

# RADOLEK

# BROADCASTER

Supplement to the Profit Guide

OCTOBER, 1934



The  
**RADOLEK**  
COMPANY  
601 W. RANDOLPH STREET  
CHICAGO

TELEPHONE  
MONROE 3424

### A MESSAGE FROM OUR PRESIDENT!

Radio Dealers and Servicemen: -

containing listings of - Here is your copy of the Radolek Broadcaster

New Merchandise, Special money-saving Bargains, Service information and a presentation of Advertising Helps that will bring YOU more business and more PROFITS. Important price reductions on merchandise listed in your 1935 Radolek Profit Guide are also included.

In your 1935 Radolek Profit Guide I have given you what I believe to be the finest and most complete encyclopedia of radio parts. I am going to try to keep this great book continually up-to-date in every respect by periodical publication of the Radolek Broadcaster. Keep these booklets with your 1935 Radolek Profit Guide and you will always have at your disposal the latest merchandise and price information along with other valuable features that will help make YOUR business more Profitable to YOU. I want always to do my part in helping YOU to occupy a more important position in your community.

The Radolek Company is the only large organization in this kind of business, as far as we know, that will not solicit business from YOUR customers. Our policy is to sell at wholesale prices only to those individuals and organizations that we believe are rightfully entitled to receive wholesale prices. We further protect the interests of every Radio Dealer and Serviceman by promptly passing on to YOU the benefit of any price reductions at the time they are announced by the manufacturer.

Here at Radolek we are constantly striving to merit all of your business. We try to keep every item we handle of the highest quality. Our prices to YOU are as low or lower than those of any distributor of new merchandise. In your 1935 Radolek Profit Guide every item is accurately illustrated and carefully described. The prices are right! We ship better than 95% of all orders the same day they are received by us.

Yours for Better SERVICE,  
*W. C. Braun*  
RADOLEK COMPANY

WCB/GG

●  
Headquarters  
For—

Latest Radio  
Merchandise

●  
Accurately  
Illustrated

●  
Correctly  
Described

●  
Priced Right

●  
Fully  
Guaranteed

●  
Prompt  
Shipments  
●

See Pages  
14 and 15  
For New  
Reduced Prices  
On TUBES  
TRANSFORMERS  
and RESISTORS

# RADOLEK CO. 601 W. RANDOLPH ST. CHICAGO

There's **UTILITY** and **ECONOMY**  
... in these new exclusive **RADOLEK**

## SERVICE ACCESSORIES

(A)



\$2<sup>70</sup>

(A)

### RESISTANCE INDICATOR

*Calibrated Variable Resistance Box*

Provides any value of resistance between 0 and 100,000 ohms! Convenient for temporary substitution in circuits having an open resistor. Contains three 25,000 ohm wire wound resistors wired in series with a special 25,000 ohm, 15 watt, potentiometer. The first half of the potentiometer is 1,000 ohms, the balance, 24,000 ohms. A modernistic knob and an etched aluminum scale, calibrated in ohms, permits quick easy selection of resistance. Insulated pin jacks are connected to the resistors, the values of which may be added to any value selected on the potentiometer scale. A pocket size brown bakelite case 5"x3"x2 1/4", contains the resistors. A pair of 24" test leads with "banana" tips and tapered alligator jaw test clips are furnished with the Resistance Indicator. Your price, \$2.70. Stock Number 3X2547. More fully described on page 56 of your 1935 Profit Guide.

(D)

### CONDENSER BOX

*Capacity Substitute for Test Use*

Provides standard capacity values for use in circuits suspected of having an open condenser. Contains a calibrated S. L. C. Condenser of 0.001 Mfd, maximum capacity and six paper dielectric condensers; of 0.005, 0.01, 0.1, 0.25, 0.5, Mfd each. Three electrolytic filter condensers rated for 450 volt circuits, of 2, 4, and 8 Mfd, respectively, may be connected in parallel with each other or with any parallel combination of the paper condensers. Toggle switches control each condenser. Toggle switches control each condenser, automatically discharging each capacity as it is switched out of the parallel circuit. A feature of the Condenser Box, is the Neon Bulb which is employed for polarity indications, for distinguishing A. C. from D. C. circuits, and approximating voltage. The Neon Bulb may also be used as an output indicator. The Radolek Condenser Box supplied in a walnut case, 5 1/2"x8 3/2"x4 3/4" deep, is sold complete at \$6.95, Stock Number 3X5898. The circuit of the Condenser Box is given on page 21 of your Profit Guide.

(B)



\$3<sup>50</sup>

(B)

### MEGOHM INDICATOR

*Extends Range of Resistance Box*

Provides ten values of resistance between 0.1 megohm and 1 megohm in 0.1 megohm steps. Used with the Resistance Box, practically any resistance in a receiver may be duplicated for test purpose. Ten point constant contact rotary tap switch selects value desired. Modernistic knob and etched metal calibrated indicating plate. Connections are made through two pin jacks in one end of the brown bakelite box which matches the Resistance Box. No exposed metal to cause shock or burns. A pair of 24" test leads with "banana tips" and tapered alligator jaw test clips are furnished with the Megohm Indicator. Your Price, \$3.50. Stock Number 3X2546. See page 56 of your 1935 Profit Guide for more complete details.

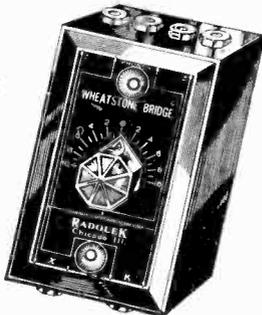
(E)

### SELECTIVE ANALYZER KIT

*Modernizes Your Test Equipment!*

This kit includes:—circuit opening pin jacks, tube sockets, switches, analyzer plugs, bakelite panel and genuine walnut case. With these parts you can build a selective analyzer. This unit used with your volt-ohm-milliammeter, provides a means of testing latest type sets by point to point or voltage current analysis method. Switches permit voltage tests between tube elements without moving test leads of your meter! An Alden Latch-Loek Analyzer plug with four adapters is included. Walnut case is 5 1/2"x8 3/2"x5" deep. This kit brings your old equipment up to-date. The price is only \$10.65 for the complete kit or parts. Stock Number 3X2526 on page 35 of your Radolek Profit Guide.

(C)



\$1<sup>95</sup>

(C)

### WHEATSTONE BRIDGE

*For Accurate Resistance Measurements*

A convenient substitute for the calibrated slide wire of a Wheatstone Bridge. Dial scale and circuit diagram on etched aluminum plate. This instrument matches the above indicators in appearance and size, having the same style brown bakelite case, modernistic dial and insulated pin jacks. Radolek offers this genuine Wheatstone Bridge at the lowest price for which this type of equipment has ever been sold, only \$1.95. Our stock number 3X2544. Accessories required are headphones, standard resistors, and a small step down transformer or an audio signal generator. Resistance measurements as accurate as those possible with instruments costing \$20 to \$50, may be made with this Wheatstone Bridge.

(F)

### NEON LEAKAGE TESTER

*Continuity, Polarity, Output, Indicator!*

Consists of a kit of parts for making a handy Neon Leakage Tester. When assembled this Indicator will check circuit continuity up to 5 megohms with 115 Volt A. C. supply. Polarity of high voltage circuits is indicated by position of glow within the tube. As an output indicator, the test leads are connected across the plates of output tubes. Resonance is determined by the intensity of the neon discharge within the bulb. The 5"x3"x2 1/2" bakelite case matches the other Radolek Indicators in appearance. This complete kit costs \$2.25. Stock Number 3X2452. Fully described with circuit diagram on page 35 of your Radolek Profit Guide.

(D)



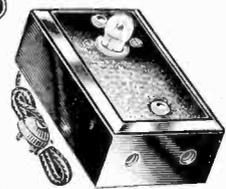
\$6<sup>95</sup>

(E)



\$10<sup>65</sup>

(F)



\$2<sup>25</sup>

# Advertising that will bring YOU more Business & Profit!

## Sales Tips Which Bring More Business

Get acquainted with your prospective customers. Take an active part in organizations which you are eligible to join, such as church societies, political clubs, community fund drives, and business men's luncheon clubs. Volunteer for duties which others like to evade in those clubs. In this way every fellow member in a club will feel obligated to call upon you for radio service. Answer their questions on radio, thus establishing yourself as an authority on the subject. Advertise in your club papers, using your picture, and your name and address. If you use Radolek's newspaper mats, secure from the newspaper the casts they use for printing and these may be adaptable to your club paper advertisements.

The most effective direct mail advertising is a personal letter. One serviceman in Indiana used personal letters to build up a \$500 a month business! His method was to note the name of every person who received a favorable comment in the newspaper and every person whose acquaintance he made in his church, club, and business contacts. At night he would write to each of these people. Here is a typical letter he supplied Radolek for this column.

Mr. John Staunton  
533 East Angella Avenue  
South Bend, Indiana

I was pleased to make your acquaintance, Mr. Staunton, at the Young Men's Civic Club today. I hope to meet you there again.

My business is radio service. I have the knowledge and equipment with which to repair any type of radio receiver. If you experience any trouble with your radio please call upon me to make the necessary repairs. My phone number is 3-2414.

Cordially yours,

This aggressive service man always inclosed a blotter with these letters. When he wanted a particularly important person for a customer, he used a kodak to make a picture of the person's home. His opening paragraph in his letter would be, "I've long admired your home. Mrs. So-and-So. Here is a copy of a picture I recently made of it." The snap shot would be pasted on the letter, the balance of which would be the same as in the sample letter above.

You can secure more business in this easy manner. Order new letterheads now! Try out these methods on ten of the most important people in your city—one call will repay you or your effort.

\* \* \*

Tell your newspaper editor every time you visit out of town or attend the various radio conventions. He'll publish any interesting news you can give him free. It is valuable publicity for you.

\* \* \*

The "Voice of the People" column in almost every newspaper will always publish your compliments to the paper upon the success of your ads in the paper. This usually will appear on the editorial page with your name and business address.

## TUBE STICKERS

Printed in Two Colors

Here is a Tube and Service Sticker that advertises Your business instead of some particular brand of Radio Tubes. Printed in blue with red border; with whatever wording you specify. Space limits copy to about five lines. Good quality gummed stock that will stick well to glass. Size 1"x1 7/8". Cash must accompany order. 3X885—Your Price imprinted per 1,000, \$1.75; 2,000, \$2.75; 5,000, \$6.00.

## BUSINESS CARDS

Your Price Only \$1.75 Per Thousand



These attractive business cards will command favorable attention and bring you business. Printed in black ink on white 3-ply vellum card stock. Size 2 1/8"x3 1/2". Stock number 3X886—Your price imprinted with your name, address and telephone number: \$1.75 for 1,000; \$3.45 for 2,000. Remittance must accompany order.

Map 29230  
MODERN  
-RADIO-  
SERVICE  
100 - 3rd Street  
BOONE, ILL.

Complete service for all types of radio receivers. Major appliances and home appliances. Your radio free. SERVICE CAREFUL. ONLY A YEAR AND A HALF TO GET YOUR SERVICE. YOU CAN GET IT AT THE LOWEST COST.

## BLOTTER CARDS

These miniature blotters are real business stimulators. Your choice of all white or assorted colors. Black ink. Size 2 1/8"x3 1/2". Imprinted with a powerful sales message in addition to your name, address and telephone number. Stock number (All White) 3X887. Stock number (Four Ass't Colors) 3X888. Your price per 1,000, \$1.95; 2,000, \$3.75. No C.O.D.'s.

## LETTERHEADS

Modern Radio Service  
"We Guarantee to Improve Your Reception"  
376 South Main St. - CAIRO, ILL.  
PHONE 14733

Printed in black ink on 20 pound white sulphide bond paper with your name, address and telephone number. Either full letter size or note head size available. 8 1/2"x11" letterhead, stock number 3X389—per thousand, \$3.70. 8 1/2"x5 1/2" note heads, stock number 3X390—per 1,000, \$2.95. Remittance must accompany order.

## Coordinated Advertising Will Insure Your Success!

Successful Servicemen advertise consistently. Every practical means you can employ to bring your name before your customers will help to increase your business. Reach your new prospects and your old customers with a properly planned variety of advertising that will make your radio service organization the only one, which the radio owner will think of when his receiver goes bad.

Use your newspaper to reach a large number of prospects for a low cost. You should have at least one advertisement a week in newspapers. Display advertising will command attention more quickly than plain type. The Radolek Company has prepared a series of "mats" from which your newspaper can print an attractive illustrated display advertisement with your firm name, phone number and address inserted. This is the first step in your coordinated advertising plan.

Post cards and blotters tie in with your newspaper campaign. Your prospects should receive at least one card or blotter a month. Every statement or letter to a customer should have a blotter inserted. You can count on a steady return of business from direct mail advertising, if mailed consistently. Hundreds of dealers leave valuable advertising material inactive on their shelves, too lazy to send it out, while they wonder how their more active competitors secure business. When advertising represents an investment upon your part you must try to realize a profit on that investment as soon as possible.

Tube stickers are acknowledged as the best advertisement with which to secure repeat business. Every tube you test should carry your advertisement. These tube stickers should be different from the commonplace stickers which advertise some product more prominently than it does the dealer selling the product. The special tube stickers Radolek has designed are in a brilliant red and blue combination on a white background. Your name and address are featured exclusively. Non-poisonous "sticken" with an inoffensive flavor is used.

Two important features of your business advertising are your cards and your letter-heads. These must be clean and easy to read. Radolek's advertising experts have prepared attractive designs which can be supplied with your name, address and telephone number, printed on good stock at extremely low cost to you. The insignia of the I. R. S. M. can be included at no extra charge if you are a member of the Institute of Radio Servicemen. New customers often judge your ability by your advertising—make a good impression with Radolek's advertising helps.

One man tells another, when your advertising is backed up by satisfactory service and good test instruments.

\* \* \*

Smart successful servicemen are well dressed, alert, courteous and friendly; not cocky but confident, confident of their ability and their equipment. Their cards, letter-heads, and advertisements reflect their ability and character.

**\$10.00 FREE**  
**If We Can't Repair YOUR RADIO**  
MAIN  
**Call 2-2-3-6**

Your Radio Can Be Repaired! Our shop can make the most intricate repairs on any radio at the lowest cost consistent with the best workmanship. We supply the latest market price. Bring your set to our shop or call us to your home. You can depend upon our guaranteed radio repair service.

**CENTRAL RADIO SERVICE**  
933 West Market Street  
LYONS, KANSAS

## NEWSPAPER MATS MAILING CARDS

Newspaper advertising used frequently and regularly is a most effective and economical means of securing more business for you. Here is a carefully prepared newspaper campaign consisting of four mats one column wide by two inches deep permitting you to use as much or as little copy with the illustrations as you wish. With each set of four mats we also furnish suggested copy to use. The amount of space you use is not nearly so important as the regularity of your advertisements. Your remittance must accompany order. Stock number 3X391—Set of four Mats (all different) Your Price only \$1.00.

These clever two-color mailing cards will amuse your prospects and attract them to your store. The ideas are timely and the sales messages are well-worded and forceful. Series consists of 4 designs, all different. It is a good plan to phone your prospects a day or so after mailing them these cards and invite them to drop in to your store for a free check of their Tubes. These cards should be mailed a few at a time, regularly. Postage required to each. Stock number 3X892—per 100 Sets (four designs, 400 cards) imprinted with your name, address and phone number, your price, \$2.95.

