

RADIO TODAY

Cents a Copy

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

\$1 Yearly



MARCH, 1937

An Akron, O., radio store daily invites women shoppers to stop in and listen to favorite broadcast programs. See page 8



They're Thinking of Programs when they're looking at sets!

NBC Network Programs are magnets that draw people to your store—a great force in selling the better sets

Programs—and NBC all-star programs in particular—stretch out to influence people and places far beyond the reach of ordinary solicitation. So . . . remember this: when prospects enter your store, give them the best of the things that turned their steps there to begin with . . . NBC Programs. Know your NBC Stations and Programs, just as you know your sets. To tune them in swiftly, clearly, is to guarantee the success of your demonstrations.

RCA presents the Metropolitan Opera every Saturday afternoon and "The Magic Key" every Sunday 2 to 3 P. M., E. S. T. Both on NBC Blue Network



NATIONAL BROADCASTING COMPANY

A Radio Corporation of America Service

WHEN you sell gasoline powered equipment — farm washing machines, small farm tools, battery chargers, etc. — there is nothing so vitally important as the gasoline motor itself.

If the motor runs — and runs economically and free from trouble for years and years — customer kick-backs are unknown. If the motor falls down, then gone are your profits — in comes an unknown quantity of ill will that makes future sales harder and harder to get.

Briggs & Stratton 4 Cycle Motors on the equipment you sell are a sure way to eliminate grief and profit gamble. Twenty years of small gasoline motor experience — over three-quarters of a million in daily use — and their enviable world-wide reputation for dependable, unfailing performance — protect you.

You and your customers also have the backing of a responsible factory-supervised nation-wide service organization — that today is servicing Briggs & Stratton Motors bought many years ago — just like they will be doing a score of years from now.

And, always working for you is the biggest thing of all in retail selling — a consumer acceptance unrivaled in the 4 cycle gasoline motor field — when you say, "It's powered by Briggs & Stratton."

Equipment powered by Briggs & Stratton is easier to sell — and the profits stay in your cash drawer.

BRIGGS & STRATTON CORP., MILWAUKEE, WIS., U. S. A.

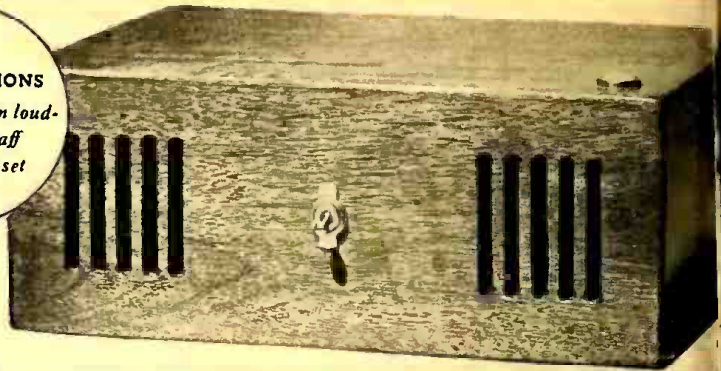


Announcing **DICTOGRAPH DUO-MATIC**

HUMPHREY BOGART starring in
Warner Bros. **MARKED WOMAN**



\$65
FOR 2 STATIONS
Executive station loud-
speaking. Staff
station hand-set
operated



The Leader in the Field has a **PROFIT** Dealers and

DICTOGRAPH IN THE MOVIES

● Dictograph has been used in hundreds of moving pictures. Fourteen pictures now in production in Hollywood show either Executive or Staff Stations in actual use. Hollywood, sparing no expense to make every scene mirror life, invariably shows Dictograph Intercommunicating Systems in business offices, homes and other scenes where the symbol of modern intercommunication logically belongs.



A



B



C

DICTOGRAPH, the oldest and best known firm in the intercommunication field, for the first time in its history offers a proposition to the radio trade.

This proposal centers around our new, proven Duo-Matic Intercommunicating System—a two-station system that provides genuine intercommunication with the all-essential feature of two-way talk. In addition to the immediate profits to be made from the sale of Duo-Matic, you are also offered an opportunity *without investment* to profit from sales of our larger models that result directly from your own efforts. These include both the Dictograph Junior with one Executive and four or six staff stations—and the famous custom-built, larger Dictograph systems now being used by leading American firms, the Federal Government, hospitals, schools, etc.

Thus, Dictograph offers you intercommunication profits from equipment that satisfies the needs of all—from the smallest to the largest user.

GENUINE INTERCOMMUNICATION—Do not confuse the Dictograph Duo-Matic with toy devices now being offered for intercommunication. Dictograph provides simultaneous two-way talk without the use of any listen-talk key—and no intercommunication is genuine without this feature. Dic-

A. PAT O'BRIEN and BEVERLY ROBERTS
Warner Bros. Pict.
CHINA CLIPPER

B. WILLARD ROBERTSON and WARD BOYNTON
in Columbia Pict.
THE MAN WHO LIVES TWICE

C. CHESTER MORRIS and WALLACE CLAWSON
in Columbia Pict.
I PROMISE TO P

Announcing DICTOGRAPH DUO-MATIC GENUINE 2-WAY INTERCOMMUNICATION!

HUGHBURY BOGART starring in Warner Bros. MARKED WOMAN



'65
FOR 2 STATIONS
Executive station loud speaking, Staff station hand-set operated



The Leader in the Field has a PROFIT-MAKING plan for alert Dealers and Distributors!

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A. PAT O'BRIEN and BEVERLY ROBERTS in Warner Bros. PAPER MOON
CHICKA CLIPPER

B. WILLARD BOGART and WARD BOND in Columbia PAPER MOON
THE MAN WHO WENT TO TULSA

C. CHESTER MORSE and WALLACE CURRY in Columbia PAPER MOON
I PRODUCE TO YOU

Radio Today

BETH DAVIS starring in Warner Bros. MARKED WOMAN



Two styles of staff stations available.

'75
FOR 2 STATIONS
Both executive and staff stations equipped with loud speaking



DICTOGRAPH

1. Created the loud speaker.
2. Created the Detective Dictograph, the sensitive microphone widely used in police work.
3. Created the Lincoustic Dictograph used almost exclusively on chaffeur driven private cars.
4. Created light weight sensitive head sets and microphones used by U. S. air forces.
5. Created the Acustillon, the first portable electric hearing aid, and has made and sold more than all other makes combined.
6. Created Dictograph Silent Radio, the radio receiver that through the principle of bone conduction has personalized listening.

TRAILER DICTOGRAPH

Intercommunication for the trailer is not only desirable but may soon be compulsory for all trailers by legislation. Dictograph is ready with the Trailer Dictograph, providing simultaneous two-way talk between trailer and car. The driver can talk and listen without taking his eyes from the road or his hands from the wheel. The Trailer Dictograph is a practical proven system that will stand up in service. Easily installed.

© Dictograph Products Co., Inc. Printed in U.S.A.

DICTOGRAPH PRODUCTS CO., INC.
580 Fifth Ave., N. Y. C.

I am interested in the Dictograph Duo-Matic Intercommunicating proposition.

Send information on the Trailer Dictograph.

Name
 Firm name
 Address City
 I am a wholesaler. I am a retailer.

to-graph offers loud-speaking without tubes or any other typical radio-operating expenses. Dictograph systems assure absolute privacy. There is no all-day current drain—for Duo-Matic, like your doorbell, operates eight to twelve months on a few dry cell batteries. Duo-Matic is always ready for immediate action—day or night. In short, Dictograph Duo-Matic is genuine telephone equipment—smartly styled, sturdily constructed, and soundly engineered for long years of trouble-free service.

A BIG WAITING MARKET—The market for Dictograph Duo-Matic is vast and unscratched. Doctors, Dentists, small offices, stores, shops and countless homes will buy practically on sight. (And don't forget the "traffic value" of the Duo-Matic; it draws folks into your store.) But that's just the beginning of your opportunity. You can build substantial extra profits with the entire Dictograph line through the sensational proposition we have waiting for you.

NATIONWIDE ORGANIZATION—Dictograph backs your effort by a long-established engineering sales and service organization with branch offices in 18 key cities. No other firm knows as much about intercommunication because no other firm has built so many installations.

SALES COOPERATION—We have a complete sales help service ready for you: Advertising folders, newspaper mats, window displays featuring famous stars of the silver screen, and Dictograph sales stimu-letters. National advertising in newspapers and publications is planned for early appearance.

WRITE FOR THIS SENSATIONAL PROPOSITION—Intercommunication is definitely a part of the activities of every radio dealer. Before you make any plans for your department be sure to get the full story of the Dictograph Duo-Matic and the other facts in this truly sensational proposition. A coupon is provided for your convenience. Fill it in and mail immediately.

DICTOGRAPH PRODUCTS CO., INC.
580 Fifth Avenue New York, N. Y.

March, 1937

Spotting the features

THAT HELP YOU MOVE RCA VICTOR RADIOS FASTER!



Number 2 RCA VICTOR'S MAGIC BRAIN

Magic Brain eliminates interference, insures more stations, better tone, easier tuning. Silver-plated copper-band coil system now gives even better performance than previously. The first radio frequency stage used even in D-band ahead of first detector, has the "Watchman Tube," which guards programs against noise and interference, and supercharges them four times.



RCA VICTOR MAGIC VOICE MODEL 9K3. A price leader in the quality class ... with Magic Brain, Magic Eye and Metal Tubes.

THESE 24 EXCLUSIVE RCA VICTOR FEATURES ALSO MEAN FEWER "FIRST YEAR", NON-PROFIT SERVICINGS

Magic Voice; Magic Brain; Magic Eye; Metal Tubes; Worldwide Reception; Super-Fidelity Speakers; Higher Fidelity Tone System; Duo-plane Speaker Mountings; Tone Compensation; Dynamic Expansion; Micro-tone Control; Music-Speech Control; Beam Power Amplifiers; Antenna Wave

Traps; Built-in Antenna Couplers; Automatic Volume Control; Permanent Adjustment; Stabilized Oscillator Circuit; Rubber Floated Chassis and Condensers; Selector Dial; Band Spreaders; Edge Lighted Dial; Record Player Connections; Magnificent Cabinets.



RCA Victor wants to help *you* make more money. Why? Because by so doing, *you* can help RCA Victor make more money.

We sincerely think that by giving you the details concerning RCA Victor's 24 features for finer performance... by urging you to tell your prospects about these features, just as we tell you about them... that you can sell *more* RCA Victor radios — and sell them *faster* and *easier!* Because these features are not mere claims. They are facts that prove beyond question the extra

quality built into RCA Victor radios. And if you point out these features to your prospects — *talk* about them — they'll prove more convincing than ten thousand fancy claims.

Note the 24 features shown on this page. Read all about the one "spotted." If you didn't get the information previously published here on Feature Number 1, let us know and we'll send it to you. Keep these and subsequent pages on hand. Study them. Use them. They'll prove welcome selling aids to you.

RCA ALL THE WAY

Most broadcasting equipment is built by the Radio Corporation of America. Most power on the air is RCA installed. The newest RCA Victor sets keep the thread of RCA quality unbroken from the microphone to you. They bring your customers reception to match the fidelity with which RCA equipment and NBC engineering put programs on the air.

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

RCA Victor

RCA MANUFACTURING CO., INC. • Camden, New Jersey
A Service of the Radio Corporation of America

Your Franchise on Extra Profits This Summer

A genuine air refrigerator and dehumidifier — self-contained — portable. Every Office, Home, Hotel, Store, Hospital a prospect for a **NORTHWIND SUMMER AIR CONDITIONER.**



The Northwind is your most important item for additional profits this year. It is "made to order" for your sales organization. It is easier to install than a radio. Air cooled, no plumbing connections necessary. It requires no special knowledge of air conditioning equipment or servicing. Motors, compressor and coils are standard, simple and fool proof. Thoroughly tested in domestic and foreign markets and by the Electrical Testing Laboratories. Fully guaranteed for one year.

The Northwind cools—dehumidifies—washes and quietly

circulates 300 cubic feet of air a minute. It is **HALF THE PRICE, HALF THE SIZE, HALF THE WEIGHT.** Can be carried easily from room to room. At its low list price of \$175, the Northwind will out-sell any summer air conditioner in your territory. Liberal discounts assure large profits.

Territorial allocations and franchise agreements are now being arranged. Hundreds of dealers are already taking advantage of this unusual opportunity. Mail the attached coupon for complete information. There are greater profits for you in the cool air of a Northwind.

Tear Off Coupon

and mail today for complete information on franchise and discounts.

Pleasantaire Corporation
304 East 45th Street • New York City

Please send me complete information on Northwind Summer Air Conditioner.

NAME _____

STREET _____

CITY _____ STATE _____

RADIO DEALER _____ DISTRIBUTOR _____

REFRIGERATOR DEALER _____ DISTRIBUTOR _____

RT-37

Pleasantaire Corporation
304 EAST 45TH STREET • NEW YORK CITY
CABLE ADDRESS: CARMUSE NEW YORK CITY U. S. A.

PHILCO PHONE

...sales sensation of the season!

I'M GOING TO PUT PHILCO PHONE IN MY HOME, TOO!



REMOTE UNIT. Provides instant two-way conversation with Master Control Unit. You can speak . . . or hear . . . from any point in the room. No need to stop what you are doing to use the PHILCO PHONE. Compact walnut cabinet — 6 $\frac{1}{4}$ " high, 6 $\frac{1}{4}$ " wide, 3 $\frac{3}{4}$ " deep.

MASTER CONTROL UNIT. Combination speaker-microphone permits instant conversation with one or all Remote Stations at will. A turn of the volume knob sends the voice to the Remote Units as LOUD or as low — as desired! Red Signal light on Master Control Unit shows when system is turned on, ready for use. Encased in compact, attractive walnut cabinet, size 8 $\frac{13}{16}$ " high, 10 $\frac{3}{4}$ " wide, 5 $\frac{1}{4}$ " deep.

PHILCO'S PRIVATE TWO-WAY COMMUNICATION SYSTEM NATION-WIDE SUCCESS!

WE KNEW there was a big market for PHILCO PHONE . . . but we never realized how big it was going to be! But when Philco distributors and dealers got their first glimpse of PHILCO PHONE . . . we got the first indications that sales were going to hit landslide proportions!

Orders came thick and fast. Every corner of the country joined in the demand. Thousands upon thousands of offices, factories, stores, theatres, restaurants, garages . . . and homes . . . had apparently just been waiting for a chance to buy a reliable, strictly private, time-saving inter-communication system *at the right price*. Now they were not only offered the right price . . . but the right name . . . the name they all knew . . . Philco!

Dealers have found the "ready and waiting" market for PHILCO PHONE is almost

unlimited. And they have found that PHILCO PHONE sales are all profit. No costly installation to make . . . no servicing problems. Anyone who can make a few simple connections can put PHILCO PHONE into operation. It operates on AC or DC . . . has Underwriters' approval . . . requires no inspection.

Philco quality . . . Philco standard radio parts throughout . . . and a real Philco product that has all the prestige of the Philco name. Get in touch with your Philco distributor! He has complete merchandising plans . . . window displays . . . folders . . . everything to help you clean up with PHILCO PHONE.

\$49⁵⁰

FOR TWO STATIONS
ADDITIONAL STATIONS \$10 EACH

PHILCO RADIO & TELEVISION CORPORATION

Staff—

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

LEE ROBINSON
Sales Manager

RADIO TODAY

ORESTES H. CALDWELL
Editor

M. CLEMENTS
Publisher

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 Caldwell-Clements, Inc.
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 New York, N. Y.
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Vol. III, No. 3

UNFAIR TO PESSIMISTS

★ Sitters-down, walkers-out and miscellaneous hangers-on, in spite of everything, have hiked the wage levels of this country. If you want, you can say that their methods are rough and shabby, but still the purchasing power is sharply upped. Add the voluntary increases that dozens of big outfits have put through, and the prospect is splendid indeed for radio buying power.

Estimate is that 1,000,000 workers have benefited in the last two weeks. Enough for manufacturers in many lines to hoist advertising budgets in an effort to get in on extra buying power.

For the radio dealer this means immediate markets for more sets.

NEW RADIO LINES FOR RADIO DEALERS

★ Rapid rise of trade interest in new intercommunicating systems using tube amplifiers, suggests that here is start of new additional associated lines for radio dealers.

Radio manufacturers have looked with concern on the increasing pressure put on electric refrigerator sales by radio trade, and have wondered what ultimate effect will be on radio sales. Now along comes new intercommunicating apparatus with radio tubes and parts, highly appropriate for the radio man to sell and to service.

Trend may be thus back to complete and exclusive radio merchants who will specialize in radio-tube devices, including radio sets, phonographs, electronic musical instruments and organs, intercommunicating sets, sound equipment, and eventually television.

Some of the new intercom. systems are being marketed only to retailers who order a required number of radio sets. This helps to move

radios; also has the effect of keeping intercoms in radio channels. A complete listing of intercommunicating systems, with specifications, appears on page 32.

JUNE IN CHICAGO

★ Altogether brisk and beautiful rings the note of optimism throughout further plans for the radio parts manufacturers' National Trade Show, June 10 to 13. Seems that all of the 130 available booths are practically traveled into.

Success and to spare, say three of the show officials, eyeing the show progress from different angles. "In a very short time," says Managing Director Ken Hathaway, "I will have to start telling exhibitors that there is no more space left."

Ralph Hill, Ohmite sales manager, reports on interest among jobbers, representatives and servicemen: "Not only are the bosses coming, but they are planning to bring their servicemen and employes along with them."

Arthur Moss, show secretary and Electrad president: "In addition to the regular group of exhibitors, I am glad to see many of the raw-material suppliers included in the listing."

PRICE RANGES OF RADIO

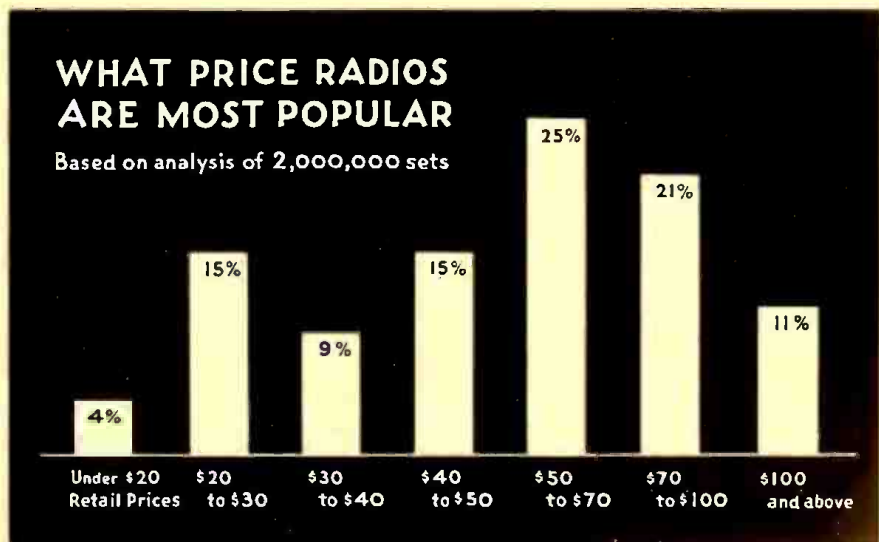
★ The editors of RADIO TODAY have been making a compilation of retail-price ranges in sets now most popular on the market, and from an analysis of nearly two million set sales, have derived the accompanying chart. Lines studied were widely representative of the present radio industry, in both the low and high brackets.

It will be noted that the most popular range—\$50 to \$70—indicated by this survey, confirms the \$55 average retail price reported by the Electric Institute of Washington, D. C., which compiles all radio sales made monthly in the capital city (see p. 9, February issue).

WEEK SHALL BE FILLED WITH MUSIC

★ Whether it's modest or masterful, droves of young people in this country are enjoying a romantic adventure with musical training. The charm of self-created music is something that steals early into our home, is inclined to linger.

National Music Week Committee surveyed the situation, found that "when this preliminary training period





David Sarnoff, president RCA, and general chairman for Music Week, mugged between masters of music and millions, Walter Damrosch and John D. Rockefeller, Jr. National Music Week is scheduled for May 2 to 8.

has passed, no further opportunity for development presents itself to thousands of those young people." Appropriately then, Music Week for this year, announced for May 2 to 8, dedicates itself to the theme, "Foster Local Music Talent."

Radio is involved, because of the appreciation studies that are regularly broadcast, and because of its super-distribution of the world's finest music. Networks will make a special broadcast series out of the Maytime event.

David Sarnoff, RCA chief, is general chairman for Music Week and says that "our special concern this year will be to create opportunities for continued musical activity by young people."

HOW MUCH THEY HAVE FOR SPENDING

★ The District of Columbia and three states had a per capita income in excess of \$600 in 1935, according to the National Industrial Conference Board. Per capita income in the District of Columbia was \$966. New York had a per capita income of \$697; Connecticut, \$607, and California, \$605.

In seven states per capita income in 1935 was between \$500 and \$600. This group included Delaware with a per capita income of \$592; Nevada, \$545; Massachusetts, \$539; Wyoming, \$526; New Jersey, \$512; Arizona, \$505, and Illinois, \$500.

There were eleven states in 1935 in which per capita income was under \$300. These were chiefly in the southeastern section of the United States. The states in this group and their

per capita incomes in 1935 were: South Dakota, \$275; North Dakota, \$260; Oklahoma, \$259; Georgia, \$253; North Carolina, \$252; Kentucky, \$240; Tennessee, \$252; South Carolina, \$224; Alabama, \$189; Arkansas, \$182, and Mississippi, \$170.

SALES SCENE

★ De luxest item to come from the radio sales front is pictured on RADIO TODAY'S cover this month. It shows how women shoppers are seduced onto a radio sales floor by the use of broadcast appeal.

Radio Mauager E. Dykes of the M. O'Neil Co., big department store in Akron, Ohio, found that many women

were following the NBC broadcast, "The Story of Mary Marlin." Mr. Dykes went to work.

"Just prior to 12:15 each day we arrange ample seating capacity in the way of radio benches, chairs, etc. Several of our better radios are tuned in on this broadcast, with the result that we have many listeners in the department during the program.

"Many additional sales of radios, radio benches and radio ornaments have been made because of this courtesy. The picture gives you an idea of the number of shoppers that follow the broadcast."

FIGURED VENEERS, LIGHTER FINISHES

★ Perry F. Hadlock, commercial engineer of the G-E Radio Division, Bridgeport, Conn., visited the recent Furniture Shows in Chicago and Grand Rapids to observe style trends in cabinets.

"Much of the styling," said Mr. Hadlock, "was in the modern trend and some designs followed the lead of radio-cabinet design in using the rollover top to a much greater degree.

"While radio very often has taken its styling trends from the furniture industry, here is one case where radio has really led the way," stated Mr. Hadlock. "The new rollover top is now being used in many pieces of conventional house furniture."

Another trend noted was more extensive use of figured veneers and especially lighter finishes than were used in radio cabinets last year.



Arthur Moss, president of Electrad, lays finance plans for the National Radio Parts Show, of which he is secretary-treasurer. Note date, Chicago, June 10-13.



Burton Browne, of Ford, Browne & Mathews, Eddie Riedel, Raytheon general sales manager, and Earl Dietrich, Raytheon jobber sales manager, hold a sales conference on a Chicago street corner.

100% EMPLOYMENT BY 1940!

★ Declared herewith is a state of roar and gaiety in business activity, bound to have repercussions on radio sales. National Industrial Conference Board says that continued increase in the total volume of production and trade and of output per man-hour at the same rate as since 1933, with the currently prevailing hours of work, would require the following number of workers in the years just ahead:

1937	45,519,000
1938	48,335,000
1939	51,418,000
1940	54,802,000

Available workers for those years will be:

1937	53,200,000
1938	53,900,000
1939	54,500,000
1940	55,200,000

And all prosperous prospects for radio sets!

LUMINOUS FACTS

★ There's a deal of fuss about what sort of taste a network exhibits during the hours which advertisers haven't bought. Observe what happened at Columbia during the year just past: there were 12,419 sustaining programs presented, of nearly 10 different types.

More than 1,000 were listed as outstanding music; over 900 as adult education; over 500 as children's programs. Civic welfare and religion accounted for another 500; national and public affairs for 300; international programs 300; news and public events 900; sports 200; and popular entertainment, including drama and dance bands, 7,000.

DAYTIME DRAMA

★ Some fresh truth has been hauled out of the latest radio audience survey made by the Cooperative Analysis of Broadcasting. From information supplied by over 161,000 radio homes in 33 of the leading U.S. cities, CAB found, among other things: "During daytime hours adult serial dramas were the most popular type and occupied one-half of the

commercial network time before 6 p.m."

Mass of figures in this report, headed "Radio Audiences—May to September, 1936," also indicates that "during the summer months, there is a decided trend toward lighter entertainment, more time being devoted to dance music, novelty shows and news commentators than during the winter. . . ."

NEWS BY SOUND

★ A new outfit, called Vocanews, with headquarters at 1770 Broadway, New York, has announced that it will set up systems in 10 of the chief cities of the country to send music and news reports on telephone wires to public spots such as cafes, hotels and stores.

Set-up will be similar to Muzak's and material put on the wires will be heard through loudspeakers installed by subscribers. No announcement has been made as to whether time will be sold to sponsors, but no such sales are made on the Teleflash, which is promoted by the same company.

RADIO DATES AHEAD

April 19—Baseball Season Opens.

May 2-8—National Music Week.

May 12—Coronation of George VI.

June 3—Braddock-Schmeling Fight.

June 10-13—Radio Parts Manufacturers National Trade Show, Hotel Stevens, Chicago.



S. T. Thompson, Pilot's vice-president, awards CBS a medal of merit, and a scroll to its president, William Paley, who a few days later was adjudged by America's tailors to be radio's best-dressed man.

Here's your practical review of the new fair-trade laws as they now stand

SPRING CLEANING HITS RADIO

★ **PRICE CLIPPERS** in radio must today keep an eye on the law-makers.

Legal dynamite started with the Robinson-Patman law, and now a good share of the 48 states are busy with regulations of their own. Few persons in the business possess anything that resembles a halo, so the clean-up should be lively.

Let John W. Van Allen, general counsel for the Radio Manufacturers Association, be the spokesman. His legislative memorandum on resale price maintenance is presented in part herewith.

"The proponents of re-sale price maintenance legislation, or some of them, apparently despairing of securing relief from Congress, entered into the plan of having enacted by individual states the so-called Fair Trade Laws, permitting re-sale price maintenance of branded, labeled or trademarked merchandise.

"Sixteen states have already passed such Fair Trade Laws, and in twenty states bills of a similar nature are pending. In those states in which valid laws have been passed, it is possible to have re-sale price maintenance in intrastate business, because these laws permit it, but it is impossible to have it in interstate business, because it is prohibited by the Anti-Trust Laws.

Supreme Court O. K.

"Of the Fair Trade Laws passed in the sixteen states, the California law and the Illinois law were declared valid by the courts of those states, and as to those two state laws, the United States Supreme Court has decided that they are not contrary to the Federal Constitution.

"In New York State practically the same law was declared by the New York Court of Appeals as invalid therein, because contrary to the Due Process clause of its constitution, and also declared by that court as contrary to the Due Process clause of the Federal Constitution.

"Since the New York decision, the United States Supreme Court decided the California and Illinois cases in which it declared that these laws were not contrary to the Due Process clause of the United States Constitution.

"In the New York case, the New York Court considered the law as making a merchant bound by statute to a contract to which he was not a party.

"In the California and Illinois cases, the United States Supreme Court distinguished between articles of trade identified by patent, copyright, trademark, grant or similar devices and articles of like character not so identified, and held that while one might own an unbranded, unlabeled or untrademarked commodity and subject it to sale, he has no right to sell the trademark or brand or label or name, and that where, knowing the restrictions on such a sale, he advertises or offers for sale and sells the combined commodity and label, brand or trademark, he can be guilty of unfair competition and can be subjected to suit for damages by any person injured thereby without violating the Federal Constitution.

"Whether the New York court will follow its previous decision or the decision of the United States Supreme Court if a new case arises by a producer who has a uniform system of do-

ing business by means of fair trade contracts and not a single contract only, remains uncertain.

"The conclusion is that similar Fair Trade Laws enacted by states are valid therein if not contrary to the Constitution of those states, as they do not violate the Federal Constitution.

"Speaking of the trends—will the Fair Trade policy in intrastate commerce, as indicated in these state laws, be reflected in an Act of Congress, or will we continue to have a prohibition by Congress of the principles of these laws in interstate commerce?

Federal law?

"We look to the records of Congress for an answer and we find that the Tydings-Miller Bill, drawn to permit resale price maintenance on a national scale on nationally branded, labeled and trademarked merchandise in interstate commerce where permitted by state laws.

"We will not here enter upon a discussion of whether Resale Price Maintenance Laws, in interstate commerce and intrastate commerce, are desirable or not, as there are proponents of these laws who strongly advocate them and opponents who as strongly disagree. We are discussing trends. We find the trend in sixteen important states has resulted in the enactment of State Fair Trade Laws and consideration by twenty other State Legislatures. We find retail establishments, particularly in the department store field, manifesting determined opposition to such laws for either intrastate or interstate transactions. We find some makers of nationally labeled, branded and trademarked goods opposed and some favoring the principle of these Acts. We find an argument being used that many makers of nationally branded goods have not availed themselves of the Fair Trade Laws of the states and hence they have not had general acceptance.

"To the contrary, we find the argument being used that makers of nationally branded goods have not done so because of increased taxation in the states and the necessity of doing business through a branch or other-

(Continued on page 62)

THESE AFFECT YOU!

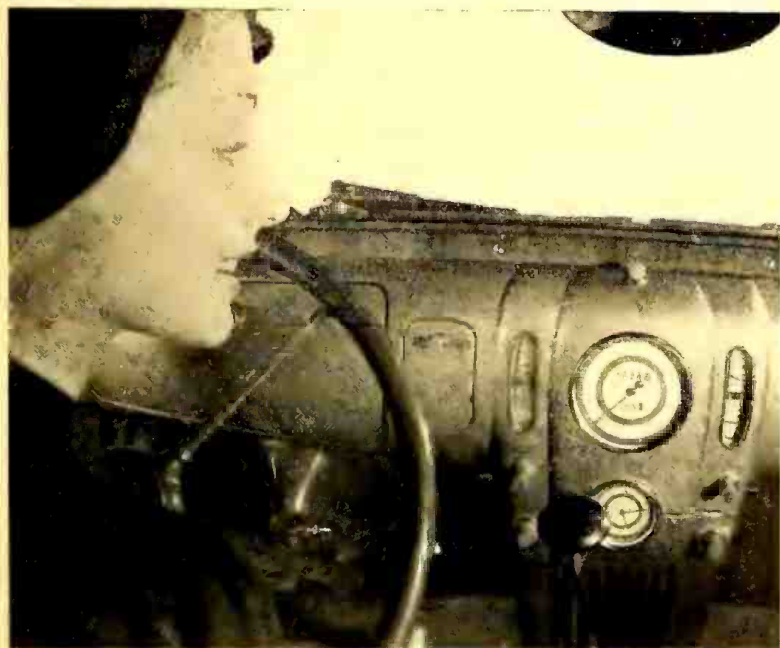
1. All manufacturers may be forced to take a stand on price maintenance on their merchandise.
 2. Private brands are likely to flourish if producers fix retail prices on trade-marked goods.
 3. Practice of fixing retail prices may settle on single figures, or on maximums and minimums.
 4. Misleading advertising will be watched closely as a result of the new emphasis on general fair trade practice.
 5. Retailers may face a new set of special taxes levied to support fair trade commissions and administrative bodies.
 6. Public good will toward nationally advertised radios will now be regarded more than ever as distinct property.
-

LISTENERS ON

WHEELS



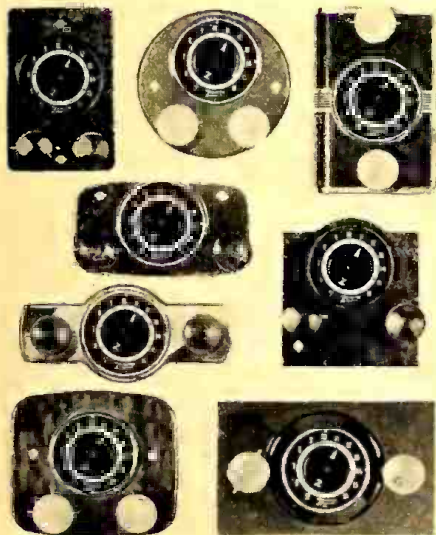
ANY ADULT within the driver-family circle can be a prospect for the many-featured 1937 car receivers.



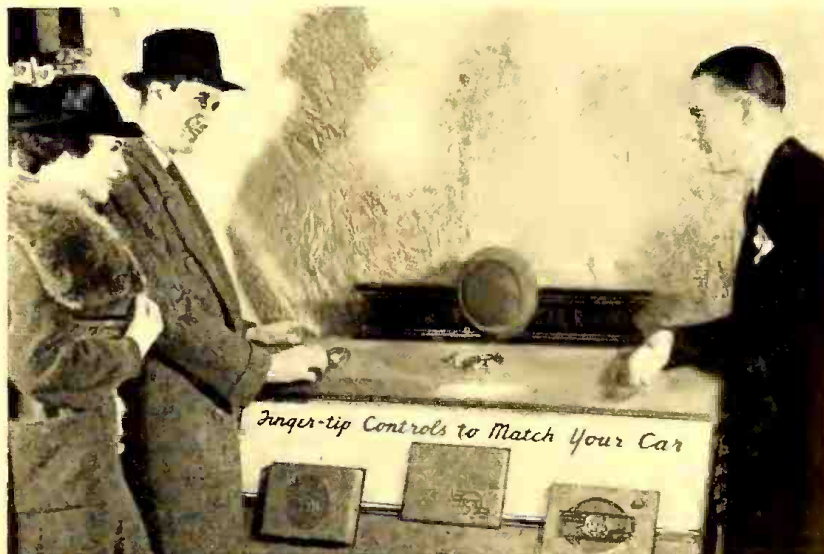
TODAY'S DASH is designed so that parts of it can be neatly and simply replaced or filled up by radio controls, chassis and speaker.



FLEETS of trailers and boats are added to likely spots for auto radio installations.



FINE FITTINGS and full-matched custom controls are part of the modern appeal.



VOLUME in both dollars and demonstrations is ready for the auto-radio dealer who finds a place for slick display jobs readied by manufacturers.

RADIO BUSINESSES THAT MAKE MONEY

Dealers invited to co-operate in setting up yardsticks for profitable selling

★ **WHAT** does it really cost to sell radio receivers at retail?

What is a fair measure of net profit for the radio dealer?

How much should be spent for sales help—for overhead—for management salaries?

What is the actual cost to the retailer of the radio merchandise he sells?

What percentage of radio sales are made for cash, on open account, and on the installment plan?

How much should profitable radio businesses spend on rent, on advertising?

Nobody knows

These questions and many others equally vital to the radio dealer's business no one has been able to answer. Definite information has not been available to show what these "yardsticks" of successful radio selling should be. Radio dealers, radio distributors, radio manufacturers have all thrown up their hands when it comes to citing actual radio selling costs applicable to the present time.

Now RADIO TODAY has gone out to get the answers—to set up yardsticks

of sound merchandising in radio businesses of various volumes, and for different sections of the country, so that the radio dealer, whatever the size of his business, can have actual facts in dollars, cents, and percentages, by which to compare his own retail operations.

To five thousand of the most active radio dealers in the nation have gone out question-blanks like that reproduced opposite. These blanks have been timed to reach radio merchants just as they are finishing making up their Federal income-tax reports, and so have all necessary information conveniently available.

You can help, too

These five thousand dealers, scattered throughout the 48 states, will provide a widely distributed background of information sources. But the survey is not limited to these particular dealers who have been sent question-forms by mail.

Any dealer-reader of RADIO TODAY is invited to take part in the survey by answering the questions shown in the form opposite, and sending in his replies on a separate sheet of paper.

Cost and profit figures supplied in this way will be held in confidence, of course, and will entitle the dealer contributing them to an advance compilation of figures covering his particular group, without waiting for the publication of the general cost studies in the pages of RADIO TODAY itself.

Merchandising authorities

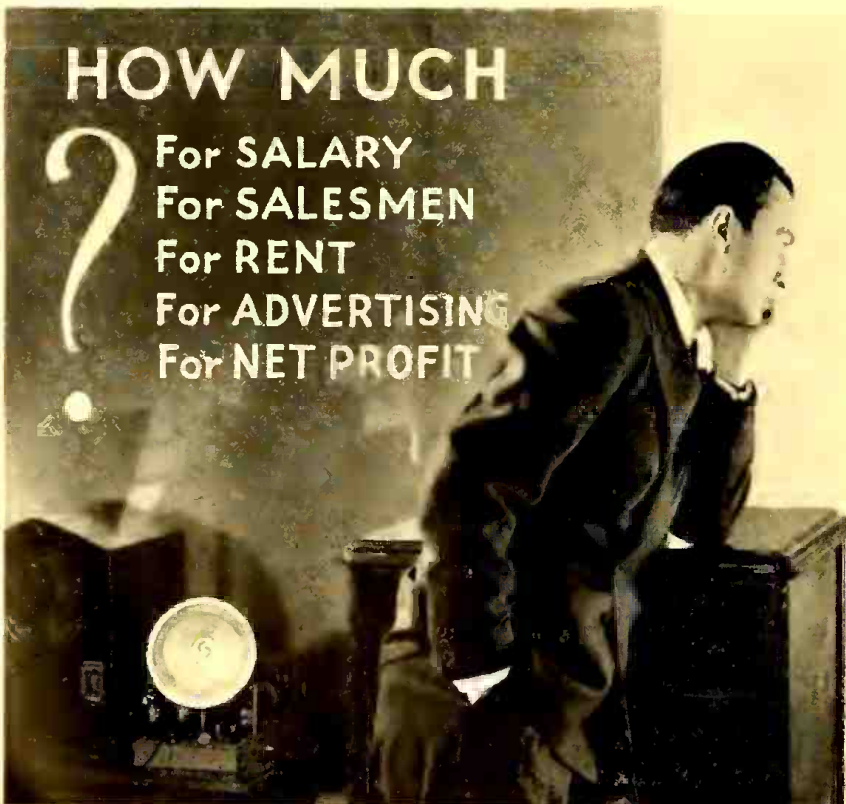
Co-operating with the editors of RADIO TODAY in making the present yardstick survey are the officials of the famous School of Retailing of New York University, New York City, of which Dr. Norris A. Brisco is dean. Dr. Brisco and his associate, Dr. J. W. Wingate, associate professor of marketing, have reviewed the question-forms on retail radio costs and have made many valuable suggestions. Under Dr. Brisco's direction will be carried out the analysis of the cost figures received.

The School of Retailing of New York University is widely known among merchants as the leading school of the country in matters of merchandising methods and practice. Dr. Brisco has the active support of the great retail firms of the metropolitan area in making his courses of the utmost practical value to students of retailing. Outstanding merchandising executives, whose incomes reach into six and seven figures annually, freely give of their time in lecturing before the School of Retailing and in consultation with Dr. Brisco in curriculum planning.

Getting the facts

With definite facts on radio retail costs in hand, dealer-readers of RADIO TODAY will have information of the most invaluable value for guidance of their own businesses. Again and again, studies of successful mercantile businesses have shown that thorough examination of all available data on the actual cost of doing business, and of specific sources of profit, supply the most effective tools to combat business weaknesses. A knowledge of the facts about a business situation creates self-reliance in the mind of the dealer and stimulates confidence—the most effective means for promoting sales and meeting competition.

