

## A SERVICFof EXCELLENCE to THE DEALER

## Confidence

During the past five years we have held the confidence of our dealers only by viewing the radio industry through their eyes.

When an organization has grown from an humble origin to a commanding position in its field, too often the problems of those who have helped its growth are overlooked.

Serving, as we do, a very large number of dealers in various territories, our viewpoint, while essentially national, must consider local conditions and problems. To this thought and to no other do we attribute the very fine consistent growth of our organization.

At the beginning of this season it was our intention to have one comprehensive cata$\log$ do for the entire season, but conditiors have changed so, and as we have added many new lines, we feel that this supplementary catalog serves a purpose in keeping with our idea of service to our dealers.

In this catalog you will find all that is new and interesting in radio. Remember that we carry a complete stock of all items made by the manufacturers whose names are shown in our price sheet, and even though individual items are not pictured, you may be sure that your orders will receive prompt and zarefu- attention. A glance through these pages will * convince you that we have merchandise on which you and ourselves will make money.


# The Pacent Cone 

## "The Speaker of the House"

## Licensed Under the Lektophone Patents

It literally speaks for itself, this Pacent Cone. It handles the entire range of musical frequencies now being broadcast by the leading stations and reproduces instrumental groups such as orchestras, bands, and choruses, both clearly and pleasingly, without shurring and blurring the intricate musical values and shadings. The Pacent Cone can be used with any receiving set, with or without power amplification.
Mechanically, the Pacent Cone is a double parchment cone of the fixed edge type, with the driving unit within the cone. The parchment is of special grade, selected only after long experimentation, and treated in a manner to ensure immunity from dampness and atmospheric changes. The driving unit is a challenge to that of any other speaker, with a balanced armature, delicately mounted yet so sturdy that it will respond to the weakest as well as the most powerful signals, and to the frequencies ranging from 50 cycles or less for the bass notes to the thousands of cycles of the higher overtones and harmonics. The action of the balanced armature is communicated to the cone by a connecting rod learling to the apex, with a simple adjustment which maintains proper position of the driver rod in the paper cone.
Electrically, the Pacent Cone leaves nothing to be desired. The permanent magnets of the driving unit are thoroughly seasoned to insure unlimited life and the windings will handle the usual high output voltages of power amplifiers.

TYPE A, (table type) 17 inches in diameter, with handsome bronze base, suitable length cord and Pacent detachable plug.......... List $\$ 28.50$

TYPE SA, (for floor use) 36 inches in diameter, mounted on an American Walnut stand.

List $\$ 89.50$

TYPE WA, (for wall) similar to type SA but designed for mounting on wall. List $\$ 78.50$

# Browning-Drake Receiver 



Without a doubt there are more amateur-built BrowningDrake Receivers throughout the world than any other ama-teur-built receiver ever designed. And the several hundred thousand Browning-Drake Receivers now in operation are giving permanent, reliable performance.

Now the Browning-Drake Corporation is producing a factory built model . . . the Browning-Drake Five which is completely assembled at its Brighton laboratories under the supervision of the inventors. Every dealer handling Brown-ing-Drake has made money and every customer has been permanently pleased.

## List Price $\$ \mathbf{9 5 . 0 0}$

## Pfanstiehl Special 5 Tube Receiver



A large number of our dealers have asked us to furnish them with a moderately priced receiver to be sold in competition to the numerous cheap and inefficient receivers parading as five tube T. R. F. receivers.

With this in mind we have persuaded the Pfanstiehl Radio

Co. to supply us, on a contract for a large number of receivers, with their regular One Hundred and Twenty-five Dollar receiver at a price which enables us to make a fair margin of profit and at the same time allows you to sell a high grade receiver at a competitive price and make money.

## List Price $\mathbf{\$ 6 5 . 0 0}$

## "How to Build It" Book

Complete instructions for assembling, wiring, and operating the Hammarlund-Roberts $\mathrm{H}_{1}-\mathrm{Q}$
under Receiver. Prepared
the direction of the Ender the directios
$25 c$
 ๑ $c$

Different and Finer Results from
Automatic Variable Coup-ling-same control operates tuning condenser and prim. ary coil coupling simultancously, gives maximum and equal amplification and selectivity over entire tuning rangeStage Shielding - prevents coupling between stages, pre venting oscillations and increasing selectivity. Clarifies
reception.

## Different, Finer Engineering

The new Hammarlund-Roberts Hi-Q is an entirely modern radio receiver, incorporating the latest approved features. The most important of these include dual tuning, stage shielding, automatic coupling variation, hi gh detector efficiency, a high power output and that it is non-oscillating. tone, simpler tuning. fundamentals have been adhered to; but they are a pplied in new and different ways that produce greater selectivity elearer tone, simpler tuning.
the most advanced and efficient receiver-regardless of cost.

## You Can Build the Hammarlund-Roberts Yourself

Anyone can build the Hammarlund-Roberts Hi. O. All the research, $t$ he selection of parts, the exact placing of units, has been worked out in advance for you. And you have a receiver that will equal an eeght-tube set-simplicity of design and operation hitherto unthought of-all at less than
half the price you would pay for a factory made set of anywhere near equal efficiency.

APPROVED MATERIAL FOR THE HAMMARLUND-ROBERTS HI-Q

Fritts Hi-Q Cabinet (same as pictured above)
Baseboard for Hi-Q Receiver
List $\$ 22.00$
. List 1.50


## Complete Kit Price $\mathbf{\$ 6 3 . 0 5}$

# The Loftin-White Receiver 

## A Recently Perfected Circuit Designed by Two Able Engineers to Give Equal Amplification and Perfect Control Over the Entire Wave Length Scale



The new Loftin-White Circuit from a technical point of view, is entitled to be called new, because it has features which distinguish it from the circuits used in other radio receivers.

The circuit was devised by Edward H. Loftin and S. Young White. Mr. Loftin has specialized on radio circuits, both in the Navy, where he was a Commander and was in charge of the Radio Research and Patent Section for several years, and in civil life for about three years, as consulting engineer and expert witness in radio suits involving radio circuits.

Heretofore the attempts to prevent regeneration and oscillation have been by four general methods. One method was to bias the tube so it would not oscillate; another was to provide losser resistance in the circuit, directly or indirectly; another was to couple very loosely; another was to use a bridge or feedback circuit that opposed the natural feedback between the grid and plate circuit.

Loftin and White do none of these things. They put a condenser reactance in the plate circuit to shift the phase of the plate circuit so that any feedback is out of step with the grid circuit and, therefore, does not aid the grid circuit to produce regeneration or oscillation.

And they do more than that. They provide in addition to the inductive coupling, usually used in broadcast receivers, a capacity coupling, which has not before been used in such receivers. The inductive coupling commonly used, does not transfer the long wave broadcast as well as the short wave broadcasts, but in the Loftin-White Circuit, that is corrected by capacity coupling which is a rranged to automatically transfer the proper additional amount as the longer wave broadcasts are tuned in.

## Complete List of Epecified Parts

1 Pacent Foundation Unit
$\$ 6.00$
$\$ 6.00$
1 Pacent No. $90-\mathrm{B}$ 10-ohm Rheostat ..... 75
5 Pacent No. 83 Cushion Sockets ..... 3.25
2 Pacent No. 27-A Input Superaudioformers shielded... 15.00
1 Pacent No. 27-B Output Superaudioformers, shielded. ..... 7.50
1 Set of Hammarlund Loftin-White Coils. ..... 10.00
1 Yaxley No. 10 Midget Battery Switch. ..... 5.00
1 Yaxley No. 704 Interstage Junior Jack ..... 75
2 Marco Illuminated Dials-No. 200-0-100 ..... 7.00
12 Eby Binding Posts, Engraved ..... 1.80 ..... 3.00

1 No. 112 Amperite-Radiall Co. ......................... 1.10
2 No. 1-A Amperite-Radiall Co.
1 Sangamo Kit-(Special Tested Condensers)-............. 2.20
$2.004-5 \%$ mfd. Sangamo Condensers .............. 1.80

1. 004 Sangamo Condensers ..... 1.80
1.001 Sangamo Condensers ..... 50 ..... 60
1.00025 Sangamo Condensers
1.00025 Sangamo Condensers
12 megohm Durham Resistor-International Resistance ..... 50
1 Front Panel-Micarta Fabricators, Drilled and En- graved ..... 3.25
Sub-panel-Micarta Fabricators, Drilled. ..... 4.00

## Complete Kit Price $\mathbf{\$ 8 5 . 1 0}$

## The New Madison-Moore "One Spot" Super-Heterodyne Receiver



This Receiver Incorporates the Latest Development in Super-Heterodyne Circuits Using a New Design of Precision Units-Design, Construction and All Illustrations of This Receiver Were Prepared in The Citizen's Radio Laboratory

## Complete Parts

$17 \times 26 \times 3 / 16$, Lignole Panel, drilled and engraved. ..... 9.00
1 Frost Filament Switch ..... 30
$13 / 4 \times 31 / 4 \times 3 / 16$ inch Drilled Strip ..... 25
$23 / 4 \times 21 / 2 \times 3 / 16$ Drilled Terminal Strip25
$1101 / 2 \times 25 \times 3 / 4$ inch Wooden Baseboard ..... 1.25
1 Set of 5 Type Madison-Moore One Spot Trans- formers ..... 55.00
1 Karas . 0005 Orthometric Condenser ..... 7.00
1 Karas .00025 Orthometric Condenser ..... 6.50
2 Marco Illuminated Dials ..... 7.00
8 Eby UX Sockets ..... 4.00
2 Samson New Symphonic Transformers. ..... 18.00
1 Frost 10 Ohm Rheostat ..... 50
1 Frost 20 Ohm Rheostat ..... 50
1 Type 2 Elkay Equalizer and Mnt. ..... 3.00
1 Type 4/3 Elkay Equalizer and Mnt75
1 Daven Glastor 2 Meg ..... 50
1 Sangamo . 00025 Mfd. Condenser. ..... 40
1 Sangamo . 005 Mfd . Condenser. ..... 70
2 Sangamo 1 Mfd. By-Pass Condenser ..... 2.50
1 Pair Sangamo Grid Leak Clips. ..... 10
1 Yaxley Cable Connection and Plug ..... 3.50
7 Eby Engraved Binding Posts ..... 1.05
1 Box of Screws, Nuts, etc. ..... 50
20 Lengths Bus Bar ..... 50

## Complete Kit Price $\mathbf{\$ 1 2 3 . 8 0}$

 <br> \section*{Vicloreen <br> \section*{Vicloreen huper huper <br> }Designed For Loop or Outside Aerial
"VICTOREEN" Transformers have a resonance curve many times sharper than that of any other transformer. This, of course, means selectivity. Because of the resonant features, Victoreen are enabled to use an aperiodic primary. This prevents interstage oscillation, makes the set more stable and permits the potentiometer to be used solely as a volume control and not as a losser. Due to the design developed in the Victoreen Laboratory, they are enabled to adjust and tune each transformer to a precision withir. $1 / 3$ of $1 \%$. "VICTOREEN" transformers require no matching of tubes, condensers, etc., in fact, there are no adjustments to make. This is all done at the factory. The wave-length to which Victoreen transformers are designed assures less interference by harmonics.
1-Victoreen Antenna Coupler ..... $\$ 3.50$
4-Victoreen R.F. Transformers No. 170 ..... 28.00
1-Victoreen Oscillator ..... 5.50
7.00
2-Precise . 0005 Mfd. New Type Condensers. ..... 7.00
4.00
2-Dublier . 00025 Grid Condensers ..... 80
2-Lynch 2 Meg. Grid Yeaks .-...80
1.00
.40
.901-Tobe 1 Mfd. By-Pass Condense1 -Frost New Type 400 ohm Potentiome

Complete Kit Price \$79.80<br>With Hammarlund Mid-Line Condensers-List $\$ 82.80$<br>With Hammarlund Mid-Line Condensers-List $\$ 82.80$$1-8 \times 23$ Baseboard1.00

3.20- Universal Sockets
2-Yaxley Double Circuit Jac .....  60
1-Yaxiey Single Circuit Fil. Control Jack ..... 70
2-Samson Audio Tra ..... 10.00
7--Eby Binding Posts ..... 1.05
2-Binding Post Panels ..... 30
20

- Feet of Wire ..... 40


## Victoreen "Universal" Super-Heterodyne



1—Post Panel $5 / 3^{\prime \prime} \times 93 / 6^{\prime \prime} \times$ 有" Urilled.
1-Post Parel, size $5 / 8^{\prime \prime} \times 41 / 2^{\prime \prime} \times$ is" Drilled … ................................................... 25
1-Baseboard $91 / 3 \times 25$.................................................................................... 1.00
1-Victoreen 2 ohin Rheostat

-Yaxley No. 10 Battery Switch50
1-Victoreen 400 ohin Potentiometer ..... 1.50
1-Weston Type 506-0.8 Voltmeter ..... 7.00
1-Victoreen 6 ohm Rheostat ..... 1.20
L-Victoreen Master Control Unit ..... 9.50
1-Yaxley No. 60 D.P.D.T. Jack Switch ..... 1.25
1-Victoreen Audio Control Unit ..... 4.50
8-Benjamin Universal Sockets ..... 6.00
2-Dublier . 00025 Type $G$ with Clips. ..... 80

# The New Remler Best Super Receiver 

## Described in Citizens Call Book



## Complete Specified Parts



Remier 639 Variable Condensers, . 0005 mfd
Remler 600 Transformers ...................
Remier 610 Transformers
Transformers . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 12.00
Weston, Model 506 Meter, Type 217

Frost 820 Rheostat, 20 ohm.
Frost 830 Rheostat, 30 ohm.
Frost 234 Par-Tab. Jack..
Froat 608 Filament Switch.
Cutler- Hammer 25 ohm Variable Resistance
Elkay Type 2 Equalizers with Mounting
Jones Type B. M. Multi-Plug.
Eby Ensign Engraved Binding Posts.
Type G.5 XL Balancing Condenser.
Sangamo Scries "A" .5 mfd. bypass condenser
1 Sangamo Series "A" 1 mfd. Bypass Condenser.
1 Sangamo . 0005 mfd . Condenser.

