

\$1 Yearly

Caldwell-Clements, Inc., 480 Lexington Ave., New York, N. Y.

15 Cents a Copy

#### Retail Radio Sales Glide Upward

#### Auto-Radio Best in Dealers' Hands, Car-Makers Feel

The Great Five Minutes in Selling Sets

Springtime Trade-Shows at Chicago

New "Million-Dollar Programs for Every Set You Sell"

"Sound" Market Expands

Many Radio Dealers Handle Elec. Items

New Things to Sell

#### OCTOBER • 1936 •



"THREE OUT OF FIVE NEED A NEW RADIO"



## **"UP TOP"**

NBC celebrates a decade of delivery! In Quantity and Quality of Programs, its Networks rank first

Through ten years, the National Broadcasting Company has hewed to its stated purpose in entering the field of broadcasting:

"The purpose of the National Broadcasting Company will be to provide the *best programs available* for broadcasting in the United States."

NBC Network programs, in this decade, have won the largest audiences in the world, as evidenced by polls among radio listeners. Every hour, from early morning to late at night, the pick of the country's programs can be heard—over NBC Networks!

These programs help sell sets for dealers ... the more expensive type of sets. It is a proven fact, according to dealers themselves, that "Better Programs Help Sell the Better Sets." And NBC has the programs.

This year—NBC's Tenth Anniversary—affords the finest all-star radio schedule ever offered to your prospects and customers. When you demonstrate a fine set, tune in an NBC program. It's your guarantee that your set will get the best possible break with listeners!



#### NATIONAL BROADCASTING CO., INC.

A Radio Corporation of America Service NEW YORK · WASHINGTON · CHICAGO · SAN FRANCISCO WE WANT TO LOOK AT LABYRINTH RADIOS--THE KIND YOU SOLD TO THE SMITHS

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THEIRS HAS SUCH PERFECT TONE!

#### HERE'S THE ONE THEY BOUGHT-AND THERE ARE ELEVEN OTHER MODELS TO CHOOSE FROM

#### EVERY LABYRINTH RADIO SOLD SELLS MORE! THE GREAT-EST BUSINESS BUILDING FEA-TURE THE INDUSTRY HAS EVER KNOWN!

LIKE a landslide, gathering momentum as it goes, sales of Stromberg-Carlson "Labyrinth" radios are sweeping the country. Every one sold brings more prospects to dealers' stores—prospects who are ready and eager to buy.

No other recent development in radio history has done so much for radio. To the radio owner the Acoustical Labyrinth gives a naturalness and fidelity of tone he never dreamed possible. To the radio dealer it gives the most powerful sales weapon ever offered the radio trade—a feature whose value can be shown and understood.

In Labyrinth radio, dealers have an exclusive patented feature that marks a milestone in radio progress—available in twelve of the season's most beautiful models.

Stromherg-Carlsons range in price from \$49.95 to \$963. Labyrinth models from \$149.50. (Slightly higher in Southeastern States and West of the Mississippi.)

STROMBERG-CARLSON TELEPHONE MFG. CO., ROCHESTER, N. Y.

NO. 150-L FIVE RANGE. Walnut finish. Beam Power. 15 watt output. Equipped with Labyriath. "There is Nothing Finer Than a

Stromberg-Carlson."

The long, winding passageway of the Acoustical Labyriath takes the place of the usual hox like cavity in the cabinet which is the source of theexagerated boom in low tones. It gives yon deeper hass noted, with a new fidelity and in-

Labyrinth

RADIOS



gives you deeper hass notes, with a new fidelity and increases the volume capacity and accuracy of the loud speaker. Shownin No. 145-L Radio.



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### FINANCE RADIOS and your entire line locally through C.I.T.

EAR YOU, perhaps in your own community, there is a C. I. T. Local Office ready to give full service in the financing of radios and other home appliances.

Using C. I. T., you secure for all your instalment sales the speedy, personalized service which cuts red tape and saves your valuable time. Furthermore, you can now offer your customers a combination C. I. T. Budget Plan sale of any two or more acceptable articles in one contract.

More than a dozen leading radio manufacturers and many appliance manufacturers are now providing their dealers with the C.I.T. Budget Plan. For quick credit service and purchase of paper—

#### Call the Nearest C. I. T. Office

Abilene - Akron - Albany - Altoona - Amarillo Asheville - Atlanta - Augusta - Bakersfield Baltimore - Bangor - Bay Share - Beaumont Beckley - Billings - Binghamton - Birmingham Boise - Boston - Bridgeport - Bronx - Broaklyn Buffalo - Butte - Camden - Cantan - Cape Girardeou Carbondale - Cedar Rapids - Charleston Charlotte - Chattanaoga - Chicago - Cincinnati Clarksburg ~ Cleveland ~ Columbia ~ Columbus Cumberland - Dallas - Daytan - Denver Des Moines - Detroit - El Paso - Erie - Evansville Florence - Fort Wayne - Fort Worth - Fresna Glens Falls - Greensboro - Greenville Hagerstown - Harrisburg - Hartfard - Hempstead Hickory - Hauston - Huntingtan, W.Va. Indianapolis - Jacksonville - Jamaica Jamestown - Jersey City - Johnson City - Kansas City Knoxville - Lexington - Lincoln - Little Rack Los Angeles - Louisville - McAllen - Manchester

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C. I. T. CORPORATION • NEW YORK • CHICAGO • SAN FRANCISCO A UNIT OF COMMERCIAL INVESTMENT TRUST CORPORATION CAPITAL AND SURPLUS MORE THAN \$100,000,000

HELPING DEALERS TO WIDEN THE SCOPE OF THEIR BUSINESS

Radio Today

# ZENITH AGAIN FIRST

ZENITH last year enjoyed a greater increase in public acceptance than any other major radio manufacturer.

As a result last year was ZENITH'S greatest year in its history, including 1929.

ZENITH repeats and is again this year experiencing its greatest increase. (222% first 4 months over last year.)

ZENITH'S sales of its new models for the first five months of this fiscal year (May, June, July, August and September) have exceeded the entire twelve months' sales of last year, its greatest year in history.

No other major radio manufacturer can make the above statements.

There is a reason — Merit of product — The public is demanding ZENITH.

### AMERICA'S MOST COPIED RADIO ALWAYS A YEAR AHEAD

October, 1936

Today



Big RCA Radiotron 1936-1937 Check-Up Plan reveals your most powerful Sales Maker! Wake him up—put him to work—he's a leader anxious to boost your profits!

IN groceries it's canned goods ... in drug stores it's soap... in hardwares it's nails. And so it goes, through every business. All have a hard-hitting Sales Leader—an article that sells in quantity at low cost—and leads to the sale of other, more expensive products featured in the same store.

In radio, the Sales Maker, the leader to the sale of your more expensive equipment, is a Radio Check-Up.

The new 1936-37 Radiotron Check-Up Promotion Plan is designed to awaken this leader—and keep him awake! This plan shows how through service you lead to more sales and greater profits.

The Plan is ready. Ask your jobber salesmen to show you the booklet outlining RCA's sensational 1936-37 Check-Up Plan. Ask him about Radiotron's de luxe display service which includes window and store interior displays that will pull prospects into your store. Find out from him details regarding the new promotional material RCA has prepared, including unusual letters, post-cards, "The Listening Ear," and other interesting promotion materials that demand action! These RCA sales helps will help you put this leader to work.

Liste: to "The Magic Key" every Sunday, 2 to 3 P. M., E. S. T., on NBC Blue Network



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

This waiting market, and the 1937 SENTINEL, the most outstanding FARM RADIO ever built, is the GREATEST combination for profit ever offered the radio dealer. Off the high lines, on farms in every part of the country, are 3.000.000 prosperous farmers (farm income this year is the highest since 1929) who will buy radios this season. 3.000.000 good prospects who know SENTINEL as the Pioneer Farm Radio and are reading SENTINEL as the Pioneer Farm Radio and are reading SENTINEL advertising in the leading farm magazines. Hundreds of thousands of satisfied Sentinel owners help you sell to this tremendous market. With every new feature found on the finest city radio

With every new feature found on the finest city radio — with amazing performance — with the Sentinel Farm Powr Generator and Wincharger to eliminate battery charging annoyance — with new P. M. Dynamic speakers in all models — with Tel-Eye Tuning — with models as low as \$29.95 complete with batteries — this 1937 Sentinel Line is made to order for this GREAT farm market, the finest and most complete Farm Radio Line ever presented. Fourteen Models to choose from — for two, six and thirty-two volt operation.

Get your share of this business. Send in the coupon today for full details.

THESE OUTSTANDING FEATURES MAKE SENTINEL THE LEADING FARM RADIO.

2, 6 and 32 volt Models 💙 New Consolette Cabinet Prices start as low as Attractive modern cab-\$29.95 complete with batteries. inets. Distinctive new Oval New Permanent Mag-Multi-Colored Dial. net Dynamic Speakers. Farm Powr Gas En-Tel-Eye Tuning. gine Generator and Wincharger Deal. Foreign Reception, MAIL THIS COUPON SENTINEL RADIO CORPORATION Dept. RT-10 2222 Diversey Pkwy., Chicago, Illinois Gentlemen: Please rush me complete details of the 1937 Sentinel NAME ....

ADDRESS .....

ALSO 28 OUTSTANDING SENTINEL AC MODELS PRICED FROM \$18.95 TO \$110.00!

October, 1936

Meet the pride of the 175 Class

Newest RCA Victor 1937 Magic Voice model 13-K with Magic Brain, Magic Eye, Metal Tubes offers dealers a real value for the quality market!

RCA Victor completes its sensational 1937 Magic Voice Series! The magnificent 13-K, shown here, fills out the series, fitting into the \$175 price class like a fine painting in a smart frame.

This gives RCA Victor dealers an outstanding model in the \$175 bracket. For the 13-K is the only radio at this price with the famed RCA Victor Magic Quartette—Magic Voice, Magic Brain, Magic Eye, RCA Metal Tubes—plus many other performance features that make it stand head and shoulders above other radios!

Get full details about the new 13-K from your RCA Victor Distributor. Push this new set and all the other superb models in the Magic Voice Series. Make higher unit sales for greater profits! Also feature RCA Victor's popular Extra Value Series of 28 sets under \$100-and cash in on the low price market!

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



MAGIC VOICE SERIES ... Brand-New console Model 13-K... 13-tube, 5-band superheterodyne with Magic Voice, Magic Brain, Magic Eye, RCA Metal Tubes. Tuning range 150-410 and 530-60,000 kcs. covers "X" band of weather reports, foreign, domestic, police, aviation, amateur bands. Many other brilliant features.

Prices F.O.B. Camden, N. J., subject to change without notice

#### EXTRA VALUE SERIES

... RCA Victor Model 4-X ... 4-tube, AC-DC, long and short wave table radio. Tuning range 540-1720 kcs. includes domestic broadcasts and police. Fine features. \$27.95



RCA Manufacturing Co., Inc. Comden, N. J. A service of the Radia Carporation of America

Radio Today

### It's the "EXTRA" Sales that Pile Up Your NET Profits!

And EMERSON is the Only Complete Line that can bring YOU this "Above Normal" Business



#### For Instance ... 6-Tube AC-DC Model A-132 Sal 6-Tube AC - DC Superheterodyne . . . Standard Broadcast and State Police Calls . . . 6-Inch Dynamic Speaker . . . Illuminated GEMLOID Dial . . . Automatic Volume Control . . . Built-in Antenna . . . Cabinet of American Walnut with Syrocowood front, 12 inches wide, 81/2 inches high, 63/4 inches deep.

NY successful dealer will tell you that Emerson Rodio is not a COMPETITIVE A line. It is in a closs by itself — there isn't onything like it on the morket. Its individual STYLING, ADVANCE FEATURES and autstanding VALUES have developed a demand all its own.

Your disploy of Emerson models will ottract customers who would not otherwise come into your store. Your Emerson exhibit will induce purchoses of EXTRA sets --for all over the home, for gifts, for offices.

No other line in Americo embodies such dynamic promotion feotures. No other line offers such merchondising opportunities — os will be PROVED by your Emerson distributor. Send for his nome and address now.

#### Here is the Complete 1937 EMERSON Line ...

COMPACTS. 17 . . \$14.95 to \$44.95 TABLE MODELS. 6 . \$29.95 to \$89.95

CONSOLES. 9 Models . . \$44.95 to \$139.95 BATTERY RADIO. 4 Models \$29.95 to \$54.95 COMBINATION (Radio and Phonograph) including Portable Models. 4 . \$59.95 to \$149.95

EMERSON RADIO & PHONOGRAPH CORP. **111 EIGHTH AVENUE** NEW YORK, N.Y.

October, 1936





### Put a Wallop in Your Window With This Invitation to Try PHILCO AUTOMATIC TUNING!

• No advertising ... no sales talk ... is half as effective as an actual demonstration when you're selling Philco Automatic Tuning!

And a demonstration packs the most punch when it lets the prospect do his own demonstrating! That's why Philco has prepared ... as part of its regular Dealer Kit Service ... this striking, strong, traffic-stopping window display ... an open invitation to "Come in and Try Philco Automatic Tuning!" That's a chance many a man ... and woman, too ... has been waiting for! They've heard about Philco Automatic Tuning ... possibly looked over a 116K De Luxe in your window and wondered just how it "worked."

Now ... invite them in with this new Philco Window Display! Let them know they're welcome to twirl the dial ... and watch how they'll jump at the opportunity!

If you have not yet received this display . . . get in touch with the Philco distributor immediately!

#### PHILCO RADIO AND TELEVISION CORPORATION

Radio Today

#### OCT 22 1936

#### Staff-

DARRELL BARTEE RANDALL R. IRWIN M. H. NEWTON B. V. SPINETTA V. K. ULRICH

TODAY

CC1B 320210 C12

LEE ROBINSON Sales Manager

#### RETAIL RADIO SALES SOAR

★ Reports on retail radio selling from all parts of the country indicate that radio is running with the general trend of the recovery—in places ahead of it. Increases in radio volume average from 20 to 25 per cent in excess of a year ago.

Employment, star programs, ball games, and general prosperity seem to be held generally accountable for increased radio sales. But the Presidential Election has had less traceable effect than was expected. Unless campaign gets hotter later, political listening remains pretty casual. Hence dealers reason that present selling pace can be counted on to continue after November 3; that public will go on buying radios no matter who's elected.

With retail sales thus holding up, look's like an 8,000,000-set year.

#### SETS WITH WHISKERS

★ Among other singular items which turned up in the "Allocation Survey" made by the Federal Communications Commission was the fact that 61 per cent of the receivers in use in rural areas are 4 years old or older. Figures are based upon 32,671 replies made by rural folk between Feb. 1, 1935, and March 1, 1935; data was released by FCC only last month.

26.1%	are	7	yrs.	old	or	older.
21.6%	are	2	yrs.	old.		
13.8%	are	3	yrs.	old.		
12.7%	are	6	yrs.	old.		
12.1%	are	4	yrs.	old.		
10.1%	are	5	yrs.	old.		
3.6%	are	1	yr.	old.		

Receivers purchased during 1935 did not show up much because the survey ended early in that year.

Buried in the report was the sentence, "Analysis of the number of tubes used by each receiver, which indicated that 69.9 per cent had from 5 to 7 tubes."

October, 1936

### NATIONAL TRADE SHOWS AT CHICAGO IN SPRING

\* For the past month, trade gossip has been active concerning plans for national radio parts shows, in the Spring and Fall, held respectively in Chicago and the East. Institute of Radio Service Men has announced its convention and show at Hotel Sherman, Chicago, April 2-4.

Definite arrangements for an RMA Chicago trade show, probably next May or June, have now been made and also its sponsorship by the Institute of Radio Engineers. "Sponsorship by the Institute of Radio Service Men was also under consideration but the joint committees of the RMA, IRE and IRSM were unable to develop any workable plan for inclusion of the Institute of Radio Service Men," explains President Muter, RMA.

"The National Parts Show next May or June will be organized to secure maximum attendance of distributors, dealers, factory representatives and service men, the latter including members of all service organizations," continues Mr. Muter. "The major objective of the show will be reduction of expense for exhibiting manufacturers and to reduce obligations to exhibit in the many parts shows which have been held throughout the country."

ORESTES H. CALDWELL Editor

M. CLEMENTS

Publisher

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Vol. II, No. 10

Fred Williams, treasurer of RMA, Arthur Moss, chairman of the RMA Parts Section, and Bond Geddes, executive vice-president, took a leading part in shaping up plans for the new trade show.

#### WAGE-EARNERS' RADIO BUYING Power Now Above '29

\* Purchasing power of average weekly earnings in the manufacturing industries, is now greater than it was even in 1929, according to analyses by National Industrial Conference Board, charted below.

Although wages in dollars have not yet reached '29 levels, present earnings have a purchasing power, at present lower cost-of-living, even greater than at the peak of Coolidge prosperity.

Which means more surplus cash to buy radios!



#### UNEXPECTED TWILIGHT

\* Rough-and-ready radio men of New York City's chaotic Cortlandt Street are drifting away from the place. Fed up, the report is, with doing business under such tense and concentrated conditions. D'o better elsewhere; couldn't do worse.

Vesey Street, West Broadway or Grand Street are new destinations. Vacancies on Cortlandt Street are filled by folk of other rackets, such as laundry or dry cleaning, so that radio row is definitely breaking up. And they can't start one in another spot because there aren't enough vacant stores to be had in one place. Once there was an indication that a whole group of price-demons would move to the north, but an organized shift has not materialized.

#### IT'S A TREND

★ While back, Hollywood's movie producers broke into jails and courtrooms, used their deep-human situations for a long series of heart-tearing flickers. There was quite a vogue for legal theatrics on the screen, and now it's radio's turn to use the angle.

So if you like to hear voices that falter and stop, if there are times when you want the grim, neurotic stuff that hearings are made of, there's plenty on the dial and going to be more.

A. L. Alexander's "Good Will Court" now airs both on NBC and at its birth site, WMCA. San Francisco's KYA has a wild night court feature now in its 15th week, complete with municipal judges and district attorneys. Warden Lawes' "20,000 Years in Sing Sing" was back to NBC on Oct. 5. WELI, New Haven, Conn., has begun a dramatic tell-all by first offenders from the local jug.

Listeners can either (1) rush out and buy the product of the sponsor, (2) send financial aid to the featured unfortunates, or (3) keep out of jams themselves.

#### SANITATION NOTE

★ Assorted droops in the radio business are forever forgetting their advertising manners. Their nit-wit schemes used to keep the trade in a nasty stir, but those days are about over, according to the observations of the National Better Business Bureau. Inc. The business is cleaner, more generally wholesome than ever before.

Bureau uses a seasoned technique in receiving complaints, making investigations, cooperating with the proper law-enforcing bodies. Not so long ago it managed to embarrass seven New York radio dealers because they were manhandling such trade names as Marconi, Edison, Victor, Brunswick, Majestic, GE and RCA. Culprits used these words in large type and squeezed additional names into their ads in very tiny letters.

Currently the Bureau is also watching for television bubbles, checking up on misrepresentations of metal tubes.



Powel Crosley, Jr., explains how the public gains from high-power broadcasting, while FCC Chairman Anning S. Prall listens in, during the re-allocation hearings at Washington.



R. M. Coburn who becomes general sales manager of National Union, following a long background in radio.

#### FEATURE THIS

\* Radio's merchandisers are occasionally confronted by squeamish units of the buying public who declare that there's too much advertising done on the air. The illusion is that commercial overmatter ruins the entertainment service.

S. E. Gill, production manager of Crossley, Inc., research organization, has conducted a special survey to determine the details of this objection to radio programs. Study was made on 6 typical sponsored features. night time, daytime, long and short. Gill had 656 conversations with set owners, found the dissatisfied listeners and asked them the reasons for their dislike. Advertising turned out to be the main reason and 133 listed reasons for their dislike of the commercial announcements. Of these 28 said they were too long, but there was a fantastic difference of opinion as to what constitutes a lengthy announcement.

#### MONTHLY SALES SPREAD

★ Pointed piece of annual research flicked from the files of the Controllers' Congress of the National Retail Dry Goods Association gives an OK indication of how radio sales vary by months. These figures are based on sales in the average department store of the country.

Per cent of radio department's annual volume:

January	July 4.8 August 6.1 September 9.4 October 10.7
May	November12.2 December18.8

#### RADIO'S 90% YARDSTICK

★ Recent conclusion that 90 per cent of homes is a reasonable figure toward which to push radio saturation right now, strongly supported by studies of the current report on family radio ownership issued by the Joint Committee of the National Association of Broadcasters, American Association of Advertising Agencies, and Association of National Advertisers.

Report indicates many large communities exceeding 90 per cent in radio ownership. A few important



W. R. G. Baker of GE Radio, who spoke for RMA during the Washington re-allocation hearings.

ones, mixed cities and states, are California, Connecticut, Washington, D. C., Miami, Milwaukee,, Indianapolis, San Francisco, Los Angeles, Denver, Boise, Wichita, Kansas City, Cincinnati, Tulsa, Portland (Ore.), and Wheeling (W. Va.).

Many hundreds of additional communities are on or near the 90 per cent mark if the counts of the Joint Committee are used along with an average of 4.3 persons per home.

#### **TWO HANDSOME FIGURES**

★ Flashy increase in radio turnover for August passed even the rankest predictions of the optimists. The 5 per cent Federal tax on radio and phonograph apparatus for the month netted the government 55.3 per cent more than for the same period last year. The sum for August 1936 was \$495,792; last year it was \$319,331. These figures are the latest and among the healthiest.

Look at the fat increase also reported in tax collections on mechanical refrigerators: August, 1936, \$1,-063,873; same month last year, \$629,-921.

#### RADIO DATES AHEAD

- Election D'ay, Presidential and State Elections, Tuesday, Nov. 3.
- Automobile Show-Grand Central Palace, New York City, Nov. 11-18. Tenth Anniversary, National Broad-
- casting Company, Nov. 15. Rochester Fall Meeting, IRE—Saga-
- more Hotel, Rochester, N. Y., Nov. 16-18.
- Auto Servicing Show-Navy Pier, Chicago, Dec. 9-13
- National Conference on Educational Broadcasting-Washington, D. C., Dec. 10-12.
- I.R.S.M. Convention and National Radio Industry Trade Show, Hotel Sherman, Chicago, April 2-4.
- National Radio Trade Show-Chicago, May or June.