RADIO TODAY will be ready with this basic information, presenting its cost studies in coming issues.



**QUESTIONNAIRE WHICH WAS MAILED OUT TO THOUSANDS OF RADIO DEALERS IN
RADIO TODAY'S SURVEY OF RADIO SELLING COSTS AND PROFITS**

MR. RADIO DEALER:

You are invited to take part in this nation-wide study of the cost-of-doing-business in retail selling of radio sets and supplies.

Information which you contribute will be treated in confidence, and used only for the compilation of averages.

In return for your cooperation in supplying your figures, RADIO TODAY will send you, with its compliments, complete compilation of average costs of similar businesses.

O. H. CALDWELL—Editor RADIO TODAY

1. My Sales of Radio in 1936 were \$ _____
(gross sales minus returns, etc.)
2. Opening Inventory of Radio, Jan. 1, 1936 \$ _____
(at cost, unless otherwise noted)
3. Radio Merchandise Purchased during 1936 \$ _____
4. Closing Inventory of Radio, Dec. 31, 1936 \$ _____
(at cost, unless otherwise noted)
5. My principal line of business is _____
and Radio Sales are _____ per cent of my total business
6. Expense of handling sales during 1936
 - a. Salaries of owners or officers \$ _____
 - b. Employees' salaries and wages \$ _____
 - c. Rent \$ _____
 - d. Advertising \$ _____
 - e. Light, heat, telephone \$ _____
 - f. Free servicing during guarantee period, delivery, installation \$ _____
 - g. All other expenses \$ _____

Total cost of doing business \$ _____
7. I operate a radio-repair or "service" department which during 1936 took
in a total of \$ _____
To operate this repair department during same period, cost, not including free
servicing of sets sold, (see 6f.) \$ _____
Making a net profit on repair dept. of \$ _____
8. My radio sales in 1936 were _____ % of the 1935 figure.
9. My 1936 radio sales were divided approximately
Cash _____ %, Credit _____ %, and Installment sales _____ %

"FUGUE IN CYCLES AND BELS"

★ MR. MILLS' fine volume is essentially about the perception of musical qualities and their relation to present and future electrical sound transmitters. Assembled with great discernment, the material includes some vastly interesting reports on recent researches and the book wisely provides some idea of the direction of

musical development in this day of things radio.

"A Fugue in Cycles and Bels" is designed rather for musicians, and will be found a pleasant and valid treatise for experts in associated matters of sound production and transmission. Part III, titled "An Electrical Future For Music," is perhaps the most arresting section in point of research news, but we were ourselves specially intrigued by the

book's preliminary account of how "an important relationship for tones was established between a psychological characteristic and a physical quantity." The structure of this part is exceptionally well planned.

Mills' style makes just the right concession to the layman reader, and he never fails to make a technical explanation seem romantic and attractive. Van Nostrand, N. Y., is publisher.

GO OUT AFTER "SOUND" PROSPECTS

With a bit of organized effort, you can make what is called a killing

★ By means of planned "sound" merchandising campaigns the Radio Laboratories, Inc., 2217 N. 12th Street, Milwaukee, Wis., has built up a large annual volume of business in the "sound" equipment line, as well as a fine volume on radios, tubes and accessories. This firm does not wait for the customer to come into the store to inquire concerning amplifiers and sound truck service.

Arnold Kaliebe, secretary, declares that a regular direct-mail campaign is the firm's biggest asset in contacting potential customers. Here is how it works:

The firm secures a list of universities, school boards, civic organizations, home-coming festival committees, political campaign headquarters, church and picnic committees, and then sends direct mail to such prospects, calling attention to the fact that various events can be publicized by using a sound system. It is pointed out that where people attend an event in large numbers, a sound system is absolutely indispensable to inform everyone of what is happening at the time it happens.

Must sell constantly

Very satisfactory results have been obtained from this kind of advertising, states Mr. Kaliebe. Organizations of various kinds are looking for ways and means to publicize their business but the radio dealer must be alert and sell these people on the sound system idea, if he wishes to secure extra profit in this field.

Among the larger gatherings which the sound trucks of this firm have covered have been gubernatorial political campaigns, celebration of the birth of the Republican party at Ripon, Wis., motor-cycle hill climbing contests in upper Michigan, events of national importance in Soldiers' Field, Chicago, Northwestern University homecoming, American Legion Convention and many other events in Wisconsin, Illinois and Michigan.

"We send our direct mail to firms located in any nearby state," says Mr. Kaliebe, "and we get results from it, too."

In the indoor field, in addition to constant reminders in the way of



CHURCHES, along with schools, factories, etc., need sound systems.

direct mail distributed to school and church authorities and funeral homes, industrial plants are constantly being contacted for new business in the way of amplifier installations. In one steel treating plant, this firm reports having installed a system of eight amplifiers of special construction, so that calls can be heard above the din of shop noises.

Replacements

Among funeral directors, Mr. Kaliebe states, additions are constantly being made to the list of satisfactory installations in funeral homes, more than twelve now being numbered among the customers of this firm. In one of the larger funeral homes in Milwaukee, this company has installed twelve amplifiers, which are constantly being kept at top-notch efficiency. Fifteen theatres in Milwaukee are also on the books of this firm for the sale and service of amplifier units.

As improvements are made from time to time in sound systems and amplifier units, this firm, according to Mr. Kaliebe, is constantly contact-

ing users by personal calls and direct mail, with the idea of incorporating new features in existing equipment, or the replacement of old type units with those of later type.

Although direct mail is usually the initial form of contact for new business, this is by no means the only method employed to increase the list of customers for this company. Personal contact is made with all prospects, about five or six calls a day being made for this purpose, or about 100 calls a month. Out of this follow-up method, Mr. Kaliebe states, records show that 5 per cent will ultimately become customers of this firm.

Renting makes sales

In many instances, Mr. Kaliebe advises, the amplifier units are rented by organizations for use on special occasions, but the satisfactory results obtained frequently prompts those in charge to have permanent installations made in assembly halls later when the budget will permit.

Although the use of sound trucks for outdoor affairs is no longer in its infancy, this method of "broadcasting" never fails to attract attention from those in attendance at meetings, Mr. Kaliebe declares, and the truck is really a good advertising medium in itself for the firm.

FEW PLACES WHERE SOUND CANNOT BE SOLD

★ To anyone who has followed the development of sound equipment and its merchandising methods, it is difficult to look into the future of this business without discerning the very broad remunerative market for those jobbers, dealers, and service organizations which make "sound" their business, comments John Erwood, vice-president of the Webster Company, 3325 West Lake Street, Chicago.

Mr. Erwood feels that the proper merchandising of sound equipment takes its logical path through the jobber, whose functions are as a warehouse and advisory station as well as, in some cases, financial aid to the dealer.

"To the dealer who expands his energy in the sale and service of a

well-advertised, progressive product that is manufactured by an organization which provides adequate dealer sales-promotional material, a substantial business will result," declares Mr. Erwood.

"As to the best prospects for selling sound equipment, this subject is too broad, and it would be easier to ask where sound equipment cannot be sold. We know of very few places.

"To sum up, the sound equipment business is going through the same stage of development today that the automobile business and the radio business has gone through in the past. And if conditions exist in the sound equipment field today that are not as stable as we would like to see them, we must remember that we are in an industry that is growing tremendously fast, and one in which the surface has only been scratched."

HOW DEALER CAN "CASH IN" ON SOUND

* "We feel that the legitimate dealer and service man is the logical person to sell public-address equipment," declares Larry King, sales manager of Operadio Manufacturing Co., St. Charles, Ill. "It is true that in all cases these men's activities will not bring them into direct contact with all the possible prospects in their localities.

"However, by associating himself with other stores in the town whom he might contact in his regular line of business, the dealer can in this way receive additional inquiries through them which he can follow up and consummate as sales.

"We feel, however, that the limiting factor in the amount of business these dealers and service men can do at a profit is dependent entirely upon two very vital elements, the first one being their willingness and desire to go out and exclusively 'sell' merchandise rather than to try to 'build and sell.' Second, that after they have been out trying to sell merchandise, they must have absolute assurance that when the final sale is consummated they will be the ones to get the sale and will not be bypassed and deprived of the sale because the customer has been able to go and buy the same product somewhere else at the dealer's cost!

"We feel in general that the 'sound' business for servicemen and dealers looks very encouraging," concludes Mr. King. "The demand and the market is there and it merely waits for the dealer and the serviceman to judiciously select the type of merchandise

and the company with whom he wants to deal to assure himself that after he has put a lot of time and effort on a prospect, he is able to 'cash in' on his efforts."

EVEN WELL-KNOWN MARKETS BARELY SCRATCHED

* Notice of greater opportunities in the sound market is given by S. N. Shure, of Shure Bros., 225 West Huron St., Chicago:

"Even the conventional, well-known markets have barely been scratched. Hard work will 'close' these sales. Continuing improvement in general business conditions has made it possible for many prospects who delayed purchases to buy now.

"Opportunities for the application of sound amplification principles are limited only by the imagination and ingenuity of the seller.

"Every prospect for sound is adversely influenced by every poor sound installation that he has ever heard. Equipment should be sold on its merits and not on a basis of price alone. Technical advances in microphones, amplifiers, loud speakers and made possible the achievement of high quality reproduction at a moderate cost.

"Technical skill is still a highly important factor in securing best results and the sound man who expects to become and remain a factor in the field must make a thorough study of his subject and keep abreast of current developments. The individual sound engineer should realize his responsibility to the industry for advancing the general level of quality of sound installations."

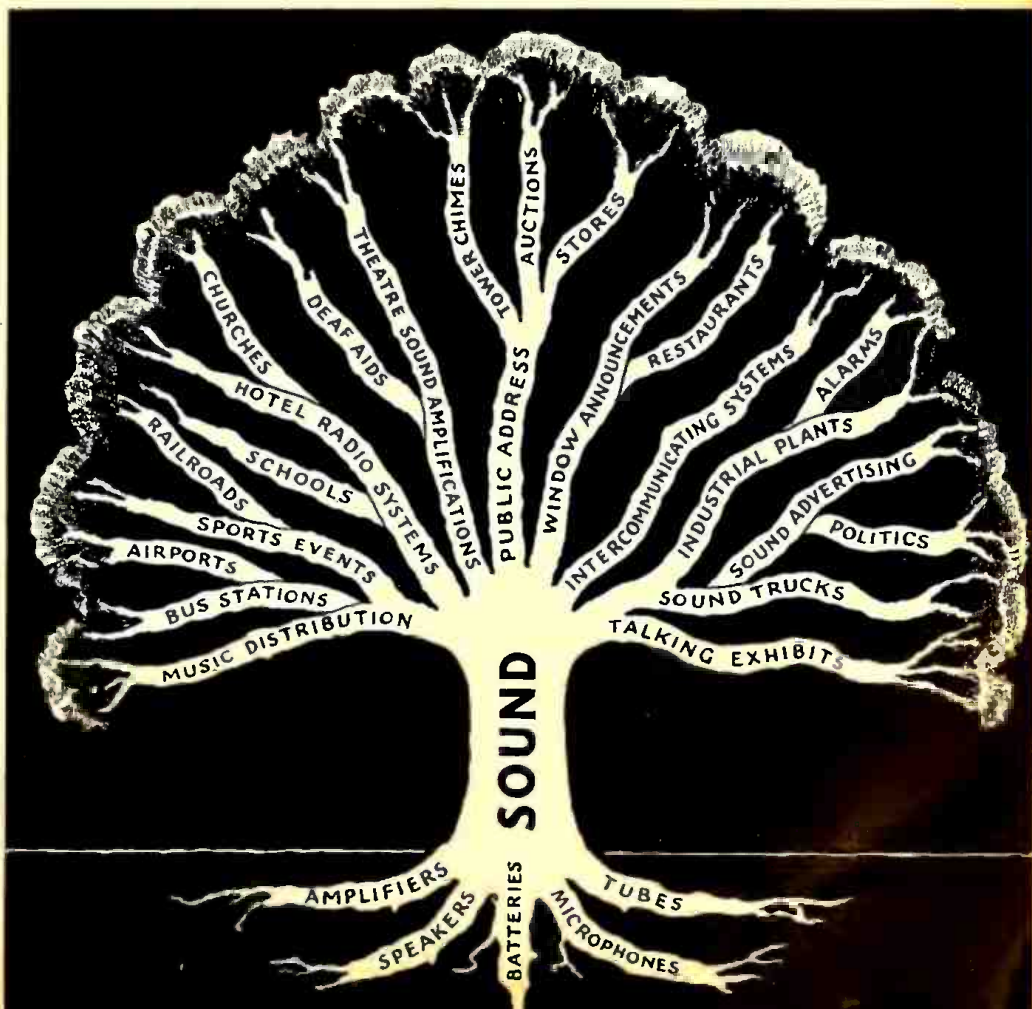
COMMERCIAL SOUND JOBS MUST BE RUGGED

* Successful "sound" men must always keep in mind the following principles, declares S. Ruttenberg of the Amperite Corporation, 561 Broadway, New York City:

"Since the number of sound installations obtainable in any territory is limited, a *good margin of profit* must be made on each job.

"Sound installations are different from home installations in that they are made for commercial purposes and therefore must use *commercial standards of ruggedness and reliability*.

"A business man does not tend to buy the cheapest material, but will insist on quality and reliability. He will also insist on *service*, which must be figured in the initial price."



PUSHING INTERCOMMUNICATORS

- purchasers galore for new loud-speaking phones
- office bosses buy quickly upon demonstration



PHILCO-PHONE. Master unit will handle four remote stations. Connected by twisted pair.

NEW "PHONES" SELL ALL SEASONS, KEEP DEALERS BUSY

★ Radio dealers who have taken on the new intercommunicating phone systems, report that public response has far exceeded their expectations.

When such intercommunicating phones are displayed in dealers' windows, they prove to be "traffic stoppers" and bring passersby into the store.

But it is those dealers who have outside salesmen who seem to be doing the best job of selling the new "talking pairs." Almost every office is found to be an immediate prospect, these salesmen report. Often, even the first call-and-demonstration results in an immediate sale; in other cases the prospect asks to try out the phones for a day or two before purchasing.

Doctors, lawyers

Doctors, dentists, lawyers, and business executives prove prime prospects. In this respect, the variety of opportunities for radio-phone sales is even larger than for radios, which, of course, are limited chiefly to homes.

But homes, too, are also prospects

for intercommunicating sets—particularly larger homes in the upper income brackets. Even in smaller dwellings, phones upstairs and down, save much up and down climbing, for talking between members of the family and for giving orders to servants.

"The fact that the new phones are not reasonable items, but have continuous sales possibilities right on through the Spring and Summer months, makes this new line a valuable adjunct for the radio dealer, in keeping his sales people busy throughout the year," comments G. W. Axmacher, in charge of Philco phone sales for the New York territory. "Already we find ourselves way behind in filling orders!"



CARRIER-CALL. Talks over lighting lines. No other connecting wires. "Simply plug in and talk!"

RE INTERCOM LICENSES, USES, INTERFERENCE

★ With the new loud-speaking intercommunicating systems attracting trade attention, radio-set manufacturers are asking whether their present radio-receiver licenses permit them to make the new pairs of talking phones. On this point, legal opinion seems definite that a radio-receiver license under the amplifier patents is not applicable; that the intending maker of intercommunicating phones must apply for a special phone license, getting it from A. T. & T. This includes both



OPERADIO inter-office set. Provides up to 11 stations. Connected by twisted cable.

wire-connected and carrier-current systems.

Already Carrier-Call, pioneer in this new field, has obtained its A. T. & T. license, according to President Levy. Asked about reports that radio-set interference is caused by carrier systems, inventor Levy explained that while in some cases radios within a few feet of the wires had been affected by carrier-frequency harmonics, this difficulty has been corrected in the new phones, and the FCC has now awarded carrier systems a clean bill of health. Carrier-Call operation was recently tested successfully in deep mines, effecting communication thousands of feet underground without special wiring. New York subway trains have also been linked by carrier impulses, and music delivered to speeding trains.

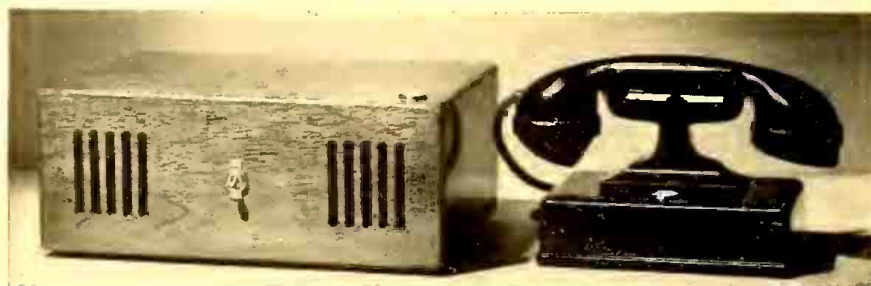
AND NOW INTERPHONES FOR AUTO TRAILERS

★ A new off-shoot of the intercommunicator field, of special interest to dealers handling auto-radio, is the new interphone for automobile trailers. These special pairs of battery-phones have been developed for communication between the occupants of the trailer and the driver of the car.

Such means of talking between the family in the trailer and the driver up front, have been found necessary as the result of accidents occurring to these trailing homes. Sometimes trouble develops in the trailer or its rolling mechanism, and the people on board have no way of calling to the driver to stop. Serious accidents have been caused by drivers continuing on, in ignorance of dangerous conditions in the trailer behind.

Motor-vehicle officials who have studied this new accident problem have considered making intercommunicating phones mandatory on trailers.

Already Dictograph and Transducer have announced special loud-speaking phone systems for auto-trailer use.



DICTOGRAPH DUO-MATIC. At left, loud-speaking unit for executive's desk; at right, hand-phone for branches. System talks both ways without switching.

DAILY PROMOTIONS FOR RADIO DEALERS

Sales ideas for Spring, as outlined by six radio merchants who tried them

March 22-31

- 22—Try the idea of inviting good prospects to your own residence for evening demonstrations.
- 23—Ascertain the type of program your prospect likes best, tune in on it, and leave radio tuned in on same. Do not switch stations. Permit your customer to get an earful.
- 24—Display a picture of a big clock face, dramatizing the daily hours that your serviceman is available.
- 25—Choose a series of cheerfully colored sets, those shades appropriate for the Easter period, for window display.
- 26—Collect all the manufacturers' sales material which has a light-colored, Spring or Easter atmosphere, group them in an island display.
- 27—Cash in on current plans to re-decorate homes at this time; offer to deliver cabinets until you get the one that's just right.
- 28—Easter Sunday.
- 30—Start a promotion among all the offices in your area, on combination radio-bars.
- 31—Check all sources for the names of those planning to take cottages for

the summer; interest them in an appropriate, or portable set.

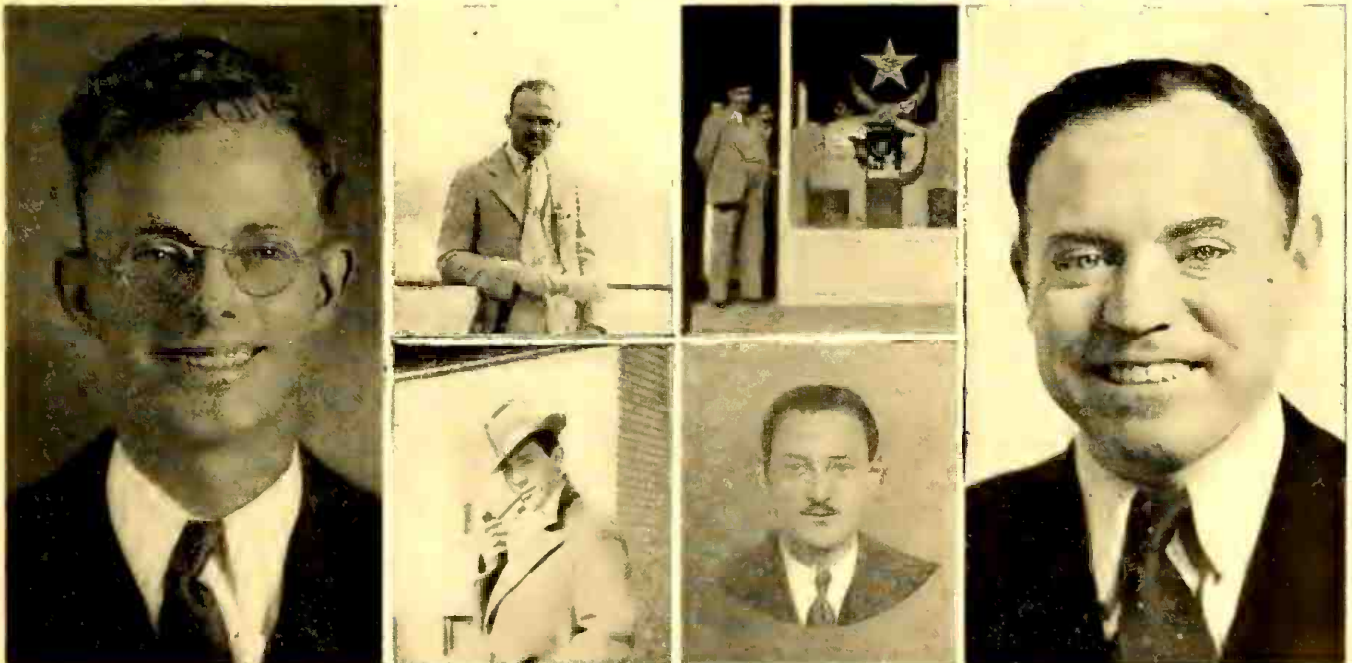
April 1-19

- 1—Use an ad or a circular outlining the fun of "April Motoring with Our New Auto Radios."
- 2—Use an entire wall of your shop to display pictures of radio stars now on the air.
- 3—Check with all local theaters to find out whether you can display new receivers in their lobbies.
- 4—Sunday.
- 5—Build a window display around large studio photos of all radio programs sponsored by radio manufacturers.
- 6—Pick out all prospects which are families, and let them know the advantages of extra sets for children.
- 7—Choose groups of Italian, German or other foreign names and mail them appropriate broadcast schedules, domestic and short wave.
- 8—If you are advertising on the air, add a notice of it to your letterhead.
- 9—Start the practice of attaching your shop sticker to a radio fan mag-

azine, to leave in homes where your free trials are in progress.

- 10—Write a note to all prospects whose credit you have checked, tell them that they may select a new set any time.
- 11—Sunday.
- 12—On a series of cards, paint separate selling features of a new receiver, run ribbons from these to the part of the set concerned.
- 13—Introduce "The Modern American Family" in your window, show a receiver for each member of it.
- 14—Run an ad showing the photos of all members of your store staff.
- 15—Send all prospects a notice which explains all the things regarded as difficulties in summer radio reception.
- 16—Offer to take prospects for a ride in your own car, demonstrating the features of a new auto receiver.
- 17—Publicize the names and pictures of those radio entertainers who will remain on the air throughout the summer.
- 18—Sunday.
- 19—Run an ad playing up the opening of the baseball season today, explaining what the season will mean to sport listeners.

Veryl Storer, Ogallala, Neb. R. H. Ghanem, Tanta, Egypt.



Harold Newby, Herbert & Newby Radio Service, Wichita, Kansas. Fred J. Olsen, Olsen's Radio, Green Bay, Wisconsin. Edward Burton, Center Music Stores, New York, N. Y. Morris Wolf, Wolf Radio & Electric, Vancouver, Washington.

AUTO RADIO ON SAFETY'S SIDE

Multiple usefulness of the car receiver is settled all over again.

★ **MESSY ITEM** to come up in the Idaho legislature last month was a bill to prohibit the use of auto radio in that state.

Advocates of the bill had the nerve to advertise it as a "safety measure." It passed the Senate and had some chance of becoming a law, until a public hearing was held in the Idaho House of Representatives.

Radio Manufacturers Association sprang into action and General Manager Bond Geddes rushed to Boise with a brief which he presented personally at a committee hearing. Mr. Geddes proved that the measure would be unwise, unnecessary, unenforceable, injurious to business, and of doubtful validity. He cited dozens of opinions of public officials, and reminded everybody that insurance companies had pronounced auto radio as safe.

Public utility

The RMA official had the facts to establish the position of car radio as attractive and indispensable. In his remarks, some of which follow, are seen the outlines of a widely useful utility.

"Automobile radio is a major factor in public communication, utility, convenience and enjoyment. For many years radio has been almost universally used and enjoyed in homes. In recent years there has been a growing demand for extension of its use in offices and public places, but the largest demand within the last six or seven years has come from automobile

owners. Introduced in 1930 with a small production of 34,000 automobile sets, the industry sales last year were about 1,500,000 of such receiving sets, and there are over 4,000,000 now in use. Also they have been universally adopted in law enforcement as a new and tremendous aid to police officials, national, state and local, and with participation and assistance from the public owning auto-radio.

"Only recently in the Ohio floods they were of dramatic aid to police, Red Cross, and other relief workers. Automobile radio was installed in police and coast guard boats and contributed greatly to relief work and saving of human lives.

"In the apprehension of criminals by police through public broadcasting, auto-radio has been a most effective weapon in the war on crime. Usefulness of automobile radio, in cars of private citizens in police direction and diversion of traffic is well recognized. In any public emergency, such as floods, storms or forest fires, auto-radio has been used in many states and is similarly potential in Idaho.

100% useful

"Needs filled by automobile radio in the daily business and private lives of citizens also are well established and widely recognized. Farmers receive crop, weather reports and news, while to the business traveler and tourist automobile radio is especially welcome and valuable.

"Experience in actual use of automobile radio and its manual operation destroy completely the apparent basis of this bill that it may tend to divert the attention of the motor vehicle operator and thus cause traffic accidents. We seriously and vigorously contend that the exact opposite is the fact. We contend that automobile radio is a safety factor, a safety accessory of an automobile, and that its use tends to and actually results in safer driving, safer highways and reduction of accidents.

Promotes attention

"Auto-radio for the motor operator and also for any passengers tends to promote attention, wakefulness, interest and alertness. All are safety factors in driving. Also automobile radio reduces or eliminates the recognized hazard of "backseat driving." It reduces disturbing conversation with the operator. It keeps the occupants of the car entertained and, therefore, more quiet, reducing disconcerting conversation. Nothing coming from a loudspeaker of an auto-radio can be as disconcerting to the driver as conversation or acts of occupants which divert his attention from his driving job.

"Consider the manual operation of automobile radio. The modern auto-radio set has not more than two dials and in some sets only one dial. It is installed close to the driver and generally closer, on the steering wheel, than the choke or controls on the instrument board. Its operation does not divert or distract the attention of the driver because it requires little or no attention of the operator. Generally the set is tuned in while the car is parked, before starting or as the car slowly goes into motion.

"In the dual control set generally in use, the operation is entirely and very briefly confined to one hand. The set is turned on with the volume control and the hand then passed to the tuning dial, involving only the use of one hand with the aid of the ear and without the use or need of the eyes. Less, or at least no more, effort is required than to operate the choke, starter or windshield wiper or other slight manual adjustment with which the driver also is familiar and which also becomes with practice largely automatic.

625,000 TRAILER-HOMES, A BRAND NEW MARKET FOR AUTO RADIO



YEAR OF TRAILERS, 1937, when they help jobbers to contact dealers who sell auto radio to trailer-homes. This is a slick job from Louisville, Ky.

"Excessive speed and reckless driving are conceded to be the principal factors causing motor accidents. Automotive radio tends to and actually does reduce driving speed and, therefore, is a safety factor. Its use is incompatible with high speed driving, either in the city or on rural highways. This has been demonstrated by years and wide use of automobile

radio. Programs cannot be enjoyed while cars are speeding. Enjoyment of music, constituting 50 per cent or more of programs, and other broadcasting, naturally and automatically reduces driving speed.

"Another actual safety result of automobile radio is that it keeps motorists alert in the operation of their cars and does not dull their perception

and reactions. This is especially true in long periods of driving and at night. There are many instances of accidents due to drowsiness or sleepiness of the driver, particularly in the case of chauffeurs or truck drivers. For this reason many owners of fleets of trucks have equipped them with auto-radio for their drivers' benefit and safety."

THE EFFECT OF TURNOVER ON PROFITS

Chart shows how delayed movement of merchandise may turn net into loss

* Among most retailers, the effect of *turnover* is perhaps the least understood of the factors having a vital bearing—direct and indirect—on profits.

The effects of turnover are far-reaching.

For the longer merchandise is kept in stock—the more it costs—and the less it is worth.

Interest on your investment increases with time.

Insurance costs are higher.

Space cost for storage and display adds up with time.

If assortments of new and wanted

merchandise are also maintained—then your total stock must increase.

Damage—and consignment repair costs rise.

Consumer "desire to purchase" goes down as age of the merchandise increases.

Long experience indicates that the "cost of merchandise"—which includes interest, insurance and rent—increases 1 per cent per month after the first month. And "cost of selling" which includes markdowns—extra commissions—polishing and repairs—increases 2 per cent per month. Combined—these two factors decrease profits 3 per cent per month.

The accompanying chart shows this relationship graphically.

Cost of merchandise is taken as 54 per cent—a 40/10 per cent discount.

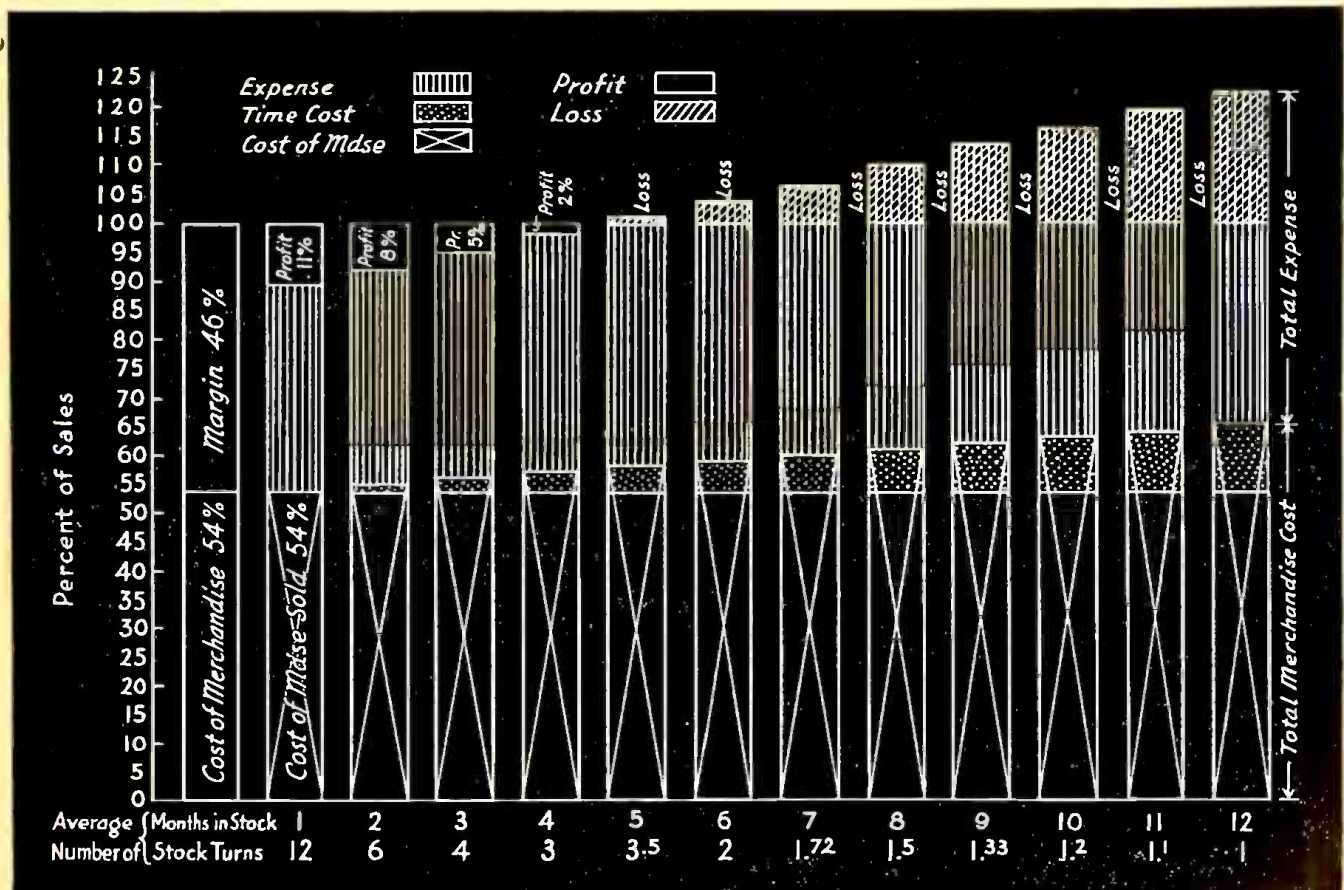
Overhead expense is 35 per cent.

Net profits 11 per cent.

Then see what the lack of turnover does to these profits—see how profits soon turn into losses when the stock fails to be kept actively on the move.

In the production of final operating profits—turnover is almost as important as high sales volume.

For safety—watch and control both of these important factors.



TO SELL THE FASTER

- locating some dynamite for sales talk
- avoiding the weak and negative cracks

★ **THE ALL-VERY-WELL** national ballyhoo on radio sets is seriously discounted unless the receiver salesman knows exactly what to utter when he stands face to face with the consumer.

Smart salesmen dislike the idea of "canned" sales talk, but a salesman's speech can be planned and standardized so that his performance is intelligently scheduled. This advice comes from Tested Selling, Inc., a New York firm whose product is nothing else besides "tested selling sentences." Company has analyzed some 105,000 sales words and phrases and has tested thousands of them on nearly 20,000,000 persons.

Radio salespeople naturally inherit from the nature of their merchandise, the finest selling arguments in the world, but these can't be delivered if the prospect departs after the first few moments. Suggestion is, then, that they take the hit-and-miss quality out of their first few cracks.

Successful sentences

Question is, what kind of opening remarks will seize and hold the radio prospect?

The Tested Selling experts believe that these sentences must be based upon the fact that people buy with their subconscious minds. Weak, unorganized phrases thought up on the spur of the moment won't do.

Although radio receivers have insides of a technical nature, the first sentences should not deal with the technical structure of the instruments according to these rules. Theory is that people buy for three reasons: (1) Self-preservation, (2) Romance, and (3) Profit. Radio merchandise falls under "Romance" and therefore the early catch-remarks should deal with broadcasts rather than with circuits.

Price angle ditched

Faithful attention to the matter of tested words has a strong tendency to cut the price appeal in sales conversations. Mention of cut prices and trade-ins does not fit in with the planned appeal of "romance" and the entire set-up is designed to focus attention elsewhere.

Rules of this game also take into account the fact that many of today's radio prospects are themselves ex-salespeople. They are bitterly wise to the whole set of tricks which super-trained sellers are likely to exhibit. They are technique-conscious to their finger-tips and they have to be halted in their preoccupation with sales style.

On the other hand, if today's salesmen try a trick of speech which is too obviously a device—sentences which sound as if they had been figured out after long hours of special planning—the effect is lost.

Action notes

Radio men will find valuable tips in the methods used by Tested Selling on a well known vacuum cleaner. Company introduced a brand new model and was anxious that it should be presented carefully on sales floors.

Instead of calling the gadget a "vacuum cleaner," it was referred to as a "cleaning ensemble." This was intended to dramatize revolutionary improvements, and the word "ensemble" was known to be familiar to all women.

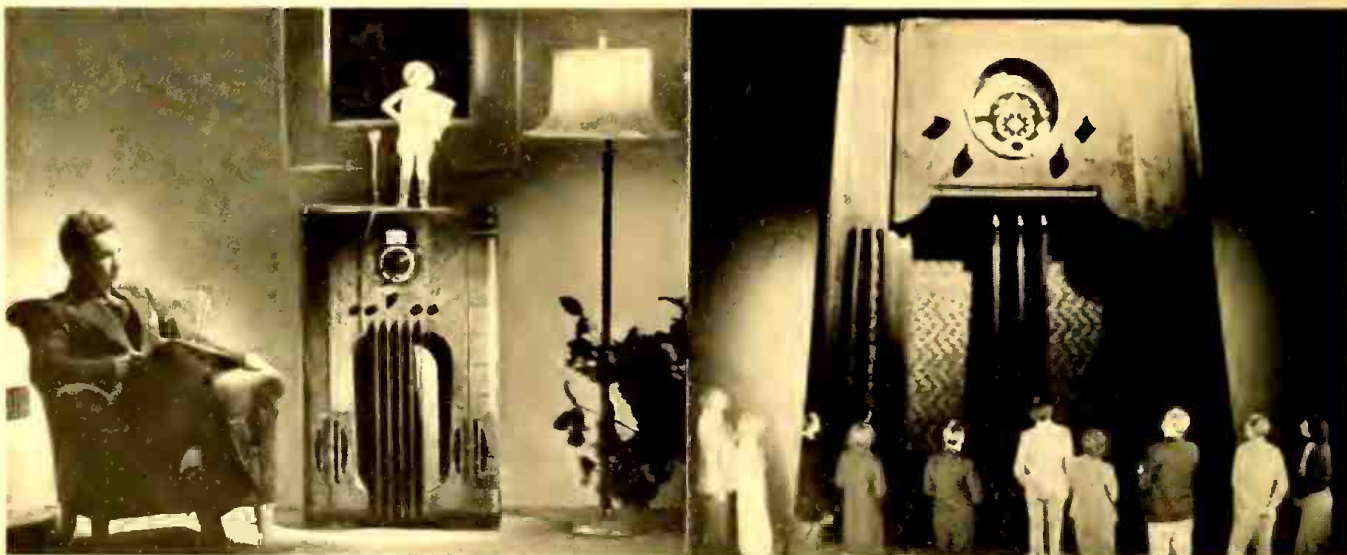
The cleaner was made of a new alloy, but that meant nothing to the average housewife until the salesman said that "it is one-third lighter than aluminum and twice as strong."

The new model was gray in color, but instead of saying that it was "Barn Yard Gray," the Tested Selling officials suggested "Stratosphere Gray, because Stratosphere is a word tested to stand for lightness and speed in the mind of a prospect."

The headlight on the new cleaner was not called just that, because the phrase was too ordinary. Description was "Dirt Finder" and the salesman added that "it sees where it goes—and it's clean where it's been."

Warning signal on the cleaner was not described as a "danger" or "warning" because those are negative words. Rather, the salesman said that "this is the new Time to Empty signal."

Many of the words which are needed by radio salesmen can be found in literature issued by manufacturers. Descriptive material in 1937 is detailed and dramatic and will reveal countless ideas, if not the phrases themselves.



Trick sound movies like these are being exhibited in many communities to promote radio dealers' wares. At left, by double photography, the broadcast artist appears singing on top of the Philco set; at the right lifelike Lilliputians crowd around the giant Fairbanks-Morse radio.

EVERY CAR OWNER IS A PROSPECT FOR

Admiral TOUGH-O-MATIC tuning!

TWENTY million or more car owners—each and every one of them a potential customer for touch-o-matic tuning. This latest Admiral sensation is easily installed on *any* car radio . . . old or new. Just touch a button . . . and presto! in comes one of your favorite stations clear as a bell.

Streamlined, handsomely faced with chromium, the touch-o-matic control mechanism is easily attached to steering column. The operating mechanism is housed in a compact metal case installed on the side of the radio. Make 1937 your biggest auto radio year with touch-o-matic tuning and the new 1937 Admiral Auto Radios. Write for details.