1 Sangamo . 006 mfd. Condenser
2 Sangamo Grid Leak Clips.
$17^{\prime \prime} \times 26^{\prime \prime}$ Bakelite Drilled and Engraved Panel ..... 6.50
1 1/2" $x^{\prime \prime} 101^{\prime \prime} \times 25^{\prime \prime}$ Wooden Baseboard. ..... 1.00 ..... 60
.50
3 3/16" $\times 1 /{ }^{\prime \prime} \times 33 /$ Terminal Strips $^{\prime \prime}$
3 3/16" $\times 1 /{ }^{\prime \prime} \times 33 /$ Terminal Strips $^{\prime \prime}$
1 Lynch 2 megohm Grid Leak. ....
50
50
$\begin{array}{ll}1.50 & \text { I Silver-Marshall Type } 110 \text { A Coil........ } \\ 4.50 & \text { Silver-Marshall Type } 515 \text { Coil Socket. }\end{array}$ ..... 2.50
1.00 ..... 12.00
12.00
$1.35 \quad 2$ Silver-Marshall Type 220 Audio Transformers.
$1.35 \quad 2$ Silver-Marshall Type 220 Audio Transformers.
6.00
$1.50 \quad 1$ Silver-Marshall Type 221 Output Transformer. ..... 6.00
1.50
$.90 \quad 1$ Silver-Marshall Type 340 Condenser.1.50
.50
.40

## Complete Kit Price $\$ 89.65$

Fritts Cabinet 7 $\mathbf{7 6} 6.12$ deep-List $\$ 23.50$

## Ultradyne Model L-R-4 Receiver

1. Micarta Panel Drilled and Engraved $8 \times 24 \times$ 左.

3 Hammarlund Shields
3 Hammarlund .00035 M.. L ... Cond.
2 Hammarlund Equalizers
1 Hammarlund $\mathrm{R}^{\text {R }}$ F. Coil, is
1 Hammarlund R. F. Coil, 18.
1 Eammarlund Auto Coil.
1 Hammarlund Shaft, $10 x / 4{ }^{\circ}$ Long
6 Sangamo .5 By-Pass Series.
1 Sangamo. 1 By-Pass Series
4 Sangamo . 005 By-Pass Series
1 Sangamo . 001 By-Pass Series
1 Sangamo. 002 By-Pass Series.
1 Sangamo. 00025 By-Pass Series
2 Thordarson R-200

### 6.50

Benjamin Sockets, No. 9040
Yaxley Rheostats, 20 ohm . 2.70

Yaxiey Potentiometer, 400 ohm
Yarley Jack. No. 3
Yaxley Pilot Light Switch.
1 A Amperites
112 Amperite
.70
........... . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 4.40
coy Binding Post Engraved.
2.20

Madison Mriti-Chokes . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1.35
Antenna and Ground, Engraved.
Bakelite Panel for Binding Posts, Drilled................................ 1.00
1 Assortment of Nuts, Screws, Spaghetti, Brackets, Flexible Hook-up
Wire and Bus Bar.......................................................


Parts as Specified in December Issue of Radio


Remler Iniradyne Amplifier
Cardwell 317 CL Triple Condenser
Remier No. 638 . 00035 Condenser
Silver Marshall Vernier Condenser No. $340^{\circ}$
Silver Marshall 110 B Inductance Coil
Silver Marshall Coil Socket................
Silver Marshall 220 Audio Transforme....
Frost No. 886, 50,000 ohm Varisble Resistance
Crost No. $886,50,000$ ohm Varieble Resistance
Set (3) Camfield Duoformers.
National Type B, CCW Dials..
Frost 30 ohm Baseboard Rheostats
Frost Panel Mount Rheostat 30 ohm.
Frost Panel Mount Rheostat 30 ohm
Frost No. 954 Single Closed Jack..
Frost No. 954 Single Closed Jack.
Frost No. 953 Single Open Jack.
Krost No. 953 Single
Benjamin $4 X$ Type Cushion Socket
5.25

Baseboard
Set Officini Blue Prints.Prints.7.85

## Complete Kit Price $\mathbf{\$ 1 1 5 . 2 5}$

## The New Ultimax Five Tube Receiver



It is a known fact that a vacuum tube has a natural tendency to oscillate at the lower wave lengths. In the Ultimax receiver practically uniform selectivity is obtained on low and high wave lengths alike, due to Ultimax Unit. This Unit is inserted in the plate circuit and superimposes a current on the oscillations of the tube.

The combination of the two frequencies result in practically uniform selectivity from $200-600$ meters.

The Ultimax Unit, not only gives high selectivity over the broadcast band, but prevents all oscillations, squealing and radiation. Energy transfer from tube to tube is unusually high in addition.

## Authorized Parts for Ultimax Receiver

1 Ultimax Unit
1 Set of 3 Ultimax Coils
1 Pacent No. 3251 B 3 gang S. L. F. condenser
2 Hammarlund Jr. midget condenser Mc 5
5 Pacent Universal Cushion Sockets
1 No. 62 Pacent Jack
1 No. 95A 6 ohm Pacent Rheostat
1 No. 65 Pacent Jack
1 No. 95B 10 ohm Pacent Rheostat
1 No. 16 Pacent Battery Switch
1 Kurz-Kasch Vernier Dial

2 No. 27 Pacent Super Audioformers (shielded)
14 ohm Special Resistance Strip
1.002 Fixed Condenser, Dubilier

1. 00025 Fixed Condenser

12 megohm Resistance, Daven
8 Eby Engraved Posts
1 Panel, $81 / 2 \times 16 \times 3 / 16$, Drilled and Engraved Panel
1 Drilled Sub-panel $15 \times 7 \times 3 / 16$
2 Benjamin Sub-panel Brackets
1 Special Pillar Post
1 Single Mnt.

# Cockaday's Latest Development L. C. 27 Receiver Kit 



Mr. Cockaday believes that this new circuit, which is the outstanding contribution of the Popular Radio Laboratory to the experimental set-builder for this year, constitutes not only one of the most important advances that has so far been made in the radio art, but that it is distinguished by a tonal quality-particularly in the lower registers-that is unsurpassed.

These features together with good distance range, simplicity of tuning and high selectivity makes the LC-27 one of the best receivers you can build to-day.

The LC-27 is non-regenerative and can be used with batteries, or power supply units, and is designed to fit the console and table type cabinets manufactured by Blandin or Corbett Mfg. Co.

## Parts Exactly as Specified by Mr. Cockaday

Parts used in the Laboratory Model of the LC- 27 Broadcast Receiver Described in October 1926 issue of Popular Radio

1 Hammarlund mid-line dual condenser, .000275 mfd... $\$ 7.504$ Aluminum shields ..................................... . 1.75
1 Hammarlund mid-line single condenser, .000275 mfd .4 .65
1 Precision Duo-Octaform coil set comprising one antenna coupler and two interstage couplers.......... 10.50
1 Amertran De Luxe first stage audio-frequency trans-
former ............................................... 10.00
1 Amertran De Luxe second stage audio-frequency
transformer ........................................ . . 10.00
1 Amertran choke No. 854 . .............................. . . 6.00
1 Dubilier No. 902 filter condenser: 4 mfd . or Tobe No.
604 filter condenser 4 mfd . .......................... 5.50
1 Dubilier No. 907 filter condenser . 1 mfd. ............ . . . 60
1 Mar-co illuminated control, scale O to 100 ........... 3.50

1 Carter Battery Switch ..................................... . . . . 65
1 Samson radio frequency choke coil No. 85 ......... 1.50

3 Aerovox micafixed condensers, . 00025 mfd. ............. . . . . . . . . . . . . 1.05
1 Durham or Lynch resistor, 4 megohms .............. . . . 50
1 Lynch grid leak mounting ................................. . . 35
1 Carter Gem single-circuit open jack ................... . . 25
1 Carter variable resistance, zero- 10,000 ohms ........ 2.00
12 Eby binding posts . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1.80
1 Binding post strip $111 / 2$ in. wide $x$ 25z/8 in. long $x$
$1 / 4$ in. thick ................................................ 1.50
1 Bakelite decorated panel, $8 \times 26$ in. as per specifica-
tions ..................................................... 7.50
5 Benjamin UX sockets ..................................... 3.75
1 Amperite automatic filament adjuster for 1 amp. load. 1.10
2 Tait brackets .................................................. 2.00
1 Mahogany baseboard ........................................ . . . 1.00
1 Box of screws ................................................ . . . 50
30 feet of rubber wire ........................................ . . . . 30

## Complete Kit Price $\$ \mathbf{8 5 . 2 0}$

Blandin Console ........................................... 54.00
Designed for L. C. 27 Model S-15-Corbett Cabinets, Mahogany or Walnut- $\$ 18$ List Price.

Blandin Cabinet 19.50

Designed for L. C. 27 Mode1 S-20-25-Combination Console\$60. Model S-20-Cabinet only 27.50.

## Recommended Accessories

Cockaday Intermediate Power Pack (with Relay) List.. 47.50 Cockaday Sr. Power Pack......................... List.. 64.45 Davy RFT-1 A Eliminator (New List)............ List.. $\$ 55.00$

# Silver Marshall-630 Shielded Six 



The Silver Shielded Six is one of the highest types of broadcast receivers ever developed, and is the result of painstaking engineering work over a period of years. The circuit employed consists of three stages of tuned radio frequency amplification, a detector and two stages of audio amplification.

The radio frequency amplifiers are regenerated by an arrangement new in amplifier design which causes them to function at practically peak efficiency over the entire broadcast wavelength range. Each stage, including the detector circuits, is completely shielded in individual aluminum stage shields, which prevent internal oscillation as well as pickup of outside noise and interference. These stage shields, together with the audio amplifiers, are mounted upon a heavy pressed steel chassis which renders the entire assembly a very rigid and rugged affair.

The four inductances (radio frequency transformers) are of the plug-in type with a guaranteed uniformity of better than two-tenths of one per cent. Further, their efficiency is far higher than that of average transformers, as the energy transfer is from two to three hundred per cent greater than that obtained with average transformers. The tuning condensers are of the straight line frequency type, so modified that ample dial space is given to the higher wave high-quality stations at the same time good dial spacing is obtained on low waves.

The entire assembly is metal thruout, with the exception of the bakelite insulation on the instruments. A steel chassis $191 / 2^{\prime \prime}$ long and $12^{\prime \prime}$ deep carries all instruments and the connection terminal strip. The radio frequency circuits are all shielded separately with removable stage shields, only the audio amplifier being unshielded (the transformers themselves are shielded by their cases). The front panel is of bronze $7^{\prime \prime}$ x $21^{\prime \prime}$, finished in walnut with a marvelously true wood grain.

All coils and condensers are matched with the greatest care, so that in every Type 630 kit each condenser exactly fits each coil. Despite the remarkable production uniformity obtained in the Silver Marshall factory, every coil and condenser for a 630 kit is sent thru a number of additional laboratory tests to insure beyond the shadow of a doubt absolute uniformity.

In operation, the Shielded Six will give ample volume from local stations with an antenna three to four feet long in many cases. During the summer months in Chicago WOC, Davenport, is tuned in in daylight with a ten foot antenna. Normally, a twenty to thirty foot antenna will give plenty of volume on stations up to one to two thousand miles distant.

Complete detailed instructions and photos accompany each

$$
\text { List Price }{ }^{\text {s }} 95^{\circ 00}
$$

## Type 633 Silver Shielded Six Essential Kit

The 633 kit contains four matched condensers, four matched radio frequency transformers, four coil sockets, four stage shields, a link motion and an instruction booklet. The same high standard of matching of coils and condensers is evident as in the 630 kit .

## List Price ${ }^{\mathbf{5}} \mathbf{4 5} \mathbf{5}^{.00}$

Fritts Cabinet [Wainut oniy] For This Receiver-List $\mathbf{\$ 2 2 . 0 0}$


The B-T B-Power Unit has five terminals as shown, permitting four different voltages between these terminals.

There are also taps numbered 1,2,3, and 4 at one of which the small plug is inserted according to the number of tubes used.
In other words, with a set drawing only 15 to 20 milliamps use Tap No. 4. With a larger set, however, instead of allowing the voltage to drop as indicated hy the dotted line the plug is simply moved to No. 3.

