakeproof terminals and ex-tra quality phos-phor bronse nickel plated fuse clips. Mounting hole jakes No. 8 or No. 10 Flat Head Screw. Overall length, 1%". Height, %". Standard package, 20. Weight, ½ lb.

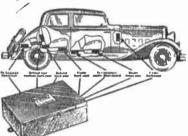
Cat. No. 6648

9c each

ELKON **"B" Eliminator**

Makes ANY Auto Radio ALL-ELECTRIC

Universal application—suitable for sall popular brands of standard automobile radio sets. Dependable, uniform recep-tion. Easily installed. Safe and com-pact, tested and proven. List price, \$19.05 pact, test complete!



Delivers 180 volts at 30 mils and 135 volts at 40 mils. Requires but 2.1 Amps. at 6 volt input.

Size 10x7x3^¼ in.

Cat. No. 273

Our Price \$14.95

MUSIC on the Highways with no B Battery Worries (

Janette Auto-B-Power /

Perfect Auto Radio Reception

Free From-Battery Replacements. Battery Expense, Battery Voltage Drops.



THE JANETTE "Auto-B-Power" con-sists of a small JANETTE dynamotor and filtering device mounted in a strong, at-tractively finished steel box. It trans-forms the 6 or 12-volt current of an automobile or airplane storage battery into the higher voltage "B" current re-quired by your auto-radio set. Whatever the voltage requirements of your auto-radio set may be a JANETTE "Auto-B-Power" can be furnished for the correct voltage. (See table on reverse side of this page.) "Auto-B-Power" THE JANETTE

Quiet-Compact Vibrationless

The JANETTE "Auto-R-Power" has a dynamically balanced srmature: thus it runs with a minimum of vibration. Vir-tually inaudible when placed under the hood, floor boards or seats. Requires but little room-measures only 13x6x6½ in. weighe 30 lbs.

(Continued in Next Column)

D.C. to A.C. Janette Rotary Converters are compact, dy-namically balanced which units change which change direct current to 110 volt, 60 cycle, alternat-ing current for the operation of A.C. radio sets on D.C. circuits.



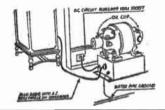
Creates Big Market for A.C. Sets

Creates Big Market for A.C. Sets The Janette Rotary Converter, and es-pecially the new CA-20-F, opens up a fertile field for A.C. radio sales. Over 500,000 farmers own 32 or 110 volt D.C. lighting plants. Every one of them is a prospect for a double-profit sale consist-ing of an A.C. radio set and a Janette Rotary Converter. Alert radio dealers and jobbers everywhere are selfing this oppor-tunity to build new volume. And on top of it all there is the great market in the D.C. districts of large cities --plus the marine field.

Perfect Radio Reception

Janette Rotary Converters are equipped with the Janette Filter which prevents converter interference from reaching the radio. Janette Converters are guaranteed not to interfere with radio reception.

		0	Termed		
Cat.		Out	Input	List	Our
	21	put	D.C.		
No.	Frame	Watts	Volts	Price	Price
282	CA-20-F	80	32	\$40.00	\$28.50
254	CA-20-F	110	32	49.50	35.00
255	CA-18-F	150	32	54.50	38.75
256	C-13-F	300	32	75.00	53.00
283	OA-20-F	80	115	40.00	28.50
257	CA-20-F	110	115	49.50	35.00
258	CA-18-F	150	115	54.50	38.75
259	C-13-F	300	115	75.00	53.00
260	CB-12-F	500	115	95,00	69.25
The	following co				d from
	Chicago,			elivery:	
261	CA-20-F	40	6	54.00	39.40
262	CA-18-F	60	6	59.00	45.35
263	CA-20-F	80	12	54.00	39.40
264	CA-18-F	120	12	59.00	45.85
265	C-13-F	160	12	81.00	60.75
284	CA-20-F	80	230	40.00	28.50
266	CA-20-F	110	230	51.50	37.30
267	CA-18-F	150	230	56.50	40.70



(Continued from Preceding Column) **Data and Prices** Battery Drain Input Output At Cat. No. Code Volt Volt. 40M.A. 265 AUTEX AUTOB 6 135 2.8 266 180 3.0 1.4 201 AUTAK 12 135 1.4 270 AUTIL 12 180 1.5 Codewords include units complete with voltage and 1 extra tap. If two extra taps are required, add following codeword: TABBY.

TABY. "These current values are maximum. In most cases battery drain will be much less than those indicated in this table. List Frice Complete with Voltage Divider and Extra Taps......\$22.00





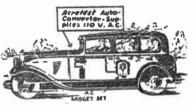
Uses one 226, one 250, and two 51's. Used with Victor Electric Orthophonis Phonograph No. 12-15 Electrois and the R. C. A. No. 105 Speaker Output transformer in amplifier matched for 11 ohm voice coil impedance with 1,000 ohm field resistance Supplies dyn-amic speaker field of 110 voit D.C. at 110 mils. Undistorted output at 5 watts which is enough to handle at least three dyna-mic speakers. Amplifier operates on 110 20 50-60 cycle A.O. current. Excellent poke-up or radio sets.

Cat. No. 81 \$14.25

The Rotrola Electric Turntable and Pick-up

IURTITABLE and Fick-up Rotrola Electric Portable Phonograph using the famous Webster Pickup with a built in volume control Genuine G. E. Synchronous motor with the turntable locked in so that it will not spill when being moved. Special container for records is another added feature of this unit. The hings on this portable phonograph is of the plano type, stretch-ing clear acros the back. The case is constructed of the designed brown leath-erette with a reinforced pedded top To stand abuse. The handles and lock are of the heavy reinforced type. "On" and "off" switch also provided. For 110V. 60 Cycle A.C. current.





This unit mounts onto the Cowl under the Hood of your Automobile, and the control and receptacle for plugging in your Radio set mounts on the Dash. The actual installation is so simple that any-one can do it without any trouble by merely following the very clear instruc-tions furnished with each device. No drill-ing is necessary on the Coh, as the con-trol mounts by means of a Postive Set Screw. A pair of pliers and a screw driver are the only tools necessary.

Due to its muliplicity of uses, every Automobile and Boat Owner should have one of these units.

This converter will supply sufficient current to operate our push-pull 245 amplifier No. 107 described on page 50



The OFFICIAL RADIO SERVIOE MANUAL Drings to the radio trade practically every sole of which there is any record, including latest diagrams of test-ing equipment and mid-get radios. Not a single diagram which appeared in Volume 1 has been reprinted. in Volum reprinted.

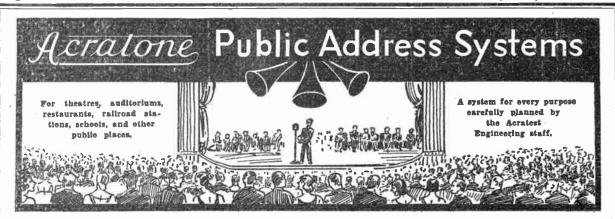
There are blank pages included throughout the book so that notes and sketches can be made if desired. A coupon page entitles the owner to have his questions answered free by a staff of radio enginears.

The Manual contains over 1,000 pages, with six supplements of C4 pages or more, mailed free every 60 days to owners for one year

With

Leatherette Cover

August-September, 1932



Popularly Priced !

The Federated Purchaser's engineers, in conjunction with the Acratest engineers, have cooperated in developing a complete line of inter-communicating and public address systems. The units incorporated in these systems are the highest quality and have been selected by Acratest Leboratories only after long tests under practical oper-ating conditions. These systems are the result of careful planning and thorough testing; are carefully matched and so designed as to give the highest efficient operation,

Acraphone Intercommunicator System No. 1

This system is recommended for inter-communication in factories, large offices, etc., where there is a noise level greater than what the human voice can over-come. The volume of this outfit is about 50% greater than No. 1. The same specifications can be used here as for the No. 1. This unit can also be used for small public address systems, recording and broadcast work.

For c'ch additional point of communica-tion is necessary to add one No. 2-A unit, consisting of a two-button micro-phone and Dynamic Speaker on a single pole double throw switch. It is necessary to use a 2-A for every point to and from which it is desired to communi-cate cate.

Ca£ No.	Description	List Price	Our Priss
24	Loftin - White 245 Amplifier	\$35.00	\$18.95
166	Utah AO Dynamic Speaker	25.00	7.95
209	Universal "B" Mi- crophone	\$5.00	14.70
6529	Acraphone Sr. Input Stage	15.00	5.30
248	Universal "K" Desk Mount	5.00	8.94
3622	Mike Extension Cord	.75	.85
	Totals	105.75	\$45.89

Our Price Complete \$43.00

Suggested Auxiliary Two Way Equipment for System No. 2

Universal Model "BB" Mike, No. 209.14.76 Single Pole Double Throw Knife Switch, Ne. 4177......

MAIL ORDERS TO See Terms on Page 5

ACRAPHONE Giant Auditorium Speech Amplifying System No. 2

Bystem No. 3 is ideal for operation at small dence halls, fungral parlors and portable public address work for instal-lation on trucks. It will give about 7½ watts undistorted output and cover an average city block in length. It has suf-ficient power to operate two or three dynamic speakers with very slight out-put drop, approximately 5 per cent. It can also be used for inter-commu-nication purposes, but is easily too great in volume. It is ideal for phonograph reproduction and microphone work, and will easily cover rooms and auditoriums

will easily cover rooms and auditoriums 100 ft. x 100 ft., or an auditorium seat-ing 1,000 to 1,500 people,

Cat. No.	Description	List Price	Our Price
101	Acratone 3 Stage		
	250 Amplifier	\$75.00	\$24.50
200	Universal Model	"BB"	
	Mlcrophone	25.00	14.70
6529	Acratest Sr. Output		
	Stage	15.00	5.50
224	"Acratest Floor		
	Stand	20.00	9.58
166	Utah Stadium AO		
	Dynamic Speaker	30.00	7.95
	Celotex Baffleboard,		
	24x24 inches	4.00	1.50
3623	Mike extension cord	1.75	.75
		-	

Totals.....\$170.75 \$60.20

Our Price for the **Complete** Outfit \$60.00

Suggested Auxiliary Equipment for System No. 3

Federated Purchaser Inc.

Carefully Planned!

having been sold to many large technical and sound laboratories, where they have met with the highest praise.

Acratest Laboratories does not claim straight line characteristics for its Amplifiers, as this is impossible if the auxiliary apparatus used is not of matched characteristics.

However, we do guarantee the best possible response characteristics for commercial units where input and output impedances are properly matched.

ACRAPHONE Auditorium, Theatre and Outdoor Model Sound System No. 3

Sound System No. 3 The Acratone 3 Stage Push-Puil 250 most economical Power Output system available on the present market. This price field. It is capable of reproducing the price field. It is capable of reproducing the price field. It is capable of reproducing the price field. It is capable of reproducing of expression of the price field of the price that the price field of the price field of the price of expression of 5000 people indoors of for audiences of 5000 people indoors of the obstained of any type. It is an and the obstained of any type. It is an ideally phonograph, radio or microphone, it is capable of an undistorted output of 1.3 waits. It will supply up to sit dy-namic speakers or 25 magnetic speakers. The using a single 127 for Microphones to putting out up to plus 35 D.B. with an absolute fidelity of toon, making i deally suited for recording purposes, working into a 5000 ohm record cutting table of more being on the price of the price table of more of the price of the price table of more of the price of the price table of putting out up to plus 35 D.B. with an absolute fidelity of toon, making i deally suited for recording purposes, working into a 5000 ohm record cutting table price of more of the price of the price the price of the price of the price of the price of the price the price of the price of the price of the price of the price table of putting on the price of the price of the price of the price table of putting on the price of the pric

No.	Description	List Price	Price
101	Acratone 3 stage		
210	250 Amplifier Universal Model	\$125.00	\$24.50
210	"K Microphone	50	24.50
5329	Acraphone Sr. Out-		
	put Stage	15.00	5.50
110	3-R. C. A. Photo-		
	phone A.C. Dynamic Speakers	50.00	25.00
333	Adjustable Floor		
	Stand	20.00	8.59
3622	Mike Extension Cord	1.75	.75
	Total	\$281 75	
	•		
Dal	r Price f	or	the
	-		
C	omplete (Dut	fit
	—		
	\$90.00	1	

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and distriction

Mr. Carling Prant -

Page 61

August-September, 1932

\$2.50

\$2.50

\$2.00

\$4.00

Price

13c

20c

33c

59c

Price Ea.

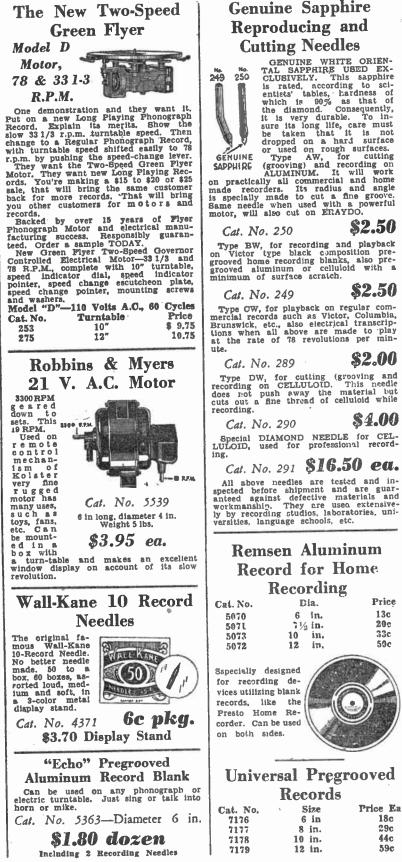
18c

29c

44c

59c







An excellent power tube socket. Fits all standard 50 watt tube bases. Maximum insulation is obtained by the use of heavy glazed isolantite base. All metal parts are nickel plated and the contacts are so erranged that connections are made either to the terminal screws or can be soldered on to the extended portion of the con-fact springs. All connections are night tact springs. All connections are plainly marked

Diameter of socket 3%. Two mounting holes.

Quartz Crystal Holder

This plug-in dust proof quartz crystal holder is ideally suited for the amateur and broadcast transmitters.



The inner dimension is 1-1-332" square. It will accommodate

\$2.25 Cat. No. 6627



This socket will fit all double ended tubes such as types 04A, 49, 51, 61, 69, etc. Heavy glazed isolantite material is used ior the mounting of the contacts and provides perfect insulation for high frequency work. All metal parts nickel plated.

MAIL ORDERS TO See Terms on Page



Federated Purchaser Inc.

Duplex Telephone Set Will Operate Efficiently Up to 1,000 Feet Cat. No. 6555 Price \$5.63 per set

Connecticut Duplex Telephones are the Connecticut Duplex Telephones are the result of 27 years experience in telephone manufacturing and are fully guaranteed for one year. Affords the easiest, simplest and least expensive means of communica-tion between two neighboring points. Simple to install. Requires 8 ordinary dry cells at each end. Cases are of heavy gauge steel, finished light green. Packed in attractive display carton with 1000 ft, of wire, staples and instruction book.

Uses for the Connecticut DUPLEX

Convenience Telephone

IN THE HOME

Bedroom to kitchen-Bedroom to maid's quarters-Upstairs and downstairs-House to garage-House to workshop-Neighbor to neighbor.

ON THE FARM

One farmhouse to another-House to barn-House to dairy-Home of one radio fan to that of another.

IN FACTORIES Manager's office to factory-One factory department to another.

The Connecticut **Duplex Telegraph Set**

Every boy will want this real telegraph set to practice on and learn the code. C on t in e ntal code on etched vlate in large, easily read fig-ures mounted beside key. Inst



ures mounied beside Key. Instruments may be used sepa-rately for practice. Just the set for Boy Scouts-can be carried on hikes and set up in camp in a few minutes. Manufac-tured and designed by engineers who have been building telegraph instruments for \$7 years. Each instrument has its own buzzer. Will operate efficiently up to 1000 feet. Mahogany finish with black enamel parts and gold trim. Packed in attractive display box with 50 feet of wire and complete instruction booklet. Weight complete, 4 lbs.

Cat. No. 6579 \$3.75 complete



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54850 NO 18

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Page 67

750 doz.

60c doz.

40c doz.

Size 2 in.

STOPPANI

COMPASS

Cat. No. 5303



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Page '68



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司法基金を知る。







Electric Soldering Irons

Blotorch

A11

1.

3

8.

time.

August-September, 1932



4142 Round Head

4288 Flat

4741

4742

4718

4744

4745

6-32

Machine Screws

85 per box.

Head 6-32

N. P. Machine

85 per box.

SCREWS

box.



.88 L

assessed a term of the

MAIL ORDERS TO See Terms on Page 5

Length

3½ in. 4½ in. 5½ in.

Cat. No.

6387 5368 5369



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Page 74

PERPETUK EDIELE

VOL. 2

VOL. 1

Radio's

1.

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book.

August-September, 1932

Laboratory

3.800 Words

and Terms

650 Elimstrations

\$2.19



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Page 73.



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			Ande from the best d insulated with the isls obtainable. Each		tains a single len wound and suital ALL ½ L	And the second s	7 G		
Gauge 18 20 22 24 26 28 30	Single C Cat. No. 6056 6057 6058 6059 6060 6061 6062	Cotton Price \$.15 .17 .18 .19 .24 .27 .33	Double Cotton Cat. No. Price 6063 \$.17 6064 .18 6065 .21 6066 .24 6067 .30 6063 .35 6069 .42	Singlo Silk (Green) Cat. No. Price 6077 \$.21 6078 .24 6079 .25 6080 .30 6081 .36 6082 .42 6083 .48	Double Silk (Green) Cat. No. Frice 6084 \$.27 6085 .30 6086 .36 6087 .42 6088 .54 6089 .66 6090 .84	Feet Per Spool 45 75 110 190 280 440 630		mel Price \$.15 .16 .17 .18 .19 .21 .23	Feet Per Spool 50 80 120 200 320 500 800

"Push Back" Wire Radio Hook-up Wire **Every Dealer and Service Man** Needs This Item A high grade hook-up



wire for general work. The 19-gauge wire is tinned, ready for soldering. Covered with paraffined push-back insulation. Black.

fised for wiring sets and general rpcair work. At this price you can afford to get 500 feet. Cat. No. Price 100-ft. Roil \$0.50 500-ft. Roll 2.00 1.000-ft. Roll 8.75 4408 4411 4412

anan Aant

Stranded Push-Back

Wire

ility lerin	is	desired.	Tinne	d for	quick	-103
.6434		Cat.	No.	4463		
		coii			• • • • •	.\$0.40



MAIL ORDERS TO AN See Terms on Page 5

Colored Rubber Covered Stranded Hook-Up Wire



Very flexible tinned wire covered with blue, yellow, green or red rubber. Ideal. for wiring or hooking up sets.

Each

11c

20c

Dozen

\$1.20

25 ft. 4405 4406 50 ft. 100 ft. 4407

2.23 4.50 40c **Radio Set Hook-Up Wire**

So many of our customers have asked is to supply them with the same type of hock-up wire that is used by the large production manufacturers of radio sets. This type of wire is unobtainable in the usual channels of trade and is made up only on order, which orders must be suf-ficiently large to make the wire on a production basis. We have arranged to stock this wire for the dealer and service-man trade at extremely low prices. Specifications

Specifications Stranded copper, TINNED; (for easy soldering): 1/64 rubber; glazed cotton braid. The braid is then lacquered, making it abso-lutely moisture it abso-moisture lutely moisture proof. The lac-quer also causes the braid to adhere permanently to the rubber.



VERY EASY STRIPPING ALL COLORS Packed on 250 ft. Spools.

Cat. No. 4430

1 Spool, 1 Color-250 ft.-95c 2 Spools, 2 Colors-500 ft.-\$1.75 4 Spools, 4 Colors-1,000 ft.-\$3.25

This is the same wire that is used by Atwater-Kent. Stewart-Warner, Majestic, Philco, RCA-Victor and all the large set Philco, RCA-V



Service Man's Handy Wire Assortment



complete assortment of wire lengths from 4 in. to from 4 in. to 15 in. of every iype of wire used in a ser-vice depart-ment. Contains back up with



Special Heavy Duty Rubber Covered Stranded Filament Lead Wire



For 11/2 and 21/2 volt filament leads and wherever a heavy flow of current is carried.

12 Gauge

Will carry

20 Amps.

at 110 Volts

Cat. No. 4459

14 Gauge Will carry 15 Amp. at 110 Volts

Cal. No. 4497 100 ft.

for 95c

100 ft. for 95c

Same wire as above also furnished in twisted pairs for A.C. leads and other uses where two conductors are required.

14 Gauge-Cat. No. 4495 12 Gauge-Cat. No. 4500

95c per 50 ft.

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Page 77

Page 78

August-September, 1932

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UNIVERSAL

60c per box of 10

Cat. No. 6488

\$1.20 per box of 10

Cat. No. 4212

4c each

Cat. No. 6114

Cat. No. 6957

1

I. C. A.

: 30c

MODERN VACUUM

TUBES

ant anter a state i beiter

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STREET,

50c

long.



