







RADIO *and Television* TODAY

MON.	TUE.	WED.	THU.	FRI.	SAT.
<p>Get the sales floor clean and in order.</p>	<p>When did you change your window last?</p>	<p>Your biggest competition in March is the ready-to-wear merchant</p>	<p>Get store, stock and staff primed for Spring business.</p>	<p>Put more color—more life—into your displays and selling.</p>	
<p>Get the sales floor clean and in order.</p>	<p>When did you change your window last?</p>	<p>RADIOS! HATS <i>Melrose</i></p> 	<p>How's Service doing with "Clear the Air" campaign?</p>	<p>"Step on" the special—phone, mail, and home.</p>	
<p>Where's the tie-in with national advertising?</p>	<p>Remember you're competing with clothes and hats this month.</p>	<p>Friday is Income Tax Day. Is check ready?</p>	<p>Is your direct-mail going out on schedule?</p>		<p>Put in a real window (Mar. 17-24) for Holy Week.</p>
	<p>Get the gang together for a shot of pep!</p>	<p>The first day of Spring Clean Up—Sell Up.</p>	<p>What are you planning for April?</p>	<p>Make 10 calls a day on your "Special" phone, or home.</p>	
<p>the windows n colorful, make them ll a story.</p>	<p>How can you sell 'em, if you don't ask 'em to buy?</p>		<p>Who's doing the best job in town? Why?</p>	<p>Check slow-moving stock—Mark it down! Get it out!</p>	<p>Don't fool yourself, now! Every thing OK?</p>

Watch the Business Signals!
Service Methods and Circuits

FEBRUARY

THE 3 R'S OF A VIBRATOR

REPUTATION OF THE MAKER
RELIABLE PERFORMANCE
REPEAT SALES FOR YOU



When you buy any radio replacement parts you generally measure their value by some standard. When you buy replacement vibrators it is well to consider these three "R's".

1. Reputation of the maker. Because Mallory has been associated with power supply vibrators from the very start, its engineers have the longest experience and broadest background in the industry on which to base soundness of design and quality control of production. That is why Mallory made Vibrators are original equipment in practically 80% of all auto and other battery operated radio receivers built today.

2. Reliable performance. The exceptional long life and trouble-free performance of

Mallory Vibrators result from the use of highest-grade tungsten contacts, fine mechanical balance, permanent alignment of component parts, positive starting, absolute freedom from broken reeds and general technical excellence. Long production experience on a few basic designs . . . long inspection experience in testing them . . . assure you uniform high quality.

3. Repeat sales for you. You are in business to make money . . . and Mallory Replacement Vibrators are profitable, even from a single sale viewpoint. But their real value to you lies in their ability to satisfy customers, and to bring them back when their sets need servicing, to enable you to sell them other goods and services.

Remember . . . you can rely on Mallory Vibrators for a long life of dependable service. Satisfied customers, and freedom from complaints and expensive no-charge re-servicing will bring you more profits. Be wise . . . always use genuine Mallory Vibrators.



Use

P. R. MALLORY & CO., Inc.
MALLORY
REPLACEMENT
CONDENSERS...VIBRATORS

P. R. MALLORY & CO., Inc.
INDIANAPOLIS INDIANA

Cable Address—PELMALLO

Use

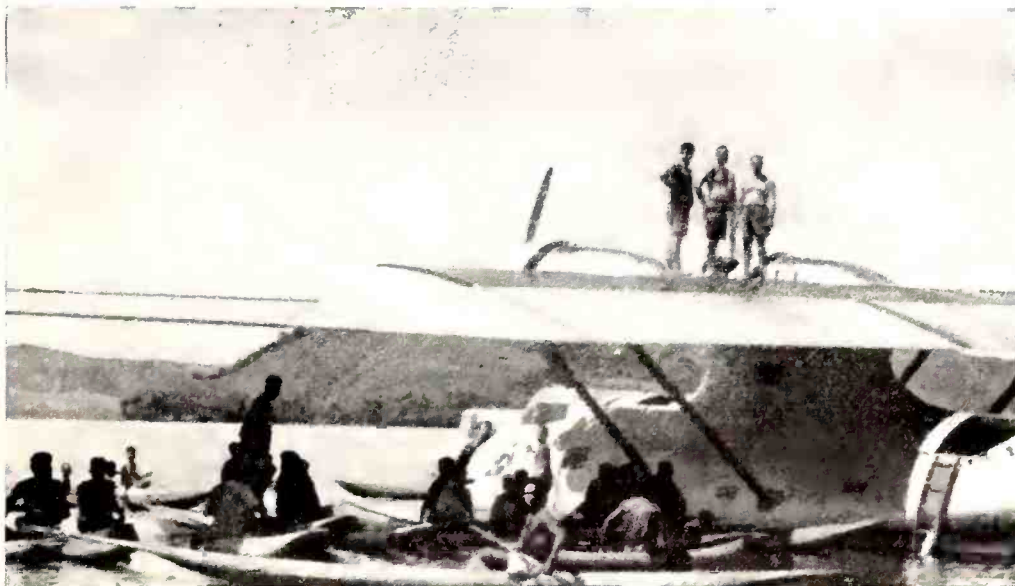
YAXLEY
REPLACEMENT
VOLUME CONTROLS

ARCHBOLD EXPEDITION

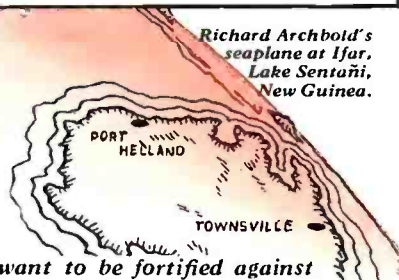
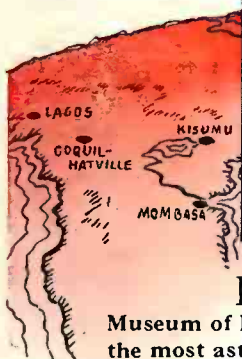
Circles the World with **RAYTHEONS**



Richard Archbold (left) at Wake Island, enroute to San Diego, Hollandia.



Richard Archbold's seaplane at Ifar, Lake Sentani, New Guinea.



RICHARD ARCHBOLD, of the American Museum of Natural History, has recently completed one of the most astounding expeditions of modern times.

With his Consolidated Aircraft seaplane "GUBA," he was the first to follow the equator around the world, spanning the Pacific, Indian, and Atlantic Oceans. The first to fly a seaplane across Australia, Africa and North America. The first to explore the interior of Netherlands New Guinea where he discovered a new tribe estimated at 60,000 people. Hardships, privations, dangers, tests of skill, resourcefulness and courage 24 hours of every day for more than a year!

On such an expedition the equipment **MUST** be good . . . the **VERY BEST**. And so it was inevitable that **RAYTHEONS** were chosen for the communications system. And they *delivered* in the most grueling test imaginable.

Yet there was nothing *special* about these **RAYTHEONS**. They were the *one quality* product of **RAYTHEON** engineers, specializing exclusively on tubes . . . engineers anticipating fast moving radio circuit developments, and pioneering in tube design and constructions to meet these developments in advance, with the utmost of efficiency.

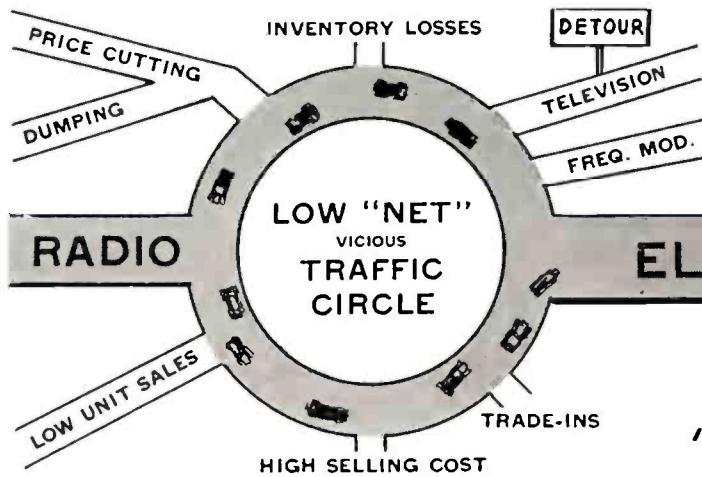
So today there's a **RAYTHEON** for every tube requirement, whether for the ordinary or for the most exacting of needs such as the Archbold Expedition demanded.

If you want to be fortified against every tube replacement emergency, remember that Raytheon is the one manufacturer that makes them all. And they cost no more.



NEWTON, MASS. • NEW YORK • CHICAGO • SAN FRANCISCO • ATLANTA

"WORLD'S LARGEST EXCLUSIVE RADIO TUBE MANUFACTURERS"



GET OFF THE TRAFFIC CIRCLE!

Take the new
"SUPER-HIGHWAY" to PROFIT—

ELECTRONIC MUSIC!

MIESSNER INVENTIONS, INC.
18 MAIN STREET
MILLBURN, N. J.



To Radio Manufacturers:

Nearly a year ago we endeavored to interest you in electronic musical instruments as a sane and logical extension of your operations in the radio field. At that time there was prevalent a wide interest in television as the next big expansion field for radio manufacturers and electronic musical instruments were not given the attention they deserved.

Since then, however, television has had a setback, at least temporarily, but perhaps even more seriously as a major extension of the radio industry. Since its very beginning I have felt that television could never have any where near the appeal and usefulness of existing sound broadcasting — for many reasons. Even without considering program production expense, small, imperfect pictures, eye strain, etc., there always remains one great and important difference between sight and sound. To see, one must stay in one place and concentrate his visual attention on another; to hear, one may at the same time do many other things without being figuratively chained to his sound source.

Electronic musical instruments are a logical extension for the radio industry because they utilize the existing radio technique and apparatus, the existing distribution and service agencies.

The musical instrument industry has fought these developments from the beginning, even worse than they did with radio. A vast new market awaits the exploitation that the radio industry, with its vision and aggressiveness, can give it. A mere handful of manufacturers have, in the past few years, sold about fifteen million dollars worth of these electronic instruments with comparatively little effort. The musical instrument industry as a whole is attaining almost boom year proportions.

Our position in this field is that of pioneer invention, development, and licensing. We have over forty issued patents on pianos, organs, and other instruments, and a dozen licensees. Among these is the Story & Clark Piano Co. of Chicago for whom K.C.A. makes the electrical equipment of their "Storytone" Piano, which they are pushing in a moderate way with splendid success.

This is a strategic time to reconsider this subject and we will be glad to aid you in any way you may suggest. With best wishes for a prosperous new season,

MIESSNER INVENTIONS, INC.
B. J. Miessner
President

as shown by
this

**OPEN
LETTER
TO RADIO
MANUFACTURERS**

MANUFACTURERS
LICENSED UNDER
MIESSNER PATENTS

Piano Manufacturers
(listed alphabetically)
Ansley Radio Co., Bronx Blvd.
& 238th St., New York City
Hardman, Peck & Co., 33 W.
57th St., New York City
Krauer Bros., Cypress Ave. &
136th St., New York City
Packard Bell Radio Co., Los
Angeles, Cal.
Story & Clark Piano Co., 64
E. Jackson Blvd., Chicago
Winter & Co., 849 E. 141st
St., New York City

Foreign
August Forster Piano Fabrik,
Germany
Mason & Risch, Ltd., 642 King
St., W. Toronto 2, Canada
Sherlock Manning Co., Clinton,
Ontario

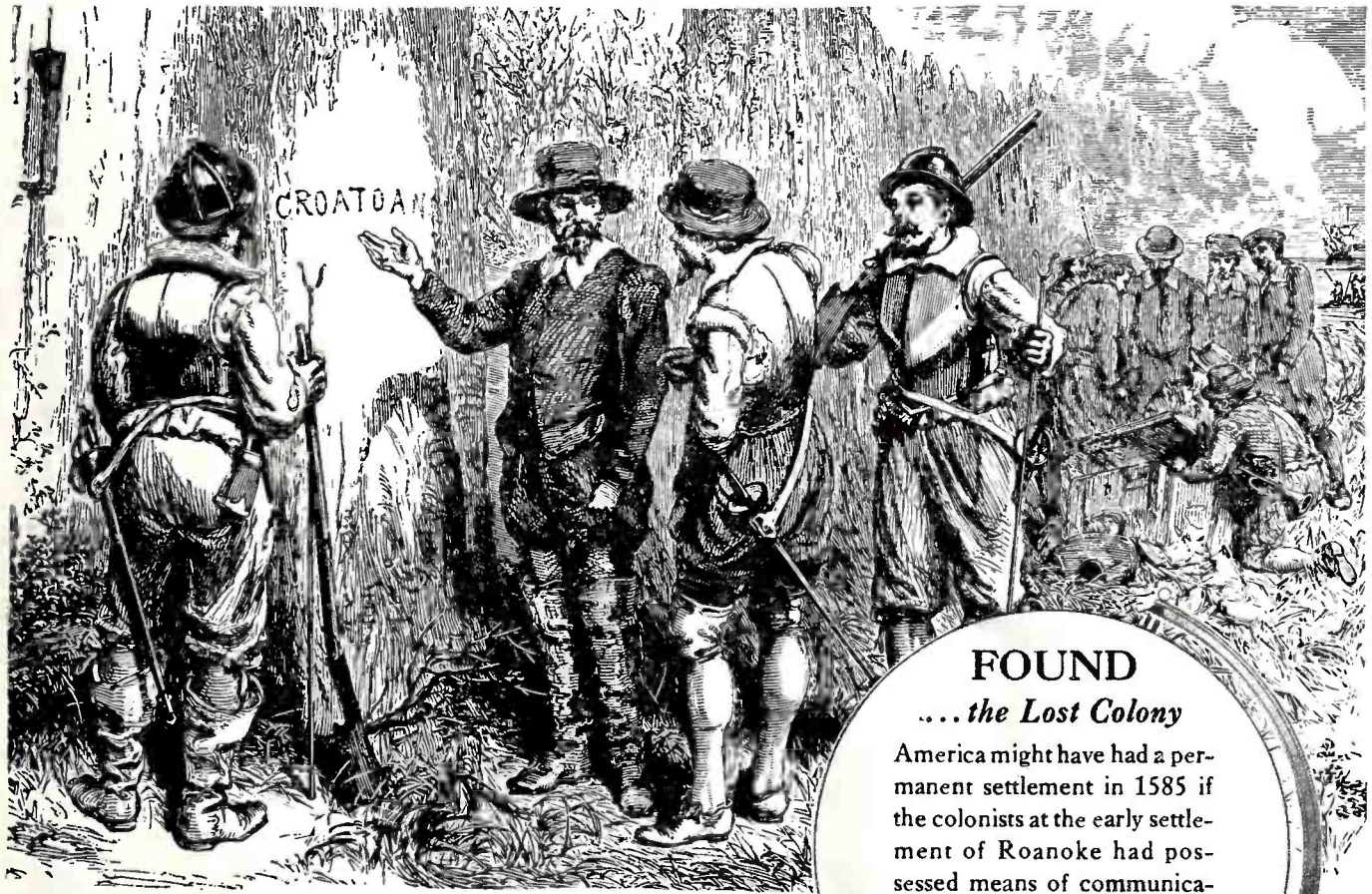
Organ Manufacturers
Everett Piano Co. (The Orga-
tron), South Haven, Mich.
Sebastian Gundling & Sons,
Lancaster, Pa.

Fretted Instrument
Manufacturers
Epiphone, Inc., 142 W. 14th
St., New York

MANUFACTURERS—For
license data, write us
direct.

DEALERS—Write to any
of the above licensees.

MIESSNER MIESSNER INVENTIONS, INC., MILLBURN, N. J.



Radio would have kept Old Roanoke on the Map

FOUND
... the Lost Colony
 America might have had a permanent settlement in 1585 if the colonists at the early settlement of Roanoke had possessed means of communication with England. As it was, a relief expedition arrived to find the colony had vanished.

TODAY, if colonists should try to settle in some remote corner of the earth, radio would keep them in constant communication with their homeland. The services of the Radio Corporation of America would do much to prevent a tragedy such as that of early Roanoke.

In the first place, the colonists would take along a radio transmitter, built by the RCA Manufacturing Company, and to operate it skilled radio technicians, trained perhaps by RCA Institutes. Then when troubles beset them, the colonists would get in touch with R.C.A. Communications—an organization that would radio their messages

throughout the world. Ships, bringing relief, would be guided by radio equipment designed in RCA Laboratories and built by Radiomarine.

The two great radio networks, and the international short-wave service, of the National Broadcasting Company would be a source of news, education, and entertainment to the isolated colonists. And, they'd listen to programs with RCA Victor Radios and enjoy the delights of Victor Records played on RCA Victrolas.

Whether or not you are planning a colonial enterprise, RCA is prepared to serve you in every field of radio, television, and sound.



Radio Corporation of America

RADIO CITY, N. Y.

RCA Manufacturing Co., Inc. • National Broadcasting Company • RCA Laboratories
 Radiomarine Corporation of America • R.C.A. Communications, Inc. • RCA Institutes, Inc.

THIS FINANCE PLAN

PROTECTS YOUR PROFITS AND PROMOTES YOUR SALES

- 1 IT'S THE NEW DEALER RESERVE PLAN
- 2 IT DOES WHAT MOST PLANS FAIL TO DO—PROTECTS YOUR PROFITS ON TIME SALES
- 3 IT OFFERS A NEW LOWER RATE
- 4 IT REQUIRES ONLY ONE RATE SCHEDULE FOR ALL HOME APPLIANCES AND RADIOS
- 5 IT'S A PLAN YOU SHOULD BACK TO THE LIMIT BECAUSE—

IT'S A SALES-MAKING PROFIT PROTECTION PLAN

A BIG part of your profits should come from your time payment sales.

But will it?

Not if your finance plan is all shell and no meat. *Not* if it looks good but works badly—for you. *Not* if it fails to offer liberal terms and low charges to attract the buyer. *Not* if it fails to protect the dealer during the first six months, the period when most repossessions occur. *Not* if it leaves you to pay your re-selling costs out of your merchandise profits.

What is there about this new Commercial Credit Plan that makes it a stand-out—the safest plan—the one really practical plan for most dealers? *Because it is a profit protection plan.*

Compare these features with other plans.

Commercial Credit has again cut appliance finance charges. One simplified rate chart covers all appliances and radios.

The Commercial Credit Dealer Reserve Plan sets aside a cash reserve for the dealer running as high as \$5.40 a deal. Here's why—

Finance company experience proves that a certain number of appliances sold on time are afterwards repossessed. After paying repossessing, reconditioning and re-selling expenses, the dealer frequently realizes an amount that is less than the original selling price, thereby establishing a loss.

And why should a dealer lose this large part of his original profit on the merchandise? He shouldn't have to. Under this new plan, the customer charge, low as it is, includes a covering margin to protect the dealer.

* * * * *

As optional arrangements, Commercial Credit Financing Service offers at the same low rates the Limited Liability Plan—popular with many dealers—as well as the Purchaser Discount Plan—created to reward the prompt paying purchaser with a discount on each instalment paid within three days of coupon date.

Regardless of which plan the dealer may select, Commercial Credit never loses sight of one of its main responsibilities. It provides a sound, adequate, liberal credit and collection service.

The Commercial Credit Plan is a *merchandising* plan in every respect. Terms are liberal with payments small enough to minimize the price of the appliance. Special plans are offered for short-term financing; for quarterly payments by farmers; for combination and "add on" sales.

The liberal low-cost FHA Plan is offered through Commercial Credit service for the financing of eligible equipment.

* * * * *

Commercial Credit Companies offer a Floor Display Plan for financing a single unit or an entire display of new merchandise. Terms are liberal, and the charges extremely low. Dealers may also arrange to demonstrate this merchandise in the prospect's home. Ask your local office for full details.



COMMERCIAL CREDIT COMPANIES

Serving Manufacturers, Distributors and Dealers throughout the United States and Canada



"The Most Progressive Step in Years"



ARTHUR MOSS,
executive secretary of
the National Radio
Parts Distributors As-
sociation, comments on
program to limit tubes
to preferred types.

"Parts Distributors have viewed with great concern the rapidly growing number of types of tubes for the replacement market. Up to the present it has been mighty hard for a parts distributor to carry all the necessary numbers to meet the needs of his customers. Any program to reduce the types of tubes employed by set manufacturers should consequently reduce the types in demand

in the replacement market. Naturally this will mean to the parts distributor a more representative stock, better turnover, increased service and a more profitable tube business.

"We congratulate RCA for the initiation of the Preferred Types Program and believe a program of this type will prove very beneficial to parts distributors."



Less Than One Type in Ten of the 470 types of radio receiver tubes now on the market is actually needed to design practically every type of radio receiver at the lowest ultimate cost. RCA has outlined a preference list of 36 tube types which adequately cover every function for any type of receiving set circuit.

UNTIL RECENTLY, the tube situation has been like the weather . . . everybody has talked about it but no one has done anything about it. Judging from the favorable reaction RCA has received from manufacturers, distrib-

utors, and dealers alike . . . the *RCA Preferred Tube Type Program* answers a need long felt by the radio industry.

Arthur Moss voices the widespread approval of Parts Distributors. Manufacturers are saying the plan will lower warehousing and stocking expense . . . and lower cost of component parts . . . and should reduce labor costs because it will eliminate stoppages and permit the use of more uniform designs. Dealers, too, are applauding it as a move which will eventually produce better turnover and ease their stocking problems.

No matter from what angle you view the plan . . . reducing the number of tube types required to service the market is going to mean a better radio business for all.



Radio Tubes

RCA Manufacturing Co., Inc., Camden, N. J.

A Service of the Radio Corporation of America

**YOU'RE GETTING
EVEN BETTER
SYLVANIA TUBES
because...**



Our new Tube Plant is 100 percent lighted by the sensational Hygrade Fluorescent Lamps.

FLUORESCENT light reduces reflected glare, is easy on the eyes and casts no shadows because it gives a multiplied light that is literally present everywhere!

With Fluorescent* light, the eyes of Sylvania employees are keen to detect any variation from perfection. Not only is working efficiency increased, but precious human eyesight is safeguarded.

That is why the new wing of the Emporium factory boasts Fluorescent* lighting . . . why this is just a prelude to the program of trans-

forming all Sylvania factories from yellow incandescent to clear daylight illumination.

Putting in Fluorescent* lighting is only one of the hundreds of special operations that help to make Sylvania Radio Tubes better. To you who sell Sylvania, this care and precision means **SATISFIED CUSTOMERS**—the kind that give you Profitable, Repeat business!

Hygrade Sylvania Corporation
Emporium, Pa. • Also makers of Hygrade Lamp Bulbs

**We are very proud of this installation, which is Hygrade Fluorescent throughout; and is produced in our Salem, Mass., plant.*

SYLVANIA
SET-TESTED RADIO TUBES



CONFUCIUS SAY...

"NEVER BEFORE COULD BUY AT ONLY... \$69.95 SUCH BIG 9-TUBE RADIO CONSOLE"

HERE are the greatest values in Stewart-Warner's whole history of radio super-values! Brand new models—superb in tone, alive with power, outstanding in size and styling—and with price tags that are sensational. Just look, for example, at what you can offer prospects in that huge, 42-inch hand-rubbed \$69.95 console! . . .

10-TUBE PERFORMANCE

- ✓ 9 Tubes including rectifier and 1 double-purpose tube
- ✓ Built-in Magic Antenna
- ✓ Magic Keyboard Automatic Electric Tuning
- ✓ Covers all bands from 540 to 18,000 Kc.
- ✓ Connection for record-player and television sound
- ✓ 12-Inch DeLuxe Dynamic Speaker
- ✓ AVC and Bass Compensation
- ✓ 3-Position Tone Control
- ✓ Massive hand-rubbed cabinet

Also... "6-TUBE CONSOLE

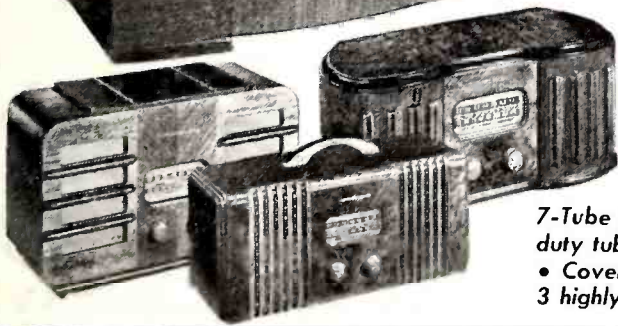
7 PUSH BUTTON \$39.95
ELECTRIC TUNING

8-TUBE PERFORMANCE

PLENTY HOT

SEE DISTRIBUTOR

PLENTY QUICK!"



7-Tube Performance! 5 tubes including rectifier and two double-duty tubes • Built-in Magic Antenna • AC-DC Superhet circuit • Covers 540-1725 and 2200-7000 Kc. • Available in choice of 3 highly finished wood and 2 molded cabinets.

STEWART-WARNER **RADIOS** AND TELEVISION

Another Stewart-Warner Product

STEWART-WARNER CORPORATION, 1828 DIVERSEY PARKWAY, CHICAGO

Also Makers of SAV-A-STEP Refrigerators and Electric Ranges

Get in on the Ground Floor of America's Fastest Growing Industry — with **PHILCO-YORK AIR CONDITIONERS**

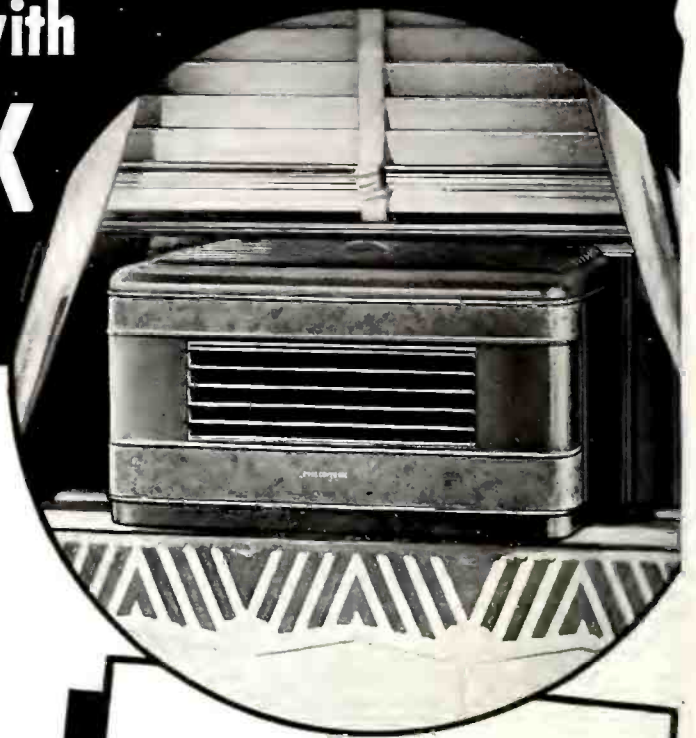
Amazing Improvements, Lower Prices Mean Quick, Easy Sales!

Less than two years ago Philco and York brought to the appliance dealers of America a new industry—*portable* air conditioning . . . at prices that opened up an entire new volume and profit market. In that short time Philco-York became the world's *biggest-selling* portable air conditioner! In fact, more Philco-York Air Conditioners were sold last season than all competitive makes combined!

Now, for 1940, Philco-York brings you a still finer, more complete line of *portable* air conditioners—a greater variety of models to cover every field and at **NEW LOW PRICES**. Easily and quickly installed—no plumbing, no wiring. Plug into any electric socket.

A marvelous product backed by the largest direct mail and national magazine advertising program ever staged in the air conditioning industry—*plus* superbly beautiful window displays, banners, streamers, electric signs and colorful descriptive literature for dealer use.

Now every business or professional office, every home becomes a live prospect for Philco-York Air Conditioners. Never before such an opportunity to make quick, easy sales! *No trade-ins . . . FULL PROFITS* every time! See your Philco-York distributor—or



NOW—Real, Complete, Efficient Portable Air Conditioning at a price the public can pay!

Model 61 shown above. Gives complete air conditioning service! Draws in fresh outside air . . . wrings the moisture out of it . . . filters out dust and pollen . . . **COOLS** it . . . and gently circulates it about the room. Stale inside air is rapidly removed and constantly replaced with fresh, filtered, clean air—brisk and energizing. Street noises are shut out. You live and work in peaceful comfort, regardless of outdoor weather! And it's priced amazingly low.

MAIL COUPON NOW!

PHILCO, Air Conditioning Dept. 501 Tioga and C Streets, Philadelphia, Pa.

Please send me full details of your dealer franchise proposition on Philco-York Air Conditioners, together with Discounts and Special Wholesale Credit Terms. Also send big, new Illustrated Book.

NAME _____

STREET _____ COUNTY _____

CITY _____ STATE _____

There's a Philco-York Air Conditioner for every size room, now priced as low as . . .

\$129⁵⁰

PHILCO ALL YEAR 'ROUND

HOME RADIO • AUTO RADIO • TELEVISION • PHONOGRAPHS
RADIO TUBES • PARTS • REFRIGERATORS • AIR CONDITIONERS • DRY BATTERIES

RADIO *and Television* TODAY

Sales Move Smoothly Ahead

After a setback due to a wintry freeze-up in most sections of the country, retail sales have hit their stride again and show gains of 3 to 10 per cent over a year ago.

Although production is decreasing in many lines, production rates are well above a year ago. Inventories generally are in better condition than at the same time last year. Spring merchandise has begun to move.

An early Easter, this year, will make the radio man's competition with ready-to-wear goods sharply noticeable at an earlier date. But radio dealers are more than holding their own, so far.

All indications are that radio sales will hold some 10 to 15 per cent above last year, for the first half of 1940.

Retail radio prices have softened, but visible inventories are not unwieldy and buying at the reduced prices is holding up.

Television, FM, Tubes

To the public and to governmental agencies, the radio industry has made a disappointing spectacle of itself these last few weeks.

With important groups pulling against each other, and with recriminations flying back and forth, outsiders begin to wonder whether radio men can really agree among themselves on what they want.

In television, in frequency-modulation, and in the radio-tube situation, forces which should be working together for the common progress, are instead fighting and hurling threats. In all three of these fields there is need of real constructive effort that will build future prosperity for all.

Instead of running to outside parties and Federal agencies with claims and counter-claims, radio men should right now be presenting a united opin-

ion and a united front on next steps in radio progress.

Outsiders and outside agencies cannot solve our problems or settle our differences. Eventually such settlements must be made *on radio principles by radio men.*

It will be better to reach such unity by voluntary agreements among members of a free industry, such as we now have—than to invite in governmental umpires (or dictators) to clamp down on us with orders that will settle our rows at the cost of radio's future freedom.

Gentlemen of the radio industry—wake up!

Better Stores

Radio dealers throughout the country are in a doll-up mood, you can see from accounts in this, and other issues of RADIO TODAY. There's a trend toward better-looking stores;

retailers are putting carpenters to work and getting handsome results.

One of the stores in this parade is shown herewith—the H. Bograd & Co. of Paterson, N. J. This house, with its double-aisle floor plan, its eye-catching inset displays, its good lighting and its general streamlining, was appropriately billed as a beautifully modern "Store of Tomorrow."

Single Radio Question in Census

In the Housing Census, which is due to start in April as a part of the government's general census-taking activity during 1940, will appear only one question on radio, "Does this household have a radio receiving set?" Earlier announcements had indicated that several questions on radio ownership would be asked.

Census officials revealed recently

SALESWORTHY "STORE OF TOMORROW"



Illustrating how shiny streamlines of modern merchandising can replace the shambles and shacks of yesterday, is this store of H. Bograd & Co., Paterson, N. J.

