# RADIO TODAY

If sales are slow, put on your hat and— GO OUT AFTER BUSINESS!

### OCTOBER



### TURN PROSPECTS INTO CUSTOMERS

Visible plus-value features of Fairbanks-Morse Turret Shielded Radios turn lookers into buyers

Demonstrate *any* model from the 1938 line of Fairbanks-Morse Turret Shielded Radios to a prospect—and you will have made a *sale*. Some day, perhaps, all good radios will have features like those that make today's Fairbanks-Morse Radios sell on sight. But today, only Fairbanks-Morse offers them.

First—*Turret Shielding* and monitor base chassis, an exclusive Fairbanks-Morse development that shuts out much of the crackling and popping noise that ruins foreign reception on ordinary sets. Add to this the natural built-in ability of Fairbanks-Morse Radios to bring in foreign stations clear and strong, and you begin to realize what a demonstration of this feature means when the prospect is "on the fence"!

Second — the exclusive Fairbanks-Morse The men who sold Tone Projector that gives this radio new faithfulness and beauty of tone. Your prospects see what it is—bear what it does—like it—buy it and show it to their friends.

Third—today's finest development in *automatic* tuning—true automatic tuning with true automatic frequency control.

And that's not all. The Fairbanks-Morse 1938 Turret Shielded Radio has everything worth-while found in any radio—plus these and other salesclinching features found in no other line.

No other radio makes as favorable an impression on the prospect as does a 1938 model Fairbanks-Morse.

Write for the complete story. There is a substantial net profit in it for you if your territory is

open. Address Fairbanks, Morse & Co., Home Appliance Division, 2060 Northwestern Avenue, Indianapolis, Indiana.

them last year know!





From a service sales viewpoint, volume controls differ from other radio parts in that the minute your customer turns the knob, he knows the quality of the part that has been installed in his radio.

Don't risk the turn of the knob

Use..

Don't take chances on inferior controls. Use only quality controls—SILENT controls—and that means Yaxley. Yaxley Controls alone offer the following exclusive features:—

1. "The Roller That Does Not Roll" — the most perfect form of contactor as recognized by leading metallurgical engineers. In addition, the contactor automatically cleans the element of noiseproducing dust.

2. Pure Silver Short-outs — assure perfect terminal contact and provide zero signal before switch action.



**3.** Silver-to-Silver Contacts — a heavy durable plating of silver is placed on all moving, current carrying parts. Silver oxide is a good conductor — the oxides of copper and brass are not. Although an expensive manufacturing process, Yaxley gives you this to insure permanent quietness and efficiency.

at turns away cerstomers

**1.** Perfected Tapers-mathematically designed. Feather edged tapering of geometric design provides mechanical smoothness and uniform control of receiver volume. Only Yaxley has such a perfect control taper.

These features, plus precision manufacturing and rigid inspection, make Yaxley SILENT Volume Controls leaders of the field. And—remember that Yaxley, with its parent company, P. R. Mallory & Co., Inc., offer the aid of the Mallory-Yaxley Radio Service Encyclopedia, which tells the easy way to make difficult replacements.

Get in touch with your distributor today.



RADIO TODAY, October, 1937, Vol. III, No. 10, published monthly by Caldwell-Ciements, Inc., 480 Lexington Ave., New York, N. Y. Subscription yearly \$1.00 in U. S. and Latin American countries; \$1.25 in Canada; \$2.00 all other countries; single copy, 25c. Entered as second-class matter July 24, 1936. at the post office at New York, N. Y., under the Act of March 3, 1879. Printed in U. S. A. Copyright 1937 by Caldwell-Clements, Inc.



• PHANTOM ACE MODEL 568 DW-5 tubes-twotone ivory and mahogany.



• PHANTOM PAL MODEL 518 DW-5 tubes-twotone ivory and mahogany.



• PHANTOM GRAD MODEL 638 CS—a lovely 6-tube chairside radio with built-in shelves for books and magazines. An exceptional value.



• PHANTOM PRINCESS MODEL 838 AT-8 tubes with automatic stop-light tuning.



• PHANTOM FAWN MODEL 638-6-tube console at a modest cost.





• PHANTOM DEB MODEL 838 CS-8-tube chairside set. Fold-over top hides controls.



Q PHANTOM MATE MODEL 528 CS-5-tube chairside radio at a low price.



• PHANTOM VOGUE MODEL 818 CS-8-tube chairside combination radio-phonograph.

• PHANTOM PRESIDENT MODEL 828 AT-8 tubes with automatic stop-light station tuning. Also Phantom Beauty Model 828A without automatic tuning.





Attractive, sturdy done in four colors and gold—for window or floor display. Holds seven Emerson models. **Emerson Radio** with the MIRAELE TONE CHAMBER

And get the "LITTLE 3" DISPLAY at the Same Time!

### Featuring the "MIRACLE TONE CHAMBER"

Here are ideal tie-ups with Emerson's National Advertising in the SATURDAY EVENING POST, COLLIER'S, AMERICAN MAGAZINE, COSMO-POLITAN, RADIO GUIDE, TIME, LADIES' HOME JOURNAL, ESQUIRE—reaching virtually every home in America—regularly, with hardhitting advertisements. And here are CASH CONTESTS that not only give you an easy opportunity to make extra money, but which also bring to you the Best Radio Promotion and Selling Ideas of Dealers and Salesmen Everywhere. Such cooperation, at a time when Emerson is making unprecedented sales records, will give YOUR business a big push forward.



Write or wire direct to factory for name and address of your nearest Emerson distributor.



EMERSON RADIO AND PHONOGRAPH CORPORATION • 111 Eighth Avenue, NEW YORK, N.Y. Cable Address: EMPHONOCO, N. Y.

World's Largest Maker of Small Radios

October, 1937



ANY SET OWNER CAN ADJUST THE BEL-MONITOR FOR NEW STATIONS WITHOUT TOOLS

with the

Belmont receivers have again "scooped" the radio world with the new BEL-MONITOR Instant Station Selector! It is noiseless and fool-proof. Just press a BEL-MONITOR key and — presto — your station is tuned to splithair accuracy. The action is instantaneous because the BEL-MONITOR does not follow a fixed sequence of stations—it rotates automatically, forward or backward, through the shortest arc.

3.5

Pat. Pending

110

BEL-MONITOR settings can be changed without tools. Changeover switches are eliminated and regular tuning with knobs is always available. Write for dealer story today.

BELMONT RADIO CORPORATION CHICAGO, ILL. General Offices—1257 Fullerton Ave. Cable Address—Belrad



NOISELESS FOOL-PROOF

BELMON Leads ligain

INSTANT

**STATION** 

SELECTOR

The BLL MONITOR 8-Station Selector is now available on two Belmont console, 3-band, all-wave a-c superheterodyne high-fidelity receivers—Model 1175 (illustrated above) with 11 tubes and Model 860 (not shown) with 8 tubes. Printed station all letter slips included with each receiver.

> The BIR-MONITOR 6-Station Selector is standard equipment on the Belmont table Model 582 (illustrated at right) 5-tube, 2-band a-c superheterodyne receiver. All Belmont sets are licensed under R.C.A. and Hazeltine patents



# **THERMENE** REFRIGERATION

the revolutionary new development in food preservation . . . soon to be displayed by your Grunow Distributor . . . will be

competitive with

LECTRIC REFRIGERATION

IN Initial Price IN Ice Production IN Operating Costs IN Sales Teatures



Radio Today

CHILLED

BY

### LIONS OF ENTRY BLANKS ALREADY CALLED FOR IN PHILCO'S \$50,000 CONTEST! waranteed. Philco distributor. With the thrilling, exciting PHILCO

It's going over BIG! Although Philco's \$50,000 Radio Mystery Contest started only a short time ago, dealers all over the nation report a record-breaking demand for Official Entry Blanks!

PHILCO'

MADIO

TUBF

RADIO

TUBE

CORPORATION PHILA, PAULA

And every Entry Blank called for . . . means another prospect IN THE STORE! That's why it pays every Philco Tube dealer to have a sufficient number of current Entry Blanks on hand. Be sure to get them from your

The Easiest Tubes in the World to Sell

Philco Mystery Contest Programs being broadcast weekly over 240 stations . . . with millions of people going into Philco dealer's stores for details and Official Entry Blanks . . . no wonder dealers are enjoying the greatest tube business in years! This contest is creating REAL SALES and BIG PROFITS for dealers. Cash-in to the limit!



N a few weeks, all the world will know that Philco has passed the ten million mark. It's an occasion absolutely unique in radio history... an event that calls for a celebration ... and if you don't think it's going to be celebrated, you don't really know Philco!

But before the publicity is turned loose ... before the advertising deluge is released ... Philco wants to take this opportunity to thank the great distributing organization that made The Ten Millionth Philco possible. Plans are already under way to make the public announcement of The Ten Millionth Philco the greatest merchandising event of the season. It should be . . . it will be! And it's coming soon.

In the meantime . . . Philco repeats: "Thanks to all of you . . . to the distributor whose orders fill a string of freight cars . . . to the retailer large and small . . . and to the man on the floor who sold a Philco yesterday!" It's due to your efforts that we proudly announce . . . The Ten Millionth Philco!

#### PHILCO RADIO & TELEVISION CORPORATION

OCT 18 1937 (

Staff---Darrell Bartee M. H. Newton

M. H. NEWTON B. V. SPINETTA VINTON K. ULRICH



CC1B 355349

LEE ROBINSON Sales Manager

#### RMA PUSHES SHORT-WAVE

\* At a meeting of the directors of the Radio Manufacturers Association at New York, Sept. 29. additional funds were appropriated to promote short-wave programs in newspapers. Participation in public shows by radio manufacturers or their distributors was resolved against. A trade show for receiver lines was also opposed, but the RMA will cooperate as before in a spring parts show. Retired manufacturers A. Atwater Kent and Paul Klugh were elected honorary members of the RMA board of directors.

#### MORE HOURS TO BE AMUSED— RADIO GETS SHARE

\* With more time for leisure there has come about a new conception of the relationship of leisure to work, declared H. C. Bonfig, sales manager RCA Manufacturing Co., speaking before the Kansas City, Mo., Electric and Radio Association.

Only a short time ago a man or woman who spent more than a couple of hours a day entertaining or being entertained was considered not a very substantial citizen-a ne'er-do-well. Then, the general conception of a man's duty on earth was to work from morning to night. The new conception is to get a lot more joy out of life. Assuming eight hours for sleep. there would be 56 hours for sleeping in a week. Assuming an eight-hour day, five days a week, with 40 hours devoted to work, and assuming the balance of the time for leisure, we have 72 hours a week during which we have to be amused, entertained or educated

That radio is standing up well under this competition of sports and other amusements is evidenced in a survey which shows that the average American family uses its radio 5.1 hours per day. Remembering again that sleeping takes eight hours, and the work-day eight hours for five or possibly six days a week, it can be seen that radio is the third most important activity in our lives today.

#### SALES SLOW UP-Follow general business

★ Early Fall has witnessed a distinct slowing up of retail radio sales, reported from all parts of the nation. This was to be expected, in view of general drop in retail business in all lines, coupled with the absence this year of the Soldiers Bonus and national election, which had speeded up radio last Fall.

Inventorics started to increase, earlier in the season, but manufacturers, keeping closely in touch with the situation. have slowed down production lines, with the result that little over-stocking is now in prospect.

Industry opinion now puts 1937 production at about the same as the 1936 output—probably 81/4 million radio sets

#### SEE BIG RADIO CHRISTMAS

\* A splendid Christmas business is expected by industry leaders, who point out that the slack taken out of radio sales in the Fall months, will prepare the country for active Christmas buying.

ORESTES H. CALDWELL Editor

M. CLEMENTS

Publisher Copyright 1937 Caldwell-Clements, Inc. 480 Lexington Ave, New York, N. Y. Tel, PLaza 3-1340

Vol. III. No. 10

Chief factor counted on to swing radio purchasing into big volume by Xmas, is the bumper crop condition reported from all agricultural centers. About nine billion dollars will be collected by farmers in 1937—a billion more than 1936. And 60 per cent of this huge amount becomes available the last four months of this year.

Since every farm dollar is estimated to create a dozen times as much purchasing, in nearby towns and cities, it appears that a vast sales-stimulating factor is yet to be heard from between now and Christmas.

#### WHO WEARS THE RADIO PANTS

\* Who believes that radio selling should be in the hands of the ladykilling type of talker? The idea is



#### SWINGS IN GENERAL RETAIL SALES --- BY NAT'L INDUS. CONF. BOARD

by no means au unscheduled oue, because in some quarters it has been said that women influence 85 per cent of all retail sales. If that's true in radio, you'd better slick your hair, fix your tie.

Editors of RADIO TODAY have quizzed hundreds of radio dealers on the subject, were told that the gals have a finger in from 30 to 60 per ceut of radio sales. There are angles galore. Women realize that radios are essentially mechanical, and that a man (preferably a husband) should function in the matter. But if they don't like the looks of the cabinet their squawks are more effective. It is also believed that women are more intense, if not as consistent, in their listening.

In these columns it is probably safe to say that the ladies are more apt to buy for whimsical, superficial or cockeyed reasons. But the man has to pay the bill so where are we.

#### RADIO SERVICE MEN OF AMERICA, INC.

\* Radio Service Meu of America, Inc., is the name designated for the new national service men's association which has been formed in Chicago, under the supervision of Jerome J. Kahn. Stancor, trustee for the reorganization committee which has purchased the assets of the former IRSM. Kenneth Prince, Chicago attorney, is handling the organization plans of the new group.

"Basically, it is anticipated that Radio Service Men of America, Inc.,



V. E. Jenkins of Weston confidently exhibits a new instrument.

will function as a central source for gathering and disseminating information ou developments in the radio field," explains Mr. Kahn, "that it will serve as a central liaison between the manufacturer and individual local service men's organizations, also that it will act as central headquarters for improving and promoting the welfare of service men."

Joe Marty will be secretary in charge of the office. With the active



At the New York Parts Show, President S. N. Shure of the Show Corporation greets a radio man from far-off Bombay, G. C. Motwane.

assistance of the Sales Managers Club, both eastern and western divisions, and a number of interested manufacturers, Marty has been contacting various service organizations in the east and middle west. Mr. Marty reports that all the groups he has visited have assured him the new RSMA has their approval, and have promised 100 per cent cooperation. Mr. Marty feels that every local service organization will appreciate the advantages of this central association and will want to become affiliated.

Local organizations or individual service men in cities where there is no organization may write for organization details to Joe Marty, Monadnock Block, Room 1523, Chicago, Ill.

#### "COLOR-MARKING" LOCAL CHAIN ON LISTENERS' DIALS

\* About a year ago the editors of RADIO TODAY surveyed a number of "average listeners" to find how people locate-on their own home receivers-chain programs they want to hear. This survey showed that most people are considerably confused as to how to go about finding, say an NBC red or a CBS program, as such, on their own sets. Women, particularly, it appeared, have about given up trying to identify their own local stations as regular outlets for the principal chains, and instead just dial at random, tuning in one station after another, with the help of local newspaper listings. Evidently many splendid chain features are missed by millions, because people have not formed the habit of regular listening on chain outlets, or don't know where these are in the local spectrum.

Based on this listeners' survey, RADIO TODAY proposed that receivers in each vicinity be marked with the dial positions of the principal chains: new sets to be labeled by the distributors; old sets to be marked by servicemen at the time of their next service calls. This idea of marking dials with red, blue and other designations was at the time discussed with industry leaders in the broadcast and set fields. But while interest was expressed, no immediate action resulted.

But now a year later, the movement is underway. The first commercial receivers to employ this color designation comprise the new home line of Motorola sets, made by the Galvin Mfg. Company, Chicago. These pushbutton sets are supplied with red and blue buttons for marking the corresponding local NBC outlets, green for CBS stations, and yellow for Mutual.



S. Ruttenberg of Amperite tunes up a radio-amplified bass viol for appreciative ears of Parts Show guests.

RADIO TODAY feels that a great convenience would be rendered all listeners if other manufacturers would similarly mark their sets—and if the networks would arrange some plan of reward to compensate servicemen for each set marked with local chain outlets.

#### "NATIONAL RADIO SERVICE Month" in January

★ Addressing the annual conference of the International Association of Electrical Leagues at New York, Oct. 7, Harry Boyd Brown, Philco merchandising manager, proposed a nation-wide effort to get radio sets overhauled, during next January, with widespread promotion to be mailed out by lighting companies with customers' bills.

Besides the replacement of tubes, Mr. Brown urged that all modern antennas be replaced once a year. Robert Herr, Philco service manager, in reply to questions, explained that the twisted-pair down-leads of antennas deteriorate in insulating quality under summer sunshine and winter cold. He emphasized that a new down-lead once a year is the only way to keep the modern antenna at top efficiency.

#### **GO OUT AFTER BUSINESS!**

★ Every man in radio has a number of uncompleted sales, prospects who have been in and showed interest, and then dropped the matter. These are the sales to be shoved over, now when there is a little breathing spell. These are the accounts that can be used to level off the sales curve, in the face of the present slight recession in ordinary sales.

So look up your list of unfinished sales, prospects that got away without completing their purchase, old customers that are ready for another call. Don't wait for them to come in. Instead—like the man on our front cover—

Put on your hat—and go out after business!

#### LONGER TERMS, LOWER DOWN PAYMENTS ARE OUT

★ Describing the new trend in the matter of financing merchandise sales today, K.C. Watson of Commercial Credit Co., Baltimore, Md., analyzes the time-payment situation:

"The better managed finance companies know, almost to a fraction of a percentage, exactly what repossession and loss ratios happen to be on various articles financed at given down payments and maturities. Inspired, perhaps, largely as a needed stimulus during the dull sales period of a few years ago, finance companies let down the bars of standard terms and took a substantial number of "irregular transactions"—lower down



Lloyd Spencer has been named general sales manager for Stromberg-Carlson.

payments, longer maturities.

"Now that the time has passed which inspired this practice and it is no longer necessary, the more conservative element in the finance business has become alarmed at the continued trend towards low down payments and long terms. Salesmen, in many instances, have reached a point where, instead of selling their merchandise, they are selling terms. Commercial Credit Company is advocating a policy of reasonable terms in the interest of profitable sales, rather than a continuation of low down payments and long maturities, which can lead ultimately to substantial losses."



W. C. Harter, left, and Arthur Moss of Solar Mfg. Co., relax amid Show events.

# SOLID PLANS FOR XMAS YEAR-END

#### Seasonal outline for selling new radios from A to Z (Admiral to Zenith)

★ BUMPING briskly over U. S. roads this month go the first of the radios for December selling.

Orders are written and shipments are made with complete confidence in what will happen on the shop floors. December normally accounts for about 18 per cent of the radio man's sales for the year. But ever since the 1938 lines were introduced, he must have felt inwardly that this year holiday selling would be a cinch.

Threaded through the characteristics of the new sets is a distinct "luxury" note. Extraordinary convenience in tuning, finer cabinets, and "a lot of radio" in general make the merchandising of receivers this year a neat proposition indeed.

Dealers say it's dead easy this time

to figure out the "de luxe" angle which makes folks buy during the last two months of the year. It's just a fact that the cabinets have it written all over them.

Into the glitter comes the need for substantial planning. Facing the retailer are the every-day principles of merchandising, adapted to the peculiar needs of this season. There's no use of fumbling the thing when the set-up is otherwise a pushover.

Retailers want to be sure that from 1938 merchandise they have stocked the models which the public craves. Chairsides, phonograph-radios and radiobars are among the good bets, along with less novel numbers.

Selections must be made, too, according to price levels, in relation to



Fans are now greatly interested in international news reports because of war abroad. Grunow supplies it here.

the income status of the area. It will be remembered that all figures are slightly higher this year.

Many good items to be used for mailing will be furnished by the manufacturers. Others, designed by the dealer, will likely accent photographs and simplified copy. Whatever is sent will be forwarded in this spirit: the consumer's mail box is more cluttered with such pieces this year than ever before.

Early in the period, dealers will wish to have complete plans laid out for cooperative advertising with jobbers. Often it requires considerable time for the distributor or the local advertising manager of the newspaper to line up a group of dealers to take part in special newspaper displays. Also, the dealer will benefit by a thorough pre-check of manufacturers' mats on hand.

Many dealers regard the new store and window displays now coming from the manufacturers as basic units

New end-table types like this RCA model add sure-fire sales interest to the 1938 Christmas season.





Billie Bailey, network singer, might be hoping that someone will think of this Westinghouse "Cozy Corner Ensemble" as a holiday gift.

around which to string their own original trimmings. New display and demonstration gadgets from the factories this year are larger, more elaborate, and in general are more effectively lighted.

This is one season in which price appeals can be played down on window placards. Undivided attention can be given to dramatizing the features of new sets. Dealers can get hundreds of ideas from recent national contests on promotion, involving window trims. This period is one in which radio display men will not be forced to turn to a re-hash of ideas used last year.

Apparently the emphasis will be placed on higher-priced models, "live" demonstrators, hook-ups with big broadcasts, and the return to prosperity.

#### Interiors

Last year the holiday season was a "blue" one, as far as color was concerned—various shades of blue dominated the leading display stunts, rather than the conventional red and green.

This year the color theme may change again, and this becomes important as radio men start to fix up

Illustrating what radio means to the youngsters-getting their lessons via Philco in Chicago recently during an epidemic of infantile paralysis. their interiors. There is no particular point in all dealers following the color style developed by metropolitan experts, except that if radio men choose the right color, they will find much more material available at the decoration supply shops.

Those dealers who plan to re-decorate their interiors will find it profitable to rush the job to completion before actual holiday work begins in the store.

#### Payment plans

Based on higher price schedules and increased spending power throughout the country, 1938 plans for time payments on radio may vary from those used last year. Dealers alertly examine the exact conditions in their areas and before the holiday season gets under way, they know what time payment technique will be attractive and profitable.

Activity in price maintenance also enters here. Legal backing for the dealer in the matter of list prices changes his philosophy and may inspire him to talk himself into a better deal when he extends credit. He may as well give the customer the idea that the whole price procedure in the radio business has undergone a change.

The "know your merchandise" aspect of selling has gained a new importance this year. New models are complicated because they are so vastly improved. For a dealer to walk into a big shopping season with his sales force vague on the features of 1938 receivers would be unfortunate.

Hence the current accent on training, while there's still time. Salesmen are encouraged to note down their awkward experiences during a sales talk, to get the answers before it happens again, and to pass the facts around among sales associates.

Films issued by the manufacturers on the subject of selling their new features are extremely helpful here.

Knowing that many of the new tuning devices and cabinet designs will sell on sight, the word "demonstration" will come in for an extra play this season. Entire ads or mailing pieces can be used on this subject alone. "Demonstration Week" or "Open House" or "Special Store Showing" are the phrases coming up.



# WHICH BUYERS ARE THE SAPS?

#### "I-can-get-it-for-you-wholesale" evil, means loss to everyone in radio. Dealers are called upon to broadcast a dramatic and final reply.

\* SOME people are going rather nuts over a new game.

It's called "skip-the-retailer."

The trick is to slip quietly past the dealer and get-it-for-yourselfwholesale.

The number of players in the radio section is increasing and the dealer is both fed and burnt up. It's one of the rankest abuses of our day; the whole business annexes itself a black eye and everybody is conscious of foul dealing. In sections where this evil is prevalent, the man who tries to run a normal radio retail outlet gets a shattered, cheated feeling.

If this unholy game spreads, a lot of sad, sad things are sure to happen. The legitimate radio dealer may become an innocent antique, a nit-wit optimist who failed to notice what smart persons were doing. His most tangible asset will be his belief that he has a wholesome position in the merchandising structure of his area. Certainly there won't be much actual profit for him.

The vital nature of proper installa-

tion and service will be totally discredited. Local standing will shrink to something not apparent to the naked eye.

#### Two-fisted opposition

Dealers have a right to think that this is a bitter reward for hard-working specialists. Selling the most exciting merchandise in the world and having taken the pains to find out what there is to know about it, here's one guy on Main Street who deserves a better deal.

Right now, he watches the skipthe-retailer thing grow. It's considered a choice move, to get a radio at an off price. People look around for somebody who knows somebody who knows somebody who can get things at wholesale. They pay cash, drag the receiver home in the car, with assorted pieces missing. Installation procedure proves to be pretty much of a mystery, but they try to be happy with the second-rate results.

Everybody suffers. Everybody loses. The customer, the dealer, the



Are they saps? It's the dealer's business to broadcast that they are saps. It's the responsibility of the whole radio industry to stamp out this evil.

#### The dealer gets a friendly fleecing

A good many of these ratty transactions look harmless enough. Big companies like to extend courtesies to their employees, in the form of discounts made specially available. Civic and social organizations think it's nice to offer members the chance to buy at wholesale prices. Distributors can't find it in their hearts to turn down their good friends when they want to buy a new radio. Industrial jobbers who sell to factories are approached by executives and employees for radios at "wholesale".

When you add to these the volume done by various types of discount houses, purchasing agencies, "buying clubs" and a large group of jobbers who are informal enough to sell at retail, you've something to worry about.

The whole group fortifies itself with circulars, booklets and personal discount cards. They even mention factory guarantees, time payments and trade-in allowances. All this is offered on makes that can't be anything but standard, with models numbers and everything.

#### It adds up

As for the number of sales that the dealer is missing as a result of this menace, here's what one dealer near a big city says flatly:

"At least 50 per cent of the sets being sold in my town are not being handled at all by dealers. The extent of the practice is more unfortunate than anyone thinks, take it from me. We know, because of the aerial jobs we are called in to do, for one thing."

Another dealer in a metropolitan suburb agrees with the 50 per cent estimate and delivers a more elaborate type of squawk:

#### "BUYING A NEW RADIO? LISTEN, GEORGE, I KNOW SOMEBODY WHO ...."



"I'm almost positive that at least half of the new radios going into homes in my area are put there by non-retail agencies. The sad part of it is that it removes a most important group of buyers from the dealer's group of prospects. The discount seekers are people who have money and who are interested in higher priced sets. It leaves only the more innocent ones for the legitimate outlet."