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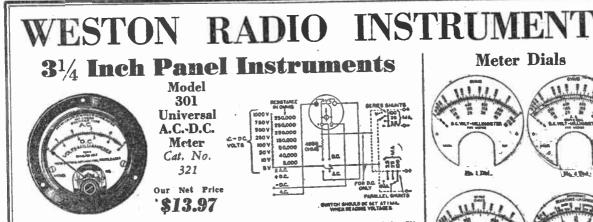
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See Terms on Page 5

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Designed for the serviceman who desires to build a multi-range instrument to fill particular testing requirements. It is for use with external shunts and external stances for measuring D.C. voltages and currents and A.C. voltages. his resistances for measuring

The instrument is of the permanent magnet moving coll type with a self-contained copper oxide rectifier for the A.C. measurements. It is self-contained for 5 volts and 1 milliampere A.C. and 50 millivolts and I milliampere D.C. It has a double scale-one for A.C. and the other for D.C., each calibrated 0-5 volts.

A connection diagram giving suggested ranges is shown below, however the instru-ment, shunts and resistances may be purchased separately and the meter built up for any range desired.

This high grade matched line of meters offers an exceptionally wide range selec-tion in D.C., A.C. and Thermo-Couple uppe instruments. Because of their inmit-able Weston design and workmanship they are extensively used throughout the entire world on radio panels and in the allied electrical industries. Ordinarily they are supplied in flush type but can also be furnished in surface type, if desired These meters may be specified with Bake-tite cases at no additional charge.

D.C. INSTRUMENTS-MODEL \$01.--Permanent magnit moving coll type. Ac-curate within 2%. They are supplied as Voltmeters, Volt-Ohmmeters, Ammeters Milliam meters and Microammeters. Weight approximately 8 ounces.

weight approximately 8 ounces. A.C. INSTRUMENTS-MODEL 301 BEC-TIFIER TYPE.-Extremely high sensitivity A. C. instruments are obtained by using a full-wire copper oride rectifier in conjunc-tion with a standard Model 301 D.C. movement. They have the excellent damp-ing, even scale characceristics and high over-load capacities of the D.C. instru-ments. inents.

Temperature errors at ordinary room

Model 301 D.C. Voltmeters Ranges Net Price 1, 1½, 2, 3, 5, 10, 15, 25, 50 and \$6.58 100 Volts 7.35 250 \$.09 \$.09 500 11.76 \$1.76
Model 301 Volt-Ohmmeter
Resistance Net Volts Ohm Scale Ohms per volt Price 4.5 0-100,000 10000 \$8.82 15 0-500,000 1000 \$8.82
Model D.C. Ammeters
Panges Net Price
1, 1½, 3, 5, 10, 20, 30, 50 Am- peres (have a drop of +
Model 31 D.C. Voltmeters
Resistance 1000 Ohms
per Volt
Range Net Price 5, 10, 25, 50, 100 \$8.52 150, 200, 250 10.66 500 12.87 750 15.38 1000 19.20

temperatures and frequency errors over the power frequency range of 25 to 133 cycles are negligible. Frequency errors on higher frequencies up to 35,000 cycles may be corrected for as the instrument indi-cations decrease approximately % of 1% for each thousand cycles per second.

for each thousand cycles per second. MODEL 425 A.C. AND D.C. INSTEU-MENTS.—These instruments are of tha thermosouple type. The ammeters are for use on D.C. and on A.C. of any frequency. The milliammeters and Thermo-Galvano-meter are for use on A.O. only. They may also be used on any frequency without im-pairing their accuracy. These instruments are accurate with 2%. Approximate weight 6 ounces.

MODEL 476 A.C. INSTRUMENTS.-Movable iron type for A.C. only. Sup-plied as Voltmeters, Ammeters and Mil-ilammeters. They are accurate within 2%. MODEL 476 CONDENSEE METERS.-These meters are calibrated to read the capacity of condensers direct in micro-farads. They are of the movable iron type and are accurate within 3% when used on the voltage for which they are adjusted.

Model 301 D.C. Milliammeters Range Net Pr'r3 1, 1½, 2, 3
Rectifier Type Model 301 Voltmeters 1000 Ohms per Volt Ranga Net Price 3, 5, 15 \$10.29 50, 100, 150 11.03 203 14.09
2000 Ohms per Volt 1. 1½, 3, 5, 15 11.03 50 12.86 100 13.60
Rectifier Type 301 Milliammeters Range Net Price 1, 2, 5 \$0.20
Model 425 Ammeters Range Net Price 1, 1½, 2, 5, 10, 20

Federated Purchaser Inc.

Note:---We are authorized distributors for a Weston and Jewell instruments. Only a few pop A complete catalog will be sent free on request.

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Cat. No. 6799 Type D1 For the 1 mil D.C. with 27 ohm inter-nal resistance (27 milli-volt). Has three scale readings and an ohm scale to to 100,000 using a 4½ volt battery. Type D2 Cat. No. 6800 Same at D1 except for the lower scales. Type D3 Cat. No. 6801 For the 1 mil. A.C. Rectified (not the universal). This dial has two scales for A.C. volts from which many can be made by adding imaginary zeros. 5,000 to 1 meg. A.C. ohms, capacity range .0004 to 7 microfarads. Uses current supply from 115 V. 60 cy, line. Hookup fur-nished.

No. 3 Dial

Cat. No. 6802 Type D4 Cat. No. 6802 A special arrangement to allow the reading of many ranges of A.C. voltage and current and D.C. voltage and cur-rent from only one set of numerical fig-ures, the scale in the center being for A.C. The main A.O. scale divisions con-nect to the D.C. divisions of the same value. At the top is a 0 to 100.000 D.C. scale using a 4½ V. battery. By using a 10 rill. shunt across the meter and readjusting the circuit resistance, a 0 to 100.000 ohm scale will result. Our Price for All Types Type D4

Our Price for All Types 45c each

Dials are of extra heavy Bristol board. When mounted on the back of your ori-ginal dial, will compare to those of larger and finar meters.

and pyer meters.
(Continued from preceding column) Model 425 Milliammeters Range Net Price 120, 250, 500
120, 250, 500
150
Model 476 Condenser Meter Range 15, 1.5
Model 476 A.C. Ammeters Renge Net Price Net Price 1, 1%, 2, 5, 10, 20
Model 476 Milliammeters 15, 25, 50. 100, 250, 500 \$5.88 Range Net Price

Page 86

August-September, 1932

THE FAMOUS JEWELL

Trio Panel Mounting Instrumentas



The Jewell Trio of radio instruments is popular for building special test panels and service instruments for use on experi-terns 88, 63 and 76 comprise a new series of instruments available in flush type bakelite cases that duplicate the old Patterns 64, 64 and 74 in metal cases. Patterns 88, 66 and 78 are furnished for mounting in cases of molded bakelite. Fiange diameter, 3% in. case diameter, 3% in. Approximate shipping weight 3 lbs. When ordering Jewell meters, please note that types Nos. 54, 64 and 74 have metal cases. Specify which type you desire. Externally adjustable, the pointer or needle can be exactly placed in the zero position which may vary slightly owing to normal changes in temperature.

Pattern 88 (Bakelite) D.C. Instruments

High range instruments are supplied with external resistors, having molded bakelite heads which are amply large to take care of various requirements. These instruments are not recommended for testing the voltage of B power supply.

testing the voltage of B power supply.
Cat. List Our
No. Price Price
514 0-8, 10, 15, 30, 60 volts \$7.50 \$5.51
515 0-150 volta 9.50 6.98
516 0-300 volts 12.00 8.82
454 0-500 volts 15.50 11.89
455 0-500 volts 19.00 18.97
519 0-1000 volts
457 0-1500 volts 28.50 19.96
458 0-2000 volts 34.50 25.55
459 0-3, 5, 10, 15, 25, 50, 100,
150, 200, 250, 300, 500
milliamperes 7.50 5.51
460 0-1 milliamperes 9.00 6.61
461 0-1.5 milliamperes 9.00 6.61
463 0-200, 300, 500 micro-
amperes
464 0-1, 1.5, 2, 3, 5, 10 and 15
amperes 7.50 5.51
465 50-0-50 galvanometer 9.00 6.61
The above meters can also be furnished
with metal cases, 3% in. flange, 3 in. case
at same prices. Specify Type 54 for metal.

JEWELL Pattern 88 Rectifier

Type A.C. Instrument The pattern 88 consists of a sensitive Jewell D'Argonval direct current instru-ment used in conjunction with a self-contained full wave copper oxide rectifier unit.

	Milliammeters	l .
Cat. No.	Range	Net Price
. 478	I	\$9.38
479	1.5	9.38
480	2.	9.38
481	5.	9.38
182	0-500 Microammeter	10.88
	Voltmeters	
	1000 OHMS PER VOI	
Cat. No.	Range	Net Price
483	5	\$10.50
484	15	10.50
685		11.25
These 1	oltmeters also supplies	1 2000 ohms
per volt	at \$1.68 additional.	

JEWELL Pattern 68 Radio

Frequency Instruments PATTEEN 68 RADIO FREQUENCY

INSTRUMENT							
Pattern *9 furnished in bakelite cases.							
flush type only. Flange diameter, 31/2 in.,							
Case diameter, 234 in. Approximate ship-							
ping weight, 3 lbs.							
Cat. List Our							
No. Price Price							
466 0-5, 1, 1.5, 2, 2.5, 8, 8,							
10. 15 amperes\$13.35 \$9.80							
467 0-100 galvanometer, 15.00 11.02							

MAIL ORDERS TO See Terms on Page 5



PATTERN 78 A. C. INSTRUMENTS Cat. List Οπ Price Price No.
 A68
 0-3, 5, 10, 16, 20 and 30 volts
 \$7.50

 469
 0-150 volts
 \$7.50

 470
 0-300 volts
 \$12.00

 471
 0-3-5-150 Triple Range
 \$200
 \$5.51

6.98

metal.

JEWELL Pattern 89 Ohmmeter-Pattern 89 Voltmeter



For the radio serviceman who relies upon resistance, con-tinuity, and inde-pendent voltage tests the Fattern 89 Ohm-meter and the Fat-tern 89 Voltmeter provide a combina-tion that is un-equaled for conveni-ence accuracy and upon resistance, con tinuity, and inde equate for conveni-ence, accuracy and speed in testing by any other equipment of comparable price. These instruments are mounted in cases of molded batalite of molded bakelite with suitable termi-nals, as illustrated.

with suitable termi-nals, as illustrated. A 1½-volt cell, mounted inside the case of the Pattern 39 Ohnmeter makes it in-dependent of outside sources of energy. A magnetic shunt provides convenient adjustment to compensate for variations a cell voltage. Since this adjustment way be made before each series of tests, very accurate direct resistance readings are assured.

Approximate shipping weight, 3 lbs.

Cat. No.	Type List Type Price	Our Price
509	Pat. 98 Ohmmeter, with either 0-1000, 0-3000, 0-10,000 or 0-30,00 ohm ranges, including battery	
	and test\$16.50	\$12.13
510 512	0-100,000 ohms 19.50 0-5,000-50,000 ohms (dou-	14.84
	ble scale) 19.50	14.34
513	PAT. NO. 89 VOLTMETER 0-30-300-600 volts (triple range), 1000 ohms per	
	volt, with test leads 25.00	18.75





Jewell Pattern 444 Analyzer

Complete with accessories; data book and pad of tube charts

Cat. No. 315

Our Price \$82.32

Jewell's Newest Set Tester and Analyzer, tests all types of tubes including triodes, pentodes and tetrodes, and both plate: of a 230 rectifier tube without the use of adapter.

This new Jewell Analyzer is the most complete radio service instrument ever built.

built. Its compact, rugged construction makes it easy to carry and enables it to stand up under the hardships of service work, and its professional appearance gives prestige to the radio service man. This new Jewell Set Analyzer and Tube Checker marks a big step forward in Radio Testing Equipment. With it practically every test can be made with a degree of accuracy never before attained. It incorporates features not found on any other type of radio set tester.

radio set tester. The Pattern No. 444 tests every circuit in any receiver, regardless of the type of in any receiver, regardless of the type of tubes used. Full wave rectifier, variable-mu, output bentode, and pentodes having a direct connected fifth element, may be accurately tested under actual operating conditions.

A.C. and D.C. circuit tests are con-trolled by separate rotary selector switches making it necessary to set only one switch to obtain any desired test.

The following measuring ranges are pro-vided: A.C.: 0-4-3 annores; 0-20-100 milliamperes; 0-4-8-160-800 volts. D. C.: 0-12-60-120 milliamperes: 0-6-12-30-60-120-300-600 volts; 0-1600-100,000 ohms; and low-medium-high output renges.

Pattern 209 Checker

Tests Screen-Grid Tubes

For radio dealers who require an ac-curate and effective tube checker at a moderate at price. Operates on a 50-60 cycle, 110-120 volt A.C. Needs price.

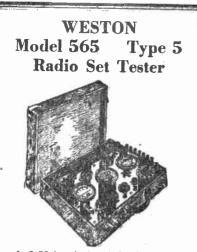


120 volt A.C. Needs no Latteries. Has a D.C. meter with six tube sockets in a case of molded bakelite. The sockets provide filament voltages of 1.5, 2.5, 3.3, 5 and 7.5 to 4-proung sockets, and 2.5 to a 5-proug socket. Terminals are provided for tubes with terminals at the top, Makes all tests. Correct values of readings are given in an engraved chart on the face of the tube checker.





Federated Purchaser Inc.



A 3-Meter test set having an oscilator, a checker for A.C.-D.C. tubes and a complete radio set tester for all types of A.C.-D.C. sets. Checks Checks pentodes without adapters.

SERVICING SCOPE OF WESTON MODEL 565 Tests With Tester Plug Inserted in Radio Set

Radio Set Radio Set All Filament Voltages . . All Heater Voltages . . . Cathole Voltages . . Four Bias Voltages . . . Two Control Grid Voltages . . . Two Plate Voltages . . Three Plate Current Rauges . . . Blas Voltage on D.C. Sets with Reversed Fila-nents . . . Convenient Readings of both Plates of Rectifier Tubes . . Two Screen Current Rauges . . . Space Charge Grid Volts on 250-volt rauge . . . Charge Grid Current on 25 M.A. range. External Tests (hat can be made with . Model 505 Moasurement of Power Transformer up to 1,000 Volts A.C. Ling Voltage Measurements on the A.C.

to 1,000 Volts A.C. Line Voltage Measurements on the A.C. Meter. Heater Voltage at Power Pack—Three Ranges on D.C. Milliammeter. Plate Current at 'B' Supply Taps—Three Ranges on D.C. Milliammeter. "B' Supply at Power Pack—Four Ranges on D.O. Volmeter. "A'. 'B' and "C" Battery Voltages— Six Ranges on D.C. Voltmeter. Continuity Tests—Using Self-contained 4¹/₂ Volt Battery and the D.C. Volt-Meter with a resistance of either 1000 Ohms per Volt as desired. Resistance Measurements—The D.C. Volt-meter also serves as a Direct Reading Ohmmeter with ranges of 0-10,000 or 0-100,000 Ohms. Condenser Measurements can be made from ¹/₄ to 6 Microfarads—from 110 Volts A.C. line without resistors or adapters.

Voits A.C. hile without resistors or adapters.
 Tube Checker—For all Filament and Heater Type Tubes—Checker operates directly from any 50 to 60 Cycle, 90 to 130 Volt A.C. Line.
 Input to Radio Set—On 4 or 8 Ampere A.C. Range and Small A.C. Measurements such as Currents in Voice Coil of Speaker, etc., using the A. C. 100 MA Range.
 Filament or Heater Current of A. C. Tubes on 4 Ampere A. C. Ammeter.
 R. F. Oscillator—Three Frequencies—For Neutralizing and Synchronizing and Testing Radio Sets when no broadcast signal is available (Grid Dip Meter.)
 SERVICE MANTIAL

SERVICE MANUAL

SEEVICE MANUAL A complete Scr-vice Manual comes with every Model 565-Ty ve 6, It tells the probable causes of poor re-ccglion, h ow to locate them and what te do to fix them. It is more than an instruc-thon book. It is a practical service man's handbook. practical service man's handbook.

Cat. No. 320 Our Net Price \$137.82

JEWELL Pattern 540 Portable **Tube Seller**

and the second second



Dealers are using tube testing in homes to increase tube sales and to locate new set prospects. The Je well Pattern 540 Fortable Tube-Seller is ideal for this ser-vice, because a three color scale similar to the scale of the famous Pattern 588 is provided. This scale reads tube condition direct in terms of Satisfactory, Deubtful, and Unsatisfactory.

The salesman who shows the definite method in which the Pattern 540 reads tube condition secures admission into the most skeptical homes, because radio set owners really do want to know the con-dition of their tubes.

Gives direct reading for all types of tubes, including variable-mu and stand-ard type screen grid, full-wave rectifier, and output pentode tubes with special adapter.

Operation is for 110 volt A.C. line, making tube tests entirely independent of the receiver. The true condition of the tube is read directly from a single meter; the reading of two values and the sub-traction of one from the other is elim-imated inated.

Line voltage indicating meter and ad-justment compensate for fluctuations of line voltage from 105 to 135 volts. Lights in series with the short-check appliests in-dicate w hi o h element of the tube is shorted.

List Price \$75.00**

Cat. No. 322



Copper Oxide Rectifier For D. C. Meter Conversion

Size, ½ in. x ½ in.





C 1

53 53

55

portable portable meters are of-fered in vari-gus ranges for particular purposes. The A.C Voltmeters are 02 the repulsion type and can be used with e qual accu-racy for either

Readri

racy for either A.C. or D.C. testing. This type should reating. This type should reations. Readrite A.C. Voltmeters are accurately calibrated and have very uniform divisions throughout the scale lengths. The higher reading voltmeters contain over 100 ohms per volt resistance. The D.C. Voltmeters are of the polarised vane type. Standard package portable meters 25. Average weight 20 lbs.

READRITE

Portable Type Voltmeters

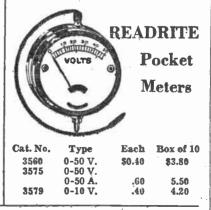
D.C. VOLTMETERS Description

With 2 in Cas

at. No.	List Price	Our Price
881	Type 346, for testing "B" Eliminators-0-300 V\$4.00	\$2,40
882	Type 347, for testing "B" Bliminators-0-500 V 8.00	8.99
	With 21/2 in. Base	
383 884	Type 349-0-300 Volts 8.00 Type 246P-0-60-300 Volts.	1.50
	92,640 Ohms, 5.00	3.00

A.C.-D.C. VOLTMETERS

0-4	Tiet	Our
Cat.		
No.	Price	Price
5385	For testing A.O. Ourrent	
	Supply Line-0-150 Volts	
	-Type 348\$4.00	\$2.40
6567	Type 355P-0-10-140 Volts	4
0001	A.C	2,40
5386	0-600 Volts A.CD.C 6.00	8.60
5387	0-150-750 Volts A.CD.C. 8.00	4.80
5388	0-300 Volts A.CD.C 5.00	3.00
5390	0-60-300 Volts (300 Ohms	
	per Volt) 4.50	2.70
5391	Type 249-0-750 V. A.C.,	
	Panel Mount 7.00	4.20
5392	0-300 D.C. Milliammeter	
• - ·	(.8 Ohm), Panel Mount	
	-Type 399 1.00	.00
5398	0-50 V. UX Socket Test-	
0000	ing Grid Voltmeter	
	(15,400 Ohms) — Type	
		1.80
	150	T-04
5894	0-10 V, Filament Meter	
	for UX Sockets (100	
	Ohms)-Type 152 2.50	1,50



'All set analyzers are shipped in original factory sealed cartons. Repairs and adjustments must be taken up with factory.



Our Price \$11.76 Tests Screen Grid Tubes

This tester is especially designed for the new sets with 224 and 245 tubes. It is equipped with three double reading instruments; a militameter 0-20-100, a D.C. colt-meter 0-60-300, and repulsion type A.C.-D.C. voltmeter 0-10-140. This latter instrument should not be confused with the vane type, with its restricted application. A grid bias switch is pro-vided vided.

Extra cords and tip jack connections permit the use of each meter individually. Also checks line voltage. Very compact and complete.

The extra cords are carried in the metal cover, which has a leather handle. Size 4x8/yx3/4 in. high. Cover finished in baked black enamel, wrinkle finish.

Readrite Output A.C. Voltmeter Copper-oxide Rectifier Type

<section-header><text><image><image><text><text>

PANEL TYPE Cat. No. 487 List Price \$5.00

\$2.94



The No. 430 Display Gase is designed for use in connection with No. 406 or No. 407 Counter Tube Testers. The metal Display Case contains a color chart pre-cision meter for direct reading of tubes and batteries. An A. C. Voltmeter with rheostat controls the line voltage. An ON and OFF togele switch, tip jacks, and outlet receptable complete the equipment of the No. 430 Display Case. The No. 407 Tube and Short Tester is

Readrite Customer

Tube Tester No. 430

\$23.52 NET TO DEALER

Complete

with

No. 407

Tube and

Short Tester

\$41.36

NET TO DEALER

of the No. 430 Display Case. The No. 407 Tube and Short Tester is plugged into the receptacle and the tip jacks. The meter on this tester is then used for short testing of all tubes under operating conditions. The tester can be lifted out of the Display Case and used for portable testing as a separate instru-ment. The Display Case contains a con-venient meter which the customer can ob-serve and readily understand. It is beau-tifully finished in baked enamel. It is 10" high, and the base is 15 x 11".