EDITOR, Orestes H. Caldwell; PUBLISHER, M. Clements; Managing Editor, Darrell Bartee; Merchandising Editor, H. L. M. Capron; STAFF, N. McAllister, G. H. Mayorga, William E. Moulic, M. H. Newton, R. A. Neubauer, B. V. Spinetta; SALES MANAGER, M. E. Herring, R. Y. Fitzpatrick, 201 N. Wells St., Chicago, Ill.; CALDWELL-CLEMENTS, INC., 480 Lexington Ave., NEW YORK, N. Y. Telephone PLaza 3-1340. Copyright 1940. Member Audit Bureau Circulations Vol. 6, No. 2, February, 1940

that lack of funds and time was the reason for limiting the queries. However, radio men will be able to get a check on other important aspects of the market, through the many general questions which are being asked.

Reallocation of Broadcast Stations

Sometime this Fall, the Federal Communications Commission is expected to reallocate a number of the broadcasting stations of the country—the first general shift since the old Federal Radio Commission set up the present broadcast structure in 1928.

The coming 1940 shift is made necessary to conform to the provisions of the North American regional broadcast agreement, now ratified by Canada, Cuba and Mexico, as well as by the United States.

Some 730 stations in the United States may be affected, particularly those above 730 kc. The main purpose is to set up a technical structure to reduce mutual interference between the broadcasting stations of the contracting countries.

The treaty provides considerable flexibility with respect to some 32 channels on which most of the high-power U. S. stations now operate, so that shifts of the more important broadcasters will be minimized.

Industry Tax for Industry Promotion

Radio manufacturers and others who have proposed at various times laying a tax per radio-set to be spent on industry promotion (cf. "Five-point Plan," etc.), will be interested in the industry-tax about to be levied on electric washing machines. In 1939 half a million washers were sold at an average price of \$50 (in contrast



Peter L. Jensen, new vicepresident of Utah Radio Products. His distinguished accomplishments in radio and sound fields are outlined on page 62.



The man whose hand guided the development of the world's first broadcasting station, Dr. Frank Conrad, left, gets the Gold Medal of the American Institute, from R. T. Pollack, Institute president. David Sarnoff of RCA, center, presented Dr. Conrad, Westinghouse engineer, for the award.

with 9 million radios at average price of \$32).

This month the American Washer and Ironer Manufacturers Association will meet at Chicago, with the purpose of laying a charge of 20 cents on each unit made and sold during the coming year. The funds thus collected—estimated at nearly \$300,000 for 1940—will be used to carry on a joint industry advertising campaign.

Farnsworth Corp. Reports Strong Financial Position

E. A. Nicholas, president of Farnsworth Television & Radio Corporation, Fort Wayne, Ind., told stockholders in a letter mailed Feb. 7, the company's operating loss in the first eight months of the current fiscal year, which ends April 30, "did not exceed \$250,000, including non-recurring items of more than \$85,000." The Farnsworth Company which manufactures radio receivers, phonograph combinations and complete television transmission and receiving apparatus, started production last September, following acquisition of its plants in April.

"With the period of preparation substantially behind us and our organization established," Mr. Nicholas stated, "we believe the company's liquid position is a cause for optimism as to the outlook for the coming year."

The balance sheet at the end of December, Mr. Nicholas' letter stated, "shows working capital of approximately \$2,000,000 more than half of which is represented by cash in banks. The company has no bank loans outstanding, accounts payable are normal."

Mr. Nicholas feels convinced that television, in which this company oc-

cupies an outstanding patent position, will make "substantial progress during the present year."

Convention News in Spotlight

Radio men heard some big-scale announcements last month when Philco staged its conventions, with some 800 distributors at the Palm Beach Biltmore in Florida and another big meeting at Hotel del Coronado, Coronado Beach, Calif. Year 'round sales program got a big play, with brand new refrigerators, air conditioners, and radios presented by Philco officials.

Along with regular radio promotions, the company came up with "the heaviest newspaper advertising program in the history of the refrigera-



E. A. Nicholas, Farnsworth president, reports a comfortable two millions of working capital.

tion industry," an unprecedented full color four-page pull-out ad in *Colliers* for Mar. 2, a packaged air conditioner for \$129.50, an announcement that the public would spend two billion dollars for air conditioning by 1945, and other feature plans.

"MAGIC WAVES"

New Things in Radio. Present and Future Uses of Radio Tubes.

Weekly Broadcasts by
Dr. O. H. Caldwell
Editor of *Radio Today*

NBC Blue Network, Saturday Afternoons. "Immediately following the Opera"

NBC Producing Staff
Gerald Holland, Dramatist
Sherman MacGregor, Director
Robert Hicks, Announcer
Jesse Crawford, Electronic Music
Wallace West, Press Representative

Lost Melodies	Feb. 17
Crystal Control	Feb. 24
Tubes Everywhere	March 2
Aids to Advertising	March 9
Eliminating Noise	March 16
Radio in Sports	March 23
Fighting Fires	March 30

"Magic Waves," as now scheduled, immediately follows the Saturday afternoon Metropolitan Opera Broadcast, which is officially estimated to have a listening audience of ten million persons. Around 4.30 to 5 p.m., when the "Met" signs off, the opera network of 50 stations coast-to-coast



L. L. Kelsey, radio division manager of Stewart-Warner, whose sales promotion announcements for SW are featured in sectional conventions this month.

is switched over to "Magic Waves" to bring to this vast audience the latest news of radio, radio tube, and radio equipment, interpreted by the editor of *RADIO TODAY*.

Editor Caldwell will also broadcast Feb. 29 over WGY and associated General Electric short-wave stations at Schenectady, N. Y., on "Electronic Wonder-workers."

On Feb. 6 at Philadelphia he addressed the Philadelphia Servicemen's Association on "Radio Tomorrow—New Jobs for Servicemen."

On Feb. 20 he will speak before the Young Men's Advertising Club at New York on "Radio's New Aids to Advertising."

Stromberg's McCanne Shows FM Highlights

Demonstrating frequency-modulation reception side by side with amplitude-modulation reproduction, Stromberg-Carlson's radio sales manager Lee McCanne explained staticless high-fidelity FM broadcasting at a meeting of the Rochester Society of Engineers, Jan. 22.

Using the New Stromberg-Carlson No. 480-M Labyrinth radio which employs dual concentric carpinchoe speakers, Mr. McCanne alternately tuned in programs from AM and FM broadcasts originating in Stromberg-Carlson studios, to give a dramatic comparison of the two types of reception through the audio system of the same radio. He ran an electric razor during the demonstration to show how the same source of noise caused sputtering and crackling on amplitude modulation, but produced no disturbance whatever on FM; then explained how natural static as well as man-made noise and interference is eliminated by the new FM method of broadcasting.

Mr. McCanne also showed how the extra fidelity with which FM programs are broadcast, adds to naturalness of tone when the receiver is capable of reproducing that increased fidelity.

Do You Remember?

A group of radio old-timers was discussing early days in broadcasting, and the question came up which radio firms were in business selling sets in 1922. From the group present the following names were listed:

Andrea, F.A.D.
Cutting & Washington
Clapp-Eastham (Genl. Radio)
DeForest
Freed-Eisemann
Grebe, A. H. & Co.
Kennedy, Colin B.
Paragon
Radio Corp. of America
Westinghouse
Zenith

Were any other well-known concerns doing an active radio business in 1922?



Lee McCanne of Stromberg-Carlson, one of the leaders in sales development of frequency-modulation radio.

Joyce Reports on Newburg Tests of Television Selling

Stating that "Practical television is no longer around the corner, but is here," Thomas F. Joyce, vice-president of RCA Mfg. Co., urged the FCC at its recent Washington hearings to "take the brakes off television by giving it the amber light."

Regarding results and conclusions drawn by RCA from its television merchandising tests conducted in Newburg, Poughkeepsie and Middletown, N. Y. Mr. Joyce said:

"Our Newburg, Poughkeepsie and Middletown merchandising experiment conducted during the months of October, November and December proved conclusively these things:

"1. The public will buy television receivers in substantial quantity if the price is right. During the test period the public bought an average of 11 sets a week for 12 weeks. The TRK12 was priced at \$395 (regular price \$600) and the TRK9 was priced at \$295 (regular price \$450.

BEYOND "DIRECT" AREA

"2. Television was submitted to its severest operating test, for this territory is outside the so-called 'line-of-sight service area' of the RCA-NBC television transmitter located in New York City. This direct-service area is supposed to be 35 to 40 miles from the transmitter. Newburg is 60 miles, and Middletown and Poughkeepsie are 75 miles from the transmitter. We have a number of television receivers in homes 90 miles from the transmitter and the owners at those locations are entirely satisfied with the day-in day-out technical performance of the receivers.

"3. Frequent check-backs on owners in this area indicate that the purchasers of the receivers are entirely satisfied with their investment."

(Please turn to page 54)



New York Central

WATCH THE SIGNALS!

You can see them in radio business figures, pointing the way to profit

It won't be long now before you, or your accountants, will be making a report on your business to Uncle Sam. It's income tax time.

If yours is an average retail radio business, your actual profits will be less than you thought they were; which is just another way of saying that either your business records are inadequate, or you do not use the information they provide to actually control your business.

Every radio dealer should have a simple set of books to furnish him the factual information with which to control his business.

The records should be current and accurate, should present detailed information and a complete picture of where your business is, and where it is going. Comparisons with the previous month, and with the same month last year, will be helpful.

WHAT TO WATCH

To properly guide your business, you should now have the following vital facts, from your books.

1. Your assets and your liabilities—to know whether your business is in a sound financial condition, and to know whether this condition is getting better, or worse, and why.

2. Your accounts receivable, by age—to know how much money is owing to you, whether month by month it rises or falls, and by a monthly comparison of the amounts by age, to know whether the old accounts are actively paying. Even "slow" accounts may be good, but when they stop paying, you have to do something about it—if you want your money.

3. Your accounts payable, by age—to know how much money you owe others, how much of it is longstanding, and whether your past due indebtedness is increasing or decreasing. Past due obligations always reflect on your credit and if you do not keep them in hand you may have to go on a cash basis.

TWO-FISTED CHECK-UP

4. Your classified sales—to know just what "class" of merchandise is selling, and to avoid buying-inducements on merchandise which is not selling. Then you'll be able to buy better on the fast-moving stuff.

5. Your classified inventory, by age—to know what your stock is, what is not moving in time to mark it down, and keep it going out. By comparison with previous figures, whether your stock-to-sales ratio, and your "old" stock, is more or less.

6. Your "cost of merchandise sold"—to have a definite check on whether your margin is going up or down.

PLANNING FOR PROFIT

7. Your "gross margin"—to know how much you have to pay your expense and make a profit with, and by comparison with previous months and last year, whether this is up or down.

8. Your classified expense, in dollars and per cent of sales—to know just how much of your sales dollar goes for expense, and precisely where it goes. This ratio of expense to sales, and how it moves, together with your gross margin, and how it varies,

are vital factors in the control of your business.

9. Your "net profit"—this is what you have left of your margin, after paying your expense, and is the "pay off" on your entire operation. It's nice to know.

There are other important bits of information which a simple set of books will give a dealer to help him run his business, such as

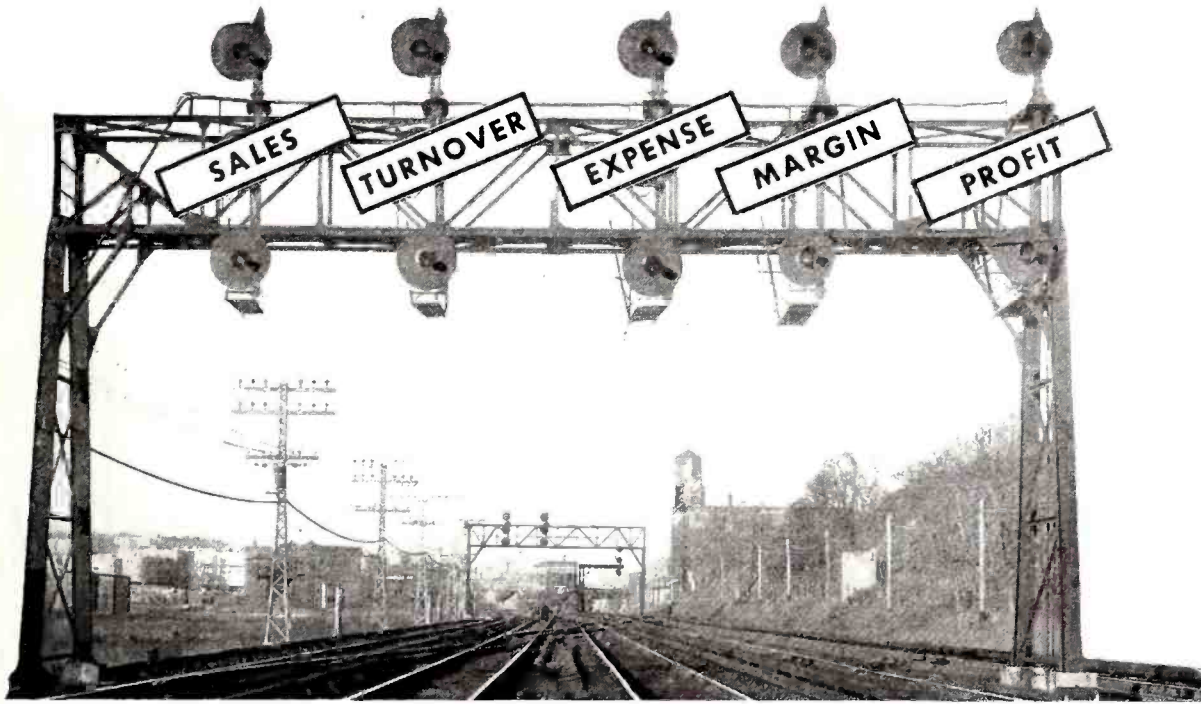
- Value of trade-in and trade-in losses.
- Repossessions, repossession costs and losses.
- Reserve with finance companies.
- Service Dept. operating costs, profits or losses.
- Your cash, received, disbursed, on hand, and in the bank.

HOW ONE DEALER DID THE TRICK

Let's take an actual case, a recent one, of a retailer who found business good. We'll see how he used information from his books to conduct his business.

This dealer was buying his radio on a 40/10 basis. His credit was good. His sales were \$25,000 in 1938, and his inventory was \$3,000 at cost. He allowed 10 to 20 per cent from list for trade-ins.

A mail order outfit opened a store only a block or two away. His prices were higher, and he found many of his customers going to his new competitor.



Here are the signals which bear watching if radio dealers are to roll smoothly along the road to profit.

He decided to meet their prices, to hold his trade. He cut his prices 10 per cent and allowed another 20 per cent for trade-in.

His sales picked up—10, 20, 30 per cent and more over the previous year, and he was sure he had this competition licked.

But his monthly reports told him that his cost of merchandise had increased from 59 to 70 per cent of sales as he reduced prices. Margin declined from 41 to 30 per cent. Expense went down from 35 to 30 per cent. But his profit of 6 per cent had vanished.

REMEDY FOUND

In two months he knew what the condition was, and what to do about it.

If he could further increase his sales, he knew his expense would go down more, and leave a little margin for profit.

He decided to advertise; spent 3 per cent of sales on direct mail, and pushed his sales up another 10, 15 or 20 per cent.

His next monthly report showed that his expense, including his advertising had gone down to 27 per cent. That left him a net profit of 3 per cent, on sales up 50 per cent. It looked okay.

But he also saw on his reports that his inventory had doubled, and his "accounts payable" were three times what they had been.

His "cash on hand" had almost vanished. What had happened?

Sales stepped up too fast. Inventory had to go up faster to give prompt delivery. The operation had expanded beyond the safe limits of its working capital.

But this dealer knew his condition, and promptly took steps to correct it.

HE CAME BACK

First, he went to his bank, explained the situation, showed his books, which proved he knew what he was talking about, and asked to borrow \$3,000 on his \$6,000 inventory. He got \$1,500 on his personal note for 120 days. Then, he arranged with his distributors to take 3 notes, due in 30, 60 and 90 days for the amounts due them.

Then, he put special effort on his slow moving stock, thawed out some of this frozen capital, stopped buying until he got his inventory in line.

Because this dealer knew, and could

prove he knew, what was happening in his business, he saw the danger as soon as it developed, and got help quickly when he needed it badly.

He *controlled* his business even when it tried to run away from him.

And so too can any retailer, if he has the figures, and knows how to get guidance from them.

Up-to-Date Figures To Be Compiled

In the big survey of radio's retail costs and profits, in which RADIO TODAY has set out to get a new series of guidance figures for the benefit of dealers, the following letter has been

(Please turn to page 41)

RADIO TODAY'S SURVEY TO SUPPLY NEW SET OF SIGNALS

In order to give U.S. radio dealers a brand new set of guidance figures, at a time when retail costs of doing business are on the upswing, RADIO TODAY has started a study of thousands of retail operations.

For the first time in several years, the retail costs will be collected and analyzed and presented as yardsticks for radio men. It is a vigorous effort to help dealers along the way to more profit.

The questionnaire which was mailed to retailers, inviting them to send their cost-of-doing-business figures in confidence to RADIO TODAY, appears on page 40 of this issue.

PROSPECT BE PLEASED



Six dealers win the buyers' eyes with a well-styled store, a handsome display.

Sales Add Up—In Magna, Utah, N. E. Papanikolas and the new quarters of the Central Appliance Co. testify to importance of "proper display." Ten years of good business in the heart of the milling and smelting area.



Pyramid Business—New radios form an impressive "peak" in the window of Zagel Furniture, Chicago. A splash of greenery and war news adds interest.



Wisconsin Pay-Off—Jack Goodwin of Milwaukee modernized his store, using exploded wood fibre in colors, for walls. Now he has indirect lights, personal studios, and four times the business.

A Customer Sings—In the recording studio of dealer E. F. Hammonds, Bryn Mawr, Pa., the making of personal records is a flourishing business. Scores of singers, speakers, etc., use the RCA Victor Deluxe Recorder.



Radio Room—Brown-Bricker, of East Liberty, Pa., thinks that display can be overdone, but puts the customer at ease with pleasant drapes of light green, in this display section.

Pulling Power—The trim, modern lines of this setup at Ott's Radio & Elec. Service, Portland, Ore., give customers the impression of neat efficiency and up-to-the-minute methods.





Majestic 3C70

Lola Lane, Warner Bros. star, focuses attention on the program coming from her 1940 set. Cabinet of 3C70 is of hand-rubbed sliced walnut. 3-band, 7-tube super with loop antenna.

FOR



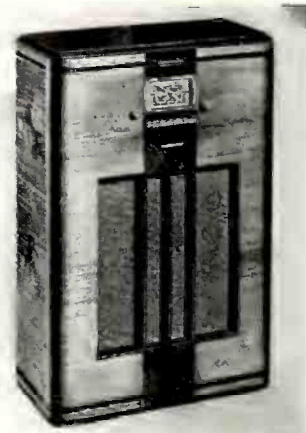
Admiral model 21-A6

★ Admiral 6-tube superhet. R.F. stage. Aeroscope. Ivory plastic cabinet. 550-1,700 kc. \$18.95. Continental Radio & Television Corp., 3800 Cortland St., Chicago, Ill.—RADIO TODAY.



Philco auto radio

★ Model AR-8, a 7 tube, two-unit Philco superheterodyne. Electric push-button tuning of 5 stations. Separate full-size electrodynamic speaker. Reception control, bass compensation, A. V. C., and full-wave vibrator. \$69.95. Philco Radio & Telev. Corp., Tioga & C Sts., Philadelphia, Pa.—RADIO TODAY.



S-W 1940 receiver

★ Model 03-6L7, one of the new Stewart-Warner 1940 models, has 7 push-buttons, magic keyboard automatic tuning. Covers 540-1,725 kc. and 2,200-7,000 kc. 8 in. electrodynamic speaker. Beam-power output audio system. 2-position tone control and A.V.C. Provides for record player and television sound. Built-in antenna. Stewart-Warner Corp., 1826 Diversey Pkwy., Chicago, Ill.—RADIO TODAY.



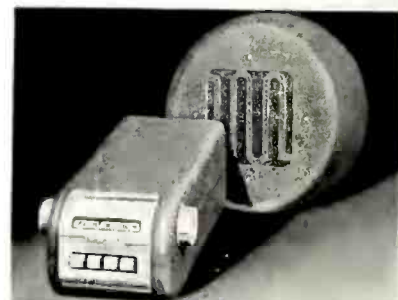
Knight console

★ 11-tube, 3-band phono-radio with record changer. Superhet receiver. 540-1,720 kc., 2.3-7.5 mc., 7.5-24 mc., 6 push-buttons. 12-inch dynamic speaker. Bass compensation and booster. AVC and variable tone control. Slide-rule dial. Television connection. Matched and blended walnut cabinet, Chippendale grille design. Drawer built into bottom for records and albums. Allied Radio Corp., 833 W. Jackson Blvd., Chicago, Ill.—RADIO TODAY.



Sonora "Serenade"

★ Plastic-molded table model phonograph-radio combination. 5-tube superhet, built-in antenna, automatic volume control, 5-inch P.M. dynamic speaker. Full-vision tuning dial. Offset-head crystal pickup, 10 and 12 in. records; needle cups and snap-on pickup arm-rest molded into cabinet. Ivory or walnut. Sonora Radio & Television Corp., 2626 W. Washington St., Chicago, Ill.—RADIO TODAY.



Motorola auto radio

★ Model 250, 2-unit, 6 tubes, 4-station push-button tuning. Compact, mounts under dash of all cars. Oversize separate electrodynamic speaker in 8 in. baffle. Superheterodyne circuit. Low battery drain. Full vision illuminated horizontal dial. Automatic volume control. \$24.95. Galvin Mfg. Corp., 4545 Augusta Blvd., Chicago, Ill.—RADIO TODAY.

NEW-CUSTOMER BAIT!

Latest models to win business. Eye-appeal in auto, compact, console and combination radios.



Westinghouse portable combination

★ WR-475, portable radio-phonograph superhet in durable airplane cloth cabinet. Detachable lid. Electro-dynamic speaker, loop antenna, AVC, illuminated slide-rule dial. 550-1,700 kc. Snap switch changeover from radio to phonograph. Crystal pickup, self-starting phonograph motor, plays 10 and 12 in. records. 105-125 v., 50-60 cycle, AC. \$34.95. Westinghouse Elec. & Mfg. Co., 200 E. 5th St., Mansfield, Ohio.—RADIO TODAY.



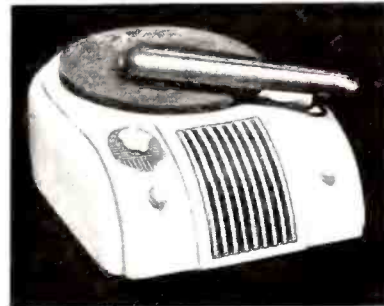
Stewart-Warner compact

★ Model 07-5S1, 5-tube, 4 push-button, superheterodyne set. Covers 540-1,725 kc. and 2,200-7,000 kc. Automatic volume control. 5-inch electro dynamic speaker. Walnut cabinet. Manual tuning, range switch, phono-switch. Provision for record player and television sound. Stewart-Warner Corp., 1826 Diversey Pkwy., Chicago, Ill.—RADIO TODAY.



Philco Chippendale model

★ No. 515, hand-rubbed walnut or mahogany. Television sound outlet, R.F. stage and built-in twin-loop aerial. Electric, 8-push-button tuning. Electro-dynamic speaker. Variable tone control for both records and radio. Crystal phonograph pickup. Push-pull pentode audio system. Deluxe inter-mix record changer; plays 14 ten and twelve-inch records mixed. Philco Radio & Telev. Corp., Tioga & C Sts., Philadelphia, Pa.—RADIO TODAY.



Arvin radio-phonograph

★ Model 302A, ivory finished radio-phonograph with 4 tubes. P.M. speaker. Plays 10 and 12 in. records. Ivory model, \$16.95; deep brown, \$14.95. Carrying case for the set and records, \$2.95 extra. Noblitt-Sparks, Inc., Columbus, Ind.—RADIO TODAY.



Motorola "Golden Voice"

★ Model 700, 8-tube, 6-station push-button auto radio. 8 in. permanent magnet speaker or choice of any instrument panel speaker. "Acoustinator" 3-position tone control. Fits all cars. Push-pull audio system, superheterodyne, A.V.C. \$69.95 with any speaker. Galvin Mfg. Corp., 4545 Augusta Blvd., Chicago, Ill.—RADIO TODAY.

Farnsworth console

Model BC-81 is a streamlined set in the 1940 line. Rounded-front cabinet is of matched American walnut, with band and grille bars overlaid with simulated Brazilian rosewood. 8-tube, 3-band super.



"CHANGE THE SCENERY"

**Radio trade divided on question of new models to replace consoles.
Enthusiastic support for proposal, countered by indifference.**

Radio Today's editorial "It's Time to Change the Scenery," in the January issue, has started a flood of comment and discussion on the subject of new styles in radio sets to replace present consoles.

Some industry leaders agree that a new form of radio receiver is needed, and have suggestions to propose. Others see the need for new models but ask what can take the place of the console in public acceptance. Still others flatly stand pat on present cabinetry and form, and refuse to be parties to efforts to introduce anything new.

WILL INDUSTRY AGREE?

Other commentators see industry difficulties in uniting on a preferred new model. "It has been so difficult to get the industry together on even the barest fundamentals," writes one, "that I question our ability to bring about unanimity of thinking in a matter as important as this one. It is therefore my opinion that a move of this kind will come about by the ability of individual organizations to hit upon designs or styles that will succeed in captivating the public taste."

"The move you have started is a worthy one," writes another reader. "It is stimulating in the extreme, and you can count on us to be a party to anything constructive for the industry."

Here are other comments:

PERIOD FURNITURE RETURNING

It is far more likely that the industry could be brought to a common viewpoint about cabinet styling than that the public could be brought to that same frame of mind. Certain changes are obvious to us as they are to the other industry members. We seem to be riding the crest of another cycle bringing us back rapidly into

more refined consoles with more period or furniture effect. This will be less felt in the medium priced but, undoubtedly, be very evident in the high priced radio merchandise and in the radio combination class.

Strictly furniture designs, based on our experience this last season, will be a definite factor. In our opinion, it will be difficult to find a model representing any radical departure from current trend which would find any immediate and large acceptance.

J. S. KNOWLSON
Stewart-Warner Corporation
Chicago

PAST EFFORTS HAVEN'T CLICKED

In your editorial "It's Time to Change the Scenery," you have posed a very neat question—one which Philco tried to solve in 1937 with its famous slant front and in 1938 with its spinet styling. Zenith also tried to answer the same question with its end-table or chairside designs. Frankly, I wonder whether a change in design is the answer. Considering the above instances, it apparently isn't, because they were three radically different stylings which I think everyone will agree, did not click sufficiently with the public to set a new trend.

It seems to me that a radio cabinet is after all, a piece of furniture—borax, Bronx Renaissance, or what have you. It still has to measure up to the mass market's idea of something that goes in a home.

The automobile has a different problem and even there, the changes in outward appearance, except for details, are not tremendous from year to year and a totally different factor accounts for continued automobile volume.

The refrigerator people haven't changed the outward appearance of their boxes materially in the past several years. They can all be described as a vertical, rectangular box, finished in white.

But the problem of radio styling is one which every manufacturer has been working at for these many years. Efforts have been made to create a new style which would be instantly

recognizable and "dated." Perhaps some designer or designers will stumble on the answer but I am inclined to think that the answer lies in better radio performance.

Galvin Manufacturing Corp.
W. H. STELLNER

SURVEY OF TRADE OPINION WELCOMED

RADIO TODAY's editorial about striking a firm style note in radio to develop obsolescence and tone up the product is very interesting.

I like your thinking and know that every manufacturer has a major problem in attempting to design style products that will sell and accomplish the many purposes intended.

I think a survey of trade opinions such as you suggest would be very interesting, and would like to know what the dealers' opinions are.

R. C. COSGROVE
Vice President & Genl. Mgr.
Crosley Corporation
Cincinnati, O.

EFFECTIVE STYLING WILL INCREASE SALES

Relative to your editorial inquiry as to whether we feel that a new type of large set is needed, I might say, "Yes we do."

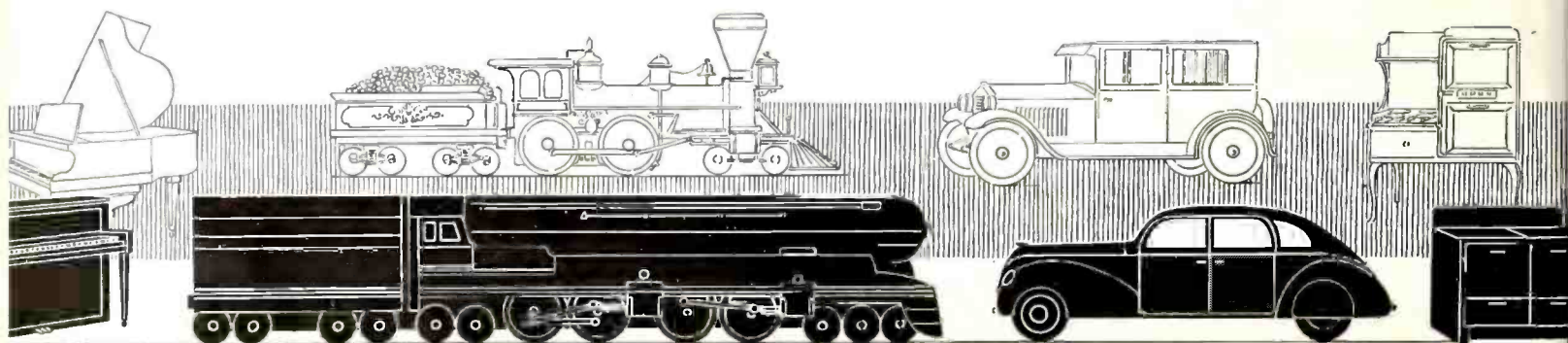
We definitely feel there should be more styling in a console radio, making a set of such design that it will fit into the average living room of today, and if the proper approach is made the console sales will increase materially.

If such new styling could be made effective, it would, we feel, interest the woman in the home today.

The Sparks-Withington Co.
HARRY G. SPARKS
Vice President and General Manager

NEW TRENDS IN STYLING

Unquestionably a "change in scenery" would be desirable providing it would be accepted by the buying public. I think I can safely say that the industry is almost 100 per cent energetic.
(Please turn to page 41)



WATCH FARNSWORTH FOR

40

WHEN Farnsworth Radios were first introduced last Fall, radio distributors and dealers *expected* big things from this alert new organization. They were not disappointed.

The set-up was right! Key men of the radio industry had teamed up to form the Farnsworth organization. Their combined experience created the fast-selling Farnsworth Line. Tremendous manufacturing and financial resources backed their efforts — assured success.

Of even greater importance, Farnsworth established sound and sensible policies of protecting the distributors' and dealers' interests that have become the basis of all Farnsworth activity.

The Farnsworth organization plans to continue these policies and to institute an even broader program for Farnsworth dealers during the next few months. Get the complete story from your Farnsworth distributor. You will find his name among the outstanding radio distributors listed on this page.