CONTINENTAL RADIO & TELEVISION CORPORATION
325 W. HURON ST. CHICAGO, ILL.

\$8.95

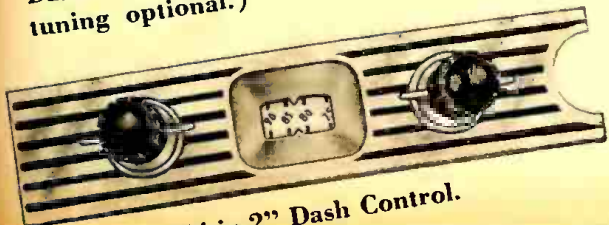
PLUS INSTALLATION
ON ANY CAR RADIO

AMERICA'S SMARTEST AUTO RADIOS

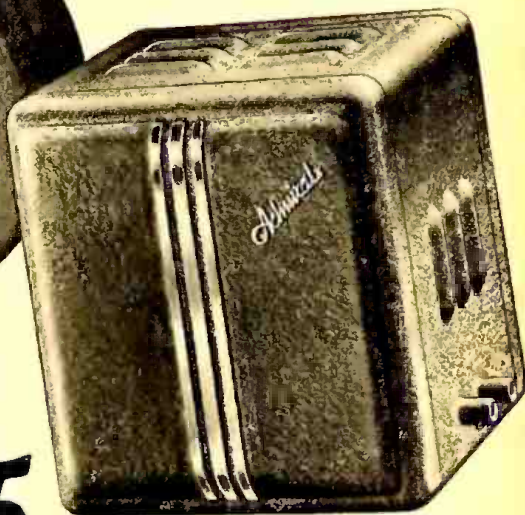
6-7-8 Tube Models

External or Self-Contained Speakers

Powerful superhet circuit operates entirely from 6 V car battery. Lowest drain. 10 KC selectivity. Variable tone control. Iron core antenna gives 1/4 MV sensitivity and increases antenna "pick up" 2 to 7 times over other car radios. Heavy duty dynamic and permanent magnet type speakers. Dash controls to match dash. (Touch-O-Matic tuning optional.)



New "4-in-2" Dash Control.



Admiral
AUTO RADIOS

\$35.95

AND UP

DASH CONTROLS TO MATCH ANY CAR

the New
RED TOP
GAS-O-ELECTRIC
POWER PLANTS

**YOUR CUSTOMERS
Want ELECTRICITY**

Here is an exclusive dealer-jobber line of portable light plants priced for quick sales and big profits. The new RED TOP!

A necessity on millions of farms, trailers and wherever "city" electricity is not available. Provides instant power for electric lights, radios, electrical equipment and appliances. Combination A.C. and D.C. or D.C. only. Liberal discounts assure long profits. Mail coupon for information at once.

COMBINATION A. C. — D. C. PLANTS

In one plant—both 110-V., A.C., 300 watts for lighting, household appliances, small electric tools, pumps, etc.; and up to 325 watts D.C., for charging 6, 12, and 32-V. batteries. Prices from \$89.95 up, F.O.B. Chicago. Push button starter.

PIONEER GEN-E-MOTOR CORPORATION, CHICAGO, ILLINOIS



\$49⁹⁵
LIST
6 Volts 175 Watts—Push Button Starter
D. C. ONLY

**Go RED TOP!
IN 1937!**
THE COMPLETE EXCLUSIVE DEALER-JOBBER LINE

PIONEER GEN-E-MOTOR CORPORATION
Dept. No. R-2C 466 West Superior Street, Chicago, Illinois
Please send me complete information on the new RED TOP
Gas-O-Electric Plants.

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

MAIL COUPON NOW!

TRYING TO GET BY WITH ONLY
SIX RIDER MANUALS "I SAVED"
TEN DOLLARS—BUT

I LOST ✓ AN EVENING'S
WORK—
✓ PROFIT ON A JOB—
✓ A GOOD CUSTOMER—



It is poor "economy" which prompts a serviceman to try and "get by" without a complete set of seven Rider Manuals. For the profit from only one additional tube sale a week, your set of Rider Manuals can be kept up-to-date.

YOU NEED ALL SEVEN VOLUMES

**RIDER
MANUALS**
NOW IN SEVEN VOLUMES

Vol. VII—1600 PAGES—
\$10.00—Covering 1936-37
Vol. VI . . . \$7.50—1935-36
Vol. V . . . \$7.50—1934-35
Vol. IV . . . \$7.50—1933-34
Vol. III . . . \$7.50—1932-33
Vol. II . . . \$6.50—1931-32
Vol. I . . . \$7.50—1930-31

**OTHER
RIDER BOOKS
THAT SHOULD
BE IN YOUR
LIBRARY**

SERVICING SUPERHETS
Revised edition just published shows how to make superheterodyne repairs quickly. 288 pp., \$1.00

**CATHODE-RAY TUBE
AT WORK**—Complete, practical, written for servicemen. Information on Oscillograph, etc. \$2.50
336 pp. 450 ill.

"AN HOUR A DAY WITH RIDER" BOOKS
ON AUTOMATIC VOLUME CONTROL will speed up your AVC work. 96 pp.—65 ill.—hard cover—60c
ON RESONANCE & ALIGNMENT. You need this! 96 pp.—48 ill.—hard cover—60c
ON D-C VOLTAGE DISTRIBUTION IN RADIO RECEIVERS. How d-c voltages are led to tube elements, etc. 96 pp.—69 ill.—hard cover—60c
ON ALTERNATING CURRENTS IN RADIO RECEIVERS—Out in March—60c

**ALIGNING PHILCO
RECEIVERS**—New! Authentic instructions for aligning ANY of the 8,000,000 Philcos. Over 160 pp. Only \$1.00

JOHN F. RIDER, Publisher, 1440 Broadway, N. Y. C.

Freed-Eisemann
FAMOUS SINCE BROADCASTING BEGAN
Announces . . .

**A Sensational New
Low Priced Spring Line**

With These Features
Distinctive Eye Appeal **Well Known Name**
Competitively Priced **Excellent Performance**
Good Profit Margin

Join the increasing list of
FREED-EISEMANN boosters



Model 28 (shown above)—6 tube AC/DC Superheterodyne—has foreign short wave band—gets police, aircraft, amateur, and standard broadcasting. Model 98, similar to above except 5 tube set for use on AC current.

Write for full information. Sets are priced from \$14.95 to \$49.95.

FREED MANUFACTURING CO., Inc.
44 WEST 18th STREET NEW YORK, N. Y.

MERCHANDISING RECORDS

- lively interest in new discs
- trends important to dealers

DISCS FROM "SHALL WE DANCE?"

★ Considerable interest has been shown in recordings from the new Fred Astaire-Ginger Rogers musical movie, "Shall We Dance?" Last week in March Brunswick announces discs of the new tunes from the picture, exclusive with Mr. Astaire and Johnny Green.

Music for "Shall We Dance?" was written by George Gershwin. Brunswick records include "Wake Up, Brother, and Dance," "They All Laughed," "Let's Call the Whole Thing Off," "I've Got Beginner's Luck," "They Can't Take That Away from Me" and "Slap That Bass."

New director of advertising and publicity at Brunswick Record Corp., 1776 Broadway, is Munroe Howard, doubtless to be an important figure among record officials. Mr. Howard's experience has been with American Publicity Associates, the Morton Freund advertising agency, and other outfits for whom he was ad chief.

TWO NEW LABELS

★ A new company in the record field is Master Records, Inc., which will market "Master" and "Variety" records, retailing at seventy-five cents and thirty-five cents respectively. This company is owned by the American Record Corp., 1776 Broadway, N. Y. C., and the new brands will be sold through regular Brunswick channels. Irving Mills, well known musical publisher, is musical director of Master Records, Inc.

BING REMAINS WITH DECCA

★ New term contract has been signed by Bing Crosby to continue exclusively making records for Decca. Company has enjoyed this arrangement since October, 1934, when the popular crooner first got under way on Decca discs. His current recording of "Pennies From Heaven" has had a top position on many best seller lists throughout the nation.

Decca has started a series of 12-in. records with two popular tunes

March, 1937

on each side. First of these novel discs (No. 15028), has Al Donahue and his orchestra playing "For Sentimental Reasons," "It's Love I'm After," "When My Dream Boat Comes Home," and "To Mary With Love," with vocal choruses by Barry McKinley.

FLOOR PLAN HIKES VOLUME

★ Radio store executive has made a report on the use of a model floor plan such as was presented in RADIO TODAY for October, page 19. The arrangement of the store and the position of fixtures had the effect of "total sales increased 20 per cent and the sale of console and compact simultaneously increased 50 per cent with a sharp decrease in overhead costs and consequent increase of net profit."

Materials and colors used in the "Layout For a Retail Radio Store" need not be fancy or extravagant. Plan aims to present the necessary amount of merchandise in the neatest fashion, from the standpoint of actual sales effectiveness.

BEST SELLING RECORDS AS WE GO TO PRESS

BLUEBIRD

This Year's Kisses. The Girl on the Police Gazette. Both with Shep Fields and his Rippling Rhythm—B6757.

How Could You? The Meanest Thing You Ever Did Was Kiss Me. Both with Dolly Dawn and her Dawn Patrol—B6797.

Moonlight and Shadows. Dedicated to You. Both with Shep Fields and his Rippling Rhythm—B6803.

BRUNSWICK

This Year's Kisses. You're Laughing at Me. Both with Hal Kemp and his orchestra—7812.

I've Got My Love to Keep Me Warm. Slumming on Park Avenue. Both with Red Norvo and his orchestra—7812.

All's Fair in Love and War. With Plenty of Money and You. Both with Hal Kemp and his orchestra—7769.

COLUMBIA

Serenade in the Night—tango. Me and the Moon. Both with vocal refrain, both with Mantovani and his Timica orchestra—3159D.

Mr. Ghost Goes to Town. Algiers Stomp. Both by Mills Blue Rhythm

Band under direction of Lucky Millinder—3158D.

Ballooney. Barrelhouse. Both by Mills Blue Rhythm Band—3156D.

DECCA

(By titles)

With Plenty of Money and You. Henry Busse and his orchestra—1076. Dick Powell—1067. Ink Spots—1154.

Good Night, My Love. Ruth Etting—1107. Mal Hallet and his orchestra—1047. Dick Robertson and his orchestra—1131.

This Year's Kisses. Dick Powell—1149. Abe Lyman and his orchestra—1127. Roy Smeck and his Serenaders—1117.

VICTOR

Stompin' at the Savoy. Vibraphone Blues. Both by Benny Goodman Quartet—25521.

This Year's Kisses. He Ain't Got Rhythm. Both with Benny Goodman and his orchestra—25505.

I Can't Lose That Lounging for You. Boo-Hoo. Both with Guy Lombardo and his Royal Canadians—25522.

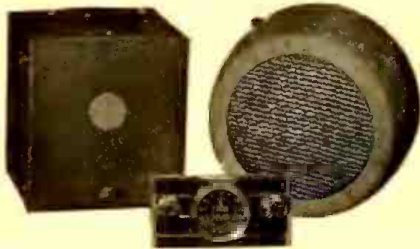
★ Thomas F. Joyce, RCA-Victor advertising head, was the speaker at the Feb. 26th meeting of the Philadelphia Chapter of the American Society for Metals. Subject was "The Revival of the Phonograph." Other activity on the part of Mr. Joyce was a recent check-up on the sales of the Victor "Book of the Opera." More than 25,000 copies of the new revised volume have been sold since the first of the year, which establishes a new high for the elaborate 526-page book.



Shep (Rippling Rhythm) Fields is on Victor's Bluebird best seller.

NEW THINGS FROM THE MANUFACTURERS

Fada Motosets



★ 1937 Fada auto radio line is comprised of four models. No. 267 is a single-unit 6-tube model—tunes 535-1620 KC. Antenna and battery lead filtering eliminates need of suppressors. Variable tone control—6-inch speaker. List \$42.95.

Type 267SD is a dual unit set with 8-inch cowl speaker. 267SG and 267SF have header speakers for General Motors and Ford cars respectively. Fada Radio & Electric Co., 30-20 Thomson Ave., Long Island City, N. Y.—RADIO TODAY.

Howard auto radio



★ Eight-tube receiver for autos—dual unit construction with 8-inch dynamic speaker. Push-pull output. Tuning condenser with cut sections enabling use of high secondary inductance antenna coil. Spark filter—first section built against outer shell. Permanent alignment card on set permits alignment without control head. Model HA-8. Howard Radio Co., 1731 Belmont Ave., Chicago, Ill.—RADIO TODAY.

Crosley auto sets



★ 7-tube dual-unit superhet employing "G" type tubes. Requires no spark plug suppressors. Airplane

type dial—custom controls. Output of 9 watts—8-inch speaker with special pressure relief, giving performance equivalent to large home radio. Header or cowl speaker. Tone control—music-speech switch. Model A-177 \$59.50.

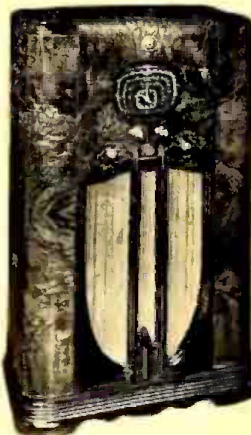
Model A-167 is a 6-tube single unit receiver listing at \$39.95. Crosley Radio Corp., 1329 Arlington St., Cincinnati, Ohio—RADIO TODAY.

Sloping panel set



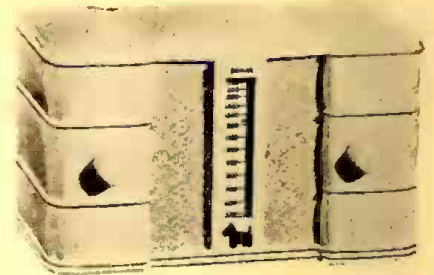
★ New Emerson creation has acoustically constructed cabinet with slanting front panel. Chassis is 6-tube AC—tunes 540-1750, 5600-18,000 KC. Output of 3 watts—6½-inch speaker. Tone control—AVC. Gemloid dial. I.F. wavetrap and power line noise filter. Model Z-159—list \$44.95. Emerson Radio & Phonograph Corp., 111 Eighth Ave., New York, N. Y.—RADIO TODAY.

American-Bosch receiver



★ 12-tube high-fidelity console with automatic frequency control. Tunes 525-18,500 KC—large etched glass tuning dial with second hand indicator—dual speed vernier. 12-inch speaker—phono terminals for record fans. Tone control—42-inch high cabinet. Model 678. United American Bosch Corp., Main St., Springfield, Mass.—RADIO TODAY.

Remler "Scottie" radio



★ Bakelite cased receivers in ivory, and onyx with ivory ornamentation. Vertical scale dial sets new style in tuning. Available with several chassis types—No. 46 has 5 metal tubes and tunes broadcast and police calls. Model 47 has AVC and tunes 540-1750, 5400-10,500 KC. An AC-DC model with 6 metal tubes is also available. Remler Co., Ltd., Bryant at 19th, San Francisco, Calif.—RADIO TODAY.

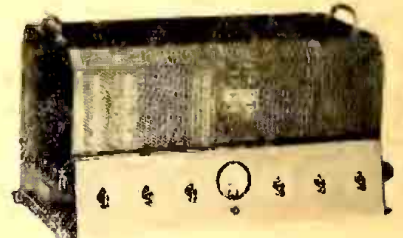
Freed-Eisemann receiver



★ AC-DC 5-tube tuned radio frequency table set—tunes 530-1820 KC. Dynamic speaker—illuminated blue and gold dial. Self-contained aerial. Size 12 x 8½ x 6¼ inches. Model FE-24—list \$19.95. Freed Mfg. Co., 44 W. 18th St., New York, N. Y.—RADIO TODAY—see also advt. p. 22.

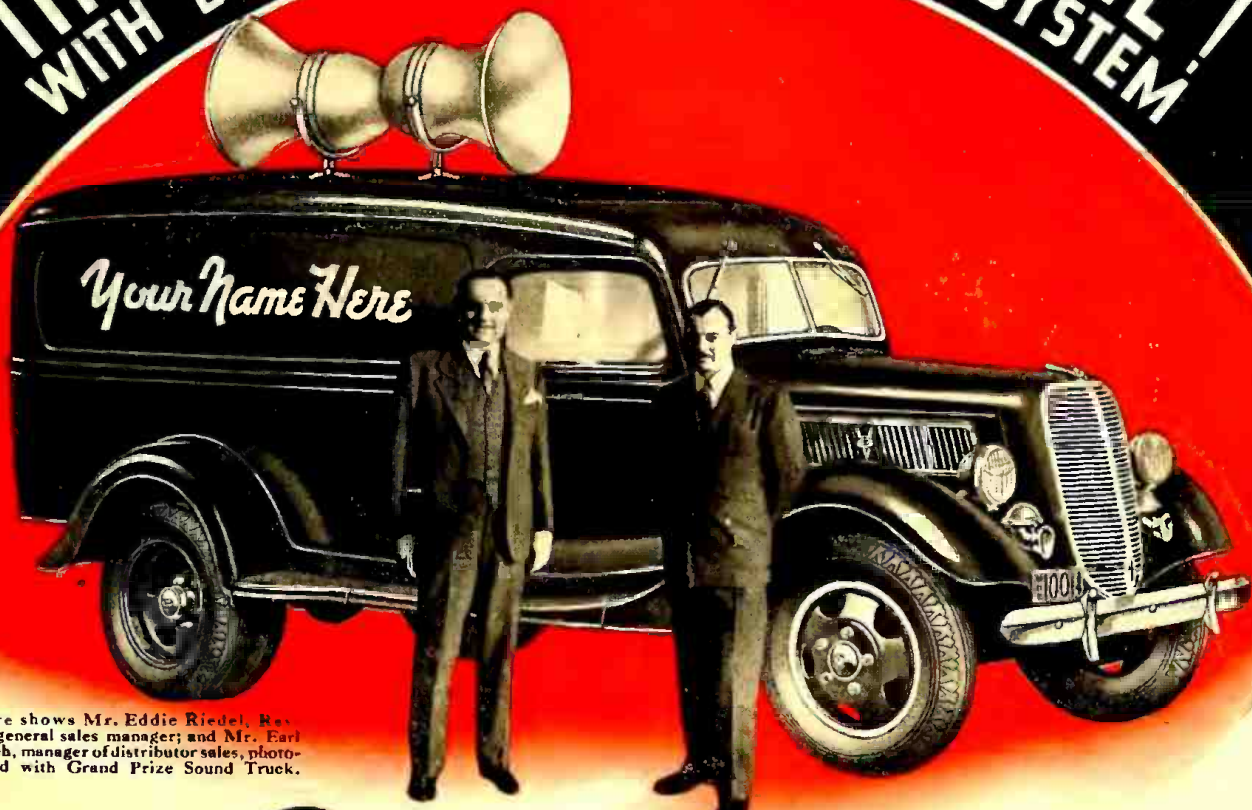
Radolek amplifier

★ 50-60 watt 6L6 beam power amplifier. 4 individual input channels for crystal, velocity or other low level mikes. Separate phono input. Universal output and field supply. With



suitable speakers it will cover an outdoor area of 65,000 square feet or indoor audience up to 25,000 persons. Radolek Co., 601 W. Randolph St., Chicago, Ill.—RADIO TODAY—see also advt. p. 74.

THIS SERVICE TRUCK FREE!
 WITH BUILT-IN LOUD-SPEAKER SYSTEM



Picture shows Mr. Eddie Riedel, Raytheon general sales manager; and Mr. Earl Dietrich, manager of distributor sales, photographed with Grand Prize Sound Truck.

WE ARE *Giving It Away!*

ALSO 500 OTHER FREE PRIZES

It's the easiest contest ever! Just answer a simple question—an answer that every serviceman or dealer gives to his customers two or three times a week. It may win for you this new V-8 service truck with a complete built-in sound system—or \$600 Cash! In addition, the first prize winner's name and photograph will appear six weeks after the contest in our advertisement in the Saturday Evening Post! There are 500 other prizes you will find equally desirable! Learn about the Raytheon Contest today! Ask your jobber!

RAYTHEON

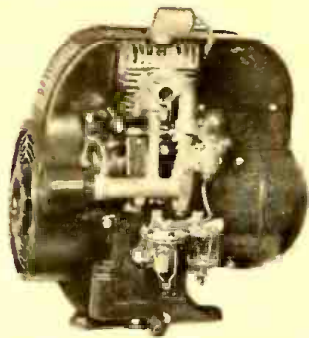
RAYTHEON PRODUCTION CORPORATION

420 Lexington Ave., New York, N. Y. 345 Lake Shore Drive, Chicago, Illinois
 55 Chapel Street, Newton, Mass. 555 Howard Street, San Francisco, Cal.
 495 Peachtree St., N. E., Atlanta, Ga.

RAYTHEON IS THE MOST COMPLETE LINE—ALL TYPES—OF GLASS, JELLY-BASE, METAL, RESISTANCE AND AMATEUR TRANSMITTER TUBES

NEW THINGS

Onan generators



★ Streamline, fully enclosed compact AC generators. Designed for sound trucks, trailers, boats, summer camps, emergency power supplies. Hand and self cranking models—available in sizes from 350 to 1000 watts. Extra silent muffler and exhaust pipe. 350 watt model weighs 150 pounds. D. W. Onan & Sons, 43 Royalston Ave., Minneapolis, Minn.—RADIO TODAY—see also advt. p. 74.

ICA auto antenna



★ Airflow type antenna designed for steel-top cars. Supported by rubber suction cups—requires no drilling of the top. Reduces ignition and wheel static noise. List \$3. Pole type antenna for mounting on rear bumper—8 feet high. List \$2.50. Insuline Corp. of America, 25 Park Place, New York, N. Y.—RADIO TODAY.

Triumph oscillograph



★ Low-cost oscillograph employing 913 type cathode ray tube. Functions as a vacuum-tube voltmeter, resonance indicator, wave-form analyzer, output meter. Practically impossible to harm the instrument by overloads. Linear thyatron sweep circuit. Uses only 4 tubes—80, 6A6, 885, 913. Controls mounted on engraved bakelite panel. Size 9 x 7 $\frac{3}{4}$ x 8. Model 820. Triumph Mfg. Co., 4017 W. Lake St., Chicago, Ill.—RADIO TODAY—see also advt. p. 59.

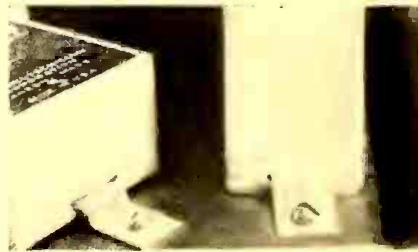
Port-o-matic combination

★ Universal AC-DC portable type radio-phonograph combination. Records carried in a separate tray—prevents damage to mechanism. Tone arm automatically supported when top is closed. Copper aerial screen built in case. Beam power output of 3-watts. Lehman Radio Salon, 1013 Madison Ave., New York, N. Y.—RADIO TODAY—see also advt. p. 60.

Miniature panel instruments

★ New line of round and rectangular style AC, DC, copper oxide, radio frequency meters. Sensitivity as great as 20 microamperes full scale. Type 35. Westinghouse Electric & Mfg. Co., E. Pittsburgh, Pa.—RADIO TODAY.

Tobe mounting clips



★ New Tobe electrolytics now equipped with mounting clips. Slits in the ends of the condenser permit the insertion of clips—will hold condenser either flat or edgewise. Tobe Deutschmann Corp., Canton, Mass.—RADIO TODAY.

Amperite velocity mike

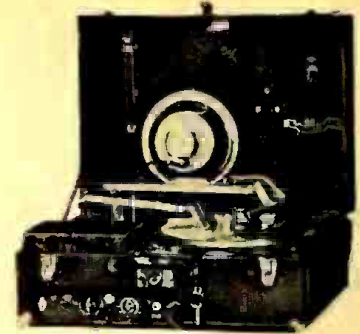


★ Improved cable connector now supplied on Amperite RBMn and RBHn mikes. Cable connector of positive 3-pin type. Locking ring eliminates possibility of loose contacts. Connector on shock absorber prevents mechanical noises due to moving cable from reaching mike. Amperite Corp., 561 Broadway, New York, N. Y.—RADIO TODAY—see also advt. p. 42.

Philco-phone

★ Two-way communication system for offices, homes, stores, etc. Master unit will handle up to 4 remote stations. Entire amplifier contained in master unit—remote units consist of speaker only. Easily installed—connected by a twisted pair. Speech may originate at either end. List—master and 1 remote station \$49.50. Additional stations \$10. Philco Radio & Television Corp., Tioga & C Sts., Philadelphia, Pa.—RADIO TODAY—see also advt. p. 6.

Universal recording machine



★ Portable recording machine designed for school and college use—featuring simplicity of operation. Amplifier has low and high pass filter. Complete with microphone, stand, playback equipment, neon volume indicator. Housed in 16x22x9 inch case—weight about 50 pounds. Universal Microphone Co., Inglewood, Calif.—RADIO TODAY.

Burgess lantern

★ Light-weight battery operated lantern. Unbreakable convex lens, parabolic reflector, grip-fit handle, rubber lens collar, micro-focusing. Only 2 battery terminals to connect—spare bulb holder. Burgess Battery Co., Freeport, Ill.—RADIO TODAY.

Professional Tru-Tan pick-up



★ Crystal type pick-up employing off-set head design which reduces the tracking error. Reduces the side thrust of the needle on the groove wall and practically removes all tendency to jump grooves. Plays all sizes of lateral transcriptions. Finished in modernistic black and chrome. Model B-16—list \$27.50. Astatic Microphone Lab., Inc., Youngstown, Ohio—RADIO TODAY.

Webster amplifier



★ 30-watt amplifier with dual adjustable frequency characteristic. Individual high and low frequency compensators. 2 input controls permit use of 2 low level mikes. Housed in metal case with rounded corners. Model 2A-30. The Webster Co., 3825 W. Lake St., Chicago, Ill.—RADIO TODAY—see also advt. p. 31.

ASTATIC

MODEL

D-2

ONLY
2 1/2" DIA.
1/2" THICK
•
FULLY
GUARANTEED



NON-
DIRECTIONAL
•
OUTPUT
LEVEL
—60 DB

FOR PUBLIC ADDRESS

THE MODEL D-2, shaped and styled like a watch — immediately wins the heart of every microphone user wherever public appearance is made. Not only beautiful to look at, but does not obstruct performer's face. Essentially NON-DIRECTIONAL. Frequency response substantially flat from 50 to 6000 c.p.s. Built to stand shock far beyond ordinary. Now equipped with plug and socket connector for immediate interchange with K-2 or D-104 on same stand. Special Astatic cable mounting designed to protect cable against breakage. List Price \$25. See your jobber or write for D-2 Bulletin.

*Licensed under Brush Development Company
Patents — Astatic Patents Pending.*

ASTATIC MICROPHONE LABORATORY, INC.
DEPT. RT., YOUNGSTOWN, OHIO, U. S. A.

ROYAL TYPEWRITER FREE To National Union Servicemen

National Union and the Royal Typewriter Company have negotiated a plan to provide free typewriters to National Union servicemen. A choice of either the Royal De Luxe Model which otherwise would cost you \$64.50 (shown here) or the Royal Model O which would cost you \$54.50 may be had with—



NATIONAL UNION TUBES

—purchased over a two-year period as follows: 1000 tubes plus \$35.00 dealer deposit secures the De Luxe Model typewriter. . . . Purchase of 850 tubes, plus \$29.00 dealer deposit gets the Model O machine. . . . This is at the rate of only 8 to 10 tubes a week, purchased over the 2-year period—depending on model. . . . Deposit assures immediate delivery of typewriter. . . . Offer good only in U. S. Send coupon below for further details.

Ask your jobber
for new booklet,
"Your Pocket
Book — What
About It."



National Union Radio Corporation RT-337
570 Lexington Ave., New York City
Tell me how to get Royal Typewriter
and other equipment FREE.

Name
Address
City State

National Union offers a complete line of radio tubes in glass, metal and G-types—the outstanding favorites in the radio service profession.

HERE'S GOOD NEWS!



MODEL AP 1831
15 WATT SYSTEM
A TYPICAL
ELECTRO-ACOUSTIC VALUE --

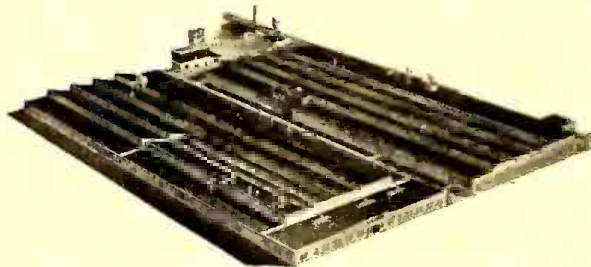
\$134⁵⁰

DISTRIBUTORS ATTENTION!

HERE'S your chance to improve your position in the Sound Equipment business, with the outstanding line of high quality P. A. Equipment. It's a completely new line which will qualify for the finest installations *without increase in cost*. And it's complete! Portable Systems from \$59.50 up, Amplifiers, Microphones, Accessories and MAGNA-VOX P. A. SPEAKERS. All fully licensed.

Built by people who know how—Electro-Acoustic Products Company is a subsidiary of The Magnavox Company which has pioneered and built the finest sound reproducing apparatus for 26 years.

A MODERN PLANT IN THE CENTER OF AMERICA



A SOURCE OF SUPPLY YOU CAN DEPEND UPON

IMPORTANT DISTRIBUTORSHIPS ARE OPEN

DON'T DELAY! WRITE TODAY!

ELECTRO-ACOUSTIC PRODUCTS COMPANY

Subsidiary of
The Magnavox Company

Fort Wayne
Indiana

LIGHTNING-FAST SALES



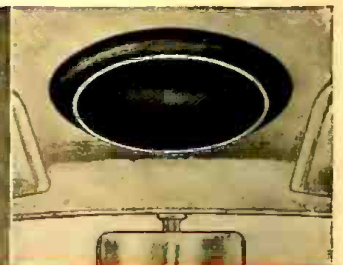
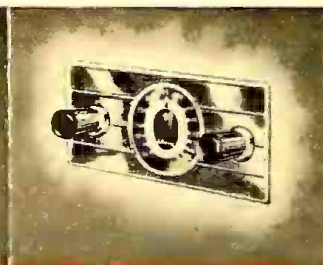
The Phantom Filter

NEW AND EXCLUSIVE DEVELOPMENT IN

ARVIN

TAILOR-FIT

Car Radio



Three powerful radios, two 6 tube sets and a super 7 tube model, with matching panel or universal controls and overhead, separate case or in-the-set speakers. Complete set prices as low as

\$39⁹⁵
LIST

● There's lightning fast sales action in the new Arvin Car Radios, simply because they perform so well . . . when folks hear 'em play they exclaim, "I never heard such a hot performin' car set."

It's all due to the many Arvin engineering achievements headed by the sensational Phantom Filter—a "booster station" that steps up power and brings in more stations, more clearly. The Automatic Eliminoise, Geographical Compensator and Permatune Transform-

ers are other exclusive features that contribute to the brilliant performance of the new Arvins.

Arvin backs you up with a complete line-up of action-getting sales helps, free to registered dealers, and powerful nation-wide consumer advertising. Ask your jobber about the Arvin Floor Plan Deal.

NOBLITT-SPARKS INDUSTRIES, Inc., *Columbus, Indiana*
Also makers of Arvin Radios for the home and Arvin Hot Water Car Heaters

ASK YOUR JOBBER ABOUT THE NEW ARVIN FLOOR PLAN DEAL

NEW THINGS

Ranger-Examiner tube tester



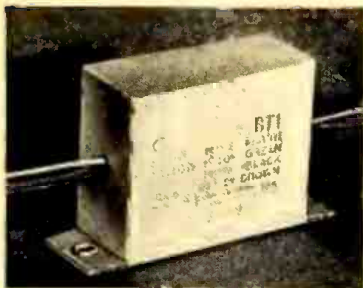
★ Emission type tube checker with direct reading good-bad scale. Only four simple operations required. Checks shorts and leakage—shadow-graph AC meter for line adjustments. Housed in a metal case with silver and black modernistic panel. Model 440—net \$18. Readrite Meter Works, Bluffton, Ohio—RADIO TODAY.

Exponential speakers



★ Magic Magnet air column speakers for outdoor use. Quartz ribbon voice coil unaffected by moisture or temperature variations. Nipermag magnets provide high flux in the air gap. Spun aluminum horns. Model FYA illustrated—list \$66.50 complete. Will handle 15 watts—28-inch air column—24-inch bell. Other models to handle 25 and 30 watts. Excellent frequency response. Cinaudagraph Corp., Stamford, Conn.—RADIO TODAY.

Universal condenser replacements



★ 3 additional universal replacement condensers have been announced by Sprague. BT-100 is a rectangular unit having 3, 8-mfd. sections at 200 volts, and 2, 5-mfd. sections at 25 volts. ST-1 is same condenser in round card-

board casing. BT-1 has 5, 10, 25 mfd. sections at 150 volts. Numerous combinations can be obtained by paralleling the sections which have separate leads. Sprague Products Corp., North Adams, Mass.—RADIO TODAY—see also advt. p. 72.

Operadio intercommunicator

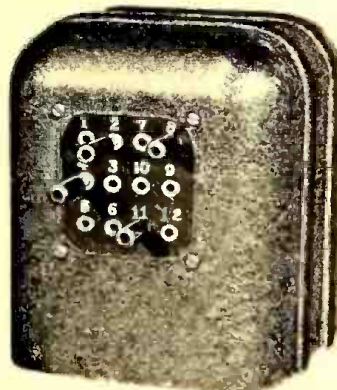
★ Two-way system of inter-office communication. Cased in steel cabinet. Speech may originate at either position. Permodynamic speaker used as mike and reproducer. Separate volume control on each unit. Connected by No. 18 twisted cable. Type A system—list \$75. Type B is a master system with maximum of 10 outlying stations. Type C is a multiple unit system of 3 to 11 stations—all able to communicate with each other. All AC-DC operation. Operadio Mfg. Co., St. Charles, Ill.—RADIO TODAY—see also advt. p. 34.

Air-tuned I.F. transformers



★ Line of air-dielectric tuned intermediate transformers. Air type condensers provide extreme stability and low losses. Available with iron or air core windings—Isolantite insulation. Primary and secondary adjustments at top of shield—size 2 in. square by 4½ high. List \$5—\$6.50. J. W. Miller Co., 5917 S. Main St., Los Angeles, Calif.—RADIO TODAY.

Modulation transformers



★ Four multi-match modulation transformers for use in amateur transmitters. Plug-in type connectors permit rapid matching of modulators to amplifier load. Available in 50, 125, 250, 500 watt ratings. Thordarson Electric Mfg. Co., 500 W. Huron St., Chicago, Ill.—RADIO TODAY.

★ On page 54 of the January RADIO TODAY, in the item about Sprague condensers, the condensers were referred to as electrolytic, whereas they are ordinary paper sections.

Vac-o-grip speaker carriers



★ Vacuum operated carrier for mounting speakers on the metal roofs of cars without drilling. Single unit model illustrated. Vacuum from car engine holds frame securely to top of car—suction great enough to prevent unit from sliding or falling off. P.A. carrier No. 4 for single speaker—\$12.80. Vac-o-grip Co., 2023 Detroit Ave., Toledo, Ohio.—RADIO TODAY.

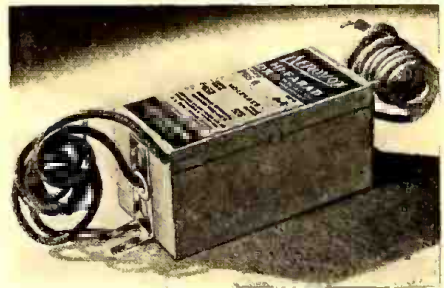
Taco wavetrap

★ Wavetrap for reducing signals of interfering broadcast stations. Available in 3 ranges, 450-750, 750-1150, 1150-1550 KC. Connects between antenna and set. Housed in small cylindrical case. Sells for less than \$1. Technical Appliance Corp., 17 E. 16th St., New York, N. Y.—RADIO TODAY.

Weston tube checkers modernized

★ Many of the older type Weston tube checkers can be rebuilt to accommodate the newer types of tubes. Rebuilds are offered of the following models: 674, 676, 676-R, 677-R, 678-R, 679-R, 681, 682, Jewell 538-R (letter R indicates that it has already been rebuilt once). Test data charts are furnished with all rebuilds. Weston Electrical Instrument Corp., 614 Frelinghuysen Ave., Newark, N. J.—RADIO TODAY—see also advt. p. 45.

Mounting flanges



★ Aerovox PBS card-board cased electrolytics are now equipped with a universal mounting flange. Fully adjustable so as to hold the unit flat against chassis, upright, or stacked by interlocking and soldering the flanges. Slots allow for variable spacing of mounting holes. Units available in 250 and 450 volt ratings. Aerovox Corp., 70 Washington St., Brooklyn, N. Y.—RADIO TODAY—see also advt. p. 69.

NEW THINGS

Triplett audio oscillator



★ AC operated audio oscillator for receiver and amplifier testing. Delivers sine wave voltage at following frequencies—100, 250, 500, 1000, 2000, 3000, 4000, 5000, 7500, 10,000 cycles. Attenuator for measuring gain percentages. Housed in metal case. Model 1260—net \$28.33. Triplett Electrical Instrument Co., Bluffton, Ohio—**RADIO TODAY**—see also advt. p. 61.

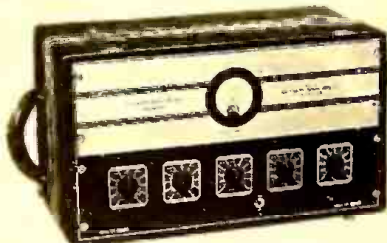
Wright-deCoster speakers



★ Speaker designed for remote position. Housed in steel cabinet—standard 482 5-inch nokoil unit. Model 596.

Model 1136 is for use in an auto. Uses model 980 nokoil speaker—requires no field excitation. Cabinet mounted by a single stud—fits any auto installation. Wright-deCoster, Inc., 2233 University Ave., St. Paul, Minn.—**RADIO TODAY**—see also advt. p. 71.

Lafayette co-ordinated sound systems



★ Complete line of sound systems with scientifically matched components. Available in five sizes from 5 to 60 watts. Mike, amplifier and speaker designed to be used with each other. Wholesale Radio Service Co., Inc., 100 Sixth Ave., New York, N. Y.—**RADIO TODAY**—see also advt. p. 56.

Western Electric mike

★ Dynamic microphone that is changeable from a non-directive unit to a semi-directive unit. Cylindrical case with perforated hemispherical end. Made directional by adding a small baffle to the end. Response well balanced from 40-10,000 cycles—output level minus 90 DB. Suitable for PA and sound reinforcing systems. Type 633A. Western Electric Co., 195 Broadway, New York, N. Y.—**RADIO TODAY**—see also advt. p. 71.

Atlas speaker stand



★ Floor stand for speaker. Adjustable height—maximum 8 feet. Adjustable rubber-tipped feet prevent wobbling. Shiny fittings—black finish. Special saddle for mounting baffle. Model AS-10—list \$12.50. Atlas Sound Corp., 1451 39th St., Brooklyn, N. Y.—**RADIO TODAY**—see also advt. p. 42.