**GET SET for the BIG GAMES**  
HEAR THE FOOTBALL BROADCASTS CLEAR!  
Your radio must be in the best possible condition to bring you every detail of the big football broadcasts this fall. Tubes should be cleaned or replaced. Your aerial have your radio put in perfect condition for the games for less than the cost of two tickets for one big game. Our Radio Service is the best you can employ. Call!

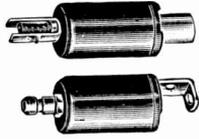
MAIN 3745  
**Modern Radio Service**  
371 Main Street - DIXON, IOWA

## New Wire Wound Auto Spark Suppressors

Save Gas and Improve  
Auto Radio Performance

by F. E. Beede \*

The new Ward Leonard Inductive Spark Suppressors are fast selling accessories. Increased motor efficiency resulting immediately in more speed and less gas consumption appeals to every motorist!



The principle of suppression of ignition noise interference is to "damp" the oscillatory discharge of the spark, thus preventing radiation of interference from the ignition cables. Resistance type suppressors "damp" the oscillatory discharge by reduction of the spark voltage which often impairs motor performance.

The inductive type suppressors have only a few hundred ohms resistance. The intensity of the spark is not reduced but due to inductive reactance of the wire wound suppressor, an impedance of many thousand ohms "damps" the oscillatory discharge. The slightly exaggerated oscillographic curves indicate the spark voltage characteristic with carbon suppressors in diagram "A" and with Ward Leonard inductive suppressors in diagram "B".

The effect of substituting inductive suppressors for carbon units, is quieter radio performance, increased motor efficiency, and usually from 2 to 5 miles more per gallon of gas than is possible with high resistance suppressors. While the feature of economy is your best selling point, easier starting in all kinds of weather, and quicker acceleration are the clinching sales points.

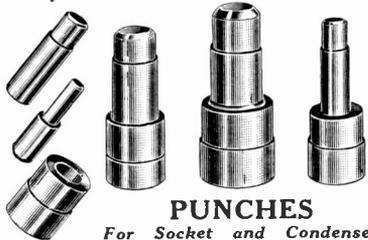
Ward Leonard Inductive Suppressors are fully described on page 129 of your 1935 Radolek Profit Guide. \*Engineer, Ward Leonard Co.



"A"



"B"



### PUNCHES

For Socket and Condenser  
Mounting Holes

3X4615—For 1 1/8" holes.  
3X4616—For 1 1/4" holes. (The size for multiposition Bakelite sockets see page 18 Radolek Profit Guide).  
3X4617—For 7/8" holes.  
3X4618—For 3/4" holes.  
List Price, Each, \$3.00. YOUR PRICE, Each, \$1.76.

YOUR PRICE, Set of Four, \$6.75

Stamp large holes in sheet metal (chassis, etc.). Easily used in locations not possible to drill and are much more practical and faster. Make clean cut, round holes with blow of hammer in 16 gauge and even heavier steel. Simply drill 3/8" guide hole in metal stock to be punched. Insert guide pin in hole, place die below metal and punch above. Hold punch firmly and drive through stock. For active servicemen, small manufacturers, engineers and laboratories a complete set of these dies will save their cost in a week or so. Tools are made of hardened steel, burnished and oiled. With reasonable care each tool will punch over a thousand holes in any ordinary metal stock. These tools open up a new field for Servicemen and Engineers in designing and constructing custom built Radio receivers, amplifiers, test instruments and other special instruments.

# THE INSTALLATION OF AUTO RADIO

By F. D. Whitten, Philco Radio & Television Co., of Ill.

A good fundamental knowledge of the best methods of installing an Auto Radio should prove to be the most profitable to a Radio Serviceman. We hope the following outline of various steps in an installation with recommended procedure will be of some help to our customers along this line—Ed.

The aerial is the most important feature of an Auto Radio installation. Our experience with hundreds of Philco Transitone installations is that the best aerial is one located in the top of the car. The best material to use is 18 mesh copper screen (see page 129 of the Profit Guide) extended the length of the top. In order to mount this screen the head lining must be dropped down, then the screen can be tacked to the bows. Cut the screen long enough so it can be bent back on the side of the bows where the head lining is tacked in place.

In order to get the most pick-up, space the screen away from the metal in the sides and ends of the top, a distance of 2 1/2 to 3 inches. The screen should be cut away the same distance from the dome light also, as one side of the dome light is grounded to the frame of the car. If the leads to the dome light run diagonally across the top from the windshield column to the dome light, they should be removed and run along the sides of the top to the bows nearest the dome light.

Some tops are equipped with wire netting which may be used for an aerial if cleared of grounds and spaced from the metal top and dome light as recommended in the preceding paragraph. If cut away from the sides, the netting must be laced to the sides with heavy cord to support the top.

On tops that have metal cross braces the use of a roof aerial is not practical. In these cases a good axle-to-axle or running board aerial such as those described on page 129 of the Profit Guide is recommended. The running board aerial (stock number 4D10179) is very efficient due to a 6 inch suspended portion which rides very close to the ground and increases its pickup considerably.

The lead-in for roof aerials should be soldered to the corner of the screen on the side of the car on which the set is to be located, so that when run down the windshield column it will be close to the set. It is not advisable to shield the lead-in all the way, but only from the point where it leaves the windshield column to the set. Ground the shield at the windshield column and at the set. Lead-in wires are very often the cause of intermittent reception if not soldered—never depend on a hand twisted wire joint in car radio work.

The actual location of the set is usually determined by the space available. If there is a hot water heater installed on the right side under the dash, the available space would be the left side under the dash. When it is at all possible locate the

set under the dash rather than in the engine compartment or under the floor boards. If set is mounted near ignition coils it will probably be necessary to install a filter condenser between low tension breaker and coils to eliminate ignition interference. The filter condensers numbers 3E1806, 3E1807 and 3E1808 on page 59 of the Profit Guide are especially designed for this purpose and are recommended.

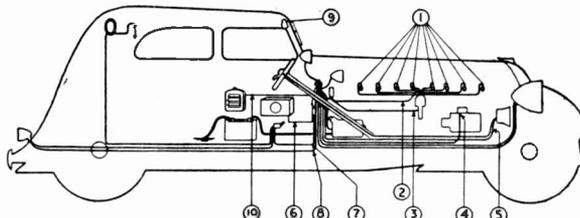
It is best to run the "A" battery lead directly to the storage battery. This assures a steady voltage supply and a minimum of interference. Avoid making the connection at the ammeter; a loose connection there or at the battery may cause the generator to feed directly to the set and burn out the vibrator or tubes.

### Elimination of Interference

With aerial and radio properly installed the next step is the installation of suppression material. A standard suppression kit is usually supplied consisting of a suppressor for each spark plug, a distributor suppressor and two by-pass condensers—one for the "A" lead at the generator and the other for the "A" lead at the ammeter or ignition coil, wherever it does the most good.

However, many cars require special equipment with which to silence certain forms of interference. Accessories which employ a small motor such as electric windshield wipers, hot air heaters and cigar lighters or dome lights with wires close to the aerial or lead-in, frequently require combination capacity and inductance filter units. These extra filters should be located close to the source of interference. They are fully described on pages 58, 81 and 129 of the 1935 Radolek Profit Guide. On page 59 will be found a detailed analysis of the ten most common sources of interference together with recommendations for their correction. Most new cars require a slight peening of the distributor rotor to lessen its gap and reduce the interference from the sparking at that point. Cars with motors suspended in rubber must have the motor head bonded to the bulkhead with low resistance tinned copper braid. Allow sufficient length for maximum vibration of the motor. Sandpaper the ends of the flexible tuning cable where connection is made to the chassis of the receiver. The tuning control bracket should make good electrical contact with the steering column. With the correct use of noise suppression equipment and careful bonding of parts which may carry interference to a receiver's aerial, it is possible to prevent all noise originating in the car from reaching the set.

### Auto Radio Noise Suppression



See top of page 59 the Radolek Profit Guide for discussion of the 10 most common causes of Auto Radio interference with recommendations for its suppression. Radolek has the most complete selection of suppression material in the entire country.

# QUESTIONS and ANSWERS

Write us about your radio problems. Our engineering staff will answer in this column questions about radio that will help you in your work. When your question refers to a particular make of receiver always specify the model number of the receiver and the number and type of tubes used. Your question must refer to one specific problem. We will attempt to answer in this column all questions we receive, if this is not possible those questions which we feel will be of most interest to our readers will be given preference.

What is the best type of short wave aerial for use with an all-wave receiver? J. H. B. Kalamazoo, Mich.

A simple and highly efficient short wave aerial kit for use in locations at least 100 feet away from power lines and automobile traffic is described on page 98 in the 1935 Radolek Catalog as the U.S. Signal Corps Pattern Special High Frequency All Wave Aerial Kit. This aerial is particularly efficient from 20 meters to 550 meters. Another and more recent type aerial gaining favor in noisy locations and for use in apartment buildings is the new RCA World-Wide Antenna System employing the "Doublet" lead-in and collector system coupled to the receiver through a special impedance matching transformer. A switch on the transformer converts the aerial to a conventional "T" for use on broadcast bands. See Catalog Page 142.

How can I determine the resistance of a wire wound volume control which has burned out at one end? N. D. B. Cedar Rapids, Iowa.

Locate the midpoint of the old volume control and measure with your ohmmeter the resistance between this point and the good end of the control. Twice this resistance is the approximate value of resistance you require when ordering a new control. As very few volume controls are critical in value unless employed as part of voltage divider circuit, 20% tolerance in total value is usually permissible. Many special controls are listed in the Radolek Volume Control Guide which may fit your particular job even though the control was not listed for the set you are working with.

What is the simplest method of repairing a defective transformer coupling a 27 detector to a 26 tube. The transformer is sealed in a tar filled case and I would rather not try to melt it out. H. A. W. Rock Island, Ill.

The Radolek Audio Repair Bridge is designed especially for this type of service job. It consists of a network of resistors and capacity which converts a defective audio transformer into an efficient impedance coupler. Four wires, plainly marked on the Audio Repair Bridge, connect to the four wires which lead to the transformer. It is usually best to disconnect the "B" wire of the old transformer in case there would be internal leakage of "B" current to the grid circuit of the succeeding tube. The tone quality of the receiver will be improved by this repair but the volume may drop a negligible amount. This drop in volume can easily be made up by substituting a 56 tube for the old 27 tube.

## A Million Football Fans Are Your Prospects For PHILCO Auto Radio!

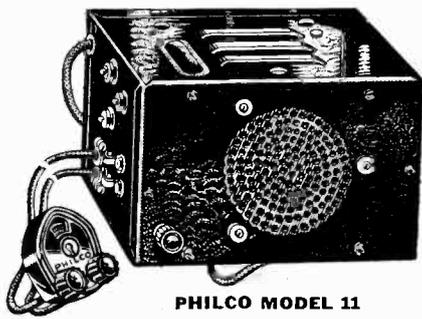
- Four Fast Selling Models!
- A Complete Price Range!
- The Easiest Set to Install!
- Your Opportunity for Big Profits!

PHILCO is America's most popular Auto Radio! Thousands of experienced dealers have found that it is easier to sell PHILCO, than to compete with it. Philco is not restricted to big stores, every radio serviceman or radio dealer can now offer the finest fast selling auto radio on the market. You can sell PHILCO to your customers! It's the auto radio they want, it's advertised more extensively than any other make. Concentrate your efforts on the profitable market PHILCO has pioneered for you.

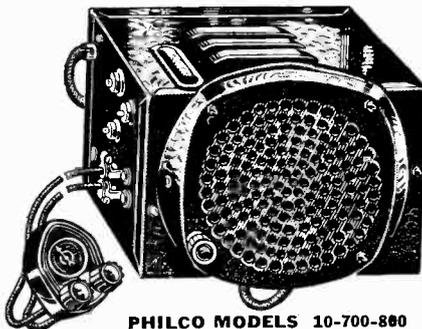
Football is radios' biggest selling feature! Millions of football fans drive to the college and high school games every week-end. Auto radio brings them the entertainment they desire before the game and the scores of other games as they drive home. PHILCO Auto Radios have proved their superiority in thousands of cars. PHILCO Auto Radios sell with less effort than any other make. You can reach the big market of football enthusiasts in your community with Philco Auto Radios. Be ready for immediate sales. Order your Philco Auto Radio stock now!

Easy to install, free from service! Philco's experience with thousands of new and old cars has taught their engineers how to build perfectly shielded and filtered receivers which will work in any automobile. Highly perfected noise suppression equipment accompanies every receiver. Complete instructions are supplied. No experience is necessary to install a Philco Auto Radio. Rarely ever do you have to service a Philco set. Philco clear tone tubes are factory tested in every Philco Auto Radio.

**Sell Auto Radios NOW!**  
It will pay you to push the Philco line.



PHILCO MODEL 11

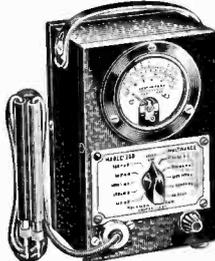


PHILCO MODELS 10-700-800

For Description and Your Net Prices, see pages 134 and 135 of Your 1935 Radolek Profit Guide.

Complete price range! Fits every class of car owners. Philco Auto Radios retail from the popular price of \$39.95 for the model 11, to the De-Luxe Model 800 at a retail price of \$75.00. In between are the models 10 and 700 at \$49.50 and \$59.50 list; each higher price instrument gives the customer more value for his money, and gives you more profit. Radolek's attractive wholesale prices listed on pages 134 and 135 of the 1935 Radolek Profit Guide assure you of these greater returns on your business.

### Triumph Model 300 Multirange Meter

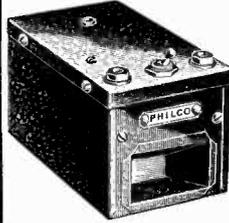


Small, Accurate and Convenient  
Your Price Only  
**\$19.55**

Study these 16 points before you buy or build a Multi-range, all purpose Test Instrument:

- 1—Eleven Ranges of Five Scales.
  - 2—1,000 ohms per V. 3/4" D'Arsonval Meter.
  - 3—Knife Edge pointer eliminating parallax.
  - 4—Reads 0/10/100/1000 volts on D.C. scale.
  - 5—Reads 0/10/100/1000 volts on A.C. scale.
  - 6—Reads 0/50/500 Milliamperes on D.C. scale.
  - 7—Reverse ohm scale, reading 0/1000 ohms.
  - 8—Medium ohm scale, reading 0/1 megohm.
  - 9—10 megohm scale for use with 45 V. battery.
  - 10—Checks audio output voltages.
  - 11—Impossible to reverse test prod polarity.
  - 12—Common adjustment for all ohm ranges.
  - 13—Uses 1/4 V. flash light battery.
  - 14—Uses 3-deck 11 point rotary selector.
  - 15—Lacquered steel case with leather strap.
  - 16—Furnished with 36" Test Leads.
- Size, 4 1/2" x 7 1/4" x 3 3/4" deep. Weight only 3 lbs. The New Triumph Multirange Meter is particularly suited to automobile Radio testing because of its small size and steel case. Its cost is less than the total cost of the equivalent parts. Stock number, 1X2502. Your Price Only, \$19.55 Net.