List Price $\$ 39.50$
B-T Lifetime Condensers


A masterpiece of mechanical construction, with resistance losses lower than "laboratory standards. thod of dic-casting aluminum rotor and stator is exciusively b-I, rigiulting in absolute rig dity, permanent spacing and yet light in weight and requires no counter-halance. When used with proper inductance Type $L$ gives true straight line wave length. Code No.
J. 7
$\mathrm{L}-17$
Capacity
.000125 (or 125 M. M. F.) ${ }^{\text {Plates }} 4.25$

| $\mathrm{L}-17$ | .00035 | (or 250 | M. | M. | M. | M.$)$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $\mathbf{L} .23$ | 4.50 |  |  |  |  |  |

B.T S.L.F. CONDENSER


B-T Tuning Control


An attractive appear ance combined with the highest degree of efficiency. A 12 to ratio provides positive control with a smooth easy action. There is no pull or side strain on the condenser shaf to cause wear on bear. ings and consequent im paired plate alignment The same dial work with either right or left turning condensers This is the only dial that reads in fractional legrees, if desired.

List Price, $\$ 2.50$

## Bremer-Tully Parts

B. T. R. F. choke.................. $\$$ List B. T. Mikro Mike condenser ...... 1.00 B. T. Thorostyle coils 4.00 B. T. Euphonic Transformer 2.2 to 1, 5.00 B. T. Euphonic Transformer 4.7 to 1.
B. T. UX socket 5.75 5.75
.75 B. T. UX Det. socket..................................... 1.00

## B-T Short Wave Outfit

121/2 TO 200 METERS


The B-T short wave outfit answers the require ments of those who wish to cover the full short wave fields. Coils are interchangeable covering $12 \mathrm{I} / 2$ to 25,25 to 50,50 to 100 and 100 to 200 ineters using B-T, 1.7 Condensers. Full details on how to buitd accompanies each Kit.

List Price, $\$ 8.50$
B-T Three Circuit Tuner

RA445-Type B, for Broadcast reception (200 to 565 meters with L- 13 Condenser).

List $\$ 5.00$


## B.T AIR CORE TRANSFORMERS

Two-circuit, bank wound skeleton frame trans. former, similar to above tuner but without rotor. The adjustable primary provides for volume or selectivity.

AC-3 Transformer (Adjustable).
List Price, $\$ \mathbf{3 . 5 0}$

# New Bremer-Tully Power Six 



The success of the B.T Counterphase circuit dur. ing the past year has estab. lished its continued popularity. The selectivity and sensitivity of three stages of stabilized tuned radio frequency amplification appeal alike to the DX listener and those located in a maze of powerful sta. tions.

Two-dial control of the four tuned circuits simplifies tuning to a degree to which none can seriously object. The methods employed insure exact resonance between all stages without materially adding to the difficulties of tuning. The new Counterphase Power-Six circuit is fundamentally the same now as when the original circuit was released. The changes are a natural result of the development and experience of the past year.

Contents of Eesential Kit
The B-T Counterplase Power Six Kit contains: One TA Thorstyle Transformer, three Thorstyle transformers, 2 LD-17 condensers, 3 B-T MMF condensers, 3 B.T R. F. chokes, 1 B.T 500,000 ohm resistance, 3.1500 ohm resistances, and one set of color charts and diagrams.

List Price, $\$ 41.50$

## POWER SIX

Complete Parts to Build This Receiver

Bremer Tully No. 6 Power Kit ..... $\$ 41.50$
Crowe Metal Panel 7:24 drilled ..... 6.50
B. T. Tuning controls B. T. Euphonic transformer 2.2 to il ..... 5.00
5.00
B. T. Euphonic Transformer 4.7 to 1 ..... 5.75
2.25
Dublier .006 condensers ..... 2.25
Dubilier .001 Condenser. .
Dubilier .001 Condenser. . ..... 1.80
Dubilier . 00025 fixed condenser

$$
\begin{aligned}
& \text { Lynch } 2 \text { mes grid leale } \\
& \text { B. T. UX sockets............... }
\end{aligned}
$$1.80

.35
.50
.50
4.50Froter 951 jecls
Frost 953 jack ..... 50
Carter Imp Battery switch ..... 65Frost 3 ohm rheontatYarley S. P. D. T.Eby Posts
50
1.00
Post Panela ..... 1.05
Angle brackets ..... 20
Lynch Grid Leak Mount. ..... 35

# The New Karas Equamatic 



Fulfills in an extremely simple manner a very desirable and HIGHLY IMPORTAN'T I'UNCTION that our forcmost radio engineers have been striving to accomplish ever since the advent of radio broadcasting.

THE EQUAMATIC SYSTEM AUTOMATICALLY provides a CONTINUOUS PRACTICAL MAXIMUM and an absolutely EQUAL TRANSFER OF ENERGY between primary and secondary inductances at all wave lengths by a coupling system unique to radio engineering practice-it also ELIMINATES the overlapping of electrostatic and electromagnctic fields with their harmful, broadening and distorting effects.

## Complete Parts of EQUAMATIC Receiver

3-Karas Equamatic R. F. Transformers ..... -.-.-........-...................... $\$ 12.00$
3-Karas Orthometric 17-plate 00037-mid., Extended ShaftCondensers.21.00
3-Karas Micrometric Vernier Dials ..... 10.50
2-Karas Harmonik Audio Transformers ..... 14.00
2-Karas Equamatic Retard Coils ..... 2.00
1--Yaxley 30 -ohm Rheostat with Gold Dial ..... 1.50
-Yaxley 10 -ohm Rheostat with Gold Dial. ..... 1.50
-Yaxley Gold Interstage Phone Jack ..... 1.05
1-Yaxley Gold Open-Circuit Phone Jack
Complete Kit Price - $\mathbf{\$ 8 8 . 7 0}$

EQUAMATIC EARAS COILS


The other factor in sharp tuning is the EQUAMATIC coils. Designed according io the very latest known FACTS for efficient handling of radio frequency currents, they pass an EQUAL and MAXIMUM amount of en ergy from primary to secondary at ALL wave lengths.
Equanatic R. F. Coils, List ..................... 84.00


The product of Karas engineering. One of the favored transformers of Amateur set builders. Amplifies high, middle and low tones in the same quality as the original. Completely shielded to avoid interstage coupling. All Ratio Audio.

1-Sangamo 0.00025 Fixed Grid Condenser with Clips......................... . . 50

2-1.A type Amperite 6-Volt Resistors with Mountings........................ 2.20


1—Formica $7^{\prime \prime} \times 28^{\prime \prime}$ Drilled and Engraved Panel...-.................................... 6.80
1—Formica $6^{\prime \prime} \times 27^{\prime \prime}$ Drilled and Engraved Sub-panel................................ 4.69



Equanatic Retard Coils, List $\qquad$ 1.00

List Price- $\$ 7.00$

"B" and "C" Battery Eliminator and two-stage power tone amplifier, capable of being used with most standard receivers or tuners. This amplifier may be fitted into a standard $7 \times 10 \times 24$. Wood or Metal Box.

Parts as Authorized by Amertran
1 Amertran Power Transformer PF-52
$\$ 18.003$ Benjamin UX Sockets
2.25

Yaxley Automatic Power Control Type 444
18.002 Federal No. 25 Potentiometers 4.00
${ }^{3}$ Amertran Chokes Type 854 ........................... 18.00
2 Tobe Power Pack Condensers Type 6022 mfd. ( 1000 V ) ........................................... 7.00
2 Tobe Power Pack Condensers Type 6044 mfd. ( 1000 V ) . ............................................ 12.00
${ }_{1}^{1}$ Amertran Resistor Type 400 ............................. 7.50
3 Tobe Type 3011 mfd . Filter Condensers.
1 Amertran De Luxe-First Stage 3.75

1 Amertran De Luxe-Second Stage
10.00

1 Yaxley Junior Jack Type 704
75
1 Yaxley Midget Battery Switch ......................... . . 50

1 C. R. L. $0-100,000$ ohm Resistance....................... 2.00
${ }_{9}$ Eby Marked Binding Posts........................................ ${ }_{1.05}^{2.05}$
1 Baseboard, $934 \times 2355^{2}$....................................... 1.00

$\ldots \ldots \ldots \ldots 1{ }^{10.00} 1$ Set of Prints and Instructions $\ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots$
Complete Kit Price, $\mathbf{\$ 1 0 7 . 4 0}$
be used in series with the relay and lighting socket
NOTE: A precise N. 1600 Circuit Breaker may be used in series with the relay and lighting socket as protection in case of short circuits. List $\$ 3.75$

## Cockaday's Improved Power Pack



Mr Cockaday's new and improved Power Pack Amplifier described in October issue of Popular Radio is the latest development in "Power Pack" amplifiers.
It operates directly off the 60 -cycle, 110 -volt alternating current lighting line and furnishes the "A, B and C" voltages for the amplifier and " $B$ " voltage of 500 volts for the receiving set. It may be attached to any radio receiving set from a simple crystal set to the most complicated Super-Heterodyne.

It will supply to any radio receiving set, either manufactured or home built, "B" current up to 500 volts for extreme power.
1 Amertran PF-52 Transformer. 12.0012.00
1 Amertran Resistor ..... 7.50
1 Yaxley Relay Switch ..... 5.00
Eby Socke
1 Federal No. 25 Potentiometer .......... ..... 2.00 ..... 2.00Tobe Type 604-4 MFd Power Pack Cond (1000V) 6.001 Binding Post Panel1.05
25 Feet Rubber Covered Wir ..... 00 ..... 40Tobe Type 604-4 Mrd Power Pack Cond (1000V) 6.00
2 Tobe Type 602-2 Mfd. Power Pack Cond. (1000V) 7.00 1 Box of ScrewsCockaday's Latest Specified Parts for Power Pack
Complete Kit Price, $\$ 6 \mathbf{4 . 4 5}$

## Dealers Discount Schedule

We have endeavored to give our dealers the maximum discount on all orders whether large or amall. We feel sure that you will appreciate receiving a proper discount on your purchases without taking a larger quantity than you really need.

Keeping this in mind you will observe that most of our quotations are flat and apply to any quantity you may desire to order. You will notice that list prices only are shown in this cataloy. Discount schedule should be removed and lisept soparately.

## RETURNED GOODS

We accept full responsibility for all mistakes made by ourselves and stand ready to correct them at all times.

## LOSS OR DAMAGE IN TRANSIT

The utmost care is taken in packing and shipping all orders. Therefore, our responsibility ceases when shipment is accepted by carrier. File claim immediately for any shortage or damage in transit, and upon request from you we will lend every assistance possible to effect a prompt adjustment.
PRICES-All prices and discounts are subject to market fluctuations and change without notice.
TERMS-We allow $2 \%$ cash discount on all orders. To merchants of established credit listed in the Commercial Registry we extend our regular terms of $2 \%$ ten days, net 30 days. Where the Commercial Agency assign no credit rating and we have had no previous dealings, we suggest that remittance or references accompany the order.
RETURNED GOODS-When you want to return goods for any reason, please write us explaining your reason and ask for our permission. This action is necessary for prompt adjustment.
SHORTAGES_All claims for shortages must be made within five days after receipt of order.

|  | Discount |
| :---: | :---: |
| Acme Apparatus Co. | 40\% |
| Acme Transmitting Apparatus. | 25\% |
| Allen Bradley | 35\% |
| Amperite | 40\% |
| Aero Coils | 40\% |
| Aero Loops | 40\% |
| Amertran Transformers | 40\% |
| Acme Spaghetti | 40\% |
| Aluminum Co. of America | 40\% |
| Ace Panels (American Hard Rubber) | . $40 \%$ |
| Air Gap Sockets. | 40\% |
| Alden Mfg. Co. (Na-Ald) | . $40 \%$ |
| Bakelite Panels | .35\% |
| Baldwin, Nathaniel | .40\% |
| Benjamin Electric Mfg. Co. | 40\% |
| Blandin Cabinets | . $35 \%$ |
| Bodine Electric Co. | .40\% |
| Brach, L. S., Mfg. Co. | . $40 \%$ |
| Bremer Tully Mfg. Co. | 40\% |
| Bristophone Elec. Phonograph Amplifiers, \$45, | 40\% |
| Brooklyn Metal Stamping Co. (B. M. S.) | 40\% |
| Browning Drake Receiver. | 35\% |
| Carborundum Co. (Detector Units and Crysta | 1s). $35 \%$ |
| Carter Radio Co. (Jacks, Rheostats, etc.). | . . .40\% |