Other dealers remark that the offcolor outlets are naturally unwilling to take the time and the effort to decently dramatize the multiple advantages of the new sets. They don't know anything about "selling up." Radio is poorly represented and finally identified with shabby tactics.

#### Folly of it all

Oue big retailer writes indignantly under the head, "We need a housecleauing":

"Purchasing agents are selling radios direct to the consumer at ridiculously low prices. Of course their expenses and upkeep are so low that they can well afford to do it, but where do we come in? I'll tell you where; we're left clear out in the cold against a competition we cannot possibly meet and still survive."

Enraged at missing a series of fat sales under his very nose, another dealer writes out loud:

"Most of the buying-at-discount goes on in large cities. It's done mostly by business people who should have better sense. They've just got a false idea of economy."

#### What can be done?

It's generally agreed, though, that it is a slow and expensive process to let the public find out for itself that discount buying is 100 per cent insane. A number of solutions are suggested.

The chief aid to the retailer is to educate the public that, as the Chicago Better Business Bureau ouce said in an advertisement, "So-called wholesale prices are wholesale bunk !" House ads with veiled warnings against the practice are a great help, although dealers can rarely afford to buy space just for that purpose. Many prefer to register the idea personally with anybody in the prospect group who is definitely in the market for a new radio.

Radio men will find that dealers in other fields will readily cooperate in the matter of publicizing the evils of buying at wholesale. Cooperative advertising in local papers, sponsored



### EVERYBODY LOSES. EVERYBODY SUFFERS . . .

When a radio is purchased at "wholesale" and improperly installed by the customer.

The **dealer** loses the retail profit on the sale

The "wholesaler" performs a retail function at insufficient payment

- The manufacturer suffers in prestige when the improperly-installed set fails to operate satisfactorily
- The broadcaster loses an enthusiastic listener
- The radio advertiser wastes his money on expensive talent whose performance the listener cannot enjoy
- And the radio listener himself loses most, for-for a few dollars he cuts himself off from the great music, drama, and thought of the world, securing for himself only a pale, colorless noisy copy of the rich treasures of radio!

by business or civic groups is one thing.

Any piece of dealer advertising which outlines the advantages of the retail shop can wind up with the suggestion that such service is not available at any wholesale type of outlet.

Iu the statement of an indignant

retailer is seen another way to combat the buy-at-wholesale danger:

"An association of radio business men could ... exert enough influence to make the purchase of a radio or any of its associated products from a purchasing agent an extremely difficult thing."

# CURE FOR HEADACHE

- trade-ins become increasing problem of radio dealers

- "get customer to keep old set" seen as complete solution

★ WHAT is the chief headache among radio dealers today? Call on retailers east and west, and the answer is the same. Trade-ins!

Trade-ins are worrying the stores big and little. They would like to be rid of the whole problem of exchanged sets, because as things stand, dealers are giving more thought and study to "buying old sets at a minimum price," than they are to selling new sets at a profit! They would like to limit the allowance for old sets at a maximum of 10 per cent of the price of the new purchase, but trade-in allowances continue to run riot.

#### Fair-trade laws

Fair-trade laws are now in force in 42 states, yet a survey of dealers in many of these states shows that few retailers yet clearly understand the provisions of their local state act. or its relation to the new Federal law. Few dealers are paying attention to the provisions of the state statutes enacted to help them with their problems. The radio trade is, of course, locally organized in few places, but general information on the fair-trade laws is usually obtainable from local chambers of commerce and business men's associations.

Clear grasp of these laws, and application of them, can do much to simplify the trade-in situation.

#### Bona fide dealers

Recognition of only bona fide dealers, as outlets for radios, would solve many problems. In one southern city, the jobbers recognize only dealers who have seven or more sets on their floor—requiring a minimum of seven radios of any line, before orders will be accepted for any sets in that line.

If radio must have its trade-in allowances, then ways must be found to handle the old sets. Many dealers are taking the best of the trade-ins, and overhauling them, thus giving slack-period work to their service departments. Such sets can be sold to buyers with limited amounts to spend. Others destroy traded-in sets—give 'em the ax! A few are giving working trade-ins to blind and invalid persons who cannot afford to buy sets for themselves. Local charity organizations help in this worthy work.

But the clean-cut and sensible way out of the trade-in problem, most agree, is to persuade the customer to keep his old receiver and use it as a second set, for the bedroom, kitchen or basement. People are beginning to find that each room in the home can use a radio set—just as each room can use a clock. The old set is worth more to the family which has used it and knows its value, than to anyone else. In use as an extra set, it supplies a new convenience, and then may itself be replaced with a new set later.

#### Everybody happy

For instance if a customer has an old set and suggests trading it in on a new console, here's what happens if the dealer gets him to keep his old model. A summary:

The dealer realizes a clean-cut profit on the sale of a new set.

The old set is shifted to another room, and if it later gives trouble the serviceman may get a job putting it in shape.

The customer learns the extreme convenience of having more than one set in his home.

#### RADIO'S 241-LB. CATCH



E. J. Krause, Radiobar's president, left, dragged him in in 45 minutes.

He may decide that he needs other sets in other rooms, too, as a result of starting the more-than-one set habit.

The customer gets 1938 reception iu his main living room, where it belongs.

The dealer is relieved of handling the traded-in set.

More listening is done in each home; program sponsors get better results: more big shows are made available.

The several-set practice becomes standard procedure in the modern home.

\* \* \*

"Get 'em to keep the old set" is the complete answer to the radio dealer's dilemma.

#### TRADED-IN RADIOS TO BLIND

\* During one month recently, every radio traded in at the radio department of "The Eastern," Los Angeles, was given to the blind.

All radios were first put in working order and donated to the Braille Institute which in turn presented them to some needy blind man or woman. The Institute then obtained the names and addresses of each person trading in during the month from Eastern and wrote a letter of appreciation to the customers. Comment on this humanitarian gesture was wide-spread, resulting in present business and future through the fine public relationship thus established. "The plan was absolutely bona fide," says William G. Chew, department manager, "although it is difficult to trace business directly to such advertising, we felt some impetus at an off-season from the promotion. What is more important, we established a basis for fine word-of-mouth advertising of the kind that cannot be bought."

#### RADIO SOLVES MAID PROBLEM

★ Late twist to the discreet business of having several radios in the home as a formula for keeping all members of the household in a good mood, is the suggestion that the maid should have a separate set.

Business men with one servant or a batch of servants have written to say that a special receiver for the maid to use helps greatly to keep her contented and to encourage her to stay in evenings.

Theory applies to other members of the household staff. Additional sets have been found to be one of the smartest investments in general domestic well-being.

# WHAT YOU CAN SELL

#### In million-dollar programs



Star singer Jeanette MacDonald now on a regular Sunday night series.

### WHEN YOU SELL A SET

★ "Here's the connecting link between the dealer and a sale." writes Gerald Evans, program-conscious radio man of Ola, Arkansas.

"I use a list of programs with their time and stations, and to get an idea of what the prospect specially enjoys, I mark out various ones. However, I never mark them out so well but that he will be able to read them if he wishes to,

"When I see the prospect later, I

ask him how he liked the picked broadcasts, and find that he has heard and enjoyed other programs also. If he mentions the Royal Canadians, for instance, he is in line for high fidelity; if drama, a selective powerful job that will guarantee every word from start to finish.

"It is easy to sell the prospect on a set that will enable him to hear every word of something that interests him."



Florence George, song artist on NBC.



Maria Jeritza, opera star on NBC Blue.



Alice Faye, a Friday favorite with Hal Kemp on CBS.



Olga Baclanova, Russian entertainer, on Mutual Mondays.

# KNOW YOUR BANKER

#### Call on him several times a year; whether you need funds or not

★ "NOT long ago I was talking to a dealer who acknowledged that his financial affairs were badly "frozen," comments Frank W. Grcusel, Milwaukee distributor who has been guide and friend to many radio retailers.

"When I suggested to him that he should see his banker, I was rather surprised at his reply which was his definition of a banker.

"'A banker,' said he, 'is a man who loans you an umbrella when the sun is shining and takes it away again when it starts raining.'"

The trouble is not so much with the banker who takes back the umbrella when it starts raining, continues Mr. Greusel, but with the merchant who waits until it starts raining to ask for the umbrella. Too often the merchant waits until he is in a tight spot before he even thinks of his financial condition or of his banker. Then without sitting down to analyze his business, he rushes in to see his banker. Because he cannot give a plausible reason or show a satisfactory statement, his request is turned down. The result is that the breach between that merchant and his banker is widened instead of being brought closer together.

#### Confidence can be built

The average banker is enthusiastic and willing to loan money to the merchant in whom he has *confidence*. It must be realized, however, that confidence in anyonc's character and ability is not built in one conversation or one interview. Confidence can, however, be built up by frequent interviews and by talking over your problems with your banker. At least



### WHERE TO FIND FUNDS OR CREDIT

AT YOUR BANK CREDIT COMPANY SUPPLY HOUSE

CUSTOMERS WAREHOUSE RECEIPTS BILLS OF LADING CHATTEL MORTGAGES FRIENDS, CHARACTER LOANS LOANS ON FIXED ASSETS CITY ASSOCIATIONS SALE OF CITY LOTS PERSONAL INVESTMENTS SALE OF PROPERTY INSURANCE once each year a good merchant should analyze his financial situation. My suggestion would be for him to go see his banker, whether or not he wants to borrow money, take his figures with him, and talk over his situation and his immediate future plans. In other words, build constructively. The merchant will be surprised at the help that he can receive from his banker. Get to know your banker—give him an opportunity to know you.

#### Several times a year

Proving that he is a capable manager will go a long way in building confidence of the merchant in the banker's opinion. If the banker points out weaknesses in the merchant's financial structure of his mode of operation, and the dealer is able to correct it, the banker's confidence is stimulated.

"Let me repeat," concludes Mr. Greusel, "I believe every merchant should talk over his financial affairs with his banker at least once a year and usually three or four times a year, whether or not he needs a loan. In fact, it usually will be found to be good business to make a small loan during your peak season, even though you might not seriously need it.

"Don't overlook the fact that the independent merchant usually must be his own executive manager, his own financier, his own sales manager, his own advertising manager, his own service manager, and his own shipping manager. In other words, to be a good manager, he must have some fundamental knowledge of the underlying principles in each of these departments that he may properly direct them.

#### Start today

"Make up your mind that before the day is over, you are going to become better acquainted with your banker. Take one problem that you may have in mind. Stop in and talk it over with him. He may not have any suggestions to make and you may not be able to use the suggestions that he does make. But, I assure you, that if you will follow this practice, you will soon find the banker vitally interested in you and your problems. I will wager further that if at the end of the year you will analyze your relationship with him, you will find that you have taken into your confidence a man of ability who can and has lessened your problems. At least you will have made a friend to whom you can go to talk over your problems."

### JOBBER-DEALER COOPERATION

three high-spots for the distributor in selling sound
 initial installations are sound man's best advertisement

★ Distributors can reuder invaluable aid to their dealers in stimulating demand for sound equipment in many ways, says L. M. Sandwick, sales manager Electro-Acoustic Products Co. But of these, three seem especially constructive;

(1) By recognizing that their dealer's success depends entirely on his first installations. Intense and concentrated effort should be put forth to "erack" the market in each dealer's territory. In the sound business one good installation almost immediately leads to others.

The jobber should, therefore, employ the full time of one or more sound specialists. These men should be wholly at the disposal of the dealers. They should call on the dealer for no other purpose than to stimulate his interest in sound and to help him develop sales. They should be competent to call on prospects, make layouts, to demonstrate equipment, and above all to supervise the dealer's first installations.

(2) By maintaining a special display room solely for sound systems, speakers, microphones, and acces-sories. Demonstrations make sales, and the dealer should be encouraged to look to his jobber's establishment as the place to bring prospects. It takes time and it costs money to demonstrate on the prospect's premises. The jobber's sound studio should be neat and attractive, and should be draped or treated to provide proper acoustics. It should not be a corner of the service department with tools. parts and sets strewn about. One or more systems should be hooked up ready for instant demonstration with turntable and various types of microphones.

(3) By stocking one and only one complete line of sound equipment which he and his organization know thoroughly, believe in, and concentrate on.

Jobbers find that one of the prineipal objections of many dealers to the active solicitation of sound-equipment business has been the seeming dearth of prospects. Why, says one dealer. should I take on a line of sound apparatus when there are ten prospects for a radio set or a refrigerator to every "suspect" for a sound system? Why, says another, should I bother with sound when my only chance to do business would be to come out low bidder on a municipal auditorium, an athletic field, or a new high school?

These objections have hitherto been seemingly valid, comments Mr. Sandwick. There have been comparatively few prospects for sound installatious as compared with the potential market for radios and refrigerators. It is likewise true that up to recently the principal effort in selling sound equipment was expended on bidding for public awards at ruinous prices.

#### Profitable markets

But the picture is changing with unbelievable rapidity. With the acceptance of the true definition of sound equipment—the means by which a man may communicate quickly, easily, naturally with a group be it large or small, and the group in turn may hear him comfortably—the market is widening almost daily. The dealer now should realize that his own urban neighborhood or natural territory is full of prospects.

Consider the two great plus factors in selling "sound" in a neighborhood market.

First of all is the comparative absence of organized competition. Let's go back to those ten prospects for a radio or a refrigerator. Regardless of the popularity of the dealer's lines, every prospect of the ten is going to shop other competing merchandise. He's going to demand trade-in allowances, terms, extra concessions of one kind or another—all the natural results of organized competition.

That's where selling "sound" has its advantages. The neighborhood prospect will be more interested in the idea and the application than the shopping for competitive equipment. Add to this "cash ou the line" and no trade-ins. and you have the best specialty merchandising opportunity in a decade. •

Next consider the very nature of the business. Remember the installation is not going into a man's home or a housewife's kitchen. The sound system in the church, the hall, the parking lot, the food market, the industrial plant, or the neighborhood theatre is going to be heard by hundreds-and over a period-by thousands of people. If it's a good one, they're going to express interest, and a certain percentage of them are going to seriously consider its possibilities as a time-saver, money-maker, morale builder, and general aid to efficiency and comfortable hearing in their own business or institutions.

In no other field is the dealer so well and profitably advertised by his past performance. He may look forward confidently to new business—as the result of past business. His greatest effort must be expended at the start. Once he has a successful installation or two to point to the rest is easy.



Public address equipment will figure in the "Technaural" lecture series to be held nationally during November. Left, E. C. Cahill, RCA service manager, and W. L. Rothenberger, commercial sound section manager.

# WHAT PRICE TUBES?

the deadly discount interrupts a fine business
signs of recovery for a big season ahead

\* FREE to develop a great season, the merchandisers of tubes have only to decide at what price.

Jobbers are saying that it should be their best business, but that the current practice is out-and-out dog eat dog. The business is beset with wild discounts which seriously disturb the machinery of distribution. Meanwhile the consumer is innocently shopping around in what is unmistakably a buying mood.

The public is being subjected to some darned effective tube promotions, and these should be given the full chance to register on total volumes. Reviewed in RADIO TODAY for August were some first-rate campaigns sponsored by Arcturus, Ken-Rad, National Union, Phileo, Raytheon, RCA, and Hygrade Sylvania.

#### Mixed marketing

Detailed scrutiny of the situation reveals more fault with the whole tube selling structure than with any particular group involved in it. The set-up has allowed the following conditions to exist:

(1) Tube buyers, whether they are jobber-purchasers from the manufacturer or dealer-purchasers from the jobber, have become as much interested in what profit the supplier makes as in what profit he can make himself.

(2) Nearly everyone in the business is convinced that there is more of a margin between manufacturing costs and list prices than was formerly thought. This impression is damaging and unfortunate and does nobody any good; it puts the manufacturer on the spot and fails to consider proper distribution costs.

#### Question of outlets

(3) The vogue of discounts has allowed new types of outlets to be encouraged. Cut-price outfits have stepped into the picture because they noticed that the industry was one which thought mostly of price.

(4) Each dealer has a tendency to stock more brands of tubes. On the new lines, he is likely to demand extra discounts because his shop has not been identified with the brands, and he feels that promotion eosts will be increased.

(5) Dealers notice that jobbers are capable of doing abrupt about-faces on tube recommendations, and the public notices that the dealer is capable of the same thing. It all de-



Tube plans in Florida get under way at Thurow Radio Distributors, Tampa. Left to right, front row, Thurow's L. H. Harrell, F. F. Frick, Jimmy Stanford, Bill Jaudon, T. M. Bates. Middle row, Thurow's V. W. Thomas, Hygrade's R. P. Almy, Thurow's Herbert Brown and Andrew Magnuson. Back row, Hygrade's J. T. Fulwiler, Thurow's W. L. Obenchein, C. E. Morgan, H. M. Carpenter (president), C. C. Campbell, Oscar Blassengame. Extreme rear, Brower Murphy, manufacturers' representative.

pends upon who has a deal on what brand.

There are a number of encouraging angles to the situation, black as it looks. In the first place, the importance of tube prices, so far as the public is concerned, is definitely overrated.

Type numbers and tube characteristics are so confusing to the average eonsumer that the matter of price is not specially important. This means that when the industry gets around to placing its emphasis on quality and service, the public will be ready and willing to pay for it. The tube business happens to be one in which it is very easy for the merchant to promote performance.

Also, price maintenance laws recently enacted have created a healthy atmosphere throughout the marketing of radio and associated products.

The idea of tube manufacturers getting together is far from ridiculous. They've done it before, and were universally pleased with results. By this time they realize that the practice of fighting each other creates a series of evils which is dramatically self-generating. It is rank folly to remain in an embattled position while a perfectly beautiful business goes wrong.

#### Cooperation coming

In some quarters it has been suggested that what the industry needs is a czar. The argument is that somebody with a stop-and-go sign could eliminate the stragglers and steer the bona fide dealers and jobbers swiftly and safely to more profits.

Apparently the tube situation will be one of the early subjects to be handled by recently formed organizations among jobbers and among servicemen. Those who have something to hide will therefore hasten to clean house before their practices become the subject of open and nationwide eriticism.

Naturally this "age of discounts" has meant that vigorous and healthy promotion of tubes was lost in the shuffle. Whenever an industry is shifty and unsound within itself, it cannot connect properly with the ultimate consumer. The chief aim of manufacturer, jobber and dealer should be to sell more tubes, rather than to concentrate on price schedules.

The season's trend in broadcasting is a smash asset to the tube seller. The networks have arranged a worldbeating sports schedule. They go on the air with regular million dollar programs, and extend their coverage of special events.



# MERCHANDISING TONE

Start the prospect thinking about what good radio tone will mean to his home.
 Give a simple explanation of frequency ranges of familiar musical instruments.
 Get a local musician to tell you what his type looks for in radio performance.
 Be sure to tune in on a broadcast which will adequately dramatize fidelity.
 Give the prospect some idea of the acoustical construction of tone chambers.
 Present a general idea of what happens as musical notes flow from speakers.
 Tell the prospect what he misses if a radio omits the high or the low notes.
 Sum up your "tone talk" with one final over-all look at the back of the set.

Photos from a Stromberg-Carlson film prooduced by Audi-Vision.







# SALES-UPPERS USED BY DEALERS

#### Merchandising ideas in operation as holiday season approaches

#### DEALERS SPONSOR TWO-HOUR PROGRAM

★ Group of eight radio dealers in St. Louis, Mo., have started the sponsorship of a two-hour transcribed program on the local station KMOX. Announced as the "Musical Cavalcade," the feature is divided into eight 15-minute units and is the biggest series ever to go on a regular schedule in St. Louis, among those sponsored by cooperative groups.

By using a transcribed series, the dealers are able to present such artists as Gertrude Niesen, Andre Kostelanetz, Russ Morgan, Lud Gluskin, Iasham Jones, Leon Belasco, Emery Deutsch and others.

#### PLACARDS ON DUMB WAITERS

★ So that apartment dwellers will read the names of a local radio dealer every time they use the dumb waiter, F. F. Amerman of Montclair, N. J., has designed a placard for use there. Service is accented on the eard, which is effective because the dumb waiter is also a form of service.

Mr. Amerman makes the acquaint-

ance of apartment house superintendents throughout his area, with good results. They steer him to aerial jobs, to prospects for new sets, and to newcomers to town. For these tips, Mr. Amerman extends the superintendents minor courtesies now and then, in connection with his own personal radio needs.

#### CONCENTRATE ON PROSPECTS

\* Recognizing that people still want to "keep up with the Joneses," the Ellis Music Company of Nevada, Mo., has increased its gross radio sales 35 per cent.

Real prospects are gleaned from the telephone book, credit publication, and the daily newspaper. The newspaper provides many leads—Mrs. Jones is entertaining her bridge elub and no doubt would like to have a radio just a little better than some of those sold recently to her friends. Or Jim Smith would like to impress his mother, who is visiting him for the first time since his marriage, with the fact that he is "doing fine."

Better merchandise can be pushed because the salesmen know who are



Ace designers are again doing radios—new Crosley by famous Walter Dorwin Teague.

real prospects and the extent of their buying power.

The above three sources for prospeets are taken into every sales meeting. Every salesman knows which names are taken by the others; H. A. Ellis, owner of the company, wants his men to compete in production but not in eustomer contacts. When a name is presented for discussion, if the credit reference is not reassuring, perhaps one of the men will know that the prospect has obtained a good job since the credit rating was issued and would be a good person to contact.

#### FOOTBALL SEASON TIE-UP

★ An attractive folder with a complete schedule of local football games is being used to advantage by Caldwell Radio Shop, Caldwell, N. J. On the cover is the dealer's imprint and the games of chief interest locally are listed on the back cover. Nine pages of conference games are listed by dates.

According to C. W. Norwood, proprietor, the folder has already stirred up service business directly traceable to its appearance. It is said that the appeal of the item will extend until the first of the year.

#### NOVEL SALES DEVICES

★ Dozens of new radio promotion ideas turned up during Philco's recent merchandising contest conducted nationally among distributors on the company's double X models.

At Raton, New Mexico, a dealer used frosted windows with tiny peekholes left to attract passersby.

At Pittsburgh, Pa., Yellow cabs were used to deliver messages.

At Reading, Pa., a mobile billboard sound truck attracted wide attention.

In New York City, live elephants carried banners through the streets, and a contest was held for candid camera shots of persons in squatting, stooping or squinting positions.

At Rochester, N. Y., an airplane was used to plug the sets.

In Oklahoma City, Okla., a traffic system with Stop, Look, Listen signals was used.

(Continued on page 24)



#### "TRAVEL WITH TRAV-LER"







Model 115 15-Tube A.C. \$137.50

Model 830 8-Tube A.C., \$52.25 Model 730 7-Tube A.C.-D.C., \$39.50 Model 630 Model 627 6-Tube A.C., \$40.50 6-Tube A.C.-D.C., \$29.95



TRAVELMATIC

### Yes... TRAV-LER offers the DEALER the MONEY-MAKING LINE for 1938

odel 112 Tube A.C.

Be the first in your

territory to feature

these Outstanding new

models. Mail this i

coupon TO-DAY. |

12-Tube A \$109.50

- Exclusive Automatic Tuning Units in TABLE MODELS
- 16 Models with Automatic Tuning—\$29.95 to \$137.50
- 10 Quality Price Leaders without Automatic Tuning—\$14.95 to \$37.95.

A complete line of radio sets having Travelmatic Tuning; carefully engineered. Housed in table "models and consoles of outstanding beauty, priced in the volume brackets . . . the moneymaking radio line for 1938. Truly an automatic line from the small popular priced table model to the larger console at prices heretofore unknown, making Trav-ler the outstanding line this year.

MODEL 527 \$2995

Trav-ler development. An unlimited number of stations can be logged. No tools or special keys required. Easily set from front of dial. Depressing and rotating with the finger automatically tunes any station.

An exclusive

Model 6300 6-Tube A.C. Chairside Combination \$127.50

That the Trav-ler name has withstood the varying conditions of the industry for the past sixteen years is an enviable record and positive proof that it has not varied from its policy—"to build up to a standard of perfection and not down to a price."

#### Sets with 1, 2 and 3 Bands

Beam Power Output
 Automatic Tuning
 Auditorium
 Type Speakers

 Trav-ler Radio & Television Corporation
 1036 W. Van Buren St., Chicago, III.

 Without obligation please send me Trav-ler Catalog RT-1037 on 1937-8
 Line.
Name

Trav-ler merchandise will definitely give you higher quality for less money.

Other models with Travelmatic tuning not shown include two Bat. tery Table Models and two Battery Consoles.



#### October, 1937

At Monte Vista, Colo., a whiteand-purple float with large cut-out figures of squatting, stooping and squinting figures appeared in the streets.

At Rock Island, Ill., the three figures were used as a basis for a drawing contest among school children.

In Seattle, Wash., and Portland, Ore., special lucky coins were issued.

In Missouri, Kansas and Oklahoma householders were given "ice cards" to place in their windows as an indication that salesmen may demonstrate new sets.

#### PUPPETS DRAW RADIO CROWDS

★ A complete radio broadcasting stage and orchestra, in "actionized" miniature form, attracted large crowds at Sherman & Clay, Sau Francisco. The elaborate display cashed in on the fact that puppet shows have universal appeal.

Puppet orchestra on the tiny stage played a Guy Lombardo number, led by an amusing little conductor waving a baton. Members of the orchestra were seen to play their instruments at the proper times. Fittings included a clock and red and green lights such as are used in broadcasting studios.

Following the music a master of ceremonies moved out ou the stage and made a commercial announcement on RCA radios, inviting the audience to try the new tuning devices. Sherman & Clay held both matinees and evening shows, and made dozens of demonstrations to prospects.

#### DEMONSTRATION PROVISION IN Contract aids radio sales

★ When a customer for a radio signs a contract with M. L. Foster & Co., Oklahoma City, Okla., he is given to understand that, should the radio not prove satisfactory, it may be returned within a 24-hour period, and he will be under no obligation to keep the instrument. If the radio is not returned within the specified time, the sale is regarded closed and the contract holds.

"This eliminates the necessity of allowing the customer to take the radio out on trial, without the contract," M. L. Foster, head of the twostore concern pointed out. "It therefore greatly facilitates the work on the part of the store, since wc kill two birds with one stone by having the contract drawn up and signed first. The fact that we make this concession in the contract instills confidence with the customer, and his reaction has been that the instrument must be pretty good if we are willing to take the risk."

