



RADIO

HANDBOOK

1927-28

*Leading Items
Distributed by*

Pettingell-Andrews Co.

PORTLAND BOSTON SPRINGFIELD

*Radio Headquarters of
New England*



EVERY radio dealer has the opportunity to earn the valuable franchise represented by this sign—



It gives him in his own community the leadership which RCA commands throughout the nation.

Pettingell-Andrews Co.

Distributors

RCA RADIOLAS AND RADIOTRONS

PORTLAND

BOSTON

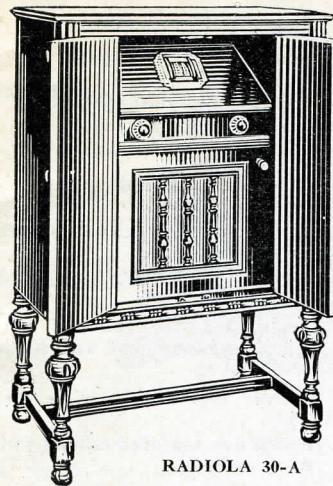
SPRINGFIELD



Radiola Line

Special Features of Radiola 30-A

1. RCA eight-tube Super-Heterodyne and a new power driven loudspeaker combined in its beautiful cabinet.
2. Complete socket power operation. Models for either AC or DC.
3. Supreme in sensitivity, selectivity and ease of operation.
4. Antenna coupler provides for operation from short indoor antenna.
5. Illuminated tuning dial and automatic shutoff switch are examples of Radiola 30-A's many unusual refinements.



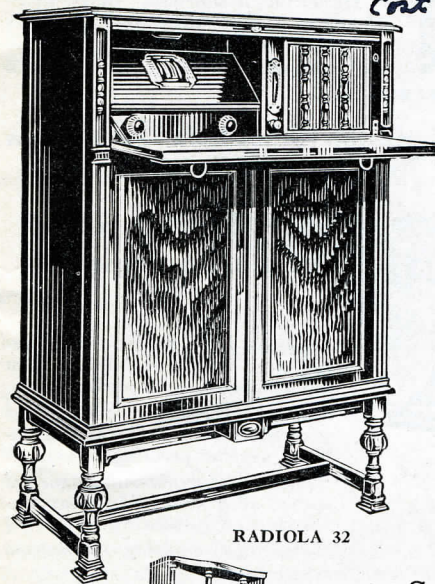
RADIOLA 30-A

Height: 42½" Width: 29"
Depth: 17¾"

Weight: 127 lbs. Price ~~\$105.00~~
Cmt. F.S.F. 285. 285.00

Special Features of Radiola 32

1. RCA eight-tube Super-Heterodyne and Loudspeaker 104 in a single artistic cabinet.
2. Complete socket power operation. Models for either AC or DC.
3. Supreme in sensitivity, selectivity, and ease of operation.
4. Rotatable loop antenna built in cabinet.
5. Many unusual refinements such as illuminated tuning dial and automatic shut-off switch.



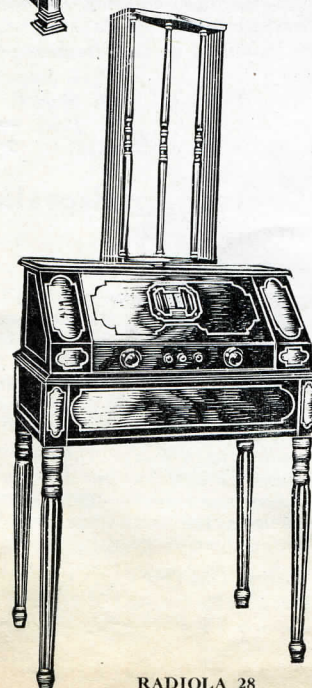
RADIOLA 32

Height: 52" Width: 37"
Depth: 17¾"
Weight: 213 lbs.

Price: \$895.00

Special Features of Radiola 28

1. An eight-tube Super-Heterodyne, the Supreme Receiver.
2. The utmost in sensitivity and selectivity.
3. Single dial tuning control.
4. No external wiring necessary.
5. Can be adapted for complete lighting socket operation.



RADIOLA 28

Height (without loop): 38½"

Height (with loop): 63"

Width: 27½" Depth: 17"

Weight: 42 lbs.

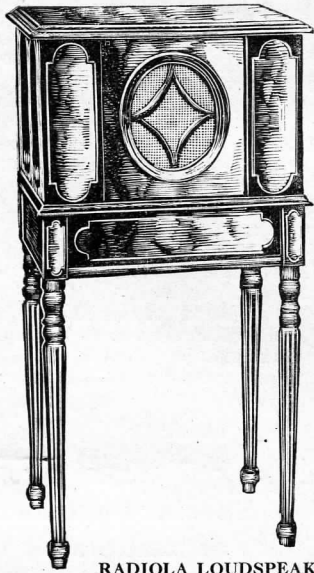
Price \$260.00 D.C.

Price \$295.00 A. C.

See page 2 for Radiola Loudspeaker 104 the ideal combination for Radiola 28.



RADIOLA LINE (Cont.)



RADIOLA LOUDSPEAKER 104

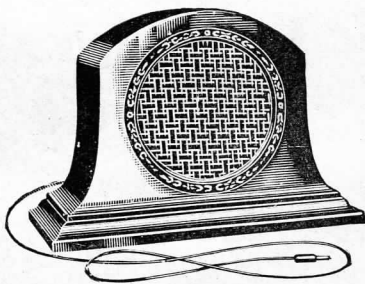
Special Features of Radiola Loudspeaker 104

1. Reproduces ALL tones—America's greatest loudspeaker.
2. Capable of tremendous volume with perfect quality.
3. Supplies "B" battery current for any receiver.
4. Supplies "A," "B" and "C" battery current when used with Radiola 28 and 25.
5. Operates from the home lighting socket.
6. Housed in a beautiful cabinet with no exposed parts.

Height: 40" Width: 20 5/8" Depth: 13 1/2"
 Weight: 85 lbs. Price: \$275.00 (A. C.)
 Price: \$310.00 (D. C.)



The ideal combination for Radiola 28 shown on page 1.



RADIOLA LOUDSPEAKER 100-A

Special Features of Radiola Loudspeaker 100-A

1. Produces more faithful reproduction over entire musical scale than any competing loudspeaker.
2. New type corrugated treated cone prevents paper rattles and is entirely weather proof.
3. A large size permanent magnet of special alloy steel gives great sensitivity and volume.

4. The magnetic strength will not decrease with age, resulting in decreased sensitivity as is the case with some loudspeakers.
5. An electrical filter removes distortion produced by high-frequency harmonics and summation tones.

Height: 10 3/4" Width: 15" Depth: 7 1/2"
 Weight: 12 lbs. Price: \$85.00



RADIOLA LOUDSPEAKER 102

Radiola Loudspeaker 102

Model 102 possesses very fine tonal qualities with exceptional volume. The maximum volume obtainable is greatly in excess of that secured from the ordinary types of loudspeakers.

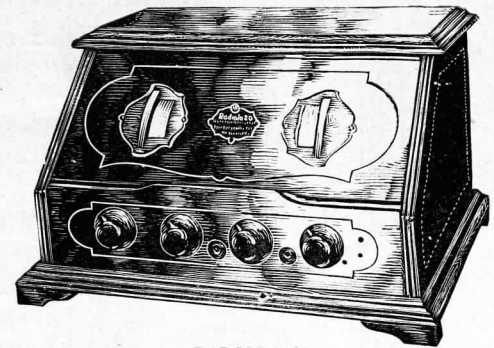
Model 102 Loudspeaker is supplied with a rectifier-power-amplifier unit, termed "RCA Power Amplifier Unit Model AP-935," which operates the super-power amplifier Radiotron UX-210 from 110 volt, 40-60 cycle, AC lighting circuits.

RCA LOUDSPEAKER MODEL 102, with Radiotron UX-210 and Rectron UX-216-B. \$140.00



RADIOLA LINE (Cont.)

Special Features of Radiola 20

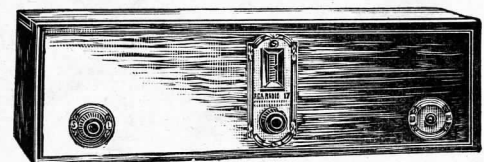


RADIOLA 20

1. \$200 performance for \$89.50.
2. Single dial tuning.
3. Extreme "A" and "B" battery economy.
4. Many times as selective as the ordinary set.
5. Seven tube performance with five tubes.
6. Can be adapted for complete lighting socket operation.

Height, 11 1/2" Width, 19 1/8" Depth, 16"
 Weight, 30 lbs. Price (with Radiotrons) \$89.50

Special Features of Radiola 17

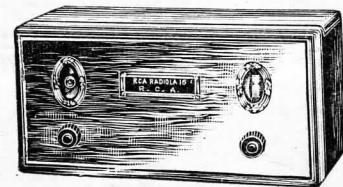


RADIOLA 17

1. A six-tube socket power operated receiver at remarkably low cost using new A. C. tubes.
2. Single dial control.
3. Three stages of radio frequency amplification provide extreme sensitivity.
4. Power amplifier Radiotron in last audio stage provides great volume without distortion.
5. Power unit and receiving unit self-contained in one compact cabinet.

Height, 8 3/4" Width, 27 1/2" Depth, 7 1/2"
 Weight, 36 1/2 lbs. Price (with Radiotrons) \$157.50

Special Features of Radiola 16



RADIOLA 16

1. A six-tube tuned radio frequency storage battery receiver at the low price of \$82.75, with Radiotrons.
2. Single dial control.
3. Three stages of radio frequency amplification provide extreme sensitivity.
4. Power amplifier Radiotron in last audio stage provides great volume without distortion.
5. Sturdy construction throughout.

