After the Broadcast Is Over
Let the Melody Linger On
NEW G-E BEAM-A-SCOPE RADIO PRICED TO BECOME THE YEAR'S BEST SELLER

MORE GREAT SALES-MAKING FEATURES

KEYBOARD TOUCH TUNING — Another G-E Scoop
A sensational improvement that brings you fast, easy tuning. Station keys are conveniently located. Swift as lightning your station is tuned in at the mere touch of a key — and it stays tuned to hairline precision.

TIME TUNING — Another Brand-new G-E Radio Thrill
The new G-E Model G-106 permits you to pre-set with the G-E Automatic Program Pre-selector — all the programs you select on five different stations, for 24-hours ahead. No re-tuning! No re-dialing. Set your radio once — and it tunes in the programs you want.

NEW POPULAR-PRICED GENERAL ELECTRIC RADIO Needs No Aerial — No Ground Wires

Here's news that spells greater profit opportunity for every G-E Radio Dealer. General Electric presents a new model G-99 equipped with the amazing Beam-a-scope — the scoop feature of the year, at the lowest price at which this deluxe feature has been offered.

The Beam-a-scope is a sales sensation. It makes the new G-E the one radio that does not need to be anchored in a fixed location. It operates in any spot — in any room. No aerial — no ground wires! Just plug it in like a floor lamp — anywhere.

Also the Beam-a-scope reduces local static interference — gives finer, quieter reception — especially in noisy areas.

It pays to line up with G-E Radio — this year more than ever.
These 4 Volume Control Developments

"Speak Volumes" for what MALLORY-YAXLEY has done to make the Service Man's job easier and more profitable

1. Universal Design — for extreme flexibility and quick, sure replacements. Mallory-Yaxley engineering made it possible to develop universal designs to meet all service needs.

2. Velocity Smooth Operation — through the silent carbon element, the "non-rolling" roller, the silent "M" construction, perfect smooth tapers, silver-to-silver contacts — all Mallory-Yaxley contributions.

3. Channel Shaft — to fit all types of knobs by use of the special insert. An easy-to-cut aluminum shaft may be fitted to any knob and any one of five attachable switches. A Mallory-Yaxley help for swift servicing.


The "M.Y.E." makes the service man's job easier, too —

Read what the magazine SERVICE says of the Mallory-Yaxley Radio Encyclopedia: — "Let it be said that here is a book primarily for the service man—written in his language, and one which will give its readers many profitable hours in more ways than one ... the book is on the 'must' list of every radio service man ... an almost inexhaustible store of up-to-the-minute information."

Get your copy today from your distributor

P. R. MALLORY & CO., Inc.
INDIANAPOLIS INDIANA
Cable Address—PEMALLO
THOUGH a milligram is only 35/100,000ths of an ounce—it means a lot to this Sylvania workman.

Just the right amount of coating material must be sprayed on a cathode to insure its long life. So as a check-up to this process—a Sylvania expert precision weighs samples from each batch of cathodes coated. Then he completely removes the coating ... weighs them again. The difference in weight represents the amount of coating present—and this amount must meet a set Sylvania standard of perfection.

Intricate? — Yes. Difficult? — Very. Worth it?—Decidedly! For only by precautions such as this—taken at every step of manufacture—can we be sure of A-1 quality in the finished tube ... and satisfied customers and repeat sales for you. Hygrade Sylvania Corp., Emporium, Pa. Cable HYSYLVANIA, N.Y.

Hygrade Sylvania Corporation Also Manufactures The Famous Hygrade Lamp Bulbs.

SYLVANIA
SET-TESTED RADIO TUBES
FRONT PAGE NEWS!

With More Than 15,000,000 Circulation in National Magazines . . .

(AMERICAN WEEKLY • SATURDAY EVENING POST COLLIER'S • LIFE • ESQUIRE)

With More Than 20,000,000 in Local Newspapers . . .

Starting Next Month . . .

... will be Promoted by the Biggest — Most Dramatic Advertising Campaign in All EMERSON History!

Watch for Detailed Announcements!

EMERSON RADIO AND PHONOGRAPH CORPORATION • 111 Eighth Avenue • New York, N. Y.
"World's Largest Maker of Small Radios"

September, 1938
The new series of Fairbanks-Morse radios is built for the profitable type of customer who can and will buy when he (or she) sees and hears the difference between these and ordinary radios. There is not a "me, too" model in the line—not one that is like some other radio the prospect has seen elsewhere. Each is a fine musical instrument that gives a new thrill to listening. The line includes no superfluous stock which serves only to increase inventory. There are no short-discount models. You get your normal and rightful profit from every sale, while selling is made easier by a name that has enjoyed public confidence for more than 100 years. For complete details, write or wire Fairbanks, Morse & Co., Home Appliance Division, 2060 Northwestern Ave., Indianapolis, Ind.

PROFITABLE MODELS  THE NEW FAIRBANKS-MORSE LINE OF RADIOS INCLUDES TABLE, CONSOLE, AND CONSOLE-GRAND MODELS WITH 7-, 9-, AND 12-TUBE CHASSIS

WORTH-WHILE FEATURES:
- Instant Electric Tuning
- Acousti-Sealed Tone Chamber
- Monitor Panel
- Cabinetry of highest quality with interlocking construction
- Complete permeability tuning
- Clearer and stronger short-wave reception
- Plus the most startlingly realistic tone you have ever heard in a radio

FAIRBANKS-MORSE RADIO  A TRULY Fine RADIO
BUT THE RAYTHEON TUBES IN RADIO-EQUIPPED U. S. ARMY TANKS WILL STAND UP UNDER TERRIFIC JARRING AND POUNDING

Smashing, crushing drives over and through insurmountable obstacles! Terrible punishment even for a giant U. S. Tank!

Yet, Raytheon tubes operate constantly under these adverse conditions — flashing and receiving "behind the lines" messages as efficiently as in the quietude of a home or your customer's automobile!

No wonder thousands of dealers and servicemen use and recommend Raytheon tubes. No wonder they save on unprofitable callbacks . . . build good-will . . . yet, RAYTHEONS cost no more! And you can always sell them at your full profit.

An amazing new 200-page book with receiver tube data previously known by only a limited number of receiver design engineers. Get yours from your Raytheon jobber for only 25c.

"WORLD'S LARGEST EXCLUSIVE RADIO TUBE MANUFACTURERS"
It will pay you to be
Ready to Go!
NATIONAL ANTENNA CHECK-UP WEEK

The week of October 15 to 22 is National Antenna Check-up Week sponsored by Belden.

The purpose of this week is threefold—

1st—To benefit the radio receiver owner by improving reception.

2nd—To increase the sales of antennas and parts.

3rd—To sell more labor in essential servicing operations.

Behind National Antenna Check-up Week is a tremendous publicity program. Large advertisements are appearing in Saturday Evening Post and Collier's with a total circulation of 5,500,000. Publicity is being released to the leading trade papers, magazines, and radio stations throughout the country. Twenty-six million set owners are going to become antenna conscious and "better-listening" conscious.

How You Can Tie In with National Antenna Check-up Week
During the next few days, tie-in material will be sent radio dealers and servicemen throughout the country. Window streamers will be included to identify your shop with National Antenna Check-up Week. Large distinctive lapel buttons to be worn by servicemen and clerks will be sent you. An instructive book will be included showing how to sell better antenna installations.

Other tie-in material is available, such as postcards imprinted with your name, ad mats for use in your local newspapers—everything to help you make a great success of National Antenna Check-up Week.

Write for complete information—get on the band wagon and increase your service and antenna sales during National Antenna Check-up Week.

Belden Manufacturing Company
4613 W. Van Buren Street
Chicago, Illinois

Endorsed by Radio Servicemen of America

Belden The Radio Wiring Line

Radio Today
This Fall, As Always, PHILCO TUBES are the Easiest Tubes in the World to Sell!

As the peak radio months approach, more and more dealers are concentrating on Philco Tubes. Why? Because they are The Easiest Tubes in the World to Sell... this fall, as always. Consider these facts:

Approximately ONE out of every FOUR radios in use today is a PHILCO... which makes a total of FIFTY-FIVE MILLION sockets that must eventually be filled. Naturally, when it comes time to re-tube, these Philco owners will want and demand Philco Tubes!

But that's not all. Today, more than ever, PHILCO is the first name that comes to mind whenever radio is mentioned. And with the tremendous interest in Mystery Control, the name PHILCO is literally on every tongue. Which means that millions of owners of other make radios will swing to Philco when they buy replacement tubes.

You, too, can reap the profits of Philco popularity by pushing Philco Tubes... The Easiest Tubes in the World to Sell!
PHILCO always has devoted every engineering effort and every merchandising and advertising effort—to the tune of millions of dollars—pushing the sale of higher priced quality radios so that the retail dealer and everybody else connected with Philco business could make a proper and satisfactory profit.

Year after year—the average retail selling price on Philco home sets in the United States has been 25% above the rest of the radio industry. And it is exactly that high average Philco selling price that has kept thousands of radio dealers and radio departments in business and in the black.

No retail radio dealer ever made a dime advertising low priced radio merchandise—$10 compact radios for instance. As a matter of fact, spending advertising money on $10 compact radios is the best way I know of to go broke. This is proven with a little arithmetic.

As an illustration, let us take the advertising sum of $300. Every radio dealer knows that if he spends $300 in newspaper advertising on a $10 compact radio, he will be doing better than the average if as many as 60 people respond by calling at his store.

And even if he sells them all—this means an advertising cost of $5 for each retail sale. The dealer’s gross profit on the $10 compact at the most is probably $4. At that rate, his entire gross profit on the 60 sales would only total $240, which means he has already lost $60 without even considering rent, heat, light, investment and selling commissions.

And even assuming that the dealer does some selling-up—you and I know that $9.95 radio prospects are not often sold-up beyond $14.95. And even if enough selling-up is done to average $5 gross on each sale, the dealer is mere breaking even on the advertising cost. All other expenses certainly put him well in the red.

On the other hand—think what you can do with Philco Mystery Control as an advertising and selling weapon! Now, for the first time in radio history, the retail dealer—on higher priced radios—has an advertising story of tremendous pulling power—a far greater traffic-getter than any low priced radio compact ever could be.

"NO WIRES! NO CORDS! NO PLUG-IN CONNECTIONS OF ANY KIND! AND YET PHILCO MYSTERY CONTROL OPERATES YOUR RADIO FROM ANY ROOM IN YOUR HOME." In those opening words of Philco newspaper copy, you have an advertising story so new and different—so amazing and exciting—so almost unbelievable that it will pack your store with people—with interested prospects.

And bear in mind—Philco Mystery Control prospects do not come to your store with $9.95 in mind—or with ‘$1.00 down’ in mind—or with a big trade-in allowance in mind. They do not come looking for bargains. They come instead to see a radio invention that is fundamentally and vitally new—exceedingly desirable. And when these prospects buy—your gross profit on each sale is 15 to 20 times as much as on a $10 radio compact.
A PEECH OF A PICK-UP

Assorted trends are right now combining themselves to make a flourishing fall for radio men. Aside from the fact that general business is better, there are the November elections to think of. Not to mention the Autumn reopening of the top shows on the air, the beginning of the football season Sept. 24, and the World Series early in October.

Among the opening dates for interest-stirring broadcasts, set to air during the coming weeks:

Sept. 9—Hollywood Hotel—CBS
Sept. 11—Ford Sunday Evening Hour—CBS
Sept. 12—Lux Radio Theater—CBS
Sept. 25—Tommy Riggs and Betty Lou—NBC Red

TREND IS TO "COMBINATIONS," TO RAISE UNIT SALES FOR FALL

With all the leading names in radio now featuring "combinations" in their lines, smart retailers are laying Fall plans as reported on pages 34, 35, etc. Picture shows novel record counter at Hudson-Ross, Chicago.
full week, with practically no change of attitude by the public.

"By the law of averages, all this activity of the newspapers and set manufacturers in exhibiting television accompanied by so much publicity, is going to sell television: but it is going to retard radio," was a radio man's comment.

**Opinion divided**

The television quality was generally very good. Naturally, at the show it was mostly film reproduction. A good deal of the curiosity of the public seemed not so much interest in television as interest in the picture itself. People thought they were at a cinema, not really examining the picture from a television point of view. Cricket games were televised from the field and were remarkably good.

Just what the outcome of this television activity is going to be remains to be seen. British radio-set manufacturers are about equally divided as to whether they should push television or not, and the division is severe enough that it may lead to a breakdown of the British Radio Manufacturers Association. Opposition comes from firms who are making and those who are not making television sets. Naturally some manufacturers are making it for their own protection marketwise.

At present England has only one station sending out a programme, and that is in London. The picture can be received nicely up to about 30 miles. There are instances of greater distance but not generally. There is talk of additional stations in different districts outside of London, but as a result the dealers and distributors in those territories are very much perturbed about their fall radio business, feeling positive that people will wait to see what comes out of television.

**RE DYNAMIC TESTING— WE WOULDN'T BRAG**

Heaped high on a desk in New York City are dozens of letters from servicemen. The writers are saying mostly this: "We are interested in dynamic testing of radio sets. We want the back articles on the subject. We hope you continue the material. Will the articles be available in book form?"

Blanket answer: what Radio Today started, Radio Today will appropriately finish. Right now, service editor Vinton K. Ulrich is in his lab, about to dynamic-test another receiver with one hand, tabulate the results with another, the while dictating replies to impatient readers.

The rumpus started in the February, 1938 issue, when Mr. Ulrich thought of the new method, named it, and outlined the whole business. Since then dynatesting has been examined by experts, featured by manufacturers, cited by the RSA, recognized by neighbor magazines, welcomed by hundreds of services.

Meanwhile, Dynamic Testing (servicing) headquarters remain suitably at 450 Lexington Ave., New York City, where a good deal of hard work will be going on as long as it's of any help to the industry.

**BETTER DAYTIME DEMONSTRATION PROGRAMS NEEDED**

"My thanks go to Radio Today for its interest in the idea of better daytime demonstration periods of music on the air," says Darse E. Todd, radio buyer for the Highlee Company, Cleveland, Ohio.

"Naturally this is of interest to me. And because of the undeniable dependence of each and every branch of the radio industry on every other branch of that industry, it would seem to me that this subject would be of vital importance to radio manufacturers, distributors, dealers, broadcasting companies, and sponsors of broadcast programs.

"Fitting into this picture from the dealer's standpoint I offer the following observation from that point of view.

"The sales resistance of the customer is reduced to a minimum when a good demonstrative program is on the air. All the new sets sound good. The old set at home seems poor by comparison. Picking the make and model is all that has to be done to close a sale.

**Sales spoiled**

"But consider what is much more likely to happen. The prospective purchaser of a new radio has decided at home to consider the selection of a new model. After an evening of listening to good programs on the old and obsolete set, he visits a radio store or radio department, expecting to hear better music and entertainment than he usually receives on his old set. The salesman by whom he is being served may be of the very highest type, alert, painstaking, intelligent, and have a thorough knowledge
of his merchandise. But, if after stressing the tone qualities of the new sets, he is forced to demonstrate this tone on programs carrying various domestic stories, cooking advice, or others equally lacking in tone possibilities, the customer is very likely to think that the programs he heard the evening before on the old radio were equally as good, if not better.

"This is certainly making the least of an opportunity. This customer had decided to purchase a new radio, went into the place where new sets are sold, was given courteous attention by a salesman whose very livelihood depends on his ability to make sales, but because of a lack of proper judgment somewhere along the line in selecting programs, the customer's desire to own a new radio is actually lessened instead of increased.

"My hope is that with a little coaxing on the part of some of the men who sell radios, the sponsors of daytime programs will consider more seriously the men who sell radios, the men who drive and listen to auto radios, the youngsters who are at home almost as much as the mothers, the thousand of shops, hospitals, gas stations, restaurants, and other places of business, where a little more music might boost the sales of their product just as much as the programs they are now directing presumably to the 'stay-at-home' housewife!"

MORE TUBE TYPES; MORE DEALER HEADACHES

* After exhausting the "single-letter" tube designation, tube and set manufacturers have now been forced to resort to type numbers containing two identifying letters. Recent examples are 6A8S3, 6A8S6, and 62Y5G.

Unfortunately it is that the radio dealer must stock the ever increasing number of tubes if he is to serve his customers. And those types available in both metal and glass envelopes are twice as much of a problem. From the tube manufacturers' point of view the picture is much brighter, for elements in some of the newer octal types are the same as the old glass types. But dealer gets it in the neck since he has to stock the same "guts" with two different base arrangements. Now we hear there is to be a new series called "octal."

And the dealer servicing farm and power line areas finds it necessary to stock additional 6-volt tubes that have a 150 mil filament current instead of 300, otherwise many of the types are almost identical. Then, there is the 2-volt series with octal and the older type base. And most recently, there is the 14 volt series of tubes.

Perhaps there is some way of introducing a universal type of replacement tubes with adapters which would make one tube interchangeable with several others. For instance, a type 6K7G might be used to replace a type 78 and in many cases a 6UG and 616. Or sockets might be changed in the older sets. In this way one tube would replace four types with no major differences in performance.

STRIKING IDEAS FOR SELLING EXTRA RADIOS

"It's all right when you win the argument, but it's not much fun to have to listen to a Bach Fugue when you were sitting with bated breath to hear what happened next in the G-man's chase of those state-line bands!"

This is one of the ways the New Orleans Public Service, Inc., appeals to the public to "see your favorite radio dealer" for extra radios in the home. Other sales phrases are "If you're only a living-room listener, you don't know what you're missing!" and "There's something on the air to enrich every hour of the day—news, thrilling drama, contests, folklore, comedy, good music, household hints."

In one ad used in the campaign, it says "Do your tastes dictate what everyone must listen to?" and suggests that the listener "widen the listening range of your home with an extra radio." The broadcast menu is divided into 15 parts in this copy, showing in a striking way how a single set would be inadequate to keep a family happy. These parts are (1) For thrill hunters, (2) For those of mobile years, (3) For the fair ladies, (4) Religion on the air, (5) For sports followers, (6) For news hounds, (7), For serial-drama addicts (8) For the theater fans, (9) For music lovers, (10) Comedy bound, (11) For song fanciers, (12) For twinkling toes, (13) Appeal to reason. (14) For variety searchers, (15) Children's delight.

"It's climate-sealed," explains Frank A. D. Andrea, left, to the African explorers, Mr. and Mrs. Armand Denis, who dropped in to discuss their next radio Safari.
GO OUT—AND GET

The ABC's of outside selling—alphabetically applied to radio.

Action—the hard-hitting, persistent kind of effort which used to be called "over-selling", is now OK. It's no secret that people everywhere are trying to hoist themselves out of a depression, and the buying public does its share by giving a new kind of welcome to pleasant salesmen. Today it is hard to overdo the sales call.

Business men, your neighbors, can be dragged in on radio display and demonstration if your merchandise is non-competitive. They buy sets for their own homes or stores, or they may send you prospects for a small cut. And they cooperate with you when a "Buy In Our Town" campaign comes along.

Colors on radio receivers are a "go" signal on a whole new line of action. Among new sets, tricky and salable combinations of tints have appeared in de luxe designs. Here's an appeal for those who have color-scheme rooms, as well as for those who are conscious of school colors and those who just have positive preferences in the matter of color.

Demonstration for the whole family, in the place where the family lives and does its listening, is a keynote trick. If the looks and the performance of 1939 receivers will sell themselves, the home itself is the best possible spot to turn on a new radio and let it prove its place in the house.

Entrance into prospects' homes, for demonstrations, will depend upon (1) whether you are willing to breeze around after business hours, (2) what impressions you have created as to your professional methods and manners, and (3) whether the prospect is convinced that you offer a real improvement over the radio equipment already in the home.

Files of prospect names, organized and up-to-the-minute, will eliminate a great deal of cold selling. You'll get openings from service matters, replacement needs, holiday requirements, changes of address, etc. The arrival at your store of special types of new merchandise will often be reason enough for an approach to many of the names in the file.

Gift models, with all their "personal radio" appeal, have a year 'round use. They deserve promotions mainly at Christmas, Easter, Mother's Day and Father's Day. But birthdays, graduations, and marriages are also important to radio sales.

Handy tuning, developed to a high degree and at a cost of millions, represents a tangible and dramatic aspect to today's demonstrations because it involves getting the prospect's hand on the buttons. In some sales areas, the "push button" homes are the only ones not regarded as hot prospects.

Instant action on leads from the service department, the utility, jobber salesmen, old customers, newspapers, etc., is today's sales plan. Snappy attention to new prospects will either sell them or get them off your lists. Prompt calls make a good impression, anyway.

Junior sets, the nifty models of the pee wee gang, are a cinch to carry along on house-to-house calls. Demonstrated, they seem to work into places where prospects originally had no thought of using a radio.

Kitchen sets are pushovers for effective demonstrations, to housewives, because the daytime is the period when the likely kitchen broadcasts are coming. Householders are able to see a neat little radio, matching their kitchen colors, producing recipes and home-making hints galore.

Leads from chummy customers often give you a chance to use a brand of "testimonial" selling. Dealers can mention that "your friend, Mrs. Jones, is now enjoying a home demonstration on one of our fine radios. She's in on the 'Sales Mean Jobs' campaign and we hope that you will be, too."

This Fall, radio dealers are turning to outside selling, to get orders for consoles, combinations, table models, tubes, antennas, and service repairs. Every day, in every way, they call on ten new prospects—or ten old customers!

Radio Today
Merchandising help from the manufacturers, which is always the work of experts and often timed for surefire local application, will frequently stir prospect interest by (1) direct mail (2) newspaper blasts (3) colorful displays (4) national advertising (5) network or spot broadcasting (6) prizes for your salesmen (7) time payment conveniences (8) sales ideas, etc.

National Salesmen's Crusade should be the dynamic symbol for widespread "invitations to buy." To radio, in which the passive, sit-at-home brand of selling has been the rule, it means shoe-leather, doorbell-pressing, hours and hours of fast talking to everybody in town.

Office radio can be tagged "the instruments that give you market news, flashes from abroad, and financial reports of practical value to everyday business." These sets will fit under your arm and the buyers usually pay cash.

Programs are readily divided into neat lists to catch the eye of any type of prospect you call on. The nature and the time of all broadcasts in a particular area are of smash importance to any salesman who plans to tune a set for a prospect.

Quick follow-ups on local pay-days, re-employment of local workmen, crop harvests, newcomers to town, radio show registrations, leads from the utility company, etc., will give dealers an extra edge. To many merchants, WPA pay-days are a signal for bargain sales on traded-in merchandise.

Records turning in windows or playing in the store have netted plenty of extra sales of phonograph-radio combinations, record-players, or the discs themselves. To stir the already-stirred appetite for recorded music means store traffic, protected profits, unexpected sales of other lines.