Meissner dual wavetrap

★ Wave trap for eliminating both I.F. and broadcast interference at the same time. Consists of 2 units—one tuning 400-700 KC for the I.F. frequency—other tuning 700-1720 KC. Iron-core coils provide extremely high efficiency. Type 8048—list \$2.65. Meissner Mfg. Co., Mt. Carmel, Ill.—**RADIO TODAY**—see also advt. 70.

Precision multimeter



★ Eleven range DC multi-meter. DC voltage ranges 0/10/100/250/500/1000 at 1000 ohms per volt. DC mills 0/1/10/100/25. Ohm scales 0/500/300,000. Ranges selected with switch. Leather finished case 4½ x 7 x 2½ inches. Model 830—net \$10.95. Precision Apparatus Co., 121 E. New York Ave., Brooklyn, N. Y.—**RADIO TODAY**.

ATR vibrators

★ Complete line replacement vibrators for auto and farm radios featuring improved performance, precision construction, and lower prices. Vibrator guide sent free to servicemen. American Television & Radio Co., 128 E. 10th St., St. Paul, Minn.—**RADIO TODAY**.

Electro-Acoustic amplifier



★ 30 watt beam power amplifier with provision for mixing 3 crystal or 3 velocity mikes and high-impedance pick-up. 5 controls for mixing, fading and tone. Amplifier supplies field for 2 13,000 ohm speakers or 1 5000 ohm. Field circuit separate from filter. Model A-3023—list \$87.50. Electro-Acoustic Products Co. (subsidiary of Magnavox), Fort Wayne, Ind.—**RADIO TODAY**—see also advt. p. 27.

Crystal musical pick-up



★ Vibration type pick-up for use with musical instruments. Type VP-1-M has a frequency range up to 8000 cycles. Size is only ¼ x ½ x 1½ inches. May be cemented in place or clamped. List \$17.50. Brush Development Co., E. 40th & Perkins, Cleveland, Ohio—**RADIO TODAY**—see also advt. p. 46.

Bullet mike in colors

★ Chinese red and antique ivory finishes are now available for the Bullet dynamic microphones. Standard black is still available. Colors are ideal for such installations as night clubs. Model TR-3 in colors—list \$27.00. Transducer Corp., 30 Rockefeller Plaza, New York, N. Y.—**RADIO TODAY**—see also advt. p. 70.

Multi-tester



★ Low-cost multiple range meter. 2000 ohms per volt movement—0/5/50/500/1000 volts DC; 0/5/5/50/500/5M mills; 0/500/50M/1meg resistance. Ranges available at pin-tip jacks. Model 408—net \$9.95. With rectifier for AC voltages—\$13.90. Size 3x5½x2 inches with 2¾ inch meter. Radio City Products Co., 88 Park Place, New York, N. Y.—**RADIO TODAY**.

MAKE MORE MONEY

... Selling

WEBSTER-CHICAGO

The Fastest-Moving Line of SOUND EQUIPMENT

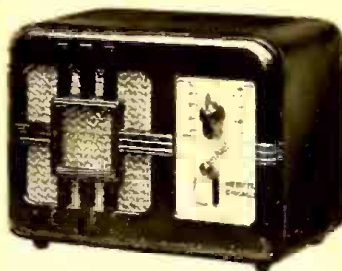
All radio dealers and service dealers should investigate the money making possibilities of the Webster-Chicago line of sound equipment, public address systems and accessories.



SOME OF WEBSTER-CHICAGO'S DEALER HELPS

1. Sound Engineering Book... Useful Engineering Sales Help.
2. School and Institutional Mailing Piece.
3. Inter-Office Communication System Folder.
4. Factory Call System Broadside.
5. Dealer Signs with Individual Dealer Name.
... Part of a definite plan of cooperation with you to sell sound.

Model PA - 530 MOBILE SYSTEM. For 6 Volt DC or 110 Volt AC operation... Hand type crystal microphone, 2 P.M. speakers, phonograph turntable built into amplifier. A 30-watt ALL PURPOSE SYSTEM.



Model OCM INTER-OFFICE COMMUNICATION SYSTEM



Model PA-20A PORTABLE SYSTEM. A 20-watt Portable System, packed in 2 handy cases. 2 P.M. speakers, crystal microphone with full length floor stand, dual input electronic mixer, amplifier uses latest type beam tubes.



- A complete Sound line. . . . All items.
- Designed by Specialists with many years experience in Sound Engineering. . . . All the very latest features. . . . Many exclusive WEBSTER-CHICAGO developments.
- Priced to sell in volume.
- Extensive and sustained advertising to the Consumer —with inquiries forwarded to dealers.
- Dealer helps that definitely open doors.

Such outstanding merchandise backed by such intensive selling efforts creates turnover . . . the backbone of dealer profit.

WEBSTER - CHICAGO

Strict Dealer Policy

Fully Licensed

NOTICE to DEALERS: For More Information Send Coupon

WEBSTER-CHICAGO, Section M-9, 3825 W. Lake St., Chicago, Ill.

- | | |
|---|--|
| <input type="checkbox"/> Inter-Office Systems | <input type="checkbox"/> School Systems |
| <input type="checkbox"/> Mobile Systems | <input type="checkbox"/> Factory Call Systems |
| <input type="checkbox"/> Portables | <input type="checkbox"/> Sound Accessory Items |
| <input type="checkbox"/> Fixed Systems | <input type="checkbox"/> Dealer Helps |

Without obligation please send me more information on checked items.

Name.....

Address.....

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

TELL-ALL ON INTERCOMMUNICATORS

Model No.	List for 2 stations	List for additional stations	Type of system	No. of remote stations	Trans. line required	Type power supply	No. of tubes	Pick-up at how many feet	Maximum distance between units	Volume control	Momentary talk switch	Size of master unit	Size of remote unit
Allied Radio Corp., 833 W. Jackson Blvd., Chicago, Ill.—"Knight"													
A12080	\$ 45.00	\$ 17.50			Yes	110 AC-DC	3	10	1500		Yes	7½x7½x5¼	7½x7½x5¼
A12083	75.00	17.50	Master	4	Yes	110 AC-DC	3	10	1500	Master	Yes	10x8½x6¾	7½x7½x5¼
A12085	130.00	47.50	Multiple	4	Yes	110 AC-DC	3	10	1500	All stations	Yes	10x8½x6¾	10x8½x6¾
David Bogen Co., Inc., 663 Broadway, New York, N. Y.—"Bogen Communo-Phone"													
2SC	49.50				Yes	110 AC-DC	2	2	500		Yes	8x8x4	8x8x4
5SC	105.00	52.50	Multiple	Unlimited	Yes	110 AC-DC	4	10	1000	All stations	Yes	7½x8x7	7½x8x7
American Carrier Call Corp., 119 W. 57th St., New York, N. Y.—"Carrier Call"													
	\$ 65.00				No	110 AC-DC	4	NS	NS	All stations	Yes	9x6¼x5½	9x6¼x5½
Dictograph Products, Co., Inc., 580 Fifth Ave., New York, N. Y.—"Dictograph"													
	\$ 65.00 and up		All types	Unlimited	Yes	Battery	None	4	Unlimited				
Electronic Devices, Inc., 626 Broadway, Cincinnati, Ohio—"Portaphone"													
FL	\$ 65.00	\$ 32.50			No	{110-220}	3	20	2500	Yes	No	6x7x9½	6x7x9½
NS	NS	NS	Master	6	No	{AC-DC}	NS	20	2500	Yes	No	NS	NS
Electronic Sound Labs., Inc., 5912 Melrose Ave., Hollywood, Calif.—"E. S. L."													
M50	\$ 49.50	\$ 15.00	Master	Unlimited	Yes	{110 AC-DC}	3	50	3000	Internal	Yes	11x8x8	11x8x8
Laurehk Radio Mfg. Co., E. Michigan St., Adrian, Mich.—"Laurehk"													
IC-42	\$ 32.75	\$ 10.00	Master	4	Yes	110 AC-DC	NS	3	100		Yes	NS	NS
Miles Reproducer Co., Inc., 114 W. 14th St., New York, N. Y.—"Vocaphone"													
201	\$ 69.50	\$ 20.00	Master	Unlimited	Yes	110 AC-DC	4	40	500	Yes	Yes	8x8x8	8x8x8
601	79.50	20.00	Master	Unlimited	Yes	110 AC-DC	4	40	2000	Yes	Yes	8x8x8	8x8x8
Operadio Mfg. Co., St. Charles, Ill.—"Operadio"													
A	\$ 57.50				Yes	110 AC-DC	3	50	1000	Yes	Yes	9x5x7½	9x5x7½
B	NS	NS	Master	10	Yes	110 AC-DC	3	50	1000	Yes	Yes	9x5x7½	9x5x7½
C	NS	NS	Multiple	10	Yes	110 AC-DC	3	50	1000	Yes	Yes	9x5x7½	9x5x7½
Ottawa Radio Co., 308 W. Lafayette St., Ottawa, Ill.—"Ottawa"													
CR-10	\$ 55.00	\$ 27.50	Master	7	Yes	110 AC-DC	4	3	500	Yes	Yes	8x14x7	8x14x7
Philco Radio & Television Corp., Tioga & C Sts., Philadelphia, Pa.—"Philcophone"													
901,902	\$ 49.50	\$ 10.00	Master	4	Yes	110 AC-DC	4	40	1000	Master	Yes	NS	NS
Radolek Co., 601 W. Randolph St., Chicago, Ill.—"Radolek"													
	\$ 35.00	\$ 8.00	Master	6	Yes	110 AC-DC	3	3	250	Optional	Yes	12x6x7	6x6x5
Remler Co., Ltd., 2101 Bryant St., San Francisco, Calif.—"Remler"													
C10	\$ 47.00				Yes	110 AC	3	25-75	1000	Master	Yes	10x6½x5	10x6½x5
M50	52.00	\$ 16.50	Master	12	Yes	110 AC	3	25-75	1000	Master	Yes	10x6½x5	10x6½x5
M70	86.00	\$ 45.50	Multiple	12	Yes	110 AC	3	25-75	1000	All stations	Yes	10x6½x5	10x6½x5
Sound Systems, Inc., 6545 Carnegie Ave., Cleveland, Ohio—"S. S. I."													
CY50-51	\$35.00	\$ 10.00	Master	17	Yes	110 AC-DC	3	3	1000	Master	Yes	7x5x4	7x5x4
52-53-54		\$ 12.50	Multiple										
Transphone Corp. of America, 14 W. 45th St., New York, N. Y.—"Transphone"													
D	\$ 65.00		Master	10	No	110 AC-DC	NS	NS	NS	Yes	Yes	11½x6½x7½	11½x6½x7½
Transducer Corp., 30 Rockefeller Plaza, New York, N. Y.—"Bulletphone"													
C2	NS	NS	Master	3	Yes	110 AC-DC	NS	10	Unlimited	No	Yes		
C3, C4	NS	NS	Master	3	Yes	110 AC-DC	NS	10	Unlimited	No	Yes		
S3, S4	NS	NS	Multiple	3	Yes	110 AC-DC	NS	10	Unlimited	No	Yes		
T3, T4	NS	NS	Master	3	Yes	110 AC-DC	NS	10	Unlimited	No	Yes		
Also available in 6 and 32 volt DC types.													
Turner Co., Cedar Rapids, Iowa—"Speech Relay" "PDQ"													
	\$125.00	\$ 30.00			Yes	110 AC-DC	NS	40	2000	Yes	Yes	NS	NS
	140.00	30.00	Master	9	Yes	110 AC-DC	NS	40	2000	Yes	Yes	NS	NS
	170.00	35.00	Multiple	9	Yes	110 AC-DC	NS	40	2000	Yes	Yes	NS	NS
PDQ	64.50	12.00			Yes	110 AC	NS	40	2000		Yes	7½x7½x4	7½x7½x4
United Scientific Labs., 510 Sixth Ave., New York, N. Y.—"Electrocal"													
200	\$18.00				Yes	110 AC-DC	2	8	1000	Yes	Yes	8x5x6	8x5x6
202	48.00	\$ 24.00	Master	6	Yes	110 AC-DC	2	8	1000	Yes	Yes	8x5x6	8x5x6
United Sound Equipment Co., 2233 University Ave., St. Paul, Minn.—not available as we go to press.													
Webster Co., 3825 W. Lake St., Chicago, Ill.—"Webster-Chicago"													
OC2	\$ 73.50				Yes	110 AC-DC	3	10	500	Yes	Yes	6x7½x9	6x7½x9
OCM	73.50	\$ 45.00	Master	10	Yes	110 AC-DC	3	10	500	Yes	Yes	6x7½x9	6x7½x9
Webster Electric Co., De Koven & Clark, Racine, Wis.—"Teletalk"													
	\$ 51.00				Yes	110 AC-DC	3	4	2000	Master	Yes	11½x6x7½	11½x6x7½
	NS	\$13.50 & 21.00	Master	9	Yes	110 AC-DC	3	4	2000	Master	Yes	11½x6x7½	11½x6x7½
	NS	NS	Multiple	9	Yes	110 AC-DC	3	4	2000	All stations	Yes	11½x6x7½	11½x6x7½

* Listed above are specifications of some 40 intercommunications systems manufactured by half as many companies. Basic price is given for two stations and does not include installation fees or transmission line.

Intercommunicators can be divided into three distinct types: non-selective units of which the simple two station installation is typical. With the non-selective types it is sometimes possible to have as many as six or more operating on a common system, but speech is heard at all stations when anyone is talking over the system.

The master type of system has a

master unit, which is capable of selecting any desired remote station. In this way it is possible to carry on a conversation with any remote station without the other stations hearing anything.

Third system is the use of a number of master units—this has been labeled *multiple* because of the use of several master systems. In the multiple installation it is possible for any station to talk with any other station directly and privately. Also the operation of any pair of stations has no effect on the other stations so that they may also be used simul-

taneously for separate communication. In other words, if there were six stations, it would be possible for three pairs of units to be operating at once without interfering with each other.

A listing appears above which gives a comparative idea of the sensitivity of the various units—it has the heading *pick-up at how many feet* and figures are given for normal talking voice. Many systems with low sensitivity have been made purposely so—and if required can usually be made more sensitive.

The SYSTEM that MADE a NEW INDUSTRY!



CARRIER-CALL

WIRELESS-PORTABLE

T.M. REG. APP. U.S. PAT. OFF.

ORIGINATORS
of the INSTANT 2-WAY
COMMUNICATING SYSTEM

Plug into any electric light socket,
press the signal, talk... and listen.

- **WIRE-LESS . . . NO WIRES . . . NO BATTERIES . . . NO INSTALLATION COSTS.** Nothing extra to sell. You sell what you advertise . . . packaged merchandise . . . ready to plug in.

- **PORTABLE . . . MOVE IT ANYWHERE AT WILL!** Move from room to room . . . from floor to floor . . . from building to building . . . just pick it up and take it with you . . . you plug it in just like a lamp.

- **OPERATES . . . On AC or DC current.**

- **EXCLUSIVE . . . Opens tremendous market** where other types of equipment cannot be used . . . giving CARRIER-CALL an exclusive and powerful selling advantage.

- **LICENSED . . . CARRIER-CALL is licensed** by Electrical Research Products, Inc., under patents owned or controlled by American Telephone and Telegraph Co. and Western Electric Company, Inc. This is **DOUBLE PROTECTION** for you.

- **MARKETING ADVANTAGES . . . CARRIER-CALL** gives the distributors and dealers the best and surest opportunity for the profitable sale of communication systems, from every merchandising and technical standpoint.

- **CARRIER-CALL** has created this phenomenal new market because it has none of the limitations of the older types.

- **FAMOUS SCIENTISTS SEE CARRIER-CALL IN ACTION.** On October 5th, 1936, CARRIER-CALL was presented to an audience of distinguished scientists at the **NEW YORK MUSEUM OF SCIENCE AND INDUSTRY . . .** where it was subjected to the most exacting analyses and tests and overnight became the sensation of the scientific world . . . creating a new industry . . . bringing in orders and inquiries from every corner of the earth.

- **THE CARRIER-CALL DISTRIBUTOR FRANCHISE** presents:

**NEW MARKETS
ATTRACTIVE PROFIT MARGINS
EXCLUSIVE TERRITORIES
PRODUCT LEADERSHIP
COOPERATIVE ADVERTISING**

- **DISTRIBUTORS . . . DEALERS!**

Here's an unusual merchandising proposition. A "Packaged" over-the-counter item that sells itself on demonstration. Everybody is a prospect . . . Offices, Plants, Factories, Banks, Hotels, Restaurants, Schools, Colleges, Theatres, Hospitals, Churches, Clubs, Halls, Auditoriums, Stores, Shops, Parks, **PRIVATE HOMES**, Doctors, Dentists . . . wherever people talk and listen.

SOME VERY ATTRACTIVE TERRITORIES STILL ARE AVAILABLE TO ACCEPTABLE DISTRIBUTORS AND DEALERS... WIRE OR WRITE TODAY—YOUR QUALIFICATIONS, TERRITORY YOU COVER, AND YOUR SALES FACILITIES . . . WE WILL CONTACT YOU PROMPTLY.

**AMERICAN CARRIER-CALL CORPORATION
119 West 57th Street · · New York, N. Y.**

To Champion Jobbers' and Dealers' PROFITS



Want to keep abreast of Sound?

Then ask to be put on our list to receive "THE SOUND ADVISOR" — a monthly publication sent with our compliments. Address Dept. R. T. 3.

... has always been the policy from which we have never deviated. We offer not only a substantial profit to jobbers and dealers, but so conduct our business that you actually *make* those profits.

OPERADIO does not enter into competition with jobbers and dealers by selling direct to the consumer. Neither do we countenance, directly or indirectly, the practice of competing unfairly with our established outlets by selling *everyone* and *anyone* who can purchase our equipment and pay for it.

To maintain a policy which allows for protected profit taking ... to pass by the business of those who operate against our established jobber-dealer setup ... to refuse the business of the "price chiseler" ... those are the principles to which we subscribe.

Mr. Jobber and Mr. Dealer ... we submit that when you sell OPERADIO Sound and Public Address Equipment you make more money because you are dealing with a company who does not sell all comers at your expense.

★ **A NEW LINE?** ... Operadio does not obsolete jobbers' and dealers' stocks by bringing out a new line periodically. To be sure, progress demands that we give you the benefit of new developments as they are proved practical and saleable. Such new developments will be announced shortly.

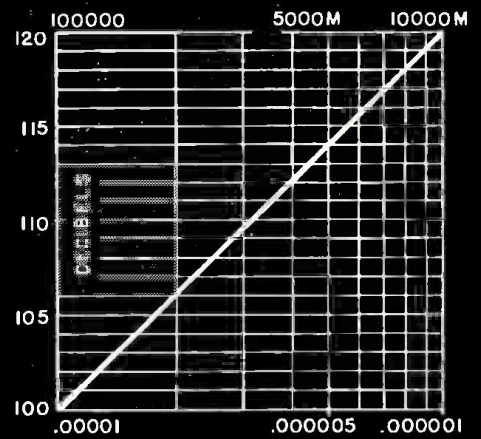
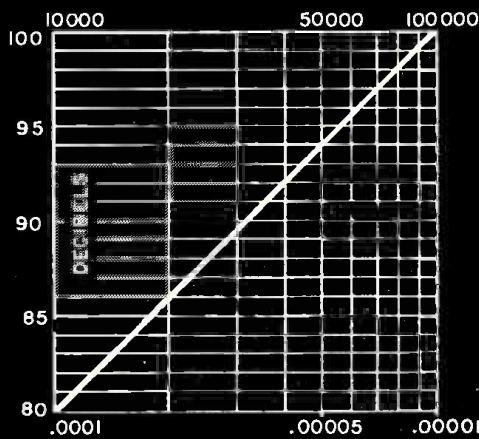
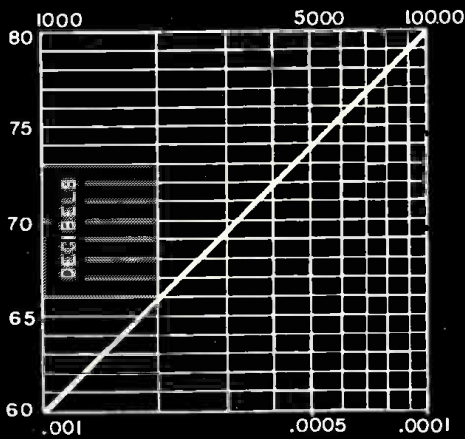
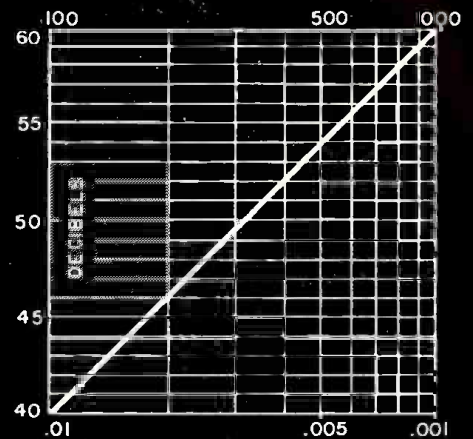
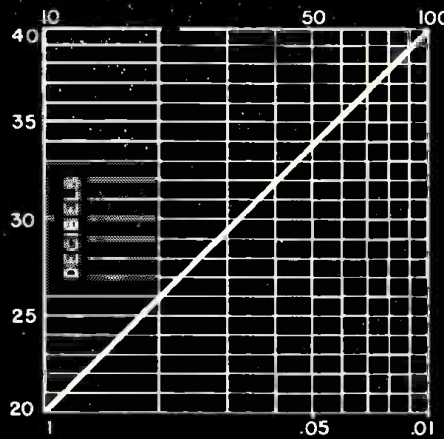
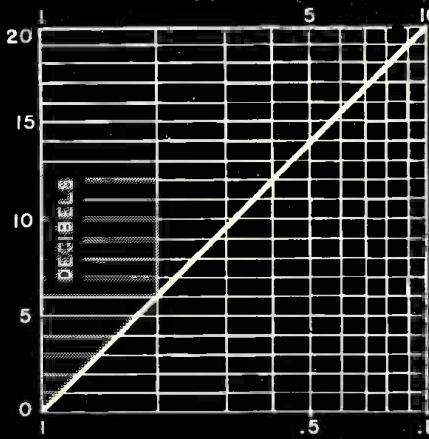
OPERADIO

MANUFACTURING COMPANY ST. CHARLES ILLINOIS

A NAME LONG KNOWN FOR FAIR DEALING AND QUALITY IN SOUND AND PUBLIC ADDRESS EQUIPMENT

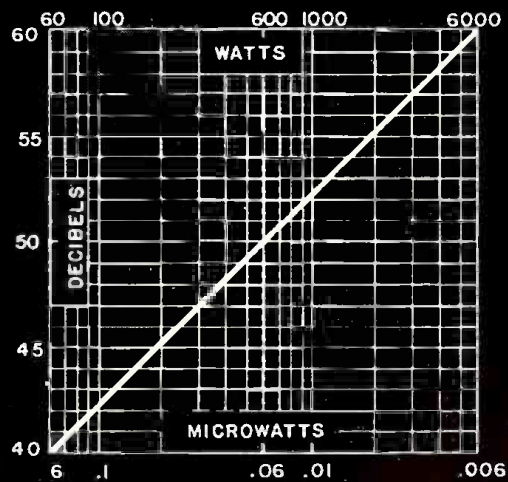
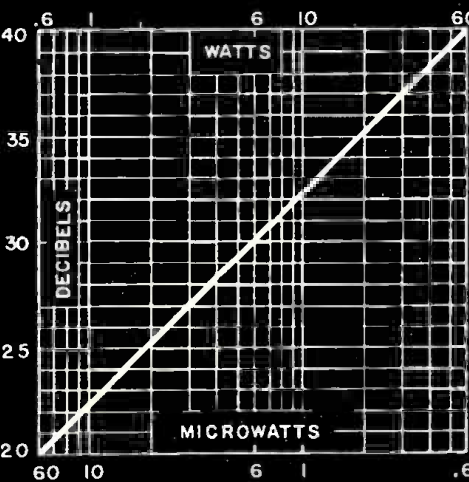
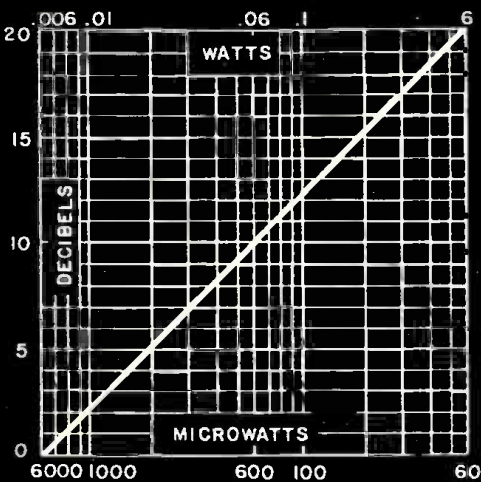
DECIBEL RATIOS & POWER LEVELS

DECIBEL GAIN OR LOSS VS. VOLTAGE RATIO



FOR DECIBEL GAIN READ TOP SCALES FOR VOLTAGE RATIO
 FOR DECIBEL LOSS READ BOTTOM SCALES FOR VOLTAGE RATIO

DECIBEL LEVEL VS. POWER LEVEL



FOR PLUS DECIBEL LEVEL READ TOP SCALES FOR WATTS
 FOR MINUS DECIBEL LEVEL READ BOTTOM SCALES FOR MICROWATTS
 0 DB. = 6.00 MILLIWATTS

**RADIO
TODAY**

SERVICING AND MAINTAINING SOUND EQUIPMENT

Practical hints for the man with radio-service experience

★ A HIGH-GAIN amplifier, contrary to general opinion, is quite different from ordinary radio set audio amplifiers. The tolerance on the various parts and frequency characteristic are more rigid than in a receiver—higher gains and operation at extremely low levels introduce many problems not found in a radio set. Many PA amplifiers have more gain than an entire radio, including RF and IF circuits.

When called into service any sound installation the first thing to determine is whether or not the system ever worked properly. If it did, and no changes have been made either in the installation or the structure of the building, the serviceman should confine his efforts to locating some defect in the equipment instead of recommending changes or additional equipment, advises Art Schneider, N. Y. supervisor of RCA Centralized Sound and Photophone service. Also, he should obtain the service bulletins for the particular system employed—this is particularly important in view of the fact that slight variations in operating voltages and parts values will affect the operation quite seriously. In other words, the serviceman cannot just assume that a certain value is *approximately* correct.

Closer tolerances

The closer tolerances required in sound systems are not in any way an indication that troubles are more likely to occur—in fact just the opposite is true with quality amplifiers since they are built more carefully and with more precise parts.

Difficulties with amplifier systems can be classified for discussion into four distinct groups: inoperation, inadequate volume, distortion, poor quality or frequency-response.

Inoperation, of course, means the failure of some part or parts. In installations using flexible cords for microphones, the input system is most prone to trouble—breaks frequently occur in the cables. The first test in such a set-up should be made in the input system—this is readily done by connecting a microphone directly to the input of the amplifier.

If the difficulty is not shown up by this test, it is best to work from the loudspeaker backwards. First test should be to see that the speaker

is getting field excitation and that the voice coil is not open. Voice coils can be easily checked using a small battery and noticing the movement of the cone when the voltage is applied.

The high-level amplifier stages can be rapidly checked by removing and replacing the tube—a plop indicates that the tube is functioning. On the lower level stages a hum or some noise should result when a finger is placed on the grids. These tests, which should be familiar to radio servicemen, will give a quick check and rapidly locate the defective stage. If the amplifier and speaker are okay, the only other sources of trouble are the pre-amplifier and the mike itself, since in the preliminary test a check was made of the input wiring system. We have assumed, of course, that the serviceman has kept his eyes open for such obvious things as smoking transformers or burnt-out tubes and improper voltages.

Mikes frequently are mistreated and as a result become inoperative. The best check for a mike is to substitute one that is known to be good—or test it with an amplifier that is working okay. *Ribbon or velocity mikes should never be tested with an ohmmeter*—the application of a volt-

age to the ribbon will cause the ribbon to be pushed out of the pole-pieces with such a force that it will break.

Mike cables are most easily checked by shorting the amplifier input end and opening the mike end—an ohmmeter applied to the mike end of the cable will provide a continuity check. The cable should be whipped around during this test to show up any intermittents. Also a check for shorting to the shield should be made.

The serviceman should never attempt to repair a quality mike for he has no instruments with which to tell if his repairs have been properly made. If the mike doesn't work properly it should be returned to the factory or local agent, advises RCA sound expert Schneider.

Inadequate volume

Inadequate volume is something that many servicemen are likely to blame upon the original installation—in fact many times additional amplifiers and many changes have been recommended. If the amplifier worked well once, it should be apparent that something in the set-up has gone bad—and the serviceman should use his head and locate a defect.

Tubes are one of the common sources of trouble—and usually they deteriorate gradually, making it necessary to increase the setting of the gain control. In the low-level high-gain stages the tubes are most critical. In fact, the ordinary tube testers are not satisfactory for checking the tubes, reports a large New York sound maintenance organization. Suspected tubes should be replaced with new ones. The high-gain tubes should be checked at intervals of about 1,500 hours use. Output tubes seem to operate about twice as long as the voltage amplifier ones. If the plate current becomes excessive they should be replaced even if the quality seems okay.

Resistors within 5%

Low volume may be caused by shorted voice coil turns or shorted output transformer. Changes in resistors will affect the gain considerably—in many amplifiers the resistors are held to within 2% but more often 5%. The accumulation of dust, moisture, etc., often will require replacement.

(To page 40)

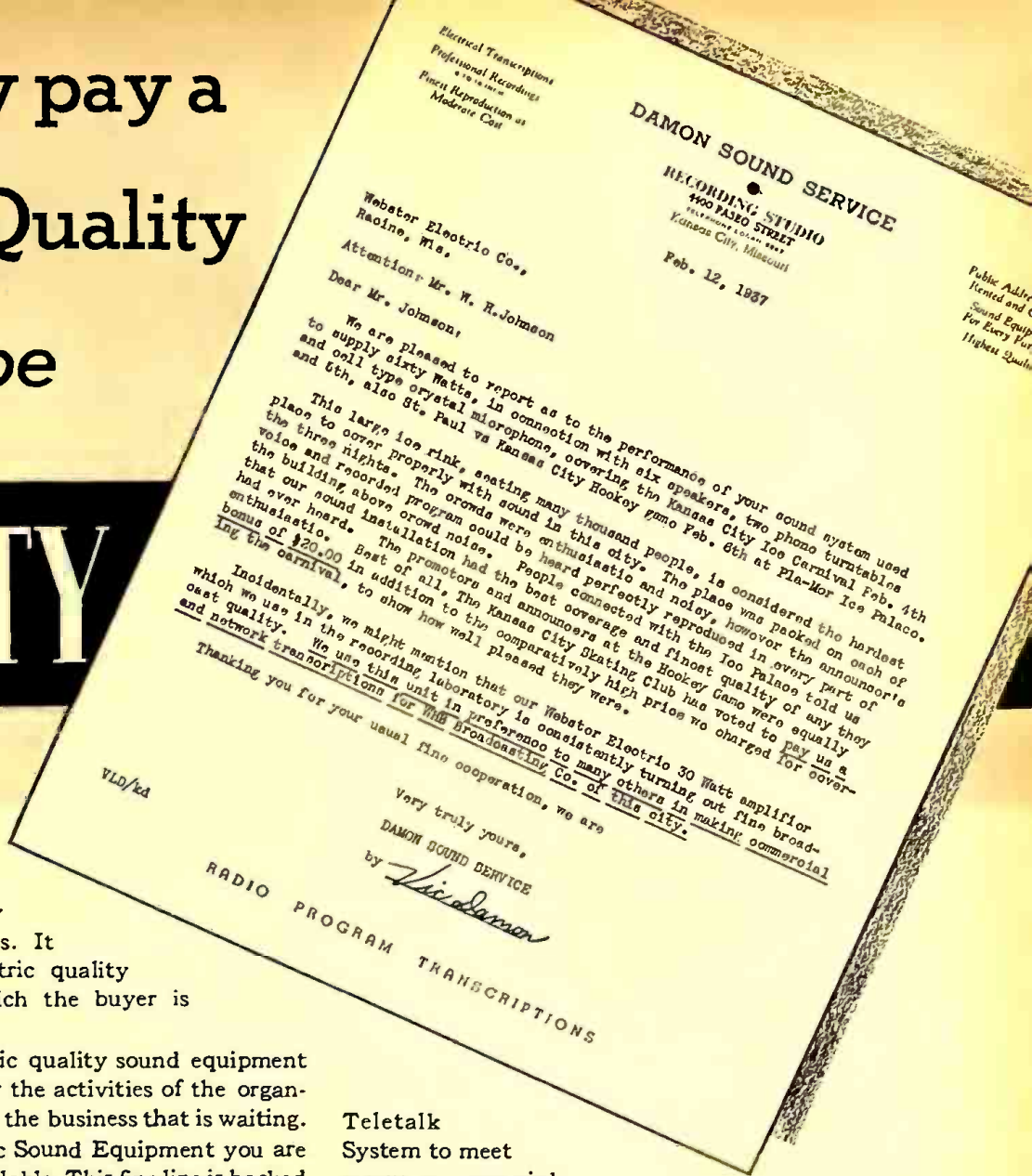


This non-directional Western Electric mike can be made semi-directional by the addition of a small baffle plate.

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it must be

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The market for Webster Electric quality sound equipment is unlimited. It is limited only by the activities of the organizations who aggressively go after the business that is waiting.

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Teletalk System to meet every commercial and industrial requirement.

Investigate the possibilities of the Webster Electric line. Complete bulletins and sales helps will be supplied on request. There is a large volume waiting those who go after it.

The Webster Electric Class "A" Sound System

This is the model referred to in the above letter. It is the Webster Electric Class "A" 30 Watt Semi-Portable Sound System. It comes to you complete in every detail. It will handle two crystal microphones and two 12" dynamic speakers.

Webster Electric Sound Systems are licensed by agreement with Electrical Research Products, Inc., under patents owned by Western Electric Company, Inc. and American Telephone and Telegraph Company

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 Established 1909

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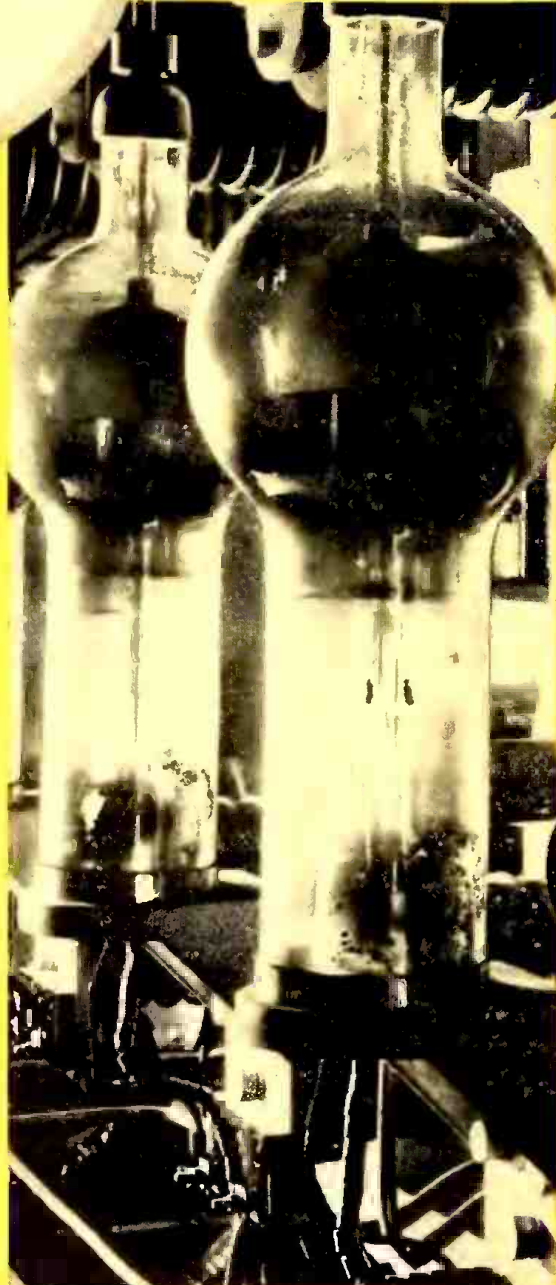
SOUND EQUIPMENT



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RCA equipment from microphones to power tubes is used by leading stations.



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communications... broadcasting... reception





...ALL THE WAY!



RCA owns and operates NBC, which brings to you scores of outstanding programs.

RCA equipment from microphones to power tubes is used by leading stations.

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"RCA ALL THE WAY" is more than a slogan. It's a statement of fact that means much... to the radio consumer's satisfaction and pleasure... to the dealer's sales and profits. That RCA makes *everything* in radio from the microphone in the studio to the loudspeaker in the home is important. Only RCA is actively engaged in *every* phase of radio. When you buy or sell an RCA product, you can be sure it is soundly engineered by men skilled in all fields of radio... men who have given the benefits of their wide knowledge of every division of the industry to each individual RCA product they design.

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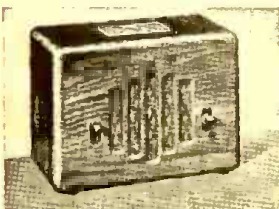
This revolutionary new device simply plugs in, and gives perfect amplified sound by merely pressing down on the "talk-listen" key!

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No installation or service headaches. No competition with other so-called intramural communication systems. AC or DC current, consumption negligible. Speeds up office efficiency, keeps phone lines open for incoming calls.

*A beautiful MERCHANDISING weapon
for the modern electrical wholesaler!
Write for all the facts*

UNITED SCIENTIFIC LABS., Inc.
62 West 14th Street New York City



SERVICING SOUND

(From page 36)

ment of the unit. Coupling condensers in the resistance coupled stages will affect the gain tremendously as well as the quality.

In some amplifiers it is common practice to group the cathode by-pass condensers in a can with a single ground lead. Should this lead become broken or the connection be bad, the removal of all the by-pass condensers will render the amplifier highly degenerative, greatly reducing its gain.

Cleaning up the socket contacts and brushing out the dust has been known to give increases in gain as great as 6DB.

Insufficient field voltage

Changing of speakers and mismatching often affects the gain and undistorted power output. Insufficient field current or voltage will lower the speaker efficiency tremendously resulting in a lower output. Ordinarily as much as a 10% increase in field voltage will have no ill effects although the field heat dissipation is increased about 20%. But a similar decrease in it cannot be tolerated in most systems, since the speakers are operated at as low an excitation as is possible for satisfactory operation.

Moisture in microphone cables or the input wiring systems in some instances has decreased available input voltage to such a degree that normal output could not be obtained. This condition can be determined with a megger or megohmmeter—or substitution.

Distortion may be caused by any of the troubles commonly found in receivers. Tubes are often at fault. When push-pull tubes are used, particularly class B, the plate currents should be equal both at zero and maximum output levels. Mismatching of speakers, shorted turns, and field excitation may be the cause of distortion.

Very often the distortion is caused by overloading of the amplifier, in either the output or low-level stages—reducing the input is the obvious cure. And if the gain is then insufficient, find out where the loss of gain is occurring.

Frequency characteristics

The quality of reproduction is governed by many factors that should be recognized. For instance, at low levels the human ear is not as responsive to low frequencies. Such a fault is

not caused by the amplifier—but still it must be corrected. The purpose of a sound installation is to amplify the original sound intensities—and to the ear they must still sound the same as before amplification.