10° high, and the base is 15 x 11°. This Customer Display Tester will not only increase your tube sales, but will add that customer satisfaction every dealer strives to obtain and hold. At the low price, no dealer can aford to be without this complete visible customer tube tester, which will add as much pres-tige to his tube testing equipment as the more elaborate testers at much higher cost. cost.

cost. The No. 407 is designed to take care of all the tubes, including the new six prong type, testing them without the use of adapters. It is the only tester on the market which tests rectifier tubes by the plate current change method.



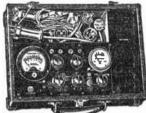
For servicing electrically operated re-frigerators, ironing matchines, water pumps, oil burners, stokers, ventilating systems, ranges and general household appliances.

Contains input and output amperes, A. C. Ammeter reading up to 20 amps., A. O. Voltmeter reading up to 300 volts, and a complete direct reading Ohmmeter 0-40, 0-10,000 ohms for continuity testing.

READRITE Continuity and Capacity Tester No. 1000

August-September, 1932

For Set Analyzing, Testing Resistance and Capacity



The Modern Set Analyzer. Contains Ohmmeter 0-6,000,000 ohms, and Capacity Meter, .008 to 10 mfds., both direct read-ing. A unique and exclusive circuit is employed, providing a new method of set analysis. No serviceman will fail to rec-ognize its superiority and outstanding ad-vantages. Every serviceman needs this instrument to properly test modern re-ceiving sets.

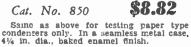
vantages. Every serviceman needs this instrument to properly test modern re-ceiving sets. The No. 1000 Tester combines the very latest method into one instrument for testing resistances, continuity and capac-ity of radio receiving sets. The 3¼" D C, precision meter has full scale deficction of one m. a. The lower scale is divided into kliohms, 003 to 3. This scale ar-rangement makes easy reading, and re-sistance tests are quickly made with ex-treme accuracy. Provision is made for increasing each scale reading by a mul-tiple of two, and also for dividing the lower scale by 10, thereby giving good scale divisions of resistance measure-ments from 0 to 6 million ohms. The A. C, meter is calibrated for reading direct-ly in microfarads. The lower scale read-ing is .008 to .25. The upper scale read-ing is .008 to .25. The instrument is calibrated for use on 60 cycle at 110 volts. The rheostat regulates the correct voltage to be applied. *Cat. No. 1000*

Cat. No. 1000 List Price \$55.00 NET TO DEALER \$32.34

Something New for **Testing Condensers** Electrolytic-Paper Types



No. 850 Capacity Tester contains one D.C. and one A.C. meter. Reads directly the capacity of condensers. The A.C. meter connects to A.C. supply line and adjusts to 100 volts. Tests paper type condensers .008 to 10 mtds. The D.C. voltmeter connects to rectifier tube and adjusts to 300 volts. Belector switch pro-vides for measuring voltage, also forming and testing milliampere capacity of elec-trolytic condensers. The maximum read-ing for a good electrolytic condenser is 2 m.a. per midd. In a seamless metal case, with or without cover. A very practical and convenient instrument.







A necessary serviceing oscillator for ad-justing r. f. and i. f. circuits.

justing r. f. and 1. f. circuits. Used to align r.f. gang condensers, lo-cate defective r.f. transformers, adjust i.f. transformers, check oscillator stage and determine sensitivity of a receiver. A modulated instrument which covers the broadcast band 550-15,00 k.c. and the intermediate circuit made with trimmer condenser through panel.

Furnished with 22½ v. and 3 v. bat-teries. One 30 tube is used. Cable is carried in the removable cover. Full op-erating instructions and wiring diagram included.

Built to a high standard. All parts are sturdy and strongly built to remain per-manently accurate. A modern instru-ment for all old and new sets. tolETAOINtaoinshrdiue

In leatherette case, 6x12x15 in. Weight, 8 lbs.

Complete Less Output Meter

List Price. \$30.00

Cat. No. 550

Our Price \$17.64 Complete With Output Meter

List Price, \$35.00

Cat. No. 551

Our Price \$20.58

READRITE **Resistance Meter**

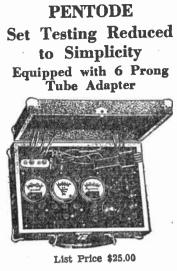
No. 501 Resist-No. 501 Resist-ance meter is used in above ohmanster. Fur-nished either with wide flange as shown or narrow rim type for rear clamping. A choroughly re-ishe he instruciamp.... thoroughly re-iable instru-ment at a pop-nrice. Re-



ment at a pup-ular price. Re-guires three small flashlight cells, which with resist-ance to be measured, are connected in series with meter. Used for testing re-sistances in radio receiving sets, and cir-cuits generally. Pine for continuity tests.

Cat. No. 5389 List Price, \$2.50 Our Price \$1.47

MAIL ORDERS TO See Terms on Page 5



and a state

. .

Cat. No. 710

Our Price \$14.70

Gur Price \$14.70 Those three meter analyzers are furphed with a practical selector switch for checking all parts of the tube circuits of checking all parts of the tube circuits and accurately. Plate current, filament are measured. The grid swing test for storen-grid and nother for other tubes, makes testing of all type tubes simple of thorough. A 44-volt grid battery is furnished. The battery is used for the stars measured, current, filament are neasured, further tubes, makes testing of all type tubes simple of thorough. A 44-volt grid battery is furnished. The battery is used for the stars measuring resistances up to 100,000 measuring resistances with leatherette of A. C. volts and D. C. volts, 0-10-140 measured in a storeg case with leatherette fus of the storeg case with leatherette fus of the storeg case with leatherette fus or the beginner for the expert service, man of the battery is used in a storeg case. The eight scale readings of the store accurately measured on the one meter. Torvering Attractive, Compact, Complet is every need for the expert service, man or the beginner for radio set analyze.

The No. 600 contains the same equip-ment as No. 700. The carrying case is largest with leatherette covering and equipped with lock. Rooms is provided for carrying tubes, tools and supplies. The test equipment and panel is in a removable tray in the top of the case. The tray equipment may be used separ-ately as a complete test panel for shop purposes. Size: 14½x7x7½.

Cat. No. 610

List Price \$30.00

Our Price \$17.64

We carry a complete line of "Readrite" Analyzers, Tube Testers and Meters. Our discount is 40.2% from list prices.

Federated Purchaser Inc.



Cat. No. 406 List Price \$25.00

Our Price \$14.70

Dealers and servicemen use the No. 406 Tester for checking all new and old stached to panel gives simple instruc-tions. Anyone can operate. A single push button provides two plate current readings for determining the conductance and worth of a tube. A new and out-standing feature applies the same test to rectifier as all other types of tubes. The simplified single scale meter is readings. The meter is connected in tip jacks. Attached to the meter is a small protecting fuse. A plot tight is also directly beneath the meter for il-luminating the dial. Both the lamp and fuse are easily renewed by detaching the meter. These are features which will applate to every user. Rejection and ac-ceptance of tubes tested in the No. 406 will be equally as satisfacory as with

Tube and Short Tester Combined Model 407

The No. 407 tester combines with the No. 406 described above, a complete short test of the tube. All shorts, gas and leakage tests are made with the tube heated under operating conditions. Tube is tested for its worth in the same socket used for short testing. The pilot light for illuminating the dial is also used to in-diate the shorts, gas and leakage con-dition. dition.

Cat. No. 407

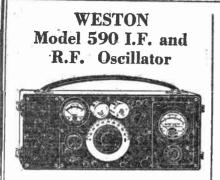
List Price \$30.00

Our Price \$17.64

The cases for above testers are strongly The cases for above testers are strongly built, with re-inforced corners and have rubber feet. The leatherette covering and trim makes up a very attractive in-strument. The cover is removable and the leather handle is provided for por-table use. Shipping weight ten pounds each. One extra ¼ amp. small fuse is supplied.

> 25 PARK PLACE, N. Y. C. or to our nearest branch

Fage 90



A New Weston Instrument for Aligning I.F. Stages — Aligning of Gang Condensers — Determining Sensitivity Condensers — Determining Sensitivity of Receivers — Checking R.F. Trans-formers and Condensers — Making Selectivity Tests and Checking the Oscillator Stage of Radio Receivers

The new Weston Model 590 Oscillator is a very complete and practical signal gen-erator. It has an intermediate frequency range of approximately 1/10 to 200 kilo-cycles and a broadcast range of 550-1500 kilocycles. Frequencies between 200 and 550, and above 1600 kilocycles may be ob-tained by means of harmonics.

tained by means of harmonics. The oscillator is equipped with an in-strument which is mounted on the panel and which serves as a Grid Dip Milliam-meter, Filament Voltmeter and Plate Volt-meter. This instrument remains in the grid circuit at all times unless connected across the Plate or Filament circuits by means of push button switches. Two type '30 tubes are used in the os-eillator, one for the R.F. and the other to modulate the R.F. to produce an aud-ible note of 400 cycles with 30% modula-tion. The output of the oscillator is con-trolled by an especially designed attenu-ator.

trolled by an especially designed attenu-ator. The batteries for operating the oscil-lator are contained in a shielded com-partment in one end of the case. They consist of an ordinary 22½ volt "B" bat-tery and four 1½ volt unit cells common-ly used in flashlights, which are connected automatically when inserted in their com-partment and which will give over 20 hours of continuous operation.

bours of continuous operation. An output meter is a necessary accession sory for this instrument and a compart-ment has been provided in the case for the Weston Model 571 which can be pur-chased with the oscillator as shown above for \$22.50 additional. Dimensions: 16!4x6%x55% inches for proximate weight, 15 pounds. The Grid Dip Millianmeter is particu-larly important. It assures the service man that the oscillator is definitely oper-ating and that when no output is obtained from the radio receiver it is the latter which is at fault. It also makes it pos-sible to test each stage of the R.F. ampli-fier individually.

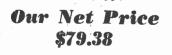
shiple to test each stage of the R.F. ampli-fler individually. The Filament Voltmeter can be used to keep the filament voltage constant at two. volts which is necessary it maintain ac-curate chibration of the oscillator and obtain maximum battery and tube life.

The attenuator is adjustable from prac-tically zero up to its maximum range by smooth, gradual changes and not by steps. This makes it possible to obtain any de-gree of audibility desired.

Because it produces signals above 1500 K.C. it can be used in testing short wave adapters and receivers.

Model 590 Oscillator without Output Meter with tubes less batteries.

Cat. No. 590



MAIL ORDERS TO 628 Federated Purchaser Inc.



Dealers and servicemen use hte No. 406 Tester for checking all new and old tubes used in receiving sets. Test card at-tached to panel gives simple instruc-tions. Anyone can cerate. A single push button provides two plate current readings for determining the conduct-ance and worth of a tube. A new and outstanding feature applies the same test to rectifier as all ohter types of tubes. A separate push button provides for testing both plates of '80 type tubes. The simplified snigle scale meter is made possible by the wide change in readings. The meter is connected in tip jacks. Attached to the meter is a small protecting fuse. A pilot light is also during the dial.

\$14.70 Cat. No. 406

TUBE AND SHORT TESTER COMBINED

The No. 407 tube tester combines with the No. 406 described above, a complete short test of the tube. All shorts, gas and leakage tests are made with the tube heated under operating conditions. Tube is fested for its worth in the same socket used for short testing. The pilot light for illuminating the dial is also used to indicate the shorts, gas and leakage condition.

Cat. No. 407 \$17.64

No. 405 Tube Tester is similar to No. 406, but has a two scale meter and 41/2 volt grid battery. \$14.70

Cat. No. 405

READRITE Direct Reading Ohmmeters Models 500-502

These ohmineters are complete with a small 3-cell flash-rent dain is negligi-light battery; cur-ble. Tesus resist-ances up to 10,000 ohms. Model 500 tests resistances by direct reading up to 10,000 ohms. Model 502 has a second scal



10,000 ohms. Model 502 has a second scale for the dit iow re-sistances up to 40 ohms. In addition to the higher resistance of 10,000 ohms. Voice colls of dynamic speakers and shorted turns of .f. transformers are tested best on the low range 0-40 ohms. Rheostat knob adjusts the needle to full scale. Wire leads are furnished for con-tinuity tests. A high grade instrument, Case is beautiful baked ename! finish, seamlees steel, 4 inch diameter. Weighs but one pound. Indispensable for service work. Cat. No.

Range Lint Net 5380 0-10,000 \$6.00 \$3.53 0-10,000 & 0-40 7.00 6960 4.12 'Angust-September; 1932



SERVICE MANUAL

A complete Service Manual comes with every Model 666-Type 3. It tells the probable causes of poor reception, how to locate them and what to do to fix them. It is more than an instruction book. It is a practical service man's handbook. This service manual is made in loose-leaf form and additional infor-mation is forwarded from time to time to keep it up-to-date.

Cat. No. 318

Our Net Price \$84.53

SERVICING CING SCOPE OF WESTON MODEL 566-TYPE 3

TESTS WITH TESTER PLUG INSERTED IN RADIO SET

EXTERNAL TESTS THAT CAN BE MADE WITH MODEL 566

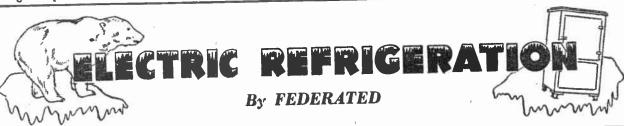
Measurement of Power Transformer up to 1,000 Volts A.C.

Line Voltage Measurements on the A.C.

- Line Voltage Measurements on the A.C. Meter. Heater Voltage at Power Pack Three Ranges on A.C. Meter. Plate Current at "B" Supply Taps-Three Ranges on D.C. Meter. "B" Supply at Power Pack-Three Ranges on D.C. Voltmeter. "A", "B" and "C" Battery Voltages-Six Ranges on D.C. Voltmeter. Continuity Tests-Using Self-contained 4½ Volt Battery and the D.C. Volt-meter with a resistance of either 1,000 or 100 ohms per volt as desired. Resistance Measurements-The D.C. Volt-
- Resistance Measurements—The D.O. Volt-meter also server as a Direct Reading Ohumeter with Ranges of 0-10,000 or 0-100,000 Ohms.

- 0-100,000 Ohms. Condenser Measurements can be made from .001 (By Pass) to 2 Microfarads --from 110 Volts A.C. Line without re-sistors or adapters. Tube Checker for all Filament and Heater Type Tubes under the same condition as exists when in their sockets. Input to Radio Set-On 4 Ampere A.C. Range and Small A.C. Measurements such as Currents in Voice Coil or Speak-er, etc., using the A.C. 100 or 20 MA. range.
- Rectifier Type Output Meter-Range 100-5 Volts.

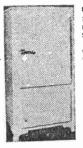
25 PARK PLACE, N. Y. C. or to our nearest branch



By special arrangement with a prominent, long established manufacturer with over a quarter century of successful electric refrigerator experience back of his product, we are able to offer our customers the Federated Electric Refrigerator. offer our customers the Federated Electric Refrigerator. Behind each Federated Refrigerator stands a time tested repu-tation for unexcelled quality and performance dating back to the pioneer days of the industry. Everything that only long years of knowing how can give to a product, is built into every Federated Refrigerator—sturdy ruggedness, capacity for long, enduring service, simplicity and economy of operation, years of satisfaction. All Federated Refrigerator cabinets are known the world over for their distinguished beauty, quality and durability.

THE CABINET

Built and insulated so as to properly maintain an even temperature at all times. Exterior and Interior Walis 18 gauge steel. Improved type of insulation between walls. A ir



and rubber cushion gasket seal and rubber cushion gasket seal for doors. Spacious storing ar-rangement. Convenient height shelves. Porcelain chill tray. Positive action snap latch on door. Exclusively designed. Bright chromium finished hardware of solid brass including hinge on door. Doors rigidly supported. Automatic electric light illumi-nates in terior when door is opened on Model 404. Removable rustless ahelves firmly mounted on rubber covered hooks. Models 402, 403 and 404 are raised above floor thus assuring maximum ventilation and sanitation. All these features mark the Peder-amazing in value. They will compare favorably

amazing in value. They will compare favorably with any refrigerator on the market, no matter how expensive.



Gracerenties Every purchaser of a Feder-ated Refrigerator is protect-ed by a double three year warranty of the Federated Purchaser and also of the factory guaranteeing every refrigerator against inher-ent fault, improper assem-bly, or defective material The Federated Refrigerator incorporates every worth-while and latest improve-ment in domestic refrigera-tion. Built to the highest standards, yet it costs you as little as many refrigera-ors of inferior grade and small capacity. Buy a Fed-erated for moderate first cost and continuous carte-free service - constant, clean, dry cold with maxi-mum economy.

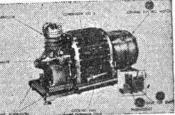
Electric Refrigeration Offers a Real **Opportunity to Radio Dealers** and Service Men

and Service Men Electric home refrigeration, the fastest growing industry today, enjoyed amasing progress and expansion during the past two years, in sharp contrast to the heavy failing off in most other lines of business. More and more radio dealers and service-men are turning to electric refrigeration as a source of profits. Every family is a prospect and there is a model for every requirement and pocketbook. Besides the profit on the initial installation, electric refrigeration offers a steady source of income from service and maintenance work. Get into it now.

THE UNIT

Handily located defrosting switch placed alongside automatic cold control with 10 stages of cold. Cool-ing unit porcelain covered. Adequate hand room between chill tray and unit. Ice cube trays of solid aluminum, rustproof with bright chromium plated

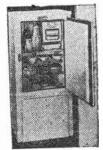
fronts. Frost, coils o 1 solid copper, will nct corrode. Silent sturdily b u i l t compres-sor unit, Direct driven by flexby flex-i b l e



Page 91

Note stardy simple ral Electric 1-6 H. Motor-Compressor. construction. General Electric P. Capacitor Motor.

i b l e r. Capacitor motor. coupling: no belts, gears or pulleys. Fewest mov-ing parts. General Electric Capacitor type 1-6 H. P. Motor. Motor-compressor assembly mounted on springs for quiet, vibrationiess operation.



Cat. No. 401

\$98.00

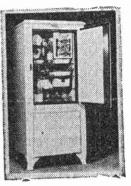
MODEL 401

Finish -- Lacquer ex-terior; porcelain in-terior. Gross capa-city, 4 cu. ft.; height, 54 in.; depth, 20% in.; width, 24% in.; depth with door open, 40% in.; shelf nrea including bot-tom, 8.12 sq. ft.; number of cu b trays, 2 -- 28 cubes per tray, total 56; insulation, 2 in. Shipping weight, 315 lbs. lbs.



Cat. No. 402 \$110.00

MODEL 402 **MUDEL 402** Finish — Lacquer exterior, porcelain interior. Gross capacity, 5 cu. ft.; height, 52 in.; depth, 22½ in.; width, 22½ in.; height of legs, 4 in.; number of cube trays, 2--total of 56 cubes; insulation, 2 in. Shipping weight, 325 lbs.



Cat. No. 403 \$118.00

MODEL 403 - Lacquer exterior, Pinish Pinish — Lacquer exterior, porcelain interior. Gross cagacity, 6 cu. ft.; height, 58 in.; depth, 22½ in.; width, 25½ in.; height of legs, 4 in.; number of ice trays, 3, total of 84 cubes; insulation, 2½ in. Shipping weight, 330 lbs.

Cat. No. 404 \$139.00

MODEL 404

Finish — Porcelain interior. lacquer exterior. Gross ca-pacity, 7 cu. ft; height. 57½ in.; depth, 22½ in.; width, 26% in.; height of legs, 4 in.; depth with door open, 43¼ in.; shelf area including bottom, 10.21 sq. ft.; number of cube trays. 3-28 cubes per tray, totai 34; insulation, 2½ in. Auto-matic electric light when door opens. Shipping weight. Finish - Porcelain interior. door opens. Shipping weight, 338 lbs.

Federated Refrigerators listed on this page are for operation on 110 Volts, 50 to 60 cycles alternating current. All models are also obtainable for 110 Volts direct current at same prices.

Cat.

No.

2657

5828

5829 5855

6843

6998

6998

6026

2617

7226

7227

7228

7229

7230

7231

7232

7233

6766

5865

2402

3738

2410

2411

2412

2414

2662

2661

7246

7347

6842

2419

3724

2553

2530

2634

2626

2628 2629

2644

2627

6999

2676

2676

6923

5044

6652

6504

7000

7234

6758

2529

7235

7236

Price

3.00

3.75

2.85

3.85

3.50

2.45

3.50

3.50

2.85

3.95

3.95

3.95

3.95

3.95

3.95

3.95

3.95

3.95

3.50

2.75

4.25

3.95

4.50

4.50

2.25

4.50

4.25

2.95

2.95

4.85

2.25

1.65

3.50

3.50

5.50

3.83

6.00

5.50

5.50

3.50

3.25

2.65

2.75

3.95

3.75

7.85

4.50

3.95

2.15

4.50

3.95

3.95

here the original manufacturers' transformers were unsuitable for continuous service, and we have made

changes in the safety factor to bring it high enough above normal operating conditions so as to even compensate

for shorts and break-downs in the receiver. Wherever the transformer is contained in a can both the finish

and physical characteristics are identical to the original.