Height, 8 1/4" Width, 16 1/2" Depth, 7 1/2"
 Weight, 14 1/2 lbs. Price (with Radiotrons) \$82.75



RADIOTRONS



RCA Radiotron UX-874 Voltage Regulator \$5.50 *4.75*



RCA Radiotron UX-199 Detector Amplifier \$2.25



RCA Radiotron UV-199 Detector Amplifier \$2.25



RCA Radiotron UX-213 Full Wave Rectifier \$5.00



RCA Radiotron WD-11 Detector Amplifier \$2.50



RCA Radiotron WX-12 Detector Amplifier \$2.50



RCA Radiotron UX-281 Half Wave Rectifier \$7.50



RCA Radiotron UX-201-A Detector Amplifier \$4.75 *1.50*



RCA Radiotron UX-240 High Mu Detector and Amplifier \$2.25 *2.00*



RCA Radiotron UX-216-B Half Wave Rectifier \$7.50



RCA Radiotron UX-226 AC-Amplifier \$3.00 *2.25*



RCA Radiotron UY-227 AC-Detector \$6.00 *4.00*



RCA Radiotron UX-280 Full Wave Rectifier \$5.00 *4.25*



RCA Radiotron UX-171-A Power Amplifier \$4.50 *3.00* *2.75*



RCA Radiotron UX-120 Power Amplifier \$2.50



RCA Radiotron UX-200-A Detector \$4.00



RCA Radiotron UX-210 Power Amplifier \$9.00



RCA Radiotron UX-112 Detector Amplifier \$4.50 *2.75*

Radiotrons and Battery Equipment for RCA Radiolas

Radiola 32—A.C.

For 110 volt, 60 cycle, A.C. operation
No batteries required

Radiotrons

7 UX199 2 UX281
1 UX210 1 UV886

Radiola 32—D.C.

For 110 volt, D.C. operation
No batteries required

Radiotrons

7 UX199 5 UX171A

Radiola 30-A—A.C.

For 110 volt, 60 cycle operation
No batteries required

Radiotrons

7 UX199 2 UX281
1 UX171 1 UV876

Radiola 30-A—D.C.

For 110 volt, D.C. operation
No batteries required

Radiotrons

7 UX199 5 UX171A

Radiola 17

For 110 volt, 60 cycle, A.C. operation
No batteries required

Radiotrons

4 UX226 1UX171
1 UY227 1UX280

Radiola 28

Batteries:

12 No. 1611 Yale Dry Cells
2 No. 3061 Yale B Batteries
1 No. 3044 Yale B Battery
1 No. 1512 Yale C Battery

Radiotrons

7 UX199 *1 UX120

Radiola 20

Batteries:

6 No. 1611 Yale Dry Cells
3 No. 3061 Yale B Batteries
1 No. 1512 Yale C Battery

Radiotrons

4 UX199 1 UX120

Radiola 16

Batteries:

1—6A90R Yale Storage Battery
3—3061 Yale B Batteries
2—312 Yale C Batteries

Radiotrons

5 UX201A 1 UX112

*Note—This Radiotron not necessary in Radiola 28 A.C. operated.

TABLES

for Radiolas 16 and 17

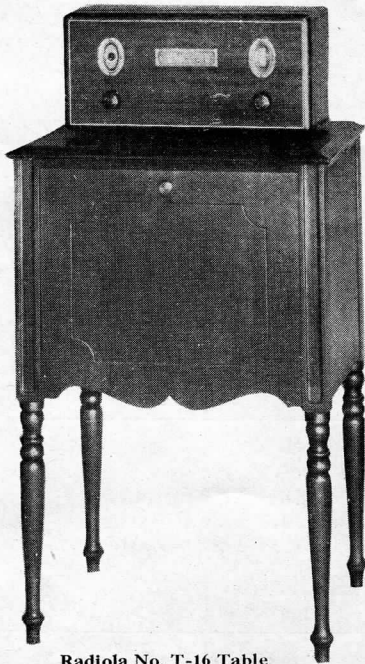


Radiola No. T-17 Table

RADIOLA No. T-17 TABLE

This table is made especially for Radiola 17 in solid gumwood finish to match the receiving set. The top is recessed to hold the set firmly in place, and it is equipped with a sliding shelf to hold the loudspeaker.

Radiola No. T-17 Table only\$18.00



Radiola No. T-16 Table

RADIOLA No. T-16 TABLE

Finished to match the receiving set and equipped with sliding shelf for Loudspeaker. Top of mahogany, front and sides solid gum plywood. Ample space provided for all batteries and mechanical equipment.

Radiola No. T-16 Table only\$23.50

TABLES

for Radiola 20

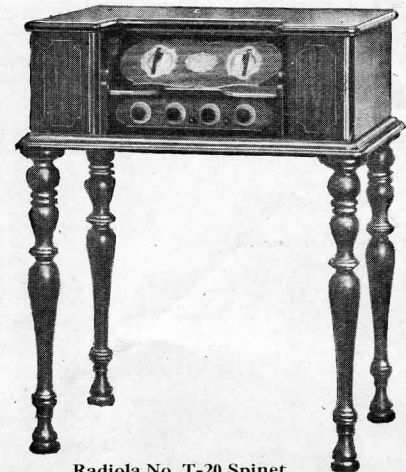


Radiola No. T-20 Table

RADIOLA No. T-20 TABLE

This table is made especially for Radiola 20, with high-grade workmanship and select material. Batteries and mechanical equipment entirely concealed. When Radiola 20 is placed on this Table it gives the effect of a complete piece of furniture. Finished two-tone to harmonize with Radiola Receiving Set.

Radiola No. T-20 Table only\$25.00



Radiola No. T-20 Spinet

TABLE FOR RADIOLA No. T-20 Spinet Model

The Spinet Model is in a class by itself. It not only meets every requirement for housing the Radiola 20 with the batteries and mechanical devices concealed, but makes a very attractive piece for the home as well. Genuine mahogany, 38 inches high; 31 inches wide; 22 inches deep. Finished in rich two-tone effect, and is shipped K. D.

Radiola No. T-20 Spinet Model only\$45.00

LOUDSPEAKERS

Brandes Cabinet Cone Speaker



Beautifully finished in Adam Brown duo-tone mahogany—designed to fit and look well on the average radio set—decidedly decorative.

Delivers unusually large volume—extremely sensitive to weak signals—reproduces faithfully extremely high and low tones.

Wood resonating chamber giving rich and pure tonal quality—unusually clear reproduction of speech.

Adjustable for maximum sensitivity and clarity.

Not affected by atmospheric conditions.

Price\$25.00

Brandes Table Cone Speaker

Unique design—pleasing appearance—antique bronze finish.

Price.....\$12.50



WIRT

CONE SPEAKER

A notable contribution to clarity and resonance in radio reproduction providing exceptional volume without blast or distortion. A special feature is the conveniently placed knob, in the back, which eliminates any necessity for dismantling the speaker to readjust it.

Price\$20.00

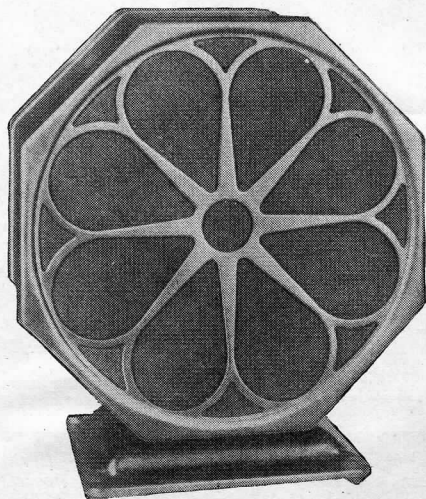
PAUSIN OCTACONE

An indestructible speaker at a popular price. The cone is free edge and full floating, reproduces with great distinctness, blends the complete musical range with harmony and balance. Has beautiful natural tone of ample volume.

Beautifully finished in old gold.

Packed in unit cartons, 6 to a standard shipping carton.

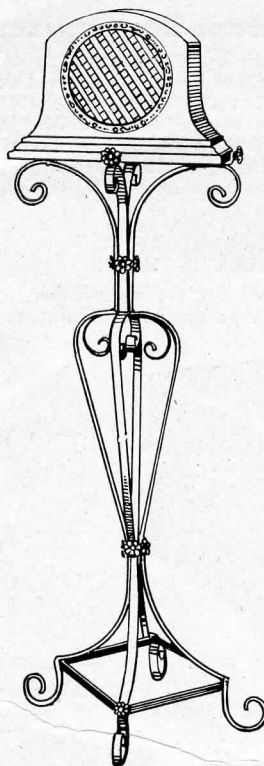
Price\$19.50



STANDS FOR RADIOLA LOUDSPEAKER 100-A

Attractive Pieces for Any
Living Room

ENGEL STAND No. 100-A



Engel Stand No. 100-A

The best in Radio Reception, the Radiola Speaker, has inspired the construction of this charmingly attractive wrought iron stand. Cleverly designed, it is most modern in appearance and comes in a finish to match the Radiola Speaker. It permits the separation of the speaker from the radio receiver, a departure which, to quote radio authorities, "Eliminates microphonic noises."

Another advantage of separation is obviously that you may place your speaker in any room regardless of the location of your set. The sick room or invalid or busy housewife will appreciate this and the natural beauty and easy grace of the stand will make it a credit to the most fastidiously decorated home.

Price \$9.75



Wahle Stand No. 100-A

WAHLE STAND No. 100-A

A most attractive looking stand, designed exclusively for the new RCA No. 100-A Speaker, finished in Bronze and Gold (electro plated), high quality finish, which will harmonize with this new and most prominent Loudspeaker. Supporting screws hold the Speaker rigid to the Stand.

Wahle Stand No. 100-A.\$10.50

Equipped with Philco Current Economizer

Philco Socket Powers convert ordinary electric house current into smooth, hum-free radio power and deliver it to any radio at the correct filament and plate voltage. Types are provided for D.C. as well as 25, 30, 40, 50, 60 cycles A.C.

They are permanently connected to the house current and radio. All wires enter at the back and all connections are INSIDE. Handsome brown crystal cabinets unmarred by outside terminals and wires connecting thereto.

Philco Socket Powers are of ample size to meet even the exacting demands of large radio sets with power tubes.

6-180-volt "AB" Socket Powers

For sets using six or more tubes, including 112 or 171 Power Tube. Provide 180 volts at 60 milliamperes and contain specially large "A" Battery.