#### NBC, HAPPY 10-YEAR OLD, November 15

★ NBC continues to mark up a strong series of double-feature items to celebrate its Tenth Anniversary. Birthday period is splendidly spotted with international hook-ups, special concerts, feature dramatizations of chapters in the network's history, guest appearances of radio's top personalities, on-the-spot airings of special events.

Credited with "a century of progress in a decade of broadcasting," NBC will be the subject of a roundthe-world salute on its actual birth date, Nov. 15. Meanwhile the daily program lists are continually surprised by whatever festive broadcasts the happy 10-year-old can think of.

#### **VERSATILE RECEIVERS**

★ Moves in the direction of greater receiver adaptability, continue to mark new radio developments. The "AC-DC set" was brought out to work on either central-station supply. Then a plug-in auto-radio was developed to work on 6-volt car battery or 110-volt AC house current. (Recently these chassis have become particularly popular for trailers.) Other sets have been workable on 25 to 60 cycles, and 95 to 250 volts.



Dr. C. F. Burgess of Burgess Battery fame, whose purchase of Thordarson Elec. Mfg. Co., has just been announced.

Newest step in versatility is Zenith's new farm duplex set. With this the dealer can satisfy needs for either 2-volt or 6-volt radio, without carrying duplicate stocks. A neat little power-pack is added for 6-volt operation; without it the set is ready for 2-volt.



Fred Williams, vice-president International Resistance Co. and treasurer RMA, a leading factor in shaping up the coming Chicago trade show.

## THE VITAL FIVE MINUTES -

Only once, every two or three years, does Mrs. Average Customer come into your store to look for a new radio.

\* IN THOUSAND'S of homes everywhere, *new* radio'sets are needed. In fact, surveys of radios now in use have shown that at least three out of five home receivers are superannuated. And should be replaced!

It is only at long intervals of two to four years, that householders look up new radio sets for their own use. For two to four years, Mrs. Customer does not come near your store. She takes her radio for granted, and assumes that it is bringing her all the reception the family needs.

Then after two or three years she begins to notice that her radio appears to be a little out of date. Perhaps she finds that the tone quality of a neighbor's receiver is much more lifelike.

So she decides to stop in at your store and look over what you have to offer.

Then comes your time of all times, out of the whole period between Her Ladyship's calls. You have five minutes at the beginning of the interview, during which you can either interest her for a demonstration, or let her turn on her heel and look for a radio somewhere else. Five critical minutes—out of four years! But during those five minutes, selling opportunity knocks. Another chance will not come for another two or four-year interval.

Are you on your toes and prepared with all the answers?

Are you ready with all the information you need about the new sets?

#### What are called fine points

Have you some attractive new cabinet designs ready to interest her?

Can you point out the superiority of the new models over the old set in her home?

Can you discuss periou-art design and demonstrate how the new cabinet will harmonize with her home furnishings?

Can you explain to her the new control advantages of your offering?

Can you sell her on all-wave reception, which is probably lacking in her old set?

Are you equipped to demonstrate the new special gadgets of your line which have particular selling appeal? Handsome handling of prospective

Handsome handling of prospective



Photo by Ewing Galloway. Also front cover. 12

#### "THREE OUT OF FIVE" NEED A NEW RADIO!

radio buyers has really "produced" for those dealers who have given it a whirl.

Vogue of higher-priced sets, increased interest in radio-phonograph combinations, more broadcasts of quality music, more consistent attention to the matter of cabinet design, bring the matter sharply into industry news.

Sales manners are easily neglected, and patrons report daily that dealerways are lax in this respect—so lax that hundreds of sales are never clinched because of some unfortunate undercurrent in the sales procedure.

True, many radio salesmen have come over to the quiet, genteel, leisurely style of selling after they saw that their wild exhibitions of super-super-salesmanship got them nowhere at all. Obviously, there is no point in a modest-community dealer suddenly assuming an ultra Park Avenue attitude and greeting his customers with a new frost in his manner. But he may certainly pick up a lesson or two from those who are careful about such things.

#### Good morning, patron

First greetings to the customer may be simple and pleasant and not in the life-long-friend tone. Earliest sentences need not concern radio but should be something else besides obvious attempts at conversation. Patron should be given time to size the place up, and if he misses some of the more comfortable and homelike features of the sales room, it is perfectly legitimate to call his attention to them in a tactful way.

Do not expect a patron to look at a model when it is in a poor light. And do not keep him or her in a standing position more than is necessary. It seems wise to get the name as quickly and as gracefully as possible, so that you may use it during the conversation, but there is probably no point in presenting your own card until after the interview.

Find out whether the prospect is chiefly interested in short wave, fine reception, tonal quality, or cabinet design. Also you need to know something about what makes this customer

## SELLING A SET. ARE YOU READY?

When she does come in, there's your chance. Make that first five minutes count. And be ready with all the answers.

different from all others, but whatever inquiries you make about residence, profession, home standards, etc., be sure that they apparently pertain to the matter of radio happiness.

It is important that actual demonstration of the set should not begin too soon, unless the patron definitely requests it. By building up the features of the receiver, you are able to create some suspense as to how it actually will sound in operation. There is often a certain advantage in "building up the entrance" of the tuned-in set.

#### Interference at home?

Although the sales slogan "get the customer's hand on the dial" has been freely passed around, it is a blunder to confront the customer with an entirely new and unfamiliar set of controls, and expect him to get a pleasant reaction. To begin with, the playing of the set will be set off to much greater advantage if it is tuned in by the salesmen, who can do it with ease and dispatch.

The prospect will get an impression of sincerity on your part if you will take an interest in the reception problems present in his particular home. The buyer must feel that you are not only interested in a sale, but also the whole question of genuine satisfaction after the receiver is installed.

#### Closing

Other problems, such as position in the home, decorative note, and service matters will probably be mentioned by the buyer himself if they are important enough. Throughout the whole conversation, the salesman should really dominate the direction of the talk, but must be sure to give the patron the notion that he is dominating it.

It is a good trick to refer to your models by name. For instance there is a great deal more dignity in the phrase "our Laureate console" than in the flat remark, "that set in the corner," or "No. 365X."

If the customer appears to be impatient with the type of program which must be used to demonstrate receivers during business hours,



salesmen may ask for an appointment for some evening when a specially fine feature may be heard. If the radio man has a broadcast schedule at hand and gets pleasantly enthusiastic about what a certain artist would sound like on his receiver, the prospect will usually consent to the appointment. When you are talking with a serious buyer and other customers enter the store, the former should not be allowed to notice any rush on your part. General theory is that the longer they stay, the more chance there is of establishing a friendship. Give them the last word, and hope that you see them again.

## AUTOMOBILE RADIO

popularity of car-receivers increases; dealers benefit
auto-makers shy away from "initial" radio equipment
Detroit opinion is, adds too much to list price of car

★ IN spite of the tremendous recent increase in the sale of automobile radios, last minute reports from Detroit indicate that the introduction of 1937 car models will find no major change in the present situation as regards initial radio equipment, thus leaving the radio dealer's opportunity as great as before, with an expanding market ahead.

While, of course, virtually every make of car is wired for radio today, the installation of the radio set itself is still under the control of the dealer in each particular line. A few makes such as Hudson-Essex have recently arranged their production lines in such a manner that radios can be installed during final assembly of the car when specified by the dealer. The majority of manufacturers, however, have not followed this trend, and radio assembly, even when carried out at the factory, is in operation scheduled subsequent to final assembly of the car.

#### Cannot standardize

The reasons for this are quite simple. Car manufacturers cannot hope to standardize on any one type of unit or installation that would be ideal from a sales standpoint. The demand for different types of installations is becoming even more diversified than it has been in the past. One step taken by automobile manufacturers to try to meet this condition is in the offering of two different models of radio equipment, one a single unit and the other a two-unit assembly installed at the option of the dealer. Ford continues to offer a single type. In the case of the latter company it is estimated that in the past year 30 per cent of all new cars sold were equipped with "standard equipment" radio, either at the factory on dealers' orders, or by the dealers themselves.

All makes of radios offered by car manufacturers during the coming year will be of the six-tube variety, it is expected. In the units themselves there is little of major novelty, although some improvement will be found in clarity and selectiveness of reception. This improvement is traceable not to one or two single developments, but to a large variety of detailed improvements. These improvements in the radio sets have all had a tendency to increase their cost and it is now virtually certain that there will be no reduction anywhere along the line in the cost of original-equipment radios installed at the factory or by the dealer. If anything, prices will have a tendency to be somewhat higher than in 1936.



#### \$50 difference in car price

This is another reason why car manufacturers look askance at making radios a standard part of an automobile. The average difference in delivered price between a car with radio and one without it is around \$50. No car manufacturer would want to throw so large an amount into the list price of an automobile, as this would automatically result in a considerable decrease in sales of that particular car. They prefer to continue to handle radios as an accessory just like heaters or defrosters. Naturally, this leaves the field wide open to the radio and automobile dealer, particularly in view of the fact that the dealer has readily accessible, through his jobber, almost any kind of an installation to suit the widest varieties of public foibles and fancies in automobile radio.

As to the car factory types of installations, the overhead speaker apparently does not seem to be gaining headway at present and probably won't unless or until public demand should lean in that direction more universally than at present. In the meantime mass production and assembly problems mitigate against its popularity at the car factories.

#### Fish-pole antenna as accessory

One recent development, however, is at present forming the basis of a great deal of discussion in the factories as regards its adoption by the car makers as an accessory. We are referring to the fish-pole type of antenna which has recently come on the market. The fish-pole aerial, which was introduced chiefly to overcome antenna difficulties with steel-roofed cars, seems to offer a number of other desirable characteristics. Engineers have found in many installations that the fish-pole aerial is less susceptible to noises than other types of antennae. Moreover, the public seems to like the fact that they "advertise" the car as being radio equipped.

Automotive interest will peak Nov. 11-16, when the Auto Show will be held at New York. The Auto-Servicing Show, Navy Pier, Chicago, Dec. 9-13, will particularly interest autoradio men.

Car manufacturers today do not as yet recognize automobile radio as a selling point for individual car makes. They do feel that radio has helped to stimulate a new "pleasureinterest" in the automobile itself, but that practically all manufacturers gain from this development, with no particular advantage accruing to any one producer.

## **RADIO OUT-WITS THE FORMAL DESIGN**



Kadette's ultra-modern hit.



Trick "Mystic-eyed" model from London's radio show.



Radiobar's cocktailed combination,



Design Engineers' dice motif.



McMurdo's speaker out-weighs a midget.

October, 1936

## "MILLION DOLLAR PROGRAM

\* FOOTBALL next to opera, drama next to concert; all of it mixed with comics, not to mention news. The current broadcast season bothers with them all, expensively and one by one.

Radio dealers will be glad to know that today's air bills exhibit more smash pull than at any time in ether history. Scores of old favorites have resumed their air shows during last month and this; new stunts in programming have also appeared to panic the fans. There are enough plus features on the dial to double the public interest in new and finer sets.

Listeners rush back to their receivers for such stars as Eddie Cantor, Fred Allen, Phil Baker, Helen Hayes, Jack Benny, Walter Winchell, Burns & Allen, Nino Martini, Nelson Eddy, and others. Seasonal newcomers among the regular features are Fannie Brice, Ethel Barrymore, Edward Everett Horton, Joe Penner, Fred Astaire and Charles Butterworth, and assorted other names from the celebrity lists.



popular orchestras on the air, his job will be a big one. Specifically he will find that the name of Andre Kostelanetz will attract many, and that Shep Fields is a good one to mention. Horace Heidt has a special radio significance because he is currently sponsored by Stewart-Warner. However, the season opened with dozens of other celebrated batons cutting the air, and the dealer has only to sell the names according to local tastes.

Set salesmen will find considerable interest in how a No. 1 tap dancer registers on the air. It is no news that Fred Astaire has opened a regular broadcast series in which his tapping is heard; he has an enormous following and will be another important reason for listeners lingering around their receivers. Of course his songs are there too, with the music of Johnny Green and the comedy of the dead-pan artist, Charles Butterworth.

Jolly business of introducing big time guest stars to the radio audience at announced spots will continue full

Marjorie Whitney, of NBC's

King's Jesters quartet.

Frank Hawks pilots a new feature on MBS.



All-time cards Jack Benny and Mary Livingstone.

Many a set will be sold and serviced again this season as a result of Major Bowes' amazing handling of his amateurs. Now on the CBS network and further inclined to do the unexpected. the Bowes hour and the fate of its odd artists will continue to rate first for thousands of listeners.

Good Will Court on NBC will stand a deal of plugging in radio stores. Its stunt treatment of persons in trouble will sell many an indifferent prospect on consistent listening; it happens to be a feature to which people will listen even if they claim to dislike it. A less expert approach to the broadcasting of human woes would be recognized as artless and cheap, but this is in skilled hands. It has its share of roominghouse emotion but the taut atmosphere of the thing is often relieved by laughable items.

Variety of orchestral music on the air will be the final reason for set sales in many cases, particularly among the younger folk. If the dealer starts out to keep a list of the



## GO WITH EVERY SET WE SELL"



received a current test. Since Yale made the front pages of the nation by selling the broadcast rights of its home gridiron clashes, even the nonsportive homes of the country began to believe that there must be some genuine entertainment and excitement in following the entire football season by radio. Hence dealers have used the air schedules to good advantage and will continue the good work into the pro season in January.

Couple of extra quality voice teams on the air have stirred up some real interest in new singing combinations in the ether. Lanny Ross singing with Helen Jepson on the Show Boat feature, Nelson Eddy matching notes with Francia White on the Vicks broadcast would make a musical evening for any listener at all intrigued by exceptional melodic effects.

Opening of school meant the opening of a certain new set market for radio salesmen, as usual. American School of the Air, the huge educational broadcast series, went back on CBS and convinced many a serious



Nino Martini and Andre Kostelanetz on CBS. Rosemarie Brancato, hit singer on many NBC spots.

Phil Baker, coast-to-coast comedian on CBS.

blast on several big broadcasts. Dealers find that this style of programming lends itself well to sales promotions of a short-time nature, and to personalized selling. Interest must be worked up after the program announcement and before the broadcast. Notably the Kate Smith hour, Rudy Vallee, the RCA Magic Key, Lux Radio Theatre, Hollywood Hotel, Shell Chateau and Camel Caravan will go on springing celebrities. Lux started off with Marlene Dietrich and Clark Gable on the same bill and radio men the country over were able to use an awakened interest in the guest practice.

General Motors concerts, the Ford Sunday Evening hour, Magic Key and several others are inclined to include guest stars of serious quality, such as Gladys Swarthout, Rosa Ponselle, Leopold Stokowski, etc. What these programs do along this line during the present season will mean plenty to dealers.

Dealer use of football broadcasts to sell and service more sets has already



parent that a good receiver was actually of first importance. Walter Damrosch's Music Appreciation Hour on NBC resumed early this month with an estimated audience of 7,000,000 school children.

Any family with youngsters in it is now of decided importance to the radio dealer, as the season boasts of more on the air for children and more children on the air. Youthful entertainers Bobby Breen, Mary Small, the Penney Kids and others are developing an exciting drag on the dial.

Interest in all NBC program schedules is now heightened by the addition of many special broadcasts as part of the web's Tenth Anniversary celebration. Dealers will be able to use these extras as part of their Fall selling plans, up to Nov. 15, which is the climax date.

Use these features in selling your sets. Each of the programs is worthy of your finest receiver—reason enough for the sale of your best instruments.



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### MERCHANDISING METHODS IN STORE ARRANGEMENT

#### Principles back of radio-selling fixtures and store plan opposite

\* ALTHOUGH the basic principles of merchandise display are well understood, and some compromise usually results in adapting them to a small store, or to irregular shapes, of selling space, it is believed that the accompanying plan presents a minimum of compromise and a maximum of effectiveness for the small store.

This floor plan, as drawn up by H. L. M. Capron, is for a store of 20 to 30 feet wide and 35 or more feet deep. The fixture type can be used in a store of any size, and the layout can be added to, or reduced, unit by unit, without sacrificing effectiveness, in adapting it to stores of other sizes and shapes.

Highest-priced consoles are placed in the center fixture. A customer must see these models then, from any, and every position in the store.

Leaders, and lowest-priced consoles, arc placed on the rear of the store. Prospective customers of these models must then be exposed to the displays of all the better models both in coming in and in going out of the store.

Better consoles are placed in the front of the store, where they are readily accessible for demonstration to the customer, without exposing the prospect to the lowest-priced models.

#### Demonstrating records

Each console is placed in its own compartment, so that attention can be concentrated upon the model being demonstrated and sold.

With each console a table model is also displayed, so that a table model customer *must see* a console and compare looks and tone, and a console customer is exposed to the table model as a "second set."

Fixture side walls may be panelled, painted, or papered, to furnish har-

#### YES! - BUT LOOK AT THE DIAL, TOO



By means of a projecting lens, station names on the tuning dial are "thrown up big" on the screen of this console radio set made by Wells-Gardner, Chicago.

monizing or contrasting backgrounds for the cabinetry.

Floor lamps and a few decorative accessories in good taste, will remove the harshness from the formal display.

A spot light will focus attention on any model desired.

Such a display must always be neat and orderly, it cannot be allowed to get otherwise even in the rush of many demonstrations, if each compartment is wired for power, aerial, and ground.

Tubes, and Service are placed in the rear of the store, so that customers with ailing radios *must* be exposed to the display of the new models.

It would be impossible to walk into this store and not see what the display intended you to see, and yet sales and demonstrations are facilitated by the very display itself, while the display is not interfered with by sales or demonstrations of records and sets.

This type of fixture and display layout makes not only effective, but efficient use of the floor space, and will result in much higher sales per square foot than a separate display and demonstration plan.

#### ATLAS TELLS HOW RADIO WILL ELECT NEXT PRESIDENT

\* A new Election edition of its Political Radio Atlas has been prepared by Philco. With cover in four colors, the Atlas contains pictures of the Presidential and Vice-Presidential candidates of both the Republican and the Democratic parties, party platforms, histories of the two major parties and articles on how the President is elected, who can vote, and how radio has increased public interest in politics. In addition, it contains a special section on short-wave reception, photographs of foreign radio stars and complete logs of both foreign short-wave stations and American long-wave stations. Many maps in four colors are carried, including a double-spread map of the world with all the principal shortwave stations spotted-in.

When dealers order the Atlases from their distributor, they are supplied with an equal number of prospect cards. The Atlas will be offered free to adults only and when these come in to get their copies, their names, addresses, and make and age of their present radios will be entered on the prospect card. In this way, idea is, dealers will collect a new, large prospect list upon which they can keep a complete card-index of follow-ups and sales.

## LAYOUT FOR A RETAIL RADIO STORE



### SALES WRINKLES CATCH DEALER'S EYE

#### Merchandising craft warms up to the field excitement in new lines

#### **PIGSKIN PROMOTION**

\* Colorful plugging of important football broadcasts as a stimulant for receiver sales and service has been successfully going on in the window of Smith's Radio Store, Washington, D. C. By using the liveliest aspects of the game in his displays, and by newspaper advertising tie-ups, Mr. Smith makes quite a thing out of the pigskin season.

Materials for the window displays at Smith's are designed with the snap which attracts the sport fan. So far, the store has managed to get the exhibit across with these items: (1) Several-colored illustration of an exciting football game, with an inset of "Pa" and "Ma" radio-listening in their home, (2) A sanded football field, with imitation 5-yard lines, side lines covered with green grass matting, painted background of grandstands, (3) Miniature players in action, (4) Reproductions of goal posts, (5) Nearly life-size figure of a player in the act of kicking off, (6) Colorful profusion of collegiate pennants of local teams, (7) Blown-up schedules of coming classics, perhaps presented with short score histories of those matches in the past.

Smith's have found that the best captions to use in football windows feature such phrases as "hear the kick-off from your own easy chair don't miss a thing!" or "turn on the switch — relax — and hear the game, play by play, in the warmth and comfort of your home."

#### WINDOW RULES

★ Lou Fink, of National Radio Stores, Inc., New York City, has figured out the principles of building window displays with midget sets, exhibited in a fashion to get over best in a city community which is densely populated.

Fink theory is that street traffic must be handled carefully, since the same persons pass the store very often. His rules are: (1) Play jazz consistently on the demonstrator—it appeals to the majority of the buyers of midgets, (2) Display a great mass of merchandise in the window and fix them so that the pedestrian knows that they may be very readily removed, and (3) Change the display often and regularly so that habitual passers-by may depend upon seeing a new layout.



Office gents are OK prospects—they have the price, and the wish to dial election news. Whoever is named President must still be watched closely.

#### COLLEGIATE SELLING

★ L. C. Wheeler, of the Hardware Products Co., Crosley distributors of Sterling, Ill., has hit upon an honestly effective selling practice. Wheeler's statement of the case:

"We have a very much larger enrollment in our schools and colleges and this always helps the radio business. When a family has a boy away to school, the whole family will listen to the football games, whereas they probably paid no attention to them before. There are programs of value to students in the grade and high schools. Greater radio sales are always a corollary of increased enrollments in schools of all kinds."

Thus the demand for sales and service among a large group of families will encourage dealers and their set salesmen to accent football broadcasts during the coming months. Many of them will find it profitable to use those schedules as extra mailing pieces as the gridiron season gets under way.

#### DEALER'S NETWORK SPECIAL

★ Multiple chances for dealers to sell more sets are found in Stewart-Warner's coast - to - coast broadcast stunt which began Sept. 28 on 49 Columbia stations. A series of Monday night half-hour programs, featuring Horace Heidt and his Brigadiers, will run to Dec. 14, followed up on local stations by spot announcements sponsored by distributors.