Centralab Products ..... 40\%DiscountCorbett Cabinets
40\%
Cunningham Tubes ..... 30\%
Cardwell Condensers ..... 35\%
Celatsite Wire, Flexible ( 25 ft . per coil) ..... 40
Celatsite bus bar ..... 05
Celatsite Battery Cables:
5 Wire ..... 60
6 Wire ..... 75
7 Wire ..... 85
Ceco Tubes ..... 40\%
Celatsite Spaghetti, per length ..... 06
Camfield Coils ..... $40 \%$
Crowe Metal Panels (for Bremer Tully) ..... 40\%
Daven Radio Co ..... 40\%
Daven Tubes ..... 30\%
Deutschman Tobe (Filter \& Bypass Condensers). $40 \%$
Dubilier Condenser \& Radio Corp ..... 40\%
Davy Vertrex Trickle. ..... 40\%
Eby, H. H., Mfg. Co. (Binding Posts and Sock-
ets) .....  $40 \%$
Electrad. In ..... 40\%
Elkay Equalizers ..... 40\%
Exide "A" Power Units. ..... 35\%
Exide Batteries ..... $.331 / 3 \%$
Fahnstock Clips
Discount
Single List, per dozen, $\$ 0.50$
DoubleFritts Cabinets and Consoles.$40 \%$
Frost, H. H., Mfg. Co. (Rheostats, Jacks, etc.). ..... 40\%
General Radio Winding (Gen-Win Coils) ..... 40\%
Hammarlund Mfg. Co. (Condensers) ..... 35\%
Heath Switches ..... 40\%
Hoyt Meters ..... 35\%
Hartford Storage Batteries: Your Cont 130 Amperes .....  $\$ 11.50$
100 Amperes ..... 9.75
Jefferson Elec. Mfg. Co. (Rejuvenators, Trans- formers) ..... 40\% ..... 40\%
Jones, Howard B. (Multi-Plugs)
Jones, Howard B. (Multi-Plugs)
Kester Solder
Kester Solder
35\%
35\%
Kodel Radio Corp. (Trickle Chargers, Elemina-tors, etc.)40\%
Kurz-Kasch Co. (Dials) ..... 40\%
Lynch, Arthur H. (Grid Leaks) ..... 40\%
Madison Moore Transformers, List $\$ 11.00$ each. $40 \%$
Madison Moore Essential Kit, List $\$ 55.00$ ..... $40 \%$
Mathieson Sandberg (Loops)
40\%
40\%
Martin Copeland (Mar-Co Dials) ..... 40\%
Magnatron Tubes
Magnatron Tubes ..... 40\%
Mignon Condensers: ..... Your Cost .00025 Mfd . .....  $\$ 1.15$ ..... 1.20
00035 Mfd .
00035 Mfd .
0005 Mfd . ..... 1.25
.00035 Mfd . Dual ..... 3.25
.0005 Mfd . Dual. ..... 3.35
Modern "B" Compact Eliminator, List, $\$ 32.00$ ..... $40 \%$
Mueller Elec. Co. (Battery Clips)
Cost per ten, $\$ 0.33$ Pee-Wee ..... 85
No. 27 A
1.60
No. 24 A
65
65
No. 48 B
40
40
No. 21 A ..... 1.30
Na-Ald (Alden Mfg. Co.) ..... 40\%
National Radio Products. ..... 35\%
ONeil Mrg. Co. (Cone Speakers) ..... 40\%
Pacent Products
Pacent Products ..... $40 \%$
Pacent Superaudiformers, Shielded, List, $\$ 7.50$. ..... 40\%
Pfanstiehl Receiver ..... $50 \%$
Precise Mfg. Co.
$40 \%$
Transformers ..... 41 .30
No. 999 Condensers-. 00025 Mfd
1.35
1.35
.00035 Mfd ..... 1.40
No. 1600 Circuit Breaker, List, $\$ 3.75$ ..... 40\%
Syncrodensers
2.40
.00035 Mfd ..... 2.70
Microdensers ..... $40 \%$
Brackets, pair ..... 36Discount
Pyrex Insulators ..... $35 \%$
Precision Mfg. Co. (Coils) ..... 40\%
Phone Cords:
Single (for loudspeakers) ..... $\$ 0.15$
Double (for phones) ..... 20
Phone Tips, per dozen ..... 07
Panels:
Ace Hard Rubber ..... 40\%
Radion ..... 40\%
Bakelite ..... 35\%
Powerizer (Radio Receptrad Co.) List $\$ 55.00$ ..... 40\%
Radiall Co. Amperites) ..... 40\%
Raytheon Tubes ..... 35\%
Radio Receptrad Co. (Powerizer) ..... 40\%
Radion Panels (American Hard Rubber) ..... 40\%
Remler Mfg. Co.... ..... 40\%
Samson Electric Co. ..... 40\%
Sangamo Electric Mfg. Co. (Condensers) ..... 40\%
Scott Transformers (Selectone) ..... $40 \%$
Silver-Marshall, Inc. ..... 35\%
Sickles, F. W Your Cost
No. 30 Shielded T. R. F. Coils. ..... $\$ 1.30$
No. 18A Roberts Coils.
5.20
No. 24 Browning Drake Coils. ..... 4.85
Soldering Irons (National Specialties Co., FortWayne, Ind.)Your CostNo. 49 Small, 55 Watt .......................... $\$ .98$No. 56 Medium, 70 Watt. .................... 215
No. 145 Heavy Duty, 200 Watt2.15
Extra Tips for No. 145 Iron. .....  65
Searchlight Batteries:
221/2 Volt, Flat or Upright ..... $\$ 1.25$
45 Volt, Large Flat or Upright ..... 2.25
45 Volt, Heavy Duty ..... 2.95
$41 / 2$ Volt, C Batteries ..... 35
Tait, Brackets, pair ..... $\$ 1.20$
Thor Couplers ..... 40\%
Thorola Coils ..... 40\%
Tobe Deutschmann (Condensers) ..... 40\%
Thordarson Elec. Mfg. Co. ..... 40\%
Ultradyne ..... 40\%
Victoreen Products ..... 40\%
Variodensers (X. L. Laboratories) ..... 40\%
Weston Elec. Inst. Co.:
Model 506 Meters, Plugs and Pin Jack Me-
ters ..... 35\%
All other models ..... 25\%Willard Storage Battery Co.:
" $A$ " and " $B$ " Eliminators ..... 35\%
Willard Batteries: Your Coest120 Amp. Rubber Case ........................ $\$ 13.95$10.75
Amp. Rubber Case ..... 10.75
40 Amp. Glass Case, Wood Separators ..... 8.75
X. L. Laboratories (Variodensers) ..... 40\%
Yaxley Mfg. Co. (Rheostats, Jacke, etc.) ..... 40\%

## Closing Out Specials!



# Dealers Prices on Kit Sets 

## WE ALLOW 2\% CASH DISCOUNT ON ALL ORDERS

We have built up a national reputation on our service to dealers on kits and apecial apparatus. By purchasing your kits here you not only assure yourself of the correct price, but save many dollars through delays in obtaining the parts from a dozen jobbers.
Our kita are complete in every detail. Every part is in exact accordance with the designer's specifications.
Amertran Autcmatic Power Unit: Complete Kit-List, $\$ 107.40$
Your Cos ..... $\$ 8.44$Broadcast Lab. Circult:Latest Model
Complete Kit-List, \$78.50. ..... 47.10
Bromer Tully Power Sta:
The New lmproved Browning Drake Kit: Complete Kit-List, $\$ 67.45$ ..... 43.85
Cardwell Two Tube Short Wave Kit: Complete Kit-List, $\$ 48.05$ ..... 31.20
Cockaday L. C. 27 KIt: Complete Kit-List, $\$ 85.20$ ..... 51.12
Cockaday Senior Power Pacis: Complete Kit-List, \$64.45 ..... 38.67
Cockeday Intermediate Power Pack: Complete Kit-List, $\$ 47.50$. ..... 28.50
Cotton 1927 Super Receiver:81.33
Daven Bass Note Kit:
Complete Kit-List, $\$ 61.50$ ..... 39.97
Hammarlund Hiyh-Q Kit: Complete Kit-List, $\$ 63.05$ ..... 38.98
Henry-Lyford Kit:
Complete Kit-List, $\$ 69.50$ ..... 45.17
Karas Equamatic Kit
Complete Kit-List, $\$ 88.70$ ..... 57.65
oftin-White Receiver:
Madieon Moore One Spot Super: ..... 74.28
Remer Infridyne Kit:Complete Kit-Liat, $\$ 115.25$

Remler Best Super Kit:
Complete Kit-List, $\$ 89.65$.
R. C. S. Recelver Kit: Complete Kit-List, $\$ 69.70$45.30
Samson Dual Kits Complete Kit-List $\$ 64.10$ ..... 38.46
Silver Marshall 630 Kit: Complete Kit-List, \$95.00 ..... 61.75
Silver Marthall 633 Kit: ..... 29.25
Siver Marshall S. C. Kit: Complete Kit-List, 856.75 ..... 36.8 8
Thordarson R-210 Power Compact : Complete Kit-List, $\$ 44.65$ ..... 23.79
Thordarson R-172 Power Compact: ..... 33.06
Victoreen Super Kit: ..... 47.88Victoreen Universal Kit:Complete Kit-List, \$111.55 . . . . . . . . . . . . . . . . . . . 86.93With Samson Symphonic Transformers-List, \$115.5068.30
World's Record Supar:
Complete Kit-List, $\$ 87.00 \ldots . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . ~$
52.206.00
Ultimax Kit: Complete Kit-List, $\$ 64.40 . . . . .$. . . . . . . . . . . . . . . . . . . . . . . . . . . 38.64Ultradyme R 4 Receiver:
71.22
Complete Kit-List, $\$ 118.70$


## Cockaday's Intermediate Power Pack

CAN BE USED FOR ANY RECEIVER



This new unit, which is here described, has similar characteristics of the I.C Senior Power-Pack except that the power tube in the set is applied with filament current from the "A" power unit. The voltage supplied is correct for the operation of the UX-171 type power tube in the recelver. This new unit gives the same type of quality reproduction as its larger brother and will supply ample volume for ordinary home use. It furaidhea over 200 volts for the UX-171 type tube that is used in the last stage of the LC. 27 receiver when operated from this unit. It supplies approxd. mately 90 volts for the first and second stages of radio-frequency amplification; it also supplies approximately 45 volts for the plate circuit of the detector tube. A "C" battery potential of 20 to 50 voles is also available from this unit for the power tube.

## Complete Parts as Specified by Mr. Cockaday <br> 1-Filtrex A-C Transformer, Type K 180.

1-Na-ald Socket, Type 481 X. $\ldots$
2-Filtrex Choke Coils,
6 - Eby Binding Posts.
6-Eby Binding Posts..B............
1 -Acracon Filter Condenser, $1 \mathrm{mfd} ., 400$ volts, $\ddot{\mathrm{D}} . \ddot{\mathrm{C}}$.
1 -Hardwood Baseboard, walnut finish, $73 / 4$ inches $x 18$ inches $x$ is inch.
1—Hardwick, Field \& Leeb Resistance Unit, Type 200, 20,000 ohms total resistance, tapped to obtain correct voltages

1-Bakelite Binding Post Panel, $31 / 4$ inches $x 41 / 4$ inches $x$
1-Set Popular Radio Blueprints and Construction Booklet.
1-Set Popular Radio Blueprints and Constru
Celatsite Connecting Wire, Screws, etc.

Yaxley Automatic Relay Swith, No. 444.
Complete Kit Price $\mathbf{\$ 4 7 . 5 0}$

DAVY "A" POWER UNITS


DISCOUNT 35\%
ABSOLUTELY WITHOUT HUM
DAVY "A" POWER rectifies the full A. C. Wave and by using a novel filter circuit suppresses the ripple below the limitis of audi. bility. It allows a variation of voltage from practically any value up to 6 V . A regulator prevents the voltage from riang over the limit value and overloading the filaments or damaging the tubes. It may be used with any type of set. The unit is designed primarily for operation with four to six tube sets, using 201 A
ubes, min. cap. 1 amp., max. cap. Or amp.
Seeady, unfaling current supply.
tions will not interfere with reception.
The rectigon tubes operate considerably under their rated output and should last for thousands of hours.
RFT-Davy "A" Eliminator for $11 / 2$ Amp. RFT2-"A" Eliminator 2 Amp. (For 8 Tubes)

List $\$ 4.50$
List 55.00 List 58.50

## 隹minghtams

 DISCOUNT 30\%List Price
CX300A-Super Sensitive Detector ..... $\$ 4.00$
CX301A-Detector and Amplifier ..... 1.75
CX112 - Power Tube ..... 4.50
CX371 - Power Tube ..... 4.50
C 299 -Dry Cell Detector and Amplifier ..... 2.25
CX299 - Dry Cell Detector and Amplifier ..... 2.25
CX220 - -Dry Cell Power Tube. ..... 2.50
CX313 -Full Wave Rectifier. ..... 5.00
CX316B-Single Wave Rectifier ..... 7.50
CX310 - Heavy Duty Power Tube ..... 9.00
CX374 -Voltage Regulator. ..... 5.50

## The Latest in Knock-Down Kits

At this time of going to press, we find three receiver kits worthy of description in our catalog.

Unfortunately no pictures of same are to be had, so we are
listing them below and we do not hesitate to recommend either or all of them very highly.
Complete descriptions of these kits may be found in Citizens' Radio Call Book.

## The World's Record Super Receiver

Bakelite Panel, $7 \times 21$, Drilled and Engraved
Baseboard, $9 \times 20$.
Samson Symphonic Transformers
Carter Rheostats ( 6 ohm )
Carter High Pot Resistance, 500,000 ohm
Carter Jack No. 1, Single Circuit.
Carter Jack No. 2A....
Carter Filament Switch..
Renler or Samson Uniform Frequency Condenser
Elkay $3 / 3 \mathrm{amp}$. and Mount.
Irost Sockets
Thor Coupler No. 460
${ }_{2}$ Dubilier Condensers, il nid. T ype 907.
1 Dubilier Condenser, . 00025 mfd. Condenser
$\$ 6.00 \quad 1$ Dubilier Condensers, 002 mid . Condenser.
$18.00 \quad 1$ Dubilier Condenser, 001 mid.
18.00 Dubilier Condenser. 005 inid.

