

# RADIO RETAILING

INCLUDING  
**SERVICE**  
AND  
INSTALLATION  
**SECTION**

HOME ENTERTAINMENT MERCHANDISING



*A Dependable Source of Supply*

## MALLORY - YAXLEY

### PRODUCTS

- Dry Electrolytic Condensers (AC-DC) Radio Motor Start
- Volume Controls
- Rheostats
- Potentiometers
- Variable Resistors
- Circuit Selector Switches
- Tap Switches
- Push Button Switches
- Jack Switches
- Junior Jack Switches
- Midget Jacks
- Plugs
- Cable Connector Devices
- Dial and Pilot Lights
- Dial Plates
- Relays
- Cable Markers
- Radio Convenience Outlets
- Automobile Radio "B" Eliminators
- Automobile Battery Chargers
- Rectifiers for Charger, "A" Powers, etc.

*A Consistent Source of Sales*



**P. R. MALLORY & CO.**  
Incorporated  
Indianapolis Indiana  
Cable Address Peimallo

**YAXLEY MFG. CO.**  
Incorporated  
Division of P. R. Mallory & Co.  
Incorporated



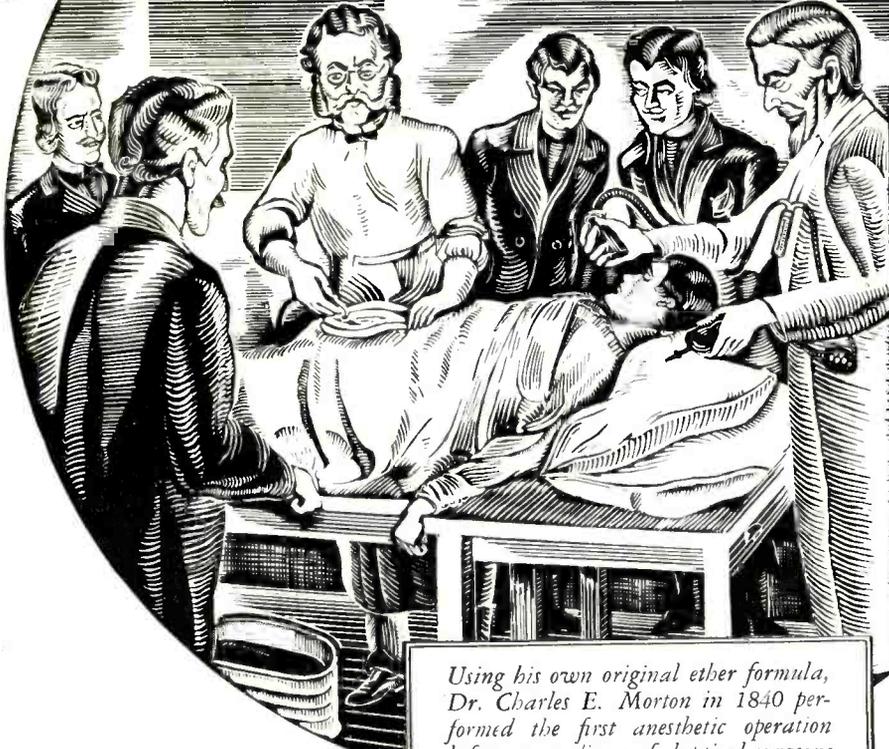
Mallory-Yaxley products for replacement or resale are popular with consumers on a basis of performance and popular with the trade on a basis of worthwhile profit.

**MALLORY**  
**ELKON**

**YAXLEY**

The history of the Mallory-Yaxley combined engineering groups has been a history of anticipating and meeting the needs of an industry which recognizes outstanding contributions.

# Pioneers both!



Using his own original ether formula, Dr. Charles E. Morton in 1840 performed the first anesthetic operation before an audience of skeptical surgeons in Boston.

6 OUT OF 7  
FUNDAMENTAL DEVELOPMENTS  
IN A. C. TUBES WERE  
PIONEERED BY ARCTURUS

- ★ STANDARD-BASE A. C. TUBE
- ★ QUICK-HEATING DETECTOR
- ★ SCREEN GRID
- ★ VARIABLE-MU
- ★ SUPPRESSOR GRID (Pentode, 2A5)
- ★ COAXIAL GRID (Wunderlich)
- ★ EMISSION CONTROL MODULATOR (EAT)

THE pioneering spirit is a rare thing. A few will ever blaze the trail, and the hundreds will ever follow.

In radio tubes Arcturus has always led the way. Six out of the seven fundamental developments in a. c. tubes were pioneered by Arcturus. An unparalleled record of individual research and aggressiveness that quickened radio's progress.

Such pioneering leadership rates Arcturus as

the quality Tube. The public knows Arcturus' reputation for quality manufacture and progressive engineering. Ask any critical engineer or technician about Arcturus Tubes. High standards of manufacturing backed by sound merchandising make Arcturus the logical tube for you to push for consistent profits. Ask your Arcturus Distributor for the details—or write us.

ARCTURUS RADIO TUBE CO., NEWARK, N. J.

# ARCTURUS

## R A D I O T U B E S

DISTRIBUTORS' NOTE: Our headquarters during the RMA convention will be at the Stevens Hotel

RADIO RETAILING. June, 1934. Vol. 19, No. 6. Published monthly, price 25c. a copy. Subscription rates—United States and Central and South American countries, \$2.00 a year. Canada, including duty, \$2.50 a year. All other countries \$3.00 a year or 12 shillings. Entered as second-class matter April 10, 1925, at Post Office at New York, N. Y., under the Act of March 3rd, 1879. Printed in U. S. A. Cable address "McGrawhill, New York." Member of A.B.P. Member of A.B.C. Copyright 1934 by McGraw-Hill Publishing Co., Inc., 330 West 42d Street, New York, N. Y.

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# TOUGH SPOTS

*in Radio Reception*



watch for  
**JULY**  
announcement

of the new 1934-35 Zenith Line

... we picked 'em to  
try out our new All-Wave Sets!

We've urged you to be skeptical about *ordinary* radio reception . . . told you to listen to Zenith's incomparable reception — finer tone — greater selectivity! Now we've put ourselves on the spot, so to speak! We have set up a huge test reception network from coast to coast . . . tough "radio resistance" spots. For several weeks we have been testing the new all-wave Zenith models . . . particularly on short wave reception. And where ordinary sets fold up and don't get a station, Zenith comes in firm and clear on a half dozen different stations!

Our results are being logged . . . engineering reports confirm our enthusiasm for the new Zenith all-wave line. It's a *great* radio! A great line! It contains the latest developments in radio engineering development . . . it's going to be spectacular on short wave reception! Don't commit yourself until you've heard the new all-wave Zenith line yourself! Don't take our word for it—take the results of the nation-wide "tough spot" test! Could anything *prove* in a better way that Zenith is superior? Write for our story and details of the Zenith dealer franchise!

**ZENITH**  
LONG-DISTANCE RADIO

ZENITH RADIO CORP., 3620 IRON ST., CHICAGO, ILL.—EXPORT DIVISION—CABLE ADDRESS: ZENITHRAD—ALL CODES

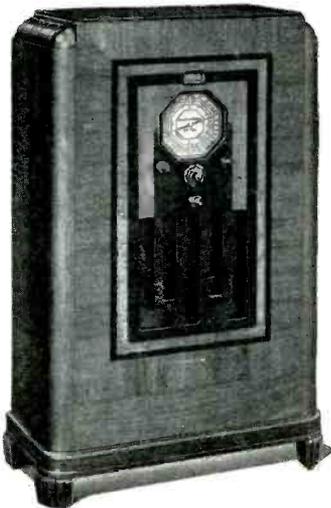
# Notable Additions to a famous line!

## ALL-WAVE Radio

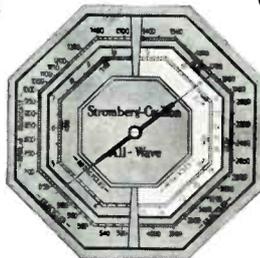
**H**ERE it is, now in production. Already tested by short wave experts, No. 68 has thrilled everyone. They are astounded that a set so sensitive can be so quiet; that its high sensitivity is so uniform, with no "dead spots" anywhere on the dial. They say its tone quality is a revelation, proving that short waves can compete with standard waves for entertainment.

They are amazed at its ability to "hang on" to stations that fade, as indicated by the visual tuning meter. They praise its easy operation; the large airplane dial; the long vertical-reading scales with the short wave broadcast channels and police channels clearly marked on the dial; the "SelectorLite" which illuminates only the portion of the dial in use; the dual ratio knob, permitting slow or rapid tuning without a gear-shift or any back-lash; the automatic antenna selector, for automatically connecting the best available aerial or doublet for standard waves or short waves. In short,

they tell us No. 68 makes short wave reception as pleasing and as simple as standard wave radio. Yet the No. 68 was not designed for short wave alone. It's an *all-wave* set giving splendid performance on standard waves. And the service man is quick to appreciate that *here's* an all-wave set in which every part is readily accessible. Desirable dealer territories and outlying distributor territories available. Write to Stromberg-Carlson's main office at Rochester, N. Y., or to the nearest branch office at Chicago, Kansas City, San Francisco, Atlanta, or Toronto, Canada.



**NO. 68 ALL-WAVE RADIO.** 10 tubes. Push-Pull Class A Triode Amplification. Output 15 watts. Automatic Volume Control. Visual Tuning Meter. Tone Control. Low Tone Compensation. Stromberg-Carlson's best Electrodynamic Speaker. Price, East of Rockies \$175.



### SELECTORLITE DIAL

The dial is divided into four sections: 540 to 1500 Kc, the standard broadcast channels; 1500 to 4000 Kc, the police, aircraft and amateur channels; 4000 to 10,000 Kc, including the 49 and 31 meter broadcast bands; 10,000 to 25,000 Kc, including the 25, 19 and 16 meter broadcast bands and down to 12 meters. Only the section in which you are tuning is illuminated.



### THE NO. 69 SHORT WAVE SELECTOR

Adds short wave, (1,500 to 25,000 Kc) to your present radio thus giving you all-wave reception.

For finest reception on domestic programs, the standard wave Stromberg-Carlsons are superior to any all-wave combination yet developed. This No. 69 Short Wave Selector used with a standard wave Stromberg-Carlson makes available high quality on short waves up to 25,000 Kc, including the 49, 31, 25, 19 and 16 meter bands and down to 12 meters. This also makes available the recent extension of the standard broadcast band between 1,500 and 1,600 Kc. Same short wave operating features as No. 68. Requires no change whatever in your present set. Equipped with 4 tubes. Price, East of Rockies, \$69.50.

*"There is nothing finer than a Stromberg-Carlson"*



1894

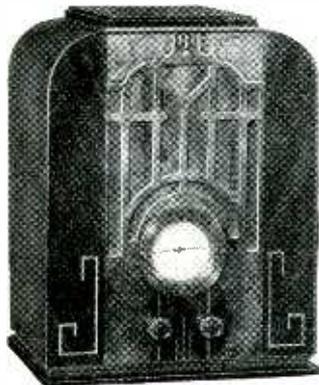
# Stromberg-Carlson



1934

MAKERS OF VOICE TRANSMISSION AND VOICE RECEPTION APPARATUS FOR MORE THAN FORTY YEARS

# two new BELMONT Models

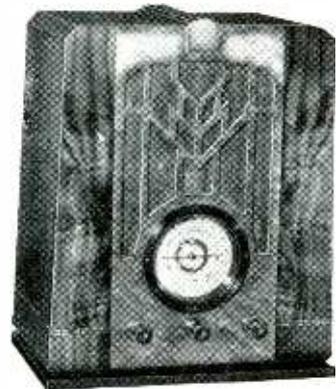


## Model 575

- Standard Wave Receiver
- 5 Tubes
- Superheterodyne
- Dynamic Speaker
- Three-gang Condenser

## Model 675

- Long and Short Wave Receiver
- 6 Tubes
- Superheterodyne
- Automatic Volume Control
- Dynamic Speaker



Model 575 sells on sight. Powerful 5-tube superheterodyne circuit with dynamic speaker. Tubes, one each Nos. 58, 2A5 and 80 and two No. 57. Attractive walnut veneer cabinet with beautiful hand-rubbed finish. Airplane type, full vision, illuminated dial. Precision made throughout. Cabinet is 13½ in. high, 11½ in. wide, 7½ in. deep. Excellent appearing, selective and marvelous tone. List price only . . . . . **\$29<sup>95</sup>**

Model 675 is an exceptional Foreign and Standard Band, 6-tube superheterodyne set. Broadcast band from 540 to 1720 kilocycles and includes top police band. Short wave band, 17.5 to 55 meters, is extremely sensitive, easy to tune, free from noise, smooth vernier tuning, large illuminated dial. R. F. amplification on both bands and oversize power transformer. Everyone wants a short wave set. Show the BELMONT No. 675. Attractively finished cabinets in butt walnut veneer. List price only . . . . . **\$39<sup>95</sup>**

## New Triple Control Dial for BELMONT Model 670 Auto Radio

Approved — Accepted — Preferred. Everywhere dealers are selling Belmont Auto Radios. We're swamped with orders and still they come in. Thousands daily buy Belmonts because they are outstandingly different.

6 tubes, superheterodyne circuit, tone control on the dial, automatic volume control, all parts easily accessible, removable vibrator and dynamic speaker, greater station range, extreme sensitivity and selectivity and the new, exclusive, triple control illuminated dial. Don't wait. Write for full details on the Belmont Auto Radio today. Lists at \$39.50 complete with matched tubes and steering post or panel control for every make of car.



The Belmont Line of standard, short wave, combination sets and auto radios includes some twenty different models ranging from \$14.95 to \$89.50 list. Snappy, attractive, quick selling models. Send today for our dealer sales plan and details of our dealers aids. Visit our plant and show room during the Association meeting, Chicago, June 11 to 14.

# BELMONT RADIO CORPORATION

1257 Fullerton Ave., Chicago, Ill. Cable Address: Belrad Chicago  
Manufacturers of High Grade Radio Receiving Sets Since 1925 a



## This G-E Auto Radio Trio has started dealers singing



Model B-52—G-E Portable Auto Radio. 5-tube superheterodyne that operates on car battery or 110-volt, 60-cycle A.C. Full, brilliant tone, particularly in higher registers. Low battery drain. Factory-sealed vibrator. High output and sensitivity. Airplane-type illuminated dial. Dimensions: 6¾ in. high, 7½ in. wide, 17½ in. deep. Brown streamline case—crackle finish.



In the car, a musical arm-rest



Also operates indoors on 110-volt 60-cycle alternating current

## Feature the complete line of G-E Auto Radios— ranging in price from a new low of \$39.95 to \$69.50

Three of a kind!

That's what General Electric now hands the auto radio dealer . . . three new auto radio models that round out a complete line of sets appealing to every preference and purse.

There's the new G-E *portable* set that operates either in the car or indoors—radically different . . . packed with novelty . . . a leader if there ever was one.

There's the new 6-tube *de luxe* set—Model C-61—for those who want the best in auto radio . . . the finest auto radio that ever bore the G-E monogram.

And there's Model C-41—a greatly improved 4-tube set priced for the mass market.

All quality sets—road-tested and guaranteed. Easily and quickly installed on any make of car.

Advertised, dramatically, in national magazines and newspapers. Fast sellers—paying a full margin of profit.

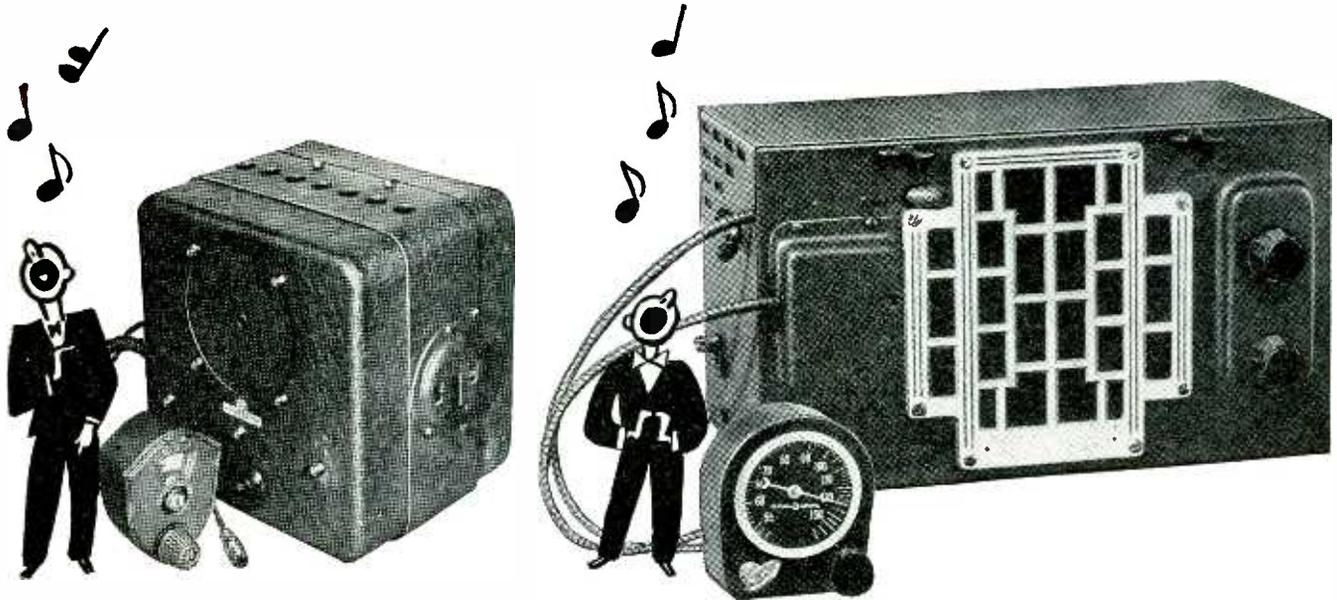
Make the new G-E Auto Radio line your leader. Display and demonstrate these sets of recognized excellence.

They'll make 1934 your biggest auto radio selling year.

*The new*



# "We're in the Money"



Model C-41—Four-tube set combining 7-tube performance with low battery drain. Brilliant tone even in high registers. Factory-sealed vibrator replaces rectifier tube. Ample volume. Gets more daytime programs. Automatic volume control. Two-point tone control. Illuminated dial. One-stud mounting. Fits all cars.



Model C-61—G-E Deluxe Auto Radio. A 6-tube superheterodyne housed in a smartly designed case with highly polished metal grille. Remarkable performance at all car speeds. Greater volume—improved tone. Illuminated airplane-type dial. Smooth tuning. Full range tone control. Automatic volume control. One-bolt universal mounting. Fits all cars.

## And lick all your Auto Radio service problems with G. E.'s Approved Installation Station Plan!

By stocking the complete G-E Auto Radio line, you say "hello" to profits, and "good-bye" to service grief.

The G-E Approved Installation Station Plan calls for the establishment of Approved Installation Stations that handle, efficiently and at low cost, installation and service for G-E Auto Radio dealers who do not wish to do this work.

All G-E Auto Radios are installed

by experts . . . serviced free for 90 days . . . and a certificate guaranteeing satisfaction furnished.

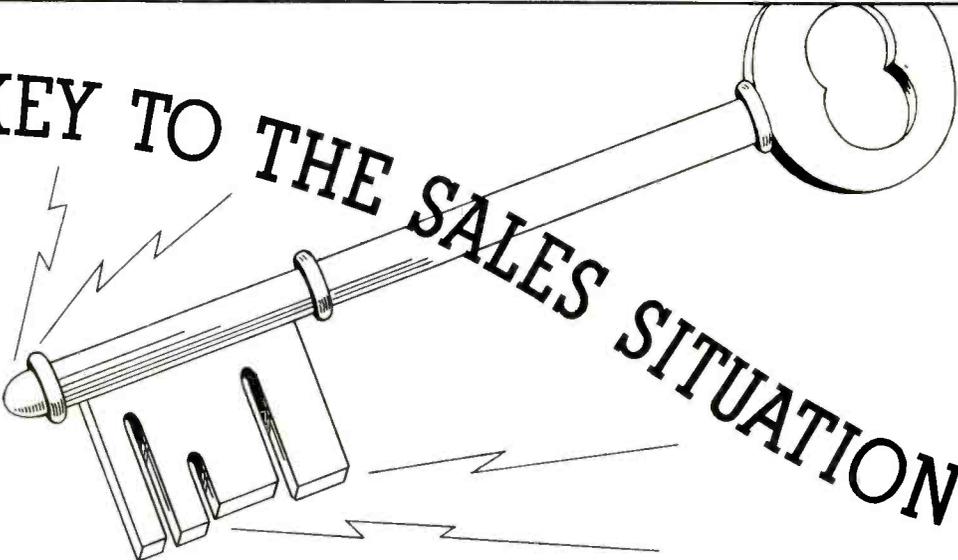
Thus, customer-satisfaction is assured . . . G-E sets give the brilliant and dependable performance they're designed to give . . . dealers are freed from service troubles of the past and can concentrate profitably on sales.

The charges for such service are moderate . . . and part of these

charges are borne by General Electric and the G-E Distributor.

Dealers—ask your G-E Distributor for details of the new 1934 G-E Auto Radio line and Approved Installation Station Plan. Or write to the General Electric Co., Section R-366, Merchandise Dept., Bridgeport, Conn. (Service Stations equipped to handle auto radio installation and service should apply immediately.)

**GENERAL**  **ELECTRIC** *Auto Radio*



THE KEY TO THE SALES SITUATION...

# NO SUPPRESSORS!

● Take your Auto-Radio business *out* of competition! Why enter price competition—why tolerate reduced discounts—when you can get more sales at a regular price and with the full profit to which you are entitled?

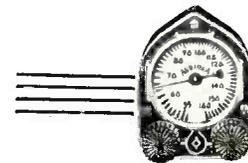
You can do it, *if you sell a receiver with a feature that competition does not have.* You can do it—if you sell the F-M Audiola with the exclusive feature of NO SUPPRESSORS ON THE SPARK PLUGS!

No car owner wants impaired ignition, greater gas consumption, reduced speed, hard starting and the host of other ills that follow "suppressing the spark."

Offer them this auto set, the F-M AUDIOLA, and tell them here is the radio which requires NO SUPPRESSORS on the spark plugs and—

You will get the business  
At a fair price  
At the profit that is rightfully yours.

Arrange now to sell the Auto-Radio line which takes you out of competition. Write, phone or wire Audiola Radio Company, 430 S. Green Street, Chicago, Ill. Subsidiary, Fairbanks, Morse & Co.



SIX TUBES

**\$39.95**

Six latest type RCA tubes, airplane dial, dynamic speaker, full 3-watt output, sensitivity less than 1-microvolt absolute. *No suppressors!* Other models, to \$69.95.