38-3-1

Replacement Power Transformers for All Standard Sets

These Power Transformers in most cases are the orlginals and where they are not, they are the physical and electrical duplicates of the originals. This list is constantly being enlarged with transformers which have passed the approval of our engineers.

Where the original transformer has been duplicated, it is a reliable product. In many of the receivers listed

.....

	Set N	fodel	Cat.	- · ·	Set	Model	1
		A	No.	Price	FADT (0)	E 21 215 20 205 22 225	94 41
		, Navigator		\$2.95	EARL (U)	31, 31S, 32, 32S, 33, 33S,	21, 11,
		LYRIC) (D), 90, 93, 94, 95		3.75		, 55, 56	
		LYRIC) (D), Model D		3.95		NE (0), 6 Tube	
		Canto Series 81		3.40		NE (0), 8 Tube	
				4.50		(0), R4	
		les Supers		3.75	EDISON	(D). R6	
		ies Supers		2.40	EDISON (D), R2, C2 Plate Trans	
		66 Plate Transformer 66 Filament Trans		5.95 3.75	EDISON.	R1, R2, C2 Plate Transform	mer (
				2.20	EVEREAD	Y (O). 30	(
		(D), 37 38 (D), 55, 55C		4.25	EVEREAD	¥ (O), 40, 50	
		(D), 60, 60C		4.75		10	
		(D), H1, H2, L1, L2		3.50	EADA 25	X '	
		(D), 82, 85		3.50	FADA, 55 FADA, 43		
		(D), 82F, 85F		4.50		. 17	
		(D), 84 (Early and Late).		3.50		44, 46, 47	
		(D), 84F (Early and Late)		4.50	FADA. 50	70, 71, 72 (420 Electric U	nit) '
		(D), 80F, 83F		3.50	FADA. 50.	70, 71, 72 (18) Electric Ui	nit) '
A	TWATER KENT	(D), 80F. 83F	7014	4,50		77	
A	TWATER KENT	(D), 87, 89, 89P	7015	4.00			
	TWATER KENT	(D), 89F	7016	4.95), Special	
		R • ·			FADA (D), 10	
		10 511	6401	1.00), Model 55, 56, 60 Cycle.	
		10, B11		1.95	FREED (C), Model 78, 788, 79, 798. 9	0, 95, 65
		315, 16		4.70	60 Cycl	e	
10	OSCH (D), 00		8008	3.95 4.50		ISEMANN (Ò). Model NI	R60, 60
Ē	OSCH 28		8557	6.50			
				4.25		SEMANN (O), Model NI	
				3.95			
			6996	5.95		SEMANN (O), NR85, 60 C	
		S-14, S-21, S-81, S-82		3.55		ISEMANN (O), Model 16, 6	
		640, 641		3.50	B and	C Eliminator	
B	RUNSWICK (0),	31, 32, Part No. 755	7202	3.50	FREED-EI	SEMANN (O), NR73	
				3.95		SEMANN (O), NR80	
		31		3.95		N, G Old Type Trans	
		S14, S21, S81. S82	7017	3.75		$(\mathbf{D}), \mathbf{ERAC} \dots$	
E		, S14, S21, S81, S82, 25			FDESHMA	N (0), Model G-60-S, 6	0 Cyclo
_	cycle		7018	4.75		(0), Model (3-00-0, 0	
B	RUNSWICK (0),	29, ,15-32 (4-224, 2-245,	0000			N (0), Model G-60-S, 6	
	1-280) without c	ase	3739	2.85	(Filamer		
		С				N (0), EAC	
C	OLONIAL (D), 3	1	2632	5.50		N (O), Filament Transform	
		2 AC		3.75	FRESHMA	N (O), N, 25 cycles	
Č	OLONIAL (0),	33	5046	4.50		N (O), Q, 60 cycle	
Ċ	OLONIAL (O), 4	7	7198	2.50		N (O), QD 60 cycle	
- C	OLUMBIA (D),	SG8	6997	4.50		N (O), QD 25 cycle	
		6J2		3.95		N (0), N, 60 cycles	
		940		4.85	FRESHMA	N (O), Q, 25 cycle	
		C10		3.95		G	
		930, 931		6.83			
		300		5.25		ELECTRIC (D), T41	
L L	OLUMBIA (0), i	300, 25 Cycle	0000	6.85		CTRIC (0), H31, H51, H71	
	OLUMBIA (0) , a	950 C1. 2, 3, 4, 25 Cycle	2000	4.65 6.85		R (O), 700, 770, 900	
	OLUMBIA (O), (EEN GRID), 8	8007	3.95		$\mathbf{D}, \mathbf{AC6} \dots$	
		S. 41S. 42S. 82S		4.75	GREBE (0), SK4 0), 1931 Serles with Clarost	i
		1A, 42		1.25			
č	ROSLEY (0), 70)6		1.25	Danast	• • • • • • • • • • • • • • • • • • • •	
		06		.95		· ĸ	
		Part No. 22432		1.50	KING (0)	, Power Pack	
		t No. 22413	7214	1.50		(D), 523, 526	
C	ROSLEY, 120, Pa	rt No. 20150		2.50		7, 26, 34	
C	ROSLEY, 53, 54,	57, 58, Part No. 20553	7216	1.50		(D), 10. 20, 30 Series	
C	ROSLEY, 122, Pa	rt No. 22356	7217	2.50		(D), P. T. and Choke	
C	ROSLEY, 30S, Pa	rt No. 6682	7218	2.50		INTERNATIONAL, K90	
						INTERNATIONAL, K80 .	
	ARL (0). 21. 22-	25 cycle	2658	2.75		(Continued on page	
-	(2), -1, -1				·		/
	Code	: (O)=Original Manufact	urer's	Model;	(D)=Duplic	cate; (R)=Replacement.	

MAIL ORDERS TO SEE Terms on Page 5

Federated Purchaser Inc.

or to our nearest branch 25 PARK PLACE, N. Y. C.

Page 92

Blocks for Standard Sets Filter Condenser

A State of the Party of the Par

이 생산 방송 문화가 있는 것

The condensers used are all of the highest quality, and in every case having higher safety factor than the original. The physical specifications and electrical specifications of the original condenser block have been duplicated in every respect. There are no obsolete or cheap parts used in the making up of these blocks and all of them are guaranteed to perform as well as the originals.

to perform as well as the origin	18.15 .			•		
Make Models	Part No.	Cat. No.	Price	Make Models Part No.	Cat. No.	
A		_		Freshman, H-5	5012	5.00
Atwater Kent, 66		7055	3,95	Freshman, H	7254	3.95
Atwater Kent, 37		5001	2.25	Freshman, K	7255	2.45
Atwater Kent, 40 (condenser only		5395	1.35	Freshman, Q	3120	1.50
Atwater Kent, 44 (Condense				Freshman, M12 (171 tube)	5013	3.50
and Choke)		7170	1.50	Freshman, N11 (250 tube)	5014	3.50
Atwater Kent, 46 (condensor only		5396	2.75	Freshman, Model G-60-S, 60 Cycle	.2432	2.40
Atwater Kent, 55, 55C, 55F		6513	4.25	Freshman, Model N-60-S, 60 Cycle	2433	3.75
Atwater Kent, 60		7054	.50	Freshman, Model Q. 2Q, 3Q, 60		
Atwater Kent, 66,		7055	.70	Cycle	2434	2.75
Atwater Kent, 70		7056	.50	Freshman, Model QD, 60 Cycle	2439	2.75
Apex, 46, 46A		6834	1.85	Freshman, Model M-60-S, 60 Cycle	2440	3.10
Apex, 47, 47A		6835	1.85	Freshman, ABC Elim., 60 Cycle	2443	1.60
Apex, 41		6836	2.25	_		
Apex, 48, 48A		6837	2.25	G	0004	9.05
Apex, 28A, 28AX		7248	2.95	Grebe, AC6, complete with resistors	6624	3.95
				Grebe, SK	6924	1.50
B		5100		• K		
Bosch, 501-2-3		7169	2.75	Knapp, A Elim. Condenser	5039	1.35
Bosch, 28	• •	6772	2.75	Kodel, A Elim. Single Condenser.	5020	2.00
Bosch, 50 Series		2988	3.25	Kodel, A Elim. Double Condenser.	5019	3.75
Bosch, 48		2853	8.50	Kodel, A Elim. Triple Condenser.	5013	5.60
Bosch, 73	• •	7249	2.95	Kolster, 6H, K5 2316	2315	3.25
Bosch, 5		7250	2.45	Kolster, K30, D.C	5609	1.50
Brandes, B10, 3.7 Mfd	. 4838	5613	2.75	Kolster, K23 Rectifier	5612	1.95
Brandes, B11	4849	5614	.95	Kolster, K25, 27, 28, 25 Cycle 3663	5615	1.95
Brandes, B15	5038	5619	1.95	Kolster, K20, 25	5023	2.50
Bremer Tulley, 6-40, 6-41	• •	6925	3.50	Kolster, K20, 25	2312	2.50
Bremer-Tully, 8-20, 8-21		7251	3.95	Kolster, 6J, 6K, 6R	5022	3.25
Bremer-Tulley, 14, 22, 81, 82		6229	.49	Kolster, K43	6774	2.50
Brunswick, 14, 22, 81, 82		6229	.49	Kolster, K44	6775	2.75
Brunswick, 15, 22, 32, 42, Part 32		7203	1.85	Kolster, 6J, 6K	6776	2.50
С						
		7197	1.25	M		0.45
Colonial, 39		5611	3.50	Majestic, "A" Elim	5031	2.45
Columbia, 950		5003	2.75	Majestic, 9P3, 25 Cycle	7256	3.45
Columbia, Screen Grid. 8	• •	5005	N.10	Majestic, 7P3, 25 Cycle	7257	3.45
E				Majestic, 7BP3	7253	3.45
Earl, 41	••	5007	2.95	Majestic, 171 Sets	5026	2.35
Earl, 31 and 32		5405	2.75	Majestic, 250 Sets	5027	2.35
Earl, 21 and 22		5406	2.75	Majestic, 245 Sets	b028	2.35
Edison, R6, R7		6840	3.50	Majestic, 90 B	6678	2.85
Edison, R4, C4, R5		7252	2.95	Majestic, Master B, Super B	5029	2.85
Elkon, "A" Condenser		5009	1.35	Majestic, Special Master B	5030	2.85
Erla		5624	2.50	Majestic, 50	6838	2.50
Erla, A2	• •	5006	4.00	Mohawk, Using Majestic Pack	5032	2.50
Eveready, 50 Series	••	2988	2.95	P		
F				Peerless, 22	2856	3.95
Fada, 18	2-1252M	3 3010	3.95	Philco, 511	2933	.65
Fada, 10, 11, 31		7172	3.25	Peerless, 70	6839	3.00
Fada, 35, 352, 40		3012	3.75	Philco, 511	2933	.65
Fada, 41, 44, 46, 47		3740	3.25	Philco, 87	2934	2.95
Fada, 70		7253	3.95	Philco, 87, 25 Cycle	2935	3.50
Fada, "K"		6704	4.00	Philco, 65 3515	2936	2.95
Fada. A Eliminator		5009	1.35	Philco Midget	3009	3.25
Fada, E420 for 50-70-71 and 72.		5410	3.25	Philco, 82	6621	2.95
Fada, 25, Part No. 1780 x 8 leads		3011	3.25	Philco, 62	6622	2.95
Fada, 25, Part No. 1801 x 1 leads		3025	3.25	Polydyne, Model Q. 60 Cycle	2437	2.75
Fada, ABC Eliminator "B" Con	d	6542	3.25	Polydyne, Model QD. 60 Cycle	2438	2.75
Federal, D, E, F, G and H		5416	2.75	R		
Freed, Model 55, 56, 65, 78, 79, 79	S.				7259	6,93
90, 95	,	2443	2.75	Radiola, 105 Speaker	6543	5.95
Freed-Eisemann, No. 16 "B" Eli	m.	#		Radiola, 64	7260	5.93
Block		5010	3.75	Radiola, 67	2714	2,75
Freed-Eisemann, NR57A		5010	3.75		2710	.45
Freed-Eisemann, Model 411,	60			RCA, 18, 33, 61	2715	2.50
Cycle		2428	3,95	RCA, 44, 46	5033	3.59
Freed-Eisemann, Model NR70,	60	/	2.44	RCA, 41	2726	2.50
Cycle		2429	3.75		2120	3.50
Freed-Eisemann, Model NR80,	60		5.1.5		6833	2.75
Cycle		2430	1.50	RCA, 80	3721	1.65
Freed-Eisemann, Model NR85,				RCA, 104 Speaker	0141	1.03
Cycle		2431	3.10	RCA, 30A Filter Block, Part No.	3721	1.65
Freed-Eisemann, 480 A.C.		5420	3.30	81951	5445	.85
Freed-Eisemann, 480 D.C.		5415	2.50	RCA, 30A, 20 Mfd	0110	*0 A
Freed-Eisemann, 485		5419	4.80	S	5004	0.45
Freed-Eisemann, NR57, 60		3214	3.00	Sentinel, 440, 11, 12, 15, 16	5034	2.45
Freed-Eisemann, NR60		6773	2.50	(Continued on page 98)		
A SCORTANDOLLANDARD ATAVAY FIFTON						
ll						

Page 94

August-September; '1932

ime co

This list of replacement volume control is not a haphazard collection of make-shift substitutes, but the result of four years of experience in merchandising replacement parts.

The majority of these volume controls are the exact replicas of the manufacturers' originals and the others best replacements obtainable. The physical dimensions and electrical specifications in each case are exact duplicates of the original controls.

cates of the original controls. These controls are the products of Frost, Centralab, Electrad, Clarostat and Yaxley. The resistance taper, value, size of shaft, size of case and switch specifications have been closely adhered to, and in no case is a control specified without our having studied the requircments of the particular receiver.

Any controls not listed here can be possibly furnished by us from stock and we invits your inquiries for special controls.

Any controls not listed here can be possibly furnished by us from stock and we invite your inquiries for special controls.

Receiver Models	Cat. No.	Price	Receiver Models	Cat. No.	Pric
A			Clarion, 80	7107	_6
	0140		Clarion, 90	7108 6190	.8
Acratone, 2, 3, 4, Midgets	6148	\$0.70	Cleartone, 112	5535	
Ul-American Lyric, K	6190 ' J 6142	.50	Colonial, 22 DC & 12 AO	5535 7109	1.2
All-American Mohawk, 90 series, C6, 4		.50 1.40	Colonial, 32, 32DC	7110	.9
III-American Mohawk, D III-American Mohawk, S80		.70	Colonial, 31, 33 Columbia Radio, S.G. 8.	2951	.7
Amrad, 81, Bel Canto series		.50	Columbia Phono, C11, 961, 902, C4, 980, K24	6185	
Amrad, 71, 7100, 70		.50	Columbia Phono, C1, C2, C3	6139	
Apex, 80 series	6142	.50	Columbia, 32, 34	7111	.6
Apex, 40 series		.50	Columbia, 31, 33	7112	.9
Apex, 30 series		.50	Colonial, 32	7195	.4
Atchison, 5 and 6		.50	Crosley, 602, 608, 609, 610	6103	
Atwater-Kent. 1928-29 Models		1.10	Crosley, 704, 705, 706, 706DC, 804, 704B	6113	
Atwater-Kent, 61, 61A, 66		1.75	Crosley, 48P. Wigit	6104	
Atwater-Kent, 37, 38, 36, 44, 40, 42, 52		.45	Crosley, 58Q, Buddy Boy, Chum, 55, 53, 54,		
Atwater-Kent, H2, H1		.50	Buddy D. C.	6106	
Atwater-Kent, 55, 55C, 60, 66		.45	Crosley, 77-1	6105	
Audiola, Jr.	6142	.50	Crosley, 124	7113	.8
Audiola, 30B and 7330	6182	.50	Crosley, 124 Tone Control.	7114	.7
Audiola, 8430	6187	.50	Croslev, 53, 54, 57	7115	
Audiola, 889	6138	.50	Crosley, 30S, 40S, 31S, 34S, 62S	6479	
Audiola, 31	6142	.50	Crosley, 804, 20, 21, 22	6187	
P			Crosley, Roamio	6186	
۵			D		
Salkeit, A3, A5, A7	6190	.50		6142	
Salkeit, B7, B9		.50	Dayten, Navigater	6142	
lalkeit, F		.50	Dayfan, 8AC. A5003, 5091	6185	
lalkeit, C		.50	Dayfan, 5065 Dayfan, 5057	6185	
Bosch, 73, 74, 20		.50	Dayfan, 5051	6186	
Bosch, 49		.50	Daylan, 5051 Daylan, 5 AC.	6138	
Bosch, 60, 62		.50	De Wald, 632		•
Bosch, 54, 48, 56, 49	5840	1.75		0140	•
Bosch, 58	6115	.89	E		
Bosch, 28, 29		.50	Edison, C1, C2, R1, R2	5378	
Bosch, 5, 20, 20J, 20K, 20L, 31, 32, 73.		.90	Edison, R6 and R7	2966	
Bremer-Tully, 640, 641		.70	Erla, R1	6142	•
Bremer-Tully, 7-70, 7-71		.50	Erla, 224 AC	6141	
Bremer-Tully, 8-2), 8-21	6182	.60	Erla, 245	7116	
Bremer-Tully, Counterphase 8		.50 .63	Erla, SG Radio	7117	1.4
Bremer-Tully. 81-82Bremer-Tully. S-81, 82		.03	Erla, SG Combination	7118	1.
Browning-Drake, 34, 36, 38		.50	Earl, 21, 22, 24	3820	
		.50	Earl, 31, 32, 41, 33	6186	•
Browning-Drake, 69 Browning-Drake, 70-71		.50	Earl, 31S, 32S, 33S	7189	
Brunswick, 10	7101	1.00	Eveready, 1, 2, 3	6502	
Brunswick, 18	7102	.60	Evercady, 50 Series	5840	1.
Brunswick, 3KR8, 3KR0, 3KR6		.45	F		
Brunswick, 5KR, 5KRO, 2KRO, 5KR6.	4165	.45	Fada, 48, 49	7095	1.
Brunswick, 5NC8, 5NO, 5NC8	4170	.50	Fada, 48, 49 Flash	7096	
Brunswick, PR-17-8, R-1, K1104		.30	Fada, 45, 53, 57	7097	
Brunswick, 14 , 21 and 31		.50	Fada, 51	7098	
Brunswick , 14 , 21 and 51 Brunswick , 514 , 521 , 331 , 581 , 582		.90	Fada, 35B	7099	1.
Brunswick, 1930 Models		.75	Fada, 265UA, 262, 265CA, RP-65UA, RP-	•	
Buckingham. 80		.50	65CA. 262UA, 262CA, RP-62UA, 262CA	,	
Bulova, M501		.90	RP-62UA, RP-62CA	5853	
Bulova, M701		.65	Fada, 7AC, 475UA, 472CA, SF45/75UA		
Bulova, M101		.85	CA45/72	. 5841	
Bush & Lane. 10 12	3203	.65	Fada, 10, 11, 30, 31, 10Z, 11Z, 30Z, 31Z, 50	,	
			70, 71, 72	5842	
С			Fada, 16, 17, 32, 16Z, 32Z, 18D.C	5842	
Case. 80	6142	.50	Fada, 20, 20Z, 25, 25Z, 15M, 15MZ	5493	
Case, 80 Clarion, Jr., 60		.30	Federal, D. E. F	. 6126	
Clarion. 51, 53, 55	6148	.70	Federal, G, H, K, M	6126	
Clarion, 40, 45	7106	.90	(Continued on next page)		