All spot plugs will, according to the plans, mention at least two dealers' names and addresses. In turn, the dealer is encouraged to offer specially autographed photos of Heidt free to prospects who will come in for a receiver demonstration; the dealer is also armed with special mats and assorted displays to use during the series. Salesmen are further encouraged to phone prospects an invitation to hear the web feature through an SW set and to arrange home demos during the broadcasts.

Important to the campaign is the dealer's parading the local station and time, along with whatever original ideas he can stir up for feature tieins.

#### NEAT PRICE DISPLAYS

★ People like to see in advance the prices asked for articles they intend buying. Price cards and price numerals, therefore, become important merchandising aids.

Readers have requested RADIO TO-DAY to furnish names of concerns who sell set-up numerals and dollar signs, cardboard or metal, to be used as price displays on radios or refrigerators. Following companies in New York City can supply these: Dennison's, 411 Fifth Ave.; The Displayers, 27 W. 24th St.; Herald Reproduction Co., 397 Bridge St., Brooklyn, and the Frank D. Maxwell Corp., 1440 Broadway.

#### SCOUTING FOR SALES

★ Snappy pointers on where and how more sales can be made are being picked up by dealers in Eastern Missouri and Southern Illinois from a "Store-at-your-door" outfit which the Brown Supply Co., St. Louis Grunow distributors, are currently using in the area.

Sales expert in charge of the traveling show store spends his time in "consultation with country merchandisers on sales strategy." Other officials from Brown Supply scout around through the area and supplement the driver's efforts with additional news of sales developments throughout the territory. Thus all dealers get the benefit of a sort of selling news service, representing complete coverage of all sections involved.

Rolling radio store has seats where persons may listen to demonstrations of the models being carried, has equipment for a sound-on-film picture show, carries broadcasting equipment.

#### "PORTABLE" STUNT

★ Auto Equipment Co., Denver, Colo., is one distributor who has worked up considerable interest with the public as well as with dealers by an unusual demonstration stunt. Company Salesman John Klein streetdemonstrates an Emerson portable set by carrying it along with him; idea seems 100 per cent OK in point of results.

Calling on many accounts "cold," Klein needed a plus selling feature. With the portable receiver in his hand and in action, he consistently got immediate attention upon entering a store. Salesmen and servicemen crowd around to have a look and to listen and Klein found it easier to start sclling. Smart angle on this method of selling is to time it around holidays, as the portable receivers are greatly in demand among those who are set for an outing of some sort. Idea also has an important application to outside selling by dealers, as house-to-house salesmen could get instant attention by carrying a set in action.

#### ADVANCE SALESMEN

★ Interesting method of handling a canvassing project is being used by the Westchester Radio & Appliance Co., Mount Vernon, N. Y. Company sends a man to knock at the local doors, who tells housewives that his firm is conducting a survey on types of refrigerators in use; he gets the data on refrigeration in homes and makes a report as to whether householders appear to be be promising prospects.

Same gent then takes a salesman along to call on the real prospects, others having been weeded out, or saved for mailing lists. Point is that busy housewives will talk to a "surveyor" more readily than to an outand-out salesman, providing an opening for the company. Westchester concern also collects similar dope on radio while they're about it.

#### MEET THE STAFF

★ Strong personal element is present in the advertising done by Shew's Appliance Store, Springfield, Ohio. In the store's plugs each past and present patron may see the name of the salesman who made the coutact, which relieves the prospect of blindly making friends with a store rather than a single gentleman.

In recent ads, the complete staff has been listed alongside Shew's phone number, in large type. Reaction is that the store has a staff which it does not mind parading; the list takes little space, considering its valuable implications.

#### FOR DEALERS TO READ

#### "Installment Selling and Collecting"

By John T. Bartlett and Charles M. Recd

★ HERE is a neat manual which presents acceptable directions for successful installment selling and collection procedure. The writers have drawn wisely on the experience of the experts in such matters, and pen their suggestions in a work-a-day fashion; they have done with highsounding theory, and stick to practical recommendations.

Products specially adapted to time selling are classified, and the authors approach the problem knowing full well that different types of organizations must attack these problems in peculiar ways. Feature space is given matters of credit, finance companies, repossession, promotions, and collection practices.

This volume is cautious and conservative and obviously a product of straight thinking and smart surveying.



Dealers like the sales punch of this trailer interior so much that Dave Bright, president of Pioneer Gen-E-Motor, plans a trailer-fleet to co-operate with jobbers and dealers in demonstrating farm-electric equipment.

### RADIO DEALERS SELL OTHER THINGS, TOO

#### Phonograph and music merchants show interest in electrical items

★ WHEN radio stormed the electrical-appliance field back in the days we won't recall, its acceptance by electrical men was mighty slow indeed. "Too busy" with their regular knitting, established electrical shops were slow to take radio on.

But with the public's sudden demand for the new miracle, thousands of new "radio shops" were set up, and thus radio has come to be the profitable master of many new stores exclusively its own.

Meanwhile stable phonograph dealers, musical-instrument merchants, and piano stores are now doing the bulk of their volume in radio, and are included among the principal radio outlets.

And now these thousands of radio dealers are more-and-more thinking of "plug-in" electrical items as additional things to sell to their radio customers. Many radio dealers have already added electrical devices of one sort or other; others are planning to take on additional electrical products.

Next to the electrical stores themselves these "non-electrical outlets" represent one of the largest groups of merchants selling electrical appliances.

Thus, today it appears that the merchandising future of radio and of various electrical appliances are importantly tangled and getting to be more so. Radio dealers have developed a strong interest in how the selling qualities of other items combine with radio under the circumstances of the day. They have learned to regard the extra items as substantial sources of additional profit; the very nature of the business points squarely to the sober stocking of refrigerators, vacuum cleaners, washers, table appliances, ranges, clocks and flashlights.

#### We investigate

RADIO TODAY has conducted a national survey of the appliance situation among 5,000 largest radio dealers. The editors are interested in anything that a radio dealer does, and are determined to know to what extent he does it. No independent service stations were included in this survey.

Would you believe that exactly 92%of the radio dealers reported that they were selling appliances of one kind or another, and 24% of the non-appliance ones said that they would add electrical items to their radio stock. When this adding has been done, only about 7% of all the radio dealers will be left selling exclusively radio.

#### Which appliances?

Of the dealers already in the appliance business, it turned out that 80% were selling refrigerators, giving the "boxes" the popularity prize. Washers were next with 74% and



after them the ratings ranged downward through cleaners, table appliances, flashlights, electric clocks, gas rangs, and electric ranges.

Dealers were nice and frank about what appliances they were going to add. Among those who have decided to add something, 33% remarked that they would take on electric ranges, thereby giving that item the largest play. Here we go down the list of the other items: table appliances, 31%; refrigerators, 27%; washers, 25%; cleaners, 23%; electric clocks, 23%; gas ranges, 11%, flashlights, 10%; oil heaters, 1/%.

#### Fast sellers

RADIO TODAY'S questionaire innocently inquired, "Which refrigerator is your best seller?" and "Which washer is your best seller?" Resulting tabulations would be loved in some quarters, loathed in others. Rankings followed pretty closely on the rankings of volume of advertising done by refrigerator makers, if you know what those rankings are. Two different brands were rated first by 16% of the dealers, which was top percentage. Another make was rated first by 11% of the interviewers, and the rest of the best selling votes were divided among 12 other makes given first places by from 1 to 10% of the dealers.

Some two dozen different makes of washers were mentioned as being best sellers among the dealers. Exactly 14% reported one make as being tops in acceptance, 11% reported another brand, indicating that selling qualities were more pronounced for the leading washer than for the leading refrigerator.

It was interesting to note that in the cases of companies which make both refrigerators and washers, success in one field did not necessarily mean leadership in the other.

#### Plans being made

Dealers went out of their way to dig up the names of some 5 dozen different companies in whose products they formally reported themselves interested. Seems that they want to take on everything from stokers to electric mixers. They'd enjoy knowing more about the electric clock business, and they show interest in ranges, motors, batteries, flashlights, kitcheu gadgets, heaters and other products besides those they said they would add in the paragraph above.

If the disclosures of the survey have not moved you to some conclusions of your own, have a look at some of ours:

1. Dealers are willing to install the complete display and sales machinery in their radio stores for the handling of lower priced items among appliances.

2. In making their selections among appliances, dealers are anxious to balance seasonal appeal.

3. Dealers are quite willing to tackle the new appliances which would mean the most involved servicing problems.

4. Many radio stores, in their new interest in home appliances, are forseeing the advance in Rural Electrification Administration activity.

5. In some cases, names of radio stores will be adapted to fit the new activity in appliances.

6. In respect to their choice of new

#### ELECTRICAL APPLIANCE PROMOTION PLANS

★ CUNNING as they are active, the manufacturers of refrigerators and electrical home appliances are today busy with some more dealer helps hotly designed to drag in the customers.

News of sales stimulators from Fairbanks-Morse, Norge and Kelvinator appeared in these columns last month; the story of how manufacturers are vigorously aiding dealers becomes more complete and more dramatic this month with reports from additional concerns.

#### Leonard material is aimed to hit

From E. L. Sylvester, assistant to the vice-president of the Leonard Refrigerator Co., Detroit, comes a brisk summary of the company's current efforts:

<sup>11</sup>Leonard Refrigerator Co. stresses advertising and promotional operations to get prospects into stores where its products are displayed, goes half-way with dealers on newspaper advertising expense and devotes plenty of energy and effort in training salesmen how to sell its products. Five films, three records are available for sales instructions. Recipe books, model price tags, specification sheets, sales club promotional literature, window demonstration cards, window



This attractive clock is "The Chancellor" by Hammond, makers of electric organs, too.

lines among appliances, radio dealers exhibit an "indefinite" or "undecided" attitude which marks them as OK targets from vigorous promotion on the part of manufacturers.

7. Really low prices are important in smaller appliances, because volume is what dealers are after when they take on the lines to start with.

and floor displays all are centered on getting prospects into the store.

"Leonard's literature is aimed to hit. It is carefully planned, catches the eye aud carries sales punch. One big promotional effort disposed of 106,000 cookie sheets this summer, sent housewives looking for Leonard merchandisers and sold a lot of refrigerators. It was in honor of Leonard's 55th anniversary. Meat thermometers, green glass refrigerator dishes, ice crushers, electric mixers, household helps books and recipe books provide a variety of souvenirs and prizes, either as promotional efforts among the selling organization or for owner participation plans."

\* Ira Ogilvie, sales manager for Haag Bros. Co., has a punch summary of the company's activity this Fall:

#### Haag announces extra sales aid

'Intensive cooperative effort has always been a major element in the merchandising policy of Haag Bros. Co., Peoria, Ill., manufacturers of Haag washers. Plans for their fall campaign incorporate an even greater and more far-reaching effort to strengthen the dealer's position and provide him with the necessary sales ammunition to do a more profitable selling job.

"In order that the Haag line may be forcibly brought to the attention of the buyer, newspaper advertising campaigns will be run. In these the factory will participate with the dealer on a 50-50 basis. The extent of this cooperation will be regulated in accordance to the amount earned through purchases by the dealer under his agreement. In addition, a complete line of up-to-the-minute circulars, sales bulletins, hand-bills and window trim will be available at all times and furnished by the factory free of charge.

"To supply sales people with information, a consistent series of instructional bulletins dealing with pertinent facts on the product will carry on an educational project fitting the dealer and his sales people to do a better and more accurate type of selling. Provision has also been made to bring into the merchandiser's possessiou a wealth of essential information on the working plans that have been used by some of the more successful operators."



Electric clocks are among the most popular and convenient electrical items for radio dealers to handle. The GE clock at left can switch radios or appliances on and off at pre-set hours; the "cylometer-dial" Telechron at right is a sure-hit.

## NEW MERCHANDISE TO SELL

#### Aerolectric wind charger

★ Wind-driven six volt battery chargers — output of generators governs pitch of propellor blades so that speed is never greater than that required to produce current for which generator was designed. Master model 625 will charge in 4 to 5 mile wind maximum capacity of 25 amps. List \$44.95. Standard model 615 — 15 amp. capacity — list \$34.95. Universal Battery Co., 3410 S. LaSalle St., Chicago, III. — RADIO TODAY

#### Emerson receivers



★ Six-tube AC-DC table superhet with micro-selector and indirectly lighted gemloid dial. AVC and 6-inch dynamic speaker — receives broadcast and state police calls. Viso-slant design for convenient tuning. Butt walnut veneer cabinet and walnut base. Model A-148 — list \$34.95.



Three-band AC console. Covers 540-18,000 KC — I. F. wavetrap to eliminate code interference. AVC and tone control — gemloid dial with velvet drive. 12-inch speaker and  $4\frac{1}{2}$  watts output — 6 metal tubes. Acoustically constructed cabinet of walnut veneers. Model S-147 — list \$64.95. Emerson Radio & Phonograph Corp., 111 Eighth Ave., New York City — RADIO TODAY — see also advt. p. 7.

#### Ansiey AC-DC dynaphone

★ 7-tube radio phonograph for AC-DC operation. Has dual-wave receiver. Power output about 1 watt — 12-inch



speaker. Equipped with AC-DC turntable — crystal pick-up. Radio set tilts out for ease of tuning. Model D-17 — list \$125. Ansley Radio Corp., 240 W. 23rd St., New York City — RADIO TODAX — See also advt. p. 66.

#### **Admiral receivers**



★ AC tilt-tuner with 12 metal tubes. 3 bands — 540-18,000 kc. Triple gang condenser with clock dial tuning — automatic tone control. Beam power output of 13 watts — cathode ray tuning indicator. 12-inch dynamic speaker. Housed in grained walnut tilt-tuning console. Model AM488 list \$99.50.



4-tube 6-volt farm radio. Dual-band tuning — 43-550 meters. Illuminated 5½-inch dial — 6-inch permodynamic speaker — automatic volume control. Battery drain less than 1.2 amperes. Model B325 — list \$29.95. Continental Radio & Television Corp., 325 W. Huron St., Chicago, Ill. — RADIO TODAY

#### **Crosley portable set**

★ Battery type portable in case shaped like golf bag but only half as large. Requires only one-foot antenna and provides loudspeaker or headphone reception. Six-tube superhet circuit covering broadcast band. Weight complete — 18 pounds. List \$39.95 with loudspeaker. Crosley Radio Corp., 1329 Arlington St., Cincinnati, Ohio — RADIO TODAY

#### Mortorola topper aerial



★ Antenna for steel and turret top cars — nounts in front of windshield near radio set minimizing noise pickup and lead-in losses. Has two positions — in normal position it will not hit obstructions like garage doors. High position is used when far away from broadcasting stations. Model M-116 — list \$2.95. Galvin Mfg. Co., 847 W. Harrison St., Chicago, Ill. — RADIO TODAY

#### Kadette clockette

★ Radio set built with combined dial and speaker grille (see photo page 15). No larger than a clock yet has 5 tubes. AC-DC operation — band coverage 540-1,600 kc. Available in three finishes, walnut, maple, mahogany. Size 8 x 7½ x 5 inches — weighs only 6 pounds. "Clockette"—1ist \$19.95. International Radio Corp., Ann Arbor, Mich. — RADIO TODAY — See also advt. p. 25.

#### Home broadcasting microphone



★ Inexpensive carbon button microphone to be used with any type radio set. Easily attached to all radios. Mike carries signature of Major Bowes — complete with cord ready to connect to set. Enables any person to broadcast over their own radio. Pilgrim Electric Corp., 44 W. 18th St., New York City — RADIO TODAY

#### Radolek streamline console

★ Five-tube AC-DC console — dual wave, 15-55, 170-555 meters. AVC and tone control. 3-color illuminated dial. (To page 26)







The Colonial



PATENTS APPLIED FOR

The Sheraton

todern THE RADIO IDEA OF THE HOUR!

The "Modern" Model 21—fashianed of rich figured ond straight grained walnut cantrasted in madern styling. Palished galden dial and ebany finished cradle.

The "Colonial" Model 22—Exemplifies the periad in combining salid maple tap and sides with guardreed, matched figured maple front and brushed gald dial.

The "Sheraton" Model 23—cased in matched groin palished mohogony veneer with golden dial in harmanious cantrast.

COMPLETE WITH TUBES AND ANTENNA

### 5-TUBES in only half the space!

Count on Kadette to come through with "timely" ideas! Conventional radios abound—but, as usual, Kadette steps out and does it different!

At the New York Show, the new Kadette Clockette stopped them. Yes Sir! No bigger than a small sized clock yet containing a powerful 5 tube chassis.

Clever designing is what did the trick. See how the tuning dial and grille are combined. A striking, new idea -lending to radio the charm and character of rare period clock designs -greater ease of tuning-large, full Dynamic Speaker with 100 per cent operating freedom—and an uncrowded 5 tube chassis.

Three exquisitely beautiful "period" models. Dial rim of metal-handsomely finished in black and gold. Operates on AC or DC. Tunes 1600 to 540 kilocycles. Size 8" high-71/2" wide-5" deep.

Only Kadette dealers can cash in on this ingenious, fast selling idea. Here's the opportunity to give the public something different—some-thing more beautiful—better performing—at a feature price.

Don't waste a minute—sell this radio idea of the hour!

INTERNATIONAL RADIO CORP., 515 William St, ANN ARBOR, MICH.

Creators of Quality Compacts

October, 1936

### **NEW MERCHANDISE TO SELL**

#### (From page 24)



5½-inch speaker. Oval type cabinet. Model K16726 — list \$34.95. Table model in similar style cabinet — list \$26.95. Radolek Co., 601 W. Randolph St., Chicago, Ill. — RADIO TO-DAY — see also advt. p 47.

#### **Crosley receivers**



★ Three-band 15 tube console — 540-18,000 kc. Automatic frequency control — auto expressionator. High fideity with 6-step control. Vibracoustic sounding board — 15-inch curvilinear speaker — 25 watt output. Model 1516 — list \$174.50.



AC-DC 6-tube table superhet. Dual band coverage — 540-1,710, 6,000-18,000 kc. Metal tubes — voltage doubler no ground required. Timelog tuning with illuminated dial and band indicator. 6-inch speaker — 3 watts output. Walnut cabinet. Model C-629 list \$34.95. Crosley Radio Corp., 1329 Arlington St., Cincinnatti, Ohio — RADIO TODAY — See also advt. p. 28.

#### All-wave antenna

★ Spider-web type antenna for full-frequency coverage. Series of balanced doublets give operation from 140 to 23,000 kc. Greater pick-up on all bands—less noise. Factory assembled—requires 38-foot span and vertical clearance of 12 feet. No. 9685 list \$8.95. Kit to extend range to 70,000 kc.—No. 9689—list \$1.50. RCA Mfg. Co., Front St., Camden, N J.— RADDO TODAY

#### Philco chair radio



★ Six-tube AC all-wave superhet with foreign tuning system. Color dial with 50 per cent greater short-wave separation. Octal type tubes. Noise excluding signal amplifier — oversize dynamic speaker. Cabinet designed for use next to chair. Model 37-620CS — list \$79.95. Philco Radio & Television Corp., Tioga & C Sts., Philadelphia, Pa. — RADIO TODAY — See also advt. p. 8.

#### **G-E table receivers**



★ Five individual type table superheterodynes with identical chassis. Tuning range 540-1,800, 1,800-4,000 kc. Five metal tubes — slide rule tuning with 6-1 vernier. Stabilized speaker tone control — 3 watts output. Power line filter. Model E-50W illustrated white and gold finish — list \$24,95. General Electric Co., 1285 Boston Ave., Bridgeport, Conn. — RADIO TODAY — See also advt. inside rear cover.

#### **Sky Pilot clock**

★ World time clock with 24-hour dial — shows time in all parts of the world — A.M. and P.M. dial. 40 hour movement. 5¼ inches square — case of brushed brass, modernistic design. Sky Pilot Organization, Pearl River, N. Y. — RADIO TODAY

#### **Stewart-Warner receivers**



★ Four additions to 1937 line. Model 1735 7-tube all-wave console range 525-1,780, 1,740-5,600, 5,500-18,000 kc. Metal tubes and glass tuning indicator — six-inch magic dial. Delayed automatic volume control — tone control. Automatic antenna system. Power output 3 watts — 12-inch phototone speaker. Model 1731 — same chassis in table cabinet.



Six-tube table receiver — octal glass tubes — three wave bands. 6-inch dial. — 23-1 vernier. 6G5 shadow beam tuner — AVC — tone control. Power line filter. 2½ watts pentode output — 8-inch speaker. Model 1721. Model 1725 is console with same chassis. Stewart-Warner Corp., 1826 Diversey Pky., Chicago, III — RADIO TODAY

#### Tobe "windo-pole" aerial

★ Eight-foot window type antenna readily mounted to any window. Ideal for demonstration and places where usual aerials are prohibited. Pole ex-



tended either at 45 degrees angle or horizontally. Complete with insulated mounting bracket and lead-in strip. (*To page* 29)

## RAY HEON TRADE MARK

#### MAKERS OF THE FAMOUS 4-PILLAR TUBES

The past two years have seen the mast hectic scramble ever known in the tube business. Same af the weirdest merchandising schemes ever conceived have been tried on the retail trade.

6

During that time RAYTHEON'S ariginal sound policies have not varied.

Unifarm prices have been maintained. Protectian far jabber and dealer has been maintained. RAYTHEON fube sales have never been "farced". RAYTHEON tubes are not odvertised at "cut" prices.

The palicy of keeping RAYTHEON tubes fram 6c to 11c more profitable per tube far the dealer has been maintained. The palicy of elabarate and practical dealer merchandising caaperatian with outstanding sales helps has been maintained RAYTHEON'S high standards af unifarmity, clase tolerances and quality have never been lawered.

Licensed set manufacturers equip their sets with RAYTHEON tubes because the name RAYTHEON insures trade and cansumer quality appeal, and higher camparative set unit prices with less sales resistance.

The fact that these saund palicies are successful is praven by the 300% increase in RAYTHEON'S business during these two trying years.

Pratect your tube prafits with RAYTHEON!