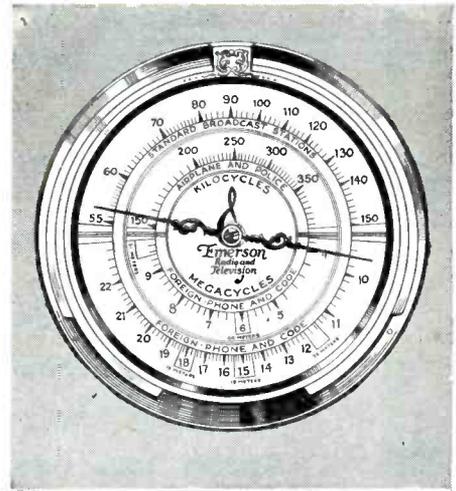
# FAIRBANKS-MORSE



Designers and Manufacturers of Engineered Products for 104 Years

**I**f you are still waiting for one, final, convincing reason why it's more profitable to *sell* Emerson . . . than to explain why you don't . . . study the set below. Then remember that smart dealers have made Emerson the "World's Biggest Selling Little Radios," because every Emerson model is packed with selling features beyond its price class! Phone your Emerson jobber for immediate deliveries, or write to

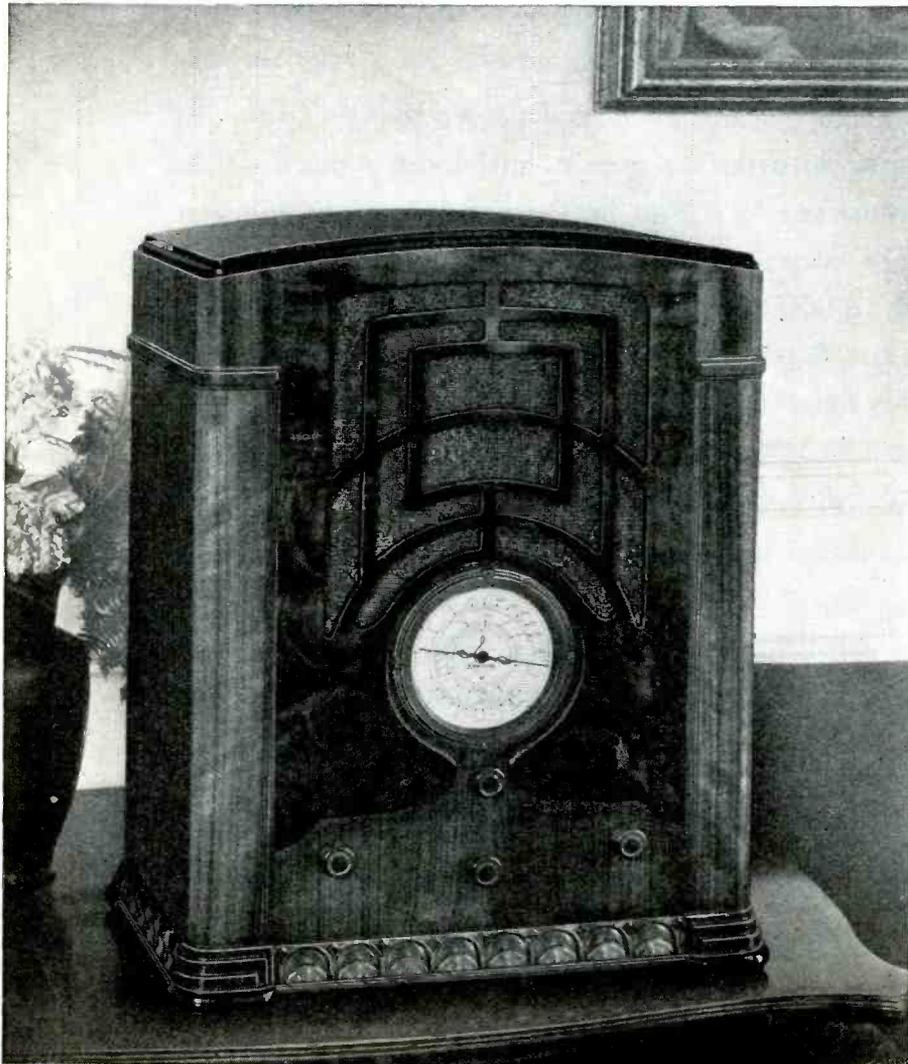
**EMERSON RADIO & PHONOGRAPH CORPORATION**  
111 Eighth Avenue, New York



**A COMPLETE Line . . perfectly BALANCED for dealer profits**

# Emerson Radio

**. . 15 Models—compacts, midgets, auto radios, consoles—\$15<sup>95</sup> to \$99<sup>50</sup>**



## True ALL-WAVE Table Harmadius

13 to 550 meters

four tuning bands on illuminated  
airplane-type dial

7-tube, AC superheterodyne

Emerson Model 71, List price,  
complete with Cunningham tubes,

**\$69.50**





# RADIO RETAILING

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NO. 6

JUNE

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STEVENS HOTEL • CHICAGO

Where Radio History Is Made

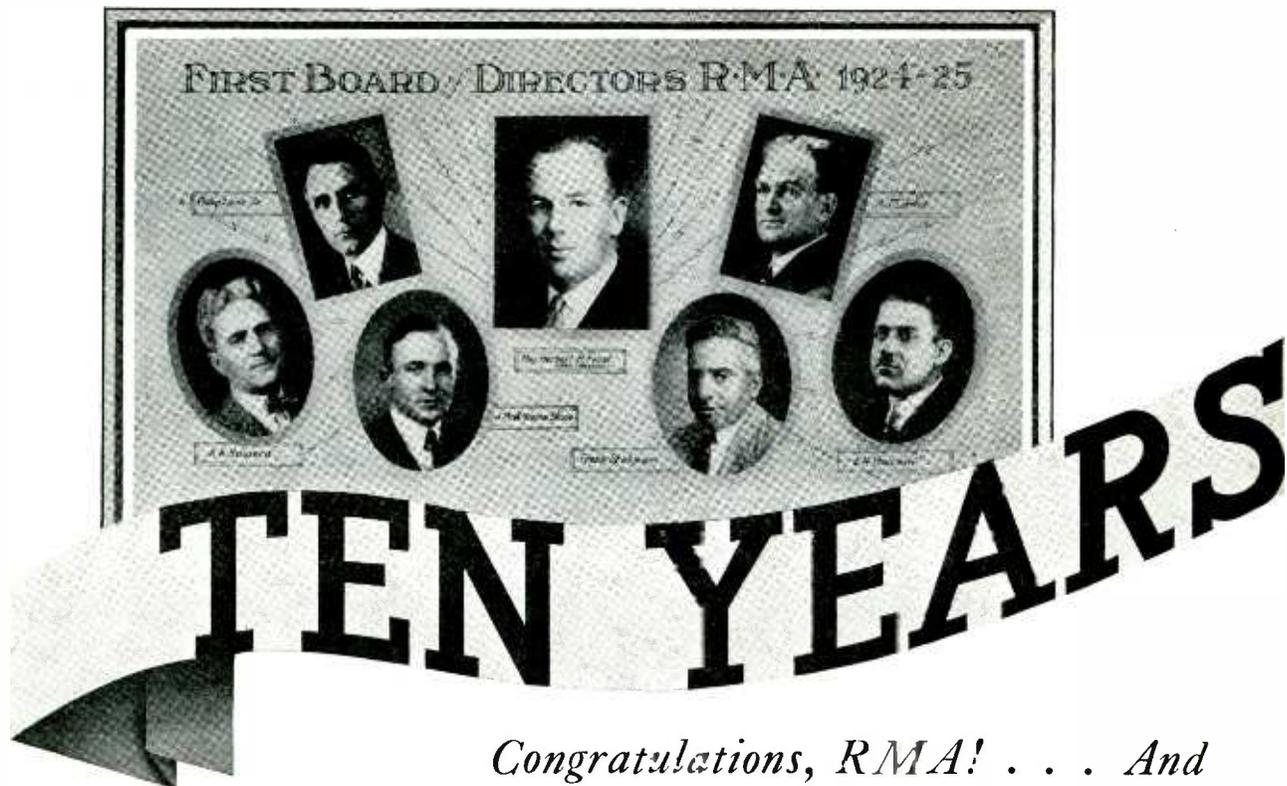
Scene of seven national conventions and six trade shows sponsored by the Radio Manufacturers Association. Here RMA is celebrating its Tenth Birthday

## NOW the SELLING Starts

IN 1925 a small group of radio manufacturers gathered in Chicago and organized the Radio Manufacturers Association—whose Tenth Anniversary will be celebrated in that same city this month. Ten years, in the life of a basic industry is a short time, a first breath period only. The developments of the past 60 days indicate that the *real battle* for business starts this fall—that it will be waged with an intelligence born of experience and that the cooperative efforts of all branches of the industry will be behind it.

The joint RMA and WRA conventions in Chicago this year should mark the start of a new deal to radio merchants for many reasons. First, is the fact that there now exists a government-authorized code of fair practices whose constructive influence will be felt by the manufacturers and dealers as well as by the members of the Radio Wholesalers Association. Second, the manufacturers, recognizing the importance of the RWA, have appointed a special committee to confer with the wholesalers on matters of mutual interest. Third, there is the growing desire, on the part of the listener, for a super-fine receiver and an expressed intent, by the set makers, to supply that demand.

Let RMA's Tenth birthday, therefore, mark more than the passing of years. It so happens that it arrives at the exact time for the launching of a new kind of salesmanship. Let it signalize, not the end of a decade but rather the beginning of individual and cooperative sales policies which will again cause every substantial radio dealer in these United States to rise up and sell radio as he never has before.



*Congratulations, RMA! . . . And  
May You Live Long And Prosper*

**I**T WAS in the early part of 1924 that a small group of radio men first gathered, in Chicago, to discuss the feasibility of industry cooperation. The record shows that those who comprised this original, informal council—and formed the nucleus of the Radio Manufacturers Association—were as follows:

C. H. Belden, A. J. Carter, R. A. Connor, Herbert H. Frost, G. R. Haase, A. A. Howard, W. H. Huth, P. C. Lenz, Jr., A. Newcombe, E. N. Rauland, Frank Reichman, Theodore Sheldon, W. H. Trimm, J. C. Tully, Fred W. Wellman and F. W. Will.

The idea of a national organization developed quickly and, on May 12, 1924, the RMA was formally incorporated under the laws of Illinois. From a slender membership roll of 19, it went to its first convention, at Atlantic City (1925), with a membership of 146. Today the RMA includes practically every substantial set, tube, parts and accessory manufacturer in the industry.

### *Has Served Its Industry Well*

The RMA has served its industry well, throughout these first ten tumultuous, glamorous years of its existence and of the life of as rapidly moving an industry as ever came into existence. It has held, without intermission, ten annual conventions and it has conducted seven industry trade shows (six in Chicago and one in Atlantic City). The Radio Manufacturers Association also has sponsored many public radio shows in New York and Chicago, the holding of which has done much to maintain public interest in radio.

Its other accomplishments are too numerous to mention in this brief synopsis of its history. Legislative committees, organized under the RMA have killed many harmful legislative proposals and have secured many benefits for the members of this dominant organization.



HERBERT H. FROST  
1924-26 1928-29



A. T. HAUGH  
1926-1927



MORRIS METCALF  
1930-1931



J. CLARKE COIT  
1931-1932

### PAST PRESIDENTS

# YOUNG

## TENTH BOARD of DIRECTORS R.M.A. 1933-34



C. C. COLBY  
1927-1928



H. B. RICHMOND  
1929-1930



FRED D. WILLIAMS  
1932-1934



and Executive Vice-President  
BOND GEDDES  
who has held this office  
since 1927

### OF THE RMA

Radio Retailing, June, 1934

The RMA has long maintained many important technical and trade committees whose work, quietly carried on, has contributed much to the well-being of every manufacturer in the industry.

Perhaps RMA's broadest contribution to the industry as a whole has been the fact that, through its many activities, conventions and trade shows, it has held radio men together as one, coherent body. It has carried aloft the banner of industry recognition. Through its many meetings manufacturers have become acquainted with their fellow competitors and have been afforded a clearing house for complaints and for constructive suggestions.

### Should Become Sales-Minded

So much for history. Today, the radio manufacturers of America are faced with broader responsibilities, with larger opportunities than at any time in the past. We repeat our opening editorial thought, from now on RMA must be sales-minded. Through concerted action it should originate, and carry out, industry sales plans and sales policies which will heighten public interest in programs and in buying a *new kind of radio set*. These objectives already have been laid down as the primary purpose of this year's deliberations at Chicago.

What, then, is the present situation? It is this: The wholesalers are organized and rarin' to go. Backed by a code of fair trade practices, the enforcement of which will correct most of the flagrant distributive—and retail—abuses of the past, the Radio Wholesalers Association has paved the way for aggressive sales promotion policies. Now it's up to the manufacturers.

The RMA is still a youngster—but a lusty one and old enough to step out and fight . . . fight for a greater share of the public's dollar . . . and for the business future of the radio dealer and jobber.

# ALL-INDUSTRY SHOWMANSHIP

TEN years is a short time in the life of a basic industry, yet it is long enough to witness the complete obsolescence of early designs and of original selling conditions. Such is the case with radio. Ten years from that day in May, 1924, when a handful of manufacturers launched the RMA, finds the radio industry on the verge of an entirely new decade of progress—a new era, full of interesting possibilities.

Why is this so?

We are entering a new era because: (a) Sets are now commercially practical which, in distance range, can capture the signals of stations half way round the globe. (b) Sets are now commercially practical which, in tonal performance, can reproduce all the frequencies necessary for fidelity, and (c) The radio wholesalers, under their own code, are about to build a strong organization which can be developed into a real selling factor.

And in another sense we are on the verge of a new business deal because, despite these developments and many other technical advancements, radio, from now on, *must be sold*. Every worthwhile sale must be planned in advance—must be fought for. And individual, local effort and publicity will not suffice. There must be created an organized, consistent and persistent, nationwide, all-industry promotion campaign. This step is necessary to back up local effort and to make the public conscious of these revolutionary developments.

In other words the unrelated publicity plans of the manufacturers, each telling a different story and together creating the impression that the best thing about a radio is its low price, will not turn the trick this year or next. No industry in America has a better or a more convincing story to tell the public than has our own. But we must agree as to just what this story is and must marshal all the resources of a united body to put it over.

## The New Lines Must Be "Staged"

The dealer must now become a genuine salesman—and the manufacturer, jobber and broadcaster should provide his second line of attack. In other words, these new sets can be sold only through sheer showmanship. The new features, of themselves, will not be sufficient to create a big replacement market. The new lines must be "staged." There should be a synchronous introduction of the new sets and a cooperative advertising of their new features.

Admittedly the problems involved in such an undertaking are many—but they are not insurmountable. Let's face them:

What will all-industry promotion of radio cost? Where will the money come from? How enlist the support of the broadcasters, program sponsors, manufac-

## It Shapes Up

### WHY

The time is ripe to sell quality sets

*Buying power has returned and the '35 models (all wave, high fidelity) will be worth shouting about*

But—for real results—concerted, all-industry action is needed

*Retailers, distributors, manufacturers, broadcasters, sponsors—all working together—must dramatize, nationwide, the new things radio offers . . .*  
**SHOWMANSHIP FOR RADIO**

### WHAT

Through a series of all-industry educational campaigns the public will be persuaded that sets over three years old are out dated; that proper installation is important and that new programs and new transmission and reception technique has entirely revitalized the radio art

*The mediums—all the tested devices and vehicles for arousing the public will be utilized; particularly station announcements, special programs, the newspapers, display materials and local activities*

turers, jobbers, dealers? What administrative machinery should be set up?

Shall we run a limited time campaign or spread this effort over a term of years? On what talking points shall it be predicated? What can be done from the studio end to heighten listener interest? And how about manufacturer-dealer relationships? Is the dealer sufficiently sold on radio, its profit possibilities, to climb aboard this bandwagon? Will he have a sufficient stock of the new models by September so that he will welcome this opportunity to concentrate on a cooperative selling job?

Clearly this task cannot be performed by any hit-or-miss methods; by voluntary committees of executives already over-burdened with their own troubles.

**Yet the need and the challenge of today is to develop a new kind of radio salesmanship.**

What, then, is the first step that should be taken? Out of last year's campaign these lessons were learned:

First—the backing of the broadcasters must be secured.

# Will Sell Sets

## Like This

### HOW

#### Money must be raised

*A tax on each set sold, so small that it will not be felt nor constitute the slightest sales resistance, will provide adequate funds for a series of national sales drives over a long time period*

#### An administrative organization must be provided

*A full time manager must be employed*

#### The cooperation of the broadcasters must be enlisted

*This can be done if the radio trade evidences its sincere intentions by raising the necessary promotion funds and organizing to sell RADIO*

### WHO

#### The wholesalers are organizing under their own code and stand ready to provide the necessary initiative

*They directly contact both the manufacturers and the dealers and are in the logical position to push this idea*

#### The RMA and the dealers will also welcome new sales incentives

By this is meant orders from the chain heads and from station owners which will produce a flood of tie-in announcements; messages which will call attention to the advancements in the art of transmitting and reproducing radio signals with a fidelity never before equalled. In addition to this, special broadcasts should receive nationwide *advance* publicity through paid advertisements in the press, with window cards for dealers and by preliminary announcements over the air.

Second—Dealers want a product they can shout about; and they want this merchandise by September, with few price and model changes thereafter.

Third—they want plenty of flashy display material; large window lithographs that will drive home the basic improvements of this year's sets . . . messages that will obsolete receivers more than three years old.

Fourth—Newspaper mats, prepared copy and illustrations must be supplied.

Fifth—Local promotion efforts should be supple-

mented by national advertising; messages that will awaken America to the *new* kind of radio now available.

Such a 100 per cent cooperative selling job should take into consideration such matters as manufacturer-jobber-dealer policies; chassis and cabinet design, the selection of a salaried executive; the reconciling of competitor differences and, lastly, the imposing of a small tax on the industry to finance such an undertaking. This latter step, unpopular though it may be, is essential because to accomplish sales results worthy of the name the national promotion must be tremendously impressive, possess maintained continuity (be given periodic blood transfusions whenever necessary) and automatically stimulate the trade to work energetically and the public to buy freely.

### Special Bureau to Administer Fund

Broadly speaking an average tax of 40 cents a set should provide sufficient funds with which to carry on a dramatic and resultful series of selling drives. It has been suggested that this fund be collected and administered under the auspices of a special Bureau, to be composed of representatives of the RMA, the RWA and other interested bodies or individuals. *Radio Retailing* endorses such a plan.

In closing, may we point out that, under the new radio wholesalers' District Agency Code administration plan, the active and official cooperation of not less than 300 leading wholesalers, located in all the vital trading centers of the country, will be available to direct and push any national sales movement. Through these District Agencies the active cooperation of most of the local dealers and jobbers should be secured and the proper distribution of promotional and display materials made certain.

We suggest, also, a series of four to six seasonal campaigns a year—of from a week to ten days' duration each; these special "drives" to be supplemented with national advertising and the education of the listener in radio's progress through special programs and announcements.

Bear this in mind: the public will support an industry only to the extent that said industry sells itself to the ultimate consumer. Radio's replacement market alone is now tremendous—but it must be attacked on all fronts. Only through such concerted action, through a series of carefully planned and sustained campaigns, adequately financed, can the radio trade make enough "noise" and attract enough attention to produce the business that will respond to such tactics.

We're not doing enough. The path to volume sales is clearly defined. Let all concerned support those who are leading the way.

4 years  
In Business  
and



Never Pushed a

*Colclough of Albany  
prefers moderate volume  
at comfortable profit to  
high-pressure methods  
with attendant overhead*

By

W. W. MacDonald

"AN outside sales crew produces volume. It does not always return commensurate profit. I am told that some dealers operating large crews still make money. Perhaps this kind of a business requires a peculiar brand of managerial technique which is unfamiliar to me. For I find it difficult to understand how salesmen can make a living on 10 per cent in these times. And the radio and appliance man's margin scarcely permits him to pay much more.

"My son and I prefer to do a conservative business and think in terms of profit rather than volume. We're perfectly content to let others buy in carload lots and move literally mountains of stock. Too often, in our estimation, this makes money for everybody concerned but the dealer. *We've been in business four years and have never pushed a doorbell.* The business is growing. Not as rapidly as we'd like to see it grow. But we think we're on the right track."

Coming from R. V. Colclough, Albany, N. Y., this is an interesting statement. For R. V. spent most of his life prior to July 1930 as an insurance and piano salesman. He knows his selling. It is made even more interesting by the knowledge that it reflects the thinking of an increasing number of experienced dealers who are no longer impressed by mere volume. We think we scent a strong back-to-old-fashioned-selling-methods movement among the trade. Even confirmed crew operators are making concessions to the conservative reaction, are leaning less and less toward cold-canvassing.

then Bill sells them a new RADIO



and APPLIANCES provide repeat sales



# Doorbell

But how can sufficient business be obtained without a certain amount of cold-contact? Perhaps a review of the Colclough business methods will provide an answer.

The company sold \$13,000 worth of radio and appliances in 1933. This does not include repair work billings, a sizable part of the business. Fifty-two per cent of this volume was in sets and tubes (Philco, RCA, Sparton, Tung-Sol) and the remainder in appliances (Kelvinator refrigerators, Thor washers, Hamilton-Beach cleaners, Hotpoint minor appliances, Standard ranges). A 25 to 40 per cent increase is anticipated for 1934, in the light of first quarter gains. In April, 1933, for example, billings totalled \$662, whereas April, 1934, put \$1,574 on the books.

## How He Gets The Business

Now obviously this is not a big business by comparison with metropolitan operations. But we are willing to wager that the net profit returned to Colclough (which he naturally refrains from divulging for publication) compares favorably with that eventually finding its way into the jeans of many a crew operator who boasts double or triple this volume. For the Colclough overhead is low. Rent is only \$75 per month. Total operating costs, less salaries, run close to \$5 a day. R. V., his son Bill, and one service man constitute the entire personnel. When times are lean the partners take no more out of the business than they absolutely need.

The store, despite its conservative selling method,

placed fifth in the March-April sales contest staged in Upstate New York by a leading set maker.

Bill is responsible for a large slice of the Colclough sales. His favorite method of pulling in new business is quite simple . . . for a salesman. The company spends \$5 monthly for a service ad in the local telephone directory, which brings from 3 to 5 repair jobs per week. Then there is always considerable repair work among the company's 300 active service accounts which have patronized the store on and off for several years.

Bill, and not the serviceman, takes all these calls . . . or all he can handle. A good technician, he makes minor adjustments right in the home, brings major jobs back to the shop man. But his primary purpose, once in a home, is to make a "one-man survey" of its appliance needs, endeavor to interest the housewife in a new radio or appliance. Leads for merchandise sales are readily developed in this manner and are later followed up, under the guise of "set inspections." Frequently it is possible to make demonstration appointments for new equipment while actually in the home on the first service call. More often it is found desirable to induce the housewife to come to the store to see the appliance there. Sometimes the service customer is not a prospect for new equipment but recommends a friend who is.

Fully 40 per cent of the concern's business is un-earthed in this manner. It is futile to try to explain in detail just how Bill sells in the home. All we can say is, simply, "He is a good salesman." The average serviceman would be totally unsuited to this task, he informs us, pointing out that "finesse" is needed to interest a service customer in new equipment without seeming to apply pressure . . . which is anathema to both Colcloughs.

Service used to follow sales. Now, it seems, sales follow service. This is the first, and most important, (Continued on page 26)

# Tube CON



LOUIS BUEHN, Jr.

Jobber



V. W. HODGE

Dealer

WE  
LIKE IT

*The following state the thoughts of the them but summarize against tube consignment in dozens of letters by "Radio*

THE outstanding favorable feature of the "more than consignment" plan, from my viewpoint as a jobber, is that it is beneficial to the retailer. The dealer is in a much stronger position as he looks to only one jobber as his source of supply—and the jobber knows that a certain group of dealers are going to look to him. This enables the latter to be prepared to supply the needs of his accounts and makes for closer cooperation. This theory has proven out in practice by the exclusive distribution methods employed in the field of specialty products, including refrigeration, washing machines and radio receivers.

But RCA's outstanding achievement in the formulation of their "Agency Plan" is that factor of assured profit—and, already, it has been working well. Our dealers know that they are going to sell a certain type tube for a certain set sum of money; and that the competitor across the street is going to do likewise. Both know that they will receive a definite margin of compensation and that, if list prices are changed, they will be protected. Further, that the more effort he puts on selling tubes, the greater will be his compensation.

Considerable stress has been laid by the manufacturer in question that it seeks better, not more, distribution. This objective already has been evidenced in practice—another reason why our dealers are supporting this plan.

The tube business should have been one of the most profitable divisions of the radio business but, heretofore, profits have been sacrificed due to pressure of competition. To attempt to bring this division of radio out of its chaotic condition is a courageous step, a gigantic program which should be supported and which seems to be on its way to success.

THE LOUIS BUEHN Co.  
Philadelphia, Pa.

I HAVE been handling tubes on a consignment basis for ten months and have found this plan to be practical and advantageous, at least for the small or medium size dealer. Possibly the big fellows can afford to buy outright all the different types of tubes but up this way we feel that consignment, with its price control protection, is the best way for all concerned to merchandise an item like radio tubes.

I know for a fact that only the two consignment dealers here in town stock the special type tubes. I signed with RCA as soon as their new policy was announced because my past experience has been so favorable. I have already noticed its good effects in the elimination of some nasty competition. If this plan is enforced it should continue to eliminate the cut price artist and give the substantial dealer the profit he is entitled to.