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Volume	Control	Guide

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Rester Models OL. No. Price Rester N G133 J49 Preed. 517, 75, 95. 7180 .46 <td< th=""><th></th><th>•</th><th></th><th></th><th></th><th>1</th><th>Receiver Models</th><th>Cat. No.</th><th>Price</th></td<>		•				1	Receiver Models	Cat. No.	Price
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Freed, 198, 198, 987, 1784, 1784, 188, 188, 188 188 </td <td>Fre</td> <td></td> <td>95</td> <td></td> <td></td> <td>N</td> <td>lorden-Hauck, Super DZ-5A</td> <td>6185</td> <td></td>	Fre		95			N	lorden-Hauck, Super DZ-5A	6185	
Bodd main Nikobic, Nikobic					,10		E	3763	.35
Freed-Riemann, NR8DDC, NR8DBC,	Fr	eed-Eisemann,	NR78, 79AC, MICOUS, MIC	6186	.50	1 -		6603	
Preed-Risemann, NESDC, ARSOLD,		- 3 T2	NUSSILK: NHAUAC, NIVOV		.50	1 1		3040	
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Freed-Bisemann, NR55, NR56 3922 36 Phile, 95, 96, 96A, 296, 290A, 214, 111, 112, 30, 203, 210A, 2110A, 4120C, 420 C, 120, 210A, 111, 112, 30, 203, 210A, 110C, 420 C, 120, 210A, 111, 112, 30, 203, 210A, 110C, 420 C, 120, 210A, 110, 112, 30, 203, 210A, 110C, 420 C, 120, 210A, 110, 210, 200, 203, 110C, 420 C, 120, 210A, 110, 210, 200, 203, 110C, 420 C, 120, 210A, 110, 210, 210, 210, 210, 210, 210, 210								0760	.50
Freihman, J. Lis, GUOS, A. A. Tigs 40 Till, Jill, Jill, Jill, S. 20, 20, 41(DC, 42D, C. 220, 42D, C. 220, 42D, 42D, 42D, 42D, 42D, 42D, 42D, 42D	e 1 -	and Rissmann	NR55 NR50					6190	.50
Freshman, K005, G. 2N, M. Sqie, GDI63. 2777 23 222A, 70, 70A, 270, 270, 270, 270, 270, 270, 270, 270	Fr	eshman, L, LS	, G60S, H, A			1.	111, 111A, 30		
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Hereiteral Motors, 120, 130, 140. T120 1.50 Radiola, 41, 41 combinations 5741 50 General Motors, S3A, S3B, S2B, 223, 22-3-4-5-7, 32 7121 90 Radiola, 46, 42 6138 59 General Motors, S3A, S3B, S2B, 223, 22-3-4-5-7, 32 90 Radiola, 44, 45, 42 6138 59 General Motors, S1A, S1B, 216, 217, 219, 250 7122 90 Radiola, 44, 45, 42 5138 59 Graybar, 700, 700, 900 2956 45 Radiola, 44, 47 7765 45 Grebe, S1C 7064 3041 55 Radiola, 71, 71, 726, 746 6186 55 Grebe, HS-4, Model 5 7061 7053 140 7062 705 706 75 Radiola, 71, 710, 720, 720, 740, 740, 750, 777 707	0	emoral Electric	H-31, H-51, H-(1	• •		5 1 -	Radiola, 33, 33 D.C.		
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General Motors, S1A, S1B, 215, 217, 217, 217, 227, 216 Gital 56 Graybar, 600 2056 45 Station, 84, 87 3768 55 Graybar, 700 2056 45 Station, 84, 82, 86 3768 455 Graybar, 700 3059 56 Station, 84, 87 3768 455 Graybar, 700 3059 56 Station, 84, 87 3768 455 Grabe, SC, 71 3039 56 Radiola, 81, 22, 46DC 7071 56 Grabe, HS-4, Model 5 7060 106 Radiola, 87, A, 7DC, 9DC, Supperette. 7071 56 Grabe, HS-4, 1, 2, 3, 4 7060 1265 56 666 666 7072 59 Guibransen, 6, 9 H 1265 56 566 1225 50 56 566 50 59 56 545 56 56 57 59 57 58 57 59 58 50 56 56 57 59 57 59 58 50 56 56 57 59 57 59 57 57 59 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Kadiola, 48, 42</td> <td>6138</td> <td>.50</td>							Kadiola, 48, 42	6138	.50
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Grebe, AHI 3688 50 Eadlola, Fi, 50, 51, 18DC 4155 455 Grebe, AC7 3040 60 Radiola, R/A, TDC, RIL, RAE28, RAE18 7071 66 Grebe, HS-4, Model 5 Torne Control. 7060 1.60 Radiola, R/A, TDC, SDC, Superstle. 7071 66 Grebe, HS-4, I. 2, 3, 4 Tone Control. 7061 1.60 Radiola, R/A, TDC, SDC, Superstle. 7071 66 Grebe, HS-4, I. 2, 3, 4 Tone Control. 7062 .65 7062 .66 666 666 7073 .90 Grebe, HS-4, I. 2, 3, 4 Tone Control. 7062 .65 .66 .666 .7073 .90 Gulbransen, 6, 9 H						5	Podiolo 44 46 47		
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Grebe, HS-4 Gi42 .50 666, 666C .109, 110, 111 .7073 .90 Guibransen, 8, 9 H .50 Sentinel, 118, 120 .7074 .7073 .90 Howard, Green Diamond, S.G.A., S.G.C. 5160 1.25 Silver, 710, 720, 724, 740, 35A, 34A, 36A .2958 .50 Howard, D4 J Sentinel, 118, 120 .7074 .50 Silver, 712, 714, 722, 30, 30B, 60B, 75B, 90B, 6142 .50 Jackson-Bell, 62 J		DIT ALL TIC A 1			-		Sentinel, 11, 12, 15, 16, 104, 106, 440, 44	4, *8149	.50
HSentinel, 118, 120 $118, 120$ $124, 740, 35A, 34A, 36A$ 3039 590 Howard, 135, 395, 445, 495 7064 56 Howard, D4 7064 56 Howard, D4 7064 56 Howard, D4 3 378 2958 50 Jackson-Bell, 62 J 6588 90 $537, 830, 446, 440, 44$ $537, 890, 6142$ $593, 930, 100, 800, 400, 400, 400, 400, 400, 400, 4$					-		000 666C		
Howard, Green Diamond, S.G.A., S.G.C 5160 1.25 Silver, 710, 720, 724, 740, 35A, 443, 30A 2052 56 Howard, 135, 395, 445, 495		Gulbransen, 8,				- 1	Gentinel 118 120		1100
Howard, Green Diamon, S.C.R., Science 6141 .50 Howard, D4				51(RO 1.2	5	GU 710 790 724 740 35A, 39A, 39A++-		
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K 6142 .50 Kennedy. 10, 20, Royal 34, 26, 826B, 36, 38, 40, 22, 20, 32, 30. 3203 .55 Kennedy. 60, 80 3203 .6142 .50 King, E30, 81, FGH, 97, 98, Monarch. .6142 .50 Kolster (Brandes), K20, K21, K23, K24, K28, K22, K25, K27, K42, K45, B10, B15, B16. .5725 .5726 .57373 .560 .57373 .560 Lang, BA5AC, BD6DC .6182 .500 Stewart-Warner, .500 and R100 Series .5739 .560 Lincoln, 31 Superhet .5157 .900 .500 Stromberg-Carlson, 846, 848, Rear .5517 .5517 .500 .500 <t< td=""><td>1</td><td></td><td></td><td> 65</td><td>88 .9</td><td>0</td><td>Spector 110 931 101, 103, 109, 301, 56</td><td>74,</td><td></td></t<>	1			65	88 .9	0	Spector 110 931 101, 103, 109, 301, 56	74,	
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King, J. H. 6142 .50 King, E80, 81, FGH, 97, 98, Monarch. 6142 .50 Kolster (Brandes), K20, K21, K23, K24, K28, 5725 .95 Kolster (Brandes), K42, 45, B10, B15, B16. 5725 .95 Kolster (Brandes), K42, 43, 45. .510 .5254 1.75 Lang, BA5AC, BD6DC			90				Smarton 410 420, 9A, 600A, 610A, 620A.		
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L 6182 .50 Stewart-Warner, 715, 720 .3751 .25 Lang, BASAC, BD6DC 6141 .50 Storey & Clark, 36, 43, 51 .7073 .65 Lang, F9DC, JTDC, MTAC, R8DC .6141 .50 Storey & Clark, 36, 43, 51 .7073 .65 Lentz, Universal, Trans-oceanic, Seven Seas .6190 .50 Storey & Clark, 36, 43, 51 .75 Lincoln, 31 Superhet .6185 .50 Stromberg-Carlson, 846, 848, Rear. .50 .55 Majestic, 20 Series M .5157 .90 Stromberg-Carlson, 638 Front. .529 .75 Majestic, 90, 91, 92, 100. .6187 .50 Stromberg-Carlson, 638 Rear. .3208 .70 Majestic, 90, 91, 92, 100. .6184 .50 Stromberg-Carlson, 635, 636 .3206 .55 Majestic, 90, 101 .5157 .5696 .35 .35 .3206 .56 Majestic, 15, 15B, 150, 155. .70 .766 .60 .76 .75 .75 Majestic, 15, 15B, 150, 155. .7066 .60 .7067 .65 .76 .75 Majestic, 25. .706	1	Kolster (Bran	des), K42, 43, 45	92	10" I.				
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Console 6185 .50 Stromberg-Carlson, 846, 846, 7424, 745, 745 Lincoln, 31 Superhet M 6185 .50 Majestic, 20 Series 5157 .90 Majestic, 130A, 230A 6139 .50 Majestic, 90, 91, 92, 100 6187 .50 Majestic, 90, 91, 92, 100 6184 .50 Majestic, 90, 91, 92, 100, 100B 5738 .35 Majestic, 90B, 100B .5696 .35 Majestic, 15, 15B, 150, 155 .5696 .35 Majestic, 15, 15B, 150, 155 .7066 .60 Majestic, 25 .55 .5698 Majestic, 25 .55 .5698 Majestic, 25 .55 .5698 Majestic, 26 .56 .60 Majestic, 26 .56 .56 Majestic, 26 .56 .56 Majestic, 15, 15B, 150, 155 .766 .65 Majestic, 26 .56 .60 </td <td></td> <td></td> <td>TTTC MIAU, RODU</td> <td></td> <td></td> <td></td> <td>Story & Clark, 3A, 4.</td> <td>65</td> <td>.55</td>			TTTC MIAU, RODU				Story & Clark, 3A, 4.	65	.55
Lincoln, 31 Superhet M Stromberg-Carlson, 10, 11 3208 .70 Majestic, 20 Series 5157 .90 Stromberg-Carlson, 638 Front. 3208 .70 Majestic, 20, 9, 91, 92, 100. 6187 .50 Stromberg-Carlson, 635, 636 3208 .70 Majestic, 90, 91, 92, 100. 6184 .50 Stromberg-Carlson, 641, 642, 652, 654. 3206 .50 Majestic, 90B, 100B .5696 .35 Steinite, 36, 43, 51. .50 .50 Majestic, 15, 15B, 150, 155. .7066 .60 .7067 .65 .66 .70 Majestic, 10, 180 .70 .7067 .65 .35 .50		(Tamaolo				.50	[Glassicherg Carlson X40, 530, [VCG1++++++		
M 5157 .90 Stromberg-Carlson, 638 Front		Lincoln. 31 S	uperhet	6	185	.50	CAnomahong Corlenn 10, 11	***	
Majestic, 20 Series 5131 .50			M	_	167	00	Ginamberg Carlson, 638 FTOIL.		
Majestic, 130A, 230A 6187 .50 Stromberg-Carlson, 605, 605 3210 .65 Majestic, 90, 91, 92, 100, 00B 6187 .50 Stromberg-Carlson, 641, 642, 652, 654		Majestic, 20	Series				I diamakang Carleon 638 Real		
Majestic, 90, 91, 92, 100. 6184 .50 Majestic, 70, 60, 70B, 71, 72, 80. 6184 .50 Majestic, 100, 181 5738 .35 Majestic, 90B, 100B 5698 .35 Majestic, 90B, 100B 5698 .35 Majestic, 15, 15B, 150, 155 7066 1.00 Majestic, 25 .100, 1055 7067 Majestic, 25, Tone Control 7067 .65 Majestic, 25, Tone Control 7068 1.00 Majestic, 100 .155 7068 Majestic, 25, Tone Control 7068 .65 Majestic, 26, 54, 100 7068 Majestic, 26, 55, 100 6142 .50 Majestic, 26, 65, 100 6142 .50 Majestic, 26, 65, 100 6142 .50 Majestic, 26, 75, 100 6142 .50 Majestic, 26, 75, 100 6142 .50 Majestic, 100 6142 .50 Majestic, 100		nm. t4to 190.	A 990A					32	10 .65
Majestic, 180, 181 5738 .35 Majestic, 90B, 100B 5698 .35 Majestic, 90B, 100B 5698 .35 Majestic, 10, 160 7068 .60 Majestic, 15, 15B, 150, 155 7066 .60 Majestic, 25 7067 .65 Majestic, 25 7068 1.00 Majestic, 100 7068 .00 Majestic, 25 706 .65 Majestic, 25 .55 7068 Majestic, 26 .569 .55 Majestic, 26 .569 .569 Majestic, 26 .55 .55 Majestic, 26 .56 .65 Majestic, 26 .56 .57 Majestic, 27 .56 .65 Majestic, 26 .56 .65 Majestic, 27 .56 .65 Majestic, 100 .57 .5844 .35		Mainstin QQ	91 WZ. 100		184	.50	Stromberg-Carlson, 641, 642, 652, 654		
Majestic, 90B, 100B 100B 5698 1.25 Steinite, 30, 43, 000000000000000000000000000000		and 1	101				1		
Majestic Equalizer, 90, 90B, 91, 92, 100, 100 7065 .60 Majestic, 60, 160 7065 .60 Majestic, 15, 15B, 150, 155 7066 1.00 Majestic, 25 7067 .65 Majestic, 25, Tone Control 7068 .65 Majestic, 100 7069 .65 Majestic, 100			10016				Steinite, 36, 43, 51	01	
Majestic, 60, 160 7066 1.00 Temple, 8-60, 8-80, 8-90 5243 1.75 Majestic, 15, 15B, 150, 155 7067 .65 7067 .65 Temple, 861, 881, 891 5243 1.75 Majestic, 25 .55 Tone Control 7069 .65 Victor, R32, RE45, RE52, RE75 3751 .25 Majestic, 100 .642 .50 6142 .50 (Continued on page 97)							T	38	0225
Majestic, 15, 15B, 150, 155 Tone Control		NR testin RO	160				Temple, 8-60, 8-80, 8-90	52	
Majestic, 25 7069 .65 Majestic, 25, Tone Control 7069 .65 Majestic, 100 5844 .35 Majestic, 100 6142 .50 Victor, R32, RE45, RE52, RE75 .3751 .25 Victor, R34, R35, RE39, RE57 .6501 1.75 Majestic, 100 .100 .175 Majestic, 100 .175 .175		Majestic, 15,	15B 150, 155 Tone Control	1 7	1067	.65			
Majestic, 25, Tone Control								97	51 .25
Majestic, 100							Victor, R32, RE45, RE52, RE75	65	
		- mm daadda 100				.50	I (demtinued on Defe V))	
Meloraa, Caulculatona						.65	(Continued on page 31)	,	
		Melorad, Cat	IICULATIONIC						

MAIL ORDERS TO CAR See Terms on Page 5 Federated Purchaser Inc.

or to our nearest branch 25 PARK PLACE, N. Y. C.

Page 96

August-September, 1932

No. Cat.

5760

5761

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3907 6379

6383

Price

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No. Part

VOLTAGE DIVIDERS For All Standard Receivers

The Voltage Dividers listed herein are duplicates of the original voltage dividers used in the various sets. All values and physical dimensions conform to the originals and in many cases the safety factor has been brought up above normal load.

l					Federal, 73-060—2,685 ohm		6383
Make	Models and Values	No.	No.	Price	Federal, 79-070—20,000 ohm		6384
()		Part	Cat.		Freed, Model 65-78-79-95-90, 4,000-		
	Α				750 ohm		3840
Amrad AC	-4,080 ohms,		0057	21 17	Freed-Eisemann, 78, 79, 95 - 5,000		
			6857	.75	ohm		3907
	B				Freed Floemenn Model MD90 1750		0001
Rollkeit Al	36, 180A, 180B - 10,800				Freed-Eisemann, Model NR80, 1,750-		0040
abancity Al	50, 180A, 180D - 10,800				2,000 ohms		3842
ohms			6858	.75	Freed-Eisemann, Model NR80, 4,000-		
Balkeit, AB	C, 135, 180-10,800 ohm		6380	.75	350 ohms		3843
Balkeit, B7.	B9-24,800 ohm		6381	.95	Freed-Eisemann, Model NR85, 1,000-		
Balkelt, C-	4,370 ohm		6382	.55	350-2,000 ohms		3844
Brandes, Bl	1—4,650 ohm	4010	3922				
Reandes D	10	4919		.40	Freed-Eisemann, NR70, 85		5765
Dianues, D.	10		5756	.75	Freed-Eisemann, NR80		5766
Brandes, Bl	5, B16—2,955 ohms		6859	1.00	Freed-Eisemann, 411 B Eliminator		5767
Bosch , 48, 4	9		5756	.70	Freshman, All N Models-18,000 ohms		3963
Bosch, 58	******************		5753	.75	Freshman, G-10,950 ohms		3966
Bosch, 60 6	1, 63—9,000 ohm		5754				3900
Bosch 610	4 700 obm			.75	Freshman, G10-6,560 ohms tapped		
D0801, 020-	4,790 ohm		5755	.75	at 1,100, 1,500, 1,460, 1,500, 1,000		3918
Bosch , 28, 2	9, 825—10,000 ohm		6274	.85	Freshman, G60S-113,000 ohms		5762
Bosch, 28, 2	9 825—2,000 ohm		6375	.55	Eveready—8,925 ohms		6872
Bosch. 60. 6	1—9.000 ohm		5752	1.00			0012
Bosch 54 D	.C20 ohm, Edison Base		5848		G		
Bosch 62 6				.85			
100501, 02, 03			6850	.75	General Electric, P41		6393
Boscn, 63-2	6,050 ohms		6851	.85	General Motors, 16005 - 9,372 onms		
Bremer-Tull	y, 820A, 8-21A - 13,400				tapped at 800, 59, 1,863, 2,000, 4,500 14	547	3169
ohms			5758	.75		JTI	
Bremer-Tull	y, 6-40—16,720 ohm		- 6377		General Motors, 5057-5,185 ohms		6385
				1.80	General Motors, 5524, 5525 - 6,300		
	, 8, 10, 11, 13—6,770 ohms		6860	1.00	ohms		6873
Brunswick, 3	ER8-6,265 ohms		6861	1.00	General Motors, 5050-18,530 ohms		6874
Brunswick, 8	3RU, X902, 3NW8—				Graybar, 678		6398
7.780 ohm	5		6862	1.00			
3.040 ohm	8		6863	1.00	Grebe, SK4-D.C. Filament Resistor.		4245
4 470 ohm					Grebe, AC6-7.090 ohms		5768
There are the test of test	S		6864	1.00	Grebe, AC6-9,450 ohms		6512
Drunswick, I	PR6-11,700 ohms		6865	1.00	Grebe, 671B		5770
	C			-	Grebe Synchrophase-5,135 ohms		6386
G-1	· · · · · · · · · · · · · · · · · · ·				Grebe Synchrophase—12,900 ohms		
Colonial, 33,	34, 110,000 ohms tapped				Grebe Synchrophase 12,800 Units		6387
at 60,000	* * * * * * * * * * * * * * * * * * * *		4017	.50	H		
Colonial, 28-	-15,500 ohm		5750	.75			
Colonial. 32	D.C., 34.9 ohm		5453	.95	Howard, 135, 395, 445, 495-13,600 ohms		6388
Colonial 32	33, 34-122,000 ohm		5727	.75	Howard, 135, 395, 445, 495-16,000 ohms		6389
Colonial 26	20 A (2 125 000 shine		0141		Howard, 135, 395, 445, 495-17,500 ohms		6390
Colomai, 30	, 39 A.C.—165,000 ohms				100 atu, 100, 000, 110, 100 11,000 011113		0000
tapped at	65,000		5636	.50	K		
Colonial, 33	, 34, 35 - 80,000 ohms				n.		
tapped at	25,000		7199	.35	King, 82-1,480 ohms		6391
Colonial, 33.	34-420 ohm C.T		3969	.25			6392
	D.CSpeaker Resistor		7205		King, 82—16,000 ohms		
				3.00	Kolster, 6-H, K-5		5513
Colomai, 31,	A.C		5674	.75	Kolster, 6J, 6K, 6L, 6F, 6R — 7,120		
Colonial, 31	D.C., 60 ohm		58 56	.85	ohms	441	4014
Colonial, 28-	-7,200 ohm		6378	.75		071	5516
Columbia. C	1, C3, 960		4014	.39	Kolster, K384,430 ohms		5515
	5—7,835 ohms		3905	.40		0.02	
	1, C3-7,120 ohms		4014			983	3905
Colonial 050	50,000 abre	4010		.39	Kolster, K44-2,600 ohms		6376
		4810	5517	.30		348	5525
	2, 950, 980—13-110 ohm.		5716	.75	Kolster, 6J—6,560 ohms		3918
Columbia, 93	0-2,060 ohm	5478	5521	.40	Kolster, 6K, K20, K22, K25, K27		
Columbia 98	0-6,155 ohm		5522	.40			4014
Columbia 20	00, 930, 500, 2,640 ohm.		5523		7,120 ohms		4014
		4000		.40	Kolster, K23-25,000 ohms		4024
	12 420 ohm		5527	.30	Kolster, 6H, 6K-Fixed Resistance 4	713	4025
	2-430 ohm	4290					
	5, 961—8,050 ohms	4290	6866	.75	Kolster, K43-2,980 ohms		2002
	5, 961—8,050 ohms	4290			Kolster, K43-2,980 ohms		5864
Columbia, 90	5, 961—8,050 ohms 2, 930, 980—2,220 ohms.	4290	6866 6867	.75	Kolster, K43—2,980 ohmsL		2096
Columbia, 90 Columbia, 93	5, 961—8,050 ohms 2, 930, 980—2,220 ohms 31—9,035 ohms		6866 6867 6868	.75 .75	L		2004
Columbia, 90 Columbia, 93 Columbia, 94	5, 961—8,050 ohms 2, 930, 980—2,220 ohms 81—9,035 ohms 40—2,955 ohms		6866 6867	.75	L Lyric (Rudolph Wurlitzer), 6,200 tap-		
Columbia, 90 Columbia, 93 Columbia, 94 Crosley, D.C	5, 961—8,050 ohms 2, 930, 980—2,220 ohms 81—9,035 ohms 60—2,955 ohms . sets using 224 Tubes—		6866 6867 6868 6968	.75 .75 1.00	L		3482
Columbia, 90 Columbia, 93 Columbia, 94 Crosley, D.C 47.7 ohm 1	5, 961—8,050 ohms 2, 930, 980—2,220 ohms 81—9,035 ohms 60—2,955 ohms . sets using 224 Tubes— Resistor		6866 6867 6868	.75 .75	L Lyric (Rudolph Wurlitzer), 6,200 tap- ped at 2,000, 1,000, 3,000, 900Y-439-		
Columbia, 90 Columbia, 93 Columbia, 94 Crosley, D.C 47.7 ohm 1 Crosley, 602,	5, 961—8,050 ohms 2, 930, 980—2,220 ohms 11—9,035 ohms 40—2,955 ohms sets using 224 Tubes- Resistor 740—5,000 ohm, tapped		6866 6867 6868 6968 5790	.75 .75 1.00 .40	L Lyric (Rudolph Wurlitzer), 6,200 tap-		
Columbia, 90 Columbia, 93 Columbia, 94 Crosley, D.C 47.7 ohm 1 Crosley, 602, at 3475	5, 961—8,050 ohms 2, 930, 980—2,220 ohms 81—9,035 ohms 		6866 6867 6868 6968	.75 .75 1.00	L Lyric (Rudolph Wurlitzer), 6,200 tap- ped at 2,000, 1,000, 3,000, 900Y-439- M	R6	3482
Columbia, 90 Columbia, 93 Columbia, 94 Crosley, D.C 47.7 ohm 1 Crosley, 602, at 3475	5, 961—8,050 ohms 2, 930, 980—2,220 ohms 81—9,035 ohms 		6866 6867 6868 6968 5790 3965	.75 .75 1.00 .40 .35	L Lyric (Rudolph Wurlitzer), 6,200 tap- ped at 2,000, 1,000, 3,000, 900Y-439- M Majestic, 9P6—3,600 ohm Resistor	R6	3482 5466
Columbia, 90 Columbia, 93 Columbia, 94 Crosley, D.C 47.7 ohm 1 Crosley, 602, at 3475 Crosley, 50,	5, 961—8,050 ohms 2, 930, 980—2,220 ohms 81—9,035 ohms 1.0—2,955 ohms . sets using 224 Tubes— Resistor		6866 6867 6868 6968 5790 3965 6710	.75 .75 1.00 .40 .35 .50	L Lyric (Rudolph Wurlitzer), 6,200 tap- ped at 2,000, 1,000, 3,000, 900Y-439- M Majestic, 9P6—3,600 ohm Resistor Majestic, 9P6—2,170 ohm Resistor	•R6 399 102	3482 5466 5467
Columbia, 90 Columbia, 93 Columbia, 94 Crosley, D.C 47.7 ohm 1 Crosley, 602, at 3475 Crosley, 50, Crosley, 40C,	5. 961—8.050 ohms 2. 930, 980—2,220 ohms 10—9.035 ohms 0—2,955 ohms sets using 224 Tubes— Resistor 740—5,000 ohm, tapped 102—25,867 ohms 601, 102C—6,515 ohms		6866 6867 6868 6968 5790 3965 6710 6711	.75 .75 1.00 .40 .35 .50 .50	L Lyric (Rudolph Wurlitzer), 6,200 tap- ped at 2,000, 1,000, 3,000, 900Y-439- M Majestic, 9P6—3,600 ohm Resistor	•R6 399 102	3482 5466
Columbia, 90 Columbia, 93 Columbia, 94 Crosley, D.C 47.7 ohm 1 Crosley, 602, at 3475 Crosley, 50, Crosley, 40C, Crosley, 77,	5. 961—8,050 ohms 2. 930, 980—2,220 ohms 10—9,035 ohms 0—2,955 ohms esistor		6866 6867 6868 6968 5790 3965 6710 6711 6870	.75 .75 1.00 .40 .35 .50 .50 .50 .95	L Lyric (Rudolph Wurilizer), 6,200 tap- ped at 2,000, 1,000, 3,000, 900Y-439- M Majestic, 9P6—3,600 ohm Resistor Majestic, 9P6—2,170 ohm Resistor Majestic, 30—10,471 ohms	-R6 399 102	3482 5466 5467
Columbia, 90 Columbia, 93 Columbia, 94 Crosley, D.C 47.7 ohm 1 Crosley, 602, at 3475 Crosley, 50, Crosley, 40C, Crosley, 77,	5. 961—8.050 ohms 2. 930, 980—2,220 ohms 10—9.035 ohms 0—2,955 ohms sets using 224 Tubes— Resistor 740—5,000 ohm, tapped 102—25,867 ohms 601, 102C—6,515 ohms		6866 6867 6868 6968 5790 3965 6710 6711	.75 .75 1.00 .40 .35 .50 .50	L Lyric (Rudolph Wurlitzer), 6,200 tap- ped at 2,000, 1,000, 3,000, 900Y-439- M Majestic, 9P6—3,600 ohm Resistor Majestic, 9P6—2,170 ohm Resistor	-R6 399 102	3482 5466 5467
Columbia, 90 Columbia, 93 Columbia, 94 Crosley, D.C 47.7 ohm 1 Crosley, 602, at 3475 Crosley, 50, Crosley, 40C, Crosley, 77,	5. 961—8,050 ohms 2. 930, 980—2,220 ohms 10—9,035 ohms 0—2,955 ohms esistor		6866 6867 6868 6968 5790 3965 6710 6711 6870	.75 .75 1.00 .40 .35 .50 .50 .50 .95	L Lyric (Rudolph Wurilizer), 6,200 tap- ped at 2,000, 1,000, 3,000, 900Y-439- M Majestic, 9P6—3,600 ohm Resistor Majestic, 9P6—2,170 ohm Resistor Majestic, 30—10,471 ohms	-R6 399 102	3482 5466 5467