When a mike is used for speech at close quarters (up to two feet) the amplifier frequency characteristic must be altered so as to reduce the low frequencies—otherwise the output will be boomy. Yet if a long distance pick-up is used the low frequency response of the amplifier must be increased or the output will sound tinny. And the only change was in the distance between the sound source and the mike.

High frequency response is often reduced when long lines are used with very high impedance microphones. Placing curtains over the speakers will also decrease the high-frequency response.

If it is desired to alter the frequency response of the amplifier for various types of pick-up, the tone controls will usually do the trick. Any changes in the amplifier itself should be made in accordance with the manufacturer's instructions.

Changes in coupling resistances and capacitors have a marked effect on the response characteristics—both at high and low frequencies. When it is suspected that they may be the cause, their values should be checked with the manufacturer's service bulletins. And it should be remembered that the tolerances are much closer than is found in receivers.

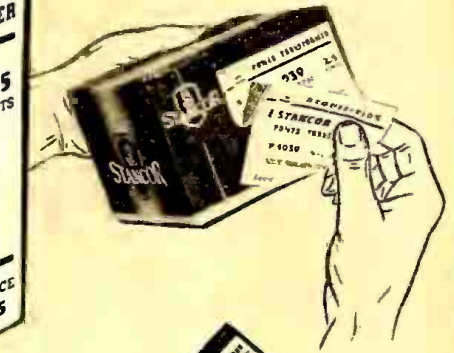
For test equipment the servicemen should have an audio frequency oscillator that will give harmonic-free signals over the entire audio band. High-resistance voltmeters are essential for measurements in the resistance coupled circuits. And a meter calibrated in DB is useful for checking the output and the results of various changes. For checking distortion and the operation of the various stages, a cathode-ray oscillograph with a sweep is very useful.

HIGH-FIDELITY REPRODUCTION

★ With the present high-fidelity trend, service and sound men should realize that a high-fidelity speaker is only part of the requirement for a high-fidelity system. Other things must be taken into consideration—particularly the harmonic content of the amplifier.

Quoting Wright-DeCoster's presi-

Let Us keep your INVENTORY!



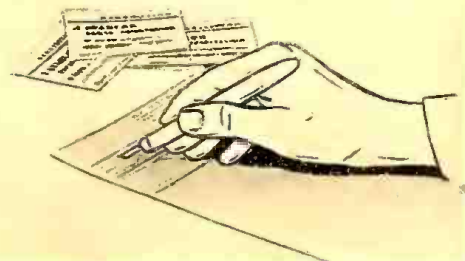
for your Convenience

Stancor makes it possible to throw the "want book" in the discard. There need be no more shortage in your transformer stock. . . and no troublesome inventory routine to keep track of what is on the shelves.

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UNDER
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ACHIEVES
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SUCCESSFUL

in performance: "A magnificent instrument . . . Despite the climate here, results are marvelous and could not be bettered. I am sure". D. Hopkins, Raffles Hotel, Singapore.

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in design: "Your streamline mike is going over big with our trade. Congratulations on its fine design and performance". R. Ruben, Saugus, Mass.

SUCCESSFUL

in construction: "We believe no other mike could take the punishment it has and still give such excellent reproduction". Johnston P.A. Service, Oneonta, N. Y.

SUCCESSFUL

in sales: "The finest type microphone that I ever used . . . Please duplicate my order". Ridley's P.A. Systems, Inc., Tulsa, Okla.

FEATURES:

1. Output increased 6 DB.
2. Triple shielded—entirely eliminating hum pickup.
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4. Excellent for close talking and distant pickup.
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MODELS RBHn (High Impedance); RBMn (200 ohms), with Cable Connector and Switch. **\$42.00 LIST**

NEW! Models RBSn, RSHn; streamline; slightly lower output and frequency range than above, with Switch only. **\$32.00 LIST**

Models RAL (200 ohms); RAH (2000 ohms). Built to Amperite standards; No peaks. Flat response. Triple shielded. Shock absorber. Swivel bracket. **\$22.00 LIST.**

Finishes: All microphones have the new standard Gunmetal Finish. Available in Chrome, extra, \$1.00 List.

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SERVICE NOTES

dent, D. H. Wright. "As you undoubtedly know there has been considerable trouble encountered when high fidelity speakers are used. One reason is as follows: When an amplifier is developing excessive harmonics due to overloading, these harmonics show up in the higher frequencies and the high-fidelity unit or the speaker with a very wide frequency range will reproduce this distortion with much more volume than a speaker having a narrower range.

"Therefore, we find while a speaker having high fidelity will be unsatisfactory when operated with an amplifier developing excessive harmonics, on the other hand it will give much more life-like reproduction when used with an amplifier having a small amount of distortion."

As explained by Mr. Wright, the trouble is not in the speaker, but in the amplifier. Obvious solution to the problem is not to overload the amplifier and not to use one having high harmonic distortion when high-fidelity reproduction is desired.

**SERVICE SHOPS USE
AUTO-RADIO SPARES**

★ Many of the more progressive auto-radio service men today have adopted the policy of keeping two or three standard auto-radio sets on hand, reports Alfred A. Ghirardi, author of many radio books.

The purpose is to use one of the "spares" as a temporary replacement set while the car owner's set is being serviced in the shop. This eliminates the necessity of tying up the owner's car while his radio set is being serviced.

Service men say that by featuring this special service through sign cards and printed slips distributed at railroad stations and auto parks, they have developed a considerable amount of business they would not otherwise have gotten from customers who did not wish to tie up their cars for an auto-radio servicing job.

DEGENERATIVE AMPLIFIERS

★ One of the more recent circuit developments is the degenerative amplifier. With this type of operation much higher quality signals are obtained through the reduction of distortion.

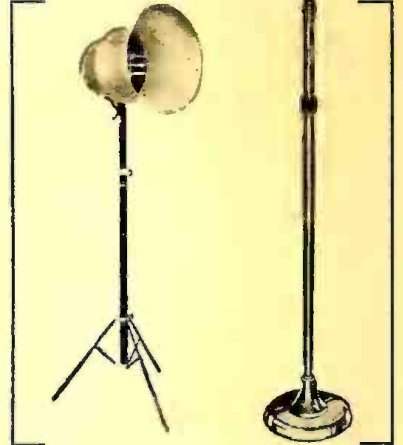
Looking at the operation from a
(To page 46)

**ATLAS SOUND
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**Let Atlas Solve
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P. A. men who know, will tell you the value of selecting the right equipment for the job at hand. To do the job right, you must have selection. Atlas offers you the widest selection of sound equipment available. Spring P. A. is here—and if you want P. A. dividends, you should have the Atlas guide to increased sound profits.

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Deflector Baffles, and Floor Stands, Indoor Speaker Enclosures, Aluminum Trumpets, Driver Units, Adapters, Exciters, Amplifiers, Demountable Baffles, Square Trumpets, and a complete line of Microphone Stands, and Desk and Banquet Stands—plus other P. A. needs. All equipment made at the Atlas plant—Immediate Delivery.



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Right: "Velvet Action" Microphone Stands, many types.



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1451 39th St., Brooklyn, N. Y.

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THE WORLD"**

NEW "MIKE"

*Streamlined in
Performance and Price*



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Less Stand

Small in size, yet providing superb performance, this new RCA Microphone, offers many features for greater efficiency!

Quality Features That Mean Extra Value

- Triple Chromium finish • Small size—light weight
- Good tone quality—high sensitivity
- No external excitation or power required
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- Unaffected by change in temperature, humidity, or barometric pressure
- May be operated at distances up to 1,000 feet from amplifier
- Excellent for close talking • Minimum response to wind
- Practically non-directional when faced vertically
- New Alnico magnet—retains magnetism indefinitely

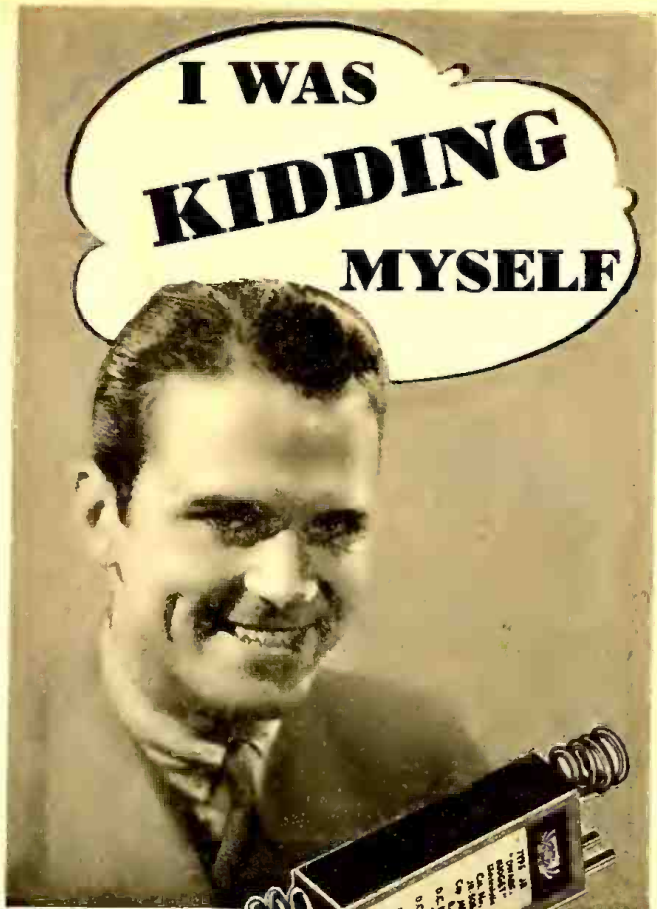
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RCA ALL THE WAY from microphone to loudspeaker.

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



Now I standardize on C-D condensers

"There was a time when I would watch pennies! But the couple of pennies I 'saved' by using low quality replacement parts for servicing proved mighty expensive. Disgruntled customers . . . free repeat calls . . . loss of good-will . . . these are only a few of the results of my 'savings'.

"Today I use only the finest replacement parts that money can buy. I have found that I keep my customers longer, get a good portion of my business through recommendations and I don't lose money on free repeat calls.

"Yes sir! I standardize on Cornell-Dubilier condensers. They're the 'tops'. I don't kid myself any longer—I know that the best is the cheapest in the end."

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Model Chassis	I. F. Peak	NF	125-R
FADA*		NK	262.5
Continued from Febuary		RA	175
RADIO TODAY		RC	175
108	470	RE	175
109	470	RK	175
111	470	RN	470
112	470	RO	470
126	262.5	RP	175
127	262.5	RS	470
130	262.5	RU	265
131	175	RV	470
132	265	RW	265
133	265	RX	125
134	265	RY	470
135	265	Letters, T, C, CK, etc., after model No. indicate cabinet styles and have been purposely omitted.	
140	175		
140L	115		
140SW	456		
141	265-R		
142	125-R		
145	175		
145L	115		
145SW	456		
150	456-R		
151	265-R		
152	265-R		
155	456-R		
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165	456-R		
166	175-R		
167	456-R		
168	456-R		
170	456-R		
171-DC	175		
171-AC	456		
172	456		
173-DC	175		
173-AC-DC	456		
190	456-R		
191	456-R		
192	456		
193	456-R		
211	456-R		
212	456-R		
216	456-R		
242	456-R		
246	456-R		
250	456-R		
251-DC	175		
253-DC	175		
254	456-R		
255	456-R		
260	456-R		
261	456-R		
262	456-R		
266	175-R		
267	456-R		
270	456-R		
271	456-R		
272	456-R		
273	456-R		
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311	456-R		
312	456-R		
315	456-R		
316	456-R		
355	456-R		
512	175		
532	175		
1250	456-R		
1255	456-R		
1262	456-R		
1265	456-R		
1450	456		
1451	456		
1453	456		
1460	456		
1461	456		
1462	456		
1463	456		
1470	456		
1471	456		
1480	456		
1481	456		
1556*	456-R		
1582*	456-R		
1583*	456-R		
KO-220	175		
KO-C	175		
KO-C-110	175		
KOF	175		
KU	175		
KW	175		
KY	175		
NA	265-R		
NE	265-R		

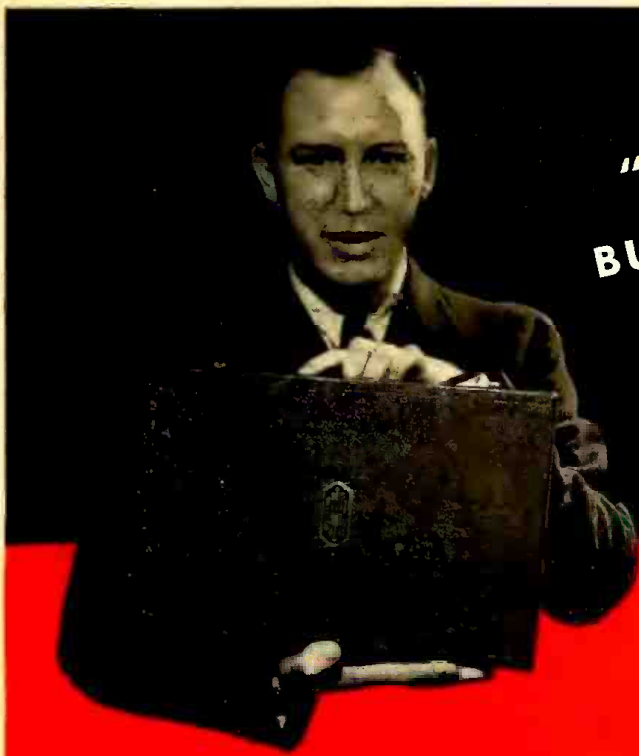
I. F. PEAKS and COLOR CODING

PART V · RADIO TODAY · MARCH, 1937

Model Chassis	I. F. Peak	K66 (220)	175
K66M (222)	175	K78 (230)	175
K78 (230)	175	K79 (331)	175
A87	465-R	K80 (140)	445
A88	465-R	K80 (140E)	445
A90 (M30)	175	K80X (141)	445
A125	465-R	K80X (141E)	445
A205	465-R	K82	175
A206	465-R	K85 (240)	445
A208	465-R	K88 (340)	445
B40 (M34)	175	K88X (340E)	445
B52 (M116)	175	K105 (261)	175
B81 (142B)	175	K106 (R90)	175
B96 (241B)	175	K107 (260)	175
C41 (M105)	175	K126 (280)	175
C60 (M100)	175	KZ62P (RE18)	175
C61 (M123)	175	L50 (R22S)	175
C62 (126B)	460	L51 (R22W)	175
C67 (223)	175	L52 (112)	175
C70 (135B)	460	L52A (112A)	175
C75 (235B)	460	L53 (114)	175
D50 (M101)	175	M41 (101)	460
D51 (M104)	175	M42 (103)	460
D52 (M108)	175	M49 (301)	460
D72 (M109)	175	M50 (117)	460
E50	465-R	M51 (118)	460
E51	465-R	M51A (118)	460
E61	465-R	M52 (119)	460
E62	465-R	M55 (214)	460
E68	465-R	M56 (211)	460
E71	465-R	M61 (128)	460
E72	465-R	M62 (125)	460
E76	465-R	M63 (124)	175
E79	465-R	M65 (221)	370
E81	465-R	M66 (226)	460
E86	465-R	M67 (224)	460
E91	465-R	M68 (321)	370
E95	465-R	M69 (322)	460
E101	465-R	M81 (143)	460
E105	465-R	M85 (243)	460
E106	465-R	M86 (242)	460
E115	465-R	M89 (341)	460
E126	465-R	M106 (262)	460
E129	465-R	M107 (263)	460
E155	465-R	M125 (281)	460
ED7C	465-R	M128 (380)	175
ED7M	465-R	M128R (380R)	175
ED7T	465-R	M129 (381)	460
ED8C	465-R	M655 (225)	460
ED8P	465-R	N60	175
ED8T	465-R	S22 (R7)	175
ED8M	465-R	S22A (R7A)	175
ED10C	465-R	S22D (R7DC)	175
ED10T	465-R	S22X (R7)	175
FA60	175-R	S42 (R9)	175
FA61	175-R	S42B (R43)	175
FA80	175-R	S42D (R9DC)	175
H31 (R80)	175	S132 (R10)	175
H32 (R50)	175	SZ42P (RE16)	175
H51 (Rad82)	175	U50	175
H51R (Rad82R)	175	U51	456
H71 (Rad86)	175	U55	456
H71R (Rad86R)	175	U70	456
H72 (RAE59)	175	U75	456
H91	175	U100	456
H91R	175		
J70 (R4)	175		
J72 (R70)	175		
J72 (R70N)	175		
J75 (R6)	175		
J80 (R8)	175		
J82 (R71)	175		
J83 (R73)	175		
J83A (R73)	175		
J85 (R12)	175		
J86 (R72)	175		
J87 (R75)	175		
J87A (R75)	175		
J88	175		
J100 (R74)	175		
J105 (R76)	175		
J107 (R77)	175		
J109	175		
J125 (R78)	175		
J125A (R78)	175		
J2835 (R023)	175		
J2822A (R24A)	175		
J2822 (R24)	175		
J2826	175		
J2828	175		
K43 (100)	460		
K50 (R28)	175		
K50P (R28P)	175		
K51 (R28)	175		
K51P (R28P)	175		
K52 (110)	175		
K53 (111)	175		
K53M (115)	175		
K54 (RE40)	175		
K54P (RE40P)	175		
K55 (210)	175		
K58 (310)	175		
K60 (R37)	175		
K60P (R37P)	175		
K62 (R11)	175		
K63 (120)	175		
K64 (121)	370		
K64D (127)	370		
K65 (R38)	175		
K65P (R38P)	175		

Model Chassis	I. F. Peak	FREED See Freed-Eismann	FREED-EISEMANN*	FREED FE-60	456	FRESHMAN See Belmont	GAMBLESKOGMO	GAYLORD	FRANKLIN
12C6	456			FE-62	456		20 C 7	510S, 510U	456
40	456			FE-70	456		20 C 8	520S, 520U	456
41	456			FE-76	456		26 S 1	610S, 610U	456
42, 42C1B	456			FE-98	175		27 C 1	620S, 620U	456
42TOB	456			H-357-L	456		27 C 2	710S, 710U	456
43, 43C1B	456			H-357-P	456		27 C 5	720S, 720U	456
43T1B	456			MB-7	175			800	456
51	456			MB-9	175			801	456
52	456			P-55	456			802	456
53	456			Q-358 S	456			803	456
54	456			R-369S	456			804	456
55	456			T-368 P	456			805	456
56	456			T-367 S	456			806	456
57, 57T0	456			U-363	456			807	456
58, 58C1	456			V-360	456			808	456
58T1, 58T2	456			W-380	456			809	456
60	456			W-382	456			810	456
61	456							1100	456
62	456								
63	456								
64 Auto	177.5								
64 Batt.	456								
65	456								
66	456								
67	456								
68, 68T6	456								
69, 69T7	456								
70	456								
71	456								
72, 72C2	456								
73, 73C2T3	456								
73, 73C3B	456								
73T3B	456								
74	177.5								
81	456								
82	456								
87	456								
90	456								
91, 91C4	456								
91C5, 91T4	456								
100	456								
110	456								
120	456								
346, 346S	177.5								
347	177.5								
516	456								
541	456								
814	175								
816	175								
840	175								
841	175								
1014	175								
1040	175								
4015	456								
4115-B	456								
5103	456								
5106	456								
5107	456								
5108	456								
5109	456								
5111	456								
5112	456								
5141	456								
5143	456								
5212, 5212A	456								
5241	456								
5312, 5312A	456								
5341	456								
5445	456								
5516	456								
5545	456								
5619	456								
5645, 5645A	456								
6010	456								
6044	456								
6210	456								
6244	456								
6317	456								
6346	456								

**"THE HANDIEST TOOL
BUILT FOR *experienced*
SERVICEMEN"**



**THE WESTON
CHECKMASTER**

**\$ 45⁰⁰
NET**

TO DEALERS IN U. S. A.

It's the experienced servicemen who have gone for the Model 771 Checkmaster in a big way. This was to be expected . . . for we built Model 771 to give the serviceman everything he needs for trouble shooting and estimating in one compact, easy-to-carry case. He has *all* this in the Checkmaster . . . providing as it does for a thorough check of tubes, as well as for checking continuity, resistances and voltages. In addition, it has a spare compartment for tubes or tools. This means *time saved* in answering emergency calls . . . for he need carry only this one, compact and complete Checkmaster for quickly getting at the root of the trouble.

But to make the Checkmaster even more useful, it has been strikingly designed and finished for counter use as well . . . making it the handiest, most versatile tool any serviceman can own. Inexpensive, too. And the name it bears is the best guarantee of instrument dependability and long life. Be sure to see the Checkmaster at your jobber's, or return the coupon for complete information.

FEATURES:

- INGENIOUS WESTON SWITCHING CIRCUIT ACCOMMODATES TESTING OF TUBES WITH WANDERING FILAMENTS
- Wired for testing latest tubes
- Neon short check while tubes are hot.
- Cathode leakage test of CORRECT DESIGN.
- Individual tests on elements of diodes.
- Voltage ranges for point-to-point testing
- High and low resistance ranges for continuity testing with built-in filtered power supply.
- Actual condenser leakage measurements — all types of high and low voltage condensers — read in ohms on meter scales.
- All readings on one legible, open-scale meter — the famous WESTON rectangular 301.
- Positive line voltage control.

Weston Electrical Instrument Corp., 597 Frelinghuysen Ave., Newark, N. J. . . . Rush me bulletin on the Checkmaster and other Radio Instruments.

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

SERVICE NOTES

High FIDELITY

is the trend



AR43—\$75.00

• Brush sound cell construction is a "natural" for high fidelity. Faithful response over a wide frequency range is an inherent feature.



BR25—\$37.50

• When Brush microphones are rated as being flat in response, for a given frequency range, they ARE FLAT—No mechanical or electrical compensation is necessary.



B1—\$32.50

• These facts have been realized and hundreds of sound cell mikes are being used for sound level analysis and calibration purposes—Plus the thousands in "P. A." and broadcast applications.

Technical Data on request

The **BRUSH**
Development Co.
3313 Perkins Ave.
Cleveland, Ohio

(from page 42)

non-technical basis, it can be regarded as a system where part of the output signal is fed into the input. In this way a portion of the distortion from the output is impressed on the input and it goes through the amplifier and cancels part of the original distortion.

The accompanying chart prepared by Hygrade-Sylvania Corp. shows how the distortion is reduced when degeneration is used. Since part of the output signal is fed to the input, a larger signal must be applied to the amplifier to compensate for the feedback voltage. In other words the sensitivity of the amplifier is reduced.

The amount of distortion present is approximately proportional to the sensitivity of the amplifier—with 50 per cent sensitivity, the distortion is 50 per cent of the original amount (shown in chart). If the sensitivity were reduced to $\frac{1}{4}$, the harmonic distortion would drop to $\frac{1}{4}$. With high-gain amplifiers the reduction in the sensitivity is not very serious.

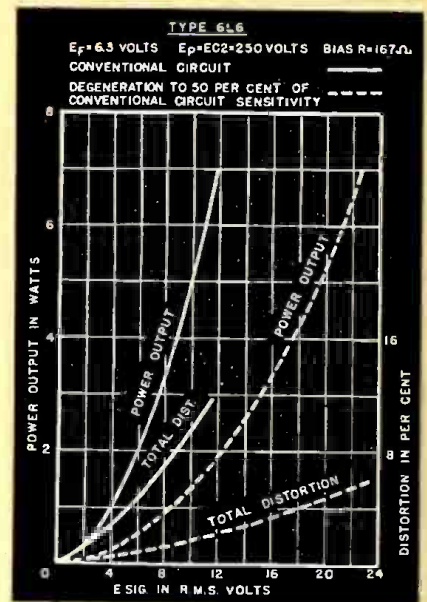
While the curves are for a 6L6 tube, degenerative circuits can be applied to any type of amplifier tube including triodes. When properly used, degeneration will give to pentode amplifiers approximately the same high quality performance that is found with triodes. More on this subject to follow in future issues.

ENGINEERING ASPECTS OF ADJUSTABLE FREQUENCY CHARACTERISTIC

★ The problem confronting installation organizations has always been one of obtaining the proper type of reproduction—that is, the public address system should do only one thing. It should increase the sound intensity but in no way alter the character of the sound, comment Webster-Chicago engineers.

It is relatively easy at the present time to obtain public address equipment that has a high order of faithfully reproducing, at an increased volume, the sounds or the program entering the microphone.

We have, however, generally speaking, one portion of our system which is ordinarily fixed and that is the enclosure in which the installation is to be made. Generally it is difficult to obtain the proper type of acoustic treatment in the halls, churches, theatres, etc., ordinarily encountered.



Distortion is greatly reduced by the use of degenerative or feed-back circuits.

Consequently, we find that although the reproducing equipment is of a high order, the tone emanating from the loud speakers is frequently unnatural, or at least so sounds to the listener, and this is, ordinarily speaking, caused by the fact that an auditorium can be regarded as a resonant chamber with all of the complex sound patterns that can be set up in an enclosure of this type.

The most common trouble that we encounter is excessive amount of low frequency response, which makes the reproduction sound boomy and unnatural. Sound men in the past have frequently undertaken the job of altering the response characteristics of their equipment to accommodate it to the specific installation. Generally, however, these alterations are expensive and take time, although the results that can be obtained with the proper type of frequency compensation are well worth the effort. Fortunately, amplifiers are now being made which have adjustable frequency characteristics.

SUPPRESSION OF IGNITION INTERFERENCE

★ Emerson in its installation manual has a list of suggested methods of reducing ignition interference; here they are:

If, when the receiver is in operation, and the motor is running, the ignition interference is excessive the

YOUR COMPETITOR

isn't such a bad guy!



Get to Know Him... Get Him to Tell You About Sylvania!

● You've heard us talk a lot about Sylvania tubes in the last few years. We'd like to have you get your information first-hand for a change.

Do this for us the next time you get a chance, will you? Call on that nearest competitor of yours who

handles Sylvania tubes. Get the whole story straight from him! He'll tell you he likes to do business with Sylvania... that the men who represent them are square shooters, looking out for *his* interests first of all. He'll probably mention the fair list prices, too and the chances are he'll tell you how

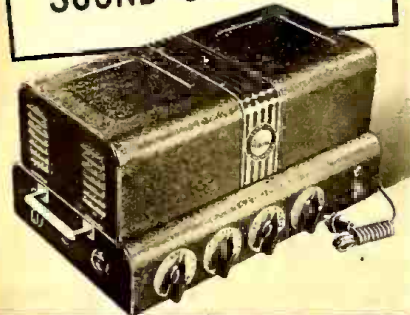
little trouble he has now with kick-backs and rejects. Get to know this man. He has a story that will mean dollars and cents to you!

Or *we* will be glad to tell you the story and send you free technical and sales helps. Write to the Hygrade Sylvania Corporation, Emporium, Pa.

SYLVANIA

THE SET-TESTED RADIO TUBE

TODAY'S GREATEST
Buy IN
SOUND SYSTEMS!



Selection of Finest Mikes Made

For the finest fidelity of music we recommend the Air line-Brush crystal (A). Many speakers prefer the Airline Velocity (B) because of its directional characteristics. Servicemen often select the Airline Dual Diaphragm (C) for its ruggedness and all-round performance. Any of these may be used with AIRLINE amplifiers.

- 60 WATTS UNDISTORTED OUTPUT. Cares for practically all rental installations.
- WILL USE ANY TYPE AND ANY NUMBER OF SPEAKERS UP TO 15. System comes complete with 4 latest Utah or Jensen Magic Metal Types.
- USES 2 MIKES AT ONCE—any two hi-gain mikes may be used at the same time . . . need not be alike. In addition, a carbon mike may be used in conjunction with an adapter, so that actually 3 mikes may be used!
- USES 12 LATEST TYPE TUBES . . . including the 6L6 Beam Amplifier.
- 3 SEPARATE MIXER CONTROLS. Permits blending of microphones and phonograph.
- COMPLETE FOR ONLY \$10 DOWN! Amplifier, tubes, 4 speakers, crystal mike and floor stand for only \$115 cash price!

Send for Free catalog today giving complete details on this and other Airline Sound Systems. Models range from 5 to 100 watts; in price from \$12.95 up.

All Are Sold on Monthly Payment Plan

MONTGOMERY WARD

Largest Distributors of Sound Systems in U. S.
CHICAGO • BALTIMORE • ALBANY • KANSAS CITY
ST. PAUL • DENVER • PORTLAND • OAKLAND
JACKSONVILLE • FT. WORTH

Mail coupon to nearest Ward House for copy of Wards Radio Catalog of Sound Systems.
MONTGOMERY WARD Dept. RR-2

Name.....
Street.....
City.....
State.....

SERVICE NOTES

following suggestions should help to reduce it to a satisfactory level.

By-pass dome light wire at instrument panel with a 1/2 mf. condenser.

By-pass the low tension lead to the ignition coil with a 1/2 mf. condenser.

Shield high tension lead from coil and ground to fire wall.

Shield low tension leads to ignition coil.

Try grounding antenna shield at various points, and also try leaving shield ungrounded, except at point where it is automatically grounded at receiver by means of the metal connector. Move all adjacent wiring slightly, and note if it may be coupling to the battery lead to receiver.

Bond steering column to fire wall.

Try bonding exhaust pipe, particularly if interference is increased with passengers in car.

Bond metal cables or pipes coming through fire wall, connecting them to the fire wall. If car has wooden floor boards, place a screen underneath floor mat and note if interference is decreased, particularly with passengers in car.

Check antenna wiring, making sure it is shielded completely.

Try bonding windshield wiper pipe.

Check ignition system for defects.

When condensers are used for by-passing ignition interference, their leads should be as short as possible, since often a condenser with leads a fraction of an inch long will be very effective in places where the same condenser with longer leads would be useless.

NOTE: It is recommended that the charging rate of the car generator be increased slightly to compensate for the added drain of the receiver.

CROSS MODULATION INTERFERENCE

★ For some time past, a number of complaints of interference have come to our attention from owners of radio sets who reside within two or three miles of a powerful broadcasting station. The character of this interference has been identical in practically all cases, in that programs from the nearby station would appear in the background of all other stations tuned in on the standard broadcast band. At certain times of the day, we were told that the interfer-

ence was worse than at other times, and all makes of sets appeared to be similarly affected.

We recently completed a very extensive investigation, which was made to ascertain the cause of the trouble, and in an effort to devise corrective measures. This investigation has revealed that most of the interference has been due to conditions outside of the receiver itself. It was found that, in certain localities of an area affected with this trouble, the interference was not present even though it existed a few hundred feet away.

It is not our purpose to go into great detail to explain the cause of the trouble, as it is of a rather complex nature. Briefly, it was found to be a phenomenon of cross modulation, with the result that the signal of the interfering station appeared on the carriers of the other stations when these signals entered the receiver. It will therefore be seen that little can be done to relieve this condition; however, in some cases the difficulty was eliminated by one or more of the following remedies:

DYNAMIC MICROPHONES
Are Increasing in Popularity

because they

- have greater sensitivity
- are free from inductive pickup
- have no background noise
- can work with long lines
- are sturdiest ever produced
- are weatherproof
- are small in size
- are reasonable in price

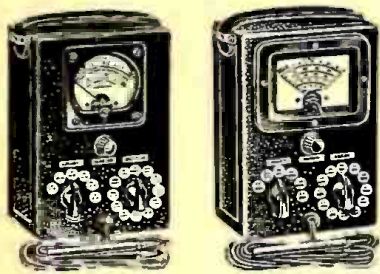
Where life and property are at stake, airline operators prefer Radio Receptor's moving coil dynamic microphones for reliability.

We solicit requests for special sound and amplifying equipment. . . Send for our latest Bulletin 3013. . . We are pleased to send this to you.

RADIO RECEPTOR CO., Inc.
251 WEST 19th ST., NEW YORK, N. Y.

MILLION

VOLT-OHM-MICROAMMETERS



VO	Model	OM
5,000	OHMS PER VOLT	20,000
10	MEGOHMS DIRECT	30
\$19.95	Dealer's NET price	\$29.95
0-300	Microampere scale	0-60-300
5 lb.	Weight	6 lb.

HERE are two instruments designed by John W. Million and built to laboratory standards. They are distinctly BETTER instruments at reasonable prices. They are a credit to the many other Million instruments in service.

Both instruments have: AC and DC voltage ranges of 0-3-30-300-900; DC milliamperage ranges of 0-3-30-300-600; resistance ranges of 0-10,000 ohms and read megohms with self-contained battery; direct reading DB power level scale; zero adjuster; plainly marked switches; handy carrying strap; size, 3" x 5" x 3 1/2".

See your jobber or write to

MILLION RADIO AND TELEVISION LABORATORIES
397 West Superior St. Chicago, Ill.

10 NEW WARD AUTO AERIALS



MODEL T. A.—The "Tur-rette." One of the new top aerials featured by WARD for 1937.

NO DRILLING IN TOP

SEND FOR CATALOG TODAY

WARD PRODUCTS CORP.

WARD BLDG. CLEVELAND, OHIO

CANADA: ATLAS RADIO CORP., TORONTO, ONT.

FOREIGN: LINCOLN EXPORT CO., NEW YORK

USE THIS COUPON

WARD PRODUCTS CORP.
Ward Bldg. - Cleveland, O.

Send information of Ward's 1937 Auto Aerials.

Name

Address

Check Dealer Jobber Service Man

Installation of a wave-trap tuned to the frequency of the interfering station.

By-passing the power line in the house where the receiver is located.

Changing the location and direction of the antenna.

—Arthur D. Williams Service Department, Philco-New York.

FADA COLOR CODE FOR CARBON TYPE RESISTORS

★ While the present Fada receivers use R. M. A. color coded resistors, many of the older models employ a private coding, which is reproduced herewith.

Value in ohms	Identification
125	Gray with yellow end
250	Light brown
500	Brown with blue end
750	Green
1,000	Green with yellow end
1,200	Dark green
1,500	Green with red end
2,000	Black
2,500	Red with yellow end
3,000	White
4,000	White with orange end
5,000	Orange
6,700	Blue with white end
7,500	Yellow with blue end
10,000	Blue with yellow end
13,000	White with blue end
15,000	Blue with red end
20,000	Green
25,000	Yellow with green end
50,000	Blue
70,000	Violet
125,000	Gray
250,000	Yellow
500,000	Brown
2,000,000	Red

PUSH ALL-WAVE ANTENNA INSTALLATIONS

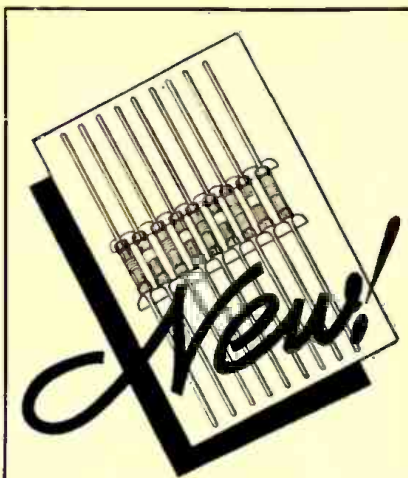
★ That spring is the best time to push all-wave antenna installations is the belief of O. R. Haptonstahl, sales manager of the Thomas Electric Co., Des Moines, Iowa.

With the summer activities ahead, and the family anticipating the joys of outdoor recreation, spring isn't always a propitious time to push radio sales, complain some. However, it is an excellent time for the serviceman to install antennae.

The following sales argument was brought forth. Generally a more satisfactory aerial can be installed during the milder temperatures, than in cold weather. The radio owner should not wait until fall or winter when he contemplates the purchase of a new set or wider use of his present instrument.

In the spring the aerial can be placed higher from the ground, for spots clear of foliage are easier to determine because the branches indicate the clear spaces which are safe to use for securing guy wires, and better work can be rendered by work-

(To page 56)



A Small End-Lead Resistor

in a new and convenient package.

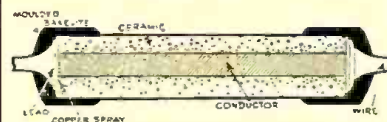
Still the same ceramic body enclosing the conducting material now offered with end leads for greater conservation of space.

Like all Centralab Resistors they are thoroly insulated from all adjacent parts.

Its smaller mass results in reduced capacity coupling to adjacent parts. Its effective resistor length is actual length of resistor . . . and its r.f. resistance is practically the D C Resistance.

Size 1/8" x 11/16"—rated at 1/2 watt.

Specify Centralab at your jobber.



Centralab

Milwaukee, Wis.

Division of Globe Union, Inc.

BRITISH CENTRALAB, Ltd.
Canterbury Road, Kilburn
London, N.W.6, England

FRENCH CENTRALAB CO.
118 Avenue Ledru-Rollin
Paris XI, France

SUNRISE NOTE IN APPLIANCE BIZ

Trends in Spring promotion of new radio-electrical merchandise.

"BDX" SATURATION

★ Sales goal for refrigerator dealers to aim at is noted in the TVA territory, in east and middle Tennessee, north Alabama and north Georgia.

W. W. Gambill, Jr., president, Gambill Distributing Co., Nashville, Tenn., recently reported that "the per cent of electric refrigerators to the number of persons taking current in the area is the highest in the country—65 per cent." Gambill distributes Crosley products.

To account for the high per cent of ownership, Mr. Gambill cited the wide publicity given the TVA, and "favorable rates made by the private power companies because of federal government efforts toward lower rates." Refrigeration saturation point for the nation was given as 46.01 per cent.

STUDIO KITCHEN

★ When General Electric goes to work this Spring on a brand new modernistic home for Station WGY, Schenectady, N. Y., one of the broadcast studios will take an extraordinary form.

Room will look like a modern electric kitchen, complete with refrigerator, range, dishwasher, etc. Broadcasts that deal with these matters will originate in this studio, which will have its glass panels fixed so that guests in the building may see the interior at all times.

WGY's new home will be two stories high, with glass blocks on the front and on the two end walls. All of the five studios will be air conditioned and otherwise up to the minute; plans were drawn by the famous architects, Harrison & Foulhoux. WGY continues as part of the NBC Red Network.

ISLAND DISPLAY SELLS SMALL RADIOS AND APPLIANCES

★ A center island fixture at the McPherson, Kan., Electric Company, has built sales volume in small radios and appliances for a year, according to E. W. Ek, manager.

The frame is of white pine and wall board. The outside measurements are 12 feet by 40 inches. It is painted in three-tone stipple.

Six plugs permit quick connection

for demonstration of table and console models to the customer. It is wired for aerial hook-up with fifty feet of wire used inside.

Repair parts, wiring devices and accessories are shown in the twenty bins, set off by glass dividers, ten to a side. Inside space permits storage for overstock.

"We have found this an effective set-up for display and demonstration of console models," says Mr. Ek.

JOBBER CHECKS APPLIANCE PREFERENCES

★ Effective way in which to determine types of wanted merchandise, actually indicated over the signature of prospective buyers, has been introduced by the Tri-State Distributing Corp., Cincinnati jobber.

T. M. Williams, Tri-State sales manager, tried the stunt at a recent electric-appliance show. All persons attending were given cards on which was printed the query: "Now that you have seen the show, what would you like to own?"

Persons totaling 2,344 said they wanted a radio, and named their favorite make. Number of those wanting electric washers was 470. And 349 wanted ironers. Mr. Williams regarded these results as significant of relative popular interest in electrical specialties.