#### SELLS SPECIAL BROADCASTS

★ Steady attention to broadcast schedules as one requirement for the finished radio-set salesman has given Brody's Music & Radio Shop, Glendale, L. I., N. Y., a new angle to use in selling all-wave receivers.

William Mantel, Brody's manager, noticed there was a terrific popular interest in international events.



"Proper installation" is feature of advertising used by Kirk of Mattoon, Ill.

Backed by the publicity given by the press to such matters, Mantel talks up radio's coverage of such affairs and stirs up a yen among his patrons for a receiver that will pick them all up as they happen.

Point is that the broadcaster's attention to special happenings abroad has arrived at the place where it can be used to good advantage on radio's sales floors. The device is particulary valuable in foreign-born communities where groups of listeners have definite old-world loyalties, due to the fact that they originally came from countries abroad.

#### DEMONSTRATION FOR CHILDREN

★ When Harry Guenther of the Guenther Radio Shop, Beaver Dam, Wis., enters a home to demonstrate a radio, he kceps his eye on the youngsters in the family—the boys and girls of upper grade and high school age.

"In many cases where there are children in the family, the radio is being bought for them," says Guenther. "That is why I show the youngsters how to operate the set. Show them how correctly and usually you have made your sale. They are usually bright and they catch on quickly; often they are studying such matters in school."

Mr. Guenther believes that an eager young person can do much of the selling for the radio dealer. When the family goes into a final "buying huddle," the youngsters have a great deal of influence. Guenther makes friends with them; invites them to his shop after school.

#### DISPLAY OF MIKE ARTISTS

★ Unusual window display tried out by Dave Krantz, radio dealer of Philadelphia, Pa., had sufficient drag to stop 8 out of 10 passers-by, and to boost general sales and service volume by 30 per cent.

Window stunt was built around a series of pictures of broadcast artists, exhibited with the caption, "Don't Be Cheated On Your Favorite Radio Program!" Point was that listeners, iu order to hear ether stars properly, should look to Krantz's for service.

According to the report which Krantz sent to NBC on the display, street traffic took a special interest in the pictures of NBC announcers, shown in the window in an attractive set of photos separate from the entertainers.

Push Ahead to Big-Set Sales with

RCA Witto

Miles ahead of any other dial on the market! That's the new RCA Victor Overseas Dial—an *exclusive* RCA Victor feature. Makes tuning for short-wave stations as easy as for domestic stations. Short-wave bands are spread 50 times wider than on

ordinary dials. Separate tuning scales are

used for 49, 31, 25 and 19 meter bands.

Only the scale in use is lighted. Names of short-wave stations are printed on the dial.

POWERFUL 4-COLOR MAGAZINE ADVERTISING Saturday Evening Post and Collier's

STRONG COMMERCIAL ANNOUNCEMENTS on Magic Key Radio Program

DRAMATIC LIFE-SIZE WINDOW AND STORE DISPLAYS

UNIQUE, ATTRACTIVE PREMIUMS

STATION VERIFICATION CARDS AND MONTHLY SHORT-WAVE PROGRAM SERVICE – for DX fans.

> FORCEFUL NEWSPAPER ADVERTISING

FOREIGN DIRECT-MAIL CAMPAIGN from Paris, London, New York

Man alive – there's a selling drive! So, man these mighty sales guns now! Each of them features Overseas Dial-directs customers into your store! Get in this sales push-and march along to a profit victory in October! NOW'S your chance to *cash in* with the biggest feature of the month . . . RCA Victor's sensational Short-Wave Tuner—the amazing new Overseas Dial! Right now, RCA Victor is focusing public attention on this revolutionary Short-Wave Tuner with seven outstanding advertising and promotional blasts. Each will bring "hot" prospects to your store. Each will help you make big-set sales, big-time profits!

October is RCA Victor Overseas Dial month! Just look at the seven big selling guns RCA Victor is going to touch off this month and you will see it will pay you—and *plenty*—to feature the sensational Overseas Dial Models 813K and 816K in your store!

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

ANAG



RCA MANUFACTURING CO., INC., CAMDEN, NEW JERSEY A Service of the Radio Corporation of America

300 MILLION RCA RADIO TUBES HAVE BEEN BOUGHT BY RADIO USERS ... IN TUBES, AS IN RADIO SETS, IT PAYS TO GO RCA ALL THE WAY!

October, 1937

# INTO THE DISC BIZ

#### Great things to expect when you open a record dept.

\* THE idea of opening a record department has hit hundreds of radio dealers as 100 per cent healthy and timely.

A large section of them are wondering whether they can swing it whether they've got what it takes in the way of personal ability and store equipment.

Herewith are presented the answers to the most important questions. They are intended to simplify the dealer's attitude toward the fast-growing disc business, and come directly from record headquarters.

The questions are:

- 1. Must I know a great deal about music, to sell records?
- 2. About what investment is required to start with?
- 3. About what profit may I expect?
- 4. Who are the chief buyers of records?
- 5 Should I stock both popular and classical records?
- 6. Do I need a demonstration room?
- 7. How many records do I need to start with?
- 8. Why do I have so many calls for records lately?
- 9. Will records increase my store traffic?

#### Victor prescribes:

From Camden, N. J., RCA-Victor issues some helpful statements:

"Someone in the dealer organization should eventually be trained to have a talking knowledge of music and a thorough knowledge of the Victor record catalogue. Investment required depends entirely upou the size of the community in which the business is located, or the neighborhood in which it is located in a big city.

"Profit to be expected is the normal retail profit necessary for the operatiou, with the additional advantage that the profit is fully realized, the record business being chiefly a cash business. All classes of people are buyers of records, because different types of records are made to suit all classes. The interest in good music has increased tremendously in the last few years due to the many great orchestras successfully operating in the cities of our country and, also, the enormous additional number of broadcasts of good music on the radio.

"A dealer who has a real desire to

build up a substantial music business must stock both classical and popular records. A demonstration room is desirable unless the business is in a very small community.

"The dealer is having many calls for records now simply because the volume of business has increased tremendously in the last few years; is still increasing at just as rapid a rate and there are still not enough places where the public can buy records.

"It should be obvious that records will increase a dealer's store traffic. Most of the items the average radio or music dealer sells today are fairly large items and once a customer has bought, he does not return quickly except for service. On the other hand, a purchaser of a record playing instrument returns constantly for new records."

#### Decca suggests:

From the New York headquarters of Decca Records, Iuc., comes a series of very useful suggestions:

Proper display will remove most of the necessity for special musical knowledge, as customers will be able to see for themselves. Very often, general knowledge is enough, and a grasp on popular stuff is very easily

#### WAX WORTH WATCHING

- TOMMY DORSEY and his orchestra playing in The Still Of The Night and Who Knows?—Victor 25663.
- BENNY GOOOMAN and his orchestra playing Bob White and Minnie The Moocher's Weddin' Oay, both with vocal chorus by Martha Tülton-Victor 25683.
- ART KASSEL and his Kassels-in-the-Air playing I'd Love To Play A Love Scene and I Want A New Romance-Bluehird 7186.
- FRANCES LANGFORD singing Harbor Lights and My Cabin of Dreams with Sam Kaki and his Islanders - Decca 1441.
- RUSS MORGAN and his orchestra playing The One Rose with vocal chorus hy Mert Curtis, and To You, Sweetheart, Aloha, with vocal chorus by Lewis Julian and The Mullen Sisters-Brunswick 7968.
- PHIL NAPOLEON and his Whispering Rhythm playing Blue Bayou and Love Me, with vocal chorus on both—Variety 656.
- TED FIO RITO and his orchestra playing Cielito Lindo, with vocal chorus by The Debutantes and Vieni Vieni with vocal chorus by Muzzy Marcellino and The Debutantes—Decca 1450.
- JEAN SABLON with orchestra singing Comment T'Oublier? (Can I Forget You?) and J'ai Peur De Rever (Afraid To Dream)—Victor 25654.
- RICHARD TAUBER singing Indian love lyrics, Kashmiri Song, and Till I Wake, with piano accompaniment by Percy Kahn—Decca Personality Series—23044.
- UNITED STATES MILITARY ACADEMY BAND playing West Point foothall songs and the official West Point march-Brunswick 4007.

picked up. The original investment is very small—sometimes less than \$100. Dealers may expect a clean-cut profit which surpasses that on most types of merchandise.

Chief buyers of records are dance fans, college people, and collectors. People are buying by artists, by brands, by tunes and for many other reasons. Stocking only popular records is a good way to start into the business. The important thing is to get started, and then the merchant will soon get the feel of the demand iu his area.

#### Store set-up

A demoustration room is particularly necessary if the dealer gets into the classical disc business. He may start with only a few records.

Widespread demand for records is due to the fact that a great musical appetite has been developed in that direction. Some lively trend is always providing a powerful stimulant. New types of rhythm are forever becoming the style and getting more people interested.

Records have a perfect score when it comes to building traffic in the radio store. Some dealers even depend upon the discs to get acquainted with radio prospects.

#### Brunswick estimates:

Answers to the questions were also forthcoming from Brunswick Record Corp., New York City:

It is not necessary for the dealer to know a great deal about music, to sell records. The investment ranges from \$1,000 up, depending upon location, etc.

Today, both young and old persons are important buyers of records, and we suggest that dealers stock both popular and classical recordings.

Brunswick feels that a demonstration room is necessary. As for the number of records needed to start with, it depends upon the size of the store. The minimum should be 2,000.

The reason dealers have so many calls for records lately is because of the increased number of combinations on the market. Also, there's that appeal of "Music when you want it--as you want it."

To dealers who ask, "will records definitely increase my store traffic?" the answer is "positively!" IT'S the season's sensation—the feature dealers are cheering for-and it's smashing sales records because nothing competition offers can match all

its advantages!

• It's faster! ... goes direct to the station in a split second! • It's more flexible! ... takes a spint second; it's more nextone: takes any 15 stations, in any order! • It's easier to set any 1) stations, in any order! • It's easier to set up or re-set! • • • adjusts from the front without tools! • It's foolproof! • • no hand switching, nothing to forget! • And it's so accurate it could be used without A F C 1

AND that's only part of the story! ... be used without A. F. C.!

The BIG 1938 Radio Feature

Exclusive Stewart-Warner-C.I.T. Sales Finance Plans open doors that competitors can't get into. • Coast-to-Coast broadcasts by Horace Heidt's

famous Alemite Brigadiers are selling for you now. • Complete advertising and merchandising plans

are really clicking the country over. • A range of models that satisfies every demand in

style, and that blankets every price level.

#### STEWART-WA MAGIC KEYBO **A**] R

# MORE PROMOTIONAL DYNAMITE

#### Manufacturers continue to scale up their efforts to aid dealers

In the new campaign are more radio programs, lively contests, increased advertising in national magazines, dealer helps of extra promise, sales films, newspaper advertising drives, more billboards and promotion noveltues with special appeal.

The campaign is so unusual that RADIO TODAY has invited sales promotion leaders of the industry to outline their efforts in one breath. What they say will mean a great deal to distributors and dealers, as they take up the season's merchandising opportunities.

#### Stewart - Warner campaigns

"The advertising and promotional plans in support of the new Stewart-Warner radio line are more extensive than ever in the past, and have been organized with full support of our 55 distributors and 6,000 radio dealers," declares John F. Ditzell, radio and refrigeration sales manager.

"Substantial funds are provided our distributors and dealers for cooperative newspaper advertising, billboards and local radio programs. The amounts we have allocated to these activities are substantially increased over our 1936 season.

"Our national program of advertising is centered around the coast-tocoast broadcast every Monday evening by Horace Heidt and his Alemite Brigadiers over the Columbia Network. The sales promotional activities direct from the factory to dealer have been expanded at the request of our distributing organization and thousands of dealers. Purchasers of Stewart-Warner refrigerators, in particular, are being targeted by mailing pieces as prospective purchasers of our new radio, with special prominence being given our Magic Keyboard."

#### Increased activity

Stromberg-Carlson will promote its 1938 line with an increased advertising budget calling for expenditures 20 per cent above last year's, according to Warren T. Eastwood, advertising manager of the Rochester firm.

Center of the national advertising program will be full pages in The Saturday Evening Post and Collier's Magazine appearing alternately throughout the season. These will be supplemented by more full pages in *Time Magazine, Better Homes and Gardens, and House Beautiful.* Large newspaper space will also be used in metropolitan areas.

The compauy's policy of thorough dealer cooperation is being fulfilled in the promotional end, by offering many point-of-sale helps and making free matrices of effective retail advertisements available to dealers. Many varied and effective dealer-news ads are offered monthly. Among the point-of-sale aids are a variety of banners, window cards, spectacular displays, backgrounds for displaying sets, neon signs, decalcomanias, circulars, log-books, etc.



Templeton Fox, popular actress heard Sunday nights on Zenith Foundation.

To acquaint dealers' salesmen with features of the line such as the Labyrinth, Flash Tuning, Carpinchoe Leather Speakers, etc., bi-monthly sales bulletins are issued. A soundfilm has also been prepared for dealers along these lines showing an ideal presentation of the Stromberg-Carlson features. It is so arranged that it is also suitable for customer showings.

#### Arvin at work

Glenn W. Thompson, general sales manager for Arvin, opens his outline of the Noblitt-Sparks promotion plans with news of the appearance of Arvin sets in new motion pictures. The receivers will be used by the New Universal studios in their forthcoming productions and the tie-up will be featured in national advertising in leading weeklies. The productions "Merry-Go-Round of 1938" and "Some Elondes Are Dangcrous" will be used for November.

Arvin also has a string of ads appearing in national monthly magazines. The firm recently announced the addition of thirteen new home radio models to its line and Mr. Thompson reports that many new distributors have been annexed during the last six months.

#### **Promotion news**

Philco started something with its recent contest among distributors on promotion of "No squat, no squint, no stoop." Scores of brand new advertising methods appeared in the competition.

In Los Angeles, a contest was staged in a window. Four radios were displayed, and prizes were offered to auyone who could tune them without squatting, squinting or stooping.

A Goodyear blimp was used in the eastern Pennsylvania territory, carrying a sales message through the sky. In this same territory, three comic characters toured the country in an antique auto, stopping in front of dealers' stores and doing a series of tricks. Also a feature of Pennsylvania was a special trolley car rolling through the streets plastered with radio advertising.

### wins with G THROUGH TO NEW HIGH S SCORES IN SALES AND PROFITS!

It's new - more spectacular than a 50-yard forward pass with sales punch that has more power than a 250-pound full back crashing the line!

RAD-O-FONE takes Sentinel clear out of the "entertainment only" class — it adds new utility to radio <del>\_ and eliminates</del> price competition. There's nothing else like if — only Sentinel can offer this exciting new feature — the greatest sales closer you've ever had.

RAD-O-FONE makes a spectacular demonstration, it's something new to talk about and sell, an irresistible plus value added to the already value packed Sentinel line of AC and Farm sets. J

Put this unbeatable team to work for you -Sentinel with RAD-O, FONE will crash through for your biggest year in sales and profits! Mail the coupon today!

#### MAIL THIS COUPON NOW!

SENTINEL RADIO CORPORATION 2222 Diversey Pkwy. Dept. RTO, Chicago, Ill.

Please rush me complete details of Sentinel 1938 Line and RAD-O-FONE.

Name Address

October, 1937

WHAT IS RAD-O-FONE?

The most sensational radio de-

The most sensational radio de-economic in years - Factusive velopment in years - RAD-O-FONE with Sentimet - RAD-O-FONE with Sentimet - A sensitivation of the provider the contract of the

with Sentimell RAD-O-FONE provides the equivalent of TWO

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**CITY RADIO from** \$2195 to \$9995!

FARM RADIO trom

\$2695 to \$8995!

#### **BLE PURPOSE RA**

 $\mathbf{29}$ 

### THERE'S ONLY ONE "B" BATTERY THAT'S PUNCTURE-PROOF



Waste space between the cells accounts for 25 per cent of the cubic contents of the old-fashioned round-cell "B" battery.



Currentismade by electrolyte eating the zinc, which gets thinner and thinner, then perforates...air filters in, the cell dries out, dies.



Five tiny "pin-holes" ended the life of this cell, wasting all this good zinc.



See how little zinc is left in an exhausted "Layerbilt" cell. All the power-making zinc is used up, except for the extreme edge, because *no air gets in*.

"Pin-Holes" Kill old fashioned batteries before their time ... You want the modern "B" battery that gives you "<u>everything it's got</u>"!

Sudden death comes to old-fashioned round cell "B" batteries when the zinc cans begin to perforate (which is long before the available current-making zinc is used up). With the first pin-hole perforations, air is admitted to the cell; as it dries out *it dies out*.

But the newer, better "Eveready" "Layerbilt" "B" batteries give longer life than "B" batteries of comparable size ever gave before. This is because of the exclusive *flat-layer construction*, which means power-making zinc is *completely used up* except for a narrow strip along each edge. Air cannot filter in to dry out flat "Layerbilt" cells, so perforation has no effect upon performance. As a further factor of added value, "Layerbilt" "B" batteries are *all-battery*, completely eliminating the 25 per cent of waste-space between the cells of old-fashioned round-cell batteries.

No wonder "Eveready" "Layerbilt" "B" batteries give more service per dollar of cost. When you explain "Layerbilt" construction, your customers will prefer the "B" battery that's *puncture-proof*.





#### NATIONAL CARBON COMPANY, INC.

GENERAL OFFICES: New York, N. Y. BRANCHES: Chicago, San Francisco Unit of Union Carbide III and Carbon Corporation The words "Eveready" and "Layerbilt" are trade-marks of National Carbon Co., Inc.

### NEW THINGS FROM THE MANUFACTURERS

#### Power output meter



★ Copper-oxide rectifier type of output meter calibrated to read from minus 10 to plus 37 DB and 1 to 5000 milliwatts. Frequency correction less than ½ DB from 20 to 10,000 cycles and impedance variation is less than 5 per cent. Terminating impedance adjustable in 40 steps from 2½ to 20,-000 ohms. Ideal for broadcast and industrial amplifier, sound system, and radio receiver measurements. Model OP-182. Write for catalog RT-130. Daven Co., 158 Summit St., Newark, N. J.—RADIO TODAX.

#### **RCA** carrier interphone



★ Wireless type two-way intercommunicator. Uses power lines to carry voice currents. Uses carrier of 100 KC that is adjustable plus or minus 25 per cent to avoid interference with other nearby units. Picks up voice at distances up to 10 feet from unit. Designed for homes, offices, factories, etc. List \$76.50 per pair. RCA Mfg. Co., Front St., Camden, N. J.—RADIO To-DAY.

#### P.M. speaker motor



★ Speaker unit with alnico magnet for supplying magnetic field. Tempered duralumin diaphragm electro-

October, 1937

chemically treated to prevent corrosion. Diaphragm easily replaced. Unit handles 20 watts. Standard model list \$45. Atlas Sound Corp., 1451 39th St., Brooklyn, N. Y.—RADIO TODAX.

#### Adjustable mike stands

★ Line of adjustable mike stands with "holdfast" adjustment which has no set screws or chuck locks. Stands adaptable for all types of mikes. 2 and 3 section styles. Available with chrome base and tubing or with black base. Floor, banquet and table types. Milwaukee Mike Stand Co., 104 E. Mason St., Milwaukee, Wis.—RADIO TODAY.

#### Phonograph-radio combination



★ 14-tube high-fidelity radio with record mechanism. Full-range volume expansion. Tunes 540-18,000 KC. in 3 bands. Resistance coupled audio system with push-pull output stage. Acoustically designed console. Phonograph plays 10 or 12-inch records crystal pick-up—counter-balanced tone arm. Model AB-184 for AC operation —list \$139.95. Emerson Radio & Phonograph Corp., 111 Eighth Ave., New York, N. Y.—RADIO TODAY—see also advt. p. 3.

#### Multi-range AC-DC meter



★ High-sensitivity volt-milliammeter with 5,000 ohms per volt sensitivity on DC. AC and DC ranges 0/3/-15/150/600 volts. DC mils 0.15.150. Current ranges with self-contained battery--0/5M ohms and 1½ megs. Ivory and black panel and steel case. Model 350. With 3-inch square meter --net \$19.95. Triumph Mfg. Co., 4017 W. Lake St., Chicago. III.-RADIO TODAYsee also advt. p. 76. **IRC** replacement controls



★ Metallized volume controls with spiral wire spring contact to center terminal. Positive contact at all times eliminates noise. 5-finger knee-action contact provides noiseless contact with the resistor element. Available in the new line of replacement controls listing at \$150 upwards—identified in volume control guide by the prefix "J". International Resistance Co., 401 N. Broad St., Philadelphia, Pa.—RADIO TODAY—see also advt. p. 40 & 41.

#### 30-watt sound system



★ Combination AC and 6-volt sound system having 30-watt output. Changeover accomplished by inserting the proper supply cord with non-interchangeable plugs. Has phono table for 10 and 12-inch records—jar-proof pick-up. Supplied with crystal mike, two 12-inch P.M. speakers and all cables and plugs. Model EAP-2232. Electro-Acoustic Products Co., Fort Wayne, Ind.—RADIO TODAY.

#### Mobile sound system

★ Universal type sound system for operation on 6 volt or 110 AC. Turntable and amplifier complete on single chassis. Transfer switch for AC or DC—standby switch cuts out genemotor during intermittent operation and saves battery. Dual input channel with electronic mixer. Crystal pick-up and shock-proof arm. Model C-28 amplifier list \$132. Phono assembly— \$49.50 extra. David Bogen Co., 663 Broadway, New York, N. Y.—RADIO TODAY—see also advt. p. 60.

### NEW THINGS

#### End table receiver



★ Dual band 6-tube receiver covering broadcast band and 5650-18,000 KC. 3-gang condenser with pre-selector circuit on BC band. Cathode ray tuning eye. Continuously variable tone-voice control. Uses glass type tubes. Golden dial. Walnut finish cabinet. Motorola Model 6A1. Galvin Mfg. Co., 4545 W. Augusta Blvd., Chicago, III.—RADIO TODAY.

#### **Condenser** bridge



★ AC bridge circuit for the accurate measurement of resistors and capacitors. Measures 10 micromikes to 100 mikes, and 1 ohm to 1 megohm. Uses electric eye with pre-amplifier stage for balancing. Linear graduations on the main control dial make instrument direct reading. Decade multiplier in switch for selecting desired range. Sloping control panel finished in black and red with chrome trim. Tobe Deutschmann Corp., Canton, Mass.—RADIO TODAY.

#### CW x-mitter kit



★ 25-watt amateur type CW transmitter in kit form. Gives all-band performance with 2 crystals. Uses 6L6 harmonic oscillator. Has self-contained power supply and one coil change per band. Housed in steel cabinet. Kit nets for \$15.95. Utah Radio Products Co., 812 Orleans St., Chicago, Ill.— RADIO TODAX—see also advt. p. 69.

#### Iron-core line-set transformer

★ High-efficiency transmission line to set coupling transformer with iron core. Used in areas where the 1938 Philco aerial does not give entirely noise-free reception. Requires no switch to change from broadcast to short-wave reception. Connected between line and transmission line terminals on receiver. Part No. 32-2763 —list \$2.50. Philco Radio & Television Corp., Tioga & C Sts., Philadelphia, Pa. —RAPIO TODAY.

#### Lafayette electric tuning console



★ 13-tube receiver tuning from 13.7 to 570 meters in 3 bands. Electric push-button tuning selects up to 8 stations. Stations set up from front. Temperature compensated circuits insure resonance at all times. Power output of 20 watts and 12-inch speaker. separate bass and treble controls, high fidelity switch. Model B-44. Wholesale Radio Service Co., 100 Sixth Ave., New York, N. Y.—RADIO TODAY—see also advt. p. 79.

#### **Binaural sound amplifier**



★ Amplifier for creating auditory perspective. Dual channel amplifier throughout—output of 35 watts in each. Channels may be used separately at different levels. Electronic tone correction permits compensation of acoustic deficiencies. 4 high-gain and 2 lowgain input channels. Electronic mixing. Uses 14 tubes. Model CX70 list \$169.50. David Bogen Co., 663 Broadway, New York, N. Y.—RADIO TODAY—see also advt. p. 60.

#### Doublet antenna

★ Low-priced noise-reducing antenna that will operate with any receiver—covers 140 to 23,000 KC. Balanced type with 20-foot legs. Supplied in assembled form—complete with all insulators and 45 feet of transmission line. RCA Mfg. Co., Cooper & Front Sts., Camden. N. J.—RADIO TODAY.

#### Multi-test speaker



★ P.M. type of test speaker for use with all types of receivers. Has a nokoil speaker unit with universal voice coil transformer for matching all output transformers. Universal output transformer matches all tubes. Universal artificial field has taps at practically all resistance values used in standard practice. Used for testing sets with speaker, checking operation of output transformer—eliminates need of carting speaker to shop when chassis is pulled. Soft suede finished steel cabinet. Model 3600—list \$36. Wright-DeCoster, Inc., 2233 University Ave., St. Paul, Minn.—RADIO TODAY see also advt. p. 80.

#### **RCA-Victor** combination



★ Phonograph-radio in chairside design. Five tube dual-band superhet receiver. 4½-watt power output—12inch speaker unit. Self-starting phono motor for 78 rpm. Magnetic type, plck-up—automatic record stop. AC operation. Model U102E—list \$109.95. RCA Mfg. Co., Cooper St., Camden, N. J.-RADIO TOPAY—see also advt. p. 25.

#### **Terminal strip**



★ Easy connection terminal strips with 2 to 10 points. Positive contact. Standard mounting centers, bakelite insulation, and tinned contacts. American Radio Hardware Co., 476 Broadway, New York. N. Y.—RADIO TODAY.