Make

Models and Values

Dayton Navigator-8,350 ohm

Edison, R-1, R-2, C-2-1500 ohm.... Edison, R-1, R-2, C-2-13,400 ohm... Earl, Model 31-32, 328-41, 5,000 ohm. Erla, R1-17,660 ohm

Federal, 73-060-2,685 ohm

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MAIL ORDERS TO See Terms on Page 5

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Federated Purchaser Inc.

25 PARK PLACE, N. Y. C. or to our nearest branch 北京都羅羅家族の「「「東京」の「東京」

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August-September, 1932

0 .4	Charles Charles and an April and Social	A DESCRIPTION OF THE OWNER OF THE	A DECK OF A	and the second se	
		OL	TAC	GE	DIVIDERS
.	Models and Values	No.	No.	Price	Make Models a
Make	Miducia and Taraca	Part	Cat.		Stromberg-Carlson, 64
	· P			I	-9.750 ohms
Philco, 76	3, 77, 77A-4,900 B Resistor	3865	3987	.80	Stromberg-Carlson, 64
Dhilos 5	at 1,400. 1,500 11, 521, 531, 551, 571, 541,				
561 581	1-23 965 opms	3000 11	5568	.95 .60	Temple, 8-60, 8-80, 8-
Philco, 20	20A, 220, 220A-5,102 onms	4230	3880 5771	.75	Temple, D. C33 onr
Philos 87			5772	.75	Temple, All-1,500 ohn Temple, D. C250 oh
Polydyne	Theing 250 Tube		3963	.65 .65	Thorardson, 210 Resis
Polydyne-	-Using 171 Tube		3966	.03	tapped at 6,800
	R				Thorardson, 171 Resis tapped at 2,000, 3,
RCA, 33	D.C584 ohm tapped at 80.	2571 2242	3871 3872	.25 .30	and 2,000
RCA, 18,	33, 513,940 ohms -voltage divider, 8,195 ohms	4434	3030	.60	
RCA 66-	-4.800 ohm Series Resistor.	, DUST	6395	.75	Victor, R-32, R-42, R
RCA. 64-	-3,040 ohms, tapped at 1500		6394	1.05	2,525 ohm tapped a and 775
1000, 2	50, 126, 165 46, 47-8,250 ohms, tapped		0001		Victor, 9-54, 9-18-4,4
ot 2750	900.3500.1100	2043	6396	1.05	Victor, 7-11, 7-25. 7-
RCA. 33	D.C., 46 D.C48 ohms, tap	-	2582	.75	ohms Victor, 9-18-7,935 of
ped at	16 D.C 480 ohms, tapped a	t	2002		Victor, 9-18-3,670 of
105		•	6544	.75	Victor, 14, 15
RCA , 10	5 Speaker-3.825 onms, tap	-	6554	1.45	and the barrier TTTDA
ped at	1050, 1475 Receptor Pack-25,300 ohm	S	5867	1.00	Westinghouse, WR4
RCA. 64-	7.780 ohms		5784	1.25	Zenith, 33, 34, 35, 354
RCA. 30	A-6.700 ohms	•	3785 5786	1.25 1.25	362-for Packs 10, 3
RCA, 47		•	6397	.95	Zenith, 34P, 35P, 35A
RCA El	ectrola, AP952, 997, 860-40	o			37-7,200 ohms-10 6,750 ohms
ohme			6398	1.20 .75	Zenith, 35PX, 35APX
RCA, 44	, 46, 47-2,580 ohms	•	6876 6877	.75	
RCA, 60	-1,340 ohms -4,030 ohms	•	6878	.95	Zenith, 39, 39A, 392 Packs 12, 16
RCA, 67	-7,335 ohms	•	6879	.75	Zenith, 52, 53, 54, 6
RCA, 42	, 48	•	6398	1.20	70, 702, 602, 612, 672, 71, 72, 73, 77,
Silvor-M	larshail, 655-11,350 ohms		3164	1.00	672, 71, 72, 73, 77,
Silver_M	[arsha]], 659-10,300 ODMS		3165	1.00	<u>-6,000 ohms</u>
Silver-M	[arshall, 651-7,200 onm taj)-	3166	1.85	VOLUME
ped at	t 6,200 (large) Iarshall, 651 — 9,720 ohn	1S	0100		I VOLUME
l (emoli	N		3167	1.10	(Con
Gilver-M	farshall, 672-5.500 chms		3168 5773	.75 1.00	Receiver N
Sonora,	A33 110-7,000 tapped at 2,000	A426		.80	Victor, R14, R15, R1
Sporton	De Luxe-7.000	. , A393	0 9911	.70	Victor, 7-25
Snarton	110 A.C10.000	A202	3 3978 5857	.50 .20	Victor, 7-11
Sparton	, 301, 931—110 ohms , 110—29,000 ohms	••	6880	.95	
Solitdor	f 153C		5774	1.00	Ware, SB45
Stewart	-Warner - 8,000 ohms tapp 500, 3,500, 2,800	ed	3873	.40	Ware, K5 Ware, SBF
at 3,5	00, 3,500, 2,800 Warner — 15,000 tapped	st.	3015		Ware, SBA
II 10.000)	** 0100	5 3990		Ware, 8-1
1 Staward	-Warner-600 onms C.L.	0410	3 3989 6881		
Steinite	991-2,500 ohms 50-25,877 ohms	•• •	6882		Wolle-Cordner, 13-1
I. Stainits	40 - 20.200 ohms		6399	1.50	Wells-Gardner, 13-1
I Stainits	a 70, 80, 95, 22, 440 onms		6400 0 883		Wells-Gardner, 13-1 Westinghouse, WR5 Westinghouse, WR4
Stromb	erg-Carlson, 19, 20-3,285 oh erg-Carlson, 638-9,000 ohms	1112	6884		Westinghouse, with
L Stromh	erg-Carlson, 10, 11-4.880 00	ms –	5775		
1 Cinomh	org_Carlson, 12, 14-0.570 00	1118	5776 5777		Zaney Gill, 54 Tone
Stromb	erg-Carlson, 10, 11-9,860 oh erg-Carlson, 401	1118	5778		Zenith, AH, CH, RI
Stromb	err-Carlson, 403-5,500 0nn	as.	5779	1.2	
El Cinomal	$horg_Corleon 403-3.770 000$	as.	5780) 1.00	9534
Stromb	perg-Carlson, 635, 636 - 9,	210	5586	3 .9	Zenith, 362X, 34P,
ohms Strom	s berg-Carlson, 12, 14 - 11,	025			Zenith, 39, 39A, 40
a hana			578	1 1.3	64, 67, 60, 61,
II Strom	herg-Carlson, 846, 848 — 0,	200	578	2 1.1	(Note: Some of
ll ohm	s berg-Carlson, 846, 848 — 9,	* * *	010		changed to dual
li ohmi			578	3 1.2	Zenith, 52, 53, 522, 67, 64, 60, 61, 60
Strom	berg-Carlson, 635 D.C. —	20	584	7 7	67, 64, 60, 61, 60 5 72, 73, 77, 712, 72
ohm	8	•••	00%		
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MAIL ORDERS TO AFF See Terms on Page 5