"AB" Socket Power

Type	Control	"A" Rectifier	115 Volts A. C. Cycles	Consumer Prices
*AB-686	Relay	Philcotron	50, 60	\$69.50
AB-386	Relay	Dry	50, 60	79.50
*AB-382	Relay	Dry	25, 30, 40, 50, 60	98.50

Overall Dimensions: Width, 13 $\frac{5}{8}$ ", Depth, 14", Height, 8 $\frac{3}{8}$ "

6-150-volt "AB" Socket Powers

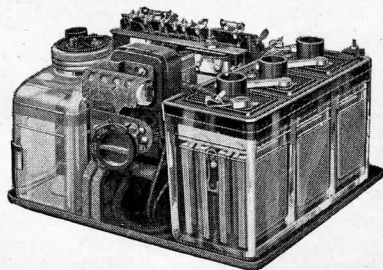
For sets using six tubes or less, including 112 or 171 Power Tube. Provide 135-150 volts for "B" circuit and full-size Trickle Charge "A" Battery

AB-663	Switch	Philcotron	50, 60	59.50
*AB-656	Relay			
*AB-356	Relay	Dry	50, 60	69.50
AB-623	Switch	Philcotron	25, 30, 40, 50, 60	69.50
*AB-652	Relay			

Overall Dimensions, AB-663, AB-623: Width, 13 $\frac{5}{8}$ ", Depth 12 $\frac{5}{8}$ ", Height 8 $\frac{3}{8}$ "; AB-656, AB-652, AB-356: Width 13 $\frac{5}{8}$ ", Depth 12 $\frac{5}{8}$ ", Height 8 $\frac{3}{8}$ "

4-volt "AB" Socket Powers

For any number of 199 tubes, including 120 Power Tube



"AB" Socket Power Open Model
For use inside of radio cabinets and consoles

AB-463	Switch	Philcotron	50, 60	\$58.50
AB-423	Switch	Philcotron	25, 30, 40, 50, 60	65.00

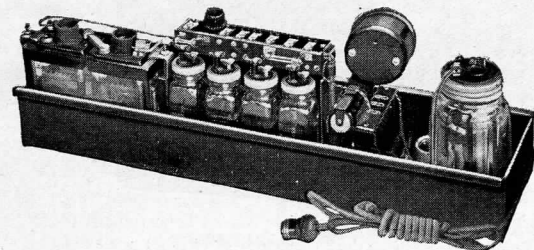
Overall Dimensions: Width, 13 $\frac{5}{8}$ ", Depth 12 $\frac{5}{8}$ ", Height 8 $\frac{3}{8}$ "

DAB-4	Switch	115 volts D. C.	50.00
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Overall Dimensions: Width 9 $\frac{3}{8}$ ", Depth 12 $\frac{7}{8}$ ", Height 7 $\frac{7}{8}$ "

*Equipped with Philco Current Economizer.

Remote Control Console and Cabinet 6-150-volt "AB" Socket Powers



"AB" Socket Power

Remote Control Socket Power for installation inside Radiola-28 cabinet

*AB-6561	Relay	Philcotron	50, 60	\$58.50
*AB-6521	Relay	Philcotron	25, 30, 40, 50, 60	68.50
*AB-3561	Relay	Dry	50, 60	68.50

Overall Dimensions: Width 13 $\frac{5}{8}$ ", Depth 12 $\frac{1}{8}$ ", Height 8"

Radiola-28 Remote Control 4-volt "AB" Socket Powers

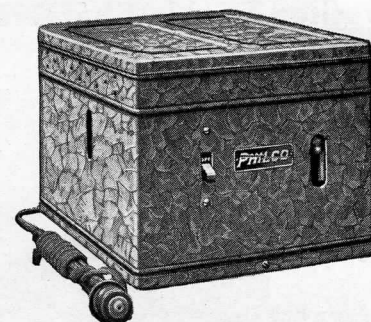
Type	Control	"A" Rectifier	115 Volts A. C. Cycles	Consumer Prices
AB-4635	Relay	Philcotron	50, 60	\$65.00
AB-4235	Relay	Philcotron	25, 30, 40, 50, 60	70.00

Overall Dimensions: Width 25", Depth 6 $\frac{3}{8}$ ", Height 8"

Philco "A" and "B" Socket Powers

May be used separately or together. When the "B" Socket Power is used in connection with A-603 or A-253, the "A" switch automatically turns the "B" "ON" and "OFF". When used in connection with A-36, the Radio set switch automatically controls both "A" and "B". Therefore, where space limitations prevent the use of combination "AB" Socket Powers, separate "A" and "B" Socket Powers may be used with the same convenience.

6-volt "A" Socket Powers



6-Volt "A" Socket Power

Type	Control	"A" Rectifier	115 Volts A. C. Cycles	Consumer Prices
A-603	Switch	Philcotron	50, 60	\$32.50
A-253	Switch	Philcotron	25, 30, 40, 50, 60	35.00

Overall Dimensions: Width 9 $\frac{1}{2}$ ", Depth 12 $\frac{7}{8}$ ", Height 7 $\frac{7}{8}$ "

*A-36	Relay	Dry	50, 60	45.00
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Overall Dimensions: Width 9 $\frac{1}{2}$ ", Depth 12 $\frac{3}{8}$ ", Height 7 $\frac{7}{8}$ "

DA-6	Switch	115 Volts D. C.	28.50
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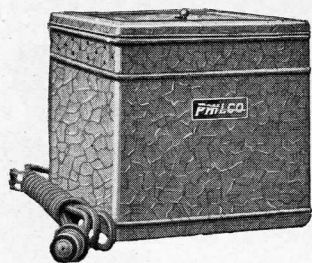
Overall Dimensions: Width 9 $\frac{3}{8}$ ". Depth 12 $\frac{7}{8}$ ". Height 7 $\frac{7}{8}$ "

*Equipped with Philco Current Economizer.

PHILCO

RADIO "A" AND "B"
SOCKET POWERS

"B" Socket Powers



"B" Socket Power

"B" power for 6 to 10-tube sets, including 171 power tube. Provide 180 volts at 60 milliamperes with transformer taps enabling voltage to be adjusted to fit exactly and permanently any line voltage and any number and type of 6-volt tubes. B-86 and 82 give clear, undistorted reproduction at tremendous volume, as obtained heretofore only with expensive power amplifiers. The last word in "B" power. Philcotrons eliminate the uncertainties and troubles of tube rectifiers. Guaranteed for 1650 hours, which is 18 months' service, using the radio set three hours every day. Solution contains no corrosive acid whatever. Require no addition of water or other attention.

B-86	50, 60	\$45.00
B-82	25, 30, 40, 50, 60	55.00

Overall Dimensions: Width 7 $\frac{5}{8}$ ", Depth 12", Height 7 $\frac{7}{8}$ "

"B" power for sets using six tubes or less, including 171 power tube or more than 6 tubes using 112 power tube. Special terminal for power tube, giving perfect quality with more than enough volume for the average home. Philcotrons eliminate the uncertainties and troubles of tube rectifiers. Guaranteed for 1650 hours, which is 18 months' service using the radio set three hours every day. Solution entirely harmless. Require no addition of water or other attention.

B-603	50, 60	\$32.50
B-253	25, 30, 40, 50, 60	37.50

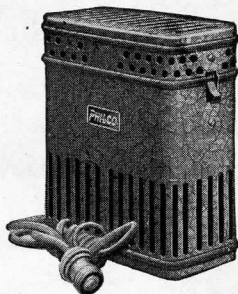
Overall Dimensions: Width 8 $\frac{1}{4}$ ", Depth 8 $\frac{1}{2}$ ", Height 7 $\frac{7}{8}$ "

DB	115 volts D. C.	28.50
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Overall Dimensions: Width 8 $\frac{1}{4}$ ", Depth 8 $\frac{1}{2}$ ", Height 7 $\frac{7}{8}$ "

Philco Trickle Chargers

For 4 and 6-volt "A" Batteries



Philco Trickle Charger

The most convenient Trickle Charger made. A snap switch is provided so that the plug doesn't have to be pulled from the light socket when the radio is used. Socket for plugging in B Socket Power is provided and the snap switch controls A power, B power, even the radio set itself. Three charging rates make it adjustable to any set. Handsome crystal metal case.

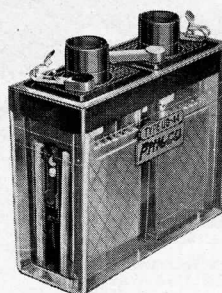
TC-60	Switch	Philcotron	50, 60	\$12.50
TC-25	Switch	Philcotron	25, 30, 40, 50, 60	15.00

Overall Dimensions: Width 9", Depth 5", Height 8 $\frac{1}{4}$ "

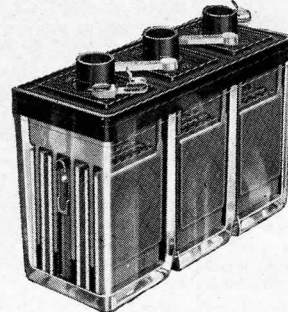
PHILCO

RADIO "A" AND "B"
SOCKET POWERS

Trickle Charge Glass Case "A" Batteries



UD-44



UD-96

Exclusive Philco visible built-in charge indicator. Spray-proof. Keep dry and clean permanently. Designed especially for trickle charge use. Large solution space insures operation over long periods without addition of water. Very thick plates and separators insure longest life.

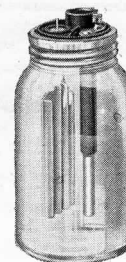
Type	Voltage	Overall Dimensions			Consumer Prices
		Length	Width	Height	
UD-44	4	7 $\frac{1}{16}$ "	2 $\frac{13}{16}$ "	6 $\frac{3}{4}$ "	\$ 7.50
UD-86 for sets using six tubes or less	6	10 $\frac{9}{16}$ "	4 $\frac{5}{8}$ "	6 $\frac{7}{8}$ "	12.50
UD-96 for sets using six tubes or more	6	10 $\frac{9}{16}$ "	4 $\frac{5}{8}$ "	7 $\frac{3}{4}$ "	13.90

Philcotron Replacement Cells



"AA" Philcotron
Part K-463

Price\$4.00



"A" Philcotron
Part K-458

Price\$3.00



"B" Philcotron
Part K-457

Price\$1.00



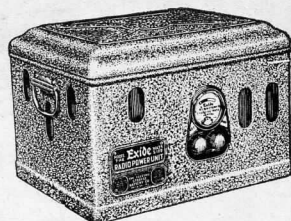
76-R

Mahogany Rubber Case Philco "A" Batteries (with Bail Handles) Filler Cap Charge Tester FREE

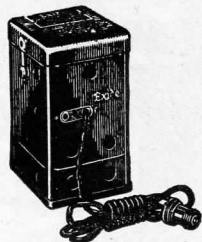
No one wants a black box in the living room. Philco mahogany cases harmonize with the furniture in the room. Famous Diamond Grid Plates and Quarter-sawed Separators. Meets the demand for a thoroughly dependable storage battery of moderate price for standard 6-volt tube sets. Conservatively guaranteed one year. Equipped free with a Filler Cap Charge Tester, making it easy to tell the state of charge at any time without danger of spilling acid.