FARNSWORTH TELEVISION & RADIO CORPORATION . . . FORT WAYNE AND MARION, INDIANA

We Proudly Present

- | | | |
|---|--|--|
| ADAMS WHOLESALEERS, INC.
Waterloo, Iowa | THE GIBSON COMPANY
Indianapolis, Indiana | SOUTHERN BEARINGS & PARTS CO.
Charlotte, North Carolina |
| ARMACOST-NORGE COMPANY
Kansas City, Missouri | GOOD HOUSEKEEPING SHOPS
Providence, Rhode Island | SOUTH TEXAS APPLIANCE CORP.
San Antonio, Texas |
| B. & O. CORPORATION
Newark, New Jersey | JENSEN-BYRD COMPANY
Spokane, Washington | SPENCER AUTO ELECTRIC, INC.
Tampa, Florida |
| BERTRAM MOTOR SUPPLY CO.
Boise, Idaho | M. H. KIRCHBAUM
Sioux City, Iowa | B. H. SPINNEY COMPANY
Springfield, Massachusetts
Albany and Syracuse, New York |
| BIRMINGHAM ELECTRIC BATTERY CO.
Birmingham, Alabama | LAPPIN ELECTRIC COMPANY
Milwaukee, Wisconsin | STERLING ELECTRIC COMPANY
Lexington, Kentucky |
| BUFFALO NIPPLE & MACHINE CO., INC.
Buffalo, New York | MIDLAND ELECTRIC COMPANY
Cleveland, Ohio | STRAUS-BODENHEIMER COMPANY
Houston, Texas |
| CHARLESTON ELECTRICAL SUPPLY CO.
Charleston, West Virginia | MONROE HARDWARE COMPANY
Monroe and New Orleans, La. | SUNSET ELECTRIC COMPANY
Portland, Oregon |
| THE COMPTON-KNODEL DIST. CO.
Cincinnati, Ohio | MORY SALES CORPORATION
New Haven, Connecticut | THE B. K. SWEENEY ELECTRICAL CO.
Denver, Colorado |
| CREST, INCORPORATED
St. Louis, Missouri | NELSON AND COMPANY
Baltimore, Maryland | TEXAS NORGE SALES COMPANY
Dallas, Texas |
| W. C. DANCE, INC.
Oklahoma City, Oklahoma | J. L. PERRY COMPANY
Nashville, Tennessee | TRILLING & MONTAGUE
Philadelphia, Pennsylvania |
| FRANK EDWARDS COMPANY, INC.
San Francisco, California | PIXLEY ELECTRIC COMPANY
Columbus, Ohio | UNION HARDWARE & METAL CO.
Los Angeles, California |
| ELECTRIC PRODUCTS CORPORATION
Pittsburgh, Pennsylvania | RADIO DISTRIBUTING COMPANY
Grand Rapids, Michigan | VALIER SALES COMPANY
La Crosse, Wisconsin |
| FARRAR-BROWN COMPANY, INC.
Portland, Maine | R. C. K. DISTRIBUTING COMPANY
Louisville, Kentucky | VIRGINIA-CAROLINA ELECTRICAL
SUPPLY COMPANY, INC.
Danville, Virginia |
| E. GARNICH & SONS HARDWARE CO.
Ashland, Wisconsin | REPUBLIC SUPPLY CORP.
Detroit, Michigan | WARREN-NORGE COMPANY
New York, New York |
| GATHRIGHTS, INC.
Richmond, Virginia | THE SACKS ELECTRICAL SUPPLY CO.
Akron, Ohio | WASHINGTON REFRIGERATION CO.
Washington, D. C. |
| GENERAL EQUIPMENT CORPORATION
Boston, Massachusetts | SAMPSON ELECTRIC COMPANY
Chicago, Illinois | THE STEVE WISE COMPANY
Wichita, Kansas |
| GERLINGER EQUIPMENT CO., INC.
Toledo, Ohio | SMITH AND HIRSCHMANN, INC.
Rochester, New York | |

W. B. DAVIS ELECTRIC SUPPLY CO., Memphis, Tennessee; Little Rock, Arkansas
CHARLES S. MARTIN DISTRIBUTING CO., Inc., Atlanta and Athens, Georgia

RECORDS OUT IN FRONT

Ten practical ways for dealers to keep their new labels neatly in view of the customers.

While the sale of records continues to reach new heights, and to pile up new profits for radio men, dealers have been asking for ideas on the display of the discs.

A survey of the active retailers of records shows that there are at least ten ways in which the platters themselves may be shown off. These may be used in connection with displays of radios, phonograph radio combinations, or record accessories, and they may be shown in windows or at various spots inside the store.

In each case, if the record is displayed without its wrapper, the dealer should be sure that its surface is glisteningly free of dust. Wrappers should have that "brand new" appearance—non of that much-folded, dog-eared stuff.

PLATTERS IN PANELS

One of the most popular methods of exhibiting records is to fasten them to panels, stand the strip at the sides of windows, or use them on the walls near the record department. The discs are placed against some back-

ground of paper which contrasts pleasantly with the shiny black of the records.

Many dealers use a "tree" effect, which requires the use of a fixture with arms that extend like branches. These extensions have small pegs on them which fit into the center hole of the record.

MONSTER BACKGROUND

Another one of the common styles of display involves the use of a "jumbo" reproduction of a record as a background for a ring of the discs themselves. A large circular cardboard, smartly covered with decorative paper or fabric, will get attention for the likewise-circular merchandise attached to it.

In cases where records are to be displayed on flat surfaces, whether on the counter, the floor of a window, or on a series of glass display shelves, it is often convenient to use some wire holders. These are about the same as the wire gadgets used for the display of dishes, and they hold the records in a nearly vertical position.



An enterprising New York City dealer, Haynes-Griffin, ties in with current interest in the big movie "Pinocchio." The colorful display features the new Victor record series made from the film sound track. There are three discs in the album, for \$2.75.

If record players are used in the displays, a good many dealers turn them on and let the records whirl. This attempt to get some action into the set-up will often catch the attention of passers-by, even though the music is not actually being played.

Albums which represent a pretty colorful and fast-selling kind of merchandise these days, offer another chance to get records into view. The trick is to slip one or two of the feature recordings part way out of the book, so that the package will look like something to be used for convenient enjoyment.

The new labels may be also shown in the nifty new record racks. Many of these are inexpensive items and they have a price appeal. By using them in displays, dealers have a chance to get larger groups of records into the public eye.

Still another display idea is found in the use of the lists of current releases which are sent out by manufacturers. Many dealers have adopted the practice of thumb-tacking these to some kind of bulletin board that the customers can readily get at. To
(Please turn to page 52)



Another customer is drawn to the "Record Bar," in the Davega store, Bronx, N. Y., showing how the "complete record dept.," made by the A. Bitter Construction Co. is getting results in the sale of this popular merchandise.

AGAIN RCA VICTOR GIVES YOU A PROFIT-WINNER!

HERE'S a radio set that bids fair to set the country aflame—that's how hot it is!

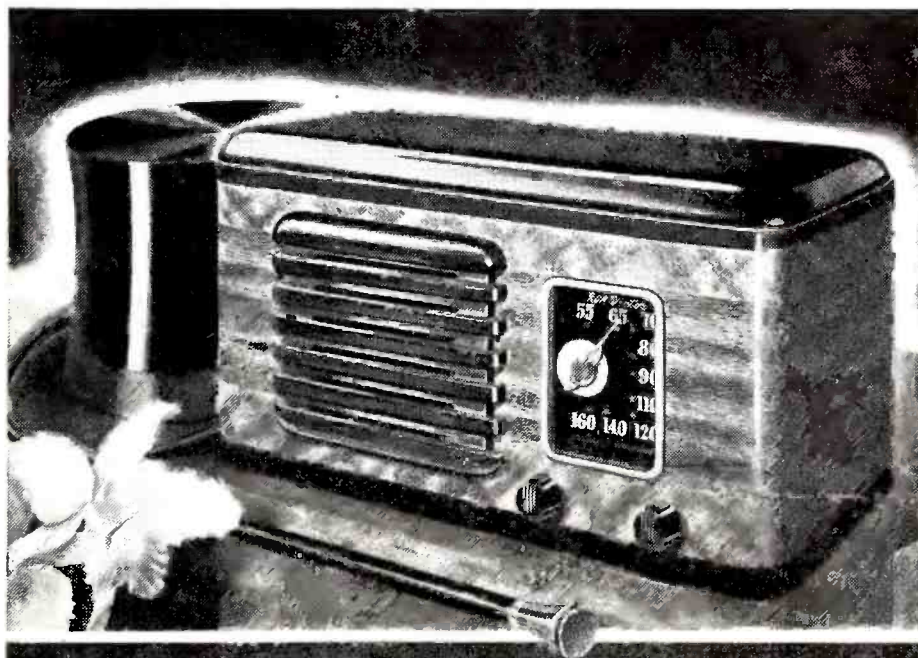
Called "The Opera Box" because it's a distinguished little *big* radio, this sensational new RCA Victor model will prove to be the feature attraction in your store. It will create new business for you, not only because its beauty, its performance and its features set it apart from usual small type models, but also because RCA Victor is backing it up with a powerful radio and newspaper advertising campaign.

Tie in with this campaign. Use the newspaper mats on "The Opera Box" that are available to you. Big profits will be your reward!



TOMMY DORSEY
Victor Recording Artist

Tommy Dorsey is one of the world's greatest artists whose performances are on Victor Records. And because Victor offers your customers such top-notch talent, it is the leading name in the recording field—just as RCA Victor Radios and RCA Victrolas, too, are leaders. An important selling feature of all AC-operated RCA Victor Radios is the Victrola Plug-in. This makes possible the attachment of an RCA Victor Record Player with which your customers may enjoy all the great artists on Victor and Bluebird Records.



"The Opera Box"

Master Voice Quality in a New Type Radio
Big in Performance...Generous in Size...Low in Cost

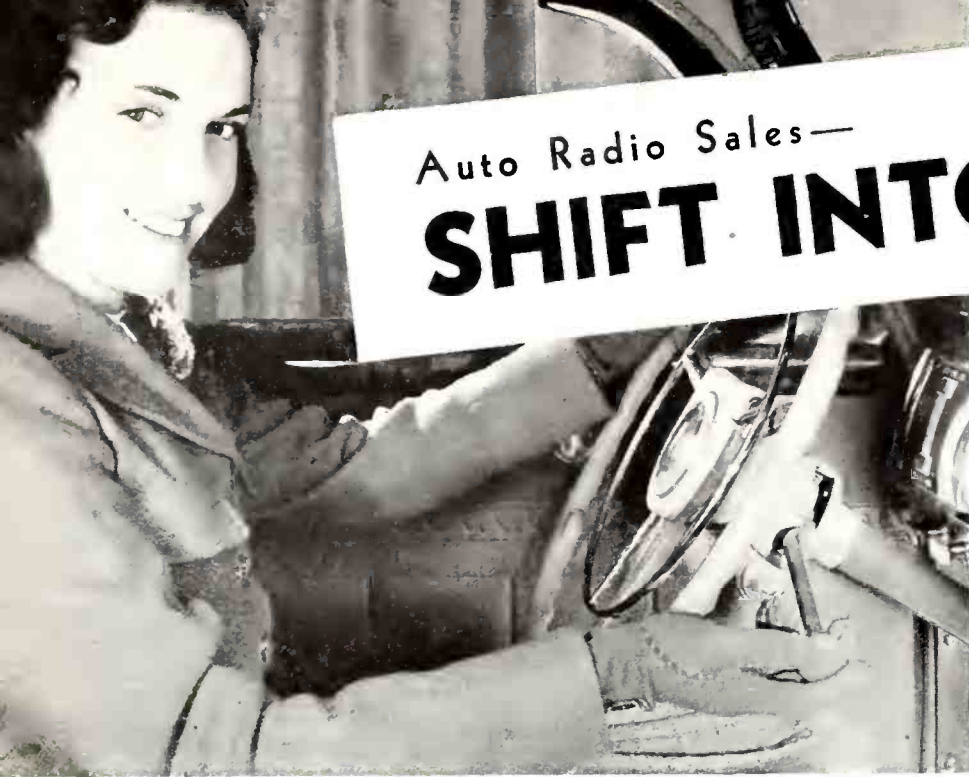
"The Opera Box," a *big* radio in *convenient* size, is RCA Victor engineers' answer to the problem of finding the *right way* to put the quality characteristics of a big radio into a compact set. It has 5 preferred type RCA Victor tubes, plus plug-in ballast resistor, which provide 7-tube performance. It also has built-in Magic Loop Antenna; operates on AC-DC; receives standard broadcasts, police calls. Its walnut and mahogany cabinet, 8 $\frac{5}{16}$ " high, 14 $\frac{1}{2}$ " wide and 7 $\frac{1}{16}$ " deep, is finished front and back, may be viewed in all its beauty from any side. This radio is Model 46X3.

For finer radio performance—RCA Victor Radio Tubes.
Trade-marks "RCA Victor" and "Victrola" Reg. U. S. Pat. Off. by RCA Mfg. Co., Inc. Ask your music merchant about the new RCA Victor Long Life Needle.



Auto Radio Sales—

SHIFT INTO HIGH!



De Soto

Early Spring opens a greener field for the sale of car receivers

Now that the frost and the ice of winter are beginning to melt away, the drivers of the country are planning for more time to be spent in the car. Warmer weather means a faster sales pace for the dealer in auto radio.

"This is the time of year when you can sell 'em a radio check-up, and edge your way into more sales," declares one radio dealer, who has some very aggressive plans for the promotion of new Spring lines of car sets.

Another retailer exclaims that for his part, he's going to do a new kind of a promotion job on the improvements in auto receivers as recently introduced by manufacturers. His plan is to blow up the announcements for use in promotion throughout his trade area. He intends to use only general terms in such a way

that people will come to his shop and ask for details.

This radio man has never bothered to do this, on any such scale, during previous seasons, but he believes that the interest in news broadcasts, and the demand for short wave in car listening, makes the move appropriate.

PROMOTION IDEAS

Among the promotion ideas appropriate for the season are the following stunts, for use in display and demonstration of the new car receivers.

1. Extra interest can be garnered for this merchandise by surrounding it with a profusion of colorful road maps. Get one for each state in the union.

2. In advertising which promotes the "matched controls" feature, the copy may start with the phrase "What Kind of Car Do You Drive?", or some lively version of the same idea.

3. Among dealers and distributors who stock the Crosley car, descriptions and features of auto radio may as well be included in the advertising fanfare. The car often attracts large crowds and dealers will find it profitable to draw some attention to the car set.

4. The new 1940 auto radios are now being advertised in national magazines, and retailers will get good results by using reproductions of the ads as display pieces in their stores.

Auto-radio Traffic Signals May Require Set in Every Car

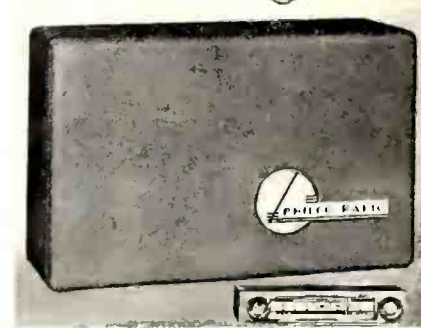
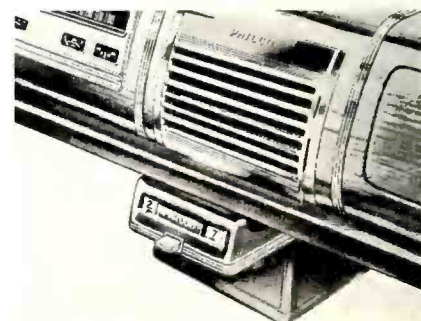
A novel plan to bring traffic signals into cars in the form of distinctive tones corresponding to the "stop" and "go" lights, may in time make an auto-radio a legal requirement on every one of the nation's 30,000,000 cars, according to the men behind the plan.

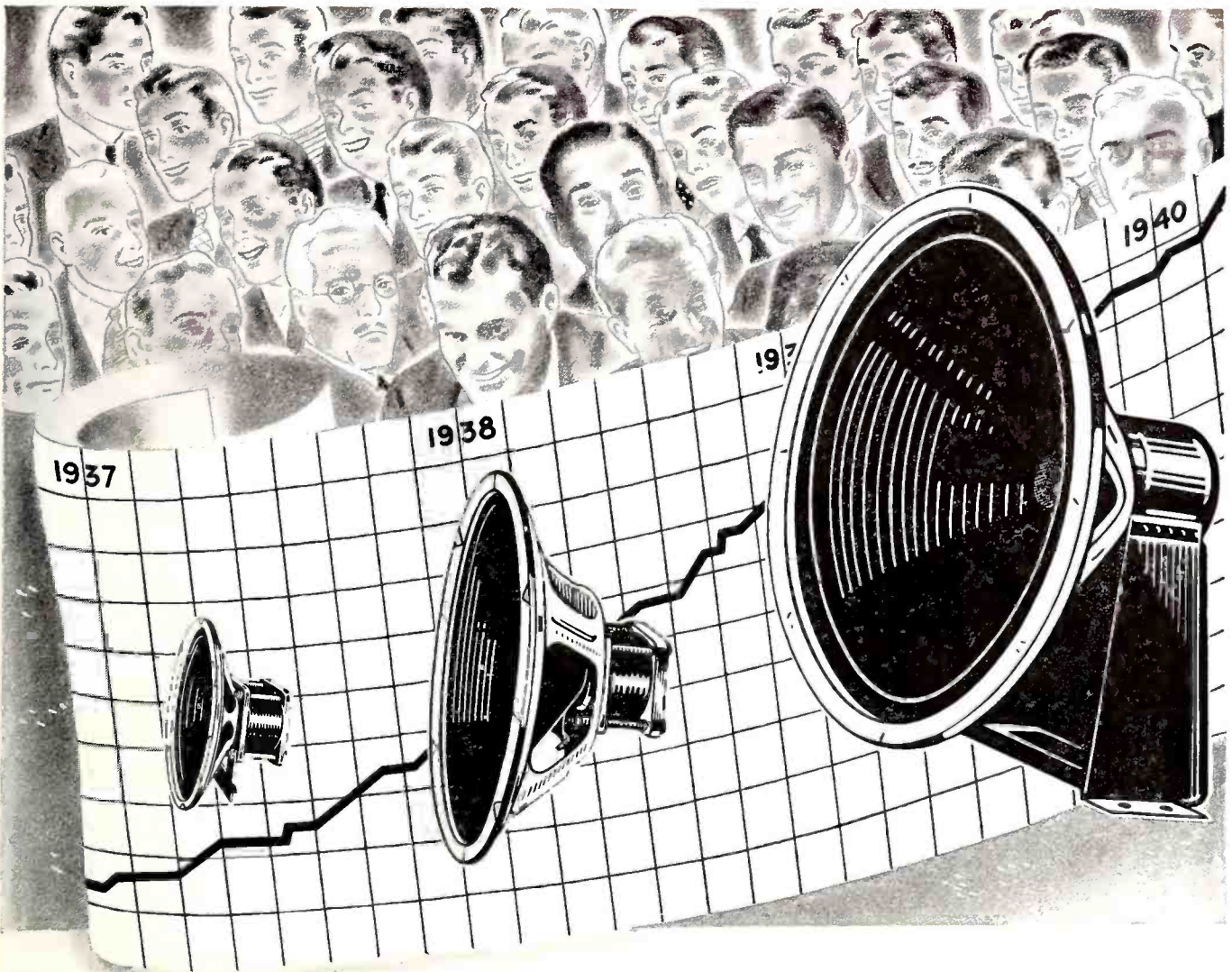
(Please turn to page 24)



At the left, upper photo, Motorola's new 7-tube "400" model with push-button tone control, at \$39.95. Below is the "450" with automatic variable sensitivity unit matched to "booster" aerial, priced at \$49.95. Other models are described in "New Things" section.

At the upper right is a new Philco with 6 Loktal tubes, single push-button tuning, at \$39.95. Below is the featured Short Wave model, a two-unit super-het job with 6 Loktal tubes, \$49.95. Other new Philcos also on "New Things" pages.





Preference FOR UTAH SPEAKERS CONTINUES TO RISE RAPIDLY

The *balanced line* of Utah Speakers has won a continually increasing preference from every branch of the radio and sound equipment industries. It is a preference earned by time-proven dependability, uniformity and consistent high quality.

Last year 1,676,622 Utah Speakers were selected to meet the specific requirements of engineers and service men in every part of the country. Ruggedness and adequate power handling capacity are built-in characteristics of service-free Utah Speakers.

Utah engineering keeps abreast of the developments and improvements in both industries. Outstanding tone quality is obtained by the careful selection of high quality materials and the precision

manufacturing and treatment of each individual part—a special plasticizing process insures voice coils against mechanical failure or heavy overloads—cones are treated to give minimum absorption—heavier gauge metal assures ample overall rigidity—they are completely dustproof throughout—these and many other features assure “audience approval.”

There is a Utah Speaker to meet every requirement. Wherever speakers are used, you are assured of complete satisfaction with a Utah. Utah engineers will be glad to help you solve your speaker problems. Utah Radio Products Co., 814 Orleans St., Chicago, Ill. *Canadian Sales Office:* 414 Bay St., Toronto, Canada. *Cable Address:* *Utaradio, Chicago.*



S P E A K E R S

VIBRATORS • TRANSFORMERS • UTAH-CARTER PARTS

SIGNALS MAY REQUIRE RADIO IN EVERY CAR

(Continued from page 22)

In its present form, this traffic-control system uses the existing car radio tuned to 550 kc, thus making the system immediately available for the 6,000,000 cars now equipped with auto-radios, though eventually a special small set would be employed with fixed tuning to the highway safety-signal frequency.

By the use of this system, the driver, instead of letting his attention wander from the roadway in his search for traffic signals in unfamiliar territory, would hear a pleasant low tone as long as the lights ahead were green. When "red" comes on, in all cars on that section of the roadway an interrupted high note would be

heard, like a crossing signal. If desired, relays could be installed which would switch on proper red and green pilot lights on the car instrument board. Cars thus equipped and operating over a test section of New York City highway, were described over the NBC Blue network, Jan. 27, during the "Magic Waves" program.

RECORDED MESSAGES

The small highway transmitting unit, which may be mounted on a telephone pole or a traffic light stanchion, makes use of a magnetic tape sound recording device by which continuous repetition of a traffic bulletin or a safety message may be broadcast. A distinctive sign placed on the street or highway in advance of a given radio zone calls attention of motorists to the radio system which they are approaching and tells them the frequency to

which to tune their set.

By means of this device, traffic can be rerouted to secondary thoroughfares from crowded highways, preventing jams before cars have a chance to pile up; drivers can be warned of speed limits or of emergency in case of fire or accident; doctors can be paged on the road or pedestrians can be warned of an impending change in traffic lights. The robot can give oral warning of such impending changes to drivers and pedestrians also.

This new highway traffic control system using auto-radios is being developed by William S. Halstead and S. K. Wolff, whose laboratory is in the RKO Building, Radio City, New York, in collaboration with Dr. Miller McClintock, director of the Yale University Bureau of Street-Traffic Research.

ROOM-COOLERS NEXT

For the alert dealer there is always something *new* to sell, something *more* to make a profit on.

Air conditioning is growing fast, because it is something most every one wants.

Room coolers are air conditioners for *everyone's* summer time comfort.

Homes, large and small, bedroom, living room, dining room, nursery, executive's, lawyers', doctors' and dentists' offices, small stores and beauty-parlors, hotel and hospital rooms, all are appropriate for the use of room coolers.

SUBSTANTIAL DEMAND

Of all the fundamental urges to buy, none are stronger than those of *health* and *comfort*, which room coolers provide, within the reach of all. These coolers are *naturals* for the radio dealers summer sales and profits.

Room coolers are not traffic items. They are specialty items, and have to be sold as such. What the customer *wants*, and so what you should really sell, is *relief from summer discomfort*.

It is a mistake of selling temperature reduction, with the thermometer as the yardstick. Room coolers do not maintain a predetermined temperature by heat extraction, as an oil burner does by heat addition. They achieve relief from summer discomfort by reducing the temperature, by extracting moisture, and by circulating the air.

Naturally, they can *best* be sold by demonstration.

First, by demonstration in your

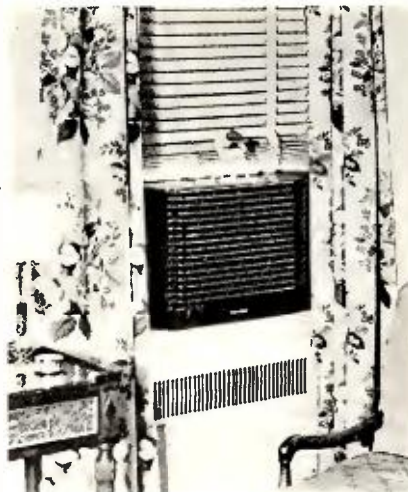
New air conditioners give dealers chance to merchandise health

own store. One dealer last year used room coolers in his record demonstration booths, to help him sell records. His record customers bought 50 room coolers.

Second, by demonstrations on the customer's premises.

Third, by rentals in hotel and hospital rooms.

The actual selling season is short—June, July and August.



Neatly installed in this window is the Philco Model 41 room cooler, now offered at feature price of \$129.50.

But for best results, much of your actual selling should be planned, and done in advance, with your hot weather demonstrations as the "clincher."

That is, the missionary work of telling your prospects that room coolers will banish summer discomfort, that you sell them, that they can afford them, can all be done in advance of the actual hot weather selling season.

PUT THEM TO WORK

Demonstrations should be scheduled in advance, and a carefully planned direct mail campaign started not later than May.

Your direct mail plans, too, might well include two or three appropriate pieces, all addressed and ready to go, to be mailed when the first heat wave strikes town.

It's true that not many dealers have done any *real* room cooler merchandising, but no alert dealer will pass them up without mighty serious consideration.

That's a pretty good reason why you should go after them.

THE FIELD HAS THAT UNSOLD QUALITY

Enough fine jobs have been done to prove conclusively that it can be done, and how to do it. As in every example of specialty selling, the largest profits go to the early birds who have vision, initiative, and the selling "ability to follow through."

That's the case with room coolers *now*.

Take the Royal Road to Profits with **NORGE** ROYAL ROLLATOR REFRIGERATION

**Here's the refrigerator
in which**

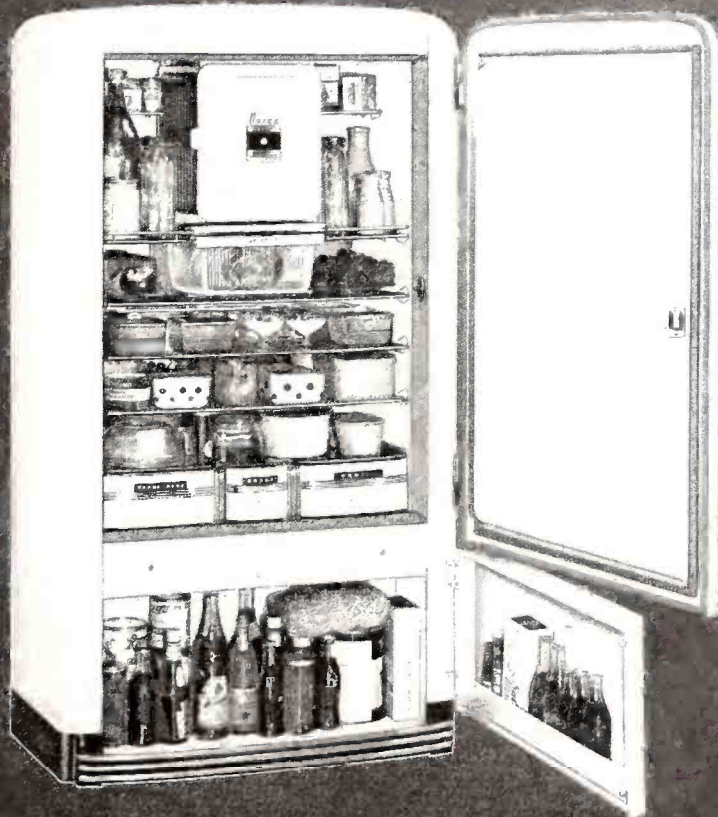
*From top to floor—
There's space galore*

To the women looking for today's best buy, Norge dealers can say: "Help yourself to an extra shelf . . . at no extra cost." By offering extra food capacity without extra size, Norge dealers have a *buying* appeal that registers immediately with women.

And, then, the

*Rollator Cold-Maker
Sells Still More*

To refrigerate this extra capacity, Norge provides the famous Rollator Cold-Maker . . . so widely imitated . . . *but only in part*, because here is the only Rollator unit permanently oiled and sealed for long, trouble-free life . . . the only domestic unit refrigerant cooled for easy going under heaviest loads in hottest weather.



A Norge for every Customer . . .

There's a Rollator-powered Norge for every home . . . the right size at the right price. Yet, the Norge line is a simple one to stock . . . and its new appeals make it a fast one to move. Because of all the great features Norge has combined to create unusual salability, many new dealers are

taking the Royal Road to Profits with Norge in 1940. You, too, are invited to join with Norge . . . provided, of course, there is still an opening in your community. Why not write today for complete information while there is still time to get lined up for a profitable new season?

NORGE DIVISION BORG-WARNER CORPORATION, DETROIT, MICH.
In Canada: CANADIAN RADIO CORPORATION, FLEET STREET, TORONTO

Write today for details!

_____ 1940
NORGE DIVISION BORG-WARNER CORP.
670 E. WOODBRIDGE, DETROIT, MICH.
Please give me details of the new Norge line, the merchandising and financing plans and the greater advertising support given Norge dealers.

Name _____
Firm _____
Address _____
City _____ State _____

RT-103

Washers and Ironers • Gas and Electric Ranges • Commercial Refrigeration

The Greater **NORGE** *for* **1940**

Teach Your Men—

TO SELL 'EM UP

Retail salesman must push "features"; "sell" higher priced units. Training vital to salvaging dealer profits from declining price levels.

The whole success of the dealer's refrigerator merchandising this year, focuses on the retail salesman.

He will make—or break—any retail operation.

Enthusiasm is almost as vital a factor in a salesman's selling as is his knowledge of a product.

Enthusiasm, the spirit of competition, must be kept alive, to hold the salesman keyed up to his best capabilities.

A *weekly* bonus, on a series of monthly contests, will help to do this. And weekly meetings at least, are an absolute necessity.

Bonuses should be calculated on the total dollar margin, on the highest average unit sale, or a combination of the two, to place competitive emphasis on *selling up—all the time*.

Displays, and the whole "selling-up" story, must place emphasis on the *features* of the higher priced boxes, in relation to the customer's *use*, and without apparent pressure.

SELL 'EM THE BETTER BOXES

Use price as the "come-on" to bring your prospects in, but sell the features of the better boxes, before you let 'em go out.

Sounds simple, but it involves much, including careful training, compensation plans, sales, contests, vision, enthusiasm and courage.

First, dealer and salesman must *know* their box, what it does, how it does it—in terms of customer health, comfort, and convenience of use.

That means training, and more training.

Distributors must train their dealers and dealers' salesmen, dealers must train their own men, at regular, frequent meetings which forget the fancy and get right

down to the brass tacks of *selling* the better boxes. And each dealer must recognize that the vital factor in selling the higher-priced jobs is to make the customer *want to buy it* for what it will *do* for her.

INCENTIVES FOR SALESMEN

Second, the proper incentive must be maintained to make salesmen *constantly* put forth their best effort.

An all-important factor in doing this, is a basis for compensation which *really* rewards a salesman for a job well done.

One very effective method of accomplishing this is to pay the salesman 25 per cent of *gross profit after* the trade-in allowance has been deducted.

Another plan that will produce the desired results is to pay commission on the basis of:

- 1 per cent on sales of \$125 or less
- 4 per cent on sales of \$125 to \$150
- 8 per cent on sales of \$150 to \$180
- 12 per cent on sales of \$180 to \$250
- 15 per cent on sales over \$250.

Still another method is to calculate the commission on the basis of 10 per cent and a \$175 base sale. Then deduct 20 per cent of the amount by which the sale is less than \$175 and add 20 per cent of the amount by which the sale exceeds \$175.

REPLACEMENTS; "COST PER DAY"

With the replacement market bulking larger than ever before, a comparison of a *modern* box with a 1930 box—feature by feature, value by value, appearance, operating cost, construction, food preservation, will make replacement selling much easier.

TO GET HER TO BUY A "BETTER" REFRIGERATOR . . .