THE MOST COMPLETE LINE - ALL TYPES OF GLASS, OCTAL BASE, METAL AND AMATEUR TRANSMITTER TUBES

420 Lexington Ave., New York, N. Y. 445 Lake Shore Drive, Chicago, Illinois 415 Reachtrae Street

HEON

w York, N. Y. 55 Chapel Street, Newton, Mass. Chicago, Illinois 555 Howard Street, San Francisco, Calif. 415 Peachtree Street, N. E., Atlanta, Ga.

October, 1936

ACTERIE)

THE OUTSTANDING STARS Choose Crosley OF THE 1937 RADIO SHOW

### **AND PROFIT!**

TUBE FOR TUBE ... FEATURE FOR FEATURE ... COMPARE THESE 1937 CROSLEY VALUES WITH ANYTHING ON THE MARKET !

THE NEW 1937 CROSLEY RADIO LINE

top to bottom with confidence and profit.

First, as always, with the best in radio, Crosley again

sets the pace with the new 1937 Crosley Radio Line. As in the past Crosley is again the tough line to sell against .... the fast-selling line to stock . . . the line you can sell from

Everything is set for another Crosley Year in radio.



MODEL 525-5 TUBES 2 Bands... 540-4000 Kc. Continuous 55 Speaker **\$2500** 314 Watts **\$2500** Output.



MODEL 629-6 TUBES American-Foreign 540-1710 Kc., 2350-7000 Kc.... 6" Speaker \$3495 ...4 Watts Output.



MODEL 744-7 TUBES Continuous Coverage Speaker 6 Watts \$4995 Output.



Model 759 Console-7 Tubes Continuous Coverage 540-18,000 Kc. 12" Speaker .... \$6750 6 Watts \$6750 Output

28



FIVER-5 TUBES

2 Bands.... 540-4000 Kc. Continuous...... 5" Speaker 34 Watts \$1999

MODEL 529 5 TUBES 2 Bands...540-4000 Kc. Continuous .... 5" Speaker \$2995

MODEL 634-6 TUBES

2 Bands...540-4000 Kc. Continuous...8"

Speaker 34 Watts \$3995 Output.

Output.

Output

Output.

**Crosley Plus Features** Look at this list of Crosley plus features that are the outstanding stars of the 1937 radio world. Every ono is a powerful "seller" poweriul seller . . everyone a headliner that will draw traffic and make quick sales for the Crosley Dealer, AUTO-EXPRESSIONATOR

MYSTIC HAND BASS AND TREBLE TONE COMPENSATOR SIX-STEP FIDELITY HIGH FIDELITY METAL TUBES CARDIAMATIC UNIT MAGNA-CERAMIC DIAL VIBRACOUSTIC SOUNDING BOARD GIANT CURVILINEAR SPEAKER

Model 644 Console-6 Tubes American-Foreign .... 540-1710 Kc., 2350-7000 Kc.... 12 \* Speaker \$4995 Output.



Model 649 Console—6 Tubes American-Foreign...540-1710 Kc.,6000-18.000 Kc... 12" Speaker \$5995 Model 537 Console-5 Tubes

Model 1211 Console-12 Tubes Continuous Coverage ... 540-18.000 Kc. ... 12 Speaker... **\$12950** 20 Watts **\$12950** Output.



Ontput.

Model 1313 Console-13 Tubes Continuous Coverage .... 540-18,000 Kc. .... 15" Speaker. ... \$14950 25 Watts \$14950 Output.

Model 989 Console-9 Tubes

Speaker 12 Watts \$9950



Model 1199 Console-11 Tubes

Model 1516 Console-15 Tubes 



POWEL CROSLEY, Jr., President Home of WLW-the world's most powerful broudcasting station-70 on your dial. (Prices slightly higher in Florida, Texus, Rocky Mountain States and west.)

Radio Today





Model 769 Console-7 Tubes 

### NEW THINGS

#### (From page 26)

Pole is of telescopic type — installed in a few seconds. Tobe Deutschmann Corp., Canton, Mass. — RADIO TODAY

#### Airplane base globes



\* Streamline globe for promoting sale of all-wave sets. Has an airplane base and shows prominent alrport citles. Line is extremely low-priced. Sizes 6 to 12 inches. Weber Costello Co., Chicago Heights, Ill. — RADIO TO-DAY

#### Ward fish pole antenna



★ Telescopic type antenna for autos — mounts on rear bumper bracket. Moulded insulators minimize losses — easily installed — no holes to drill. Extends to 8 feet. Other Ward products are buggy-whip aerial, running board aerials, sound systems and mike stands. List — \$3.50. Ward Products Corp., 2135 Superior Ave., Cleveland, Ohio — RADIO TODAY — See also advt. p. 69.

#### Zenith 2-6 volt sets

★ Duplex farm radios featuring 2 or 6-volt operation. 2-volt set adapted to 6-volt operation by plug-in power pack. Four and five tube models reduces number of models required by dealers. Permo-dynamic speakers dual-band and all-wave models. Metaglass tubes. Console and table types. Zenith Radio Corp., 3620 Iron St., Chicago, Ill.— RADIO TODAX— See also advt. p. 3,

#### Wood baffle



★ Semi-weatherproof wood baffle for sound systems — has high-frequency equalizers. Houses either 8 or 12-inch speakers. Horizontal distribution angle 90 degrees — vertical 50 degrees. Bell mouth 27¾ x 17¾ — depth 27 inches overall. Weight 28 pounds. Baked gray crinkle finish. Model MI-4428 — list \$22.50. RCA Mfg. Co., Commercial Sound, Front & Cooper Sts., Camden, N. J. — RADIO TODAY

#### **Radio Receptor amplifiers**



★ Complete line of power and preamplifiers. Illustrated (top) is the LAL-2 pre-amp—Flat within 1 db. from 30 to 12,000 cycles — 2-stage with 50 db. gain. Noise level minus 50 db. below maximum signal level — output level of 40 milliwatts. Power amplifier model LPC-3 (bottôm picture) — output of 15 watts — furnishes plate and filament current to LAL-2 pre-amp. Output flat within 2 db. from 30 to 12,000 cycles. Designed for rack or table mounting. Radio Receptor Co., 106 7th Ave., New York City — RADO TODAY — See also advt. p. 47.

#### Portable sound system



★ Five-watt portable P.A. system. High-gain amplifier for use with velocity, crystal, and other mikes. Case acts as baffle. 25-foot speaker cable. Housed in case 12¾ x 12¼ x 8¾. Clarion type C-45—list less tubes and mike \$59. Transformer Corp. of America, 69 Wooster St., New York City— RADIO TODAY— See also advt. p. 61.

#### Webster 6-volt sound system

★ 10-watt sound system for 6-volt battery operation. Power from synchronous vibrator system. Permomagnetic speaker with spun aluminum exponential horn. Crystal mike with 25 feet of cable. Amplifier uses 6A6 output tubes in class B. Tone and volume controls. Model MV-410 complete list \$102.50. Webster-Chicago, 3825 W. Lake St., Chicago, III. — RADIO TODAY — See also advt. p. 58.

#### Microphone boom stand



★ Stand for placing mike in any position. Silently adjustable in vertical and horizontal positions. No adjusting screws used — uses ball clutch adjustable by slight pressure of the hand. Amperite Corp., 561 Broadway, New York City — RADIO TODAY — See also advt. p. 50.

#### DeWald all-wave superhet



★ Three-band AC-DC table type superheterodyne — tuning range, 540-16,000 kc. Full-vision dial with split second indicator — synchrobeam tuning. Eleven tubes — r.f. stage on all bands — 10-inch speaker. In same cabinet there is also a 9-tube AC set. Pierce Airo, Inc., 6th Ave., New York City — RADIO TODAY — see also advt. p. 64.

#### **Operadio sound systems**

★ Two sound distribution system for permanent installations. Have 11tube all-wave radio set, microphone and phonograph reproduction. Electronic volume indicator—tone expander and control. Dual-speed turntable with crystal pick-up. Distribution to any desired number of speakers. DuKane is a rack and panel job — St. Charles a compact cabinet. Operadio Mfg. Co., St. Charles, III.— RADIO TODAY—See also advt. p. 62.

### **RETAILING MORE RECORDS**

- politicians demand wax for final splurge - novelty discs to get a lively sales play

\* YOU couldn't say that "records will elect the next president," but record dealers are finding that there is a certain amount of wax involved in political campaigns. To political speakers, to local committees and to assorted campaign officials, alert merchandisers are promoting recordings of the campaign songs.

For Republicans, the ditty is "Oh, Susanna," and the Democrats are warbling "Happy Days Are Here Again." Lively recordings of both should be stocked until after Presidential election, as they are selling half a dozen at a clip. The market might be worth a special mailing piece directed to persons involved in political stumping who just hadn't thought about the musical end of the drive for votes.

#### The wanted numbers

The bouncy tune, "Oh, Susanna," has been recorded for Victor by D'alhart-Robison-Hood (No. 21169) and by the Harding Sisters (No. 22949). Victor has "Happy Days Are Here Again" by Leo Reisman's orchestra on No. 24270.

Brunswick has a record of "Oh, Susanna" (No. 4569) made by Eddie Jordan and his Old-Fashioned Boys, and a disc of "Happy Days Are Here



Fred Astaire, who teamed with Johnny Green for the 3 Brunswick leaders.

- Ray Noble, the debonair Englishman whose orchestra makes the smartest clubs in the country. Thas made the record, "Seven Years With The Wrong Woman" (Victor 24388).
- Decca has a platter called the "Decca Stomp" (691).
- One of the four discs by Marlene Dietrich (Brunswick 7723-6) made in Europe and now retailing here at 75c is titled "Mein Blondes Baby."
- Smith Ballew, currently the master of ceremonies on NBC'S Shell Chateau, has made more than 5,000 records.
- Jaunty title for a platter made by F. Henderson and his orchestra is "Hotter Than 'ell" (Decca 555).

Again" (No. 4709) by Benny Meroff and his orchestra. With the Columbia label are also two platters of the Demo song, 2123D made by The Rondoliers and 2116D by the Ben Selvin orchestra. Columbia also has the GOP song on 3098D, sung by the John Henry Choir.

#### SWING TIME

★ SELLING "swing" at the record shops today appears to be more than a transient fad. The torridstyled music has developed variations and off-shots which make it as much of a vogue as ever; books are written about it and Hollywood builds some of its costliest productions around it.

Aside from the hundreds of current recordings of popular tunes which are done in the "swing" manner, dealers will find it easy to promote the disc titles which include the word itself. "Swing" fans will respond to these:

Swingtime in the Rockies-Victor 25355; Swing Is Here-Victor 25276; The Waltz in Swing Time-Brunswick 7716; Medley from "Swing Time"-Brunswick 7738; Monopoly

Swing-Brunswick 7667; Swing Me a Lullaby — Brunswick 7680 and Decca 840; Moten Swing—Decca 853;Swing, Mister Charlie—Decca 848, Vocalion 3179 and Columbia 3125D; Swing That Music-Decca 866; Walkin' and Swingin'-Decca 809; You Can Call It Swing-Decca 840; Sing Me a Swing Song-Victor 25340 and Decca 830; Swing Me With Rhythm - Brunswick 7431; Organ Grinder's Swing-Brunswick 7656 and American Label 6-11-05; Swingin' on the Famous Door-Decca 737; Let's Swing it-Victor 25070; Swing-Decca 838 and Bluebird B6333; Swing Low – Decca 807; Black Snake Swing – Decca 7203; Swing Them Blues-Bluebird B6314; Swingin' 'Em Down-Bluebird B6193; Swing Fever-Vocalion 3236; Grand Terrace Swing-Vocalion 3213; Let's Get Together and Swing-Brunswick 7740; Swingin' the Blues-Vocalion 3279; Grab Your Partner and Swing-Brunswick 7743; The Wedding of Mr. and Mrs. Swing-Brunswick 7748.

#### BEST SELLERS AS WE GO TO PRESS

(All fox trots unless otherwise noted)

Bojangles of Harlem—Organ Grinder's Swing. Both by Tempo King and his Kings of Tempo—B6533.

BRUNSWICK (All from the RKO picture, "Swing Time") The Way You Look Tonight—Vocal by Fred Astaire. Pick Yourseif Up—Vo-cal and tap dancing by Fred Astaire. Both with Johnny Green and his or-chestra—7717. A Fine Romance—Vocal by Fred As-taire. The Waltz in Swing Time— Waltz. Both with Johnny Green and his orchestra—7716. Never Gonna Dance—Vocal by Fred Astaire. Bojangles of Harlem—Vocal and tap dancing by Fred Astaire. Both with Johnny Green and his orchestra —7718.

COLUMBIA Ride. Red, RIde—Congo Caravan. Both by Mills' Blue Rhythm Band directed by Lucky Millinder—3087D. Chasing Shadows — Foot-loose and Fancy Free. Both with Henry King and his orchestra\_3048D. Tell Me That You Love Me—Waltz. Martinigue—(From the Liberty picture. "Dizzy Dame"). Both with Henry King and his orchestra—3036D.

DECCA Organ Grinder's Swing-Sleeny Time Gal. Both by Jimmie Lunceford and his orchestra-908. Take My Heart-Afterglow. Both with VC by Russ Morgan, both with Jan Garber and his orchestra-851. If We Never Meet Again-VC with Louis Armstrong and his orchestra. Dipper Mouth-Jimmy Dorsey and his orchestra with Louis Armstrong-906.

VICTOR The Curse of an Aching Heart—I Just Made Up With That Old Girl of Mine. Both with "Fats" Waller and his Rhythm—25394. You Turned the Tahles on Me\_Here's Love in Your Eyes. Both with Benny Goodman and his orchestra—25391. Love Me or Leave Me—Benny Goodman orchestra. Exactly Like You—Benny Goodman Trio—25406.

# Battery Set Sales? Power Charger Sales? a look at LICKING COUNTY Let's take a loop

3,269 NON-ELECTRIFIED

LICKING COUNTY

RATTON

#### NOW-HOW ABOUT YOUR COUNTY?

In the first place, there are over 5 million non-electrified farm homes in the U. S. A. Your county, just like Licking County, Ohio, has its share of this huge market... there are battery set and Power-Charger prospects all about you—extra business profitable sales—that can easily be yours.

These sales will come much easier, too, when your prospect learns that the famous Briggs & Stratton 4-cycle gasoline motor powers the Power-Charger. It is the same motor that drives over 500,000 washing machines—that furnishes the power for several hundred thousand garden tractors, light farm machinery, etc....It is the same Briggs & Stratton Motor, that, for 25 years, has set a standard for outstanding performance, rugged reliability and economical operation.

#### Fills the Power Needs Beyond the Power Lines

The Power-Charger is the first completely equipped plant of its type. Provides full-time radio reception-electric lights up to 200 watts-power to drive small farm equipmentfor only a few cents a day. No other battery charger combines all its features.

BRIGGS & STRATTON CORP., MILWAUKEE, WIS.

Power

Charger



BRIGGS & STRATTON CORP., Milwaukee, Wis.

October, 1936

RIGOS

### DISTRIBUTING "SOUND" EQUIPMENT

quality products at adequate prices needed
 trade-discount situation has been in chaos

★ CONTINUING the discussion on sound-equipment sales and discounts, which appeared in RADIO TODAY for September (page 28), further constructive comments have been received from John J. Lawler of Reincke-Ellis-Younggreen & Finn, who is merchandising counsel for Webster Electric Company of Racine, Wis.

Sound equipment as we know it and understand it, comments Mr. Lawler, has been in existence a little over ten years. But manufacturers have not known just what to do with it, for in addition to selling problems. there existed all the complexities which arise from the patent situation surrounding sound equipment. During the pioneer period, many manufacturers were conscious of the future market for "sound," but hesitated to do very much because they knew there would be patent difficulties. Responsible firms were, therefore, very conservative in their policies, from both the engineering and sales viewpoints.

On the other hand, manufacturers with no character or policy proceeded to manufacture sound equipment re-

gardless of future responsibilities. As a result, these people turned out a lot of inferior merchandise. The normal reaction to this situation, observes Mr. Lawler, was that many manufacturers sold direct by mail or any other way. As a consequence, the service man felt that he could buy at any price he wanted, and so dictated the price at which the manufacturer should sell. In addition, many service men were anxious to tie up with manufacturers whose policy was sound and whose merchandise was right. They in turn were interested only in information they could secure and parts they could buy so that they in turn could compete against the manufacturer whose line they represented. This was bound to produce confusion-it has led to a chaotic condition.

#### Good jobber wants

Within the last year, reputable jobbers in both the electrical field and the radio field have become conscious of the fact that "sound" is taking an important part in our social and commercial life and that the field holds a great potential for volume. These



Beautiful example of modern all-purpose sound units. This instrument by Operadio reproduces records, radio or mike, through from 10 to 60 speakers.

jobbers, conscious of the situation which existed, then sought from the manufacturer merchandise that was somewhat competitive with the merchandise produced by the "policy-less" manufacturers and which, because of the specialty selling required, demanded excess discounts.

We have found the better type of wholesaler wants merchandise of superior quality and at a higher price, so that he can definitely lift himself out of the class of merchandise into which he has been forced.

#### Will manufacturers agree?

Radio Sales Manager R. Ferda of the Webster Electric Company confirms the point of view that "there is a lot of dissatisfaction and lack of coordination as regards trade discounts."

"Some manufacturers do not discriminate," he adds. "Mail-order houses offer discounts equivalent to 40 or 50 and 5, even to the user. All of these conditions tend to maintain a disturbed condition.

"By having the major manufacturers agree on a method of defining the status of distributing channels, and appropriate discounts in relation to service rendered," Mr. Ferda thinks that much benefit will result.

Mr. Lawler, however, expresses a contrasting view. "In the first place, I don't think we will ever get the manufacturers to agree," he says. "In the second place, I do not believe the status of distributing channels needs any defining. There always has been and always will be good, legitimate jobbers who conduct their businesses on a sound basis and who are conscious of their responsibilities as far as service to their customers is concerned."

#### TCA through jobbers only

The recent announcement of the Transformer Corporation of America, manufacturers of the Clarion line of amplifiers and public-address systems, to the effect that distribution of their lines will be made only through franchised jobbers in each territory, has created much interest among servicemen and sound engineers.

This policy on the part of the manufacturer is the first step in a campaign to protect sound men against the practice of selling direct to the consumer. Under the TCA plan, it will not be possible for the public to purchase equipment direct from the manufacturer, and in this way, the dealer has the assurance of list price maintenance, according to F. H. Skrotzki, sales manager, New York.
FROM THE DAY ENTERED	My
HEDE'STORE / "	/
HERE'S WHY PEOPLE GO FOR COMPARATIVE Grunow "Eleven" SOTHER NO OF TUBES ELEVEN SAME	TUP
TUBES DATA THE PR	ICEDIUS
OF CABINET (Full of INCHES METAL GLASS &	METAN
SIZE OF CE	e)
ALL-WAVE ALL. WORLD CHURCH & AND 10 I RECEDENCE	(000)
TONE "VIOLIN-SHADE	ption
Chamber Best at any Price Chamber Best at any Price CHAMBER Struments Are Rou	VE

" J DOUBLED "STEP-UP"SALES.

AV THESE BIG NEW

HUNDREDS OF DEALERS tell us the same sensational story! "Step-up selling is almost automatic now-since we put the big new Grunows on our floor. Nearly every customer wants to see the TELEDIAL "Twelve" and the Grunow "Eleven" at the price of a six!

They "go for" big, powerful sets, 11 and 12 tubes instead of 5 to 7 tubes, big 41-inch, beauti-fully grained, walnut consoles, the magictone of the "Violin-Shaped" cabinets and famous 12-inch Grunow speaker.

The instant they see these sensational extra values they decide to spend 50c more a week and own a Grunow. And say-how these extra step-ups increase our profits!"

Better get these sensational new Grunows working for you today!

GENERAL HOUSEHOLD UTILITIES CO. Chicago, III. . Marion, Ind.

Manufacturers of Grunow Super-Safe Carrene Refrigerators Grunow Household Radios . Grunow Automobile Radios



Tremendous public interest in TELEDIAL automatic tuning puts TELEDIAL neck and neck in sales with the Grunow "Eleven."



#### **BETTER TONE AND PERFORMANCE AT ANY PRICE!** NO

October, 1936

ALL-WORLD

# The Music

### SOUND ENGINEERING

In years gone by, Enrico Caruso as Canio in the opera Pagliacci, thrilled audiences with the rich melody of his voice. His drum and costume you see above. Today, more than a decade after Caruso's death, his magnificent voice still stirs music-lovers the world over -coming to them on Victor Records with all the glory of old... recreated by the sound engineering of RCA!

### RADIO CORPORATION OF AN EVERYTHING IN RADIO FOR SERVICE IN COMMU

# Millions Want ...when they want it!

#### Another RCA product, Victor Records, provides music to suit every mood—bringing the world's greatest artists to America's homes!

In Victor Records, too, RCA sound engineering plays an important part!

For more than thirty years there has been a forward march of painstaking experiment, tireless research and careful development in our sound recording laboratories. These years have produced, among other "firsts," Victor High Fidelity Records—and phonograph-radios and electric phonographs which at last bring precise, truthful reproduction of these records. This—climax of sound engineering—is something never before accomplished!

Just as every move is double-checked in record manufacture, so the other divisions of RCA work with the same year-long caution and exactness to insure products worthy of the RCA trademark.

In addition to instruments for the reproduction of Victor Records in the home, RCA services make sound film equipment, amplifiers and loudspeakers for public address systems. Notable achievements in sound reproduction that have come from RCA include the Dynamic Amplifier, which restores true volume range to record performance and the Rotary Stabilizer, a device highly essential for high fidelity reproduction of sound motion pictures.

RCA is the only organization engaged in every phase of radio. Hence RCA *knows* radio—knows most about sound engineering in the industry. This has given the public *confidence* in the RCA name. That's why dealers find it wise to identify themselves with RCA. They make more money.

Remember-RCA has produced more "firsts" in radio than anyone else. For RCA has always engineered sound-just as some day RCA will engineer sight!