ROOM-COOLERS FOR SUMMER PROFIT

★ Dealers have a chance to get busy on a new kind of merchandise designed for summer selling. It's a portable room cooler in the popular-price bracket, presented by air conditioning engineers for homes, offices, stores, hotels, hospitals, etc.

Having the enormous appeal of "summer comfort to everyone," the unit is 12½" high by 27¾" long, rests upon the window sill of the room to be conditioned. Top of the gadget has a ribbon of felt upon which fits the lower sash of the window, and all openings at either side of the machine are filled by special wings. It plugs into the ordinary light circuit.

(To page 52)

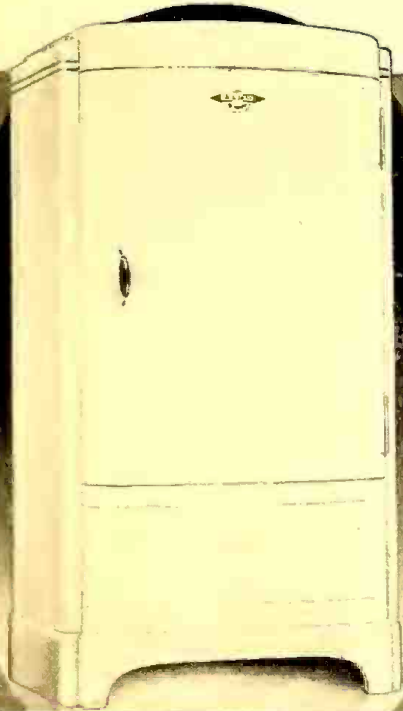


SUNDAY BROADCASTS sponsored by an FM jobber, Olmsted Co., Syracuse, N. Y., features local night clubs plus Conservador. Event attracts up to 1,400.

OUT TO SMASH RECORDS AGAIN!

Announcing

THE NEW "SUPER-DUTY" FRIGIDAIRE



...with the NEW INSTANT CUBE-RELEASE

The 1937 sales sensation! Only Frigidaire has it! Instantly releases ice-cubes from trays! Yields 20% more ice by ending melting under faucet! A single demonstration puts Frigidaire way out in front for 1937!



...the NEW 9-WAY ADJUSTABLE INTERIOR

STORAGE-ABILITY never known in home refrigeration before! Includes a 2-way Frozen Storage Compartment . . . 2-way Cold Storage Tray . . . 3-way Sliding Shelf . . . 2-way Multi-Storage Section. 9 quick, easy adjustments, with dozens of variations!

...and of course, the METER-MISER

An exclusive Frigidaire advantage with unbeatable sales-closing power! Cuts current cost to the bone! And proves it with an actual electric meter test! *The simplest refrigerating mechanism ever built!* Only 3 moving parts, including the motor.



The 1937 Frigidaire Line includes

4 De Luxe Models	5 Master Models
5.1 to 8.25 cu. ft. sizes	4.1 to 8.25 cu. ft. sizes
3 Special Models	1 Imperial Model
5.1 to 7.2 cu. ft. sizes	13½ cu. ft. size
The D3-37—3.1 cu. ft. size	

Proves COMPLETENESS NEVER BEFORE KNOWN IN ALL 5 BASIC SERVICES FOR HOME REFRIGERATION

1. **GREATER ICE-ABILITY**
Ends "Cube-Struggle" and "Ice-Famine"!
2. **GREATER STORAGE-ABILITY**
New 9-Way Adjustable Interior!
3. **GREATER PROTECT-ABILITY**
Keeps food safer, fresher, longer!
4. **GREATER DEPEND-ABILITY**
5-Year Protection Plan, backed by General Motors.
5. **GREATER SAVE-ABILITY**
ONLY FRIGIDAIRE HAS THE METER-MISER
Cuts Current Cost to the Bone!

Frigidaire announces a sensational new line . . . and the biggest, most dramatic selling program in its history

● YOU'LL DO STILL BETTER WITH FRIGIDAIRE IN 1937. Because Frigidaire is putting back of its sensational new line the most sweeping, far-reaching Selling Program in its history! Sales strategy which retains everything that shattered all sales records in 1936. Plus *new strategy*—built around "ALL 5 Basic Services for Home Refrigeration." Plus, also, the introduction of the new Instant Cube-Release—greatest improvement ever made in ice convenience! All backed by an even heavier, more concentrated advertising schedule!

Everything about the 1937 program is complete, dramatically presented, sales-compelling in the highest degree. We're all set to go! Watch Frigidaire selling men set the fastest pace on record. They're bound to do *still better* with Frigidaire in '37!

Watch for the smashing announcement ads appearing in 157 newspapers from coast to coast and in all these leading publications, beginning March 7!

- The Saturday Evening Post
- Collier's
- Liberty
- Time
- Cosmopolitan
- National Geographic
- American Home
- Better Homes and Gardens
- American Weekly
- This Week
- Good Housekeeping
- Woman's Home Companion
- McCall's
- Holland's
- The Graduate Group
- Electricity on the Farm

YOU'LL DO *Still Better* WITH FRIGIDAIRE IN '37!





PORTABLE PLUG-IN air-conditioner, to bring cool comfort to modest homes and offices, presented by President Roper of Pleasantaire Corp.

★ Fairbanks-Morse officials have recently held a series of dealer meetings in various parts of the nation to honor the 1937 FM Conservador models. Special attention was given to presentation effects, and three crews were in charge, one headed by W. Paul Jones. Other crew members were Joe Hopwood, True Waggoner, Parker H. Ericksen, John S. Garceau, Earl Hiatt, W. S. Shaw, Henry Hayward and Wm. Macke.

★ Dealer meetings with Crosley jobbers as hosts continue throughout the country to finish the presentation of 1937 Shelvadors. These distributors have held shows: Appliance Distributing Corp., Boston, Mass.; Lincoln Sales Corp., Baltimore and Washington; Interstate Electric Co.,

New Orleans; Ontario Electric Co., Buffalo, N. Y.; Tenk Hardware Co., Quincy, Ill.; Central Illinois Wholesalers, Inc., Springfield, Ill.; Hieb Distributing Co., Des Moines, Ia.; H. E. Dunn, Inc., Omaha, Neb.; Advance Appliance Co., Peoria, Ill.; Davidson Sales Co., South Bend, Ind.

★ Norge's biggest ad campaign broke early this month in 125 key cities of the country. Newspaper campaign in every jobber area in the U.S. got under way, via increased plugging. Features of the big 1937 drive will be more magazine ads, national outdoor advertising, radio programs under jobber control, newsreels, "minute movies," movies for women prospects, and other sales helps.



CONVENTION CHATTER as carried on (left to right) by Lenford Harrison, mgr. dealer dept., Crosley Corp.; Harold Goldstein, pres., H. M. Sadler, sales mgr., H. Swartz, Anchor Lite Appliance Co., Pittsburgh; Luther E. Reid, American Elec. Co., St. Joseph, Mo. Latter is oldest Crosley jobber.

Dealers need not be air conditioning experts in order to handle this "Northwind" unit, which is made by the Pleasantaire Corp., 304 East 45th St., New York City. That company declares that the Northwind "cools, de-humidifies, washes and quietly circulates 300 cu. ft. of air a minute." Dealers may tell prospects that the machine's cost of operation is about the same as a large refrigerator.

Salesmen are given the chance to match the home decorative scheme of their prospects in point of color. Conditioner comes in two colors, ivory for residence use, shadow brown for office or commercial use. Also available is a unit in standard base filler for painting or spraying by the dealer.

Crosley Shelvadors

★ 1937 line of Crosley refrigerators feature more economy, more convenience, more usable space, more accessibility, more beauty. 4 deluxe models—4.3 to 7.1 cubic feet. Seven other models from 3 to 7.1 cubic feet are in the line. Features are electrosaver hermetic unit, 18-point temperature control, built-in thermometer, Freon F-12 refrigerator, Dulux white exterior, porcelain interior, shelvador. Crosley Radio Corp., 1329 Arlington St., Cincinnati, Ohio—RADIO TODAY—see also advt. p. 54.

★ Frigidaire's recent series of sales conventions had an attendance of 26,915 persons, an increase of 18 per cent over 1935. Meetings were held in all key cities, preparatory to national introduction of new products on March 7.

★ To the newly remodeled show-rooms of the jobbers, True & Blanchard, Newport, Vt., recently were invited the firm's dealers to view the 1937 Fairbanks-Morse Conservador refrigerators. Lively show was the first to be held by the company in several years.

W. W. True, president of the company, is winter vacationing in Florida, and the other news is that Clarence A. Blossom has joined the firm and will work in northern Vermont and New Hampshire.

★ Newly appointed manager of the department store sales division for GE is Ralph C. Cameron. Announced at the same time was John P. Rainbault as manager of the electric clock section; A. E. Pierce as sales manager of the same section. This news follows the recent appointments of E. H. Vogel as manager and C. M. Wilson as sales manager of the radio sales division.

★ Electrical Appliance Dealers Association of Brooklyn, Inc., at its meeting of Mar. 2, voted to send a representation to the New York State Legislature to encourage the passage of the Feld Bill. Chief effect of that bill is to give manufacturers power to fix retail prices on trade-marked goods.

★ *Look behind the nameplate*

**SEE
REFRIGERATOR
FEATURES
THAT DON'T SAY
*me too!***

**FAIRBANKS-MORSE
REFRIGERATORS**
WITH
Conservador
L.B.C.S. Q.U.E.S.T. T.H.E. S.A.F.E. S.E.L.F.S.

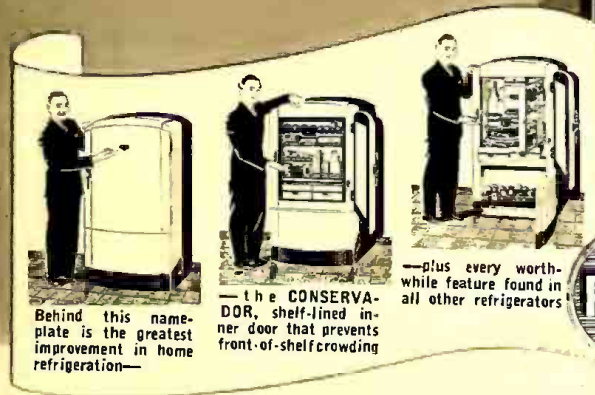
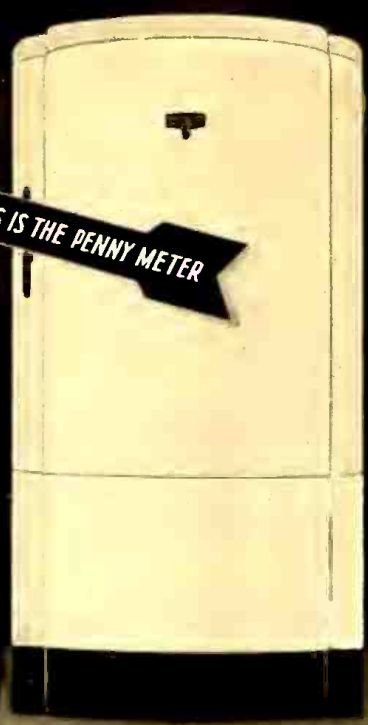
SHOWS YOU *Exactly*
THE OPERATING COST

- NOT APPROXIMATELY
- NOT COMPARATIVELY
- NOT IN KILOWATTS

But Exactly in Pennies

ACTUAL METER READING SINCE
1/6 4:00 PM

**THIS PENNY METER
SHOWS HOW *Little* it costs
TO OPERATE A
**FAIRBANKS-MORSE
Conservador** REFRIGERATOR**



Behind this nameplate is the greatest improvement in home refrigeration—

—the CONSERVADOR, shelf-lined inner door that prevents front-of-shelf-crowding



Penny meter demonstrations are helping F.M. dealers to clinch sales. If you have not received your Penny Meter display, write, wire, or phone your distributor or Fairbanks, Morse & Co., at Indianapolis.

SHOW your prospects a refrigerator so outstandingly different that your competitors down the street, up the street, and across the street can't show them one like it.

When you demonstrate the new Fairbanks-Morse CONSERVADOR Refrigerator, you *are* doing just that. You are not showing little differences that don't even register in your prospect's memory. You are not showing her just another "me too" refrigerator that looks almost identically like all the others she has seen. You are showing her *big* differences . . . *big* improvements . . . features found in no other refrigerator in all the world.

Where Else Can They Find These?

First, the CONSERVADOR; exclusive; patented; biggest difference of all. Then, Self-Sealing Crisper, Sliding Fruit Drawer, and Utility Storage Compartment.

ment. *Two-fifths* of this refrigerator's contents can be removed without even opening the main food compartment! Where else can they match *that* for convenience?

Show the first modern refrigerator door in the industry; simplified temperature control; automatic overload protector.

Show a refrigerator that not only has reserve power for any heat-wave emergency, but also costs *less*, not more, to operate! And you can prove it. You can show—right on your sales floor—how long it will run on a penny's worth of electricity, at your prospect's rate.

FREE FLOOR PLAN

For a limited time only—A Free Floor Plan on your initial order. This, plus a limited recourse finance plan at no cost to the dealer, means that you can cash in on the early buying market by going into action now.

Your distributor has the details

**It Has What You Need
to Clinch Sales!**

Your prospect can see that there IS something different and better in refrigerators and that the Fairbanks-Morse CONSERVADOR has it. You know the sales-clinching power of visible, understandable differences—especially when there is a good reason for every one. They clinch sales where little differences fail. Write the Fairbanks-Morse distributor in your territory now. Get the complete story of the "hottest" refrigerator franchise in the industry today. Fairbanks, Morse & Co., Home Appliance Division, 2060 Northwestern Ave., Indianapolis, Ind.

**Other Fairbanks-Morse Products:
WASHING MACHINES, IRONERS,
RADIOS, AUTOMATIC COAL BURNERS**

F A I R B A N K S - M O R S E
Conservador Refrigerator

Exclusive!

. . . The Crosley SHELVADOR Alone
Offers This EXTRA USABLE SPACE

Make This Startling Visible Demonstration



Thus Proving -

THIS MUCH MORE

EXCLUSIVELY IN THE CROSLY SHELVADOR

The Crosley Shelvador offers the buyer more usable food storage space than any other electric refrigerator on the market . . . and you can prove it conclusively right on your sales floor!

In the illustrations above showing this dramatic demonstration, the whole tableful of food—48 pieces in all—is placed first in an ordinary refrigerator, filling up all the normally used shelf area. Then all this food is transferred to the Shelvador, which takes every piece of it without excessive crowding.

What more powerful and convincing sales argument can be offered for any refrigerator than such a demonstration! . . . particularly when it is backed by:
1. MORE BEAUTY; 2. MORE CONVENIENCE;
3. MORE ECONOMY; 4. MORE ACCESSIBILITY

and offers such selling features as the sensational Electrosaver, the Stora-drawer, new tilting shelves, special removable shelf section, spacious Crosley Crisper, Built-in Thermometer, 18-point temperature control, and a dozen others.

It's going to be tougher than ever to sell against the Crosley Shelvador in 1937 . . . and easier than ever to sell the Shelvador. Alert dealers who know refrigerator value and are familiar with public demand are enrolling under the Crosley banner and assuring themselves of the greatest year in their history with—THIS MUCH MORE EXCLUSIVELY IN THE CROSLY SHELVADOR. See your Crosley Distributor for complete details of the Crosley Franchise.

THE CROSLY RADIO CORPORATION, Cincinnati - POWEL CROSLY, Jr., President

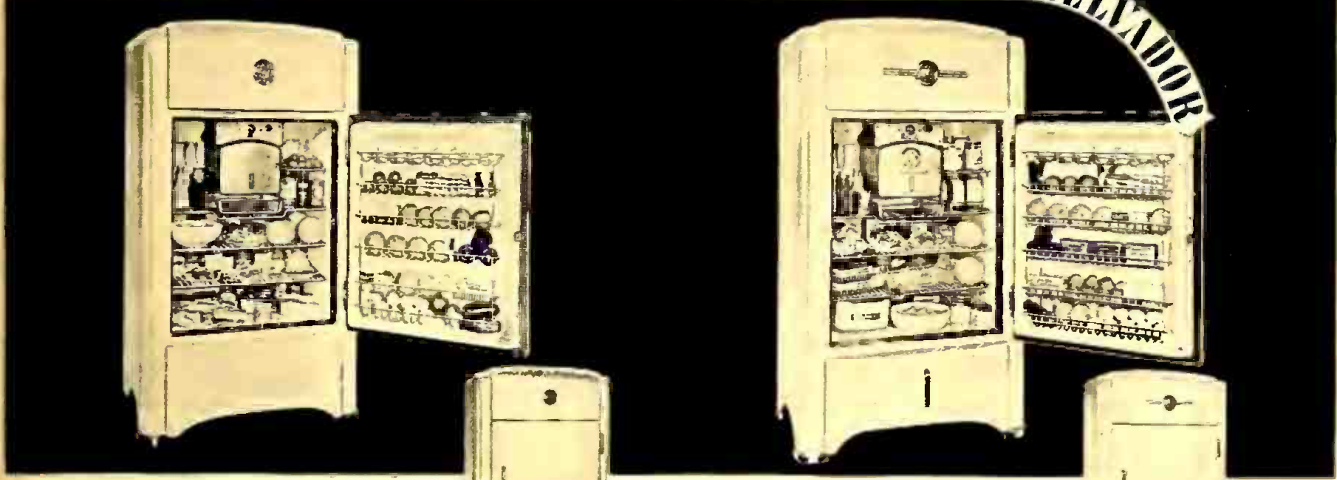
Home of "the Nation's Station"—WLW—70 on your dial

THE CROSLY SHELVADOR . . . Patented, Exclusive Feature

THE CROSLLEY SHELVADOR FOR 1937

MORE BEAUTY • MORE ECONOMY • MORE CONVENIENCE • MORE USABLE SPACE • MORE ACCESSIBILITY

"THIS MUCH MORE" EXCLUSIVELY IN A CROSLLEY SHELVADOR



MODEL HB5-71—Food storage capacity 7.1 cubic feet (N. E. M. A. Rating), total shelf area 16.77 square feet, 6 shallow and 1 deep ice cube trays with a total capacity of 168 ice cubes in one freezing. Features include: Shelvador, New Hermetic Unit Model T-5 with large double-section Still Air Condenser, Float Valve, Freon F-12 Refrigerant, 18-Point Temperature Control, Built-In Thermometer, Hinged Shelf, Chromium-Plated dull finish door to Fast Freeze Cube Compartment, Porcelain Interior with Acid-Resisting Porcelain Bottom, beautiful Dulux Exterior, Chrome finish hardware. Automatic Interior Light. Quick-acting Ice-Tray Release. Dimensions: 58 $\frac{3}{4}$ " high, 33 $\frac{1}{4}$ " wide, 29 $\frac{1}{4}$ " deep.

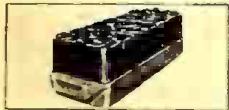
MODEL HB3-71—Same as above excepting Standard Q3 type Compressor Unit.

DELUXE MODEL HL5-71—Net capacity 7.1 cubic feet (N. E. M. A. Rating), shelf area 16.77 square feet, 7 ice cube trays with a total capacity of 168 ice cubes. Features include: Shelvador, new Electrosaver Hermetic Unit Model T-5 with large Double-section Still Air Condenser, 18-point Temperature Control, Built-In Thermometer, 5 all Flat Wire Shelves, 2 Hinged Shelves, Bottom Shelf has Removable Section, bright Chrome Satin Finish Door to Fast Freeze Cube Compartment, 3 Crosley Shelf Jars and Covers, 6 Red Beetleware Dessert Cups, Crosley Crisper, Storage-drawer, Porcelain Interior with acid-resisting porcelain bottom, brilliant white Dulux Exterior, bright Chrome hardware with Blue Inlay, Automatic Interior Light, Quick-acting Ice Tray Release. Dimensions: 58 $\frac{3}{4}$ " high, 33 $\frac{1}{4}$ " wide, 29 $\frac{1}{4}$ " deep.

Other Standard Series HB Shelvador models available: Model HB1-30, 3.0 cu. ft.; Model HB1-31, 3.16 cu. ft.; Model HB1-36, 3.6 cu. ft.; Model HB1-41, 4.1 cu. ft.; Model HB1-50, 5.07 cu. ft.; Model HB1-60, 6.0 cu. ft. All HB models also available with Standard Q3 type Compressor Unit.



Other De Luxe Shelvador Models available: Model HL5-43, 4.3 cu. ft.; model HL5-50, 5.03 cu. ft.; Model HL5-61, 6.1 cu. ft. All De Luxe Shelvador Models have the Crosley ELECTROSAVER, the sensational T-5 Hermetic Unit with Double-Section Still Air Condenser.



Red Beetleware Cups— for quick freezing of salads and desserts.

Storage-drawer — non-refrigerated compartment for storing bulky foods.



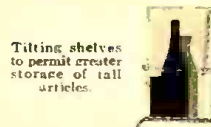
CROSLLEY ELECTROSAVER FEATURED IN DELUXE MODELS

... Summed up in one word, "ELECTROSAVER", all the years of earnest study, superior engineering skill and tireless experimentation combine to bring worthwhile savings to every Shelvador user. The new Crosley T5 Hermetic Unit is a marvel of efficiency and its exceptional operating economy, its long life and quiet dependable performance, represent the highest possible value in electric refrigeration today assuring enthusiastic customer satisfaction.

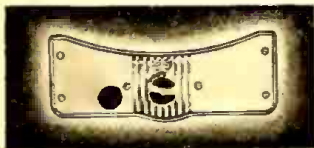
Removable bottom shelf section to accommodate roasts, turkeys, etc.



Key-type, quick-acting ice tray release.



Tilting shelves to permit greater storage of tall articles.



18-Point Temperature Control. Radio-type illuminated dial provides faster or slower freezing speeds as desired.



These features distinguish the Crosley Electrosaver: Non-toxic Freon refrigerant... economical high side float expansion system... high reserve capacity, resulting in shorter running time, faster freezing and greater ice-making capacity.



Built-In Thermometer— gives visible proof of safety zone food compartment temperatures.

of the CROSLLEY ELECTRIC REFRIGERATOR

*You're missing
A BIG CHANCE
IF YOU DON'T GO AFTER
THE RECORDING BUSINESS
IN YOUR COMMUNITY—
RIGHT NOW!*



GOOD INSTANTANEOUS RECORDINGS ARE SOMETHING NEW

Your customers will be amazed when they hear their first Presto recording . . . they are so different from any home recordings they have ever heard before.

MAKE THIS SIMPLE TEST to discover the interest among your own customers. Send for a supply of dealer folders on the Presto Model D recorder. Distribute them to your best customers and watch the response. When you need the machine wire us at 137 W. 19th St., New York City, or phone us at Chelsea 2-6425. *Shipment will be made the same day.*

Over 300 live customer inquiries now on file will be turned over to dealers stocking Presto equipment within the next 30 days.

PRESTO

RECORDING CORP.

137 W. 19th STREET, NEW YORK, N. Y.

WORLD'S LARGEST MANUFACTURER OF INSTANTANEOUS RECORDING EQUIPMENT

Export Division (Except Australia & Canada)
THE M. SIMONS & SON CO., INC.
25 Warren St., New York Cable: Simontrice, N. Y.
Australia and New Zealand Agents & Stockists
A. M. CLUBB & CO., LTD.
45 King Street Sydney, N. S. W., Australia

SERVICE NOTES

men operating in mild temperatures than during freezing weather. They are not encumbered and handicapped by mittens and are inclined to spend more time at such details as splicing and securely fastening all wires, instead of hurriedly returning to ground or inside where a greater degree of comfort was afforded.

A list of good prospects was worked last spring, and beginning in April, twenty antennae installations were secured weekly until summer set in.

SERVICE TIPS*

Philco Model 70

Howling

★ This trouble is usually due to vibration of the condenser plates. If the rubber washers on which the gang condenser is mounted cannot be replaced, a repair can be made by placing the rubber washers on which the set is mounted under the chassis. When this is done the bolts should be left loose in order to obtain a floating effect.

Stromberg Carlson Models 38, 39, 40, 41 (2nd type)

Weak, Station Hiss

★ If this condition is cleared by placing a finger on the R.F. type 58 tube control grid, the pre-selector coil primary may be found open or grounded to the metal braid of the antenna binding post lead.

Superheterodynes Using Screen Grid Osc.-Det. Insensitive At High Frequencies

★ Replacing tubes in this case will form only a temporary repair, as the trouble will show up again when the tube is used for only a short while. To effect a permanent repair, decrease the value of the bias resistor connected from the cathode of the osc.-det. tube to the chassis. This may be eliminated but the best value may be found by experiment. One-third of the original value has been found quite satisfactory in numerous cases. The best way to select the correct value is to use an output meter and an oscillator, adjusting the resistance value for maximum value.

Atwater Kent Models 67, 67B

Excessive Volume On Local Stations

★ You will probably find an open in the black wire leading from the volume control to the on-off toggle switch or a poor contact in the switch itself. The switch may be tested by shorting it. Bend the switch contact spring for greater tension or, if necessary, replace it with a new one.

Victor R-6

Erratic Operation

★ The screen bleeder resistor from plate to screen (16,000 ohms) is con-

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

tinued to the cathode circuit with a 8,000 ohm resistor both of which become defective. Reduction in value of one will put an overload on both and hence both must be replaced in such an event. Very often this fact is neglected in receiver repairs.

Auto Radio

Noise From Brakes

★ The brakes of many automobiles will generate electrostatic charges which, on discharge, will set up interference. To overcome this trouble the brake rods may be bonded. If these charges are permitted to discharge to the chassis as soon as they are created, they can cause no difficulty. In some cases the brakes must be relined to overcome this difficulty, but this is a very rare condition.

SERVICE MEETINGS ON RADIO

★ Series of thirteen "Service Meetings of the Air," via electrical transcriptions, are to be inaugurated by RCA in all sections of the country, according to F. B. Ostman, RCA Service Manager.

A thorough test was made in the Philadelphia area and members of the Philadelphia Radio Servicemen's Association voted enthusiastic approval of the plan after the first broadcasts.

Every lecture has been prepared

P. A. is Big Business. LAFAYETTE has met this fact with CO-ORDINATED SOUND SYSTEMS. Complete packaged units—pre-tested—ready for easy installation and long faultless operation. Priced right they offer a system for every conceivable P. A. application.

SEND FOR FREE NEW 116 PAGE SPRING CATALOG NOW!

WHOLESALE RADIO SERVICE CO., INC.
 NEW YORK, N. Y. CHICAGO, ILL. ATLANTA, GA.
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 542 E. FORDHAM RD. 219 CENTRAL AVE. 99-08 154th STREET
 (LINDEN PLAZA)

■ **WHOLESALE RADIO SERVICE CO., Inc.**
 ■ 100 SIXTH AVENUE, NEW YORK

■ Please rush FREE Catalog No. 68-12 C7

■ Name _____

■ Address _____

■ City _____ State _____



How the C.C.C. Finance Plan **HELPS RADIO DEALERS SELL PROFITABLY**

COMMERCIAL CREDIT COMPANY financing has proved its value to thousands of successful merchants as an aid in closing sales. Its name is so well-known to American families, there is no hesitance in accepting CCC financing . . . no doubt about the fairness of the terms.

But your financial interest in time payment sales doesn't end with the signed order and the down payment. There has to be a final reckoning before your full profit is assured.

Commercial Credit Company's twenty-five years experience in credit investigation and collection is a bulwark of strength for you. It weeds out the bad risks that mean trouble and loss from failure to complete payments. It assures you of the maximum of profit. Get the most out of the big year ahead of you with Commercial Credit Company service. Nation-wide operation through 179 offices in principal cities assures close cooperation, prompt remittance.

COMMERCIAL CREDIT COMPANY

COMMERCIAL BANKERS
CONSOLIDATED CAPITAL



HEADQUARTERS: BALTIMORE
AND SURPLUS \$60,000,000

FINANCING SERVICE FOR MANUFACTURERS, DISTRIBUTORS AND DEALERS THROUGH 179 OFFICES IN THE UNITED STATES AND CANADA

SERVICE NOTES

and recorded by leading engineers from the RCA labs, on a wide variety of subjects close to every service engineer's interests. With the knowledge that the public will be listening in, each broadcast will emphasize the technical knowledge, the special equipment and experience required for servicing radio sets. This angle of approach is calculated to discourage amateur attempts at home repairs and to show the necessity for engaging a competent service engineer to

ENTIRELY *New* IN DESIGN
PERFORMANCE * BEAUTY



SHURE ZEPHYR
★ *Balanced-Tracking*
CRYSTAL RECORD REPRODUCER

● The ZEPHYR marks an important milestone in pickup progress. It brings you basically new improvements of far-reaching significance in electric pickup design. *Exclusive* "needle-tilt" Balanced-Tracking reduces record wear . . . increases record life. Improved wide-range frequency characteristic and better transient response give you higher fidelity . . . more life-like reproduction. "High-Lift" streamlined arm allows plenty of room for easy convenient needle changing. Plays 10 and 12-inch records. Furnished with 3½ ft. shielded cord, mounting screws, and complete instructions.

List Price \$12.00

Order a ZEPHYR now! Let your own tests *prove* how much *better* it really is! For complete technical data, write for Bulletin 205T.

Licensed under patents of the Brush Development Company. Shure patents pending.

SHURE MICROPHONES
BRUSH BROTHERS • MICROPHONE HEADQUARTERS
225 WEST HURON STREET • CHICAGO, U. S. A.

inspect and "check-up" the radio set for the best possible radio reception.

Valuable prizes will be awarded to servicemen for the best letters on the service subjects covered.

CHICAGO IRSM CONVENTION

★ Plans are being laid to arrange a program for the fifth annual IRSM Convention at Chicago that differs from the usual type of technical session; and in addition, arrangements have already been made for speakers of renown who will talk on inspirational subjects. The purpose of this latter type of lecture is to instill a greater degree of self-confidence in the members of the service profession. Convention is scheduled for June 10 to 13 at Hotel Stevens.

THIS CARD FILE TELLS TALES

★ A SIMPLE card system which acts as its own record—ledger, mailing list, ready reference, and many other things in one, is used by Jack Muthart of Allentown, Penna. This is how it works.

The telephone rings. A call has come in for a serviceman. The girl in the office immediately puts down the call in a Day Book.

Then the date, name, address and phone number is transcribed to a record card illustrated herewith which becomes a ledger card, mailing list, and reference file, all in one. *after* the job is completed.

The stub of the card is torn off at the perforation, and is left with the customer, preferably in the radio (where it serves a useful check up purpose later on in case of complaint). On the back of the card is written just what has been done to the customer's radio.

The card itself follows the job through to its conclusion. Mr. Muthart enters the type and model of radio on the card, and the bill which is itemized for future reference. The card is returned to the shop and on the back are entered any "remarks" for which there is no space on the front.

The original is numbered serially, in order to keep track of the number of calls and cards written daily, to check with the call book, and also to know whether all serial numbers are accounted for at the end of each day or week, which in turn tells Mr. Muthart whether all calls have been properly attended to. In this way nothing is overlooked or neglected.

No. 5001		DATE LEFT
		DATE PROMISED
NAME	<i>Sam Smith</i>	
ADDRESS	<i>210 N. 10th</i>	
CITY	<i>Allentown</i>	
RADIO	PHONE	
		TOTAL AMOUNT
RADIO HOSPITAL DEPENDABLE RADIO REPAIRING ASK JACK		
222 N 7TH ST		ALLENTOWN, PA.
No. 5001	NOT RESPONSIBLE FOR GOODS LEFT OVER 30 DAYS	

This tag provides a complete record for the service shop.

After the job is completed, the card is then filed alphabetically. This record serves as a complete customer record and reference ledger.

"In this way I know when I get the radio back, just what I have done," explained Mr. Muthart. "A customer cannot slip anything over on me. When I call at a home, all I have to do is to pull the card out of the radio and I can tell at a glance what day the set was fixed and all about it. If necessary show it to the customer so they know their memory is somewhat faulty.

"Or if they call up on the phone, or come into the store, all I have to do is to pull out that record card. This card index also serves another purpose. Suppose a call comes in. I immediately refer to my file before I make the call and I can instantly find out whether they paid me promptly or not.

"In other words I get a complete picture of the customer's credit situation. If they are slow to pay, for instance, I look over what their trouble is, tell them what it will cost, and that it will be spot cash. If they hedge, I know I can scratch them off my list and that my call is wasted.

"This system was started after forty jobs which I had done failed to pay and wanted charge privileges. I had to have some way also of keeping track of my calls and repair service, and a ledger or other system was too much work for a cash business."

BOOKS FOR SERVICEMEN

"ALIGNING PHILCO RECEIVERS"

By JOHN F. RIDER

★ The book represents the first time that alignment data on the entire Philco line, from the first set ever produced to the latest, has been gathered in one comprehensive work.

The information was prepared in cooperation with the Philco engineering department and is authentic and complete in every respect. The order followed in the tables is the same that the serviceman uses when aligning the receiver on the bench, presented in the most convenient form for fast and accurate alignment operation. Costs \$1 and has 160 pages.

Published by John F. Rider, 1440 Broadway, New York, N. Y.—RADIO TODAY.

"THE RADIO HANDBOOK"

By FRANK C. JONES

★ Revised 1937 edition of handbook deals largely with "ham" radio, but fundamentals of electricity and radio, together with charts and data on construction of equipment will interest radio servicemen.

Major portion deals with construction and operation of short-wave receivers and transmitters. Book will give the radio technician a fairly good idea of why sets are built as they are and how to get the most out of any radio—either broadcast or shortwave. The "ham" will find this book of great help in building and operating his equipment.

A supplement will be issued during the year to all purchasers of the book for the sum of ten cents.

Published by Pacific Radio Pub. Co., Inc., Pacific Building, San Francisco, Cal. Price \$1.50—RADIO TODAY

"ELECTRON TUBES IN INDUSTRY"

By KEITH HENNEY

★ As indicated by its title, Henney's book deals with the industrial application of tubes, including the vacuum, gaseous, and photo-electric types. The second edition has been completely reset and material of very recent dates added.

The beginning chapters of the book deal with the theory of tubes and their associated circuits, which provide a background that helps in understanding the actual applications. Literally hundreds of typical circuits are shown and briefly described. Numerous references are made to books and periodicals so that the

reader may go to the original sources for more detailed discussions.

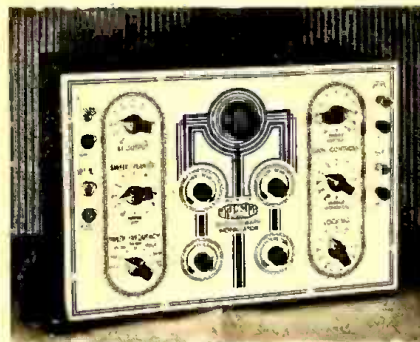
The book is recommended to those interested in learning of the many applications of amplifiers, oscillators, photo-tubes, rectifiers, thyratrons, grid-glow tubes, and cathode-ray tubes to industrial uses. For the serviceman it will provide an insight into the wide uses to which tubes are being put—and it is quite likely that

in the future the wide-awake radio-man will find the servicing of electronic equipment entrusted to his skill.

Volume has over 500 pages and costs \$5. Published by McGraw-Hill Book Co., New York.—RADIO TODAY.

NEW LITERATURE

★ Separate sheets on I.F. transformers, midget condensers, transmitting condensers are offered by Hammarlund Mfg. Co., 424 W. 33rd St., N. Y. C. New policy originated by Lewis Winner is to send only those



Cathode Ray OSCILLOGRAPH WOBBULATOR Model 77 **2** Instruments FOR the cost of **1**

Why pay over \$100 for your oscillograph and sweep frequency oscillator when you can buy both for \$49.95???

The Triumph Model 77 is both an oscillograph and wobbulator in one instrument! It combines the 1" cathode ray tube with a wide range linear sweep and the famous electronic sweep band wobbulator pioneered by Triumph years ago. Dual amplifiers provide the highest sensitivity possible and the synchronous locking circuit stabilizes any trace within the frequency range of the 15 to 35,000 cycle sweep.

Model 77 is supplied complete with six tubes in a portable carrying case, ready to operate. Elaborate instructions and extensive applications are included. Send for your copy of instructions before you buy.

A TRIUMPH



Triumph Instruments Cost Less

- Model 820 1" Oscillograph with 15 to 35000 cycle linear sweep, dual amplifiers, synchronous locking, and 4 beam controls, your best buy— **\$39.95**
- Model 800 3" Oscillograph with 15 to 50,000 cycle linear sweep, dual amplifiers, synchronous locking, and 4 beam controls, Lab. style. Only **\$63.60**
- Model 180 Electronic Sweep test oscillator for use with any type oscillograph. Copied but unbeatable, Triumph Wobbulator— **\$46.00**
- Model 120A Signal Generator Direct reading dial, calibrated microvolt attenuation, no leakage, 100 kc to 75 mc, 30% Mod. **\$29.95**
- Model 420L New Standardized Tester checks all types of tubes, makes hot leakage, and performance tests. Accurate, reliable, simple. **\$29.95**
- Model 300 Multirange Meter, official 1000 ohm per volt factory standard. 6 ac-dc volt ranges, 3 ohm and 2 m.a. ranges, portable, handy. **\$15.95**
- Model 310 Volt-ohmmeter for knock about service, 2 ohm and 3 volt ranges at 1000 ohms per volt. **\$7.85**

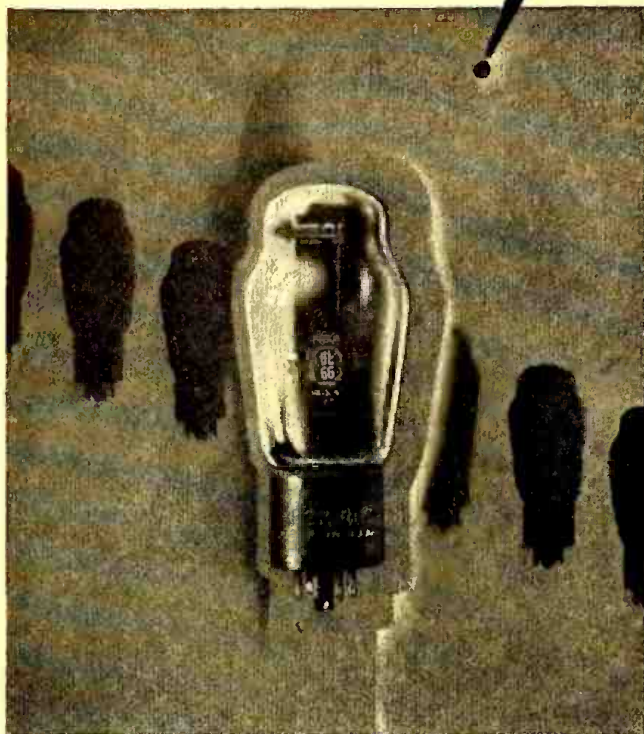
TRIUMPH MFG. CO.

4015 W. Lake, Chicago, Ill.

Please send catalog and FREE data on "How to Operate An Oscillograph."

Name Address
City State

ALL 6L6G's ARE *not*
alike!



HERE'S why the Arcturus 6L6G tube is recognized as being individual by both radio technicians and amateurs. . . .

Months of painstaking research in the Arcturus laboratory have developed a unique testing method which assures exceptionally low grid current for every 6L6G with an absolute minimum of distortion. Every tube is *individually measured* for power output and resulting sensitivity. Two separate noise tests (the last one in an actual radio receiver) bring truly remarkable freedom from noise while the excellent emission life assures maximum power output over a longer period of time.