$.15 \quad 2$ Selectone L. W. Transf R410.
$\begin{array}{rr}.30 & 1 \\ .65 & 1 \text { Daven } 2 \text { meg. Leak............... }\end{array}$
$11.00 \quad 6$ Eby Binding Posts.
$.75 \quad 2$ Binding Post Panel, $3 \quad \ddot{x} \quad 3 / 4 \times \cdots$
$3.20 \quad$ 2 Kurz-Kasch Vernier Dials.
$\begin{array}{ll}3.50 & 20 \text { Lengths of Bus Bar } \ldots \ldots . . \\ 1.20 & 1 \text { Box of Screws, Lugs, }\end{array}$
.40

## Complete Kit Price-\$87.00

## Cotton 1927 Super Receiver

## Described in Citizens Radio Call Book



To
.$\$ 11.00$
11.00
1.80
1.80
70
.70
4.00
4.00
2.25
2.25
14.50
14.50
6.50
6.50
1.20
.40
4.20
4.20
3.50
7.00
7.00
4.50
4.50
4.50
5.00
Samson Symphonic Transformer9.00
Benjamin Sockets ..... 6.00
1.00
Lynch 6 Meg. Leaks. ..... 2.50
Samson New Type, Double Wound Cuupler
Samson New Type, Double Wound Cuupler ..... 12.00
1 Eby Binding Posts ..... 1.65
5.00
Samson Vernier Dial5.00
1.10
Amperite No. ..... 1
1121.10
3.30
Hammarlund Shield3.30
2.00
Carter Switch ..... Shield
C. R. L. Volume Control ..... 65
2.00
1 Bakelite Drilled and Engraved Pancl, $8 \times 24 \times$ ² $\ldots . .$.
25 Lengths of Bus Wire.

## Complete Kit Price-\$135.55

## The New Improved Browning-Drake Receiver

1 Browning-Drake Kit (Coils, Condensers and Illuminated Vernier Dials)
1 Browning Drake Foundation Unit (Drilled Sibpanel with sockets, etc.; front panel and brackets).
National Impedaformer (1st stage)
Nationsl Impedaformer (2nd-3rd stage)
Tobe .1 mid. Browning-Drake Type By-Pass Condenser
.001 Tiny Tobe Fixed Condensers, each
.00007 Tiny Tobe Fized Condense
2 Yaxley No. 416 Pup Jacks, each.

Yaxiey No. 10 Midget Battery Switch
Yaxiey No. 10 Midget Battery Switch

Eby Binding Posts (Antenna, Ground, A- [A- and B- comPrecise No. 940 Midget . 0001 Variable Antenna Microdenser Precise No. 940 Midget .0001 Variable Anten
Browning. Drake 33 ohm Resistance Cartridge.
Browning- Drake 33 ohm Resistance Cartridge.
Resistors 8 meg. (Tobe Tipon)
Browning-Drake Balancing-Netralizing Device.
Browning-Drake Balancing-Netitralizing Device. ............................... . . . . . . . 75
Amperite $0.8 \mathrm{ohm}, 11 / 4 \mathrm{amps}$., Type $5 \cdot \mathrm{~A}$.

## The Pacent Powerformer

## A Combination Power Amplifier and "B"' Eliminator.

It is no exaggeration to say that with the development of the Powerformer by a group of enginecrs under the direction of Louis Gerard Pacent, a new day has dawned in radio. By adding the Pacent Powerformer to your receiving set, you literally sweep aside the intervening space between the broadcasting station and your own fircside. Both music and speech reach yon, loud or soft as you desirc, undistorted, perfectly clear, and in a manner which has heretofore been impossible.

With the PACENT POWERFORMER you eliminate the B Batteries, and by simply plugging into your electric light socket or outlet, you enjoy a constant, even, never decreasing source of $B$ current at a cost almost too small to be taken into consideration.
THE PACENT POWERFORMER can be operated from any 60 eycle 110 volt alternating current :ouse supply, and consumes no nore urrent than an ordinary 60 watt ump. It is only $8^{\prime \prime} \times 8^{\prime \prime} \times 10^{\prime \prime}$ and weighs approximately 32 poundstherefore truly portable.
Wherever you are, whatever set you use with a good loud speaker (cone type preferred) it gives you absolutely exceptional results.

## Description

Its case is entirely of metal, with the exception of the leather handle, and is most attractive, being finished in a neutral satin bronze duco, rendering it suitable for association with any radio receiving set and loud speaker.

Its lines and coloring have been especially designed and adopted so that it will harmonize with the surrounding house furnishings.

A hinged door on the front of the cabinet provides easy access to the tubes. Below the door there is an attractive face plate, with an input jack and an output jack, a tumbler type control switch and a red pilot light, which indicates whether the POWERFORMER is "on" or "off."


## OPERATION AND INSTALLATION

The POWERFORMER is simplicity itself. That, in fact, is what makes it so striking, aside from the marvelous results obtained. There are no adjustments, no controls, no fussy meters to watch. The usual receiver, rheostats and tuners control the loud speaker volume obtained with the POWERFORMER, from a mere whisper to a thunderous rendition, always without distortion.

To connect, simply hook up one end of the connecting cord to the first audio stage of your receiving sct by either plugging into the jack usually provided for headplones, or if no head-phone jack is provided, use either l'acent No. $2+$ Adapter for Navy Standard Sockets or Pacent No. 34 Adapter for U. X. type sockets. The other end of the connecting cord is then plugged into the "input" jack of the POWERFORMER.

Then plug the loud speaker cord into the "output" jack of the POWERFORMER, turn the tumbler switch to "on" and the POWERFORMER' is at work.

List price (exclusive of tubes, but including all necessary connections)
$\$ 97.50$
The following are required:
1 UX-216 or CX-316B Rectifying Tube, $\$ 7.50$
1 UX-210 or CX-310 Amplifying Tube, $\$ 9.00$
This device is only guaranteed when used with genuine
Radio Corporation of America or Cunningham Tubes.

## Exide "A" Power Unit



The Model 3A Exide Radio Power ('init meets the demand for a compact, easily operated, safe and silent source of uniform, non-pulsating, continuous current for the filament excitation of the tubes in radio sets. It takes the place of both the ordinary "A" battery and its charger.

There are two sizes of Units, as follows

| Type | Cat. No. | For Use with Tubes Rated at |
| :---: | :---: | :---: |
| Mordel 3A-6 Volt | 16386 | 5 to 6 Volts, as types 201A and 112. |
| Mordel 3A-4 Volt | 16384 | 3 to 4 Volts, as types 199 and 120. |

Both sizes are for use on the ordinary 105 to 125 volt, 50 to 60 cycle, alternating current house supply and may be plugged into any convenient socket or outlet in the house. The current consuniption is between that of a 10 -watt lamp and a 25 -watt lamp. depending upon the voltage rating of the Unit and the tap used.

Model 3A is not designed for operation on any direct current supply nor on less than 50 cycle alternating current supply and should not be connected to such a source of current.
The Unit consists of a substantial and easily carried case in which is permanently located a specially designed rectificr and an Exide Battery. A storage battery is recognized as the most desirable source of current for radio " $A$ " circuits and this Exide Unit practically takes care of itself, normally requiring the aldition of water to the battery only once a year.

## Willard Storage Batteries and Eliminators

## Willard "B" Power Unit



The Willard "B" Power Unit is designed for service in place of the " B " battery on any
receiving set where 110 volt, 60 cycle AC lighting line is available. It is very simple to install and operate.
The rectifier is of the chemical type, which is superior to the tungsten bulb type for "B" is sumer. It consists of four units connected in such a way that full wave rectification is se sured.
The chemical solution in the rectifier should ast approximately one year, with normal service, when it should be renewed.
There are variable voltage taps for the detector and amplifier which allow very close regulation and insure maximum results from the receiving set.
"B" Power Unit-List $\$ 35.00$


## RADID PDWER UNIT



THE ENTIRE LINE EXIDE RADIO BATTERIES
In the complete line of Exide Radio Batteries, of course, yout will find every current supply necessary to the satisfactory operation of your set. Type $1, X 1$, the 6 -volt 'A" battery, is made in the following capacities: $50,75,100,125$ and 150 ampere hours. Type ${ }^{2}$. KZR-3 and 1.KZR-5, the 4 -volt and 2 -volt " $A$ " batteries respectively, will remain the popular choice of those who use low voltage tubes.

EXIDE "A" BATTERIES

| Type | Cat. No. | Volte | Capacity Amp. Hiss. | $\begin{aligned} & \text { Price } \\ & \text { Sicach } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| 3-LXL. 5-1 | 16450 | 5 | 50 | \$12.30 |
| 3-LXL- 7-1 | 16451 | 6 | 75 | 14.55 |
| 3-LX L-9-1 | 16452 | 6 | 100 | 17.65 |
| 3-LXL-11-1 | 16453 | 6 | 125 | 20.60 |
| 3-LXL-13-1 | 16454 | 6 | 150 | 23.90 |
| 2-KZR-3 | 14231 | 4 | 12 | 6.00 |
| 2-LX L-5-1 | 13920 |  | 50 | 9.85 |
| $1-\mathrm{KZR}-5$ | 14230 | 2 | 24 | 4.90 |
| 1-LXL-9 | 15071 | 2 | 100 | 7.50 |

Willard 100 Ampere Rubber Case Battery


Willard storage batteries possess many advantages not found in others. Thei exceptionally heavy plates made of the same quality as used in the Willard automobile batteries, insures long life and an even, constant flow of current to the filament of the tubes. It is of one rundred ampere capacity in a beautiful Willard rubber case

120 Amp. Rubber Case, List. $\$ 19.50$
100 Amp. Rubber Case, List 18.00

75 Amp. Rubber Case, List
40 Amp, Glass Case, List....................... . . 13.75


Hartford Batteries are specially designed and constructed for radio work. Their exceptionally heavy plates insures long life. Every battery is guaranteed for 18 months against mechanical and electrical defects.
100 Amp. Rubber Case $\qquad$ .816 .00 130 Amp Rubber Case.

## Hammarlund Space-Wound Coils



By an ingenious process, Hammarlund engineers have found a way to wind a solenoid coil with a definite space between turns, and supported by a mere film of dielectric material. By firmlv anchoring the wire to the dielectric, short circuits are impossible.

Distributed capacity and resistance are at a minimum, thus extreme sensitivity and sharp tuning are inherent qualities of Hammarlund Space-Wound Coils.
The amall diameter, 2 inches, permits mounting of coils closer together, and the smaller field reduces undesirable coupling between stages External pick-up is small with consequent re duction of interference.
HR-23 Coils for all "Roberts" Circuits, including Antenna Coil and Coupler Coil, $\$ 7.50$ per set. Used with .0005 Condensers.

Antenna Coupler for .0005 or .00035 Condensers, $\$ 3.00$ each.
RF-17 "Neutrodyne" Coils in sets of 3 tapped for neutralixing. Built for .00035 Condensers, $\$ 7.50$ per set.
Equalizer
$\$ 0.50$
Extension Shaft ................................ . . . . 25
No. 85 Choke. 2.00

No. 250 Choke........................................ . . . 2.25

## "Hammariund Jr." Midget



Soldered brass plate, cone bearings, clock spring pigtail, minimum dielectric. A high ra. tio shielded midget with all the distinctive earmarks of Hammarlund design and workmanship -plus single hole mounting. Many uses are shown in circulars packed with each condenser.

MC-5, $\quad 16 \mathrm{mmid}$. $\qquad$ $\$ 1.80$

Inciuding Bakelite Knob

## Hammariund PRODUCTS

## The New Midline Condensers



The new Hammarlund "Midline" Condenser was produced not merely to have a new model, but rather because past experience has demonstrated the short-comings of all previous types.
The old "Straight-Line-Capacity" Condenser crowded the low-wave stations. The newer "Straight-Line-Frequency" type crowded the upper band. The "Straight-Line-Wave Length" type was merely a compromise. But the Hammarlund "Midline" Condenser does not crowd either the upper or lower bands and retains normal separation in the middle of the scale.

All of the established Hammarlund features are included: soldered, non-corrosive brass plates with tie-bars; rib-reinforced aluminum alloy frame; minimum dielectric; one-hole mounting with anchoring screw; bronze clockspring pigtail; friction band brake that places no strain on bearings.
ML-23-. 0005 mfd.
$\$ 5.00$
 ML-13-. 000275 mfd . 4.65

ML-11-. 00025 mfd . 4.65

ML-5-. 0001 mfd . 4.25

Hammarlund Improved S. L. F. Condensers

Many radio fans will continue to prefer the "Straight.Frequency.Line" Condenser, so popular the past season. Hammarlund, therefore, will continue to manufacture this model, but much improved.