RCA MANUFACTURING CO., Inc. • RCA COMMUNICATIONS, Inc. NATIONAL BROADCASTING CO., Inc. • RCA INSTITUTES, Inc. RADIOMARINE CORPORATION OF AMERICA

TIONS ... BROADCASTING ... RECEPTION



#### RCA'S RECORDING "FIRSTS" include:

First with Orthophonic recording... First to sign up important artists... First to use commercially flat disc talking-machine records...First to perfect sound-on-film method for synchronized talking motion pictures...First to demonstrate commercial practicability of home sound picture apparatus using sound-on-film system with 16 mm. standard amateur film.

First with new system of noiseless recording for motion picture field... First to recreate old records, adding new orchestration... First to increase range and more delicately shade tone in sound motion pictures by development of High Fidelity recording.

First to use the now famous Victor Higher Fidelity process to make phonograph records.

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

RICA · Radio City · NEW YORK



# The Music Millions Want ...when they want it!

Another RCA product, Victor Records, provides music to suit every mood—bringing the world's greatest artists to America's homes!

In Victor Records, too, RCA sound engineering plays an important part!

For more than thirty years there has been a forward march of painstaking experiment, tireless research and careful development in our sound recording laboratories. These years have produced, among other "firsts," Victor High Fidelity Records—and phonograph-radios and electric phonographs which at last bring precise, truthful reproduction of these records. This—climax of sound engineering—is something never before accomplished!

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Remember-RCA has produced more "firsts" in radio than anyone else. For RCA has always engineered sound - just as some day RCA will engineer sight!

RCA MANUFACTURING CO., Inc. • RCA COMMUNICATIONS, Inc. NATIONAL BROADCASTING CO., Inc. • RCA INSTITUTES, Inc. RADIOMARINE CORPORATION OF AMERICA



RCA'S RECORDING "FIRSTS" include;

First with Orthophonic recording... First to sign up important artists... First to use commercially flat disc talking-machine records...First to perfect sound-on-film method for synchronized talking motion pictures...First to demonstrate commercial practicability of home sound picture apparatus using sound-on-film system with 6 mm. standard amsteur film.

First with new system of noiseless recording for motion picture field... First to recreate old records, adding new orchestration... First to increase range and more delicately shade tone in sound motion pictures by development of High Fidelity recording. First to use the now famous Victor

First to use the now famous Victor Higher Fidelity process to make phonograph records.

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SOUND ENGINEERING

In years gone by, Enrico Caruso as Canio in the opera Pagliacci, thrilled audiences with the rich melody of his voice. His drum and costume you see above. Today, more than a decade after Caruso's death, his magnificent voice still stirs music-lovers the world over -coming to them on Victor Records with all the glory of old... recreated by the sound engineering of RCA!

RADIO CORPORATION OF A ERICA · Radio City · NEW YORK EVERYTHING IN RADIO FOR SERVICE IN COMMENTIONS ... BROADCASTING ... RECEPTION



Selling Atmosphere ... one of the new home backgrounds originated by American-Bosch.

## **HOME BACKGROUNDS**

... another dealer-minded sales display originated by American-Bosch

EVERYTHING that American-Bosch has touched this season is deliberately dealer-minded.

The line itself is dealer-minded. Market-measured to embrace every price class. Scintillating cabinets "have a way with women." The "Automatic Maestro" leads a combination of 24 other sales-compelling features that capture the man.

Our point-of-sale aids are so dealer-minded that hundreds of dealers have echoed their approval.



Have you seen our hooklet: "Success in the Radio Business," describing what the Automatic Maestro is doing for dealers? Write for your copy, to United American Bosch Corporation, Springfield, Massachusetts. Lithographed cut-outs in 12 colors, movie star tie-up displays, spot radio transcriptions by N. B. C. artists, each as distinctive as the home atmosphere background illustrated which marks another "first" in radio merchandising.

Do dealers like it? Well, dealers have already ordered 4 times as many American-Bosch Radio sets as last season. It's the biggest year EVER in American-Bosch Radio history.

AMERICAN-BOSCH Centromatic RADIO

Radio Today

## ANNOUNCING

\*\*\*\*\*\*

TO

Millions will buy it who would not buy any other set!



SILENT

Beautifully streamlined in design is Model B-20. one of the many startling models of the Dictograph Silent Radio now in preparation. See the new style note in controls. Sides are of white oak. trimmed with metal ribbon. Top is of cork. When desired the Silent Radio operates in the conventional manner. Dynamic speaker of rich purity may be turned on or off.



When operating through the Acousticon Magic Ear or with the loudspeaker, an ingenious flexible sliding cover may be closed to completely conceal dial, speaker and other radio characteristics. In styling, Dictograph Silent Radio is as far ahead of the conventional as is the Silent Radio principle which it offers. Model B-20, illustrated, lists at \$65.

Made by Dictograph Products Corporation, makers of precision equipment for thirty-four years including Acousticon for the Deaf: Intracommunicating Télephone Systems: Packard Lektro-Shaver; Lektro-Lite, the flameless lighter, and transmitting and receiving equipment for aviation, etc.

## ONE CAN LISTEN while others SLEEP READ or TALK thanks to acousticon MAGIC EAR

RADIO

U. S. PAT. 1,630,028; OTHER PATS. PENDING

DICTOGRAPH SILENT RADIO is a totally new conception in radio. It answers all of radio's negative problems. It brings to the listener the opportunity to enjoy by himself, without headphones or anything that is worn, quietly, comfortably. with complete clarity — music and speech via radio while others in the same room need not be disturbed unless they too wish to hear.

With Dictograph Silent Radio, Mrs. Radio Listener who wishes to hear her favorite program and her husband who wishes to read his newspaper undisturbed come to an amicable understanding. Now the children welcome bed-time with the Acousticon Magic Ear. No radio din in home, office, hotel, etc.

The Acousticon Magic Ear, a tiny Tonal Fork, tucked away beneath pillow or on the back of an armchair, is the secret. This Acousticon Magic Ear is not an earphone, not a miniature loudspeaker. It employs a principle new to the industry.

Strange as it may seem, this remarkable radio can be heard by the hard of hearing as clearly as by those with normal hearing.

This sensational new radio will be demanded by millions of listeners through dealers and jobbers.

The set of the future will have the Acousticon Magic Ear. Radio set manufacturers and makers of sound equipment should get license information forthwith.

If interested in onr licensing plan, cable, wire, write or phone Dictograph Products Corp., 580 Fifth Accuuc, New York, N. Y. Dealers and distributors address Progress Corp., Debt. RT; 1 East 43rd Street, New York, N. Y.

#### DOUBLES THE OPPORTUNITY FOR RADIO SALES



## ADVERTISING HAS ALREADY BEGUN

THREE of the outstanding advertisements for Dictograph Silent Radio are illustrated above. The first will appear in December issue of "Esquire." Dictograph Silent Radio is the answer to the anti-noise agitation that is a major issue in New York and every other large center of population. Leagues for Less Noise, Noise Abatement groups and apartment house owners are enthusiastic. Medical men welcome it. Leading hotels are demanding it and orders have already been received for Dictograph Silent Radios from many, including Ritz-Carlton, New York; Sir Francis Drake, San Francisco; Cloizter House, Sea Island, Georgia; Adolphus Hotel, Dallas, Texas; Book Cadillac. Detroit; Congress Hotel, Chicago, and others; steamship lines, railways, airplane lines have Dictograph Silent Radio under consideration.

Dictograph Products Corporation, 580 Fifth Avenue, New York, has an interesting licensing plan for manufacturers of radio sets and sound equipment. Cable, wire, write or phone today for further information.

Retailers and distributors can place orders for delivery in rotation from Progress Corporation, Dept. RT, 1 East 43rd Street, New York.

## CLIP AND MAIL TODAY I am a (check which) Retailer Distributor Manufacturer Please send full information on Dictograph Silent Radio to

the undersigned immediately.
INDIVIDUAL
POSITION

FIRM ADDRESS

Manufacturers, interested in licensing plan, mail to Dictograph Products Corp., 580 Fifth Ave., New York, N. Y. Retailers and Distributors mail coupon to Progress Corporation, Dept. RT, 1 East 43rd Street, New York, N. Y.



NOTE: Because af tremendous demand, orders for single radios must be filled at standard retail price of \$65. Address single orders to Dictograph Products Corp., 580 Fifth Ave., New York, N. Y. Copyright 1936 by Dictograph Products Corp., N. Y.

## THIS "SOUND" BUSINESS

#### ABOVE THE BUZZ

★ No sooner does a New York City Municipal Court go into session than a coarse hum rises from the persons assembled. Uproar is level and deadly and it finally got on the Nerves of the Bench; public address systems are to be installed throughout the city.

Municipal sessions open with the calling of the calendar by the clerk, and although these fellows get shrill and desperate in their efforts to be heard above the buzz of the accused, yet there has been some doubt that the litigants always heard their names called. Wired for sound, the clerks will be able to use cool tones.

#### PERMANENT CORRECTION OF BAD ACOUSTICS

The entire problem of acoustical correction is simple when properly understood. The mystery of this science, which for so long had engineers baffled, has been removed along with the mystery of electricity and other forms of engineering. Common sense and good judgment together with scientific background should enable public - address and sound men to cope successfully with acoustical problems that they encounter.

Curved surfaces in particular are troublesome. When encountered, particularly on rear walls, place large quantities of sound-absorbing materials on the surface. Even then, the condition is only tempered if the curvature is decidedly sharp. The echo resulting from the curve will be materially reduced by the material and conditions will usually be satisfactory on a temporary basis. Extreme high ceilings and walls are also difficult since material should usually be placed on the walls about half of the distance from the floor to the ceiling. Thus a major problem in scaffolding often presents itself.

On the other hand, low-ceiling rooms can often be made satisfactory by leaning the proper amount of material against the walls. The walls farthest away from the loud speakers should be treated first. This is usually the rear wall. Next, treat the side walls, starting at the rear and going forward at least one-half the distance to the stage. Placing the materials on the walls above the heads of the audience is more effective than merely leaning it against the wall at the floor. However, conditions are often such that nailing into the walls is not permitted. Wherever possible, place the material in a position where it will be exposed to the mean free path of sound in the room.

#### A SOUND MAN'S BLAST

Writes James R. Kearns, National Sound Service, 130 Flatbush Avenue, Brooklyn, N. Y.: "I read RADIO TODAY'S article 'Radio'S Cancer Spot — New York City,' and I quite agree with you. BUT why limit the scope of your broadside; why not include such damnable snakes in the grass as the mail-order houses who practice the theme song, 'I can get it for you wholesale.'

"It has been my experience in the past few years of being chiefly annoyed in the amplifier game by wholesale houses offering the public their products at our cost.

"If this doesn't constitute cutthroat practices then I'm a China-





Smartly colored in red, gold, white and black, this decal offered by Amperite Corp. scores a "first" in display items for "sound" dealers.

man. I not only speak for myself but for other sound men as follows: 'Upon calling on a prospective customer to sell him sound equipment for his place of business, we estimate the job and when the customer hears the price, he reaches into his desk, pulls out a mail-order catalog and says quite emphatically, you're a gyp. I can buy that same amplifier equipment for just half your price.' What would you do?... So did I.

"Instead of being able to keep the field clean and enabling one to make a living, these mail-order houses drag the whole situation down into the mire."



After election, this king of sound trucks may become a perambulating movie show. Its amplifiers will carry a voice 10 city blocks.

## **REPLACING ELECTROLYTIC CONDENSERS**

#### Surge, peak, and working voltage ratings explained

★ APPLICATION of the voltage characteristics of electrolytic condensers to replacement work<sup>\*\*</sup> is a subject understood only by a relatively few radio servicemen. One of the features at the recent New York I.R.S.M. Show was an explanation of electrolytic condensers by G. V. Peck of the P. R. Mallory Co., Inc. Mr. Peck's talk, which follows, describes the various voltage ratings and interprets their use.

"There seems to be a rather general misunderstanding of the various terms used to describe the voltage ratings of dry electrolytic condensers. A complete understanding of these terms and their proper application will unquestionably allow the condensers to be used more intelligently, and will result in their having a longer life with marked freedom from field trouble.

"The object of this talk is to give a clear picture of the voltage ratings of dry electrolytic condensers and point out how each affects the operation of a condenser in the usual radio set.

"Dry electrolytic condensers have

\*When available exact duplicate replacement units should be used, for they are designed especially to replace the defective unit.-Service Editor. three different voltage ratings as follows:

"Working voltage is the maximum DC voltage that can be applied to a condenser continuously without overheating (see Fig. 3 on drawing). This is the voltage read by the usual high resistance D'C voltmeter. The working voltage rating is determined by the voltage used to form and age the anode foil during manufacture. This, however, has nothing to do with the point at which the condenser starts to spark internally on voltage overloads. The actual working voltage applied to each condenser in a radio circuit should be measured at the highest input voltage which might ever be encountered on the radio transformer primary. The working voltage rating of the condenser should always equal or exceed the measured value

#### Peak voltage rating

<sup>17</sup>Peak voltage represents the total DC working voltage plus the maximum allowable peak AC ripple voltage superimposed thereon. In most circuits the peak AC ripple voltage amounts to 10 or 20 volts (see Fig. 4 on the drawing). The maximum al-



Figs. 1 and 2 show how leakage of condenser regulates the surge voltage—note that surge with 450-volt condenser is greatly reduced. Excessively high working voltage ratings do not necessarily mean added safety.

lowable peak AC ripple voltage is dependent on the capacity of the unit and, therefore, must be rated differently for each value of capacity. In general, it may be said that the peak voltage rating of a condenser is relatively unimportant and should not be incorrectly emphasized as a DC working voltage rating. However, if the peak AC ripple voltage encountered in a radio set exceeds 25 volts, it should be taken into consideratiou.

#### Surge voltage defined

"Maximum surge voltage is the maximum voltage a condenser will stand for 5 minutes without breakdown, when the voltage is applied through a series resistance equal to 20,000 ohms divided by the capacity of the condenser in microfarads. It is an arbitrary formula designed to obtain a standard of comparison. However, the resistance value approximates that encountered in radio set filter circuits. The maximum surge voltage rating is not connected directly with the working voltage rating of a unit. If the applied voltage exceeds the maximum surge voltage rating of a condenser, sparking will result and destruction of the unit may follow. Surge voltage measurements may be made with a high resistance DC voltmeter and readings should be taken at the highest input voltage which might ever be encountered on the radio transformer primary. Remove all the tubes from the radio set except the rectifier and disconnect all electrolytic condensers when making the surge voltage measurement. A paper dielectric condenser of one mfd. or more must be connected across the rectifier output terminals or the meter will not read accurately. The maximum surge voltage rating of the condenser should exceed the measured surge voltage reading.

"The surge voltage rating of a condenser, as is now obvious from the above explanation, remains relatively fixed and does not move up in value in step with increased working voltage rating. This is particularly true of condensers rated 350 volts DC and over.

"If the measured surge voltage (as described above) does not exceed the actual surge voltage rating of the conTALKING AND BUYING WESTON

> ...AND THE WESTON Investment Plan NOW MAKES WESTON INSTRUMENTS EASY TO BUY!

MODEL 772 WESTON Super-Sensitive ANALYZER (20,000 OHMS PER VOLT) PRICE \$4650

Net In U.S. A

MODEL 692 WESTON All-Wave OSCILLATOR (LABORATORY TYPE) PRICE \$1500

Not in U.S. A

ybody

More than ever, the swing is to WESTON instruments. For with WESTON precision and WESTON dependability available at such popular prices, no serviceman need pass up the opportunity to be WESTON equipped for every servicing need. Moreover, the WESTON INVEST-MENT PLAN makes it easy to buy these quality instruments. You will want full information on this new Plan. See your jobber, or return the coupon today... Weston Electrical Instrument Corporation, 597 Frelinghuysen Avenue, Newark, New Jersey.

SEND THIS

Weston Electrical Instrument Corp. 597 Frelinghuysen Ave., Newark, N. J. Rush complete information on the WESTON INVEST-MENT PLAN and all WESTON Radio Instruments., NAME ADDRESS

PRICE

MODEL 771

WESTON

CHECK MASTER

TUBE CHECKER PLUS

\$4500

Nor In U.S.A

October, 1936

#### DRY ELECTROLYTICS

#### (From page 38)

denser, then the working voltage rating of the condenser does not need to be considered in relation to the surge voltage. The working voltage rating must, of course, exceed the applied working voltage, but from an economical standpoint should not be higher than necessary.

"When the measured surge voltage (read as described above) exceeds the highest obtainable surge voltage rating of the condenser, then it is important that the working voltage rating of the condenser be chosen as close as possible to the actual working voltage applied in accordance with the following explanation.

"The accompanying chart shows a typical voltage characteristic of a radio filter circuit during the starting cycle (that is, until the tubes warm up). It will be noted that in this particular case the actual surge voltage, without the condenser connected, reaches 550 volts. If a condenser rated at 500 volts DC working (see Fig. 1 on the chart) is connected across the circuit, it will draw very little leakage current and this load will only lower the surge voltage to about 540 volts. Since this value is higher than the sparking voltage of most condensers, sparking will take place and damage of the condenser may result.

#### Importance of leakage current

"A 450 volt DC working condenser (see Fig. 2 in chart) or less, depending on the actual working voltage encountered in the radio set, would have a higher leakage current at voltages above its own rating and thus hold the surge voltage down to roughly 490 volts. As this is less than the critical voltage where sparking starts, there should be no trouble experienced. The above explanation is one of principle only and the values given are solely for demonstration of this principle, as cases vary and no direct values would apply in general. However, it will serve to correct the false idea gained by many people that the higher the working voltage of the condenser, the less apt it is to break down on momentary voltage surges.

"The particular action just described is subject to change with time, as the leakage current will drop slowly over an extended period. Theoretically, therefore, the regulation characteristic will become less pronounced and other factors of design must be relied upon for continued service past this point.

"Referring again to the chart, a condenser rated at 400 volts DC working would work continucusly without heating at the 375 volts (see Fig. 3 on the chart) shown as the maximum working potential. This working voltage should always be measured at the highest input voltage that might ever be encountered on the radio transformer primary, for obvious reasons. For the particular characteristics shown in the chart, a working voltage of 400 would be the safest to use and it would provide greater leakage current drain than a condenser of higher working voltage when surge voltages above 400 are encountered during the heating cycle. If a rating higher than 400 were used. it would offer proportionately less protection, due to the decreased leakage and higher surge voltage that would result, as explained above.

"If radio service engineers will study carefully the points outlined above regarding the proper voltage ratings of condensers, they will be assured of long, trouble-free condenser life, with low initial cost (due to reduced voltage ratings)."

(To page 42)

## "YOU CAN COUNT ON 'EM'"

#### "HERE'S A TUBE That never lets You down...I'll Tell you why!"

• "When you'buy a Sylvania tube, you're buying dependability! Here's what I mean. Before those tubes leave the factory they have received 80 separate tests. That's for my protection . . . and yours. Naturally they carry a definite written guarantee . . . again, we're both protected!

"When it comes to price ..., that's dependable too. And the list price is fair. You see, it pays to do business with that kind of a company...I always know where I stand!"

You can make your tube business as dependable as this man's! You can get complete sales and technical information by writing to the Hygrade Sylvania Corp., Emporium, Pa.



Radio Today

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ADIO

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THE NAME TELLS YOU IT'S MASTERPIEC

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### Metallizeg VOLUME TYPE CONTROL

When a new product bears the IRC Trademark, you know something worthwhile has happened. You know it is the last word in dependability ... one you can rely upon any time, anywhere!

With the famous Metallized Resistance Principle and with many other exclusive features this new Volume Control is a typical IRC product ... permanently quiet ... amazingly smooth ... rugged and simple in construction ... remarkably durable. In short, you know an IRC product is right. You know that here, at last, is the Volume Control for you!

Write For New Catalog Just Off the Press INTERNATIONAL RESISTANCE CO. 401 North Broad St., Philadelphia, Pa

MAKERS OF RESISTANCE UNITS OF MORE TYPES, IN MORE SHAPES FOR MORE APPLICATIONS THAN ANY OTHER MANUFACTURER IN THE WORLD

The second s

Lattering street



Our background enables us to produce outstanding speakers, which is the outstanding speaker basis of our success. the

A complete line of PERMANENT DY-NAMIC Speakers for Battery Sets, and P.M. Installations. Sizes 6 in., 8 in., 12 in.

Permanent Dynamic Auto Speakers. 6 in., 8 in. and 5¼ in. Header. Also a complete line of Electro Dynamic Speakers ranging in size from 5 in. to 12 in.

Send us your specifications.

**RADIO SPEAKERS, Inc.** Henry C. Forster, President 1338 S. MICHIGAN AVENUE, CHICAGO, ILLINOIS

#### **REGULATING WET ELECTROLYTIC** CONDENSERS

\* The usefulness of leakage current in dry electrolytic condensers has been discussed in the preceding story by Mr. Peck. Recently a new type of wet electrolytic condenser has been developed that acts to keep the surge voltage down to a low value. according to the Aerovox Corp.'s engineering department.

#### Ordinary wet electrolytic

The first diagram shows the leakage characteristic of the ordinary wet electrolytic. Under normal operation at rated voltage the leakage is very low. However, as voltage increases beyond the normal peak voltage, current rises too, first slowly and then faster, until a point is reached where the condenser "scintillates." By "scintillation" is meant the repeated breakdown of the insulating film formed on the positive foil. After the breakdown, the film is reformed, only to break down again, followed by reforming, etc. This scintillation does not ruin the wet electrolytic condenser, for when the voltage is lowered again and the normal operating



Leakage current characteristic of ordinary wet electrolytic.

voltage applied, the condenser performs as well as ever.

The characteristic of the new regulating type condenser is shown in the accompanying chart.

#### Regulating condenser

This regulating feature is utilized only during the interval when tubes are heating up, since a prolonged heavy current through the condenser would result in too great a temperature rise. When a set is first turned on. the rectifier tube heats considerably faster than the other tubes. During this period the tubes are drawing no plate current, and there may be no drain on the power supply save that for the filaments and the voltage divider.