Consignment should pave the way for the standardization of tube types and prices. The market has been flooded with multi-prong tubes which has made the proper stocking of tubes impossible. Consignment will remedy this condition. It also should make the tube manufacturer a bit more conscientious in the factory processing and in the guaranteeing of the product which he turns out.

Summarizing: This plan is a big step forward. It standardizes prices, assures adequate stock without burdensome investment and places all on a fair competition basis. To date I note that the new spring issues of the catalogs of four different mail order houses do not list Radiotron tubes at cut prices. Although our discount is a trifle shorter, the many advantages offered more than compensate for this small difference in gross spread.

RADIO REPAIR SERVICE  
Claremont, N. H.

*Radio Retailing, June, 1934*

# SIGNMENT

WE  
DO NOT

*ments express not only individuals signing the arguments for and ment which are set ters recently received Retailing."*



F. JOHN HARRIMAN



CLARK GOULD

Jobber

Dealer

FOR the past two years I have averaged two calls a month, in an eight county territory, on our dealers and, during that time, have sold them tubes on the outright purchase plan exclusively. Two other jobbers have been selling tubes on the consignment basis in the same territory. Since 1932 we have increased the number of our dealers and the volume of their tube purchases—and we never have consigned a tube.

Our dealers have been saved the bother of making out monthly stock reports and have made more money due to the fact that the retail discount is right. The only dealers we have lost have been the smaller ones, in most cases COD accounts. We find that the responsible dealer does not want his name included with those who cannot afford to purchase tubes outright. He wants to be an independent merchandiser, not a factory agent.

A large part of our tube business comes from the consignment dealers of our competitors who buy the fast moving tubes from us, for cash, and let their jobber hold the bag on the slow moving ones.

Another thing, no matter how alert a jobber may be, he finds, under the consignment plan, that many of his dealer accounts have signed with someone else. Or, if he signs most of his dealers, he finds his clerical work much heavier and that his salesmen cannot cover as much ground as formerly—due to the time required to check dealer stocks.

A jobber must "sell" just as hard, even though his accounts are on a consignment basis, and his financial obligations are practically as burdensome. Personally, I do not favor this type of distribution for tubes because consignment tends to set up in business too many irresponsible retail outlets. Possibly this danger will be foreseen and avoided. I hope so.

HARRIMAN RADIO PARTS CO.  
Appleton, Wis.

WE have stocked and sold liberally what we consider the leading make of radio tubes for some years. We have tested tubes free—and freely—and we have enjoyed the business of our community from those who wanted the best tubes backed by a reliable store at regular prices. On the other hand, the garage man, the newsboy amateur repairer, the chain store, etc., all have had other makes of tubes at cut prices which most of them handled on consignment, principally because their capital or credit did not permit them to own them.

Now, so it seems to me, because our tube account feels that it can hold its present dealers and, by consignment, acquire some of the other trade, we are compelled to join the consignment host—at a smaller profit and turnover, as the business must now be split.

This angle of the consignment plan is somewhat discouraging—it should be corrected. From my viewpoint it would seem that a policy of a few strong dealers is better than one calling for many irresponsible ones whose only interest is in trying to "beat" the game. While I appreciate the higher objectives of this consignment policy the above is a fair statement for that class of retailers, such as The Gould Company, who have been doing business on resources and initiative.

Another point: In the past we have found it advantageous to divide our business among several jobbers. Now we must select one jobber. This makes the others peeved. To the dealer who is individualistic, consignment means carrying someone else's stock—an agent legally responsible for the property of another.

Lastly, the main purpose of the live dealer is more sales and more profit. I do not see provision in the present plan for the accomplishment of either of these primary, merchandising needs.

THE GOULD CO.  
Southington, Conn.



# Helen Crooks

## AUTO-RADIO SPECIALIST

THE management of a retail radio business is scarcely a woman's game, frequently taxing the energy and ingenuity of even the hardiest male. And auto-radio, conjuring up visions of greasy motors and complex noise-suppression problems, seems even less her *metier*.

This makes Helen Crooks, attractive and efficient co-partner of Van-C Sales, Newburgh, New York auto-radio headquarters, "news." For Helen's concern sold 38 car sets in 1933, largely through her efforts, anticipates moving 50 (Motorola) and installing as many more for other dealers in 1934. Eighty per cent of sales to date have been in the \$69.50 price class, which is no mean news item in itself.

There's a story of genuine courage behind this diminutive company. Two years ago Helen was stock clerk for a local automobile agency. She had graduated to this position from that of bookkeeper after several years in the business. A young man by the name of Hiram Van Buren was head mechanic. The concern "folded" during the height of the depression. Stock clerk and mechanic found themselves without jobs, hunted in vain for suitable openings.

Right here, according to the law of averages, the army of unemployed should have gained two new recruits. But Helen and Van determined this was not to be. They pooled their combined resources and went into business, renting a garage on Newburgh's main street, painting its front bright red and surmounting the entrance with a shingle reading: "Auto-Radio Sales and Service Headquarters."

Van turned his abundant energies to automobile repairs. Helen talked auto-radio to customers who came in for carburetor adjustments and valve-grinding jobs. It became at once apparent that there was definitely room for an auto-radio specialist in town. And today, while by no means a large business, Van-C Sales returns its owners sufficient profit to make ends meet, supports two employed mechanics and is slowly but surely achieving its place in the sun.

Between 25 and 30 people a week bring their cars to the shop for repairs. The mechanics talk motor car

*She  
brings the feminine touch  
to a masculine business*

radio and when interest is aroused turn prospects over to either Helen or Van, who do the closing. This constitutes the concern's chief source of business, car repairs producing the necessary "store traffic."

Satisfied customers spread the good word and pass along leads which keep business expanding. Trouble-free installations, according to the partners, produce more new auto-radio business than any other form of advertising, at a lower cost.

All but two of the sets sold in 1933 were delivered on the time payment plan. Van-C finances its own paper, charging \$2.75 flat for the convenience. One-third down is required and 6 months is the limit. No time losses have been experienced to date, and only one account has required careful follow up. This favorable experience with an item not the best of credit risks is, we are told, no doubt due to the fact that in a small town references are easily and accurately checked. And friends of old customers who have met payments regularly are better risks than are complete strangers.

Free service is held to one month, but so good have been the Van-C installations that more than this is seldom required. It is the excellence of installations and service, in fact, which has influenced other dealers, who do not wish to bother with mechanical details, to patronize the shop. They pay \$5 when an antenna is already installed, \$10 for installation plus antenna, one month's free service being included in both cases. The consumer can buy such work at the same price.

Here, your inquiring reporter believes, is the perfect partnership. Helen does the bookkeeping and brings the feminine touch to bear on hard-boiled prospects. Van handles the mechanical work, sells the technically inclined as only a master mechanic can.

# Progress in HIGH-FIDELITY

Set makers working out practical designs  
—One super-quality model ready

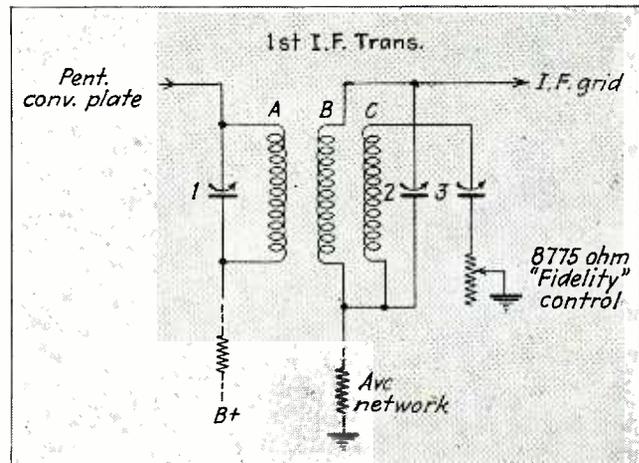
TODAY'S radios leave much to be desired with respect to faithful reproduction over the entire audible spectrum. Designers who have been working on the problem of band-width extension now know, however, that *response can be materially bettered in commercially practicable receivers.* This is perhaps the brightest spot on the industry's horizon.

In March (page 24) *Radio Retailing* called attention to the opportunity for sets reasonably "flat" up to six or seven-thousand cycles. In April (page 43) we briefly reported the characteristics of an experimental super-quality model encountered in a prominent factory. And in the "Service Section" of the present issue the work of the Hazeltine Laboratories, rapidly nearing release to licensees, is described.

As we go to press one set manufacturer, working independently but along closely parallel lines, is announcing a high-fidelity receiver (Philco). Because this is indicative of what we may reasonably expect from other quarters and because high-fidelity design progress is of great importance, its construction is herewith briefly reviewed.

THE receiver—a 10-tube super with r.f. pentode pre-selection, pentagrid-converter, two pentode i.f. stages, diode-triode second detector-a.v.c. and first audio, tuning-meter triode, triode driver and push-pull final amplifier—differs from conventional designs first in the construction of its i.f. transformers. These (see circuit) have three separate windings and can be "broadened" to admit a wide band of frequencies.

Coil A is the usual tuned primary. Coil B is the usual tuned secondary. Coil three is the new winding. All these circuits, tuned by condensers 1, 2 and 3, are adjusted for resonance at the factory and cannot be varied by the user. It is possible, however, to vary the setting of the 8,775 ohm resistor in the coil C circuit (the shaft of this resistor is ganged to an identical unit in the



A typical variable band-width i.f. circuit

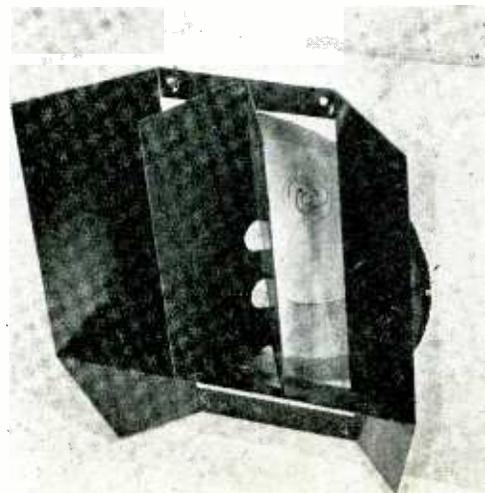
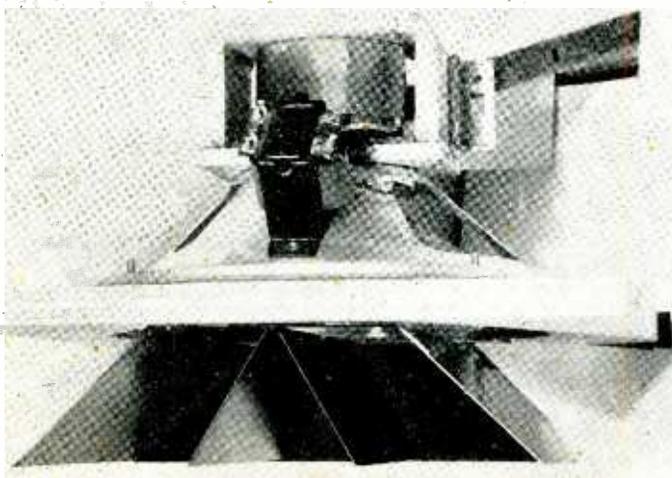
second i.f. transformer circuit and also to a bias control resistor in the pentagrid-converter and first i.f. tube cathode circuit).

When a maximum of resistance is included in the circuit of coil C this circuit has relatively little effect on the normal transformer action. Thus high-gain and selectivity (about 2,000 cycles) is obtained. When the resistance is lowered, however, the resonant circuit of C "absorbs" energy from the adjacent windings, reducing the gain and broadening the response curve to admit high frequencies. Reduction in sensitivity when the fidelity control is in the "broad" position is compensated for by decrease in pentagrid-converter and first i.f. stage bias, accomplished by the ganged cathode resistor already mentioned. Selectivity is apparently adequate when the set is "opened up" for maximum response due to the selectivity inherent in the tuned r.f. and double i.f. stages.

So much for the i.f. transformers.

Tuning is necessarily critical when operating the set at the maximum selectivity setting. A tuning meter, driven by a special grid-leak detector used just for this purpose and driven from a separate winding on the sec-

(Please turn to page 31)



Deflecting vanes "spread" high-frequencies. Note four vertical and one horizontal "fin"

# Follow These Tips for NEW



SOMETHING NEW IN "SANDWICH MEN"—"Tune in Russia on the new RCA radio" reads the signs carried by these appropriately costumed street advertisers. Raymond Rosen & Co. of Philadelphia says the idea helps shortwave set sales

## WHY ONE BOSS "SCABS" HIS SERVICE WORK

A. M. Davis of Waukesha, Wis., keeps an extremely complete list of people in his county with sets 4 years or more old. When a call for service work comes in Davis immediately looks up the name. If the customer's set is more than 4 years old he makes the call himself, frequently succeeding in selling a new set.

The shop's regular serviceman handles all calls which involve sets less than 4 years old, which Davis considers the "retirement" age.

## EFFECTIVE, LOW-COST SERVICE ADVERTISING

Eight months ago the Modern Home Appliance Co. of Birmingham, Ala., started out to build a paying radio service business. James A. Giglio, manager of the service department, considered various forms of advertising for the job and finally decided upon the following mediums and methods:

The city commission was approached and asked for permission to use two vacant windows in a municipal building. It was pointed out that these hurt the town, made it look "dead." The windows were obtained, free

The local utility was next approached and, inasmuch as it does not merchandise but is interested in seeing load-building appliances sold, fell in with the idea, provided a window in its main showroom for one week.

Other owners of vacant stores were approached and sold. Giglio agreed to wash the windows and to keep the store more presentable against the eventual appearance of a tenant. A total of 12 windows was obtained, some in the downtown district but most in outlying sections.

The cost of trimming the windows and keeping them clean ran about \$3 each, \$1.50 for cards, \$1.50 for sign

painting and cleaning. The total cost, therefore, was only \$36 for all 12.

Newspaper advertising was deemed too expensive at the outset, so Giglio placed a number of two-column, five-inch ads in the *Southern Radio News*, a publication going to radio "fans" weekly. In addition, he mailed 6,000 direct mail circulars to 6,000 people who had bought merchandise from the Modern Home Appliance Co. in the last few years. He also painted and distributed a number of small cardboard signs featuring high-speed service.

Another method which quickly brought results was the paying of a small commission to the staff of three servicemen for repair jobs originating with them. This stunt has been worked to sell merchandise, but Giglio thinks he is the first to use it in the sale of labor.

The combined effectiveness of these methods of advertising has enabled the company to establish a profitable repair department in short order without exceeding a \$200 advertising budget established as the maximum permissible for the year.



ONCE THIS WINDOW WAS VACANT—Now the Modern Home Appliance Co. of Birmingham uses it . . . free . . . to advertise radio. The owner cooperated when convinced by Jim Giglio that vacant windows hurt the town

## REFINISHED "SECONDS" BRING BETTER PRICE

By refinishing traded-in "seconds" Paul H. Parker of the Darrow Music Company, Denver, increases their saleability, moves them at a substantial profit. The cost of the work averages 60 cents per set. Here are Parker's notes on some of his popular jobs:

Table model, metal-cased . . . Given a heavy coat of black lacquer, then mist-coated with gold or silver. Sent to display floor unrubbed. Looks like a modernistic jewel-box.

Wooden consoles and midgets . . . Suitable base color, such as green, red, orange, laid on solidly and permitted

# BUSINESS

to dry thoroughly. Matching trim laid on by masking out sections of the ground color with tape. Sometimes a strip of masking tape may be run at intervals of an inch around the case, giving the finished job a striped effect. A strip of contrasting color diagonally from corner to corner is also effective. Geometric patterns formed by using squares or circles of masking tape is frequently effective. For the den, smoking room or sun porch.

Attractive bedroom set . . . Use rich creams or ivory whites. Trim corners with gold, or mask out the case and "shoot" the corners. Use masking tape to give pattern or grotesque animals for the children's room.

Refinished sets are mixed in with others on the floor, form a delightful contrast and liven up the store interior.

## ANTENNA DEMONSTRATION

Here is a stunt that has sold many an antenna installation, writes Campbell Radio Service, Ann Arbor Mich. When the customer thinks a short room-aerial or the "A" post grounded to the radiator will do, connect a 30-foot coil of No. 14 rubber covered wire to the antenna post. Turn on the set. With the radio playing open the window and heave the coil of wire outside. As it straightens out the signal will show a marked increase in strength and clarity. Many times the program changes from a whisper to a roar. This demonstration speaks for itself.



## BATTLESHIPS IN THE WINDOW

Two toy battleships placed in a recent allwave receiver window dressed by the Denver Dry Goods Co. helped boost the attention value of the display. Battleships in Denver, remote from both oceans, are novel and focused



PEOPLE LOOK AT BLACKBOARDS—Curiosity prompts the passerby to read a message chalked on a slate while a lettered sign is often ignored. So P. C. Davidson of Superior Radio, Anaheim, Calif., chalks up a daily program hint or an ad just inside his entrance

attention on the distance-getting ability of the sets featured.

A receiver was centered in the display window, up on a square black platform, mounted in turn on semi-circular white platform. The contrast made it stand out beautifully. One ship was placed in each forecorner of the window. Ribbons were carried from the various controls of the set to cardboard discs pasted on the inner surface of the glass, lettering explaining the "high points" of design.

## NOISY MOTOR HELPS SELL SPECIAL ANTENNAS

R. E. Gilliland, manager of the radio department, Franzen's hardware and furniture store, Riverside, Calif., reports the use of a noisy toy brush-type motor as a sales accessory.

Strange as it seems, Gilliland actually creates noise in his demonstration room. By turning on the motor in close proximity to a set using an ordinary antenna, then shifting the receiver over to a special noise-reducing type, he is able to demonstrate the efficiency of the special system. Sales result.

Then, too, the device is useful in demonstrating to people who complain about noise after purchasing a receiver that even the best of them pick up racket if it is created nearby in an electrical device.

# WHAT THE TRADE



**James E. Aitken**  
Toledo

*President of the Radio Wholesalers Association and member of its Code Authority for the north central states*



**Harold Erstrom**  
Chicago

*Executive vice-president of the RWA. Erstrom will handle all details of the code enforcement*



**Harold J. Wrape**  
St. Louis

*First president of the National Federation of Radio Associations — Forerunner of RWA. Member of the Code*

## 30 DISTRICT AGENCIES ELECTED BY RWA CODE AUTHORITY, MAY 18

The Radio Divisional Code Authority, officially approved by the NRA Administrator, held its first session in Washington, May 18. As finally appointed, the Code Authority consists of: Benjamin Gross, chairman, New York; David M. Trilling, Philadelphia; Francis E. Stern, Hartford, Conn.; Harold J. Wrape, St. Louis; James E. Aitken, Toledo, Ohio; H. G. Erstrom, Chicago; A. C. Marquardt, Boston; A. Meyer, Los Angeles; L. Luckner, Minneapolis; D. H. O'Brien, New York; Wm. E. O'Connor, Washington, D. C., and E. A. Emerich, Baltimore.

This Code Authority tentatively designated 51 administrative districts. The territories under the jurisdiction of each Agency are subject to change at the request of such administrator. At this meeting 30 District Agencies, nominated by the trade in as many trading areas, were formally approved. Under the Code these District Agencies are virtually Local Code Authorities, charged with the duty of administering the Radio Wholesaling Code and the General Wholesaling Code as it applies to this trade.

### Urges Election of All District Agencies

The central Code Authority requests that every trading area nominate its members to constitute the District Agency at once and submit its recommendations to the Executive Secretary of the Radio Wholesalers Association, 185 North Wabash Ave., Chicago, without delay. The procedure is quite simple and runs as follows:

Announcement is made to all members of the trade in the District extending an invitation to all who perform the function of selling radio apparatus to dealers, to attend an open meeting for the purpose of designating the District Agency. This includes distributors who wholesale radio as a major line or as a secondary line as well as manufacturers who sell direct

to dealers in the District. At such a meeting it is decided how many members the District Agency shall consist of and those who receive the greatest number of votes are chosen. The Code provides for a minimum of three, with the same ratio of non-RWA members as appear on the National Code Authority, which is composed of one non-Association member to every four RWA members. If every one wholesaling radio apparatus in the District is a member of the Association, then there naturally will be no non-Association members on the District Agency.

As has been pointed out by General Johnson, it should be borne in mind that each individual on a Code Authority represents the entire trade and not his own firm or line. Representation by lines sold is, therefore, not the essence of membership.

After choice of the District Agency the Code should be gone over and any questions raised placed before the District Agency for their study. Of course, the District Agency cannot function until officially elected by the Divisional Code Authority. Therefore, the names should be transmitted at once to the Executive Office of the Code Authority who will issue formal approval of election as promptly as possible, subject to verification of the qualification of each member.

### District Agency Chairmen

The following are the District Agency chairmen elected by the Code Authority at its May 18 meeting. These District Agencies are now functioning within the scope of the Code.

**BOSTON DISTRICT** (Mass. excepting Springfield, Maine, N. H.)—Allan Steinert, Eastern Radio Co.

**HARTFORD** (Middlesex, Tolland, Windham, Hartford, Litchfield counties, Springfield, Mass. and Vermont)—Pete Carr, Post & Lester.

**NEW HAVEN** (Fairfield, New Haven and New London counties)—R. Mailhouse, Plymouth Electric Co.

**NEW YORK CITY**—D. F. Goldman, North American Radio Corp.

**NEWARK**—B. J. Oppenheim, B. & O. Radio, Inc.

**TRENTON**—J. Harry Hearnen, Hearnen, Inc.

**PHILADELPHIA** — Raymond Rosen, Raymond Rosen Co.

**PROVIDENCE**—R. U. Lynch, Post & Lester, Inc.

**PITTSBURGH**—Ludwig Hommel, Ludwig Hommel & Co.

**BUFFALO** (Eric, Genesee, Orleans, Wyoming, Allegany, Cattaraugus, Chautauqua and Niagara counties in N. Y. and Warren, Potter, McKeen, Erie and Crawford counties in Pa.)—H. G. Rice, C. Kurtzmann Co.

**ATLANTA** (State of Ga.)—W. D. V. Hopkins, Hopkins Equipment Co.

**RICHMOND** (Va. and N. Car.)—H. R. Perkinson, Tower-Binford Electric Co.

**CLEVELAND**—R. H. Bechtol, Cleveland Ignition Co.

**LOUISVILLE** (Louisville trading area and southern section of Indiana)—George Buechel, Sutcliffe Co.

**CINCINNATI**—Harry Knodel, Harten-Knodel Dist. Co.

**INDIANAPOLIS** (Ind. excepting Lake county)—Adolf Wagner, Wagner Radio

**DETROIT** (Lower peninsula of Mich.)—D. F. Burke, Radio Dist. Co.

**CHICAGO** (Ill. excepting extreme lower end and Lake county, Ind.)—Harry Alter, Harry Alter Co.

**KANSAS CITY, MO.** (Western Mo. and Eastern Kan.)—J. C. Suor, Moser & Suor.

**OKLAHOMA CITY**—W. E. Titus, Radio Corp.

**MILWAUKEE** (State of Wis.)—Michael Ert, Michael Ert, Inc.

**OMAHA** (Omaha and Lincoln territory)—M. S. Livingston, Auto Equipment Co., Omaha.

**DES MOINES** (State of Iowa)—A. A. Schneiderhahn, A. A. Schneiderhahn Co.

**LOS ANGELES** (Southern Cal.)—B. S. Manuel, Westinghouse Elec. Supply Co.

**SAN FRANCISCO** (Northern Cal.)—H. E. Lapkin, Coast Radio Supply Co.

**PORTLAND, ORE.** (Oregon, Washington, northern Idaho, western Montana, Alaska)—R. F. Megee, Harper-Megee Co., Seattle, Wash.

### Lillian Guth Honored

Lillian M. Guth, credit manager for the Emerson Radio & Phonograph Corporation, New York, was the recipient of a beautiful set of candle sticks, May 8, at the Hotel New Yorker. This gift came from the Woman's Credit Group of the New York Credit Men's Association in appreciation of Miss Guth's untiring efforts in behalf of the welfare of these associations.