### Philco Shadow Output Meter Model 012



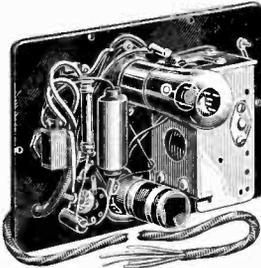
An Essential Output Indicator For Adjusting A Radio Set  
Your Net Price  
**\$7.50**

The newest Testing Device available to Radio Servicemen. The Shadowgraph Tuning Meter indicates maximum signal by the width of the shadow appearing on the reticulated screen aperture. A self-contained flashlight battery supplies power to the pilot bulb which is controlled by a switch on the top of the tuning meter. A copper-oxide rectifier is connected between the 5 M.A. meter and the leads which connect to the plates of push-pull power tubes or to the plate and cathode of a single power tube. Maximum shadow width is obtained when aligning I.F. trimming condensers or tuning condensers with a modulated input signal. The width of the shadow is proportional to the square of the output signal. The attractive amber screen upon which the shadow appears makes precise alignment very simple. The Philco Shadowgraph Tuning Meter is particularly recommended for use with Philco 024 Signal Generator described on page 32 of your 1935 Radolek Profit Guide. Model 012, Your Net Price, \$7.50.

Radolek is an Authorized Philco Parts Distributor. We carry a complete stock of Philco Replacement Parts and Accessories and can give you immediate service on any Philco item you may require.

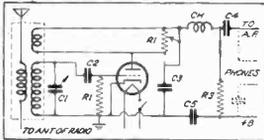
# "Build-it-Yourself" Kits

## A Police Call Alarm that Works!

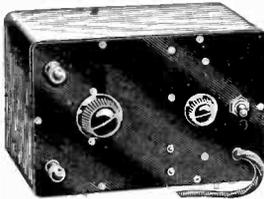


**Makes Local Police Calls Come In While Radio Is Receiving Broadcast! Supplied in Kit Form Only.**

Here is a profit making device for you to build and sell! Your prospective customers are city officials who can well afford this important accessory for their home or office radio. The Radolek Police Call Alarm works on any radio with more than 6 tubes, within ten miles of a police radio transmitter operating in the 1700 to 3000 kilocycle band. When Police Calls are sent out, the Call Alarm picks up the signal and forces it into the audio system of the standard broadcast receiver, where the Call is heard as a background to the regular broadcast reception. The Alarm can be turned on or off without effecting the normal broadcast reception.



As this Kit is only available to Radolek customers, you have no competition in sales from non-radio outlets. No profit-eating trade-ins are involved. Only genuine radio servicemen are capable of assembling and wiring the Police Call Alarm. A special coil, and choke, available only in the complete kit assures success with the Police Call Alarm. With your All-Wave oscillator, you can "pre-tune" the Call Alarm to the frequency of your local Police Radio Station or you can tune the Alarm like any regenerative set to the police signal during their regular test periods. Once adjusted no further tuning is required.

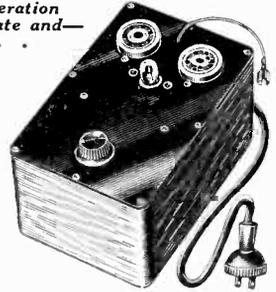


The complete kit, less tube, for the Police Call Alarm is available to servicemen for \$6.90. Stock Number 3X2453, listed on page 35 of the 1935 Radolek Profit Guide.

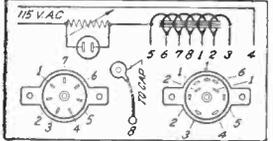
## Practical Tube Short Checker

For 110 volt, 25/60 Cycle Operation  
Easy to Build—Simple to Operate and—  
Economical to Own.

Protect your regular tube tester or analyzer from shorted tubes! Test every tube in this short checker first. Know instantly if there is cathode heater leakage, open filament or any trace of interelement short in any type of filament or heater radio or rectifier tube having standard size base prongs. This modern short checker is available in a kit of essential parts which permits construction of the unit as part of a custom built tube tester and as a complete kit which can be assembled as an independent unit for portable or bench service. In the circuit diagram, all points bearing the same numbers are connected together.



The principle of operation. Alternating current, 105 to 125 volts, 25 or 60 cycle may be employed. With terminals 3 and 4 closed, the line voltage is distributed across the tapped choke and the resistance shunting the neon bulb. The reactance of this choke on 60 cycle A. C. is approximately 20,000 ohms. The variable resistor is adjusted to approximately 100,000 ohms where the neon bulb is about to light. The voltage distribution at this instant is approximately 1/6th of the line potential across the choke and 5/6ths across the neon bulb. The slightest reduction of the 20,000 ohms impedance will flash the neon bulb which operates at its critical voltage. With the slightest trace of short the impedance of the choke (which then becomes an auto-transformer) drops to only a few ohms. The current drain at all times is so slight that even a delicate type 30 tube filament may be used to complete the circuit from 3 to 4, in the diagram.

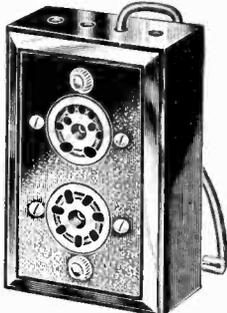


### Essential Parts Kit

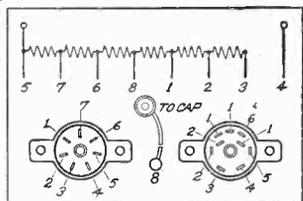
1—Tapped Choke. 1—Variable Resistor. 1—Neon Bulb. 2—Tube Sockets. 1—Neon Bulb Socket, and Plans for building. No Panel or Cabinet. 3X2520. Your Price, \$3.95.

Complete Set of Parts as listed above, walnut case size 7"x4 1/2"x3 3/4", bakelite panel cut to size but not drilled, hook-up wire, and 40" heavy rubber covered Connecting Cord and Plug. 3X2521, Your Price, \$5.95.

## Tube Short Checker For Use with Ohmmeter



The Radolek Portable Tube Short Checker Kit described on page 35 of the 1935 Profit Guide makes an excellent accessory for a custom-built Volt-Ohmmeter. The parts include the neat brown bakelite case illustrated above, the diagram of which is illustrated below. The six 2000 ohm resistors, if ordered from stock number 3X7808 at 15c each, will be supplied with insulation which permits the resistors to be packed together without danger of shorting. Terminals 4 and 5 in the diagram below may be permanently connected to the ohmmeter circuit. When a tube is inserted, it either does not move the ohmmeter, which indicates an open filament, or causes a reading of 12,000 ohms, indicating a good filament and no interelement shorts or a reading of less than 12,000 ohms which indicates internal leakage or short circuit. In the diagram below, similar numbers are wired together. Your price for a complete kit of parts is \$2.10. Our stock number 3X2451.



## There's Profit in "P.R."

### BUILD YOUR OWN AMPLIFIERS with RADOLEK KITS

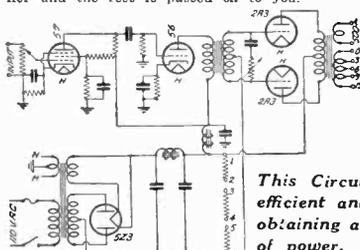
## 15 Watt AC Amplifier Kit 110 Volt 60 Cycle Operation

We are offering until Nov. 1st ONLY our most popular amplifier in kit form at an unusually low price. Radolek wants every radio man to build one of these amplifiers and actually experience the superior performance of Radolek Amplifiers. In your 1935 Radolek Profit Guide on pages 113 to 123 are the best amplifiers for any installation. The kit we are offering below is described on page 114 and more completely described in built-up form on page 117.

14X10697—Kit contains every part for construction of the complete amplifier. Drilled chassis base and diagrams including a schematic and pictorial. Less tubes. Your Price, \$21.95.  
14X10698—Complete with 5 matched Arcatrus Tubes. Your Price, \$25.22.

Radolek Amplifier Owner's Enthusiastic! A recent survey of a large number of Radolek Amplifier owners brought enthusiastic replies from every part of the country. Servicemen are making money with Radolek Amplifiers by direct retail and indirectly by the advertising it brings their service business. One Ohio owner makes competitive demonstrations of his Radolek Amplifier and constantly secures business at higher rates by proving superior coverage and tone quality. Be "in" on all the big games, banquets, and meetings with a Radolek Amplifier.

Caution! Read amplifier descriptions and specifications carefully. Compare Radolek amplifier specifications with those of any other company. You will find that Radolek gives you much more value. Reason! Radolek amplifiers are custom built in our own laboratory by men who are experts in this work. Manufacturing our own amplifiers permits us to save an outside manufacturer's profit, salesman's commissions and advertising expenses. Part of this saving goes into making a better amplifier and the rest is passed on to you.



Circuit Diagram of the Radolek 15 Watt A.C. Amplifier.

This Circuit is the most efficient and practical for obtaining a true 15 watts of power.

## Wheatstone Bridge

The Most Accurate Method of AC and DC Resistance Measurement.



Good servicemen use a Wheatstone Bridge for accurate resistance measurements, for capacity comparisons, and for impedance measurements. The new Radolek Wheatstone Bridge is the smallest and most compact instrument of its kind. It employs ordinary headphones instead of the old fashioned ballistic galvanometer for determination of the balance position. A C from the secondary of a filament transformer supplies the signal for securing balance.

The principle application of the Bridge is measurement of small resistances and coils which cannot be accurately measured on ordinary ohmmeters. For exact work, a few Electrad Precision resistors listed on page 60 of the 1935 Profit Guide should be selected as standards of resistance for comparison. Values of 0.1, 1, 5, 10, 25, and 50 ohms should be selected as (K) standards. To determine the value of an unknown resistor select a precision resistor of approximately similar value and substitute the unknown in X, the known resistor in K. The procedure is given in all electrical text books. Your price for a complete kit of parts is only \$1.95. Our stock number 3X2544.

On page 31 of your 1935 Radolek Profit Guide, the circuit diagram of the Wheatstone Bridge is illustrated. Complete specifications accurately describe this service accessory.

# Radolek is first to offer these new Testers



## Triplet Model 1230 "Master" Signal Generator

In this new Model 1230, Triplet has produced a precision stabilized, all-wave, continuously variable Signal Generator at a price within reach of practically every Radio Serviceman. Provides frequencies from 100 KC to 18 megacycles, either modulated or unmodulated. A special frequency stabilized circuit employing a type 30 tube generates the r.f. oscillation, while a second type 30 tube generates a clear 400 cycle note. The small amount of current required is furnished by one 22½ volt and three 1½ volt flash-light batteries. These batteries permit oscillator to be independent of line radiation. Power is taken from the oscillator in a manner that does not upset the circuit function. Individual shielding provided wherever critical shielding is required. Range switch and knob control frequencies. Attenuation controlled by three output jacks and attenuator. Tubes and batteries furnished. 3X2583—Complete in wood case. Size 2½"x6½"x4¼". List \$23.00. Your Price \$15.02.

## Triplet Model 1220 "Master" Free Point Tester



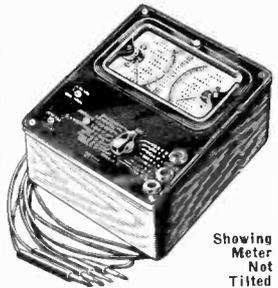
The Triplet 1220 Free-Point tester unit used with the Triplet 1200 or any other suitable volt, ohm, milliammeter enables the making of voltage tests between any tube elements including chassis current tests in series with any tube element, resistance tests between any tube elements or socket contacts including chassis. The jacks are so arranged that the source of external voltage may be applied to any tube element. This permits testing tube characteristics. A 4 prong, a 5 prong, a 6 prong, and a combination large and small base 7 prong socket are mounted on the bakelite panel and the contacts marked according to RMA standards. One end of the conductor cable is permanently connected to the switch type jacks, the other end terminates in a 6 prong latch type plug. 4, 5, large 7, and a small 7 prong latch type adapters are included. Instructions, guarantee and registration cards are furnished. Wood case. Size 2½"x6½"x4¼". 3X2585. List Price, \$12.50. Your Price, \$8.16.

## NEW TRIPLETT "MASTER" TEST EQUIPMENT

The Triplet Master Unit Testers have been designed with the idea of providing the simplest, most compact, accurate and useful service equipment on the market regardless of price. This Master line of equipment contains many new and useful features which will enable the servicemen to speed up repairs on any radio set.

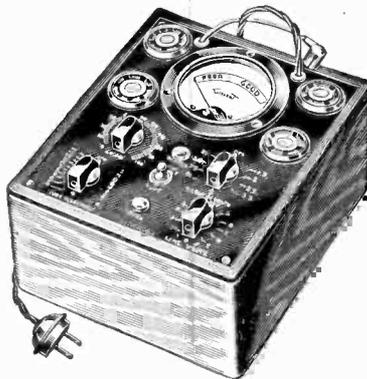
We have in stock all the latest improved models of Triplet test equipment.

Combine these four instruments in the Triplet "Master" carrying case. With these four essential instruments it is possible to completely service any radio receiver. Point to Point, Standard Analysis, Overall Performance all these tests can be performed. In addition tube tests can be made on the "Master" Unit Tube Tester from the 110 volt AC line.



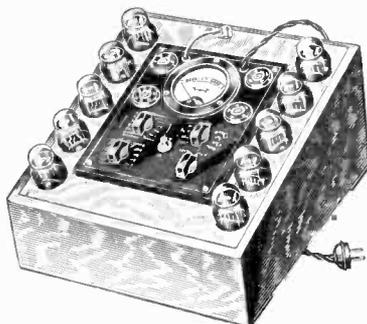
Showing Meter Not Tilted

## Triplet Model 1210 "Master" Unit Tube Tester



It is impossible to place a tube in the wrong socket of this new emission type Tester; four sockets for all type tubes. Its ¾" Triplet D'Arsonval meter reads GOOD and BAD values on three colored scale. Only three simple operations required to test all types of tubes; only one operation for shorts. Two selector switches provide for short, leakage, and quality tests without removing tube from socket. Infinitesimal leakages between elements indicated correctly on meter. A third selector switch selects proper filament voltage; a fourth switch is set for the type tube to be tested. Chart furnished for all switch settings. Has line voltage regulator. Rectifier tube furnished. Wood case. Size 2½"x6½"x4¼". 3X2584—List, \$30.00. Your Price, \$19.60.

## Counter Case for Model 1210 Tube Tester



Tester is held firm by four screws fastened at the bottom of the case. Has an attractive sloping oak panel. Oak panel has five holes on each side of unit for holding tubes while testing. Entire case is quartered oak. Size 11¼x12¼x7" high. 3X2586. Carrying Case Only. Model 1211. List Price, \$6.00. Your Price, \$3.92.

## Triplet 1200 "Master" Volt-Ohm-Milliammeter

This new instrument has two exclusive and very interesting features: (1) The large rectangular meter used is so mounted that it may be tilted at an angle to the case to avoid parallax; and (2) the meter employs a separate movement for A.C. and D.C., both of which are accurate within 2%.

The tilting feature enables the user to make accurate readings with ease in practically any position, while the double movement feature provides separate scales for A.C. and D.C. and makes all readings simple and direct. No mental arithmetic necessary. The scale figures are extremely large and clear. They are all arranged in horizontal lines—no twisting of the head while reading them.