(To page 44)









This impressive instrument performs the operations of 12 essen-tial servicing instruments: Radio and P. A. analyzer. Electrostatic and electrolytic capacitor leakage tester. Multi-range ohmeter. Multi-range DC voltmeter. Multi-range AC voltmeter. Multi-range DC mill-iameter. Multi-range decibel meter. Multi-range output meter. DC am-meter. Condenser capacity meter. A total of 43 ranges and functions.

**MODEL 550 RADIO TESTER** 

THE **timest** that money can buy!

\$6.00 DOWN-\$5.55 MONTHLY FOR 10 MONTHS

It has the latest improvement in meters — the big double window illuminated Quadrimeter. It accurately checks all circuits for voltage, current and resistance.

Allows test of all types of tubes by by comparative "Grid-shift" meth-od. Makes accurate tests of all elec-trolytics at rated voltage from built-in DC power supply. Also meas-ures capacities from O-14 mfd. Neon tube shows leakage or shorts in all paper, mica or oil capacitors. Provides point-to-point resistance and voltage measurements. All re-sistance, voltage, capacity and cur-rent readings are secured through rent readings are secured through the 9 conductor analyzer cable. Tests made without removing chassis from the cabinet. Oak fin-ished metal panel is housed in a solid quartered oak carrying cas

October. 1936

I WILL SELL YOU ANY SUPREME

INSTRUMENTS

ON S. I. C. EASY TERMS

Your Parts Jobber



comes to the rescue with its New

#### Selector Switch

• When you fall asleep, dead to the world from fatigue, trying to dope out how in blazes you're going to get all those dizzy connections right on that new analyzer ... take it easy ... CENTRA-LAB'S new SELECTOR SWITCH KIT, with thousands of combinations will ALWAYS solve your problem. See your jobber today.



## SERVICING NEW CIRCUITS

#### (From page 42)

During the interval of heating up tube filaments or cathodes, the large condensers in the power pack are charged to peak voltage of the transformer secondary, and since there is no current drain, there is no voltage drop in the filter and the speaker field. Hence the same peak voltage is applied to all the smaller condensers, such as tubulars, as well as other equipment. These peak voltages are apt to raise havoc with small condensers not intended for such surges.

#### Overload protection

Aerovox engineers have developed wet electrolytics for given regulation voltage. Properly applied, these units



The regulating wet electrolytic effectively keeps the voltage from rising above the regulating voltage.

prevent voltage rise above a given point, and consequently protect other condensers and components.

It is highly important that such regulating condensers be connected across the output of the filter, and not immediately after the rectifier. In the latter position the regulating condenser would cause an enormous peak current at the start, which would have to pass through the rectifier. The regulator condenser can be placed after the first choke or after the second one, if there are that many.

#### KADETTE 87 SERIES

★ Inspection of circuit diagram shows the model 87 to be a 7-tube superhet covering the broadcast and short wave bands.

Set has a 448 kc. intermediate frequency. Antenna wavetrap is adjusted also at this frequency for minimum response.

Broadcast band is aligned at 1,400 kc. Alignment of oscillator conden-

ser at 600 kc., if necessary, is done by bending condenser plates.

The three trimmers on the bottom of chassis are, reading from the end of the chassis toward the center, BC oscillator, SW detector, SW oscillator. There is no trimmer for BC detector.

SW oscillator alignment is done at 15.5 megacycles—SW detector at 12 megacycles.

#### WESTINGHOUSE MODEL WR-311

\* Model WR-311 is a 6-tube allwave superhet. Schematic diagram is shown on opposite page with chassis layout and alignment frequencies. Coil resistances in ohms are placed adjacent to coils.

Note the new method of biasing the tubes -- cathodes are grounded. In the I.F. and R.F. circuits a bias is obtained through one section of the 6H6 tube. The cathode is connected to the center tap of the power transformer and is negative with respect to the chassis or amplifier cathodes. The plate is connected to the AVC or grid return circuit and a current flows through the diode load circuit to ground. The current through the diode load produces a negative bias on the amplifier tubes. This keeps a negative bias on the tubes even when no signal is tuned in.

After a station is tuned in, the diode detector produces a bias for the AVC control—this is greater than the no signal bias, and since it is more negative, current ceases to flow through the other section of the diode and the set performs like any other set with AVC.

Coupled to the wave-change switch is a switch that alters the frequency response of the audio system — it is shown in the diagram just below the diode detector and load resistance.

Note antenna wave trap is inductively coupled to the antenna coils. It is adjusted for minimum output when an I.F. signal is fed into the antenna of the set.

#### PERSONAL APPEARANCE

\* That first impressions are often the most lasting ones should be remembered by all servicemen, particularly in this day of "gyp" artists.

A clean, neat, efficient appearance and courteous greeting will break down more sales resistance than a line bathed in honey and oil. A (To page 47)

### WESTINGHOUSE MODEL 311















Normally the function of most tubes is to amplify a signal. But when tubes are required to deliver power, such as the 6F6, the amplification may test up and yet the tube may distort badly. Reason . . . weak emission . . particularly at low frequencies. Such tubes demand both amplification and emission test, now available on





tubes. Tube Tester . . . tests all types tubes. Tube values are indicated on GOOD-BAD Scale.

Has shadow-graph line voltage indicator. Neon inter element short test made while tube is hot. When new tubes are released, up-to-date tube charts are provided. Complete in quartered oak case with all necessary accessories.

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## The P.O.

Tubes in radios have three different functions: to amplify, to deliver power, to rectify.

For amplifiers (75% or more of all tubes) the power output test is absolutely the final word in determining the worth of the tube. The Power Output Test in Triplett P.O.E. Tester simulates actual operating conditions in the radio set.

For Power Tubes, the Power Ontput Test determines the amplification factor. The emission test determines the power handling ability. Both tests are necessary to properly analyze these tubes.

The function of the diode tube is to rectify. Here the emission test only is required to determine the condition of the tube. P.O.E. tests these under both voltage and current load. High voltage will detect any flash overs.

#### Model 1503 combines nine instruments in one

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Test.

- 4. Condenser Test for Shorts
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### SERVICE NOTES

(From page 44)

word to the wise should be sufficient. Oh, yes, as for trying to find that break in the lead-in wire where it goes over the coal bin - better wear overalls.

#### **UP-TO-DATE TEST EQUIPMENT**



A self-calibrating vacuum tube voltmeter is Triplett's answer to voltage measurements in high-resistance and radio frequency circuits.

\* Newest editions of service equipment boast of many new advances and the design is such that obsolescence is quite remote. Shown at the New York I.R.S.M. Convention were many outstanding modelstube checkers, analyzers, oscillators, multi-meters. oscillographs, vacuum tube voltmeters, and many other devices.

With the increasing circuit complexity, the need for modern flexible test equipment is paramount. Good test instruments enable the serviceman to do more and better work in less time.

A complete analyzer or multi-meter that will accurately measure AC and DC voltages, DC current, resistance and capacity through all the ranges found in modern sets is indispensible. An all-wave oscillator and output

(To next page)



The Simpson Roto-Ranger instruments have a meter scale that is automatically changed by the range selector switchon the 300-volt range only the 300-volt scale is visible.



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## Store Demonstrations that sell sets!



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**DATA** Write for data on how you can equip your store for better demonstrations and reduce your selling expenses on sets.



T East toth St., New TOPE Chy

### SERVICE NOTES

(From preceding page)



Weston with an eye to the future has an analyzer with 20,000 ohms per volt resistance and a 50 microampere meter.

meter are equally necessary. The oscillator (modulated and unmodulated) should cover the entire intermediate and radio frequency range. The minimum output, should be sufficiently low so that sets can be aligned below the AVC operating point-the maximum output should be great enough to force an I.F. signal from the antgnd. terminals through the set. This latter feature is necessary in adjusting wavetraps. If the output meter is of the decibel type it will be valuable for measuring both gain and outputin P.A. work a decibel meter is indispensable. For sound work an audio frequency oscillator will be found extremely useful.

The newest service instrument is the cathode-ray oscillograph. When properly used it will paint pictures of what is happening inside a radio and there is practically no limit to the information that it will give out. Most servicemen have the erroneous idea that it is useful only for alignment work—but alignment is only a small part of its usefulness. The oscilloscope is truly the serviceman's N-ray.

For store sales a tube tester is excellent, but the serviceman who must operate with the least amount of equipment can easily get along without it by employing a substitution test in the set in conjunction with his test oscillator and output meter. First render the AVC inoperative by shorting the grid returns to ground-then feed a signal through the set. The output meter will indicate a great inerease in volume when a poor or defective tube is replaced by a good one. This method tests the tubes under actual operating conditions in the cus-(To page 50)





Three entirely independent sections in one compact can - that's the idea of the new Series 3GL electrolytics.  $\pm$  Six leads—two for each section. Unit measures only 13%" dia. x 3¼ or 44%" high. Inverted mounting.  $\pm$  Two ratings—250 and 450 v. working. In 4-4-4, 8-8-8, 8-8-16 and 8-16-16 mfd. combinations.  $\pm$  Also the 2GL Series, with two sections in one can.  $\pm$  Just the thing for improved filtering in tight spots.

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Also manufacturers of Ken-Rad Incandescent Electric Lamps.



### SERVICE NOTES

(From page 48)



A dual-window meter is featured in the new Supreme line-meter is illuminated and scales more easily read.

tomer's set—what could be fairer? Of course, a tube tester is an excellent device and is to be recommended —for the customer can be shown just how his tubes are in terms of English.

#### ADVANTAGES, LIMITATIONS OF FIVE TYPES OF MIKES

★ The rapid advances in sound equipment have brought out the development of five distinct types of microphones and the sound man should know the uses and limitations of each type. Mr. John Erwood, Vice-President of Webster-Chicago recently gave his opinion of the advantages and limitations of each type as follows.

#### Carbon microphone

The carbon microphone consists of a stretched diaphragm across the center of which rests a loosely packed pile of carbon granules in a carbon cup. Sound pressure waves, on striking the diaphragm, cause a lateral movement with a consequent increase or decrease of pressure upon the carbon granules. An electric current is maintained through these granules and the effect of changing pressure of the granules is to vary the resistance of the element which causes a fluctuating current across two terminals mounted on either side of the carbon pack.

Advantages: It is low in cost, has a relatively high output and is of low impedence.

Limitations: It is limited in fre-(To page 52)



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Radio Today

N two months, what a welcome! Simpson Radio Instruments, with the ingenious Roto-Ranger\* scales were unquestionably the sensation of the I-R-S-M Show, and in the sixty crowded days since their announcement they have been hailed by service men everywhere as the one big development in recent years.

Cinother

SENSATIONAL

Development

-the new

Roto Ranger

**TUBE TESTER** 

and

SET SERVICER

The latest addition to the Simpson line is illus-trated here—the new Simpson Model 220 Tube Tester and Set Servicer—an A. C. operated tube tester and a point to point set servicer combined in one versatile instrument. As in other Simpson Roto-Ranger equipment, the new Tube Tester is equipped with independent scales synchronized with the circuit selector as described below.

The Roto-Ranger feature permits the use of three distinct English reading scales with the correct load resistances to facilitate close reading of the three classes of tubes—battery types, cathode types and diodes. Tubes are tested hot so as to locate shorts due to thermal expansion. Any possible pin arrangement, including the location of both filament terminals is provided for by the filament return selector and flexible unit switching arrangement. A spare socket provides for any radical changes in tubes that may develop. A switch in the lower right hand corner enables you to check voltage at any time without disturbing the circuit selector-a real time saver.

Testing for shorts is a simple matter of turning the circuit selector to "short check" and manipulating the toggle switches at the bottom of the panel. Two "Good and Bad" dials cover condenser testing-one indicates the condition of paper and mics condensers; the other shows the allowable leakage for electrolytic condensers at various capacities. Both indicate exact leakage in Megohms instead of merely detecting the general condition as in conventional instruments.

111 - CALIFORNIA - 41-2

There are three very practical resistance ranges: The 0-100 ohms range (15 ohms center) measures resistance of coils and even detects poor soldering, and there is also an 0-100,000 ohm range (3500 ohms at center) and an 0-100 megohm scale with 1 megohm at center—a complete range from .2 ohms to 100 megohms. Voltage ranges include D. C. 0-8-300-1000 volts. All voltage ranges are furnished with resistance of 2500 ohms per volta practical combination of ranges for all test work.

See the finer workmanship of this and other Simpson Instruments-the unmistakable signs of greater precision—the clear, independent scales. Then consider the fact that these instruments actually cost less than equipment which cannot match their design, beauty or utility. This will be your final reason for using Roto-Ranger servicing instruments.



0

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Another plus-quality Simpson "Roto-Ranger" achievement — the Roto-Ranger Volt-Ohm-Milliammeter.

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Pon men rest and rest over and of the rest of the set o What is **Roto Ra** 

"Roto-Ranger" is the appropriate designation of the basic unit which is incorporated in the Simpson Set Servicer, Tube Tester, Volt-Ohm-Milliammeter and similar instruments. This ingenious unit consists of a selector switch which is perfectly synchronized through a precisely built bevel-gearing with a drum containing the twelve scales corresponding to the twelve selector circuits. As the selector switch is

moved through its twelve positions, the drum is auto-matically rotated by means of the gearing so that the proper scale for the particular circuit appears in the aperture of the panel. Here is *truly* direct reading. This unit, which marks the greatest advance in recent years, is a patented and ex-clusive feature of Simpson Instruments. There is only one "Roto-Ranger-Simpson 1" Simpson

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### SERVICE NOTES

#### (From page 50)

quency response, its noise level is high originally and increases with years, and requires an exciting current for operation.

#### Velocity or ribbon type

The velocity microphone does not require a diaphragm. It has a loosely suspended ribbon maintained in an intense magnetic field. Sound pressure waves hit against the ribbon, causing it to move. This cuts the magnetic field of the magnet, producing varying potentials across the extreme terminals of the ribbon.

Advantages: It has a highly directional pick-up range which is advantageous for indoor work. Its noise level is at a minimum. Its frequency response is excellent and is largely limited by the design of its coupling transformer.

Limitations: This type of microphone is not a good device for close talking, giving bassy reproduction and is not particularly adapted to outof-door work because of the delicately suspended ribbon.

There are fundamentally two different types of crystal microphones. One-a diaphragm type, which employs a sound cell with a diaphragm attached to some point on the cell. In the diaphragm type of crystal microphone, sound waves strike the diaphragm and vibrate the sound cell. The sound cell is so constructed that feeble currents are generated in proportion to both the level and frequency which strike it. This feeble electric current is then sent to the amplifier.

In the sound cell type of crystal microphone, no diaphragm is employed. This has the added advantage of producing a far better frequency response than the diaphragm type as there are no limitations to the mechanical vibration which is set up in the former.

Advantages: The crystal microphone is rugged, is suitable for both indoor and outdoor work and has excellent frequency characteristics.

Limitations: Low output and high impedance.

#### **Condenser type**

The condenser microphone operates upon the principle of changing capac-A ity between two electrodes. stretched metallic diaphragm is insulated and separated by a very small distance from a flat electrode. In this case the sound pressure waves, (To page 59)

echnique.



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## **NEW SERVICE INSTRUMENTS**

#### Triumph test equipment



★ Visograph sight-sound radio tube merchandiser. Checks all type tubes — has direct reading speed-roll test chart, just turn indicator to desired tube type and reading settings of switches. Reversible indicator panel may be seen from front or back of instrument. Big clear indicators counter type instrument.



Portolab servicing unit — includes tube tester with roll-type index and line volts check, signal generator, multi-range meter. Oscillator covers 100-30,000 kc in 4 bands. Meter has following ranges 0/10/100/1000 volts DC, 0/10/200/1000 volts AC, 0/1000 ohms/1 Meg/10 Megs, DC mils 0/50/500. Entire unit weighs 45 pounds — leatherette-covered carrying case. Net price — \$65.55. Triumph Mfg. Co., 4017 W. Lake St., Chicago, III. — RADIO TODAY — see also advt. p. 59.

#### Supreme diagnometer



★ Deluxe series of testers — has 2 quadrimeters with dual windows. Tests all tubes and gives complete set analysis. AC and DC voltage ranges — 0/7/35/140/350/700/1,400. DC mils 0/7/35/140/350/700/1,400 and 14 amps. R esist an ce — 0/200/2M/20M/200Mohms/2meg/20meg. 5 decibel ranges from minus 10 to plus 45. English reading tube and electrolytic condenser scales. Entirely self powered with illuminated meters. Model 585 — net \$96.95. Supreme Instruments Corp., Greenwood, Miss. — RADIO TO-DAY — See also advt. p. 43.

#### C-B test equipment



★ Microvolter signal generator directly calibrated from .1 to ½ microvolt - 100 to 60,000 kc. Modulation variable in accurately known steps from 0 to 75 per cent. Dial scale length of 12½ feet directly calibrated. Hand calibrated charts within ½ per cent supplied. Model 99 -- net \$43.90.



Vacuum tube voltmeter with range 0-1.2 volts rms. Peak voltage range 0/10/100 volts for AVC voltages and other potentials where no current drain is permissible. Input resistance of 10 megs  $-4\frac{1}{2}$ -inch meter. Housed in metal case - baked crystalac enamel finish. Model 88 - net \$42.50, Clough-Brengle Co., 2815 W. 19th St., Chicago, Ill. - RADIO TODAY - See also advts. pp. 48 and 67.

#### Service estimator

★ Combined set and tube analyzer designed for diagnosing trouble in customers home. Has tube tester for all type tubes. Voltmeter ranges — 0/5/250/1000 volts. Currents — 0/5/250 mils. Resistance — ½/2000/200M ohms/ 2 megs. Provides for condenser leakage test. Meter of D'Arsonval type with 1 milliampere movement. Model 25—net \$39.50. Burton-Rogers Co., 755 Boylston St., Boston, Mass. — RADIO TODAY

#### **Roto-ranger test instruments**



★ Radio set analyzer with new roto-ranger meter. 12-independent scales controlled by range selector switch. 0/8/130/1,000 volts AC, 0/8/300/1,000 volts DC, 0/1/8/130 mils DC. 0/100/50Mohms/2megs. Cord and plug or point-to-point analysis of radio. 3-inch scale length on each range. Model 200 — net \$49.



Set servicer and tube tester with 12 scales and good-bad indication for tubes. Checks resistances, condensers, voltages at 2,500 ohms per volt. Primary fuse and line voltage control. Model 220 — net \$57. Other devices are meters and signal generators. Simpson Electric Co., 5216 W. Kinzie St., Chicago, Ill. — RADIO TODAY — See also advt. p. 51.

#### Meissner I.F. transformers



★ Line of double air-tuned I.F. transformers with either air or Ferrocart cores. Completely eliminate "drifting." Ten complete revolutions (To next page)

#### (From preceding page)

of micrometer adjustment — neverchanging, self-locking setting. Moisture-proof, dust-proof, temperatureproof. Top tuning for ease in alignment — leads permanently placed to eliminate shifts. Align-aire in standard frequencies. Meissner Mfg. Co., Mt. Carmel, III. — RADIO TODAY — See also advt. p. 60.

#### **Triplett condenser tester**

★ Completer condesor analyzer tests for breakdown, opens, shorts, leakages, capacity. AC and DC voltages up to 1,000 available for breakdown tests and leakage. Capacity ranges .0001 to .05, .01.6, .1.10 mfd. with good-bad scale for electrolytics. Shadow type line voltage indicator and regulator. Model 1240 — net \$24.83. Triplett Electrical Instrument Co., Bluffton, Ohio — RADIO TODAY — See also advt. p. 46.

#### Electronometer radio tester



★ Combined tube tester and set analyzer. Tubes tested on emission basis under proper loads. Each section separately checked. Hot cathode leakage índication. Free point analysis system—individual switches—5 sockets. Voltage, current, resistance scales on meter—controlled by master rotary switch. Model 600—counter, panel, or portable mountings. Net \$45.75. Precision Apparatus Corp., \$21 E. N. Y. Ave., Brooklyn, N. Y.—RADIO TODAY— See also advt. p. 52.

★ Volume 1—of the "Sound Advisor," a new house organ sponsored by the Operadio Manufacturing Co. of St. Charles, Ill., made its appearance a few weeks ago and was welcomed by dealers, sound specialists and jobbers of sound equipment. The publication covers many subjects of vital import to everyone interested in the merchandising of sound equipment; some of these subjects being "Unique Time Payment Plan"; "Price Differential vs. Extra Value"; "Proper Baffling Application in P. A. Work" and similar articles.

## THE TRADE IN SHORTS

#### 30 names make industry news

★ Having purchased a modern plant at 5216 W. Kinzie St., Chicago, the Simpson Electric Co. is under way with a new line of radio instruments, service equipment and electrical measuring apparatus. President of the firm is Ray R. Simpson, formerly chief of the Jewell Electrical Instrument Co. and the man who headed the design and manufacture of Jewell products prior to its merger with Weston Corp. Simpson firm is building a new "Roto-ranger," a new analyzer, an all-wave signal generator, and a complete line of panel instruments.

On September 24th, the United States District Court at Indianapolis, Ind., granted the Electronic Laboratories, Inc., of that city, a petition for reorganization which was filed by the company voluntarily. William W. Garstang, president of Electronic Laboratories, states this step was necessary as a protection to creditors because a continual increase in business during the past few months found the company short of working capital. September sales were the largest of any September in the history of the company and orders on hand during the first week of October indicated a 100 per cent increase over last year.

★ Shallcross Mfg. Co., makers of precision wire-wound resistors, decade resistance boxes, bridges, test equipment and switches, have moved into their new daylight fireproof factory at 10 Jackson Ave., Collingdale, Pa. Fact that plant has 3 times the former floor space has inspired extensive production schedules.

★ Pioneer Gen-E-Motor Corp. is making another expansion and "Dare" Bright, president of the company reports that a lease has been signed for another floor at the factory's present address — 463 West Superior St., Chicago. However, even this expansion seems to be inadequate, and according to Mr. Bright, it looks as though an entire new factory will be necessary shortly after the first of the year.