# IS TALKING ABOUT

## CALIFORNIA ASSOCIATIONS AFFILIATE

Plans for the formation of an organization to be known as the Affiliated Radio and Music Dealers Associations of Northern California were perfected at a meeting of representatives of 14 radio trade associations in San Francisco on May 18. The central objective of the organization is to foster the interests of those connected with the radio industry in northern and central California.

In addition to approving a constitution and by-laws, ratification of which will be dependent upon action of the member associations, the meeting adopted a code of fair trade practices to govern the retail selling, servicing and installation of radio



**GEORGE H. CURTISS**

*Leader in organization of Northern California dealer association*

receiving sets in the territory covered by the organization. Purpose of these trade practice rules is to provide a working basis pending the drafting and approval of a radio retail code under the NRA.

Significant was a resolution adopted unanimously favoring the establishment of a minimum set servicing charge of \$1. Plans were also drafted for the compilation of a master list of dealers for the guidance of distributors.

George H. Curtiss, executive secretary of the Pacific Radio Trades Association, who was instrumental in the formation of the new organization, was elected temporary chairman pending the election of a board of directors and permanent officers. A second meeting will be held in San Francisco, June 15, at which final organization will be perfected.

### Excerpts from Trade Practice Code

Prospective customers shall not be allowed a free trial or home demonstration in excess of 48 hours and an interest charge of at least  $\frac{1}{2}\%$  a month on all time payment contracts shall be made.

Installation of a permanent outside aerial for best efficiency shall be recommended. Charges for aerials are: Standard outside aerial installation, \$5 minimum. Shielded lead-in type, no filter, \$10 minimum. In-

side aerial and ground for \$2.50 minimum.

Radio sets and tubes will be serviced free of charge for 30 days, provided necessity for call is not occasioned by tampering with equipment. After 30 days, tubes will be charged for and service charge will be made at the rate of \$3 per hour, with a minimum charge for service of \$1.75, or \$1 for inspection or tube testing. If repairs necessitate bringing radio into shop, shop labor will be charged for at the rate of \$3 per hour, with a minimum charge of \$1.75 for pickup and delivery.

Opposition will be made to any effort on the part of a manufacturer or wholesaler to advertise any definite amount of trade-in allowance or to create the impression that an excessive allowance will be made.

### California Jobbers Will File Prices

The radio wholesalers in the northern California district have started a movement to make effective that paragraph of the radio wholesaling code covering the filing of prices. Indications are that more than the required two-thirds will sign the petition so that this particular feature of the code will become a part of the administrative procedure in California.

### A-K to Hold Ninth Annual Distributor Meeting June 27

The Atwater Kent Mfg. Co. will hold its ninth annual Distributor Convention in Atlantic City on June 27-29. Invitations to attend this gathering as guests of Mr. Kent have been issued to the executive officers of distributing organizations



### From Plate to Microphone

*Babe Ruth, hero of a dozen big league pennant races, comes direct from the ball parks to the radio studios this season and tells listeners about his participation in the current day's game. The Home Run King is giving the boys of America tips on how to play baseball and a dramatization of his own life. He may be heard over an NBC-WJZ network each Monday, Wednesday and Friday night at 8:45 p.m., E.S.T. The series, which brings Ruth to the air for the first time, is under the sponsorship of the Quaker Oats Company.*

### Another "Spanish Inquisition"



*This device "jiggles" a-r sets 3,425 times a minute and is Emerson's "proving ground" whereby "the severity of a five-hour test exceeds that of 30,000 miles of hard driving," according to John B. Hawkins, its designer and operator.*

in all parts of the country. Sales manager F. E. Basler anticipates an attendance of several hundred.

The group will gather at the Atwater Kent plant in Philadelphia on the opening day for luncheon and inspection of the factory, then go by special train to Atlantic City, where headquarters will be maintained at the Hotel Ambassador. Business sessions will be held on the two days following, with the usual dinners and entertainment.

### Lynch to Market Micamold Products

Arthur H. Lynch, Inc., 227 Fulton St., New York City, has taken over the national marketing of a complete line of replacements including all types of condensers and resistors. These are the well known products of the Micamold Radio Corporation, Brooklyn, N. Y., engineered by Harry Houck, pioneer of early Dubilier days.

Micomold products are used by a large percentage of the radio set manufacturers as initial equipment. Lynch's replacements parts marketing policy, according to Arthur H. Lynch, president, is "exclusively through recognized jobbers."



## FIRST CONVENTION OF THE RADIO MANUFACTURERS ASSOCIATION

How many of these pioneers of

### JOBBER HOLD CONVENTION CONCURRENT WITH MANUFACTURERS

Code Enforcement and National Sales Plans Chief Topics of Discussion

IT is significant that the opening event on the convention programs of the Radio Manufacturers Association and the Radio Wholesalers Association calls for a breakfast meeting of the RMA and RWA Boards of Directors, followed by a joint meeting of the entire memberships of both these organizations. Both events are scheduled for Tuesday morning, June 12 at the Stevens Hotel. Sales cooperation, industry promotion of radio business through the creation of a greater nationwide interest in radio, is the keynote theme.

Following these concrete expressions of close harmony between manufacturers and distributors a series of divisional and committee meetings for both groups is being held.

Wednesday morning RMA holds its annual membership meeting, President Fred D. Williams presiding. At the same time the wholesalers will be addressed by their president, James Aitken, of Toledo, Ohio.

Both conventions conclude, Wednesday evening, June 13, with an old-time banquet, reminiscent of the "Days of '28," according to Toastmaster Paul Klugh and the committee of arrangements. A symphony orchestra and an array of artists, headed by Reinald Werrenrath and a male chorus of 16 voices are providing the entertainment—broadcast over a coast-to-coast, NBC, chain broadcast from 9:30 to 10 P.M., Chicago Time.

#### RWA District Agencies Meet

For the first time since the signing of the radio wholesalers code those charged with its territorial administration are meeting to approve by-laws for the proper conduct of their duties and to discuss the many other new problems which have arisen.

#### "Bob" Lacey GSM for Wilcox-Gay

The appointment of "Bob" Lacey by the Wilcox-Gay Corp., Charlotte, Mich., to the position of general sales manager marks the initial action in a definite program to expand the domestic distribution of this pioneer radio manufacturing company which was founded in 1919. A complete new line of merchandise including six home type sets, three of the all-wave

type, as well as a new auto receiver are now ready for delivery.

Mr. Lacey brings to his new position much valuable sales experience. As president of the Lacey Co. in the early days of radio, he operated an unusually successful distributing business over a number of years. Later he became general sales manager of one of the larger tube manufacturers. Conservative management and his firm adherence to fundamental policies has made him many friends.

#### Gives Stewart-Warner A-R Set 3,600 Mile Road Test



"Came through with flying colors, with never a tube replaced," states H. M. Pauley, road test ambassador for Stewart-Warner, Chicago, who has just completed a rough and ready tour of 3,600 miles to give Stewart-Warner's auto set "the works."



#### Skinner, Jr., Wins Table Tennis Tournament

"Meet the Winnah!" James Skinner, Jr., demonstrated that he is a true son of a fighting father when, on the Philco cruise, he won, hands down, the first official table tennis tournament to be conducted on the high seas. By so doing he annexed a handsome trophy cup suitably engraved and donated by the United States Table Tennis Association.

Skinner is now learning the radio business from the ground up. If his athletic ability is any criterion, it will not be long before his dad will have to stop, look and listen.



#### Crosley Simplifies A-R Installation and Serving Problem

To relieve the dealer of installation and service problems, Crosley has completed an arrangement whereby its automobile radios will be installed and serviced by



**HOTEL AMBASSADOR, ATLANTIC CITY, N. J., JULY 10-11, 1925**  
**"way back when" can you identify?**

the organization of United Motors Service. Many dealers who have hesitated about entering the car radio field because of the complicated service problems have indicated their interest in a plan which makes a radio "package" merchandise.

When the dealer sells a Crosley automobile radio, he presents the buyer with an installation certificate, reading as follows:

"This certificate is exchangeable for a standard normal installation for the Crosley Roamio contained in this carton in any make of automobile (antenna installation extra) when presented to (name of dealer) who has been recognized and

properly designated as an official Crosley Roamio Installation Station by the Crosley Radio Corporation in conjunction with United Motors Service, Inc., or through its distributor in this territory."

The selling price of the Roamio includes the installation charge and the buyer has nothing further to pay except in unusual cases. The dealer redeems the certificate when it is properly endorsed.

FOR BULLETIN ON THE CAUSES of auto-radio interference and cures write Continental Carbon Co., Cleveland, Ohio.

**700 ENJOY PHILCO CRUISE TO NASSAU**

Easily the largest distributor cruise-convention yet conducted, and distinguished by the placing of close to half-a-million orders for sets for delivery over the next three months, Philco chartered liner, the "Queen of Bermuda," completed a week's jaunt to the West Indies, May 22. When 700 busy business men can be persuaded to take time off for a week at sea, it's an achievement of the first magnitude.

The convention subjects were ably presented by the following executives of the Philco Radio & Television Corporation: James M. Skinner, president; J. T. Buckley, treasurer; Larry M. Gubb, general sales manager; Sayre M. Ramsdell, manager of sales promotion; Harry Boyd Brown, sales advisor; Ernest F. Loveman, advertising manager; Robert Herr, parts and service manager, and C. E. Carpenter, in charge of tube sales.

A presentation, by President Skinner, of Philco's 1935 line of brand new sets, over 45 in all, constituted the high interest point of the first day's deliberations. Among the innovations were modern cabinets, by Ben Nash; a genuine "high fidelity" model; a new, remote control, two speaker job and many short and all-wave numbers. In this latter connection it was announced that Philco will broadcast a series of Spanish music programs from Madrid, Spain. This is the first time that a United States manufacturer has engaged the services of a foreign station to advertise, at home as well as abroad, the merits of an American product. Station EAQ will broadcast a Philco program every Sunday evening at 7:15 E.S.T.

The entertainment features, which included a professional night club cabaret, were ably handled by Ernest Loveman. Philco's New York dealers cruised to Havana the following week.

**Eight Page Supplement Announces Payne's New Store**



With a display of progressiveness that merits emulation, Payne's for Music, Inc., Greenville, South Carolina, advertised the opening of its new store with a special, 8-page supplement of the *Greenville News*.

Numerous illustrations of the store and its personnel and interesting news articles

put lots of pep in this smashing piece of dominant publicity. Twenty ads, which sang the praise of the products handled, completed this job.

Above is a picture of South Carolina's most modern music shop and of D. W. Payne, president of this establishment.

**LEVIS MUSIC STORE FOLLOWS SUIT**

Seldom does it happen that two new music stores, as sumptuous as those of Payne's, Greenville, S. C., (see above illustration) and Levis, Rochester, N. Y., are opened within a week of each other. A greater coincidence is the fact that William

Levis also announced his new establishment with a special newspaper supplement, published by the *Rochester Times-Union*. Mr. Levis took 16 pages in which to celebrate this opening of what, unquestionably, is one of the very finest music stores in the entire country. Supremely modern in treatment, it is destined to become the mecca of music lovers throughout the Rochester area.

**"Gentlemen Ride the Cushions"**

The Institute of Radio Service Men has issued a pamphlet entitled: "Gentlemen Ride the Cushions." It is a story of use to servicemen and their clients. A copy may be obtained by writing the Institute at 510 N. Dearborn Street, Chicago, Illinois.

## Condenser Corp. Builds Good Will for Dealers

The problem of creating consumer demand and good will for replacement parts always has been a stickler. The Condenser Corporation of America, Jersey City, N. J., solves it by providing its dealers and servicemen with a six-month "Factory Guarantee" slip. This attractive warranty is, in turn, given to each set owner purchasing a Green Line Gadget replacement condenser. Thus the ultimate consumer is advised that the factory will replace, without charge, any of its condensers that prove defective within a half-year period.

This plan also brings repeat call business to the dealer, who also signs this guarantee.

## Hal Sheer, GSM Philco's New York Branch

Hal Sheer, formerly sales manager of three divisions of the Philco Radio & Television Corp., New York, has been advanced to the position of general sales manager,

effective June 2. This well merited appointment was made possible by the transfer of Sidney L. Capell to the Chicago branch of the Philco Radio & Tel. Corp.

## Capell Moves to Chicago

Sidney L. Capell, formerly general sales manager of the Philco Radio & Television Corp., New York City, has assumed the position of general manager of the Philco Radio & Television Corp., of Illinois, with headquarters at Chicago.

As a tribute to Mr. Capell's success the members of his former New York organization tendered him a dinner at the Hotel McAplin just prior to his leaving for Chicago.

## Frank Joins R. K. Radio

Arthur V. Frank, formerly connected with the Echophone Manufacturing Company, and widely known throughout the distributing trade, has joined the R. K. Radio Laboratories, Inc., organization in the capacity of sales promotion manager.

## Farm Auctions Net 15 Prospects

Here's how L. Kuester, West Bend, Wis., gets sure-fire prospects: He sends a salesman to every farm auction held in his territory. Whenever a radio is offered for sale at these auctions there are usually from 10 to 15 bidders. However, only one person can buy the set. But by their bidding the others revealed that they too are in the market for radio.

The Kuester salesman is usually well acquainted with most of the farmers. As they bid he jots down their names. The next day he starts contacting them. Mr. Kuester says that many sales are made in this manner.

## Raytheon Window Displays

Raytheon Products Corporation is out with a series of most attractive lithographs for dealer use. Built around the "four-pillar support" theme and done in full colors, they should go far to create a demand for Raytheon tubes—"at full list prices."

Twenty new jobbers recently have been added to this company's distributor list.

## Never Pushed a Doorbell *(Continued from page 15)*

step in the company's selling plan. Let's examine it.

Approximately 85 per cent of sales are made on the time-payment plan. Customers are encouraged to pay their installments weekly, in the store. Thus a majority of the Colclough radio customers are exposed to appliances at least once a month, usually more often. While they are making the payments on their radio their attention is drawn casually to a refrigerator, or to a washer or cleaner. Generally long before the account is closed out the customer is ripe for a repeat sale. And the selling process has been spread over such a long period that there is little feeling of pressure.

Service customers are followed up for set sales, set buyers are later approached in behalf of electrical appliances. The result is a continuous circle of sales to old customers, the circle gradually expanding as friends of these customers come into the fold and as Colclough's moderate advertising gradually adds new names. How far does the store carry this repeat selling? Approximately 29 per cent of its customers have been sold more than one item of merchandise, many of them contributing \$500 or more to its volume in the last 4 years.

### Typical Repeat Sales

Here are a few actual examples of repeat business taken directly from the Colclough books, complete with the exception of addresses:

*William Smith.* City water department laborer, \$27 salary. Wife took in washing at time of initial contact. Jan., 1931. . . . Entered store for service on old set. March, 1931. . . . sold \$155 console on time as result of cultivation during service call. June, 1931. . . . sold \$9.95 Telechron electric clock when making time payment. Jan., 1932. . . . Sold \$99.50 washer by calling for radio inspection and inviting wife to store to see it. April, 1932. . . . Sold another clock at \$4.95, cash. February, 1933. . . . Again called at home to check set and sold \$189 refrigerator after struggle, repeated preference to box at time of time payments helping eventual

closing. October, 1933. . . . Sold \$49.50 range oil-burner while customer was making range payments.

*Theron Wood.* Railroad conductor. Sent to store by friend in Albany Shops. February, 1931. . . . Bought \$219.60 console for cash, no trade-in. April, 1933. . . . People downstairs, service customers, said Wood wanted a refrigerator. Called, but couldn't close. Was told a relative wanted one. Sold relative \$330 box. Wood, impressed by relative's purchase, came through with a duplicate order one week later.

*Jake Ludwig.* Bank teller. Met him in relative's home while completing service job. April, 1931. . . . Sold \$154.50 console for cash. June, 1932. . . . Made several service calls in interim, talked about refrigeration. Ludwig, in August, bought a \$255 box.

### Consumer Satisfaction Essential

A low-pressure selling operation of this kind rapidly dies of dry rot without complete consumer satisfaction, R. V. points out. This must be obvious. For relatively few new accounts are contacted by comparison with those reached by an outside sales crew. Those new accounts which are secured, through service or off the street must be held at all costs. The success of the operation depends not only on Colclough's ability to obtain repeat business from these customers but also on the enthusiasm with which they recommend the concern to friends, its second important source of trade.

"The nearest approach to outside crews we have ever employed is to pay workers in nearby factories and plants for leads which result in sales. They are really old customers of ours who are helping us sell and getting paid for it. We pay them from \$5 to \$7, depending upon the nature of the sale. They account for about 8 per cent of our business.

"We prefer moderate volume at a comfortable profit to high-pressure methods with attendant overhead. We've been in business four years and have never pushed a doorbell . . . and we won't."

# Business Follies of 1934 *Folly No. 5*

*"Records haven't got a chance against Radio!"*

We hate to be impolite—but he's all wrong. The new Victor records have a rich, full tone that has never been equalled by any kind of reproduction . . . which is why sales of phonograph records have shot up 200% in 1934.



**F**IND out about this reawakening market . . . find out what wide awake dealers are learning . . . that record sales are picking up again, that during the first three months of 1934 sales of the new Victor records shot ahead 200%.

Those facts mean money . . . they mean that people are finding out the splendid new quality of reproduction they can get today from Victor records. RCA Victor has achieved new crispness and definition never before equalled in any kind of reproduction. Through higher fidelity RCA Victor obtains a new sweetness and purity of tone.

That's why there's no longer any question of "stocking up for eternity"

on records. The tide is turning once more to recorded music. More turntables are being bought today than in the past few years. And as a result, live dealers are putting the remarkable new Victor records out where people can see them—and hear them.

Write to us today for the new sales plans that will start Victor records moving for you . . . also how you can cash in on the new Blue Birds, fastest selling low-priced records.

RCA VICTOR CO., INC., A Radio Corporation of America Subsidiary.



- GET THESE NEW VICTOR RELEASES:**
- 24616—*The Wise Little Hen*—(from Walt Disney's Silly Symphony "The Wise Little Hen")
  - The World Owes Me a Living*—(from Walt Disney's Silly Symphony "The Grasshopper and the Ants")
  - Raymond Paige and his Orchestra
  - 24617—*Cocktails for Two*—(from Paramount film "Murder at the Vanities")
  - Live and Love Tonight*—(from Paramount film "Murder at the Vanities")
  - Duke Ellington and his Orchestra
  - 24606—*I Ain't Lazy, I'm Just Dreamin'*
  - It's Funny to Everyone But Me
  - Isham Jones and his Orchestra
  - 8282—*Rhapsodie Espagnole*—Leopold Stokowski and the Philadelphia Orch.

# IT PAYS TO SELL Victor Records



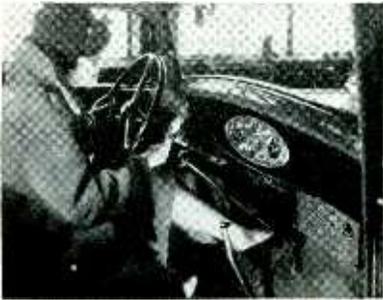
RCA VICTOR CO., Inc., Camden, N. J.  
I want to get in on the new increase in sales of Victor records. Please send me complete details of your proposition.

Name \_\_\_\_\_

Address \_\_\_\_\_

RR6

# NEW MERCHANDISE



**Stewart-Warner Model 1171  
Auto Radio**

Due to the "3 stud mounting" which insures rigid installation of the cabinet in any one of three mounting positions, the new Model 1171 motor car set of the Stewart-Warner Radio Corp., Diversey Blvd., Chicago, Ill., is exceptionally simple to install. Also there is a short convenient connection to the ammeter which eliminates need for battery connection. The 6-in. electro-dynamic speaker is connected to the set with a plug-in cord and is fastened to the front plate of the cabinet so that both plate and speaker can be easily removed to get at vibrator and tubes.

Among other features are sensitivity less than 1 microvolt; power output more than 3 watts; ignition interference practically eliminated (an unusually efficient filter system will, in most cases, eliminate the spark plug suppressors entirely). There is also a local-distance switch and a tone control.—*Radio Retailing*, June, 1934.

## Zenith Shortwave Midgets

Capitalizing on the virtues of personal type cabinets, for which women show a great preference according to a recent survey, the Zenith Radio Corp., 3620 Iron St., Chicago, has brought out two standard and shortwave midgets.

Both are 7-tube superheterodynes, with three wave bands, tuning from 560 to 12,000 kc.—all police bands, amateur, aviation and foreign broadcasts.

One is \$49.95; the other, \$54.95.—*Radio Retailing*, June, 1934.



## Tatro 6-Volt Radio

Using only one 6-volt A battery and no B or C batteries, the new 6-volt Radio of L. Tatro Products Corp., Decorah, Iowa, is designed mainly for the farmer who has no source of power supply. The drain is only 1½ amp. and the average battery in typical service for three hours per day is said to last approximately five to six weeks.

This set may be had in an upright table cabinet or in a modernistic design console.—*Radio Retailing*, June, 1934.

## Stromberg Carlson Allwave Radio and Selector

The "Selector" just announced by the Stromberg-Carlson Tel. Mfg. Co., Rochester, N. Y., is a 4-tube, self-powered converter which when attached to any standard broadcast receiver converts that set to an allwave receiver, covering in addition to the broadcast band every short wave channel from 1500 to 25,000 kc. When the range switch is turned to the standard broadcast band the corresponding section of the dial is illuminated, showing complete instructions for the operation of the Selector. The only connection to be made between the Selector and the receiver is the antenna and ground cable. The same automatic antenna selecting system used in Model 68 described below is incorporated, \$69.

Model 68 is a 10-tube superheterodyne covering every channel from 540 to 25,000 kc. The large full vision airplane type selectorlite dial is octagonal in shape and divided into four sections one for each of the four tuning ranges. An automatic antenna selector is built into the range switch so that when a broadcast antenna and a short wave antenna or doublet type antenna are employed, the correct antenna for best reception will be connected automatically in circuit with the best range. \$175.—*Radio Retailing*, June, 1934.



## Operadio "Unit-Matched" Sound Equipment

Ten combinations of "unit-matched" sound equipment can be obtained from the Operadio Mfg. Co., St. Charles, Ill.

"Unit-Matched" equipment means a complete system of parts designed specifically to work one with the other. This is made possible because Operadio is set up to engineer and manufacture all of the necessary units including the speakers. These combinations range from a simple microphone service for paging, announcing, etc., listing at \$148 to a de luxe microphone and phonograph service for stadiums, baseball parks, conventions, etc., priced at \$1,121.30.

Operadio maintains a Planning Department to work on special problems to meet individual requirements, without charge.—*Radio Retailing*, June, 1934.

## GE Inverted Converter

Built from standard direct current motor and generator parts, the General Electric Co., Schenectady, N. Y., has developed a new and inexpensive line of inverted converters, ranging in size from ½ to 20 kva., single phase. Built especially for use with radio equipment, public address systems, etc., where only direct current is available. Will change 115 or 230 volts d.c. to 110 or 220 volts a.c. These converters are compact in size and readily portable.—*Radio Retailing*, June, 1934.



*Philco Model 16RX*

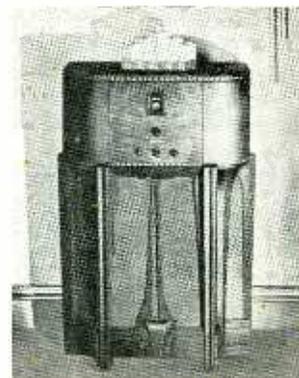
## 1935 Philco Line

Forty-nine models including a new achievement in radio—a "high fidelity" set capable of reproducing the entire musical range from 50 to 7,500 cycles, make up the new 1935 line of the Philco Radio and Television Corp., Philadelphia, Pa. Included are 12 Baby Grands, 5 compacts, 7 lowboys, 6 highboys, 8 inclined sounding board models, 3 remote control receivers and 6 phonograph combinations.

Prices range from \$20 to \$600 and besides the conventional broadcast models, an array of combination American and foreign radios ranging in size from 5 to 11 tubes and available for a.c., a.c.-d.c., d.c., battery and 32-volt operation, is offered.