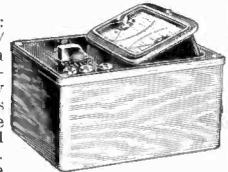
### A.C. and D.C. Ranges

D.C. Ranges: 0/10/100/250/500/1000 volts at 2000 ohms per ohm; 0/1/10/100 milliampere; 0/1500 volt, 0/1.5/3 meg-ohms.

A.C. Ranges: 0/10/100/250/500/1000 volts on a vane type movement. Capacity measurements may be made between .01 and 10 microfarads.

Only three jacks are used: two for all D.C. Voltage, milliamperes, and resistance; A.C. voltage and capacity measurements and a third jack is used when measuring output voltages. This output voltage jack contains a blocking condenser which prevents the flow of D.C.

A single selector switch makes for extremely simple operation. Individual zero adjustments for the various ohmmeter scales permit the changing of selector switch from one range to the other without adjusting the ohmmeter ranges. 3X2587—Model 1200 complete. List, \$32.50. Your Price, \$21.24.



Showing Meter Tilted

## Carrying Cases

### Single Unit Case

Built to exactly fit any of the "Master" testers. Made of oak and covered with black grained leatherette. Has additional compartment for accessories. Inside is felt lined. Size 8¾x10x5½" high. 3X2588. Model 1201. Carrying Case. List Price, \$6.00. Your Price, \$3.92.



### 4 Unit Case

Constructed of solid oak and covered with attractive black grained leatherette. Has extra large compartment to accommodate all the accessories necessary for the 4 testers. Size 17x17¾x5½" high. 3X2589. Model 1204. Carrying Case. List Price, \$9.00. Your Price, \$5.88.



# NEW SUPREME TESTERS

## With the New Supreme Fan Type Meters

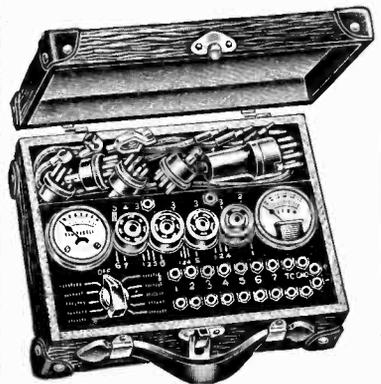
All the Supreme Instruments illustrated in your big 1935 Radolek Profit Guide are now furnished with the new Supreme Laboratory Type Meter illustrated. The new long shape makes the scale full 5 inches long which spreads

out the readings and permits greater accuracy and speed. Mounted in an attractive moulded bakelite case. Meter is sturdy and accurate and of high quality in keeping with Supreme's reputation for excellence.

### New Standard Model 333 Analyzer

Last season thousands of servicemen bought the Model 333 Analyzer at \$39.50. This season Supreme has added a new standard model of the 333 at a lower price in addition to the DeLux Model illustrated in your 1935 Radolek Profit Guide. This new instrument at \$29.35 brings Supreme design and quality to thousands of service men who could not previously afford a Supreme because of the price. The standard 333 Analyzer provides point-to-point tests for voltage,

current and resistance directly from the socket through the analyzer cable without removing the chassis from the cabinet. Reads A.C. and D.C. voltages on 4 scales; 0-5/125/500/1250. 1000 ohms per volt. Reads D.C. mills on 0-5/125 scales. Self-contained 4½ volt battery operates ohmmeter with ranges of 0-2000 and 0-200,000 ohms. The low scale reads down to 1 ohm with 35 ohms in the center of the scale. Meter ranges selected through multipolar switch. Output measurements directly through analyzer cable without adapters. Contained in a handsome hardwood carrying case with cover and handle. A high-grade instrument at a new low price. 3X2557—Your Net Cash Price, \$29.35.



### New Readrite Model 720 Point-to-Point Tester

Designed for fast, efficient service work. Requires minimum manipulation, is extremely flexible and so arranged that voltage and current can be measured in any tube circuit. Resistances, continuities and capacities are also quickly measured. Point-to-point tests are made through an 8 conductor cable and plug connected to the set socket. The tester socket terminals are arranged according to RMA standards. With this method it is not necessary to remove the chassis from the cabinet to localize defects. All meter ranges are available by connecting through the single pair of jacks. Regardless of the arrangement of the different tube elements the No. 720 will make all tests with the same ease it does now with present tubes. When it is found advisable to increase or decrease the voltage values as applied to the tube elements, the break in jacks are also made use of for this purpose.

#### Separate AC and DC Meters

Rugged, simple, speedy and accurate in use. The D.C. scales are 15, 150, 300 and 600 volts, 15 and 150 milliamperes. The A.C. scales are 10, 25, 150 and 750 volts. Scales are clearly lithographed on all metal dials. No mental arithmetic required. Overloading of the meter is prevented as far as possible by the single selector switch and the single pair of jacks for all meter ranges. 3X2591—Furnished complete with all instructions, resistance and capacity charts, cords, registration and guarantee cards. Size: 10½" x 3½" x 8". List Price, \$25.00. Your Price, \$14.70.

#### Model 730

The same as the No. 720 but equipped with a Triplett DC voltmeter having 1000 ohms per volt resistance. 3X2592. List Price, \$31.00. Your Price, \$18.23.

### Special October and November Bargain Flashlight Screw Driver



Puts the Light Directly on the Screw  
Radolek offers this combination flashlight and screw driver during this month only at this low price. The full size insulated secure grip handle is the compartment for a standard two cell flashlight battery. Light is easily turned on at top of handle and shines directly upon your work from the base of the handle. Screws are quickly and efficiently handled in dark places. Fine tool steel 47 blade fits all sizes of radio screws. Bulb is included. 3X4747—Screw Driver, Less Batteries. Your Price, 49c.

3X39—No. 1 Uni-Cell Batteries (2 required) Two for 12c.

### New Supreme Model 85 Counter Type Tube Checker

Many service men and dealers have asked Supreme for a good looking counter tester. Here it is. All the features of the portable Model 85 including the famous neon leakage test and the direct reading "English" scale that your customers can understand. The Model 85 really picks out the bad tubes. Result: More sales for you and more profit. If you have an old style tube tester that doesn't find and reject all the bad tubes you may be losing the cost of a Model 85 every week or month. Mounted in a beautiful walnut finish cabinet with matched walnut front and top. Sloping walnut panel with bronze escutcheons. Hidden slide in base carries full operating data. Tests all tubes correctly.



Supreme Model 85 Tube Checker

3X2558. Your Net Cash Price, \$39.15.

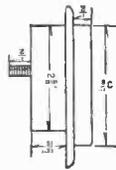
We Sell these Instruments on Time Payments—Write Us for Terms!

### New Supreme Fan Type Meter Kit

With this new Supreme Model 310 Laboratory Type fan shaped Meter Kit you can build your own AC-DC Volt-Ohm-Milliammeter with ranges of 0/5/125/500/1250 volts AC or DC.—(1000 ohms per volt) 0/5/125 mills DC and 0/2000 and 0/200,000 ohms with a 4½ volt battery or 0/2 megohms with a 45 volt battery. Meter has 5" scale. Bakelite case with round extension which mounts in 2½" hole. 3X2559—Meter only. Your Net Cash Price, \$6.12.

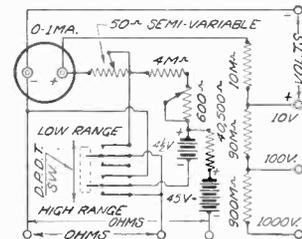
3X2560—Copper Oxide Rectifier for Meter. Your Net Cash Price, \$2.69.

3X2561—Complete Set of Resistors including: 1-Meter adjustment Resistor; 1-"Mills" Shunt; 9-Special Metallized Resistors; 1-0/3600 ohm Potentiometer and Instructions. Your Net Cash Price, \$3.92.



### New Circuit for Radolek Triplett Foundation Meter

Extend the range of your Triplett Foundation Meter to 1½ megohms! An extra resistance of 40,500 ohms has been added to the original circuit to permit use of a 45 volt battery. Electrad Precision resistors listed on page 60 of the 1935 Radio Profit Guide should be employed. With the new circuit, multiply the high ohm scale reading by 10. The midscale reading which was formerly 4500 ohms, now reads 45,000 ohms. This makes the finest type ohmmeter for test panel use which you can assemble. This meter is listed on page 37 of your 1935 Radolek Profit Guide.



Here's WESTON Quality at Low Cost!

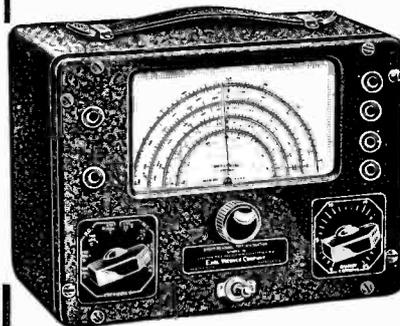
**MODEL 682 TUBE CHECKER**



Size 11 $\frac{3}{4}$ "x10 $\frac{3}{4}$ "x5 $\frac{1}{2}$ "

The new Weston Model 682 Tube emission checker is the finest quality tester in the low price group. It has attractive appearance—finished in tan and silver with a single arc meter scale which shows tubes to be "GOOD" or "BAD". Inter-element short check and a separate cathode leakage tester instantly spots tubes with this defect. All diode and double plate tubes have individual plate tests. A meter-reading-line-voltage control is provided for use with 100 to 130 volt, 60 cycle A.C. line. No radio experience is necessary to operate this tube tester—the simple routine of testing can be learned in a few minutes. The 682 is supplied as illustrated for portable use or in a sloping panel counter case for \$28.66 net to Radio Servicemen or Radio Dealers. When ordering specify stock number 1X9430 for the portable model or 1X9431 for the counter model.

Full Vision Dial!

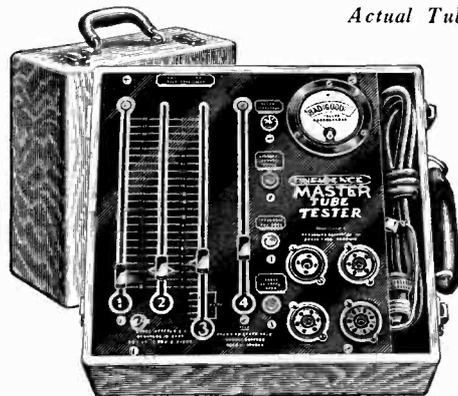


**A New Portable All Wave TEST OSCILLATOR**

The latest type of test oscillator is this new direct reading Burton-Webber Portable Precision Instrument. Charts are not required—inconvenient connection to a supply line is unnecessary. All commercial frequencies are covered between 90 kilocycles and 25 megacycles (12 to 3318 meters) with strong fundamental signals. A steady 400 cycle audio signal is available for amplifier and bridge tests. This audio signal modulates the high frequency signal approximately 35%, but may be cancelled out for beat frequency tests. Leakage currents are held at a minimum because of efficient circuit design and the one piece cast aluminum case. Perfect attenuation is obtained. Only two batteries are required—extra—a 4 $\frac{1}{2}$  volt and a 22 $\frac{1}{2}$  volt "C" type—which fit in separate battery compartments within the case. The Burton-Webber Oscillator is supplied with two type 30 tubes less batteries for \$28.91 net. Stock Number 1X2536.

**The CONFIDENCE Master Tube Tester**

*Actual Tube Performance Tested*



Improved model! Lower Price! Megohm Leakage Checker! Easiest tube tester to operate! These are just a few of the many features of this new Confidence instrument. Four sliders provide correct circuit for every radio tube made. The meter reads directly "GOOD" or "BAD". All rectifiers may be checked on both plates. Only four sockets are employed. Short test and Dynamic tests are made without moving the tube. The operation of the Master Tube Tester is so simple, your customers may be taught to test their own tubes after seeing you test the first one. The price of this new model is only \$38.71 net in either the portable case illustrated or a modernistic counter

case. Designed for 105 to 125 volts, 60 cycle A.C. Size of the portable oak case, 13 $\frac{1}{4}$ "x13"x6". When ordering request stock number 1X2543.

**How To Use An All Wave Signal Generator**

*For Alignment and Performance Testing*

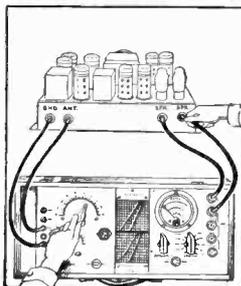
The new all wave oscillators provide an audio signal which will save many hours of tedious service analysis on audio amplifiers. In testing a receiver which is not working because of some minor defect, the audio signal may be supplied to the grid of the power tube; if the 400 cycle note is heard in the speaker, apply the signal to the grid of the first audio tube and then to the grid of the detector. Each stage of amplification should provide a stronger signal reproduction unless there is trouble in the stage.

Open audio transformers, shorted plate coupling condensers, incorrect bias voltage on the tube or positive potential reaching the grid of an audio tube are possible troubles within the amplifier. Lack of field current or an open voice coil might be the cause of trouble in the speaker.

The next step in trouble analysis is through the I. F. stages. For this test adjust the oscillator to produce a modulated signal. If the I. F. peak frequency is known, tune the oscillator to this frequency. Otherwise connect the Oscillator to the I. F. tube grid in the stage preceding the second detector and tune over the I. F. bands. When the frequency is reproduced nearest that to which the I. F. stage is tuned, the strong modulated signal should be easily identified in the output of the receiver. If the tuning of the stage has been tampered with, it is usually safe to return it to the nearest standard I. F. band. The preceding stage is then matched to the same frequency. Always short the oscillator tuning condenser in the set while endeavoring to identify the I. F.

frequency. If this is not done, the signal-generator may "beat" with the set's oscillator and cause false harmonic signals which would be hard to identify.

As a check on the receiver's oscillator, adjust the set for a broadcast signal and tune your oscillator to a frequency above or below the broadcast wave until a signal can be heard. Stop the modulator of your oscillator, then you can actually tune stations in and out with unmodulated wave of your instrument. If the receiver's oscillator is not defective, produce a modulated wave at the high frequency end of the broadcast band and adjust the trimmers of the tuning condensers for maximum signal response. If the receiver has the all wave feature, each wave band should be checked with your oscillator and the trimmers adjusted for best performance.



should be used to couple to the set's antenna and ground posts.

**CLOUGH-BREngle AC-DC Signal Generator**



*Model OC, All Wave*

This is a new continuously variable Signal Generator—50 kilocycles to 30 megacycles (10 meters to 6000 meters)—producing all fundamentals over this wide range. Six frequency bands each covered by a dual scale with a visible range over two feet in length which permits reading to 1/10 of 1% of the desired value. Six coils on a rotating frame are used for the six bands. The stable electron coupling circuit employing two tubes and a rectifier tube which are supplied with the instrument assures a constant non-drifting signal at all times. Completely shielded with line filter. Choice of modulated or unmodulated signals or 400 cycle audio signal. By plugging in a phono pickup or microphone input, the Model OC becomes a miniature broadcasting station! You can test tone quality of a receiver on short waves with standard phono recordings! Or broadcast from one part of your shop to the other! A dual attenuator provides a signal from 1/2 microvolt to approximately 2 volts. Absolute zero attenuation is possible on all ranges. Any 110 to 120 volt AC or DC line will provide power. Model OC Signal Generator is supplied with three tubes complete for \$29.31. Stock Number 1X2573. Radolek always has in stock the new test equipment announced by manufacturers and the latest models of the apparatus already listed in your 1935 Radolek Profit Guide.