The world's largest Exclusive Radio Tube Manufacturers! LL the resources of the vast Raytheon or-ALL the resources of the vast Kaytneon or-ganization are concentrated in the develop-tend production of radio tubes! Raytheon s and production of charingliste ment and production of radio tubes! Raymeon is an organization of specialists. All the brains, time and effort are expended toward one endis an organization of specialists. All the brains, time and effort are expended toward one end-that your may have better quality londer-lasting time and effort are expended toward one end-that you may have better quality, longer-lasting that you may This is the reason for Raytheon's radio tubes. This is the reason remarkable econvib and success This unusual policy is responsible for some of the decider. Inis unusual policy is responsible for some of the greatest developments in tube design: the greatily used outcomet flore outcomet. remarkable growth and success. the greatest developments in tube design: The in tube design: The gaseous inversally used auto-set filamentless gaseous inversally used auto-set filamentless fruits of the OZ4 is one of the fruits of the one on the filament is another important Raytheon contribution tube is another important Raytheon contribution Raytheon concentration. Ine Beam-L'oweroutput tube is another important Raytheon contribution. uwe is any une in the era of all-electric receivers. Raytheon quality There is an outetand kaymeon bri and DA tubes years e began the era of all-electric receivers. Kayineon service is comparable in Raytheon quality. There is an outstand. Raytheon jobber in every commu-ing Raytheon jobber in every commu-nity to eventy you promotive Heatening nity to supply you promptly. He stocks the most complete line of times make the most complete line of tubes made Order Raytheon for greater permatoday nent tube profits! RADIO TUBE prive, Chicago, Ill. 420 Lexington Ave., New York, N.Y. St., San Francisco, Cal. 55 Chapel Street, Newton, Mass 415 Peachtree St., N. E., Atlanta, Ga.

### NEW THINGS

#### Sonora Phantom phonograph



★ Automatic electric phonograph, which accepts the record through a slot and automatically plays it and then ejects it. Will handle either 10 or 12 inch discs. Uses semi-permanent needles. No more fumbling with records. An excellent device for the blind or for persons with poor eyesight. Model PC-3—list \$139.50. Sonora Electric Phonograph Co., 160 Varick St., New York, N. Y.—RADIO TODAY.

#### Low-cost record changer



★ Record changing mechanism for automatically playing seven 10-inch records. Handles 12-inch discs manually. Repeats last record. Magnetic type pick-up with 1,400 or 96 ohms impedance. Brown wrinkle finish. More compact than usual mechanism, Model 9800—list \$49.95. RCA Mfg. Co., Cooper St., Camden, N. J.—RADIO TODAY.

#### Conversatione intercommunicator



★ Low-cost 2-way interphone using wire connections. Model 100 consists of master and remote station. Combination switch and volume control and talk key on master unit. AC-DC operation. List \$19.95 per pair. Conversaphone, Inc., 17 W. 60th St., New York, N. Y.-RADIO TODAY.

#### Shielded transmission line

★ Coaxial type transmission line for all purposes requiring a lightweight, flexible cable. Consists of an inner conductor, set of spacers, and outer conductor which acts as a shield. Spacers made of "Anhygron" which is light and has low dielectric losses free of conductivity variation due to atmospheric humidity. Available in sizes ¼ to 13/16 inches. ¼-inch lists at 40 cents a foot, 13/16 at \$1.20. Suitable for receivers and transmitters requiring a low-loss, low-capacity shielded wire. Transducer Corp., 30 Rockefeller Plaza, New York, N. Y.—RADIO TODAY.

#### Radiojac chassis stand



★ Adjustable type stand for all types of radio chassis. Jacks up chassis so that it is level or on slight angle for easy work. All parts of set are then immune from damage due to weight of chassis. Radiojac consists of a set of 36 hardwood rods with holder, and 4 bases for inserting rods. Various chassis layouts accommodated by various lengthed rods. Does away with time-taking, haphazard substitutes. Net \$1.60. Cooks Mfg. Co., 274 Mile Square Road, Yonkers, N. Y.— RADIO TODAY.

#### Arvin push-button tuning



★ 14-tube all-wave receiver with push-button tuning. Automatic selection of 10 stations. Large dial and electric eye for easy manual tuning. Dual speakers for high and low-frequencies. Double phantom filter. Model 1427. Noblitt-Sparks Co., Columbus, Ind,—RADIO TOPAY—see also advt. p. 2.

#### **Sparton Selectime receiver**



★ Clock-controlled receiver with push-button tuning. 6 push buttons permit selection of desired stations by customer. Clock turns set on and off for any number of and combination of predetermined 15-minute periods, thus avoiding the loss of programs due to owner forgetting to turn set on handles up to 12 hours. Uses Telechron clock movement for accurate timing. No tuning dial is provided, since 6 stations are ample variety for ordinary radio listener. Sparton model 738 with A.F.C. and 7 tubes. Sparks-Withington Co., Jackson, Mich.— RADIO TODAY.

#### Taco doublet antenna



★ Low-cost antenna system for allwave receivers. Has 2 30-foot legs can be installed in a limited space on roof. Supplied with 50 feet of transmission line, self-selecting line to set transformer and, insulators. Model 400 —list \$3.75. Technical Appliance Corp., 17 E. 16th St., New York, N. Y. —RADIO TODAY—see also advt. p. 78.

#### **Crystal microphone**



★ Semi-directional microphone for all types of sound and P.A. systems. Equa-level interior is coil suspended, thus allowing mike to be handled in use without creating a noise. Has no peak responses. Can be made nondirectional by tilting the mike so that it faces the ceiling. High output level. Supplied with 8-foot cable. Model DB50 with chrome table stand—list \$25. Turner Co., Cedar Rapids, Iowa— RADIO TODAY.

#### Radio Today
FOR ten years radio testing equipment had just gone along . . then it was suddenly revolutionized by the Simpson line.

NEW HEIGHT

New designs ... new standards of workmanship ... new heights of accuracy, of stamina, of practical, on-the-job useability-that is what hundreds of servicemen have discovered in Simpson Instruments.

See them at your jobber's —and your next servicing equipment will be Simpson.

SIMPSON ELECTRIC CO. 5216 W. Kinzie St., Chizago, Ill.





## Model 220 Roto-Ranger

Model 220 Roto-Ranger Tube and Set Tester The fastest selling instrument in its price class. Roto-Ranger feature places twelve separate scales at your finger tips. Has latest tube testing circuit — filament return selector-separate resistance scales of 0.100—102,000 ohms, and 100 megohms. Three D. C. scales 8,300-1000 volts (2500 ohms per volt). Net price. \$62.75 Time price: \$12.50 down and six \$3.60 payments.



Model 201-202 Roto-Ranger Volt-Ohm Milliammeter

Volt-Ohm Milliammeter Convenient Roto-Ranger gives fol-lowing ranges: Model 201 (DCJ) Ohms, 0.20.2000-20.000-20.000-20 megohns: Microamps, 0.200; Milli-amps 0.10.150; Volts, 0.8-300.1,000, Model 202 (A.C. and D.C.) A. C. volts, 0.8-130.1,000; D. C. volts 0.8-300.1,000; D. C. Milliamps, 0.1-8.130; Ohms, 0.100.0.50,000.2 megohms, Net prices: Model 201.....\$32.50 Model 202......\$35.75 (Sold on deferred payments)



State.





WRITE TODAY

FOR COMPLETE INFORMATION

MOSTVALUABLE

FRANCHISEIN

RAD10!

## THE LINE OF AUTOMATIC RADIOS -

PROVIDES LIVE-WIRE RADIO DEALERS WITH ...

. . . A complete line-consoles, chairside and table models!

. . . A price range to fit every merchandising plan!

... Powerful merchandising advantages!

... Advanced features that satisfy every consumer demand!

Act Promptly



October, 1937

Model 220 Model 205

Name

City.

Address

## NEW THINGS

### **50-watt amplifier**



★ Push-pull parallel 6L6 amplifier with 50 watts output. Output impedance of 4, 7½, 15, 60, 250 ohms. Voltage amplifier in separate unit—has capacity to drive one to eight 50-watt power amplifiers. Electric remote mixer, volume range expansion and automatic volume control. Over all gain of 105 DB—frequency response plus or minus 1 DB from 50 to 10,000 cycles. List \$260 for both units. RCA Mfg. Co., Front & Cooper Sts., Camden, N. J.—RADIO TODAY.

### 6-tube Emerson



★ Dual-wave AC table superhet tuning 540-1,730, 5,600-18,000 KC. 5watt output, tone control, 6½-inch dynamic speaker. Foreign tuning principle, miracle tone chamber, shockmounted variable condensers. Size— 10% x 19% x 8% inches. Model AR-173—list \$49.95. Emerson Radio & Phonograph Corp., 111 Eighth Ave., New York, N. Y.—RADIO TODAY—see advt. p. 3.

### Webster Teletalk



★ AC-DC low-priced intercommunicating system. For use in office, factory, home, etc. 2-way communication from master to five outlying stations. Remote stations can answer master only when called—selected by 6-point switch which has a group position. Operates up to 3,000 feet, with No. 14 or 16 gauge wire. Model 105. List—\$39.50 for master, \$9.50 for speaker units. Webster Electric Co., Racine, Wis.—RADIO TODAY.

### Philco service tools

★ Inspection mirror similar to type used by dentists. Ideal for looking around corners and beneath various parts. Part No. 45-2474—list 60 cents.

cents. Eyeletting kit with %6-inch punch and point. Indispensable for replacing those riveted parts. Kit with assortment of rivets. Part No. 45-1162--list \$2.25. Other punches and points from ½ to % inch available. Philco Radio & Television Corp., Ontario and C Sts., Philadelphia, Pa.--RADIO To-DAY.

### Prestotune console



★ 11-tube all-wave receiver, tuning to 22,000 KC. Electric push button tuning for 8 stations. 12-inch speaker and parallel pentode output amplifier. Temperature compensating condenser on oscillator. I.F. expander for high fidelity. AC operation, Gold reflector type dial. Power output of 10 watts with 125 volt line. Model 1137M. Crosley Radio Corp., 1329 Arlington St., Cincinnati, Ohio—RADIO TODAY see also avt. p. 49.

### Selective beam antenna



★ Directional type antenna designed for aniateur operation. Permits selection of nine beams by turning switch. Antenna consists of 2 doublets at right angles coupled to selecting transformer by a 4-wire transmission line. Legs of doublets designed to give peak operation on the 20-40-80 meter amateur bands. Completely wired and supplied with all insulators, couplers and 50-foot transmission line. Model 155—list \$12.50. Technical Appliance Co., 17 East 16th St., New York, N. Y.—RADIO TODAY—see also advt. p. 78.

### Trav-ler receivers



★ 3-band 6-tube AC superhet and phonograph in chairside design. Travel-matic manual automatic tuning. Tunes 540-1750, 1950-6700, 6500-22,500 KC. Output of 3¼ watts feeds 6-lnch dynamic speaker—has full AVC and tone control. Self-starting phono motor for 78 rpm. records. Model 6300—list \$127.50.



5-tube AC receiver tuning 540-1750, 1725-2620 KC. 5-inch illuminated vernier dial—Travel-matic tuning. Set up without use of tools or special keys. Power output of 2½ watts. Model 527—list \$29.95. Trav-ler Radio & Television Corp., 1036 W. Van Buren St., Chicago, Ill.—RADIO TODAY—see also advt. p. 23.

### G-E farm radio

★ 7-tube 6-volt receiver tuning 540-18,000 KC in 3 bands. Colorama tuning indicator—illuminated dial. Class B power output of 1.6 watts. 12-inch PM dynamic speaker. Music-speech



control. 2 stages of I.F. dual ratio tuning vernier. Model FB-77. General Electric Co., 1285 Boston Ave., Bridgeport, Conn.—RADIO TODAY—see also advt. inside rear cover.

## NOW! NATIONAL UNION CONDENSERS ELECTROLYTICS and PAPERS New N.U. Plus Profit Products for Radio Service Experts

HERE'S SENSATIONAL good news for Radio Service Specialists! The same superior quality... the same plus profit opportunities which make NATIONAL UNION RADIO TUBES outstanding choice in the Service Profession are here in this new line of Condensers. NATIONAL UNION has spent years working ... building with you. National Union knows the kind of merchandise you demand. It is here in these new condensers with built-in quality and guaranteed performance. The chance to build your business bigger and faster is here too. Get details from your distributor today. Start now to cash in on N. U. Condensers as well as N. U. Tubes.

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Condense

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NOIN

October, 1937

## NEW THINGS



Portable type sound system with ★ Portable type sound system with 15-20 watt output. Frequency re-sponse flat within 2 DB 50-10,000 cycles. Overall gain of 124 DB—lo and hi-gain channels. Supplied with 2 11-inch speakers, each with 25-foot cable. Amperite velocity mike, with 12 feet of cable. Housed in modern luggage carrying case. Model C-102— list \$160.40. Transformer Corp. of America, 69 Wooster St., New York, N. Y.—RADIO TODAY—see also advt. p. 61.

### Midget volume control



\* Small-sized control for auto radio replacement and other uses requiring a 1-inch diameter unit. Available in ¼, ½, 1 and 2 megs with tone com-pensation tap. ¼ inch shaft 3 inches long—slotted entire length. Hinged shaft insert. Controls without switch have sllp clutch shaft. Switch units have D.P.S.T. switch. Centralab, 900 E. Keefe Ave., Milwaukee, Wis.—RADIO TODAY—see also advt. p. 62.

### **Bias supply transformers**



★ Multi-volt type bias transformers for blasing supplies in transmitters and hi-power amplifiers. Available in 3 types, each delivering 200 ma. DC voltages of 90-150, 150-275, 275-500— each unit delivering 6 voltages selected by means of convenient plug-in jacks. Filament winding supplies 5 volts at 3 amps. List \$9.50 to \$12.50. Thor-darson Electric Mfg. Co., 500 W. Hu-ron St., Chicago, Ill.—RADIO TODAY.

## Illuminated panel meters

★ Modernistically styled panel me-★ Modernistically styled panel me-ters with illuminated scale. Dial of translucent material and 6-volt lamp give a well-diffused light. Available in AC and DC voltmeters, milliammeters, microammeters, and thermocouple meters. Face of instrument 3 inches wide—mounts in 2¾ inch round hole. Simpson Electric Co., 5216 W. Kinzie St., Chicago, III.—RADIO TODAY—see also advt. p. 36.

### Universal crystal mike



\* Crystal microphone for P.A. use. Frequency range of 40-8000 cycles-output level minus 65 DB. Fits either desk or floor type stands. Supplied with 10-foot cable. Mike—list \$22.50, Desk stand \$3.50—floor stand \$12.50. Hand type crystal mike—list \$22.50. Universal Microphone Co., Inglewood, Calif.-RADIO TODAY.

### G-E phonograph-radio



★ 10-tube 3-band combination with touch tuning. Receiver has AFC, tone monitor, louvre dial, visual volume in-dicator, dual speed vernier dial. An automatic record changer will handle 8 10-inch or 7 12-inch records. Crystal pick-up, rubber-mounted motor. Power output of 10 watts—12-inch dynamic speaker. Model F-109—approximate price \$300. General Electric Co., 1285 Boston Ave., Bridgeport, Conn.-RADIO TODAY-see also advt. inside rear cover.

### **Electar** microphone

★ High-level dynamic mike for use with guitar amplifiers. Has volume control, right on the microphone. Re-sponse from 20 to 9,000 cycles. Supplied with adjustable 62 inch stand and 20 feet of cable. List \$45 in black, Chinese red or ivory \$3 extra. Epi-phone, Inc., 142 W. 14th St., New York, N. Y .- RADIO TODAY.

## **Clarion flash tuning**



Electric flash tuning receivers with six magic buttons. Instantaneous tuning without motor-all adjustments made from rear by hand with selector knobs-no special tools required. Variable condenser out of circuit when flashtuning is employed. Available in models listing from \$29.95 (illustrated) to \$119.50. Clarion Corp., Pure Oil Bldg., Chicago, Ill.—RADIO TODAY.

### Airline inter-office call system



★ Master type fully interselective interphone system. Uses separate speaker and mike—pitched to voice frequencies. Volume control on each station. Just push a single button to talk and select desired station. Uses ordinary telephone wire. Available in 2 to 5 and 2 to 10 station models. 5 station type—list \$28.50 each. Mont-gomery Ward & Co., Chicago, III.--RADIO TODAY.

### **Hickok signal generator**



All-wave test oscillator, tuning 85-28,000 KC, with output calibrated in microvolts. Microvolt calibration standardized by self-contained vacuum tube voltmeter. Output ranges from 1/2 to 100,000 microvolts. Also has decibel ranges from minus 10 to plus 38 DB and provides A.F. voltages from 0 to 2 volts. Suited for making gain measurements on sets in I.F., R.F. and A.F. stages, Model PSG-15. Hickok Electrical Instrument Co., Dupont Ave., Cleveland, Ohio-Radio Today. (To page 61)

Radio Today

## IN THE NAME SYLVANIA THERE'S PERFORMANCE PRESTIGE AND PROFIT FOR YOU!

What's in a

NAME?

It is performance—*nothing else*—that has placed Sylvania in the high position it occupies today Not merely technical performance, but *sales performance* as well.

The public knows that the Sylvania name on a tube means thousands of hours of fine, dependable service. The radio trade has taken this sort of performance as a matter of course. For you, the name Sylvania means reputation and profit, all along the line, right down through the trade channels to the retailer's cash-register.

What's in a name? Wherever the name is Sylvania—profit is your answer. Hygrade Sylvania Corporation, Emporium, Pa.

S<sub>E</sub>T-TESTED

RADIO

October, 1937

TUBE



Initiative—Resourcefulness—Cooperation to advance the interests of the industry

## OUT GOES NOISE AT THE TWO MOST CRITICAL POINTS IN ANY Control

HAVE THES

Sliding, metal-to-metal contact—the most common cause of control noise—is definitely eliminated by the latest IRC engineering triumph, the Silent Spiral Connector. Because it provides positive, continuous electrical connection between the center terminal and volume adjustment arm, there is no chance for noise to originate. With element noise also eliminated by the famous IRC 5-Finger "Knee Action" Silent Element Contact, you have double assurance of the smoothest, most reliable controls you've ever used—controls that are quiet and stay quiet!

Silent Spirol Connector ovoilable only on IRC Special Replacement Cantrols... designated in Guide with prefix "J." 5-Finger "Knee Action" Element Contoct supplied on all IRC Cantrols.

## FREE GUIDE

The most complete guide ever offered. Contains more than 200 pages listing IRC Standard and Special Replacement Controls for practically every receiver.

## SERVICEMEN—Play Safe!

... Insist on the new IRC Metallized Type "J" Special Replacement Controls for those critical jobs that cannot be handled with standard types. Special replacements demand the best. You can't afford to take chances. Play safe! Build a reputation for better work by using the <u>only</u> controls with the two outstanding noise elimination features in the history of radiol

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Factories and Licensees in Canada . . . . England . MAKERS OF RESISTANCE UNITS OF MORE TYPES, IN MORE SHAPES

## CIAL REPLACEMENT VOLUME CONTROLS USIVE NOISE ELIMINATING FEATURES

Silent Spiral Connector

PATENTS APPLIED FOR

NO SLIDE NO FRICTION NO NOISE

5-Finger "Knee Action" Contact

AMAZINGLY SMOOTH PERMANENTLY QUIET

## RESISTANCE COMPANY ROAD STREET, PHILADELPHIA





Initiative - Resourcefulness - Cooperation to advance the interests of the industry

## OUT GOES NOISE AT THE TWO MOST CRITICAL POINTS IN ANY Control

Sliding, metal-to-metal contact-the most common cause of control noise-is definitely eliminated by the latest IRC engineering triumph, the Silent Spiral Connector. Because it provides positive, continuous electrical connection between the center terminal and vol ume adjustment arm, there is no chance for noise to originate. With element noise also eliminated by the famous IRC 5-Finger "Knee Action" Silent Element Contact, you have double assurance of the smoothest. most reliable controls you've ever used-controls that are quiet and stay quiet!

Silent Spiral Connector available only on IRC Special Replacement Controls . . . designated in Guide with prefix ") S-Finger "Knee Action" Element Contact supplied on all IRC Controls

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## INTERNATIONAL

401 NORTH

Silent Spiral Connector PATENTS APPLIED FOR NO SLIDE **NO FRICTION** NO NOISE 5-Finger "Knee Action" Contact AMAZINGLY SMOOTH

PERMANENTLY QUIET

## **RESISTANCE COMPANY** BROAD STREET, PHILADELPHIA

. . . . Germany . . . . . Italy . . . . . Denmark . . . . . Australia France . Factories and Licensees in Canada England MAKERS OF RESISTANCE UNITS OF MORE TYPES, IN MORE SHAPES 'OR MORE DIFFERENT APPLICATIONS THAN ANY OTHER MANUFACTURER IN THE WORLD

## ELECTRIC TUNING CIRCUITS EXPLAINED

Details of how the Stewart-Warner and Admiral mechanisms work

★ With the increasing sale of push button receivers, servicemen need to know more and more about the various tuning mechanisms. How they operate, how they are adjusted are prerequisites for proper installation and servicing.

To aid the servicemen RADIO TODAY is publishing a series of articles describing the operation of the various systems. Last month's article dealt with the RCA-Victor, General Electric, and Sparton receivers. And now on these pages the Stewart-Warner and Admiral (Continental Radio) mechanisms are explained.

The Magic Keyboard used in the Stewart-Warner models 1845 to 1865 is a mechanical device which upon the touch of a button tunes in the desired station. When any one of the fifteen buttons is pressed, the mechanism moves the dial pointer to the station by the most direct route since the motor automatically starts rotating in the correct direction.

One of the features of this device is that no switching of any kind is



Fig. 2 (left)—Position of switch operating cam when pawl is on high side of station selecting cam. Fig. 3—Pawl on low side. Fig. 4—Pawl in slot, station tuned in.

necessary in going from automatic to manual tuning or vice versa.

To set the buttons to stations it is only necessary to pull off the tuning knob so that one can reach the set-up knob located on the same shaft. The mechanism is unlocked with this set-up knob, then a button is pushed and the desired station tuned-in. Each other button is pushed and the



Fig. 1—Wiring employed in the Stewart-Warner tuning mechanism and arrangement of station selector and switch operating cams.

corresponding station tuned in the same manner until as many buttons as desired have been set. The mechanism is then locked up with the set-up knob and the tuning knob is replaced. This completes the set-up.

## How the mechanism operates.

If you will refer to the illustrations you will note that the mechanism consists of fifteen buttons with fifteen corresponding station selector cams and fifteen pawls. Please observe that each of the station selector cams has a high side and a low side separated by a tapered notch. The position of any one of the pawls determines the position of the switch operating cam which operates the master switch.

The master switch starts and stops the motor and controls the direction of its rotation. This switch assembly also contains A.F.C. and mute contacts.

There is an auxiliary switch located over the tuning shaft which also controls the motor power, switches the automatic and visual tuning indicator lights, and keeps the A.F.C. from operating during manual tuning.

Next to the auxiliary switch is the train of gears which reduce the speed of the motor and drives the main shaft. (See illustration on page 44.)

The actual operation can best be understood by observing the contact positions in Fig. 1, 2, 3 and 4.

Figure 1 is a schematic diagram of the automatic control circuits of the mechanism and shows the relative position of the essential parts and switch contacts during manual tun-(To page 44)



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**D**ere's the *surest* sure thing that ever put profits in a radio dealer's bank account...the Tung-Sol Consignment Plan.

You don't pay a nickel for Tung-Sol Tubes until they're sold—and the profits are safely in your hands.

No money tied up in shelf-stock. No headaches from slow-moving numbers. Fast selling, nationally advertised Tung-Sol Tubes, placed in your custody with no cash investment. All that is necessary is to meet Tung-Sol's qualifications as a responsible dealer. And mind you—the price is NO HIGHER than you pay for any recognized brand. Our ability to finance consignment costs you nothing.

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> > Please Address Dept. C.

October, 1937

## PUSH BUTTON TUNING (Cont'd.)



Fig. 5-Circuit arrangement of the Admiral push-button tuning system. Note that the position of split station selector disc determines direction of rotation.

ing. On the master switch the motor, mute and A.F.C. contacts are open. On the auxiliary switch the automatic pilot light circuit is open, the visual tuning indicator light circuit is closed and the A.F.C. contacts are closed so that A.F.C. does not function.

Figure 2. When a button is pushed with the dial pointer to the left of the station desired, the pawl drops to the high side of the station selector cam and thus the switch operating cam and master switch are in the positions shown. The motor switch is closed and the reversing switch is contacting the lower spring so that the motor drives the cam shaft in the proper direction to tune in the station. While the motor switch is closed, the audio mute and A.F.C. switches are also closed, thus killing the A.F.C. and audio circuits. In the auxiliary switch the A.F.C., and manual light contacts are open while the motor power and automatic light switch are closed.

Figure 3. When a button is pushed with the dial pointer to the right of the station, the pawl drops to the low side of the station selector cam. In this position all contacts are in identical positions as in Figure 2, except that the reversing switch is up. Thus, the motor rotates in the opposite direction and turns the cam shaft in the proper direction.

Figure 4. When the dial pointer reaches the desired station the pawl drops into the slot in the station selector cam so that the motor contacts open and stop the motor. Since the pawl definitely stops the cam at the same place each time, the gang condenser will be tuned exactly to the point for which the button was originally set. As the motor switch opens, the mute and A.F.C. contacts also open thus allowing the signal to come through the receiver and allowing the A.F.C. to function to put the finishing touches on a perfectly tuned program.

The Admiral push button tuning system uses a reversible type motor drive to rotate the condenser gang. A contact arrangement (station selector disc) on the condenser gang sets the motor in operation in the proper direction so that it goes directly to the station desired.

When any station selector button is depressed the circuit to the motor is closed. See Fig. 5. By tracing the circuit, it is apparent that one side of the transformer is grounded through the white button. In the other direction, the current flows through the field of the induction motor to the station selector disc and then through the contact corresponding to the button depressed and back to ground.

In Fig. 6 the arrangement of adjustable contacts is clearly shown. Two slots are used to permit setting up stations close to each other.

Referring again to Fig. 5, note that the station selector disc is in two parts, each section insulated from the other and ground. Herein lies the principle of going direct to the station desired. When the button is depressed, the motor turns until the contact drops into the slot, thereby opening the circuit and stopping the motor.