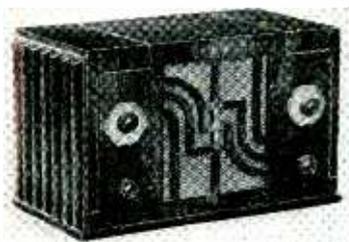
The outstanding set, Model 200X "High Fidelity," is designed to take full advantage of broadcasting stations which are extending the upper range of their modulating equipment to 7,500 cycles. For stations not using high fidelity transmission, a fidelity-selectivity control is provided in order that the channel width may be narrowed. True wide channel reception is made possible by newly designed r.f. and i.f. high fidelity circuits. An improved audio amplifier of Super Class A type provides 15 watts of undistorted power to a newly designed speaker. The cabinet contains what is called a sound beam diffuser which directs the sound to all parts of the room with equal intensity. The cabinet itself is of new design, being open on the sides to eliminate directional effects. This set uses 10 tubes and covers a tuning range of from 540-1720 kc. \$200.

Another feature of the line is the inclusion of three remote control sets. Model 16RX, American, and foreign all wave, 11 tubes, is \$225. Model 118RX, American and foreign allwave, 8 tubes, is \$125. The control cabinet in these models is of the end table type. Model 29TX has 2 speakers, one in a compact cabinet and one in the over-size speaker cabinet. American and foreign broadcasts, 6 tubes, \$89.50.—*Radio Retailing*, June, 1934.



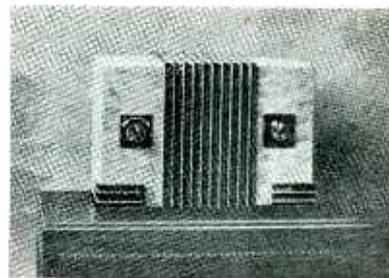
*Philco Model 200X*

*Radio Retailing*, June, 1934



## DeWald "Motortone" Auto-Radio

The 1934 DeWald Motortone auto radio has just been announced by Pierce-Airo, Inc., 512 Sixth Ave., New York City. The set, a six-tube hi-gain superheterodyne has full automatic volume control and improved noiseless vibrator. The set and speaker are housed in an attractive dustproof metal container. A novel method of attachment combined with quick, detachable aerial, ground and battery leads, simplifies installation and service. Six cylinder suppressors are included. — *Radio Retailing*, June, 1934.



## Wilcox Gay Sets

Five new sets, each with the modernistic touch attractively used, can be obtained from the Wilcox Gay Corp., Charlotte, Mich.

"Vogue" is a 5-tube superheterodyne for a.c.-d.c. with a wave length range from 190 to 550 meters.

"Cardinal" is a full-sized table model, using five tubes. Covers from 75 to 550 meters.

"Cameo III," also a table set, has large dynamic speaker, dual wave reception. A.c. operation only. The wave length range is 75 to 550 meters.

"Luxor" is an a.c. upright table set with over-size speaker, airplane dial. 75 to 550 meters.

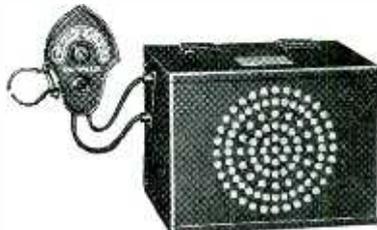
"Ambassador" is a "floor" type console using six tubes. Tuning range covers from 75 to 550 meters.

Wilcox-Gay also makes the "Road Mate" auto radio. Receiver, speaker and power supply are a single unit with only one bolt required for attachment. The set has steering column remote control and uses six tubes. Wave length range 200 to 550 meters.—*Radio Retailing*, June, 1934.

## Commonwealth Short Wave Set

The new dual wave receiver of the Commonwealth Radio Mfg. Co., 2363 N. Seeley Ave., Chicago, Ill., is a compact 6-tube superheterodyne covering the broadcast band of 200-550 meters and also the principal short wave band of 15-50 meters. The following tubes are used: 2-6D6, 6A7, 75, 43 and 25Z5.

This set is also made to cover the range of 200 to 2,000 meters for the European market.—*Radio Retailing*, June, 1934.



## J-M-P "Checkatube"

For greater flexibility, four selector switches are incorporated in the "Checkatube" of the J-M-P Mfg. Co., Inc., Milwaukee, Wis. A newly developed ballast rectifier circuit is employed. There are 96 popular tube numbers on the panel chart, segregated under four, five, six and seven prong groups with dial setting for each tube. Shorts are indicated on a neon pilot light. Cathode leaks are clearly shown up to one megohm.

The "Checkatube" is supplied for counter use in a slanting front leatherette covered case or in a leatherette covered carrying case for either counter or portable use. The counter type is \$22.50 and the portable type is \$24.—*Radio Retailing*, June, 1934.

## Superior Radio Sets

Three radio receivers (two table models and one console), are now ready at the plant of the Superior Cabinet Corp., 3611 14th Ave., Brooklyn, N. Y.

Model 502US is a 5-tube "around-the-world" universal set tuning from 1,550 to 540 kc. and 18 to 51 meters.

Model 63S is a 6-tube console with the same tuning range.

Model 703AA is a 7-tube table model covering, in five bands, from 13 to 2,000 meters.

Model 703US is a 7-tube super universal covering two wave bands, 1,550 to 540 kc. and 18 to 51 meters.—*Radio Retailing*, June 1934.



## Acracon Gadget Kit

Condenser Corp. of America, 259 Cornellsen Ave., Jersey City, N. J., has recently produced a novel kit arrangement designed especially for the serviceman. This kit includes a well chosen variety of condensers familiarly known as "Green Line Gadgets" attractively housed in a durable metal case.

An assortment of 52 condensers is included, the values and sizes of which were determined after a careful survey of the service field. Their use, either singly or in combination, provides an easy and rapid repair of practically any radio condenser failure.—*Radio Retailing*, June, 1934.

## Keletron Radios

A complete line of radio receivers, built primarily for export, including 5 and 6 tube compacts for a.c.-d.c.; 5 and 6 tube transformer sets, a.c. only, for short, medium and long waves; a nine tube transformer model for operation on all waves; combination phonograph sets in table and console cabinets; automobile sets which can also be used in the house and a complete line of radio tubes is offered by A. H. Keleher Co., Inc., 90 Broad St., New York City.—*Radio Retailing*, June, 1934.

## Sylvania "Majestic Type" Tube

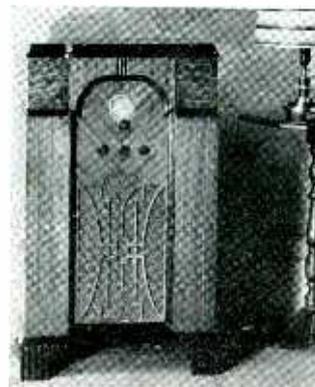
Twenty-eight Majestic type tubes have been added to the Sylvania line, each equipped at the factory with a form-fitting metal shield, soldered in place and thus permanently connected in the same manner as the spray shielded types. Hygrade Sylvania Corp., Emporium, Pa.—*Radio Retailing*, June, 1934.

## Freed-Eisemann Portable Radio

A 5-tube universal compact superheterodyne with 5-in. speaker built into an attractive waterproof DuPont Fabrikoid covered carrying case with removable front cover is announced for the summer season by the Freed Television & Radio Corp., 2217 41st Ave., Long Island City, N. Y.

This set works on either a.c. or d.c. 110-120 volts, 50 or 60 cycles. Attachment cord and antenna are supplied and fit into the rear compartment. Tunes from 540 to 1,750 k.c. Works with indoor antenna, no ground.

This set comes in black or brown and measures 9½x7½x6 in. with cover. Weight 7½ lb.—*Radio Retailing*, June, 1934.



## Trouble Chart and Repair "Pricer"

Freed's Radio Co., of 5153 Baltimore Ave., Philadelphia, Pa., offers a 7½ by 9½ in. cardboard chart which lists cross-indexed causes of specific set troubles, gives a schedule of flat-rate repair job prices based on a \$1.50 hourly labor charge and list-priced replacement parts. Known as the "Complete Radio Chuckker," this handy device enables servicemen to quickly isolate faults following a preliminary analyzer test and then to quote a price which insures a satisfactory profit direct from the chart.

Data used in compiling the chart was obtained by collating records of 1,000 actual repair jobs. The chart sells for \$1.—*Radio Retailing*, June, 1934.

## Fairbanks-Morse Refrigerators, Washers and Ironer

Five electric refrigerators ranging in size from 4.3 net cubic feet to 6.3 net cubic feet are announced by the Audiola Radio Co., 430 South Green St., Chicago, Ill., a subsidiary of Fairbanks-Morse & Co.

All but the smallest model have interior lights and all are porcelain on the inside. The hardware is semi-concealed chromium combined with black Bakelite.

This company also offers three electric washers and an electric ironer. The washers are of six sheet capacity.—*Radio Retailing*, June, 1934.



### Emerson All-Wave Radio

A "Round-the-World" 5-tube superheterodyne has been added to the line of the Emerson Radio & Phonograph Corp., 111 Eighth Ave., New York City. It is known as Model 59 and covers regular broadcast band from 1,500 to 550 kc. and foreign shortwave from 18.5 to 55 meters. This set has the airplane type dial with double end pointer. Tubes used: 47, 5S, 2B-7, 2A-7 and 80. The console cabinet is a modified moderne. \$59.50.

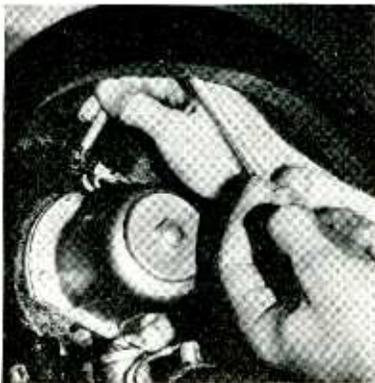
Model 71 is a 7-tube superheterodyne covering from 13 to 550 meters. Four distinct wave-length ranges are contained on the single airplane type dial. Tube equipment includes 6A7, 2-6D6, 75, 2-42 and 80. The table cabinet is of the upright style in solid walnut.—*Radio Retailing*, June, 1934.



### Bond 3-Volt Batteries

For 2-volt radio sets, Bond Electric Corp., Jersey City, N. J., announces its 6140 "Stedyvolt" A Powrpk dry battery.

The Bond laboratories have developed a special mix to meet the requirements of this service, enabling the new battery to deliver from 300 to 400 hours of service on the most modern battery-operated radio set, it is claimed.—*Radio Retailing*, June, 1934.



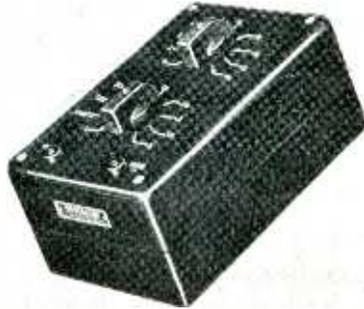
### Flexible-Grip Tool

For reaching inaccessible places, the California Sales Co., 9 Front St., San Francisco, Calif., offers a flexible grip tool, constructed of a flexible steel, making it possible to start or remove nuts, bolts, cotter pins, rivets, etc., around corners and in places too small for fingers or wrenches. Controlled, uniform pressure on the four claws enables the "Flexi-Grip" to handle fragile pieces such as radio dial light bulbs. Manufactured in 8, 12 and 18 in. sizes.—*Radio Retailing*, June, 1934.

### Sprague Capacity Indicator

A moderately priced instrument that tells the correct capacity for condensers that be used in any circuit may be obtained from the Sprague Products Co., North Adams, Mass. Besides giving the correct replacement capacity for condensers that have broken down the indicator will check the efficiency of all other condensers in a set. The price net to service men and dealers is \$8.90. A carrying case is \$2.25 extra.

Sprague also offers a line of EC condensers in sizes from .5 to 8. microfarads, as well as two emergency kits. Kit No. 1 is a complete assortment of ten EC type dry



electrolytic units in five capacities from which any needed filter combination may quickly be obtained. Net to servicemen, \$6.72.

Kit No. 2 is similar to No. 1 with the exception that it contains only five condensers, one each in the following capacities: 1, 2, 4, 6, and 8 mfd. units. Net to servicemen, \$3.36.—*Radio Retailing*, June, 1934.

### Electro-Voice Microphones

The Electro-Voice Mfg. Co., Inc., 324 E. Colfax Ave., South Bend, Ind., has announced a new line of microphones ranging in price from \$6 to \$25. There is a type to fit most every requirement. These microphones have 24-karat gold spot contacts, all-metal plating of polished chromium and the carbon granules are acid-treated to remove ash content for quieter operation and longer life.

Electro-voice also offers repair parts as well as a repair service. The stretched diaphragm type is repaired for \$6.50 and the non-stretched diaphragm type for \$3 net.—*Radio Retailing*, June, 1934.

### Modernization Service on Weston 676 Tube Checker

Illustrated is a rebuilt Weston 676 tube checker, modernized by the Precision Apparatus Corp., 821 East New York Ave., Brooklyn, N. Y. After modernization it will check practically all standard receiving tubes, both plates of full wave rectifier and dual purpose tubes and short test all tubes.

Other features include a complete new metal etched frosted aluminum panel and new molded replaceable sockets.

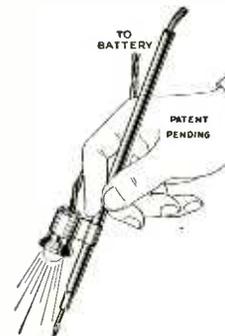
Modernization is also available on certain Jewell and Dayrad instruments, which should be sent to the above company.—*Radio Retailing*, June, 1934.



### Crosley "Coolrest"

An electrically air conditioned compartment that fits over the bed can be obtained from the Crosley Radio Corp., Cincinnati, Ohio.

To cool, dehydrate and continually recirculate the air in the air conditioning compartment, the Crosley refrigerator unit is used. The list price is \$150 delivered.—*Radio Retailing*, June, 1934.



### "Prod-Lite"

The "Prod-Lite" consists of a complete system to illuminate test prods without interfering with the normal test procedure, so that a service man can see what he is doing in dark corners of radio sets, under chassis, etc. The lamp socket is securely clamped to the test prod yet may instantly be adjusted to any position on the prod. It is furnished complete with bulb, flexible cord and standard flashlight battery which is contained in a case that may readily be carried in one's pocket.

The outfit can be supplied either complete with de luxe test prods at \$1.50 or less prods at \$1. Radio City Products Co., 48 W. Broadway, New York.—*Radio Retailing*, June, 1934.



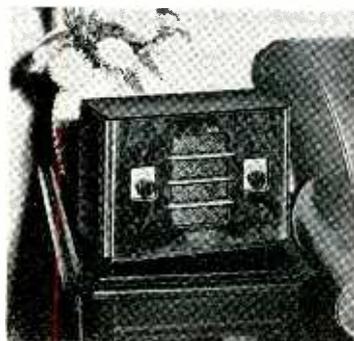
### "Measured Time" Electric Clock

"Measured Time Electric" is a minute timer and electric clock combined. On the predetermined minute it gives a clear tone signal which can be adjusted to a loud or soft call of long or short duration. Has many uses in the home such as to time radio programs, remind the housewife to take her pie out or that it is time to leave for the bridge club. Black, Ivory, walnut or onyx case. Measured Time, Inc., La Porte, Ind.—*Radio Retailing*, June, 1934.

## Westinghouse Announces Full Line of Moderately Priced Sets Including Allwave and Auto Models



Westinghouse Model WR 24, \$89.50



(ABOVE)  
Westinghouse Model WR 21, \$31.95

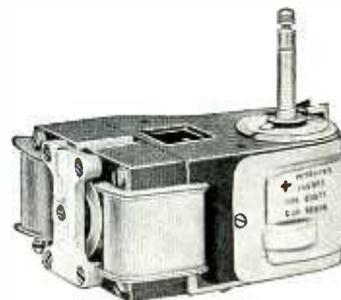
(RIGHT)  
Westinghouse Model WR 23, \$67.50

The "Westinghouse" trademark is back in radio. Sets displaying this nameplate are to be distributed nationally by the Westinghouse Electric Supply Co., Inc., with headquarters at 150 Varick St., New York, and affiliated organizations in 90 trading centers, according to H. M. Gansman, who heads up the merchandising operation.

A complete line of both home and car models has already been announced and shipments are under way on the following items: Model WR 20, a 4-tube, a.c.-d.c. compact at \$19.95 list. Model WR 21, a 5-tube a.c.-d.c. compact at \$31.95. Model WR 22, a 5-tube a.c. midget at \$29.95. Model WR 23, a 7-tube a.c. allwave table model tuning from 540 to 20,200 kc. at \$67.50. Model WR 24, a 7-tube a.c. allwave console model tuning from 540 to 20,200 kc. at \$89.50. Model WR 25, a 6-tube, all-electric auto-radio at \$39.95. And Model WR 26, a 6-tube all-electric auto-radio at \$52.50.

A high-fidelity console at around \$130 is planned for fall introduction.

Attractively designed, sturdily made, hand-rubbed cabinets are an important feature of the line. Shipments include RCA or Cunningham tubes. Westinghouse Supply is soliciting distribution among all classes of retail radio outlets.—*Radio Retailing*, June, 1934.



### Thorens Pickup

Introduced to the American market by Thorens, Inc., 450 Fourth Ave., New York City, is the Omniscopic pickup, manufactured by Hermann Thorens S.A. Ste-Croix, Switzerland.

The needle holder is balanced in such a way that it can swing only at a perfect right angle to the grooves of the record. This eliminates the distorting noises, thus making it an ideal pickup for recording. The pickup head is completely enclosed, preventing dust from entering into the delicate mechanism. The arm of the pickup has a tangential movement which, in addition to the advantages of clear reproduction, considerably reduces the wear of the record.

This company also distributes two-speed electric motors for a.c. (See cut). It carries in stock only those for 60 cycles and 100 to 120 volts, but other voltages or cycles can also be furnished. The motor comes in three different torques.—*Radio Retailing*, June, 1934.

### ICA Soldering Iron

A practical "all-purpose" soldering iron, sealed in "Insulex," can be obtained from the Insuline Corp. of America, 23 Park Place, New York City. It heats to an operating temperature in three minutes and an adjustable plunger-type soldering tip assures proper operating heat at the soldering point. Thoroughly insulated.

The 50-watt special radio iron is \$3 as is the 75-watt all-purpose iron.

A heavy duty iron is also available with two kinds of soldering tips, a 3/8 in. plunger-type of adjustable length and a 3/4 in. tip for heavier work. \$4.—*Radio Retailing*, June, 1934.



### Shadow Tuning Instrument

A novel resonance indicator for radio receivers, called the "Shadow Tuning Instrument," has been developed by the Westinghouse Elec. & Mfg. Co., East Pittsburgh, Pa. This indicator is especially desirable for sets with automatic volume control, substituting the eye for the ear which is ordinarily not a very good guide to proper tuning on such sets.—*Radio Retailing*, June, 1934.

### Electrad Attenuator Controls

Electrad, Inc., 175 Varick St., New York City, is making "T" type attenuator controls for control of volume, input or output, of public address systems. They use a multi-tap switch with wire wound resistor elements. Standard sizes are 200 and 500 ohms, 8 watts, with a total attenuation of 44 decibels. Other values on request. They measure 2 3/4 in. in diam. by 3 1/4 in. deep.—*Radio Retailing*, June, 1934.

## High Fidelity Progress (Continued from page 19)

ond detector input coil, is therefore used, indicating resonance irrespective of the fidelity control setting. A filter which cuts off response sharply in the neighborhood of 7,500 cycles is included between the first a.f. stage and driver. As in experimental models seen elsewhere it apparently proved necessary to lop off excessively high-frequencies in order to avoid undue inter-channel "hash." A tone-control, also included in the circuit, permits the reduction of highs at low volume-level, which increases apparent bass to compensate for the ear's deficiency in this region.

**T**HE speaker system is equally interesting. The dynamic used is of the usual large diameter. Its voice-coil is wound of aluminum wire to reduce weight, an important consideration at the higher frequencies. In addition the cone itself is constructed to radiate highs more readily. This is accomplished by making it of two

different grades of paper. The apex, close to the voice-coil, is made of stiff material while the outer edge is constructed of lighter, more flexible stuff. Thus the inner portion follows highs while the entire assembly takes hold on lows.

Diffusing "vaness" (see illustration) are used in order to reduce the highly directional radiation of high-frequencies. Without such diffusing vanes highs are not heard with normal volume much off the axis of the cone. In the receiver under discussion they consist of several vertical "fins" arranged directly in front of the cone to give lateral diffusion and a single horizontal vane to give vertical diffusion. The latter, aided by a slight upward deflection of the cone itself, keeps tone approximately equal in fidelity to both the tuner and a person seated at a distance.

The grille aperture is carried around on the cabinet sides slightly to permit wide-angle diffusion.



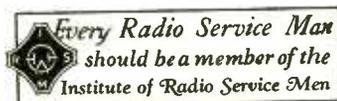
## if you could sit in with us

**SO** familiar has the name STANCOR become to you as identifying EXACT-DUPLICATE Replacement Transformers, it is frequently over-looked that the same name is outstanding among those supplying the set manufacturer with one of the most vital elements of his product.

Long before STANCOR engineers had developed STANCOR EXACT-DUPLICATE Replacement Transformers they had been building transformers for most of the best known makes of receiving sets. The development of STANCOR EXACT-DUPLICATE Replacement Transformers has not changed this. Instead it has added value to both.

If you could sit in with us . . . if you could see first hand how closely related these two are —STANCOR EXACT-DUPLICATE Replacement Transformers and STANCOR Transformers for original installation, you would even more thoroughly understand why STANCOR EXACT-DUPLICATE Replacement Transformers are so greatly to be preferred for servicing where renewal of performance is required through transformer replacement.

You would see the specifications of many transformers passing through the engineering department and the laboratory, preliminary to putting them on the production line by thousands and tens of thousands. You would see why STANCOR engineers are so familiar with every slightest detail of so many makes and models of receiving sets. You would better understand why set makers deliver into STANCOR hands the making of one of the most vital of all the parts of their sets . . .



how this and the accumulated experience of the past has in-

fluenced the development of STANCOR EXACT-DUPLICATE Replacement Transformers.

It is this broad background and intimate, close-up knowledge of a vast range of makes and models of receiving sets that is behind you in your assurance to your customer that you can renew the original performance of the set with a STANCOR EXACT-DUPLICATE Replacement Transformer.

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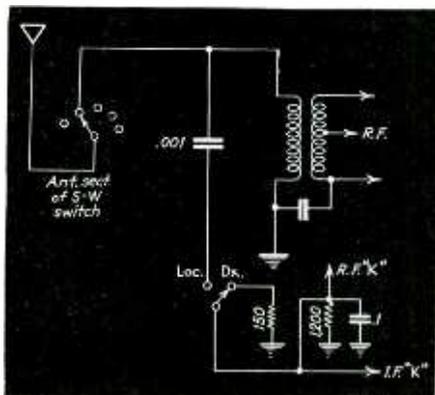
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# SERVICE SECTION

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Including  
Installation Data

## CIRCUITS of the MONTH



**Double-Acting Local-Dx Switch**

Stewart - Warner's model R-120 chassis uses an unusual "double-acting" local-dx switch. When in the position shown the 150 ohm resistor diagrammed is in parallel with the 1,200 ohm r.f. and i.f. bias resistor, reducing drop in this circuit and increasing amplification. When the switch is turned to the local position the 150 ohm parallel resistor is removed, raising the tube bias and reducing gain and, in addition, a .001 condenser shorts part of the incoming signal to ground (through the .1 cathode resistor bypass), further reducing gain.

The set is a superhet equipped with a separate shortwave detector and oscillator which works as a "converter" when the main chassis circuits are tuned to 1,540 kc. (accomplished automatically by the insertion of trimmers when the range-adjusting switch is turned to high-frequency bands).

The shortwave oscillator is rendered inoperative when listening in the broadcast band by applying abnormally high bias voltage to its grid.

### Beat-Frequency Oscillator A.V.C. and Q.A.V.C. Pre-Amplifier

Howard's 19-tube "Explorer," a deluxe model tuning continuously from 140 to 22,000 kc., is a veritable gold mine

of circuits that are "different" . . . so much so that we had difficulty writing a fully descriptive title for this item.