# PRIZES for Your PROBLEMS

COME ON, BOYS! Lets make this column a source of helpful information for all the servicemen and dealers who read the Radolek Broadcaster. Trade your tough problems and your solution of them for merchandise awards.

## Here are the Prizes Offered

1st Prize ... \$10.00 Merchandise Credit  
2nd Prize ... 5.00 Merchandise Credit  
3rd Prize ... 2.50 Merchandise Credit  
Every Honorary Mention,  
1.00 Merchandise Credit

These awards will be made to those whose problems and solution appear in the following issues of the Radolek Broadcaster. Here is what we want to know: 1. The most difficult radio repair problem you have run into; 2. The name of the set or system in which the trouble developed. 3. How you discovered the cause of the trouble and solved it. 4. The test equipment you used on the job.

Our engineers will select the problems and solutions most timely and considered as most helpful to fellow servicemen who might have to meet the same problems. The decisions of our engineers will be final. We know you will enjoy this column and pick up many practical ideas from it in addition to prize money. Everyone has an equal opportunity to win an award. Dust off the typewriter and get busy. Send in your problems at once.

## Actual Troubles in Commercial Radio Receivers

By Bertram M. Freed



This New Book Discloses the Common and Unusual Failures and Tells how to Repair them.

Knowing beforehand the symptoms and effects of their failures makes possible the more rapid and efficient repair of Radio Receivers. This new book

lists all standard Receivers alphabetically and discusses clearly the common and unusual failures each has most frequently developed over a period of several years; then it tells you how to repair them.

The most practical book of its kind yet published for the Radio Serviceman because it explains those troubles actually encountered. Only those troubles difficult or impossible to disclose with a Set Analyzer are discussed. Supplements furnished free from time to time to registered owners. 192 pages. Profusely illustrated. Stiff board covers. 3X5997—Net Price, 98c.

Excerpt From Page 99  
Philco 90, 90A

"Fading and intermittent reception on this model is almost invariably caused by the open-circuiting of any one of the three audio coupling condensers, the open-circuit taking the form of a snapped connecting lead, either within the condenser housing or at the external lug. The surest and most sensible procedure to follow toward eliminating this condition, is replacement of all three condensers at the same time. Should a slight motor-boating exist after these condensers have been changed, the first audio grid resistor should be replaced with a 100,000 ohm unit."

## The New Crystal Mike



### Its Advantages Over Other Types

The active element in the Crystal Microphone is the Bimorph Rochelle Salt Crystal Element, which generates a voltage when pressure is applied. In the Piezo Astatic Crystal Microphone, this pressure is applied through the medium of a diaphragm made from extremely thin duralium formed in such a manner as to transmit the greatest possible pressure to the crystal with a given sound wave. This sensitive diaphragm responds to every variation of pressure caused by the sound wave and instantly generates in the crystal element a voltage proportional to the intensity of the sound wave. The diaphragm and crystal is suspended within a strong case which protects it from harm.

Once the crystal is finished and tested, no further adjustments are required. The Crystal Microphone may be mounted in any position with equally satisfactory results. None of the characteristic hiss of carbon microphones or the limitations of Ribbon or Condenser microphones exist in this new type of acoustic pickup.

The frequency response is uniform from 30 to 2000 cycles and has variations not to exceed 5db to 5500 cycles which is well beyond the limit required for broadcast or P. A. applications. The Crystal will only generate voltage with pressure from sound waves striking the diaphragm, hence ordinary background noise is entirely absent.

Owing to their high impedance, Crystal Microphones may be connected directly into the grid circuit of an amplifier without an input transformer. This is a distinct saving and advantage in eliminating transformer losses.

The response of the Crystal Microphone is lower in voltage than a high quality carbon microphone. An amplifier to work effectively with the Crystal Microphone should have a gain of at least 100 db which is equivalent to the overall gain of a normal 75 to 85 db amplifier with one stage of pre-amplification. The Radolek 15 Watt A.C. Portable P. A. System is the first moderately priced amplifier which will handle the Crystal Microphone directly and reproduce the full output power.

This new type Piezo Astatic Crystal Microphone is listed on page 108 of the 1935 Radio Profit Guide. Stock number 3X2907. Your net price for this superior microphone is \$12.39.

## Win A Prize

### Association Secretaries

Win a fine "Minutes of Meetings" record book for your radio association! Radolek will present free to each Radio Club or Association of Radio Servicemen or Dealers, this attractive book in which to record the proceedings of each meeting. To secure this book, have each member sign his name and his firm's address on a sheet of paper at the next meeting. Add to this list the names of members not present. Send the list to Radolek, and we will forward your "Minutes of Meetings" record book. Where your association represents the majority of radio servicemen in your district, Radolek desires to restrict the distribution of the Profit Guide to your association and to such non-members of your group as are legitimate radio dealers or servicemen approved by your club officers. You can eliminate the "I-can-buy-it-elsewhere" competition in your community by this cooperation. Radolek desires to protect the interests of real servicemen at all times. Secretaries, get busy.

## Join The I. R. S. M.

By Ken Hathaway, Exec. Secretary

Are you making money in the Radio Service business?

The fundamental object of the Institute of Radio Service Men, is to create conditions within the ranks of the service men themselves which will make possible a decent living income from the radio service business.



Starting with a basic code of ethics which set forth the principles of a radio service man's obligations to his customer, to his fellow servicemen, and to himself, the members of the Institute of Radio Service Men have changed radio service from a trade to a profession. They have fostered sectional groups organized with local officers who hold meetings at regular intervals for the advancement of technical knowledge and promotion of better business relations. The culmination of the Institute's efforts is a national project for the approval or classification of Radio Service Men under government supervision. All the work of the Institute is for your benefit—to increase your earning ability—to raise the standards of radio service from a trade to a profession, which permits greater prosperity for you.

You receive direct benefit from membership in the Institute of Radio Service Men. The Institute brings you into direct contact with thousands of other men in the same line of business. You can profit by the experience of these men—you can share your experience with them. From this association you will glean new ideas, learn of successful ways to increase your business, learn new methods of service, and be up to date with regard to every new development in radio. This is valuable to you!

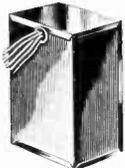
In communities where the Sectional Groups of the I. R. S. M. are representative of the majority of radio concerns, the Radolek Company are restricting the distribution of wholesale catalogs to Institute Members, thus preventing your customers from having access to your wholesale prices. Without organized groups to contact, it is almost impossible for a wholesale concern to distinguish between clever "chiselers" and legitimate wholesale accounts. Individually it is practically impossible to secure this cooperation,—as an organized I. R. S. M. section, you have within your power the means of greatly increasing your earnings.

Learn about the Institute of Radio Service Men at once. Write to me, in care of the Radolek Co., for full details of how you can become a member of the I. R. S. M.

## SPARTON 930 Filter Condenser Block

### A Special Bargain

Exact duplicate of the original part used in the Model 930 Sparton receivers with a greater margin of safety. Total capacity 6.1 mfd. Individual sections: 3-1 mfd. 600 volt; 1-2 mfd. 600 volt; 1-1 mfd. 600 volt. Between the 1-2 mfd. 600 volt and 1-1 mfd. 600 volt sections is a .1 mfd. 600 volt by-pass condenser. Leads are insulated and color coded exactly like those on the original part. Dimensions 5 1/4" high, 3 1/2" wide, 2 1/2" deep. New merchandise and fully guaranteed. XP7290—Your Special Price for this Sale Only 79c.





# A Scientific Super Service FOR THE TRADE

Follow a Set through the Radolek Laboratory!  
A Brief Story of One Receiver, Sent to the Radolek Super Service Laboratory.

## A Message from the Lab.

The Radolek Scientific Super Service Laboratory is equipped with the most modern apparatus for advanced radio service. Few Universities have as fine equipment for analytical radio testing. The convenience of this laboratory permits rapid and accurate work. In addition the huge stock of thousands of items available for immediate replacement in defective receivers eliminates the delays which might be occasioned if the repairs were being made in a laboratory not associated with a large distributor.

Every effort is made to hold the cost of the repairs to the lowest figure which will permit high quality workmanship. When requested, estimates are furnished for a moderate service fee which applies as part of the total bill if the work is authorized. Upon request, a retail statement is furnished quoting twice your actual cost which permits you to secure a legitimate profit on each job, if you desire to show your customer the bill.

We prefer the larger and more difficult jobs. Our routine of testing is so complete, that it requires almost the same time to check a midjet receiver as it does to test an eight or nine tube set. Auto sets, because of their compact construction and rectifier "B" supplies require about twice the time consumed by home sets. Large amplifiers can be rebuilt or repaired within 6 hours as an average.

The laboratory is in charge of an experienced radio engineer who has conducted a radio service business for a number of years. Try the Radolek Scientific Super Service for the next set you wish repaired.

The letter accompanying the first set received Monday morning was typical of the many which accompany radio sets sent to the laboratory for repair: It read like this, "This set, which has no name, was brought to my shop for repair. I am not familiar with its circuit and do not know its intermediate frequency. It works very faintly on local stations. Kindly repair it, putting it in as good shape as possible. I do not want to spend over \$7.00 on it, as I don't believe the customer will stand over \$13 or \$14 for the repair. The tubes seem O. K. and if any have to be replaced, I prefer to do so from my own stock."

## A Complete Check Is Made

The set was an odd looking six tube job, with chassis and speaker mounted together. Evidently designed for A.C. or D.C. service with a 25Z5 rectifier. Tubes are always checked first on our big Hickok A.C. 47 tester. While an assistant performed this task, the chief took charge of the set. Starting at the rectifier socket, he traced the circuit with a continuity tester, instinctively following portions of the circuit which would baffle less experienced men to trace. Next the large dual scale Radolek Ohmmeter came into play. Each resistor and coil was measured and the value noted on a diagram. An excessive leakage appeared across one filter condenser and its position in the circuit was marked with a red pencil four future tests. Next a Weston Capacity Meter was employed to test each condenser. The leaky unit, which was marked 4 Mfd., indicated less than 1 Mfd. capacity. Without delay, it was replaced with a Sprague cardboard cased condenser of the same physical size and full 4 Mfd. capacity. Ready for further tests, the chief observed a tag on the 25Z5 stating that one plate circuit was weak. A Raytheon test tube was substituted temporarily.

As the set was connected to the line, the chief watched the wattmeter creep up as the tubes heated. That tube complement shouldn't draw over 80 watts and the meter indicated 75 which was within the safe range of the series resistor mounted under the chassis. Next the voltage at all tube pins was checked and noted on the

diagram for future reference. Optimistically, the chief connected the aerial, but only a few raspy canary like sounds came from the speaker.

The handy Triumph Signal Generator was turned on, its audio range first being fed through the detector plate. The audio system responded to the 400 cycle note with adequate gain. Next the I. F. Transformer preceeding the detector was tested with the Signal Generator swinging over the entire I. F. range. The strongest response was observed at 259 K. C. The nearest standard frequency for I. F. stages being 262, the Signal Generator was accurately adjusted for this frequency, and the trimmers retuned for resonance. The other I. F. transformer was then tuned to the same frequency. The padding condenser on the oscillator was adjusted to zero beat with a signal from the General Radio Signal Generator, tuned 262 K. C. away from the input signal adjusted to 1000 K. C.

A brief test with the aerial proved the adjustments correct but the chief wasn't pleased with the tone. The Universal Speaker Tester was quickly connected and speaker centering shims were employed to secure exact centering of the speaker cone.

## Our Precision Equipment Saves You Time and Money

The final test was made on the finished job bench, where the set was allowed to play softly for ten minutes on an out of town station. Only an hour and a half was consumed on a job which would require at least four hours in a shop not adequately equipped. Within 15 minutes after the final test, the receiver with its defective 25Z5 tube plainly marked, and the old filter condenser included, was in the shipping room being packed as carefully as new merchandise for its return shipment.

Not all jobs can be handled as swiftly, particularly those requiring correspondence or special parts, but the majority of receivers can be repaired within two hours. If you've made any changes in the circuit or substituted any parts before sending the set in, it will save considerable time to mention all details in your letter.

## Standardize Your Charges for Sure Profits—This Schedule is Recommended

The major reason for failure among Radio Servicemen is failure to charge enough for their services. If you desire to use high class equipment, drive a good car and maintain your dependents in a decent manner you must charge fair prices for your efforts.

On a proper schedule of prices, you can set aside a 5% fund for advertising, basing each month's appropriation on the previous month's business. Such a program will bring you a steadily increasing patronage.

The following schedule of prices are charged by a Radio Serviceman who averages \$300 per month from his business. You, also, can make a good income from the proper management of your business, and the proper charges for your services.

Clip this schedule, paste it on a stiff card and carry it with you. Consult it when estimating on a job. The customer seeing that you use a standard rate will respect you as a high-class Serviceman who charges everyone the same prices.

### Standard Service Rates for Radio Repair

Labor charge: Within five mile range, \$1.00 first half hour, \$1.50 each succeeding hour.

\$.50 each succeeding five mile zone.

When set must be returned to shop and delivered back within 48 hours, minimum charge \$2.50.

Shop service: \$1.50 per hour or flat rate according to schedule.

Tube service: \$.50 delivery charge within first zone, \$.50 extra each succeeding five mile zone.

Flat rate jobs taken to the shop and delivered back within 48 hrs. Neutralizing and aligning condensers, R.F. and I.F. ....\$3.50

Speaker cone adjustment.....\$3.00

Dial cable replacement.....\$2.50

Installation of tone control.....\$4.00

Volume control replacement minimum.....\$3.50

Power pack repairs, labor minimum.....\$2.50

Power pack parts as follows: Condensers, 450-volt rating or less 1 Mfd. or less.....\$1.50

Each succeeding Mfd. or fraction per Mfd.....\$0.75

2 Mfd. or less electrolytic.....\$1.50

Each succeeding Mfd; electrolytic.....\$0.25

Condensers, 800-volt rating or less, 1/2 Mfd. or less.....\$2.00

Each succeeding Mfd, or fraction, \$2.00

Resistor Replacement, Plus labor:

1 Watt carbon.....\$0.75

3 Watt carbon.....\$1.00

5 Watt carbon.....\$1.25

10 Watt wire-wound.....\$2.00

50 Watt wire-wound.....\$2.50

Transformer Replacement:

See list price of transformer plus labor charge on open jobs of.....\$3.50

Sealed in pitch transformers.....\$6.00

Shop service where all necessary parts are brought in to the shop, labor \$1.50 per hour plus parts.

All work at above prices should carry a 90-day guarantee.

## Keystone Condensers

Keystone Electrolytic Condensers are built especially for the Radolek Company by leading manufacturers. These condensers are compact dry electrochemical units constructed from best quality materials. Capacities are of permanent value and have an extremely low leakage factor. They are free from surge breakdown and merely suffer a temporary increase in leakage current at the time an abnormal voltage is applied. Following an overload the condenser returns to its normal low leakage without the necessity of reforming. Keystone condensers are not harmed by extremes of operating temperatures or shipping temperatures in winter or in summer. In your 1935 Radolek Profit Guide on pages 76 and 77 is listed a Keystone condenser for every requirement.