\* At a meeting on Oct. 6, The Representatives held their annual election, and Earl Dietrich was elected president; Perry Saftler, vicepresident, and David Sonken was reelected secretary and treasurer. Kenneth Hathway, executive vice-president IRSM, was the personal guest of "Jack" Price, and gave the representatives an interesting report on the success of the recent show at the Hotel Pennsylvania.

★ John Keefe, formerly connected with the RCA Mfg. Corp. and well known in the advertising trade, has been appointed eastern representative for Radio Speakers, Inc., Chicago, headed by Henry Forster. ★ Robert Hertzberg has resigned as advertising manager of Wholesale Radio Service Co., New York, after 13 months in the position.

★ New contact man for Emerson dealers and distributors throughout the West and on the West Coast is Charles O'N. Weisser, famed as a popular sales exec formerly with Atwater Kent.

★ Aerovov Corp., Brooklyn, N. Y., has announced the appointment and licensing of the Continental Carbon Co., Ltd., Melbourne, Australia, as manufacturers of electrolytic and other condensers under Aerovox patents. Continental's managing director, Fred W. Clarke, has had a twomonth visit at the Aerovox plant, learning production methods.

★ Condensers, the kind which withstand extreme dampness and humidity, had an important part in the recent round trip flight to Europe made by Dick Merrill and Harry Richman. Several Cornell-Dubilier condensers were used in the new radio compass recently perfected by the Dayton Products Co. This was the central guide-gadget which directed the fliers throughout the dangerous trek.



Mr. Meck, John S., general sales manager for Clough-Brengle, key man in the firm's current expansion plans.

### PARK YOUR FEET AFTER SIX...GET THE BLUE RIBBON RADIO CATALOG

SHOP IN YOUR

SLIPPERS

**THOSE** valuable daylight hours were intended for work—NOT to be wasted in shopping around for parts, tubes, instruments. Get the "WHOLESALE" habit—utilize your daylight hours for servicing—a few minutes spent with the Blue Ribbon Catalog in the evening will take care of your purchasing! And it's CHEAPER, too! It is also easier—for no matter what your requirements, you'll find them in the 1937 BLUE RIBBON CATALOG. If it's radio—you'll find it here!

### Another "Wholesale" Feature

The most complete research department in the country is maintained by "WHOLESALE". Each year we assist THOUSANDS of our Ham and Serviceman friends in the solution of their problems. Are you "stuck" with a tough or unknown circuit? Let "WHOLESALE" give you the "lowdown". Are you trying to build a new "rig"? Tell your troubles to "WHOLESALE"—our "ham" technicians know the answer. No matter what your problem—if it's RADIO —go to WHOLESALE RADIO SERVICE CO., INC.

RADIO

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YORK.N.Y.

NEWARK, N.J

HOOT MON!'TIS SMARRT TO BE THR-RIFTY! SEND FOR THIS BRAW-BONNY BOOK-'TWILL SAVE YE MONEY

BRONX, N.Y.

SWIFT ELIVERY

TAD

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2

No matter where you are located, one of our FIVE BRANCHES will speedily get your order to you—

#### TWENTY-FOUR HOUR SHIPMENTS ARE A "WHOLESALE" RULE.

#### **10 THOUSAND BARGAINS**

Within the more than 150 pages of the Blue Ribbon Catalog, you will find more radio bargains than you ever heard of. Bargains in all brands of parts — bargains in every type of test equipment—bargains in "Ham" equipment—bargains in tubes—bargains in P. A. equipment. And REMEMBER — no product is listed in our catalog until it has been subjected to, and PASSED the exacting tests prescribed by our laboratory technicians. THAT is your assurance of QUALITY.

SEND IN THIS COUPON NOW

WHOLESALE RADIO SERVICE CO., INC., 100 Sixth Avenue, New York, N. Y.

Rush FREE "Blue Ribbon" Catalog No. 65-K66.

STATE

NAME\_\_\_\_\_

STREET\_\_\_\_\_

ATLANTA. GA.

CHICAGO. ILL.

## THE LATEST IN PORTABLE SOUND SYSTEMS



#### UTAH PARTS have been selected as original equipment for over 3,000,000 radios.

Utah Parts are right-

Because they are quality built-

it's from

so it's ri

Because they are of superior design-

Because their cost is extremely moderate commensurate with their quality—

Because they are of precision manufacture throughout— Because the Utah line is complete—

Because of Utah's 15 years of radio parts manufacturing experience—

For all these reasons manufacturers and service men alike prefer Utah radio parts. The switch shown here is one of the hundreds of Utah parts designed to meet your exact requirements.

#### **INSIST ON UTAH!**

Vibrators, Transformers, Chokes, Volume Controls, Tone Controls, Speakers, Resistors, Plugs, Jacks, Jack Switches, Push Button Switches.





in Combination Floor and Banquet Stand • 2—12" P.M. SPEAKERS

in Blased Cut Case

 ONLY TWO CASES TO CARRY

Microphone, Amplifier and Stand go in one case: Speakers in the other case.

Model PA-417C is the very latest design in portable sound systems. The crystal microphone is the new directional type with 25 ft. of rubber covered shielded cable. The microphone floor stand is the full size. When demounted it packs in same case with amplifier and microphone. Weight—41 lbs.

System is equipped with heavy permanent magnet speakers mounted in acoustically correct bias cut carrying case. Speakers can be placed on platform or hooked on wall. Total weight—21½ lbs.

Tubes, cables and all necessary accessories furnished with system. Very moderate price. Write for catalogue giving complete details or see your local jobber.



#### STRICT DEALER POLICY FULLY LICENSED TIME PAYMENT PLAN

WEBSTER - CHICAGO Section O-9, 3825 W. Lake St., Chicago, III.
Please send me more information Model PA-417C. I am also interested in sound systems for Rentals; Portables; Fixed Systems; Lower Power; High Power; Institutional Systems; Hotels; Schools; Inter-Office Communicating Systems; Factory Call Systems
Name

Radio Today

## SERVICE NOTES

(From page 52)

striking the diaphragm, cause it to move, thereby changing the capacity. The two electrodes and diaphragm and the stationary electrode are maintained at a potential of 90 volts or more from each other.

Advantages: Frequency response is considerably improved over the carbon microphone and also has an inherent low noise level.

Limitations: Low output which requires polarized potential for its operation and it is difficult to keep in operating condition due to the extremely small clearance between the diaphragm and the back plate. It is not used very extensively today.

#### Dynamic mike

The dynamic type of microphone is a complete self-contained unit that does not require field excitation. It consists of an extremely light voice coil, mounted on a diaphragm. The voice coil is maintained in an intense magnetic field which is supplied by a permanent magnet.

Advantages: the dynamic microphone has a low impedance and its noise level is extremely low. It can be made with excellent frequency response.

Limitations: It is heavy and must be handled with extreme care. It is essentially an extremely high impedance device and therefore is not applicable for long microphone runs. Also, it is an un-directional microphone.

#### THIRD HAND



\* For the man who is having a struggle getting dial cables put back on after servicing a receiver, a third (To next page)





## SERVICE NOTES

#### (From preceding page)

hand has been invented by Carl Evans, Concord, N. H., serviceman. Instrument as shown by sketch is simple but effective. Condenser shaft is slipped through hole in center and made fast by set screw. Two side bearing screws are turned up against panel front which locks shaft from turning. Block is made from piece of ½ inch bakelite (or very hard wood). The holes in the block are drilled and tapped for machine



#### **RADIO SERVICE LABORATORY**

• Write for details about this new radio service STAR—this modern, complete, compact and impressive SERVICE LABORA-TORY. Has everything for speedy and efficient handling of all radio problems. Makes more business for you—creates good will. Pays out within a short time. Get full facts. Made by the same experts who designed and engineered other Webber Radio Testing Instruments. Write today for catalog.

EARL WEBBER COMPANY, Mfrs. 1313 W. Rondolph St. Chicago, III.



screws, which may be picked up around the shop. With this, your dial band and cable troubles are over.

#### STUDY REQUIRED

★ With all the new circuits that are continually being introduced, it is essential that the serviceman spend a number of hours each week studying the new developments.

Here is what the foreman of Philco-New York's service department, Mr. Wellman, has to say about study. "I find that a serviceman must devote an average of two or three evenings a week to read about and become acquainted with the new sets and circuits. Unless he does this, it is not long before he is hopelessly in a fog as far as servicing new models is concerned."

Never before has there been so much need for study—in the past year there have been such developments as AFC, AVE, automatic tuning, tone compensated circuits, new biasing methods, cathode-ray alignment, high-fidelity, new tuning indicators and tubes. If the serviceman is not familiar with these and other new developments, he should spend more time studying.

And in view of the fact that study is required after business hours, the service charges should reflect this item.

#### SERVICE TIPS\*

Silver Marshall A

#### Low Volume, Distortion

★ The cathode circuit of the 47 output tube is unable to recover from voltage fluctuations due to signal current flow. This in turn is due to the use of too small a condenser across the

\*Service tips are selected from the files of H. K. Bradford. President. Capitol Radio Research Labs.. Washington, D. C. cathode resistor to take care of the matter. Remove the .1 mfd. condenser and wire a 10 mfd. 25 volt electrolytic (dry type) in its place. The positive lead goes to the filament centertap and the negative to ground. This will permanently cure the trouble.

#### General Electric K-64

Intermittent While Tuning

★ A bare wire connects to wave band switch to the condenser gang stators. Within the cabinet this is often forced in contact with another bare grounded wire close to it, due to downward pressure put on it from the condenser gang shaft. Remove the chassis and separate the wires as far as conveniently possible.

#### Silvertone 42 Poor Low

Frequency Reception ★ If reception up to 950 Kc. is attended by noise, heterodyne and instability, a suggestion is made to ground one side of the antenna coil. In addition to this grounding the chassis externally will reduce or entirely eliminate hum from that cause. The chassis is thus prevented from picking up voltage variations from the line and power apparatus within the receiver. Adding a ground to a receiver which is not supplied with one, is always helpful in this end.

#### RCA Victor 220, 222 Motorbooting

★ Usually occurs in connection with the grid circuit of the 2A5 tube. Bombardment of the grid due to heavy emission of the cathode will force the grid negative to a point where it will unload itself through secondary emission when the grid resistor is too high to carry electrons off of the grid at the same rate that they are deposited on it. Reduce the grid resistor value to 250,000 ohms from its original value of 500,000 ohms.

#### Crosley 8H1

#### Noise, Intermittent Reception

★ Carefully check the mechanical condition of the balancing condensers mounted on top of the i-f coil cans. The plates of these condensers often get out of line vertically and short to the mounting pillars which are grounded. If the condition is permanent the set will of course be dead, but the conditions mentioned as the symptom will give the forwarning to this trouble.



Radio Today



larion

69 WOOSTER ST., NEW YORK, N.Y.

PPLAUSE

The CLARION

"CALL TO ARMS"

which stated that the Clarion line of P.A. equipment would be distributed only through franchised jobber outlets, has met with a most gratifying response. Real healthy applause - resounding from one end of the trade to the other — acclaims that this is going to be

If you haven't already joined in the Clarion parade to greater sales and greater profits, you'll be interested to learn that Clarion territories are now being assigned. There are still some choice territories open. The Clarion line is so packed with sensational advan-

tages that you can't afford to pass up the opportunity

to tie in with the leader in P.A. . . . this is a Clarion year! Write to Dept. K11 for complete information.

TRANSFORMER CORPORATION OF AMERICA

October, 1936

a Clarion year.

### GET ON THE PIONEER BAND WAGON

Here's a NATURAL for any elec-trical dealer with rural trade. 6,000,-000 farmers NEED electricity. Now -for the first time-they can MAKE THEIR OWN at LOW COST-with their own Pioneer Gas Electric Power Plant.

With these efficient new private power plants they can operate ELECTRIC LIGHTS, RADIO, ELECTRIC WASHER, and other CITY conveniences at low cost.

Are they buying? Ask anyone who knows Pioneer! Pioneer's amazing suc-cess is one of the talked-of SENSA-TIONS of the electrical industry!

TIONS of the electrical industry! Get on the Pioneer Band Wagon! Let us GIVE YOU the leads we de-velop with our Streamlined Demon-stration Cars, our Exhibits, our Farm Paper AdS! Let us put our IN-ACTION WINDOW DISPLAY in YOUR window! Let us supply YOU with our Colored Handbills Get on the Pioneer Band Wagon. MAIL THE COUPON FOR FULL DETAILS.

PIONEER POWER PLANTS

#### PIONEER "CUB"

Imagine 200 watt gas-electric plant to self for \$44.9S with long profit! Direct drive! Push - button starting! Built - in ammeter! Also "Baby Jumbo" gas-electric plants with magneto ignition: 6, 12 volts, 1S0 and 200 watts DC. 12, 32, 110 volts, 2S0 watts DC.

#### THIS COUPON! MAIL To PIONEER GEN-E-MOTOR CORP. 468-Q West Superior St., Chicago, III. (Cable address, "Simontrice," New York) Tell me how I can develop a big, profitable business with Pioneer Gas-Electric Power Plants. 8

NAME ..... ADDRESS ..... CITY ......

STATE





#### **\*OTHER PIONEER** PRODUCTS

"Gold Crown" and "Grand Champion" Gas Electric Power Plants, 600 to 1500 watts, 110 volts AC; 800 watts, 32 volts DC; 800 - 1500 watts, 110 volts DC.

"Silver Band" Dynamo-tors, "Red Seal" Gen-E-Motors, Rotary Conver-ters in various sizes and voltages.

#### 61



OR MAR

MAKE YOUR OWN

DRAIRIE FARMER

THE

OS PARMER

for Lights and Radio vitle DIONEER

may Feed Lo

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## HAVE A NEW BOOKLE

\* Solar Mfg. Corp., 599 Broadway, New York, announces a new technical catalog for engineers and laboratory execs.

★ Sound Engineering Manual pub-lished by Webster-Chicago Co., 3825 West Lake St., is off the press. Free to dealers who have previously re-quested them; 10 cents to others.



Tour OPERADIO Sound Equipment has been in use in our 11th Street Store To a period of six monthe. To date we are completely in a position to do so, we would also install same in Milwaukee Drug Shop. "We furnished your new Radio Sales & Service. "We furnished your new Radio Sales & Service. "We furnished your new Radio Sales & Service. "Sound Sales and Sales & Service.

★ Brush Development Co., 1893 E. 40th St., Cleveland, Ohio, is ready with a Data Sheet No. 10 crystal-operated type headphones.

★ Briggs & Stratton Corp., Mil-waukee, Wis., has just issued a sales manual and instruction book on the company's new 6-volt battery charging unit and lighting plant.

#### Here is what users of **OPERADIO** UNIT-MATCHED EQUIPMENT sav:

"The use of OPERADIO P. A. Equipment has enabled us to increase the attendance of our alroort as high as 400%."-Large Chicago Airport.

"It looks like we'll have to doff the old honnet to OPERADIO with reference to your Model 62 Portaile Auto Amplider. It certainly is a honey."—Illinois Radlo Shop.

"It will be pleasing to you to know of the bundreds of complimentary remarks made to members of the committees on the excellent boud speaking equipment furnished by your company for our plenic,"—Dallas, Texas, Com-mercial Association.

"We find that the message we want to deliver to the public is done more directly over the OPERADIO Public Address System than through any other medium and is therefore more effective "--Chain Store Ladles' Apparel Shp, San Francisco.

Address Dept. RT for Catalog No. 10 Ask About Our Convenient Time Payment Plan



**OPEKADIO** MANUFACTURING COMPANY Unit-Matched P. A. Equipment at its Finest ST. CHARLES, ILLINOIS

★ Simpson Elec. Co., 5216 W. Kinzie St., Chicago, has literature on a new type tube tester and set servicer, introducing Roto-Ranger meter.

\* Warren Telechron Co., Ashland, Mass., has announced a Winter catalog on self-starting electric clocks.

★ Magnavox Co., Fort Wayne, Ind., has a new engineering bulletin on wet electrolytic capacitors.

★ Tobe Deutschmann Corp., Can-ton, Mass., has published a new catalog completely descriptive of all the company's products.

United Sound Engineering Co., 2233 University Ave., St. Paul, Minn., is ready with new descriptive literature on radio service equipment.

★ Monark Battery Co., 4556 Grand Ave., Chicago, is offering an information series on special radio batteries designed for farm radios.

★ Ward Products Corp., Cleve-land, Ohio, is ready to send a new catalog showing the complete line of the firm's products.

★ International Radio Corp., 515 William St., Ann Arbor, Mich., has a new announcement series on Kadette quality compacts, featuring the company's "Clockette."

★ Meissner Mfg. Co., Mt. Carmel, Ill., is out with a new bulletin No. 510, carrying complete coil listings.

McMurdo Silver Corp., 3356 N. Paulina St., Chicago, is ready to rush full detail bulletins on a "Master-piece 30-60" sound system.

\* Radio Speakers, Inc., 1338 S. Michigan Ave., Chicago, is currently releasing an information series on permanent dynamic and electro dynamic speakers.

Majestic Radio & Television Co., 600 West Adams St., Chicago, has complete literature on its new 1937 line of receivers,

Operadio Mfg. Co., St. Charles, Ill., has announced a catalog No. 10 on unit-matched P.A. portable units, amplifiers, mikes and speakers.

★ Utah Radio Products Co., Orleans St., Chicago, will send bulletins on a complete line of vibrators, transformers, chokes, and 8 other prodnets.





#### OURTEEN MILLION HOMES still lack automatic refrigerators.

Twenty million homes haven't the comfort and convenience of the million or so that have oil hurners.

Adding to these the tremendous sales possibilities still in sight for washing machines, radios, cooking ranges and other domestic electrical equipment, there is a potential multi-billion dollar business awaiting energetic, progressive manufacturers, distributors and dealers.

Estimating conservatively that more than half of it must he sold on time payment plans, the vast importance of a sound, low-cost time financing service as an aid to sales isn't even debatable.

Commercial Credit offers a plan that is easy to sell to a finance-wise public. It is backed by a nationally known company with a record of success in handling more than \$600,000,000 of receivables and time payment financing in the past year. It is administered by an experienced personnel, trained to serve with promptness, efficiency and courtesy in every phase of its dealings.

A telephone call or a letter to the nearest of our 171 offices will bring a staff representative for consultation on financing, without cost or obligation.

### COMMERCIAL CREDIT COMPANY

COMMERCIAL BANKERS Consolidated Capital



HEADQUARTERS: BALTIMORE AND SURPLUS \$49,000,000

FINANCING SERVICE FOR MANUFACTURERS, DISTRIBUTORS AND DEALERS THROUGH 171 OFFICES IN THE UNITED STATES AND CANADA



In Beauty and Performance --one step nearer the ultimate ALL WAVE SYNCHRO-BEAM TUNING 9-TUBE SUPER

Stage of R. F. on all bands; Provision for any type antenna; Six Metal Tuhes; Total shielded receiver; Full A.V.C. on all hands; 15 Watt Push-Pull Class "A" amplification; Variable tone modulator; Split second 7½ inch dial, dual ratio; Large console chassis; Available in any voltage; Any frequency; Two microvolt sensitivity; Large 10 inch Push-Pull High Fidelity speaker; New design low minimum three gang variable condenser; New large hand pass intermediate frequency transformer; Cushion mounting unit; Built-in phonograph Jack; 22 tuned circuits.

**11 Tube AC-DC Super** Same frequency coverage as our 9 tube AC models and the same general characteristics, including synchro-heam tuning. Over 4 watts audio output and can be supplied in all cycles and voltages. 11 tube AC-DC Superheterodyne 3 band, 16 to 550 meters—American and foreign broadcast, and police. Tahle Models 1102B...List \$75.00 Chassis Models 1102C.List 95.00



Send for complete illustrated catalog **PIERCE-AIRO, Inc.** 512 SIXTH AVE., NEW YORK CITY



## THE TRADE IN SHORTS

★ The Earl Webber Company, manufacturer of radio testing instruments, and the newly introduced Webber Radio Service Laboratory, moved a few weeks ago to enlarged quarters at 1313 West Randolph Street, Chicago, III.; a move made necessary by rapid increase in the company's business since the announcement of the Service Laboratory.

★ Two new district representatives for GE in the New York City area are Paul Lippmann and Pat Seracino, both vets in the radio biz.

★ Globe-Union Mfg. Co. has changed its corporate name to Globe Union, Inc., and has simplified its operating structure. Company makes batteries, Centralab radio parts, spark plugs and roller skates; headquarters are at Milwaukee, branch factories at Atlanta, Cincinnati, Dallas, Los Angeles, Memphis, Philadalphia and Seattle.

★ Ralph H. G. Mathews of Ford, Browne & Mathews, Chicago, well known advertising agency in charge of advertising campaigns for many manufacturers of radio products, is a candidate for Director from the Central Division of the American Radio Relay League. Election is being held by mail, with ballots being sent to members of the League on Nov. 1st in the states of Illinois, Indiana, Ohio, Wisconsin, Kentucky and Michigan. An energetic campaign is being waged by Mr. Mathews' sponsors, who are emphasizing the fact that he has been an important factor in the activities of the American Radio Relay League for many years, having formerly been vice-president of the League and one of its original founders.

★ Walter Eckhardt, director of sales for General Household Utilities Co. (Grunow), announced recently the appointment of the J. H. Burke Co., Boston, Mass., as Grunow radio jobber. The Burke organization is a pioneer wholesaler in the radio field and is recognized generally as one of the foremost jobbers in New England—in fact, nationally.

★ Thomas F. Joyce, ad chief for RCA, has reported that each year for the past three, 60 per cent more persons have bought Victor records of all classes, with new gains being registered monthly. Sales of RCA sets for the first seven months of this year have more than doubled over those of the some period last year.