Type	Voltage	A. H. Cap. at Radio Rates	Standard Package	Consumer Price with Charge Tester
76-R	6	100	5	\$16.50

Exide Power Units



Exide Radio Super-Power Unit—Type 7 AB



Exide Radio Power Unit
Model 3A-4 Volt



Exide Radio Power Unit
Model 3A-6 Volt

The IDEAL in radio power. Super "A" and "B" power from one unit with automatic control from set switch.

Type	Cat. No.	Volts	Price
7 AB	17586	6-180	\$82.00

Most convenient form of "A" power. Handsome metal case with special battery connected to a charger. Uses very little current. Made in 4 and 6 volt sizes. For use with separate Master Control Switch.

Type	Cat. No.	Volts	Price
3A-4 Volt	16384	4	\$24.45
3A-6 Volt	16386	6	31.90
Master Control Switch	16812		4.50

"A" Power Units "B" Power Units

Model BP 135 for any set with four, five or six tubes where from 90 to 150 volts are required.

Type BP-135	Price	\$38.00
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Model BP 180 for sets with six or more tubes using 135 to 200 volts.

Type BP-180	Price	\$43.00
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Both units are equipped with voltage taps and selector switches to obtain the variable voltages required for efficient operating. Each match up perfectly in size. with the YALE "A" Power Unit.

Width, 5 7/8"; Length, 10 7/8"; height, 8 3/8"

"A" Power

Comprises a 50 amp. storage battery and an 0.8 ampere hour charger, charging current automatically controlled.

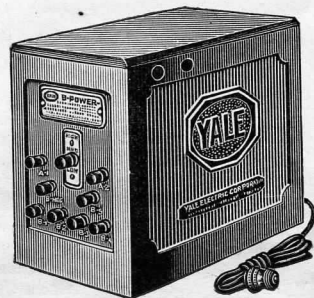
Charger and Battery are installed in an attractively paneled hard rubber container, mahogany finish, with cover, handle and 6 feet of extension cord with double socket plug.

Width, 5 7/8"; length, 10 7/8"; height, 8 3/8"

6 volt "A" Power—Tungar equipped, complete	\$32.00
6 volt "A" Power—Rectox equipped, complete	36.00



Yale "A" Power



Yale "B" Power

Tungar Battery Chargers

Tungar Trickle Charger



Combined with a low capacity 4- or 6-volt radio "A" storage battery provides a simple, dependable "A" power supply from the lighting circuit.

The Tungar Trickle Charger delivers continuously a small amount of current sufficient to replace the energy consumed by the radio set. This size Tungar takes little power from the line and costs but a few cents for a full day's operation.

Proves most useful in connection with a storage battery of low capacity, — such as the Philco glass case batteries UD-44, UD-86 and UD-96.

Cat. No.	Cycles	A. C. Volts	Net Wt. (lbs.)	Price
3049336	60	115	5	\$10.00

One Cat. No. 289881 bulb furnished with the above Tungar.

Two-Ampere Tungar



Any radio "A" and "B" storage battery may be charged with the two ampere Tungar. By changing one simple connection on the terminal board of the Tungar 2- or 4-volt "A" batteries, 6-volt "A" batteries, or 24 to 96-volt "B" batteries can be charged. No extra attachments are necessary. A "B" battery charging rate 0.1 to 0.25 amp. can be obtained by inserting a Mazda lamp in the socket on the terminal board. An overnight charge occasionally with the Tungar will keep an automobile battery at full strength.

Cat. No.	Cycles	A. C. Volts	Net Wt. (lbs.)	Price
277153	60	115	10	\$14.00
279171	40-50	115	12	20.00

One Cat. No. 277465 bulb furnished with the above outfits.

Five-Ampere Tungar



Made especially to charge automobile and large radio storage batteries. It will charge a 3-cell battery at a 5-ampere rate and a 6-cell battery at 3 amperes. Taps are provided to charge 2- or 4-volt radio "A" and 24- to 96-volt "B" storage batteries without the use of attachments.

Tungar operates quietly without attention.

Cat. No.	Cycles	A. C. Volts	Net Wt. (lbs.)	Price
3049323	60	115	20	\$24.00
3049324	40-50	115	23	31.00

One Cat. No. 189048 bulb furnished with the above outfits.

TUNGAR RENEWAL BULBS

Renewal bulbs will be needed for thousands of Tungars that have been in use for several seasons. The following list includes all renewal bulbs for Tungars for home use:

Cat. No.	For Tungars	Price
289881	3049336 Trickle	\$4.00
277465	277153 2 amp.	4.00
195528	195529 2 amp.	4.00
189048	(219865 5 amp.)	8.00
	(3049323 5 amp.)	
189049	Garage-Type 6 amp.	8.00

RAYTHEON

Long Life Rectifying Tubes

Type BH—125 M.A. Price \$4.50
Rating 125 M.A. at 300 volts. Replaces former type B—60 M.A. The standard "B" eliminator tube.

Type BA—350 M.A. Price \$7.50
Rating 350 M.A. output at 200 volts. For A-B-C Power Units of special construction.

Type A—2 1/2 amps. Price \$4.50
"Cartridge" type element for "A" Battery rectifiers.



Radio **YALE** Batteries



No. 3061

No. 3061 Upright 45V.—Extra Large Cells

For sets of five or more tubes. Contains 30 EXTRA LARGE SIZE cells which deliver extra power and longer life. Cost less per radio hour. Recommended for sets which require 90, 135, or more volts. Equipped with three spring clips as illustrated, giving voltages of plus 22½ and plus 45 volts.

Price \$4.75



No. 1611

No. 1611 Dry Cell "A" Battery

Made to render the most efficient radio dry cell "A" service. Delivers much more service than is obtainable from general purpose ignition dry cells.

Price \$0.50

No. 312—4½ V.—"A", "B" or "C" Battery

This battery has three large cells, three terminals and can be used as an "A", "B" or "C" battery. Equipped with three spring clips as illustrated, giving variable voltages of minus 3 or minus 4½ volts. The use of a "C" battery improves radio reception and prolongs the life of the "B" battery.

Price \$0.60

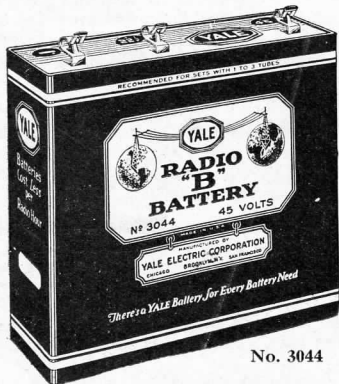


No. 312

No. 3044 Upright 45 Volts—Large Cells

For sets of 1 to 4 tubes. Renders the same service as the Yale No. 3045, but occupies less than half the table space and is therefore a more popular battery. When 45, 90, or more volts are required and limited space does not permit the use of the extra large heavy duty Yale Battery No. 3061, we recommend this battery. Contains 30 large standard size cells and is equipped with spring clips as illustrated.

Price \$3.75



No. 3044

No. 1515—22½ Volts—Very Small Cells

For use where compactness and light weight are absolutely necessary. Ideal for portable sets. Contains 15 cells, giving 22½ volts. Equipped with one negative and one positive knurled screw binding post.

\$1.50



No. 1515



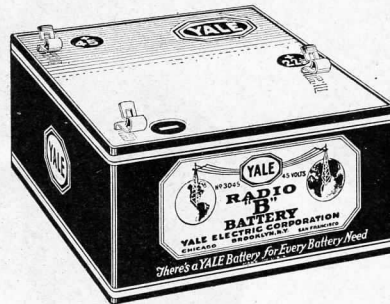
No. 1517

No. 1517—22½ Volts—"B" or "C" Battery

"B" connections are plainly marked "B"; "C" connections are plainly marked "C". As a "B" Battery, it is constructed especially for use only in portable sets where light weight and small size are necessary. Has four knurled screw binding posts, giving "B" voltages of plus 6, plus 18 and plus 22½. This Battery is popular as a "C" or Grid Bias Battery. Three voltages are available: Minus 4½, minus 16½, and minus 22½.

Price \$1.75

Radio **YALE** Batteries



No. 3045

No. 3045—45 Volts—Large Cells—Flat

For sets of 1 to 4 tubes. Contains 30 large, standard size cells. Can be used for detector tube control as well as for amplifiers requiring 45, 90, or 135 volts. Equipped with one negative and two positive spring clips, as illustrated, giving plus 22½ volts for detector tubes and a plus 45 volt tap for amplifier tubes.

Price \$3.75

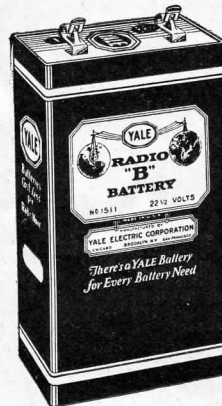


No. 1528

No. 1528 Upright—22½ Volts—Medium Cells

Suitable only where table or cabinet space is limited. Designed for the larger portable sets and renders more than twice the service of the very small cell batteries Nos. 1515 and 1517. Equipped with two spring clips as illustrated.

Price \$1.75



No. 1511

No. 1511 Upright—22½ Volts Large Cells

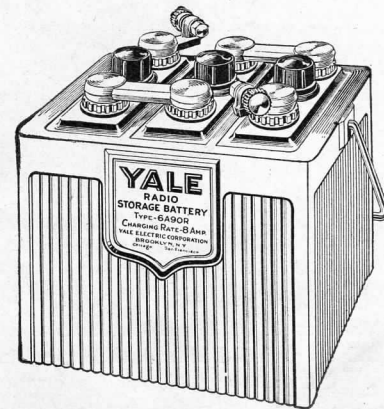
On sets requiring 22½ volt batteries this upright type is most popular and economical—it occupies less than half the table space of a flat battery. Its large size standard cells render very much longer service than the smaller sizes. Equipped with one negative and one positive contact clip.

Price \$2.00

Yale Storage "A" Batteries

YALE Storage Batteries are equipped with the extra thick plates so necessary in providing uniform voltage and discharge characteristics for Radio "A" circuit use. Fully charged and ready for service upon delivery.