Tell the prospect about—

1. The need for different temperatures and degrees of humidity for proper food preservation.
2. The economy of buying a large enough box to make bulk buying practical.
3. The convenience of the frozen food and non-refrigerated storage space, and the other gadgets your line features.
4. The satisfaction in owning a better box.
5. The small difference in cost when the long life, and the easy payments, on the higher priced box are considered.

Another point to remember in selling the higher priced boxes, is to break prices down to a "cost per day" basis, on your best time payment plan.

The difference between your best box and your leader on such a "daily cost" comparison may be only the price of a pack of cigarettes, and when so expressed will meet with almost *no* resistance, if you *sell* the features.

Just because prices and margins are looking around for a deeper hole to drop into, doesn't mean the business has gone to the dogs.

Smart dealers will sell more boxes, make more money, than before.

Poor dealers may lose their shirts a little faster.

Signs, with ribbons leading to each feature, should indicate what the features are in the better boxes, in each case emphasizing those which did not exist in the lower priced models, or in competitive lines.

Every line has *some* features; play them up, but be sure the customer can quickly grasp *what they mean in use*—tricky names aren't worth a dime a dozen in actual selling.

If your salesman's training, your *incentive* compensation plans, and your *morale* contests are to pay *real* dividends, you've got to provide the prospects for your men to sell.

That means you've got to tell the public you have a fine, big, modern refrigerator that costs *less than ice*.



Ewing Galloway

Offer the Long-range Benefits of a Better Refrigerator

Point out the features, one by one, in terms of her needs as related to food preservation, economy of operation, convenience, satisfaction, and pride of ownership. Clearly associate the important features with the higher priced boxes.

SELLING WILL COUNT

The pay-off this year will be much more directly related to *merchandising* ability and to *selling* ability.—

Merchandising ability to locate more prospects than ever before, bring them in to the store through price appeal.—

Selling ability to make them buy the features, pay a better price for very much better boxes.

That's the job that every dealer has to do. And he can't do it waiting, or hoping, for something to happen.

CONTRAST BOXES; SHOW FEATURES

Price leaders should invariably be shown *empty*, and *that means empty*.

In contrast, alongside one of the higher-priced larger boxes, put a table with all the food on it which can be stored in that box. Such a display will focus attention on the higher-priced refrigerator.

Take this message to your new lower-income market, by repeated direct mail, phone, window display, billboards, and any other means you can. Make your appeal *enthusiastic, emphatic, and repeated*.

DIRECT APPEAL

Go after your *replacement* market with a comparison of the features of the better boxes, and compare prices with those of 7 to 10 years ago.

Make this appeal with *personal* letters, *personal* phone calls, *personal* calls at the homes of the users. Drive home the values and features of these better boxes, remembering that though users know the advantages of mechanical refrigeration, they don't know how much the new features mean to them.

This year we have the greatest values ever, and if we do a sound merchandising and selling job, 1940 will be the "tops" in refrigeration sales and profits.

A DYNAMIC 1940 LINE
SENSATIONAL 'KIT PLAN'
DIRECT-TO-DEALER POLICY

*Make it easy and
profitable for you to*

GET

Gale is built to SELL.
Styled ahead of the trend, built to
out-perform, kitchen-designed for
greatest utility and convenience!

And more! Gale offers dealers
direct-from-factory advantages
plus the sensational merchan-
dising plan that solves dealers'
problems—the Gale "Kit Plan".

No restriction on ANY Gale mod-
els—you sell whatever YOUR
prospects prefer—and you get
FULL MARGIN on EVERY Gale.



Features beauty—perform-
ance—economy—utility
Gale has them all! You can
PROVE the extra value of the
Gale! Just look at the load
the Gale 6 ft. economically,
efficiently cools, by actual
test. Designed for UTILITY.

The 1940 GALE De Luxe 6



GALE 'MECHANICAL ICEBERG' UNITS
plus the exclusive new Gale Equalizer give
you a powerful new sales presentation on
efficiency and economy. Conventional
or hermetically sealed 'Mechanical Ice-
berg' super-power units are available.

GALE PRODUCTS

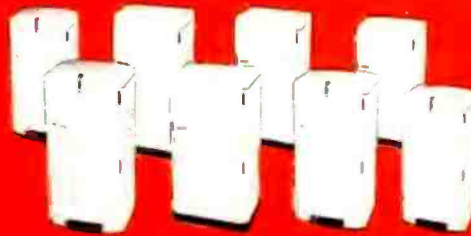
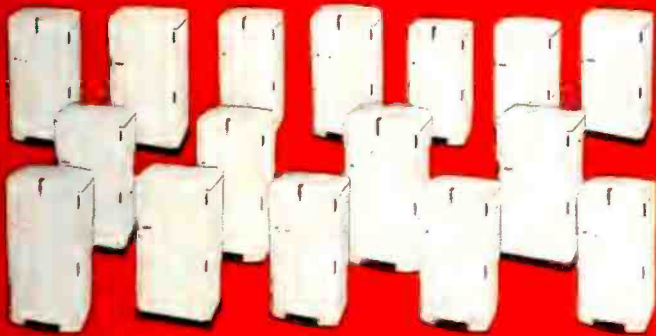
Division of Outboard, Marine & Manufacturing Co.
GALESBURG, ILLINOIS

In Canada, GALE Products, Peterboro, Ontario

VOLUME WITH

Gale

THE **Gale "Kit Plan"**
YOU SHOW THESE 16
BRILLIANT MODELS



BUT YOU STOCK ONLY 8

All interior equipment is packed in "kits". 16 kits are available for the 8 refrigerators. They give you 16 different models in logical steps. You purchase the SIZE refrigerators you want plus your own selection of kits. You TAILOR the line to your trade!

With the Gale 'Kit Plan,' you cut your inventory, yet show more models you take the gamble out of buying you keep inventory flexible you eliminate loss leaders you build volume and profits you become the TOUGH competition! Hundreds of dealers have already enthusiastically endorsed the 'Kit Plan' it will solve serious problems for them. No restrictions on ANY Gale models FULL MARGIN on every one! We'd like to tell YOU all about Gale for 1940. You NEED Gale! Mail the coupon today we'll send you complete facts.



"THERE'S REAL MONEY IN THIS 'KIT PLAN'." says DEALER A

"I buy in carload lots and earn quantity discounts. NOW I can buy the SIZES I KNOW I can sell. I add kits to make the MODELS my prospects want! I save on warehousing and handling. Man, this 'Kit Plan' not only solves my toughest problems, but puts EXTRA profits in my pocket!"

"THE GALE 'KIT PLAN' LOOKS GOOD TO ME!" says DEALER B

"I sell 50 to 100 refrigerators a year. Now I can safely buy in larger quantities and KNOW I won't be stuck with slow models. I can show a full line and make money on every refrigerator I sell. This 'Kit Plan' solves MY problems!"



"THE GALE 'KIT PLAN' SELLS MORE FOR ME." says DEALER C

"Folks call me a 'small' dealer. But now I can really sell refrigerators. I show prospects a complete line, without tying up lots of money. Why, I can show FOUR refrigerators for only 50% more than ONE usually costs! The Gale 'Kit Plan' is the first program to really consider me!"



Clip this coupon to your letterhead!

GALE Products
 1631 Monmouth Blvd., Galesburg, Illinois
 GENTLEMEN: Without obligation, send me full details of the GALE line, the sensational KIT PLAN and your dealer proposition.
 FIRM.....
 ADDRESS.....
 CITY..... STATE.....
 BY..... TITLE.....



"CLEAR THE AIR!"



TURN RADIO NOISE INTO DOLLARS!

There's money in clearing the air of radio noises, but most of it will be made by those who really *sell* this service as a *specialty*, and work the same way.

First requirement is probably the matter of viewpoint. Noise elimination is so broad and so important a thing that it really *deserves* special study and attention.

The more you study, the more you learn. The more you know, the more your enthusiasm grows, and enthusiasm is a vital ingredient in any campaign.

Noise elimination is interesting, fascinating, profitable.

Couple these conditions with enthusiasm and you're ready to go.

Although it is estimated that one in three radio sets have some noise, and one in four are affected by *bad* noise, most of these listeners will *not* come to you, *you'll have to go to them*.

The next step in cashing in on noise elimination then, is to *tell* your prospects how good a job *you* can do for *them*.

MAIL OUT THE NEWS

Probably the best way to start is a direct mail campaign.

Get your local printer to fix up several cards, each giving a different fact about radio noise, but all carrying the same statement, that *you* "can fix it."

How to sell in Radio Today's big campaign. How to turn noise prospects into profits.

Government penny post cards are okay for this job. They are inexpensive, and your message *will* be seen.

Your message should be very short. Preferably a picture, cartoon, or other graphic indication of noise on the radio. Your manufacturer friends can help.

The card must "grab the eye" and "leave a thought." The quicker it does those two things the better.

Repetition will finish the selling job, if your name is easily and surely related to noise on the radio, and you mail the whole series at regular intervals.

Start mailing these cards at the rate of 25 a day. Arrange your mailing so that your entire list receives the entire series of cards at 10-day intervals. But be sure and stop the mailings to those who buy.

Your mailing list should start with your own customers and can be expanded as your budget and plans allow, to include

- automobile registrations, by city, or county.
- telephone subscribers by address.
- tax payers by address.

any of which lists you can buy for a penny or two a name.

STATIONS PLAY BALL

Try also to work out a deal with your local radio station, whereby you give the station publicity in your windows, and in turn the station refers complaints to you.

Several servicemen can buy spot announcements on the local station, and divide the inquiries on some equitable basis. Broadcast stations *do* cooperate in improving the reception of their listeners.

A small reverse plate 1 column 4 inch ad in your local paper, run regularly, is inexpensive and will round out your advertising nicely.

Customer's word of mouth recommendation is probably the most valuable publicity.

This you must *merit*, on the basis of favorably impressing your customers with your personality and thoroughly satisfying them with the results of your work.

This, of course, is no different than in your regular service work, except that in noise elimination much, if not most, of your work is done under the eyes of the customer. That puts a

premium on your neatness, your manner, and how you go about your work.

If you work haphazardly, "by guess and by God," you certainly won't convey the impression that you know what it's all about.

But if you check the source of the noise systematically, locate it methodically, and correct it certainly, no one can miss the fact that you know your business, and will talk about it, too.

EQUIP YOURSELF

Equipment plays its part, but the use of it is more important.

A battery operated loop portable, with an output meter built in, can locate air-borne noise, and indicate a quiet spot for the aerial, much more certainly, and a lot faster than "cut and try" methods.

In selling other customers your noise elimination service, the state-

STOP RADIO NOISE!

Radio noisy? Bothered with bangings, buzzings and crackles that interfere with program enjoyment? Then let us check your installation with an amazing new Sprague method, recently developed by the world's leading maker of condensers. Noise is eliminated not in the radio itself but where it originates—in motors, electric appliances, oil burners, electric razors, etc., in or near your home.

DEALER'S NAME AND ADDRESS HERE

Direct-mail pieces and ads, similar to this one, will be supplied servicemen by Sprague Products Co., North Adams, Mass. Post cards for direct mail promotions are also available

ments and testimonials of your *satisfied* customers will help a lot.

When you sell a noise elimination service you should *charge* for noise *elimination*. Not a time-and-material basis alone, but for *knowing what to do*, as well as *doing it*.

Your charges must be reasonable of course, and if you don't eliminate the noise you should make *no charge*.

On the basis of *no noise*, or *no charge*, you will not only sell a lot more customers, but you will also pave the way for a higher price, when you *have* satisfied your customer.

RESULTS GOVERN REWARD

This is an important factor in selling noise elimination, because in the past many servicemen have charged *plenty* and failed to correct the noise condition. Listeners who have had noisy reception for some time, and who have had servicemen who did *not* correct it, naturally think the noise in their radio *can't* be removed, and so are not particularly receptive of the idea of spending *more* money for nothing.

You can sell *such* customers on a "satisfaction guaranteed" basis, and when you *have* cleared the air of noise, these same "hard to sell" customers become your greatest boosters.

That's the pay-off on a job well done, and it makes your selling a continuous, and a progressively easier, matter.

Some servicemen, and dealers, too, have built up a fine profitable business in just this way, and found it also paid dividends in *other* service work and *sales*, as well.

It's all in how you tackle the job and *follow through*.

"CAP" SAYS—

Stop, Read, and Think a Bit.

When a retail business in 1939 can show sales—

14 per cent greater than its previous peak year,

56 per cent greater than 1929,

908 per cent greater than 1914—you'll agree the record "shouts out loud."

That's the combined record of Sears-Roebuck, and Montgomery-Ward, with 1939 sales in excess of *one billion dollars*.



H. L. M. CAPRON
Merchandising
Editor

Looks like they have what the public wants. For no business, or form of distribution can long succeed if the public doesn't *want it*, and patrolize it.

I know what you're thinking, but look at the facts a minute.

These businesses weren't *always* big.

Less than 70 years ago, Richard Sears and A. C. Roebuck opened a tiny mail order watch and watch-repair service in a "hole in the wall."

A. Montgomery Ward, with about \$2,000 capital and one clerk, had a tiny business, *and an idea*. Yes, *today* these are the retailing giants. *Yesterday* they had only a revolutionary idea.

What made these *little* outfits of 50 years ago the giants of today?

Manufacturers and dealers alike should ponder well.

First, they offered the public, *what the public wanted*, at a *price* they wanted to pay.

Second, they backed their merchandise with a money back guarantee. The customer be pleased.

No dealer is too small to learn a real lesson, and take honest inspiration, from this example of what *can* be done, if he has the vision and courage to *do it*.

No manufacturer is too large to study this record of rapid growth, of ever increasing radio and appliance market penetration, and check the reasons therefor against his own merchandising policies and practices.

ACT—DON'T YAP

The small independent retailer is the backbone of our national distribution of the products of our mass producing industry.

If he is to be so maintained, there *must* be more thought, more help given, to protect him and to help him recover his lost ground.

You can't whittle the "big boys" down by yapping at them, but *you can* build the little fellows *up* with some sustaining merchandising diet.

I think it's time we gave damned serious *thought* to the independent dealer.

What do you think?

I'll welcome your comments, good, bad, or otherwise, from dealers, manufacturers, or distributors, for publication or in confidence.

TAX TIME IS HERE

Your income tax is due.

It is the obligation, as it should be the privilege, of every business to pay the taxes for which it is legally liable.

The tax laws are precise, yet complex. They state in detail what may and what may not be done.

They do not contemplate that a business or an individual shall not take advantage of every authorized deduction, or exemption, from tax to the end that the tax which is paid may be the minimum amount for which legal liability exists.

A STRICT COUNT

Inventories must be taken and valued at the beginning and end of each year, before you can properly determine your profits.

Inventory rules cannot be uniform, but should follow trade customs, and must be consistent from year to year.

The methods of inventory valuation

in most common use in the retail trade are:

1. "Cost or market, which ever is lower"—in which the inventory is valued at original actual cost, or current replacement cost, whichever is the lower.

2. "First in—first out," in which the value of the closing inventory is assumed to include, at actual cost, first, the most recently acquired stock and the balance, if any, is valued at the *opening* inventory figure.

3. The Retail Method, in which the inventory books record all stock and purchases, at both cost and retail, and the difference between the two expressed in per cent of retail price.

Inventory is then taken at *retail* and reduced to cost by this cumulative mark-on, corrected for any reductions from original retail.

4. The "last-in, first-out" method—authorized by the Revenue Set of 1938, and available for use for the first time on your 1939 tax return.

In this method, inventory is evaluated on the basis that it covers, first, the opening inventory at actual cost, and the excess is considered to have been acquired during the current year.

CHECK YOUR METHOD

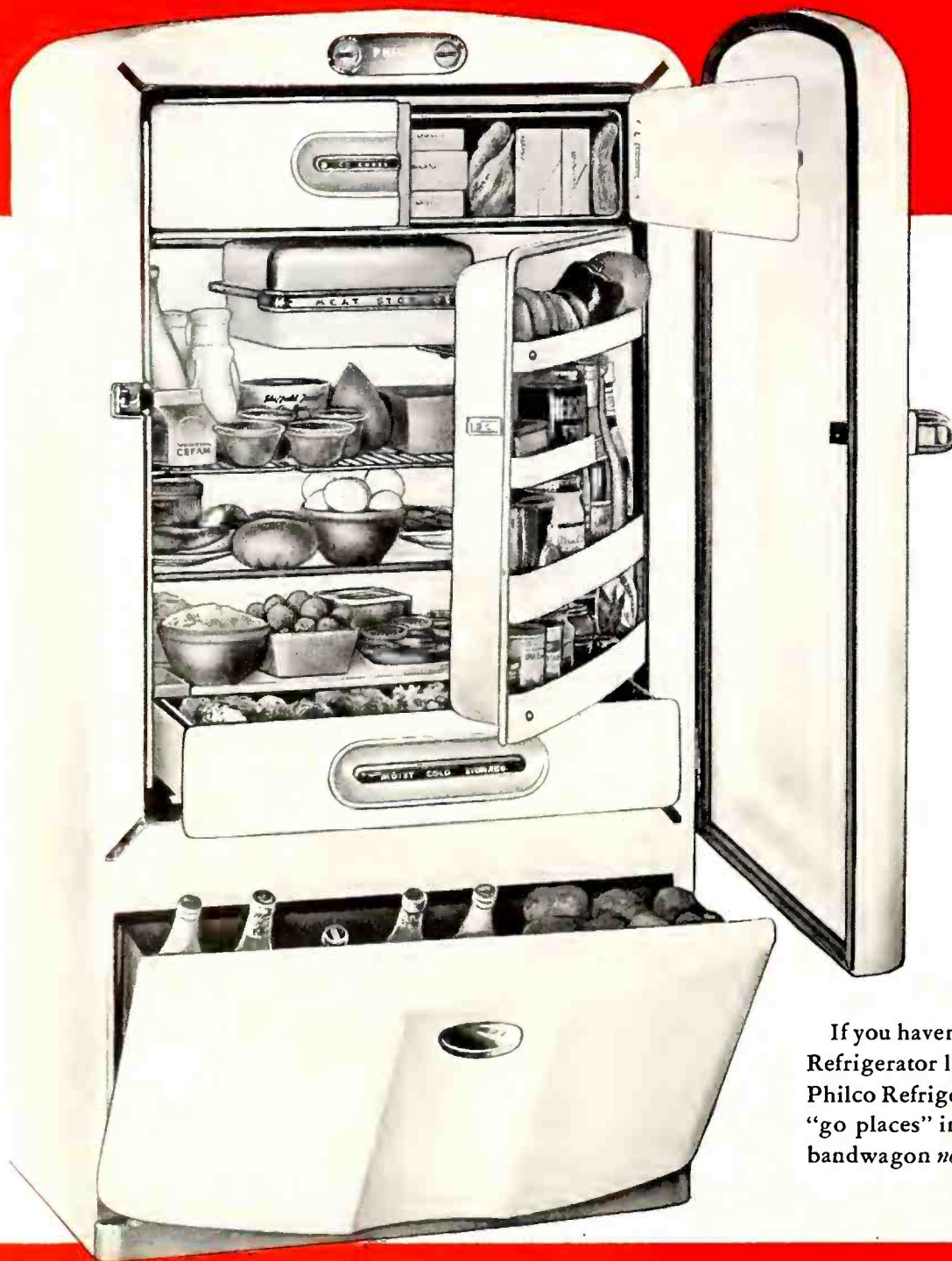
Each of these methods offers certain advantages under certain conditions, but the selected method can be changed only with the approval of the Treasury Department. It is advisable then, to consider all methods carefully, and consult competent tax authority to aid in making your choice.

There are hundreds of items and taxes which are properly deductible from your gross income, and *plenty* on which you pay.

A handy guide, which will answer most of your income tax questions in understandable language is entitled "Your Income Tax—How to Keep It Down" by J. K. Lasser, and can be bought in any stationery store. Your curiosity, to say nothing of your peace of mind is worth more than its cost.

In Sales Features, PHILCO

is the



DURING the past few weeks, appliance dealers from coast to coast have flocked to see the sensational new 1940 Philco Refrigerator . . . to get the full story of the most profitable franchise in the entire industry. And what a reception they have given it! Never before such interest . . . such enthusiasm . . . such wholehearted endorsement of *any* refrigerator!

Everyone agrees that Philco has "done it again"! At last, a product that offers conveniences and economies never before combined in a single refrigerator . . . at prices that give a new meaning to the word *value!* A complete line of models, with the greatest selling features in the industry. A complete merchandising program that includes tremendous *national* advertising, plus every kind of *local* advertising and promotion to bring you quick, profitable sales. And . . . a dealer *contract* that means a permanent *All Year 'Round* source of profits!

If you haven't yet seen the thrilling new 1940 Philco Refrigerator line, by all means get in touch with your Philco Refrigerator distributor *at once!* Philco is out to "go places" in refrigeration . . . and by getting on the bandwagon *now* you will travel farthest and fastest!

Philco All Year 'Round for Profits All

Value and Price, the

Refrigerator

SENSATION of 1940!

Only PHILCO gives you the Conservador . . . *plus* Dry, Moist and Frozen Food Compartments



THE FAMOUS CONSERVADOR

This patented shelf-lined Inner Door gives you 26% more quickly usable space. $\frac{2}{5}$ of all food at your finger-tips without opening main compartment. No crowding in front, no wasted areas in back. That's why the Philco Refrigerator holds more food! Acts as a "storm door"—cuts electric bills.



DRY COLD COMPARTMENT

Some foods *must* have dry cold to preserve their purity. That's why *no modern refrigerator is completely safe and healthful unless it offers dry cold.* The Philco Refrigerator has this *complete, separate* Dry Cold Compartment that furnishes the one best *single kind* of food protection.



MOIST COLD COMPARTMENT

Now, *you don't have to cover foods* to keep them from drying out! This Moist Cold Compartment preserves the flavor and color of cooked "left-over" meats and vegetables . . . without the bother of covers and wasted space of special dishes. Cooled by the Freshener Shelf—*only Philco has it!*



FROZEN FOOD COMPARTMENT

A huge *separate* chamber, specially designed for frozen storage. Yes, a *giant-size* space, as large as 13½" wide, 11" deep and 7" high, *in addition* to the regular ice-cube chamber. Plenty of room in this Frozen Food Compartment for packaged frozen foods, ice cream and delicious frozen desserts.

and, in addition, every other worthwhile feature you need to make quick sales, more sales and greater profits!

There's a Philco Refrigerator to fit every need and purse 12 models from **\$119⁹⁵** to **\$257⁵⁰** (F. O. B. Factory, Including 5-Year Protection Plan)

Year 'Round

HOME RADIO • AUTO RADIO • TELEVISION • PHONOGRAPHS • RADIO TUBES
PARTS • REFRIGERATORS • AIR CONDITIONERS • DRY BATTERIES



In Sales Features, Value and Price, the PHILCO Refrigerator is the Sensation of 1940!



DURING the past few weeks, appliance dealers from coast to coast have flocked to see the sensational new 1940 Philco Refrigerator . . . to get the full story of the most profitable franchise in the entire industry. And what a reception they have given! Never before such interest . . . such enthusiasm . . . such wholehearted endorsement of *any* refrigerator!

Everyone agrees that Philco has "done it a gain"! At last, a product that offers conveniences and economies never before combined in a single refrigerator . . . at prices that give a new meaning to the word *value!* A complete line of models, with the greatest selling features in the industry. A complete merchandising program that includes tremendous *national* advertising, plus every kind of *local* advertising and promotion to bring you quick, profitable sales. And . . . a dealer contract that means a permanent *All Year 'Round* source of profits!

If you haven't yet seen the thrilling new 1940 Philco Refrigerator line, by all means get in touch with your Philco Refrigerator distributor *at once!* Philco is our "go places" in refrigeration . . . and by getting on this bandwagon *now* you will travel farthest and fastest!

Only PHILCO gives you the Conservador . . .
plus Dry, Moist and Frozen Food Compartments



THE FAMOUS CONSERVADOR

This patented shelf-lined Inner Door gives you 26% more quickly usable space. 3/4 of all food at your finger-tips without opening main compartment. No crowding in front, no wasted areas in back. That's why the Philco Refrigerator holds more food! Acts as a "warm door"—cuts electric bills.



DRY COLD COMPARTMENT

Some foods *must* have dry cold to preserve their purity. That's why no modern refrigerator is completely safe and healthful unless it offers dry cold. The Philco Refrigerator has this complete, separate Dry Cold Compartment that furnishes the one best single kind of food protection.



MOIST COLD COMPARTMENT

Now, you *don't* have to cover food to keep them from drying out! This Moist Cold Compartment preserves the flavor and color of cooked "left-over" meats and vegetables . . . without the bother of covers and wasted space of special dishes. Cooled by the Freshener Shelf—only Philco has it!



FROZEN FOOD COMPARTMENT

A huge separate chamber, specially designed for frozen storage. Yes, a *great* size space, as large as 13 1/4" wide, 11" deep and 7" high, in addition to the regular ice-cube chamber. Plenty of room in this Frozen Food Compartment for packaged frozen foods, ice cream and delicious frozen desserts.

And, in addition, every other worthwhile feature you need to make quick sales, more sales and greater profits!

There's a Philco Refrigerator to fit every need and purse . . . 12 models from \$119⁹⁵ to \$257⁵⁰ (F. O. B. Factory, Including 5-Year Protection Plan)

Philco All Year 'Round for Profits All Year 'Round

HOME RADIO • AUTO RADIO • TELEVISION • PHONOGRAPHS • RADIO TUBES
PARTS • REFRIGERATORS • AIR CONDITIONERS • DRY BATTERIES

NEW THINGS



Stewart-Warner table model

★ Model 07-5R5, 5-tube superhet with built-in antenna. 4-inch electro dynamic speaker, beam power output audio system, A.V.C. Manual tuning. Standard broadcast, 2 police, international band, aircraft and amateur shortwave bands. (540-1,725 kc. and 2,200-7,000 kc.) Walnut cabinet. Stewart-Warner Corp., 1826 Diversey Pkwy., Chicago, Ill.—**RADIO TODAY.**



Plug tip soldering irons

★ Four sizes 105, 150, 200, 350 watts of new electric soldering irons, with inexpensive plug tips that fit into barrel of irons. Plugs, which are available in copper or Armor Clad, are held by screw, permitting easy adjustment and removal. Heating unit hermetically sealed. Hardwood handles with adjusting sleeves. Cord strain relief, and tool rest stand. Stanley Tools, New Britain, Conn.—**RADIO TODAY.**



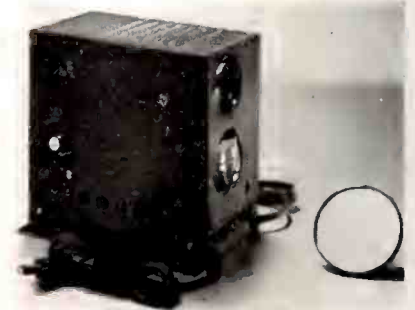
Philco air conditioning unit

★ Model 62, one of 4 new 1940 air conditioners. Console model, walnut wood cabinet. Designed for year 'round use, provides de-humidified, fresh filtered air in summer; and fresh filtered air and ventilation in winter. Serves large rooms and offices (about 285 sq. ft. area). 1 quart water per hour humidity removal capacity. Gives complete change of room air in 14 minutes. Adjustable grille prevents drafts. $\frac{1}{2}$ h.p. motor. $39\frac{3}{8}'' \times 30'' \times 15\frac{1}{2}''$. \$250. Line ranges in price from \$129.50 to \$365. Philco Radio & Telev. Corp., Tioga & C Sts., Philadelphia, Pa.—**RADIO TODAY.**

Stromberg-Carlson FM antenna

★ New antenna kit for frequency modulation and television signals uses glazed ceramic insulator and coupling transformer. No. 6 antenna

comes with all connections soldered, low-impedance lead-in, and doublet lightning arrestor. Stromberg-Carlson Telephone Mfg. Co., 100 Carlson Rd., Rochester, N. Y.—**RADIO TODAY.**



Ray-alarm electric eye

★ Compact single unit photoelectric eye uses reflecting mirror to return beam to photo cell. Color filters may be used to make beam invisible. Adjustable sensitivity. Cord connects to bell or chime alarm. Ray-Alarm Co., 225 Fifth St., Des Moines, Iowa.—**RADIO TODAY.**

H-K beam pentode

★ New Gammatron 257 beam pentode will deliver 230 watts with 2,000 volts on plate and 500 on screen. The filament operates at 5 volts, 7.5 amps. Grids and plate are made of tantalum. $6\frac{3}{8}$ inches high and $2\frac{5}{8}$ inches in diameter. Giant 7-pin base. Heintz & Kaufman Ltd., South San Francisco, Calif.—**RADIO TODAY.**

Bell Re-Cord-o-fone

★ Recorder and play-back phonograph in portable case may be attached to any radio. Will record voice, radio programs, etc. Model RC-1 records radio programs only, and RC-1M is equipped with mike to record voice, music. Wireless oscillator used in RC-1M to put voice through radio and its amplifier. Bell Sound Systems, Inc., 1183 Essex Ave., Columbus, Ohio.—**RADIO TODAY.**

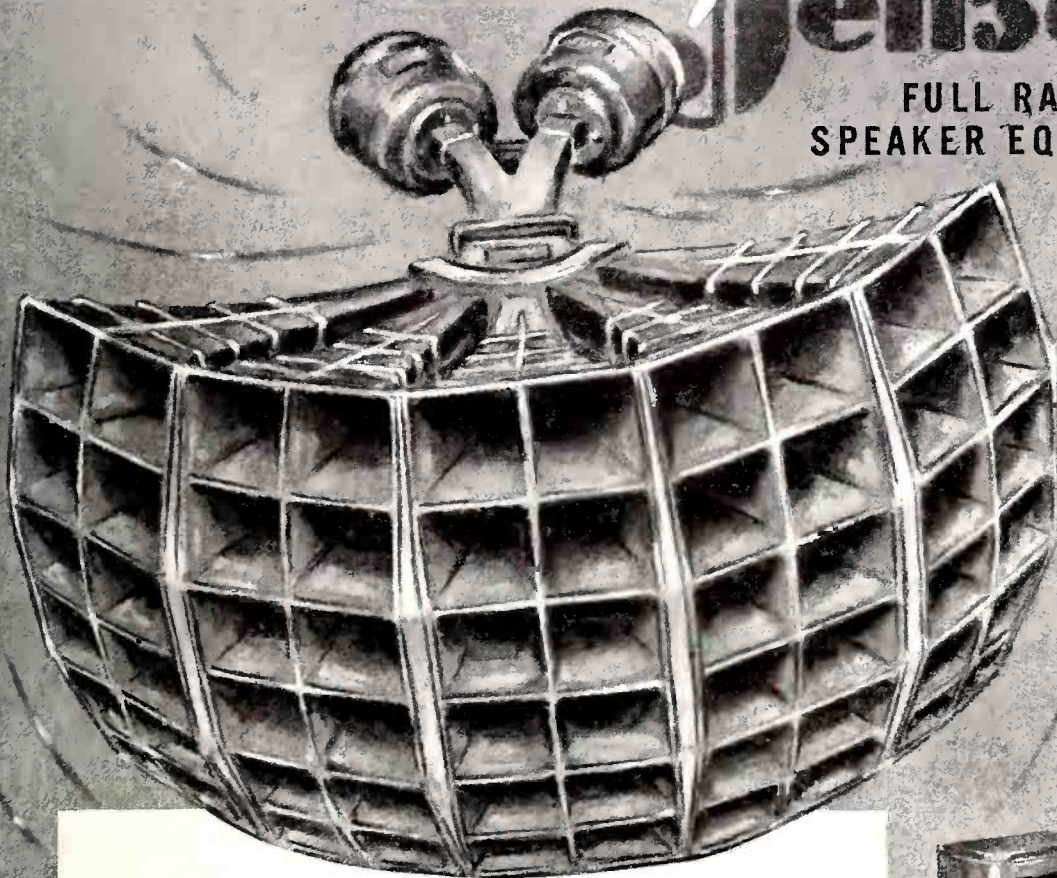
Philco 1940 refrigs

Philco's new 1940 line includes 11 models, 5 with Conservador feature (shelf-lined inner door). Features 3 kinds of cold protection in a dry cold, a moist cold, a frozen food compartment, and refrigerated aluminum Freshener shelf. Six of the models have a non-refrigerated storage bin. Meat storage compartment, sliding crisper drawer are also included. Philco Radio & Telev. Corp., Tioga & C Sts., Philadelphia, Pa.—**RADIO TODAY.**



WHERE *Quality* IS ESSENTIAL
Jensen

FULL RANGE
SPEAKER EQUIPMENT



**A Complete New Line
of Jensen Products of Commanding
Character and Magnitude**

NEW • High Frequency Speakers • Low
Frequency Speakers • Multicellular Horns
Dividing Networks and accessories
Combined into 3 Basic Systems:

Type B . . . For **Type G and E . . . For**
largest audiences. smaller audiences.