It embodies all of the advanced mechani. cal features of the new "Midline" Condenser, described above, differing only in its tuning curve. Sizes and prices also are the same.

| SFL-23 | . 0005 | mid | \$5.00 |
| :---: | :---: | :---: | :---: |
| 17 | . 00037 | mid | \$4.75 |
| 13 | . 0003 | mid | $\$ 4.65$ |
| 11 | . 00025 | mid. | \$4.50 |
| 5 | . 0001 | mid | \$4.25 |

## "Auto-Couple" T.R.F.Assembly



Here is the tuning unit the radio world has been waiting for-a harmonious assembly of coil, condenser and shield providing automatic grad uated coupling of the primary coil throughout the range of condenser settings.
It is strong, accurately made and highly effi cient. It insures scientifically correct primary coupling and maximum energy transfer for each wave-length received, resulting in additional sensitivity, greater selectivity and control of interstage coupling and unwanted oscillations on the lower wavelengths.
Hammarlund "Midline" or "S-F-L" . 00035
Condenser ___........................... 845
"Auto-Couple" Coil, inciuding mounting
bracket and cam, (Code $\mathbf{H Q}$ )..eech 3.50
(Set of three "Auto-Couple" Coils, (Code
Complete Aluminum Shield $\left(6^{\prime \prime} \times 7^{\prime \prime} \times 6^{\prime \prime}\right.$
high), Code AS
each 2.00
Complete Assembly (Code ACU) _ $\$ 10.25$ Hammarlund Foundation Unit $\qquad$ $\$ 10.50$

## Hammariund Multiple Condensers



Models "MI-D" and "SFL-D" are dual condensers. Like all Hammarlund products they are instruments of laboratory precision, em. bodying all the well known Hammarlund features of design and workmanship. Capacities are accurately matched. Standard equipment in the finest single control sets because of superior per. formance. Accurately matched Triple Condensers are also available in the bove sizes. Price, $\$ 10$ to $\$ 12$.

| Plates | Capacity | "ML-D" <br> (Dual) | "8PL_D" |
| :---: | :---: | :---: | :---: |
| (Dual) |  |  |  |

## Samson for Dependability!

Samson Radio products show the results of nearly half a century manufacturing experience. They are built to a Standard and not to a price.


## Samson for Suitability :

Samson Radio products, when used with other high grade standard parts, produce resulta that are unequalled for tone tivity.

## SAMSON RADIO FREQUENCY CHOKE



Sumson Radio Frequency Choke Coils keep high radio frequency currents out of-or in-a particular portion of a circuit, preventing overloading of tubes with consequent distortion. L..sy are also used where a high radio fre-
quency impedance is desired. Their helical winding gives inimitable operation as a choke over an unusually wide band of frequencies. W'rite for Bulletin No. 27.
No. 85-R. F. Choke. No. $125-R, F$ Choke. No. 500 R. F. Choke.

## SAMSON

DOUBLE ROTOR COUPLER


Samson Double Rotor Coupler is highly efficient coupler or radio frequency transformer wound with double-silk covered wire on a bakelite tube. It gives a selectivity instantly adjustable from "razor edge" to broad. It can be used in many circuits. Two single-hole mountings. . . . . . . . . . . . . . . . . . Price $\$ 5.00$

SAMSON NEUTRALIZING CONDENSER


Samson Neutralizing Condenser is variable by fine gradations and stays permanently where adjusted. Minimum capacity, .00002 mid. Maximum capacity, .00015 mfd .

## Price, $\$ 2.00$

Samson Transformers and Impedances all have same case as il pedances all have

Price $\$ 2.00$ Price 2.25 Price 2.75

Smalient Made. Yet easily lit Into Present Set Samson Uniform Frequency Condensers

Mathematically proportioned plates assure uniform atation spacing at both low and high ends of the scale as well as in the middle.
Samson Uniform Frequency Condensers are built to a tolerance of $1 / 1000$ inch.
These grounded rotor type instruments have losses lower than the average laboratory standards.
This condenser, due to its design, does not have the defects caused by either solid metal or dielectric end plates. Samson Uniform Frequency Condensers have a one-hole mounting. They can be mounted vertically or horizontally, and are guaranteed accurate within plus or minus $1 \%$ of their -ated capacitances.
Capacity-. 0005 Mfd. ( 500 mmf ).
Capacity- 00035 Mfd . $(350 \mathrm{mmf})$.
Capacity-. 00025 Mfd . 250 mmf ).
Capacity- .000175 Mfd.
Capacity- .0000875 Mfd.
$(75 \mathrm{mmf})$

```
Price \(\$ 5.50\)
5.25
``` Capacity-. 000175 Mid. ( 125 mmf )................................. 5.00


\section*{Samson Symphonic}
climax of several years development, gives perfect reproduction of broadcast tones over greater range than average oud speakers can cover or is now oroadcast.

Price, \(\$ 9.00\)

The New Samson HWA-3 Transformer
\(2: 1,3: 1,6: 1\), Standard equipment with leading set manufacturers and home constructors. Built for service as well as quality of reproduction.

Samson Dual Impedance (Donle Desirn) is complete-no condensers or leaks required-being connected like a transformer. It gives excellent tone quality and grid leaks are not necessary. It keeps on giving this tone quality because hermetically sealed against moisture.

Price, \$5.00
Samson Audio Plate Impedance
a high inductance choke for use with standard or high "mu" tubes. -_.............................................................. \(\$ 4.50\) Samson Audio Grid Impedance
forms ideal power amplification combination with plate impedance.

SAMSON OUTPUT IMPEDANCE, TYPE O—\$5.00

\section*{AUDIO AMPLIFICATION (A Book)}
"Audio Amplification" is the title of a book which contains forty pages of information on all types of audio amplification such as resistance, impedal pedance, and transformer coupled amplifiers. A great deal of the material contained has


DIRECT CURRENT VOLTMETERS WESTON MODEL 301
(Flange diameter, metal case \(31 / 4^{*}\); bakclite case, \(33^{\prime \prime}\) )
Their size and aceuracy, for the job of measuring filament and plate voltages, put them ahead of all others in the small instrument class.

Price List of Model 301 Voltmeter
\begin{tabular}{|c|c|c|c|c|}
\hline \multicolumn{2}{|l|}{Range} & Price & Range & Price \\
\hline 7 & Volt & \$8.00 & 100 Volt & 11.00 \\
\hline 8 & Volt & 8.00 & 150 Volt. & \$11.00 \\
\hline 10 & Volt & 8.00 & 1000 Volt & 17.75
24.75 \\
\hline 15 & Volt & 8.00 & 1500 Volt* & 30.75 \\
\hline 50 & Volt & 8.00 & 2000 Volt & 36.75 \\
\hline
\end{tabular}

Low range voltmeters can be supplied with bakelite cases at 75 c extra

Has bakelite case and external reaistor. WESTON RADIO TABLE

\section*{VOLTMETER}

(Size- \(33 / 4^{\prime \prime}\) long, \(31 / /^{\prime \prime}\) wide, \(1 / 6^{\prime \prime}\) high) An indispensable Radio Table Voltmeter for measuring filament, plate and grid voltages, checking battery conditions and locating broken or loose connections.

Because of its relatively high resistance, 62 ohms per volt, it causes very little drain on the batteries.
Each Model 489 is provided with a pair of flexible cables and pin jacks for permanently connecting the filament circuits to the panel.

This Voltmeter is made in double range, 150 and 7.5 volts. It has a silver etched scale and is enclosed in a handsome bakelite case.

Price \(\$ 13.50\)
Model 489 for "B" Eliminator.
. \(\$ 28.00\)

\section*{VOLTMETER AND}

UNIVERSAL RADIO SWITCH


This combination consists of a Weston \(2^{m}\) high resistance panel type Voltmeter and a Weaton nine-point Bi-polar Switch. May be installed on any type of radio receiving set and so arranged to measure voltage at any goint within the set or any of the batteries.
The price of the Weston bi-polar switch in combination with a single range Weston Model 506 Voltmeter with a scale figured \(140 / 7\) volto and \(200 / 8\).

\section*{\(\$ 13.00\) Lint}

\section*{FOR ECONOMY-} RESULTS

WESTON, a name famous in every electrical field, stands for unusual achievement in radio. The models here shown combine unusual precision, ruggedness and beauty at reasonable cost.

There are Weston Radio Instruments for Receiving and Sending Sets, for both the Expert and the Amateur.

\section*{Two Inch Radio Panel Meters Weston Model}


\section*{(Case Diameter \(2^{\prime \prime}\) )}

Weston Standard quality and workmanship throughout put these little meters in great demand for ladio Panel use. Every part has been designed and constructed in such manner that the completed instruments are, in fact high grade, depeadable producta notwithstanding that the dimension of the containing case has been reduced to two-inch diameter.

\section*{VOLTMETERS}

SINGLE RANGE (2 binding posta),
3-5-7-8-10-15-50 or 150 rolts
DOUBLE RANGE ( 3 binding posts with push button) 125/5-140/7 or \(150 / 7.5\) volts.
For use only when-" \(A\) " battery is connected to'B" battery.

\section*{Price \(\$ 9.00\)}

DOUBLE RANGE (4 binding ponts without push button)
\(125 / 5-140 / 7\) or \(150 / 7.5\) volts.
Price \(\$ 8.25\)
\begin{tabular}{|c|c|c|c|}
\hline \multicolumn{2}{|l|}{Milliameters} & \multicolumn{2}{|c|}{Ammeters} \\
\hline Range & Price & Range & Price \\
\hline  & \$9.00 & & \$7.00 \\
\hline 5 & 8.00
7.00 & 1.5. & 7.00 \\
\hline 15. & 7.00 & 3. & 7.00 \\
\hline 25. & 7.00 & 5. & 7.00 \\
\hline 50 -- - - - - - - - & 7.00 & & \\
\hline 100........... & 7.00 & 10 & 7.00 \\
\hline 300. & 7.00 & 15 & 7.00 \\
\hline 500. & 7.00 & & \\
\hline
\end{tabular}


WESTON MODEL 301


WESTON MODEL 506 PIN JACK VOLTMETER
 volt) is specified because one not of high resistance consumes enough current for operation to cause a serious drain on the batteries and rob the tubes of current required for their proper performance.

Model 506 Pin Jack Voltmeter has a handsome black lacquer finish Its scale is calibrated from to volts and it will be ob served that ele and luat the scale bears a legend instruching the user to set to the red mark which, a previously explained, is the control voltage for proper tube operation.

List Price \(\mathbf{\$ 7 . 5 0}\)
With High Range Stand................. . \(\$ 10.00\)
WESTON RADIO PLUG
THE PIONEER INSTANT CHANGE RADIO PLUG


Frequently imitated but never equalled.
Two seconds from headphones to 10 ud speaker.
Beautifully made with genuine bakelite case-
TO SEE IT IS TO WANT ONE.
To connect-just push the terminale in.
To disconnect - press the terminals and pull the cables out.

Price 60c

\section*{National Radio Products}

\section*{NATIONAL TUNING UNIT-TYPE "B" \\ B D-1B with "B" Dial}

National Tuning Unit B D-1B consists of a Browning-Drake space-wound inductance coil, mounted on a .0005 National "Equicycle" (SLF) condenser and covering the broadcast range. The inductance has the lowest \(\mathbb{R}\). \(\mathbf{F}\). resistance recorded for a coil of this type. The condenser uses three-quarters instead of one-half turn, thus still further spacing out the stations. A National
Velvet-Vernier 4 -inch dial is included. Velvet-Vernier
Price 4-inch dial is included,

With illuminated Type C Dial.-.... \(\$ 10.75\)

\section*{B D-2B with "B" Dial}

The B D2B National Tuning Unit combines a Browning-Drake Spacewound Transformer with a 00025 National "Equicycle" Condenser. This condenser gives clean-cut separation of stations on all wavelengths. The National Velvet-Vernier, Type B Dial included with the unit is known to
every radio enthusiast from coast to coast for its perfection and constancy of action. It is now every radio enthusiast from coast to coost for its perfection and constancy of action. It is now

With Type C Dial. \(\qquad\) \(\$ 14.25\)


VELVET VERNIER DIAL Type B


This dial embodies a modified ap; plication of our "Velvet Verner" mechanism designed to facilitate mounting on the \(1 /{ }^{\prime \prime}\) shaft of any standard type of variable condenser, a screwdriver. It will replace plain dials on any receiver where sharper tuning is desred.
Of apecial importance is a new and novel device which enables the user to adjust at will the reduction to any ratio from 6-1 to 20-1. This feature aids greatly in the separzfion of stations operating on the lower wave lengths. This new dial is moulded from black bakelite in a highly ornamental design.
Nickel finioh.



For Impedance Coupled Audio Fre. quency Amplification practically perfect reproduction of tones as low as 25 cycles per second. In each set of three Impedaformers one is marked lst stage. This contains a radio frequency choke coil and is used in the first or input atage of amplifier.

List Price \(\$ 4.00\)

IMPEDAFORMER
Type "B"


The National Impedaformers have been designed for quality audio amplification. Each of the three units contains a .1 mfd . Tobe Condenser and a Lynch Resistor. The first unit has also an R. F. Choke, which is a real necessity for perfection of reproduction. Three Impedaformers, three tube sockets and a rheostat are all that is necessary for an audio amplifier which is the last word in power and faithfulness of reproduction.