Surprise styles in cabinets are glistening plentifully among 1939 lines. You now have the chance to sell radios in triangle shape, in maple, in period design, in easy-chair style, in streamlines, or to hang on the wall.

Trailers, plastered with dealer ads, are one popular method of getting your merchandise on the roll. Sales crews are often happier, more efficient and faster if you use this way of getting receivers into the residential districts.

Utility aspects of radio cabinets are more cunning than ever. Sets are today combined with magazine racks, book shelves, tables, bars, lamps, easy chairs, pianos, clocks, etc.

Varsity crowds have been drawn en masse into the radio market because (1) sets have been colored and lettered for them (2) their favorite dance maestros are regularly on the air (3) they crave personal access to sports broadcasts.

Window stunts, to fit in with house-to-house work, can feature the catch lines: "The Radio Parade Is Coming Your Way," "Want To Try This Radio Miracle?", "Leave Your Name And Address For A Radio Surprise", "Our Radio Man Will Come Calling", etc.

Xtra value per dollar spent for new radios is a cinch to dramatize, when you list and demonstrate the features of the set you bring into the home. These features pile up nicely with those of the receiver being replaced. Many dealers choose to do this even if the sale is already made.

Yields from consistent house-calling should be tabulated in dramatic form, to encourage fellow doorbell-pushers. Not in sermon form, but attractively showing the juicy volume done in the action spots.

Zipper have earned a place in radio. The cases for portable radios, designed in smart luggage style, are often the most displayable items which can get across the portable theme. For vacation specials, and for traveling men the year 'round.

College and high-school students make a special select class of prospects for personal radios. Picture shows how Lyon & Healy, Chicago, featured a windowful of Stewart-Warner's new Varsity models in college colors.

September, 1938
TO MOVE MORE MERCHANDISE

Dealers plan promotions for a promising Fall

DEALER DRAMATIZES TONE QUALITY

One of the new aspects of radio selling at Jensen Bros., Terre Haute, Ind., is brisk demonstration of the ways in which the new receivers outplay the older sets. G. R. Turner tries to keep the population aware of radio reception improvements.

Sample stunt projected by Mr. Turner outside the store is what happened at the local Kiwanis Club recently. One hundred townspeople at the meeting were confronted by four consoles, completely shrouded. The plan was to play them for blindfolded judges and select the one with the finest tone.

With local station WBOV, arrangements were made to pick up four organ solos from Radio City, New York. These selections came through the receivers, one after the other, and the whole business was broadcast over WBOU.

The judges selected the radio make stocked at Jensen's, and Mr. Turner dramatically said so on the air. The Kiwanis crowd thought it was entertainment; the radio store knew it was a darned good ad.

To give the sales presentations another plus quality, Turner is talking up the matter of good aerials for finer reception. In many cases, the antenna is put up before the set arrives at the prospect's home.

LETTERS IN WINDOW BRING CUSTOMERS INTO STORE

Everybody likes to read other people's mail—and genuine testimonial letters are a potent sales force. Practical application of these two principles brings hundreds of new customers every year to Sico Electric Radio Co., 258 Lexington Avenue, New York City, according to proprietor S. S. Cowen.

Across the front of the store's one small window are seven picture frames—the kind you can buy for a quarter or less. Within each frame is a letter—either from a customer, expressing appreciation of a service job well done; or from a manufacturer to someone in the neighborhood, recommending the store as a reliable radio repair shop. The group of letters is changed constantly. Those displayed at any time cover the most common radio ailments, so that the curious person reading can match some complaint with the trouble in his own set. One letter may refer to the elimination of interference, another to the adjustment of an old receiver so that it could tune the 1550 kc. band, a third to the improved tone since the Sico serviceman's call, and so on.

Folks enter the store almost daily saying, "Can you fix my radio like that letter in the window says you fixed Mr. Smith's?"

The picture frames are also used to display salesmanship charts or pictures clipped from Radio Today and other magazines. Additional frames are hung within the store. "I have been displaying letters in this way for years," says Mr. Cowen. "They are responsible for the greatest part of my new business. People stop to read the letters who never would be attracted by a display of radios. I have watched passersby many times: they invariably read all the letters, and then their eyes travel to the sets on display."

A ROBOT FOR YOUR WINDOWS

A traffic-stopping idea for a window display, which requires no fixings except the merchandise itself, has been worked out by M. Lehman of Port-O-Matic Corp., 1010 Madison Ave., New York City.

The stunt concerns the robot door, which is a regular feature attached to the side of the portable phonograph-radios made by the firm. It flops open to allow records to be released automatically. By adjusting the rejector to a special position for display purposes, the door can be made to move back and forth constantly. The result is a fascinating action display.

Records cannot be actually changed during this process, but with some of them displayed on the turntable, and some in the storage tray, the purpose of the door’s movement will be clear to passersby.
CHART OF TRADE-IN VALUES OF OLD RADIOS

Simplified figures show maximum amounts allowable on large and small sets.
Compact tabulation takes place of bulky "trade-in books," now obsolete.

Many radio dealers have written to Radio Today requesting a complete reference list of "trade-in value" of old sets, to take the place of the bulky "black-books, green-books, etc.," compiled in earlier periods of radio's history.

"We don't need all these pages and pages of tabulations of out-dated and obsolete sets. Such books are themselves as obsolete as the radios they list. Give us something simplified and convenient, which we can put in the hands of every salesman on the floor or on the pavement. Our men haven't time to pore through complicated compilations, all more or less exactly alike, when a simple chart would give us all we need to show the customer."

So in answer to these requests from busy radio men who want a streamlined chart of radio-set trade-in values, Radio Today has compiled the simplified tabulation on this page. The values used are based upon the averages of trade-in allowances recommended by various associations and merchandising organizations. They are conveniently grouped under small sets and consoles, and are for use in sales where the new-set price is over or under $70.

Trade-in sets listed by number of tubes (4T, 8T, etc.)

### VALUE OF OLD TABLE MODELS AND MIDGETS

<table>
<thead>
<tr>
<th>YEAR SOLD</th>
<th>4T</th>
<th>5T</th>
<th>6T</th>
<th>7T</th>
<th>8T</th>
<th>9T</th>
<th>10T</th>
<th>11T</th>
</tr>
</thead>
<tbody>
<tr>
<td>1929</td>
<td>$1.00</td>
<td>$1.00</td>
<td>$1.00</td>
<td>$1.00</td>
<td>$1.00</td>
<td>$1.00</td>
<td>$1.00</td>
<td>$1.00</td>
</tr>
<tr>
<td>1930</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.25</td>
<td>1.25</td>
<td>1.50</td>
<td>1.50</td>
</tr>
<tr>
<td>1931</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.50</td>
<td>1.75</td>
<td>2.00</td>
<td>2.00</td>
<td>2.00</td>
</tr>
<tr>
<td>1932</td>
<td>1.25</td>
<td>1.25</td>
<td>1.50</td>
<td>1.50</td>
<td>2.00</td>
<td>2.00</td>
<td>2.25</td>
<td>2.25</td>
</tr>
<tr>
<td>1933</td>
<td>1.50</td>
<td>1.75</td>
<td>1.50</td>
<td>2.00</td>
<td>2.25</td>
<td>2.25</td>
<td>2.50</td>
<td>2.75</td>
</tr>
<tr>
<td>1934</td>
<td>1.75</td>
<td>2.00</td>
<td>2.25</td>
<td>2.50</td>
<td>2.75</td>
<td>3.00</td>
<td>3.00</td>
<td>3.00</td>
</tr>
<tr>
<td>1935</td>
<td>2.00</td>
<td>2.25</td>
<td>2.50</td>
<td>2.75</td>
<td>3.00</td>
<td>3.25</td>
<td>3.50</td>
<td>3.50</td>
</tr>
<tr>
<td>1936</td>
<td>2.25</td>
<td>2.25</td>
<td>2.75</td>
<td>3.00</td>
<td>3.25</td>
<td>3.50</td>
<td>3.50</td>
<td>3.50</td>
</tr>
</tbody>
</table>

### VALUE OF OLD CONSOLES

<table>
<thead>
<tr>
<th>YEAR SOLD</th>
<th>4T</th>
<th>5T</th>
<th>6T</th>
<th>7T</th>
<th>8T</th>
<th>9T</th>
<th>10T</th>
<th>11T</th>
<th>12T</th>
</tr>
</thead>
<tbody>
<tr>
<td>1929</td>
<td>$1.00</td>
<td>$1.00</td>
<td>$1.00</td>
<td>$1.00</td>
<td>$1.00</td>
<td>$1.00</td>
<td>$1.00</td>
<td>$1.00</td>
<td></td>
</tr>
<tr>
<td>1930</td>
<td>1.25</td>
<td>1.25</td>
<td>1.25</td>
<td>1.25</td>
<td>1.25</td>
<td>1.50</td>
<td>1.50</td>
<td>1.75</td>
<td>2.00</td>
</tr>
<tr>
<td>1931</td>
<td>1.50</td>
<td>1.50</td>
<td>1.75</td>
<td>2.00</td>
<td>2.00</td>
<td>2.25</td>
<td>2.25</td>
<td>2.25</td>
<td>2.50</td>
</tr>
<tr>
<td>1932</td>
<td>2.00</td>
<td>2.00</td>
<td>2.50</td>
<td>2.25</td>
<td>2.50</td>
<td>2.75</td>
<td>3.00</td>
<td>3.25</td>
<td>3.50</td>
</tr>
<tr>
<td>1933</td>
<td>2.25</td>
<td>2.25</td>
<td>2.50</td>
<td>2.75</td>
<td>4.00</td>
<td>4.25</td>
<td>4.75</td>
<td>5.00</td>
<td>5.50</td>
</tr>
<tr>
<td>1934</td>
<td>2.50</td>
<td>2.75</td>
<td>3.00</td>
<td>3.50</td>
<td>4.00</td>
<td>4.75</td>
<td>4.25</td>
<td>4.50</td>
<td>4.50</td>
</tr>
<tr>
<td>1935</td>
<td>3.00</td>
<td>3.25</td>
<td>3.50</td>
<td>4.00</td>
<td>4.25</td>
<td>4.75</td>
<td>4.50</td>
<td>5.00</td>
<td>5.50</td>
</tr>
<tr>
<td>1936</td>
<td>3.50</td>
<td>3.75</td>
<td>4.00</td>
<td>4.25</td>
<td>4.75</td>
<td>5.00</td>
<td>5.25</td>
<td>5.50</td>
<td>5.50</td>
</tr>
</tbody>
</table>

### VALUE OF OLD TRADE-IN TUBES

<table>
<thead>
<tr>
<th>YEAR SOLD</th>
<th>4T</th>
<th>5T</th>
<th>6T</th>
<th>7T</th>
<th>8T</th>
<th>9T</th>
<th>10T</th>
<th>11T</th>
</tr>
</thead>
<tbody>
<tr>
<td>1929</td>
<td>$2.00</td>
<td>$3.00</td>
<td>$3.50</td>
<td>$4.50</td>
<td>$5.00</td>
<td>$5.50</td>
<td>$6.00</td>
<td>$7.00</td>
</tr>
<tr>
<td>1930</td>
<td>2.50</td>
<td>2.75</td>
<td>3.50</td>
<td>4.50</td>
<td>5.00</td>
<td>6.00</td>
<td>7.00</td>
<td>7.50</td>
</tr>
<tr>
<td>1931</td>
<td>3.00</td>
<td>3.00</td>
<td>3.75</td>
<td>4.50</td>
<td>6.00</td>
<td>7.00</td>
<td>7.50</td>
<td>8.50</td>
</tr>
<tr>
<td>1932</td>
<td>3.50</td>
<td>3.50</td>
<td>4.00</td>
<td>5.00</td>
<td>6.00</td>
<td>7.00</td>
<td>8.00</td>
<td>9.00</td>
</tr>
<tr>
<td>1933</td>
<td>4.00</td>
<td>4.00</td>
<td>4.50</td>
<td>5.00</td>
<td>6.00</td>
<td>7.00</td>
<td>8.00</td>
<td>9.00</td>
</tr>
<tr>
<td>1934</td>
<td>4.50</td>
<td>5.00</td>
<td>6.00</td>
<td>7.00</td>
<td>7.50</td>
<td>8.00</td>
<td>9.00</td>
<td>9.75</td>
</tr>
<tr>
<td>1935</td>
<td>5.00</td>
<td>6.00</td>
<td>7.00</td>
<td>8.00</td>
<td>9.00</td>
<td>9.50</td>
<td>10.00</td>
<td>10.00</td>
</tr>
<tr>
<td>1936</td>
<td>5.50</td>
<td>6.75</td>
<td>7.75</td>
<td>9.00</td>
<td>9.50</td>
<td>10.00</td>
<td>10.50</td>
<td>11.00</td>
</tr>
</tbody>
</table>
CUSTOMERS THAT GOT AWAY
Confessions of a radio man who learned his lesson

Offhand we might think of all radio customers as variegated nuts. But, still, they are customers, and bread-and-butter for us radio dealers. It is, of course, inevitable that a percentage of customers will slip away from any dealer or serviceman. Unfortunately, the customer seldom tells you why he discontinued patronizing you. But he does tell his friends. In my own day I have pulled boners that are adequate examples of profound stupidity in dealing with customers. I've seen dealers and jobbers put my humble blunders to shame with gross insults to customers who cost good money to get inside the front door. A few collected cases may prove interesting and instructive. The names employed are fictitious but the incidents are genuine.

Real McCoy
Case 1. Dennis McCoy, professor of physics, doctor of philosophy, and for seven happy years my Number One buyer of radio gadgets.

"Mr. Phillips, there is a bit of a barrel tone in that new radio you sold me, I think it cuts the high notes and unnaturally accentuates the lows. Could you fix it?"

I laughed and led him over to the set just like his, next to the front window of the store. Reaching behind it, I loosened the reflector back of the speaker cone. Instantly the tone of the receiver changed. "Do you like it like this?" I asked.

"Splendid!" The poor nut was jubilant.

Back to its original position went the reflector. "You wouldn't have the radio in your house if it sounded like that all the time," I opined.

Dennis McCoy was red-headed and he started to argue. Blunder number 2 was that I argued with him. I felt that I knew him well enough to caution him against a mistake which he would sooner or later realize. He hasn't been in since, and that was twelve months ago.

Engineer Martin
Case 2. George Martin was an engineer with a large automobile concern. I had sold him a small radio and he brought it in for repair. My serviceman is a young genius. With a pair of headphones and a few tools, an old crystal set and a neon bulb he can fix any radio set worth fixing. Martin stood by while my expert did his stuff. I should have seen the meaning of the gleam in Martin's eye. My boy fixed the set and made it play as good as new. But what did Martin do but take it right across the street in plain sight of yours truly and let that dumb cluck they have as a serviceman apply an oscillograph, two signal generators, a vacuum-tube voltmeter and an assortment of voltmeters and all the junk he has on the service bench to that set. Naturally my competitor, the dirty louse, told Martin a tall story about the value of all those gadgets and Martin must have fallen for it because he doesn't come in any more. I didn't need all kinds of test equipment because I had a good boy. But after a while I woke up and bought everything that would look flashy on the bench. I've got other customers like Martin who might go high hat on me.

Motorman Teets
Case 3. George Teets, Interurban motorman, dresses flashy, slangy in speech, hands invariably greasy. George dropped in while I was selling the cashier of our bank a new 11-tube afc automatic tuning job. After writing up the order, I turned to George. "What'll you have, Teets?"

"I want one of them afc sets, Charley—one like you was just selling to that guy from the bank."

"You don't want that set, George. It costs over $200. It would take you two years to pay for it and our contracts only run nine months."

I thought I was doing him a favor to tell him that. Yea, that's what I thought.

"To hell with you, big stiff, I'll go across the street and get me one—for cash, see?" And he held up a roll that would choke a cow. "I picked the right parlay at the Washington track yesterday afternoon and I'm buying the best radio made, before I shoot the roll on some other nags." I lost a cash sale and the customer.

Lady Gray
Case 4. Mrs. Henrietta Gray, widow, living frugally at the edge of the town on an old-age pension. Mrs. Gray tried my competitor first. He knew her as well as I did. He offered her a $10.95 midget set she didn't like, then a $12.72 job which had a strange name, than a $15.95 special marked down from $24.50. She didn't buy and this was her story.

"He thinks he can pawn off his cheap sets on me, Henrietta Gray. I knew his mother when she did our washing. He thinks I'm cheap. Why I've been saving up for two years to buy a good radio, and I want to see the best you have, Mr. Phillips."

If she had visited my store first, I would have done the same as my stupid competitor across the street, but as I have always said, let the customer do some of the talking.

Mrs. Cartwright
Case 5. Mrs. Belle Cartwright, leader of society, chairman of the Community Fund Drive, one-time candidate for Congress on the wrong party ticket, and nobody to be sneezed at. She used to patronize my competitor across the street. This day she sailed into my joint with both eyes popping and a thin upper lip, like a good, high-spirited horse that has just been cut with a whip.

"If you can show me a good radio without asking how my children are, what my husband is doing today, or if I've recovered from my auto wreck, I'll write you a check for it."

"There is only one radio in my store in keeping with your lovely home, Mrs. Cartwright. It is this one by the window at $277.50, complete with a new aerial."

"Excellent, deliver it this afternoon, please. What are your initials, Mr. Phillips? I'll write you a check immediately, and you're lucky, too, because I was determined to buy that set in the window across the street, until that jackanapes thought I was making a social call on him, the impertinent ass!"

I silently agreed with her; she expressed my own thoughts much better than I could have done.

FOUR MORALS
Always assume the customer wants a quality better than I think he can afford.

Let the appearance of my store and especially my service department inspire confidence in the customers.

Give special care to the assorted nuts who want something special to boast about on their radio.

Quit worrying over lost customers but worry over why they went elsewhere.
AUTUMN ARRIVALS

Novel ideas in new merchandise for Fall

Admiral's laydown model with slide-rule dial.

Any school letter or any combination of colors is Stewart-Warner's come-on for the varsity crowds.

Philco's Mystery Control has a workout in California sunshine, tuning set at right.

Sleek new remote-control box by Stromberg-Carlson.

A self-powered Philco draws street crowds in Syracuse, N. Y.

Metropolitan model, Stewart-Warner.

Motorola "time-tuning" pleases Washington jobbers.

September, 1938
NEW 1939 ADMIRAL CONSOLES
7, 8 & 11 TUBE SUPERHETERODYNES

Left—Model 137-8G, 7 tube A.C. Console with permeability tuning. Includes 3-gang condenser... new electric eye... large, easy-to-read slide rule dial... push button tone control... full A.V.C... heavy duty dynamic speaker. Three bands cover American broadcast and foreign stations, police, amateur, aviation, ships at sea.

Right—Model 139-11A, A.C. Superhet Console Grand with tilt-tuning dial... electric automatic tuning... gold calibrated slide rule dial... push button off-on switch... push button operated tone control plus manual base compensation to give 42 tune variations. Has 10 watts output... full A.V.C... RFC... pre-selector... 12" electro dynamic speaker... 3 bands. Tunes American broadcast and foreign stations, police, amateur, aviation, ships at sea.

BATTERY RADIO
With Sensational New 1½ Volt Tubes
Model 141-4A, 4 tube Superhet Table Radio operates for almost a year from one "AB" battery. Single plug-in connection does away with messy wires. New superhet circuit gives 6-tube performance. Tuning range 535 to 1735 KC. Tunes American broadcast and police stations. Has slide rule dial... full A.V.C... 6" P.M. dynamic speaker.

CONTINENTAL RADIO & TELEVISION CORP., 3800 W. Cortland St., Chicago
Meet "Price Competition" with the Little Admiral

A Full 5-Tube AC-DC Super as Low as $9.95

You can depend on Admiral to keep one step ahead of the parade...in price...performance...design. Here's a new 5-tube super that will help you get your share of the midget radio business. Has 5 working RCA metal tubes in improved superhet circuit to give 7 tube performance...automatic volume control...pilot light...range 535 to 1735 KC. Modern one-piece molded plastic cabinet available in our attractive colors.

NEW 1939 ADMIRAL RADIO-PHONOGRAPHs

NEW ADMIRAL 8-TUBE AC TABLE RADIO for 1939

Model 134-8A, 8-Tube A.C. Superhet Table Radio. Has push button on-off switch...automatic push button tuning...continuously variable tone control...full A.V.C. and 8" electro dynamic speaker. Three bands. Tunes American broadcast and foreign stations, police, amateur, aviation and ships-at-sea. The biggest buy in 8-tube AC table radios today!

Above-Model 520-SC 5 Tube (including ballast) T.R.F. Radio-Phonograph. Has 5" electro dynamic speaker...2 watts output...one stage R.F. Tunes American broadcast and police stations (535 to 1735 KC range) Phonograph has new light weight crystal pickup...78 R.P.M. quiet electric motor...plays up to 12" records.

Model 142-8A Radio-Phonograph Console. 8 tube AC superhet radio with permeability push button tuning. Has large, easy-to-read slide rule dial...continuously variable tone control...full A.V.C....extra heavy electro dynamic speaker. Three bands. Tunes American broadcast and foreign stations, police, amateur, aviation and ships-at-sea. Phonograph includes automatic record changer which plays 10" or 2" records automatically in mixed sequence. Has top loading crystal pickup with automatic needle cup and triple sealed crystal cartridge.

September, 1938
NEW 1939 ADMIRAL CONSOLES
7, 8 & 11 TUBE SUPERHETEROODYNES

Left—Model 137-4 - 7 tube A.C. Console with microphone dummy. Includes 3-gang mandered new \voltage control. ... rule dial... push button tone control... full A.V.C. heavy duty dynamic speaker. Three bands cover American broadcast and foreign stations, police, aviation, ships at sea.

Right—Model 135-11A. A.C. Superhet Console friend with sliding dial for automatic tuning... push button on-off switch... push button operated tone control. Has full A.V.C. 12 tube... dynamic speaker. Three hands cover American broadcast and foreign stations, police, aviation, ships at sea.

BATTERY RADIO
With American-made 115 Volt Tubes
Model 161-49, 6 tube Superhet Table Radio operates for almost a year from one "BB" battery. Simple plug-in connection does away with moving wires. New superhet circuit gives 6 tube performance. Tuning range 535 to 1735 KC. Three American broadcast and foreign stations, police, aviation, ships at sea.

NEW 1939 ADMIRAL RADIO-PHONOGRAPHS

Above—Model 141-5A Radio-Phonograph Console. 8 tube A.C. Superhet radio with microphone push button tuning. Has large, easy-to-read slide rule dial... push button tone control... full A.V.C. heavy dynamic speaker. Three hands. American broadcast and foreign stations, police, aviation, ships at sea.

CONTINENTAL RADIO & TELEVISION CORP., 3800 W. Cortland St., Chicago
More Power to Your Sales!