NEW CATALOG

A Technical Catalog describing these new
developments is now available. Ask your
Jensen Distributor or write for your copy.



Jensen
6601 SOUTH LARAMIE AVE., CHICAGO

TYPICAL SOUND INSTALLATIONS

No. 5—Theatres. Re-inforcing stage sounds for audience. Special effects. Directional sounds. Bright future for this theatre art.

No actor who has stepped onto the stage in the last few years has played such varied and important roles as have the electronic amplifier and loud speaker. "Cast" in a dozen different ways, as aid to producer, playwright, performers and musicians, the tube and its amplifying circuits have become indispensable equipment of the modern stage show, whether drama, musical comedy or opera.

First of all, is the tube's service as amplifier of the sounds on the stage so that they may be heard clearly in all parts of the auditorium. In this respect, the legitimate stage formerly suffered severe competition from the talking pictures, because while the celluloid actors' voices can invariably be heard with clarity in every part of most movie houses—most of the old-time "legitimate" theatres had only a few front rows in which hearing was comfortably clear.

FOOTLIGHT MIKES

But now with footlight mikes and other microphones concealed in the scenery and in stage properties around the "action" of the play, every voice tone before the footlights can be brought distinctly to the back rows, without the actors raising their voices to unnatural shouts. Indeed today in many metropolitan houses, be it known, no tender love scene is played without benefit of a mike concealed in the old trysting tree or other stage prop, to convey the soft passages clearly throughout the house, so that 600 or 6,000 may eavesdrop!

In New York City, for example, more than half the theaters are completely sound-equipped. In such theatre work, different loudspeakers cover each part of the auditorium and if any sections prove particularly difficult to hear in, special amplification can be directed at

those seats. Provision is also made for special listening aids for the hard-of-hearing.

Taps from the auditorium circuits are also carried to the dressing rooms of the actors, so that people making costume changes can follow closely the progress of the play, and be ready for their cues. Orders from the stage director can also be broadcast to the dressing rooms over these same circuits, so that the whole backstage area can be kept in continuous communication with its otherwise isolated parts.

"BUILDING UP" THE CHORUS

Mikes, tubes and amplifiers are also useful in "building up" voices of certain sections of the cast or chorus. In musical comedies, nowadays, where economy is the watchword, the front-row girls can be chosen only for their good looks, without regard to their voices. For they need only to open and close their mouths to the cadence of the music while their less-attractive but better-vocalizing sisters in the back rows sing into microphones which build up the total sound output of the chorus into over-adequate volume!

Musical accompaniments can also be provided for stage shows with the aid of records. Vaudeville acts have thus been given a new lease on road-life, because the vaudeville person or team can now carry a couple of records and a portable amplifier, to replace the musicians who are no longer on tap at local stands, or are too costly for the act to pay for.

BEAUTIFUL VOICES, BEAUTIFUL FIGURES!

A new concept of opera realism has also been proposed by those sound experts whose sense of the fitness of things is slightly taxed by watching a 250-pound middle-aged song-bird in the white robes of a maiden of 18.

It is therefore proposed that with sound amplification the mature and hefty artists be kept out of sight in an invisible studio from which they would sing through microphones. Meanwhile the visible action of the opera on the stage before the audience will be carried on by good-looking young persons who will go through all the movements of the piece, opening and closing their mouths but singing not!

Where the stages are large, or outdoors, additional realism is obtained



Unique car calling system recently added to the Chicago Civic Opera Building halves time required to empty the 3600-seat house. The doorman can quickly call any car, by its identifying number, from a nearby parking lot as it is required. One 60 and two 25-watt speakers are used in the sound system installed by the RCA Victor Distributing Corp. under the direction of B. J. Sullivan.

by "acoustic perspective" sometimes called stereophonic reproduction. In this system, a microphone on the right side of the stage picks up the sound of the action on that side, and reproduces it through a right-side loudspeaker, and so on with the middle and left sides. This makes the re-inforced sound seem to come from the part of the stage where it would naturally be expected to originate, and so renders the stage presentation more realistic than ever, while concealing any artificiality of the sound reinforcement.

OFF-STAGE SOUND EFFECTS

In stage production sound is now being used for a wealth of off-stage effects—such as the chimes of great church bells, amplified from small steel rods, or reproduced from records.

Or suppose the director is presenting Hamlet. He can make a very effective ghost by proper tone adjustments—that is subtracting the middle frequencies from the voice of an unseen actor, as the latter intones:

"I am thy father's ghost, doomed for a certain time to walk the night, etc."

Now if our play requires that a train rush across backstage, we can today get all the reality of 4,000 tons of locomotive and cars by using a 4-ounce phonograph record. One can even notice that difference in pitch as the train approaches and recedes. Modern stage directors are such sticklers for realism that they insist on reproducing even the so-called Doeppler effect, which causes the pitch of an approaching sound source to appear higher than it is, changing to a considerably lower note as it recedes. Every reader has probably noticed this effect when riding in a train, as the crossing signals swept by.

OVERHEAD SOUND SOURCES

If the modern stage director wants to reproduce an airplane's roar, he does it much as the sound men in broadcast studios do—with a record. But the theatre realist needn't let the airplane sound come just from the stage. By an arrangement of loudspeakers, he can make the plane seem to roar around *over* the audience's heads, so that they unconsciously duck as the plane swoops to a landing.

If the play requires a storm, the sound effects man can also turn it on right *over the audience's heads*, so that some impressionable persons may hold out their hands to feel if raindrops are falling and if they are going to get wet.

CONTROL ALL SOUND IN THEATRE

But while the stage producers have been utilizing such tube-amplified sound effects, in various ways as aids, during recent years, there is one pioneer who feels that *all* the sound the audience hears during a play should be under the close control of the director, so that moods of the audience can be definitely built up or dispelled at will.

This means, of course, that all sounds of the production, the voices of the actors as well as the incidental sounds and music of the play, shall be first picked up by microphones, then mixed and controlled as the director wills, and finally delivered to the audience by loudspeakers as a finished product—compelling in emotional effect, and reaching every seat with adequate intensity.

The pioneer in this revolutionary art of stagecraft is Professor Harold Burris-Meyer of Stevens Institute, Hoboken, N. J., who has introduced his novel sound methods in a number of recent plays.

"The theatre makes its appeal to the audience through the two senses of sight and hearing," explains Prof. Burris-Meyer. "What the audience sees, is controlled and conditioned by light. Controlled light provides visibility, and also creates mood and atmosphere and stimulates emotional response.

MOODS THROUGH HEARING

"What the audience hears has, up to the present, depended for its control and therefore its artistic effectiveness, on the cadence of the line, the lung power of the actor, the guess of the architect, the musical instrument, and the eleventh century sound machine. The potentialities of sound as a device for stimulating audience reaction have been little exploited because of the control limitations inherent in the sources of sound."

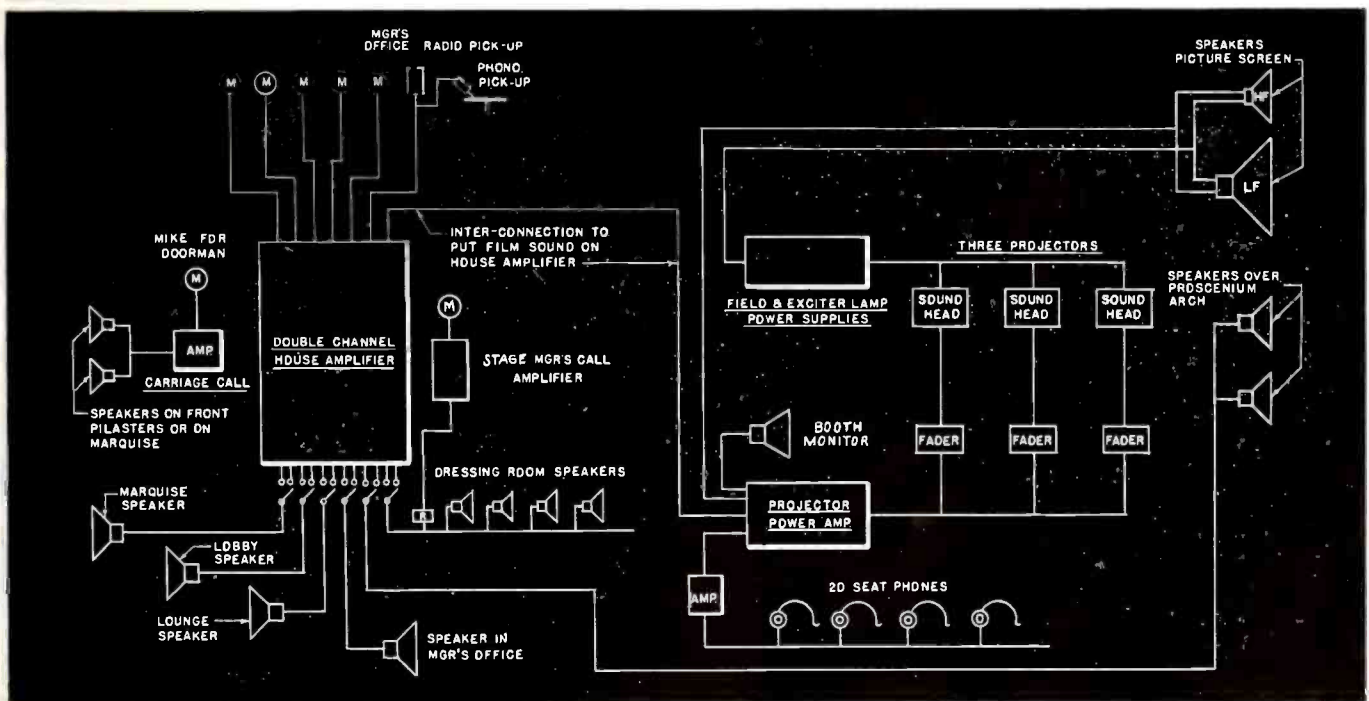
Prof. Burris-Meyer has therefore undertaken to develop a technique for making sound as controllable and as dramatically useful as light.

INCREASING EFFECTIVENESS

He says, "By the dramatic use of controlled sound we mean increasing the effectiveness of the play: first, through the control of the intensity of any sound which may be used in the theatre; second, through the control of pitch; third, through the control of quality; fourth, by controlling the apparent direction from which sound comes; fifth, by controlling the apparent distance from which the sound comes; sixth, by controlling the form of sound, that is, making it reverberant or non-reverberant as the play may demand.

"In a word, our aim has been to produce any sound or group of sounds, with any predetermined characteris-

(Continued on page 43)



Theatre sound equipment layout includes separate amplifiers for sound movie, actor call system, car call system, hearing aid phones, and main stage equipment. Stage manager's system has push button control through relay to cut dressing room speakers from main amplifier. Mikes cover stage action and dual amplifiers deliver sound to auditorium and offices.



Chat between Philco president, J. T. Buckley, left, and vice-president Sayre Ramsdell.



Larry E. Gubb, Philco exec. vp., and B. Olivier, Reading, Pa., jobber.



General sales mgr. T. J. Kennally, right, with A. W. Griffin, Danville, Ill., jobber.

JOBBER UNDER PALMS

Philco convention at Palm Beach reviewed here by Radio Today.



Riding to the convention in Florida style, Walter Eichelberg, left, of Philco Distributors, Inc., Detroit, and Fred Ogilbie, distributor head in Philadelphia.



In the sunny chair at left is Chester Gaylord (left), Pittsburgh distributor, and Jack Allison, southern mgr. Other chair represents Boston, with Tom Burke, right.

Herb Schiele, left, of Artophone Corp., St. Louis; Frank Beaucaire of Rochester.



Convention talk here includes, l. to r., D. J. McKillop, southern exec.; Mark Hayes, Chattanooga; and A. K. Sutton, Charlotte, N. C.



Motorola Plans Biggest Ad Drive on New Line

In order to blanket the U. S. with dramatic announcements of the new 1940 Motorola auto radio models, the Galvin Mfg. Corp. has made plans for advertisements to appear in 11 of the leading national magazines. The ads will run in such publications as *Life*, *Time*, *Esquire*, *Saturday Evening Post*, *American Weekly*, *Collier's*, *Fortune*, *Look*, *This Week*, and 47 Motor Club magazines.

It is estimated that Motorola ads will be read by 24,000,000 subscribers of these magazines, and at least two and a half times as many readers.

When the company held its annual convention at the Edgewater Beach Hotel, Chicago, the advertising campaign announcement was greeted by special applause from jobbers and dealers. The new line, which includes seven models priced from \$24.95 to \$69.95 (described elsewhere in this issue) will be credited with extra amounts of "eye appeal," "ear appeal," and "price appeal."

Motorola has geared its factory to a higher production rate, in anticipation of its biggest year of radio sales.

Sales Managers Club Committees Named

Members of the new committees for the Western Group of the Sales Managers Club of the Radio Parts Industry have been named by the group chairman Herbert W. Clough, general sales manager for Belden Mfg. Co.

On the Catalog Committee are Ralph M. Hill (chairman), W. S. Hartford and Howard Wilson. The Jobber Relations Committee includes S. N. Shure (chairman), Ralph M. Hill and J. J. Kahn. John Robinson is chairman of the Membership Committee.

Mr. Kahn is chairman of the Servicemen's Advisory Committee and other members are W. A. Kuehl, P. H. Tartak and A. H. Peterson. Mr. Hill and Helen Staniland were named for the Distribution Statistics Committee.

Barriette Opens New Service

S. L. Barriette, who for the past 12 years has been service manager for Bruno-New York, Inc., RCA jobbers, has resigned from that post and has formed his own organization, to specialize in "the installation and servicing of all makes of radio and television receivers for the trade."

Mr. Barriette has a feature plan to offer dealers on the installation of television receivers, which is said to involve only very nominal fees. His headquarters are at 200 W. 34th St., New York City.

Guild Flies for Norge

Now on a 4-month airplane trip through the West Indies, Central and South America, is E. N. Guild, of the export department of Norge. He will check new sales possibilities, offer organization aid to new outlets, and supply merchandising counsel to established Norge firms.

FEBRUARY, 1940

Where Perfect Reception is Essential—



IN SCHOOLS
AUDITORIUMS
HOTELS
RESTAURANTS
CLUBS
GYMNASIUMS
RECREATION HALLS

Wherever High-Quality Radio
Reproduction is to be used
with Audio Amplifying Equipment

Use a Meissner P-A Tuner!

Whatever type of Radio-Public Address installation is to be made—fixed or portable—there's a Meissner P-A Tuner to fill the bill. Three efficient models to select from—all provided with multiple output impedance to feed any good Audio Amplifier.

These P-A Tuners are supplied as complete kits (except tubes) with detailed printed instructions and diagrams. Assembly and wiring is merely a matter of a few interesting hours with soldering iron, pliers and screw-driver.

HIGH-FIDELITY MODEL

Broadcast-band coverage, two-stage band-pass TRF with diode detector, AVC and dual-triode audio and monitor amplifier. Especially designed for most faithful reproduction of High-Fidelity Broadcasts. Five tubes, operates on 110 volts, 60 cycles.

"UTILITY" MODEL

Broadcast-band coverage, three-stage Ferricart (iron-core) TRF with diode detector, AVC and dual-triode audio and monitor amplifier. Ample selectivity and sensitivity for excellent reception of local or distant

Broadcast stations without interference. Six tubes, operates on 110 volts, 60 cycles.

DUAL-BAND MODEL

A seven-tube super-het with tuning indicator—covers regular broadcast and the 5.9 to 18.8 mc short-wave band. Has RF stage on both bands, diode detector, AVC and dual-triode audio coupler monitor amplifier. This is the Tuner to use where distant reception of Broadcast or Foreign programs is desired. Somewhat larger than the other two models—has 7 1/4-inch linear scale dial. Operates on 110 volts, 60 cycles.

To obtain any of the literature listed below, just clip the lower part of this ad, check the items you want, write your name and address in the margin and mail to the address below.

Get This New Book!



A brand new 168-page book, full of live, interesting, up-to-the-minute radio constructional data and information. Contains complete diagrams and instructions for all the Meissner Kit Receivers as well as complete data on ready-wired units.

18-pages of latest Television data covering theory and practical application in plain language. See your Jobber at once or order your copy direct from factory. Only 50c net.

COMPLETE CATALOG FREE

For more detailed information and prices on these unusual P-A Tuner Kits, as well as a complete listing of all Meissner Products, get this big 48-page 1940 Catalog, absolutely free.

168-PAGE INSTRUCTION MANUAL

See description at left. You can't afford to be without this new Manual of up-to-date radio designs. Just send 50c in coin, stamps or money-order and we will mail your copy direct, post-paid.

TIME-PAYMENT PLAN

Ask your Parts Jobber for details of the Meissner Time Payment Plan on which these P-A Tuners and many other Meissner Products may be purchased.

Dept. T-2



QUESTIONNAIRE WHICH WAS MAILED TO DEALERS IN

**RADIO TODAY'S Survey of
RADIO SELLING COSTS AND PROFITS**

	Dollar Sales (for the year)		Purchases at Cost (for the year)		Inventory at Cost	
	1938	1939	1938	1939	Dec. 31 1938	Dec. 31 1939
Radio.....	\$.....	\$.....	\$.....	\$.....	\$.....	\$.....
Records.....	\$.....	\$.....	\$.....	\$.....	\$.....	\$.....
Appliances.....	\$.....	\$.....	\$.....	\$.....	\$.....	\$.....
Service.....	\$.....	\$.....	\$.....	\$.....	\$.....	\$.....
TOTAL.....	\$.....	\$.....	\$.....	\$.....	\$.....	\$.....

EXPENSE OF HANDLING SALES

(If 1938 figures are not available, please send 1939 anyway)

	1938	1939
SALARIES		
Owner and officers.....	\$.....	\$.....
Office and delivery.....	\$.....	\$.....
Salesmen.....	\$.....	\$.....
Servicemen.....	\$.....	\$.....
OCCUPANCY		
Rent.....	\$.....	\$.....
Heat—Light—Power.....	\$.....	\$.....
ADMINISTRATION		
Interest—Insurance—Taxes.....	\$.....	\$.....
Phone—Postage—Stationery.....	\$.....	\$.....
Advertising and Sales Promotion.....	\$.....	\$.....
GENERAL		
Delivery—Installation—Free Service.....	\$.....	\$.....
Depreciation.....	\$.....	\$.....
All other expense.....	\$.....	\$.....
TOTAL EXPENSE.....	\$.....	\$.....

MY RADIO SALES IN 1939 WERE DIVIDED AS FOLLOWS

	Consoles	Compacts	Combinations	Portables	Auto Radios
Number.....	%.....	%.....	%.....	%.....	%.....
Value.....	%.....	%.....	%.....	%.....	%.....

I SELL THE FOLLOWING APPLIANCES (please check) Refrigerators___Washers___Ironers___Room Coolers___Fans___

Oil Burners___Space Heaters___Stokers___Gas Ranges___Electric Ranges___Dry Shavers___Table Appliances___

What brand of Radio Sets do you prefer to sell? _____

What brand of Refrigeration do you prefer to sell? _____

All figures are confidential to RADIO TODAY, 480 Lexington Ave., New York City. Averages will be used as guidance figures.

UP-TO-DATE FIGURES TO BE COMPILED

(Continued from page 13)

addressed to retailers throughout the U. S.:

Dear Subscriber:

Retail costs of doing business are rising.

Rising costs eat into profits, particularly when you don't know just *where*, or just how much, or just why, they are moving upward.

Radio dealers need a study of the "cost of doing business" which is complete and accurate enough to be used as a standard by which to measure their own operation.

Responsive to the need, RADIO TODAY is making such a survey and study, for you.

We are therefore asking thousands of dealers in every state in the union to give us their figures *in confidence*, so that we may tabulate them, analyze them, and report to you what we find.

This we believe is our obligation to the industry of which we are proud to be a part.

You are invited to co-operate with this nationwide study of costs.

We know it will take some effort on your part, but just one idea you get from the results will compensate for this effort many times over.

Information you contribute will be kept strictly confidential, (your report need not even be signed if you do not wish to).

The composite results will be available to you for comparison with your own figures.

We ask you to help us so that we may *help all dealers* make more money.

Thanks a lot for your help.

Cordially yours,
O. H. CALDWELL,
Editor, RADIO TODAY

"CHANGE THE SCENERY" COMMENTS

(Continued from page 18)

getically following out thoughts such as yours in an effort to create new and novel pieces of merchandise, some of which over a period of time have been moderately successful and have served to establish new trends in styling. The successful innovations in the past few years have been confined to real small midget sets, portables, the re-introduction of combinations. Other variations from standard have, to a great extent, been at the best just moderately successful. In this latter group can be included chairsides, which definitely were promoted by the majority of the manufacturers, period furniture, and various types of remote control devices. Practically every manufacturer has at some time or other offered table cabinets or console models that deviated from standard design and typically the sales of these unusual models was far from satisfactory.

In spite of the somewhat pessimistic comments we are, as an organization, whoieheartedly in accord with any thoughts that will be of benefit to this industry and those in it. Individ-

ually and collectively we are willing to contribute toward any plan or program that will accomplish an improvement.

Electrical Research Laboratories, Inc.
E. G. MAY
Chicago, Ill.

Sylvania Promotes Executives

News from M. F. Balcom, the Hy-grade Sylvania Corp. vice-president who is general manager of the radio division, reveals a series of personnel changes at the Sylvania offices in Emporium, Pa.

Bernard J. Erskine, son of the firm's

president, B. G. Erskine, has been moved up to the post of assistant to the vice-president. Arthur L. Milk is promoted to an administrative position, also assistant to the vice-president. Both men will work directly under Mr. Balcom.

R. P. Almy now becomes sales supervisor of the Renewal section. E. T. Reid has been given complete charge of the order department for Sylvania tubes.

NEWA to Meet

The National Electrical Wholesalers Association will meet for its 32nd Annual Convention at The Homestead, Hot Springs, Va., May 19-23, 1940.

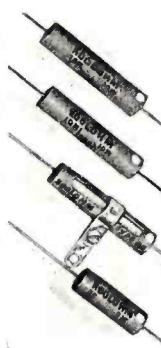
UNBEATABLE SPRAGUE VALUES UNMATCHED SPRAGUE QUALITY

NEW!
BETTER!
DIFFERENT!
ECONOMICAL!

Imagine a 70,000 ohm, 10-watt wire wound resistor actually dissipating 10 full watts! Imagine resistors with an automatic overload indicator. Imagine non-inductive resistors with 0 inductance at 50 mc. and distributed capacity of only 2 mmfd. available at lowest prices ever! No wonder the entire trade is talking about

SPRAGUE
KOOLOHMS.

See Them Today!



MIGHTIEST MIDGETS OF ALL ...

The smallest midget dries on the market! Build up to higher surges — have lower leakage and power factor — unconditionally guaranteed. Available in the most complete line of singles and duals for all ordinary replacement needs. Look at these typical Atom values:



SPRAGUE ATOMS

UT-81, 8 mfd. 150 v. $\frac{3}{8}$ " x $1\frac{1}{8}$ " Net 27c
UT- 4, 4 mfd. 450 v. $1\frac{1}{16}$ " x $1\frac{1}{8}$ " Net 33c
UT- 8, 8 mfd. 450 v. $1\frac{3}{16}$ " x $1\frac{1}{8}$ " Net 36c
UT-88, dual 8-8, 450 v. 1" x $2\frac{3}{8}$ " Net 63c

TC TUBULARS



"NOT A FAILURE IN A MILLION"

The most famous condensers ever made — and still the best and fastest selling tubulars on the market. Famous Sprague "inner seal" moisture protection and many other features. TC's cost little — do a big job. All ranges at your jobbers.

FREE—Ask your jobber or write to us for big new Sprague Condenser and Koolohm Resistor Catalogs.

New Sprague Manual of Interference Elimination now available, 25c net.

OBSOLESCENCE-PROOF!

A new kind of condenser-resistor analyzer



Every serviceman should have a Sprague Tel-Ohmike Condenser and Resistor Analyzer. Tests intermittent opens, power factor, leakage, insulation resistance and resistance values at all voltages, all capacities. Plug in your own milliammeter and voltmeter as provided—don't buy instruments twice! You get an instrument worth at least \$50 for a net of only \$29.70



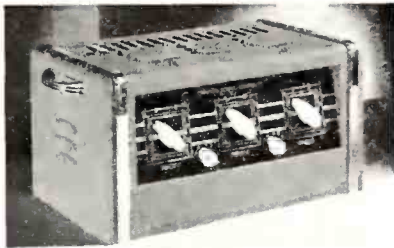
SPRAGUE

CONDENSERS
KOOLOHM RESISTORS
TEST EQUIPMENT

SPRAGUE PRODUCTS CO. NORTH ADAMS, MASS.

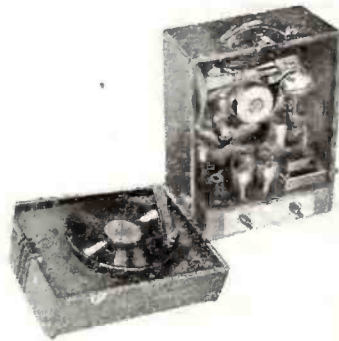
NEW SOUND PRODUCTS

Equipment for every sound job



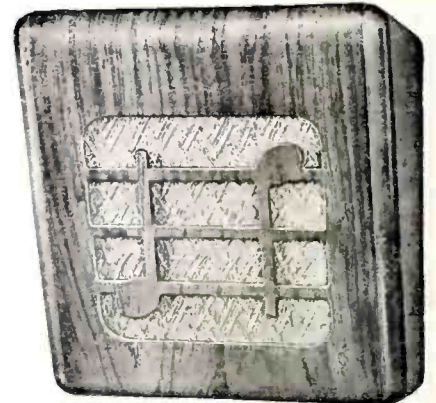
Erwood amplifier

★ Model 3428 is rated at 28 watts with less than 5 per cent distortion. Input provision for two mikes, and phonograph. High and low frequency controls are provided. Controls are mounted on edge illuminated dial of plastic. Output impedances are variable by tapped switch on rear. Provision for remote control. Housed in steel case with maroon wrinkle finish, chrome trim. Erwood Sound Equipment Co., 224 W. Huron St., Chicago, Ill.—RADIO TODAY.



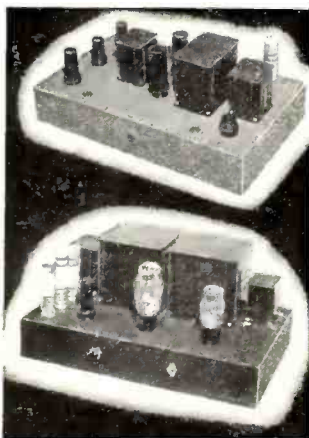
Clarion portable PA

★ Model C-412, 10 to 15 watt amplifier comes complete with 10-inch PM speaker, record player, crystal mike, stand, and cables. All equipment fits into one carrying case. Two channel inputs for mike and phono. 110 db gain in mike channel. 40 to 9,500 cps. Lists \$90.57. Transformer Corp. of America, 69 Wooster St., New York, N. Y.—RADIO TODAY.



Atlas speaker enclosure

★ New line of walnut speaker housings designed for general public address, extension speakers. Music Boxes are modernly designed, and are complete with all mounting hardware. AE-8 and AE-12 take 8 and 12-inch speakers respectively. AE-12 lists at \$7.50. Atlas Sound Corp., 1449 39th St., Brooklyn, N. Y.—RADIO TODAY.



Kenyon amplifier-modulator

★ One of three new basic kits is the 60-watt push-pull amplifier and voltage regulated power supply illustrated. Amplifiers may be used with interchangeable output transformers for PA work or modulation by either plate or cathode systems. Diode limiter circuit prevents blasting. 600 series. Kenyon Transformer Co., Inc., 840 Barry St., New York, N. Y.—RADIO TODAY.



Brown "Magna" pickup

★ Combination pickup and recording head of magnetic type with 200-500 and 5,000-10,000 ohm available impedances. Frequency range is 60 to 5,500 cycles. Head tilts upright for easy needle insertion. Finished in statuary bronze. Price \$5.50. Brown Electric Co., 65 Atlantic Ave., Rochester, N. Y.—RADIO TODAY.



Lafayette sound system

★ Complete 15-watt sound system has mike, two speakers, cables, amplifier, and airplane luggage carrying case. Gain is 113 db. One mike and two phono channels. Mixing and fading facilities for any two of three channels. Universal output impedance. Model 741-T. Radio Wire Television, Inc., 100 6th Ave., New York, N. Y.—RADIO TODAY.

Webster Electric communicators

★ Deluxe series 500 inter-communicators features "busy signal" light; automatic two-way conversation. Separate mike eliminates "talk-listen" switch. Private conversations carried on with handset which automatically disconnects mike and speaker. Webster Electric Co., Racine, Wis.—RADIO TODAY.

Universal Mike handset

★ Two new hand phones, 875 and 820, for use with compact portable transmitting equipment will match 500 ohms and tube plate respectively. Moulded plastic case, screw caps, and four conductor cable. Universal Microphone Co., Ltd., Inglewood, Calif.—RADIO TODAY.



SOUND INSTALLATIONS

(Continued from page 37)

tics, so that the audience will appear to hear the sound or sounds from any apparent source, from no apparent source, or from a moving source. It is axiomatic that in all cases the quality of the sound used in the theatre must be such that the audience shall never be aware of the presence of sound-reproducing apparatus."

VOLUME SWINGS EMOTION

Volume control or intensity of sound is an effective method of increasing emotional response. The louder the sound, the more intense its emotional effect. If with the varying sound intensity, variations in frequency or tone are produced, the audience can be put almost into a frenzy, as Prof. Burris-Meyer and his associates succeeded in doing recently in a play called "The Adding Machine," where the principal character was depicted during the process of losing his reason. The sound accompaniment which had such effect on the audience, was a pure tone warbled and raised in frequency and intensity for about 32 seconds.

In plays like "Strange Interlude," where the actor is indicated as expressing his unspoken thoughts, this effect has been accomplished by projecting the sound of a voice seemingly from the actor's exact position on the stage, while his own lips are tightly closed. Similarly, a dancer engaged in a breath-taking routine, has been made to sound as if singing a melody all the while.

Sounds can also be made to come from no apparent source, but from all directions. In one play the sound of knocking was heard apparently *inside the head of each member of the audience*, accompanying the similar sound motivated the chief actor's lines.

SOUND IS DIRECTOR'S GREATEST ALLY

In short, Dr. Burris-Meyer envisages a new day in the theatre when *all sound will be distributed and given the necessary reverberation by radio-tube amplification.*

"When that day comes," says he, "the limitations will be removed from the auditory component of the stage show. Then players may speak with the voices of men and of angels."