Type B, each.................... 55.50

NATIONAL ILLUMINATED DIAL


The National Velvet-Vernier Dial, Type C, is essentially the same as Type B Dial as far as perfection of construction and operation, beauty of appearance and ease of attachment are concerned. It has the same variable ratio of from 6-1 to \(20-1\).
But it is designed with a tiny invisible 6 -volt lamp which illuminates the dial directly. This lamp can either be separately switched or placed in the filament circuit to art as a tell-tale for the tubes. Extra 6 -volt lamps, \(80.20 .41 / 2\)-volt lamps, \(\$ 0.35\) each.
Made in either clockwise or coun-ter-clockwise and with \(360^{\circ}\) divisions ( \(0-200\) ) or in Dual Range \(-180^{\circ}\) (0-100-0).
Price-In nickel finigh. ....... \(\$ 3.00\)

\section*{NATIONAL POWER AMPLIFIER KIT (Type L-3)}

\section*{New National} Power Amplifier Kits

\section*{NATIONAL}


The National power amplifier is put up in complete kit form by the National Company except audio tubes. Including the wire and full instructions. The unit may be easily assembled in one evening.
National Power Amplifier Kit L3, complete with Raytheon BH Tube.................... . 884.00 Price of Kit as above, but completely assembled, ready to run..................................... . . 895.00

\section*{NATIONAL ONE-STAGE AMPLIFIER KIT (Type E-1)}

In many cases the Radio owner desires a combined B Eliminator and one stage power amplifier which can be plugged directly into the output of this present set. The National one-stage Power Ampliner meets this need. It contains the same "B" Power Units as the National "B" with Type 171 Semi Power Tube-an adjustable "C" Bias is also included and a National Tone Filter.
National One-Stage Power Amplifier Kit E-1, complete with Raytheon BH Tube.......... 374.00

\section*{NATIONAL TONE FILTER}

The plate voltage now required with either UX 171 , UX 112 or UX 210 Power Tubes, for fine quality reproduction, range from 180 volts upward. The makers of the tubes recommend passing the output to the loud speaker through a tone filter. The National Tone Filter is designed for this purpose.
Natlonal Tone Filter
88.00

\section*{THE NATIONAL B POWER-UNIT (Type M)}

To meet the large demand for a reliable and rugged B Power Supply unit, free from diff. culties associated in so many minds with such devices, National Company also offers a complete kit with Raytheon BH Tube. This is also provided with a cored and drilled metal base, all necessary wire, and can be assembled in a few hours. It employs the same fine units as the NATIONAI, Power Amplifier,-Power Transformer, NATIONAL Special TOBE B BLOCK and Fitter Chokes.

Price-NATIONAL B Supply Unit Kit, Type M. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 860.00

\section*{AUDIO TRANSFORMER}


Over thirty of the leading receiving set manufacturers use Thordarson transformers as standard equip. ment in their product. They realize that the amplifying transformer question is of utmost importance, and have spared no effort in conducting have spared no effort in conducting thorough and exhausting tests for the very best musically, electrically and mechanically - and they have all hosen Thordarson.
The following paragraphs contain helpful information relative to the selection, installation, care, and methods of testing amplifying transformers.
Ratio- 6 to 1.......................... List \(\$ 4.50\)
 Ratio-2 to 1.


R-196 30 HENRY CHOKE COIL
This Thordarson choke is de signed for use in filter circuits in converting A.C. into smooth D.C. for radio use. Especially adaptable for radio use. Especially adaptable er amplifiers. Mounted in attracer amplife steel case. Terminals at base. Dimensions \(21 / 3^{\prime \prime} \times 21 / 2^{n} \times 3^{n}\) high.

\section*{THORDARSON} TYPE R-200 POWER TRANSFORMER


A quality transformer with un usually faithful reproductive powers and a very wide amplification range. The super-sized core combined with the high inductance primary result in the evenness so characteristic of this transformer

Designed for 2 stage amplification.
Ideally adapted for use with cone type speakers.
Used in quality receiving sets costing as high as \(\$ 2,000\). List Price \(\$ 8.00\)

\section*{Thordarson R-171 ER-210 Power Compact}

Thordarson R-171 Power Compact contains a power supply Transformer for full capacity operation of Raytheon BH Tube, 2 Filter Chokes of 80 milliamperes capacity, a 5 Volt Filament Tap. and two buffer condensers. All in one case. List Price, \(\$ 15.00\)
Thordarson R-210, a power supply Transformer for UX 216 B Tube, furnishing 400 volts for ('enter Tap. All in filter chokes, a \(71 / 2\) Volt (enter Tap. All in one case.

AUTOFORMER


The Autoformer is a step-up im redance coupled amplifier which em iedance coupled amplifier which emnote amplifiers with the additional advantage of greater amplification Three-stage Autoformer amplifications are superior in amplifications to four stages resistance coupled or four stages straight impedance coupled amplification. Flat amplif. cation curve over entire range of audibility.



MICA and By-Pass
Sangamo Mica Condensers meet the most stringent requirements for all circuits.
The rounded edges prevent chipping and the high ribs of these condensers give them great mechanical strength. They are as finely made and handsomely finished as the most costly radio parts, and harmonize perfectly with beautiful workmanship.

The smooth mahogany-brown bakelite in which Sangamo Mica Condensers are molded protects the delicate parts. Every edge is sealed. This excludes moisture-the greatest enemy of condenser accuracy. Moisture creates resistance and changes condenser capacity.

\section*{SERIES B}

Guaranteed for continuous operation at 500 volts A. C., 1,000 volts D. C. Tested at 800 volts A. C., 1,500 volts D. C.

Capacities in mid. and Prices

\({ }^{1.60}\) SRIES \({ }^{4}\) mid.
4.00

Guaranteed for continuous operation at 250 volts A. C., 400 volts D. C.. Tested at 400 volts A. C., 750 volts . C.

Capacities in mid. and Prices.
\(1.10 \mathrm{mfd} . . .80 .80 \quad 1 \mathrm{mfd} . . . . . . \$ 1.25\)
\(1 / 4\) mfd...... .80 2 mfd........ 2.00

\section*{Condensers}


Meets the need for a durable condenser that is mechanically strong and capable of standing heavy electrical surges without breakdown. Tightly wound with high-grade aluminum foil and special insulation on patent-protected machines. This process eliminates varying tension with consequent air and ozone bubbles, which cause a variation in surface contact and therefore a fluctuating capacity.

Series B will stand continuous duty at 1,000 volts D. C.


\section*{Precision Fixed Condensers By-Pass Condensers}

In their beautifully finished, silvered metal cases, with the new ground-lugs, the TOBE Bi-Pass Condensers are standard for all by-pass use in Radio sets. For this kind of work, noiselessness is a requisite. The TOBE Bi-Pass Condensers are noiseless and unchangeable. They stand extremes of heat and cold without alteration. Insulation is of the order of 150 megohms.
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline Types & Sizes & Dealers' Packages & List Price & Types & Siz & & Dealers' & Packages & List Price \\
\hline 210 & 0.1 Mfd . & 10 Condensers & \$ . 60 & 201 & 1.0 & & 10 & & . 90 \\
\hline 225 & 0.25 & 10 & . 70 & 202 & 2.0 & " & 10 & " & 1.75 \\
\hline 250 & 0.5 & 10 & . 75 & 204 & 4.0 & " & 6 & " & 3.50 \\
\hline
\end{tabular}

\section*{Tobe Precision Filter Condensers}

TOBE Filter Condensers are made for use in filter circuits on plate-supply units and in B-Eliminators and in power amplifiers where the D.C. working voltages run up to 300 volts.

They are especially suitable for use with Raytheon Types B and BH tubes and are recommended by the Raytheon Manufacturing Company as unsurpassed for use in Raytheon circuits.

The 4.0 Mfd . is especially suitable for use in output devices required with the UX-171, and similar power-tubes.


Cased in silvered, metal cases, with tinned ground-lugs for grounding, and separately boxed in attractive blue, red and
black boxes. black boxes.

Three-minute test 700 volts D.C.;-D.C. working voltage 300 volts;-A.C. working voltage, 250 volts.
\begin{tabular}{|c|c|c|c|c|c|c|c|c|}
\hline Type & Sizes & Dealers' Package & List Price & Type & Sizes & & Dealers' Package & List Price \\
\hline \(310-0.1\) & Mfd & 10 Conderssers & \$0.70 & 301. & Mfd. & 10 & Condensers & 1.25 \\
\hline \(325-\ldots\) & Mfd. & 10 Condensers & . 75 & 302 & Mfd & 10 & Condensers & 1.75 \\
\hline 350...----0.5 & Mfd. & 10 Condensers & . 90 & \(30+\) & Mfd... & & Condensers & 3.50 \\
\hline
\end{tabular}


\section*{Hi-Voltage Power Pack Type Condensers}

This is a new TOBE Condenser, especially designed for use in plate-supply units of the AmerTran Power-pack type and power amplifiers employing working D. C. voltages from 600 volts upward.

They are of a new shape.
They are provided with a new type of terminal placed at the bottom of the condenser case. This brings the connections down where they should be for high-voltage condensers, simplifying the wiring and greatly increasing the safety of operation, as the terminals and wiring are removed from chance contacts. The terminals being on the side of the case permit a number of condensers to be arranged in a bank and wired together with a minimum of wiring and difficulty. Cases have ground-lugs for grounding them.
D. C. working voltage, 1,000 volts.
\begin{tabular}{|c|c|c|c|c|c|c|c|}
\hline Type & Sizes & Dealers' Package & List Price & Type & Sizes & Dealers' Package & List Price \\
\hline 650. & Mfd. & Condensers & \$2.00 & 602.... 2 & Mfd. & 0 Condensers & \$3.50 \\
\hline & Mfd. & Condensers & 2.50 & 604.... 4 & Mfd. & 6 Condensers & 00 \\
\hline
\end{tabular}

\section*{Searchlight Radio Batteries}

\footnotetext{
They are the outcome of 15 years of scientific research work in the battery and carbon fields and are designed eapecially for une with une preseat types of Radio receiving and sending sets.

> Painataking selection of the elements used, careful tests at every stage of the manufacturing process, all under the direct oupervidou of an expert enced organization unites in SEARCHLIGHT "BB Batteries, long "High Voltage" life, wonderful recuperative powers and umusual shelf life eafety, greater dependability and compactness.
}


No. 550-Combines in one unit all features and characteristics of two No. 300 batteries. Seven epring clip terminals, providing connections at \(161 / 2,18,191 / 2,21,221 / 2\) and 45 volts, make this battery particularly uintable for soft and critical detector tubes as well as for amplifying purposes.

Composed of 30 large and powerfal cells, it provides most economical service with all sets drawing lese than 15 milliamperee.
\[
\text { LIST PRICE, } \$ 3.75
\]
\(223 / 2\) VOLT (LARGE) FLAT


No. 300-"Standard" of the 225/, volt batteries, sometimes called "Navy type." Particularly suitable for the critical detector circuits. Six spring elip terminals permit connections at \(163 / 2\), \(18,193 / 2,21\) and \(221 / 2\) volts. Two or more easily connected in series for amplifier circuits. Composed of 15 large and powerful cells it provide most economical service with sets drawing leas than 15 milliamperes.

LIST PRICE, \(\$ 2.00\)
No. \(250-223 / 2\) volt vertical__Llet Price, \(\$ 2.00\)

TRIPLE SERVICE BATTERY


No. 3-C-The purpose and uses of this battery are three-fold. It may be used as an " \(\boldsymbol{A}\) " are three-fold. It may be used as an "
(Filament) battery or serve as a "B" (plate) (Filament) battery or serve as a " \(B\) " (plate) battery. "t \({ }^{\text {act as }}\) " C " (grid biasing battery).
The use of a "C" battery effects a remarkable saving in "B" battery current consumption. Equipped with three spring clip terminals, permitting voltage range of 3 to \(4 / 6\) volta.

LIST PRICE, 60c

45 VOLT (HEAVY DUTY) VERTICAL

No. 600-Especially dealgned for heavy current drains. The use of this battery with sets drawing 15 millismpere or more effect: a remarkable Eaving in " \(B\) " current cont.

It is equipped with three apring clip terminala, permitting connection at \(225 / 3\) and 45 volte.

ZIST PRICE, 84.75


\section*{45 VOLT (LARGE)} VERTICAL

No. 500-Composed of 30 large and powerful cells, it provide mont economical service with all sett drawing less than 15 milliamperes.

It is especialls constructed, however, to provide the "space saving" feature of smaller batteries and to fit certain types of self-contained cabinet sets.
It is equipped with three spring clip terminals, permitting conneotions at \(223 / 3\) and 45 volte.