★ Stewart-Warner has announced its annual refrigerator convention for distributors, to be held Oct. 29-30 at the Drake Hotel, Chicago. Meeting plans are elaborate and extensive; the 1937 line will be presented, stunt demonstrations staged and a new merchandising campaign outlined. ★ One of the many successful gatherings held during the IRSM convention at the Hotel Pennsylvania a few weks ago was a meeting of "The Representatives," with J. P. Price, Eastern representative for the Utah Radio Products Co. and president of The Representatives, in the chair. There were out-of-town Representatives from practically every state in the Union, and many interesting ideas were discussed during the meeting. At one point in the proceedings, Perry Saftler, a founder of the organization, presented the three officers of the association with handsome traveling bags as a token of the members' appreciation of the efforts for the organization the past year. In addition to Mr. Price, the recipients of these gifts were Earl Dietrich of the Raytheon Production Corp. and David Sonkan, well known representative, who are vice-president and secretary, respectively of The Representatives.

★ L. H. Mingens, identified with the radio-music industry for many years, is now representing the Webster Electric Co. in metropolitan New York, with headquarters at the company's New York office, 100 Varick St. Mr. Mingens will work in close cooperation with the company's jobbers, and his past experience well qualifies him for his new work.

★ At last month's meeting of the Cincinnati section of IRE, a featured speaker was W. Stanley Brian, of the engineering department of the Ken-Rad Tube and Lamp Corp. Brian's subject was "Beam Power Amplifier Tubes."



Grebe execs Maurice Raphael (left) and Clarence H. Mansfield look over a long list of their new dealers.



October, 1936



CLARIFIES RECEPTION

The new Birco all wave antenna will actually improve reception because it filters out all man-made static. The Birco Antenna kit is easy

man-made static. The Birco Antenna kit is easy to install because it has been factory connected and soldered to eliminate incorrect and poor connections. The antenna transformer matches impedance to transmission. There is no signal loss in transmission to the receiver coupler which automatically adjusts Itself to the fre-quency tuned in by the receiver. No switching for short wave or broadcast is required. No. 375 All Wave Antenna. List ea. \$4.25 No. 376 All Wave Antenna forsets with built in aerial selector. List ea. \$3,50 Dealers! Servicement See your Jobber. If he can-

Dealers! Servicemen! See your Jobber. If he can-not supply you write direct to Dept. RT-10.

145 HUDSON STREET . NEW YORK, N. Y.

## TRADE NEWS

★ Glenn H. Corbett, advertising manager, Crosley Radio Corp., is teaching the class in advertising at the University of Cincinnati this year. Class has 85 students as compared with an average of 25 for previous years, another reflection of the upturn in business and advertising. Mr. Corbett has had wide experience in both the application and teaching of advertising. He is a graduate of Miami University and of the journal-ism program at Northwestern University. For several years he served on the Chicago Tribune and other newspapers.

O. P. Smith and Robert Karet of Utah Radio Products Co., Chicago, have just completed very successful Eastern trips at the conclusion of the New York Show. Mr. Smith returned by way of Philadelphia and Canada, and announces a new representative to cover the Philadelphia, Baltimore and Washington territory, Mr. Leban of Philadelphia. Mr. Karet returned by way of Pittsburgh, and announces the following list of new jobber appointments: Radio Servicemen's Sup-ply Co., Cleveland, O.; Rinehart Radio Sales, Richmond, Ind.; North-west Radio and Central Electric Supply Co., Duluth, Minn.; Shuler Sup-ply Co., New Orleans, La.; Cosmo-politan Radio Co., Gary, Ind.; Elec-trical Specialties Co. and Radio Spetrical Speciallies Co. and Radio Spe-cialties Co., Detroit; Southern Sales Co., Oklahoma City, Okla.; R & R Parts Co., Lubbock, Tex.; Radio Ser-vice and Supply Co., Colorado Springs, Col.; Ferguson Radio Sup-ply Co., Detroit, Mich.

★ It's a boy at the Bright house-hold and "Dave" Bright, president of the Pioneer Gen-E-Motor Corp., Chicago, is buying drinks and cigars to celebrate the arrival of Edward David Bright, who made his debut at the Meyer House. Both Mrs. Bright and the young man are enjoying the best of health, and the latter has already taken a keen interest in the fact that Pioneer sales totals this year are far ahead of any year in the company's history.



Paul B. Klugh is the new national chairman of the Radio & Music group of the GOP National Committee.

Herbert A. Brennan, vice-president of the Brennan-Cole Corporation, 1860 Broadway, New York, distributor of various electrical specialties, announced recently that this company has taken on the distribu-tion of the "Covered Wagon." Many well known radio and refrigeration dealers have already purchased these trailers which they are using to excellent advantage in their merchandising campaigns.

★ Advertising and Sales Promo-tion Dept. of NBC in New York has been separated from the Sales Department and allied with the Press Department. Promotion and Press will now be divisions of a new department called Publicity, with Wayne L. Randall as director. E. P. H. James continues as ad and sales promotion manager; Vance Babb continues as Press manager.



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## WHOLESALERS AT WORK

Bruno-New York, Inc., distributor for RCA-Victor in New York City, has added W. W. Cone to its sales staff, as representative for the metropolitan area. Cone has had more than 12 years experience as an RCA sales exec, has travelled extensively for Radiotron. Recently he has been in the ad dept. of RCA at Camden.

★ O. W. Ray, vice-president and general wholesale manager of Times Appliance Co., Fada jobber of New York City, has announced a series of changes in his firm's personnel: Willard Hall, vice-president and as-Willard Hall, vice-president and as-sistant sales manager; E. A. Bonne-ville, refrigeration manager; Henry Stephens, manager, radio appliances and cameras; W. H. Quigley, adver-tising manager. Times Appliance has taken on a new line of ranges, known as the Go range.

★ Dealers of the state of New Mexico were recent guests of the Auto Equipment Co., Emerson wholesaler, Denver, Colo. J. H. Parks, treasurer of the distributing firm, reports unusual attendance and lively interest in the current Emerson promotious.

Ditch, Bowers & Taylor, Inc., Baltimore distributors of American-Bosch, have a new staff salesman in the person of G. H. Hobler.

★ Nelson P. Wright, for 10 years merchandise manager and buyer for the major appliance department of the May Co., Cleveland, has resigned from that position to become general from that position to become general manager of the Appliance Distribu-ting Co., Columbus, Ohio, succeeding B. A. Morgan. Morgan returns to the Tracey-Wells Co. to do promo-tional work for that company and its subsidiary, the Arnold Wholesale Corp., Cleveland.

★ Wholesale Radio Service Co., Inc., New York, has announced a change in advertising agencies. Reiss



for 1937

Catalog

Hand Calibrated

1 NAME\_

ADDRESS

Lively outing for some 300 dealers was held early this month by Beaucaire, Inc., Philco distributors, Rochester, N. Y. Affair was called 8th Annual Beaucaire-Philco Reunion Party, had a parade, a series of sport events, chicken dinner. Philco exec Harry Boyd Brown described "The Gold Rush of 1936" and Frank M. Beaucaire, president of Beaucaire, Inc., distributed prizes for a sales contest.

\* New jobber signed by Stromberg-Carlson to cover the state of Oregon and the river towns in the state of Washington is the Radio Specialty Co., Portland, Ore.

\* Ontario Elec. Co., Crosley dis-tributors, Buffalo, N. Y., recently staged a take-off on the New York Radio Exposition at a local show of their own. About 500 dealers and salesmen were there for the presentation of the new lines. Ontario's officials on the program were J. L. Block, general manager, and George Eckel, promotion manager. Crosley representatives present were Neil Bauer, assistant sales manager, and Jack Allen, district manager.





### THE SENSATIONAL "30-60" **28 SOUND SYSTEMS IN ONE!**

LU SUURIN STORENESS IN UNCE ! THE MASTERPIECE "30-60" is the only truly universal sound system being built today. It will cover an outdoor audience of 50,000 people—or 1,500 pairs of headphones in a hospital. It is the most flexible sound sys-tem ever designed in terms of inputs, outputs and power output of anything from one watt up to sixty-four honest man-sized watts at 2½ times LESS than customary total harmonic dis-tortion. It has a dozen entirely new technical features—and such mechanical advantages as rack mounting, wall mounting and portable operation all in one unit! Above all its tone is life itself such as you have never heard from any sound equipment before. Any MASTERPIECE amplifier may be pur-

before. Any MASTERPIECE amplifier may be pur-chased on Easy Terms with a 5-Year Guaran-tee and a Free Trial under your own condi-tions. Send the coupon for full details. MCMURDO SILVER

#### MASTERPIECE AMPLIFIERS

ULL DETAILS FREE MAIL THIS COUPON	
McMURDO SILVER CORP., 3356 N. Paulina St., Chicago, U. S. A.	
Please RUSH me full details on MAS- TERPIECE amplifiers.	
Name	
Address	

#### Radio Manufacturers and Suppliers

THERE is an almost unlimited market for group station, aircraft and police radio equipment in South America. No manufacturer or supplier of the United States is making an even halfhearted attempt to supply this market. Pan American Radio Service is an established and going radio service organization and is anxious to represent a leading manufacturer on a commission basis or otherwise. Two American engineers with the best of references and with the best possible connections own and control this company.

Please write your proposition to **PAN-AMERICAN RADIO SERVICE** CALLE ESPERANZA 379 MIRAFLORES (LIMA) PERU., S. A. 

## WHOLESALERS AT WORK

★ Maurice Despres, head of the Dale Radio Co., New York, whole-salers of Sylvania tubes, Admiral sets and other standard parts, announced recently the opening of a branch at 122 State St., New Haven, Conn., under the management of Irwin Miller, who has been identified with the Dale organization for many years Sylvania tubes will be merchandised at the new branch, as well as a complete new line of parts which will be announced later.

★ Numerous distributors were signed up by the Arcturus Radio Tube Co., Newark, N. J., as a result of the firm's exceptional display booth at the recent IRSM show inNew York. Arcturus had the only mo-tion display at the Show, attracted large groups of servicemen besides the jobbers,

\* Leo J. Meyberg Co., RCA distributors of San Francisco, report the appointment of the following California dealers: Ross Radio Co., San Mateo; Lloyd A. Wollmer Co., Burlingame; McMahan's, Fresno; and Losher & Hodgert, Modesto.

\* C. R. Betts and C. J. Kauffman, electric appliance vets of Western Pennsylvania, have organized the Ny-Penn-O Distributing Co., with offices in Pittsburgh, Erie and Warren, Pa. Sparton radios and refrigera-tors will be distributed in Northwestern Pennsylvania, washers and small appliances in larger areas.

★ Ott-Hciskell Co., Crosley job-bers of Wheeling, Va., have reported an unusual sale made by its dealer G. A. Morgan of Moundsville, W. Va. Rev. J. W. Anderson, a missionary headed for India, bought an "Icyball" refrigerator to use in that country.

★ Deep Sea Cruise recently spon-sored by Roskin Distributors, Inc., Boston, Mass., attracted more than 300 dealers of the area. Entertainment included fishing, deck sports, contests, wrestling and a skit pre-sented by Roskin salesmen. Com-pany distributes Philco, has branches at Worcester, Mass.; Albany and Middletown, N. Y.

\* Stromberg-Carlson has nounced that the Middle Tennessee Electric Co. will distribute the company's radios in central Tennessee east of the Tennessee river. Stromberg thus completes jobber coverage in that state.

Couple of new dealers named by the Simon Distributing Corp., wholesalers of Motorola sets and Ken-Rad tubes, Richmond, Va., are White House Service Station, Ashland, Va., and Appomattox Hardware Co., Appomattox, Va.

\* New general manager for the Anchor Lite Appliance Co., Crosley distributors of Pittsburgh, Pa., Is Harry M. Sadler. New official has had more than 20 years in assorted ex-ecutive positions in the furniture and appliance biz.

Omaha Appliance Co., Philco distributor of Omaha, Neb., recently established itself in a handsome new home. Dealers of the area were invited to celebrate the event; guests saw the complete new line and heard saw the complete new line and heard the sales and advertising plans. Gents on the program were L. M. Kelly, Philco's southwest division manager from Kansas City; Jack Leahy, western division sales man-ager; W. H. Campbell, Omaha dis-trict representative; Paul Jacobus and Elmer Jacobus, respectively owner and general manager of the Omaha Appliance Co Omaha Appliance Co.

\* Rumscy Electric Co., Philadelphia distributors of Fada radios and RCA tubes, has announced the fol-RCA tubes, has announced the fol-lowing recent dealer appointments: In Pennsylvania, Ralph Bros. Furni-ture Co., Easton; McCoy's Music Shop, Norristown; Smith & Peifly, Al-lentown; Harry W. Carson, Bridge-port; H. A. Roubert, Chester; J. Wilson Morrow, Wernersville; Ho-bek Radio Laboratory. Coatesville: bek Radio Laboratory, Coatesville; and the Philadelphia dealers Gimbel Bros., Frank F. Taylor, Levin's Radio & Hardware Store, Bond Radio Co., Poster Radio Co., and B. Wolkin. In New Jersey. The W. L. Hurley Co., Camden, the VanDoren-Hempel Co., Atlantic City, and Blom Bros., Vine-land. In Delaware, the Wilmington stores of Reburn Radio Stores, Inc. and the Harvey H. Poole Co.



Radio Today

## TRADE NEWS

★ Leon L. Adelman, sales manager for Cornell-Dubilier Corp., N.Y., reports extensive factory improvements at new C-D plants, increased business, and a consequent revision of list prices on the company's paper tubular condenser line. Newest C-D plant is at South Plainfield, N.J., with 210,000 sq. ft. of floor space, 33 acres of land, its own power plant. Both this and the New York outfit at 4401 Bronx Blvd. will be operated until Jan. 1, 1937, when the whole company moves to Plainfield.

★ Stromberg-Carlson is now active in Eastern Tennessee. Graybar Electric Co., Knoxville, has just been appointed distributor for Stromberg radios and parts, to cover 36 counties in the Eastern section of the state.

★ Johnson Distributing Co., Crosley wholesaling organization of Tampa, Fla., recently formed by J. E. Johnson, signed up 24 dealers during the first month of its existence. Johnson is known as the go-getting exec from the Cooper-Louisville Co. of Louisville, Ky., of which he is still vice-president. He recently made a visit to the Crosley factory in Cincinnati, mentioned that one of his new dealers was the Young Electric Co., Sarasota, Fla., which has new and enlarged quarters.

RADIO . . . "MAN - MADE" STATIC

HE nuisance noises caused by proximity of electrical conveniences may be completely divorced from any radio by installing this modern Amy, Aceves & King licensed antenna. On broadcast as well as shortwave bands "NOISE-MASTER" improves reception ... in every type of location!

Write for Full Particulars

CORNISH WIRE CO., Inc. 80 CHURCH ST., NEW YORK CITY ★ Two exceptional dealer meetings were held recently by A. K. Sutton, Inc., Philco distributors for the states of North and South Carolina. Huddles were held at Charlotte, N. C., and at Columbia, S. C. Attendance at former spot was a record one, with 500 guests enjoying the program. Philco merchandising manager Harry Boyd Brown was a featured speaker and also on the platform were the company officials D. J. MacKillop, W. A. Allison, Wakefield Taylor and A. P. Hommedieu. Columbia meeting was a similar one.

★ J. J. McCarthy, president of the Triumph Manufacturing Company, in a recent general announcement to his sales representatives, said: "Sales of Triumph equipment sold direct without intermediate handling have more than trebled within the past six months. The indications are obvious; direct sales must be the answer.

"From date of October 10, all Triumph equipment will be sold at a factory direct price. This means that the dealer and the service man can now own the finest testing equipment ever built at lower prices than ever before. This is our new policy: The Triumph Manufacturing Company offers all its merchandise at a buy-from-factory price which will effect savings reaching 36 per cent. Our prices are based on cash orders, and the values received are astonishing."

★ Kearns Auto Radio Service, who distribute Motorola sets in the Atlantic City, N. J., area, are awarding 10-day trips to Miami this winter to their most successful dealers. Kearns business for so far this year is double that for 1935; company expects to triple its October-to-December business over the same months last year.

★ Last month the C. E. Hamlin Sales Co., Crosley distributor of Jackson, Mich., held a lively open house for dealers and dealers' salesmen at its newly opened store.

#### COVERS FOR CONSOLES

★ Readers of Radio Today have requested the names of companies who manufacture covers for radio cabinets, suitable for use while the sets are being trucked around for delivery or demonstration. Happy to be useful again, we have listed some concerns who are currently making the covers:

> Biltmore Mfg. Co., 1501 Freeman Ave., Cincinnati, Ohio. Oppenheim Bros., 1107 Broadway, New York City. Jiffy Pad & Excelsior Co., Inc. 24 Spice St., Boston, Mass. Morgan Awning Co., 205 Bridge St., Cambridge, Mass. F. J. Bauer, 45 E. 17th St., New York City.



WARD BUILDING

WARD PRODUCT'S CORP.

Ward Bldg., Cleveland, Ohio

USE

WARD PRODUCTS

AUTOMOBILE AERIALS

CLEVELAND, OHIO

CNUPDN

IN CANADA: ATLAS RADID CORP., TORDATO, DATARID

Send us your new catalog

Name.....

Address .....

THIS

## "RADIO TOMORROW!"

#### RADIO'S DEBUTS-TO-BE

★ Radio has been busy in every corner where there's a big name. Rare indeed is the star who has been too busy elsewhere to greet radio audiences, but there are a few among the stage, screen and concert importants. Informal check-ups by NBC and CBS have produced a short list of those who have not made the acquaintance of the network mikes: Elisabeth Bergner, George Arliss, Mae West, Greta Garbo, Shirley Temple, Lynn Fontanne, Katharine Cornell, Ignace Paderewski, Sergei Rachmaninoff, Fritz Kreisler and Alfred Lunt.

Shirley Temple, whose tiny person is the No. 1 box office attraction of the country, would have long since had a short mike and a long contract, if she were old enough to read the script.

#### **RE-PROJECTION TELEVISION**

★ Some advanced workers in television research now feel that "reprojection television" — in which a small cathode-ray image tube replaces the present bulky tube — will be the ultimate solution for both theatre and home pictures.

Under the re-projection plan, the picture produced on the end of the small cathode-ray tube is too bright to look at directly, but when projected through a simple lens onto a screen,

the picture is viewed as an ordinary movie. Very high potentials, 20,000 volts or more, are needed to get electron velocities which produce impacts sufficient to create the necessary light intensities at the cathode-ray screen. Difficulty is experienced in getting fluorescent material which will stand up under the terrific bombardment. But even if short-lived, small tubes would be very much cheaper than the present delicate large units. In such small tubes, with short electron paths, very sharp focus of the electron spot can be maintained, contributing to the detail of the picture.

So it is beginning to look as if ultimate home television will come with a picture-tube no larger than a standard radio tube.

#### AUTO-RADIO PARKING NOTE

★ One of the harassed persons who was artless enough to motor over to a World Series game found himself circling and recircling the grounds in search of a parking spot. Finally he hailed a policeman who probably had hoped he wouldn't be on duty during the big games. Of a sudden, the cop wanted to know whether the driver had a radio in his car.

"Yes," was the motorist's whatdoes-it-matter reply.

"OK, Buddy, right over here's a place to park. I've been saving it for you."



Television-camera truck in Berlin, Germany. Motion-picture film as exposed is fed down into truck-body to be developed and then scanned for transmission on television circuits, with less than half a minute delay.



General Electric is acknowledged as the leader in the metal tube field —

- -General Electric scientists in the "House of Magic" pioneered and developed metal tubes
- -The 1935-36 G-E Radio was the original Metal Tube Radio-the first line in which every model was completely equipped with metal tubes.

Your customers know this. They know they can rely on G-E Metal Tubes, bearing the famous G-E monogram, for dependable service, better reception, longer life.

- And remember tube sales also
  - -build store traffic
  - -furnish leads for future radio sales

Every dealer, no matter what makes of radios he carries, should sell G-E Metal Tubes. Order your supply from the G-E Radio Distributor in your locality today!



Radio Today

MODEL E-52

Double Sales Angle GENERAL ELECTRIC'S

NEW Individual \* RADIO

with a CHOICE of COLOR Combinations

Gracefully styled in two-tone Walnut.



Gracefully styled in four colorful finishes: Twotone Walnut; White and Gold; Black and Gold; Red, Black, and Gold.

MODELS E-50 and E-52: Five G-E Metal Tubes . Two Reception Bands • Coverage, 540 to 4000 kc. • Single-plane Dial • 6½-inch Stabilized Dynamic Speaker • Tone Control • Three Watts Output •



APPLIANCE AND MERCHANDISE DEPARTMENT, GENERAL ELECTRIC CO., BRIDGEPORT, CONN.

RADIO

#### POWERFUL TRAFFIC PROMOTER

in the \$20.00-\$25.00 price bracket

There's extra store traffic waiting for you in the promotion of G-E Individual Radio models. A radio for each type of room in the home means additional sales and profit opportunities for you. With a G-E Individual Radio each member of the family may listen to favorite programs on his or her own personal radio. Just what home makers are looking for to add a spot of color, a touch of individuality to each room. And just what dealers need for tuning into greater profits.

#### SPECIAL COMBINATION PROFIT MAKER

- (1) ONE COMPLETE SET OF 5 MODELS: One each of Model E-50 (two-tone Walnut); E-50W (White and Gold); E-50R (Red, Black and Gold); E-50B (Black and Gold); E-52 (two-tone Walnut).
- (2) A colorful display merchandiser that dominates with sales-pulling force and beauty of design plus fifty illustrated folders printed in two colors.

Get this complete and timely Merchandise Promotion Package NOW. See your G-E Radio Distributor for complete details.

#### FOR METAL TUBE RENEWALS, SPECIFY G-E





• Fairbanks-Morse exclusive Tone Projector and Turret Shielding are only two of more than a score of new improved features found only in F-M radios. These new features are winning extra sales for Fairbanks-Morse radio dealers. The model illustrated, 72-C-2, retails for \$69.95 f.o.b. factory. Others, \$19.99 to \$149.50. If you are interested in extra profits, write us about the F-M radio franchise. Fairbanks, Morse & Co., Home Appliance Division, 2060 Northwestern Ave., Indianapolis, Indiana.

FAIRBANKS MORSE Get the facts about Fairbanks-Morse C. I. T. non-recourse finance plan