### PRICES REDUCED

**Keystone Dry Electrolytic In Tubular Fibreboard Cases 450 D.C. Working Volts—500 Volt Peak**



Moisture-proof tough fibre board tubular containers sealed with high melting point compound. Stranded flexible 6 inch leads with high voltage rubber and braid insulation. Leads tinned for easy soldering. Lug type 6/32 mounting studs riveted flush with sides of container. Mounting centers

Cap. Mfd.	Container Size Inches	Stock Number	Your Price	Ten For
2	1 1/4 x 2 3/8	3x5749	25c	\$2.30
4	1 1/4 x 2 3/8	3x5750	28c	2.60
8	1 1/4 x 2 3/8	3x5751	32c	3.00
4-4	1 1/4 x 2 3/8	3x5752	50c	4.70
4-8	1 1/4 x 2 3/8	3x5753	54c	5.10
8-8	2 1/2 x 2 3/8	3x5754	88c	5.50

2 Negative and 2 Positive Leads



Type AR

Sprague  
Vibrator

**Type FR Condensers Type LR**  
Specifically designed for use as replacements in auto radio Vibrator Units. Oil impregnated—Fully sealed. Metal Can Type with Flexible Leads. 1500 D.C. Working Volts

Cap. Mfd.	Container Size Inches	Stock Num.	Code Num.	Price
.01	1 1/4 x 2 3/8	3x7581	AR-11	List Price 45c
.02	1 1/4 x 2 3/8	3x7582	AR-12	
.03	1 1/4 x 2 3/8	3x7583	AR-13	
.04	1 1/4 x 2 3/8	3x7584	AR-14	
.05	1 1/4 x 2 3/8	3x7585	AR-15	
.02	1 x 3/8 x 1/4	3x7586	FR-12	Your Price
.01	1 x 3/8 x 1/4	3x7588	FR-11	
.007	1 1/4 x 2 3/8	3x7589	LR-27	27c
.01	1 1/4 x 2 3/8	3x7590	LR-11	
.02	1 1/4 x 2 3/8	3x7591	LR-12	
.01	3 x 1/4 x 3/8	3x7592	LR-11	
			MV-11	

\*MV-11 and LR-27 Types are exact duplicate replacements for Mallory Units.



**Sprague Extra Safety Factor Dry Electrolytics**

Unusually small. For all ordinary replacement purposes. Of compact, tubular shape. May be used to replace much larger old style condensers of equal capacity. Self-supporting. You will find ample space to hang or bracket them in even the smallest of midgelet sets. Insulated leads. Made by Sprague.

Working Voltage 450

Stock Number	Sprague Code	Cap. Mfd.	Dimensions Dia. Lgth.	List Price	Your Price
3x7593	RE-1	1	1 1/4 x 2 3/8	\$0.55	\$0.32
3x7594	RE-2	2	1 1/4 x 2 3/8	.65	.38
3x7595	RE-4	4	1 1/4 x 2 3/8	.75	.44
3x7596	RE-6	6	1 1/4 x 2 3/8	.90	.53
3x7597	RE-8	8	1 1/4 x 2 3/8	.95	.56
3x7598	RE-8S	8-8	1 3/8 x 2 3/8	1.50	.88
3x7599	RE-44	4-4	1 x 2 3/8	1.20	.71

## Two New TOBE All-Wave Aerial Kits

Essential for Noise-Free Reception and Maximum Efficiency with All Wave or Dual Wave Radio Receivers

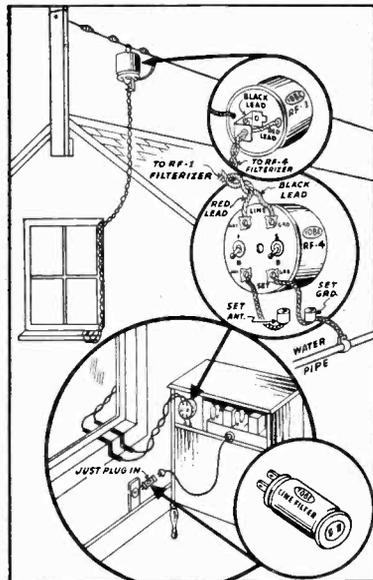
The Tobe All-Wave Aerial Filterizer is the latest development in noise eliminating aerial and lead-in systems. This scientifically engineered product is designed to keep man-made static out of the receiver at all frequencies from 500 kilocycles to 15 megacycles or from 600 meters to 20 meters and may be depended upon to provide greatly improved reception from any short-wave or all-wave receiver when substituted for the usual aerial lead-in.

### High Fidelity

In designing the TOBE ALL-WAVE AERIAL FILTERIZER system, the three fundamental requirements for aerial installation have been kept in mind. These requirements are:

1. The aerial must be efficient at all frequencies.
2. The lead-in must be protected against noise pick-up.
3. The aerial must be easily installed.

The requisite simplicity of installation is achieved by use of a single length of aerial wire in which it is not necessary to insert insulators, special cross-over blocks or other devices which increase the difficulty of installing the aerial. Moreover it is not necessary to connect the lead-in transmission line at any special point on the aerial. The aerial transformer, which is used for coupling the aerial to the transmission line, is so designed that it may be suspended from any part of the aerial or from one of the aerial supporting wires, and its electrical characteristics are such that the efficiency of the aerial is practically constant over the entire receiving range. The construction of the transmission line lead-in is such that it may be carried from the aerial to the receiver without special mounting provisions. This lead-in employs a balanced construction so that radio noises or man-made static that would be picked up on a plain lead-in are balanced out and kept from reaching the receiver. The type of lead-in supplied with this kit is especially designed for low losses and will transmit to the receiver all of the signal picked up on the aerial.



### Contents of Model 34 Kit

A complete aerial and lead-in system with power line filter. Consists of 4—Strain Insulators, 1—Antenna Coupling, 75 ft. Aerial Wire, 50 ft. Filterized Transmission Line, 1—Porcelain Knob, 2—Window Lead-in Strips, 1—Receiver Transformer, 1—Power Line Filter, 1—Ground Clamp, and 25 Ft. Ground Wire. Stock Number 3X8497. List \$6.95. Your Price, \$4.00.

Kit 35, same as above except without Line Filter, Aerial and Ground equipment. Stock Num. 3X8498. List \$1.95. Your Price, \$2.91.

## Additional Vibrator Units Now Available

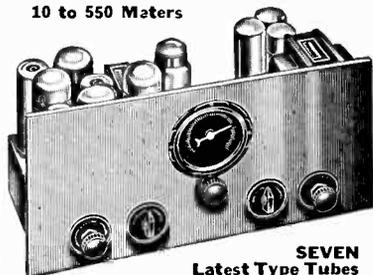
Radolek has a complete line up of replacement vibrators for auto radio receivers listed on page 124 of your big 1935 Radolek Profit Guide. The volume sales of practically all the vibrators included in this listing have proven to us that there exists a real demand amongst your customers for these units. Solicit auto radio repair business and get your share of the replacement vibrator business. We can supply any vibrators you require.

Make	Model	Stock Number	List Price	Your Price
<b>Atwater Kent</b>	816	3x8545	\$3.75	\$2.20
<b>Audlola</b>	345, 347	3x8547	3.75	2.20
<b>Automatic Tom Thumb</b>		3x8531	3.50	2.06
<b>Bosch</b>	45, 79	3x8545	3.75	2.20
<b>Chevrolet</b>	1 unit non-Sync. 2 unit non-Sync.	3x8531 3x8531	3.50 3.50	2.06 2.06
<b>Colonial</b>	164, 150	3x8545	3.75	2.20
<b>Detrola</b>	1100, 1100A, 6A	3x8531	3.50	2.06
<b>DeWald</b>	61	3x8531	3.50	2.06
<b>Erla</b>	550, 5500	3x8561	3.75	2.20
<b>International</b>	1034 Model	3x8545	3.75	2.20
<b>Mission Bell</b>	10A	3x8531	3.50	2.06
<b>Remler</b>	27	3x8531	3.50	2.06
<b>Sentinel</b>	602	3x8531	3.50	2.06
<b>Sparton</b>	33, 33A	3x8531	3.50	2.06
<b>Stewart Warner</b>	1121, 1122	3x8531	3.50	2.06
<b>United Motor</b>	2035	3x8531	3.50	2.06
<b>Utah B</b>		3x8531	3.50	2.06
<b>Wilcox Gay</b>	4B6	3x8545	3.75	2.20
<b>Wurlitzer</b>	460	3x8545	3.75	2.20

## A Quality All-Wave Set You Can Build and Sell

★ CONTINUOUS BAND-SPREAD ★  
**ALL-STAR**  
ALL-WAVE Superheterodyne

10 to 550 Meters



SEVEN Latest Type Tubes

Eight leading Parts Manufacturers Combine Their Engineering and Manufacturing Facilities to Design this Remarkable Build-It-Yourself All-Wave Superhet.

The All Star receiver is completely AC operated from the 110 volt 60 cycle line. This super-sensitive receiver employs a continuous band-spread arrangement which allows any crowded short-wave channel to be spread over 270 degrees of the illuminated airplane tuning dial. Full dynamic speaker volume brings distant stations in with room-filling volume. A beat-note oscillator is incorporated in the construction. All coils are pre-adjusted, eliminating the necessity of test instruments or tiresome adjustments.

### Uses Standard Parts

Only standard parts are used in the All Star receiver. They are manufactured by Thordarson, Cornell-Dubilier, Hammarlund, Ohmit, Electrad, Belden and Crowe.

Write us for your copy of the All Star News which will give you a complete listing of the necessary parts as well as a complete description of this receiver. These parts are all available from Radolek at the published list prices less your regular discount of 10% and 2%.



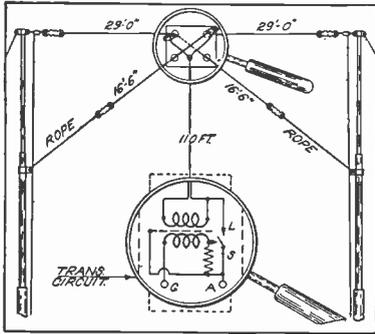
## New RCA-Victor Items

### The R.C.A. Worldwide Antenna System

The R.C.A. Worldwide Antenna System was developed with two important objectives in mind. First, to reduce the effect of man-made static and second, to secure a maximum of signal strength over the entire short wave band. The most effective short wave antenna is horizontal and its greatest pickup of signal is at right angles to its length. Every aerial system has a particular point at which it is most efficient. However,

two dissimilar antenna systems can be connected to the same transmission line without either bucking the other. The overall performance of the combination will be satisfactory over a wider band of frequency than a single aerial. The doublet antenna is the most satisfactory type for short wave reception. To secure different resonance points with the doublet aerial, a crossover connection is made;

that is, the left arm of the longer doublet is connected to the same side of the transmission line as the right arm of the shorter doublet. When connected in this way the output of the short doublet will be additive to the output of the long doublet at a frequency midway between the resonance points. The R.C.A. Worldwide Antenna System horizontal 29 foot doublet is resonant at about 8 megacycles, and the additive effect of the short portion of the doublet, produces another resonance point at about 24 megacycles. The short doublet in itself is resonant at about 14 megacycles. The resultant response is relatively uniform over the most important part of the short wave section. The transmission line used with the R.C.A. Worldwide Antenna System has a low impedance which closely matches the impedance of the antenna and which reflects an impedance ap-



proximately equal to the input impedance of most short wave receivers. This 110 foot line consists of a rubber covered twisted pair of stranded copper wire. Special submarine rubber is employed, because this insulation has the lowest losses and the highest natural rubber content available. The twisted pair wire used prevents out of phase signals and eliminates a major amount of electrical interference. The in-phase signals

picked up by the transmission line are cancelled out by the use of a primary coupling transformer with an electro-static shield between the primary coil and the secondary coil. The reduction of man-made noises with the use of the RCA Worldwide Antenna System is in many cases remarkable. The antenna coupling transformer is also provided with a switch for changing the system from a short-wave

pickup to a conventional long wave antenna. A resistor is also connected from one side of the primary to ground, to prevent the antenna system from sparking to ground, which causes periodic static in the receiver. The entire antenna should be erected as high as possible and in as nearly a noise-free area as can be found. Where the antenna picks up interference it should be pointed at the source of the interference. For European reception the antenna should be pointed North and South, which is at right angles to the majority of European signals. The Radolek Co. lists the R.C.A. Worldwide Antenna System on page 142 of your 1935 Radolek Profit Guide. Your net price is \$3.53. Stock Number 3X8528.

Service Division R.C.A.-Victor Co., Inc.

## No Burnouts with This New \$4 Output Indicator!

A New RCA Instrument for Use with Any Oscillator—Uses Neon Lamp!

Just Announced!

The T M V - 121 - A Visual Output Indicator, a companion instrument to the famous TMV-97-B Test Oscillator described on page 32 of your 1935 Radolek Profit Guide, has high sensitivity and three output ranges. This new visual Output Indicator is ideal for all types of service work where an accurate indicator of output is needed.



Has Three Impedances

The Instrument consists of a Neon Lamp, a Transformer, and a Potentiometer all mounted in an attractive Bakelite case. Three binding posts are provided so that either a low, intermediate, or high input may be used. Having this range of impedances, it may be used on all types of Receivers. Impedances available: 1½ ohms, 4 ohms, or 6 ohms.

For accurate alignment of a Receiver a sensitive Output Indicator is just as necessary as an Oscillator. Using the ear gives only an approximate adjustment, as the ear does not differentiate in small variations of volume. In the past such an instrument has cost two or three times the low price of the TMV-121-A. In many cases, they were not sufficiently sensitive and would frequently burn out. The TMV-121-A is so constructed that it will not ordinarily burn out and sells to the Serviceman for only \$3.92. Our stock number 3X2500.

## RCA Victor 2-Speed Pick-up For 33-1/3 and 78 R.P.M. Records

Cobra head inertia type tone arm and magnetic type pick-up head. The arm is designed to eliminate low frequency resonance. A viscoloid damping block which vibrates as a whole on the low frequencies and yet absorbs the armature vibration on the higher frequencies eliminates any bad peaks in the frequency range. The output of this pick-up is substantially flat from 50 to 5000 cycles. Arm is heavily weighted to provide best needle pressure on both 33½ and 78 R.P.M. records. Base of arm is mounted in a rubber cushion so that pick-up rides free at all times. Attractive Brown crackle finish.

3X2967—Low Impedance. Can be used for home recording with special weight listed below. For this purpose pick-up should be connected directly to the low impedance voice coil connections of the output transformer. Impedance at 1000 cycles, 7 ohms, DC resistance 3 ohms. List Price, \$8.00. Your Price, \$4.70.

3X2968—High Impedance. Not recommended for home recording. Impedance at 1000 cycles, 700 ohms. DC resistance 300 ohms. List Price, \$8.00. Your Price, \$4.70.

Home Recording Weight 3X2969 fits over pick-up head. The correct weight for making the low impedance pick-up number 3X2967 suitable for all recording purposes. List Price, \$1.20. Your Price, 71c.

See Pages 27, 32 and 142 of Your 1935 Radolek Profit Guide for Listings of Other RCA-Victor Products

## RCA SERVICE NOTES FOR 1931-32-33



Here is a new convenience for all Dealers and Service Engineers: RCA-Victor Service Notes, famous for their completeness, handsomely bound between stiff fabric covers. Diagrams and Parts lists for every model issued during the period covered by these books. Each volume contains over 300 pages, and opens flat on the work bench. In addition to service notes, each volume contains additional information such as impedance, inductance and capacity charts, antenna length charts for Short-wave Receivers, reception charts for time and season of short-wave bands, and complete data on all types of RCA Radio Tubes. Volume I covers Sets built during 1931-32 (our stock number 3X5998); Volume II covers Sets built during 1933 (our stock number 3X5999). The net price of each volume is \$1.00.