When the condenser is stopped for any particular station, one section of the station selector disc is on each side of the contact. Now when any button is depressed, its contact must be resting on one side or the other of the selector disc. Since each side of the selector disc is wired to a different field winding and since the direction of rotation is determined by the field used, the position of the adjustable contact determines the direction in which the motor turns.

In this way, the motor turns in such a direction as to go directly to the desired station.

The thrust or movement of the motor shaft is used to kill the AFC and (To page 62)



View of Stewart-Warner mechanism showing the arrangement of pawls and cams.



"These instruments are quickly removed from the combination case, and can be used individually for portable, counter or panel use." Your profits this fall and winter will depend, to a large extent, on your equipment. See the WESTON Model 775 Scrviset today. Examine it carefully. Compare it, feature by feature, with any other equipment the market affords. Then consider that it is WESTON built . . . that it provides the sound engineering, the quality materials, the dependable accuracy and the long, useful life that the name WESTON assures. See the Model 775, as well as all other WESTON instruments for radio use. Visit your jobber today, or send the coupon for complete information.

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October, 1937

Model 772 Anayzer also is available in this light-weight, sold-wood carrying case with real luggage andle.



Model 773 Tube Checker in individual carrying case. Also available in attract tive, polishe'd, solid-wood counter case. Veston ELECTRICAL INSTRUMENT CORPORATION 597 Freinguysen Are., Newark, N. J. Send dsia on Model 775 and other radio instruments,

Address\_\_\_\_

## **DISPLAYS PLUS BOOKLETS**

## **TALKING LETTERS**

★ To dealers who will furnish a list of their prospect names and addresses, Grunow distributors are supplying a series of "talking letters," so-called because the mailing pieces are personalized to the prospect with his name and address on the front page.

Dealers get three pieces per prospect name, all personalized, imprinted, signed with written signature, inserted, addressed and including postage. A set of prospect cards are also supplied, so the dealer may keep a record of mailing dates and sales reports.

## **DEMONSTRATION DRIVE**

 $\star$  Motorola has made available to distributor salesmen an Electric Push-Button Network Tuning demonstration unit. It comes in a trim suitcase form and is designed to dramatize the simplicity and the other qualities of the tuning device in which the buttons are colored to identify the four networks. With this unit, it is possible to show the actual operation of the whole mechanism.

## **RADIO TONE WEEK**

★ Many types of displays are being issued by Stromberg-Carlson to aid dealers in extending special invitations to the public to visit their stores.

Labyrinth Radio Tone Week, Oct. 12th to 23rd, is being vigorously featured by dealers. The period has an educational angle, and offers the public actual demonstrations of the patented feature without being pressed to buy. New emphasis is placed on terms and trade-in allowances, as a result of a recent agreement between Stromberg and C.I.T. making the Limited Recourse Finance Plan, as well as the wholesale and full recourse plans, available to dealers.

In the promotion are giant telegrams, animated show pieces, display cards and banners, special retail ads, puzzles and new circulars.

## DISPLAY AND DEMONSTRATING BOARD

★ A baffle board for showing and demonstrating Nokoil speakers has been released to distributors by Wright-DeCoster, 2233 University Ave., St. Paul, Minn. The board is finished in taupe soft suede, and is mounted on metal standards for floor use. The speakers are shown against sections of royal blue suede, four of them on the front and one in the slotted recess back of the board. Lettering in natural wood is a feature of the display. ★ Brand new catalog with a complete listing of the new Trav-ler line will be sent free to those addressing Trav-ler Radio & Television Corp., 1036 W. Van Buren St., Chicago. Detailed specifications on 16 models with automatic tuning and 10 other models are included.

★ Allen D. Cardwell Mfg. Corp., 81 Prospect St., Brookiyn, N. Y., has issued a new 12-page booklet, No. 40, on Cardwell condensers.

★ New folder titled "Precision, the Modern Line of Test Equipment," has been issued by Precision Apparatus Corp., 821 E. New York Ave., Brooklyn, N. Y

★ Sponsored by Kadette in its southern market is a new 16-page weekly newspaper available for dealer tie-in advertising.

★ "Smoothflo" motors are featured in a new catalog "F", just published by The Lauson Co., New Holstein, Wis. The booklet has 12 pages descriptive of water-cooled engines for driving generators and battery charging sets. It includes drawings, illustrations and data for radio users, jobbers and manufacturers interested in battery charging sets.

## ACTION AND LIGHTS



★ Lithographed in 8 colors, a new display by General Electric has an actual tuning action repeated every few seconds. A hand touches a button, dial lights up, pointer speeds across the scale. Figure of a little boy is life-size, and plugs the simplicity of Touch Tuning. ★ American Communications Corp., 1650 Broadway, has issued a folder featuring the American Code Reader.

★ "Glassmike—A Fixed Condenser That Stays Fixed" is the title of a new folder issued by Condenser Products Co., 1369 N. Branch St., Chicago, III.

★ New catalog on transmitting capacitors has been issued by Solar Mfg. Corp., 599 Broadway, New York City. It shows the Transoil, Solarex and Transmica groups which comprise the new line. Coples are free from Solar.

★ Feature booklet written and illustrated by the famous Hendrik Van Loon is being issued to RCA jobbers. Titled "A Short Wave Journey of Discovery," it has 32 pages in full color and is designed to stir further interest in the "Overseas" dial.

★ A new manual on master antenna systems, covering the profit possibilities in apartment houses as well as in individual dwellings, may be had from Taco jobbers or by writing Technical Appliance Corp., 17 E. 16th St., New York City.

★ Literature describing crystal pickup devices, of typical piezo-electric Rochelle salt crystal design (applicable to the study of noises and vibrations in industrial applications) is available upon request from Brush Development Co., 3311 Perkins Ave., Cleveland, Ohio.

★ "Broadcast Components" is the title of a new 46-page booklet released by United Transformer Corp., 72 Spring St., New York City. The elaborate publication has dozens of diagrams and a special section of blue-print engineering charts.

blue-print engineering charts. United Transformer has also released a new booklet on "Transformer Components for Every Purpose."

★ Commercial Sound Section of RCA Mfg. Co. has issued a new sound catalog listing over 100 commercial sound products. The book has 36 pages and dozens of illustrations; it also includes a cross-reference table as a guide to equipment requirements. The catalog is distributed through jobbers.

★ Under the auspices of Radio Manufacturers Service, Philco has issued a new radio tube manual of 64 pages. Book includes socket layouts, characteristic table, base schematics, etc.

The company has also released the 1937 edition of the Philco Auto Radio Replacement Chart.

Currently being distributed to dealers is a Philco crayon book, for boys and girls to color. It features the elements of typical American homes, with a special treatment of the "No Squat, No Stoop, No Squint" slogan.

★ Revised and complete new catalog of radio parts, tools and accessories has been issued by Stromberg-Carlson, Rochester, N. Y. It lists all standard replacement parts for the line, including 1938 models. Additional items listed include kits for automatic frequency selecting antenna, tri-focal tuning, furniture refinishing, etc.

1

25,000 OHMS PER VOLT

Entirely New for Quick

Accurate Set

Testing

- D.C. Volts at 25,000 Ohms per Volt. A.C. Volts at 1,000 Ohms per Volt. Reads to 2,000 Volts A.C. and D.C. in 6 Ranges.
- Resistance Measurements to 20 Megohms.
- Condenser Tester to 30 Mfds.
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- Free Point Tester.
- Incorporates Exclusive Plug-in Type Copper Oxide Rectifier.
- New Single Zero Adjustment for Ohmmeter.
- All A.C. Operated—No Batteries Used.

TRIPLETT'S NEW DE LUXE LINE OF RADIO TESTERS SETS A "NEW HIGH" IN ACCURACY, APPEARANCE AND PRACTICABILITY



Model

1601 **\$45**33 In Metal Case

Model

Triplett's new DeLuxe Set Tester incorporates the very latest features. Ultra high class and professional appearance. Durable etched panel — natural silver background with sunken black lettering. Control knobs and other fittings are finished in red. The exclusive plug-in type copper oxide rectifier is the approved. most accurate method

for rectification, with the newly added advantage of easy replacement due to accidental damage or overloading. Replaces as easily as removing an ordinary fuse. In leatherette case, as shown, \$49.33

DE LUXE

SET TESTER

# NODEL 1631—Same as 1630 but in addition incorporates electronic frequency modulation — in Metal Case \$55.00 NODEL 1670—Vibrator Tester—completely tests all vibrators under actual performance conditions in Metal Case \$24.00 All DeLuxe Testers in two case styles Sturdy metal with black wrinkle finish, 14/2" x 75%" x 4/2", teatherette covered case has removable cover and compartment for accessories, size 15½" x 12" x 6%" THE TRIPLETT ELECTRICAL INSTRUMENT CO 1910 Harmon Ave., Blufton, Ohio Please send me more information on \_ Model 1601; \_\_Model 1690; \_\_Model 1630; \_\_Model 1631; \_\_Model 1670, \_\_I am also interested in Name Address City. State

Other De Luxe Items:

 MODEL 1690 OSCILLOSCOPE—With 2-in. Screen— Exclusive Triplett turret type tube mounting. Linear Sweep 15 to 20,000 Cycles—complete with tubes and instructions— in Metal Case \$47.00.
 MODEL 1630—Outstanding Signal Generator for extreme accuracy—zero leakage—100 K.C. to 30 M.C. in six ranges—complete—in Metal Case \$45.00

October, 1937

## NABBING MORE APPLIANCE PROSPECTS

Dealers make additional plans for refrigerators, start Christmas plans

## LISTS OF THOSE TO BUY REFRIGERATORS

★ National review of dealer efforts to collect new lists of refrigerator prospects has revealed a new series of business-building methods suitable for the season. Working in a last-quarter-of-the-year mood, and remembering the holiday season, they have uncovered a lively variety of ways to get the names of local persons in the market for "boxes".

Here are the chief items among the name-getting devices:

- 1. Spotting refrigerators as prizes in local contests.
- 2. The use of giveaways designed for all members of the family.
- 3. Displaying models in hotels and club foyers with blank cards.
- 4. Collecting names of guests at electrical shows.
- 5. Sponsoring local broadcasts and issuing invitations to the studio.
- 6. Watching newspapers for the names of newcomers.
- 7. Using pictures of network stars (sponsored by refrigerator manufacturers) as openers.
- 8. Acquaintance with real estate officials and local builders.
- 9. Exchanging lists of buyers with non-appliance furniture stores.
- 10. Collecting leads from the local utility.
- 11. Connecting with rural electrifi-

cation officials, for data on extension of power lines.

- 12. Rechecking radio sales lists and service jobs.
- 13. Arranging to get the names of guests at food shows and cooking schools.

## RURAL TRADE DEVELOPMENT

★ Radio and appliance firms are among those who cooperate at Kenosha, Wis., in a vigorous development of buy-at-home rural trade. Firms specially active in the affair are Brenner Electric Co., Maytag Sales Co., Kenosha Radio Co., Zabel Martin Co., Anderson Appliance Co., and Paramount Radio Co. Local Chamber of Commerce is a factor in the program to keep buying profitably within the community.

Primary part of the program is an annual dinner. Prize certificates for merchandise are a feature, and the business men act as hosts. Attendance has increased from 135 to 1,400 and business contacts are extremely valuable.

Offshoot of the campaign has been a new series of bi-monthly "rural dinners," at which 50 farmers or townspeople are special guests of 50 Kenosha business firms. Radio and appliance men report that a completely profitable trade relationship has been established.



Merry Christmas window of radio plus appliances. It's an idea of Morgan & Dornich, New York City, and a winner in the Electrical Assn. of NY's contest.

## APPLIANCES IN Holiday Uproar

★ Radio dealers planing to doll up their stocks and their profit outlook for the Christmas season are rapidly listing the likely merchandise. Supplementary lines with OK sales records behind them are chosen to build traffic, and to hike smaller unit sales.

Attractively packaged items in the following lines appear to be favorites:

Clocks	Camer	as and projectors
Flashlights		Vacuum cleaners
Mixers		Electric razors
Toasters		Electric fans
Waffle irons		Electric heaters
Tree lights		Curling irons
Coffee make	rs	Water heaters
Radio lamp	s	Air conditioners
Heating pac	ls	Electric irons
Hot plates		Electric roasters
Typewriters		

## WHEN TO SELL; WHEN TO LISTEN

★ Some radio salesmen talk themselves out of as many sales as they make, says B. C. Kitchings, proprietor of the Kitchings Electric Co., radio and refrigerator specialty store in Birmingham, Ala. Too much talking makes the customer think that the salesman is overanxious, and so may queer the deal, he finds.

"The biggest fault I find with salesmen of the high-pressure type is that they talk too much," said Mr. Kitchings. "They seem never to have learned the fine art of pausing. Consequently they don't get what is in the customer's mind. For this reason I prefer to employ young men without previous experience as salesmen. Then I can train them in my own way. I want them to be enthusiastic, but not wound up like alarm clocks. And I want them to learn to judge personalities.

"It is a pretty good rule for a salesman to curb his tongue as a rule after the sale is made. Just recently a prospect, after being presented a cabinet model on the sales floor, excused himself on the grounds he wished to look across the street first. In a few

(Continued on page 50)

## THE STANDOUT VALUES IN RADIO FOR 1938



MODEL 1117-11 tubes; 3 hands, 525-22,000 Kc. continuous; American and Foreign reception; octal hase tubes; Pusb-pull pentode output; broad automatic volume control; continuously varialle tone control; IRIS tuning indicator; power supply noise filter; 10° electro-dynamic speaker with plug-in cable; 3-dimensional Mirro-Dial; 8 watts output. Handsome striped walnut cabinet. Dimensions: 40° high, 24¼ \* wide, 13° deep.



MODEL 1127 – 11 tubes: 3 bands, 525-22,000 Kc. continuous; Dynatrol Electric Tuning; 10° electrodynamic speaker: 3-dimensional Mirro-Dial; IRIS tuning indicator; 10 watts output; hand rubbed walnut cabinet. Dimensions: 40° high, 24¼ \* wide, 12¾ \* deep.

## IN RADIO FOR 1938 the new **EROSLEY** all-star super radios

Electric tuning . . . exclusive, modern cabinet styling in console, chairside, compact and upright table models . . . 3-Dimensional, illuminated Crosley Mirro-Dial . . . and a score of other advanced features, plus the sensationally low Crosley prices, have made the 1938 Crosley Radios the outstanding values of the year. A few of the newest models in this remarkable new 1938 Crosley All-Star Radio line are shown here. See and hear them today. Your Crosley Distributor will gladly explain how you can place them on your sales floor to make sales and profits for you.



MODEL 567-M-5 tubes; illuminated Mirro-Dial; automatic volume control; American and Foreign reception. Black wrinkle finish chairside type cabinet with Chinese Red bakelite top and red feet. Available also in brown wrinkle finisb-Model 567-N, and walnut grained finisb-Model 567-P.

THE CROSLEY FIVER—"The World's Greatest Radio Value": 5 tubes, American and Foreign reception; Mirro-Dial; electro-dynamic speaker; automatic volume control. Cabinet dimensions: 12½" high, 10½" wide, 6<sup>14</sup>/<sub>6</sub>" deep.





MODEL 617-6 tubes; 2 hands, 535-1725 Kc. and 5800-18,300 Kc.; Dynalrol Electric Tuning; 8" electro-dynamic speaker; receives American and Foreign broadcasts; 3-dimensional Mirro-Dial; handsome chairside type cabinet. Dimensions: 20" high. 1914 "wide, 10% deep.



MODEL 637-A-6 tubes; 2 bands, 535-1725 Kc. and 5800-18,300 Kc.; 6" electrodynamic speaker; Mirro-Dial; 4 watts output. Dimensions: 83% high, 14% wide, 67% deep. MODEL C647-A operates on both AC and DC current; hallast tubes; same cabinet as Model 637-A.



MODEL 817-8 octal base tubes; 3 hands, 525-22,000 Kc. continuous; 8" electro-dynamic speaker; 3-dimensional Mirro-Dial; 5 watts output. Walnut veneered cabinet with goldfinished escutcheons and grille bars. Dimensions: 101/4" high, 161/8" wide, 73/8" deep.

CROSLEY FIVER ROAM10 - 5-tube Superheterodyne automobile receiver; octal base tubes; full automatic volume control; exceptional volume; illuminated Mirro-Dial; ONE PIECE INSTAL-LATION; low battery drain; plug-in connections for both battery and antenna.



THE CROSLEY RADIO CORPORATION, Cincinnati POWEL CROSLEY, Jr., President (Prices sliphlly higher in South and West)

Home of "the Nation's Station"-WLW-500,000 watts-70 on your dial



## UTU-IT'S EASY AND PROFITABLE TO SELL THESE FOLKS ....

People who won't spend the money for a big light plant and a bank of batteries, buy TINY TIM like hot-cakes when you show them how it operates S to 13 electric lights and the radio, all with a single 6-volt battery.

The TINY TIM dealer in Elk. Washington, sold 220 in a month! Washington, sold 220 in a month! No competition, Only TINY TIM has the Controlled Voltage Genera-tor and the Automatic Shut-off for safe, economical, convenient opera-tion. NATIONALLY ADVERTISED and guaranteed by *Continental Motors!* Models as low as \$45. No coupon deals — you make a FULL PROFIT on every sale! Get started NOW! We'll send com-plete details on a COMPLETE line of battery chargers you can sell — and SHOW YOU HOW TO SELL THEM! Mail the compour TODAY!

minutes he came back. I could have gone into another long story about the radio and its features, but that was unnecessary, because I knew the man was ready to buy. To be sure, I had previously put in a good sales story for my brand of radio, the name behind it and its points of superiority. In short, salesmen need to know not only when to talk, but when to listen."

## THEY COME IN FOR AUTO CON-TROLS. BUY CAMERAS, TOO

\* What happens when radio men stock home movie equipment has been outlined by the well known expert H. D. Weiler, of Fischer Distributing Co., New York City. "Customers make a trip to buy auto controls, or some similar item," he declares, "and before they get out of the store they have seeu and bought home movie equipment. It's the kind of a thing that sells itself-the easiest item that de have ever had to merchandise."

Mr. Weiler, who handles Univez, bases his report partly upon what dealers buy from him at wholesale. and partly upon what he hears dealers say about consumers. He mentions that people with youngsters are specially good prospects and that dealers can start with a small investment and a few feet of counter space for display. He also suggests that radio servicemen take a projector and a few feet of film with them when they visit homes, particularly around Christmas time.

Wisconsin Radio, Refrigeration \* & Appliance Association held the final event of their summer entertainment program last month with a golf party and picnic at Merrill Hills Country Club, Waukesha, Wis. Members took business associates as guests, distributors took manufacturers' representatives.

Sampson Electric Co., Chicago distributors for Norge, recently staged their annual dealer jamboree at the Stevens Hotel, with the guest list running up to 2,500. Norge speakers were R. S. Beale, E. R. Bridge, R. E. Densmore, N. M. Forsythe and W. C. Rowles. Guest speakers were A. E. Bottenfield, St. Louis, Mo., Jobber; David Burke, Detroit distributor, and G. E. Stedman, Cramer-Krasselt Co., Milwaukee. Banquet speakers were C. S. Davis, Borg-Warner president, and Gus Schallberg. Affair was supervised by Sampson Electric's head man, Peter Sampson.

Frigidaire is spending over \$4,000,000 in one of the largest factory expansions of its history. To prepare for 1938 production schedules, two new factory buildings will be erected, and manufacturing facilities at the Moraine City, Ohio, plants will be enlarged and rearranged,

Anchor Lite Appliance Co., Pittsburgh, Pa., jobbers for Crosley, have announced their appointment as distributors for the Eureka line of gas range, coal ranges and circulating heaters, for northern West Virginia, eastern Ohio and western Pennsylvania. Other news is that S. I. Lasner has been added to the Anchor Lite staff to do promotion work on all lines. The company was recently host to 100 members of the Pittsburgh Regional National Industrial Stores Association.





Dinner shot of the Virginia jobbers for Fairbanks-Morse, Benton-Bailey. Circling left around the table, C. S. Smith (back toward camera) Z. P. Richardson, Tom Boone, and Tom Phillips.



Otto Heilmann has been named St. Louis (Mo.) dist. manager for Detrola radio and refrigeration.

J. M. McKibbin, Jr., associated with Westinghouse Elec. & Mfg. Co. since 1922, has been named apparatus advertising and sales promotion manager of the company.

To C. D. Donaven, vice-pres. and general manager of Norge division of Borg-Warner Corp., is cred-ited the feat of constructing a complete new gas and electric range plant at Muskegon, Mich., with a production interim of less than 30 days. New facilities cover 28 acres and employ 4,500 persons.

Ahmed A. Fazelbhoy, distributor for Crosley refrigerators in Bombay, India, was a recent visitor to this country, and reports increased acceptances for American products in his country. He said that the "gen-eral business situation is excellent," but mentions the need for more trained servicemen in his field. His brother, Fazel A. Fazelbhoy, is job-ber for Crosley radios in the Bom-bay area.

★ There was a gala attendance of more than 175 golf enthusiasts and guests at the final golf meet of the Radio Industries Golf Club of Chicago which was held on Septem-ber 24 at the Medinah Country Club, Medinah, Ill. Despite a rain, H. Nordendale turned in a low gross score of 81, while the honors for a low net score were shared by W. J. Tewksbury and L. S. Laystrom. Hundreds of prizes were given to members of the club and their guests and the event was voted "best yet" in the history of the golf club. Of-ficers of the Radio Industries Golf Club responsible for the success of this gathering, as well as the extraordinary growth of the club are as follows: Philip C. Lenz, president; Fred Aylesworth, vice-president; O. M. Holen, secretary.

## VHAT A XMAS **PPORTUNITY!**



## **Feature Something Everybody Wants!**

There's no question about it! Everybody wants-and very few people have a movie camera! And today UniveX is the most talked of value on the market! Over 200,000 people in one short year have made it America's No. 1 Movie Camera!

## CASH IN!

By tieing up with the extensive campaign featuring famous Hollywood stars, you will bring into your store those people who read UniveX magazine and newspaper advertising. We tell the story-and you can get the sale by featuring UniveX Cine "8" on your counters, in your windows, in your own advertising!

Cash in on the irresistible appeal of the only 8 mm. movie camera at \$9.95-the only 8 mm. projector at \$14.95! Take advantage of the "hottest" Christmas opportunity you've ever had.

## **DON'T DELAY!**

The tremendous pre-Christmas business already booked makes it impossible to guarantee holiday deliveries unless you send in your order immediately. Universal Camera Corporation; New York, Chicago, Hollywood.

Here's the gift of giftsthe supreme merchandising opportunity! Everything needed to take and show glorious movies! Includes UniveX Movie Camera... Eveready Camera Case... UniveX Projector ... and handsome, serviceable Case that holds and protects the complete outfit. A high-unit sale and splendid-unit profit! . .