Guarding and insuring Arcturus efficiency are 137 separate tests and checks that every tube must pass before being shipped. No wonder then, they have earned the reputation. . . .

The Quality Tube Of The Industry

ARCTURUS RADIO TUBE COMPANY
NEWARK, NEW JERSEY

ARCTURUS

**INDEPENDENT TUBES FOR DEALERS WHO
DO THEIR OWN INDEPENDENT THINKING**



**FAST
VACATION
SELLER**

**The
PORTOMATIC**

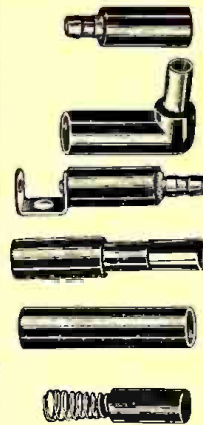
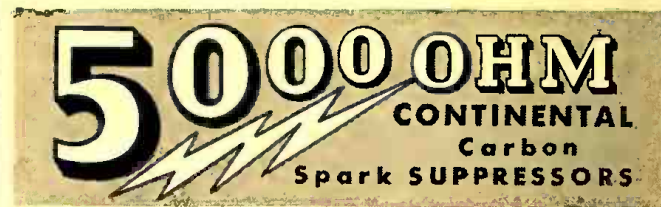
**WORLD'S FINEST PORTABLE
AUTOMATIC PHONOGRAPH-RADIO**

Sweeping the country in popularity

Patented construction will play and change 8 records of any standard make automatically.
Felt-lined receiving tray stores records and protects them.
Luxurious cowhide leather case.

Remarkable clarity, volume, faithfulness and beautiful tone.
Built-in Aerial. AC-DC, foreign current. Short wave reception.
Good territories available. Write or wire for details now.

LEHMAN RADIO SALON, Inc.
1013 MADISON AVENUE NEW YORK



● Out where the test begins—out where stations are few and far between, your car radio needs all the sensitivity its circuit will permit. CONTINENTAL Carbon's new 5000-ohm low-voltage-coefficient spark suppressors effectively squelch ignition interference, thus releasing the avc circuit and the full sensitivity of your set.

Make this test—tune in a distant station while driving on a country road at 30 to 50 miles per hour. Shut off your ignition and note if the radio reception is better. If it is better with the motor shut off, you need CONTINENTAL suppressors.

For spark plug suppression select S27, S20A or S21, in 5000-ohm resistance. Use T13 or T11 for the distributor in 10,000 ohms; T17 for Ford V-8 distributors. Available from leading radio jobbers.

CONTINENTAL CARBON Inc.

13910 Lorain Ave., Cleveland, Ohio

(Toronto, Canada)

Please send booklet on Interference, 10 cents enclosed.

Name

Address

City Jobber

NEW BOOKLETS

sheets requested and enclose a card to be returned if complete catalog is wanted—thusly catalog is sent only to those who specifically ask for it.

★ Cinaudagraph Corp., Stamford, Conn., has issued a 16-page two-color catalog, No. 237, describing its new line of magic magnet speakers. Booklet and price list available from the Stamford plant.

★ Weston Electrical Instrument Corp., Newark, N. J., has just issued supplementary data on testing new tubes in the following tube checkers: Model 682, 770, 771. Data has been mailed to all registered owners of this equipment. Sheets are also available for types 538-R, 672-R, 674-R, 678-R, 681, 682-R—R indicating rebuilt models.

★ Free to all radio men is a new characteristic chart for the complete line of regular glass type tubes, published by Champion Radio Works, Danvers, Mass.

★ "How to Operate an Oscillograph and Wobbulator" is the title of a new 6-page technical bulletin offered free by the Triumph Mfg. Co., 4017 West Lake St., Chicago, Ill.

★ International Resistance Co., 401 N. Broad St., Philadelphia, Pa., has issued two new booklets: a volume control guide available through parts jobbers, and a resistance engineering manual to be obtained free from IRC. Both are handy pocket size.

★ New 6-page illustrated booklet on "Genemotor Power Plants" has been issued by Carter Motor Co., 365 W. Superior St., Chicago, Ill.

★ Just off the press is the 1937 issue of Philco's "Parts Price Catalog," in which are listed more than 10,000 items on 38 pages.

★ Spring and Summer 1937 catalog has been issued by Wholesale Radio Service Co., Inc., 100 Sixth Ave., New York. Distributed free of charge, it has 116 pages and over 2,000 illustrations.

★ Either from jobbers or from Solar Mfg. Corp., 599 Broadway, New York, a new complete condenser catalog (No. 8-S) is now available.

★ Requests for Catalog 135A, addressed to Cornell-Dubilier Corp., South Plainfield, N. J., will bring complete specifications on the firm's new type TL capacitors. Company also has a new catalog, No. 137A, listing a complete line of replacement electrolytic and paper condensers.

★ Available on request is a new booklet describing the use of recording equipment by broadcasting stations and advertising agencies, issued by Presto Recording Corp., 139 W. 19th St., New York.

★ Sent free of charge to all persons allied with the radio industry is a new volume control guide issued by

Centralab, 900 E. Keefe Ave., Milwaukee, Wis. New guide has 83 per cent more pages than in 1936.

★ Hygrade Sylvania Corp., Emporium, Pa., has issued for March a 7th anniversary edition of *Sylvania News*. As usual, the publication is mailed free to jobbers, salesmen, dealers and servicemen.

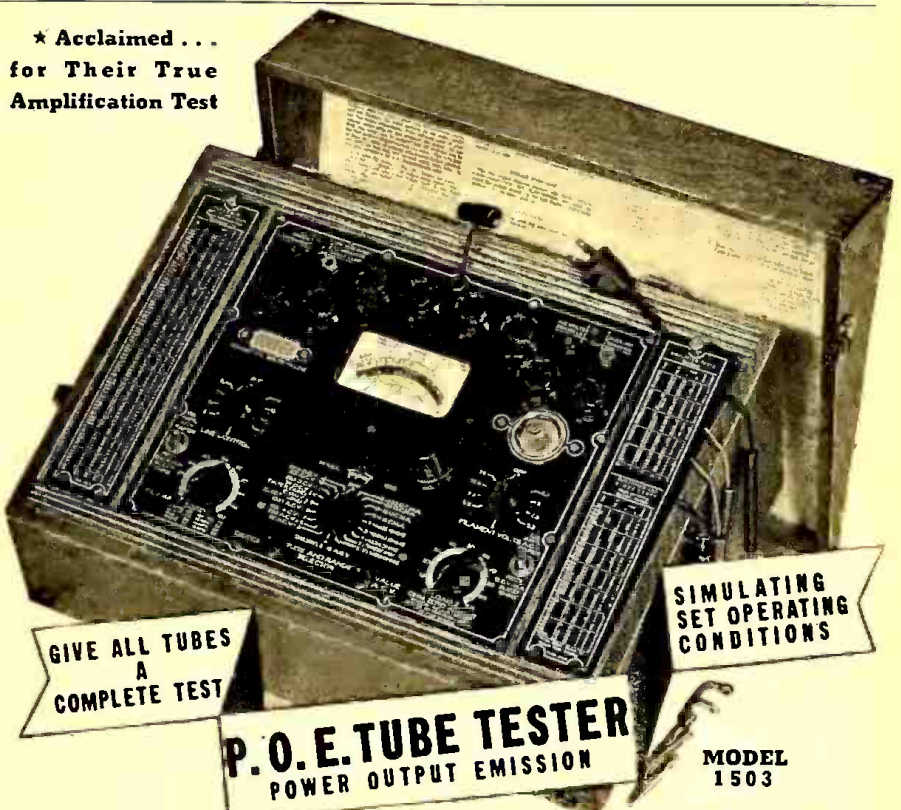
★ Additional copies of the "Aerovox Research Worker," which deals with phase inversion as practiced in Europe and America, have been run off and are available free to anyone writing Aerovox Corp., 70 Washington St., Brooklyn, N. Y.

★ Issued by P. R. Mallory & Co., Inc., Indianapolis, Ind., is a new 41-

page catalog listing new Mallory and Yaxley accessories and parts, as well as established items. Booklet carries dozens of charts, illustrations, tabulations, etc.

★ Forty-page, 1937 catalog issued by Insuline Corp. of America, 25 Park Place, New York, is now available to servicemen, amateurs and experimenters. Copies of the catalog, No. 190, available from jobbers.

★ New "RC-13 Receiving Tube Manual" has been prepared by RCA and copies may be obtained by sending 25 cents to the Commercial Engineering Section, RCA Radiotron Division, RCA Mfg. Co., Harrison, N. J. Volume includes feature tabulations on resistance-coupled amplifiers.



★ **Acclaimed . . .**
for Their True
Amplification Test

GIVE ALL TUBES
A
COMPLETE TEST

SIMULATING
SET OPERATING
CONDITIONS

P. O. E. TUBE TESTER
POWER OUTPUT EMISSION

MODEL
1503

DEALER PRICE . . \$46.67

MADE IN THREE MODELS

MODEL 1502 P.O.E. Tube Tester has
Shadow Graph Line Voltage Indi-
cator. Neon Inter-Element Short
Test is made while tube
is hot. Complete in Quar-
tered Oak Case. Dealer
Price \$36.67

MODEL 1503 combines with the
P.O.E. Tube Tester separate Uni-
versal Volt-Ohm-Milliammeter, Con-
denser Tester and Deci-
bel Meter. In same Case
as Model 1502. Dealer
Price \$46.67

MODEL 1504 same as
1503 but also combines
Free Point Tester in side
panels. Dealer Price \$56.67

SEE YOUR JOBBER
WRITE FOR CATALOG



The Triplet Electrical Instrument Co.
193 Harmon Ave., Bluffton, Ohio

Please send me more information on
 Model 1502; Model 1503; Model 1504.

I am also interested in

Name
 Address
 City State

MINI DOLLAR ADVERTISING

PAY TO THE ORDER OF **John D. Farmer** No. 1001
 CLARINDA, IOWA March 31 1937
 TWO DOLLARS AND FIFTY CENTS \$2.50
 TO PARRIS-DUNN CORPORATION
 CLARINDA, IOWA, U.S.A.

DUN-CHARGER
 PARRIS-DUNN CORPORATION
 CLARINDA, IOWA, U.S.A.

John D. Farmer
 PRESIDENT

WE ARE Giving Away THESE CHECKS TO BE SPENT IN YOUR STORE

• Our enormous consumer advertising sells thousands of **DUN-CHARGERS** to farmers every month. With each one we enclose a check for \$2.50 to apply on the purchase price of a selected list of nationally known battery radios.

NATIONALLY ADVERTISED to 11,015,716 FARMS every month

MAIL THIS COUPON!

PARRIS-DUNN CORP.
 Dept. 29, Clarinda, Iowa
 Send list of radios on which I can accept these \$2.50 checks.

I now handle.....make radios.

Name

Address

DUN-CHARGER

Approved by **PHILCO**

10 FEET TALL

SPRING CLEANING

(From page 10)

wise to transform the business from interstate to intrastate; because of the complicated legal structure necessary to accomplish this; and because of the possibility of so intermingling interstate and intrastate transactions as to result in a violation of Federal Laws; and that all of these complications, legal or otherwise, would largely disappear if State Trade Laws for intrastate commerce and Federal Fair Trade Laws for interstate commerce were substantially identical.

"The Tydings-Miller bill, though it permits price maintenance, prohibits agreements, contracts and understandings between competitors with respect to prices, while permitting them between a manufacturer or jobber or dealer or customer on the nationally branded merchandise which he produces and sells.

"Indicating also the strong possibilities of the passage of the Tydings-Miller Bill (which has once passed the United States Senate), we mention that Congressmen elected in those states which have adopted Fair Trade Laws as sound public policy may take that as an indication of public sentiment in their respective districts and favor the same kind of legislation in Congress, and if this assumption proves true, the size of the area in the nation in favor of resale price maintenance, as embodied in the Fair Trade Laws, affects a considerable number of the members of Congress.

Last analysis

"We emphasize these points:

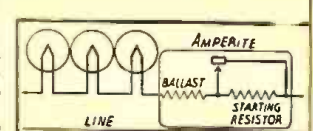
"1. That the Fair Trade Laws of the states and the Tydings-Miller Bill apply only to commodities bearing trade names, trademarks, labels or brands in fair and open competition with commodities of the same general character produced or distributed by others, and that they do not apply to commodities which do not bear such an identification or are not in such competition.

"2. That the sale of the same commodities without a trade name, trademark, label or brand cannot under these laws and that Bill be similarly protected by them as they are not dealt with in these laws and in this Bill.

"3. Unless other State Laws or Federal Laws prohibit it, the names, trademarks, labels or brands may be removed and the commodity sold by any owner without restrictions on price by any person owning the commodity."

New! AC-DC AMPERITE WITH STARTING RESISTOR! Prevents Untimely Burnouts

When your set is turned on, the Potent Automatic Starting Resistor allows only 75 volts to pass through... Then it increases the voltage to normal as the tubes warm up, thus preventing sudden overloading and burnouts.



WRITE FOR CHART CVS

Only 3 types of AC-DC AMPERITE are required to replace any of the 60 types of AC-DC ballast tubes. NEW LOW PRICE: List \$1.00. (Also new low price on replacements for 2-Volt Battery Sets, List \$1.00.)

AMPERITE Company 561 BROADWAY NEW YORK

AMPERITE BOOM (Model FS-B)



Adjustable in any direction. Noiseless, smooth, easy action. Adjustable counterweight. Write for Bulletin ST.

TRADE FLASHES

★ Robert F. Herr, manager of parts and service division of Philco, has recently summarized the characteristics of the most active year just passed by the Radio Manufacturers Service. RMS replaced about 3,000 servicemen and added several thousand. Present membership is about 19,000 in the U.S., 1,500 in Canada, 1,500 in Great Britain, several hundred in other countries combined.

★ Arrangements have been made by Continental Radio & Television Corp. that all Admiral set "paper" from their dealers will be accepted in the future by the Commercial Credit Co. of Baltimore, Md., one of the foremost credit organizations in the country. J. H. Clippinger, vice-president and sales manager of Continental, announced recently that Herbert Weisburgh, 180 Riverside Drive, New York, will represent Admiral sets in New England states. Weisburgh is well known in the specialty product industry, having been identified with several refrigeration organizations in recent years. Ross Siragusa, president of Continental, just returned to his desk from a stay in New York territory where he gave pre-views of the new Touch-O-Matic push button tuning to interested jobber and dealer groups.

★ Morris F. Taylor, manufacturers representative, opened on Mar. 15 a warehouse at 440 W. Peachtree St., Atlanta, Ga., to serve jobbers in southern states. A. S. Hardy, assistant manager of the former Federated Purchaser's Atlanta branch, will be in charge.

★ Pierce-Airo Radio Co., Inc., 510 Sixth Ave., New York, has informed its distributors in the flood areas that it will replace at the manufacturers' expense all DeWald merchandise destroyed in the high water.

★ R. H. Van Dusen, who has held the position as office manager at New York headquarters of National Union Radio Corp., has been advanced to assistant sales manager-ship.

National Union has also announced the addition of instruments made by Simpson Electric Co., Chicago, to its line of free equipment for servicemen. Total of six of the Simpson models are available.

★ O. P. Smith, general sales manager Utah Radio Products Co., Chicago, completed recently a swing around the Eastern trade centers with J. B. Price, Utah Eastern representative. Mr. Smith brought back with him substantial orders plus optimistic comments from all of the manufacturers. Looking over sales figures on his desk, Mr. Smith found that January and February sales for Utah showed an increase of 30 per cent over last year.

The GIANT SKYSCRAPER DUN-CHARGER

10 FEET TALL!
Only \$1500 NET

Approved by **PHILCO**

MAIL THIS COUPON!

PARRIS-DUNN CORP.
Dept. 29, Clarinda, Iowa

Send list of radios on which I can accept these \$2.50 checks.

I handle make radios.

Name

Address

110 VOLTS AC ANYWHERE

KATOLIGHT, JR., AC PLANTS

Sells itself! 55 pounds. Self-cranking 300 watts, and rope-cranking 350 watts. Also 6, 12, 32 and 110 volts DC.

300 TO 10,000 WATT AC PLANTS

Specially designed for sound-truck, amplifier, P.A., radio and other work. Self-contained. Self-cranking by connecting to auto batteries.

DIESEL PLANTS

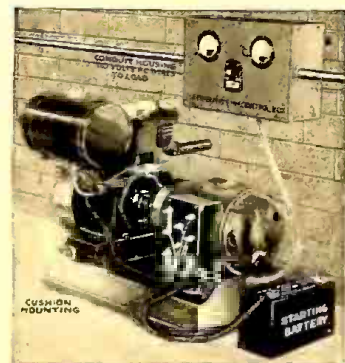
Full Diesel AC & DC plants. 2, 3, 5, 6 KW sizes.

AC, DC Generators, Rotary Converters; DC Plants; Windmill Lighting Plants.

Dealers, Jobbers, write for details and discounts

KATO ENGINEERING COMPANY

MANKATO, MINNESOTA, U. S. A.



ON THE TRADE TICKER

★ After 25 years' experience in handling exports of technical products, Kelvin Engineering Co., Inc., 106 Front St., New York, will now enter the radio field. Firm has vet representatives in chief Latin American markets; is also interested in representing makers of intercommunicating systems. Kelvin will welcome manufacturers' literature and prices.

★ Zenith Radio Corp. has established itself in its proud new home at 6001 Dickens Ave., northwest section of Chicago. This plant is the largest radio factory in the world on one floor, and according to Commander E. F. McDonald, Jr., Zenith president, will be adequate to handle in a modern fashion the firm's expansion plans. Layout is capable of producing 10,500 radio sets every 8 hours, or nearly 22 receivers a minute.

Zenith will now fabricate its own

steel into chassis frames and other metal parts for home, farm, boat, trailer and auto radios. Special provision is made for auto set engineering, wherein Zenith is expanding.

New plant will contain all facilities needed for making cabinets, thus removing the uncertainty arising from using outside manufacturers. Elaborate new quarters and equipment have been assigned to the engineering, technical, service, draughting and research staffs.

★ Members of the engineering staff and sales force of Arcturus Radio Tube Co., Newark, N. J., as well as the company's jobbers, cut a sort of a birthday cake last month. Occasion was the 10th anniversary of Arcturus' introduction in February, 1927, of the standard base AC radio tube.

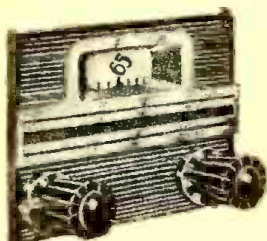
★ Annual report of Hygrade Sylvania Corp. for 1936 reveals several feature facts: net income was 33 per

cent over 1935, there was a 29 per cent increase in sales volume, an extra dividend was paid on common stock, a new tube plant was erected at Salem, Mass., and extra wage payments were made to employees.

★ New company has been formed by Robert L. Coombs and Edward J. Rooney, known as the Coombs-Rooney Co., 88 Fourth Ave., New York, to handle radio and electrical lines chiefly in the South and Central American markets. Mr. Coombs is sailing about March 20th for an extensive selling trip in South America.

★ W. F. Huntington, formerly sales representative in the Cleveland district, has been assigned by RCA to the Atlanta district and will be stationed in Florida, succeeding J. R. Slocum, deceased. George L. Malsed, formerly sales representative in the RCA Minneapolis district, has been assigned to the Dallas district. Gay White has resigned as sales representative of the Dallas district to accept a position with RCA-Victor's new wholesale distributor in Dallas, the Radio City Distributing Corp.

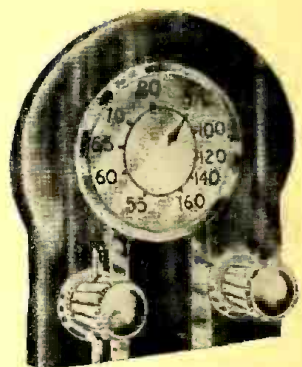
SERIES 700 CROWE PANEL CONTROLS for ANY AUTO RADIO in 1935, 1936 and 1937 cars



Ask for Bulletin No. 202. Gives full details on the new Series 700 remote controls, flexible shafts, end fittings, and other accessories.

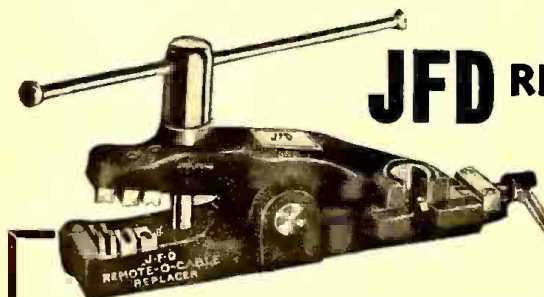
NEW DOUBLE-UNIT CONSTRUCTION GIVES YOU:

1. Same control unit in all cars.
2. Airplane or porthole dial (as specified by car manufacturer) *without changing control unit.*
3. Quick installation without drilling, sawing, or filing any instrument panel.
4. Custom control for any make of radio.
5. Full coverage for all ratios, *with or without on-off switch, sensitivity switch, tone control, and other features.*
6. Approved styling for every car.
7. Smooth, dependable operation.



Order from your jobber. Liberal trade discounts.

CROWE NAME PLATE AND MANUFACTURING CO.
1771 Grace St. Chicago—Cable Address: Croname-Chicago



AUTO RADIO J.F.D. REMOTE-O-CABLE REPLACER

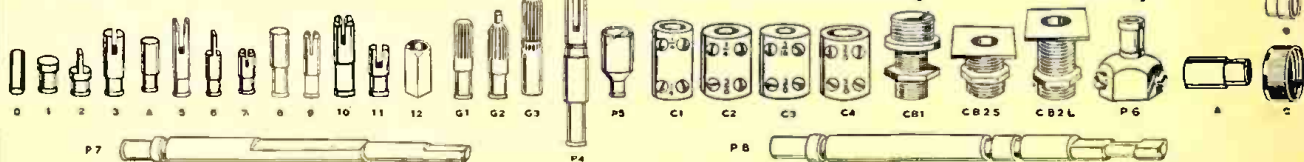
With the Remote-O-Cable Replacer, a supply of shafting and casing, same as used by leading manufacturers and an assortment of fittings, you can immediately deliver any length or type of Auto Radio Control Cable. Properly connect any auto radio to any dashboard head.

Auto radio jobbers, distributors and servicemen write for full particulars.

J. F. D. MANUFACTURING COMPANY

4111 Fort Hamilton Parkway

Brooklyn, N. Y.





R. H. VAN DUSEN, advanced by National Union to asst. sales mgr.

★ N. P. Bloom, president of Adler Mfg. Co., Louisville, Ky., is believed to have set a new record during the recent flood. At the crest of the flood, he designed, laid out a boat and had it floating in the water all in two hours. Adler plant was under water on Jan. 27, but by Feb. 17 had rushed back to production. Firm makes radio cabinets for the trade, inlaid tables and other items.

★ Introduced by Consolidated Wire and Associated Corps., Chicago, is a new type package for the firm's electrolytic condensers. Eye value is based on lively colors and a varnish.

★ Torsion Grip Mfg. Co., Chicago, who have been manufacturing a new patented tube socket, have joined forces with Micarta Fabricators, Inc., also of Chicago. Latter firm will have exclusive manufacturing and sales rights on the Torsion grip socket. Micarta President Harry A. Olson and Torsion President George Duncan were recent guests in New York at the offices of Perry Saffler, manufacturers' representative at 27 Warren St.

★ Production space, equipment and personnel of the Clarostat Mfg. Co., Inc., 285 N. 6th St., Brooklyn, N. Y., have been boosted to meet a rising volume in jobber business.

★ Wm. C. Grunow, president of the General Household Utilities Co., was honored on Feb. 16 at a special dealer luncheon given for him in Kansas City, Mo., by the new Grunow refrigerator distributor there, the McNeil-Likeus Co. Mr. Grunow continued on to California for a similar meeting arranged for him at Los Angeles by jobbers and dealers.

★ Entering the radio field as a manufacturers' representative in Bombay, India, is K. R. Srinivas, near King's Circle, Matunga. Set manufacturers, as well as makers of parts and accessories, are invited to send catalogs and complete descriptive material.

★ The Tobe Deutschmann Corporation, Filterette Division, Canton, Mass., offers a free consulting service, by mail, to any municipality regarding all questions of radio noise. "We have learned that many municipalities, anxious to eliminate radio noise, have been timid about contacting us for fear that this would obligate them," explains President Deutschmann. "We make no charge for any consulting service of this nature, and we gladly make recommendations on general or specific problems."

★ Notwithstanding Utah Radio Products has one of the largest and most modern factories in the radio-

parts industry, President Ira J. Owen announces one of the greatest expansion programs in the company's history. Several departments will be completely re-equipped with latest developments in automatic machinery to further increase production and enable Utah to maintain delivery schedules on its rapidly increasing business. The Utah laboratory will be one of the finest in the radio parts industry, equipped with new specially built testing apparatus designed to maintain quality standards of Utah products. Meanwhile the office is being fitted out with the most up-to-date basic standard cost system available. This system, when completed, will greatly increase the operating efficiency of the business.




**WHEN YOU
REPLACE
RADIO SHAFTS
USE ONLY**

**S.S. White FLEXIBLE SHAFTS
and CASINGS**

... and here are the reasons why

They're specially designed and built for radio application.

They're standard **original** equipment on practically all makes of auto radios.

They provide smooth, sensitive tuning, without "stiff" spots or "jumping."

They assure satisfied customers—and that means more business for you.

• **BE SURE to ask your jobber for genuine S. S. WHITE Shafts and Casings.**

The S. S. WHITE

DENTAL MFG. CO.

INDUSTRIAL DIVISION

10 East 40th Street, Room 2310T

NEW YORK, N. Y.

ON THE TRADE TICKER

★ James F. Weldon, formerly with the Atwater-Kent Manufacturing Co., and for the past ten years identified with important export executive activities, has been appointed export manager of the Zenith Radio Corp., Chicago. At one time Mr. Weldon was associated with the export department of the radio division of General Motors Corp.

★ General Sales Manager R. M. Coburn of National Union Radio Corp. has announced an arrangement

with Royal Typewriter Co. whereby radio servicemen may equip themselves with typewriters by purchasing NU tubes.

★ C. L. Parris, president of Parris-Dunn Corp., Clarinda, Iowa, who recently visited various radio set manufacturing organizations in the East, states that the factory is now taxed to capacity with new machinery recently purchased and that manufacturing floor space has been increased over 5,000 sq. ft. This



JOHN ERWOOD, vice-pres. and gen'l. mgr., Webster-Chicago, now busy with big factory expansion.

expansion was felt necessary in order to keep pace with Dun-Charger orders received from all parts of the country. Shipments now include more than forty foreign countries, and within the last three months the company has increased its sales volume over 500 per cent with many national radio manufacturers accepting the Dun-Charger as part of their farm merchandising program for the coming year.

★ R. B. Smith, president Consolidated Radio Products Co., Chicago, Ill., and Joseph Kruglick, president Clinton Manufacturing Co., Chicago, recently returned from an interesting tropical voyage which included a visit to Venezuela, Colombia, Panama, Cuba and Trinidad.

★ M. Lehman, president of Lehman Radio Salon, Inc., 1013 Madison Ave., New York City, has received a letter from the famous orchestra leader, Leo Reisman. Letter speaks of Port-O-Matic, the Lehman product: "Of all the machines I have ever owned, I find that this one reproduces sound most accurately." Mr. Lehman pioneered the portable automatic phonograph-radio combination.

★ Fred K. Bollman, formerly with Blackett-Sample-Hummert in charge of Stewart-Warner advertising and previously with Erwin Wasey Co., in charge of Philco advertising, has joined the staff of Hays MacFarland & Co. as an account executive.

★ Within the last two months, Radio Technicians Guild of Massachusetts has added five Chapters in the state: Arlington, Brookline, Milton, Lawrence and Quincy. Guild is expecting Lowell, Worcester and others to join in short order.

UTAH VIBRATORS CAN *Take it!*

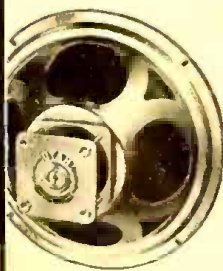
**EXCLUSIVE
UTAH FEATURES MEAN
LONGER LIFE
HIGHER EFFICIENCY**

When you install a UTAH Vibrator—no other serviceman can do a better job. You have given your customer longest vibrator life, freedom from set interference, and peak efficiency.

UTAH Vibrators are TOUGH! We've proved it by gruelling tests. Manufacturers know it too. That's why UTAH Vibrators are original equipment in more than a million sets. And the 1937 UTAH Vibrator is the finest and toughest we've ever made.

Use UTAH Vibrators on your replacement jobs. Prove to yourself they work better, last longer—but cost no more.

Your jobber has UTAH Vibrators for all radios.



THE NEW UTAH P.M. *Dynamic* SPEAKER

brings "better than new" performance to sets using this type of speaker.

UTAH has designed a new Permanent Magnet speaker that sets a new high in performance and long-time efficiency. Ideal for multiple speaker installations. Twenty-two models available in all standard sizes from five to fourteen inches.

Hear them at your jobber's—or write for details.

UTAH RADIO PRODUCTS CO.

CHICAGO, U. S. A.

TORONTO

BUENOS AIRES

ONTARIO, CANADA

(UCOA RADIO PRODUCTS CO.)

"15 YEARS OF LEADERSHIP"

★ Several radio manufacturers were present at the recent 1937 Automotive Accessories Manufacturers Show held at the Edison Hotel, New York City. Sets, tubes and parts were exhibited by Air-King Products Co., Automatic Radio Mfg. Co., Clinton Mfg. Co., Dunhill Radio Products, Fada Radio & Electric Co., Halson Radio Mfg. Co., Insuline Corp. of America, Pierce Airo, Raytheon Production Corp., Snyder, Inc., Travler Radio & Television Corp., Universal Controls, Ward Products Corp.

Both home and auto radio sets were featured in the exhibits, indicating that the manufacturers are desirous of having home sets as well as the auto sold through automotive outlets.

★ "Marty" Camber, veteran factory representative for radio manufacturers, has been named representative for Automatic Winding Co., Inc., East Newark, N. J. Camber will cover the metropolitan area and will remain representative for Mica-mold Radio Corp., Brooklyn, N. Y.

★ Work has started on a new \$100,000 building for the Crosley Radio Corp. in Cincinnati. Structure will replace the one destroyed by fire during the flood period, and will be used for shipping and storing radios, refrigerators and washing machines.

★ Compilation of "Case Histories" on radios, giving trouble and remedy for each set mentioned, has now reached over 1,500 in the loose-leaf job-data book called "Radio Field Service Data," by Ghirardi. Volume published by Radio & Technical Publishing Co., 45 Astor Place, New York, has had one supplement this year, and will get another in June.

★ Picture in the circle on the cover of this issue of RADIO TODAY shows the towers of broadcast station WEAN, Providence, R. I. Western Electric equipment. Photo by Solari.



JOBBER & SON, former being L. H. Arnold, of the new Arnold Co., parts jobber, Richmond, Va.

★ A new director of the Sonotone Corp., New York, makers of radios and other instruments for the hard of hearing, is Herman Scheibler, E.E., Ph.D. He lives in Geneva, Switzerland, and will work both here and abroad for Sonotone.

★ Bob Fogelson, purchasing agent for the Chicago division of Wholesale Radio Service Co., Inc., announces that he will resign about April 1. Active in radio since 1923, he has long been an executive with big parts and set makers, as well as distributors in the Chicago area.

★ Garfield Electric Co., 147 W. 23rd St., New York, has taken on the line of Universal refrigerators. A. G. Lichtenstein is the firm's president and L. Cowen, appliance manager.

★ The 450 radio dealers and their wives who were guests of the General Electric Co. on a winter vacation cruise to Bermuda, returned to New York Mar. 5th. Trip offered some special sightseeing chances, all manner of sport and entertainment. Cruise committee was headed by D. W. May and other GE officials aboard were Ernest H. Vogel, C. M. Wilson, Earle Poorman and Lee Williams.

★ Recent meeting of the Association of Radio Service Men, Rochester, N. Y., included novelty entertainment as well as the usual serious features. Friendly technical contest was held in which members first tried to identify and state the use of unlabeled circuits, then to draw schematics for each of 13 tubes for which type numbers were given.

★ Eugene F. Tracey, vice president, Zenith Radio Corp., Chicago, Ill., announced recently a very important augmenting of the company's staff of district managers throughout the country.

Six district managers were appointed including some of the most popular and successful members of the radio industry in their respective territories: James H. Hickey, formerly connected with the Atwater-Kent Mfg. Co., who will represent Zenith in Southeast territory; George A. Lyons, formerly sales promotion manager and district manager for Atwater-Kent, who will represent Zenith in New York state; R. E. McGreevy, formerly with the Modern Appliance Sales Co., Zenith jobber in Columbus, O., to represent Zenith in Detroit territory; J. H. Souther, formerly with Crosley, who will cover Kansas City, Mo.; Fred H. Strayer, formerly with Hygrade Sylvania in executive sales posts, now to represent Zenith in Dallas, Tex.; and C. H. Wilks, formerly with the Victor and Brunswick organizations, to work in the Northwest. New managers spent several weeks in the Zenith factory in conference with Mr. Tracey and his associates, and with their previous experience as a background, they are well qualified to cooperate with Zenith jobbers and dealers to excellent advantage in their respective territories.

★ Emporium, Pa., section of the Institute of Radio Engineers met Mar. 11 to hear Dr. P. Robinson, of the Sprague Products Co., speak on "Electrolytic Capacitors and Their Application." Dr. Robinson has been associated with the development of these capacitors since their first use in radio receivers.

★ At a recent meeting of the Westchester Chapter of the Institute of Radio Service Men, Inc., the featured speaker was Vinton K. Ulrich, Technical Editor of RADIO TODAY. Subject was "Vacuum Tube Operation as Applied to Radio Circuits." Mr. Ulrich also appeared at the Feb. 8 meeting of the New York City IRSM chapter with a discussion of the same subject.

Out of this one big book you'll get over 2,000 ideas for building up your radio service and set business. Practical store-tested plans, methods, sales talks and ad specimens, which you can put to work TODAY. They'll make that old cash register sing sweet tunes! This great, new Ghirardi book will keep you out of the ruts and show you how to put your business on good solid ground. ¶ HOW TO SELL—Getting leads and prospects. Store phone and outside selling. Sales talks. Breaking down sales resistance. ¶ HOW TO ADVERTISE—Planning. Costs. How to write your own advertising. Tested appeals. Displays. Direct Mail. Newspaper and other forms of advertising. Free publicity. Merchandising. Contests. Follow-ups. ¶ BUSINESS METHODS—How to start and run a business. Equipment and layout. Bookkeeping. Collections. Forms and records. Policies.

Money IN THE BANK...
NOT ON THE SHELF



That's only one of the advantages of the TUNG-SOL CONSIGNMENT PLAN. No outlay for an adequate stock of these high quality tubes. No repeated investments to keep that stock up to the minute. Sell—collect your profit—then remit the cost price. That's "velvet"—for you!

Tung-Sol performance means repeated, full-profit sales. There are still desirable locations for the appointment of reputable dealers..who can qualify. Write for name of your nearest Tung-Sol wholesaler.

TUNG-SOL

Flow radio Tubes

TUNG-SOL LAMP WORKS, INC.
Radio Tube Division

Sales Offices: Atlanta, Boston, Charlotte, Chicago, Dallas, Detroit, Kansas City, Los Angeles, New York. General Office: Newark, N.J.

20,000 OHMS PER VOLT!

A new HIGH in Sensitivity and Value

At 20 000 ohms per volt, this new Simpson Set Tester is the most remarkable value ever offered to the service man. Negligible current consumption means accurate D. C. voltage readings of 2.5—10—50—250—1000. Same ranges for A. C. at 1000 ohms per volt. Current readings from 1 microamp to 500 milliamps. Accurate resistance readings as low as 1 ohm up to 40 megohms. Ask for new circular covering wide range of tests.



Model 250 (20,000 ohms per volt model)—Net Price... **\$38.50**

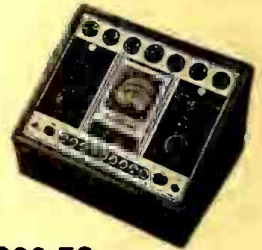
Time price: \$8.00 down and 6 monthly payments of \$5.85 each

Model 225 (10,000 ohms per volt model)—Net Price... **\$29.50**

Time price: \$6.00 down and 6 monthly payments of \$4.50 each

Illuminated Dial Tube Tester

Checks all tubes under individual load conditions utilizing latest authoritative circuit. Tube quality shown on illuminated scale. Separate scales for "Diodes" and 0-100 percentage scale for matching tubes. Spare sockets provide for future tube changes. Has neon-tube short check. A beautiful instrument that boosts tube sales.



Model 222 Tube Tester—Counter or portable type—Net Price... **\$39.50**

Time price: \$8.00 down and 6 monthly payments of \$6.20 each

"Roto-Ranger" Tube and Set Tester

"Roto-Ranger" feature places twelve distinct scales at finger tips. Utilizes latest tube testing circuit. Has filament return selector. Tests all types condensers on separate scales. Has separate resistance scales of 100 ohms, 100,000 ohms, 100 megohms. Three D. C. scales of 8—300—1000 Volts. (2500 Ohms per Volt.)



Model 220—Net Price... **\$57.00**

Time Price: \$11.40 down and 6 monthly payments of \$8.75 each

"Roto-Ranger" Volt-Ohm Milliammeter

Incorporates Simpson "Roto-Ranger" feature with twelve separate scales covering all ranges for practical servicing. Model 201 with D. C. ranges only: Net Price ... **\$29.50**



Time Price: \$6.00 down and 6 monthly payments of \$4.50 each

Model 202 (A. C.-D. C. type): Net Price \$32.50

Time Price: \$6.50 down and 6 monthly payments of \$5.00 each

SOLD ON DEFERRED PAYMENTS

SIMPSON
RADIO INSTRUMENTS
AND SERVICE EQUIPMENT

ASK YOUR JOBBER

COUPON BRINGS FACTS

Simpson Electric Co., 5216 W. Kinzie St., Chicago

Send bulletin describing models checked.

No. 250 No. 225 No. 222 No. 220 No. 201 No. 202

Send deferred payment application.

Name _____

Address _____

see this!



**Handier Than Ever
ELECTROLYTICS**

- ★ Now as handy mechanically as they have long been electrically. Adjustable flanges permit any mounting.
- ★ Instantly adjusted for any hole spacing, flat or upright mounting, singly or stacked.
- ★ These ultra-compact PBS cardboard-case electrolytics come in 200 and 500 v. ratings; popular capacities: single, double and triple sections.

Write for latest catalog covering the largest line of condensers and essential resistors. Sample copy of monthly Research Worker included.

AEROVOX

CORPORATION

70 Washington St. : : Brooklyn, N. Y.



**ONE CUSTOMER
TELLS ANOTHER**

The "good word" about Ken-Rad Tubes spreads, and you make more money. Take the first step to building better business by writing for our sales plan.



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

Ken-Rad
Radio Tubes

KEN-RAD TUBE & LAMP CORPORATION, Inc., Owensboro, Ky.
(Also Manufacturers of Ken-Rad Electric Light Bulbs)

JOBBER NEWS



FRANK HORNING, sales manager, new radio division of the now-exclusive Philadelphia jobber for GE, Elliott-Lewis Elec. Co.