Let's go over them one at a time. The first diagram shows the receiver's beat-frequency oscillator. Except for the fact that the 2A7 receives supply voltages from the common power pack this oscillator is entirely separate, electrically, from the main tuner. Signals from it are simply "broadcast" to the r.f. circuits.

With the switch set in the position diagrammed the tube works as a modulated r.f. oscillator. Coil "A" is in the r.f. oscillator grid circuit, the normal suppressor grid being used as a control grid in this case, and may be tuned from 1,500 to 22,000 kc. (It makes a swell signal generator for aligning the

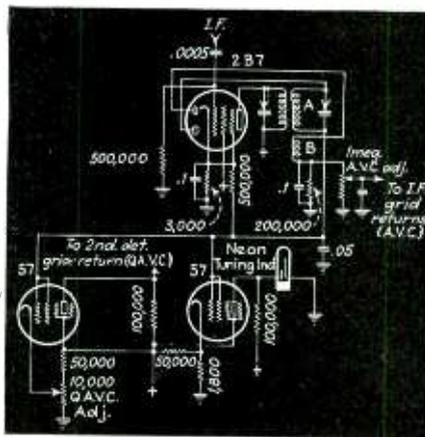
tration, is equally interesting in design.

I.F. is fed to the grid of a 2B7 which has nothing whatever to do with the regular signal circuits. It appears, amplified, in the plate coil of the tube and is passed by "B" to the lower diode plate, which rectifies and supplies a.v.c. voltage in the usual manner to preceding i.f. grids connected to the movable arm of the 1 megohm load resistor. Note that the a.v.c. adjustment resistor is in shunt with a 200,000 ohm fixed diode load.

Amplified i.f. developed by the 2B7 is also passed to the upper diode plate through coil "A," d.c. produced by rectification in this separate circuit appearing across the 500,000 ohm load between the lower terminal of the coil and cathode. This d.c. is applied as biasing voltage to the control grids of a 57 noise-suppressor, or q.a.v.c. tube, and a 57 amplifier which operates the neon tuning indicator.

When there is no incoming carrier little a.v.c. voltage is developed and little negative bias is applied to the noise-suppressor tube grid. Thus its plate current is relatively high and, inasmuch as this current flows through a 100,000 ohm resistor used also for 2nd detector bias the detector will be over-biased due to the voltage drop to a point where it fails to function, suppressing reception. The 57's plate current can be varied by adjusting its cathode residual bias resistor, hence the proper point of q.a.v.c. operation may be manually selected.

The neon tuning indicator "strikes" on the voltage drop across the 100,000 ohm resistor in the amplifier 57's plate circuit. Actuating bias for the grid of

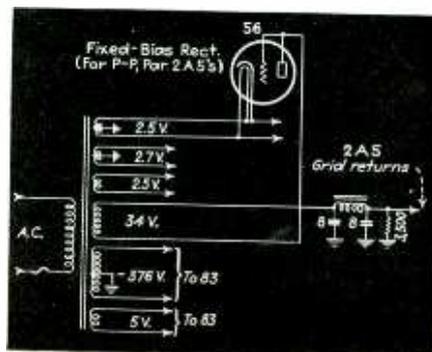


receiver on broadcast or shortwave channels.) Oscillation at r.f. is obtained by means of a tickler connected in the plate circuit. An audio choke is connected between the true control grid of the tube and cathode, producing a.f. modulation of the r.f. signal through common cathode coupling.

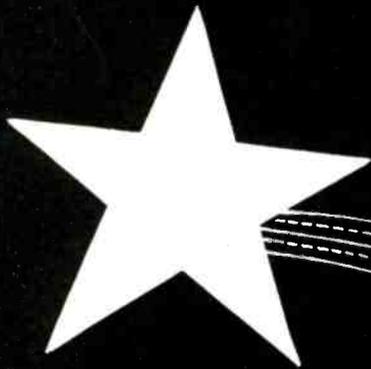
When the switch is turned to position 3 the a.f. coil is cut out and the 2A7 control grid circuit left open. Thus only an r.f., unmodulated signal is generated. Turning the switch to position 1 shuts the thing off.

The device makes a swell station locator.

The set's a.v.c.-q.a.v.c. tuning indicator circuit, diagrammed in the second illus-



*"Hitch your wagon to a star"*



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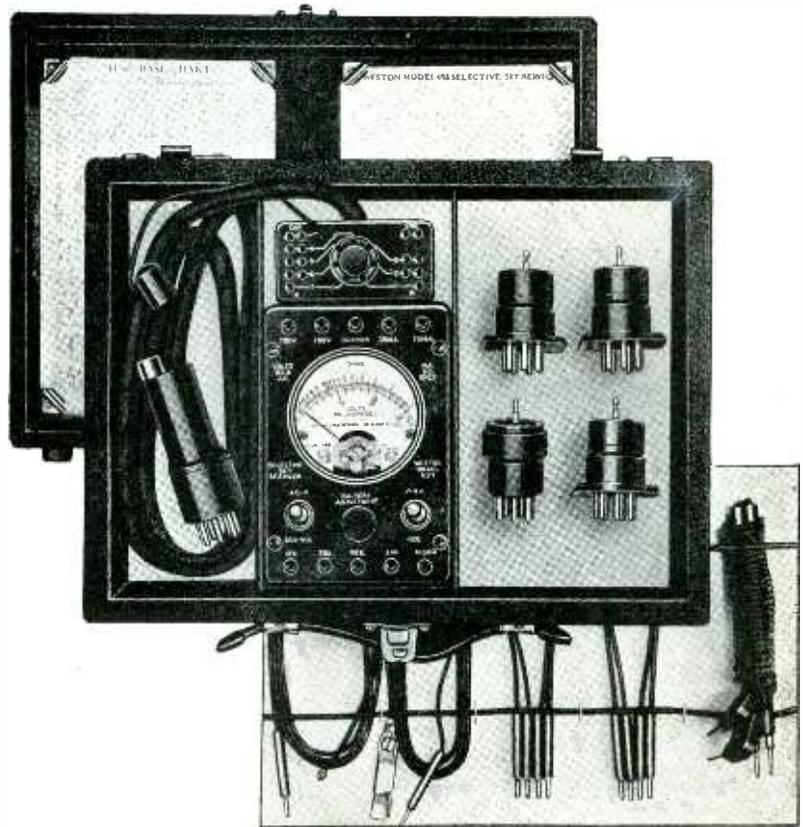
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**WESTON**



*Radio Instruments*

WESTON ELECTRICAL INSTRUMENT CORPORATION  
 581 Frelinghuysen Avenue, Newark, New Jersey

Send Bulletin on Weston Radio Instruments.

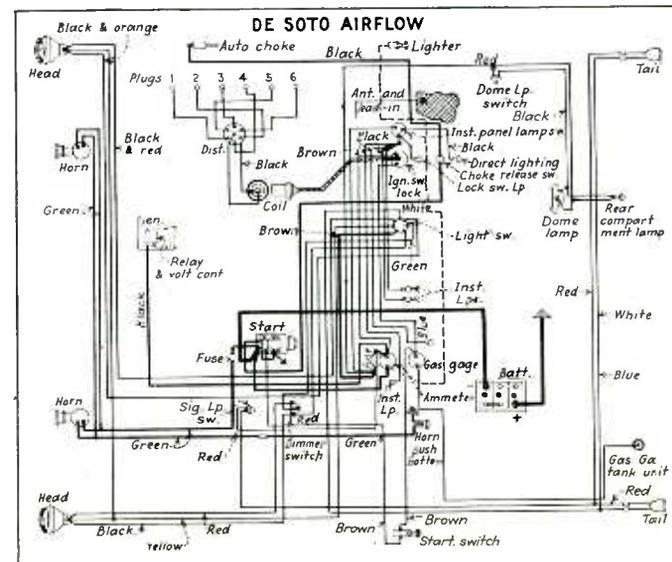
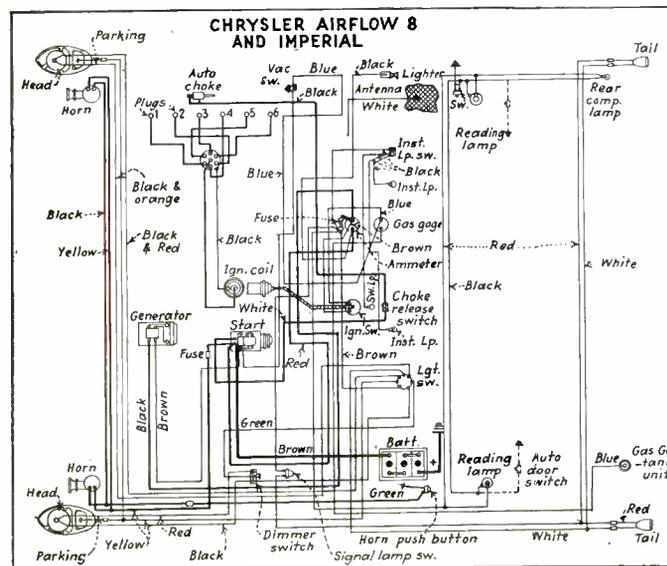
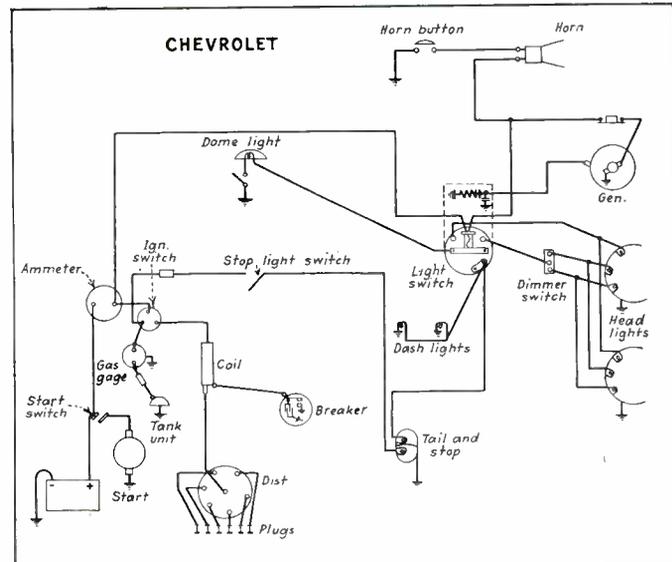
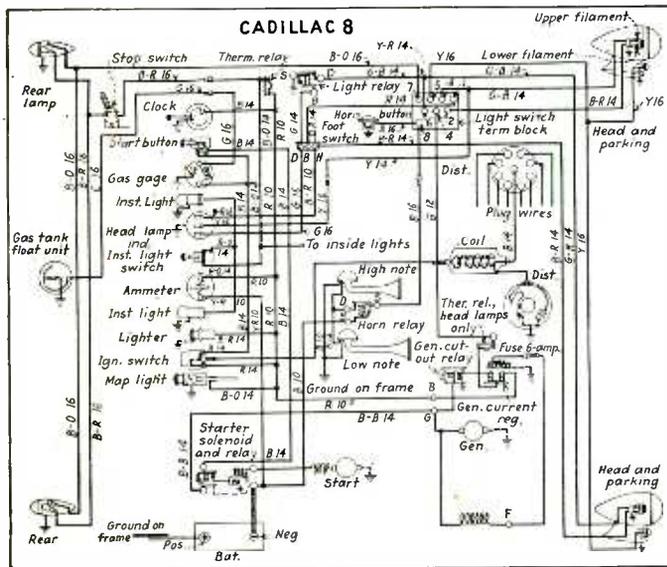
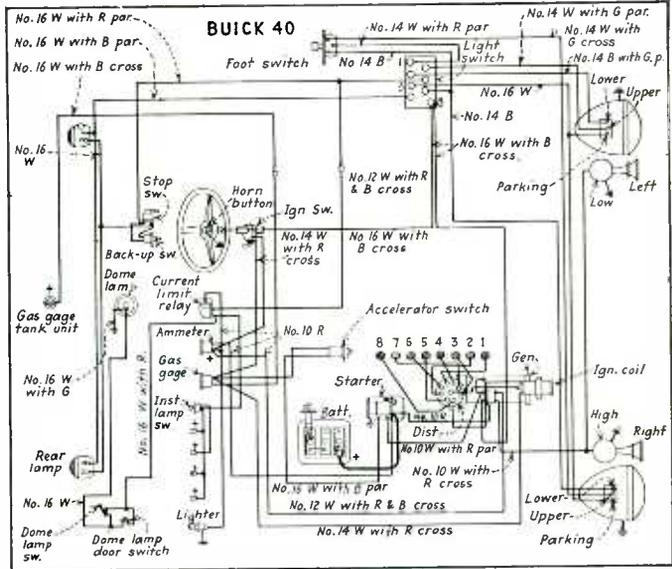
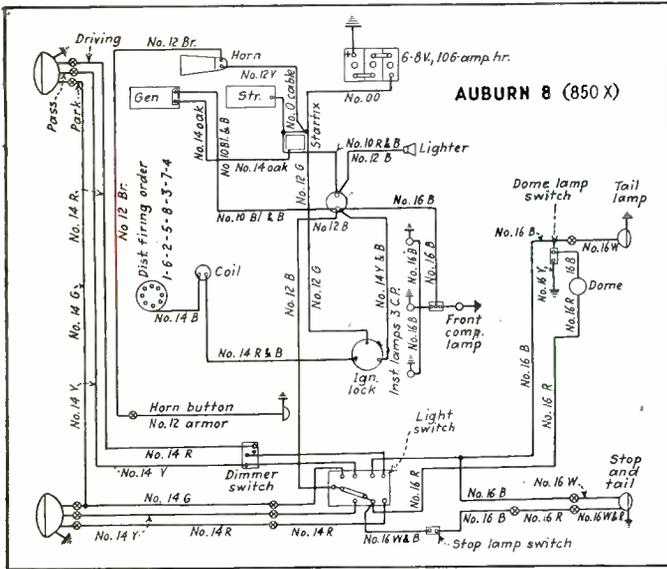
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Follow the GREEN LINE

Keep pace with the times.



You can cut inventory costs and STILL maintain efficient service by using ACRACON GREEN LINE GADGETS.\* Compact, dependable and convenient, these GADGETS are the ULTIMATE in servicing.

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\*Trade Mark

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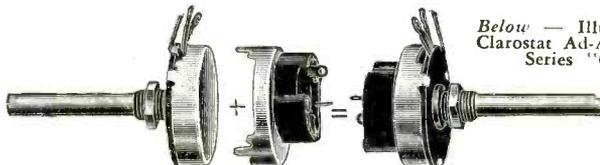
Hundreds of manufacturers have "banked" on Clarostat for initial equipment in radio and sound devices. For more than a decade Clarostat has held this business.

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If you are a jobber, dealer or service organization *have Clarostat reliability help you build repeat business.*



Clarostat Line Ballast Replacements for 27 makes, 81 models.



Below — Illustrating Clarostat Ad-A-Switch Series "C"



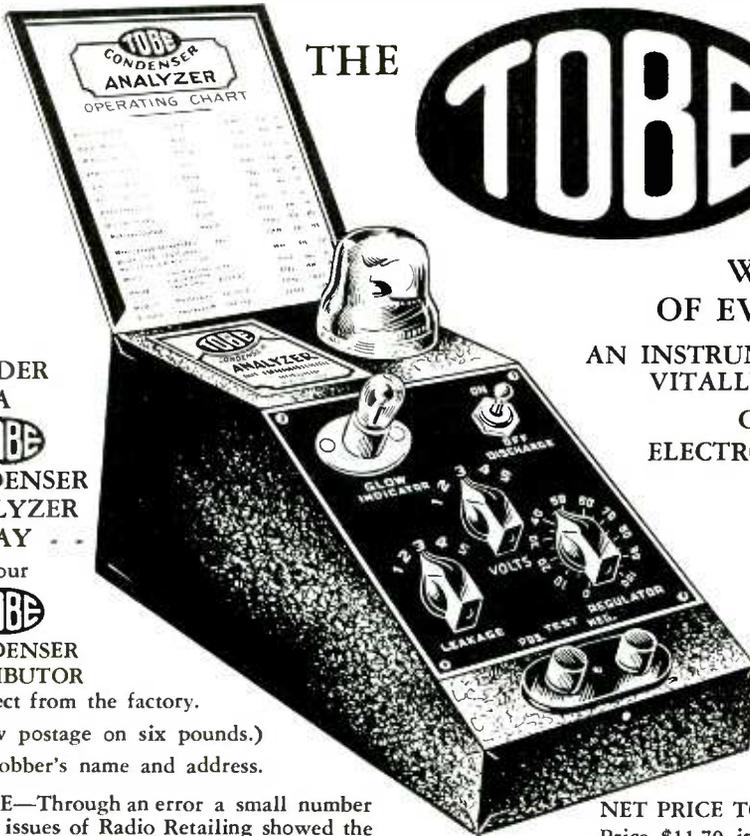
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**AN INSTRUMENT THAT HAS ALWAYS BEEN VITALLY NEEDED—NOW IS AVAILABLE !**

Condensers of Practically Any Capacity—  
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TESTED SCIENTIFICALLY BY THE  
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 METHOD.

1. Indicates poor, leaky condensers.
2. Indicates "intermittent" connections.
3. Indicates "open" condensers.
4. Indicates "shorted" condensers.
5. Tests at voltages up to 700 volts D.C.
6. Identifies all condensers as "good" or "re-place."

ORDER  
 A  
  
 CONDENSER  
 ANALYZER  
 TODAY  
 From your  
  
 CONDENSER  
 DISTRIBUTOR  
 or direct from the factory.

(Allow postage on six pounds.)  
 Give jobber's name and address.

NOTICE—Through an error a small number of May issues of Radio Retailing showed the incorrect price of \$9.90 for the TOBE CONDENSER ANALYZER. The correct price of \$11.40 was given in the bulk of the printing.

NET PRICE TO SERVICEMAN OR DEALER, only \$**11.40**  
 Price \$11.70 in Denver and the West Coast.

**TOBE DEUTSCHMANN CORPORATION**  
 CANTON - - - - MASS.

## NEW Auto-radio noise elimination data



Type GBO6DH Auto-Noise Filter with choke and two capacity units. The most effective noise filter ever designed for auto-radio installations.

### Causes of Interference and How to Remedy

CONTINENTAL engineers have now worked out a complete solution to the problem of noise elimination in auto-radio installations. This new FREE booklet is invaluable for auto-radio work. Write for your copy today. Also lists complete line of CONTINENTAL Auto-Radio Noise Filters.

### CONTINENTAL Replacement Condensers and Resistors

Now the best costs no more! Ask your jobber or write for the new CONTINENTAL Condenser and Resistor Catalogs showing greatly reduced prices on the famous CONTINENTAL-IGRAD Condensers.

Write for Service Engineering Bulletin listing all the new CONTINENTAL types and complete applications for each.

Ask your jobber or write

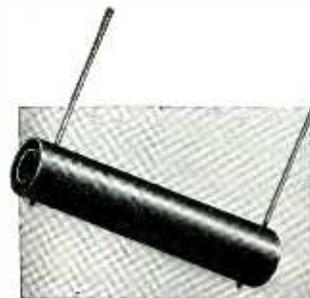
**CONTINENTAL CARBON Inc.**

13902 Lorain Ave. Cleveland, O.

Send the new CONTINENTAL Service Engineering Bulletin 101 on Auto-Radio Noise Elimination; also latest CONTINENTAL Resistor and Condenser Catalogs.

Name .....  
 Address .....  
 City ..... State .....  
 Jobber .....

## SERVICE MEN



### Select the Jobbers Stock

Progressive jobbers are supplying this demand. SERVICE MEN KNOW Ward Leonard resistors are dependable. The price is so low there is no profit in taking chances with over-rated resistors.

Ward Leonard resistors are wire wound with silver soldered joints at the terminals. The resistance does not change. They assure quiet operation.

Write for new literature for service men.

## WARD LEONARD RESISTORS

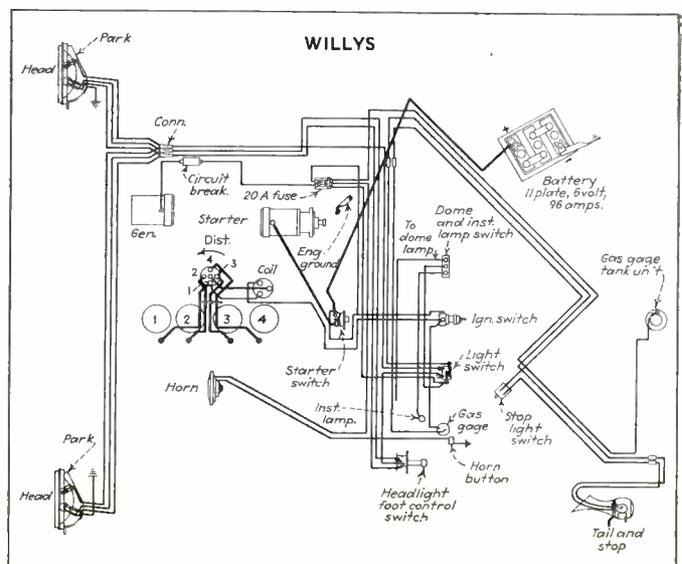
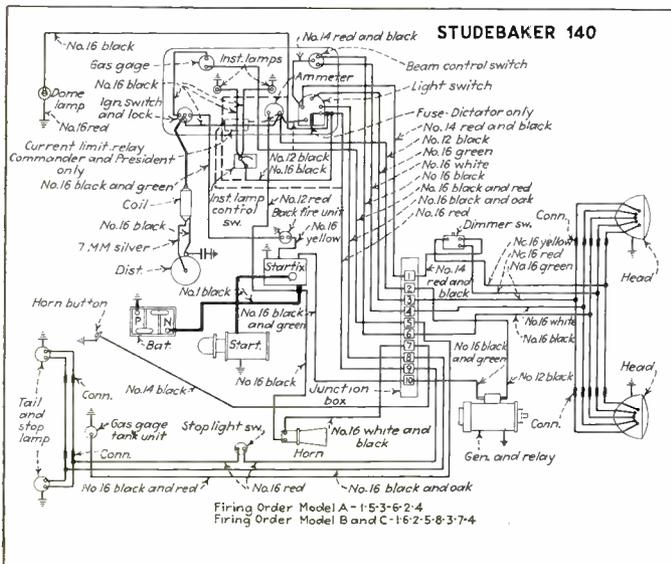
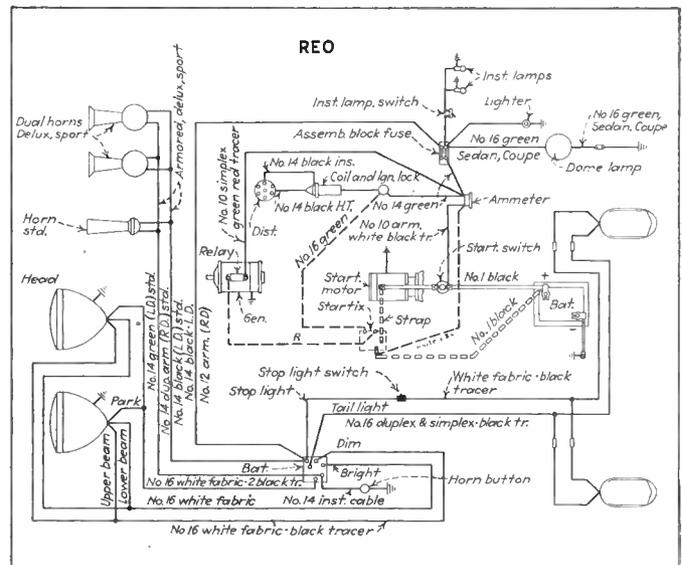
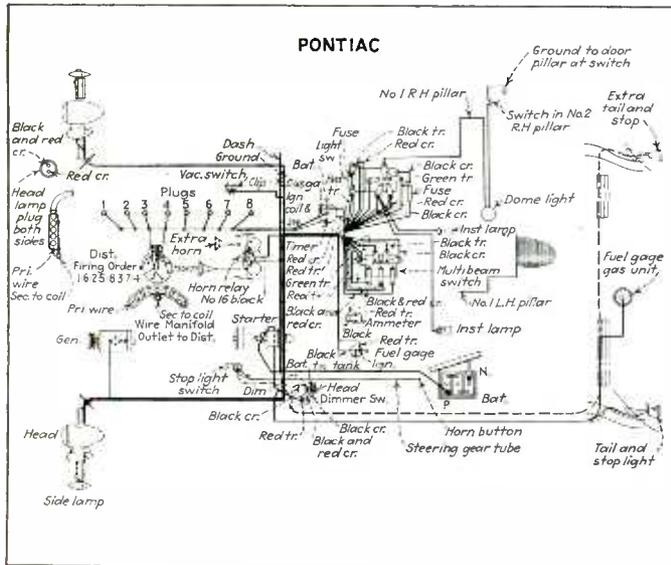
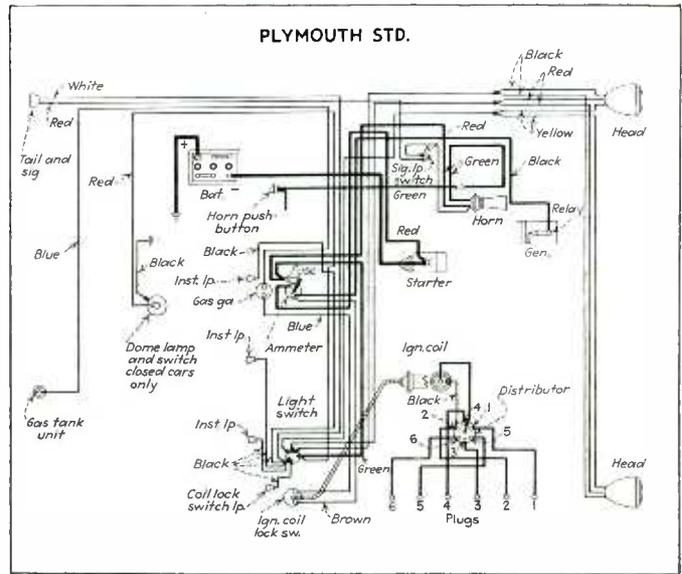
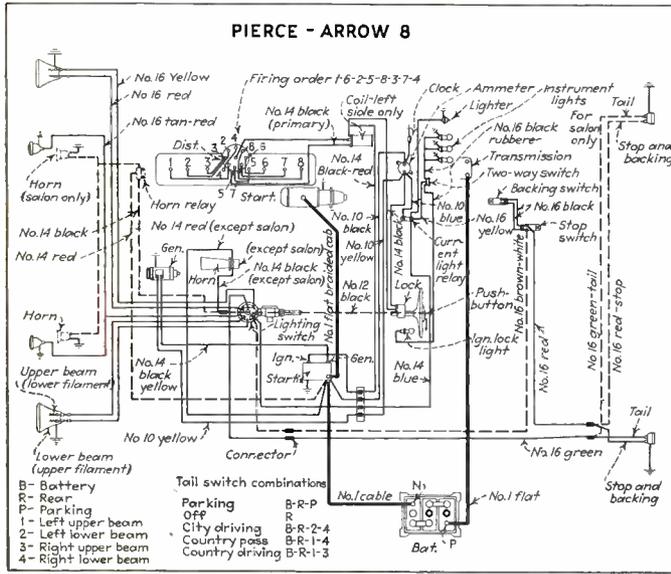
WARD LEONARD ELECTRIC CO.