In three vital directions
RCA serves the men who sell radio

Transmission—The better the quality of broadcast transmission, the greater the interest in listening, and hence in buying radio instruments. Starting with radio message services, RCA research has constantly contributed to the improvement of radio broadcasting. Today RCA equipment is in almost universal use by broadcasters.

Programs—The second incentive to buy radio sets is the quality of programs. Through NBC, one of the RCA family, the art of broadcasting has been continuously improved.

Receivers—Given broadcasting of fine technical quality, and interesting in its material, the public wants radios with which they can hear the programs at their best. They want these instruments at reasonable prices. Here again RCA research delivers the goods. The 1939 RCA Victor Radios that offer Electric Tuning for All mark the greatest advances yet made in providing the listening public with great values.

Thus in three vital directions RCA research means more power to your sales.

Radio Corporation of America

Radio City, N. Y.

RCA MANUFACTURING CO., INC. RCA INSTITUTES, INC. RCA COMMUNICATIONS, INC.

RADIOMARINE CORPORATION OF AMERICA NATIONAL BROADCASTING COMPANY
GET SETS READY FOR WINTER

Clear up interference sources, replace tubes
National Antenna Check-up Week, Oct. 15-22

Some forty million radio sets in this U.S.A. need to be gotten ready for broadcasting's biggest season, which starts this month. With new features—music, drama, comedy, news and information—crowding the airways, this is the time to see that every listener has his set "in A No. 1 condition," with fresh tubes installed, defective parts replaced, proper antennas installed, and all interference eliminated from local reception.

Here's work for every radio man and his service helpers, to get all the radios in his neighborhood in shape to bring in radio's brilliant winter programs with maximum clarity and free of annoying interference. Thousands of tube sockets cry out for replacement tubes, to restore the sets to their pristine clarity and sensitivity. Volume controls that have gotten noisy, need to be renewed. Condensers and transformers may need to be replaced.

Filter out interference

And the owner's full enjoyment may be prevented because of some electrical interference in his own home or in some neighboring premises, which could be promptly eliminated by means of one of the simple plug-in filters now available. Too many listeners go on month after month, suffering interference and enduring it, all because some radio man has not demonstrated how simply and inexpensively such noise can be prevented.

Of course, it is in the antennas of the nation, that greatest improvement might be made in radio reception. For no radio, however costly, can be any better than its antenna. The electro-magnetic waves in the ether must first be picked up, before they can be amplified in the radio set. And so "fixing the antenna" gets back to first principles. For all radio listening starts with the listener's antenna.

To tell the public

It is appropriate therefore that a National Radio Antenna Check-up Week is scheduled for Oct. 15 to 22, to remind the general public of the importance of getting their antenna installations overhauled or replaced with modern scientific antennas. Sponsored by the Belden Manufacturing Company, which will publish full-page announcements in the Saturday Evening Post, Collier's, and other magazines, prior to the period, National Antenna Check-up Week is expected to result in improved reception for millions of listeners, and to produce valuable earnings for thousands of service men. To 50,000 radio men Belden will also mail out window banners, lapel buttons and instruction books to aid in selling modern antennas for replacing old installations.

Clear channel reception

For many new and important developments have been made in antenna design in recent years and even months. A review of some of these new outside antenna features will be of interest to radio readers, bringing them up-to-date on the new improvements now available.

Clear channel reception is featured in the new Belden all-wave antenna system which provides uniform signals from 400 to 22,000 kilocycles. The transmission line is unusual in that two conductors with an outer shield are used, the shield being a common conductor. On short waves one conductor is employed with the grounded outer shield, while on the broadcast band the other conductor is used with the grounded shield.

Separate antenna and set coupling transformers are provided for high and low frequencies, so that each channel can work at maximum efficiency. The circuit with iron-core transformers provides 60 per cent more efficiency than conventional systems, and is shown in the accompanying illustration. System will operate up to four receivers with little loss in signal strength.

Cancels noise

Another new antenna is the RCA-Victor "Master" for use in private homes. In addition to the usual doublet with its double-wire transmission line, the antenna uses a counterpoise placed parallel to the transmission line, but slightly shorter than the line. (see accompanying diagram).

Outstanding feature is that the counterpoise on the broadcast band picks up "noise" which is fed into an adjustable set coupling trans-
former where it cancels out noise picked up by the flat top or doublet. Thus, claims the manufacturer, the antenna flat-top can be quickly erected without the need of finding a “quiet” location on the roof. On the shortwaves this antenna performs as the usual doublet-type of antenna, with noise reducing properties.

**Doublets**

A still popular type of antenna is the conventional doublet which in the past few years has been much featured for short-wave reception. These doublet antennas are found in many forms and available from all manufacturers. Doublets are manufactured with self-selecting matching transformers which automatically operate at all frequencies. Other doublets require the operation of a change-over switch when going from the broadcast band to short waves. Then, too, some of the radio sets are equipped with built-in matching transformers and change-over switches which operate from the receiver wave-change switch.

Doublets are made with both equal and unequal legs on the flat top. Equal legs give balanced operation on shortwaves, with an additional reduction in noise. Unequal doublets give more uniform response over a large band of frequencies as well as stronger signal strength on the broadcast band.

Some of the all-wave antenna systems provided for noise reduction on the shortwaves only, so that the antenna works similar to an ordinary wire and lead-in on the broadcast band.

**Magic wave: beamascope**

The RCA magic wave antenna is a noise-reducing transmission line with matching transformers that can be operated with any length of antenna or vertical rod. With suitable matching or coupling transformers, this antenna will operate up to 16 receivers, though primarily designed for a single radio set.

Another important antenna development is G-E’s beamascope. This is an electrostatically-shielded loop built into certain G-E models that provides for noise reduction on the broadcast band. However, for shortwaves a “standard” antenna is needed.

Especially effective in certain installations are the double-doublet, spider-web doublet, tuned doublets, antennas with open-wire feeders. Generally, these antennas either require too much space or cost too much for ordinary installations.

For noise-free broadcast reception the RCA Master aerial system uses a counterpoise to pick up an opposing noise to cancel the noise picked up by the antenna itself.

**RSA PRESENTS 48 CHARTERS**

The National Office of the RSA, on behalf of the Board of Directors, takes great pleasure in announcing that charters have been approved for every one of our forty-eight chapters as of record August 1, 1938. These charters will be presented personally by the Executive Secretary in every case possible as rapidly as necessary details can be arranged. RSA feels that this measures a milestone in the progress of the Radio Servicemen of America, and definitely assures the future welfare of its members.

National headquarters announces the formation and affiliation of new RSA groups in Tulsa, Okla., and St. Paul, Minn. Several other groups are carrying out the necessary preliminary steps to affiliate with RSA. A chapter of the RSA in Holland has been established under the direction of Mr. A. F. L. de Quind, Secretary of the Netherlands Radio Service Association. Applications are pending from Sweden, Ireland, and Switzerland.

**RADIOS IN SCHOOL COLORS—“VARSITY”**

One of the most unique and far reaching merchandising ideas to hit the radio industry has just been announced by Stewart-Warner with the introduction of a new radio known as “Varsity.”

This radio has been designed to ‘show-your-colours’ loyalty of undergraduates and alumni of schools throughout the country. It is available in the actual and authentic color combination of a college or university. As an example: The Northwestern model is a purple cabinet with white tuning and volume knobs, push-buttons, speaker grill and screen. The school letter “N” is purple and mounted on the white grill.

The idea has been carefully tested out in the central west states and the possibilities of merchandising a school radio, in school colors, was quickly grasped by dealers everywhere. In Chicago, Lyon & Healy, one of the foremost musical stores in the country, devoted a full Boulevard window to display the complete line of Big Ten school models, plus several other schools.

The factory is in full production and shipments are being made to territories representing 91 major colleges and universities all over the United States, according to L. L. Kelsey, radio manager. In addition to those schools for which models are already available, Stewart-Warner is adding new color combinations daily, and eventually will include prep, high and military schools.

The vivid color combinations of the Varsity model are baked on a Bakelite cabinet which houses a five-tube (including ballast) superheterodyne chassis. Four push-buttons are provided for automatic tuning and there is a manual control as well. The speaker is a full five-inch dynamic and the set operates AC or DC with a tuning range of from 540 to 1,720 kc.
Selling Sound

FALL ELECTIONS WILL HIKE PA SALES

Already, the hundreds of candidates who are involved in the Fall elections are touring the country and, via public address, are asking voters to support them.

Political campaigns this year are exceptionally lively due to the intense interest in President Roosevelt's "purge" activities. Many extra speeches will need to be made, and many extra political meetings will be held by both parties. All this means a nice pickup in the demand for voice amplification.

Campaign committees now have a more formal organization than was present in the primaries—they're easier to reach and they're better pay. Sound men thus find their sales chances considerably improved.

The weather is still generally OK for outdoor political gatherings; later on the demand will be for indoor installations. Throughout it all, the sound trucks which do street work will have more prospects.

TO SELL SOUND, COOPERATE WITH DEALERS

"We operate on a strictly wholesale basis and cooperate with the dealer to the fullest extent," comments W. D. Jenkins, Radio Supply Co., Norfolk, Va. "We supply to our dealers for demonstration purposes only, sound equipment and inter-communication systems. We insist that such equipment be used only for demonstration purposes and we check very carefully to see that no rentals are received on such demonstrations.

"We believe that by working with the dealer, we can secure more business on sound equipment. By refraining from promoting the sale of the equipment direct to consumers or having a separate sales division to handle retail sound, we do not antagonize the dealer and thus possibly lose a portion of the sound business along with the other business which we would normally receive from the dealer.

"This is a point which we believe is very important," emphasizes Mr. Jenkins. "As time goes on more of our dealers will become interested in the sale of sound equipment and if we are a strong competitor of theirs, naturally they would not be inclined to give us their parts and tube business."

"The dealers, knowing that we will not compete with them in sales will purchase their sound equipment and accessories from us as there would be no inducement for them to purchase sound equipment from some of the manufacturers who sell to dealers on what we term jobber's discounts."

Refer prospects

"Prospects on sound equipment who talk to us are referred to dealers for followups and in instances where more than one dealer is figuring on a particular job, we will supply the same information to each dealer insofar as his prices are concerned and let him submit his individual bid. We do not interfere in any way with the prices which he quotes other than insisting that he maintain the established list prices which are in effect on the various manufactured items.

"Installation, service, and maintenance charges are left entirely up to the dealer.

"We have an investment in stock at our cost of approximately $2,500 in sound equipment, speakers, and all other accessories used in sound installation work and are in a position to figure on any job from low powered systems to the centralized systems which run into considerable money.

"The method employed by us has been most satisfactory to us and to our dealers in general and we do not consider making any changes which might jeopardize the respect which we have from the dealers and service men in our territory.

"The sound field has unlimited possibilities and we have hopes that more of our dealers will become interested and enter the field."

CONTACT MIKE IN P.A.

The field that the contact unit opens to the P.A. man and the help that it gives to the musician can be gained from a few typical installations. A ten-piece band for example was using two violins, a cello and a piano—the rest brass and drums; contact mikes were placed on the two violins, the cello and the piano, bringing the output up to that of the brass. The orchestra now sounded as if it were a small symphony of approximately 25 men, whereas before the strings were hardly heard.

September, 1938 23
NEW INTEREST IN RAZORS

The event that most radio men were waiting for, in the electric razor business, has taken place. Led by Packard Lektro-shaver, the leading manufacturers have cut their prices.

In a survey conducted among dealers in seven states, Radio Today found the majority of dealers in this frame of mind: “We can sell more razors if the well-known best-sellers will reduce their prices. In the past, the main difficulty has been that people don’t want to pay the current prices for a shaver. As a rule, our radio customers are good prospects for razors.”

While the results of the survey are being compiled, the manufacturers of the shavers announced lower prices, so it appears that the dealer group got exactly what it wanted.

Also noticeable in the dealer reports were these items: Prices are not always maintained on this merchandise. And nobody is doing any outside selling on shavers, at the moment.

HAY-FEVER SEASON

The fact that a big part of the U. S. population has a tendency toward hay fever is something for air-conditioner salesmen to remember, according to Larry Gub of Philco, who has been busy analyzing the market for his firm’s new Cool-wave unit.

“While there is no medical cure for hay fever, it has been found that air-conditioning prevents, relieves and often eradicates it by completely filtering room air of all dust, dirt or pollen which is responsible for the disease.”

WHAT IT TAKES TO SELL

The characteristics of “the perfect salesman” have been abruptly outlined by Detrola sales manager “Jim” Davin: (1) He has the curiosity of a cat; (2) the tenacity of a bulldog; (3) the determination of a taxi driver; (4) the diplomacy of a wayward husband; (5) the patience of a self-sacrificing wife; (6) the enthusiasm of a flapper; (7) the friendliness of a child; (8) the good humor of an idiot; (9) the assurance of a college boy; (10) the tireless energy of a bill collector.

Some 40 radio dealers of the NY Metropolitan area lost their 1933 franchises, in a single week, for violations of the radio price structure. At the Aug. 24 meeting of Electrical Appliance Dealers Association of Brooklyn, N. Y., where this data was discussed, radio committee chairman Percy Peters reminded the group that they were being “shopped” every day for further price-cutting offenses. He declared that he would read the names of new violators at the next meeting of the organization.

Association committees for 1938 have been named by president James J. Schneer: Finance—Thomas S. Forker, chairman; Max Zimmer, Percy Peters and Meyer Eisenberg; membership—Edward J. Dunne, chairman; Sam Klein and James W. Josephs; display—Max Zimmer, chairman; Sol Scholder, M. Eisenberg and Max Hollins; educational—George MAGNO; fair-trade—Percy Peters, chairman; Russell A. Atkinson, M. Zimmer and Marvin A. Tarzian; by-laws—T. Forker, chairman; R. Atkinson, A. H. Grafenstadt, M. Tarzian and Z. Zimmer; income-association relations—R. Atkinson, chairman; T. Forker, M. Tarzian, Percy Peters, Ralph Cerillo and Albert H. Bernhard.

The Association elected a full-time executive secretary in the person of Tom Bolger, who will establish Brooklyn offices for added service to the members of the organization.

Peaslee-Gaultbert Corp. will now distribute Stewart Warner radios, refrigerators and gas ranges in the Atlanta, Ga., area, according to news from SW sales manager John W. Dittrich. Factory branch operations of the Stewart-Warner Distributing Co. have been taken over by Peaslee-Gaultbert, but the plan does not affect the factory branch at Birmingham, Ala. The Atlanta jobber will also handle SW products in the Jacksonville, Fla., and the Louisville, Ky., areas.

New manager of the air conditioning and heating dept. of the Auto Equipment Co. the Denver, Colo., jobbers, is Harold H. H. Clark, who takes the post after four years experience in the ventilating, heating and air-conditioning industry. After an impressive technical training in Chicago, Mr. Clark spent some time abroad and later worked with Simplex and Norge.

Large group of retailers and industry officials went to the first “popular priced” golf party sponsored by the Wisconsin Radio Refrigeration & Appliance Association, Milwaukee. Plans for the big affair were handled by golf committee men E. H. Schafer, W. D. Baker and Ray Hensch.

Radios and refrigerators made by the Detrola Corp. are now among the products listed as eligible for financing by the Electric Home and Farm Authority of Washington, D. C.

Benny Ginsburg, of Smith-Benny Sales Co., 11 W. 42nd St., New York City, eastern representatives for the Steem-Electric iron, reports a 500 per cent increase in sales of the product in the last five months.
EVERY DEALER CAN SELL
dthis amazing new
STEEM-ELECTRIC IRON

HERE is a new year-round profit-builder for the radio dealer—new in safety, convenience and SALES APPEAL. It combines the efficiency of electricity with the advantages of steam and operates on the principle used by the finest tailors and laundries.

STEEM-IRON—already displayed and demonstrated in many of the largest and finest stores—is destined to replace ordinary irons as surely as the modern refrigerator is replacing the old-fashioned ice box.

Write at once for the full story of this new merchandising opportunity. See the attractive window and counter displays, consumer literature, etc., all furnished free with initial shipments.

14 AMAZING FEATURES
- NO SPRINKLING OR ROLLING
- NO MORE MILDEWED CLOTHES
- NO BURNING OR SCORCHING
- NO PRESS CLOTHS
- NO CONSTANT LIFTING
- SAFE TO FINE FABRICS
- SAFE TO SYNTHETIC FABRICS
- SAFE TO HEAVY WOOLENS
- REJUVENATES PILE FABRICS
- BLOCKS FELTS—KNITTED WEAR
- STERILIZES AS IT IRONS
- WEIGHT 6 POUNDS
- OPERATES ON A.C. OR D.C.
- FULLY GUARANTEED

Approved by the
Underwriters Laboratories, Inc.
Manufactured by
STEEM-ELECTRIC CORP.
1726 Lafayette Avenue
St. Louis, Mo.

$1295
Complete with approved cord and plug, asbestos pad, funnel, directions and guarantee.

September, 1938
NEW THINGS

Latest news of radio products from manufacturers

Delco receivers

Symphonic phonograph pick-up

Miniature tubes
★ Compact tubes designed for hearing aids and other devices where extremely small size is required. Operate on battery no larger than flashlight type. Filament consumes 70 mls at 1.4 volts. Tube 1¼ inches high overall. Available in triode, pentode voltage amplifier, and pentode output amplifier, with or without bases. Hytron Corp., Salem, Mass.—Radio Today.

Belden clear channel antenna
★ All-wave antenna system using shielded two-wire transmission line. Separate coupling transformers provided for short-wave and broadcast reception. Shielded line eliminates need of lightning arrester. Maximum efficiency from 400 to 22,000 KC with no dead spots. Type 8306—list $6.50. Belden Mfg. Co., 4847 W. Van Buren St., Chicago, Ill.—Radio Today.

Clough-Brengle tube checker

RCA tube tester
★ Highly efficient tube tester for all types of tubes including the new 1½ volt types. Magic eye tubes also tested for brilliance and eye action. Eleven buttons on panel released or retained automatically as required. Roller chart has easily read figures for setting controls. Tests made according to K.M.A. standards. Type 125-A with carrying case—$69.95. RCA Mfg. Co., 1560 15th St., Camden, N. J.—Radio Today.

Crosley console

Television kit
★ Complete television kit designed for assembly by the buyer. Set uses 15 tubes in addition to 5-inch cathode ray tube. Electrostatic deflection of the cathode ray tube. Kit of all parts with tubes lists for $69.95. Designed and marketed by Garod Radio Corp., who reputedly introduced the first all-electric radio. 115 Fourth Ave., New York, N. Y.—Radio Today.

Silvered-mica capacitors
★ Mica condenser having silver deposited directly on the mica. Condensers have very low temperature coefficient. Molded in low-loss bakelite and impregnated in a high-Q wax. Available in capacity tolerances of 1, 2, 3, 5 per cent. Aerovox Corp., 70 Washington St., Brooklyn, N. Y.—Radio Today.
ONLY RCA Victor GIVES YOU ALL THIS

Look at this amazing 3-WAY OFFER

1. Magnificent 1939 "Console Grand" Radio ........................................... $185.00
2. RCA Victorola Attachment for playing records ........................................ 14.95
3. Your choice of $9.00 worth of Records plus $2.00 Subscription to Record Review and Membership in Victor Record Society ........................................ 11.00
TOTAL VALUE .................................. $10.95

FOR ONLY $99.95
SMALL DOWN PAYMENT EASY TERMS

This kind of advertising—running in leading newspapers in September, plus one of the most powerful window displays you have ever seen—plus a sales making array of promotional material—will make profitable sales for you. See your distributor today—and cash in on this sensational 3-way offer!

GENUINE RCA ELECTRIC TUNING AS LOW AS $19

SEE YOUR RCA Victor DEALER TODAY!
Oil-filled condensers


G-E multi-meter


Electric shaver filter

* Filter unit designed for use with electric shavers. Contained in a bakelite housing ⅛ in diameter by 2¾ inches long. Provides an attenuation of 100,000 microvolts in the noise voltage impressed upon the electric power lines by the razors. Listed by Underwriters Labs., Model R-1. Tobe Deutschmann Corp., Canton, Mass.—Radio Today.

Admiral superhet

* 6-tube AC table model with push-button for 6 stations. Tunes from 175 to 560 and 161¼ to 54 meters. 6-inch dynamic speaker. Cabinet of straight-grain walnut. Illustrated on a preceding page. Model 547-6C. Continental Radio & Television Corp., 3800 W. Cortland St., Chicago, Ill.—Radio Today.

Low-cost crystal pick-up


Operadio amplifier


Detrola superhet


High-frequency resistors

* Power-type resistors for use at high frequencies. Frequency characteristic essentially flat up to 60,000 KC. Power ratings of 5, 10, 25, 50, 150 watts. Metallized coating applied to a ceramic tubing. Designed especially for terminating resistors in transmitting antennas. Type MP. International Resistance Co., 463 N. Broad St., Philadelphia, Pa.—Radio Today.

Compact velocity mike


Metropolitan model radio

AC Model 78 . . . . . . $29.95

Radio-Phonograph
AC Model 88 . . . . . . $39.95
Fine quality 6-tube superheterodyne. Reproduces both radio broadcasts and recordings beautifully. Plays 10" and 12" records. All in attractive walnut cabinet.

AC Model 58 . . . . . . $16.95

AC Model 58A . . . . . . $19.95
Fine quality superheterodyne. Striking ivory plastic cabinet and dial tuning.

AC Model 68 . . . . . . $24.95
Six push buttons with variator for tuning in additional stations. Walnut plastic.

ARVIN RADIOS

A complete line of console, chairside, table and battery radios

Modernistic Gold foil Display
Free with the Arvin No. 30 Deal

Here's a honey of a merchandising idea in a window or counter, that you get free with order for 3 Arvin table radios. Ask your jobber about this Arvin profit deal.

These new Arvin table radios are fine quality superheterodynes - built large enough and well enough to give the selectivity, sensitivity and rich tone everyone likes. Their honest-to-goodness performance appeals to those who want fine radio reception at low cost. Five models give you a diversified selling set-up that meets the demand for push button tuning, dial tuning or a combination of both.

Profit-minded dealers are ordering these new Arvin radios in quantities now. They are stream-lined profit-builders - engineered and built to satisfy radio users and stimulate sales for you. Every model is a full-sized table set, not to be confused with midget radios.

Don't overlook this Arvin radio opportunity to boost your sales and profits. The Arvin catalog shows the complete line of fine quality Arvin radios priced for every selling bracket. Order from your Arvin jobber. NOBLIT SPARKS INDUSTRIES, Inc., Columbus, Indiana.

Prices slightly higher in extreme South and West.
MORE NEW THINGS

Midget exponential speaker

60-watt sound system
* Five-stage 15-tube sound system having multi-stage degeneration, high-speed expander, remote control, dual tone compensation. Four input mixing circuits. Variable output impedances. Output of 60 watts ample for handling outdoor applications with crowds in excess of 20,000 persons. Unit supplied with 2 P.M. speakers and choice of dynamic or velocity microphones. Webster-Chicago model FR60. Webster Co., 5622 Bloomingdale Ave., Chicago, Ill.—Radio Today.