## An Auto Radio Lock

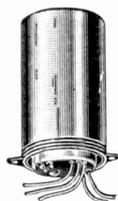
New RCA Auto Lock Fits All Makes of Auto Receivers



Auto Sets are easy to install—but also easy to steal, unless protected by an RCA Auto Radio Lock. Extremely easy to install—just remove old nut from bulkhead bolt, slip on special bushing and nut, and lock slips over nut and bushing like a spare tire lock. Lock barrel made by Yale. List price \$1.35. Your Price, 79c. Our stock number, 3X6332.

## Improved RCA Victor Sealed Replacement Vibrator

For RCA M-34 and General Electric 40-B



Exactly replaces the vibrators used in the RCA model M-34 and General Electric Model 40-B auto receivers. High efficiency and long life. Case is of double aluminum with felt insulation. Vibrator unit is mounted in rubber. Input voltage range, 4 to 8 volts. Output 265 volts at 50 ma. with 6 volts input. 5 color coded leads. Size 2½" x 4½" high. 3X8529. List, \$6.00. Your Price, \$3.53.

# STANCOR Transformer PRICE REDUCTIONS

In line with our Price Reduction Policy our customers have received the benefit of these low prices since the time they were first announced by the manufacturer on September twenty-fifth.

The revised prices on this page were effective September twenty-fifth and supercede the prices specified on pages 43, 44, 45, 46, and 47 of Your 1935 Radolek Profit Guide. With a few exceptions, all Stancor Transformer prices have been reduced. At these new low prices it is possible to buy a Stancor Product at prices even lower than those charged for Transformers of unknown manufacture. Stancor Transformers are exact duplicates of the originals and in most Transformers a wider margin of safety is provided.

These new prices reflect the tremendous progress Stancor has made. Increased sales resulting in increased production have made price reductions possible without any reduction in the quality of the product. When buying a Stancor Transformer you are sure of getting the best possible replacement unit. We carry in stock every Transformer Stancor makes. If the Transformer you need is not listed in your 1935 Radolek Profit Guide send us your order and we will fill it promptly.

## Stancor Exact Duplicate Power Transformer

We are showing our Stock Numbers and Stancor Part Numbers and the New Reduced List and Net Prices. See your 1935 Radolek Profit Guide for Alphabetical Listing of Radio Set Manufacturers and Receiver Models.

Stancor Part Number	Radolek Stock Number	New List Price	New Net Price	Stancor Part Number	Radolek Stock Number	New List Price	New Net Price
P-130	3x3848	\$5.20	\$3.06	P-1192	3x3762	\$6.65	\$3.91
P-149	3x3847	3.50	2.06	P-1193	3x3763	6.50	4.00
P-187	3x3846	5.00	2.94	P-1194	3x3764	8.90	5.23
P-219	3x3846	5.25	3.09	P-1196	3x3808	6.40	3.76
P-220	3x3785	6.25	3.68	P-1204	3x3809	6.60	3.88
P-340	3x3645	\$4.40	4.94	P-1209	3x3842	6.60	3.88
P-420	3x3851	4.55	2.68	P-1213	3x3653	6.25	3.68
P-453	3x3772	4.10	2.41	P-1253	3x3850	6.80	4.00
P-557	3x3668	4.60	2.24	P-1260	3x3669	3.20	1.88
P-597	3x3667	3.50	2.06	P-1271	3x3742	4.30	2.50
P-711	3x3795	6.00	3.53	P-1272	3x3824	4.95	2.91
P-712	3x3854	7.65	4.50	P-1291	3x3624	5.05	2.97
P-713	3x3796	5.90	3.47	P-1358	3x3821	3.00	2.29
P-714	3x3748	5.95	3.50	P-1372	3x3811	8.15	4.79
P-715	3x3678	5.45	3.20	P-1373	3x3807	4.20	2.47
P-716	3x3649	5.35	3.14	P-1380	3x3826	6.25	3.68
P-717	3x3819	6.80	4.00	P-1404	3x3625	2.50	1.60
P-718	3x3821	6.35	3.73	P-1405	3x3623	3.90	2.29
P-757	3x3780	6.90	4.06	P-1406	3x3635	4.75	2.79
P-762	3x3794	6.00	3.53	P-1410	3x3637	3.75	2.20
P-763	3x3798	6.70	3.94	P-1411	3x3832	7.30	4.29
P-784	3x3802	6.95	4.09	P-1412	3x3831	7.55	4.44
P-785	3x3795	6.35	3.82	P-1429	3x3888	5.90	3.47
P-786	3x3797	6.65	3.91	P-1430	3x3818	9.35	5.50
P-787	3x3799	7.15	4.20	P-1434	3x3788	5.45	3.20
P-788	3x3800	7.75	4.56	P-1437	3x3765	7.80	4.59
P-789	3x3782	7.45	4.38	P-1438	3x3627	6.20	3.64
P-790	3x3796	7.40	4.28	P-1439	3x3825	7.30	3.70
P-791	3x3677	5.40	3.17	P-1460	3x3791	4.40	2.59
P-792	3x3757	6.20	3.64	P-1461	3x3626	5.25	3.09
P-798	3x3778	4.65	2.73	P-1462	3x3829	6.15	3.62
P-805	3x3781	5.20	3.06	P-1463	3x3638	6.40	3.76
P-827	3x3796	18.00	7.06	P-1464	3x3707	5.55	3.26
P-834	3x3816	6.40	3.76	P-1465	3x3709	6.85	4.03
P-851	3x3853	6.90	4.06	P-1466	3x3708	5.90	3.47
P-859	3x3671	7.20	4.23	P-1467	3x3826	6.80	4.00
P-864	3x3813	6.45	3.79	P-1468	3x3792	6.45	3.79
P-868	3x3826	7.20	4.23	P-1469	3x3793	3.25	3.31
P-882	3x3801	7.30	4.29	P-1470	3x3839	4.90	2.88
P-883	3x3749	6.50	3.82	P-1471	3x3718	5.60	3.29
P-901	3x3715	4.90	2.88	P-1472	3x3699	5.40	3.17
P-903	3x3700	6.35	3.73	P-1473	3x3817	9.10	5.53
P-905	3x3776	5.45	3.20	P-1474	3x3730	5.60	3.17
P-906	3x3772	3.55	2.09	P-1475	3x3750	5.40	3.17
P-909	3x3812	6.55	3.85	P-1476	3x3751	5.05	2.97
P-910	3x3722	5.75	3.38	P-1477	3x3752	5.00	2.94
P-913	3x3650	6.40	3.76	P-1478	3x3629	7.45	4.38
P-918	3x3651	6.30	3.70	P-1479	3x3628	6.40	3.62
P-919	3x3793	5.40	3.17	P-1480	3x3713	4.40	2.59
P-921	3x3810	5.40	3.17	P-1481	3x3732	4.85	2.85
P-927	3x3728	6.60	3.88	P-1482	3x3734	5.05	2.97
P-939	3x3779	4.65	2.73	P-1483	3x3736	5.00	2.94
P-954	3x3773	4.80	2.82	P-1484	3x3786	5.80	3.41
P-956	3x3744	4.90	2.88	P-1485	3x3743	3.80	2.23
P-961	3x3703	5.40	3.17	P-1486	3x3769	5.05	2.97
P-1000	3x3665	3.65	2.15	P-1487	3x3738	4.80	2.82
P-1015	3x3698	5.40	3.17	P-1488	3x3738	6.45	3.79
P-1016	3x3630	6.05	3.56	P-1489	3x3753	6.40	3.62
P-1039	3x3712	5.85	3.44	P-1490	3x3830	6.20	3.64
P-1038	3x3639	6.00	3.53	P-1491	3x3823	6.10	3.59
P-1053	3x3844	6.75	3.97	P-1492	3x3745	5.30	3.12
P-1066	3x3652	6.05	3.56	P-1493	3x3740	4.05	2.38
P-1068	3x3654	5.80	3.41	P-1494	3x3612	3.60	2.15
P-1070	3x3620	5.80	3.41	P-1495	3x3631	5.75	3.38
P-1084	3x3657	5.80	3.41	P-1496	3x3822	5.00	2.94
P-1086	3x3659	5.80	3.41	P-1497	3x3803	6.75	3.97
P-1088	3x3655	5.80	3.41	P-1498	3x3804	6.50	3.82
P-1089	3x3661	6.30	3.70	P-1499	3x3682	4.45	2.82
P-1101	3x3719	6.70	3.94	P-1500	3x3663	4.80	2.82
P-1102	3x3774	7.25	4.16	P-1506	3x3744	3.90	2.29
P-1108	3x3837	6.00	3.53	P-1507	3x3783	5.50	3.23
P-1112	3x3674	6.85	4.03	P-1508	3x3610	3.90	2.29
P-1119	3x3806	5.70	3.35	P-1511	3x3677	4.65	2.67
P-1134	3x3633	4.60	2.70	P-1571	3x3616	4.60	2.70
P-1136	3x3630	6.00	3.53	P-1578	3x3614	6.20	3.64
P-1143	3x3704	7.70	4.53	P-1915	3x3614	6.20	3.64
P-1149	3x3664	3.25	1.91	P-1916	3x3615	3.65	2.15
P-1166	3x3689	6.45	3.79	P-1927	3x3613	6.10	3.59
P-1168	3x3715	5.60	3.29	P-1928	3x3614	5.25	2.94
P-1190	3x3760	6.10	3.59	P-1974	3x3611	5.35	3.14
P-1191	3x3761	8.00	4.70				

## Exact Duplicate Audios

Stancor Part Number	Radolek Stock Number	New List Price	New Net Price
A-74CP	3x3963	\$2.20	\$1.29
A-72YP	3x3959	2.45	1.44
A-72YCP	3x3961	2.50	1.47
A-73YS	3x3970	2.20	1.29
A-74YP	3x3962	2.50	1.47
A-2120	3x3972	2.30	1.35
A-2128	3x3971	2.15	1.26
A-2132	3x3954	2.70	1.59
A-2133	3x3955	2.70	1.59
A-2318P	3x3964	2.15	1.26
A-2320P	3x3965	2.15	1.26
A-2462	3x3973	1.60	.94
A-2718	3x3996	1.15	.68
A-2774	3x3992	2.05	1.20
A-2811	3x3994	2.15	1.26
A-2814	3x3995	1.45	.85
A-2836	3x3993	1.85	1.09
A-1016	3x3997	1.85	1.09
A-4126	3x3995	2.85	1.67
AU-101	3x3958	4.60	2.70
AU-102	3x3959	4.50	2.65
AU-103	3x3951	3.70	2.17
AU-104	3x3991	5.10	3.00
A-104CP	3x3960	3.50	2.06

## Exact Duplicate Filter Chokes

Stancor Part Number	Radolek Stock Number	New List Price	New Net Price
C-1140P	3x3987	\$2.40	\$1.41
C-1141P	3x3986	1.95	1.15
C-1162	3x3980	1.25	.73
C-1270	3x3970	2.00	1.18
C-1271	3x3984	1.70	1.00
C-1315	3x3982	1.60	.94
C-1318	3x3981	1.20	.70
C-1440P	3x3998	1.75	1.03

## Replacement Power Transformers

Stancor Part Number	Radolek Stock Number	New List Price	New Net Price
P-951	3x3900	\$4.00	\$2.35
P-952	3x3901	3.20	1.88
P-953	3x3902	2.95	1.73
P-955	3x3903	2.35	1.38
P-1501	3x3904	4.40	2.59
P-1502	3x3905	5.00	2.94
P-1503	3x3906	6.25	3.67
P-1504	3x3907	5.85	3.44
P-1505	3x3908	6.05	3.56

## Replacement Output Transformers

Stancor Part Number	Radolek Stock Number	New List Price	New Net Price
A-2200	3x4175	\$1.40	\$0.82
A-2201	3x4186	1.50	.88
A-2203	3x4185	1.10	.65
A-2211	3x4187	1.80	.96
A-2220	3x4176	2.00	1.10
A-2227	3x4177	1.10	.62
A-2231	3x4178	1.50	.88
A-2234	3x4183	1.70	1.00
A-2235	3x4184	2.15	1.26
A-2312	3x4182	1.50	.88
A-2313	3x4181	1.40	.82
A-2347	3x4179	1.40	.82
A-2348	3x4189	1.50	.88

## Replacement Audio Transformers

Stancor Part Number	Radolek Stock Number	New List Price	New Net Price
A-64	3x4170	\$1.40	\$0.82
A-64C	3x4171	1.50	.88
A-72	3x4150	1.70	1.00
A-72C	3x4151	1.80	1.06
A-73C	3x4152	1.70	1.00
A-74	3x4153	80	.46
A-75	3x4154	1.70	1.00
A-74C	3x4155	1.80	1.06
A-74Y	3x4156	2.00	1.18
A-74YC	3x4157	2.10	1.23
A-82C	3x4158	2.30	1.35
A-82C	3x4159	2.40	1.41
A-83	3x4160	2.30	1.35
A-83C	3x4161	2.40	1.41
A-84	3x4162	2.30	1.35
A-84C	3x4163	2.40	1.41
A-102	3x4164	2.70	1.59
A-102C	3x4165	2.80	1.65
A-103	3x4166	2.70	1.59
A-103C	3x4167	2.80	1.65
A-104	3x4168	2.70	1.59
A-104C	3x4169	2.80	1.65

## Filter Choke

Stancor Part Number	Radolek Stock Number	New List Price	New Net Price
C-1001	3x3910	\$1.85	\$1.09
C-1002	3x4201	1.55	.91
C-1003	3x3911	1.25	.73

## Reduced Prices On I. R. C. Metallized Resistors and Motor Radio Suppressors



The Radolek Co. has priced all orders received on or after September 1st at these new low prices. On page 58 of Your Radolek Profit Guide our stock numbers for all values of I.R.C. resistors are specified. Use these numbers when ordering and we will ship at the reduced prices.

### I. R. C. Resistor Price List

All Sizes of	Old List	New List	Your Price
1/2 Watt	25c	20c	12c
1 Watt	25c	20c	12c
2 Watt	25c	20c	12c
3 Watt	35c	30c	18c

### Resistor Kit Price List

Stock Number	Kit Number	New List	Your Price
3x1475	1	\$4.00	\$2.40
3x1476	2	6.00	3.60
3x1478	3	4.00	2.40
3x1479	4	4.20	2.52
3x1477	Grid Bias	2.60	1.56

# REDUCED TUBE PRICES!

These List and Net Prices for Arcturus, Philco, Gold Seal and Raytheon Tubes are now in effect, superseding all Tube Prices on pages 5 to 11 of Your 1935 RADOLEK PROFIT GUIDE. RCA-Cunningham tubes are subject to the discount specified in your consignment contract.

In line with our policy of giving our customers the benefit of all price reductions on any merchandise listed in our catalog, at the time they are announced by the manufacturer, we have been shipping all orders for tubes at these new reduced prices since August 1st.

## Pioneer Bargain Tubes



Pioneer tubes are first quality and thoroughly dependable. Each tube is guaranteed to equal the standards set by leading manufacturers.