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UniveX Projector Case alone retails for\_ 2.95



## October, 1937

## RADIO SOURCES OF SUPPLY

An alphabetical list of manufacturers whose advertisements have appeared in		Accessories					& I.F. Transformers	q	variable	Converters (Rotary)	Devices	Misc. Parts		In ter-Communicators			Record Playing & Recording Eq	ume Controls	& Amplifiers	(8			: Chokes			
RADIO TODAY. Companies having ad- vertisements in this issue are listed in the	ete	& Acc			Gas	Wind	Tra	fixed		(Rot	Tuning	& MI	æ	unu		sa	Ing	Vol	Systems	Parts		Equipment	ers &			6
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<ul> <li>ABC Radio Laboratories, 3334 N. New Jersey St., Indianapolis, Ind.†† Adler Manufacturing Co., 29th &amp; Chestnut Sts., Louisville, Ky</li></ul>	1 1						1		1	1	1	1			1	1				1	1	1	1	T	i	
ABC Radio Laboratories, 3334 N. New Jersey St., Indianapolis, Ind. J Adler Manufacturing Co., 29th & Chestnut Sts., Louisville, Ky				¥																						
Aladdin Radio Industries, Inc. 468 W. Superior St., Chicago, Ill.							Ľ	Ť											• • • •							
Alden Products Co., 715 Centre St., Brockoli, Mass.	V			• • •										Ť					. 🔻							•••
American Carrier-Call Corp., 39 West off St., New York, N. Y. American Communications Corp., 1650 Broadway, New York, N. Y.																			: ¥							
American Radio Hardware Co., Inc., 1915 So. Western Ave., Los Angeles, Cal. American Radio Hardware Co., Inc., 476 Broadway, New York, N. Y.		••••			:::		:::					•••									V					
Amperite Corp., 561 Broadway, New York, N. Y. Ansley Radio Corp. 240 West 23rd St., New York, N. Y.	••••			:::	:::												•									
Arcturus Radio Tube Co., 720 Freinghuysen Ave., Newark, N. J Ariston Manufacturing Corp., 4045 Diversey Ave., Chicago, Ill.	1										:		11		:::					•						
Astatic Microphone Laboratory, Inc., 40 Hubbard Rd., Youngstown, O. Atlas Sound Corp., 1451–39th St., Brooklyn, N. Y.														•		¥			••••	•						
Beimont Radio Corp., 1257 Fullerton Ave., Chicago, Ill. Birnbach Radio Co., Inc., 145 Hudson St., New York, N. Y.					• • • •			••••				÷.	:::						•••	•••						
Bogen Co., Inc., David. 663 Broadway, New York, N. Y. Breez-Electric Corp., 440 North Oakley Blvd., Chicago, Ill.					••••	••••														:::						
Briggs & Stratton, Milwaukee, Wis 1. Brush Development Co., 33rd & Perkins Ave., Cleveland, Ohio													••••			••••				•						
Burstein-Applebee Co., 1012-14 McGee St., Kansas City, Mo. # Cannon Co., C. F., Springwater, N. Y		•••	•••			••••	••••			• • •		• • •	••••						•••							
Centralab, 900 East Keefe Ave., Milwaukee, Wis. Central Communications Devices, Inc., 140 W. 22nd St., N. Y., N. Y.,		••••		• • •	••••					••••				••••				▼		•••					••••	
Cinaudagraph Corp., 110 Davenport St., Stamford, Conn Clarion Radio, Inc., 35 East Wacker Drive, Chicago, Ill.	••••	••••			••••			••••			• • • •		• • •						•••	▼		•••				•••
Clarostat Mfg Co., Inc., 285 N. Sixth St., Brooklyn, N. Y., Clough-Brengle Co., 2815 W. 19th St., Chicago, Ill							••••			• • •			•••		V		•••	T	•••		•••				• • •	
Consolidated Radio Products Co., 618 W. Elm St., Chicago, Ill.								Y												T						
Continental Motors Corp., 12801 E. Jefferson St., Detroit, Mich		• • •			V																					
Cornell-Dubilier Corp., South Plainfield, N. J.				•••																						
Crosley Radio Corp., The. 1329 Arlington St., Cincinnati, Ohio.	₹																									
Curtis Condenser Co., 3088 W. 106th St., Cleveland, Ohio.						:::		•••																		
Detroia Ratio Corp., Beard & Chatheld, Detroit, Mich.		V		•••				•							¥	:::						•				
Eastern Mike-Stand Co., 56 Christopher Ave., Brooklyn, N. Y.¶		•••									:						:::	:::		•••						
Electro-Voice Mfg. Co., 324 Colfax Ave., South Bend, Ind.				:::										•	:::					• • • •						
Electronic Design Corp., 164 N. May St., Chicago, Ill., Electronic Laboratories, Inc., 122 W. New York St., Indianapolis, Ind.,									:::						:::										•	•••
Electronic Products Specialties Co., 1623 S. Hill St., Los Angeles, Cal., Emerson Radio & Phonograph Corp., 111 Eighth Ave., New York, N.Y.		¥		:::	:				:::	• • •			:::	:::						• • • •	•••					•••
Ene Resistor Corp., 644 W. 12th St., Erie, Pa., Fada Radio & Electric Co., 30-20 Thomson Ave., Long Island City, N.Y.	•	•••					• • •						:::	:::												•••
Fairbanks-Morse Appliances, Inc., 21st & N'thwest'n, Indianapolis, Ind. Federal Sales Co., 26 S. Jefferson, Chicago, Ill	. 🔻			•••	•••							••••				:::					•••					• • •
Fleron & Sons, Inc., M. M., 113 N. Broad St., Trenton, N. J. Freed Manufacturing Co., 44 W. 18th St., New York, N. Y.	•									::-		:::														
Galvin Manufacturing Corp., 4545 Augusta Blvd., Chicago, Ill., General Electric Co., 1285 Boston Ave., Bridgeport, Conn.,	Y	¥		• • •				•••														••••				•••
General Household Utilities Co., 2638 N. Crawford Ave., Chicago, Ill., General Industries Co., 3537 Taylor St., Elvria, Ohio.							••••				:::					:::		:::								
General Houstries Co., 3537 Taylor St., Elaviour Ave., Cincago, III., Grebe Manufacturing Co., Inc., 119 Fourth Ave., New York, N. Y Guthman & Co., Inc., Edwin I., 400 S. Peoria St., Chicago, III.	•	•••			•••		••••		•											•••						•••
Guthman & Co., Inc., Edwin I., 400 S. Peoria St., Chicago, Ill. Halldorson Co., 4500 Ravenswood Ave., Chicago, Ill. Hallson Radio Mfg. Corp., 136 Liberty St., New York, N. Y. Hammarlund Mfg. Co., Inc., 424-438 W. 33rd St. New York, N. Y. Hickok Electrical Learning to Complexity of the State of	•••	••••	• • •	• • •			•••							•••						••••			•			•••
Hammarlund Mfg. Co., Inc., 424-438 W. 33rd St New York, N.Y. Hickok Electrical Instrument Co., 10516 Dupont Ave., Cleveland, Ohio	T	•••		• • •					V																	•••
Howard Radio Co., 1731-5 Belmont Ave., Chicago, Ill.	V	•••							• • •																•••	
Insuline Corp. of America, 23 Park Place, New York, N. Y.		. A	•••				Ť		Ť		Ť	Ť	T		V	V						•				
International Resistance Co., 401 North Broad St., Philadelphia, Pa				•••																			••••			
Hammarindo Mig. Co., Inc., 424-438 W. 33rd St. New York, N.Y., Hickok Electrical Instrument Co., 10516 Dupont Ave., Cleveland, Ohic Howard Radio Co., 1731-5 Belmont Ave., Chicago, III Hygrade Sylvania Corp., 500 Fifth Ave., New York, N.Y. Insuline Corp. of America, 23 Park Place, New York, N.Y. International Resistance Co., 401, North Broad St., Philadelphia, Pa International Resistance Co., 401, North Broad St., Philadelphia, Pa Isolantite, Inc., 233 Broadway, New York, N.Y. Janette Mfg. Co., 556-558 W. Monroe St., Chicago, III J. F. D. Manufacturing Co., 4111 Ft. Hamilton Prkwy, Brooklyn, N.Y. Jensen Radio Mfg. Co., 6601 South Laramie Ave., Chicago, III Kato Engineering Co., 727 S. Front St., Mankato, Minn Ken-Rad Tube & Lamp Corp., Owensboro, Ky., With			•••							•																
Jensen Radio Mfg. Co., 6601 South Laramie Ave., Chicago, Ill.				•••						:		••••								V						
Ken-Rad Tube & Lamp Corp., Owensboro, Ky.		•••	•••	• • •		••••				• • •																
Kreisler Communications, Inc., 250 W, 57th St., New York, N. Y.		• • •	•••	•••		• • •	• • •	:			:.:		••••	• 👻												
Kar.Rad Tube & Lamp Corp., Owensboro, Ky Kraeuter & Co., Inc., 583–18th Ave., Newark, N. J Kreisler Communications, Inc., 250 W. 57th St., New York, N. Y Lauson Company, New Holstein, Wis.; Lear Development Co., 121 W. 17th St., New York, N. Y.**. Leotone Radio Co., 63 Dey Street, New York, N. Y. (Continued on Page 54)		• • •	:	• •••		••••	:::			:::					•••		••••					:::				
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## Insulation

t Gas Engines • Tape Code Recording Equip.

## YOU PROFIT Two WAYS WITH THE NEW ARCTURUS EQUIPMENT DEAL !

CTINE

¥ HIGHEST GRADE STANDARD EQUIPMENT ... Quick Delivery ...

Amazingly Low Down Payment ....

## \* THE WORLD'S BEST ENGINEERED TUBES .... At Standard List Prices

"An equipment deal that stands head and shoulders above any other!" . . .

"The fairest deal I have ever seen." . . .

Thus run trade comments as every mail brings enthusiastic letters from radio men who know a good thing when they see it - who recognize in the new Arcturus Equipment Deal an unexcelled opportunity to get needed shop equipment under the most favorable terms — and, at the same time, feature radio's finest, best engineered tubes in all their work.

## TRY IT-YOU CAN'T LOSE!

The ARCTURUS offer includes a long list of high quality, standard shop equipment. Small monthly tube requirements make it unnecessary for you to "oversell" yourself on tubes. Furthermore, ARCTURUS actually helps you sell with the finest line of dealer helps on the market today. ARCTURUS tube quality, plus the exceptionally easy terms, make this deal a sure winner! The only way you can possibly lose is by not taking full advantage of it!

for DETAILS From Arcturus Radio Tube Co., Newark, New Jersey. Gentlemen:

MAIL THIS COUPON

Name

Address

Send complete details of your new Equipment Deal.

🔲 I am a Dealer □ I am a Serviceman

State

INDEPENDENT TUBES FOR DEALERS WHO DO THEIR OWN INDEPENDENT THINKING City My Jobber is

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## RADIO SOURCES OF SUPPLY (Continued from page 52)

An alphabetical list of manufacturers whose advertisements have appeared in RADIO TODAY. Companies having ad- vertisements in this issue are listed in the	ß Sets	18 & Accessories	8	8	s Gae	e Wind	Colls & I.F. Transformers	sors fixed	sers variabie	Converters (Rotary)	ng De	re & Misc. Parts	ones	Inter-Communicators	tere	lones	Record Playing & Recording Eq	s & Volume Controls	Systems & Amplifiers	s & Parts	8	Equipment	rmers & Chokes		8	
ADVERTISERS INDEX, P. 79.		Antennas	Batterles	Cabinets	Chargers	Chargers Wind		Condensers			Dials		Headphones		Line Filters	Microphones		Resistors	Sound	Speakers	Switches	Test	Transform	Tubes	Vibratore	
estic Radio & Telev. Co., 50th & Rockwell Sts., Chicago, Ill lory & Co., Inc., P. R. 3029 E. Washington St., Indianapolis. Ind. comphone. Inc., 679 Madison Ave., New York, N. Y samed Products Corp., 1087 Flushing Ave., Brocklyn, N. Y es Reproducer Co., Inc., 812 Broadway, New York, N. Y ion Radio & Telev. Labs., 671 W. Ohio St., Chicago, Ill tark Battery Company, 4556 W. Grand Ave., Chicago, Ill tark Battery Company, 4556 W. Grand Ave., Chicago, Ill ional Carbon Co., Inc., 30 E. 42nd St., New York, N. Y ional Carbon Co., Inc., 30 E. 42nd St., New York, N. Y ional Carbon Co., Inc., 30 E. 42nd St., New York, N. Y ional Carbon Co., Jose St. Jones York, N. Y litt-Sparks Industries. Columbus, Ind ate Manufacturing Co., 4335 Flournoy St., Chicago, Ill n & Sons, D. W., 379 Royalston Ave., Minneapolis. Minn radio Míg. Co., 13th & Indiana Sts., St. Charles, Ill and Tartak Radio Corp., 915 W. Van Buren St., Chicago. Ill American Radio Ser., Lima, Peru, S. A. # is Dunn Corp., Clarinda, Jowa ce Airo, Inc., 510 Sixth Ave., New York, N. Y rim Electric Corp., 44 West 18th St., New York, N. Y rear Gene-E-Motor Corp., 458 W. Superior St., Chicago, Ill to Radio, Inc., 72 Cortland St., New York, N. Y. # nax Sales Division, (Chisholm-Ryder Co., Inc.) Niagara Falls. N.Y. to Recording Corp., 139 W. 19th St., New York, N. Y ne-Nichols Co., 33rd Place & Cottage Grove Ave., Chicago, Ill io Service Institute, 139 M 413 St., Chicago, Ill. # theon Production Corp., 420 Lexington Ave., New York, N. Y iobar Co. of America, 7100 McKinley Ave., Jew Angeles, Cal io Service Institute, 14th & Park Road, Washington, D. C.*. io Service Institute, 14th & Park Road, Washington, D. C.*. io Service Institute, 14th & Park, Road, Washington, D. C.*. io Serv			:::					••••			••••	••••						••••	: :		••••				••••	Ţ
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Radio, Inc., 72 Cortland St., New York, N. Y.#.														• • • •			••••	••••								1
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n-Nichols Co., 33rd Place & Cottage Grove Ave., Chicago, Ill art Corp., The, Shaw Ave. at 133rd St., Cleveland, Ohio	• • •	¥	••••		• • •					••••		••••	••••			••••		• • •		V	• • •	••••				
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Radio Today

## IT'S IN HERE, O. M.!



## The STANCOR HAMANUAL

New...complete...practical! 16 complete circuits from microphone to antenna post... transformers for *all* tubes....Don't build or re-build until you have seen the Stancor Hamanual.... It has all the latest dope!

Ask Your Jobber for Your Copy!



## STANDARD TRANSFORMER CORPORATION

October, 1937

## PROFITS FROM AMPLIFICATION

## Tricks and trends in the fast-growing business of selling sound

## NEW DEVELOPMENTS HIKE SALES

★ M. B. James, of Seattle Radio Supply, Seattle, Wash., accents the importance of keeping "sound" stock up to date. He writes:

"We have no formula for increasing this business other than having a stock of first quality speakers, amplifiers, and microphones plus all the necessary accessories . . . and then selling the customer up to the quality of the equipment in stock. The salesman must know all about the items he is trying to sell and be able to convey the feeling to the customer that he would be making a grave error to buy anything else.

"Recent developments of speaker manufacturers along the line of peridynamic speakers in bass-reflex cabinets, full-range crystal and velocity microphones of reasonable price, and many sizes of amplifiers to fit individual requirements . . . all tend to make easier the distributors part in selling sound equipment. Instead of engineering the whole installation for each customer, which we have done so much in the past, we can now present him with each component part so well engineered that anyone can complete an installation and make it work satisfactorily.

"Seldom does a distributor make a charge for the valuable time spent in advising the prospective customer on exactly how to go about making a sound installation, therefore it is to our advantage to be able to offer sound equipment in such form that it does not require detailed instructions or technical service to very great extent. The present market is leaning very decidedly toward this desirable end and we find sales increasing and larger unit sales at that."

## SOUND IN ROOSEVELT'S CAR

★ WOR engineers installed the radio equipment which included amplifiers, microphones and loud speakers in President Roosevelt's private car which he used during his West-



"Machine gun" microphone picks up passing band from nest atop the Empire State Building in New York. WOR engineers used newest Western Electric development.

ern trip. This apparatus was used by the President to carry his talks to the large crowds which he addressed en route to Seattle, Wash.

In addition there were two loud speakers installed in the dining car for the convenience of the press. Since this car was usually separated by two cars from the President's private car, lines had to be installed underneath the cars.

This marks the second time that the WOR engineering staff, under chief engineer Jack Poppele, has been called upon to equip the President's car with broadcasting and public-address facilities. The first occasion was during the last presidential campaign.

## SOUND FOR "PAGING" IN FACTORIES

★ "For several years we have argued that the best potential market for sound equipment has been barely touched," comments S. N. Shure, Shure Bros., Chicago. "We refer specifically to the use of publicaddress outfits as paging systems in factories. Garages and restaurants offer a wide field for this type of equipment, too. A long list of other places could be drawn up, of places that can use public-address for paging.

"We feel that the time has arrived to promote paging systems in all establishments that occupy more than one floor, or a large area on one floor. When a good merchandising job has been done in this paging field, there will be enough advertising value gained to increase the sale of publicaddress equipment in a great many other fields.

## TRICK FOR SOUND MEN

★ An extra-profit device being used by some sound specialists arises from the fact that many people appearing on the air are in the market for recordings of their broadcasts. The dealer writes them a letter after the airing, says that he has a record of it, offers to let the prospect hear it and mentions that it's available for a few dollars.

Most of these prospects are persons involved in the broadcasting of special events, rather than artists appearing regularly. Dealers will see which ones are likely buyers by carefully inspecting daily broadcast schedules. After locating a feature which includes several people, he then records it from a receiver and offers to sell the transcription in a whole or in parts.

## FIGURING SCHOOL JOBS

\* "There is no hard and fast rule for figuring prices on installations." says W. H. Edwards of Providence. "However, we have figured R. I. schools in this manner: List price for the central unit, plus list price per speaker per room, and an additional charge of five dollars per room for wiring. This may seem small to one who thinks that when wiring for speakers you must tear down walls and plaster. In the modern brick school of fifty rooms, it should take two men three days to wire every room. This can be accomplished by using the air ducts. For new business in the schools see the Parent Teachers Association. In our city more than forty schools have been radioed through this medium. For public buildings, architects must be interviewed, and believe it or not, a politician or two should be sold the idea.

"To conclude, the rules of commonsense and discretion which apply to all sales efforts, are still important and paramount. Last but not least, know your amplifiers and your installations."

## **BULLS LISTEN IN ON YEGGS**

\* Chief Flanagan of the Greenwich, Conn., police, has been investigating the possibility of using intercommunicating phones to listen in on conversations of prisoners in their cells, when they believe themselves out of hearing of any officer, thus leading to valuable disclosures.

The convenience of plugging in an interphone in the cell-block out of sight of the prisoners, and then plugging in another phone elsewhere in the station-house in the office of the detective assigned to "break" the case opens up new possibilities for securing confessions from hardened criminals, thinks Chief Flanagan.

\* Three new bulletins have been issued by Western Electric Co., 195 Broadway, New York City, on the latest additions to broadcast station equipment. First one handles the 104Å, 105A and 106A amplifiers. Second bulletin describes the new 110A program amplifier, and the third takes up the 23B speech input equipment.



For Complete Cotolog or Other Information Address Section 0-9

WEBSTER - CHICAGO 5622 Bloomingdale Ave. CHICAGO, ILL.



EXPORT DIVISION: 145 WEST 45th STREET NEW YORK CITY

## PHASE OPPOSED SPEAKERS For interphones

★ Intercommunication difficulties in noisy locations can often be very satisfactorily remedied by the use of double loudspeaker elements generally arranged back to back and with their voice coils connected in parallel but opposite in phase. It is sometimes desirable, although not always necessary, to include some absorbing baffle between the backs of the two diaphragms. As long as the units are directed away from one another there will be no adverse interference pattern or cancellation of sound waves when acting as reproducers.

When these units are used as transmitters (microphones), general noise. particularly in the lower end of the frequency spectrum (which strikes the two diaphragms in phase) will cancel and not be amplified. Sound waves striking one diaphragm only will be reproduced as usual. It is necessary of course to talk into one or the other unit and not into both at once. This, of course, limits the physical distance of pick-up range. A very practical application of this was made about two years ago in a traffic tunnel where the noise of trucks and automobiles made the ordinary communication facilities practically useless. With the method outlined above loudspeaker communication was extremely satisfactory. The same principle of out of phase cancellation has been used in some instances in the elimination of acoustical coupling or feed-back.

## SELLING "QUALITY" TO HOTELS

\* "Quality of reproduction" is the gospel of Carl C. Langevin, San Francisco sound man extraordinary. He has applied this in many ways.

A few years ago, in Frisco, radio stations were broadcasting from many local hotels. It was good advertising for the hotels. It brought business to them. But Langevin went on to convince the hotels that most smaller radio stations used cheap, obsolete "remote pick-up" equipment for these hotel broadcasts.

"If you pay big money for the best orchestras, why do you let the radio stations ruin the quality of their broadcasts from your hotel with cheap equipment?" he asked. Again there didn't seem to be a good answer to that, so Langevin did a big business in equipping hotels in San Francisco area with up-to-date speech input equipment of Western Electric quality. The hotels footed the bills. The radio stations were delighted.

Once that was accomplished, Langevin began to sing his song of quality to the hotels again. "People who come to dine and dance in your hotel can't hear your singers" he told them. "Why pay a lot of money for a good singer only to have that beautiful voice not heard, or worse still, distorted by a poor public address system." As a result, most of the big hotels in San Francisco were sold new quality public-address systems.

## MINES AND INDUSTRIES USE **CARRIER PHONES**

\* Successful experiments have been carried out in various industries, using intercommunicating systems of the carrier-frequency type which can be operated without other talking wires than the power-supply lines already installed.

In mines this flexibility is especially valuable. Recent tests conducted under the supervision of Sol J. Levy, of American Carrier-Call, have shown that sets can be operated far underground, and communication maintained between deep working levels and the surface, using no other wires than the lighting or power lines already in use for electricity supply to the mine. Special waterproof cabinets have been developed to meet the moisture conditions in such mines, and these can be plugged in anywhere, as working conditions change.

In some recent experiments in the oil fields, communication on power lines was carried on at distances up to 100 miles, using carrier-frequency voice currents on the regular power lines.

## SOUND IN AUTOMATIC GROCERY

\* In Clarence Saunders' new automatic grocery store called "Keedoozle," recently opened in Memphis, Tenn. . . . each customer receives an individual key on entering; makes her various selections by turning her key in the slot beside each article. When she has finished purchasing, she surrenders her key to the cashier who inserts it in the master release. This operates on Triplett designed relays, automatically placing goods purchased on a conveyor and brings them to the cashier.

Communication between the service organization who stock the bins and the cashier is maintained by a Webster-Chicago inter-communication system.

(Continued on page 60)

## Jensen PERI-DYNAMIC REPRODUCERS

PERFORMANCE

... Perfect for use with the amateur's radio receiver.

## **The Perfect Speaker No Baffle Required**

THE "WANTED" KIND OF

HIGH QUALITY LOUD SPEAKER

Acoustic Networks and Particularly the Jensen Bass Reflex Principle. Now conceded by leading engineers to be the fea-ture of 1938 Radio Receivers.

lensen

Bass Reflex

Principle

Says a recent engineering publication in effect.

"The really new thing for 1938 is the Jensen Bass Reflex System."

And so 1938 Receivers will generally establish new high standards of acoustic performance.

Jensen Peri-dynamic Reproducers Models KM, with either 8, 10, 12 or 15-inch speaker, all incorporate Bass Reflex and are ready now. Ready for the owner who has been dissatisfied with ordinary loud speaker performance; who wanted brilliant highs and middle highs and a low frequency range extended in range and improved in quality. Low frequency response where the fundamentals predominate not the harmonics.

Model KM-15 with 15-inch speaker as illustrated, is ideal for those who have high quality radio receivers and want real improvement in loud speaker performance. The receiver can easily be set on top of the Reproducer.

## **Available In Kits**

Model KM is shipped in knockdown kits. Each kit consists of speaker and knock-down enclosure, packed in separate corrugated box containers, shipped together. All necessary screws, bolts, grilles, brackets, etc., included for assembling. Assembly instructions are complete. No tools necessary except an ordinary screw driver. Enclosures are finished with two coats of French Gray. Model KM with 8-inch speaker has a list price of only \$22.00.

There is a Jensen Peri-dynamic Reproducer for all known loud speaker applications. Model KM as described above is ideal for general public address use: Model KV is recommended where speech reinforcement is the chief requirement.



	JENSEN RADIO MFG. COMPANY   6601 S. Laramie Ave., Chicago, III.
n	Please send me more information on Jensen Models KM and KV Peri-dynamic Reproducers. RT-1037
	Name
1	Address
ity	City State



## the AMPERITE VELOCITY with NEW DESK STAND



A modern, versatile combination. Ideal for Desk, Pulpit, Footlights, Banquets. Leaf spring suspension acts as extra

shock absorber.

STAND ONLY LIST \$4.00

Name Plate with maximum of 10 letters. LIST \$2.00

### Microphones:

Models RBHn (High Imped.); or RBMn (200 ohms); with Cable Connector & Switch... **LIST \$42.00.** 

Models RBSn, RSHn, streamline design, slightly lower output than above, with switch only... LIST \$32.00.

## NEW "HAM MIKE"

No Peaks! No Splashing! Real Broadcast Quality! RF CHOKE CIRCUIT INCLUDED IN MICROPHONE

Finest mike ever designed for "hams". No peaks, thereby allowing a higher percentage of modulation without splashing. Output, -68 db. Operates directly into grid of tube. Rugged.



Not affected by climate or pressure changes.

MODEL. HAM (High Imped.) or MODEL. HAL (200 Ohms) Gunmetal. **LIST \$22..** Chrome, LIST \$23.00. Price includes special Ham Desk Stand with individual call letters, and 6 feet of cable.

### AMPERITE MODEL RAL



## HIGH-SPEED LONG-DISTANCE TELEPHONING

\* For delivering messages of some length over long-distance telephone lines when the toll-charge per minute is high, R. C. Powell, of Presto Recording Corporation, 137 W. 19th St., New York City, has been developing a plan of high-speed transmission to a recorder at the other end. The message thus received at an unintelligible high speed and high frequency is then slowed down and played back at its original voice speed, producing a very satisfactory reproduction. In this way, ordinary voice messages at 300 words per minute can be speeded up for transmission at 750 to 1,000 words per minute, which, Mr. Powell points out, is much faster than any other means of transmitting intelligence now in general use.

The proposed high-speed method would be especially useful for phoning in long news reports to a faraway publishing office.

## HUM IN SOUND INSTALLATIONS

★ With the introduction of the base reflex speaker and its consequent improved low frequency reproduction, the question of hum in public address iustallations is becoming of greater importance, state Webster-Chicago's engineers.

The manufacturer of sound equipment in this respect needs very keenly the assistance of the installation organization to the end that the installation should be properly made.

It is very important with the low level microphones that are now being used, that the continuity of the shielding be perfect. In other words, even a break as small as one inch in the microphone wire shielding may introduce a serious amount of induction pickup in the system.

The amplifier should be grounded to eliminate the floating chassis condition. The selection of the proper type of tubes is also important. It is an unfortunate matter that many of the radio tubes available on the market today, while ideally suited for use in radio equipment, are of too noisy a character for general public address work. The construction of the tube heater structure has much to do with the amount of hum that will be generated by the amplifier.

It is a fortunate fact that the manufacturers of tubes are appreciating more and more the importance of humless tubes for public address work and to this end a number of manufacturers are working to supply tubes particularly adapted to audio applications. It is to be hoped that in the future tubes will be available with some type of designation marked thereon indicating that they have been picked or selected for high gain audio work.

On some of the smaller light plants, where the wave form is not particularly good and the power supply contains harmonics of the order of the 17th, 19th, etc., inductive sing becomes a problem that requires close attention to input shielding and grounding.



Radio Today

## (From page 38)

## Garod phono-combination



12-tube AC radio with 3-band tuning. Power output of 12 watts-12-inch dynamic speaker. Automatic record changer for 10 or 10 and 12inch records. 78 and 33 rpm. turntable. Magnetic or crystal type pick-up. Cab-inet 38 x 34 x 18½ inches. Model 3012-P7A with 10-inch changer—list \$279.50. Garod Radio Corp., 115 Fourth Ave., New York, N. Y.-RADIO TODAY.

### **Transmitting** capacitors



★ Line of high-voltage condensers for transmitters and similar apparatus. Mica by-pass and blocking units available in bakelite and ceramic cases. Oil impregnated paper types for filter circuits available in steel cans with ceramic stand-off insulators. Available in voltages and values for all uses. Solar Mfg. Corp., 599 Broadway, New York, N. Y.--RADIO TODAY.

### 11-tube table superhet



Dual-band receiver tuning 550-1,600, 5,500.18,000 KC. Electric eye tuning indicator. 11 glass tubes— AC-DC operation. Beam power output tube. Full-range tone control—I.F. wavetrap. Gold dial indirectly illuminated. Hand polished walnut veneer and inlay cabinet. Model 29-D.-list \$45.95. Freed Mfg. Co., 44 W. 18th St., New York, N. Y.-RADIO TODAY-see also advt. p. 77.