Non-skid screw drivers
* Screw driver with small teeth milled in point which keeps screw driver from slipping. Removes screws with less pressure since point does not have tendency to slip out of slot. Prevents injury to screw and exposed surface. Special radio designs with insulated handles—magnetized or non-magnetized tips. Bridgeport Hardware Mfg. Corp., Bridgeport, Conn.—Radio Today.

Low-cost multi-meter
* Pocket type meter having ranges of 0/5/50/500/1000 volts DC at 1000 ohms per volt. Resistance range of 0/1000/5000 ohms. Current range of 0/1 milliamp. Metal case measures 3 1/4 x 6 x 2 inches. Net $7.55. Million Radio & Television Labs., 685 W. Ohio St., Chicago, Ill.—Radio Today.

Co-axial cable
* Low-loss type of co-axial cable for all purposes including high frequencies. Capacity of only 11.5 mfd. per foot. Losses of 0.069 DB per foot at 1000 KC. Characteristic impedance of 82.4 ohms. Uses low-loss polystyrene base Insulating beads. No. 14 solid copper wire conductor. Special coupling connectors available. Type 73—list 60 cents per foot. American Phenolite Corp., 1250 W. Van Buren St., Chicago, Ill.—Radio Today.

Decca record player

Presto recorder

Simpson tube tester

Clarion sound system
A CONSISTENT advertising story over a period of 15 years has given RCA Radiotrons an unmatched public acceptance...a public acceptance that will continue!

*RCA presents the Magic Key every Sunday, 2 to 3 P.M., E.D.S.T., on the NBC Blue Network*

Ask your RCA Radio Tube Distributor for complete details concerning the new "Money Back" merchandising program designed especially for radio tube dealers.

Over 325 million RCA radio tubes have been purchased by radio users...in tubes, as in radio sets, it pays to go RCA All the Way.
Phonograph: A phonograph is a device for recording and reproducing sound. It plays back recordings of music or speech. It can be connected to an amplifier and speakers, and often includes features like tone control and automatic start.

Bogen recording machine: This is a recording machine used in schools and universities to record lectures, seminars, and other educational content. It typically includes features such as dual-action controls and a switch for easy recording.

RCA school sound system: This system is designed for schools, offering a simple and cost-effective way to provide audio in classrooms and other learning environments. It includes a loudspeaker, switch controls, and a record changer.

Philco tube tester: This device is used to test the performance of electronic tubes. It includes an accurate push-button testing function, which simplifies the process of testing.

Automatic phonograph: This is a phonograph designed for AC and DC power, featuring automatic record changer and a four-tube high-fidelity amplifier with power output. It can handle eight 10-inch or seven 12-inch records.

Master recorder: A high-fidelity recording machine for wax and all types of instantaneously discs, featuring 15-inch turntable weights 100 pounds and driven by belt at 23½ and 78 r.p.m. It includes a self-starting synchronous motor.

Hickok show lab: A radio service panel to aid service men in merchandising tube sales and set service. It features Long lumaline lamps inset at top, and a rack holding seven instruments.

Plug-in resistors: These are two types of plug-in resistors to replace most of the R.A. types having an octal base. They can be cut at one or more colored dots.

Chassis jacks: Adjustable chassis jacks for supporting radio sets when in upside-down position on bench. They are made of metal and finished in wrinkle paint.

Radio Today
PHONOGRAPH-RADIOS
Today's Opportunity

For months, now, radio men have been looking for some new feature that will encourage the public to spend more money on receiving sets—some new "plus" to make people want to replace their old radios with fine new 1939 musical instruments.

And obviously the answer is the phonograph-radio "combination."

**When he wants it**

For a combination furnishes so much that the listener wants—and supplies it at the instant when he wants it.

A combination doubles the original enjoyment of the radio. Through the magic of recorded music and amplified pick-up, the listener's favorite mood can be recaptured at any moment and enjoyed again at will.

**Double pleasure**

With "double pleasure" thus to be expected from the modern phonograph-radio combination, it is not surprising that Mr. and Mrs. Purchaser readily justify expending for it far more money than they would ever outlay on a radio set alone.

Recent years have seen the average price of radio sets sink steadily. Starting ten years ago around a hundred dollars, the radio-set average has slumped progressively through $75 and $50—until it now stands somewhere around $35.

**Record sales soar**

If radio merchandise is to be lifted out of this $35 level and back again above the $100 line, combinations can be depended on to do it.

Records and record-playing devices of all kinds are in demand today. Sales of records have jumped 40% above a year ago. Combinations are offered in increasing numbers of models by more and more manufacturers. In short this is going to be a combination year.

No home will be complete this season without a record-playing instrument to supplement the wonderful programs on the air.

**Every home a prospect**

So it becomes a matter of combing over lists of past radio purchasers to turn them into prospects for combinations. Customers who come in to purchase lower-bracket radios should be shown how much more entertainment satisfaction they can buy in a combination. Sales of combinations can thus lift radio selling back to prosperous levels. That is why every radio man must help make 1938-1939 a combination year!

And remember, every combination sold means more pleasure to the owner, more profit to the dealer.
SALES SUCCESS ON COMBINATIONS

Profit-making methods used to move phonograph-radios and records

Scores of modern "ways to sell" have been used by the go-getting dealers who are out after the phonograph-radio business, combined with the sale of records.

To more this merchandise there are some interesting adjustments to be made in the promotion schedule of radio stores. Mostly, these changes are simple and inexpensive, once you get an idea of what kind of skill is involved.

A prize example is furnished by Good Housekeeping Shops, Detroit, who, after 20 years of successful merchandising of appliances and radios, have recently added combinations and records. The report from Detroit:

"That a large and constantly growing portion of the public wanted records and phonographs had for some time been the growing conviction of Frank W. Hackett, general manager. This conviction was based upon his personal observation of his friends and family and their attitude towards radio entertainment. His personal observation was further confirmed by what he saw in the trend of Good Housekeeping Shop's radio sales."

"Having decided to go into the record and phonograph business, he adopted as his guiding principle that everything was going to be done right or not at all. Therefore, no false economies were tolerated. Starting from scratch, a complete department, including shelving, counter and three booths were constructed, everything new and of good quality, no attempt being made to adapt old store equipment to the peculiar needs of this new department."

"The booths are sufficiently large, completely sound-proofed by means of double walled construction, air-conditioned and furnished in the very best of taste for the convenience of the public using them."

Peak comes in December

"After less than six months of operation in this new enterprise, Good Housekeeping Shop indicates definite and satisfactory progress in its record and combination department in spite of adverse business conditions. Another important point to bear in mind is that the record and combination business has a definite seasonal trend, being peaked at about December or January, with the lowest point about May. So the firm started in the record and combination business when the business was at its lowest ebb for the year. Definite figures show that they have had a consistently increasing volume of business, week after week, with no exceptions. The hundreds of new customers who now visit the record departments of the several branches of Detroit's Good Housekeeping Shop regularly have had a very direct and beneficial effect on appliance sales. The sale of a very important number of refrigerators, ranges, ironers, and washers is directly attributed to the increased volume of store traffic which a record department creates.

Stocking up

"The main store proudly boasts that they have the most complete selection of records in the State of Michigan, going even to the extent of carrying in stock some of the best and most outstanding HMV records imported from England. The importance of this in attracting record buyers cannot be over estimated. The branches carry complete stocks of all the latest records and all the 'best sellers' in the Red Seal and Album class. If the branches get a record customer whose tastes extend beyond this the records are obtained for him or he is referred to the main store where he can be assured of finding what he wants.

Definite system needed

"Right from the start the so-called 'green stock envelope' system of handling the stock and ordering was used. This method was developed by and recommended by RCA-Victor. It is difficult to understand why many record retailers attempt to operate a department without this or any other definite system when the inevitable result of the proper use of the 'green stock envelope' system is lower inventory, greater turnover, and much better service to customers.

"Every album set in stock is removed from the factory wrappings and can be heard by a customer for the asking. This is in direct contrast to the attitude of some retailers, who acting upon misguided motives, are not very enthusiastic about opening an album set for a customer to hear unless they practically have definite assurance in writing that he is thinking seriously of buying it. The comparatively small percentage of people who will abuse this privilege by constantly dropping in for free concerts.

At the left, the display-studded record department at Gimbel Bros., Pittsburgh.

Radio Today
Philo's "mystery control" captures everybody's interest. Even Atlantic Manager Peter Kain and Vice-president Sayre Ramsdell, can't stop dialling the little mystery box which, without wires, controls the set at left.

can soon be spotted and discouraged in a nice way. On the other hand, regular customers should be encouraged to listen to as many records as possible. That's the only way they can be sold.

**Hiring salespeople**

"Most new record dealers when looking for sales people for their record department assume that a knowledge of music is of primary importance. While Good Housekeeping Shop did not for a moment overlook or underrate this important factor, they did make it secondary to the fact that first of all they wanted honest-to-goodness sales persons behind their record counters. Sales girls who could constantly keep in mind that their primary purpose in being there was to sell records and not to indulge in long-winded esthetic discussions of music, except, of course, when good business indicated that they should.

"It is not uncommon to come across that type of record salesgirl who can and will, at the slightest provocation argue with their customer, regarding a difference of opinion concerning a composition, composer, conductor, or particular interpretation. In matters of this type the customer should always be right. The wise record clerk will catalog a customer as a buyer of certain types of music and then sell him more records of that type, rather than to attempt to educate him musically, which a customer naturally resents unless he has specifically indicated that he desires the opinions of the clerk in selecting his records. With these principles in mind Good Housekeeping Shop selected and trained its personnel.

**Starting promotion**

"Coincidental with the opening of the store the public was informed by radio, large newspaper ads, direct mail, and telephone that Good Housekeeping Shops were selling records and combinations. As a special added attraction record buyers were informed that by dropping in at any of the record departments they would be given free a copy of the latest record catalog in a special leatherette cover imprinted with the customer's name. There was a very large demand for these catalogs and placed the store in direct contact with hundreds of people who were definitely enough interested in recorded music to take the time and trouble to come in and ask for one.

"Since the opening of the main store Good Housekeeping Shop has been on the radio three times a week over a local Detroit station. This program comes at the dinner hour and features all types of records, particularly the latest ones, and points out to the listeners where they may be purchased and also reminds them of the obvious advantages of owning a combination instrument for home entertainment.

"Without a lapse Good Housekeeping Shop has also carried out a consistent program of newspaper advertising, including tie-ins with national ads on records and also with the Sunday record review columns of the local newspapers.

"Greatly effective use has also been made of direct mailings to special groups, such as the symphony and opera subscription lists, doctors, musical organizations, schools, etc.

"One of the most effective and yet one of the most neglected promotional methods which can be used to sell records is a consistent and logical use of the telephone. This method is also being profitably used with good results.

**Calling personally**

"Last, but not least, and somewhat of an innovation is personal calls. A certain number of people can be sold records in this way, who ordinarily do not have the time or the inclination to come in and buy. Single calls of this type have actually resulted in orders for dozens of album sets amounting to hundreds of dollars.

"The Good Housekeeping Shops (Continued on page 46)

At the right, the Good Housekeeping Shop, Detroit, features convenience and comfort for customers, in a compact corner.

September, 1938
LIFE Magazine recently sent a questionnaire to thousands of its readers, asking questions of great importance to you. Look at the answers. They definitely prove two things:

1. That public interest in Victor Records and Victrolas soars higher every day — creating a highly profitable market for you to take advantage of.

2. That Victor Records and RCA Victrolas are the line for you to stock — for volume sales and profits!

**LIFE ASKED**

1. Have you purchased any phonograph records in the past year? ... If so, what brands?

   80.6% answered "VICTOR!"

2. If you were to purchase an instrument that combined radio and record entertainment, what make would you most likely buy?

   52.7% answered "RCA VICTOR!"

Brand "A" received 8.3% of the votes, Brand "B" 4.0%, Brand "C" 2.3%.

RCA Victrolas are the vogue! And that means more profit to you! Because with new thousands from coast to coast becoming enthusiastic record fans, the market for the new 1939 RCA Victrolas grows larger and larger all the time. And every RCA Victrola sale means future record business, too, with steady profits coming your way month after month.

That is why it will pay you — as it has hundreds of other money-making dealers — to stock and feature the new RCA Victrola line. It has everything the consumer demands — it is the greatest value RCA Victor has ever offered — and it brings you what you want, more sales and profits.

**Only RCA Victor gives this Victor Record Society bonus to help make sales!**

When you stock RCA Victrolas, you can offer your customers this extra inducement to buy! With the purchase of most RCA Victrolas, they receive either $9.00* or $4.50* worth of Victor Records of their own choosing, a $2.00 year's subscription to the Victor Record Review and membership in the Victor Record Society — all without extra cost! That's a value they'll go for — and they can get it only on an RCA Victrola!

*Amount depends on price of Victrola purchased.
RCA VICTOR
Overwhelming Choice!

15 NEW 1939
RCA VICTROLAS

A BIG PROFIT LINE FEATURING:
- Automatic Record Changer
- Electric Tuning Radio
- Top Needle Loading
- Beautiful Period Cabinets

RCA Victrola Model U-128
Offers such outstanding features as Gentle Action Automatic Record Changer, Crystal Pickup with Top Loading Needle Socket, and has a 10-tube, 3-band radio with Electric Tuning. ... $185*

RCA presents the "Magic Key" every Sunday, 2 to 3 p.m., E. D. S. T., on the NBC Blue Network.

RCA Victrola Model U-134-A
18th Century Cabinet Style, High Fidelity Electric Magic Voice, Crystal Pickup, Automatic Record Changer for 10" and 12" records, Top Loading Needle Socket, and has 16-tube, 7-band Electric Tuning Radio. $355* in walnut, $365* in mahogany.

RCA Victrola Model U-119
A handsome table instrument of modern design with self-starting motor, Crystal Pickup and 6-tube, 3-band Electric Tuning Radio. $79.95*

For Finer Radio Performance—RCA Victor Radio Tubes

RCA Victrola Attachment R93-B
which has proved so popular with thousands. Easily attached to any A.C. radio, it plays records through the radio. ... (Dist price) $14.95

*All prices f.o.b. Camden, New Jersey subject to change without notice.

RCA MANUFACTURING COMPANY, INC.
Camden, New Jersey

A Service of the Radio Corporation of America

September, 1938
Life magazine recently sent a questionnaire to thousands of its readers, asking questions of great importance to you. Look at the answers. They definitely prove two things:

1. That public interest in Victor Records and Victrolas soars higher every day — creating a highly profitable market for you to take advantage of.

2. That Victor Records and RCA Victrolas are the line for you to stock — for volume sales and profits!

Life asked:

1. Have you purchased any phonograph records in the past year? If so, what brands?

80.6% answered "VICTOR!"

2. If you were to purchase an instrument that combined radio and record entertainment, what make would you most likely buy?

52.7% answered "RCA VICTOR!"

RCA VICTORs are the vogue! And that means more profit to you! RCA Victrolas the vogue! And that means more profit to you!

RCA Victrolas are the line for you to stock — for volume sales and profits! RCA Victrolas are the line for you to stock — for volume sales and profits!

RCA VICTOR gives this Victor Record Society bonus to help make sales!

When you stock RCA Victrolas, you can offer your customers this extra inducement to buy! With the purchase of most RCA Victrolas, they receive either $9.00 or $4.50 worth of Victor Records of their own choice, and a $2.00 year's subscription to the Victor Record Review, and membership in the Victor Record Society — all with no extra cost! That's a value they'll be eager to accept and that means more sales too — more profit to you!

RCA VICTOR gives this Victor Record Society bonus to help make sales!

When you stock RCA Victrolas, you can offer your customers this extra inducement to buy! With the purchase of most RCA Victrolas, they receive either $9.00 or $4.50 worth of Victor Records of their own choice, and a $2.00 year's subscription to the Victor Record Review, and membership in the Victor Record Society — all with no extra cost! That's a value they'll be eager to accept and that means more sales too — more profit to you!

A Big Profit Line featuring:

- Automatic Record Changer
- Electric Tuning Radio
- Top Nudels
- Records Printed Cabinet

SOON... A 40th Anniversary Promotion That Will Boost Your Sales Even Faster. Watch for Details!

RCA VICTOR
Overwhelming Choice!

15 NEW 1939 RCA VICTROLAS

RCA VICTOR Attached R93-B which has proved so popular with thousands. Easily attached to any AC radio, it plays records through the radio. Inst. price $14.95 Add $1.00 to base. Camden, New Jersey refuses to chance without notice.

RCA Manufacturing Company, Inc.
Camden, New Jersey
A Service of the Radio Corporation of America
The World's Greatest Salesman of Record-Playing Instruments

The Victor Record Catalog is often called the world's greatest encyclopedia of recorded music...the world's greatest salesman of Victor Records. But it is also the fundamental approach to sales of RCA Victor record-playing instruments. Your best prospects for RCA Victrolas are the growing army of people who are buying Victor Records. Now that the record business is booming, this fact is more important than ever: the world's greatest artists are on Victor Records—and that's no idle boast!

FOR FNER RADIO PERFORMANCE—RCA VICTOR RADIO TUBES

RCA presents "Magic Key" every Sunday, 2-3 p.m., E.D.S.T., on NBC Blue Network

The World's Greatest Artists are on Victor Records

Only Victor Records offer you the definite sales advantage of "Higher Fidelity!" Because only Victor Records are produced by the world-famous Higher Fidelity process—the recording method that enables the records to capture and preserve the full range of beauty from low to high. In addition, only Victor enables you to sell the recordings of the world's greatest artists because the world's greatest artists are on Victor Records. And these highly important sales points are sound reasons why it will pay you to stock, feature and sell Victor Higher Fidelity Records!
ions....22 Magazines....papers....tell millions about

dds and Victrolas

"The Magic Key of RCA" Program...nightly Victor Record Programs...national magazine and newspaper advertising...powerful sales promotion material—all combine to bring millions from Maine to California the sensational story of the amazing new RCA Victrolas...and to sell them the joy of having "The Music You Want When You Want It."

RESULT!
RCA Victrola Sales are Currently Running 58.4% ahead of last Year!

September, 1938
The World's Greatest 
Salesman of Record-
Playing Instruments

The Victor Record Catalog, it is often called the world's greatest encyclopedia of recorded music—the world's greatest salesman of Victor Records. But it is also the fundamental approach to sales of RCA Victor record-playing instruments. Your best prospects for RCA Victrolas are the growing army of people who are buying Victor Records. Now that the record business is booming, this fact is more important than ever. The world's greatest artists are on Victor Records—and that's no idle boast!

FOR FINER RADIO PERFORMANCE—
RCA VICTOR RADIO TUBES
RCA presents "Magic Key" every Sunday,
2:15 p.m., E.D.S.T., on NBC Blue Network

The World's Greatest Artists are on Victor Records

Only Victor Records offer you the defense-side advantage of "Higher Fidelity!" Because only Victor Records are produced by the world-famous Higher Fidelity process—the recording method that enables the recording to capture and preserve the full range of beauty from low to high. In addition, only Victor enables you to sell the recordings of the world's greatest artists on Victor Records. And these highly important sales points are sound reasons why it will pay you to stock, feature and sell Victor Higher Fidelity Records!
HERE'S THE ONE LINE OF COMBINATIONS THAT

PHONOGRAPH WITH PHILCO

A FAST SELLING MODEL IN EVERY CLASS—QUICKER TURNOVER!

PHILCO—the greatest name in radio—now take full advantage of the big demand for radio
. . . with PHONOGRAPH WITH PHILCO! Exclusive features plus the famous PHILCO name and turnover . . . more volume and more profit from
And PHONOGRAPH WITH PHILCO gives you 1939 models . . . a model in every price class, outstanding value! Cash-in on this new and business . . . and cash-in with PHONOGRAPH way to take full advantage of your radio-display, demonstrate, and sell PHONOGRAPH PHILCO distributor at once . . . PHONOGRAPH PHILCO selling power to the radio-phonog

New 1939 PHONOGRAPH WITH PHILCO

Automatic Record-Changer Model 35 PCX

You get greater Volume and greater Profit from this model! Famous CAPEHART Automatic Record-Changer plays and changes ten 10- and 12-inch records automatically . . . PHILCO plus CAPEHART for easier selling! With PHILCO INSTANT Electric Push-Button Tuning of 8 stations. American and foreign radio reception.

LIST PRICE

$225

Easier to Sell! PHILCO

The PHILCO name by itself makes this new PHONOGRAPH WITH PHILCO more to sell! PHONOGRAPH PHILCO combination and sales-producing Automatic Record-Changer . . . to for greater profits.

New! Exclusive REPRODUCER included

Only PHONOGRAPH WITH PHILCO has the new Semi-Automatic feature—the turntable motor, close automatically! Lift and close turntable automatically! 100% perfect

10 New PHONOGRAPH WITH PHILCO

SEE YOUR PHILCO DISTRIBUTOR

*Price slightly higher in the West.
Only PHONOGRAPH WITH PHILCO GIVES YOU ALL THIS TO SELL!

- A Complete Line—11 New Models!
- Greater Value in Every Model!
- PHILCO Performance and Quality!
- Sensational New Mystery Control!
- Exclusive Phonograph Features!
- Famous CAPEHART Record Changer!
- Exclusive Semi-Automatic Reproducer!
- New Cabinet Styling in Every Model!

RY PRICE
CREASE PROFITS!

Does it possible for you to phonograph combinations fast-selling phonograph performance means quicker every dollar you invest!

complete line...11 new...and every model an table radio-phonograph WITH PHILCO! The fastest phonograph prospects is to WITH PHILCO! See your WITH PHILCO brings real business!

plus CAPEHART!

A make demand merchandise of the PHILCO line! But you get even PHILCO gives you the reputation of the famous CAPEHART feature you can “grade-up”

SEMI-AUTOMATIC
low-Priced Models!

D Dealers will profit from this to demonstrate...just start automatic and the record plays automatically the record repeats itself 

Models $49.50 to $95.00
BUT OR TODAY

New Chairside Model 19 PCS

LIST PRICE $89.50*

Here's the special-purpose model your customers will want instantly! With Semi-Automatic Record reproduction...just close the lid and the needle automatically finds the first groove and the record starts to play. PHILCO INSTANT Push-Button Tuning. American and foreign radio reception!

Automatic Record-Changer Model 19 PA

LIST PRICE $139.50*

An amazing value that will move fast! Automatic record-changing phonograph plays eight 10-inch records automatically, 12-inch records manually and repeats them! INSTANT Push-Button Tuning PHILCO Radio. American and foreign radio reception.
HERE'S THE ONE LINE OF COMBINATIONS THAT HAS EVERYTHING...