Make Models and Values No. Part	No. Cat.	Price
Stromberg-Carlson, 641, 642, 652, 654	0	
	6401	1.25
Stromberg-Carlson, 641, 642, 652, 654 	6402	1.20
T Corrections	3864	.30
Temple, 8-60, 8-80, 8-90-6,550 ohms Temple, D. C33 ohms	3867	.35
Temple, D. C33 ohms	3861	.30
Temple, All—1,500 ohm audio blas Temple, D. C.—250 ohm tapped at 50	3865	.25
Temple, D. C.—250 film tapped at 50 Thorardson, 210 Resistor—8,000 ohm		
	3163	.60
Thorardson, 171 Resistor—13,000 ohm	`	11
tapped at 2,000, 3,000, 3,000, 3000		
and 2,000	3162	.95
V		- 11
Victor, R-32, R-42, RE-45 and RE-75		11
2.525 ohm tapped at 200, 1,350, 200	P O	
	3170	.65
Victor, 9-54, 9-18-4,470 ohms	6397	.95
Victor, 7-11, 7-25, 7-26, 9-16 - 8,195	6885	.75
ohms	6886	.95
Victor, 9-18	6887	.95
and 775 Victor, 9-54, 9-18-4,470 ohms Victor, 7-11, 7-25, 7-26, 9-16 - 8,195 ohms Victor, 9-18-7,935 ohms Victor, 9-18-3,670 ohms Victor, 14, 15	6398	1.20
Victor, 14, 15		11
Westinghouse, WR4-4,805 ohms	6398	1.20
Z		
040 050 259A		
Zenith, 33, 34, 35, 35A, 342, 352, 352A, 362for Packs 10, 1322,700 ohms. 63-85 Zenith, 34P, 35P, 35AP, 342P, 352AP, 500 ohms. for Packs 11, 14	3897	.95
362-107 PACKS 10, 15-24,700 01111-		ł
37-7,200 ohms-for Packs 11, 14-		
6 750 ohms	3980	.95
6,750 ohms		
Zenith, 39, 39A, 39A, 392. 392A, 40A—for Zenith, 39, 39A, 392. 392A, 40A—for Reacher 12, 16, 63-70	3979	.95
Zenith, 39, 39A, 392, 392A, 40A-for		07
Packs 12, 16 63-70	3983	.95
Zenith, 52, 53, 54, 60, 61, 62, 50, 60,		
70, 702, 602, 612, 622, 64, 67, 642,		
70, 702, 602, 612, 622, 64, 67, 642, 672, 71, 72, 73, 77, 712, 722, 732, 777	5 5587	.95
Zenith, 52, 53, 54, 60, 61, 62, 50, 60, Zenith, 52, 53, 54, 60, 61, 62, 50, 60, 70, 702, 602, 612, 622, 64, 67, 642, 672, 71, 72, 73, 77, 712, 722, 732, 777 -6,000 ohms	5 5567	.95
-6,000 Onins		
-6,000 Onins		
VOLUME CONTROL G		
VOLUME CONTROL G (Continued from page 95)	UIDE	
VOLUME CONTROL G (Continued from page 95) Receiver Models	UIDE Cat. No.	Price
VOLUME CONTROL G (Continued from page 95) Receiver Models V	UIDE Cat. No. 5158	Price 1.45
	UIDE Cat. No. 5158 7080	Price 1.45 .55
	UIDE Cat. No. 5158 7080	Price 1.45
VOLUME CONTROL G (Continued from page 95) Receiver Models Victor, R14, R15, R17 Victor, 7-25 Victor, 7-11	UIDE Cat. No. 5158 7080	Price 1.45 .55
VOLUME CONTROL G (Continued from page 95) Receiver Models Victor, R14, R15, R17 Victor, 7-25 Victor, 7-11	UIDE cat. No. 5158 7080 7081	Price 1.45 .55 .55
VOLUME CONTROL G (Continued from page 95) Receiver Models Victor, R14, R15, R17 Victor, 7-25 Victor, 7-11 W	UIDE cat. No. 5158 7080 7081 . 7082	Price 1.45 .55 .55
VOLUME CONTROL G (Continued from page 95) Receiver Models Victor, R14, R15, R17 Victor, 7-25 Victor, 7-11 W Ware, SB45 Victor	UIDE cat. No. 5158 7080 7081 7082 7083	Price 1.45 .55 .55
VOLUME CONTROL G (Continued from page 95) Receiver Models Victor, R14, R15, R17 Victor, 7-25 Victor, 7-11 Ware, SB45 Ware, K5 Ware, SB	UIDE cat. No. 5158 7080 7081 7082 7083 7084	Price 1.45 .55 .55 .55 .90 .90 .85 .85
5,000 onnis VOLUME CONTROL G (Continued from page 95) Receiver Models V Victor, R14, R15, R17 Victor, 7-25 Victor, 7-11 W Ware, SB45 Ware, K5 Ware, SBF Ware, SBF Ware, SBA Wore, SA	UIDE cat. No. 5158 7080 7081 7082 7083 7084 7085 7086	Price 1.45 .55 .55 .90 .90 .85 .85 .89
5,000 onnis VOLUME CONTROL G (Continued from page 95) Receiver Models V Victor, R14, R15, R17 Victor, 7-25 Victor, 7-11 W Ware, SB45 Ware, SB5 Ware, SB7 Ware, SB7 Ware, SB4	UIDE cat. No. 5158 7080 7081 7082 7083 7084 7085 7086	Price 1.45 .55 .55 .90 .90 .85 .85 .85 .89 .89
5,000 onnis VOLUME CONTROL G (Continued from page 95) Receiver Models V Victor, R14, R15, R17 Victor, 7-25 Victor, 7-11 W Ware, SB45 Ware, SB45 Ware, SB5 Ware, SB4 Ware, SB4 War	UIDE cat. No. 5158 7080 7081 7082 7083 7084 7085 7084 7085 7086 7087 6142	Price 1.45 .55 .55 .55 .90 .90 .85 .85 .89 .50
5,000 onnis VOLUME CONTROL G (Continued from page 95) Receiver Models V Victor, 7-25 Victor, 7-11 Ware, SB45 Ware, SB45 Ware, SB5 Ware, SB7 Ware, SB4 Ware, SB7 Ware, SB4 Ware, SB4 W	UIDE cat. No. 5158 7080 7081 7082 7083 7084 7085 7086 7085 7086 7087 6142 7088	Price 1.45 .55 .55 .55 .90 .90 .85 .85 .85 .80 .50 .75
5,000 onnis VOLUME CONTROL G (Continued from page 95) Receiver Models V Victor, R14, R15, R17 Victor, 7-25 Victor, 7-11 W Ware, SB45 Ware, SB45 Ware, SBF Ware, SBF Ware, SBF Ware, SBF Ware, SBF Ware, SBF Ware, SBF Ware, SBA Ware, S1, B-2 Wells-Gardner, 13-10 Whole Gardner, 13-10 Whole Gardner, 13-10 Whole Gardner, 13-10	UIDE cat. No. 5158 7080 7081 7082 7083 7084 7085 7086 7086 7087 6142 7088 7089	Price 1.45 .55 .55 .90 .90 .85 .89 .89 .50 .75 1.00
5,000 onnis VOLUME CONTROL G (Continued from page 95) Receiver Models V Victor, R14, R15, R17 Victor, 7-25 Victor, 7-11 W Ware, SB45 Ware, SB45 Ware, SBF Ware, SBF Ware, SBF Ware, SBF Ware, SBF Ware, SBF Ware, SBF Ware, SBA Ware, S1, B-2 Wells-Gardner, 13-10 Whole Gardner, 13-10 Whole Gardner, 13-10 Whole Gardner, 13-10	UIDE cat. No. 5158 7080 7081 7082 7083 7084 7085 7086 7086 7087 6142 7088 7089	Price 1.45 .55 .55 .90 .90 .85 .80 .50 .75 1.00 .50
5,000 onnis VOLUME CONTROL G (Continued from page 95) Receiver Models V Victor, R14, R15, R17 Victor, 7-25 Victor, 7-11 W Ware, SB45 Ware, SB45 Ware, SB45 Ware, SB45 Ware, SB45 Ware, SB4 Ware, SB45 Ware, SB4 Ware, WR5 Were, WR4 W	UIDE cat. No. 5158 7080 7081 7082 7083 7084 7085 7086 7086 7087 6142 7088 7089	Price 1.45 .55 .55 .90 .90 .85 .89 .89 .50 .75 1.00
5,000 onnis VOLUME CONTROL G (Continued from page 95) Receiver Models V Victor, R14, R15, R17 Victor, 7-25 Victor, 7-11 W Ware, SB45 Ware, SB45 Ware, SB45 Ware, SB45 Ware, SB4 Ware, WB4 Ware, WB4 Ware, WB4 Ware, WB4 Ware, WB4 Ware, Ware, WB4 Ware, Ware, War	UIDE cat. No. 5158 7080 7081 7082 7083 7084 7085 7084 7085 7086 7087 6142 7088 7088 7088 7088 7088	Price 1.45 .55 .55 .90 .90 .90 .85 .85 .89 .50 .75 1.00 .50 1.45
5,000 onnis VOLUME CONTROL G (Continued from page 95) Receiver Models V Victor, R14, R15, R17 Victor, 7-25 Victor, 7-11 W Ware, SB45 Ware, SB45 Ware, SB5 Ware, SB7 Ware, Ware, W	UIDE cat. No. 5158 7080 7081 7082 7083 7084 7085 7086 7086 7087 6142 7089 6141 5158	Price 1.45 .55 .55 .90 .90 .85 .80 .85 .80 .75 1.00 .50 1.45 .85
5,000 onnis VOLUME CONTROL G (Continued from page 95) Receiver Models V Victor, R14, R15, R17 Victor, 7-25 Victor, 7-11 W Ware, SB45 Ware, SB45 Ware, SBF Ware, SBA Ware, SA Ware, WRA Zaney Gill, 54 Ware, Sa Ware, SA Ware, SA Ware, SA	UIDE cat. No. 5158 7080 7081 7082 7083 7084 7085 7084 7085 7086 7087 6142 7089 6141 5158 7090	Price 1.45 .55 .55 .90 .90 .85 .89 .89 .50 .50 1.00 .50 1.45 .85 .85 .85
5,000 onnis VOLUME CONTROL G (Continued from page 95) Receiver Models V Victor, R14, R15, R17 Victor, 7-25 Victor, 7-11 W Ware, SB45 Ware, SB45 Ware, SB45 Ware, SB4 Ware, WB4 Ware, WA4 Ware, WA4 Ware, WA4 Ware, WA4 Ware, WA4 War	UIDE cat. No. 5158 7080 7081 7082 7083 7084 7085 7086 7087 6142 7088 7088 7088 7088 7088 7088 7088 708	Price 1.45 .55 .55 .90 .90 .85 .89 .89 .50 .50 1.00 .50 1.45 .85 .85 .85
5,000 onnis VOLUME CONTROL G (Continued from page 95) Receiver Models V Victor, R14, R15, R17 Victor, 7-25 Victor, 7-11 W Ware, SB45 Ware, SB45 Ware, SB45 Ware, SB4 Ware, WB4 Ware, WA4 Ware, WA4 Ware, WA4 Ware, WA4 Ware, WA4 War	UIDE cat. No. 5158 7080 7081 7082 7083 7084 7085 7086 7087 6142 7088 7088 7088 7088 7088 7088 7088 708	Price 1.45 .55 .55 .90 .90 .85 .89 .89 .50 .50 1.00 .50 1.45 .85 .85 .85
5,000 Onnis VOLUME CONTROL G (Continued from page 95) Receiver Models V Victor, R14, R15, R17 Victor, 7-25 Victor, 7-11 W Ware, SB45 Ware, SB45 Ware, SB45 Ware, SB4 Ware, SB4 Wa	UIDE cat. No. 5158 7080 7081 7082 7083 7084 7085 7086 7087 6142 7089 6141 5158 7090 7091 7092 2, 3,	Price 1.45 .55 .55 .90 .90 .85 .89 .89 .50 .50 1.00 .50 1.45 .85 .85 .85
5,000 onnis VOLUME CONTROL G (Continued from page 95) Receiver Models V Victor, R14, R15, R17 Victor, 7-25 Victor, 7-11 W Ware, SB45 Ware, SB5 Ware, SB7 Ware,	UIDE cat. No. 5158 7080 7081 7082 7083 7084 7085 7086 7086 7086 7086 7086 7087 6142 5158 7089 6141 5158 7090 7091 7092 2, 6120	Price 1.45 .55 .55 .90 .90 .85 .80 .80 .80 .75 1.00 .50 1.45 .85 .85 .85 .85 .85
5,000 onnis VOLUME CONTROL G (Continued from page 95) Receiver Models V Victor, R14, R15, R17 Victor, 7-25 Victor, 7-11 W Ware, SB45 Ware, SB45 Ware, SB5 Ware, SB7 Ware, SB7 Wa	UIDE cat. No. 5158 7080 7081 7082 7083 7084 7085 7086 7087 6142 7089 6141 5158 7089 6141 5158 7092 2, 3, 6120 6121 6122	Price 1.45 .55 .55 .90 .90 .85 .85 .80 .75 1.00 .50 1.45 .85 .85 .80 .80 .80 .80 .80
5,000 onnis VOLUME CONTROL G (Continued from page 95) Receiver Models V Victor, R14, R15, R17 Victor, 7-25 Victor, 7-11 W Ware, SB45 Ware, SB45 Ware, SB5 Ware, SB7 Ware, SB7 Wa	UIDE cat. No. 5158 7080 7081 7082 7083 7084 7085 7086 7087 6142 7089 6141 5158 7089 6141 5158 7092 2, 3, 6120 6121 6122	Price 1.45 .55 .55 .90 .90 .85 .85 .80 .75 1.00 .50 1.45 .85 .85 .80 .80 .80 .80 .80
5,000 onnis VOLUME CONTROL G (Continued from page 95) Receiver Models V Victor, R14, R15, R17 Victor, 7-25 Victor, 7-11 W Ware, SB45 Ware, SB45 Ware, SB5 Ware, SB7 Ware, SB7 Wa	UIDE cat. No. 5158 7080 7081 7082 7083 7084 7085 7086 7087 6142 7089 6141 5158 7089 6141 5158 7092 2, 3, 6120 6121 6122	Price 1.45 .55 .55 .90 .90 .85 .85 .80 .75 1.00 .50 1.45 .85 .85 .80 .80 .80 .80 .80
5,000 onnis VOLUME CONTROL G (Continued from page 95) Receiver Models V Victor, R14, R15, R17 Victor, 7-25 Victor, 7-11 W Ware, SB45 Ware, SB45 Ware, SB5 Ware, SB7 Ware, SB7 Ware, SB7 Ware, SB7 Ware, SB7 Ware, SB7 Ware, SB7 Wells-Gardner, C, CG, 82, 72 Wells-Gardner, 13-10 Wells-Gardner, 13-10 Wells-Gardner, 13-10 Wells-Gardner, 13-10 Wells-Gardner, 13-10 Wells-Gardner, 13-10 Wells-Gardner, 13-10 Wetinghouse, WR5, WR6, WR7 Westinghouse, WR4 Zaney Gill, 54 Zaney Gill, 54 Zaney Gill, 54 Zaney Gill, 54 Zenith, 33, 34, 35, 35A, 342, 352, 352A, 362 353A Zenith, 362X, 34P, 342P, 41, 42, 422 Zenith, 39, 39A, 40A, 392, 392A Zenith, 52, 53, 522, 532, 54, 542, 55, 57, 64, 67, 60, 61, 602, 613, 622, 642, 65 64, 67, 60, 61, 602, 613, 622, 642, 65 (64, 67, 60, 61, 602, 613, 622, 642, 65	UIDE cat. No. 5158 7080 7081 7082 7083 7084 7085 7086 7086 7087 6142 7089 6141 5158 7089 6141 5158 7090 7091 7091 7092 23, 6120 6122 32, 6122 32, 6122 32, 6122 32, 6122 32, 6122 32, 6122 32, 6122 32, 6122 32, 6122 33, 6122 33, 6122 34, 6122 32, 6122 32, 6122 33, 6122 33, 6122 33, 6122 34, 6122 34, 6122 34, 6122 34, 6122 34, 6122 34, 6122 34, 6122 34, 6122 34, 6122 7082 7085 7091 7092 72, 72, 72, 72, 72, 72, 72, 72	Price 1.45 .55 .55 .90 .90 .90 .85 .85 .80 .75 1.00 .60 1.45 .85 .85 .80 .80 .80 .80 .80 .80
5,000 onnis VOLUME CONTROL G (Continued from page 95) Receiver Models V Victor, R14, R15, R17 Victor, 7-25 Victor, 7-11 W Ware, SB45 Ware, SB45 Ware, SB7 Ware, SB7 Ware	UIDE cat. No. 5158 7080 7081 7082 7083 7084 7085 7086 7086 7087 6142 7089 6141 5158 7089 6141 5158 7092 22, 6120 . 6121 . 6122 32, 72 . 3204	Price 1.45 .55 .55 .90 .90 .85 .85 .80 .75 1.00 .60 1.45 .85 .85 .80 1.45 .85 .80 .80 .80 .80 .80
5,000 offinis VOLUME CONTROL G (Continued from page 95) Receiver Models V Victor, R14, R15, R17 Victor, 7-25 Victor, 7-11 W Ware, SB45 Ware, SB45 Ware, SB45 Ware, SB4 Ware, SB4	UIDE cat. No. 5158 7080 7081 7082 7083 7084 7085 7086 7086 7087 6142 7088 7088 7088 7088 7088 7088 7088 7089 6141 5158 7090 7091 7092 2, 6122 3, 6122 5, 61	Price 1.45 .55 .55 .90 .90 .90 .85 .85 .80 .75 1.00 .60 1.45 .85 .85 .80 .80 .80 .80 .80 .80
5,000 offinis VOLUME CONTROL G (Continued from page 95) Receiver Models V Victor, R14, R15, R17 Victor, 7-25 Victor, 7-11 W Ware, SB45 Ware, SB45 Ware, SB45 Ware, SB4 Ware, SB4	UIDE cat. No. 5158 7080 7081 7082 7083 7084 7085 7086 7086 7087 6142 7088 7088 7088 7088 7088 7088 7088 7089 6141 5158 7090 7091 7092 2, 6122 3, 6122 5, 61	Price 1.45 .55 .55 .90 .90 .85 .89 .50 .75 1.00 .50 1.45 .85 .85 .80 1.45 .80 .80 1.25
5,000 onnis VOLUME CONTROL G (Continued from page 95) Receiver Models V Victor, R14, R15, R17 Victor, 7-25 Victor, 7-11 W Ware, SB45 Ware, SB5 Ware, SB7 Ware,	UIDE cat. No. 5158 7080 7081 7082 7083 7084 7085 7086 7086 7087 6142 7088 7088 7088 7088 7088 7088 7088 7089 6141 5158 7090 7091 7092 2, 6122 3, 6122 5, 61	Price 1.45 .55 .55 .90 .90 .90 .85 .85 .80 .75 1.00 .60 1.45 .85 .85 .80 .80 .80 .80 .80 .80

1714

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Federated Purchaser Inc. WorldRadioHistory

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25 PARK PLACE, N. Y. C. or to our nearest branch

Page 90

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August-September, 1932

By-Pass Condensers for Standard Sets

Dy=1-9		uen	Ser
Sets and Models Atwater Kent	Capacity	Cat. No.	Price
87, 38, 40, 42, 44, 46	325 mfd. 15 mfd.	2985 2984	\$0.65 .75
Speaker Condenser Bosch		7211	.40
1928-1929 models	225 mfd. 130 mfd.	2983	.65
Brandes B-10 Colonial	.6-C6 mfd.	56 18	.30
82	225 mfd. 210 mfd.	3211	.65
Croslev	1.5 mfd.	5807	.50
60S, 61S, 62S, 63S, 65S Roamio	W6471 W7944	2780 5219	.21 .30
41, 41A, 42, 704, 706	W4013O	2980	.30
608, 618, 628, 638, 65 8	.6 mfd. W20449	2781 5209	.25 .40
*	W22412	5210	.40
	W20446 W7753B	5211 5212	.55 .55
	W20186	5213	.65
	W5943 W6428	5402	.25
	W20187	5403 5404	,45 ,22
	W25426	5398	.38
	W4919 W22995	5399 5407	.30 .30
	W7753	5408	.30
	W4968	5409	.26
	W4313A W23736	5411 5412	.27 .70
Dayfan	W20448	5427	
All Earl	21 mfd.	2761	.10
All Eveready	.5 mfd.	2872	.15
1928-1929	225 mfd. 130 mfd.	2983	.65
- Fada All	1. mfd.	2902	.35
Federal D, E, F, F, H	325 mfd. .001 mfd.	2939 2963	.40
	4 mfd.	5604	1.75
Freed All General Motors	.5 mfd.	2872	.15
1930 Series A	31 mfd.	5214	.40
	1,202,685 1,202,273	5215	.55
* 1	1,202,251	5216 5217	.45
• • • • • • • • • • • • • • • • • • • •	1,202,287	5218	.65
Kellogg	1,203,860	5409	1.50
All Kolster	.5 mfd.	2752	.25
44,45	35 mfd.	5617	.50
43, 48 44, 45	.6-C mfd. 1. mfd.	5618 5627	.30 .35
430, 32 D.O.	C1-5 mId.	5628	.30
44, 45 6, 61., 6 F , 6M, 75	.5 mfd. 4. mfd.	5608	.20
6J	.6-C6 mfd.	5603 5581	.95 .35
Majestic			
70, 90, 180	.5 mfd. 25 mfd.	5448 5446	.30 .30
Peerless	35 mfd.	5447	.30
All Kylectron	.5 mfd. 71 mfd.	2903 2864	.30 .30
	15 mfd. 31 mfd.	2904	.30
Courier 65	31 mfd.)	7195	,45
Kennedy	100025")		
20 Radiola	Multiple By-pass	7183	.48
64, 67		4180	1.75

Sets and Models	Capacity	Cat. No.	Price
	-3-,25 mfd,	4182	.40
	21 mfd.)	4181	.45
	125 mfd.)		
80, 82, 86	31 mfd.)	3000	.15
	15 mfd.)		
42, 48	31 mfd.	3026	.15
•	21 mfd.	3027	.15
44, 46, 47	.25-C25 mfd.	3028	.15
	1-1. mfd.	3037	.15
44, 46, 47	31 mfd.	3026	.15
	125 mfd.		610
16, 41, 17, 60, 62 and			
All Supers	1-1. mfd.	5295	.35
All Models	R.F. Choke	0.000	100
	2001 mfd.	2910	doz. 1.25
Sparton			
All	½ mfd.	5833	.35
	1. mfd.	6894	.35
410	41 mfd.	6608	.35
Victor		4180	1.75
9-18, 9-54, 9-56	.1 mfd.	5726	.15
	21 mfd.		
	125 mfd.	4180	1.75
Victor		2100	
RE 14.15	31 mfd.	3028	.15
	21 mfd.	3027	.15
U. S. Radio & Television			
	2378	5204	1.25
•	964A	5205	.75
	2628	5206	.50
	170	3013	.35
	2235B	5208	1.25
Zenith		apro () (3	4 1000
50, 60, 70 Series	42 mfd.	6478	.\$9

FILTER CONDENSER BLOCKS

(Continued from page 93)		
Make Models Part No.	Cat. No.	Price
Sonora, Using 245 tubes	2914	1.85
Sparton, 930 Sparton, AC 5	5039	3.50
Sparton, AC 5	3159	3.50
Sparton, AC7, 601, 62, 63	5040	3.50
Sparton, 89	657 6	3.25
Sparton, 109	7261	4.05
Splitdorf, M6 Steinite, 70	7263 7262	2.95
Steinite, 45, 70A	5037	2.95 3.50
Steinite, 40A	5038	3.50
Stewart Warner, 950, 100A	6575	3.25
Stromberg-Carlson, 635, 636, 638.	3723	4.50
Stromberg-Carlson, 641, 642, 652,		2.00
654	6514	4.95
779		1.00
Temple, 8-60, 8-80, 8-90	2754	.95
Temple, Same as above for 25 cycles	2758	.95
Temple, 7-50, 7-60	2753	.95
10		
U. S. Radio & Television, 46, 46A,	6777	1.75
U. S. Radio & Television, 47, 47A.	6778	1.75
U. S. Radio & Television, 41	6779	1.95
U. S. Radio & Television, 48, 48A.	6780	1.95
V		
Victor, R-32, R-42, RE-45 and		
RE-75	2709	.95
Victor, Electrols, Hyperion and		
Borgia	3721	1.65
W		
Willard, B Elim. Condenser	5041	3.25
7		
Zenith, ZE11, 12, 14, 18 PL1145	2800	1.35
Zenith, ZE1835PX, 35APX and 37A	2701	4.50
Zenith, ZE17	2700	1.50
Zenith, ZE10	3160	3.00
Zenith, ZE13	3161	4.00
Zenith, ZE6	3171	5.00
Zenith, 39	3181	3.75
Zenith, ZE8 (set of 2)	5042	7.50
Zenith, ZE9, Pack	5043	2.50
Zenith, 9E, 11E, 14E	5043	2.95

POWER TRANSFORMERS

POWER TRANSFORMERS			
(Continued from page 92)		· · ·]	
Set Model K	Cat. No.	Price	
KOLSTER INTERNATIONAL, K70 KOLSTER INTERNATIONAL, K60 KOLSTER (D), K29 KOLSTER (D), 6J, 6K KOLSTER (O), 6H, K5 KOLSTER (O), 20, 21, 22, 23	7237 7238 6781 2534 5632 5509 5507	3.95 3.95 3.95 4.25 7.85 4.95 3.95	
ROLSTER (0), 28 KOLSTER (0), K38 KOLSTER (0), K45 KOLSTER (0), K45, 48, using 171A or 245	5503 6815 5504	6.50 8.85 4.75	
tubes KOLSTER (O), K44 KOLSTER (O), K25, 27 KOLSTER (O), K24 M	5506 5718	6.75 6.85 5.50	
MAJESTIC B ELIMINATOR (D) MAJESTIC 91, 92 (227, 245, 280 tubes) MAJESTIC (D), 130, 131, 132, 233 MAJESTIC (D), 71, 72 (Pack No. 7BP6)	2525 2612 6767 5104	1.50 4.00 3.95 4.00	
MAJESTIC (D), 130A, 230A, 130, 131, /132, 133	7020	5.25	
MAJESTIC 180 (Radio-Phono Combination) (227, 250, 281).	2619	7.50	
 MAJESTIC (0), 71, 72 Filament and Plate transformers in one can. MAJESTIC (0), 90B, 100B. MAJESTIC (0), 180 Filament. MAJESTIC (0), 180 Plate. MAJESTIC (0), 70 Series Filament. MAJESTIC (0), 70 Series Plate. 	2684 5872 5458 5460 5464 5463	4.75 4.75 1.50 1.50 2.50 1.50	
MAJESTIC (0), 90 Series Flament and Plate	5461 7239 7240 7241	2.95 3.95 3.95 3.95	
Flate P PEFRLESS (0), Courier, 65	5872 2615	4.75 2.75	
PEERLESS (0), K70, 20, 22. PHILCO (0), 20, 220. PHILCO (0), 65. PHILCO (0), 70. PHILCO (0), 76, 77. PHILCO (0), 82, 86. PHILCO (0), 87. PHILCO (0), 87. PHILCO (0), 90 (using 245 tubes). PHILCO (0), 90 (using 247 tubes). PHILCO (0), 95. 98, 296. PHILCO (0), 500 Serles . PULYDYNE (0), Model Q, 60 cycle (222 Tube)	2569 4321 2600 6248 6342 6241 2604 6247 6246 6247 6246 6244 2620 2621	4.85 2.85 2.85 2.85 2.85 2.85 2.85 2.85 2	
R RADIOLA (O), 18, 25 Cycle R C A (Q), 17, 18, 33, 51 R C A (O), 17, 18, 33, 51, for 220 V. A.C R C A (O), 41 R C A (D), 44, 46 R C A (D), 44, 46 R C A (D), 60, 62. R C A (O), 80, 82. 86 R C A (O), 104 Speaker R C A SUPERETTE (O) R C A -VICTOR (O), R52, R39, RE57. R C A -VICTOR (O), RE14, RE15. R C A THERAMIN (O)	3734 6816 2573 2531 2568 2677 2683 3729 2676 6009 2675 6919 6769 2531 6771	4.25 1.80 3.93 2.50 3.25 3.25 3.25 4.85 3.95 2.65 4.50 9.45 3.95 2.65 3.95	
SEARS ROEBUCK (O), Power Pack SILVERTONE (O), Power Pack SLEEPER MONOTROL, Type 70 SONOHA (O), A31, B31 SPARTON (D), 69, 79A, 89A SPARTON (O) 301	6504	7.85 7.85 3.50 3.40 2.98 3.85	