★ Available to all distributors for Cornell-Dubilier Corp. is the 6th of a series of promotional displays. Latest counter-size placards are in three colors and are to be requested from the company at South Plainfield, N. J.

★ Recent guests at the Grunow factories in Chicago were over 100 dealers and salesmen from Midwest-Timmermann Co., Davenport and Dubuque, Ia. Group was thus honored as a result of a sales contest. Next guest-group will arrive Mar. 24th from Specialties Dist. Corp., Detroit.



ALAN STEINERT, head man at the Eastern Co., recently-expanded RCA jobbers of Cambridge, Mass.



P-A CONTROL

- ★ Here's the new CLAROSTAT Series CIA Constant-Impedance Attenuator, Handles 25 watts continuously, safely, at any setting.
- ★ Linear up to 45 db in steps of 3 db. Infinite attenuation at end position. Compensated ladder type network. Constant input and output impedances.
- ★ 4 1/4" long by 3 1/4" dia. Single-hole mounting. Power switch for speaker field, optional. Just the thing for Public Address speakers.

Send for DATA . . .

Bulletin No. 11 describes this latest CLAROSTAT product. Yours for the asking. And remember, there's a CLAROSTAT for every control and resistance need.

CLAROSTAT

MANUFACTURING CO.
Incorporated

285 North Sixth St.
Brooklyn, N. Y.

Newest Radio Developments

MONTHS
AHEAD!

in ALLIED'S
New Spring Catalog

10,000 PARTS

Write for the new Spring 1937 ALLIED Radio Catalog—156 pages packed with interest for every Dealer, Serviceman and Sound Specialist—Everything in Radio that's new, important—months ahead! More than 10,000 exact duplicate and replacement parts; 53 new Knight Radios, featuring latest console, auto, portable, plastic, and phono-radio combination models with Automatic Dialing, Touch-O-Matic Tuning, AFC, Tone Expansion, etc.; Public Address Systems; newest Test Instruments; latest Amateur Transmitting and Receiving gear; dozens of set-builders' kits; books, tools, etc. Send for this great book today!

ALLIED RADIO

Send for FREE CATALOG

You're always sure of huge stocks, fastest service and lowest prices when you order from the ALLIED Catalog!

ALLIED RADIO Corp.

833 W. Jackson Blvd., Dept. 15-C
Chicago, Ill.

Send me your new Spring 1937 ALLIED Catalog.

Name

Address

City State

Meissner
**Dual Universal
 WAVE-TRAP**



ELIMINATES:

- Blanketing by Powerful, Nearby Broadcasting Stations.
- Cross-modulation
- Long-wave Signals
- Code Interference
- Broad Tuning
- I. F. Interference

Dealers:

You can boost your profits and save service calls by selling this unit with every set sale.

Keep our dealer display card where your trade and salesmen cannot miss it.

Sold By All Leading Jobbers

**MEISSNER MFG. CO.
 Mt. Carmel Illinois**

**"BULLET"
 DYNAMIC MICROPHONES**



**EVERYBODY
 WANTS ONE . . . EVERYBODY
 CAN AFFORD ONE!**

The All-Purpose "Bullet" Dynamic Microphone is sweeping the 1937 market.

T. R. 3 — New Model "Bullet" . . . smaller than TR 2 but with relatively the same characteristics. List price, any impedance . . . \$24.50.

T. R. 2 — Standard Model "Bullet" . . . the ultimate in dynamic microphone performance. List price, any impedance . . . \$39.50.

Write for circular "T" and technical data

**TRANSDUCER CORPORATION
 30 Rockefeller Plaza
 New York, New York**

JOBBER NEWS

★ Joseph Oppenheim, a member of the firm of the O. K. Appliance Co., Denver, Colo., successful jobber of Admiral sets and radio parts, is believed to have met an untimely death last month while skiing with a cousin also identified with the jobbing organization. Both men have been lost in the mountains near Denver since Feb. 7th, and all hope has been given up of finding them before the spring thaw.

★ Fuller Specialty Co., Parkersburg, W. Va., has added Clayton Sherwood to its staff to direct sales on a new line of home and auto sets which the firm intends to distribute. Company is now distributing National Union tubes, all kinds of testing and sound equipment, general parts lines. Fuller's recently opened a new amateur department under the supervision of Charles Lowers.

★ Frank H. Clay Co., Kalamazoo, Mich., Crosley distributors for southern Michigan, recently were hosts to dealers and representatives of the Crosley Corp. at a lively display dinner. Michigan dealers came from Battle Creek, Marshall, Berien Springs, Benton Harbor, Schoolcraft, Three Rivers, South Haven, Constantine, Galesburg, Coldwater, Bangor, Bloomington, Mendon, and Niles.

★ Newcomer to the radio and appliance sales force of the Hardware & Supply Co., Akron, Ohio, is Jim Sturtevant, ace salesman. Company distributes Sparton sets and RCA tubes; according to one of its officials, H. O. Smith, the firm will add two more salesmen if some real ones can be found.



HOWARD A. JACOBS, named by RCA jobbers, Bruno-New York, to sales-supervise Brooklyn and Long Island.

★ Arthur Bennett has been added to the sales staff of the Crosley Distributing Corp., Chicago.

★ Recent months found two Emerson displays in important spots. W. M. Dutton & Sons, Hastings, Neb., took an elaborate exhibit of Emerson's full line to the Nebraska Retail Hardware Association convention at Omaha; Morley Murphy Co., Milwaukee, Wis., were likewise active at the Wisconsin State convention, Milwaukee.

★ C. K. Throckmorton, executive vice-president of RCA Mfg. Co., announces the appointment of the Radio City Distributing Co., Dallas, Texas, as wholesale distributors of RCA Victor products in the Fort Worth-Dallas territory. The new company is headed by John Donovan. Gay White, former RCA Victor sales representative in the Dallas district, will be in charge of sales.



FLORIDA FIRM, Thurlow Radio Distributors, alertly contact dealers in the Tampa territory with what looks like tops in travelling stock rooms.

Push!



Automatic Playing At Low Cost

Increase your sales! Install General Industries modern record changing units in your radio-phonographs. Get them completely assembled, ready to place in your cabinets with low installation cost . . . Silent, smooth-running, dependable two-speed FLYER Motor, including turntable. Instantly adjustable for 33 $\frac{1}{3}$ or 78 r.p.m. by simple shift lever. Maintains constant running speed as adjusted, regardless of variations in record drag . . . Latest flat-type, flexible, balanced pickup . . . Accurate, reliable changer mechanism. All precision-built throughout, insuring long active service free from repairs. Compact and efficient. For AC, DC, or universal AC-DC. Priced for changer combination sales in volume.

Model "L", shown above, plays and changes EIGHT 10-in. or SEVEN 12-in. records. Model "K" plays and changes EIGHT 10-in. records; plays 12-in. records changed by hand . . . Order test samples TODAY. Be sure to specify exact voltage and frequency of current you use.

The GENERAL INDUSTRIES CO.
3738 TAYLOR STREET, ELYRIA, OHIO

Send for FREE trial Package of TRUE-TONE Needles.

TRIAD

THE CHOICE
OF SERVICEMEN
BECAUSE
THEY ARE USED
BY LEADING SET
MANUFACTURERS

**TRIAD
MANUFACTURING
COMPANY, Inc.**

Pawtucket, Rhode Island

The Quality Name in Radio Tubes



THOMAS H. MAGINNISS, manager of the new Stewart-Warner Distributors Co., Chicago.

★ At the Valley Radio Distributors, Appleton, Wis., three gentlemen have been added to the personnel: R. R. Swanson, Lyall P. Buestrin and Ralph L. Hamilton. Company recently added new line of Electrad volume controls.

★ Admiral radio sets will now be distributed exclusively in the metropolitan New York and northern New Jersey area by Dale Parts, Inc. This company is associated with Dale Radio Co., Inc., exclusive distributors of Sylvania tubes in the same territory. Recently both Dale Parts and Dale Radio Co. moved to larger quarters at 25 Warren St., where a complete modern showroom has been provided for display and demonstration.



TYPICAL WHEELED jobber, W. R. Osborne rolls around thru a 50-mile radius out of Croton-on-Hudson, N. Y.

Model



836

1937's MOST POPULAR AUTO SPEAKER

The above model is a combination of our new automobile speaker cabinet and the model 682—8" Nokoil speaker which requires no field current, thereby eliminating any drain on the battery.

Those who know the quality of the Nokoil Reproducer can well imagine the performance the model 836 is capable of giving.

The steel cabinet has a single stud attached to it, so that the cabinet carries the speaker. This does away with the old type method of drilling a hole in the pole piece of the speaker, making it carry the entire load, which often forces the pole piece off center. In the bottom of the cabinet, holes are provided so it may be base mounted when desired.

**LIST PRICE COMPLETE \$8.36
WITH SPEAKER . . . 8—**

Write for literature and prices on other models. Also name of our nearest distributor.

WRIGHT-DeCOSTER, INC.

2265 University Avenue, St. Paul, Minnesota
Export Dept.: M. Simons & Son Co., New York
Cable Address: "Simontrice"
Canadian Office: Wright-DeCoster, Inc., Guelph, Ont.

**NOW you
can afford a
Western Electric
Mike!**



It's both Non-Directional
and Directional!

Western Electric's newest mike—the 633A—was designed by Bell Telephone Laboratories especially for public address and remotepick-up broadcasting. Like the famous 8-ball, it is a 2-in-1 mike: (1) non-directional; (2) directional, when acoustic baffle is attached. It assures "good broadcast quality."

Its low price will surprise you.

Western Electric

GRAYBAR ELECTRIC CO., Graybar Bldg., New York.
Please send bulletin describing the new Western Electric 633A microphone. RT-3-37

Name

Address

City State

"Ever Tear Open
a
'BARGAIN'
CONDENSER
to
See What Makes
It So Cheap?"



SPRAGUE
The Standard of Condenser Quality

"DON'T BUY
CONDENSERS
BLINDFOLDED!
"Take an average or 'bar-
gau' cardboard dry electrolytic
for instance. Tear it apart. See if the
terminals are embedded—see whether or
not the unit is doubly-sealed in a moisture-
proof container. See if ordinary wax instead
of high quality heat-proof wax is used. Tear
open defective condensers to learn exactly
why they failed. . . .
"Nothing will prove more convincing in
getting you to standardize on Spragues, as
thousands of discriminating servicemen and
amateurs have already done. Their solid,
honest construction tells its own story of
outstanding condenser quality!"

SPRAGUE PRODUCTS CO., North Adams, Mass

BATHING BEAUTY FOR DEALERS

★ Good-looking gal in a bathing
suit, drawn by the famed artist, Jay
Weaver, looks out from the new dis-
play piece issued by National Union
Radio Corp. Background is a colorful
presentation of the company's tube
carton.

Display is being supplied to dealers
through NU distributors.

NOISE STOPPER

★ Flashy display card for counter
or window has been released by Tobe
Deutschmann Corp., Canton, Mass., to
plug a filterette which is designed to
stop noise caused by electric razors.
One of the filterettes is attached to the
card; attention is seized also by the
word STOP in large type. Whole dis-
play is about 5 by 7 in.

RECORD FOR RADIO MEN

★ Series of radio spot announce-
ments for radio dealers to use on local
stations between programs have been
electrically transcribed and are being
featured by RCA. Single disc has 13
different announcements dramatized
by professionals, and time is planned
in each case to include dealer's name
and address.

Record is available through RCA
Radiotron jobbers, gives small dealers
a chance at professional scripting.

"Sure!..I've even
**TORN OPEN
SPRAGUES**
to see what
makes 'em
SO GOOD!"



CONDENSERS
USE SPRAGUES... and Note the Difference

"Look inside a
Sprague dry electro-
lytic such as the PTM-8
'Pinhead' Tiny-Mike. Note
that both terminals are deeply
**IMBEDDED IN HIGH MELTING
POINT** pitch. No chance for corrosion
here! Note that an inside container is used
as a **DOUBLE SEAL** against moisture
which so commonly increases leakage and
lowers voltages with a consequent rise in
heat in ordinary condensers.
"In short, note that Sprague not only
makes the finest, most reliable condensers,
but also takes every precaution to keep them
as fresh as the day they left the factory.
"Yours for long, trouble-free condenser
service."

Sincerely, *Henry Kalkreuth*
Sales Manager,

SPRAGUE PRODUCTS CO., North Adams, Mass.



VITROHM LINE VOLTAGE REDUCER

Protects the Set from Over Voltage

The way line voltage is being stepped up it is no wonder that
you are getting kicks because resistors, condensers and tubes
are burning up. You can not only answer embarrassing ques-
tions but can turn them into profit by offering the
kicker this inexpensive unit that brings too high
voltage down to safe limits. Write today for
folder No. 1480 and prices.



WARD LEONARD ELECTRIC CO.

40 SOUTH STREET, MOUNT VERNON, N. Y.

Please send me Folder No. 1480

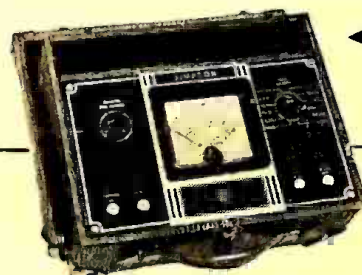
Name

Street

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

Jobber

72



← **FREE**

FREE SIMPSON INSTRUMENTS

to
National Union Servicemen

By special arrangement, the Simpson
line of testers is now obtainable
FREE with special deals on.

NATIONAL UNION TUBES

— a complete line of
highest quality tubes
in glass, metal and G-
type. Note special of-
fers at right (good
only in the United
States) . . . Coupon
will bring further de-
tails. Ask your jobber
for new booklet, "Your
Pocket Book — What
About It."



National Union Radio Corp. RT-337
570 Lexington Ave., New York City
Tell me how to get Simpson Testing
Instruments and other FREE equip-
ment.

Name

Address

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

New Simpson Set
Tester No. 250 (20,-
000 ohms per volt)
with purchase of
650 National Union
tubes over 2-year
period and dealer
deposit of \$21.00
for immediate de-
livery of tester. This
instrument would
regularly cost you
\$38.50.

Other National Union Offers

(On Tube Purchases
Over 2-Year Period):

Simpson Set Tester
No. 225 (10,000 ohms
per volt) — with 500
tubes; deposit \$15.00.
Simpson Roto-Ranger
Tube Tester No. 220
—with 950 tubes; de-
posit \$33.00.

Simpson All-Wave
Signal Generator No.
210 (AC)—with 300
tubes; deposit \$28.00.

Simpson Roto-Ranger
Volt - Ohm - Milliam-
meter No. 201—with
500 tubes; deposit
\$15.00.

Simpson Roto-Ranger
Volt - Ohm - Milliam-
meter No. 202—with
550 tubes; deposit
\$17.00.

Radio Today

Keep the Old Eye Peeled!

**-if you want the 11th hour news
of an 11th hour industry**

Said CURRAN: "Eternal vigilance is the price of liberty" — which, if applied to the radio business, would mean that vigilance is the price of OPPORTUNITY.

Said SHAKESPEARE: "Some must watch while some must sleep," but, of course, this won't go in radio. The watching is necessary but you mustn't be caught napping.

ONE EYE on the day's work — the other on tomorrow's opportunity. That is the order of the day, for radio has COME BACK and is REACHING OUT.

Not in eight or nine years has there been such definite promise of opportunity—in old lines and new.

Have YOU watched this trend as closely as you should? Have you noticed how the pages of RADIO TODAY bring you the first word of new opportunities in merchandise and methods? Do you realize the significance of what is taking place in the field of auto radio, sound and communication

systems, records and recording and other activities now confronting alert radio men?

If you want to know the real meaning of what is going on in radio and its allied fields — if you want to keep abreast of things and be *at the door* when opportunity knocks, you must read RADIO TODAY regularly.

And here is another opportunity: With a one-year subscription to RADIO TODAY at ONE DOLLAR, you will receive, absolutely free, the 1937-1938 edition of the Radio Service Year Book, a valuable and useful compilation of data needed by every man in radio.

FEATURES of the YEAR BOOK

ANNUAL RADIO TRADE DIRECTORY, the only work of its kind in the industry.

TABLES OF INTERMEDIATE FREQUENCY PEAKS, necessary for alignment and helpful in ordering replacement units.

RMA COLOR CODING DATA, showing at a glance whether or not a set is color-marked to indicate the necessary values of resistance, etc.

ALSO, TUBE OPERATING VOLTAGES, ANALYSIS OF SOCKETS, COMPARISON OF TUBE TYPES and other classes of data of daily importance to all radio men.

FREE!

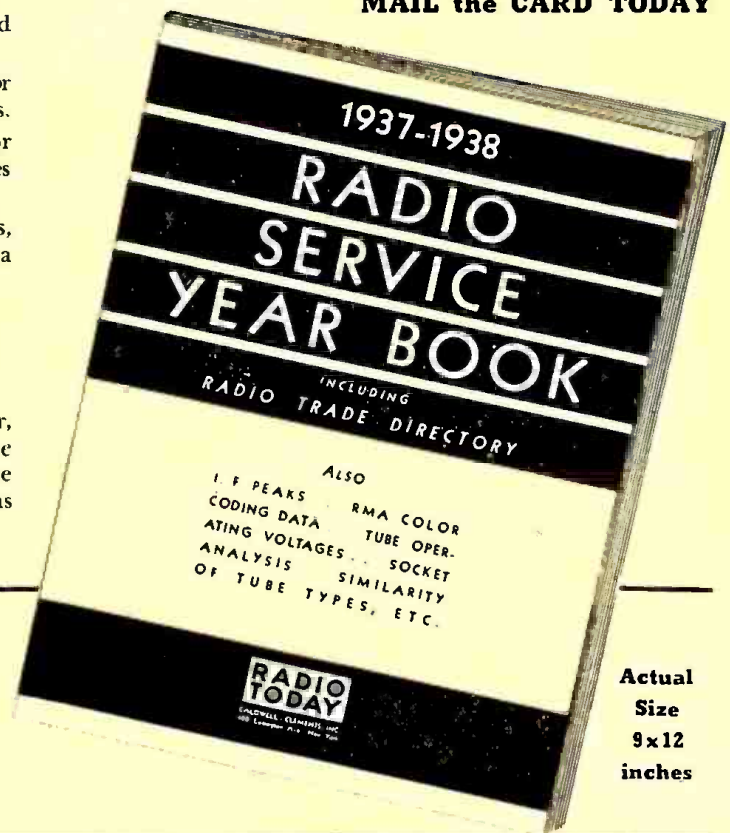
To get this Year Book FREE with a one-year, one-dollar, subscription to RADIO TODAY, just fill out and mail the card herewith. Your subscription will start at once. The Year Book is now in production. It will be sent to you as soon as it is off the press.

RADIO TODAY

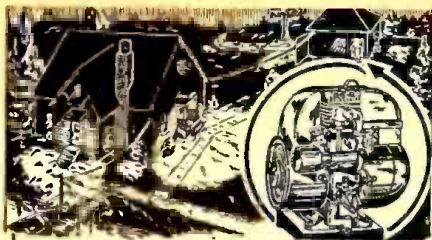
Published by CALDWELL-CLEMENTS, Inc.

480 Lexington Ave., New York, N.Y.

MAIL the CARD TODAY



Actual
Size
9x12
inches



Complete Electric Plants

ONAN ALTERNATING CURRENT GENERATING PLANTS furnish the same electricity as city power lines. Made in sizes 350 to 10,000 watts to meet the requirements of those who must provide their own electricity for Farms, Summer Camps, Cottages, Boats, Commercial Purposes.

OPERATE A. C. RADIO

These A. C. Plants operate RADIO, HOUSEHOLD APPLIANCES, WATER PUMP, MOTORS—anything that normally would operate from city lines. Will run Public Address Systems, Demonstrating Car Equipment, Talking Moving Pictures, X-Ray.

MODERN CONSTRUCTION

ONAN PLANT Engines are like the Motor Car, Truck or Tractor Engines. Operate on Gasoline, Gas or Distillate. Wiring and Installation is the same as for standard applications. Also 32 volt, Direct Current Models. Write for Details

D. W. ONAN & SONS

571 Royalston Ave. Minneapolis, Minn.

BUILD SALES

WITH

THIS
FREE
160
PAGE



RADOLEK PROFIT GUIDE

New 1937 Edition. Just off the press . . . the most complete Radio Parts Catalog ever published . . . completely revised, bigger and better. Everything in radio . . . at the right prices. Over 160 pages of valuable, money-saving "radio-buying" information. Over 12,000 Radio Repair Parts—hundreds of new items—a complete, new selection of Radio Receivers and Sound Amplifiers . . . contains the most complete, exact duplicate replacement parts listings, of volume controls, condensers, transformers, vibrators. Every page of this New Radio Supply Catalog brings you extra profits. This is your book—it's FREE. Send for your copy NOW!

RADOLEK

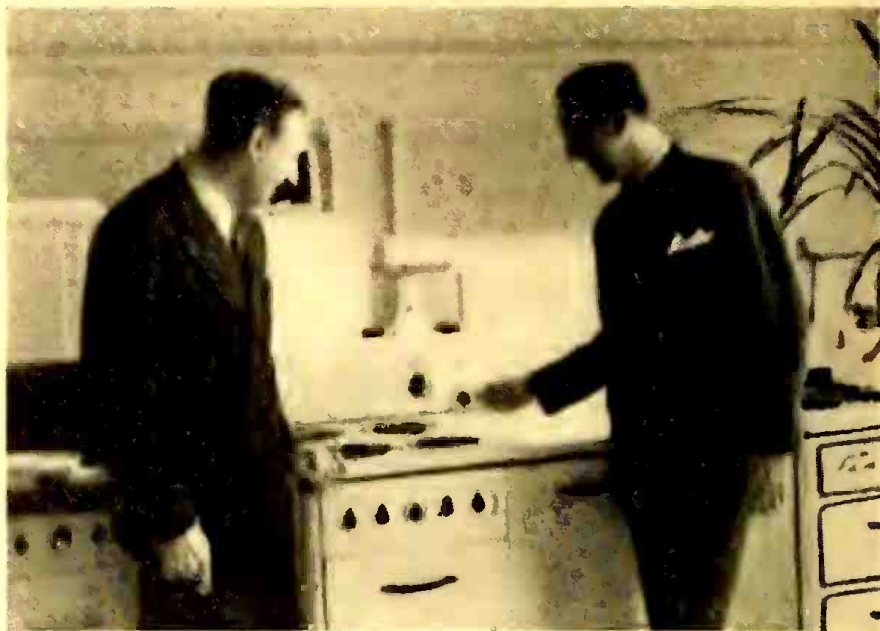
601 W. Randolph, Chicago, Dept. D-5.
Send me the Radolek Radio Profit Guide FREE

Name

Address

Serviceman? Dealer?

DOPE ON DISTRIBUTORS



RADIO SPECIALTY is the name of the Milwaukee firm to which Alvin Van Antwerpen and Vernon Maurer belong, but they accent Norge as well as Philco.

★ Elaborate series of dealer meetings have been held by these Philco distributors: Commonwealth Sales Corp., Richmond, Va.; A. K. Sutton, Charlotte, N. C.; D. & H Distributing Co., Inc., Harrisburg, Pa.; Auto Parts Co., Williamsport, Pa.; Eshelman Supply Co., Lancaster, Pa.; and Radio & Motor Service, Inc., Altoona, Pa.

★ Dealers in the areas around Philadelphia, Atlantic City, and Wilmington, Del., have been notified by GE that dual distribution in the territory has been stopped; the Elliott-Lewis Electrical Co., 1017 Race St., Philadelphia, now has full responsibility. GE wants it made clear that the step was taken without reflection upon anyone, and that the only aim is better merchandising service.

★ At Houston, Tex., Reader's Wholesale Distributors held recently a special dealer party to present the 1937 Crosley products. Hymen Reader, president, reports an unusually lively meeting for the nearly 500 guests; party had cocktails, banquet, floor show, dancing.

★ Company formerly known as the Dakota Radio Service Co., Yankton, S. D., has recently been incorporated under the name of Dakota Radio Corp. Firm distributes Wilcox-Gay and Setchell Carlson sets, and considers taking on a line of refrigerators and other appliances, as well as a nationally advertised line of radio sets. R. A. Bowyer, Jr., is president; M. J. Kramar, v-pres.; G. H. Ellerman, secretary and treasurer.

★ Wholesale Radio Service Co., 100 Sixth Ave., New York, have opened a new display and sales room at 90-08 166th St. (Merrick Road), Jamaica, L. I., New York. Expansion was made as a convenience to servicemen, amateurs and experimenters living in the Queens and Long Island districts.

★ Newcomer to the sales staff of OK Appliance Corp., Admiral distributors of Denver, Colo., is Grosvenor S. Barron, who will travel for the firm in its southern and western territories. OK Corp. covers the Rocky Mountain area and reports that there are some cities and towns available for exclusive franchises on Admiral.

★ In the midst of one of the worst rains in the history of Norfolk, Va., Tidewater Electric Corp., Philco jobbers, report a 100 per cent turn-out among dealers recently when it held an Automatic Tuning Cabaret Party. Howard P. Stewart, Tidewater secretary, was in charge; E. Jack Guillory, Philco district representative, was a guest.

TUBE DISPLAY SERVICE

★ Feature window display series has been prepared by RCA Radiotron. Service consists of 4 main display units, to be followed by supplementary material supplied at intervals.

First unit features the Radiotron doll, the second is a large reproduction of a slate to be used for daily bulletins, the third is a life-sized girl standing beside the world's largest radio tube, and the fourth accents the football angle. Additional material is seasonal and includes streamers, charts, pictorial news bulletins, etc.

• INDEX • TO ADVERTISEMENTS

	page
AEROVOX CORP.	69
ALLIED RADIO CORP.	69
AMERICAN CARRIER-CALL CORP.	33
AMPERITE CO.	42, 62
ARCTURUS RADIO TUBE CO.	60
ASTATIC MICROPHONE LABORATORY	27
ATLAS SOUND CORP.	42
BRIGGS & STRATTON CORP.	1
BRUSH DEVELOPMENT CO.	46
CENTRALAB	49
CLAROSTAT MFG. CO., INC.	69
COMMERCIAL CREDIT CORP.	57
CONTINENTAL CARBON, INC.	60
CONTINENTAL RADIO & TELEVISION CORP.	21
CORNELL-DUBILIER CORP.	43
CROSLY RADIO CORP.	54, 55
CROWE NAME PLATE & MFG. CO.	64
DICTOGRAPH PRODUCTS CO., INC.	2, 3
ELECTRO-ACOUSTIC PROD. CO., Subsid. Magnavox Co.	27
FAIRBANKS, MORSE & CO.	53
FREED MFG. CO., INC.	22
FRIGIDAIRE DIV., GENERAL MOTORS	51
GALVIN MFG. CORP.	Cover IV,
GENERAL ELECTRIC CO.	Cover III,
GENERAL INDUSTRIES CO., THE	71
HYGRADE SYLVANIA CORP.	47
J. F. D. MFG. CO.	64
KATO ENGINEERING CO.	63
KEN-RAD TUBE & LAMP CORP., INC.	69
LEHMAN RADIO SALON, INC.	60
MEISSNER MFG. CO.	70
MILES REPRODUCER CO., INC.	76
MILLION RADIO & TELEVISION LABS.	49
NATIONAL BROADCASTING CO.	Cover II,
NATIONAL UNION RADIO CORP.	27, 72
NOBLITT-SPARKS INDUSTRIES, INC.	28
ONAN & SONS, D. W.	74
OPERADIO MFG. CO.	34
PARRIS-DUNN CORP.	62, 63
PHILCO RADIO & TELEVISION CORP.	6
PLEASANTAIRE CORP.	5
PIONEER GEN-E-MOTOR CORP.	22
PRESTO RECORDING CORP.	56
RADIO & TECHNICAL PUBL. CO.	67
RADIO CORP. OF AMERICA	38, 39
RADIO RECEPTOR CO., INC.	48
RADDLEK	74
RAYTHEON PRODUCTION CORP.	25
RCA MFG. CO., COMMERCIAL SOUND	43
RCA MFG. CO., RCA-VICTOR DIV.	4
RIDER, JOHN F.	22
SHURE BROS.	58
SIMPSON ELECTRIC CO.	68
SOLAR MFG. CORP.	75
SPRAGUE PRODUCTS CO.	72
STANDARD TRANSFORMER CORP.	41
TRANSDUCER CORP.	70
TRIAD MFG. CO., INC.	71
TRIPLETT ELECTRICAL INSTRUMENT CO.	61
TRIUMPH MFG. CO.	59
TUNG-SOL LAMP WORKS, INC.	68
UNITED SCIENTIFIC LABS., INC.	40
UNIVERSAL CONTROLS, INC.	76
UTAH RADIO PRODUCTS CO.	66
WARD & CO., MONTGOMERY	48
WARD LEONARD ELECTRIC CO.	72
WARD PRODUCTS CORP.	49
WEBSTER-CHICAGO	31
WEBSTER ELECTRIC CO.	37
WESTERN ELECTRIC CO.	71
WESTON ELECTRICAL INSTRUMENT CO.	45
WHITE DENTAL MFG. CO., S. S.	65
WHOLESALE RADIO SERVICE CO.	56
WRIGHT-DeCOSTER, INC.	71

While every precaution is taken to insure accuracy, we cannot guarantee against the possibility of an occasional change or omission in the preparation of this index.

New Eye-Saver Catalog

A RADICAL DEPARTURE
IN CONDENSER CATALOGS



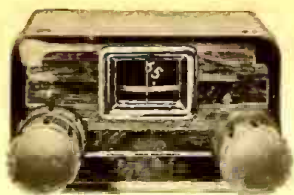
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and a free Domino
Bakelite-molded
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Large photographs, big type, clarity, make it easy for you
to locate any condenser ... Be sure to get your copy! It'll
save your eyesight and your temper ... and will show
you how to save money by buying "Quality Above All!"

SOLAR MANUFACTURING CORPORATION
599-601 BROADWAY, NEW YORK, N. Y., U. S. A.

Free

NAME _____
ADDRESS _____
JOBBER'S NAME _____



Universal FEATURES

- No assembly. No loose parts.
 - No cutting of dash. No visible screws.
 - Escutcheon Plates to match all instrument panels. Color-matched knobs.
 - Automatic dial adjustment.
 - Minimum stock for maximum coverage.
- PATENTED

Pre- ASSEMBLED

REMOTE CONTROLS
for all 1937-36-35 CARS
and ALL CAR RADIOS

You'll do a *better job—quicker*
—with UNIVERSALS. Pre-assembled at our plant, they come to you already to slip into the dashboard opening, perfectly matched in design and finish. Less inventory — more profits on re-installations.

DISTRIBUTORS:
A request will bring
our representative with
the complete story.

Universal CONTROLS, INC.

21-07 40th Ave., L. I. City, N. Y., Dept. C

Please send without obligation your
Bulletin 37-C2 about the new,
patented Universal Controls.

Name _____

Address _____



VOCAPHONE Communication Systems

"MILES AHEAD OF OTHERS"

OUR slogan, always true of sound equipment, is especially true of communication systems. VOCAPHONE is a master unit connected with from one to six sub-stations. It meets every requirement of Simplicity, Sensitivity, Tonal quality, Volume, Flexibility and Low cost.

Whether you need one or six sub-stations, the VOCAPHONE is packaged merchandise and is sold complete. No wiring. No installation experience is necessary. Move it at will. Operates on AC or DC. For complete details of the system and its market, write

MILES REPRODUCER CO., INC.

Manufacturers of

SOUND AND COMMUNICATION SYSTEMS

112-14 West 14th St., New York, N. Y.

TRADE FLASHES

★ Frank T. Parker, manager of the Portland, Ore., branch of the F. B. Connelly Co., Grunow distributors, has announced that a series of dealer meetings will be held in key cities of the northwest. Connelly firm recently held a special meeting for jobber salesmen and branch managers of the company's 3 branches, Seattle, Portland and Spokane.

★ Philco has named the Philco Iowa Sales Co. as distributor for 47 counties in the Des Moines area, where the company has its establishment. Lou Cohen is sales manager of the new organization.

★ Kierulff & Co., well known jobbing organization in Los Angeles, Cal., distributing Admiral sets, has opened a branch in Phoenix, Ariz. J. A. Clippinger, vice-president of Admiral, was among those at the opening.

★ Association of Radio Service Engineers, Buffalo, N. Y., recently elected the following officers: T. J. Telask, president; J. E. Stoffel, vice-pres.; A. J. Schreiber, executive secretary; F. Bestine, corresponding secretary; V. E. Ball, treasurer; John Klemens, sgt.-at-arms; H. Keller, librarian. Office of the executive secretary is at 33 Grote St., Buffalo.

★ Expansion plans at the RCA New York jobber firm, Bruno-New York, Inc., include several changes and additions to the sales staff: Howard A. Jacobs has been named sales supervisor for Brooklyn and Long Island; Anthony J. Dillon is the new supervisor for Manhattan, Bronx and Westchester; Chris Lindsley, Aaron Weiskott and W. H. Pinchus have been appointed sales representatives.

★ Tremont Electrical Supply Co., Inc., otherwise known as "Ben's Radio" have moved to a new location at 372 Tremont St., Boston, Mass., where they are offering complete lines of radio, amateur and transmitting apparatus.

★ Fairbanks, Morse & Co. has announced the appointment of these distributors: B. W. Smith Co., Cleveland; Walding, Kinnan & Marving Co., Toledo, Ohio; Klaus Radio & Elec. Co., Peoria, Ill.; Whitney Sporting Goods Co., Denver, Colo.; Lorenz Co., Klamath Falls, Ore.; Koehnman Elec. Co., Jackson, Miss. According to W. Paul Jones, FM general manager, the appointments are a part of a definite plan to extend merchandising plans for 1937.

★ L. A. Levi is now the sales manager at R. F. Burns Radio Co., Johnstown, Pa., distributors. Also new at the company is George Cornet, service engineer, assisted by Henry Bowden. Burns distributes Delco sets and Hygrade Sylvania tubes.



PRESIDENT Ira J. Owen of Utah, foreseeing business increases for 1937-8, is starting a big expansion program.

★ Starr Piano Co., Richmond, Ind., which makes Gannett records for use as sound effects, has a new sound truck operating for its Pacific Coast division. This traveling recording outfit goes anywhere and records everyday sounds in the country, city, mountains, seashore, desert. Truck is equipped with Universal Microphone Co.'s professional recording gadgets, specially mounted for mobile operation.

LIGHT — RADIO — REFRESHMENTS



International Kadette's new easy-chair model with "Equafonic" horizontal speaker, handy tuning and space for cocktail service.



WATCH THE PROFITS ROLL IN WITH G-E AUTO RADIO

Today, only 4 out of every 23 automobiles on the road are equipped with auto radio—19 million cars without auto radio. What a market! No wonder auto radio dealers are enthusiastic about this year's unequalled opportunity to win new sales and increased profits.

Once Again - - - General Electric leads the auto radio parade. This time with the most complete auto radio program in G-E Auto Radio history. It puts G-E Radio dealers on the fast lane to auto radio sales and profits.

Only GENERAL ELECTRIC OFFERS YOU ALL THESE SALES-MAKING ADVANTAGES

- 1 The ONLY Auto Radio with Automatic Frequency Control—a real contribution to simplified tuning and safe driving.
- 2 A complete Auto Radio line in 3 new models—each a sales leader in its price bracket.
- 3 Dominating Performance . . . Metal Tubes . . . Greater Power.
- 4 "Custom-Built" Instrument Panel Controls for all makes of cars.
- 5 Complete line of Auto Antennas—a new source of business and profits.
- 6 Powerful Sales Promotion Helps.
Demonstration Stand . . . Folders . . . Wall Charts . . . Banners . . . Handbills . . . Auto Door-Handle Hangers! Everything you need for EASY STARTING and a quick GETAWAY to volume sales.

Ask your G-E Radio Distributor—or return the coupon—for full particulars about General Electric **MERCHANDISING DEAL.** It contains **FOUR** of the new G-E Auto Radio **MODELS** plus a complete **SALES PROMOTION SERVICE.** Get set for a record run in sales and profits in General Electric's greatest Auto Radio year.

GENERAL ELECTRIC

Auto Radio

Section R-463

General Electric Company.

Radio Division, Bridgeport, Conn.

Please send me complete information about
the G-E AUTO RADIO 1937 Merchandising Deal.

Name

Firm

Address

City State

THE *Motorola* ACOUSTINATOR

IS BRINGING FLOCKS OF CAR OWNERS IN TO BUY!

Your Enthusiastic Customers Are Saying:



The NEW "PERSONAL PREFERENCE SELECTOR" IS TODAY'S BIGGEST AUTO RADIO FEATURE

PRICED
LOW AS
\$29.95

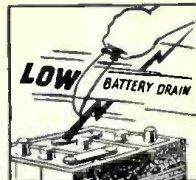
MODEL "35"
THE CHALLENGER
NEW LOW PRICE-BIG VALUE
6 Tubes - 3-Gang Tuning Condenser
List, \$29.95



Never before has there been such a wave of enthusiasm among car radio buyers. Motorists itch to get their fingers on the knobs and direct their own radio programs. This "stand-out" ACOUSTINATOR feature permits car owners to emphasize at will either the Music, Voice or Bass of the programs they listen to. And they can accommodate Motorola to their location—whether in the Country, City or alongside Street Cars, insuring extreme useable sensitivity without noise, crashes and crackles. CASH IN NOW ON MOTOROLA!

FEATURES THAT HELP YOU SELL!

EXACTLY MATCHES DASH OF ALL CARS
NEW "E-Z" CONTROLS
"ADAPTO" BROAD RANGE ANTENNA SYSTEM
REVERSIBLE-PHASE "MAGIC ELIMINDOE"



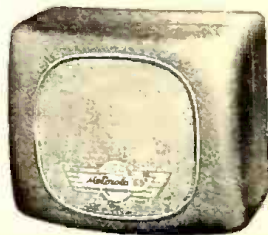
FEATURES THAT HELP YOU SELL!

ACOUSTINATOR Personal Preference Selector
LOW BATTERY DRAIN
PERMANENT MAGNET DYNAMIC SPEAKERS
ORTHO-ACOUSTIC SEPARATE SPEAKERS

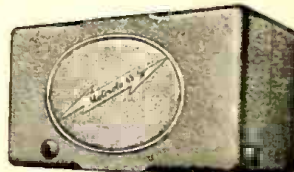


"GOLDEN VOICE"
MOTOROLA
The Aristocrat of Radio
8 Tubes

8" Permanent Magnet Dynamic Speaker
LOW BATTERY DRAIN
ACOUSTINATOR EQUIPPED
List, \$69.50



Model "65" ACOUSTINATOR EQUIPPED
LOW BATTERY DRAIN
6 Tubes—8" Electro Dynamic Speaker
List, \$49.95



Model "45" REMARKABLE PERFORMANCE
6 Tubes—6" Electro Dynamic Speaker
Local-Distance Switch and Tone Control
List, \$39.95



MODEL "70"
DE LUXE
6 Tubes

8" Permanent Magnet Dynamic Speaker
LOW BATTERY DRAIN
ACOUSTINATOR EQUIPPED
List, \$54.95

NEW—DIFFERENT—BETTER

Motorola Home Radio

Product of the same engineering staff that has kept Motorola Car Radio far ahead in PERFORMANCE and VALUE for seven years.

READY IN MAY

Motorola is backed by 1937's most outstanding Merchandising and Advertising Program, designed to make your selling easier and your profits greater. Tie in with Motorola for your biggest auto radio year.

GALVIN MFG. CORPORATION

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