New 1939 PHONOGRAPH with PHILCO Automatic Record-Changer Model 36 P-CX

$225

Easiest to Sell! PHILCO 4/6 CAPEHART!

A FAST SELLING MODEL IN EVERY PRICE CLASS - QUICKER TURNOVER - GREATER PROFITS

New! Exclusive Semi-Automatic Reproducer in Low-Priced Models!

LIST PRICE

Easy to Sell! PHILCO 4/6 CAPEHART!

New Clarisse Model 19 P-CX

LIST PRICE

New CAPEHART-Styling in Every Model!

Exclusive CAPEHART Record Changer Features!

Exclusive PHILCO Feature!

PHILCO Value in Every Model!

Sensational New Mystery and Quality!

1939 PHILCO - the greatest name in radios today! It's possible for you to start your PHILCO line with $225.00. We'll pay you the difference from the PHILCO factory to the distributor at once, instantly! With PHILCO instacstd y tuning, customers can play any automatic phonograph ploys and never need any tuning at all! With PHILCO phonograph combinations - you can get instant turnover! Cash in on this new combinable radio-phonograph line... the famous PHILCO name you demand!...

LIST PRICE

New CAPEHART Model 19 P-CX

LIST PRICE

Only PHONOGRAPH GIVES YOU ALL THIS TO SELL!
WHY WE ARE PUSHING "COMBINATIONS"

Industry leaders tell promotion plans for Fall

GREAT BOON TO DEALERS

By L. E. Gubb
President
Philco Radio & Television Co.

We look to the radio-phonograph combination business as a great boon to all radio dealers. The amazing rise in the sales curve on all record lines shows a buying interest in combinations on the part of the public never before equaled in the industry's history. Aggressive dealers throughout the country are taking full advantage of this remarkable consumer demand to substantially increase their average unit of sale by pushing radio-phonograph combinations. The new Phonograph-with-Philco line will give the dealer full benefit of this increasing demand, backed by sound advertising, merchandising, and sales promotion plans. New and exclusive features on Phonograph-with-Philco models give greater performance and value than ever before.

ENTHUSIASTIC AT OUTLOOK

By Ernest H. Vogel
Manager Radio Division
General Electric Co.

The General Electric Company has always been sincerely interested in the sale of radio-phonograph instruments and has consistently carried a number of such instruments in its line. In 1937, there was definite evidence of increased interest by the part of dealers and consumers for this type of instrument and we believe the Fall of 1938 will open up still greater opportunities for the sale of complete musical instruments for the home.

Our line this year reaches into all of the list price brackets, offering a table model radio-phonograph combination in the $40 bracket, a splendid non-automatic lowboy console under $150 and an automatic record-changing lowboy radio-phonograph combination well under the $300 mark.

GREAT DEMAND

By Powel Crosley, III
Vice President, Crosley Radio Corp.

There is a great demand for radio-phonograph combinations for a number of reasons—the jitterbug craze, the desire for better education in foreign languages, the need for controlled education of infants. Many people have favorite pieces they like to hear when they want to. To enable our dealers to get this extra business, we are supplying them with a complete line of radio-phonograph combinations at prices which can be promoted by forceful advertising and sales aids.

FINE MUSIC IN THE HOME

By J. H. Clippinger, Vice President
Continental Radio & Television Corp.

Admiral believes that everyone is interested in enjoying fine music in home and is entitled to the opportunity through medium of recordings. Ad-
1939 will be a great year for every CROSLEY dealer

CROSLEY PUSH BUTTON YEAR

Compare Crosley radios with all competitive models and note the reason dealers are making more sales is better tone, better performance, more tubes, bigger speakers and better circuits AT ALL PRICE LEVELS.

at $9.99

Crosley offers a traffic builder that rolls up amazing sales totals. AC-DC. Push button and knob tuning. Electro-dynamic speaker.

at $24.95

Crosley will win a great market with this portable push button electric radio-phonograph. Beam Power tube delivers greatly improved record reproduction. New self-starting motor and high impedance pick-up. Leather strap on flush cover makes it easy to carry. Radio is tuned by knob or by instantaneous positive push buttons.

Crosley presents a value in a superheterodyne 6 tube regular and shortwave receiver (the “SIXER”) even greater than the famous “FIVER”. 5 push buttons for quick, positive tuning in addition to conventional knob tuning. 5-inch dynamic speaker. Brown plastic cabinet. Out-performs anything in its price class.

at $19.99

Crosley presents a CONSOLE ELECTRIC RADIO PHONOGRAPH of beauty and great efficiency. Power transformer with Beam Power tube delivers exquisitely true record reproduction. Illuminated Radio Log dial. Push button radio tuning as well as conventional knob tuning. Simple walnut-finished cabinet suggests elegance. Thousands will buy now that such quality is at this price level.

at ‘49-95

Crosley presents a CONSOLE ELECTRIC RADIO PHONOGRAPH of beauty and great efficiency. Power transformer with Beam Power tube delivers exquisitely true record reproduction. Illuminated Radio Log dial. Push button radio tuning as well as conventional knob tuning. Simple walnut-finished cabinet suggests elegance. Thousands will buy now that such quality is at this price level.

Prices slightly higher in South and West

*NOW, MORE THAN EVER...

You're there with a CROSLEY

THE CROSLEY RADIO CORP., CINCINNATI • POWEL CROSLEY, Jr., Pres. • Home of "the Nation’s Station"—WLW—70 on your dial

September, 1938
In the upper right corner is the Westinghouse WR472, a 5 tube AC superhet with 5 inch speaker. Directly above is the new Stewart-Warner 91-649 combination, with Magic Keyboard, vertical grill. At the left is Ansley’s “piano of the future”—combined radio, record-player, electronic piano, $595.

**STRIKING SALES FEATURES AMONG NEW PHONOGRAPH-RADIOS**

At extreme right, **Brunswick**’s “Sheraton” combination, $124.50.

Center right, **Wilcox-Gay**’s A-57 record-player at $29.95.

Directly at right, **Motorola**’s 59F1 atop record cabinet.

At extreme right, a top combination by **General Electric**.

Center right, one of **Emerson**’s Symphony Grand models, $129.95.

Directly at right, **Fada**’s 6A80APC combination at $229.50.
FOR VOLUME RADIO SALES IN '39

✓ CHECK
THE WESTINGHOUSE
FEATURES THAT CLOSE SALES!

DOUBLE CHECK
✓✓ THE WESTINGHOUSE
MERCHANDISING PROGRAM
THAT PULLS PROSPECTS!

Here’s a radio line and advertising program specially planned to sell radios fast... in volume... at a profit! Never before has Westinghouse offered such radio values... packed with features easy to demonstrate, easy to sell. They’re the talk of the trade! New, Instantaneous, Push-Button Tuning! Styling by America’s foremost radio designers. Furthermore, Westinghouse offers you a new and effective merchandising program designed expressly for your local use! Cooperative newspaper advertisements! Colorful floor and window displays! 2-color Selling Book. Consumer literature and other profit-building helps. It will pay you to check and double check this unusual business-getting proposition. Call your local Westinghouse Representative today.

Merchandise Headquarters — Westinghouse Radio — 150 Varick Street — New York City

Westinghouse Precision Radio

September, 1938
SALES SUCCESS ON COMBINATIONS

(From page 33)

are looking forward to a constantly increasing record and combination business. 'I believe,' says Mr. Hackett, 'that a straight radio is no longer a complete instrument for home entertainment, but the combination phonograph and radio is. Both radio and phonograph fill a definite need in home entertainment and one cannot supplant the other. The degree of perfection which has been reached in present day record reproduction plus the advantage of having 'The Music You Want When You Want It' has an appeal to music lovers which cannot be resisted. The fact that there is now a fine combination instrument available in almost any price class opens a vast new market which has barely been touched. Our selling job is to demonstrate to the public that we have something they want and will enjoy.'

Let it demonstrate itself

A New York dealer has hit upon a device which nets him a great deal of customer-interest in combinations. It applies to those who come in for a radio. When the sale has been made, this merchant says that it will take a minute to make out the receipt; will the buyer just sit down a minute and listen to some music?

At this point, the dealer starts a likely-priced combination on a record, and leaves the patron alone. The statement about the receipt is pretty much of a gag, but the dealer feels that too much obvious "selling-up" will often lose sales. This device lets the prospect develop his own interest in a record-playing instrument. And in many cases he is sufficiently impressed by the quality of the music to make inquiries. Quietly, it starts a whole new line of sales talk.

Also, this dealer has found that customers are impressed by models which change their own records. Therefore he keeps them playing on the sales floor. An instrument which turns out a constant flow of impressive music, without attention, will often draw prospects toward it, automatically.

A store with a specialty

"During the past ten years, 90 per cent of our total radio volume has been in combinations," is the report from Castellanos Molina Corp., New York City, where the sales experts have the special merchandising problem of dealing mostly with people of Spanish descent. The exceptional success of this store serves as a lesson to other dealers—not to neglect the tastes and the buying power of prospects of this type.

This firm sells about $900 worth of records a month. The sales success is based mainly upon keeping the very latest recordings in stock, a careful and constant understanding of wanted merchandise, consistent advertising in newspapers and on the air, and the stocking of phonograph radios priced altogether within reach of the customer group.

Co-manager Herman Diaz of the company believes that part of the interest in combinations is due to "a hang-over from the old phonograph days." Many people still have an old hand-wind phonograph and a few records; they will readily renew their interest in these matters if you show them what modern record-playing equipment offers. By this time they've had enough experience with radio to know that their entire musical life cannot be rounded out by broadcasting alone.

WAX WORTH WATCHING

TOMMY GORSEY and his Gambolè Seven playing At a Ticket and As Long As You Live, both with VC by Edythe Wright—Victor 23899.

HARRY MORLICK and his orchestra playing The Merry Widow and Gypsy Princess—Decca 1944.

FREDONIE "SCHNICKELFRITZ" FISHER and his orchestra playing When They Played the Polka, with VC by Stan Fritts, and Red Wing, with VC—Decca 1929.

HENRY BUSSE and his orchestra playing I'm Gonna Lock My Heart, with VC by Skip Mart, and Figure, with VC by Don Hutton—Decca 1924.

ELLA LOGAN singing My Bonnie Lies Over the Ocean, and Blue Bellies of Scotland, with Perry Botkin and his orchestra—Brunswick 2168.

LARRY CLINTON and his orchestra playing My Heart at Thy Sweet Voice and A Pretty Girl Milking Her Cow, both with VII by Les Wex—Victor 25624.

RENNIE HAYE and his quilt and Rayzy orchestra playing Tu Li Tu Tid Tim and Don't Cross Your Fingers, Cross Your Heart, with Jimmy Brown—Victor 24943.

JOSEPH RINES and his St. Regis orchestra playing Lambeth Walk, with VII by Eagles and cymbals, and Je Ne Sais Po Po, with VII by F. D. Oray and cymbals—Victor 25012.

KAY KYSER and his orchestra playing Love of My Life, with VC by Glenn Simms, and When the Circus Came to Town, with VC by Simms, Harry Rabbit and In-Na-Bubble—Brunswick 2301.

PENNY WISE and her Missy Guys playing Don't Let That Moon Get Away, from "Sing You Smitten," and Silent Night, with both vocals with Penny Wise—Vocalion 1286.

ELLA FITZGERALD and her Savoy Rhythm playing Whoo Do You Know About Love and If You Only Knew, both with VC by Ella Fitzgerald—Decca 1967.

BING CROSBY singing Small Fry, from Paramount's "Sing You Smitten," and Mr. Crooby and Mr. Mercer, assisted by Johnny Mercer—Decca 1960.

JIMMY GORSEY and his orchestra playing Living Is Where You Find It and Garden of the Moon, both from First National's "Garden of the Moon," both with VC by Bob Eberle—Decca 1970.

THE MERRY MACS singing Stop Beatin' Round the Mulberry Bush and Pea, Goes the Weasel—Decca 1968.

TEDDY WILSON and his orchestra playing A Ticket to the New and It Can Be Told, from "Alexander's Ragtime Band," both with VC by Ken Wyman—Brunswick 2409.

Radio Today
WHY WE ARE PUSHING COMBINATIONS  
(From page 42)

and if the dealers manifest such a lively interest it is only reasonable to assume that the product will be promoted to the retail trade and substantial results obtained.

The dealer who properly demonstrates the radio phonograph combination is the one who will receive the greatest benefits from this type of radio. The dealer should be equipped to show the prospective buyer the "flexibility" of this model, through an intelligent demonstration with records, as well as the radio feature.

Simply playing an ordinary record will not convince the customer of the features in the radio-phonograph combination. Instead, if the dealer will point out the tremendous library of records by favorite artists that is available—and the user can select his own program at any time, in addition to having all that is on broadcast available to him, the customer will be impressed.

In other words, a demonstration of the radio-phonograph combination should actually be two demonstrations: (1) The merits and features of the radio; and (2) the dealer should give the same intelligent type of demonstration of the phonograph feature that was given years ago in the successful promotion of the Victrola.

RECORD SALES CLIMB

By Henry C. Bonfig
Commercial Vice President
RCA Manufacturing Co., Inc.

I am very optimistic about business potentialities in "combination" instruments this fall for the following reasons:

1. Record sales are now registering a substantial increase for the sixth successive year, as popular interest in recorded music of all types continues to build up. Radio is credited with developing a vast new public of music lovers. This desire for more and better music of both the "classical" and "swing" type can best be satisfied, I believe, by the Victrola, as an adjunct of the radio receiver.

(Continued on page 48)

FOR THE YOUNGSTERS

Decca lists the discs "most likely to succeed" among the children:

BARBAR STORIES, adapted from the "Barbar" books—Frank Luter and Co., 107-5.

FRENCH FOLK SONGS FOR CHILDREN—Louis Charlie—20062-6.

FAIRY TALES, stories with sound effects and Celeste—Frank Luther and Company—580-3.

HANSEL AND GRETEL AND THE SLEEPING BEAUTY, as told by the Singing Lady, Irene Walters—1901-11.

SNOW WHITE AND THE SEVEN DWARFS—Frank Luther and Company—1901-93.

HOME ON THE RANGE, cowboy songs, sung by Frank Luther and the Luther Trio—1107-5.

MOTHER GOOSE RHymes, vocal with novelty accompaniment—Frank Luther—353-4.

NURSERY RHYMES, vocal with novelty accompaniment—Frank Luther—353-4.

TUNEFUL TALES, by Rose Einstein—Frank Luther—353-4.

WIRKIE THE POGH AND CHRISTOPHER ROBIN—Frank Luther—1359-61.

Record Changer, Motor, Pickup ... All One Unit at Low Cost.

Get the volume business with radio-phonograph automatons that the crowd can buy. Use General Industries record changer units in your sets. Performance as good if not much more expensive machines. Durable, quiet-running FLICKER Motors. Changing mechanism of simple, dependable design. High-fidelity balanced pickup. Choice in styles to meet your requirements.

Order Samples for Testing. Get them NOW with automatics that SELL. When ordering, specify voltage and frequency of current you use.

The General Industries Co.
3838 Taylor Street, Elyria, Ohio

RADIO TODAY

• Published the largest volume of radio advertising during the last 12 months.

• Showed the greatest increase in paid circulation during the last 12 months and also the last 6 months.

• Has the lowest advertising rate per thousand circulation.

• Is preferred by large dealers, as proved by reader-interest tests.

• 22,000 Monthly Guaranteed.

* Member Audit Bureau of Circulations *

September, 1938
erey has established that more than 60 per cent of those who buy or acquire the inexpensive type of record player are in the market for more expensive combination instruments later.

The display of musical merchandise to the public is being constantly improved. More and better dealers are being added all the time. Dealers and distributors, too, are contributing more aggressive promotional efforts. In addition, we are conducting musical-merchandise training schools to show dealers how to get the most out of the tremendous potentialities in the current market.

APPRECIATION OF CLASSICS

By B. Abrams, President Emerson Radio & Phonograph Corp.

The ever-growing public appreciation of the classics and the desire to preserve special renditions of music and voice—and to have them available at all times—are important factors in the re-development of radio-and-phonograph business.

Sales of Emerson radio-and-phonograph combinations have been increasing for several years back and the business made exceptional strides during the past year. Emerson is producing a number of different models this year, at prices ranging from $19.95 to $625.95, some of them incorporating the automatic record changer. We are stressing combinations in our literature, our cooperative advertising and in our national campaign—giving them a much greater proportion of emphasis than ever before. It is our belief that the trend toward combinations will increase as time goes on.

INSTALL TURNTABLE LATER

By Frank A. D. Andrea, President Andrea Radio Corp.

To help dealers sell customers who balk at the extra initial expense of combinations, Andrea radio consoles have phonograph compartments in which the turntable and pick-up can be installed at any time, making the console into a genuine combination instrument. Also, we have an Andrea radio floor-plan arrangement by which, from three samples, dealers can demonstrate and sell eight different AC models, from $111.00 to $255.00, including both manual and automatic combinations.

PUSH COMBINATIONS

By J. M. Marks, General Manager Fada Radio and Electric Company

The revival of interest by the American public in the new recordings prompted Fada to include six radio-phonograph combinations in the 1939 Fada line. Table, portable and console models: in this classification from $39.95 to $255.00. Fada radio-phonograph combinations will have a prominent place in all of the forthcoming sales promotion and advertising plans for the 1939 Fada line. Publication advertising, direct mail, displays and cooperative advertising with Fada dealers and distributors will frequently emphasize combinations during the coming season.

RECORDS THAT EVERY HOME SHOULD HAVE

(From recent lists released by RCA Victor)

ROUMANIA RHAPSODY, No. 3 in A Major, turns 1 and 2, in the London Symphony Orchestra, Eugene Ormandy, conductor—1014-1702.

LUCIA DI LAMMERMOOR, The Mad Scene in two parts, by Lily Pons—7386.

STREAM MYSTERY OF LIFE and HEATH THE SOUTHERN MOON, sung by Nelson Eddy—7387.

TOSCA, Te Deum, by Laurence Tibbett with Victo-

rian Opera Chorus—8124.

FINLANDIA, by the Philadelphia Symphony Orchestra, Leopold Stokowski, conductor—7112.

CAPRICE VIENNOIS and TAMBORIN CHINOIS, by Fritz Kreisler—4169.

CARNEVAL OVERTURE, by Boston "Pops" Orchestra, Arthur Fiedler, conductor—12158.

PRELUDE IN C SHARP MINOR and SPINNING SONG, by Bessie Barriscombe—13156.

TRAVIATA, prelude to Act 1 and to Act 2, by the Philadelphia Symphony orchestra of New York, Arturo Toscanini, conductor—6994.

AVE MARIA and AUFHALT, sung by Marian An-

derson—41120.

OL'MAN RIVER, sung by Paul Robeson, and AH SITUATE HMI ME, by Mr. Robeson and Elizabeth Wilcox—23578.

RHAPSODY IN BLUE, by Paul Whiteman and his orchestra—35822.
**TUBE TESTER AND VOLTMETER-MILLIAMMETER**

Many misleading names indicate a Dynamic Mutual Conductance Circuit... Tripletts is a true dynamic mutual conductance tester in every sense of the word.

Push-button control gives a new order of simplification. The buttons are clearly marked on chart at base. Just rotate the chart to the tube to be tested—then the button to push is indicated by the naked eye with but of push buttons. What could be simpler?

A second revolutionary improvement is the arrangement of the measuring circuit of the dynamic mutual conductance test for amplifiers and power tubes. The tube tested not only shows GOOD or BAD but the percentage of why to 100% condition also is determined. In critical sets this permits the service dealer to pick his tubes with confidence. . . . Diodes and rectifiers are tested for emission according to the latest approved engineering standards. Ballast tube continuity test. Gas test also included.

Rotating chart for Volt-Ohm-Milliammeter settings—push button for: .01-10-100-250-500-1000 Volts at 1000 Ohms per Volt: .01-10-250-500-1000 Watts 1 to 500 Ohms—200,000 Ohms—1/2 Megohms—2 Megohms—10-20-50-250-1000 A.C. Volts at 400 Ohms per Volt; dividers chart furnished to 45%-50% (Ohmmeter is line powerup) Uses two interchangeable plug-in type rectifiers, simplifying replacement in case of malfunctional diode. Replacement rectifiers are all precalibrated at the factory.

Baled in attractive, all-metal case with instrument panel. Removable cover. For portable or counter use... STOPPING PANEL.

---

**MODEL 1615**
- Dynamic Mutual Conductance Tube Tester only with Push-Button testing. Same tube tester circuit and push-button panel as Model 1616, but for tube testing only.
- Dealer Price $63.34

**MODEL 1610**
- Emission Type Tube Tester with Push-Button testing. Has new R.M.A. approved circuit with every essential for dependable emission test on all type tubes. Testing greatly simplified by Tripletts push-button operations. Installed in metal case with removable cover.
- Dealer Price $39.00

**MODEL 1611**
- Dealer Price $49.50

---

**THE TRIPLETT ELEC. INSTRUMENT CO.**
**190 Harmon Dr., Hattinburg, Ohio**

Please send me more information on:
- [ ] Model 1616
- [ ] Model 1615
- [ ] Model 1610
- [ ] Model 1611
- [ ] Details on Radio Service Puzzler Contest

---

**TRIPLETT**
**Precision**
**Electrical Instruments**

September, 1938
Evils of the radio-parts jobbing business were discussed by A. M. Hirsch of Los Angeles, Cal., on p. 22 of Radio Today for July, expanding the line of thought already developed by him in recent addresses before the National Parts Distributors group and the Sales Managers Club at Chicago.

Further discussion on the needs of the parts jobbing situation, by other well-known radio distributors, follows:

LET JOBBERS MAINTAIN SUGGESTED SCHEDULES

By R. W. Demarest
Radio Supply Co., Los Angeles, Cal.

The question raised by the Hirsch article is a mooted one of long standing. "Small Profits Realized by the Jobber."

No real good has ever come, so far as we know, of any effort to improve the condition. Whether the present unsatisfactory state is due to greed for business, or lack of trust in one another of those interested in attaining a better basis, we are unwilling to say.

It is obvious that many plans could be offered to create a more substantial profit to the jobber, which he is certainly entitled to. But in our opinion the simplest and most effective corrective one would be to see all jobbers strictly maintain the suggested discount schedules supplied by reliable manufacturers.

Put field men to work

The manufacturers, having already provided what we think is a reasonable jobber margin, could for their part be of great help by possibly more rigid policing of their lines through their field men. Further, there is a one hundred per cent degree of saturation in every territory throughout the country, and if all merchandise could be distributed through proper jobber connections it would rebound to the benefit of the manufacturer through materially cutting expensive detail he is now compelled to assume, as well as throw a greater flow of business to the legitimate and properly set up jobber.