Page 99

	And the second		
Set	Model	Cat.	
there	S	No.	Price
-	-	7002	4.75
SPARTON	(D), 589	7003	4.75
SPARTON	(D), 931	5866	3.40
STEINITE	(0), 40A, 40S, 40, 45A	5364	3.95
STEINITE,	70 80	6921	3.75
STEWART	WARNER (D), 100A-B-E	7021	3.25
STEWART	WARNER (D), 801, 801A, 802	6768	6.50
STRUMBE	RG-CARLSON (D), 638	2663	4.50
004	RG-CARLSON (D), 635, 636	3722	4.25
STRUMBE	RG-CARLSON (D), 035, 030 RG-CARLSON (D), 10, 10A, 11	5850	5.25
STRUMBE	RG-CARLSON (D), 101 , 101 , 111 .	5601	4.50
STRUMBE	RG , 12, 14	7243	3.95
STROMDE	RG, 12, 14 RG-CARLSON, 19, 20	7244	3.95
STRUMDE	RG-CARLSON, 15, 20	7245	3.95
STRUMBE	BU-ORIEDOVI, 20 ·······		
	T		
TEMPLE (O), 8-60, 8-80, 8-90, 8-61, 8-81, 8-91	2283	3.75
	Ú		
U.S. TELEY	VISION & RADIO (O), Gloriatone	6250	2.35
U.S. RAD	IO & TELE. (O), 561	2501	. 1.50
U.S. RAD	IO & TELE. (O), 540	2509	1.50
U. S. RAD	IO & TELE. (O), 581	2510	1.50
U. S. RAD	IO & TELE. (O), 680	2514	1.50
U. S. RAD	IO & TELE. (O), 681	2516	1.50
U. S. RAD	IO & TELE. (O), 682	2507	1.50
U. S. RAD	IO & TELE. (O), 1945	2517	1.50
	v		
VICTOR (O), R-32, R45, 75	6830	3.45
VICTOR (O), R-32, R45, 75 O), R-32, 25 Cycles	2554	3.75
VICTOR (O), 14, 15, 17	2531	2.75
VICTOR (O), 34, 35, 39, 57	5456	2.65
	W		
WESTING	HOSE (0), WR4	2531	2.25
WESTING	HOUSE (0), WR5, WR6, WR7		2,65
** 110 I II VOI	7. Z		
-	(D), XE9	6841	3.25
ZENITH (ZENITH (0), Super 27, No. 4 Pack		1.85
ZENITH (0), 10, 11, 12, 60 cycle	2527	2.75
ZENITH (O), 53, 54, 55, 52, 57, 62, 60, 61, 64		
87 699 6	09 613 692 642 672 71 72 73 77		
719 799	732, 777	5422	2.25
ZENITH	9	6841	3.25
(15) (15) (15) (15) (15) (15) (15) (15)			

Audio Transformer Guide

Receivers	Models	Cat. No	. Price
	****		.50
Atwater Kent	40, 42, 46, 1st audio	7058	.50
Atwater Kent	46 Input	7168	.50
Atwater Kent		2606	\$1.25
Atwater Kent	20, 30, 35, 37	6898	1.25
Atwater Kent	41, 1st audio	6897	1.25
Atwater Kent	41, 2nd audio	7204	1.35
Brunswick	32. 42 Input	5534	3.85
Columbia	902, 920 100 D C 100 1 D C		9,00
Crosley	126 D.C., 126-1 D.C.		1.25
	Double PP Input	3720	
Earl	41	2515	
Earl	A11	3720	
Freed	95	7264	
General Motors	A Input Trans.		
Grebe	Straight Audio	5105	1.50
Grebe	Input Audio	6651 5587	
Kolster	K20, K21		
Kolster	Output choke	3725	.80
Kolster	Double choke		1.85
	6J, 6K, 6F, 6M, 6R	5584	
Philco	See Complete Ph	11169	Disting on
	Page 19.	0.510	4.46
RCA	17, 18, 33, 51	2512	
R C A-Victor	46, 47, 66	5625	.60
R C A	All, Push-pull	2566	
Sonora	Input Transformer		
Stromberg Carlson	846	6517	
Stromberg Carlson	846 Audio & Input		
Victor	All	2581	.75
Victor	All early models		
	Push-pull pack	5744	1.00
Żenith	50, 60, 70 series		
• •	Interstäge	6585	2.75
Peerless	A11	2513	.60

Page 100

A
Adapters
Antenna Kits
Antenna Wire
Arcturus Tubes10
Auto "B" Eliminators 58
Auto Radios101
Auto Generators
Aluminum Panels
Andio Trans-
formers 18, 10, 20, 21, 30, 31

R

Bakelite Pauels
Bakelita Tubing82
Battery Cables
Battery Clips
Battery Meters6, 87
Binding Posts44
Blow Torches
Books
Brackets
Buzzers
Righ Frequency
flouse
Batteries
Flashlight
B & C

. C Cabies Microphone61 Carbon Microphones58 Cats Whiskers68 Chassis Blanks Chokes Audlo 18, 19, 20, 21, 30 RF18, 43, 83 Output18, 19, 20, 21, 30 Chicago Telephone Clarostat Products34, 36 Colls Superheterodyns ... 42, 43, 44 Transformer17 Speaker Fleid8 Short Wave43 Catacombs, Radiola44

Condensers By-pass. .22, 23, 24, 25, 26, 27, 28, 29, 30, 93 Fliter. .22, 23, 24, 25, 26, 27, 28, 20, 93

Floatrolytic

16 F F F F F

Electrolytic
Fixed
Mica
Cartridge
Short Wave
Variablo
Standards
Hang-up
Crystals68
Cunningham Tubes11
Cones, Speaker
_

Ð

Dials				•						4	1-1		ł	K	5,	4	G,	,	83	,
Dial	Cat	le	8	•	•	*	•	,	•	•	•	•	•		•	•	•	•	78	ł

E

Escutcheon Plates45, 46
Electrad Products
Electrical Appliances. 71, 79, 83
Electrical Specialties, 78, 79, 82
Extension Cords
Electric
Microphone
Speaker
Electrolytic Con- densers

F

rost	.Proc	luci	8		 	• •	• •	33	, 33
ield	Coil	ы.			 		• •	• • •	7
leld	Excl	ters	ι.			• •		.7	, 11
uses				• •	 	75),	81,	, 82
lashl		Bu	ilbi	8					.75

G

H

Hacksaws	•													•	•	•	73	
ileadphones						•		•	•			•	•	•	•		.9	
Hook-up W	1	r	3										,				77	
Hardware /	٩	s	s	0	r	t	n	16	1	n	t	5					68	

Insula	tors			•	•	•		•	•					•		•	•	80	
lrons,	Elect	r	1	ß						•	•			•		•		79	
Sold	ering		•	•	•	•			•	•	•	•	•	•	•	•	•	71	

J

Janette Rolary Converters.57 Jewell Instruments 86, 87

K

Knobs	,46
Kits, Antenna	. 80
Superhet	41
Resistor	. 38
Condenser	25

L

Lamps
Lead-in Wire
Lightning Arresters
Lugs, Soldering68
Line Filters
Line Voltage Regulators69

M

INDEX

99 24 29

Magnet Wire
Majestio Parts
Meters . 30, 85, 86, 87, 88, 89, 90
Microphones
Microphone Cabies61
Microphone Stands
Motors, Phonograph63

N

Necales																	
Phonograp	b	L		•			•	•	•	•			•	•		62	
Playback			•	•			•			•		•	•		•	62	
Recording					•				•	•	•	•	•			63	
Neutralizing	1	T	0	0	1	8	•		•	•			•	•		67	

0

Ohmme	ters				••	 	. 8	36	3,	89,	9	0
Oscillat	ors											
Outlet												

P

Power Packs
Panels
Photoflash63
Phone Plugs
Phonographs, Electric
Phono Motors
Pickups
Pin Jacks
Pilot Bulbs
Pilot Sockets
Plugs, 1.7 trio
Analyzer
Speaker
Jones
Potentio-
meters
Powerizers
Public Address
Equipment
Photo-Electric Cells11

R

Readrite Products .87, 88, 89, 90
Receivers, Automubile101
Battery
Midget
Short Wave2, 4
Radio-Phonograph
Refrigerators
Remote Controls
Recorders103
Record Blanks62
Rectifiers65
Resistances, Carbon 38, 39
Variable
Wire Wound
Filament
Grid
Rheostats
Rotary Converters
Receptacies
R.C.A. Tubes

S

Shields			• •	• •	• •				•	•	•		•	•	٠	•	42
Sorews	81	nd	N	iu	ţ,				•	•	•			•		•	68
Screw	Dr	lve	er a	r,	• •		•	• •					•	6	7,	,	73
Shleidi	ng,	. (Co	PI	pe:	r			•	•	•	•	•	•	٠	•	73
Selecto	r	S W	7lt	ch	es	6											48

Set Analyzers . 86, 87, 88, 89, 90 Shielded Wire61

Shleided Microphone
Cables61
Solderali
Solder
Soldering Fluid
Short Wave Colls48
Silencers, Auto Radio6
Sockets
Soldering Irons
Spaghetti Tubing
Staples
Speakers, Dynamie7, 8
Magnetic
Automobile
Suppressors, Spark Plug6
Switches

Т

Tape
Test Adapters65, 66, 68
Test Leads
Tip Jacks
Toggle Switches
Tone Controls
Tool Boxes
Toois
Transformers,
Audio
Filament
Power
17, 30, 31, 92
Step-down
Bell-Ringing
Microphone 18, 19, 20, 31
Push-Pull 18, 19, 20, 21, 80, 81
T.ansmitting Equipment. 54. 63
Practice Sets
Keys
Tubes, Arcturus
R.C.A
Cunningham11
Universai11
Triad11
Tabe Testers
Tube Shleids
Tuners

IJ

Units, Sp	eaker .	 	9
Universal	Micro-		
phones		 . 54,	56, 58
Universal	Tubes	 	n

Variable Resist-	
ances	
Voice Colls, Speaker	
Voltage Regulators	
Voltmeters	
Volume Con-	
trols	
Voltage Di-	
viders	
WWY .	

Weston	Instruments85, 87, 90	
Wright-	DeCoster Products	
Wireless	Кеур	
Wire		

reached with the Acratone AUTO-RAD

New Heights

近空

FTER months of experimenting, ACRATEST A engineers have perfected a really marvelous automobile radio, utilizing the new type auto screen grid tubes throughout, giving uniformly good reception in all locations and the most simple of sets to install.

Now everybody can afford a radio in their car! You can sell the ACRATONE AUTO RADIO for less than \$50 completely installed, and still net a handsome profit. Despite the extremely low price the ACRATONE has the following features:

- Employs 2-239 RF Pentodes, 1-236, 1-237 and 1-241 A. F. Pentode Tubes.
 Equipped with Magnavox Special
- Auto Dynamic Speaker.
- 3 Installed on steering post or dashboard -only 4 holes to drill.
- Low battery drain-only 20 M. A.
- Sold complete-nothing else to buy. 5

Can Be Installed in-**AUTOMOBILES MOTOR BOATS** AEROPLANES MOTOR BUSES TAXICABS

A complete suppressor kit, consisting of 6 spark plug suppressors, 1 generator silencer and 1 distributor suppressor is furnished with the set. A Ward Royal Auto Antenna, which is attached underneath the running board, is also furnished, as is a steel battery box, 5 Sylvania tubes, and 3 large 45 volt B batteries, which furnish all the nec-essary B and C current for the set. The car storage battery is utilized to furnish the cur-rent to light the filaments of the tubes.

Cat. No. 96

Cat. No. 89

\$24.50

in lots

of 3

2-

receiver.

set.



The set of simple installation, marvelous operation

Utilizes All Heater Type Tubes-2-236, 2-237, 2-238

Illuminated Dial . . . Lock Switch . . . Magnavox Dynamic Speaker. Made to sell for around \$45.00 to the dealer and now offered to you for less than half!

For Outfit consisting of a 6-Tube Chassis housed in a heavy steel case, Magnavox dynamic speaker, shielded cable, shielded battery cable, steering column clamp and mounting brackets.

Batter

to

Complete—Nothing Else

-Complete Suppressor -Ward Auto Antenna. -Steel Battery Box.

Buy

Here is what you get for \$29.50 !

1—Acratone 1933 Auto Radio.
 1—Magnavox Matched Dynamic Speaker.
 5—Sylvania Tubes.
 3—45V. Large B Batteries.
 1—Complete Suppressor Kit.
 1—Ward Unto Actorne Contemport

The receiver is readily attached, by means of the brackets furnished, to the steering column of the car, thus avoiding the neces-sity of marring or defacing the car. There are no cumbersome or fussy flexible cables —the set is tuned in directly like any other tractions. An illuminetic dial cohorces the

An illuminated dial enhances the

-Shielded Cables. Brackets, Screws, Nuts, Etc.

Our Net Price

Set of Universal Tubes



\$4.35

The Receiver

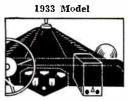
The ACRATONE Automobile Radio is a super-sensitive 5 tube improved radio frequency receiver employing new type auto radio tubes of low current

auto radio tubes of low current consumption: Three tuned circuits, followed by a stage of 41 power pentode, provides the utmost selectivity, sensitivity and fidelity of re-production. The compact chassis is cadmium plated and is housed in a metal can. Only 2 screws to loosen in order to remove the chassis.



Compact

The ACRATONE Auto Radio is the most compact on the market. It measures only $5\frac{1}{2}$ in. wide, 7 $\frac{1}{2}$ in. long and $6\frac{1}{2}$ in. high, and weighs 7 lbs. The Magnavox Dynamic Speaker is $7\frac{3}{2}$ in. in diameter and housed in a metal diameter and housed in a metal case, with mounting brackets and has a center bolt so that it may be easily mounted on the cowl, on the ceiling, on back of the driver's seat or on the dash. Both set and speaker are fin-ished in handsome black crackle to harmonize with the inside fit-tings of the car tings of the car.



Can be installed under dash or on steering post

Midgets in size GIANTS - in performance



FEATURING 5 MODELS

With Latest Improvements

Including-

TONE CONTROL FULL VISION DIALS VARIO-MU AND PENTODE TUBES FULL DYNAMIC SPEAKERS

Outstanding in value without sacrifice of quality, these spiendid receivers incorporate features usually found only in high priced receivers. The reception is remarkably faithful, selectivity minute and volume ample for all requirements.

Model
54For people living in dis-
tricts using Direct Current
this efficient receiver will be
a revelation in performance.
The use of heater type tubes
makes the set very efficient
and insures the absence of line hum. The
set also hoasts of Tone Control and 2 of
the new direct current Pentode Power
Tubes are used in push-pull, giving great
volume if desired. A very artistic wal-
nut cabinet with fluted sides and Gothic
grille houses this receiver. Illuminated
single dial control.
Cabinet 19½ in. high. 15½ wide,
9½ deep.Model
93

Set	of	Arcturus	Tubes	7.25

Model To Incorporating the most re-hetrodyne design, this 7-tube model is the last word in radio efficiency. Its ability to receive stations at great distances with ample volume is almost uncanny. In this receiver selectivity attains per-fection and fidelity of reproduction is second to none. Volume from a mere whisper to auditorium-filling crescendo can be attained. Tone control enables you to bring out any desired shading of tone color. The cabinet is beautifully designed with a suggestion of the Orient and iends itself to any surroundings. The illuminated tuning dial is enhanced with a handsome bronze escutcheon plate. Cabinet 19½ in. high. 15½ wide.

Cabinet 191/2 in. high, 151/2 wide, 91/2 in. deep.

Tubes used: 2-551 or 235 Vario Mu, 2-224 Screen Grid, 1-227 Detector, 1-247 Pentode and 1-280 Full Wave Rectifier.

Set of Universal Tubes.....\$3.45

The set is the **Model** product of the Publix Labora-tory and is well constructed with constructed with materials throughout. Oper-ates on a 25-ft. aerial and brings in stations in a ra-dius of 500 miles and more. Full vision dial. Handsome mahogany two tone cabinet.

mahogany two tone cabinet. The set is ideal for the bungalow, camp, sun-parlor, bedroom, or anywhere a small individual set is re-quired. You can sell this set at \$19.50 complete with tubes to thousands of pros-rects right in your town. Order your sample today and get started making sales to people who have no radio sets in your city. Nobody can afford to with-out radio for \$19.50!

1134 in. long, 834 in. wide, 141/2 in. tall.

Uses 1-235 or 551, 1-224, 1-247 and 1-290 Tubes.

Set of Universal Tubes. \$2.00 Set of Arcturus Tubes. 3.00

A receiver extremely low in price, yet embracing the latest improvements in de-sign, including the new type tubes. Tone control enables you to emphasize high or low notes and bring out the proper shading. Vario Mu tubes eliminate cross-talk and make for sharp tuning. The Pentode Tube gives ample volume for every re-quirement. Cabinet 15" high, 13½" wide and 9½" deep.

Uses 2-58, 1-57, 1-247 and 1-280 tubes.

Set of Universal Tubes\$2.95

Set of Arcturus Tubes\$3.85

Model This 7 Tube Tuned Radio Frequency Model is designed primarily for people with whom great distance recep-tion is secondary but who de-sire the utmost in quality of reproduc-tion. The receiver uses three of the new Vario Mu tubes for utmost selectivity, on Screen Grid Detector and two of the powerful Pentode Tubes in push-pull. This combination makes for remarkable idelity of tone with great volume where the occasion requires. The Cabinet is of a very popular Gothic design and of very beautifully matched walnut overlays. Illuminated dial with bronze escutcheon. Tone Control gives you just the right emphasis of instruments.

Cabinet 191/2 in. high, 151/2 in. wide, 9½ in. deep.

Tubes used: 3-551 or 235 Vario Mu, 1-224 Screen Grid, 2-247 Pentode and 1-280 Full Wave Rectifier.

Set of Universal Tubes......\$3.45

Set of Arcturus Tubes...... 5.50 🕆 Set of Arcturus Tubes..... 5.50



MODEL 74 4-TUBE 110V. A.C.



MODEL 93 5-TUBE 110V. A.C. MODEL 54 5-TUBE 110V. D.C.



MODEL 70 7-TUBE TRF MODEL 77 7-Tube Superheterodyne Both for 110 V. A. C. A Great Success/



Easily installed on phonograph turn table, Only one hole to drill,

Three I tage '250'' Am-differ for recordings.using 55'' 1-58 -56, 1-58, -250 and 281 ubes

pecial oeciai e' ording stor. Two pred. p.m. and

3 1 / 3 D. m.

7 8



Processing

ve have arranged for a service to ress these records. All records are be shipped to 25 Park Place to at-ion of Recording Department.

Price \$1.25 each ONE WEEK DELIVERY

For Cutting and Recording on **Aluminum Record Blanks**

Has Won Universal Acclaim From Sound Engineers, Broadcasting Studios and Recording Laboratories

A Really Practical Recording Device for Record-ing Favorite Radio Programs, Sound Truck An-nouncements, Musical Accompaniments, Home ing Favorite Radio Programs, Sound Truck An-nouncements, Musical Accompaniments, Home Movie Sound Effects, Transcription Programs, Sound Effects, Dancing Studio and Gymnasium Recording, Advertising Talks, Campaign Speeches, etc., etc.

The recorder is extremely simple to in-stall. One single ³6" hole is all that is necessary to mount it. In recording it is only necessary to move the arm to the center of the record and throw the lifting lever to the down position. This immediately starts the recording which evenly grooves the record. The remark-able number of 96 grooves per inch are even which allows the recording as long a playing time as standard phonograph records. The recorder may be operated at either 78 or 33-1/3 r.p.m.

Amplifier to Match

Acratest has developed an amplifier suitable for recording and public address use. This amplifier uses three stages and gives excellent quality for microphone, radio and phonograph recordings. This amplifier has special settings of its vol-rme control for recording purposes. Fully described elsewhere in this catalog.

Cal. No. 101 Price \$24.50

Recording Motor

We have found that ordinary phono-graph motors are hardly suitable for re-cording as they are not powerful enough for such purposes. This Motor is specially fitted for re-cording purposes. It is extremely power-ful and can be switched from 78 r.p.m. to 33-1/3 r.p.m. by just a throw of the switching lever.

Cat. No. 274

Price \$12.50 *

Acratone Recorder makes records that are really outstanding in quality and The The Acratone recorder makes records that are rearry butstanding in quarky and are comparable to standard transceription records. Already this recorder is being lauded by broadcast engineers as the first practical and simplified studio recording unit. It is extremely simple to operate and records instantaneously. Records are practically free from needle scratch and background noise.

Radio servicemen and dealers will find a new field of endeavor with this recorder as it lends itself to many applications.

CENTER SPINDLE CUTTING HEAD THREADER HARDWARE ARM SWIVET

Cutting Outfit

	SWIVEL AN							
Cat. No.	Impedance of Cutter							
70	15 ohms							
71	500 ohins							
72	4000 ohms							

In Ordering Mention Type Required

↓ For Complete

Consisting of:

DIAMOND RECORDING NEEDLE Cat. No. 276 **Price \$6.00** FIBRE REPRODUCING NEEDLES

Cat. No. 6929 25c Package of 50

Simple to Operate

In recording a great deal of volume is unnecessary. An ordinary midget receiver at normal room volume is sufficient. For microphone announcements the vol-ume shou'd be turned slightly higher. A special cutting needle is suggested for best recordings. Fibre needles are used for reproduction except where the rec-ords are processed. This process en-ables the use of steel needles. The proc-essing is done after the recording has been made. This processing, described below, hardens the surface of the record and makes it last thousands of repro-ductions. In recording a great deal of volume is

For Campaign Speeches

FOR Camparyn Specenes This recorder can be put to use to great advantage by political organiza-tions and individual office seekers. Speeches may be recorded on blanks and distributed to theatres, clubrooms, and other public places for reproduction. With a portable public address system, such speeches can be reproduced to great numbers of voters. This angle offers a real opportunity to radio dealers and servicemen. servicemen.

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