LIST PRICE, 83.75



The Acme B-Eliminator Kits contain all the parts and instructions for making Acme B-Eliminators which operate as giod as the factory-made product. Two types EK-1 for radio sets having up to 12 tubes and EK-3 for radio sets having up to 6 tubes. Both kits are complete with Raytheon tube and give voltages up to 180 volts for use with power tubes.
EK-1 for 12 tube sets including Raytheon Tube . ......................... . 859.50
EK-3 for 6 tube sets Including Raytheon
Tube . .............................. \(\$ 32.50\)

\title{
Acme "A" Supply Unit
}


No Charging: No Hum; No Nuianace The Acme A-1 A power supply unit eliminates the nuisance of a storage bittery. This unit operates the filaments of the radio tubes from the lamp socket and the storage battery becomes simply a comdenser. No charging or discharging of the battery, no battery trouble. This is not a trickle charger or batters charger and is used only while the radio set is operated. No changes in wiring of the radio set or accessories need be made to install this instrument.
Tvine A-1, A power supply \(1-8\) tube net: 110 volts 60 cycle without tubes.. \(\$ 42.00\)

\section*{Acme "BH-I" High Voltage Eliminator Transformer}


The BH-1 Transformer is especially designed to supply filament and plate voltage for the UX 171 or UX 210 type tubes. This transformer has two secondary plate voltages, high enough to give a D.C. output of 180 volts for the UX 171 tube and 400 volts for UX 210 tubes. This trans former has a separate filament winding for the rectifying tube and another for the amplifying tube. Type BH-1 Transformer, 110
volt, 60 cycle
\(\$ 16.00\)

\title{
FRITTS Super -Quality Cabinets Permanency Built Clear Thru
}

The first thought in the development of Fritts Radio Cabinets and Consoles was permanency in material, workmanship and design. The furniture made by D. H. Fritts \& Co. has enjoyed for many years that reputation of excellent quality and it is their firm purpose to maintain that slogan

\section*{Quality Built Clean Thru-}

Solid Walnut-combined with beauty in design and fine finish has placed the Fritts Super Radio Furniture a leader in the field from the very beginning. Its originalitv of design and superior craftsmanship warrant the attention of those who understand the best.

Finish-is the finest known to those in the quality field, viz:-varnished, water and oil rubbed. Carvings are all slightly polychromed thus adding that touch of the master European furniture designer on his origin als made to special request.

Fritts-Cabinets and Consoles are all made with the one thought of adding dignity to any setting and are worthy of housing the finest radio receiver made.

\section*{Standard Super Cabinet}


This Cabinet is also solid Walnut and is of the same high quality which distinguishes the entire Fitts line.

The decorations are polycromed.
Top and sides slightly raised with panel effect.

Nickled piano hinge and lid stay.
Made to take standard 7 in . panel. If an 8 in. panel is used, it is only necessary to remove the top panel decorative strip.
All cabinets 8 ins. high inside, by 12 ins. deep from panel to back.
\begin{tabular}{|c|c|c|c|}
\hline & Panel & Shipping & \begin{tabular}{l}
List \\
Price
\end{tabular} \\
\hline No. & \[
\begin{gathered}
\text { Size } \\
7^{\prime \prime} \times 18^{\prime \prime}
\end{gathered}
\] & Weight 45 Lbs. & \begin{tabular}{l}
Price \\
\(\$ 21.00\)
\end{tabular} \\
\hline SS 21 & \(7^{\prime \prime}\) ス21" & 45 Lbs . & 22.00 \\
\hline SS 24 & 7 "x24" & 50 Lbs. & 22.50 \\
\hline SS 26 & \(7{ }^{\prime \prime} \times 26\) " & 55 L.bs. & 23.50 \\
\hline SS 28 & \(7{ }^{\prime \prime}\) 天 \(28{ }^{\prime \prime}\) & 60 Lbs. & 24.50 \\
\hline SS 30 & \(7{ }^{\prime \prime} \times 30^{\prime \prime}\) & 65 Lbs. & 26.50 \\
\hline
\end{tabular}

\section*{Super-Vesta \\ Italian Chest Type in Motif}

Like the Super Consolette, this cabinet is equipped with our exclusive feature, "inverted panel lighting." The lamp sockets are fitted in the decorative strip over the panel. The spread of light is uniform.


\section*{SOLID WALNUT}

\section*{Super Vesta with front door closed}

Diamond insert on panel door, genuine Burled Walnut, op. sides and front have raised panel effect. Four post construction. Hardware, antique brass. Lid equipped with nickled piano hinge and lid stay

SUPER VESTA with front door opened (Note carved decorative top panel strip)


Like the Super Consolette, this cabinet is equipped with our exclusive feature, "inverted panel lighting." The lamp sockets are fitted in the decorative strip over the panel. The apread of light us uniform.

Diamond insert on panel door, genuine Burled Walnut. Top, side and front have raised panel effect. Four post construction. Hardware, antique brass. Lid equipped with nickled piano hinge and lid stay.
\begin{tabular}{|c|c|c|c|c|}
\hline No. & Panel Size & \begin{tabular}{l}
Inside \\
Depth
\end{tabular} & \begin{tabular}{l}
Shipping \\
Weight
\end{tabular} & List Price \\
\hline SV 18 & \(7^{\prime \prime} \times 18^{\prime \prime}\) & 11 " & 45 Lbs. & \$30.00 \\
\hline SV 21 & 7"x21" & \(11 \times\) & 50 Lbs. & 32.00 \\
\hline SV 24 & 7 "x24" & 11 " & 55 Lbs . & 35.00 \\
\hline SV 26 & \(7{ }^{\text {" }}\) 26" & 11 " & 60 Lbs . & 36.50 \\
\hline SV 28 & \(7{ }^{\prime \prime} \times 28{ }^{\prime \prime}\) & \(11^{\prime \prime}\) & 65 Lb . & 38.00 \\
\hline SV 30 & 7 "x 30 " & 11" & 70 Lbs. & 42.00 \\
\hline
\end{tabular}

\section*{The Super Consolette \\ (With Inverted Panel Lighting)}

Solid Walnut-embodies our very latest feature, "inverted panel lighting." The spread of light is uniform over the entire panel.

A Masterpiece in Design.
All decorations are slightly polychromed and the diamond inserts on the front doors are genuine Burled Walnut.

Top, sides, and doors have a raised panel effect. Hardware, antique brass.
Lid is equipped with nickled piano hinge and lid stay.
Finish-Natural Walnut, varnished-hand rubbed.
Speaker is not included.
Overall dimensions-Height \(39^{\prime \prime}\)-Width \(15^{\prime \prime}\)-Length \(35^{\prime \prime}\).
Inslde dimensions of lower compartment. Length \(30^{n \prime}\)-Width \(131 / 2^{\prime \prime}\) —Height \(101 / 2^{\prime \prime}\)

Panel sizes adjustable, \(18^{\prime \prime}\) to \(30^{\prime \prime}\).
Inside depths from panel to back- 12 inches.
Shipping weight crated- 140 lbs .
Style No. S. C. \(100 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . ~ . ~ L i s t ~ P r i c e ~ \$ 89.50 ~\)


Showing Two Heavy Duty Batteries Back of Set
Top cross rail is removable. Panel slides into grooves. The set is mounted in the new Blandin drawer-tray slide. Cut shows 90 volts Jumbo "B" batteries back of set. Panel frame is adjustable from rertical 10 any angle 41 to 25 degrees.
(Patents Pending)

\section*{Blandin Radio Cabinets}


Overall dimensions of either Console, \(41 \frac{1}{2} 2^{\prime \prime}\) high, \(321 / 2^{\prime \prime}\) wide and \(161 / 2^{\prime \prime}\) deep (front to back).
Inside dimensions of upper cabinet, compartment \(834^{\prime \prime}\) high, \(28^{\prime \prime}\) wide and \(131 / 2^{\prime \prime}\) deep. Back has three cut-outs for wires.
Upper cabinet will house any ratlio set with panel height of \(6^{\prime \prime \prime}\), \(7^{\prime \prime}, 8^{\prime \prime}\) and a panel length of \(18^{\prime \prime}\), \(20^{\prime \prime}, 21^{\prime \prime}, 24^{\prime \prime}\), or \(26^{\prime \prime}\). Depth back of panel, 11 inches.
Set pancl is inserted into grooves. No screws are necessary. Installation is quick and simple.
Set panel may be mounted either verticle or sloping or any angle up to 25 degrecs.

Inside dimensions of the R-101 lower speaker compartment, \(30^{\prime \prime}\) wide, \(141 / 2^{\prime \prime}\) deep and high enough for speakers not over \(171 / 2^{\prime \prime}\)

Inside dimensions of the R-100, lower battery compartment, \(30^{\prime \prime}\) wide, \(16^{\prime \prime}\) high and \(141 / 2^{\prime \prime}\) deep. Ample for batteries, charger or eliminators.


Blandin R-40 Battery Table is \(32 \frac{1 / 2 " 1}{2}\) long, \(16 \frac{1}{2}\) " wide and \(301 / 2^{\prime \prime}\) ligh

Blandin R-41 Speaker Table is the same size as R-40 Battery Table. It will accommodate battery equipment in addition of any speaker not over \(171 / 2^{\prime \prime}\) high ........................................... Mrice, \(\$ 34.50\)

\section*{Thordarson R-I7I Power Compact}

Complete "B" and "C" Supply for Power Amplification


Designedfor use with No. 171 Power Tube for any Receiver and ORficially Specilied for Hammarlund Roberts Mi-Q Receiver

To secure the full advantage of the 171 type power tube, it is essential that the recommended plate voltage and high negative grid bias be used.

These higher voltages make the use of " \(B\) " batteries uneconomical and a lamp socket " \(B\) " eliminator is therefore recommended.

This power outfit supplies both " B " voltage for the entire racciver, also filament current for the power tube, and high negative grid bias. This eliminator offers advantages not to be had with batteries, in that it is possible to get accurate and infinite adjustment of the voltage to be applied to the radio frequency and detector tubes. This is an important consideration with sensitive receivers.

The eliminator will deliver a steady, uniform flow of current for all tubes, without the trace of a hum.

\section*{Complete Specified Parts}


\section*{Complete Fit Price \(\$ 51.10\)}

\section*{Thordarson R-210 Power Compact}

\begin{abstract}
Power amplification needs but little introduction to the radio public, for no single feature in the field of radio has earned so much publicity as this recent development along the lines of better reproduction.

Bass notes require a considerable expenditure of energy. When we reason back and realize how much more mechanical energy it takes to sound the pedal diapason of the organ than the note of the violin, it is not difficult to appreciate that a correspondingly greater amount of electrical energy is required in the reproduction of these deeper tones. Consequently a radio tube with the capacity just sufficient to amplify comfortably the music of the violin cannot be expected to do justice to the tone of the heavier bass instruments.
\end{abstract}

Complete Specified Parts
1 Thordarson R-210 Power Compact. \(\$ 20.00\)
1 Tobe R-210 Filter Block. ..... 13.00
1 Set of Kroblak Resistances ..... 4.50
2 Eby Sockets ..... 1.00
7 Eby Posts ..... \(\begin{array}{r}1.05 \\ \hline 25\end{array}\)
1 Binding Post Strip.
1 Baseboard ..... 50
1 Tobe 1,000 ohm Veritas Biasing Resistance ..... 1.10
30 Feet Rubber Covered Wire, screws, etc. ..... 1.00
2 Frost UX Sockets ..... 1.20
7 Eby Binding Posts ..... 1.05


Acme is proud to offer you its new "double free-edge cone" loud speaker. Five years and 256 experimental models have finally enabled us to produce a loud speaker which gives "reproduction without distortion." The inherent resonance common to all other types has been eliminated. Low notes and soft overtones are faithfully reproduced. This speaker can be operated directly off of power tubes if desired with no additional apparatus. The cones are fourteen inches in diameter and the case is finished in a beautiful tan color ensuring harmony in the Home.
\[
\text { Aeme K-1 } \$ 25
\]

\section*{The New E-3 ACME "8," Eliminator}


The Acme E-3 B-Eliminator also uses a Raytheon tube and is designed to supply voltages up to 180 for sets having up to and including six tubes. The same humless, distortionless characteristics exist in this eliminator as in the E-1.
Three voltages are available, one for A. F. ( 180 max.), one for detector and one for \(\mathbf{R}\). F. The control of these voltages is accomplished by means of a rheostat in the primary line and fixed resistances in the output circuits. In this way single control is obtained and provision made for changing the detector and R. F. voltages when desired. Size \(83 / 4 \times 31 / 4 \times 73 / 4\) inches high.


More than 200,000 set owners use one or nore numbers of the ACME line. More than 200,000 radio fans have found ACME items make for better reception. Are these facts a reason for the ACME line being the best sellers? Sure they are-but take into consideration that the ACME Apparatus Company are pioneers in the transformer field -specialists in amplification even before the days of broadcasting.

Consider that this fact has been advertised all over the country, through magazines and newspapers - together with word of mouth of 200,000 satified users.

Consider that \(93 \%\) of all radio dealers in the United States handle ACME appara-tus-think it their best line because a sale is finished when the goods are sold until a repeat order comes through.

Acme Tone Filter


The Acme Tone Filter contains an impedance of the proper value through which the plate of the power tulue is supplied, and which will carry enough current continuously without heating or deterioration. Also cased in the tone filter is a +mfd . through which the A. C. component of the power tube passes to the speakir.

List Price, \(\$ 6.00\)


The Acme B Eliminators have no hum and what's more no distortion. When high \(B\) battery voltages (up to 180 volts) are used and where constant and uninterrupted service is required use this eliminator. The Raytheon tube is included and has no filament to burn out. A F, R F and detector voltages are available.

Typer K-I Tor orta having I Ma tulye 1xe vulas 60 syctes
Type E-X fer aety having \(x-53\) tubes xie-2a0 Tulis D. C. . . . . 5as.a日

\section*{The New K-3 ACME Single Free-edge Cone}


The Acme K-3 single free-edge cone speaker is the result of further research in loud speaker development. With a single eleveninch free-edge cone faithful reproduction has been obtained. This loud speaker is finished in a beautiful bronze green and can be hung on the wall by the substitution of a special fitting for the base. This speaker can also be operated directly from a power tube amplifier.```