Type	Purpose	Net
201A	Amp.-Det.	\$0.22
171A	Power Amp.	.28
120	Power Amp.	.60
224	S-G Amp.	.45
226	A.C. Amp.	.25
227	A.C. Amp.	.26
230	D.C. Amp.	.30
232	D.C. S-G	.60
235	Tetrode	.47
236	Auto Triode	.47
237	Auto Triode	.36
238	Auto Pentode	.47
245	Power Amplifier	.28
247	Power Amplifier	.47
280	Rectifier	.25
41	Power Pentode	.47
42	Power Pentode	.49
43	25 V. Pentode	.54
55	D. Dio-Trio	.47
56	A.C. Amplifier	.31
57	R.F. Pentode	.47
58	R.F. Pentode	.47
49	T-G Amp.	.47

Specify "Pioneer Tubes" and Type Number When Ordering.

## Elkon 5,000 Hour "B" Rectifier

Used to Replace Tubes

Replaces rectifier tube in "B" Eliminator. Dry, solid, rugged, self heating. Just replace the fragile 1,000 hour tube with this sturdy 5,000 hour Elkon EBH and the change is made. Not affected by accidental surges or overloads. No adjustments required. Shpg. Wt., 1/2 lb. 2X87-For "B" Eliminators using Raytheon BH Tube. List, \$6.00. Your Special Price.



**79c**



## Type BH Rectifier Tube

A quality, gas filled, full-wave rectifying tube. Will give satisfactory service over a long period of time. Full 125 mil. output for all types of eliminators requiring this type tube.

2X779—  
List, \$4.50  
Your Price

**97c**

Make Radolek Your Tube Headquarters . . . We carry the leading nationally advertised brands and are prepared to make immediate shipment on all types. Our complete selection and prompt service enable you to operate a successful Tube business with a minimum investment in stock. Prices quoted in your 1935 Radolek Profit Guide are correct for all tubes not listed below.

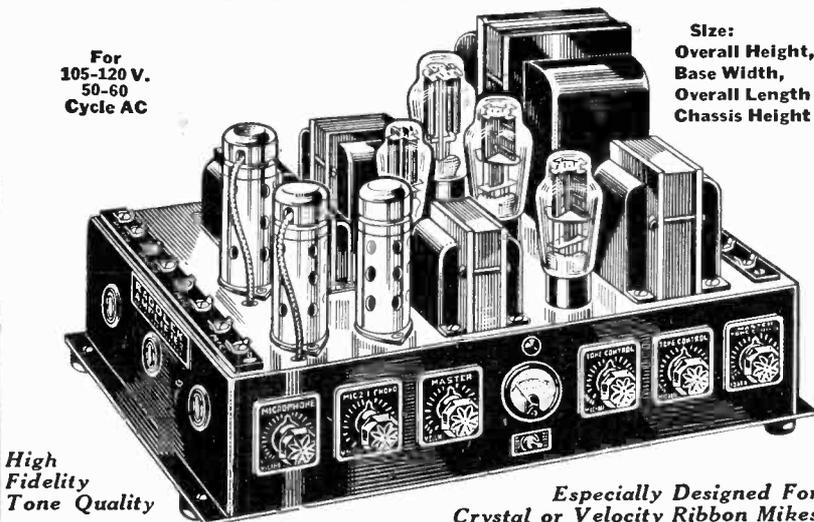
ARCTURUS		PHILCO		TUBE TYPE NUMBER	NEW LIST PRICE	GOLD SEAL		RAYTHEON	
Stock Number	Your Price	Stock Number	Your Price			Stock Number	Your Price	Stock Number	Your Price
3E700	\$0.32	3E626	\$0.32	00A	\$2.00	3E520	\$0.96	3E781	\$1.06
3E701	.79	3E627	.79	01A	.60	3E521	.27	3E782	.32
		3E628	.85	1A6	1.50	3E522	.68	3E785	.79
		3E629	.53	1V	1.00	3E524	.77	3E783	.53
		3E593	.58	2	1.10				
3E702	.93	3E630	.93	2A8	1.75	3E525	.84	3E766	.93
3E703	.58	3E631	.58	2A5	1.10	3E526	.52	3E767	.58
3E704	.58	3E632	.58	2A6	1.10	3E527	.52	3E768	.58
3E705	.69	3E633	.69	2A7	1.30	3E528	.62	3E769	.69
3E707	.79	3E634	.79	2B7	1.50	3E530	.72	3E770	.79
3E706	1.32			2B6	2.50	3E529	1.13		
		3E594	.93	3	1.75				
		3E595	.85	4	1.60				
		3E596	.85	5	1.60				
3E708	.63	3E635	.63	5Z3	1.20	3E531	.57	3E771	.63
		3E636	.74	6A4/LA	1.40	3E532	.67	3E772	.74
3E711	.58	3E637	.58	6C6	1.10	3E535	.52	3E775	.58
		3E638	.58	6D6	1.10	3E536	.52	3E776	.58
3E712	.58	3E639	.69	6A7	1.30	3E533	.62	3E773	.69
3E709	.69	3E640	.69	6B7	1.40	3E534	.67	3E774	.74
3E710	.74	3E641	.85	6F7	1.60	3E537	.77	3E777	.85
3E713	.85	3E642	1.32	10	2.50	3E538	1.19	3E784	1.32
3E714	1.32			WD11	3.00	3E539	.93	3E785	1.59
								3E786	1.59
3E715	.48	3E643	.48	VX12	3.00				
		3E644	1.11	12A	.90	3E540	.43	3E787	.48
3E716	.58	3E645	.58	12A5	2.10			3E778	1.11
		3E649	.79	12Z3	1.10	3E541	.51	3E779	.58
		3E597	1.19	14	2.25				
		3E646	1.51	15	2.85				
		3E625	.79	17	1.50				
		3E647	1.45	18	2.75				
		3E648	.63	19	1.20	3E542	.57	3E788	.63
		3E649	.79	20	1.50	3E542	.71	3E789	.79
		3E650	.79	22	1.50	3E544	.71	3E790	.79
3E719	.58	3E651	.58	24A	1.10	3E545	.51	3E791	.58
3E720	.85	3E652	.85	25Z5	1.00	3E546	.77	3E780	.85
3E721	.34	3E653	.34	26	.65	3E547	.29	3E792	.34
3E722	.37	3E654	.37	27	.70	3E548	.32	3E793	.37
3E723	.42	3E655	.42	30	.80	3E549	.38	3E794	.42
3E724	.42	3E656	.42	31	.80	3E550	.38	3E795	.42
		3E725	.74	32	1.40				
		3E726	.74	33	1.40	3E551	.67	3E796	.74
		3E727	.79	34	1.50	3E552	.67	3E797	.74
		3E660	.58	35/51	1.10	3E553	.71	3E798	.79
3E728	.58	3E661	.58	36	1.10	3E554	.52	3E799	.58
3E729	.45	3E662	.45	37	.85	3E555	.52	3E800	.58
						3E556	.41	3E801	.45
3E730	.58	3E663	.58	38	1.10	3E557	.52	3E802	.58
3E731	.63	3E664	.63	39/44	1.20	3E558	.57	3E803	.63
				40	.80	3E559	.38	3E804	.42
3E732	.58	3E665	.58	41	1.10	3E560	.52	3E805	.58
3E733	.63	3E666	.63	42	1.20	3E561	.57	3E806	.63
3E734	.66	3E667	.66	43	1.25	3E562	.60	3E807	.66
				44	1.20			3E808	.63
3E735	.40	3E669	.40	45	.75	3E563	.34	3E809	.40
3E736	.63	3E670	.63	46	1.20	3E564	.57	3E810	.63
3E761	.69	3E671	.69	47	1.30	3E565	.52	3E811	.69
		3E672	1.59	48	3.00	3E566	1.30	3E812	1.59
		3E673	.58	49	1.10	3E567	.52	3E813	.58
3E737	1.32	3E674	1.32	50	2.50	3E568	1.19	3E814	1.32
3E738	.58			51	1.10			3E799	.58
				52	1.60			3E816	.85
		3E739	.71	53	1.35	3E569	.64	3E817	.71
3E740	.58	3E675	.58	55	1.10	3E570	.52	3E818	.58
3E741	.40	3E677	.40	56	.75	3E571	.36	3E819	.40
3E742	.58	3E678	.58	57	1.10	3E572	.52	3E820	.58
3E743	.58	3E679	.58	58	1.10	3E573	.52	3E821	.58
3E744	.85	3E680	.85	59	1.60	3E574	.76	3E822	.85
		3E681	.37	71A	.70	3E575	.33	3E823	.37
3E745	.37	3E682	.58	75	1.10	3E576	.52	3E824	.58
		3E683	.48	76	.90	3E577	.43	3E825	.48
3E747	.63	3E684	.63	77	1.20	3E578	.57	3E826	.63
3E748	.63	3E685	.63	78	1.20	3E579	.57	3E827	.63
3E749	.69	3E686	.69	79	1.30	3E580	.62	3E828	.69
		3E687	.37	80	.70	3E581	.32	3E829	.37
3E750	.37	3E688	1.32	81	2.50	3E582	1.19	3E830	1.32
3E751	1.32	3E689	.48	82	.90	3E583	.43	3E831	.48
3E752	.48	3E690	.58	83	1.10	3E584	.52	3E832	.58
3E753	.58	3E691	.69	84	1.30	3E585	.62	3E833	.69
3E754	.69	3E692	.58	85	1.10	3E586	.52	3E834	.58
		3E693	.63	89	1.20	3E587	.57	3E835	.63
3E756	.63	3E694	.66	V99	1.25	3E588	.60	3E836	.66
		3E695	.53	N99	1.00	3E589	.48	3E837	.53
3E757	.53	3E699	3.57	806	6.75				
				AF	1.80				
3E758	.95			AG	2.05				
3E759	1.08								

# NEW RADOLEK SUPER 4 STAGE 2B6 PUSH-PULL "P.A." AMPLIFIER

**15  
WATTS  
HIGH GAIN**

For  
105-120 V.  
50-60  
Cycle AC

Size:  
Overall Height, 11"  
Base Width, 10 1/2"  
Overall Length 21 1/2"  
Chassis Height 4 1/2"



High  
Fidelity  
Tone Quality

Especially Designed For  
Crystal or Velocity Ribbon Mikes

## Amplifier Characteristics and Specifications

- 1—15 watts undistorted power output (up to 20 watts can be obtained with negligible distortion).
- 2—Four stages—Seven tubes—Highest gain ever secured in one unit (approximately 152 D.B.).
- 3—For one or two crystal, carbon, velocity, or condenser "mikes".
- 4—No matching transformers or current supply necessary with crystal "mikes".
- 5—Dual "mike" mixing and fading circuit.
- 6—Individual "mike" tone and volume controls.
- 7—Phono or radio input circuit can be mixed with one "mike".
- 8—Master tone control.
- 9—Master volume control.
- 10—Tremendous bass—Brilliant highs. Uniform frequency response from 40 to 8000 cycles within 2 D.B.
- 11—Output power level meter.
- 12—Three minute installation—Standard socket plug-in connection for two "mikes" and three speakers.
- 13—Forty watts field supply for one to eight dynamic speakers.
- 14—Universal output taps for all standard speaker voice coils (3 to 15 ohms).
- 15—Three transmission line impedances (250, 500, 1000 ohms).
- 16—Hum level lower than in finest quality A.C. radio receiver.
- 17—Complies with Underwriters requirements—Fused power line—Bottom protecting plate—Ample provision for ventilation.

## Designed for Dual Microphones

### A Super Power Amplifier!

Combines a Dual Pre-Amplifier and Mixer With a High Gain Power Amplifier Which Supplies its own Speaker Field Current! Includes Individual Mike Tone and Volume Controls and Master Tone and Volume Controls! Volume Level Indicator! Every feature that could possibly be desired in an amplifier is incorporated in this complete Public Address amplifier. Sufficient power is delivered to supply from one to eight speakers with strong high fidelity signals. Original quality of the sound is accurately maintained. Individual controls for regulating tone and volume of each input and master controls for regulating tone and volume of the entire output are all built in. Designed for Crystal or Velocity Ribbon Microphones to be used without external pre-amplifiers; single or double button carbon microphones may be used with suitable current supply and Mike-to-Grid transformers. Any two microphones may be used independently or simultaneously. Either microphone may be mixed with the other mike so as to feature the pick-up of one mike. Formerly a number of pieces of apparatus were needed to accomplish only a part of these functions. Radolek has simplified and combined all this apparatus in one complete compact amplifier.

### Finest Professional Appearance

Only tested quality parts are used in the construction of the Radolek Four Stage Amplifier. Chassis and all transformers are finished in a rich baked-on black enamel. Etched metal indicating plates under all controls. Layout of component parts insures highest efficiency. Ample ventilation keeps operating temperature at lowest point. All transformers, chokes, main filter condensers and voltage amplifier tubes are fully and separately shielded. All wiring and parts easily accessible. Layout diagram, and Schematic hook-up diagram furnished.

### Permanent or Portable Installation

Suited for permanent or temporary installation for broadcasting the finest programs. The complete system with speakers and microphones as described on page 123 of your 1935 Radolek Profit Guide can be set up and put in operation in ten minutes. The amplifier is fitted with standard bakelite sockets for conveniently "plugging in" each microphone, one, two or three speakers and radio or phonograph. Every plug-in connection is plainly marked.

### Powerful New Circuit

Each Microphone Circuit is amplified by an individual high- $\mu$  57 type tube equivalent to a two stage pre-amplifier. The output of each 57 tube contains the individual tone and volume control of each microphone! Distortionless resistance coupling from each 57 tube to the dual grids of a Wunderlich tube permit mixing of the two microphone circuits or one microphone and one phono circuit within the Wunderlich tube. This eliminates the distortion of line mixing transformers and the losses of "T" pads.

### High Gain

The output of the Wunderlich tube is resistance coupled through a master gain control to a 53 which is connected as a triode. This arrangement secures high gain without harmonic distortion. The 53 is transformer coupled to push-pull 2B6 tubes. These amazing tubes contain a cascade arrangement of elements equal to two closely coupled triodes. The master-tone control is across the plate of the 53 tube.

### Tapped Output Transformer

A universal output transformer provides for 3, 6, 9 and 15 ohm voice coil circuits or 250, 500, or 1000 ohm transmission lines. The heavy special steel core of this transformer automatically compensates for as much as 50% variation in load impedance thus actually accommodating voice coils from 1 1/2 to 22 1/2 ohms or line loads between 125 and 1500 ohms.

### The Power Supply

The power supply uses a 523 rectifier with an extra heavy filter system. In addition to supplying all the necessary voltages for the receiver, it provides 400 volts at 100 milli for speaker field supply. This circuit is independent of the filter system and bleeds through heavy resistors until suitable speaker fields are connected. The circuit is arranged for 8-500 ohm or 4-1000 ohm, or 2-2000 ohm speakers or any combination of speakers and resistors which will equal 4000 ohms.

### Output Level Indicator

An audio power level meter visually indicates the volume level at all times—this is particularly valuable if the operator cannot hear the speakers.

### Price List

3X10698—Amplifier exactly as described.  
Less tubes, List Price, \$84.75.  
Your Price ..... **\$4263**  
3X10699—Amplifier exactly as described.  
With 7 matched Tubes ..... **\$4900**  
List Price, \$100.00. Your Price .....