With sound amplification, he declares, one can *compel* the audience to laugh or to weep. "You can knock 'em off their seats, you can lay them in the aisles. You can make them believe what you will. When the radio tube thus acquires the central role it deserves, we shall then see a production of 'The Tempest' such as Shakespeare envisioned and a 'Gottterdammerung' which would have satisfied Wagner!"

Three-Purpose Amplifiers in Kenyon Line

A trio of foundation amplifier kits, recently announced by Kenyon Transformer Co., 840 Barry St., New York, serve triple purpose to the public address specialist and the ham interested in "phone."

When equipped with a universal output transformer, these amplifiers

can form the foundation of a high quality PA system.

Rated at 5, 15 and 60 watts, these three units will deliver sufficient audio power to fully cathode modulate a 50, 150 and 600 watt RF amplifier respectively. With the plate modulation transformers that are quickly interchangeable in the universal output position, these amplifiers may be used to plate modulate low and medium power stages.

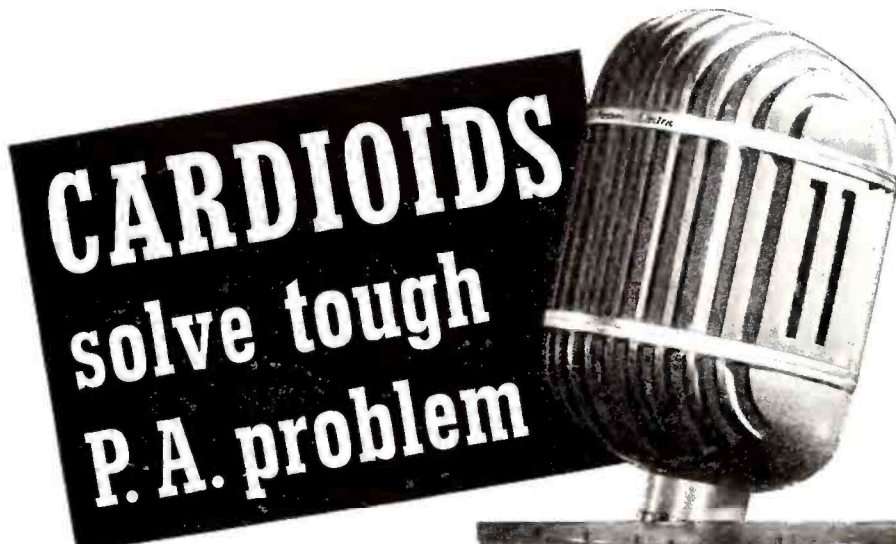
The 5-watt amplifier is a straight forward Class A resistance coupled unit with a 6F6 in the output. A well filtered power supply uses dual chokes and three filter capacitors with the final result of a very quiet, low hum level, amplifier.

REGULATED POWER

The Kenyon "150," 15-watt amplifier has push-pull 6V6's in the output that are transformer coupled from the driver stage. A high gain 6SJ7 serves as the input tube. The same three-section filter is used in the integral power supply.

The 60-watt amplifier is shown in the circuit diagram. It is quite similar to the other units in the group with the exception of a separate power supply chassis. The separate power supply has an interesting voltage regulator for the screens of the 6L6 output tubes. A 6N7 has its two triode sections paralleled to function as a

(Continued on page 49)



CARDIoids solve tough P. A. problem

46 WESTERN ELECTRIC MIKES USED IN LOUDSPEAKER AREA

Like many similar halls, the Chamber of the Connecticut House of Representatives had undesirable acoustic characteristics. The normal speaking voice couldn't cover the large area. Raising the voice resulted in echoes so bad that only those nearest the speaker could hear.



Then Western Electric Cardioids came to the rescue.

Now legislators speak in normal tones—arc heard clearly. Though

there are 46 mikes in the loudspeaker area, feedback is successfully reduced to the minimum.

This is just one example of the many ways Western Electric's 639-A can solve your tough problems. It's three-mikes-in-one—a Cardioid, a ribbon, a dynamic—directional, bi-directional, non-directional.

Get full details. Send the coupon for details now.



Western Electric
CARDIOID
DIRECTIONAL MIKE

GRAYBAR ELECTRIC CO., Graybar Bldg., New York.
Please send booklet describing Western Electric's
New 639A Mike. RT2-40

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

PRACTICAL SERVICING

Put your 5 sources of income to work by observing these simple rules. Making more money by saving time.

As a general rule, the better service technician you are, the poorer "business man" you are.

Technical thinking and merchandising seldom go together to a marked degree, but running a service business requires both.

Let's forget engineering theory for a while, and concentrate our thoughts on the practical end of our business; *making more money.*

In any service business you have just 5 things to sell:

1. Tubes, parts, etc.
2. Your time
3. Your technical knowledge and skill
4. Your own personality
5. Satisfactory radio reception for the customer.

It is your constant job to so combine these factors that you satisfy your customers and *get more of them*, that you keep busy and *make a profit.*

SELL SATISFACTION

In every community there are some who know they are not real service men, who know they can't build their reputation on the basis of satisfied customers. These men try to lure customers to them by cut-price methods.

But here are the practical things they forget.

First, that most people quickly forget what they paid, but they long remember what they get. If you want your customers to come back for more you *must satisfy them.*

Second, when you cut your prices, you cut your profits by exactly the same amount.

Any serviceman who knows his business can lick this kind of competition easily.

POINT TO PROFITS

Guarantee your work for 6 months. Sell customer-satisfaction.

Of course, when you refuse to meet the cut-price and gyp artist, you have really got to do a kind of job which is better, and which the customer can see is better.

When you go to the customer's home to inspect the set, call the customer's attention to the dirt in the chassis, scratches on the cabinet, etc.

When you return the set, be sure it has been thoroughly cleaned, the cabinet polished, any scratches burnt in. The customer will see the difference.

When you service a set, guarantee your work.

Don't be satisfied with just fixing the one thing which may be wrong. Check the set from aerial to speaker. Thoroughly clean the chassis, the tuning condenser plates and the speaker. Check and adjust the oscillator padder and the tuning condenser tracking trimmers. Realign the I.F. and center the speaker voice coil.

When you return the set, be sure it is as good as you can make it.

Any parts which have failed, or are failing, replace, and return the old parts for the customer to see, and throw in the ash can.

It is also a very practical plan to have your invoice or bill, with all of these inspection points printed on it. Check the tubes and parts which are OK, indicate the work done. The customer will readily pay more for the work you charge for, when she sees all the things you did free.

It is much easier to build confidence, to justify your charge for service, when the customer can see what you have done, and can see and hear the results of your work, the thing she is actually paying for.

TIME IS LIMITED

The one thing you have to sell which is limited is your time. There are only 24 hours in a day, there are no "hour stretchers," and you do have to eat, sleep and play, too.

And so from a practical viewpoint you do have to conserve your time, make every hour, every minute count in income.

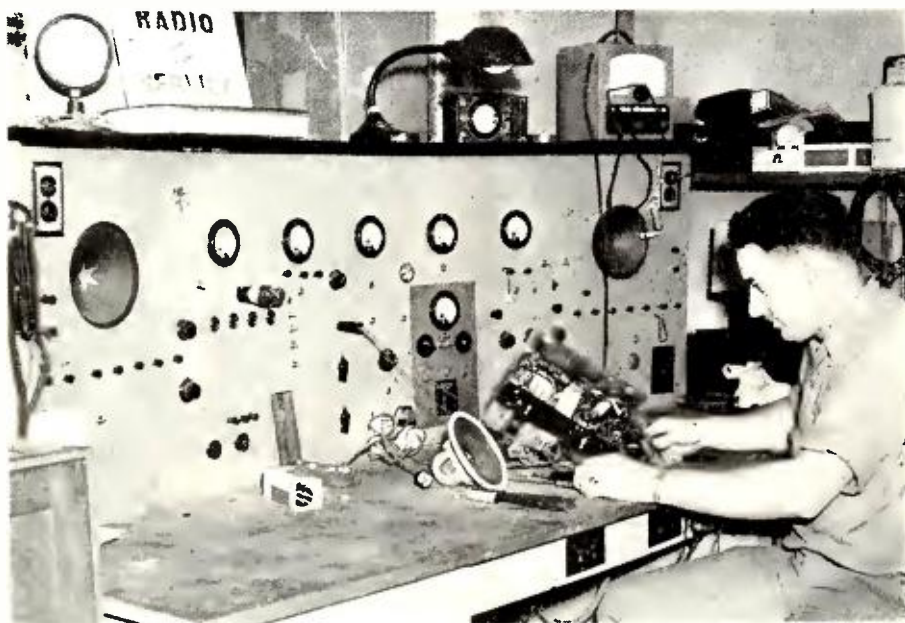
Not by cutting the corners, or doing a sloppy job. But knowing what you're doing, and doing it.

In the average service job it takes 2 to 5 times as long to find what and where the trouble is as it does to fix it.

Here is a point where much time can be saved, and time is money.

Most servicemen "jump to conclusions" in "trouble shooting" and sometimes hit it right, the first time. But in the long run you will save a lot of time if you test every set systematically, and record what you find on a printed test form. You will be surprised how quickly the things which are wrong will stand out when they are tabulated, and how much more is not entirely right than appears at the time of the actual test.

If you test systematically, not only will you locate the trouble quicker, but you will do a more thorough job,



Simple tricks like cleaning the tuning condenser insulation strips will make a big difference in performance. Noise and weak reception can be traced many times to a combination of dirt and moisture.

and a better job than you will on a "catch-as-catch-can" basis.

Most servicemen have a lot of equipment, or hope to have, which they do not thoroughly understand, do not begin to use as effectively as it could be used.

Equipment can save you time and money, only when you use it the way it was designed to be used.

If you have bought equipment which stands idle most of the time, the trouble is probably with you, rather than the equipment. Take time to study—and really learn—how to use your equipment to best advantage.

Most servicemen will find time spent in really learning their equipment pays big dividends, just as they expected when they bought it.

Then again, when you bring every set to your shop for repair, you go out to get it, bring it in, take it back, and go home. Four trips for a single job. As much as half your time can be spent going back and forth. That costs money.

SERVICE IN THE HOME

Many servicemen have found they can save a lot of time, do more work, make more money when they service every possible job in the customer's home.

Sure, we all knew reasons why it's better to take the set to the shop. But just think about it, honestly, and then if you would rather waste all this travel time you will at least do it after thinking of both sides of the story.

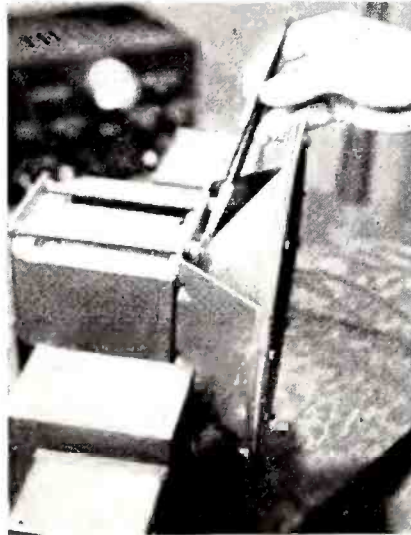
And don't forget that the real pay-off is the money you make without overcharging your customer.

Then there is the matter of viewpoint, which is important in many ways.

When you consult a doctor, or a lawyer, you are not charged for what he does, but for what he knows.

That's the difference between a profession and a trade.

When you look upon servicing as a profession several things will happen.



Metal particles and dust in the voice coil can cause plenty of noise. Clean with a small brush and air-jet, being careful of connections.

Your self-respect will go up, and your customers will respect you more. You will look and act like a professional, not a mechanic or a "digger of ditches." You will take more pride in your work, do a better job, and find your customers more willing to pay more, for getting more.

Not so long ago, in a large plant, a speed regulator was sticking, and production was all snarled up. After several attempts by shop mechanics to regulate the job, a young engineering student volunteered to do the job.

In 10 minutes production was restored.

His bill was for \$25.00.

The superintendent yelled, "\$25 for ten minutes?—It's ridiculous."

But when the student itemized his bill—

4 contact points @ 25c.....\$ 1.00
10 minutes with screw driver
and hammer50

For knowing what to do with the above 23.50

it was paid promptly, and with a smile. Get the idea?

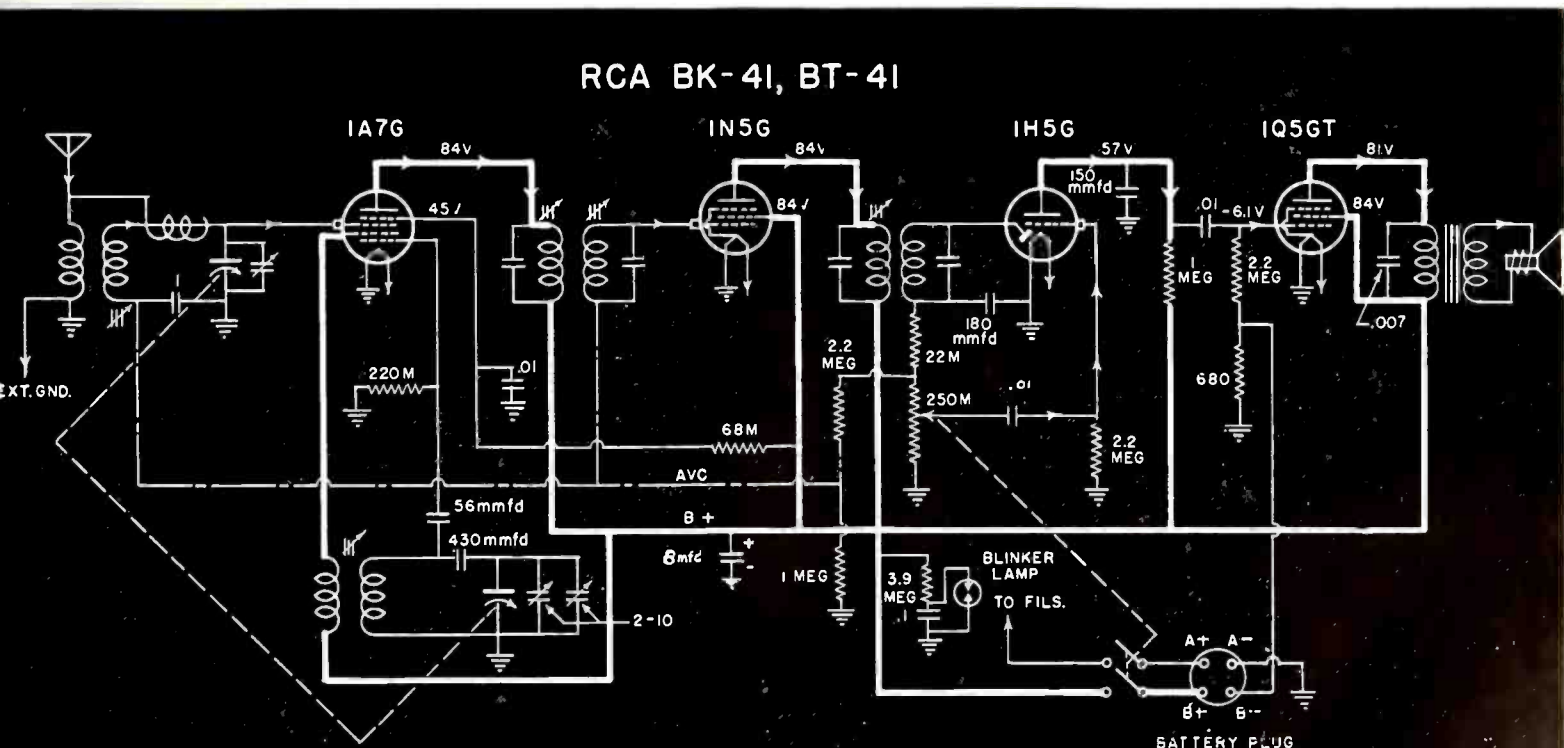
But you always have to satisfy the customer.

RCA Battery-Operated Model BK-41 and BT-41

The circuit diagram for this four-tube, single band home receiver is given below. This receiver is equipped with 1.4-volt tubes and may be operated from a 1.5-volt dry cell and 90-volt B source for districts not equipped with commercial power. Also available is the CV-40 power supply to operate the receiver from AC lines.

The circuit is that of a straight-forward superhet with a combination oscillator-mixer stage, and combination second detector, AVC, and first audio. A pentode output tube is used to operate the PM speaker. A blinker lamp is employed in this circuit to indicate that the set is in operation and at the same time use very little battery current. The circuit for this blinker light is a simple neon oscillator system that flashes the glow tube each time the .1 mfd. capacitor is fully charged. The frequency of oscillation depends upon the values of resistance and capacitance. The permeability tuned IF transformers should be aligned in the following manner. Connect oscillator to 1N5G grid, tune receiver to dead spot between 550 and 750 kc, adjust second IF to resonance at 455 kc. (Feed oscillator signal through 0.01 mfd. capacitor.) Connect oscillator to grid cap on 1A7G and repeat alignment for first IF transformer. To align the RF sections, connect the oscillator to the antenna through a 200 mmfd. capacitor and adjust oscillator and antenna cores for maximum response at 600 kc. Set oscillator at 1500 kc and adjust oscillator and antenna trimmer for peak response. The

(Continued on page 51)



SERVICE NOTES

GE Radio Phono Combination H-639

Models H-639AC and H-639DC are 6-tube radio-phonograph combinations in table style cabinets. Manual and mechanical push-button tuning for 6 stations are incorporated in both models.

The circuit diagram shows the connections for both the AC and DC models. H-639AC does not have the vibrator-inverter unit and the leads to the phono motor go directly to the switch and AC line.

The voltages marked on the electrodes of the various tubes are for the 115-volt AC operation. When the DC model is checked, the voltages will be about 15 per cent lower. All measurements are made with a 1,000 ohm per volt meter. The plate voltage of the second detector and the first audio stage is measured on the 500 volt scale. The cathodes of the first detector, IF tube, and second detector are at zero potential DC. Grid bias for the mixer and IF tubes is supplied from the AVC bus only.

Inverse feedback is employed in the 6J5GT driver tube to improve overall frequency response. Some of the output voltage obtained from a separate

winding on the output transformer, is put in series with the cathode circuit. The varying AC voltage placed in the cathode circuit changes the grid bias, thus "de-generating" all audio frequencies.

ALIGNMENT

To align the IF transformers, connect an output meter across the voice coil and turn the volume control to maximum position. Set the test oscillator at 455 kc. and apply lowest signal voltage possible to grid of the 6SK7GT through a 0.05 mfd. capacitor and align 2nd IF transformer. Apply 455 kc. signal to the control grid of the 6SA7GT through the 0.05 mfd. capacitor and align the first IF transformer. Touch-up both transformers for final alignment.

The RF end of the receiver is aligned as follows. Fully mesh the gang condenser plates and set the pointer to the first mark on the left end of the tuning scale. Apply a 1,500 kc. signal either through a standard IRE dummy to the antenna terminal or through an additional loop connected to the generator output. This loop may be magnetically coupled to the loop antenna. Adjust the parallel oscillator padder at 1,500 kc. and peak the first detector parallel padder for maximum output. Adjust the series trimmer in the oscillator circuit while rocking the gang

condenser at 580 kc. Retrim at 1,500 kc.

The glass tubes may be replaced with metal if the set is re-aligned.

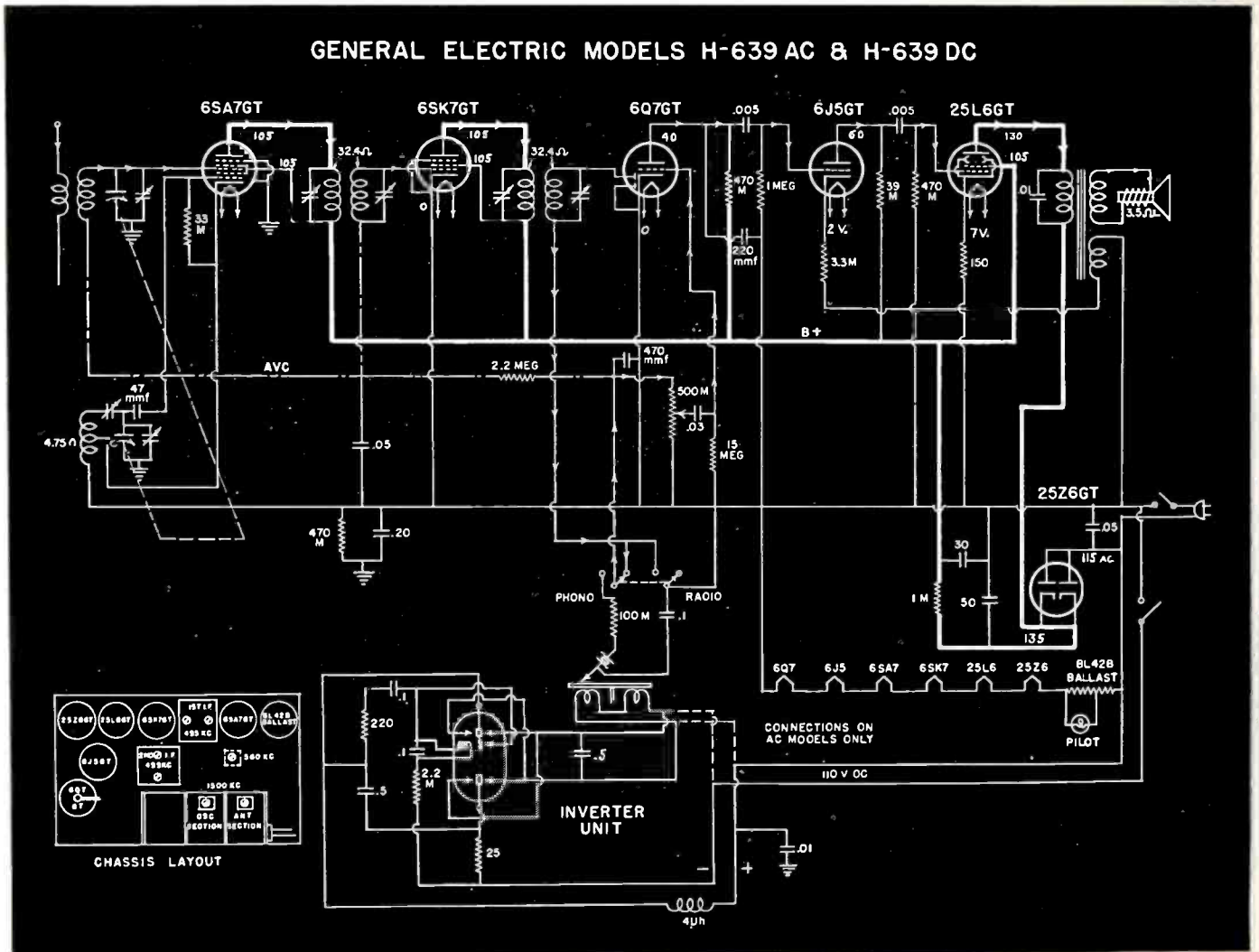
Stage gains may be checked with a vacuum tube voltmeter. From the antenna post to the converter grid, a gain of 4 at 1,000 kc. is normal; from the converter grid to 6SK7GT grid, 30 at 455 kc.; from the 6SK7GT grid to 6Q7GT detector plate, 100 at 455 kc. Variations of +10% and -20% are permissible. For audio gains, 0.06 volts signal across the volume control at 400 cycles will give approximately 1/2 watt in the speaker. The DC voltage developed across oscillator grid resistor averages 12 volts.

New RCA Tubes Announced

Two new receiving tubes in the 12-volt class are the 12K8 and 12SR7. These tubes have electrical characteristics similar to the 6K8 triode-pentode mixer and the 6R7 diode-triode. Both are metal and the 12SR7 is the single ended type of construction.

The 928 gas phototube has a non-directional feature. The cathode is a caesium coated mesh entirely surrounding the anode. Peak anode voltage is 90 and light sensitivity is 65 microamperes per lumen.

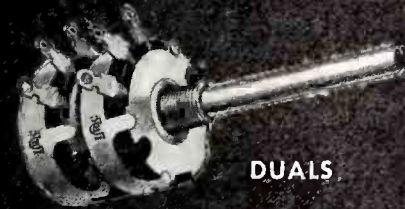
Two television camera tubes, the 1840 Orthicon, and 1848 Iconoscope were announced by the RCA Mfg. Co., Harrison, N. J.



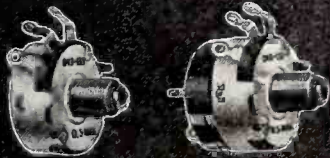
Every REPLACEMENT TYPE FOR Every RADIO NEED



CS STANDARD



DUALS



MIDGETS



SPECIAL STANDARD



SPECIAL
SHAFTS FOR
EVERY NEED



AUTO RADIO



WIRE
WOUNDS



IRC SILENT SPIRAL CONNECTOR

Positive "clockspring" connection—no slide—no friction—no noise.

IRC 5-FINGER "KNEE ACTION" CONTACTOR

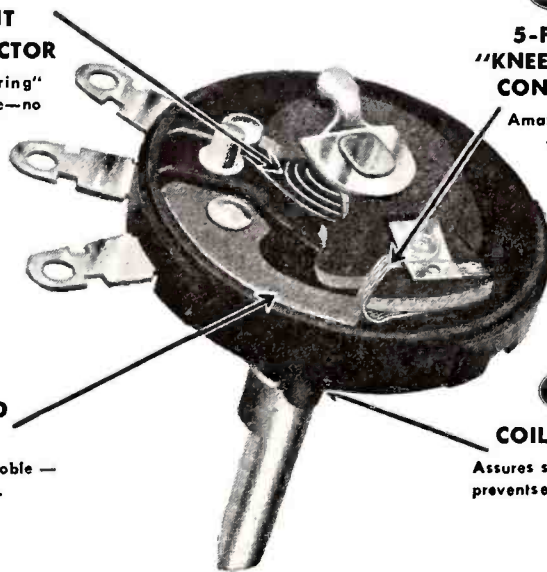
Amazingly uniform —permanently quiet.

IRC METALLIZED ELEMENT

Moisture-proof — durable — outstandingly smooth.

IRC COIL SPRING

Assures smooth rotation prevents end play of shaft.



4 EXTRA FEATURES . . NO EXTRA COST!

Only in IRC Volume Controls do you get the exclusive features illustrated above — and an important thing to remember is that you get them at not one cent of extra cost. They mean more for your money. They are your assurance of the smoothest-acting volume controls you ever tried. They mean IRC Controls are quiet — and built to stay quiet.

Every one of these features is included in IRC Midget Controls as well as in the standard and special replacement types. One standard of quality only! Each and every IRC Control is made to the same high standard that has made them tops in performance and dependability throughout the world.



FREE! 1940 SUPPLEMENT TO THE IRC GUIDE IS OUT . . . Most complete, up-to-the-minute listing available. Covers control replacements for practically every receiver made since Edition No. 2 of the IRC Guide was issued. The new Supplement — and the Guide if you need it—free upon request from your jobber or direct from IRC.

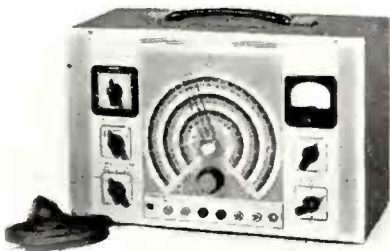
INTERNATIONAL RESISTANCE COMPANY

401 North Broad Street, Philadelphia, Pa.
(In Canada, 187 Duchess Street, Toronto)

VOLUME CONTROLS

Makers of Resistance Units in More Types, More Shapes and More Sizes for More Applications Than Any Other Manufacturer in the World

NEW SERVICE EQUIPMENT



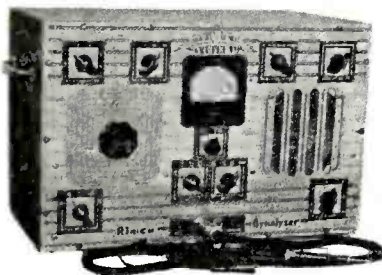
RCA signal generator

★ Wide range oscillator covers band from 100 kc. to 120 mc. in 10 bands. Panel meter indicates output in microvolts. Three-color dial has total scale length of 90 inches. Double reduction gears give ratios of 18:1 and 60:1 in tuning. Signalyst lists at \$107.50 RCA Mfg. Co., Camden, N. J.—RADIO TODAY.



Million multimeter

★ Model VV, 1,000 ohm per volt meter with ranges of AC and DC volts, mills, ohms and decibels. Self-contained battery permits resistance measurements to 2.5 megs. 4-inch meter, built in test leads. Million Radio and Television, 685 W. Ohio St., Chicago, Ill.—RADIO TODAY.



Rimco Dynalyzer

★ Three channel signal tracer measures signals from 95 kc. to 15 mc. on 1 tuning control. Vacuum tube voltmeter checks voltages at 2 megs per volt. Measures resistance to 10 megs. Built-in speaker. Price, \$88.50. Radio Instruments Mfg. Co., 1131 Terry Rd., Jackson, Miss.—RADIO TODAY.



Walsco utility kit

★ A radio cabinet and chassis repair kit consists of polish remover, stain, friction powder for dial cables, dial oil, cement, and contact cleaner. Liquids have either brush or glass rod applicator. All items come in neat leather case. Walter L. Schott Co., 5264½ W. Pico Blvd., Los Angeles, Calif.—RADIO TODAY.



Triplett battery tester

★ Model 696 checks all dry batteries under proper load conditions. "Good" sections are in contrasting colors for different types of batteries. The 3-inch meter also has voltage ranges to 150 at 1,000 ohms per volt. Case is pocket-size molded plastic. Triplett Electrical Instrument Co., Bluffton, Ohio.—RADIO TODAY.

Aerovox L-C equipment

★ Accessories for the L-C Checker include panel mounting brackets and standard 0.001 mica capacitor for use with the instrument in measuring inductance. Four brackets hold checker to standard test panel, Aerovox Corp., New Bedford, Mass.—RADIO TODAY.

Simpson battery tester

★ Compact dry battery tester checks popular sizes under actual load conditions. The 1,000-ohm per volt meter has maximum scale of 150 volts. Green sector indicates condition of each type battery. Model 245 has red bakelite case and black panel. Simpson Electric Co., 5216 Kinzie St., Chicago, Ill.—RADIO TODAY.



General "Twin Power" pack

★ Model P Porta-Power converts 6-volt battery radios to 115 volt 60-cycle current. Two separate sources of 6 volts are supplied at 1.5 amps each. One output supplies filaments, the other goes to vibrator for B voltage. General Transformer Corp., 1250 W. Van Buren St., Chicago, Ill.—RADIO TODAY.



Hickok Jumbo multi-meter

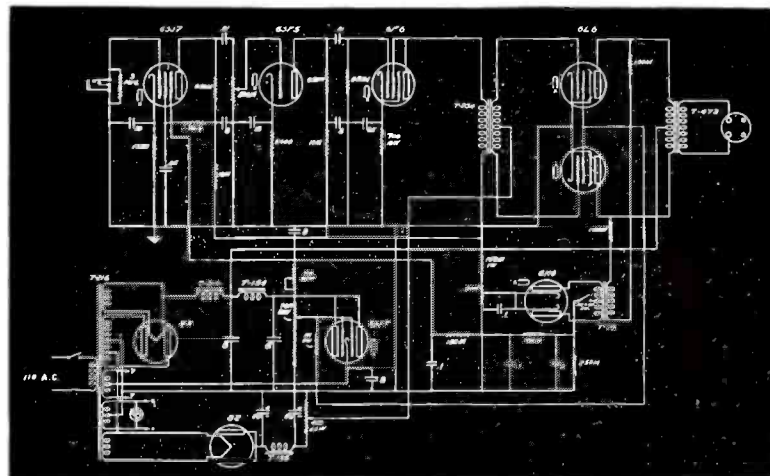
★ Wide range volt-ohm-milliammeter uses giant 9¼-in. meter. AC and DC volts to 2,500. DC current from ½ mill to ½ amp. Resistance ranges from 0.05 ohm to 10 megs. Decibel ranges from -10 to +15 and 29,43. Output meter range same as AC volts. Hickok Electrical Instrument Co., 10514 Dupont Ave., Cleveland, Ohio.—RADIO TODAY.