Also, the jobber should not be called upon to make free deliveries. This has become a vicious and expensive cycle in competition. The jobber has to pay the freight from the factory to his place of business, but cannot charge the expense of free delivery to his customers from his place of business.

This subject is a very broad one that would require a great deal of thought and work, but a correction can be accomplished if everyone concerned will work together with an open mind, fairness and honesty. Basically, however, we feel jobbers in general would find additional profit and satisfaction if they retained their normal margin and refused to give it away as a means of getting additional business.

MANUFACTURERS AND DISTS MUST HELP

Vice-president NRPPA

The major evils today are threefold:

1 The extension of distributors' discounts by manufacturers to concerns that are not really distributors, but only large service organizations.

2 The lack of strict supervision by the manufacturer over the factory representative who, without thought of his better accounts, sneaks around the corner and sells at distributor prices the lines his main outlet or outlets cannot handle, thereby setting up competition that the larger distributor cannot meet, due to overhead, policy, etc.

3 The granting by the manufacturer of the same discount regardless of quantity purchases, thereby placing the larger account at a decided disadvantage.

What should be done

1 The manufacturer should make all concerns that wish to be listed as parts distributors and receive distributor discounts measure up to certain qualifications. I would define as a distributor, one who does at least 80 per cent of his business at wholesale, carries adequate stocks in the lines he distributes, is recognized by at least ten leading parts manufacturers as a distributor, and does no service work, as this is the main subterfuge used as a wedge to get distributor discounts.

2 More strict factory supervision by the manufacturer over the factory representative.

3 A balanced discount schedule given.

(Continued on page 67)
NEW THINGS
(Continued from page 32)

1.4 volt tubes
* Line of dry-cell tubes operating from 1½ volt battery. Types available are 1A5G output pentode, 1A7G pentagrid converter, 1C5G output pentode, 1H5G triode with single diode, 1N5G r.f. pentode. All types operate with B battery of 90 volts. Ken-Rad Tube & Lamp Corp., Owensboro, Ky.—Radio Today.

Low-priced trouble shooter
* DC type multirange meter. Measures 0/5/50/500/1000 volts, 0/1/10 milliamperes, 0/500/50M/500M ohms. Weights only 2 lbs. Self-contained dry cells. Model 432—net $5.55. Radio City Products Co., 88 Park Place, New York, N. Y.—Radio Today.

Table type cabinets

Convertible battery radio

75-watt rheostat

All-wave signal generator

Reasons why
IS THE BIGGEST SELLING
CAPACITOR LINE

Quality Built
Experience Tested
Economically Priced

Type BR

The type BR “Blue Beaver” is a typical example of the C-D “experience-tested and quality built” capacitor line. Hermetically sealed and vented, they eliminate drilling of chassis, use of pal nuts and washers as well as minimize assembly operations. You’ll like the results you get from C-D’s NEW Blue Beavers.

Type TJ-U

Type TJU fireproof Dykanol transmitting capacitors come hermetically sealed in sturdy steel containers. These are the capacitors practically every broadcast and government station in the world uses today. Standard equipment too, with tens of thousands of “hams” who will buy nothing else but C-D Dykanol units.

Type DT

C-D famous “Dwarf-Tigers” paper tubular capacitors are non-inductively wound and specially sealed. Extensively used by leading set manufacturers, C-D has produced many hundreds of millions of these tubulars—more than any other company in the world. Type DT is a real quality capacitor at the lowest price ever offered.

Catalog No. 161
NOW OFF THE PRESS! Have You
Enough Copies?

Cornell-Dubilier
Electric Corporation
1022 Hamilton Boulevard, South Plainfield, New Jersey
DYNAMIC CHECKING OF LOAD IMPEDANCES

The effect of load impedance in output amplifiers and how to detect mismatching of the load in triodes

By VINTON K. ULRICH
Service Editor

Just as important as knowing in what stage distortion occurs is knowing what part of the stage is responsible for the distortion. Methods of localizing the distortion either by ear or by the oscilloscope were described in the July and August issues of Radio Today. Also in the August issue a series of tests were described to help the serviceman put his finger on the exact cause of audio frequency discrimination or amplitude distortion in audio amplifiers.

Because so few servicemen understand the need for proper load impedances in output amplifiers, this month's article will discuss distortion caused by improper load impedances and describe a test that can be quickly made on triode amplifiers. While it may appear to some that we are putting undue emphasis on the subject, recent discussions with servicemen indicate the need for this material.

The basic circuit for an amplifier is shown in Fig. 1-A. When simplified it takes the form of 1-B, the load impedance of the tube and its internal impedance in series, with a hypothetical AC source having a value equal to the grid swing \( E_g \), multiplied by the amplification factor \((a)\) of the tube.

The grid signal takes the form of a sine wave (that is what the test oscillator delivers) and is shown in Fig. 2-A. The signal has a peak value of 28 volts and the tube has a negative grid bias of 30 volts. The curve shows the instantaneous variations in grid potential for one cycle. Note that for any instant, the grid potential is the sum of the signal potential for that instant and the grid bias. When the signal is 28 volts positive (point C) the grid potential for that instant is 28 - 30 or -2 volts.

Fig. 3 shows the family of characteristics of a typical triode type tube. Point O is the operating point when no signal is applied to the tube. The bias is -30 volts, the plate voltage is 268 volts and they can be measured by a voltmeter when the tube is in the circuit.

If the signal shown in Fig. 2-A is applied to the grid of the tube, for point A, the instantaneous grid voltage becomes -20 volts. This means that the instantaneous operating point for the tube is somewhere along the curve for "grid voltage equals -20 volts.

Plate load explained

From the curves shown in Fig. 3 and previous knowledge, it is obvious that if the grid voltage is changed, the plate current will also change. As the grid voltage becomes more positive (less negative), the plate current rises. Since originally a potential of 268 volts was on the plate, and the plate current has increased, it follows that there is an additional voltage drop through the plate load resistor or impedance because of the increased current. If it is known that a plate load of 3400 ohms is employed, one would expect that each additional 10 mils of plate current would cause an additional 34 volts drop across the load resistor. (By Ohm's Law: \( E = 3400 \times .010 = 34 \))

Knowing that each 10 mil change causes a 34 volt drop, one can draw in a line through point O with a slope that satisfies the stated condition. Where that line intersects the curve for -20 volts on the grid is point A, which is for 250 volts on the plate with a current of 46 mils. Point O is 268 volts and 35 mils. The change is 11 mils and 38 volts. By Ohm's Law that means approximately a 3400 ohm resistance, which is a check on the work above.

Having determined the position of the load line on the family of tube characteristics, the grid swing can be traced on the curves as shown by points B, C, and -A, -B, -C, all of which must lie on the load line. (The

![Diagram of Instantaneous Grid and Plate Voltages](image-url)
The tube can be thought of as a device in which the plate current is controlled by the grid potential. Then the change in plate current induces or causes a change in the voltage across the load impedance. Since the voltage is dependent not only upon the change in current, but the value of the load impedance, the significance of the load becomes apparent. With zero load impedance, there just isn’t any voltage output—and consequently the power output is also zero.

By taking the points O, A, B, C,—A,—B,—C along the load line in Fig. 3 and plotting them for grid voltage vs. plate current, the result is the dynamic characteristic shown in Fig. 4. Note that no plate voltage is stated, since the plate voltage is not constant. This dynamic characteristic is somewhat easier to follow since there is only one curve to consider, but it is good for only one specific value of load impedance. The variations in grid voltage are projected up to the E_i—I_n curve in the usual manner and then projected to the right for the plot of change in plate current.

**Dynamic tube characteristic**

Contrary to what some servicemen believe and to curves shown in the current radio press, this dynamic characteristic is a straight line for small values of both positive and negative grid voltages. The bend that occurs is in the vicinity of plate current cutoff, which occurs for high values of negative grid bias.

The instantaneous values of plate voltage can be calculated from Fig. 4 by multiplying the change in plate current (upper “size” wave) by the value of load resistance. Since we also have this information on Fig. 2, we have taken it and plotted it point by point as shown in Fig. 2-B.

In the May issue of Radio Today on pages 30 and 31 there was a discussion of how the tubes cause distortion, and it pointed out that various loads on the tube required various operating potentials. Conversely, if the plate and grid voltage on the tube are established, there is an optimum value of load resistance for maximum power output with minimum distortion.

Figs. 5, 6, and 7 show three different values of load impedance for the same values of grid bias and plate voltage. No load condition with the speaker voice-coil circuit opened is shown in Fig. 5. The actual value of this load is about 30,000 to 60,000 ohms since the output transformer has some losses, even under no load. Note that for full swing of the grid, a very high plate voltage swing is obtained. (Points A and B in these figures refer to maximum and minimum values of grid swing.)

When the load impedance is equal to the plate impedance, the voltage across the load or plate swing is much less as shown in Fig. 6. In fact, by referring to Fig. 1-B and using Ohm’s Law, one finds that if R_L were many times greater than R_P, practically all the applied voltage would appear across R_L. If R_L equaled R_P, then only half of the voltage would appear across R_L. This phenomenon is predictable from the characteristic curves and is also measurable at the radio set.

**No load vs. open circuit voltages**

With Class A triode type amplifiers, it then becomes practical to make measurements of the plate load impedance by taking measurements of the voice coil voltages on no load and with a load. In order to eliminate the possibility of distorting at high levels affecting the accuracy of the measurements, the grid signal is limited to a small value, as indicated by X and Y on Figs. 5, 6, and 7. Note in Fig. 6, which would give high distortion at full grid swing, that the curves for high grid voltages become closer together in the region of point H. In other words, the length A—O and O—B are not equal in Fig. 6 and for a full grid swing, one-half of the output wave would be greater than the other.

By reducing the swing to one-third or one-quarter of its full value, the
The Chicago Chapter of RSA announces a test equipment show and round table discussion to be held at the Stevens Hotel in Chicago, September 28th. All of the outstanding test equipment manufacturers have signified their intention of participating in this opening meeting of the 1938 Fall season. Such outstanding figures in the industry as Mr. John F. Rider, Mr. Walter Weiss, Mr. O. J. Morelock, Mr. Paul Jackson, and many others who have been contacted have signified their intention of participating.

Newark—The first annual outing of the Radio Servicemen of New Jersey was held at Farchers' Grove, Union, N. J., on August 21st. More than fifty radio servicemen attended. For our first meeting in September, Chairman Rambler will address the group on "How to Increase Your Income by Servicing Allied Appliances."

Deer-Ant—The Deer-Ant Chapter of RSA has started a series of round table discussions, using a different subject each week, at which each member turns in a brief written statement of his personal views. These are discussed at the meeting. We expect to have a test equipment lecture the latter part of September by Mr. Walter Welas of Hickok.

Fremont—On August 22nd Mr. Mohaupt of Radio Training Asn. addressed the Fremont Chapter on the use of the signal generator in service work. A large turnout was present and everyone felt he had gained something from the meeting.

BIGGEST ADV. CAMPAIGN IN EMERSON HISTORY

Starting in October issues of such top-flight magazines as American Weekly, Saturday Evening Post, Collier's, Life, Esquire, the Emerson Radio and Phonograph Company is planning the most intensive and aggressive advertising and sales promotion program in its history. Featuring all of the new 1939 models, from $9.95 to $219.95—in full-page, full-color advertisements in some publications, with liberal sized space in others—the campaign is designed still further to augment the growing popularity of Emerson in all markets.

Supplementing the magazine advertising, there will be a vigorous campaign in local newspapers, with tie-in copy, together with new window and store displays. A series of illustrated bulletins and other promotion is being planned for the trade. Divisional distributor and salesman meetings will be held at intervals throughout the intensive campaign period.

Commenting on the campaign's 1938-39 promotion plans, Mr. Max Abram, treasurer of Emerson, stated that "although sales for the entire 1939 Emerson line have already exceeded all expectations, we are going ahead with our campaign in keeping with our agreements with Emerson distributors and dealers. Because of the new styling, the new values, which our mass production has made possible, Emerson is in a stronger position than ever before to capitalize the second, third and fourth-set-to-a-home market. We have every reason to believe that this campaign will greatly stimulate such additional sales for the trade."

Complete details of Emerson's 1938-39 advertising campaign will be furnished to dealers by Emerson distributors.

RHINE PLANS 'SUPER-SERVICE' GROUP

Arthur E. Rhine, well-known leader in the New York radio-service field, is planning a new service organization, to operate under a well-advertised name in the metropolitan territory. Individual service men who co-operate will be enabled to retain their own identity, but will benefit from improved locations, broadcast advertising, increased volume, lowered overhead, and quantity production, according to the announcements.

"Radio men who have long been seeking some method by which the radio repair business can be made to pay returns appropriate to their experience and efforts required, should investigate this plan," comments Mr. Rhine, whose own business headquarters are at 158 W. 53rd St., New York, N. Y.

NEW WESTERN MANAGER FOR RADIO TODAY

Dick Fitzpatrick

Richard (Dick) Fitzpatrick has been appointed western manager of Radio Today, with headquarters at 201 N. Wells Street, Chicago. Mr. Fitzpatrick was formerly in the eastern territory for the W. P. Woodall Company, which manages and operates the direct-mail lists of Radio Today. He will continue to represent the Woodall lists in Chicago.

Radio Today
RCA Victor

TIME-SAVING, PROFIT-PACKED Phone SYSTEMS!

Two types are available—a wireless system for instant 2-way inter-office communication... a wired system for 1 to 5 channel communication! Both sell at reasonable cost—assure you worth-while profits.

Designed to meet the time-saving requirements of modern business, these RCA Victor phones will appeal to a tremendous market—a market you can sell.

Practically every place of business is a prospect. Auto dealers, banks, dentists, doctors, factories, hospitals, police stations, schools, and dozens of others!

Not only do these two RCA systems offer many excellent sales features, but both are moderately priced. Order your supply now—and climb aboard this plus-profit wagon!

FOR 2-WAY COMMUNICATION REQUIREMENTS RCA VICTOR WIRELESS PHONE—JUST PLUG IN AND TALK

Model MI-6350 illustrated above, is as simple as it is effective. Your customer simply plugs into the light socket (110 volt AC or DC) presses a button, and talks. No wires, no batteries, no installation at all. Works perfectly at all times.

In addition to the wireless system illustrated, RCA Victor also offers a master phone system for 1, 2, 3, 4 and 5 channel communication, which will be particularly popular in business offices. Speech is clearly heard up to 25 feet from the loudspeaker. Further information from distributor.

Any sound system sounds better equipped with RCA Radio Tubes.

September, 1938

RCA Commercial Sound

RCA MANUFACTURING CO., INC., CAMDEN, N. J.
A Service of the Radio Corporation of America

This Combination Means

MORE PROFIT FOR YOU!

ARCTURUS DEALER HELPS!

If you have not yet received your copy of the ARCTURUS DEALER HELPS folder, send for it today! Here's everything you need to win the big sales contest that goes on right in your own store—every day! New displays, new, up-to-the-minute sales promotional items, new office and store aids, new ideas, new systems to sell. Use these tested sales builders to bring new customers into your store and to keep the old ones coming to you again and again.

RADIO'S FINEST TUBES!

When you sell ARCTURUS TUBES you sell top quality. ARCTURUS' outstanding achievements in tube design... skilful workmanship... careful inspection... make ARCTURUS TUBES the finest engineered tubes on the market today. That means satisfied customers and increased tube sales for you!

The IMPROVED ARCTURUS EQUIPMENT DEAL!

Better, more complete than ever—with a new assurance of the very latest models—the ARCTURUS EQUIPMENT DEAL enables you to equip your shop with the most efficient test equipment money can buy... at almost no cost to you! Lower Down Payment... Low Tube Requirements... Tubes at Standard Prices... Immediate Delivery of the equipment you select. ARCTURUS actually gives you EXTRA PROFITS in the form of this valuable, modern equipment!

GET THE FACTS! Send your FREE copy of the ARCTURUS DEALER HELPS folder and full details of the new items just added to the ARCTURUS EQUIPMENT DEAL. Don't Delay... put this profit-making combination to work for you at once! Mail this coupon today.

ARCTURUS

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

T-11

Without cost or obligation, send my copy of the ARCTURUS DEALER HELPS Folder and details of your new equipment deal.

Name.........................................................................................................................

Street.........................................................................................................................

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

□ I am a dealer □ I am a serviceman. My jobber is..................................................

For your convenience this coupon can be pasted on a penny postcard.
Averaging these load ranges.

Fig. 3 - Plate load is equal to twice the plate impedance of the tube. Note that the voltage swing is greater than in Fig. 5.

Proper load for triodes

When the load is equal to approximately two or two and one-half times the internal impedance of the tube, which is about the right ratio for most triode amplifiers operating in Class A, the voltage under load should be around two-thirds of the no load value. This condition is shown in Fig. 7. 268 - 239 is 33 and 305 - 268 is 37, which gives an average of 37½. This voltage is roughly 70 per cent of the no load, so for all practical purposes it can be stated that with proper load matching, the load voltage will be two-thirds of the no load voltage.

These voltage measurements referred to above can be taken either across the secondary of the transformer or the primary. Because of the lower power required to operate the voltmeter* at low voltages, the secondary connection is preferable — also the use of the DC voltage blocking condenser is unnecessary in the voice coil circuit.

The signal input to the tube should be somewhat in the vicinity of 400 cycles, although 1000 cycles will probably be okay with most sets.

Should the voltage be greater than two-thirds, it means that a higher value of load resistance is being used. Since with triodes, higher load impedances give less distortion with but a slight reduction in power output, a voltage under load which is slightly greater than two-thirds is not worth getting disturbed about. Note in Fig. 8 that for increasing plate loads, the distortion falls off very fast while the output power drops off more slowly.

Because push-pull operation of a stage causes cancellation of the even harmonics, push-pull stages often use lower values of plate load impedance than do single-ended output amplifiers. This factor should be taken into account when making measurements.

Class A output plate current not constant

While on the subject of Class A amplifier operation, it might be well to correct some misunderstandings that are easily made. For distortionless (0 per cent) operation the plate current of a Class A amplifier should remain constant. However, in radio set output amplifiers there is no such thing as distortionless output — as a result, the plate current of an output Class A amplifier will not remain steady when the signal is adjusted from no output to full output.

The proof of this statement is easily shown by an inspection of the tube characteristics in Fig. 3, which has a load for normal operation. Note that the length of C to O is greater than the length from O to — C. This means that the positive peak of the plate current is greater than the negative. The positive plate current swing is 66 - 35 or 31. The negative peak is 35 - 9 or 26. Since the upward swing is greater than the downward swing, the average plate current during full output must rise. This rise in plate current may be 5 to 8 per cent with single-ended Class A output amplifiers. With push-pull amplifiers the increase is even more.

Even though only 5 to 7 per cent distortion is present, the plate current will not remain steady from no output to full output. This is true for both triodes and pentodes. Examination of Figs. 5, 6, and 7 will show that as the plate load impedance is decreased, the negative plate current peak becomes a

* A voltmeter is a device used to measure voltage.

Fig. 6—When the plate load is equal to the plate resistance, the load line has the same value of slope as the tube characteristic.
smaller percentage of the positive peak, even for constant values of plate voltage and grid bias. Therefore, for low values of plate load impedance and triodes, a greater rise in plate current will be observed at full output.

In the case of Class A voltage amplifiers which have a very high value of load impedance, illustrated in Fig. 5, the plate current will very nearly stay steady up to the full capacity of the tube because operation is limited to the very nearly linear part of the tube characteristic.

Lest the serviceman get too worried about load resistances, it must be pointed out that in voltage amplifiers there is no such thing as matching the load to the tube for maximum power output, since power output is unimportant — it is voltage output that counts. As explained before, high voltage output is obtained by high load impedance.

While one talks of matching the load impedance to the tube, the serviceman should not get the idea that the word "matching" means making it equal. In no instance is the load equal to the plate impedance for proper operation.

This discussion on matching impedances has been in reference to triode type tubes. Pentodes will be discussed later and alternative methods of checking for proper load impedances described.

Tube characteristics by courtesy of Radio-\line (0.35)\textcopyright\, 1938, F. Rider, Inc.

A high-resistance AC voltmeter having a multiplicity of ranges is especially desirable for these tests. The Weston 765 unit used has resistances of 1/2, 3, 6, 15, 30, 60, 150, etc., to 12,000.

USE MIDGET ELECTROLYTICS WITH DISCRETION

A word of caution regarding the latest midget metal-ceramic electrolytics is sounded by Charley Golenpaul, Aero-\line (0.35)\textcopyright\, 1938, F. Rider, Inc.

Please get this straight: the midget metal-ceramic electrolytic is not a cure-all. It's a place in servicing AC-DC sets, where dollars as well as space are limited. But when it comes to larger sets, particularly costly consoles, go easy on the use of midget electrolytics. They may be used for by-pass functions. But when it comes to filter circuits, particularly the first condenser following rectifier, it isn't wise to stick in a midget. After all, these tiny jobs haven't the foil area, electrolyte and canister for dissipating the heat of heavy-duty service. You can't expect them to do the same work as the full-sized electrolytics.

The set owner who finds one of these tiny electrolytics in place of the original large condenser, can't help but feel uneasy. He doesn't understand how the same working voltage and capacity can be crammed into such a small can. Therefore, he jumps to the conclusion that he's been ripped, and the serviceman has a dissatisfied customer on his hands.

"I speak from first-hand experience.

September, 1938
SERVICE NOTES

Some time ago we introduced an 8-mike 450-volt electrolytic an inch or so shorter than the usual job. We thought servicemen would like this smaller can. Instead, servicemen ran into customer kicks. Set owners didn't think the smaller unit could be as good. They felt cheated.

"So again I say, go easy on those midget electrolytics. Use them with due discretion, both from the technical and the business angles."

DYNAMIC TESTING OF RADIO TUBES

* In Radio Today's first article outlining dynamic radio servicing in February, 1938, it was stated that the most significant test for a radio tube is in its socket in the radio set. In other words, after a preliminary test in a tube checker shows that there are no serious defects, it is well to check operation of the tube in the set by substituting a new tube or tubes for the old one. In this way tubes in critical circuits can be carefully checked.

Right in line with this idea is the following paragraphs taken from the Technical Section of the Sylvania News for May-June. While the excerpt is from an article pointing out the need of better correlations between testing methods and equipment; we feel that it points out emphatically, that after all the real test is in the set—or a dynamic test. Here's what Sylvania says:

"In 1929 and 1930 the use of type 27 as a bias detector was quite common. It was discovered that some 27's worked better than others in certain applications. Investigation showed that there were over fifty different sets of operating conditions that the 27 had to meet in biased detector service. Tubes which were satisfactory in one circuit..."

---

Sensational New PRICE REDUCTION PACKARD SHAVER

A Million Have Been Sold for $15

Now $7.50

"The new Packard price of $7.50," said a dealer the other day, "is an act of merchandising genius!"