Transformer Corporation of America is extremely happy to announce formation of the CLARION INSTITUTE OF SOUND ENGI-NEERS - a nation-wide organization, designed to give the sound man a "BREAK" at last.

Here is just a sample of what C.I.S.E. is offering members:

1. C.I.S.E. enables you to huy sonul equipment DIRECT FROM THE FACTORY.

2. As the official C.I.S.E. man in your territory, you enjoy a selected market. Only one C.I.S.E. representative will be appointed to a territory.

3. C.I.S.E. representative cau enjoy the vast engineering and research facilities of the TRANSFORMER COR-**PORATION OF AMERICA free** of charge.

4. An extensive advertising compaign -both trade paper and direct-mail, will help sell a larger percentage of prospects called on. 5. C.I.S.E. enables you to sell sound

the way it should be sold, the way it must be sold-with the sound specialist the BIG profit-maker. C.I.S.E. is the PROVEN METHOD of meeting competition in sound today.

6. As a recognized member of this MODERN ORGANIZATION, you can OUTSELL THE ENTIRE FIELD. But, membership is filling rapidly. Remember, only one representative to a territory. It may as well be YOU.

## MAIL CONVENIENT COUPON IMMEDIATELY !

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frank start	CLARION INSTITUTE OF SOUND ENGINEERS 69 WOOSTER STREET, NEW YORK CITY
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LARION INSTITUTE F SOUND ENGINEERS	Name
9 WOOSTER ST., N.Y.C.	CityState

## **CENTRALAB**.



## savs:

## Mr. V. E. Chandler of Louisville

Sh! for 12 years off and on he has used these quiet controls . . . without once waking up old lady trouble.

Mr. Chandler, well known radioman of Louisville, Ky. writes us in a loud voice how very well pleased he is with QUOTE: the only control that I have ever found that will stay quiet, UNQUOTE.

Need we go on guoting?

## Get the 1937 Volume Control Guide



## WILLSTAY QUIET !" | SERVICE NOTES

mute the audio during the tuning process and to engage a dog clutch which connects the motor to the condenser shaft.

Manual tuning is accomplished by depressing the white manual button



- Arrangement of adjustable contacts in Admiral set. Fig. 6-

which opens the motor circuit and unlatches the depressed station button.

To set up the device, the station is tuned in manually after both the white button and button to be set are depressed. The AFC is killed by the contact on the white button. Note that the adjustment indicator lamp is now in series with the motor and station selector disc. When the adjustable contact is moved to such a position that the lamp goes out, it is positioned in the slot of the station selector disc. Since the indicator lamp draws such a small current, the motor remains stationary.

ton tuning is available only on the broadcast band since the motor circuit is open on the other bands.

## **CORRECT INSTALLATION** IS VITAL

\* "The modern radio is more complicated than the most intricate musical instrument, such as the piano," comments Philco's Sayre Ramsdell.

"People don't tune their own pianos; they don't install and service and adjust their own oil burners or electric refrigerators. Yet they will do just that with their radio sets, and this in spite of the fact that the radio is almost as complicated as an X-ray machine. That's why people who install their own radios and aerials lose 25 per cent of the instrument's performance. We are in an era now where 'over-the-counter' buying of radios is dangerous."

## **ARVIN MODELS 1237 & 1247**

\* The new Arvin 12-tube receivers utilize a somewhat unusual circuit arrangement in the AFC and associated circuits. First, a dual I.F. channel is employed. The first converter tube generates an I.F. of 455 KC, which is coupled through a bandpass circuit to a second converter tube. (To page 64.)

In this particular receiver push but-

## PROFITS FOR THE SERVICEMAN INSTALLING PRESTO RECORDER



Newest recording device for the home comes in the form of an attachment to be used with any phonograph-radio. Owner of set can make recordings from radio programs or using a mike. Unit lifts out of the way (right) when playing records.



Read Baranter

Manufacturers of a complete line of Standard Glass Types, G Series, and Genuine All-Metal Radio Tubes.

Actual users are highly enthusiastic about Ken-Rad Radio Tubes. This speaks for their dependable performance. No wonder, since Ken-Rad engineering and manufacturing methods are "tops." Dealers and service men, carry Ken-Rad Tubes. They earn money for you and increase good will.

> • SELL KEN-RAD BULBS Here's a good profit item. Shares the Ken-Rad reputation for highest quality,



## **KEN-RAD** \* Radio Tubes \*

## **KEN-RAD TUBE & LAMP CORPORATION, Owensboro, Kentucky**

Also manufacturers of Ken-Rad Electric Light Bulbs



Schematic of the AFC circuits used in the 12-tube Arvin receivers. A dual I.F. frequency is employed.

Second converter tube like the first, has the oscillator and modulating function combined. The A.F.C. control tube operates on the second oscillator which is tuned to 355 KC.

The second I.F. channel operates at 100 KC. (Iron-core inductance



tuned I.F. transformers are utilized in both channels.) A separate diode detector (6Q7G) is employed for audio demodulation and AVC; in this way the AFC circuits are independent of the rest of the receiver.

The AFC channel is coupled to the plate of the I.F. amplifier tube and a 6K7G AFC amplifier is used. The discriminator circuit is of the usual type. The fixed frequency oscillator section of the second converter tube is somewhat different from the usual AFC controlled oscillator.

Note that the low side of the oscillator tuned circuit is grounded (as far as RF is concerned) through 100 ohun resistor in series with the coil. The grid of the AFC control tube is coupled to the junction of the resistor and inductance. Since the voltage across a coil is  $90^{\circ}$  out of phase with the current, the grid of the control tube is out of phase with the coil voltage. Aside from the grid phasing arrangement, the control tube works in the same manner as other AFC circuits.

## TONE MONITOR

★ "Tone Monitor" is the name given to a new audio degeneration circuit iu the 1938 General Electric receivers.

In general, the circuit shown in the figure is sufficient for describing the manner in which these results are obtained. This circuit is used in the 6 and 7-tube models and, with some modifications of the tone control circuit, in the smaller and larger sets.

The conventional diode and volume

control circuits are shown followed by the audio amplifier which may contain a single-ended or push-pull output stage with the conventional drivers or phase inverter as required. The feedback voltage is returned to a 5,000 ohm tap on the 2 megohu volume control. Since the volume control resistance is approximately nine times the diode load resistance there will appear only 1/10 of the feedback voltage on the slider at maximum volume setting; therefore, if 5 to 1 degeneration is introduced when the slider is at the tap there will be a loss in gain at maximum setting of ouly 30 per cent. It follows that since the extent of degeneration is variable with the volume control setting, the compensating effect of C<sub>1</sub> C<sub>2</sub> and C<sub>3</sub> will also vary in accordance with the volume control setting.

For simplicity, assume that the audio amplifier consists of a 6F5 driver and a single 42 output tube. Then at high frequencies the phase of the output voltage will be lagging the input voltage due to shunt capacities in the amplifier and due to the leakage reactance of the output transformer. The value of C, iuferior is so chosen that the fidelity curve falls off at 10 KC. and peaks around 3,000 to 6,000 cycles for ordinary volume control settings. Since C<sub>3</sub> reduces the amplifier gain at high frequencies as well as shifting phase, the result is that the amplifier becomes less and less degenerative with increasing frequency until we reach the peak. At this point regeneration starts, but since the amplifier gain is very low

## "STEP-FATHER POWER"

In your business, two factors will make you or break you. Number one is customer satisfaction. They've got to like you well enough to *come back for more*.

Number two is profits. If you don't make money consistently, you can't last.

That's why we say, "Look out for 'Step-Father Power'." The "Eveready" "Air Cell" "A" battery is the *daddy* of two-volt radio. Dry "A" batteries and elaborate, troublesome charging devices are *stepfathers*.

When you sell "Eveready" "Air Cell" batteries you sell steady voltage, no costly, bothersome recharging, and long life...1,000 hours of guaranteed satisfaction.

The "Eveready" "Air Cell" "A" battery is clearly the right thing for the dealer who intends to stay in business, with *guaranteed* service to every user, a real profit on every sale.



## **"EVEREADY" "AIR CELL" RESISTOR** WIDENS YOUR MARKET



Every true "Air Cell" receiver, no matter who makes it, is approved by National Carbon Company, Inc., and is ready to function on "Air Cell" "A" power without the addition of resistors.

All other 2-volt receivers may be quickly and easily adapted to the economical *level power* of the "Air Cell" battery by adding an "Eveready" fixed resistor of the proper value. Through this simple operation, the set owner is freed from tinkering with hand-operated resistors, from short-lived ballast tubes and from the excessive power-waste of dry "A" batteries, the nuisance and expense of storage batteries, chargers, etc.

Get a card of these "Eveready" "Air Cell" Resistors at once. Always keep them on hand. Note the five different resistances on each card so you need buy only one to take care of sets from 480 to 740 milliampere drain.

## NATIONAL CARBON COMPANY, INC.

GENERAL OFFICES: New York, N. Y. BRANCHES: Chicago, San Francisco Unit of Union Carbide and Carbon Corporation The words "Eveready" and "Air Cell" are trade-marks of National Carbon Co., Inc.



Address .....

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



Inverse feed-back is employed in the General Electric tone monitor to provide a control of the tone characteristics and to reduce distortion.

at these frequencies the output goes down for any further increase in frequency.

In the bass and foreign positions of the tone control,  $C_2$  is shunted across the feedback resistor. This introduces a leading current around  $R_2$  making the feedback voltage lead the output voltage, or in other words correcting for the phase shift in the amplifier at high frequencies. At the same time the feedback voltage is increased at high frequencies, thereby reducing the high frequency output simply by further degeneration.

The output voltage leads the input at low frequencies due to the shunt inductance of the output transformer and the fact that a coupling capacitor is used between the 6F5 and 42.  $C_1$  is added to the eireuit to increase the phase shift of the feedback voltage and reduce its amplitude. What results, of course, is a sharp rise in the low frequency end of the fidelity curve, since degeneration is reduced with lowering frequency. The function of R<sub>3</sub> is simply to prevent regeneration, or possible oscillation, from occurring at extremely low frequencies. The tone control switch short-circuits C<sub>1</sub> in the foreign and speech positions, providing a flat response down to 60 cycles.

For strong signals an extended frequency range is used, while for weak signals which require a high volume control setting, both highs and lows are reduced leaving only the important voice frequencies. This characteristic is better suited to cope with noisy conditions of reception.

Loudspeakers have the anuoying tendency to reproduce bass notes at their own resonant frequency so that with a constant current drive it would be practically impossible to reproduce 55 cycles with a loudspeaker resonance of 75 cycles. However, with the degenerative amplifier described, bass frequencies no longer sound all the same and very low frequencies are reproduced in spite of the small cabinet size and of any desire on the part of the loudspeaker to have its own way. This follows from the fact that spurious frequencies are reduced in direct proportion to the amount of degeneration; hence, the name "Tone Monitor."

## SERVICE MEETINGS

★ A new technical series of service lecture meetings will be conducted by RCA starting in November. Lectures will be jointly sponsored by RCA and wholesale distributors in more than 100 eities. Both scund and receiver developments will be discussed and a number of demonstrations have been arrauged. Dates of the meetings can be obtained from the local RCA jobber.

## SERVICE TIPS\*

### R.C.A. M30

Fuses blow

★ If the fuses blow as soon as the receiver is hooked up the trouble is probably caused by shorted .03 micro-farad condensers in the vibrator space unit.

Emers	50 N	mo	del	
M-AC	-7			
-				

Hum develops after use

Check the high voltage winding of the power transformer for a partial short resulting in throwing off the center-tap, producing hum. Replace the power transformer if this is found to be the trouble.

### Plymouth 6 Persistent generator noise

Make sure that the condenser is fastened under the cutout screw next to the engine rather than under the one next to the hood.

66

<sup>\*</sup>Service tips are selected from the files of H. K. Bradford, President, Capitol Radio Research Labs., Washington, D. C.



**N**OT in years has there been such a heavy de-mand for wire in connection with the Ser-viceman's business. You have noticed it—we have noticed it.

With Public Address going like a prairie blaze and Radio a seething hotbed of activity which promises to be sustained, you will be needing GOOD WIRE.

CORWICO Wires are scientifically produced to do their job 100%. Antenna Systems, P-A Cables, Hookup Wires—"made by engineers for engineers." Use CORWICO on your next contract.





## Eliminates "Man-Made" Static on Broadcast as Well as on Shortwave Bands

Licensed by Amy, Aceves & King, engineered with traditional CORWICO care, this masterly aerial system fits every set and every location. Filters out nuisance noises caused by electrical devices. Improves reception generally-widely endorsed by Service men.

No. 14 (illustrated above)

\$675 List

For broadcast and shortwave frequencies, de-signed to eliminate "man-made" static and afford better reception. 2 to 6 sets can be operated at the same time with an additional lower transformer for each added unit. Other "Noise-Master" units available. WRITE FOR INFORMATION.

CORNISH WIRE CO., Inc. **30 CHURCH STREET** NEW YORK CITY CORWICO Wire Catalog available to Service men. Distribution is exclusively through jobbers





- AEROVOX offers selection of condenser types ties, voltages, tors. eauaci-Also essential resis-
- AEROVOX provides mass-produced quality components for real sound values.
- AEROVOX serves you through care-fully selected jobbers who carry ade-quate stock and know best your problems and needs.

### Free CATALOG ...

New 32-page entalog just issued. Ask your jobber or write us direct for your copy.







1938 Radolek Radio Profit Guide contains complete showings of Radio Repair Parts, Radio Receivers, Public Address Ampli-fiers, Speakers, Microphones, Test Instru-ments, Technical Books, Special Tools. Leading Standard Brands! Everything you need in the Radio Business all at Lowest Prices. You save money at Radolek!



ASTEST

SERVICE

Address

Serviceman?

Every item you get from Radolek is guar-anteed. It must be right or we make it right. Standard merchandise produced by leading Manufacturers with Radolek's guarantee added!

Everything in Radio promptly when you want it—and exactly what you want, Radolek's efficient organization insures you Habites Seniclen organization mains you the fastest service in the Radio Business. 25,000 Servicemen depend on Radolek ser-vice and benefit by Radolek's LOWEST PRICES. Radolek Radio Profit Guide will Note Service help you make money

Experimenter?

--- RADOLEK ----601 W. Randolph, Chicago, Dept. D-12 Send me the 1938 Radolek Radio Profit Guide FREE

Name

| Dealer ?

## MORE SUBSTANTIAL SERVICE NOTES

\* A few days ago one of our service readers wrote commenting on how substantial the new Silvertone service manuals are and requested if we couldn't call them to the attention of other manufacturers.

Upon examination we find the Silvertone service data printed on extra heavy paper stock that won't tear easily or show the dirt marks since it is medium brown in color. This means that the sheets will have a much longer life in the service shop. In the long run it should also prove cheaper since reprints will not be needed as soon to replace worn-out sheets.

## BOOK REVIEWS

## **RADIO ENGINEERING**

By F. E. TERMAN

★ The second edition of Terman's Radio Engineering is a thoroughly revised and enlarged version of his practical engineering text. New material includes: diode detectors, negative feed-back amplifiers, television, alignment problems of all-wave receivcrs. and transmitter antenna design.

The volume shows how the various circuits perform and how variations will affect the performance. Literally hundreds of curves are reproduced to give qualitative and quantitative descriptions of radio phenomena. The subject is presented from a practical point of view, and much data is given that will aid in the design of numerous circuits. References are made to contemporary authors for more complete information on the subjects that are briefly treated.

The chapter on radio receiver design practice has been revised, as has the discussion on linear and power amplifiers of all types. The section on audio frequency voltage amplifiers now contains data on pentode type tubes.

While written from an engineering viewpoint for engineers and students, the book will make a valuable addition to any serviceman's library.

The volume, containing 813 pages, sells for \$5.50 and is published by McGraw-Hill Co., N. Y. C.-RADIO TODAY.

## **IRC Volume Control Guide**

\* The first edition of International Resistance Co.'s volume control guide devotes the first dozen pages to a discussion of volume control tapers, switches, circuits, and a consideration of other technical features.

Thousands of receivers are listed on the 185 pages of the guide to proper volume controls. Listings give set model no., control no., resistance value, switch data, use, and price. The remainder of the 208 page pocket size book are devoted to a catalog of I.R.C. products.

Published by International Resistance Co., 401 N. Broad St., Philadelphia, Pa. Free to the radio trade .- RADIO TODAY.

## POCKET TROUBLE SHOOTER

By A. A. GHIRARDI

★ Two types of trouble shooters comprise Ghirardi's "Twin Gadgets," which provide a rapid, handy source of information for locating trouble in receivers.

The auto radio gadget specializes in these sets, and the home radio trouble shooter is designed for both power line and battery receivers. Printed on cardboard with a sliding arrangement, these service aids list the possible causes (by circuit location) of about ten different symptoms.

Reproduced herewith is one sheet

## **Dependable Low-Cost** Record-Changer Units -**Sell More Combinations**

USTOMERS for moderate priced redio-phonographs gladly seize the opportunity to own a changer set when offered one equipped with the General Industries motor-pickup-changer unit. Surpris-ingly little more cost for automatic playing — freedom from hand record changing. Install these

dependable low-cost units — sell more combina-tions. Flyer Motor; flat type flexible balanced pickup; accurate, reliable changer mechanism. Assembled ready to place in cabinets with low installation cost.

The GENERAL INDUSTRIES CO. 3738 TAYLOR ST.



Model "L" unit shown above plays and changes eight 10" or seven 12" records. Model "K" plays and changes eight 10" records; plays 12" rec-ords changed by hand. Be sure to specify exact voltage and frequency of current you use. of current you use.


PRODUCTS PRODUCTS RED TOP and GOLD CROWN gas-engine driven relectric light and power reletric light and power reletric ainton or direct curalternating or direct cooled; remote control. Send for literature.

## TRIAD BALLAST TUBES

(Resistor Units)

NOW AVAILABLE FOR REPLACEMENT

\*

Assortment No. 1 Consists of 50 Units (Assorted Types) Glass and Metal of Fast-Selling Numbers

Assortment No. 2 Consists of 100 Units (Assorted Types) Glass and Metal

Other Types Supplied on Request

ALSO A COMPLETE LINE OF RADIO RECEIVING TUBES A Profitable Line to Handle

## TRĪAD MFG. CO., Inc.

PAWTUCKET

RHODE ISLAND



MORE CREDIT TO YOU — MORE PROFIT, TOO WHEN YOU RECOMMEND A NEW

# SPEAKER



Don't risk customer goodwill by selling new parts for old speakers! Even at the factory, parts must be carefully matched for each individual speaker. It's a delicate job—and requires special equipment. A new UTAH speaker brings a new thrill to set owners more credit to you, and more 'profit, too! And you can always get the

correctly engineered replacement speaker for the job from UTAH. Write for speaker catalog. Address Dept. RT-10.

#### UTAH VIBRATORS ✓ LAST LONGER ✓ WORK BETTER ✓ COST NO MORE

The 1937 UTAH Vibrator is the finest and toughest ever made—gruelling tests PROVE IT! Exclusive UTAH design and construction mean "no comebacks" for you. And remember, over a million sets are factory equipped with UTAH Vibrators. Here is the vibrator that has earned customer preference—the vibrator easiest and most profitable for you to sell. Order yours today!





Possible Trouble Sources		
ANTENNA SYSTEM	1. Test for antenna system "noise pickup" by discon- necting antenna system from tadio while radio is "on," with cat at rest and engage "idling," If	with stops (or reduces), at least part of it is bring picked up by the aut. 1911, They eleck following: 2. Part of lead-in wire is "un- (Concid. over).
CAB BATTERY	i. Battere "exhausted" mbd "sulphated." Hydrometer feel; woltage fest under load.	2. Water level "Iow." Examine; add distilled water. 3. Terminals "corroded." Examine; clean; tighten.
CAR IGNITION SYSTEM	1. Generator interference. Accelerate engine (with ear at rest); then turn ignition switch "off." A "whine" (decreasing in volume as regime dire	down) indivates generator interference. Check generator bypase condeners for "open" or defect. Ciran commutator and brushes. (Cond'd. over.).
CAR PARTS. & WIRING	1. Dome-light wires "tadiating interference" into serial or lead-in. Disconnect dome-light wire at back of dath. "Ground" is to bulkhead. If this	diminishes noise, re-connect is as originally, but with a small s-f choke in series. Bypass wire to builthread with 0.5 mfd. cond. (Cant'd. over.).
TUBES	<ol> <li>Tube shields not making firm contact with chassis. Examine: clear; tiphtes.</li> <li>Tubes noisy: "Tap" test.</li> <li>Contacts at tube societ proops, or grid caps, "loose"</li> </ol>	or "coiroded." Examine; clean; tighten. 4. Tube: "weak" Tube checker. 5. Tube clemeon "shoring." Tube checker. 6. Cathoda-heater "leakage." Tube ebsecker.
RECEIVER CIRCUITS PROPER	<ol> <li>Receiver case "imperfectly grounded" to builthead of cas. Examine: clean builthead around mounting helve exist infig earle builth. Tighter an arg., belu.</li> <li>Responsement of colors "imperfectly grounded" to cast. Examiner; clean all "grounding" contact sur- faces; inghten all clauges.</li> </ol>	<ol> <li>Chassis shirlding "imperfect" (large vent holes in receiver case). Examine: pressure reprinter; par- ribly incided digreent type receiver.</li> <li>In addition to the foregoing seve all troubles and tens in the "RECEIVER CIRCUITS PROPER" merido of the "NOISY" (both car and cogine "at reat") card.</li> </ol>
POWER	1. "A" files chate "sbored" or "defective." OAm- meter tett; rubsiliute. 2. "A" bypass conderser "open," Condenset tester. 3. "Eliminode" not adjusted properly. Examiner; ad-	just correctly in accordance with mafe's, instructions, 4. Id addition to the foregoing, see also all troubles and term listed in the "POWER UNIT" section of the "NOISY" (both car and engine "at rest") card.
LOUD	1. Loud speaker cable shielding "grounded" imper- fectly to car. Examine; provide good "grounding."	2. Iton filings of dirt between voice coil and pole piece. Examine; clean out. (Conf. over).
GENERAL	1. "Re-radiation" from bodies of passengers (car with wooden fluor of dashboard and roof-type acrial).	If interference saries with no. of pash in car, place "grounded" copper cereen under floor mat. (Const.d. over).

One of the 11 sheets used in the auto radio trouble shooting gadget. A page is employed for each symptom. Noisy with car at rest is illustrated.

of the auto radio card, listing Noisy with car at rest, engine idling. Additional trouble-shooting data fills up the rear side of the card.

Printed in a  $5 \times 7\frac{1}{2}$  inch size, the gadgets are easily carried in the pocket or service kit. Published by Radio & Technical Publishing Co., N. Y. C. Price 50 cents each—RADIO TODAY.



\* Pocket size manual listing exact duplicate replacement controls for thousands of radio receivers. Book tabulates model no., replacement no., use of unit, resistance value, and list price.

Part of the forward and rear sections are devoted to technical discussions of resistance values, tapers, ratings, circuits, etc. The final pages are devoted to a catalog of parts and table of ballast tube nos. and interchangeability.

Published by Clarostat Mfg. Co., Inc., 281 N. Sixth St., Brooklyn, N. Y. Free to the radio trade.—RADIO TODAY.

★ 1937 edition of the Yearbook contains 226 pages and is devoted to scanning the world's technical literature. A collection of 11 technical papers published in Europe, South America, and the U.S.A. is the main feature.

Papers deal with both radio and sound subjects as indicated by the title. A few of the subjects are audio transformer design, sound systems, reverberation and sound absorbtion, dipole fading reducing antenna, ultra-short-wave transmission at high power, television over cable.

Summaries of the articles are printed in six foreign languages for those with a limited knowledge of English.

Price \$1.50. Distributed in U.S.A. by Pilgrim Electric Corp., 44 W. 18th St., New York, N. Y.-RADIO TODAY.

<sup>★</sup> New leaflet on Nathaniel Baldwin electrolytic condensers has been released by Consolidated Condenser Co., 618 W. Elm St., Chicago.

# DOPE ON DISTRIBUTORS



W. Teegarden is in charge RCA's radio tube sales to distributors.

★ Appointed by Emerson as dis-tributors for all of North Dakota and counties in Minnesota is the Dakota Harness & Hardware Co., Fargo, N. D. T. O. Smith is sales manager.

United Electric Supply Co., Salt Lake City, where S. Rosenfield is president and Sidney Ross sales manager, have been appointed distributors for Motorola home and car United will cover Utah, 1 Idaho, eastern Nevada, radio. southern western Wyoming and southwestern Oregon. A new jobber for the company in the Wisconsin area has also been named: the Electro-Pliance Co., Milwaukee, where W. F. Seemuth is head man.

\* Wilcox-Gay Corp. has an-nounced through sales manager W. L. Hasemeier a series of new distrib-utors: W-W Electric Co., Spring-field, Ohio; Radio Accessoriees, Or-lando, Fla.; Radio & Sound Service, Knoxville, Tenn.; Norwest Radio Lab-oratories, Shelby, Mont; Thompson Radio Co., Zanesville, Ohio, and Ra-dio\_Electric Service Co., Harvey, N. Dak.

★ Stern & Co., the Grunow jobbers of Hartford, Conn., have started a novel radio-newspaper advertising tie-up with dealers. The firm has begun a series of broadcasts on local station WDRC, twice a week at noon, for 13 weeks. Each broadcast sa-lutes a single dealer, using a testimonial from a consumer who purchased a Grunow from him. Awards of a Silex encourage these testimonials; meanwhile newspaper ads stir up interest.



ONAN ALTERNATING

These PLANTS supply electricity for Domestic and Commercial places where current is not available. Op-erate Water System, Refrigerator, Honsehold Appliances.

SIZES TO SUIT EVERY PURPOSE Operate on Gasoline, Gas or Distil-inte. Sizes 350 to 50,000 watts, \$110 and up. Also G. 12, 32 and 110 volt, DC Models. All Models furnished complete, ready to run. Write for Details.