SERVICE NOTES

(Continued from page 46)

RCA Receiving Tube Manual Issued

A new 224-page manual of receiving tube types and characteristics has just been released by the RCA Mfg. Co., Harrison, N. J. A forty page section covers the basic functions of tubes in various circuits. Each tube is presented with its socket connections, electrode voltages, characteristic curves, and circuit applications. Other sections of the new manual, priced at 25c, include radio tube testing, a chart of circuit constants for resistance coupled amplifiers, a tube classification chart by use and filament voltage, and several pages of circuits for receivers, amplifiers, and a vacuum tube voltmeter.



Circuit diagram of the Kenyon 60-watt amplifier-modulator and voltage regulated power supply. Peak limiter circuit is used to prevent distortion.

KENYON AMPLIFIERS

(Continued from page 43)

series current limiter for the screens of the 6L6 tubes. An 82 half wave rectifier is used to supply fixed bias for the output tubes thus permitting greater power capabilities.

PEAK LIMITER

Incorporated in each of the amplifiers is an output limiter circuit which prevents overloading and blasting in

PA work and over-modulation in phone work. The circuit uses a 6H6 diode rectifier transformer coupled to the plates of the 6L6's. When the peak limiter switch is closed, a portion of the output audio voltage is rectified and is used as a negative bias on the suppressor grid of the 6SJ7. This negative bias reduces the overall gain of the amplifier. A variable control in the cathode of the 6H6 determines the operating point at which the diode will rectify.

These new amplifiers may be easily constructed from the instructions fur-

nished with the transformers. All parts including the punched chassis are readily obtainable.

MEISSNER BOOK READY

The 1939-1940 issue of the Meissner book, "How to Build Radio Receivers," priced at fifty cents is now available. Eighteen pages of television data, complete instructions on 28 different models, formula and data, and electrical theory on coils, self and mutual induction, are included in this 168-page book.

Triumph 1940 Economy Equipment



This new modern TUBE TESTER

Costs less than "modernizing gadgets"!

Model 443, Universal Tube Tester, Triumph's latest economy design, checks all tubes from a WX12 and 01A to date! Uses the famous "400" series, interelement leakage test—the hottest and most sensitive leakage tester ever offered. Uses the electronic conductance test for tube performance. Checks ballast tubes and all types of pilot lights. Quick, automatic push-buttons may be set one at a time and all simultaneously released for the next test. Cuts testing time in half. Why spend more than this tube tester costs for an adapter for your old tester? Don't modernize—be modern. Immediate delivery.

Write for your free 1940 catalog of Triumph Test instruments—complete laboratory equipment!



The Percent-O-Meter!

Sensational new battery tester! A real battery merchandiser. Tests batteries under load. Indicates per cent rated battery voltage, understandable—simple—convincing. Batteries under 75% must be replaced!

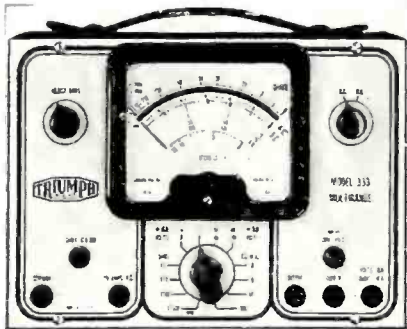
ONLY \$10⁹⁵

TRIUMPH MFG. CO.

4017-19 W. Lake St.

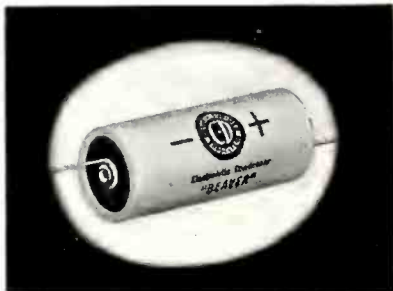
Chicago, Illinois

NEW PRODUCTS



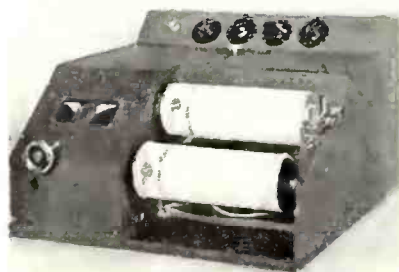
Triumph multimeter

★ Model 333 Multi-Quantum meter has 33 ranges of voltage, current, decibels, and resistance. 4½ inch meter has a mirror anti-parallax strip. AC and DC voltage to 3,000 at 1,000 ohms per volt. DC mills to 300 and amps to 15. Decibel ranges from -20 to 64 in five ranges. Resistance to 10 megs. Price \$21.95. Triumph Mfg. Co., 4017 W. Lake St., Chicago.—RADIO TODAY.



Cornell-Dubilier dry electros

★ Small dry electrolytic "Beaver" capacitors in variety of ranges and voltages. Etched aluminum foil. Single and dual sections from 50 mfd., 25 volts to 16-16, at 250 volts, and 8-16 at 450 volts. Riveted end leads. Cornell-Dubilier Elec. Corp., S. Plainfield, N. J.—RADIO TODAY.



Finch facsimile unit

★ Compact facsimile printer and sender unit for use with police, aviation or similar transmitting and

receiving equipment. Mobile unit weighs 25 lbs., and reproduces 8" x 5½" of copy at 8 sq. in. per minute. Finch Telecommunications, Inc., 1819 Broadway, New York, N. Y.—RADIO TODAY.

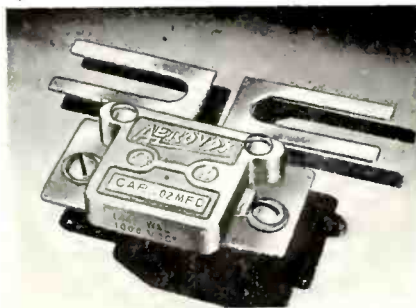
Transcrip-Tone reproducing needle

★ Permo point, high fidelity, transcription type, play-back phonograph needle. Point of precious metals made from the elements of rhodium, ruthenium, osmium, and iridium. Designed for long life without distortion. Permo Products Corp., 6415 Ravenswood Ave., Chicago, Ill.—RADIO TODAY.



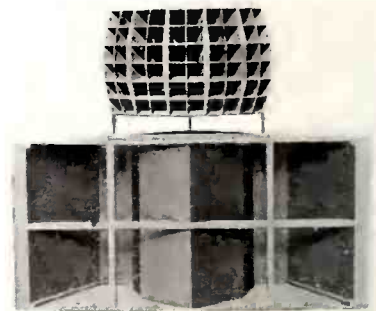
Philson cowl aerial

★ Telescoping auto antenna has removable shielded lead. Fits between kick-pad and car body. No. 1350, 50 inches long; No. 1366, 66 inches long. Only 2 inches project above cowl when fully telescoped. No. 1366 lists at \$5. Philson Mfg. Co., 156 Chambers St., New York, N. Y.—RADIO TODAY.



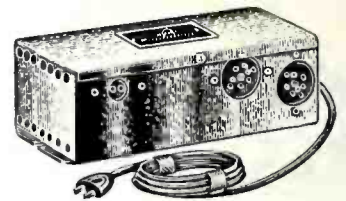
Aerovox meter capacitors

★ Molded bakelite mica capacitors for by-passing meters at radio frequencies. They have slotted lugs for universal mounting on terminals. Aerovox Corp., New Bedford, Mass.—RADIO TODAY.



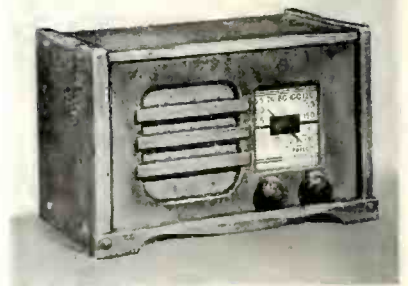
Jensen full range speaker

★ Type B system illustrated is one of new line of wide frequency range speakers. Two high frequency speaker units operate through multicellular horn. Two low frequency speakers deliver sound from "folded" horn. Jensen Radio Mfg. Co., 6601 S. Laramie Ave., Chicago.—RADIO TODAY.



Electro Products 1.4-volt pack

★ Battery eliminator for portable and home receivers using 1.4 volt filaments. Model P suitable for 4, 5, and 6-tube sets. Operates from 115 volts, 60 cycles. List, \$7.95. Electro Products Labs., 549 W. Randolph St., Chicago, Ill.—RADIO TODAY.



Philco Transitone

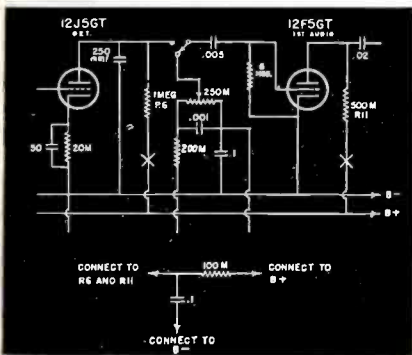
★ PT-50, AC-DC superhet, one of Philco's Spring line. Solid, hand-rubbed maple with matching wood knobs. 5 loktal tubes. Built-in loop aerial. Covers standard American broadcasts. A.V.C. Philco Radio & Telev. Corp., Tioga & C Sts., Philadelphia, Pa.—RADIO TODAY.

SERVICE NOTES

Filter Network Reduces Hum

Excessive hum noticed in model 6326 Silvertone may be traced to one or more of the following causes. A 60-cycle hum in the output may be caused by cathode to filament leakage in the 12J5GT second detector, or the 12F5GT audio driver. These tubes should be checked with a tube tester having a leakage indicator and should be replaced if such leakage is present.

If the tubes show up "good" on the leakage test, the hum may be traced to a ripple in the power supply. In the circuit diagram shown, a simple resistance-capacity filter is connected between the plates of the 12J5GT and 12F5GT and the B+. The by-pass capacitor is rated at 400 volts and the 100M resistor is 1/4 watt.



A number of sets of this model are without a shield for the 12F5GT audio amplifier. A shield should be used around this tube as it will aid in reducing hum.

RCA BK-41, BT-41

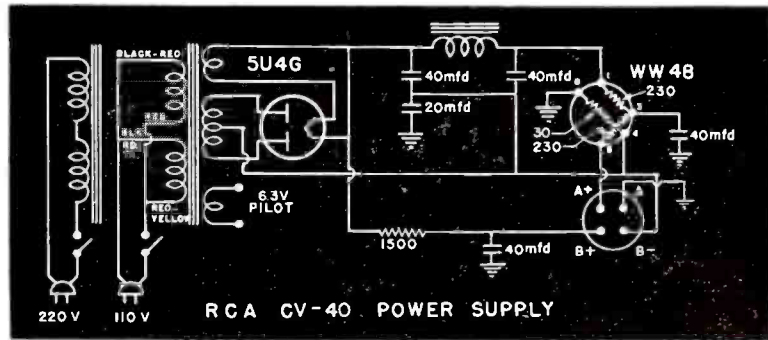
(Continued from page 45)

second trimmer on the oscillator gang condenser should be turned one turn from tight before adjusting the other trimmer at 1500 kc.

AC POWER PACK

The voltages indicated on the circuit diagram are for battery operation. When the AC power pack is used, the higher voltages are increased by about 10 volts. The grid bias on the pentode output tube increases from 6.1 to 6.8 volts.

The power supply unit, CV-40 may be operated from 110 or 220-volt current, 50/60 cycle frequency. The filament supply for the receiver is obtained from the main rectifier tube. The total filament drain of 250 mills is pulled through the pair of 230 ohm resistors and the 30 ohm resistor in the WW-48 plug in resistor. Be sure to have all tubes in the socket when connecting the power supply to the set. The order of connection of the primary wires on the power transformer is very important. If the windings are incorrectly connected, the magnetic fields will buck each other and the result will be a short across the AC line and the primary destroyed.



Power pack for operating BK-41, BT-41 battery receivers from AC. Filament current is rectified by 5U4G and separately filtered. Dual primary may be connected for 110 or 220 volts.



A Giant Tube Tester - MODEL 325

• A great tube merchandiser is this Model 325 with 9-inch dial artistically colored—red, green and black—brightly illuminated by two easily replaced 6-V bulbs. Provides for complete range of filaments from 1.5 to 120 volts. Tests octals, single-end tubes, bantams, midjets, ballast tubes, gaseous rectifiers, even Christmas-tree bulbs. Individual toggle switches permit checking each element separately. Large neon tube for checking shorts and cathode leakage; head phone jack for noise test. Line adjustment with smooth vernier control. Drawer with handy tube charts. Dealers net price \$34.50



A Giant Set Tester MODEL 320

• The big, easily read 9-inch illuminated meter applied to a wide range set tester. First tester to incorporate a meter of this size; also first to incorporate 50 ranges — nine A.C. and nine D.C. voltage ranges; six milliamperere ranges; five resistance ranges; four capacity ranges; seven decibel ranges. Entirely A.C. operated. All voltage ranges have resistance of 1,000 ohms per volt. Test leads are included. Rack mountings available. Dealers net price \$37.50

Giants

in everything but price

HERE is Simpson beauty, quality and uncompromising accuracy in man-size proportions. No shop is complete without these impressive instruments. When you see the handsome panels and the big illuminated dials you will know why we say they are giants in everything but price.

From these shop instruments with their nine-inch dials down to pocket-size testers, all Simpson Instruments have the same unrivalled beauty of design and unerring accuracy that could only have been built into them by Ray Simpson and a group of associates who have made a life study of instrument design and production.

Ask for new catalog of remarkable Simpson values.

SIMPSON ELECTRIC CO.

5216-18 Kinzie Street, Chicago

SIMPSON

INSTRUMENTS THAT STAY ACCURATE



An Advanced Signal Generator MODEL 310

• Here, too, you have the easy readability of a 9-inch meter in the new Simpson Signal Generator designed to the most minute detail for highest accuracy, greatest stability, minimum leakage and good wave form. Smooth vernier control permits close settings and knife edge pointer, accurate readings. Your kind of Signal Generator. Dealers net price.....\$37.50

RECORDS OUT IN FRONT

(Continued from page 20)

make the new releases more buyable, these lists are often surrounded by tacked-up samples of the records themselves.

PROMOTING THE ARTISTS

Pictures of the star recording artists are additional material for the record exhibits. It has been noted that many very catchy windows have been built around the use of these photos attached to the center of new platters. These are particularly timely in the display of recorded hits taken from the currently popular movies.

Dealers who have record cabinets to sell find it a good idea to put them in the window, fill them up with crisp new releases, and leave the doors open. In such cases, the cabinets can be placed on small rugs and topped with a decorative lamp.

Dealer Uses "Back-to-School" Motive

Making an extra season at the beginning of radio's best selling period, G. Schirmer, 3 E. 43rd St., New York City, featured records, portables and combinations, in an advertisement timed to reach the parents of children now going back to boarding schools and colleges. Concise and well-worded the ad read "If you're off to school—remember music is the cure for overwork (upperclassmen) and homesickness (freshman). So why don't you drop in at the Schirmer Record Shop where you'll find a complete selection of swing, sweet and serious records—as well as the latest in portable radios and phonographs."

Schirmers also uses the Christmas season to promote music for school since many parents buy records and radios for students returning to schools and colleges after the holidays.



Here's the new director of sales promotion for Columbia Recording Corp., of Bridgeport, Patrick Dolan.

Wax Worth Watching

RAYMOND SCOTT and his new orchestra playing Just a Gigolo—Columbia 35363.

ABE LYMAN and his Californians playing Princess Poo-Poo-Ly with VR by Rose Blane—Bluebird B10556.

HAL KEMP and his orchestra playing Confucius Say with VR by "The Smoothies"—Victor 26452.

DICK JURGENS and his orchestra playing In An Old Dutch Garden with VC by Eddie Howard—Vocalion 5263.

EDDY DUCHIN and his orchestra playing The Creaking Old Mill by the Creek with VC by "The Earbenders"—Columbia 35352.

HAPPY FELTON and his orchestra playing Would'Ja For A Big Red Apple with vocal by Mr. Felton—Varsity 8175.

DICK TODD with orchestra singing The Gaucho Serenade—Bluebird B10559.

DICK ROBERTSON and his orchestra playing As 'Round and 'Round We Go with VC by Mr. Robertson—Decca 2926.

AL DONAHUE and his orchestra playing In the Mood with VC by Paula Kelly—Vocalion.

GLENN MILLER and his orchestra playing Careless with VR by Ray Eberle—Bluebird B10520.

BOB CROSBY and his orchestra playing The Little Red Fox with VC by Teddy Grace—Decca 2924.

ORRIN TUCKER and his orchestra playing You'd Be Surprised with VC by Bonnie Baker—Columbia 35344.

Radiobar Has New Factory Reps

From Radiobar Co. of America, New York, comes news of the appointment of four factory representatives, named by C. T. Hillman, general manager.

The newcomers to the Radiobar sales organization are R. H. Campbell, 53 W. Jackson Boulevard, Chicago, who will cover Illinois, Indiana and Wisconsin; Albert Rapfogel, 700 Prospect Ave., Cleveland, to cover Ohio, West Virginia and western Pennsylvania; Harry Richards, 803 Cherry St. S. W., Grand Rapids, Mich., to cover western Michigan, and Robert Howard Co., 965 Broad St., Newark, for northern New Jersey.

The company's new line is now being sold direct to retail radio and furniture dealers on an exclusive franchise basis. A big promotional campaign, including newspaper and magazine advertising, is under way.

Dolan to Head Columbia Record Promotion

Patrick Dolan, who has had extensive experience in advertising and promotion both here and abroad, has been named as sales promotion director for Columbia Recording Corp. He had recently worked with the parent firm, Columbia Broadcasting System. Mr. Dolan's office will be at Columbia Record headquarters in Bridgeport, Conn.

U. S. Records in Expansion

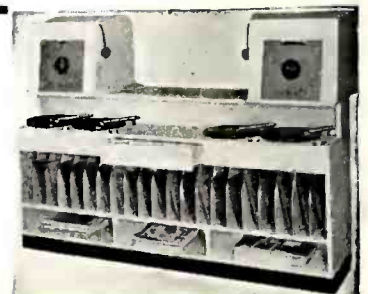
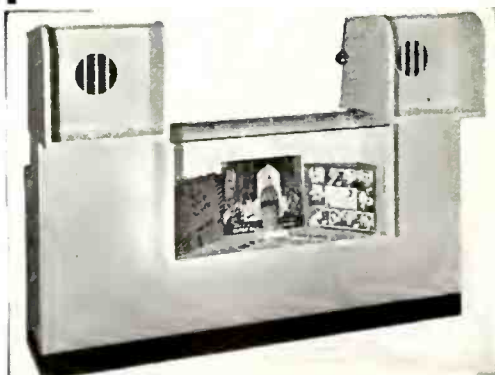
At the United States Record Corp., 1780 Broadway, New York City, J. H. Bergman has been appointed manager of a newly formed Record Accessory Division, according to news from U. S. vice-president Eli E. Oberstein. The company will shortly start a national advertising drive on a complete new line of record accessories and supplies.

Inter-State Radio & Supply Co., 1639 Tremont Place, Denver, Colo., has been announced as distributor for Royale and Varsity records, by Eli E. Oberstein, vice-president of United States Record Corp., 1780 Broadway, New York City.

The RECORD BAR* you've been waiting for!

THE COMPLETE RECORD DEPT. IN THE SPACE REQUIRED BY AN ORDINARY COUNTER AT A COST OF 25% OF THE USUAL RECORD DEPT.

←FRONT VIEW . . . BACK VIEW→



- Ideal unit for small dealers needing maximum economy in equipment and floor space. Takes only 12 sq. ft. floor space—Fits any size or shape of store—Island fixture or against wall.
- Provided with record bins to hold 500—either 10" or 12" records and albums.
- Four listening stations with separate turntables and amplifiers. Two earphones and two speakers. (Available with or without EQUIPMENT.)
- Enclosed glass showcase for display of albums, accessories.
- Provided with needle and accessories drawer; space for wrapping material.
- Latest releases under glass in each listening station.
- Standardized design. Add-a-unit when necessary. Retain original intact.

A. BITTER CONSTRUCTION CO., 2701 Bridge Plaza No., Long Island City, N. Y.

EST. 1920

*Patent pending

Send for Free Folder



MEMO:

*Order space
in the
Radio Year Book
and
Trade Directory
Must!*

**To be issued in MARCH
as a section of RADIO TODAY**

The Radio Year Book and Trade Directory is the only complete Buyer's Guide listing all manufacturers and all products in the radio and electronic field.

Used by every branch of the industry and trade—for a whole year—it is radio's largest and strongest medium of trade promotion.

While many of the leading manufacturers have already ordered space (alongside their directory listings), it is not too late to get a choice position if you place your order, or ask for further information, AT ONCE.

25,000 CIRCULATION GUARANTEED

**Covering All Worthwhile
Radio Markets**

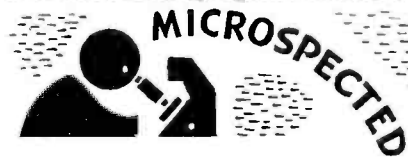


480 Lexington Avenue, New York

Send in Your Order Today

FEBRUARY, 1940

NOW!
A Complete Line of
**PERMO POINT
PHONOGRAPH NEEDLES**



**TO INSURE
PERFECT PERFORMANCE**

Every Permo Point Needle sold is subjected to rigid Permo MICROSECTION process before it leaves the Permo laboratories. This process is a positive check on the precious Permo Metal point for perfect uniformity and performance.



PERMO Recording NEEDLE

—a new stylus, equalling ability of sapphire on nitrate coated blanks. Cuts clean grooves, free from surface noises. Records entire frequency range. Minimum loss of high frequencies—no "peaks". Permo Metal point gives long life. MICROSECTIONED for uniformity, packed in special protective metal container.



**Transcrip-tone
PERMO POINT NEEDLE**

—gives even response over entire audio frequency range—constant at over 10,000 cycles. Specially designed to transmit all frequencies useful in modern broadcasting and recording work. Fits standard record groove. Valuable in play-back and dubbing work. Permo Metal tip gives 35-50 hours' service. Won't wear acetate, nitrate coated, commercial records—prolongs life with self-lubricating Permo Metal Point.



**Fidelitone
PERMO POINT NEEDLE**

—for home record players and changers. Keeps surface noise at a minimum. Perma Metal point assures finest full range reproduction. Record wear is negligible due to self-lubricating action of Permo Metal. Gives up to 50 hours' service on standard recordings. Long play for use in home, salon, sound distributing systems, schools, etc.



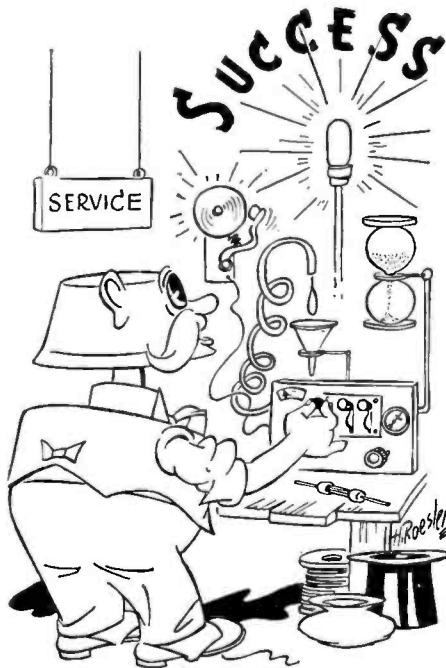
The above and other Permo Point Needles for professional and home use are available at all leading suppliers.

PERMO PRODUCTS CORP. RT-2-40
Manufacturing Metallurgists
6415 Ravenswood Ave. Chicago, Illinois
Gentlemen:

Please send me your free booklet on Needles and Records, and full information on Permo Point Needles.

Name

Address

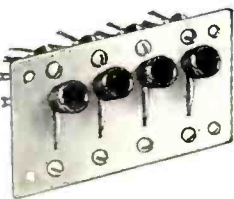


--with the **CENTRALAB**
LEVER ACTION SWITCH

A flip of the Centralab Switch tells all . . . whether to read the tell-tale meter . . . to test a reluctant tube, or to solve the inner mysteries of some intricate testing apparatus.

Just a habit with Centralab . . . to turn out a better mouse-trap so that a world of service men can make a beaten path to our jobbers.

Switches, controls, resistors, ceramic capacitors . . . in each field of endeavor . . . like Abou Ben Adam . . . "our name leads all the rest."



Contact clips of spring brass heavily plated (silver), treated for easy soldering. Switching combinations available use up to 12 clips per section.

Centralab

Div. of Globe-Union Inc.
MILWAUKEE, WISC.

A "First" in Refrigerator Advertising

A record-breaking advertising stunt will be staged by Philco March 2 in *Collier's* magazine, when the company will run a unique four-page full color "pull-out" ad, to launch "the most comprehensive advertising and promotion campaign in the history of home refrigeration."

More than 12,000 copies of the magazine will be delivered by Western Union to Philco dealers and distributors throughout the U. S. *Collier's* itself, to call attention to the unprecedented ad, will run ads in New York, Philadelphia, Chicago and Detroit.

Following this event, ads will also appear in *Saturday Evening Post*, *Good Housekeeping*, and *Liberty*, and Philco has also scheduled a series in 195 key newspapers.

Joyce Reports on Newburg Television Sales Tests

(Continued from page 11)

"The satisfaction which television-set owners have reported with their purchases, seems to me most significant of all. All of the engineering arguments about television, pro and con, take second place, in my opinion, to the verdict of the buyers. The answer to the question: 'Is television technically perfected to the point where it should be allowed to develop as a commercial service?' is to be found with the present-day owners of television receivers. What do these people say? Are they satisfied with the picture quality?"

"The answer is an emphatic—YES. The owners of television receivers do not experience all of the imaginary troubles that have been painted for television by those who, for reasons best known to themselves, are opposing progress. Television has had its baptism of fire and has proved itself ready to go.

PERHAPS 50,000 IN 1940

"Our merchandising test clearly and unmistakably indicates that there is a market for from 25,000 to 50,000 television receivers during the next 12



Tom Joyce of RCA reviews the results of his company's experiment with lower prices on television receivers.

months. With the announcement by Mr. Sarnoff of RCA's successful development of the 'missing link,' namely a low-cost automatic radio relay system for television, thereby making possible a television network, it is conceivable that if the FCC gives television the amber or green light, sales for 1941 will exceed 150,000 units and sales for 1942 300,000 units.

"This is on the assumption that the FCC will grant now the applications that are before it for 18 television licenses and that these stations would be on the air the early part of 1941. RCA is all set to provide the first step in a radio relay link, by connecting stations in the area extending from Washington, D. C. to Boston, Mass., thus making television programs available to 20,000,000 people.

"There is no better time to start television on its way to becoming a nation-wide service than right now. For nine months, the industry has demonstrated a system of television that has worked day in and day out

Dependable, Inexpensive
CRYSTAL PICKUP
Model AB-8

List Price
\$10⁰⁰



Model AB-8 is a new, high-performance crystal pickup, ultra modern in styling and available in standard statuary brown and other finishes. Spring-axial cushioning. Astatic's famous Type B Cartridge with ehonite water-proof coated crystal element. Tru-Tan offset head. Threaded stud base for single hole mounting. Massive new die-cast arm. Eight inch mounting centers. Effective reduction of noise and feedback from motor board vibration. Dependable as well as inexpensive. An ideal pickup for better phonographs or radio phonograph combinations. Complete Astatic Catalog No. 12 available.

ASTATIC MICROPHONE LABORATORY, Inc.

Astatic Crystal Products Licensed Under Brush Development Co. Patents **YOUNGSTOWN, OHIO**

and has given the public what the owners of television receivers have decided is excellent technical performance."

SHOULDN'T DELAY NOW

There are those who argue that the commercialization of television should be delayed pending the outcome of tests on several *untried* ideas that are still in the laboratory. This type of reasoning should apply equally as well a year from now, five years from now or at any date in the future one might name. There will always be new ideas in the laboratory which need to be tested before their value can be established. That's what laboratories are for. People could argue at any future date, just as sincerely as those who are arguing now, that a regular commercial television service should be delayed until the ideas then in the laboratory have been fully explored. With that kind of reasoning we never could have any industrial progress.

"The present industry standards are satisfactory. Not only have outstanding engineers testified on that point, but the owners of television receivers have given their approval. Competent witnesses have testified that there is room for growth and development within the industry standards. They have testified that using present industry standards pictures can eventually be 100 per cent or more better than they are today—with tremendous improvement in picture contrast, pic-

ture detail and picture brightness. Who is there to say that, using the present industry standards, the picture quality which has already been proven to be commercially acceptable, cannot be improved even beyond that indicated by the experts?

"The price that the public will pay for television is a relative matter. Last year the American public spent more than one and a quarter billion dollars for smoking tobacco. It has all gone up in smoke and might be called an economic waste. A billion two hundred fifty million dollars would put 4,000,000 television receivers in American homes at an average price of \$300 and leave enough over to build 400 television transmitters. Last year the

American public spent \$400,000,000 for cosmetics, \$500,000,000 for soft drinks and \$150,000,000 for chewing gum—enough to put almost another 4,000,000 television receivers into American homes.

"Television is here. There are those in the radio manufacturing industry and the radio broadcasting industry who are eager, willing and ready to give the American people that which they have been asking for—sight as well as sound by radio. The most progress can be made by letting those who are able and willing to serve the public go forward. With encouragement television will take its place within the next five to ten years as a great industry serving the public."

New Sales Manager at Shure Bros.

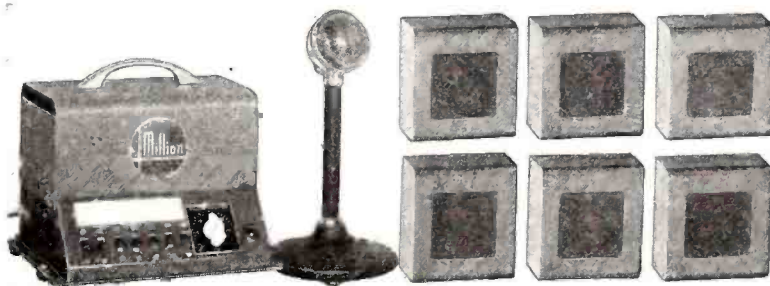


Jack Berman, boosted to post of sales manager for Shure Bros. of Chicago.

Jack Berman is now the sales manager for Shure Bros., Chicago. He was promoted to the post to succeed his brother, Gene Berman, who resigned to form his own company in the camera field. Jack has been with Shure for the past six years, and enjoys wide experience in sales promotion and research in the sound field.

The new sales manager plans to spend a good part of his time out in the field, where he has many acquaintances, and where he will assist Shure jobbers and sound men with selling ideas.

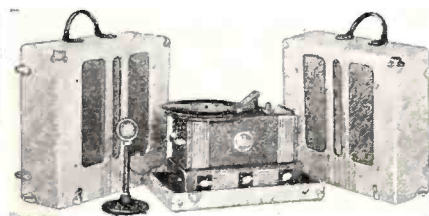
MILLION CALL SYSTEM



Complete 10 watt call system, including tubes, shield, microphone, table stand and six 3-inch P.M. speakers in cases. Call any one or all stations at will. No. S10-3.

\$79.95
LIST

Complete system with six 6-inch speakers in cases. No. CS10-6. **\$99.95**
LIST



MILLION P.A. SOUND

The 1940 *Million* line of Sound Equipment is smartly styled and streamlined. Incorporates all the wanted features. Approved by the Amplifying Contractors Association of Chicago.

SOUND JOBBERS

If sound is an important part of your activities let us show you how to increase your VOLUME AND PROFIT. If you are passing up sound let us show you how to get PROFITABLE SOUND BUSINESS IMMEDIATELY. We have the answer on sound distribution.