Type	Amp. Hour Capacity	Prices
6A60R	60	\$12.00
6A90R	90	14.15
6A120R	120	17.00



Type 6A90R

Elay Storage "A" Batteries (Yale Built)

Meet competitive conditions with a dependable product

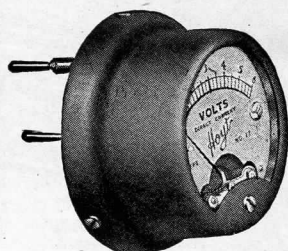
Type	Price
6A90S Rubber Container	\$11.15
6A120S Rubber Container	13.35

HOYT METERS

Tip-In Voltmeters



Type 17-B Universal Tip-In



No. 17-B 20 Tip-In Range 0-6 Volts

Type 17-B 20 Tip-In is a special filament control Voltmeter equipped with Tips correctly spaced vertically for insertion in the jacks provided in the Radiola 20 sets. The case is finished in green-bronze to match the Radiola hardware. The dial has a red line as a warning at the three volt-point.

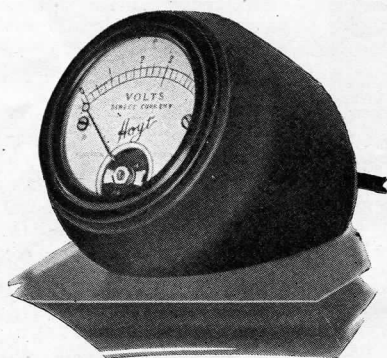
Price \$6.50

Type 17-B Universal Tip-In Voltmeter with movable Tips for use with Radiolas Nos. 25, 26, 28 and all other sets provided with filament jacks, can also be supplied. The case is finished in brown.

Price \$7.50

“Super” Control Meter—Type 17A

D.C.—Range 0-6 Volts



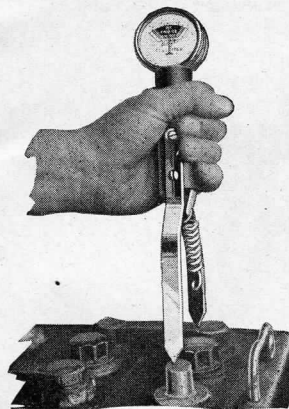
“Super” Control Meter Type 17A

For instant connection to tip-jacks provided for the purpose in the Radiolas Nos. 20, 25, 26 and 28, the Brunswick and Victor Sets and all other sets similarly equipped with jacks. Dry-cell tubes require very accurate voltage control for best reception and to insure proper life of tubes. The scale is marked in red at 3 volts;—the meter may be left in circuit at all times without appreciable battery drain, and offers the most convenient means available of voltage control in any radio set.

Equipped with 2-foot cord and tips, and mounted in dark polished mahogany case with non-scratch base, it may be connected and placed anywhere on or near the set that is most convenient. Rim of meter is finished in bronze.

Price, \$8.50

Cell-Chek

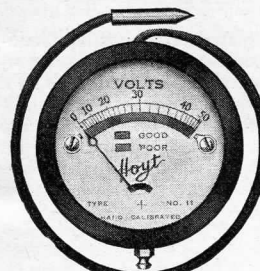


Enables the Radio owner to determine at any time the condition of the charge in the cells of his storage “A” battery without bothering to determine the specific gravity of the acid. This means no more soiled hands, burned rugs or clothing. It is used exactly like a commercial cell-tester for automotive battery use. The prods are pushed down on the terminals of each cell in the battery and the reading noted in the small meter conveniently mounted at the end of the handle. A special scale reads direct the condition of the battery. The meter has a center zero, so that it can be used to indicate polarity.

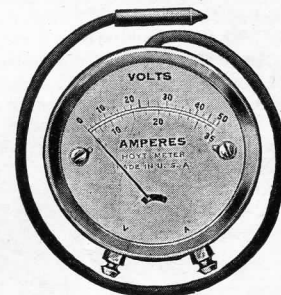
Price \$2.50

1927-28 Series of Hoyt Pocket Meters Pocket Voltmeter—Type 11

Range 0-50 Volts



Type 11



Type 31

Type 11 is used for testing “B” batteries. Total range, 50 volts, scale hand calibrated, and the 22½ and 45-volt points are marked in red and special markings indicate whether batteries are new or should be discarded.

Price \$2.25

Pocket Voltammeter—Type 31

Two Ranges: 0-50 Volts; 0-35 Amps.

Combines in one instrument the Types 1 and 11, and will do the work of both of them. Attractive Brown Finish.

Price \$3.00

Milliammeter—Type 17

Flush Mounting—D.C.—Ranges: 0-5, 0-10, 0-50, 0-100 M.A.



Milliammeter-Type 17

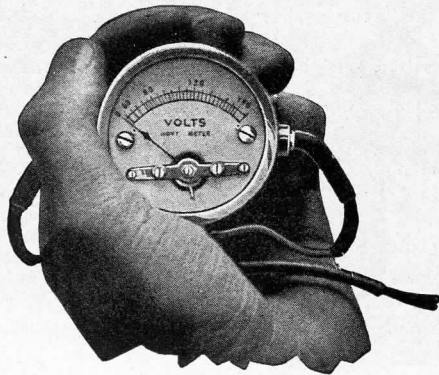
Matches the filament voltmeter or the A and B voltmeter Type 17. Can be furnished with nickel or bronze rim on special order and at a slight advance in price. Milliammeters are quickly coming into wide use, for indicating when the proper B and C battery voltages are applied to the audio amplifier to produce distortionless amplification. The milliammeter also indicates whether or not the set is operating properly and the condition of the tubes. It is permanently connected in the minus-B lead and has no effect whatever upon the operation of the set. This instrument is equipped with easily available zero adjuster as standard.

Standard Black Narrow Rim (Except 0-5 M.A.)..... Price, \$7.00

HOYT METERS

Type 5370 A. C. Voltmeter

Standard Range 0-150 Volt—With Multiplier 0-300 Volts



A. C. Meter (Type 5370)

A special instrument for testing the line-voltage in the electric-lighting system. Has become a necessity with the advent of B eliminators and battery chargers in Radio. Very frequently improper operation of these vital accessories is due entirely to insufficient line voltage. The HOYT Type 5370 A.C. Voltmeter provides a compact, dependable instrument at a reasonable price for determining the line voltage.

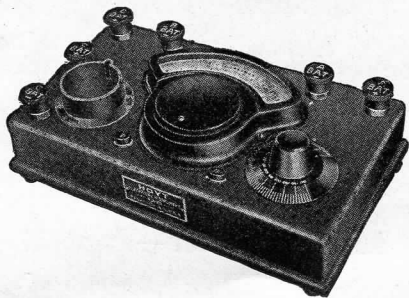
The case is 2" in diameter, 1" deep, nickel-plated. Dial has hand-calibrated scale about 1½" long. Terminals are specially designed plugs, protected by rubber covers and connected by reinforced silk-covered leads to a specially designed socket plug which may be pushed into any electric-light socket in any position and contact made without danger of short-circuits. Although calibrated for A. C. readings, the meter is correct within a fraction of one per cent on D. C. above 90 volts as it operates on the soft iron principle.

Complete with leads, socket plug, and packed in light, well-made pocket carrying case.

Price
\$11.00

With Multiplier (0-300 Volts)..... 16.00
Extra pair of leads with clips instead of special plug..... .90

Tube Tester—Model 100



Tube Tester (Model 100)

It will detect—open circuits; short circuits between plate and grid plate and filament, or grid and filament; low vacuum or poor emission.

The meter is a combination voltmeter and milliammeter of precision with ranges of 6 volts for A battery testing, 24 volts for B battery testing, 10 milliamperes for tests on plate current consumption of individual tubes. The meter is much larger than the type ordinarily used on even the most expensive tube testers and has a scale 3½" long, permitting extremely accurate reading of voltage and plate current draw.

The arrangement of wiring within the test-set makes it possible, with a rheostat and two push button switches, to make tests on the filament, plate and grid of a tube. From these readings it is possible to plot emission curves. Mounted on a polished mahogany block, with a high-grade universal socket and complete with filament rheostat and marked binding posts.

With each meter is furnished a comprehensive instruction book for its use.

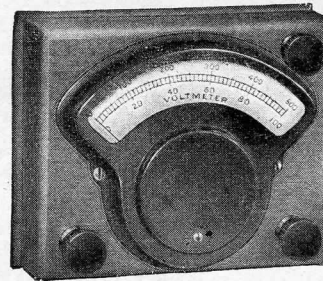
Price, \$35.00

Standard B-Eliminator Voltmeter

ACCURATE—SENSITIVE

RESISTANCE—1000 ohms per volt

STANDARD RANGES 0-100, 0-500 volts



Standard B-Eliminator Voltmeter

An ordinary voltmeter drawing a fairly large amount of current may be extremely accurate, but is not suitable for work with a B-Eliminator. HOYT has brought out a standard instrument with a resistance of 1,000 ohms per volt. (Current drawn for total scale deflection: 1 Milliampere.) This meter is recommended for ordinary dealers' service, as well as for laboratory and precision work. Two scales are supplied: 0-100 volts for measurement of voltage from the lower taps of the plate-supply device and for testing filament voltage of tubes connected with filaments in series, and 0-500 volts for determining the voltage delivered by high voltage units, including those using the No. 210 tube.

Price \$28.00

Also supplied on special order with additional scale of either 0-10 volts or 0-100 M. A.

Price \$32.50

Hoyt Service Set Tester—Model 300



Hoyt Service Set Tester

Furnishes the Radio Dealer or Service Man with a compact, accurate instrument, for making extremely rapid continuity tests of Radio set wiring in all kinds of Radio sets, without changing any connections in the set or disturbing the set or its accessories. Tubes may also be tested for plate current under working conditions.

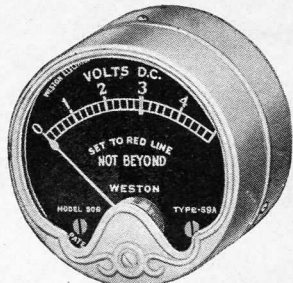
Equipped with a Moving Coil Meter, resistance 1000 ohms per volt,—sufficiently sensitive for practical and reliable voltage readings of B-Eliminator output. The meter has a 3¾ inch scale and is equipped with three ranges, 0-10 volts, 0-500 volts, 0-25 milliams. A knife-edge pointer is used and the damping is excellent.

A two-foot flexible lead, permanently attached to the instrument, terminates in a plug which, with the usual adapters, fits all set sockets. External binding posts with which the meter is also equipped and a set of rubber-covered leads with prods makes available the three scales of the meter, for external tests of A and B batteries, and B-Eliminator voltages and current up to 25 milliamperes.