A moment's thought—and you'll agree. For now Packard is the only recognized, established, top-quality shaver available anywhere near its price. The nation knows Packard—knows it always sold for $15. Feature Packard at this new price! And the thousands of men in your community, who have always wanted Packards but couldn't afford $15, will flock to your store. Order through your jobber.

REGULAR DISCOUNTS CONTINUE
On orders of one to five shavers, 33 1/3%. On orders of six or more shavers, 40%.

PROGRESS LEKTRO SHAVE CORP., 521 Fifth Ave., New York City
Canadian Dist. Progress Corp. (Canada) Ltd., 55 York St., Toronto, Can.

Radio Today
were not as good in others. Yet all of these tubes met normal specifications for type 27. In later years a similar situation has arisen in the use of type 36 as an autodyne.

"It is frequently necessary to try out several tubes before finding one that would give satisfactory performance in a certain receiver, yet the "unsatisfactory" tubes will work well in some other circuit with different requirements. It is obvious, from these examples, that although tubes test normal there are occasions when a selection must be made."

SLIPAGE OF DIAL DRIVE

Where a tuning knob rotates without positive drive to the dial Stromberg-Carlson's service department suggests the following:
(a) Check gang condenser against obstructions hindering movement or
(b) Loosen drive assembly screws and shift drive assembly toward dial disc as far as screw holes will permit, or
(c) Check dial disc for rubbing or binding against dial pan, or
(d) Replace dial drive if none of above are effective.

When the vernier tuning knob binds or sticks it usually indicates that vernier knob has been pushed too far onto shaft or that large tuning knob is not far enough on shaft, causing knobs to rub together.

NEW CATHODE-RAY TERMS

* The rapidly expanding cathode-ray art, particularly as it gets into television, is building up a language all its own. Leonard F. Cramer, sales engineer of the Allen B. DuMont Labs, Inc., Upper Montclair, N. J., supplies the following new terms and their meaning, for the enlightenment of radio workers.

Oscillograph—A cathode-ray tube for oscillograph work.
Teletron—A cathode-ray tube for television work.
Phasemitter—Meaning image emitter or a tube which provides a standard video signal source to aid television experimentation.
Electronaut—Meaning electric eye or a photo-electric mosaic pick-up tube for television camera work.

These terms and more to follow, have been adopted from the Greek and the Latin, and are coming into general use to cover the essentials of the commercialized cathode-ray art.

ARVIN STATION VARIATOR

In one of the current Arvin radio sets, a device known as the station variator is employed to permit selection of stations outside the usual range of push-button trimmers, since the set does not have a tuning condenser for manual tuning.

The circuit accompanying this de-
GET THIS TODAY!
The Full Story of Halson's amazing new miniature
The "DWARF"

Fits into the palm of your hand

- Here is a brilliant performer and superbly beautiful little set that is a real PROFIT LEADER—not a loss leader.

It is the type of set that will lead your customers away from the snare of cheapness by giving them a far better set for only a trifle more.

5-tube AC-DC...Large dynamic speaker...Marvelous tone...Broadcast and police calls...Exclusive new onyx-like cabinets...Red, green or ivory, all priced the same!

$15.00 LIST

You can make money and hold the good will of your customers, by selling "The Dwarf!

Get the whole story of the latest Halson hit and five other smart table models. Send today—and handle the line that's on its way to record popularity.

HALSON
RADIO & TELEVISION CORP.
MERIDEN, CONN.

scription shows that two sets of trimmer condensers are used for selection of six stations. The station varistor is built into the oscillator circuit and is an iron-core which is moved in the field of the oscillator coil. Movement of the coil changes the oscillator frequency thereby permitting selection of several nearby stations for each push button.

The antenna circuit remains fixed for each push button. The amount of detuning for stations other than those set up is slight.

The station varistor also has the desirable feature that it can be used to overcome slight drift in the oscillator circuit, thereby keeping the set in tune with the station at all times.

AUTOMATIC TUNERS NEED OUTSIDE ANTENNA

* In a recent service bulletin Stewart-Warner Corp. calls attention to the need of a good antenna installation on electric tuning sets. Quoting, "All automatic tuning receivers should be operated on a good outside antenna to give maximum signal strength. An inside aerial, while it may permit satisfactory reception for a manually tuned set, will not provide sufficient strength to operate the A.F.C. during automatic tuning."

"Many dealers connect several sets to one antenna in their stores. This is liable to result in poor automatic operation, since it cuts down signal strength."

And on automatic sets not having A.F.C., we have noticed that a short antenna will not always give good reception, since with a slight amount of mistuning a strong hiss results. With a better antenna, even though the mistuning is the same, the signal strength is great enough to override the hiss.

(Continued on page 62)
This new Brush H. L. microphone is sure to gain popular appeal. It's ideal for use with public address systems, amateur radio transmitters—in fact, any place where an inexpensive and high level microphone (minus 46 db) is needed.

The Vari-sitv mounting is another feature. It enables the mike to be used in an upright position or tilted to any angle. Mike obtainable with three prong male plug assembly if specified.

Write for details. Complete with 25 feet of cable—$2.35.

THE BRUSH DEVELOPMENT CO.
3313 PERKINS AVENUE
CLEVELAND, OHIO

INTERFERENCE ELIMINATION
Profit-Builders
by SPRAGUE

The Sprague Interference Amplifier—a compact, professional instrument 4½" wide x 7" high and 3" deep. List $97.50.

The famous Sprague Interference Analyzer combined with the special Sprague Noise Filters gives you the first practical, inexpensive method for eliminating radio noises AT THE SOURCE. It tells you exactly what filter to use—and exactly what results you will get.

For eliminating noises AT THE SET, try the new Sprague Plug-in Filters. Scientifically designed for the job, you'll be pleasantly surprised at their amazing effectiveness. A real profit-maker!

KEEP THIS PROFITABLE BUSINESS IN THE TRADE!

Sprague interference elimination materials are designed for radio servicemen—sold THROUGH servicemen. We equip you to do a thorough job, help you go after this profitable business. Write today for complete details on the Sprague Radio Interference Elimination plan.

SPRAGUE PRODUCTS CO.
NORTH ADAMS, MASS.

A MILLION DOLLAR BABY

. . . That Does a Man-Sized Job
Get next to the best! Use Sprague ATOMS (the new midget dry Electrolytics) for those jobs where you've got to save space—where you've got to use a really good condenser at a rock bottom price. 8 mfd. 450 V, lists at only 60c. All replacement capacities including duals.

IT TAKES a Nationally known and accepted brand
IT TAKES a policy of dealer merchandising cooperation
IT TAKES insurance against slow turnover and obsolescence
IT TAKES protection from cut-price houses
IT TAKES guarantee of only clean competition
IT TAKES a proposition which gives the dealer ample stock without tying up his capital
IT TAKES a tried and tested program which is making money for better dealers everywhere

IT TAKES THE TUNG-SOL CONSIGNMENT PLAN TO TURN TUBE SALES INTO TUBE PROFITS

Take time out now and ask the nearest Tung-Sol wholesaler or branch office

TUNG-SOL LAMP WORKS, INC.
Dept. C
Radio Tube Division

TUNG-SOL
Tung-flow Radio Tubes.
SERVICE TIPS

Crosley model 42-5 Distortion

* There is a dual by-pass unit which is used for the detector, and first audio cathode bias resistors. Sometimes a leakage will develop between these units, causing distortion. Simply replace both of these condensers. Values are .5 mfd.

Philco model 70 Microphonic howl

* If this condition occurs when the tone control is turned all the way to the left, check the .00025 microfarad phone condenser connected to the plate of the second detector. This condenser has a yellow dot on one side and causes the trouble due to changes in its value or to its becoming open.

Radio model 18 Oscillation

* There is an adjusting screw between the first two tuning condensers. It is accessible through the hole in the condenser frame. The correct adjustment is made as follows: Tune in some station between 1,400 and 1,500 Kc, and turn the adjusting screw clockwise, until you obtain oscillation and then turn it counter-clockwise until the oscillation stops. Selectivity may be improved to some extent by adjusting the R.F. compensating condenser screw slightly clockwise to bring the circuit closer to the oscillation point.

Silvertone interrupted reception, model 1640 A-Y-C time lag

Replace the .1 mfd a-v-c condenser with a .01 unit. To overcome undesirable hiss, insert an r-f choke in the red plate lead of the 83 tube. In unusual cases another may be required in the other plate lead of this tube.

U. S. radio model 26-P Oscillation

Evidenced by extremely high screen voltages, this condition is due to an open screen bleeder resistor (2,560 ohms). Replace with a 2,500 ohm value.

Edison models R1, R2, C1, C2 weaknesses

- The .32 microhm ohm series plate resistors and the 1,500 ohm center-tapped resistors for bias of the 50 type tubes have asbestos washers at their ends. The absorption of moisture causes these washers to transmit dampness into these resistors, causing corrosion and shortening their lives. Replace with bakelite washers. The 25,000 ohm loss resistor should be replaced with a ten watt unit whether it tests all right or not.

When it comes to electric shavers a radio dealer should handle only the best!

ROTO-SHAVER

Thousands Have Been Sold for $18.75

NOW $12.50 LIST

WITH 2 HEADS, INSTANTLY INTERCHANGEABLE

A Shaving Head for Him—A Depilator Head for Her

The public is tired of make-shift shaving devices—
and is ready and waiting for a shaver that performs
its promises. That's the only kind you should carry.
Retailers everywhere proved this to themselves with
the Roto-Shaver at $18.75. Now—at the new low price
of $12.50 it represents the greatest electric shaver
value on the market. Roto-Shaver Shaves as close as a
fine blade razor the first time it's used—won't irritate
even the most sensitive skin—is sturdy, easy to clean,
doesn't spray "whisker-dust." A hard-hitting national
advertising campaign is already building demand.

Ride on the crest of this wave. Order a supply to-
day—being sure to mention your jobber's name so we
can refer your order to him.

REGULAR DISCOUNTS CONTINUE

On orders of one to five shavers, 33 1/3%. On orders of six or more shavers, 40%.

PROGRESS LEMTRO SHAVE CORP., 521 Fifth Ave., New York City

Canadian Dist. Progress Corp. (Canada) Ltd., 55 York St., Toronto, Can.
"An exclusive combination of the ohms adjuster with the AC-DC switch, which confines the controls to two, instead of three, marks the line of Bernard multimeters," according to H. J. Bernard, manufacturer of the instruments. "In addition, the pulsating DC through the meter is rendered negligible, so that the needle provides the same steadiness of reading on AC as on DC.

"The basic circuit of this simple scheme is shown in accompanying diagram. M is the DC meter, R is a limiting resistor, Z a copper-oxide rectifier, and Sw a single-pole, double-throw switch. Following the sense of the diagram, when the switch is thrown to the left it opens the rectifier circuit and at the same time shorts out the limiting resistor, so that the meter is free for introduction of the usual DC voltage multiplier and DC current shunts, whereas when the switch is thrown to the right the limiting resistor is brought into circuit, as is the rectifier. Thus meter and resistor form a DC voltmeter, and the combination measures the pulsating DC across the rectifier.

"The main selector switch, the only other control used, picks up separate voltage multipliers for DC and separate ones for AC. Since there is also an ohms-adjusting rheostat, Rh, the S.P.D.T. switch is made mechanically a part of that control, and thus single control of the two functions is established."

FAIRBANKS-MORSE STRESSES TONE

"A review of our 1939 line will indicate that we are eliminating the real low-priced sets from the Fairbanks-Morse line, and are being rather conservative as to the number of sets included," comments Earl L. Hadley, manager of advertising and sales promotion, home appliance division, Fairbanks, Morse & Company, Indianapolis, Ind.

"We are stressing quality and performance, plus startlingly realistic tone. The line includes table, console and console grande models with 7-, 9- and 12-tube chassis. Features are as follows: instant electric tuning, acoustic-wood tone chamber, monitor panel, complete permeability tuning, cabinet of highest quality with interlocking construction, and clearer and stronger short-wave reception."

BE SURE YOU SEE THIS BIG NEW CATALOG!

Ask your Jobber to show it to you. Get the equipment you need to do More business... better business this year FREE with your purchases of...

NATIONAL UNION
Radio Tubes and Condensers

NATIONAL UNION
Radio Tubes
Condensers
Panel Lamps
Television Tubes
Photo Cells
Tube Shields
Auto Lamp Bulbs
Exciter Lamps

FREE EQUIPMENT
MORE BUSINESS
BETTER BUSINESS

For nearest Distributor's name write:
NATIONAL UNION RADIO CORP.
Newark, New Jersey

NEW "MARINE MIDGET"
P. M. REPRODUCER and
"TALK-BACK" UNIT

All of the exclusive Storm-Proof features of the larger Atlas "Marine Horns" are included in the new "Marine Midget." The reproducer is ideal for all types of sound installations, including inter-communication and "talk-back" systems. The inverted reflex design offers high efficiency directional characteristics, and absolute weather and mechanical protection.

It's compact and easy to install. (Bell diameter 10"); depth 8") Mounting bracket included. All aluminum construction, battleship grey enamel finish.

Model WX-55P Complete with Speaker $1150

SEND FOR FREE CATALOG...Write now for technical description of the new "Marine Midget" and other high priced "Marine Horns" for large P. A. installations. New 1939 Fall Catalog contains 100 P. A. accessories. Widest selection of Microphone stands, Baffles, P. M. Horn Type Units, Trumpets, Speaker Enclosures.

ATLAS SOUND CORPORATION
1454 39th Street
Brooklyn, N. Y.

September, 1938
C-D LAUNCHES BIGGEST CAMPAIGN

A sales promotional campaign of extra size has been announced for this fall by Cornell-Dubilier Corp., South Plainfield, N. J. Counter displays, direct mail and publication advertising will all be included in the big drive which sales manager Leon Adelman describes as "excelling the other plans used during the previous years."

ADDITIONS TO ARCTURUS DEAL

A cash and change register, an electric clock, a new dealer's Neon sign, and various test instruments from the Weston, Precision and Supreme lines, have been annexed to the equipment deal offered by Arcturus Radio Tube Co., Newark, N. J. The company points out that its complete list of dealer helps now includes all business necessities for the radio merchant, from business stationery to technical equipment.

EMERGENCY STOCK OVERCOMES AEROVOX STRIKE HANDICAPS

An emergency stock of standard types of condensers, set up in the Middle West, is now available to jobbers for the prompt filling of their orders during the Aerovox C.I.O. strike in the Brooklyn plant. There will be no shortage and no delay in taking care of jobber business, reports the Aerovox managemen.

"During April, May and June, when business was more or less at a standstill among set manufacturers," states S. I. Ccle, president of Aerovox Corporation, Brooklyn, N. Y., "we received much less business from that source than usual. However, rather than lay off our employees, we concentrated on the manufacture of jobber stock. As a result, we have a tremendous stock of all jobber items on hand to take care of requirements for the balance of this year at least. Most of this stock has been transferred to a Middle West warehouse, and shipments from that point are already rolling. The strike is having no adverse effect whatsoever on the normal handling of our jobber business."

"With regard to the C.I.O. strike, the facts are:"

"For two and a half months we diligently carried on negotiations with the C.I.O. Union, endeavoring to get the aircraft. But without success. The policies of the C.I.O. Union have not been to make a single contract or agreement that will be acceptable to us. Within the last month we had a conclusion in this same district lower terms. We wanted the same deal, but the Union refused, and wouldn't tell us why—your guess is as good as ours as to the reason for such a battle. At a meeting held by the State Mediation Board, they were suggested to us that we let things remain "m muscle" until an agreement could be worked out. This we agreed to, provided someone from the Board would sit in. The Union insisted on a strike."
"PINCOR" POWER SUPPLY UNITS

DYNAMOTORS GEN-E-MOTORS CONVERTERS

"PINCOR" dynamotors, gen-e-motors and rotary converters provide the last word in power supply units for air craft, police, marine and auto radios; also for public address systems. Now widely used by leading air lines and municipal and federal agencies throughout the world. Available in a wide range of capacities for every requirement. Compact, light weight. Sturdily constructed to assure long dependable service. Write for catalog and complete information.

PIONEER GEN-E-MOTOR CORP.
Manufacturer of "PINCOR" Products
Dept. R-22
406 W. Superior Street, Chicago, Illinois

"PINCOR" PRODUCTS
BLUE DIAMOND and GOLD CROWN ball-type driven electric light and power plants, up to 5000 watts; alternating or direct current; air or water cooled; remote control. Send for literature.

AGED...
FOR EFFICIENCY

No better vibrator is made than the Meissner. But to our knowledge no other vibrator—even the other well designed ones—are aged at the factory to guarantee their uniform efficient operation! Lying on a jobber's shelf, the several metals used in any vibrator undergo slight metallurgical changes which may seriously affect its efficiency and life. Only Meissner goes to the extreme of aging vibrators at the factory and retesting them to eliminate those where the efficiency has deteriorated. Order Meissner from your parts jobber and know that you can always guarantee a replacement.

Meissner
MT. CARMEL ILLINOIS
VIBRATORS

September, 1938

RCA INSTRUMENTS DO A BIG JOB AT SMALL COST

NEW RCA 2" CATHODE RAY OSCILLOGRAPH... uses the RCA-902 2" cathode ray tube... Has new, easily-read, tiltable-mounted screen. All controls on front panel. Amplifiers, both horizontal and vertical—gain 50—sensitivity 0.5 (RMS) per inch... Has built-in, sawtooth oscillator. Net Price Stock No. 151-2. $49.95

RCA BEAT FREQUENCY AUDIO OSCILLATOR... range—30 to 15,000 cycles. For testing loudspeakers, P. A. systems, etc. Three output impedances. Has large, easily-read dial. Net Price Stock No. 154... $49.95

RCA presents the Magic Key every Sunday, 2 to 3 P.M., E. D. S. T., on the NBC Blue Network.

WARD LEONARD ELECTRIC CO.
40 South Street, Mount Vernon, N. Y.

Please send me Price List Bulletin 507 A.

Name ____________________________
Street ____________________________
City __________________ State ________
Jobber ____________________________
Six more new jobbers have been announced for Stromberg Carlson by distributor manager Fred R. Anzal. They are: Cloud Bros. Co., 902 S. Michigan St., South Bend, Ind.; Radio Studios, Inc., 136 E. Broadway, Salt Lake City, Utah; The Kilian Co., Cedar Rapids, Iowa; Rogers Jolyng Co., 1415 Fifth Ave., Moline, Ill., and Electric Sales & Service, 138 Walton St., N. W., Atlanta, Ga.

Two Good Reasons

Your slipper st. two good reasons why you'll enjoy our periodical: it makes free radio catalog. It makes a good of over-values. With the catalog of that's such a thin line for you won't want to be without a copy ever again! This is running around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- ning around, tiresome re- n...
Simcon Distributing Corp., Washington D.C., jobbers for Motorola, were recent hosts to local dealers at an advance showing of 1939 merchandise. President J. H. Simon and his assistants At Harris and "Bill" Hartmeyer led the demonstrations. Prominent dealers guests included Sun Radio Corp., Manhattan Auto Radio, Georges Radio, etc.

General Electric has established a direct factory distributing branch at 700 Commonwealth Ave., Boston, for the area formerly served by W. L. Thompson, Inc. C. M. Wilson is manager and V. U. Brown, operating manager. The Boston and Buffalo, N. Y., sales districts have been combined, with the Buffalo man J. A. Ramsey named district manager.

Lecture meetings of a semi-technical nature for service engineers and dealers will be held this Fall in 100 of the key cities of the U.S., jointly sponsored by local RCA distributors and by RCA service exes. Service manager Edward C. Cahill of RCA has announced that the September-October-November series will cover radio's newest technical developments.


Radio Accessories Co., distributors at 2566 Farnum St., Omaha, Neb., are mailing to dealers and servicemen in the MiddleWest, Southwest and West, a new 24-page advertising supplement catalog. RACO bargain list includes a big section of sound equipment.

MANUFACTURERS AND DISTS MUST HELP

(From page 50)ing the quantity buyer an equal chance to meet demands at a higher overhead.

All jobbers should belong to the XRPHA or a similar association. Dealers and servicemen should join local organizations which in turn would work with a national association.

These groups in turn should work with the manufacturers in solving the evils we hear so much about, but about which we do so little.

September, 1938
More and more, Servicemen have come to realize that it pays to belong—that the RSA is the one big constructive and progressive organization of Servicemen for Servicemen—that it is genuinely and actively helping every member.

YOU GET ALL THIS
(Material and Service that's Worth $75 and more!)

YOU become eligible for participation in the Advanced Extension Course for Professional Servicemen—available to RSA Members only. ★ YOU GET monthly Advertising and Business Promotion ideas to increase your business and make it more profitable. ★ YOU GET a subscription to "The Radio Serviceman"—the Association’s monthly magazine. ★ YOU GET the benefits of being included as a "REGISTERED AND QUALIFIED SERVICEMAN" on record at National Headquarters for reference. ★ YOU GET a Certificate of Merit to hang in your shop. ★ YOU GET a pocket card of credentials. ★ YOU GET the assistance of our big expert technical staff as a department in your service business. We will give you the right answer to your “impossible” service problems. ★ YOU GET (if you belong to a local serviceman’s group) access to our National Speakers’ Bureau—famous speakers for your meetings. ★ YOU GET advance technical information on new circuits.

It’s as important to you as your job or your business! JOIN NOW and get in on all its benefits.

RADIO SERVICEMEN OF AMERICA
JOE MARTY, Jr., Executive Secretary, 304 S. Dearborn St., Chicago, III.

MAIL THIS COUPON!

RADIO SERVICEMEN OF AMERICA, INC.
304 South Dearborn St., Chicago, Ill.

Gentlemen:
I hereby make application for membership in the Radio Servicemen of America.

Name ..............................................................

Home Address ..................................................

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

Firm Name ......................................................

Address ..........................................................

☐ I am enclosing $2.00 National Yearly Dues
(Plus Nominal Local Chapter Dues)

☐ Bill me $2.00 National Yearly Dues.

NEW BOOKLETS

Shure Bros., 225 W. Huron St., Chicago, have brought out a new catalog on ultra wide range microphones, crystal pickups, “communications” mikes, stands and accessories, directional crystal mikes, and vibration pickups.

Zenith Radio Corp. makes the suggestion "add to your radio enjoyment with recorded entertainment" in a new folder featuring Zenith phonograph-radio combinations for every occasion. Ten models are presented. There is also a section on the “Radiorgan” feature.

The F. W. Sickles Co., 300 Main St., Springfield, Mass., has released a new catalog on its quality “Diamond Weave” radio electrical apparatus. Number of this 22-page illustrated booklet is 359.

The latest jobber catalog sheets, bulletins J-11 and J-13, on public address equipment controls, are now available direct from Clarostat Mfg. Co., Inc., 285 N. 9th St., Brooklyn, N. Y. Complete descriptions, listings and application data are included.