D. W. ONAN & SONS Minneapolis, Minn. 578 Royalston Ave.





When Texas dealers get this card from George White, jobber salesman for Porter Burgess Co., Dallas, they watch for the trailer.

## DISTRIBUTORS

★ General Electric Supply Corp., New Orleans distributors for GE, recently sponsored a feature dinner to present the 10 new models added to the new line. Carl O. Brown, district sales manager, and George Ruble, radio sales supervisor for the araea, report hearty acceptance for the new models. ★ J. M. Marks, Fada president, has announced the formation by private capital interests of Fada Radio of New Jersey, with headquarters at 1115 Elizabeth Ave., Elizabeth, N. J. The new firm will handle the entire Jersey set-up except for a strip adjoining Pennsylvania, which is covered by Rumsey Electric Co., Philadelphia, Pa. All dealers' requirements for parts and service will he handled by the new company, which will carry a complete supply of parts on all sets made since 1921. Large stocks of the new Fada line have already been shipped to the new offices, including several carloads of consoles featuring Flash-O-Matic tuning. One hundred dealers have heen re-franchised, and Mr. Marks reports genuine enthusiasm. Alexander Wellington, district manager, is contact man for the new firm.

★ R. B. Lacey, vice president and general manager of the Clarion Corp., Chicago, recently completed a successful southern trip with Henry W. Burwell of Atlanta, Clarion representative. Jobber appointments on this trip included the following: Hollis Sales Co., Memphis, Tenn., Keith-Simnous Co., Nashville, Tenn., L. K. Rush Co., Jackson, Tenn., Radio & Sound Service, Inc., Knoxville, Tenn., and Lambeth Electric Supply Co., Winston-Salem, N. Car. Other jobber appointments announced recently by Mr. Lacey include the following: Reed Co., Milwaukee, Wisc.; Valley Radio Distributors, Appleton, Wisc.; Williams Auto Sales Co., Clearfield, Pa.; Radio Service and Supply Co., Martinsville, W. Va.; Tracey-Wells Co., Columbus, Ohio; Farmers Union, Inc., Omaha, Neb.; United Electric Service, Monroe, La.; Northwestern Radio Labs., Shelby, Mont., Crescent Radio Supply Co., Glasgow, Ky.; Professional Radio Supply Co., Clarkshurg, W. Va.; MacIntosh-Dupont, Inc., Portland, Me.; Morris & Earl Co., Chippewa Falls, Wisc.; Hochman Distribnting Co., Cleveland, Ohio; Bruce Supply Co., Adair, Ohio; R. F. Clark Co., Denver, Colo.





• "They don't mean a thing if they ain't got that swing."

• Unless vibrators are correctly designed so that in the proper circuit they immediately break into a full swing and continue to act that way through minimum starting voltage, they will arc, burn and sputter on starting. Don't risk a poor vibrator spoiling a good set.

 Play safe—insist on Exact Duplicate Radiart Vibrators from your dependable Radiart Jobber.



## This HANDBOOK is a MONEYMAKER for DEALERS and is ABSOLUTELY FREE

Vital Merchandising Data and Helpful Selling Hints in Handy Pocket Manual

#### features:

#### SET SPECIFICATIONS + TRADE-IN ALLOWANCES COST OF DOING BUSINESS + TABLE OF SALESMEN'S WAGES MARKUP TABLES + CALENDAR OF SELLING OPPORTUNITIES

THE industry's No. 1 magazine—RADIO TODAY now offers you a valuable PLUS service, one that will help make your saleswork more effective and increase your profits.

Every monthly issue of RADIO TODAY gives you a tangible and timely magazine service, with special attention to merchandising matters, but you also need reference material of the kind that appears in the Radio Dealers' Handbook. It will cut waste time, put an end to needless troubles and prevent the loss of sales.

The Handbook is sent FREE as an extra service with new

subscriptions or renewals to RADIO TODAY. It is not SOLD and is obtainable in no other way. In addition, you will receive, free, two issues of SELLING SOUND published semi-annually as a separate section of RADIO TODAY.

Every dealer has problems that are simplified or answered by the Handbook. For example, TURNOVER. A chart shows when and how your expected profit becomes an actual loss. Another feature covers TAX SAVING, with a list of deductions and depreciation rates that are allowable. Every feature in the book will help you save money or increase your profit.



#### NATIONAL ACTION BY PARTS JOBBERS

\* Membership meeting of the National Radio Parts Distributors Association was called during the recent New York Parts Show, with wholesalers from all parts of the country attending. Leslie G. Rucker, president, heard from old members and welcomed many new ones.

Matters taken up by the Association concerned re-allocation of the regional divisions, the question of whether manufacturers should be adnitted to membership, the policy of using door prizes at ham fests, an organization poster, and other items.

The Sales Managers Club had appointed a committee to work with the Association, headed by Jerry Prince. Both Mr. Prince and Charley Golenpaul, the popular speaker from the Aerovox organization, addressed the meeting.

Present group of national officers for the Association continue in their positions and additional directors for the new regional divisions will be announced soon. Secretary Blakely E. Cross is at Adirondack Radio Supply Co., 40 Clyde St., Gloversville, N. Y.; besides President Rucker the other



Dorthy Kelly is the only woman sales promotion mgr. in big-time radio. A top-notch expert, she's been named by Clarion Corp.

leaders are Joseph A. Demambro, Boston, vice-president, and C. W. Kamm, Toledo, treasurer.

★ James Woods, southern division sales manager for International Radio Corp., has opened an elaborate office suite in the Perdido Building, 822 Perdido St., New Orleans. Mr. Woods cordially welcomes dealers and jobbers. ★ Added to the sales division of Majestic Radio & Television Co. are F. S. Dahl, to cover upper New York state under the direction of Edward Fairchild, divisional sales manager; Fred Toole, to handle Alabama, Georgia and southern South Carolina, under the supervision of Mr. Herzog, divisional sales manager; Russell Fryburg, to be district supervisor of Oregon, Washington and parts of Utah and Montana with headquarters at Portland, Ore; and Parker Randall, to cover eastern Iowa under the supervision of Frank Hawley, divisional sales manager.

★ The Utah Radio Products Co., Chicago, closed in September the biggest replacement parts business in the history of the company, according to R. M. Karet, director of sales, wholesale division. The new line of Utah amateur kits is selling far beyond anticipation and right now production, rather than sales, is the problem. The Cameradio Co., Pittsburgh, Pa., and Wheeling, W. Va., leading parts jobber, has been appointed exclusive distributor for the Utah amateur kits in that territory. This distributor has been doing an excellent job in wholesaling Utah speakers.

★ RADIO TODAY has been informed by a well-known set manufacturer that territories are available just now for established distributors who are open for a set line. Information can be secured by addressing Box B, care of Radio Today.





Henry C. L. Johnson is the new asst. ad and sales promotion mgr. of Hygrade's radio tube division.

At dealer meetings just held all over the country by General Electric radio distributors, the ten new models added to the 1938 G-E line have been given enthusiastic recep-tions. E. H. Vogel, manager of G-E's radio division, presented the sets to the dealers at the Buffalo, Philadelphia, Baltimore and Washington conventions while A.A. "Art" Brandt explained in detail the elaborate advertising and sales promotion campaign now being launched on behalf of General Electric radio. Mr. Brandt also presented both models and advertising plans at meetings in Atlanta, Birmingham, New Orleans, and Dallas. C. M. "Woody" Wilson, G-E radio sales manager, did the honors in the midwest at the Chicago, Milwaukee, Omaha, Kansas City and St. Louis presentations.

★ Detrola Corp.'s director of sales Horace H. Silliman has announced the appointment of Earl F. Bryant as district manager for the company in the Denver, Colo., area. Mr. Bryant's experience during the past 4 years has been with United American Bosch, travelling in 7 states.

★ First set of 126 winners in Philco's \$50,000 Radio Mystery contest came from practically every state in the Union. Cash prizes awarded recently ranged from \$10 to \$500, in the first of the 16 weekly broadcasts, and these winners will have a chance to compete for the Grand Prizes. The contests are broadcast on 243 stations.

★ Emerson reports exceptional success with its model Q157, the 4-tube set with a cabinet of molded bakelite. The company has named it "America's Most Photographed Radio" and traces part of its success to the fact that the case is constructed sectionally, allowing for a wide range of color combinations. IF II ID IE IL OMIATIC PHONOGRAPH RADIO The CONSOLE AUTOMATICI de Luxe

Fifteen tubes with cathode-ray tuning eye. All wave reception—5 bands. High fidelity loud speaker. Inclined panel for dial. Noise eliminated by special sensitivity control. Combination bass and treble tone control an exclusive feature. The Record Changer plays eight 10-inch or seven 12-inch records, automatically. Felt-lined compartment to protect records. Latest development in erystal pick-ups producing tone of rich resonance and superbly clear detail. Cabinet masterfully built in tasteful, graceful lines. Write or wire for details.

The PORT-O-MATIC

1013 MADISON AVENUE :: :: ::

### PORT MATIC PHONOGRAPH RADIO

Patented construction will play 8 records of any standard make automatically. Felt-lined receiving tray stores records and protects them. Beautiful tone, remarkable clarity and volume. 8-tube superheterodyne with cathode-ray tuning eve.

cathode-ray tuning eye. Built-in aerial. AC-DC, foreign current, short wave reception. Luxurious cowhide leather ease. Good territories available. Write or wire.

CORPORATION

NEW YORK





heard the Visograph. Thousands in use now. It flashes reports on radio tube health! It shouts out loud if a tube is dead. Tests electronic conductance, leakage, and individual elements. Price only \$39.95 through leading distributors and tube manufacturers. Special prices on quantity orders.

TRIUMPH MFG. CO. 4015 W. LAKE ST., CHICAGO, ILL. (In Canada, Big A Co., Belleville, Ontario)

## it SELLS tubes ON THE TRADE TICKER

\* The Sentinel Radio Corp., Chicago, announced recently the acquisition of another factory located adjacent to the present Clybourne Ave. plant. Sentinel now has three full-fledged factories in Chicago in operation, and is still running far behind orders. A recent visitor to the executive office at 2222 Diversey Parkway was Ray Noblitt of the United Appliance Corp., Ft. Worth, Tex., Sentinel jobber who was emphatic in stating that business conditions in Texas right now are better than at any time during the past twelve years. Pat Reed, factory representative, recently completed an extensive tour, wherein he contacted many dealers in behalf of Sentinel distributors in Midwest territory.

★ In a meeting held on September 24th, directors of the Utah Radio Products Co. elected G. Hamilton Beasley president of the company to succeed Ira J. Owen. Mr. Beasley, who has been a director of the company since last April, was assistant secretary of the Chicago Stock Exchange from 1930 until becoming associated with the investment firm of Fuller, Cruttenden and Co. of Chicago, where he was active in the underwriting department.



-with or without all wave filters. Dynamotor construction-economical to operate-ruggedly built for years of trouble-free service-used or recommended by the largest manufacturers of sound apparatus-in use in all countries of the world-Send for prices and data.

#### Janette Manufacturing Company

556-558 West Monroe Street Chicago, Ill. U. S.A. BOSTON-NEW YORK-PHILADELPHIA-CLEVELAND-MILWAUKEE-LOS ANGELES DETROIT-SEATTLE





M. F. Blakeslee is the new eastern division sales manager for RCA.

★ American Communications Corp., 1650 Broadway, New York City, makers of the American Code Reader, have named a group of representatives: Conrad R. Strassner, 1623 S. Hill St., Los Angeles, Calif.; J. Earl Smith, P. O. Box 1805, Dallas, Tex.; Richard Brock, 20 E. Jackson Blvd., Chicago, Ill.; E. H. Christy, 542 Tchoupitoulas St., New Orleans, La.; Hollingsworth & Still, Norris Bldg., Atlanta, Ga.; Albert Leban, 27 S. Robinson St., Philadelphia, Pa.; Edwards Sales Co., 942 Prospect Ave., Cleveland, Ohio; Fred Stephens, 528 Macabees Bldg., Detroit, Mich.; and P. A. Boyd, 312 Trenton Ave., Wilkinsburg, Pa. The company has also announced that some territories are still available.

★ Robert F. Herr, manager of Philco's Parts and Service Division, reports a 100 per cent increase in the firm's parts business every month since the early part of the year.

★ Edward F. Glavin, pioneer radio experimenter and inventor of radio-controlled vehicles, died in Hollywood, Calif., while visiting friends. Mr. Glavin's work in radiocontrolled vehicles was well known. He exhibited and operated one of his vehicles at the first radio show, held at the Pennsylvania Hotel, New York City, in 1921. He was an ardent early radio worker and his pioneer radio station in Jersey is remembered by many. During the World War he gave his services to the U. S. Navy and was stationed at the Brooklyn Navy Yard. Mr. Glavin was connected with Pacent Electric Co., Inc., for several years on radio research work. He was an early member of the Radio Club of America and the Institute of Radio Engineers. ★ Further expansion in production and sales divisions is reported from the new headquarters of Central Communication Devices, Inc., 140-144 W. 22nd St., New York City. The company's Central-Call intercommunicators were recently introduced to the trade by manager S. Englander.

\* M. N. Beitman, veteran radio author and experimentor, and wellknown PA expert, has been added to the staff of engineers at the Chicago branch of the Wholesale Radio Service Co.

★ To the sales force of Majestic Radio & Television Co., have been added Loren M. Wood, Moncrieff H. Smith and E. W. McGrade. They will cover territory in Missouri and southern Illinois; with headquarters at St. Louis, Mo.

★ At the recent convention of the National Retail Stores Association, Pittsburgh, Pa., International Radio Corp. displayed an elaborate series of new Kadette models. Two jobbers for the company were on hand— Charleston Electric Supply Co., Charleston, W. Va., represented by John Morgan and "Jake" Bekenstein; and Samuel Weinhans & Son, represented by "Lou" Corbin. Well-known retail outlet representatives present were Messrs. Sadd of Gimbel's, Buzzard of Spear's, and McGowan of Horne's. Kadette execs Albert Rapfogel and Gere Burns were on hand.

★ Equipment deal by which dealers and servicemen may obtain modern shop equipment at new figures has been announced by Arcturus Radio Tube Co., Newark, N. J. Full lines of Supreme and Clough-Brengle instruments are available, along with a Neon sign and portable Underwood typewriters.

★ G. K. Throckmorton, executive vice-president of the RCA Mfg. Co., has announced the following promotions in the RCA Victor sales execu-tive organization: L. W. Teegarden, formerly eastern division manager, has been placed in charge of radio tube sales to wholesale distributors. M. F. Blakeslee, formerly manager of the Chicago district, has been appointed manager of the Eastern Division, with headquarters at Camden, N. J. Richard A. Graver, formerly manager of the Cleveland district, has been appointed manager of the Chicago district. A. G. Kemp, form-erly package goods sales representative in Cleveland, has been appointed manager of the Cleveland district. E. J. Rising, formerly manager of the San Francisco district, has been appointed manager of the Los Angeles district, replacing E. W. Isenhower, resigned.

★ Winner of RCA's Radiotron sales contest, which ran for 6 months in the Tri-State district, was Anchor Lite Appliance Co., Pittsburgh. Company was awarded \$150 first prize.

★ A nationally known radio manufacturer has opening for sales representatives or salesmen of proven ability and with dealer following. Complete information should be sent to the following address: 9th floor, 430 N. Michigan Ave., Chicago, Ill.





#### NOW A PERFECTED MODULATOR

KENDALL CLOUGH, pioncer of cathode ray and electronic test equipment again scores a sweeping victory. After years of exhaustive study and research, Clough-Brengle announce the ...

#### New Model 111 Electronic Frequency Modulator

One Positive---One Negative Beat! No more! No less! Unit supplies only the frequency modulation needed to delineate receiver response curves on the Cathode Ray Oscillograph. Balanced circuits, Band Pass Filters, Push Pull Coils and Unit Shielding have eliminated harmonics and spurious repeat points. Low impedance C-B coaxial cable provided with each instrument. Use with any R.F. Oscillator.





#### TACO ANTENNA SYSTEMS and make many Extra Dollars

Take any set, anywhere, any owner, Equip it with a TACO Antenna System, Presto! Tremendous difference in performance. Ideal results on broadcast and short waves. Minimized noises.

All because TACO (licensed under A.A.K., Inc., Patents) represents most advanced engineering. Factory assembled, wired, soldered. Low-loss transformers. Models for every pocketbook.

Also a Master Antenna System for the private home, providing any number of radio ontlets. Same job used for apartment houses, botels, etc.

.

**New DATA:** Ask your local TACO jobher or write us direct for latest eatalog and installation manual.

TECHNICAL APPLIANCE CORP. 17 East 16th St., New York City IN CANADA: 414 Bay St., TORONTO



• Brand new Service Manual—over 200 pages of practical data—yours on request. And remember, it's backed by that complete line of CLAROSTAT control and ballast matched replacements.



#### NATIONAL UNION ANNOUNCES Condenser line for service Field

\* H. R. Peters, president of the National Union Radio Corporation, announces the entry of his company into the field of condensers for radio service specialists. "We will provide a complete line of electrolytics and papers. We have worked closely with the service specialist field for several years and have studied the condenser problem closely. We intend to fill a need for a quality condenser line which will be merchandised along lines similar to National Union radio tubes. The same policies which have earned National Union tubes a leading place in the radio service profession will be applied to the new N. U. condensers." The N. U. condensers will be handsomely boxed in gold, black and green containers and cartons. The line will include standard and junior card-board box types, standard and junior inverted can types and tubular types in electrolytics, tubular papers, automobile radio papers, uncased con-densers, auto vibrator condensers and cil-filled transmitting condensers. Complete stocks will be warehoused at strategic points throughout the country for quick delivery to distributors.

★ Frank G. Klock, sales manager, Universal Camera Co., 32-46 W. 23rd St., New York City, has returned from an extensive tour of the country, dedicated to radio stores handling home movie outfits. Mr. Klock found hundreds of new accounts, store traffic definitely up, and list prices rigidly adhered to.

★ Ralph Mathews, well-known radio advertising agency executive in Chicago and also a director of the A.R.R.L., won additional honors recently in a tennis match played at the Chicago Town and Tennis Club. After winning first place in the tournament for his division, R.H.G.M. is now threatening to play Budge in the near future. ★ Lloyd Spencer, the new general sales manager for Stromberg-Carlson, has for the past 9 years been sales manager for Gross Sales, Inc., New York and New England representatives for the company. Widely known as an able executive and a friendly advisor, he is a popular figure in the East. He has a long period of experience in the talking machine industry to his credit before his radio activity began. Enthusiastic friends in Kansas City recall his early work with Columbia Phonograph Co. and J. W. Jenkins Music Co.

Gross Sales gave Mr. Spencer a grand send-off party at the Belmont Plaza Hotel Friday, Oct. 1st, in celebration of his appointment. The sales staff made a presentation of a beautiful world globe indicating his new sphere of travel. The presentation talk was made by W. L. Collins, with a very touching response from Lloyd. Later came the high spot of the evening, a moving talk by Benjamin Gross, president of Gross Sales, Inc., in which he emphasized the great possibilities for advancement in the selling field, for men who everlastingly develop their ability and knowledge and maintain an alertness to fit themselves for bigger rewards. Mr. Gross concluded his remarks by presenting a personal token to Mr. Spencer, a beautiful Longine wrist watch, as a mark of appreciation for Lloyd's loyal efforts during the past nine years.

during the past nine years. John G. Wolfe, well known to the metropolitan district radio trade since 1922, has just been appointed office manager by Gross Sales. Mr. Wolfe is taking over the office duties formerly carried by Mr. Spencer, including customary factory and dealer contact. In addition, he will continue in charge of the service and parts supply department.

★ Crosley's foreign division manager, A. G. Lindsay, has sailed from New York for a 5-month tour of Europe, the North African coast and Palestine. He will call on Crosley's distributors and licensees in those areas, making plans for a better business year to come.



Tom Joyce of RCA, center, says bravo to A. S. Buzzard of Spear & Co., Pittsburgh, a winner in the electric tuning contest. At the left is Elmer Hamburg, Pittsburgh jobber.



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racy, we cannot guarantee against the possibility of an occasional change or omission in the preparation of this index.





BLVO

STATE

PASTE COUPON ON PENNY POST CARD

WHOLESALE RADIO SERVICE CO., INC. 100 SIXTH AVENUE, NEW YORK, N. Y.

Rush FREE 1938 catalog No. 69.-12K7

BOSTON, MASS.

NAME

ADDRESS

CITY

BRONX, N.Y. NEWARK, N. J. JAMAICA, L. I.

NOW

YOUR AUTOGRAPH

MINE

FOR A GOLD

TRADE



MODERN RADIO SERVICING

BOTH BOOKS BADIO FIELD SERVICE DATA

## DEMAND FOR AMERICAN SETS

An insatiable demand for American-made radio receivers exists Abrams, treasurer of the Emerson Radio & Phonograph Corp. Mr. Abrams has just returned from a 5-week tour of western Europe.

The demand for our radios comes from consumers as well as from the trade, he reports. However, many barriers have been set up in the form of quotas, monetary embargoes and governmental restrictions. In some countries, certain circuits are banned, and in other cases a manufacturer has to list each part that goes into a set, repeating the process for each model.

#### CLARION INSTITUTE **OF SOUND ENGINEERS**

★ Hubert L. Shortt, president of Transformer Corp. of America, 69 Wooster St., New York City, announces a novel sales and merchandising program to promote the sale of its public address and amplifying equipment.

"Close study of conditions in the industry," Mr. Shortt advises, "indicates that the average sound specialist is being put at a decided disadvantage. The radio distributor who maintains a sound department can sell to anyone, either actual con-sumer, serviceman or sound special-ist, and still retain his direct factory purchasing power. However, the P.A. man who concentrates on this particular phase of a highly special-ized industry is forced to purchase through secondary sources, reducing in proportion his earning capacity. This. in my opinion, has retarded the exploitation of a tremendous market for sound equipment, more than any one other factor."

"It is our endeavor," he continues, "to allow the sound man an equit-able profit for his services in return for his sales efforts for the further promotion and development of public address equipment market." Briefly his plan consists of the following:

The Transformer Corp. of America will sponsor the formation of the Clarion Institute of Sound Engineers. This organization will consist of chartered members, all sound specialists of proven ability, who will vol-untarily subscribe to the plan. All participants will be carefully checked, so that only the selected men will be considered. These mem-bers will be given direct factory purchasing power. They will be able to buy standard Clarion merchandise at prices comparable to those offered other distributing outlets. The facilities of the engineering department and laboratories will be made available to the members. Difficult jobs requiring special engineering will no longer be a stumbling block.

Each member will be given an appointed territory in which he will be the exclusive distributor of Clarion equipment. He will be given the ad-vantage of a protected territory, and he alone will be able to buy directly



C. L. Parris of Parris-Dunn has a Hy-Tower handshake with dealer Aaron Angel of St. Francis, Kan.

from the factory. A cooperative ad-vertising campaign, covering various industries will be instituted and inquiries resulting from the campaign will be turned over to the members. Those chosen for membership will receive handsome certificates of ability as sound specialists.

#### SHADOWGRAPHING NEEDLES

Further success has been regraph needles, by H. W. Acton, 370 Seventh Ave., New York City, makers of Actone needles. The firm uses a "shadowgraph" process, which con-"shadowgraph" process, which con-sists of casting a shadow of the needle-point upon a screen. This re-veals the slightest imperfection, and affords a unique check on the fine-ness of the point. New Actone ac-tivity is dedicated to increased interest in the record business.



Lynn C. Park is the new treasurer for Continental Radio & Television, Chicago.

#### Radio Today

# TOUCH TUNING

THE BIGGEST RADIO DOLLAR VALUE OF THE YEAR NOT 149 95 NOT 139 95 NOT 139 95 NOT 129 95 but

Get the good news from your local G-E Radio Distributor on the sensational price announcement. MODEL F-96

GENERAL ELECTRIC scores another great radio scoop. G-E Touch Tuning, the most important radio improvement of the year, is now offered at a price within reach of every home.

Your customers can purchase a G-E Touch Tuning Radio for no more than they would pay for a good coventional hand-dialed Radio.

No more dialing! No dials to twist, twirl, or swish. The new G-E puts an end to fumbling with knobs. You press a button—that's all! And instantly, silently, and automatically, the program comes in tuned to hairline precision.

The biggest radio dollar value of the year TOUCH-TUNING -Press a button that's all-plus these outstanding features:

New Multi-vision Louver Dial with Visual Volume and Tone Indicators... The amazing new G-E Tone Monitor... Silent Tuning... Automatic Frequency Control... Automatic Volume Control... Custom-craft Cabinet.

G-E RADIO IS EASY TO SELL BECAUSE THE PUBLIC IS SOLD ON



APPLIANCE AND MERCHANDISE DEPARTMENT, GENERAL ELECTRIC COMPANY, BRIDGEPORT, CONNECTICUT



#### **JOBBERS & DISTRIBUTORS:**

Some exclusive territories still available — phone, wire or write for particulars.

> CITICAL AND CONSTRUCTION OF THE Button There's Your Station

> > WRITE FOR LITERATURE

Here's the Big Jeature 8 TUBE TABLE MODEL TO RETAIL AT ONLY



Think of it!

Be the first to give the public the new feature they all want—AT POPULAR PRICES —genuine Electric Tuning—NOT manual tuning—NOT variable trimmer tuning— NOT mechanical tuning—but gehul/hetelectric Tuning in its most simplified and most accurate form. DETROLA again sets the pace with Electric Tuning sets at unheard of low prices. This is the only Electric Tuning Table Model radio on the market today—you have NO COMPETITION. Get on the DETROLA band-wagon and stait making more money for yourself; at the same time have the "livest" line of radios in Americal

Model T 1 illustroted. 8 tubes with 12 tube performance: AC Superheteradyne. Bandsy Stondard Broodcast, Police, Aviotion, Amoteur, Foreign. 532-16000 KC. 8'' dynamic speaker. Telobeam Tuning Eve — Automatic Volume Cantrol. Tone Control. Illuminated Network Dial. Cabinet: 12'' x 22'' x 9''.

DETROLA CORPORATION . DETROIT, MICH.