The entire HOYT SERVICE SET TESTER is cased in a finely finished hardwood box, 9" by 7" by 3¾", with leather carrying handle and rubber feet. Complete instructions are provided with each instrument.

Price \$65.00

WESTON METERS



NEW MODEL 506 PIN-JACK VOLTMETER

Range 5 volts

For Radiolas 20, 25 and 28, Victor and Brunswick sets. Green gold finish with black dial and gold markings. Has a self-contained resistance of 125 ohms per volt and draws less than .005 ampere at the 3-volt mark.

New Model 506 Pin-Jack Voltmeter

Model No. 506 Pin Jack High Range Base, 0-200, 0-6 volts	\$10.00
Model No. 506, 3, 5, 7, 8, 10, 15, 50 or 150 volts	7.00
Model No. 506 with Push Button, 125-5, 140-7 or 150-7.5 volts	9.00
Model No. 506 without Push Button, 125-5, 140-7 or 150-7.5 volts	8.25

WESTON FILAMENT AMMETER

Model No. 301, Ranges 1.5, 3, 5, 10, 15 amp. 8.00

WESTON MILLIAMMETERS

Model No. 301, 0 to 25 Milliamperes to 0 to 150 Ma. 8.00

WESTON FILAMENT VOLTMETERS

Model No. 301, 0 to 5 volts to 0 to 15 volts. 8.00

WESTON PLATE VOLTMETERS

Model No. 301, 0 to 50 volts. 8.00

MODEL 519 RADIO SET TESTER

For both battery and battery eliminator operated sets. This tester makes a complete set check-up, including all voltage tests, continuity of circuit test and check on tubes. All tests can be made while the set is in actual operation without changes in connection or use of auxiliary batteries. The instrument part of this set has three voltage ranges of 200-80-8 and a 20 milliamper range. The voltage ranges have a sensitivity of 1000 ohms per volt, so that full scale deflection is produced with a current of only one milliampere. Price, \$75.00

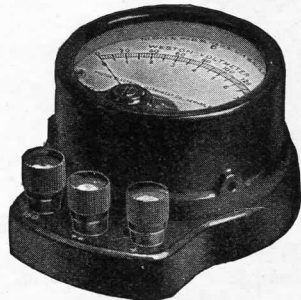


Model 519 Radio Set Tester

MODEL 489 DOUBLE RANGE D. C. VOLTMETER

150-7.5 or 200-8 volts

A double range battery testing voltmeter for portable use—can also be mounted on the panel if desired; can be used for measuring filament or plate voltage and locating circuit troubles. Price, \$13.50



Model 489 Voltmeter

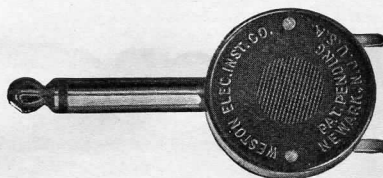
MODEL 489 BATTERY ELIMINATOR VOLTMETER

1000 ohms per volt 200-8 or 250-50 volts

Draws only one milliampere for full scale deflection. While primarily intended for giving an accurate check on the voltage battery substitutes, this meter can be used for measuring any D. C. voltage within the range of the instrument. Price, \$28.00

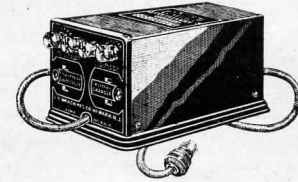
WESTON RADIO PLUG

Price \$.60



BRACH PRODUCTS

Brach Controlit



Places complete control of power plant and set in one switch, the set switch itself. A small compact instrument which makes possible the linking of the radio set with the house current.

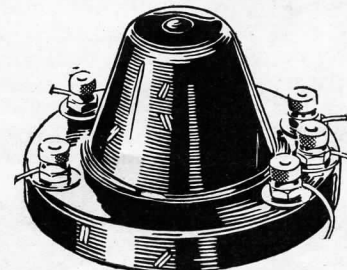
It is designed to operate with any radio set, any storage battery, any "B" substitute and any trickle charger, regardless of the make. Once installed it becomes the very heart, so to speak, of the entire radio plant because it gives automatic control of every operation of the set and power plant to the set switch itself.

CONTROLIT REQUIRES NO EXTRA WIRING. Only the usual "A" and "B" wiring, which every set requires, is used. No alterations or additions to the set itself are necessary nor are there any extra switches. The entire operation of the set, batteries and charger is automatically accomplished with the switch or rheostat with which every set is equipped. The Brach CONTROLIT can also be used to automatically operate the "B" substitute alone or to operate the charger alone.

When the set switch is turned on the Brach CONTROLIT automatically connects the "B" battery substitute with the 110-volt house lighting circuit obtained from the light socket. When the set switch is turned off the CONTROLIT automatically breaks this circuit, thus cutting off the house current from the "B" substitute. At the very same time it diverts the house current to the trickle charger which automatically commences to continuously or trickle-charge the "A" Battery.

Model R-6 for 6-volt battery	Price	\$4.50
Model R-4 for 4-volt battery	"	4.50

Reliable Automatic Power Control Switch



This device makes the "A" Battery switch on the Receiving Set automatically turn on and off either or both Trickle Charger and "B" Eliminator as they are required.

No. 13. For use with receiving sets using 5 volt tubes. Rated capacity .75 to 2 amperes, i.e.—from 3 to 8 type 201A tubes or their equivalent in amperage drain. Price \$2.00

No. 14. For use with receiving sets using 3 volt tubes. Rated capacity .3 to .6 amperes, i.e.—from 5 to 10 type 199 tubes or their equivalent in amperage drain. Price \$2.50



No. 301 Individual Tru Phonic Couplers

Separate couplers are supplied stage by stage in iron-clad cases. Price, \$5.00

No. 300	Price,	5.00
No. 304 Tru Phonic Amplifier		20.00
No. 300 Tru Phonic Output Unit		5.00
No. 306 Tru Phonic Audio Assembly		20.00

Na-Ald Tuning Units

No. 2172 Double Control	8.00
No. 2173 Triple Control	10.00

Na-Ald No. 421X Adapter

For Radiola III, IIIA, and Similar Sets



No. 421X

UX199 and UX120 tubes can be used in the Radiola III, IIIA, X, Regenoflex and Balanced Amplifier, with this adapter. Greatly improves the performance of these sets.

Price \$0.75

Na-Ald No. 429 Adapter

For UV199 Tubes in Storage Battery Sockets, either UV or UX

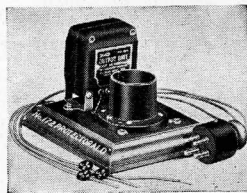


No. 429

The standard adapter for this purpose, both for sets and for tube testers and rejuvenators.

Price \$.75

Na-Ald No. 172 Protectorald



You can use the UX 171 power tube with your present set with either B batteries or a B eliminator. With the Na-Ald 172 Protectorald, you make no changes in set, speaker or wiring.

The 172 Protectorald combines the functions of Connectorald and Output Unit or "Tone Filter."

For the UX 210 power tube, the 172 Protectorald is ideal. Filament connects direct to the power supply for the UX 210 tube.

Price \$6.50

Na-Ald, No. 481XS Universal Silencer Socket

Dependable, quiet contact, of course. Contacts press firmly, strongly, flatly against the tube prongs of either UV or UX tubes. Special phosphor bronze, triple locked, contacts are held in constant tension, insuring permanent, quiet action.

The same strip of metal which contacts with the tube prong projects as a solder lug for connecting either above or below the panel. This lug may be removed and connections made through binding posts.

Price \$0.65

RADIO PRODUCTS

Na-Ald No. 112 Connectorald



No. 112

For UX171 and UX112 Tubes in UV201A Sockets

The UX171 and UX112 storage battery power tubes may be used in regular UV201A storage battery sockets with this No. 112 Connectorald. Cables for attaching both extra B and C batteries to this tube are provided. No rewiring is necessary. This extra voltage applies to the power tube only, without affecting the other tubes of the set. Many other uses are obvious, such as attaching C batteries to any tube in the set, etc.

Na-Ald, No. 112 Connectorald.....Price \$1.50

Na-Ald No. 120 Connectorald

For UX120 Tubes in UV201A Sockets. Price \$1.25

Na-Ald No. 419X Adapter

For Small "X" Base Tubes in UV201A Sockets



No. 419X

This adapter, a bakelite case, takes UX199 and UX120 tubes. A set screw holds the tube in the case. A side pin locks tube and adapter in the regular UV201A socket.

Na-Ald, No. 419X Adapter.....Price \$0.35

Na-Ald No. 999 Adapter

For UV201A and all UX Tubes in UV199 Sockets



No. 999

With the No. 999 adapter, any tube can be used in a UV199 socket. This adapter finds wide use in tube testers and rejuvenators as well as sets equipped with UV199 sockets.

Na-Ald, No. 999 Adapter.....Price \$1.00

Na-Ald No. 920 Connectorald

For UX120 Tubes in UV199 Sockets



No. 920

This connectorald holds any standard tube upright in UV199 socket. No change in set or wiring is necessary.

Na-Ald, No. 920 ConnectoraldPrice \$1.25

Na-Ald No. 420 Connectorald

For Radiola Superheterodyne Semi-Portable and Super VIII

Price, \$1.25

Na-Ald No. 171 Connectorald

For UX171, UX112 and UX210 Tubes in UV201A or UX Type Sockets



No. 171

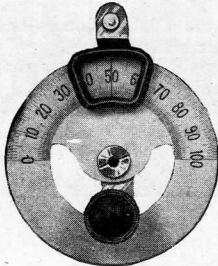
The UX112 or UX171 power tube is practically a necessity for clear, smooth reproduction. Cables provide the necessary connections to socket, tube and extra B and C batteries for the power tube, and also for convenient arrangement to fit your set.

The filament leads of this Connectorald may be connected to eliminators which supply filament current for the last tube, making this connection without any change in the set, and greatly reducing the load on the A battery.

Price \$1.50

MAR-CO

MAR-CO ILLUMINATED CONTROLS

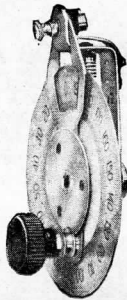


No. 220

Mar-Co Illuminated Controls. Complete with mounting bracket, Light Switch, Lamp, Precision Scale, Template and full instructions.

No. 220	0-100	180°	\$3.00
No. 221	100-0	180°	\$3.00
No. 320	0-200	360°	\$3.00

The above with black bakelite Panel Bezel.