Mount Vernon, New York

Name .....  
 Address .....  
 City ..... State .....  
 Jobber ..... RR .....

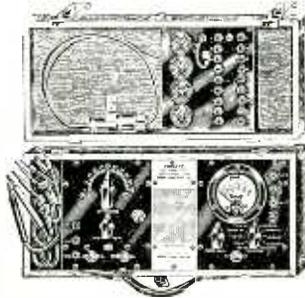
# SERVICE SECTION

Additional ignition systems will be diagrammed in an early issue of "Radio Retailing"





**NO  
1181**



**T**RIPLETT engineers developed the ALL-WAVE Oscillator, in answer to the growing demand from service men for a well designed, completely shielded all-wave signal generator. This new Triplet instrument is advanced in design, precision built, compactly constructed, and absolutely dependable. It gives a signal output of constant level . . . either modulated or unmodulated.

The charts are hand calibrated and cover a frequency range of 110 to 18,000 KC. The frequency ranges are controlled by a 4-position band change switch. The condenser shaft is at ground potential. This means that there is no radiation of signal from condenser shaft or screws. A perfected attenuator control makes it possible to use the signal generator on the most sensitive as well as the weakest receivers.

No. 1151 is a single All-Wave Oscillator. Dealer's net price..... **\$23.34**

No. 1180 is made up of the combined All-Wave Oscillator and Volt - Ohm - Milliammeter. Dealer's net price..... **30.00**

No. 1181 is a combination of Volt-Ohm - Milliammeter. Free - Point Tester, and All-Wave Oscillator. Dealer's net price..... **38.00**

*Your Jobber Can Supply You*



**The Triplet Electrical Instrument Co.**  
73 Main St. Bluffton, Ohio

**Mail today for details**

The Triplet Electrical Instrument Co.  
73 Main St.,  
Bluffton, Ohio.

Gentlemen:

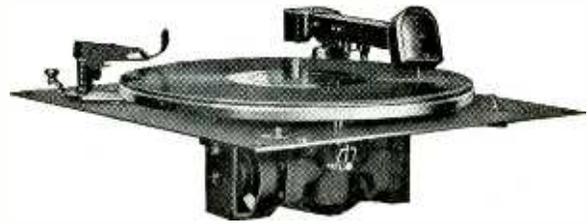
Send me catalog on Triplet ALL-WAVE Oscillator, and your complete line of radio servicing instruments.

Name .....

Street Address .....

City ..... State .....

## Automatic Record Changer Plays both 10" and 12" Records



### CAPACITY

Plays and automatically changes eight 10" records or seven 12" records at 78 r.p.m. or 33 1/2 r.p.m.

### COMPACT

Requires small cabinet space for mounting

### REMARKABLY SIMPLE

No intricate working parts to get out of order

### SELF-CONTAINED

Shipped complete ready to drop in cabinet

### FINISHED

in pleasing statuary bronze

IMMEDIATE DELIVERIES MAY BE HAD

Product of

**THE GENERAL INDUSTRIES CO.**  
Elyria, O.

## NATIONAL UNION TUBES WILL HELP YOU STAR IN SERVICE WORK



**Free Meters—Manuals—  
Superior Quality - More Profit**

You want to be rated as a service man who "knows his stuff!" You want to be the leader in service work in your locality. You are given a real chance to star in service work when you tie up with the National Union program. Thousands of your fellow servicemen all over the country are finding that National Union means far more than—radio tubes. Service Aids, Sales Aids, Superior Quality tubes. More Profit on every tube sale through ten cent higher list prices. No Price Cutting and Customer Satisfaction are a few of the reasons you can't afford not to tie up with National Union.

To star in service work you need not only superior tubes but complete data and shop equipment. National Union understands the problems of service men and offers FREE with National Union tube purchases a Servicing Tool Kit, Supreme 333 Analyzer, Four Service Manuals, Auto Radio Manual, Triplet 419 Tube Tester, Triplet 1178 Perpetual Tester, Hickok Diamond Point, Jr. Tester, Supreme 85 Tube Tester. All offers subject to withdrawal without notice. Small deposit. What do you need to help you star in service work? Get details!

### A STAR SERVICE BENCH

The fine example of a modern service bench shown above belongs to Stitely Radio Shop, Oskaloosa, Iowa. Mr. Stitely says:

"Two years ago I was about to give up service work because every time a new tube or set came out I had to buy new test equipment. Then National Union came along and showed me their proposition. My first contract was a tube tester and I was first to have one up to date. Therefore, I got the tube business. Then I got more instruments on contract. People soon found out I had the best test equipment and in came the repair jobs. Today I have every instrument and manual that National Union gave out. Also have the finest equipped shop in this city. (Thanks to National Union)."

"Still better, I don't have to make repeat service calls to replace tubes like I used to. I have only replaced two bad tubes in the last two years. Think of the time and cost it eliminates a service man, not saying anything about dissatisfied customers."

"N. U. will positively test better than any other make and with the ten cent higher list, well, it just means more money for the service man."

**National Union Jobber Stocks Are Complete**

National Union Radio Corp. of N. Y.  
400 Madison Avenue,  
New York City.

Gentlemen:

I am interested in: .....

Name .....

Street .....

City .....

State .....



RT-6

# SERVICE SECTION

## TRICKS of the TRADE

**AK 82.** Very poor reception, oscillation, cutting in and out of signals . . . Check mica of i.f. stage plate trimmer. It sometimes either rots or carbonizes and leaks badly, later shorting and then opening. The condenser is one of two trimmers on top of the i.f. transformer, completely inclosed in shield can.

**'33 CHEVROLET.** Noise, disappearing when antenna is disconnected from set . . . Generally picked up by shielded antenna lead which runs behind instrument panel and is frequently in inductive field of cable running from key to coil. Run antenna lead at right angles.

**CROSLEY 130.** Oscillation, lack of volume, hum . . . Check for failure of 4 mfd., 300 volt section of dual cardboard type dry electrolytic. Use a 450 volt job in this position.

**FORD III.** Lack of sensitivity at high-frequency end . . . Replace 8,000 ohm cathode resistor in 38 autodyne circuit with 6,000 ohms.

**'34 HUDSON.** Noise suppression . . . Install a dual condenser on the generator, one directly on the temperature indicator at the radiator, another directly on the oil gauge connection at the bottom of the motor pan and also one on the gas gauge directly on the top of the tank. This can be reached back of the rear seat as there is a door for access. Also use condensers in the dome light lead and coil supply lead right at the coil. It is also frequently necessary to shield the high tension lead from the coil right up to the fire wall. And the low tension lead from coil to distributor should be removed from the spark plug duct and shielded.

**KOLSTER, ZENITH.** Where sets of this type, using filament rheostat for volume control in 26 circuits do not provide satisfactory volume variation . . . Remove volume control entirely, solder filament leads to control together. Use a 500,000 ohm potentiometer across output of first a.f. transformer, center tap of potentiometer to succeeding tube grid. The rotor of the potentiometer should be insulated from the grid.

**MAJESTIC 500.** Nothing coming through tubes ahead of 42 . . . Look for open coupling condenser, tubular type .05 going from triode plate of 6F7 to control grid of 42. Motorboating, all voltages ok . . . Change 3rd i.f. transformer. Trouble is usually primary to secondary short. Set stops when nearby light is turned on or off . . . Short out a.v.c. 300,000 ohm resistor in grid return circuit of 6A7. Trouble is due to over-biasing of 6A7 by surge, paralyzing its action.

**MAJESTIC 66.** Installation hints . . . To greatly reduce motor noise pick-

up conducted to chassis by pilot light lead, make it easier to remove the set, permit the use of the set without the pilot light burning in daylight proceed as follows: Before making the installation remove the remote control pilot light feed wire from the chassis by unsoldering it inside or cutting it off just outside the case. When the remote control unit has been mounted connect the pilot lamp wire to the tail lamp post on the lighting switch by holding wire to each post and snapping switch through its various positions.

**PHILCO 90.** Audio howl not due to microphonic tubes . . . Check for control shafts or chassis touching front of cabinet, and also for correct functioning of rubber cushions. Vibration frequently causes oscillator plates to vibrate, causing tuning change and howl.

**PHILCO 87.** Low volume or fading . . . Look at r.f. trimmers. Metal eyelets in insulators supporting these may have temporary short to trimmer stators. Remove screws through eyelets and slip thin piece of insulation under them. Remove adjusting nuts and give trimmer stators an upward bend. This tension will hold them in place.

**RADIOLA 44, 46.** Set plays on one or two stations but it seems impossible to align tuning condenser . . . Replace the first, unshielded, r.f. coil, which is frequently affected by moisture and climatic conditions.

**RCA R32, R52, RE45, RE75.** Whistle in background on all stations, reception otherwise ok . . . Generally due to open 500,000 ohm resistor across half secondary winding of interstage push-pull audio transformer.

**SERVICEMEN.** How about letting us have the intermediate frequency when sending in "Tricks of the Trade" items? This will eventually build up a valuable reference list.

**S-M "Q."** Motorboating or distortion when volume is turned full on . . . Defective cathode bias resistor in i.f. stage. It will probably check ok on an ohmmeter but should be replaced. (I.f. 175 kc.)

**SPARTON 79A, 89A, 930, 931, 301, 109, 110, 740, 750, 589, 25, 26.** Partial or complete open-circuit in r.f. chokes composed of very small enamelled wire wound on bobbin in all band-pass selector and fixed r.f. amplifier models . . . Break most often occurs at point where winding is soldered to ferrules at end of bobbin. This is detectable with an ohmmeter and small pocket magnifier. Remove a few turns of wire, clean with fine sandpaper, then warp a half dozen turns around the ferrule and solder with rosin core. Most of the chokes have a d.c. resistance of about 3,000 ohms and a hundred turns more or less seems to make no difference.

**STEWART-WARNER 1121, 1122.**

To increase volume and improve tone . . . Disconnect B-plus (yellow and red lead) from side of output transformer from screen grid terminal of output tube and connect it to the high voltage side of the combination relay and filter choke. The most convenient point to connect is the cathode terminal of the rectifier tube. This raises plate potential about 40 volts. Change the grid resistor of the 41 from 510,000 ohms to 250,000. It is inclosed in a piece of large spaghetti and is connected from the 41 grid to ground. Change the permanent tone control condenser which is connected to the plate of the output tube from .01 to .006, 600 volts. It may be necessary to readjust the spring of the relay as output tube plate current no longer passes through it. Reduce the tension of the relay spring, which tends to keep the contacts closed, by stretching it slightly.

**STEWART WARNER 116.** Hum . . . Check for following possibilities: Poor contact at grounding lug of vitreous voltage divider resistor. To cure, tighten screw used to hold down the grounding terminal and solder it in place. If this does no good cut the 230 ohm negative section out and use a separate 230 ohm unit. To cut out section unsolder from the negative terminal of the divider both the wire leading from the power transformer and the small, red resistor within the insulated sleeving. Re-solder these wires to one end of the 230 ohm resistor. Solder the other end of the resistor to ground. The grounding lug located below the shortwave switch is convenient for grounding. Keep power cord away from the .05, 100 volt isolating condenser. See that green speaker field coil lead goes to the front electrolytic condenser, the white lead to the rear.

**UNITED MOTORS 2035.** Vibrator test . . . Connect 8 volts to battery leads, remove 5 ampere fuse in 84 filament lead and shunt an ammeter across the fuse terminals. Place a good 84 in the rectifier socket. The meter should jump to 10 amperes and then drop back to 4.5 if unit is normal. Voltage from plate of 84 to ground is 300 a.c.

**VICTOR RE 32, 45.** Background noise, lack of sensitivity . . . Replace 27 detector with a 56.

**WELLS-GARDNER 20 (Gulbrandsen 23, Griffith 20).** No volume . . . Check 40,000 ohm carbon resistor attached to end of Candohm, wired between plate of 1st a.f. 27 and grid of 47's. If defective, replace with 5 watt size of same resistance and replace .5 mfd. bypass, in the condenser block (red wire) with external .5 mfd. unit rated at 600 volts. Intermittent or fuzzy reception . . . Check and, if necessary, replace .1 mfd., 600 volt and .05 bypass condensers.

**NEW SERVICEMEN'S TYPE  
CANDOHMS**

1 WATT  
½" x 1"  
LIST 25c



10 WATT  
¾" x 1½"  
LIST 40c

SEND TODAY FOR NEW COMPLETE CATALOG and  
FREE RESISTANCE CALCULATION TABLES

**THE MUTER COMPANY**  
1255 South Michigan Ave., Chicago



**WET AND DRY ELECTROLYTIC  
PAPER AND MICA CONDENSERS**

RECOGNIZED FOR  
**SUPERIOR QUALITY**  
IN ALL CLIMATES  
THE WORLD OVER

SOLD BY LEADING  
JOBBER EVERYWHERE

**SOLAR MFG. CORP.**  
599 BROADWAY  
NEW YORK

**BEST BY TEST!**  
ASK FOR  
CATALOG  
OF EXTREMELY  
COMPACT TYPES  
HANDY FOR SERVICE

**Get Rid of " " Auto-Radio "B" Pack Troubles**



Model JW Gen-E-Motor replacing vibrator power supply in popular set. At small cost any auto-radio may have the dependable power supply that is used in every deluxe 1934 auto-radio. Write for list of sets using PIONEER Gen-E-Motors.

Replace with the  
**PIONEER GEN-E-MOTOR**

Don't take chances with doubtful repairs. Install a genuine PIONEER Gen-E-Motor, the original rotary auto-radio power supply. New Model JW, only \$13.00 list (less usual discounts). Fits all popular sets. Can be installed in less time than required for troublesome adjustments to vibrator units. *Guaranteed for one full year.* Ask your jobber or write for the new "B" Replacement Guide. Just off the press!

★  
Write for FREE "B" Pack Replacement Guide  
**PIONEER GEN-E-MOTOR CORP.**  
464 W. Superior St., Chicago, U. S. A.  
Export Office: 25 Warren Street, New York, N. Y.

Send your new FREE "B" Pack Replacement Guide which contains complete replacement data on "B" power supplies for leading auto sets.

Name .....

Address .....

**RCA makes aerial history!**

**NEW ALL WAVE ANTENNA**

"Provides a new source of profit for the wide-awake service man"  
— says A. H. Prow, Pres. Phila. Radio Service Men's Association

EVERY home with an all wave set is an immediate prospect... so get busy! Tell your customers how this remarkable new antenna brings up weak signals, cuts down man-made interference, gives more uniform response because of special "double doubler" feature. Kit of essential parts retails for \$7.00. Your installation charge extra.

Special "Dealer Demonstration" Antenna Kit, Net Price \$9.85, makes possible convincing demonstrations in your store. Connects to four receivers.

[ Have you seen the remarkable new RCA Full Range Test Oscillator? 90 to 25,000 K. C. Direct Reading Dial, weighs 5 pounds with batteries. Only \$29.50. ]



**WORLD WIDE  
ANTENNA  
SYSTEM**

**Profit Makers**

IT'S good business to handle Ken-Rad Radio Tubes. The investment is nominal, compared with other merchandise. Turn-over is fast. The market is large and growing rapidly.

Ken-Rad Radio Tubes are manufactured by experts according to the highest standards. Write for details.



**Ken-Rad  
Radio Tubes**  
**DEPENDABLE LONG LIFE**

THE KEN-RAD CORPORATION, Inc., Owensboro, Ky.  
Division of The Ken-Rad Tube and Lamp Corporation  
Also Mfrs. of Ken-Rad Incandescent Electric Lamps

# WHEN PROSPECTS CALL ON SALESMEN —THAT'S NEWS



## BUT It's Happening in Stores Everywhere, Under the Leonard Selling Plan

### THE COMPLETE REFRIGERATOR

offers these, and a score of  
other, great sales advantages

**LEN-A-DOR**—Leonard's famous self opening, step saving door.

**CABINETS** of beautiful design, superior finish and quality construction.

**PLANNED INTERIOR**, with unusual shelf area and storage capacity.

**NEW SERVICE TRAY**, sliding and adjustable shelves.

**IMPROVED DAIRY BASKET** with bottle container; vegetable crisper; electric light.

**12 FREEZING SPEEDS**, extra fast freezing tray, cold chest, "vacation temperature," ice tray lifter.

**ALL-PORCELAIN INTERIOR**, all-porcelain cooling unit, refrigeration mechanism backed by 20 years' experience.

THERE are many plans to help dealers locate refrigerator prospects, but here is one that reverses the process—*brings prospects, in large numbers, to the salesman in the store.*

Leonard's program is the biggest sales promotion news of the year in the refrigeration industry. Big—because it is operating with tremendous success in hundreds of territories the country over. Big—because it is attracting *interested* prospects—who come to hear the Leonard story, and remain to buy. Big—because it saves so much of the time ordinarily

spent in hunting out possible buyers.

Coupled with a refrigerator line of outstanding beauty and quality—with a combination of convenience features unmatched in the industry—this program is breaking all Leonard records for retail sales.

Let us give you the details, and tell you more about the new Leonard Electrics—11 models (5 all-porcelain)—a complete line of merchandise that covers 98½ per cent of home refrigeration needs. Write or wire now . . . **LEONARD REFRIGERATOR COMPANY, 14259 Plymouth Road, Detroit, Michigan.** 

(686)

# LEONARD

THE COMPLETE



REFRIGERATOR

# Pulling...



## *Their weight in the boat*

**A**BSENTEE owners have never controlled the destinies of the Hygrade Sylvania Corporation.

The men who own the major portion of the stock are all active in managing the business. They work hard. They put the success of their company above all else. They pull their weight in the boat.

This unswerving loyalty to one ideal is a large part of the reason why Hygrade Sylvania has increased its financial and dealer strength, even during the years of depression. Throughout 1930, 1931, 1932, 1933 . . . and today . . . the company's credit rating has always been AAA1.

The radio set owner has been given a high quality, carefully inspected tube. The radio set manufacturer has had expert

technical help and advice. It was Hygrade Sylvania who first pioneered the development of new and more efficient tubes for automobiles . . . and later, the new 6.3 volt group of tubes.

Dealers and jobbers are assured sound merchandising, fair price protection policies. They benefit from the partner-like aid of the financial, engineering and sales departments. These advantages, combined with the fine quality of Sylvania Tubes, provide unmatched sales opportunities.

The support of a company like the Hygrade Sylvania Corporation can mean much to your business. Write us for further details. A letter puts you under no obligation. Hygrade Sylvania Corporation, Sylvania Division, Emporium, Penna.



# Sylvania

(Reg. U. S. Pat. Off.)



THE SET-TESTED RADIO TUBE

© 1934, H. S. C.

# A CLOUD-BURST THAT TURNED INTO A TIDAL WAVE

**D**URING the past few months Grunow distributors and dealers have achieved a record that has never before been equalled in the history of all business.

They, and the American public, have emphatically placed a seal of approval upon, and paid a tribute to a new and revolutionary product, in a way that leaves no doubt as to its supreme value.

This great out-pouring of faith — this unqualified vote of confidence, as expressed by the public in millions of dollars of expenditures for our product, again supports the homely truth, that if you build a better mouse trap — or refrigerator, a path will literally be beaten to your door.

Today Grunow distributors and dealers are practically out of merchandise. Yesterday the same thing was true. Last week, and even last month, in certain sections of the country, Grunow refrigerators were almost sold at a premium. This is the case from Maine to California.

With production facilities that are unquestionably more modern than those of any refrigeration plant in the country — with a plant organization probably more efficient than any in the country and with production *four times as great* as was originally contemplated, Grunow refrigerators still cannot be built fast enough.

We prepared for a cloud-burst, but we received a tidal wave!

We knew we had the *safest* refrigerator in the world. We felt that we had the most *beautiful* refrigerator ever built, the easiest to service, the most economical to operate — and the most profitable for dealers to handle. But frankly, it was not by any means the cheapest on the market. Contrary-wise — it was simply the *finest* on the market.

And who could foretell that in the space of a few short months it would grip the imaginations and hearts of American women to such a degree that more models of Grunow

would be sold, in its price bracket, *than of any other make in the country.*

To our distributor and dealer organization which has performed so wonderfully, sincere appreciation. To them all the thanks that go with the thrill of a superb achievement. And to them also, we offer this sincere explanation of why, despite large production and a real effort to keep up with demand, it has been impossible to do so, even though we have consistently built several times as many refrigerators each day this year as last.

And now we are about to launch what we believe will offer the chance for another great achievement on the part of our selling organization. It is the 1934-35 Grunow radio line, which has occupied the attention of our own and some of the greatest consulting engineers in America for six months past. On this line hundreds of thousands of dollars have been expended in experimental work. This radio combines the finest of all-wave reception with many other spectacular features.

We say here and now that this will be the most startling development that has yet been announced in radio. Cabinet designs, mechanical features and prices will all be revolutionary — and this is not a mere catch-phrase for expressing a thought. In radio our production is geared to fill a terrific demand; because it will be there — never fear.

And, more to come: General Household Utilities Company is not pausing in its experimental work or plans for offering dealers still more extraordinary refrigeration developments that will give them an impregnable position in their respective communities.

Again we say THANKS; and await future developments.