Radio & Technical Publishing Co., 45 Astor Place, New York City, will send free a new illustrated circular on Alfred Ghirardull’s latest book for service men, "Radio Trouble Shooter’s Handbook." It gives full information in the 50 sections of the volume, covering all phases of repair service.

"New 1939 Jackson Radio Testing Equipment" is the title of a 2-page booklet released by Jackson Electrical Instrument Co., Dayton, Ohio. Automatic range selection is featured in one section; ways to modernize service shops with Jackson service lab units are suggested in another.

Complete information on the installation of Philco’s new Mystery Control receivers has been issued to jobbers in booklet form. This is the first technical dope of any kind to appear on the Mystery Control. It was written by sales engineer Henry T. Fauste, Jr.

All jobbers are invited to write to Triad Mfg. Co., Inc., Pawtucket, R. I., for a supply of the firm’s bulletin No. 115 for distribution to dealers and servicemen. The booklet handles the replacement problem in ballast resistors, giving the new numbering system, the base wiring, voltage drop and pilot table.

“Facts About Television” is a new 18-page booklet issued by American Television Corp., 130 W. 56th St., New York City. The five Videor home television receiver models, including the Kinet portable extension, now being marketed by the firm, are shown and described.

Newest addition of “Sound Apparatus Bulletin” has just been published by Sound Apparatus Co., 190 W. 46th St., New York City. It features a new Simplex record-cutting device, and includes general data on sound and recording.
A condensed catalog No. 16 on "Radio Service Equipment, 1939" has been issued by Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland, Ohio.

Wright-DeCosters, Inc., St. Paul, Minn., have released a new 12-page catalog. In red, which carries details and illustrations of the firm's complete line of reproducers, and replaces all other catalogs. The company's new line of radio service speakers, for replacement work, is included.

To servicemen who are entering High-grade Sylvania's Service Shop Modernization Contest, or are otherwise planning shopping improvements, there is now available a booklet containing complete specifications of the Sylvania Model Service Shop. The book comes from the firm at Emporium, Pa., at 10c.

Ideal "Thermo-Grips" are presented as the latest in electric soldering tools, is a new booklet issued by Ideal Com- putator Dresser Co., 1221 Park Ave., Sycamore, Ill.

Latest edition of RCA's "Wheel Static," prepared for the company's auto radio service network. Concerns tire static, including practical service hints and installation data.

All the new wire products and assortments of Alpha Wire Corp. are shown and described in a new catalog, No. 38, Address 50 Howard St., New York City.

Specifications and price sheet on Ohion Radio has been released by the Ohio Carbon Co., 12508 Berea Road, Cleveland, Ohio.

"Again in 1939 Admiral Rules the Air Waves" is the title of a new folder released by Continental Radio & Tele- vision Corp., 3800 W. Cortland St., Chicago. Tilt Tuning, with the Full Tunin Illuminated "Slide Rule" dial. Is featured, and the elaborate presentation includes console and table model combinations, and straight radios, auto sets, and battery receivers.

Leotone Radio Co., 63 Dey St., New York City, have released a new booklet on cone assemblies, Beld coils, speakers, "hard-to-get" parts, pickup and microphone repair services, Balkite service station, and accessories.

Tuned to appear with the opening of the fall buying season, Federal Sales Co. will shortly issue a new catalog featuring many special items of radio hardware, notably those used by the manufacturers of sets, interphones, sound equipment, testing instruments, speakers, etc. This line is also a feature with jobbers because of its variety and completeness. Copies of the catalog should be requested on company stationery. Address to 26 South Jefferson St., Chicago.

Loose-leaf sheets, with concise and complete listings of all Clarostat products, will now be sent to those addressing the company at 295-7 N. 6th St., Brooklyn, N. Y. These are catalog sheets for counter and jobber sales man use.
TRADE FLASHES

Cinadograph Corp. has a new sales policy in the New York Metropolitan area. The Stamford Conn., speaker manufacturers will appoint engineers to contact, direct from the plant, the manufacturing and jobbing customers in the area. The plan is designed for closer cooperation in company-to-customer matters; general sales director D. P. O'Brien will supervise it.

Dr. Ralph L. Power, Los Angeles radio counselor who for the past five years has been the American representative for some of the leading radio interests in Australia, has been named as U.S. representative for the newly formed Macquarie network, a million-dollar Australian organization. Mr. Power will continue to act as resident buyer for American script and transcriptions, will sell Australian transcriptions in the U.S., and will represent the Macquarie network in the sale of time to American sponsors.

Announced by Freed Transformer Co., 72 Spring St., New York City, are two new representatives: Harry E. Marshall will handle the Pacific Coast area, including the states of California, Oregon, and Washington; Fanchon & Co., Houston, Tex., will cover Texas, Louisiana, Oklahoma, Arkansas and New Mexico.

KADETTE WIRELESS TUNEMASTER

The International Radio Corp. of Ann Arbor, Mich., has just announced its Tunemaster radio. The compact, portable device will control the customer's present radio or any number of radios in different rooms entirely by wireless. The Tunemaster gives instantaneous push-button tuning, plus complete manual control over the entire broadcast band.

According to the manufacturer, it will operate any number of compact Kadetteregnators one-quarter the size of a console, giving commensurate tone quality and volume.

FOR CONVERTING D.C. TO A.C.

• Built especially for radio and sound apparatus—capacities 110 to 3250 volt amperes—with or without all wave filters. Dynamotor construction—economical operation—ruggedly built for years of trouble-free service—used or recommended by the largest manufacturers of radio and sound apparatus—in use all over the world.

WHY EXPERIMENT—INSIST ON A JANETTE

Janette Rotary Converters

Janette Manufacturing Company
556-558 West Monroe Street Chicago, Ill., U.S.A.
Vice-president Sherman Revere Hoyt of Cinaudograph Corp., Stamford, Conn., now has the additional duties of general manager of the firm, following the company's announcement that Harold W. Hartwell has resigned as vice-president and general manager. Other officers remain the same: John Sherman Hoyt, president, and Howard C. Seaman, secretary and treasurer.

Gene Tauray, well known in the New York area as an expert radio and electrical technician, has joined the staff of the H.A. Marsh Advertising Agency, 267 Fifth Ave., New York City.

University Laboratories, makers of internally-folded air-column trumpets and permanent-magnet dynamic driver units for public address use, have moved their factory and sales offices to new and enlarged quarters at 195 Christie St., New York City.

RCA Institutes opened its first courses in television with the beginning of the Fall term, Sept. 6 at 75 Varick St., New York City. For those without previous training in radio engineering, the course requires two years in the day school or five years in the evening school.

HALSON RADIO MANAGER

Herb Brennan has been named sales manager for Andrea Radio Corp., 48-20 48th Ave., Woodside, N.Y. Mr. Brennan was for 5 years the New York representative for Victor Talking Machine Co. before he entered the radio business in 1921 as general sales manager for John Firth & Co. Subsequently he spent 5 years in radio executive work in Minneapolis, Minn., and later came back east to become a partner in the firm of Gross-Brennan, Inc., where he remained for 7 years with the Stromberg-Carlson representatives. These interests were later sold out, and Mr. Brennan spent three years as Norge representative in the NY area. Thus he now approaches his new post as a sales executive known coast-to-coast in radio and appliances.

Eric F. Storm, the new gen'l sales mgr. for Halson Radio, is a widely traveled U.S. Signal Corps Captain with many years of electrical sales experience here and abroad.

Sell BETTER ANTENNAS

National Antenna Check-up Week will stimulate demand for better antennas. Get behind it—and be doubly sure you sell originals; not cheap imitations. When your kits are marked "Licensed by Amy, Aceves & King, Inc." they are authentic and dependable.

All antenna manufacturers operating under our patents furnish two major types: 1—All Wave Full Noise Reduction, and 2—All Wave Signal Boosting, but not noise-reducing on broadcast wave. Be sure to choose right one for your job. Full noise-reduction costs a little more and is worth its cost, but cheap kits do not actually provide it. You and your customers are protected when your antennas are licensed by

AMY, ACEVES & KING, Inc.
11 WEST 42nd ST. NEW YORK

—and don't risk your reputation with cheap, unlicensed outfits.

Get behind
THE NATIONAL ANTENNA CHECK-UP Campaign

Lockheed Plane Ohmite-Equipped
Hughes' dash around the world in his LOCKHEED Plane adds another "case history" to the service-record of Ohmite Vitreous-Enamelled Rheostats and Resistors. Their ability to withstand overloads and abuse, shock and vibration, heat and humidity, has made Ohmite resistance units standard equipment on such major airways as Pan-American, United Air Lines, and others, both here and abroad—as well as in the general radio and communications fields.

OHMITE RHEOSTATS
Time-proved all-porcelain vitreous-enamelled construction and practically stepless resistance variation assures permanently smooth, safe, close current control. Underwriters' Laboratories Listed. 9 stock sizes from 25 to 1000 watts.

OHMITE RESISTORS
Be Right with Ohmite! Not your lobbyist for Ohmite vitreous-enamelled "Fixed" and "Adjustable" Resistors—and of course, the popular wire-wound "Brown Devil" Replacement Resistors.

Write for New Catalog 17,
OHMITE MANUFACTURING CO.
4847 W. Flournoy Ave., Chicago, U.S.A.
RADIO AND TELEVISION

RADIO TOMORROW

By Commander E. F. McDonald, Jr.
President Zenith Radio Corp.

The editor of Radio Today has asked me to tell:
2. "My conception of what the radio business will be, looking a few years ahead and my reasons for my views."

The editor has asked me to speak frankly, and that is what I am going to do. First, as to radio itself, I see it as an increasingly powerful force for public entertainment, improvement, and education. The big broadcasting companies are doing a noble job of self-regulation and are in addition providing a fine balance of editorial matter of various kinds. Radio advertising has come a long way from the days when the nearest comparison I can think of was the old-fashioned medicine show. First they gathered the crowd by entertaining you. Then they made you sick by talking about your troubles. Then they sold you the medicine that would put you back on your feet again. That's just about what the advertiser does today with the modern radio show. It is the old medicine show but very much streamlined, produced by experts, and written by practical psychologists in the field of advertising and merchandising.

Many sets per home

The variety of broadcasting available in the home today is so great that each member of the family can find something personal to him or her at almost any time of the day, and this is a good sign for the industry, especially that part of the industry which is making receivers, because it is promoting the use of more than one set in the home.

The industry itself, as a business, will continue to go places if it continues to put its house in order. By that I mean that the radio industry must continue to improve the ethics of selling. It must give greater thought to controlled production and the avoidance of dumping. It must protect the dealer and improve its relations with him if he is to make a profit from his business so that he may survive as a constructive public contact.

BATTERY OPERATED TUBE TESTER and ANALYZER

AT LAST . . . A RADIO TUBE TESTER DESIGNED FOR RURAL AREAS NOT EQUIPPED WITH ELECTRICAL CURRENT. NO EXTERNAL CONNECTIONS ARE REQUIRED. IT WORKS RIGHT ON THE SPOT.

The STARK RURAL METER is a brand new development and is the only instrument of its kind on the market.

SELF-CONTAINED POWER SUPPLY

Enables you to service battery radios in the owner's home . . . no more time lost in carrying the chassis to your shop. The RURAL METER contains complete tests for all DC tubes, including new 147 series, plus many AC types (over 200 test positions) . . . also resistance and voltage ranges.

COUNTRY RADIO DOCTORS — A proficient practice awaits you, as you not only get the chance of increasing your sale of tubes, batteries, etc., but make valuable sales contacts and new prospects while performing a service for which you are paid!

For complete information see your nearest jobber or write direct.

Commander McDonald with one of his arm-chair receivers, a type which he feels will be the 'radio of tomorrow.'
I feel so strongly on the above two points that I have for three years past incorporated controlled production and dealer protection as major policies No. 1 and No. 2 in our own company's merchandising programs. I have insisted that these two policies be rigidly pursued by our executives as far as it is in our power to maintain them against conditions in the field as they exist. Perhaps I am wrong—perhaps I am doing all this too many years in advance, but let me tell you, the dealer appreciates what we are doing, and we know we are building for the good of the entire industry.

Branding

Thus far the more important manufacturing units of the radio industry have been proud to identify themselves as the makers of the radios which bear their firm name and trade mark. During the present season, however, there has been a decided increase in a practice which I cannot describe in any other way but "false branding." This practice is especially deceptive in cases where a radio manufacturer is willing to allow his name and trade mark to appear on a radio which is made for him by another, more cheaply than he could produce it for himself with his own facilities. An extra profit thus introduced, and manufacturing supervision is removed from the manufacturer's own plant to that of someone else—so it is quite logical to conclude that a radio so made can hardly fail to fall short of that maker's product made in his own plant. Besides which, the money for the extra profit must come somewhere and usually it comes out of the customer's pocket. Any practice which tends to give the customer less value for his money and a less carefully made product than he could be given, is, of course, to be frowned upon. It represents a step backwards. This is one matter on which the industry should formulate some very definite policies in relation to its public. As the matter stands this season, with a few outstanding exceptions, it presents a decidedly tangled picture to the ultimate consumer. The radio industry of the future will avoid ambiguities.

It is customary, I believe, in a statement of this nature to make a reference to television—in fact it is difficult to avoid that question, because it is always asked. I am happy to say that my company has just been given its permit to operate a television station and we can now go ahead and build a physical station for experimental purposes. This new station will be on our own factory which is advantageously located in a suburban section of Chicago. Experiments in transmission and reception from this new station will be made as soon as it is completed. In fact we have already been carrying on laboratory experiments in television for some time.

Our cautious advance in the field of television has not as yet altered one of my favorite maxims "Television is just around the corner for the stock salesman only." Television is coming just as surely as steamboats, railroads, automobiles, and wireless itself have come. It would be useless to decry the value of such an improvement in radio technique. Yet, like other similar improvements in the electrical field, the development will be slow but sure. There will be no need for some time to come, for anybody to throw his present radio out of the window, in favor of a television set.

AMERICAN RADIO ASSOCIATION
SEPT. 30-OCT. 2

Walter Schwalge, convention chairman, has announced the program for the American Radio Association service meeting and show, to be held at the LaSalle Hotel, Chicago, Sept. 30 to Oct. 2.

Speakers and their topics are:

"Will Radio Service Ever Become a Man's Business?" John Meck, president, Electronic Design Corp.

"Utilizing Manufacturers' Window and Store Display Material to Produce Profits." Frank Ewing, vice-president, Pensholt Co.


"How to Use Direct Mail to Promote a Service Business." J. S. Older, Buckley, Dement & Co.

SECRET OF TROUBLE-FREE RESISTORS

It is a matter of record that nine out of ten resistor breakdowns are caused solely by failure of the protective covering, either in its job of keeping moisture from the element, or in dissipating heat properly.

It is also a matter of record that the outstanding popularity of IRC Resistors results in no small part from their perfection in this respect. Hand in hand with engineering improvements inside of the resistors themselves, IRC has pioneered and perfected BOTH Molded Phenolic insulation for IRC BT Metallized Resistors and other types, as well as the famous Cement Cooling for heavy duty power wire wounds.

By whatever test you choose to make—even boiling hot and freezing cold salt water immersion—you'll find these IRC protective coatings supreme.

"They Stay Put"

INTERNATIONAL RESISTANCE COMPANY
401 N. Broad St., Philadelphia, Pa.
In Canada, 187 Duchess St., Toronto, Ont.

September, 1938

73
NEW!
Model CC
CAPACITOR ANALYZER

Incorporates Model CB Features, plus High Capacity Scale, High Test Voltage, Simplified Scales, Sloping Panel

This advanced Analyzer measures Capacity .00001 to 800 mfd., including motor starting condensers; measures Power Factor 0 to 50%, including motor starting condensers; measures Resistance 50 to 2,000,000 ohms; measures Insulation Resistance to 1000 megohms, using test voltages to 600 D.C.; detects leakage and intermit-tents. A.C. operated.

Cat. No. CC-160 (110 v., 60 cyc.) Less tubes—$24.90 net
Order through your jobber

SOLAR MFG. CORP. 599-601 Broadway, New York
SALES AID

PRESENTING "PEAKED" TUBES

A window display in three pieces and four colors has been brought out by the Sales Dept. of Triad Mfg. Co., Inc., Pawtucket, R. I., to aid dealers and jobbers in putting over the company's "peaked" radio tubes.

10 PLAYS TO A NEEDLE!

Full-colored display card of convenient counter size has been released by Recoton Corp., 178 Prince St., New York City, to show the public that the Recoton needle with the special shaft and rounded point is a quality item. The phrase "10 Plays to a Needle" is featured on the card, which is easel-mounted and also punched for hanging.

FOR FALL TUBE-SELLING

A gayly colored window display unit, which invites people's interest by using a vigorous football theme, has been prepared by Hygrade Sylvan. It ties in with the widespread listener-interest in the coming gridiron clashes, which begin Sept. 14 and end in December.

Also, the company has released a smaller counter card, with cut-out letters and glistening green foil, to add life to sales counters.

Sylvania has also issued a new give-away item for dealers, which further carries its fall interest. This is a complete 1938 football schedule, a season-long score sheet for over 400 games, in booklet form. It has space for dealer imprint on the front.

blanks for local game scores on the back. Come-in-and-get-one window streamers are furnished with orders on the booklets.

FREE SERVICE TO THE BONE

Free "Recalls" are where your profits go. Cut them to a minimum by using our complete line of Replacement Transformers. Available in exact duplicate or universal mounting to fit all types of Radio Sets.

PRICED RIGHT!

We are "there" with the right price, and fast, dependable service when you need it most. Don't fail to send for your Free Catalog showing the complete line.

FREED
THE REPLACEMENT KING

FREED TRANSFORMER CO.
76 SPRING STREET NEW YORK, N. Y.
LAMPERITE
ACOUSTIC COMPENSATOR
(pat. pend.)

HIGH OR LOW PITCH
WITH THE SAME MICROPHONE

BIGGER To be ahead of competition, and realize a
PROFITS larger profit on each job, you must offer added
value in new features. Realizing this, Amperite gives
you The Acoustic Compensator...at no extra cost
to you!

This is an exclusive feature which enables you to (1) lower or
raise the response of the microphone; (2) adjust for close talking
or distant pickup; (3) adapt microphone to varied conditions.

THESE 4 MODELS HAVE THE ACOUSTIC COMPENSATOR

MODEL RBHk (hi-imp); RBMk (200 ohms) Frequency range 40 to
11000 CPS. Output -65 db...Chrome or Gunmetal...$42.00 LIST
NEW! MODEL RSHk (hi-imp); RBSk (200 ohms) Frequency range 60
to 8000 CPS. Output -68 db...Chrome or Gunmetal...$32.00 LIST

All of the above are complete with Acoustic Compensator,
Switch, Cable Connector, and cable.

NOTE Both Sound Service writes... "Your mikes are certainly
rugged. We've used them in rain, wind, and on the hottest
days, but they've always stood up perfectly."

IMPROVES ANY "LOW-COST" INSTALLATION ON 4 COUNTS!

P.A. Men, you can improve those "price" jobs by using the popular
Amperite Model RASH (or RALL). You will get better
results because: (1) it is excellent for both speech and music; (2) has flat
response without undesirable peaks; (3) reduces feedback; (4) stands up under rain, wind, heat,
and rough handling...Frequency range 60 to 7500 CPS. Output -68 db.
MODEL RASH (hi-imp); with 12' of cable; MODEL RAL (200 ohms) with
8' of cable..............$22.00 LIST

MAKE EXTRA SALES WITH CONTACT MIKES...$12.00 LIST

Professional and amateur musicians are delighted with the Amperite Contact Microphone. It "makes
an ordinary violin sound like a Strad"...gives a
small piano the tone of a grand. And yet, there is
no distortion. No unnatural effects. No "fingering
noises"...Frequency response 40 to 9000 CPS.
Output -40 db. 20' of cable.

Models listed below can be used on most radio
sets since 1935 and on all P.A. Systems. They oper-
ate with either high or low gain amplifiers. Instal-
lization is simple...no changes in strings or instru-
ments...attached without tools.

MODEL SKH (Hi-imp); SKL (200 ohms)...$12.00 LIST
SKH or SKL with foot-operated
volume control..................$20.00 LIST
Professional Model KTH (or KTL)...$22.00 LIST

A COMPACT VELOCITY for hand or stand

Though only a little larger than a match box, this Amperite Velocity has the fea-
tures of the larger microphones. Good
for speech and music. Designed for
use on stand but also makes an
elegant hand microphone with
convenient pass-through
Frequency response 60 to 7500 CPS.
Output -70 db. Complete with
switch, cable connector, and 25' of
cable.
MODEL ACH (hi-imp); or
ACL (200 ohms)...$25.00 LIST

Sales Aids for the P. A. Man Amperite offers the following cooperation to P. A. Men
(1) FREE Window Decals advertising your Sound Service. Size 5¼ x 9¼; finished in 4 striking
colors. (2) FREE Window Display. 11 x 17. (3) Special Sound Equipment Letterheads, Samples
and prices complete. (4) FREE use of cut for printing business cards, etc.
Write for these valuable sales aids and new illustrated bulletins today!

AMPERITE Co. 561 BROADWAY, N.Y. U.S.A. CABLE ADDRESS
"AMPERITE" NEW YORK
May be used with any receiver

Push-Button selection of 7 favorite stations plus volume control from any convenient location!

Simply connect to the aerial and ground posts of any receiver by means of a special 15-foot cable supplied, and plug into any 110 volt AC or DC outlet! A turn of the fingers sets each button to a station—permanently.

Each Remote Control comes, complete with tubes, all tested and ready to operate. Housed in a handsome light Walnut cabinet 4 1/2" high, 5 3/8" wide, 9 1/8" long. Retail for only $26.50.

Write Dept. T-9 for full details on the Meissner Remote Control and Push-Button Converter units.
**1939's MOST SENSATIONAL FEATURE**

**Motorola**

**WITH TIME-TUNING**

**THE RADIO THAT TUNES ITSELF**

**MOTOROLA MODEL S9K-1**

Nothing to match it for value
The biggest "package" in its price class

Will tune as many as 96 different programs in 24 hours by itself

Also turns itself on — and turns itself off — automatically

Easier to "set" than a clock — simplicity itself

No switches or knobs to turn

A REAL "3-IN-1" RADIO— Combines TIME-TUNING — "Feather-Touch" Electric Automatic Tuning — and also operates manually

The greatest radio development in 10 years — Dealers Everywhere Agree It's the "HOTTEST" demonstrating and selling feature shown this season

"ALL-IN-ONE" Remote Control
Compact — smaller than a pack of cigarettes. Turns set on and off — regulates volume and changes stations remotely — automatically — without turning any knobs or switches at set.

See Your Motorola Distributor

GALVIN MFG. CORPORATION • CHICAGO