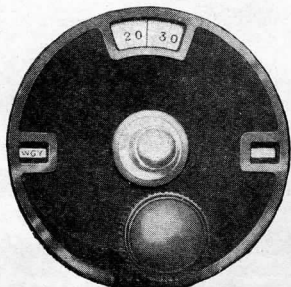


No. 320

No. 420	0-100	180°	\$3.50
No. 421	100-0	180°	\$3.50
No. 322	0-200	360°	\$3.50

The above with bronze ornamental embossed panel plate.

MAR-CO VERNIER DIALS



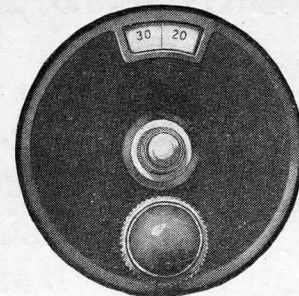
No. 192

Black Bakelite, absolutely free from backlash, only one hole to mount.

No. 192	0-100	180°	\$2.00
No. 203	100-0	180°	\$2.00
No. 210	0-200	360°	\$2.00

RADIO PRODUCTS

MAR-CO ILLUMINATED VERNIER DIALS

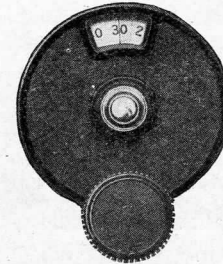


No. 302

Complete with light, no screws required to mount.

No. 302	0-100-100-0		\$2.50
No. 303	0-200	360°	\$2.50

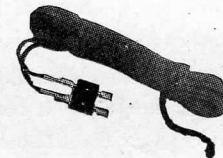
MAR-CO MINIATURE VERNIER DIAL AND RHEOSTAT DIAL



No. 216

No. 216	0-100-100-0		\$1.10
No. 214	Rheostat Dial		\$.75

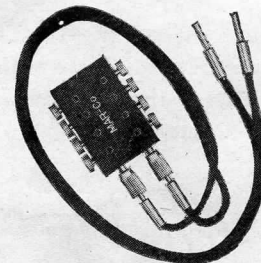
MAR-CO EXTENSION CORD AND CONNECTOR



No. 190

No. 190	20 ft	\$1.00
No. 225	50 ft.	\$2.50

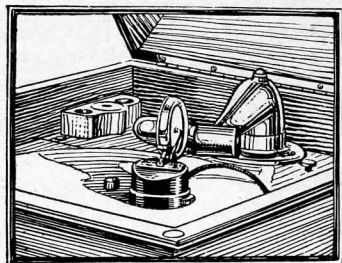
MAR-CO MULTI PLUG AND MULTI CONNECTOR



No. 105

No. 105	Plug	\$1.00
No. 106	Connector	\$1.00

DULCE-TONE PHONOGRAPH SPEAKER



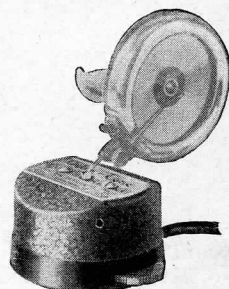
Link the Clearness of
Your Talking Machine
to Radio with the
"Double Volume"
Dulce-Tone

You already own a loudspeaker. It's the sound box, tone arm and horn of your talking machine. No part of the talking machine is removed to use Dulce-Tone—every detail of the original sound channel is retained.

The reproduction of voice and music from radio is as fine and clear as that from a good record. It utilizes, complete, the perfected talking machine reproducer.

Don't be satisfied with imperfect radio reception. The new Universal and adjustable "Double-Volume" Dulce-Tone, plus the talking machine, is the ideal loudspeaker.

Using Dulce-Tone is almost identical to playing a record—you simply place the talking machine needle in the Dulce-Tone's grooved reed. Then plug into the radio set as with any loud speaker.



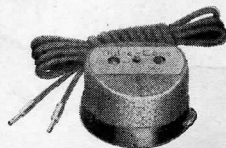
No special wiring or battery connections. Dulce-Tone obtains its power entirely from the "B" battery of the audio frequency circuit. It is plugged in on the audio amplification of the receiving set in the same manner as ear phones or loud speaker.

With Dulce-Tone your talking machine and radio may be located in different rooms if desired, by using a standard extension cord obtainable in any desired length. The extra length of cord will not effect satisfactory performance.

Dulce-Tone will only reproduce with an Edison phonograph if the Edison has an attachment for playing other than Edison records.

Dulce-Tone Links All Radio to All Talking Machines

There is now only one Dulce-Tone—the Universal Model. The adjusting device projecting from the base of the unit makes it possible to take full advantage of the tone qualities and sound volume of each individual talking machine.



Dulce-Tone, Universal Model.....\$10.00

28 P-A Co.

ACCESSORIES for "A", "B" and STORAGE BATTERIES



"Break-Not" Storage Battery Tester

Bulb and tip of finest rubber. The float tests right—it cannot bend and will not stick. Only half as much glass as other hydrometers. Packed in strong mailing tube with metal screw cover and complete directions for use.

Ten "Break-Nots" put up in handsome counter display unit. Price, each.....\$1.00

"Break-Not" A and B Battery Tester

A hydrometer that can be placed anywhere while making a test. Permits the operator to test all of the cells of a battery without moving the tester. The nozzle is 24" long; reaches the battery enclosed in the radio cabinet.

This clever Battery Tester can be used for testing "A" Batteries as well as "B" Batteries, or automobile batteries.

The Float is cushioned and protected in the rubber housing base. The base, on which this Hydrometer stands, is made of soft resilient rubber provided on the bottom with a weight; practically impossible to tip it over. The pure red rubber bulb is of proper capacity and provided with a loop into which the nozzle is placed after making a test, which prevents the acid dripping on clothes or carpets.

The entire outfit stands 8" high. Packed one in a heavy mailing tube.....Price, each \$1.00

UNIVERSAL CLIPS

Screw Connections—No solder required

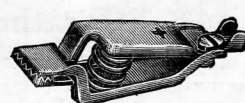
Channel construction throughout—polarity indications
+ for positive—plain for negative.



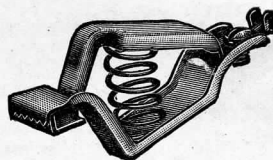
No. 45.....\$0.10



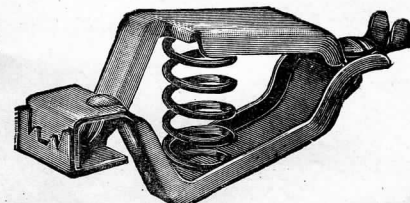
No. 48B.....\$0.12



No. 27.....\$0.25



No. 24A.....\$0.20



No. 21A.....\$0.40

MORSE EUREKA CLIPS

No. 2 Eureka Clips, each	\$.15
" 5 " " "	" .24
" 7 " " "	" .05
" 8 " " "	" .40

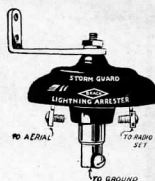
P-A Co. 29

LIGHTNING ARRESTERS AND INSULATORS

Brach Storm King and Storm Guard Lightning Arresters (Non-Air-Gap Principle)



No. 300



No. 330

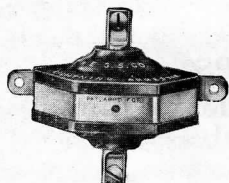
No. 300 STORM KING, \$1.00—No. 330 STORM GUARD, \$1.50

Either of these Radio Arresters acts as a safety valve between the antenna wire and the radio set, taking off lightning disturbances that might do damage and shunting them into the earth.

In recognition of the important necessity of protecting the home and radio set, the Brach Company *guarantees* that each Arrester they produce is individually tested in order that it will comply with the requirements of the *National Board of Fire Underwriters*. The unusual value which the Brach Corporation gives in their Arrester is due to their large production and experience in manufacturing. Brach Arresters have been standard in all important electrical services for the last twenty-one years. Brach Arresters are also noted for reducing static interference.

Instructions for installing accompany each Arrester

Keystone Lightning Arresters and Ground Fittings



Keystone ground fittings are used with $\frac{3}{4}$ " pipe. The tapered fitting enables ground pipe to be driven into the earth easily and cap is adapted for ground lead.

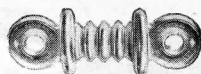
Type B Keystone Arrester \$1.50
Keystone Fittings (Cap and Point)90

K-E Weatherproof Lightning Arrester

The K-E Weatherproof Lightning Arrester can be used indoors or outdoors. A barrier is provided between the binding posts to prevent signal being drained into ground by the rain. Price each, \$.50.

Brach Low-Loss Crystal Insulators

Insure signal strength
Price \$.25.



Electrose Insulators



Electrose Insulators are generally used by amateurs in the installation of radio equipment.

No. 4501 \$.18

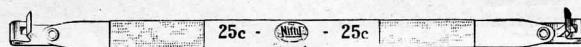
Porcelain Insulators

No. 500 \$.21
No. 384405
Emsco10
No. 1 Aerial Glass15
 $\frac{3}{8}$ inch Porcelain Screw Eye15

ANTENNA EQUIPMENT AND SET ACCESSORIES

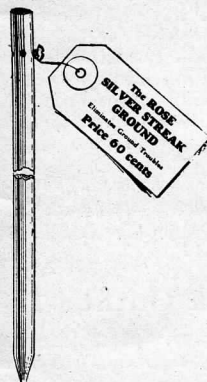
Nifty Lead-In

The Nifty Lead-In was designed expressly to be pliable and weatherproof. The metal strap is insulated with pure gum rubber. Fahnestock clips, mounted at each end, insure positive contact at all times.



Nifty Lead-In Price \$.25

The Rose Silver Streak Ground



Made in two sizes. The No. 1 four feet long—A popular length for ordinary use; the No. 2, six feet long, for sandy soils. Just the right length for best efficiency. Made of $\frac{1}{16}$ " diameter, highly sensitive metal, galvanized to prevent rust. It has a sharp point at one end, and can be driven into the earth with utmost ease. A special solderless connection is made in the rod itself, forming a quick, permanent and electrically perfect job. No soldering to do, and no extra cost or trouble for a ground clamp.

Size No. 1. Four feet long. Price \$.60
Size No. 2. Six feet long. Price90

Antenna, Wire, Ground Clamps, etc.