GENERAL HOUSEHOLD UTILITIES COMPANY,  
CHICAGO.

*Grunow*  
SUPER-SAFE REFRIGERATOR

# 93% of the TUNG-SOL Tubes sold by our 9000 retail partners go to replace tubes of other makes

There are a number of reasons for this enormous replacement percentage, but back of them all stands this fundamental fact:

**Tung-Sol Tone-Flow Tubes do a better job.**

They are built with hair-line precision and scientific accuracy to provide clearer, fuller reception, to minimize the noise nuisance and to work together like a perfectly matched team during a longer-than-average lifetime.

**And Every Tung-Sol Tone-Flow Tube does 100% of its duty.**

That is why Tung-Sol Tone-Flow Tubes require so little servicing. That is why your Tung-Sol customers are satisfied and that is why Tung-Sol's 9000 retail partners have increased their sales by 800% during the last two terrible years!

## The Tung-Sol Time-proven Protection Plan

- 1** Insures an adequate stock without investment on your part.
- 2** Insures the full profit merited by merchants who build business on the firm foundation of quality merchandise.
- 3** Insures protection from cut-throat competition.
- 4** Insures elbow-room for all by selling only to selected retailers.
- 5** Eliminates cut-rate gyp-shop and mail-order competition.
- 6** Protects against loss due to price declines and obsolescence.

Write in at once for the full details of the Tung-Sol Protection Plan



# TUNG-SOL

Tone-flow radio Tubes

TUNG-SOL RADIO TUBES INC., NEWARK, N. J.

Atlanta Boston Charlotte Cleveland Chicago Dallas Detroit Kansas City Los Angeles New York



*Only Stewart-Warner Could Make Them*

DESIGNED and built by the world's foremost makers of automobile accessories, precision instruments, and the famous "Magic Dial" Round-the-World Radio. Years of engineering, manufacturing, and sales experience in the automobile accessory and radio fields underlie the superiority of these new car radios. Only Stewart-Warner could make them!

Exceptional performance made possible by a sensational new system for suppressing ignition interference is the surprise feature of the new Stewart-Warner Automobile Radio. Use of old-time suppressors now eliminated. Sensitivity is less than one microvolt—power output is exceptional.

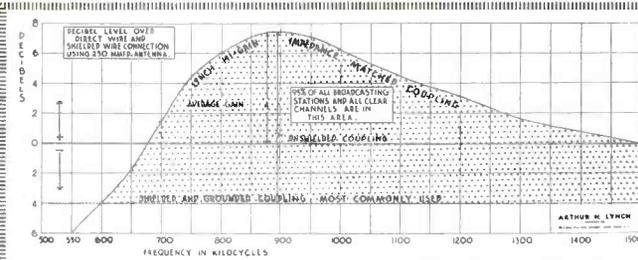
Six tube superheterodyne circuit with automatic volume control—3 gang condenser—variable tone control—variable sensitivity control—vibrator type "B" Supply—full 6 inch electro-dynamic speaker. Black crackle finish all-steel cabinet is arranged for 3-position mounting. Remote control with patented drive—illuminated airplane dial. Easiest set on the market to service. List complete \$49.50.

Also a five tube set with many of the above outstanding features, list complete \$39.95.

*For complete details of advertising and selling plans, communicate with the Stewart-Warner distributor in your locality, or write to us today.*

**Matchless  
Car Radios**  
from the  
**Most Logical  
Source**

**STEWART-WARNER CORPORATION, 1853 Diversey Parkway, Chicago, Illinois**



**LYNCH HI-GAIN IMPEDANCE-MATCHED COUPLING IMPROVES AUTO RADIO SIGNAL STRENGTH**

More stations, less noise, easier to install, much more satisfaction and profit.

Write for Details

**ARTHUR H. LYNCH, Incorporated**  
227 Fulton Street, New York, N. Y.

# ARKAY Radio

Manufacturers of  
**MIDGETS, AUTOMOBILE, CONSOLE AND SPECIAL RADIOS**

R. C. A. LICENSED

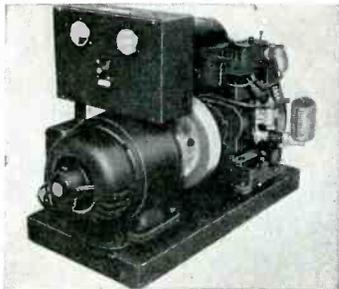
**R. K. RADIO LABORATORIES, INC.**  
6312 Northwest Highway Chicago, Ill., U. S. A.  
Tel. Newcastle 4040 Cable Address: Arkey Chicago

## A.C. CURRENT ANYWHERE

with Kato AC Electric Plants

All A.C. Models self cranking—Generates 110 Volts, 60 Cycles A.C. \$130.00 and up.

Dealers: Every non-electrified dwelling is a prospect. Plant sales net you substantial profits.



Creates Potential buyers for electrical appliances. Sizes 300 to 5000 watts. Operates Radio, Refrigerators, etc.

Ideal for sound trucks. Supplies D.C. for speakers.

YOU CAN BUY THROUGH YOUR JOBBER

Write for interesting descriptive literature.

**KATO ENGINEERING CO.**  
Mankato, Minnesota, U. S. A.

## The Fit Still Survive

Did you ever compare the classified section of the 'phone book with the directory of the year before? It's an interesting if somewhat disheartening pastime. You find every year that some merchants have fallen by the wayside. The causes are usually bad management and poor merchandise.

Fortunately each trade has antidotes for business disaster and failure. Not the least of these antidotes are the business magazines of each trade. The editorial pages tell a merchant how to manage his business profitably—the advertising pages help a man buy good merchandise.

Try *Radio Retailing* as a prescription. Use its pages as a cure for failure, as a stimulant to business survival.

*Radio Retailing*



## JANETTE ROTARY CONVERTERS

For Farms—Ships  
—City Apartments  
—Automobiles

Wherever the current supply is D.C. use JANETTE Rotary Converters to operate your AC receivers.

JANETTE Converters are filtered to give radio results as good as, or better than, those obtained with central station AC. Built to outlast the radio set.

Available in 15 sizes. Capacities from 20 to 2500 watts. Input voltages of 6, 12, 32, 115 or 230 volts. Standard machines deliver 110 volts, 60 cycles AC.

**MAIL COUPON FOR DETAILS**

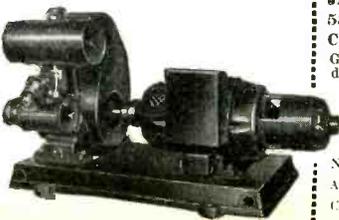
JANETTE MFG. CO.  
555 W. Monroe St.  
Chicago, Ill.

Gentlemen: Please send prices and details on your:

- Rotary Converters
- Auto-B-Power (B-eliminator for auto-radio)
- Gas Engine Generators.

Name .....  
Address .....  
City ..... State .....

Below: Gas engine-operated JANETTE 110-volt, 60-cycle generator. Capacities: 300 to 3000 watts. Ideal for sound-trucks, amplifiers, P.A. systems, etc.



## The Fleet's In

the Hudson River, almost outside our office. Thousands of visitors are going aboard the ships. But suppose we tried to collect all our *Radio Retailing* readers on board the fleet—all the men who're reading this issue, for example. Our naval expert, an Annapolis chap, says it would take the whole battleship squadron of the U. S. Navy to hold our 20,000 readers.

Remember that crowd of over 20,000 eager, interested *Radio Retailing* readers, particularly if you've a product to sell to distributors, dealers or service men. Yes, *Radio Retailing* has more paid subscribers than any other radio trade publication.



# SEARCHLIGHT SECTION

EMPLOYMENT and BUSINESS OPPORTUNITIES—SURPLUS STOCKS—DISCONTINUED MODELS

**UNDISPLAYED—RATE PER WORD:**  
*Positions Wanted* (full or part-time salaried employment only), 10 cents a word, minimum \$2.00 an insertion, payable in advance. (See ¶ on Box Numbers.)  
*Positions Vacant* and all other classifications, 15 cents a word, minimum charge \$3.00.  
*Proposals*, 40 cents a line an insertion.

**INFORMATION:**  
*Box numbers* in care of our New York, Chicago and San Francisco offices count 10 words additional in undisplayed ads. Replies forwarded without extra charge.  
*Discount* of 10% if one payment is made in advance for four consecutive insertions of undisplayed ads (not including proposals).

**DISPLAYED—RATE PER INCH:**  
 1 inch ..... \$7.50  
 2 to 3 inches..... 7.25 an inch  
 4 to 7 inches..... 7.00 an inch  
*Rates for larger spaces, or yearly rates, on request.*  
*An advertising inch* is measured vertically on one column, 3 columns—30 inches—to a page. Radio Retailing

## There is a Searchlight Section

in each McGraw-Hill  
paper:

- American Machinist
- Aviation
- Bus Transportation
- Chemical and Metallurgical Engineering
- Coal Age
- Construction Methods
- Electrical Merchandising
- Electrical World
- Electronics
- Engineering News-Record
- Engineering and Mining Journal
- Factory Management and Maintenance
- Food Industries
- Metal and Mineral Markets
- Power
- Product Engineering
- Radio Retailing
- Textile World
- Transit Journal

For advertising rates and other information on any or all of these publications, address

Departmental Advertising Staff  
**McGraw-Hill Publications**  
 330 W. 42d St., New York City

### SPECIAL NOTICE:

## TO THE RADIO INDUSTRY

Advertising in connection with legitimate offers of surplus stocks and discontinued models of radio merchandise is acceptable in this section of "Radio Retailing."

Extreme care will be exercised by the publishers to prevent the use of advertising in the Searchlight Section to encourage price cutting on current models of merchandise or equipment. Nor will advertising which invites violation of the dealer's contract with the manufacturer be acceptable.

All merchandise offered in the Searchlight Section must be accurately and fully described and must be available on order.

**SERVICEMEN-DEALERS**  
 "Send for our Handbook and Catalog"  
 Complete Stock of NEW  
 Radio Replacement Parts  
 Hard to Get Parts in Stock  
 Power Packs and Speakers Repaired  
**GRANT RADIO LABORATORIES**  
 6521-R South Halsted St., Chicago, Ill.

## STOP GUESSING!

Radio service is easy when you know just where to look for the troubles. And, the securing of profitable rates for repairs makes the job still more attractive. A CHUCKKER eliminates guesswork in "What is Wrong, and What to Charge." This trouble-localizer, with a really profitable schedule of flat rates included, enables radio men to localize any trouble in any radio, in a few minutes right in the field. Permits you easily to convince set owners that you are not guessing at either the trouble or the price of the repair job. Your competitor is making good money by using a CHUCKKER. Send \$1.00 NOW for yours, postpaid.

**FREED'S RADIO CO. (Dept. E)**  
 5053 Baltimore Ave., Philadelphia, Pa.

### POSITION WANTED

SERVICE man desires position, 8 years on all makes. Own equipment. Anywhere. PW-190, Radio Retailing, 520 No. Michigan Ave., Chicago, Ill.

### REPRESENTATIVE AVAILABLE

**Manufacturers**  
 Reputable service engineer, rapidly expanding practice, seeks additional lines, sell direct to homes, Commission, Eddy Radio Service System, Springfield Gardens, N. Y.

### WANTED

ANYTHING within reason that is wanted in the field served by Radio Retailing can be quickly located through bringing it to the attention of thousands of men whose interest is assured because this is the business paper they read.

### Agents Wanted

A few territories open for agents having a following in the Radio Replacement Parts Jobbing Trade.

### MORRILL & MORRILL

30 Church Street, New York, N. Y.

## RADIO ENGINEERING,

broadcasting, aviation and police radio, servicing, marine radio telegraphy and telephony, Morse telegraphy and railway accounting taught thoroughly. Engineering course of nine months' duration equivalent to three years of college radio work. School established 1874. All expenses low. Catalog free.  
**Dodge's Institute, Earl St., Valparaiso, Ind.**

## FREE 1934 WHOLESALE RADIO CATALOG

Radio Replacement Parts, Sets, Tubes and Electrical Appliances at great savings.  
**WHOLESALE MERCHANDISERS, Inc.**  
 624 Broadway, - - New York City

### DEALERS and SERVICE MEN

Genuine Grebe factory made parts in stock for all model Grebe receivers manufactured prior to 1933. Power transformers for sets using from 4 to 12 tubes. Also audio transformers and filter chokes. Write for descriptive data and parts price list.  
**GREBE RADIO SALES & SERVICE CO.**  
 137-28 Jamaica Ave., Jamaica, N. Y.  
 (Owner former Gen. Fact. Mgr. of A. H. Grebe & Co., Inc.)

### Easily Sold—Easily Serviced Motion Picture Sound Today's Best Bet

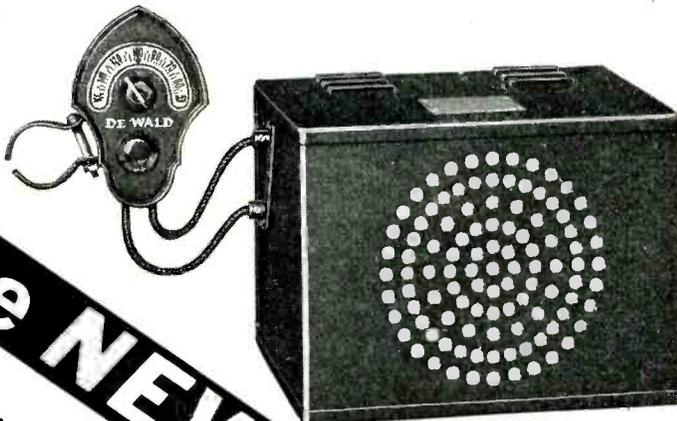


Exceptional Bargains in New, Used, and Rebuilt Motion Picture Apparatus. Recent Government Surplus and Liquidation of other manufacturers such as PACENT, ROYAL AMPLITONE, POWERS CINEPHONE, TONE-O-GRAPH, BIOPHONE, RCA PHOTOPHONE and others now offered to our trade.

Write for Our New Illustrated Catalogue  
**S. O. S. CORPORATION**  
 Dept. R.R.2, 1600 Broadway, New York, U. S. A.  
 EXPORT: 120 Liberty St., New York  
 Cable Address: "SOSOUND" New York, All Codes.

*At last!*

# TROUBLE-PROOF AUTO RADIO



Perfect reception ANYWHERE.

... Every part IMPROVED. New and astounding in construction and performance. Simplified installation. Get the dope on this revolutionary set NOW!

**\$39.95**

**THESE FEATURES:**

6 tube hi-gain superheterodyne circuit. Full automatic volume control. Tone control modulator. Large 6 inch dustproof dynamic speaker with console tone. Full vision steering post remote control. Positive improved vibrator. Quick detachable aerial, ground and battery leads, 6 cylinder suppressors.

**PIERCE-AIRO, Inc.**  
520 6th Ave.,  
New York

Makers of Fine Radio Receivers Since 1921

Not connected with the Pierce-Arrow Motor Car Company.

**DEWALD**

## CONTENTS JUNE, 1934

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<i>Now the Selling Begins</i> .....	9
<i>RMA—Ten Years Young</i> .....	10
<i>Showmanship Will Sell Sets</i> .....	12
<i>And Never Pushed a Doorbell</i> .....	14
<i>Tube Consignment—For and Against</i> .....	16
<i>She Sells Auto Sets</i> .....	18
<i>High Fidelity Arrives</i> .....	19
<i>Try These Sales Ideas</i> .....	20
<i>News of the Month</i> .....	22
<i>Code Authorities Appointed</i> .....	
<i>RMA-RWA Convention</i> .....	24
<i>What's New in Merchandise</i> .....	28
<b>SERVICE SECTION</b>	
<i>Circuits of the Month</i> .....	33
<i>Audio Frequency</i> .....	35
<i>1934 Ignition Systems</i> .....	37
<i>Tricks of the Trade</i> .....	43

## INDEX TO ADVERTISERS

This index is published as a convenience to the reader. Every care is taken to make it accurate, but *Radio Retailing* assumes no responsibility for errors or omissions.

	Page		Page
Arcurus Radio Tube Co. ....	6	RCA Radiotron Co., Inc. ....	8
<i>Inside Front Cover</i> .....		RCA Victor Co., Inc. ....	44
Audiola Radio Co. ....	6	<i>(Antenna)</i> .....	27
Belmont Radio Corp. ....	3	<i>(Records)</i> .....	50
Clarostat Mfg. Co. ....	38	R.K. Radio Lab's, Inc. ....	44
Condenser Corp. ....	38	Solar Mfg. Corp. ....	32
Continental Carbon Co. ....	40	Standard Transformer Corp. ....	49
Crosley Radio Corp. ....	40	Stewart-Warner Corp. ....	2
<i>Inside Back Cover</i> .....		Stromberg-Carlson Tel. Mfg. Co. ....	42
Deutschmann Corp., Tobe. ....	40	Triplet Elec. Instrument Co. ....	48
Emerson Radio & Phono. Corp. ....	7	Tung-Sol Radio Tubes, Inc. ....	40
Fairbanks, Morse & Co. ....	6	Ward Leonard Elec. Co. ....	36
General Electric Co. ....	4-5	Weston Elec. Instr. Corp. ....	1
<i>(Auto Radio)</i> .....	4-5	Zenith Radio Corp. ....	
<i>(Radio)</i> .....	Back Cover		
General Household Utilities Co. ....	47		
General Industries Co. ....	42		
Hygrade Sylvania Corp. ....	46		
Janette Mfg. Co. ....	50		
Kato Engineering Co. ....	50		
Ken-Rad Corp., Inc. ....	44		
Leonard Refrigerator Co. ....	45		
Lynch, Inc., Arthur H. ....	50		
Mallory Co., P. R. ....	Front Cover		
Micamold Sales Corp. ....	34		
Muter Co. ....	44		
National Union Radio Corp. ....	42		
Pierce-Airo, Inc. ....	52		
Pioneer Gen-E-Motor Corp. ....	44		

**SEARCHLIGHT SECTION**

*Classified Advertising*

	Page
Classification	
AGENTS WANTED	51
BOOKS	51
BUSINESS OPPORTUNITY	51
INSTRUCTION COURSES	
Dodge's Institute	51
POSITIONS WANTED	51
REPAIRING	51
REPRESENTATIVE AVAILABLE	51
RADIO STOCKS	
Freed's Radio Co.	51
Grant Radio Laboratories	51
Grebe Radio Sales & Serv. Co.	51
S.O.S. Corp.	51
Wholesale Merchandisers, Inc.	51

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# sets amazing new acceptance record among housewives

Orders for Crosley Shelvador and Tri-Shelvador Refrigerators are pouring in. The big Crosley factories are being taxed to capacity. Housewives all over the country are demanding the exclusive features and the exceptional value that only Crosley can give.



**Model EA-43**  
4.3 cu. ft. NET capacity, 9.15 sq. ft. shelf area, 2 ice trays—12 cubes—one double depth tray.  
**\$117.00**



**Model EA-55**  
5.5 cu. ft. NET capacity, 11.6 sq. ft. shelf area, 3 ice trays—12 cubes—one double depth tray.  
**\$145.00**

## Provides about 50% more "usable" storage capacity

Shelvador provides a definite place for many items that are "space robbers" in ordinary refrigerators. Example: an orange occupies exactly the shelf space an orange should—not the shelf space of a milk bottle.

## Streamline Beauty

The Streamline Beauty of Shelvador and Tri-Shelvador models does justice to the modern woman's sense of beauty. The pleasing design fits in with modern kitchen arrangement.

## Compare These Features

There is the famous Shelvador, ventilated front, automatically illuminated interior, no-stop defrosting control (defrosts while refrigerator is operating), chromium plated stamped brass hardware of modern design, thorough insulation throughout (including door), round cornered porcelain interior, white lacquer exterior with black trimming, ample tray capacity for quick freezing of ice cubes.

*All models have automatically illuminated interior*



### Ventilated Front

This feature of all Crosley models permits cool air to be drawn from the front and warm air expelled from the rear, properly ventilating power unit even when refrigerator is placed in limited space or close to wall.



**\$99.50**

### MODEL EA-35

This Crosley Shelvador has a NET capacity of 3.5 cubic feet with a shelf area of 7.5 square feet. It is equipped with two 21-cube ice trays—12 cubes in all. It incorporates all of the Shelvador Series features described to the left. Dimensions: 43 1/2" high, 23 7/8" wide, 21 1/2" deep.



## brings additional exclusive features that offer the utmost in electric refrigeration value

The Crosley Tri-Shelvador Series incorporates all the features of the Crosley Shelvador. It has *additional* features that make it the outstanding achievement in electric refrigeration.

- 1. THE SHELVATRAY . . .** Can be placed in a horizontal position instantly. Place articles on it and carry them, Shelvatray and all, to table, range or cabinet. An exclusive Crosley feature. (Patent pending.)
- 2. THE SHELVABASKET . . .** Swings with the door. Not refrigerated. Handy for greens, carrots, cabbages and the like. Exclusive. (Patent pending.)
- 3. THE STORABIN . . .** A place for potatoes, onions and other bulky items. Not refrigerated. Exclusive with Tri-Shelvador. (Patent pending.)

Self-closing porcelain door to freezing chamber is a feature of all Tri-Shelvador models. Model E-55 (left) has 5.5 cu. ft. NET capacity, 11.6 sq. ft. shelf area, 3 ice trays—12 cubes—one double depth tray. The Crosley Shelvador and Tri-Shelvador models represent the latest in refrigeration design, convenience and performance. Ask your Crosley distributor for a demonstration. All models available in full porcelain at slight extra cost.

Montana, Wyoming, Colorado, New Mexico and west, prices slightly higher.



### Model E-13

4.3 cu. ft. NET capacity, 9.15 sq. ft. shelf area, 2 ice trays—12 cubes—one double depth tray.

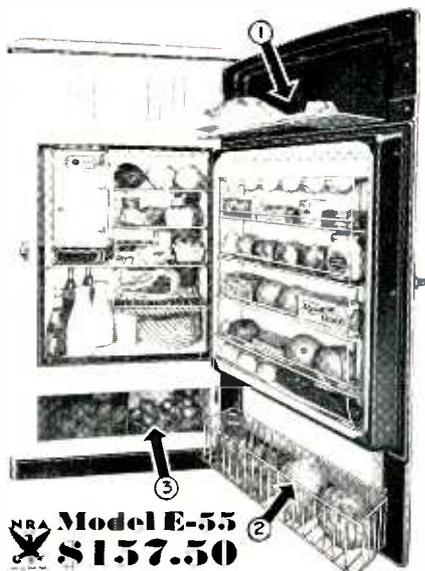
**\$135.00**



### Model E-70

7 cu. ft. NET capacity, 14.9 sq. ft. shelf area, 4 ice trays—12 cubes—one double depth tray.

**\$185.00**



**Model E-55**  
**\$157.50**

## The Crosley Radio Corporation - Cincinnati

(Pioneer Manufacturers of Radio Receiving Sets)  
POWEL CROSLEY, Jr., President Home of "the Nation's Station"—WLW

**ALL PRICES INCLUDE DELIVERY..INSTALLATION..ONE YEAR FREE SERVICE**

P L DELP  
TAMAQUA PA

...ES COUNSEL FROM THE CUSTOMER... No. 4

*“Show me the best...  
I’ve got more money today”*



**S**ELL from the top down! Start demonstrating the top of the G-E line—the combination sets and consoles. Work down to the lower-priced G-E radios later—if necessary. That way—you’ll cover the entire G-E Radioline. Sales chances are greater—profit possibilities are better—your average sale will be higher.

Follow this plan—it’s a proved money-maker. Tie up with General Electric’s great national

advertising. Feature G-E short-wave radio in your local newspaper advertising. Put the G-E monogram on your store—show people where to buy G-E radio sets. Use G-E displays in your windows to show that you sell G-E Radio.

Sell from the top down—and you’ll be in the money.

See your G-E Distributor, or write the General Electric Co., Section R-366, Merchandise Department, Bridgeport, Conn.

Model M-128-R—G-E’s newest, greatest de luxe radio-phonograph combination. Plays 9 records with automatic changing and home recording—now perfected! List price, \$400. Slightly higher in West, Mid-West and South. Subject to change without notice.



**GENERAL  ELECTRIC**  
**RADIO**

“Now is the  
time to buy”