Antenna Wire furnished in Tinned or Enamelled Stranded

No. 7/22 Tinned Antenna Wire C. ft. \$1.00
No. 14 Black or White Lead-In Wire C. ft. 1.50
Fahnestock, Type A. $\frac{3}{8}$ -1 Ground Clamps10
Fahnestock, Type B. $\frac{3}{8}$ -2 Ground Clamps15
P. A. Battery Connectors 2 for .05

Murdock Multiple Phone Jack-Plug Cord Tip Type

This is one of the latest Murdock radio products, made to attach from one to four pairs of phones either in series or multiple or in one unit.

No. 401P. Cord Tip Jack and Plug \$.75

Phone Cords

Five feet double phone cords \$.50
Brandes Superior phone cords75
No. 121. 30 ft. extension phone cord 1.40
No. 102. 5 ft. single phone cord pin tips35
No. 103. 5 ft. single phone cord spade tips35

ANTENNA EQUIPMENT



100 FEET **75¢** 100 FEET
MFD. BY LEES TEXTILE CO., INC. LOWELL, MASS.

Puretone Antenna Tape

Puretone Tape is the scientific result of many experiments to produce a highly efficient radio antenna for use *indoors*—with all types of receivers. It provides maximum receptive surface with minimum bulk. It offers all the advantages of an outside antenna with none of its faults, and is far superior to any other type of indoor antenna.

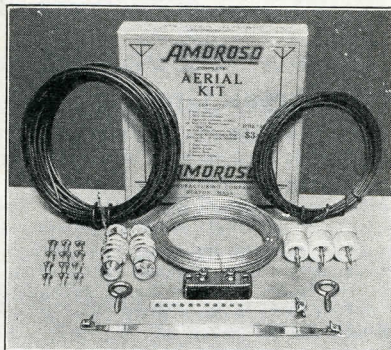
Puretone Antenna Tape, 100 ft. \$0.75

Amoroso Aerial Kit

This package contains:

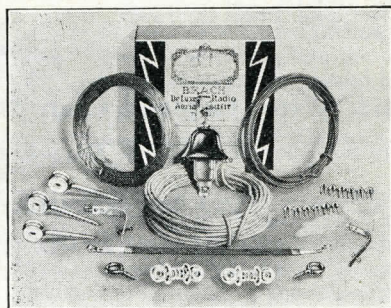
1. 100 ft. 7-22 tinned copper aerial wire.
2. 50 ft. No. 14 white insulated lead-in wire.
3. 25 ft. No. 18 hook-up wire.
- 4-5. 2 Glass Insulators and 3 Nail-it Knobs.
- 6-7. 1 Nifty Lead-in and 1 Nifty Ground Clamp.
8. 1 Approved Lightning Arrester.
- 9-10. 2 Screw Eyes and 12 Insulated Staples.

Amoroso Aerial Kit \$3.50



Brach Storm King Antenna Outfit

Storm King aerial outfit includes all the necessary parts for erecting a complete aerial, including a Storm King Non-Air Gap Lightning Arrester. Full instructions in simple language in each set.



This package contains:

1. 100 ft. 7-strand No. 22 gauge hard-drawn copper wire.
2. 50 ft. No. 14 white insulated weather-proof wire.
3. 10 ft. No. 18 cotton covered interior wire (for hooking up).
4. 2 Brach Low-Loss Crystal Insulators.
- 5-6. 2 Stand-off Wall Insulators and 2 screw eyes.
7. 1 Brach Ground Clamp and 12 Insulated Staples.
- 8-9. 1 Brach Insulated Window Lead-in, type 25.
10. 1 Storm King, type 300, Indoor Lightning Arrester.

((All parts conform to the requirements of the National Board of Fire Underwriters.))

Brach Storm King Antenna Outfit \$4.00

Emsco Antenna Outfit

Contains:

1. 100 ft. 7-24 Copper Antenna Wire.
2. 50 ft. rubber covered Lead-in Wire.
3. 25 ft. Hook-up Wire.
- 4-5. 1 Approved Lightning Arrester and 1 Lead-in.
- 6-7. 2 Porcelain Insulators and 1 Ground Clamp.

Emsco Antenna Outfit No. 101 \$2.00



WHILE RCA RADIOLAS are sold only through authorized franchise dealers, the sale of

RCA RADIOTRONS

is open to any dealer who has the enterprise and vision to appreciate the sales-possibilities of this indispensable accessory to satisfactory radio reception.

Ask us to tell you about the Effective RCA Sales Helps Scheduled for 1927-28

Pettingell-Andrews Co.

Distributors

RCA RADIOLAS AND RADIOTRONS

PORTLAND

BOSTON

SPRINGFIELD

INDEX

PETTINGELL-ANDREWS CO.

RADIO HANDBOOK

1927-28

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Pettingell-Andrews Co.
RADIO HANDBOOK
Price and Discount Sheet

1927-1928

All Prices and Discounts Quoted Herein are Subject to
Change Without Notice

RCA RADIOLA Receiving Sets, Loud Speakers and Acces-
sories (except Radiotrons)

PAGES 1, 2, 3

Sold Only to RCA Franchise Dealers

PAGE 4

RADIOTRONSany quantity 30%

PAGES 6, 7

TABLES FOR RADIOLAS 16, 17, 20 . . .any quantity 40%

PAGE 8

BRANDES, WIRT AND PAUSIN LOUD-
SPEAKERSany quantity 40%

PAGE 9

STANDS FOR RADIOLA LOUDSPEAKER
100-Aany quantity 40%

PAGES 10, 11, 12, 13

PHILCO PRODUCTSany quantity 40%

PAGE 14

EXIDE AND YALE POWER UNITS . . .any quantity 40%

Cash Discount On All Above Items 2%

PAGE 15

TUNGAR BATTERY CHARGERS.....	less than 4	30%
	4 and over	35%
TUNGAR RENEWAL BULBS.....	less than 4	30%
	4 and over	35%
RAYTHEON RECTIFYING TUBES.....	any quantity	40%

PAGES 16, 17

YALE BATTERIES

No.	Volts	Cells	Std. Pkg.	Net Price each Any quantity
312	4 1/2	3	10	\$.39
1515	22 1/2	15	10	.97
1517	22 1/2	15	10	1.14
1512V	22 1/2	15	10	1.30
1511	22 1/2	15	10	1.30
1528	22 1/2	15	10	1.14
3044	45	30	5	2.44
3045-V	45	30	5	2.44
3061	45	30	5	3.17

	Std. Pkg.	Broken Pkg.	Std. Price
1611 RADIO "A" DRY CELLS	50	\$.50	\$.40

Freight prepaid in standard packages only

PAGE 17

YALE AND ELAY STORAGE "A" BATTERIES:

Type	Capacity Amp. Hrs.	Net Weight in Pounds	Dealers' Net Price
6 A 60 R	60	32	\$8.10
6 A 90 R	60	42	9.43
6 A 120 R	120	52	11.30
6 A 90 SN	90	38	8.55
6 A 120 SN	120	48	10.18

PAGES 18, 19, 20, 21

HOYT METERS

No. 5370 A. C. VOLTMETER.....	each net	7.15
with MULTIPLIERS.....	each net	10.40
No. 100 TUBE TESTER.....	each net	25.00
No. 300 SET TESTER.....	each net	48.75
All other HOYT METERS	less than 5 ass't.	35%
	5 and over, ass't.	40%

Cash Discount On All Above Items 2%

PAGE 22

WESTON METERS:

MODELS 301, 519 AND 489.....	any quantity	25%
MODEL 506	any quantity	35%
WESTON PLUG.....	any quantity	40%

PAGE 23

BRACH CONTROLIT.....	any quantity	40%
RELIABLE CONTROL SWITCHES.....	any quantity	40%

PAGES 24, 25

NA-ALD SOCKETS, ADAPTERS AND CONNECTORALDS.....	less than 5	35%
	5 and over	40%
ALL OTHER NA-ALD PRODUCTS	any quantity	40%

PAGES 26, 27

MAR-CO PRODUCTS.....	less than 5	35%
	5 and over	40%

PAGE 28

DULCE-TONE PHONOGRAPH SPEAKER UNIT.....	any quantity	40%
---	--------------	-----

PAGE 29

HYDROMETERS.....	less than 3	35%
	3 and over	40%

TEST CLIPS:	less than	10 to	100 and over
	Ea. Net	Ea. Net	Ea. Net
No. 45 Pee Wee nickel plated	\$.05	\$.03 1/2	\$.03
No. 48B "B" battery clip lead pl.	.06	.04 1/4	.03 1/2
No. 27, 10 Amp., nickel plated	12 1/2	.08 3/4	.07 1/2
No. 24A, 25 Amp. lead plated	.10	.07	.06
No. 21A, 50 Amp. lead dipped	.20	.14	.12
EUREKA CLIPS.....	less than 5 assorted	50%	
	5 and over assorted	50-20%	

PAGE 30

LIGHTNING ARRESTERS ..	} less than 5 assorted	35%
BRACH INSULATORS		

ELECTROSE INSULATOR:

	Each net	Each net
	1 to 10	10 and over
No. 4501.....	.10	.06

Cash Discount On All Above Items 2%

PAGE 30 (Continued)

PORCELAIN INSULATORS:

	Each net 1 to 25	Each net 25 and over
No. 500.....	.10	.08
No. 3844.....		C net 2.40
Emsco, any quantity.....		C net 5.00
No. 1 Ariel Glass Insulator, any quantity		C net 7.50
	Each net less than 25	Each net 25 and over
5/8" Porcelain Screw Eyes	.05	.03

PAGE 31

"NIFTY" LEAD-IN.....	less than 5	35%
	5 and over	40%
ROSE SILVER STREAK GROUND...any quantity		40%
ANTENNA WIRE, less than 500 ft., assorted coils		30%
	500 ft. to 999 ft.	40%
	1000 ft. and over	50%
No. 14 LEAD-IN WIRE, less than 500 ft. \$10.00 M ft. net		

Price on larger quantities on application

FAHNESTOCK GROUND CLAMPS	less than 10 asst'd	35%
	10 and over	40%
P-A BATTERY CONNECTORS, any quantity, \$1.50		C net
MURDOCK MULTIPLE PHONE PLUG	less than 5	35%
	5 and over	40%
PHONE CORDS.....	less than 5	35%
	5 and over	40%

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ANTENNA EQUIPMENT:

PURETONE TAPE.....	less than 12 rolls	35%
	12 rolls and over	40%
AMOROSO, BRACH AND EMSCO		
OUTFITS.....	less than 5	35%
	5 and over	40%

Cash Discount On All Above Items 2%