Portable system available with or without Phono Top. One microphone, one phonograph input. Complete system less phono top and tubes, but with shield **\$99.50**
For two microphone inputs add **5.00**
For Phono Top add **19.45**
Amplifier only less tubes and shield..... **32.50**



LABORATORY MULTIMETERS

You get more for your money in Million test equipment. Just look at these features:

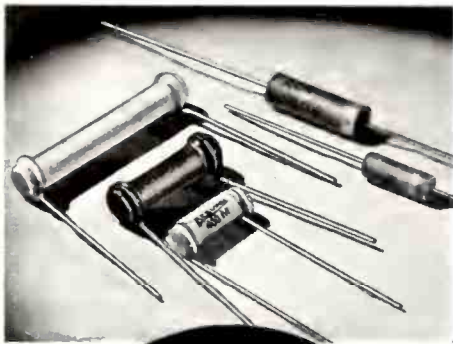
★Built-in test leads. ★AC-DC Volts, 0-6-120-300-1,200. ★DC Milliamperes 0-1-30-300-600. ★Ohm meter 0-1,000 (50 ohms at mid scale), 0-2½ megohms with self contained batteries. ★Decibels minus 10 to plus 12. ★Large 4-inch meter. ★Size 8 x 5½ x 3½ inches. Shipping weight 4 lbs.

MODEL VV—1,000 ohms per volt. Complete with handle, rubber feet, batteries and instructions. **\$14.95**

MODEL OM—Supersensitive meter with 20,000 ohms per volt. 50 microampere and 40 megohm scales. Size ranges and appearance similar to Model VV..... **\$24.95**

MODEL VOA—5,000 ohms per volt. Same scales as Model VV but reads to 10 megohms and has 200 microampere meter. **\$17.45**
Dealers Cash Price

• MILLION RADIO and TELEVISION •
697 W. OHIO STREET CHICAGO, ILLINOIS



Worthy
of the
AEROVOX
good name



★ Don't overlook the resistance part of the AEROVOX octagonal symbol! It means that, in addition to an outstanding line of condensers of all types, AEROVOX also offers a choice of essential resistors to the really critical component buyer.

WIRE-WOUND RESISTORS

★ Pyrohm Jr. Fixed Types in 10 and 20 watts. All popular resistance values from 1 to 100,000 ohms. Also Slideohm Adjustable Types in 25, 50, 75, 100 and 200 watt ratings, 1 to 150,000 ohms. These power resistors represent the very latest advances in the art. Instead of wasting time with meaningless claims, all we ask is that you try them. Especially so since prices are "right".

CARBON TYPE RESISTORS

★ Again we have sought the very latest advances in the art. Two types offered: Insulated Molded Carbon with carbon resistance element permanently imbedded in crackproof casing of insulating material; Lacquer-Coated Carbon with heavy carbon element properly protected. Both types are RMA color coded. Again, prices are "right".

Ask Your Jobber . . .

★ Along with those AEROVOX condensers you are ordering, ask for some of these better grade resistors in your required wattages and ohms. Also ask for the new 1940 catalog—or write us direct.



Abrams Heads Radio Group in Benefit Event

Ben Abrams, president of Emerson Radio & Phonograph Corp., is the leader of a large group of radio manufacturers, distributors, dealers who will cooperate in a big-scale philanthropic at the Hotel Astor on Feb. 25th. The dinner, dance and reception will honor Paul Felix Warburg, and will commemorate the 40th anniversary of the National Jewish Hospital at Denver, a non-sectarian institution for the benefit of the tuberculosis poor in the U. S.

To serve under Mr. Abrams, who is co-chairman of the dinner, are Jules M. Smith of Davega City Radio Corp. and Max Kassover of Vin Radio & Sporting Goods Stores. Mr. Abrams is planning a series of luncheons for radio men to take place regularly between now and Feb. 25th.

Mannheims is IRC Export Head

Hans Mannheims has been named manager of the Foreign Sales Dept. of the International Resistance Co., 401 N. Broad St., Philadelphia, Pa. He succeeds Robert E. Keiser who has entered another line of work.

Mr. Mannheims was formerly Mr. Keiser's assistant and has many years of experience in foreign sales and export shipments. The company's export policies will continue unchanged under his supervision.

Winney Gets New Post At Thordarson

From Thordarson Electric Mfg. Co. comes the announcement that the company's Directors have elected L. G. Winney treasurer of the firm. He was given the post after serving as credit manager for Thordarson since joining the company in 1934.



L. G. Winney gets a new position at Thordarson, Chicago.

Previous to his five-year period with this firm, Mr. Winney was an executive of the Marshall Field organization. He has a widely recognized familiarity with the problems of dealers and jobbers and thus is "in thorough accord with the Thordarson policy of helpful cooperation with the trade."

West Coast Raytheon Expansion

The West Coast offices and warehouse of Raytheon Production Corp. have been moved to new and larger quarters at 1045 Bryant St., San Francisco. The improved facilities are needed as a result of increased sales in the area, according to the company's announcement.

Emerson to Omaha

Recently named as distributor for Emerson in the entire state of Nebraska is the Omaha Appliance Co., with offices and showrooms located at 1720 Jackson St., Omaha. In charge of Emerson promotion there is Paul W. Jacobus.



M. G. O'Harra, left, Norge vice-pres. in charge of sales, and James A. Sterling, general merchandise manager, look over the exam papers turned in by jobbers and jobber personnel who took 100-question quiz at Norge merchandise clinic. The 198 "students" average 80%. W. G. Whittingham of Radio Distributing Co., Detroit, and J. M. Sandifer, Cain & Bultman, Jacksonville, tied for first, with 96%.

**Commercial Credit Offers
New Financing Plans**



The Commercial Credit Co. vice-pres. H. B. Mathews was a speaker at Philco's Palm Beach, Fla., jobber convention. Herewith he announces CCC's new financing plans for dealers.

Commercial Credit Companies have announced new finance plans for 1940, with a considerable reduction in the finance charges required of the appliance buyer. This general reduction in rates applies to radios, as well as all other home appliances, and a new, simplified Commercial Credit chart entirely replaces all others in dealers' hands.

Commercial Credit also announces two new plans of dealer operation, in addition to its present ones. The new Dealer Reserve Plan permits the dealer to receive a large portion of the finance charge as a special reserve to apply against his contingent liability on paper discounted.

GOOD MERCHANTISERS

H. B. Mathews, CCC vice president, in commenting on the Dealer Reserve Plan, said:

"We recognize and appreciate that more sales and larger gross profits do not *always* result in greater net profits in any business. The appliance dealer has proven himself to be one of the outstanding merchandisers. His manufacturer and distributor have given him a sales discount which retailers in most other lines would consider extremely liberal. And yet the average appliance dealer's net profit shows a very small return on sales or capital investment. One major reason for this is the drain on profits resulting from the special cost incident to selling on a time payment plan. Our new plan provides a reserve to the dealer which should be ample to stop this profit leak and give the dealer the full profit to which he is entitled on the time sales of his merchandise."

As an optional plan for dealers Commercial Credit also offers a Purchaser Discount Plan at the same rates to the buying public. Under this plan, however, instead of the dealer getting a reserve, a discount is given to the purchaser who pays his account promptly.

It is entirely up to the dealer whether or not it is to his advantage to select the Dealer Reserve Plan, the Purchaser Discount Plan, or the Limited Liability Plan.

Only **AMPERITE**
gives you THE ACOUSTIC COMPENSATOR
and these **5 VITAL FEATURES**

- (1) It's a VELOCITY
- (2) It's a DYNAMIC
- (3) It's UNI-DIRECTIONAL
- (4) It's NON-DIRECTIONAL
- (5) Gives HIGH or LOW PITCH

By moving UP the Acoustic Compensator you change the Amperite Velocity to a DYNAMIC microphone without peaks.
THE ACOUSTIC COMPENSATOR (also Cable Connector and Switch) are standard on these models: RBHk (hi-imp); RBMk (200 ohms), chrome or gunmetal. LIST \$42.00 . . . RSHk (hi-imp), RBSk (200 ohms), chrome or gunmetal, . . . LIST \$32.00.

PUSH UP TO INCREASE HIGHS
PUSH DOWN TO INCREASE LOWS

AMPERITE KONTAK MIKE, Model SKH, IDEAL FOR MUSICAL INSTRUMENTS. CAN BE USED WITH ANY AMPLIFIER, AND WITH RECORD PLAYERS AND RADIO SETS . . . List \$12.00; Plug extra, \$1.50 list.



Specify **AMPERITE** C. 561 BROADWAY, N. Y. U. S. A. CABLE ADDRESS ALKEM, NEW YORK

AMPERITE MICROPHONES

Fast Action • Low Priced
TRIPLET
TRIPLE VALUE TUBE TESTER MODEL 1213

FOLDEX TUBE CHART!
A folding "card-index" system, giving quick and complete tube data with the additional advantage of new tube supplements mailed free to registered users.

Only \$2200 Complete

● Model 1213 contains all sockets to check present-day tubes, including Loctals, Bantam, Jr., and the new 1.4-volt Miniatures. Tests High Voltage series including 117Z6G; also gaseous Rectifiers. Filament voltages in 20 steps from 1.1 to 110 volts. Neon shorts test and Ballast tube continuity test. Has RED • DOT Lifetime Guaranteed Instrument. Complete in Black Baked Enamel Suede Finish Case. Dealer Net Price, \$22.00.

Write for catalog! Section 192 Harmon Drive

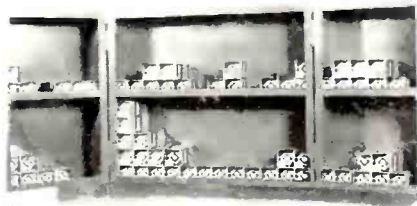
THE TRIPLET ELECTRICAL INSTRUMENT COMPANY
Bluffton, Ohio

NEW BATTERY TESTER!

Model 696 speedily checks ALL dry batteries under proper loads. Eleven loads from 1½ to 135 available by selector switch control. . . . This tester is the first to provide a GOOD sector for all dry batteries in common use. . . . Model 696 also can be used as a 1,000 ohms per volt Voltmeter with nine DC ranges, 2-4-8-10-25-50-75-100-150 volts. . . . Net Price \$7.84

SALES HELPS

Folding Stock Boy Now Ready

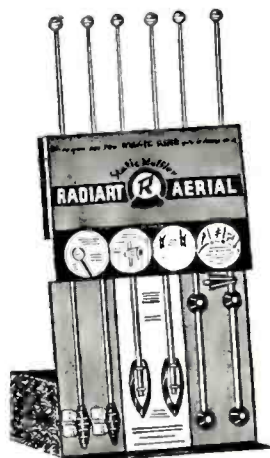


A new "Stock Boy," in folding style, which holds 240 tubes is being announced by Hygrade Sylvania to jobbers, dealers, and servicemen. It has two free-swinging parts which, when open, become convenient shelves measuring 60 inches. The hinged compartments can be closed and the Stock Boy is then a small compact unit. It helps to prevent dirt and dust from spoiling the appearance of tube cartons.

The cabinet is designed to be hung on a wall or stood on a flat surface, and is a space-saver for many servicemen who have limited space for tube stock.

Aerial Display for Dealers

The 1940 Radiart aerial display is the latest in a series of aerial mer-



chandisers designed by Radiart to help move aerials off the dealer's shelf.

The display holds six of the more popular types of aerials and has an attractive printed panel with a sales message on quality features of the Radiart line.

Radiart jobbers now have the displays in stock and can give dealers full details on an extra-profit deal.

Lively Display in Vibrator Offer



To boost jobber sales, a novel counter display in three colors is now being offered, in limited numbers, by the Meissner Mfg. Co., Mt. Carmel, Ill. The display features the firm's recently re-designed vibrator, and packs a big

sales appeal by pointing out the features of the new element. Six leading replacement items are included, and a special price plan permits the resale of the unit with extra profits to the dealer-serviceman.

Special displays for use by jobbers themselves are also offered, and this Meissner campaign in the vibrator replacement business also includes wall charts, guides, catalog sheets, etc.

Bantam "GT" Display and Stock Cabinet from Hytron

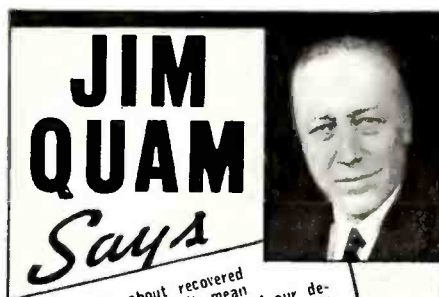


To help radio men stock the new "GT" series of tubes, the Hytron Corp., Salem, Mass., has just designed a special cabinet in red, white, and blue baked enamel. This display rack does away with the need of stocking the small tubes beside the larger ones, where they may get lost or disarranged.

The Hytron display cabinet is offered free to dealers and servicemen with the purchase of an assortment of 50 Bantam "GT" type tubes at regular discount from the list price of \$46.30.

In addition to taking care of current tube replacements, this assortment of 23 different types will replace a total of 55 metal, "G," and "GT" tube types.

The cabinet measures 8 x 20 inches high and is only 4 inches deep; it is useful in extremely small spaces. It will stand up by itself, and has vertical guides to keep tubes in line.



**JIM
QUAM**
Says

We've just about recovered from the flu. I don't mean that I had it, but so many of our department heads were down at once, it was almost unanimous.

Hardly a pleasant experience, nevertheless, it gave me a good idea of the efficiency of our organization. As one after the other went to bed, I began to worry. But nothing happened. Speakers kept coming off the line, thousands of them every day, as though the whole executive staff was still on the job. When those departments kept right functioning without their bosses, then I knew I had a really efficient organization.

It's something like a well-built speaker—it just goes on and on, performing so smoothly you never know it is there. Ask a service-man some time, how many Quam Speakers he has to service!

QUAM-NICHOLS CO.

33rd Place & Cottage Grove 1674 Broadway
CHICAGO NEW YORK



A GOOD NAME GOES A LONG WAY



Ken-Rad Radio Tubes are being used in ever-increasing numbers by radio manufacturers as original equipment.
KEN-RAD TUBE & LAMP CORP.
OWENSBORO, KY.

Export Dept.
116 Broad St., New York, U. S. A.
Cable Address: Minthorn, New York

★ KEN-RAD ★

DEPENDABLE RADIO TUBES

**More Lines, Fewer Frames,
Claims Dumont Television**



Allen B. Dumont of Passaic, N. J., whose television sets automatically follow 400 to 800 line scanning.

A form of television permitting a wide range in number of lines from 400 to 800, and employing as low as 15 frames per second, with screen material of persistent character which reduces flicker, was described by Allen B. Dumont of the Dumont Laboratories, Passaic, N. J., before the Federal Communications Commission hearings on television. Mr. Dumont protested against freezing the present RMA standards, claiming automatic flexibility for his own system of scanning, with numbers of lines and frames adjustable at will. He also argued that narrower bands of frequencies would be required under the Dumont principle, cutting down the necessary width from six megacycles to four megacycles.

Dumont representatives complained that the RMA standards would not permit the full flexibility of the new vertical-synchronizing system, with its adjustability of frames and lines. The system of vertical synchronization employing a short pulse of 0.5-megacycle energy has proven entirely adequate

for producing interlaced pictures either at 441 lines per frame and 30 frames per second, or at 625 lines per frame and 15 frames per second. This method of producing higher definition introduces the problem of increased flicker.

The flicker problem has been attacked by varying the composition of the receiving-tube screen material. While the ultimate in this screen material has not yet been achieved as to color, the flicker itself is practically eliminated even at 15 frames per second. Moving pictures employing a continuous projector have been shown to demonstrate the freedom from blurring with moving objects on this "time-delay" tube material and operating at 15 frames per second.

**Nelson Gets Sales
Post at Gale**

Announced by L. H. D. Baker, sales manager of Gale Products, Galesburg, Ill., is the appointment of Richard G. Nelson to the Gale refrigerator sales department. Mr. Nelson has formerly enjoyed success in sales, manufacturing and engineering posts with Frigidaire, Westinghouse, Leonard, Universal Cooler, and others.

At Gale, Mr. Nelson will be engaged in special sales promotion work in the field.

**Stewart Warner Holds
Convention Series**

A series of sectional conventions are being held this month by Stewart Warner, to introduce to distributors and key dealers the 12 new radios the company has announced. The meetings occur in Chicago, New York, Dallas and San Francisco, with L. L. Kelsey, radio division manager, and C. R. D'Olive, manager of the refrigerator division, announcing new plans for sales and promotion.

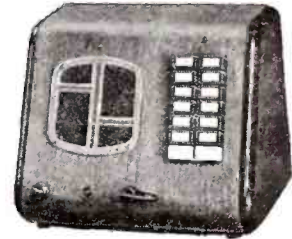
**Finn Speaks on
Television**

A featured speaker for the 150 members of the Masonic Club of Wilmington, Del., last month was David J. Finn, advertising manager for RCA Mfg. Co. Mr. Finn spoke on the subject of television, and illustrated his remarks with the new RCA movie, "Television."

**NEW! OPERADIO
INTERCOMMUNICATION
SYSTEM**

**New Improvements!
New Developments!**

Incorporating the very LATEST "do more—do better" features



MASTER STATION

Includes amplifier, speaker unit, and stationary selector switches.

The NEW Operadio INTERCOMMUNICATION SYSTEM is the culmination of all suggestions received from the trade... plus our years of engineering, manufacturing, and sales



SPEAKER STATION

Includes Speaker Unit only.

experience in the field of inter-communication and sound equipment.

All the new developments and improvements, as well as the System itself, are fully explained in Catalog 17. Write for it.

OPERADIO

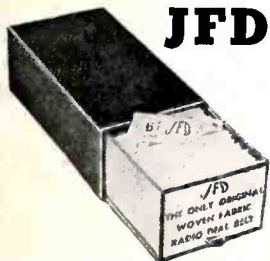
MANUFACTURING COMPANY
Dept. RT 2 - - ST. CHARLES, ILLINOIS
Export Division: 145 W. 45th St., New York



All Operadio Amplifiers and Intercommunication Systems are Licensed by Electrical Research Products, Inc., under U. S. Patents of American Telephone and Telegraph Company and Western Electric Company, Incorporated.

You need BELTS—you need BALLASTS—and you need this new

JFD 80-Page BELT and BALLAST BOOK



containing
Accurate compilations of belt replacement data covering 90 belts for 900 models made by 38 set makers, including 1940 sets—all listed by set and belt number.

Jobber's and Servicemen's kits of JFD Woven Fabric Belts, identical to original belts used in all popular sets.

Wiring diagrams and installation data on AC-DC ballasts.

Kits of A, B and C-type adjustable ballasts to replace over 2,000 types, listed by type numbers.

Your copy of the 80 page Belt and Ballast Book is

FREE WITH EITHER ONE OF THESE KITS

Order yours today from your jobber

J. F. D. MANUFACTURING CO.

4111 Ft. Hamilton Pkwy., Brooklyn, N. Y.



Servicemen's Belt Kit No. B25A, contains 25 belts. One each of the most popular numbers.

You pay only for the belts

Servicemen's Ballast Kit No. 770, contains 5 adjustable AC-DC ballasts, of 3 types mentioned above.

You pay only for the ballasts

126* JOBBERS *Can't* BE WRONG

When 126 of the Country's leading Radio Parts Distributors come forward of their own volition and pay for the privilege of adhering to a code of ethics of merchandising—there *must* be a reason.

There is a reason—it's MORE PROFIT. These 126 far seeing Jobbers realize that the NRPDA has taken great strides in its endeavor to remove destructive price competition; in assisting to develop better understanding; in creating a greater measure of goodwill, confidence and respect on the part of Servicemen and Dealers.

They have found that cooperation with Dealers, Servicemen and other Members insures profits. You, too, will find that the benefits which accrue after becoming a Member of the NRPDA far outweigh the small cost of membership.

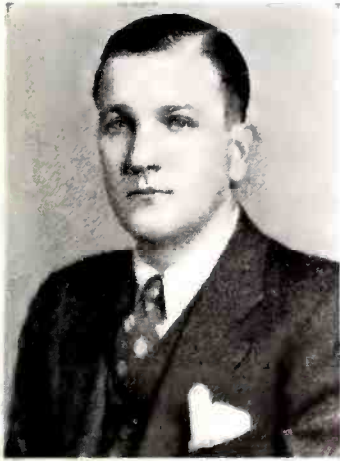
You can secure full information by addressing the Executive Secretary.

*This advertisement was prepared in September, 1939. Present Membership is substantially in excess of this figure.



the mark of an ethical merchandiser of advertised radio brands

OFFICE OF THE EXECUTIVE SECRETARY
5 WEST 86th STREET
NEW YORK, N. Y.



Officers of the company include John B. Milliken, president; Hamilton Hoge, vice-president; George H. Hobson, treasurer; and Martin Van B. Morris, secretary. Directors include Richard D. Lunn, John R. Fales, and Frederick A. Lindley, chief engineer.

Sonora Meeting Sets Pace for 1940 Sales

A big sales meeting, staged last month by Sonora Radio & Television Corp., Chicago, found representatives from all parts of the U.S. on hand for the firm's first-of-the-year announcements. Program events included introduction of 1940 models, factory tours, promotion announcements, etc.

Sonora's new package plan promotion, announced by Joe Gerl, drew generous applause from the guests as they listened to the bigger and better merchandising plans outlined for 1940.

"The 1940 presidential campaign plus a greatly increased demand for industrial sound equipment will make this year a banner one for sound operators," says R. C. Reinhardt of Atlas Sound Corp., Brooklyn, N. Y. The firm is now doubling its present manufacturing facilities and factory space.

U. S. Television 14-in Receivers

The United States Television Mfg. Corp., 220 E. 51st St., New York City, is now offering a line of 14-in. television receivers on the New York market.

The sets include both a table model and a console designed in Sheraton style, and made of a dull-finish mahogany. "This is most likely to conform to the decorative scheme of the high-income class home which television reaches," says vice-pres. Hoge, "as the great majority of these have mahogany furniture in some classic style. Our cabinet is one that these homes will be proud to have."

Set features include direct vision, spotless screen, simple tuning, five television channels, high fidelity sound, excellent linearity, giving better contrast and detail, large picture, standard broadcast receiver on every set, and fine engineering and parts quality. Sets are simple to service due to three-chassis construction, enabling any one to be pulled out for repairs. Price is \$395 for the table model and \$440 for the console.

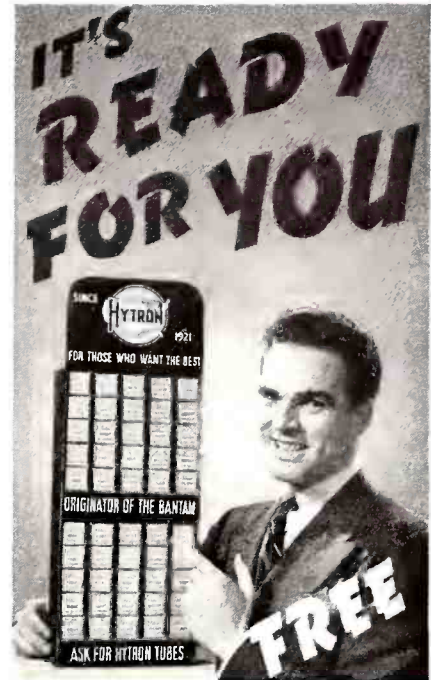
Rockey Sees Good Sales Ahead

"An unusually cheery outlook for 1940" among radio distributors and representatives is reported by G. V. Rockey, vice-president and general sales manager for Meissner Mfg. Co., who has just finished a sales tour in the Western states and the Pacific Coast.

Mr. Rockey found that West Coast jobbers were particularly enthusiastic about the new "vibrator sales plan and counter display deal" just announced by Meissner.

Radio Sales Rep To Open in Spain

Faustino Fernandez, who has been connected with a leading radio distributor in Havana, Cuba, and whose address is Maximo Gomez 353, Havana, is planning to open a business in Spain, as a radio distributor or representative for well known brands. Mr. Fernandez writes that he will be glad to present his references to interested manufacturers.



A COMPACT CABINET THAT STOCKS 50 BANTAM* TUBES AT YOUR FINGERTIPS!

You Dealers and Servicemen can appreciate just what this new HYTRON Tube stock cabinet will mean, because for a long time, you've found it difficult to stock BANTAM* type tubes on the shelf with the larger types.

Now for the first time, this attractive three-color baked-enamelled cabinet stocks fast-moving Bantams right at your fingertips—fifty of them—23 different types which will handle 55 popular replacements!

Only 8" wide by 22" high by 4" deep, the new Hytron Bantam Cabinet is compact enough to hang on the wall or to be placed on the counter. Not only is it helpful in storing tubes but it is a powerful *silent salesman* constantly reminding customers to buy tubes!

BY THE ORIGINATORS OF THE BANTAM

This "Bantam size" cabinet with vertical partitions has been designed specifically for the HYTRON Bantam "GT" Tubes—the *original Bantam Tube*. It's yours *FREE* with the purchase of the assortment of only 50 HYTRON "GT" Tubes at \$46.30 list, less the usual discount.

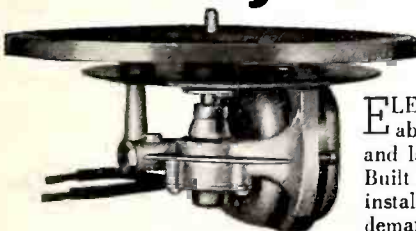
It pays you to stock HYTRON Bantam "GT" Tubes because they are interchangeable with the corresponding metal and "C" types. Seventy HYTRON "GT" Tubes will handle replacement of a total of 136 types. Shields are included where necessary. The Bantam is the most recent type of tube design. No wonder they sell *f-a-s-t* with a minimum inventory.

Get in a supply today. Contact your Distributor or write us direct for details about this assortment of fast-moving types. Remember—the stock cabinet is *FREE!*

*Trade Name Registered



Pick Profitable Motors for Your Phonograph Jobs



Above: New, light-weight induction-type "CX" model motor. Fan cooled. Bearings in sealed oil bath. Noiseless. Self-starting. Other new models, including wide range of choice.

ELECTRIC or spring-wound—light-weight for portables and table models, or heavy-duty for consoles and large combinations—get General Industries Motors. Built for maximum performance. Delivered ready to install. Priced to equip instruments for popular demand.

Order Samples to Test

Give frequency and voltage of current you use, size of turntable wanted.

Send for NEW Catalog

The GENERAL INDUSTRIES CO. 4038 Taylor St. Elyria, Ohio

MUSICAL TOWERS

For Bigger Sales and Service Returns

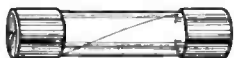
Here's a sure profit-maker! Handle the complete Sunco amplifying system of tower and belfry chimes. It's the best sound installation proposition in the field—not only do you get the best equipment, but also expert technical assistance and sales help.



Sunco "Master" has wide range of usage. Broadcasts chimes or organ music. Powered for 2, 6, and 12 mile dia. coverage. Can be used as P. A. unit. Automatic record changer play 10" and 12" records mixed. We have many specially recorded low-noise acetate discs for this work. Ask about them. **REAL MONEY FOR SOUND EQUIPMENT SPECIALISTS** — Protected territory, everything furnished, speakers, accessories, installation and service directions. Get the facts about this money-making offer. No obligation, **WRITE TODAY!**

SUNDT ENGINEERING COMPANY
4763 Ravenswood Ave., Chicago, Illinois

Sell & Use LITTELFUSES



Write for Catalog



Get this new catalog FREE. Shows complete line of Littelfuses for radio, transmitters, rectifiers, meters, instruments. **FUSE MOUNTINGS**—all kinds. When you want fuses — **LITTELFUSE!** See your jobber or write:

LITTELFUSE INC.
4763 RAVENSWOOD AVE. CHICAGO, ILL.

Simplest

WAY TO REPLACE BALLASTS

- 4 STANDARD TYPES of Amperite Regulators replace over 200 types of AC-DC Ballast Tubes now in use.
- Not to be confused with ordinary dropping resistors. Amperite actually regulates.
- Amperite Regulators are equipped with a patented Automatic Starting Resistor which prevents initial surge and saves pilot lights.
- Amperite AC-DC Regulators; List \$1.00. Amperite Replacements for 2V Battery Set ballasts List \$1.25

WRITE FOR REPLACEMENT CHART "S"

AMPERITE Co. 561 Broadway, N. Y. C.

AMPERITE

Peter L. Jensen Plays Big Radio Role

Peter L. Jensen, new vice-president of Utah Radio Products Co., 820 Orleans St., Chicago, has long been an outstanding figure in the fields of radio and sound reproduction.

Born in Denmark, Mr. Jensen as a young man worked for Valdimar Poulsen, inventor of the Poulsen Arc and the Telegraphone (steel-tape recording), from 1903 to 1910. In 1909 he was sent to the U.S.A. to erect in California two complete Poulsen-arc stations fully equipped for wireless telegraphy and telephony, with automatic apparatus for rapid sending up to 300 words per minute. The Federal Telegraph Co. was formed in 1910, and acquired the Poulsen U. S. patents.

Mr. Jensen resigned from the Federal company in 1910 after the Poulsen job was done, and with Edwin S. Pridham in 1911 formed the Commercial Wireless & Development Co. for the purpose of making further research in radio. Their laboratory was established in Napa, Calif., 35 miles from San Francisco.

"ELECTRO-DYNAMIC" PRINCIPLE

At Napa, in 1911, the principle that a moving conductor when attached to a diaphragm was capable of being made into an excellent sound reproducer, was discovered. Messrs. Jensen and Pridham gave the name "electro-dynamic" to this principle, a term now universally used. Early in 1915, the electro-dynamic construction was applied to a loudspeaker, creating a device capable of tremendous power handling capacity. By using high-power microphones Mr. Jensen succeeded in amplifying the human voice about 1,000 times, based upon acoustical power output. The powerful loudspeaker was heard a distance of 7 miles under favorable conditions in Napa Valley. It was at this point that the inventors coined the name "Magnavox" and applied it to the loudspeaker. The first public use of a loudspeaking system for reinforcing a speaker's voice took place on Christmas Eve, 1915, in San Francisco, when Mayor Rolph addressed an open-air audience of 75,000 people.

In 1916 Messrs. Jensen and Pridham applied for the first patent on an electrical amplifying phonograph, using a microphone for pick-up and a loudspeaker for the sound reproducer.

In 1917, Mr. Jensen became co-founder of the Magnavox Company, which took over all the assets and patents of the Commercial Wireless and Development Co. He served as chief engineer of the Magnavox Co. until 1925, when he resigned.

AIRPLANE AND PA WORK

During the World War Messrs. Jensen and Pridham developed for the Navy intercommunicating telephone systems for airplanes, a system based upon an anti-noise microphone. They also developed vacuum-tube amplifiers for amplifying audio frequencies, and in 1919 equipped the San Diego Stadium with a public-address system, wherein were used audio amplifiers and microphones remote from the speakers.



Herman J. Tauber, for the past four years in the advertising dept. of Radio Wire Television, Inc. (formerly Wholesale Radio Service Co.), has just resigned.

President Wilson used this system successfully to address 50,000 people September 19, 1919. This was the first public test of audio amplifiers and remote microphones, substantially as used today. Dynamic loudspeakers were naturally employed.

Magnavox loudspeakers were developed for radio reception in 1919 and 1920.

Mr. Jensen resigned from the Magnavox Co. in August, 1925, and founded the Jensen Radio Mfg. Co. in 1927, marketing a line of loudspeakers under the trade name "Jensen." He served as president of Jensen Radio Mfg. Co. until December, 1939, when he resigned to become vice-president of Utah Radio Products Co., Chicago.

Palestine Jobber Ready For Line of Parts, Tubes

Received by RADIO TODAY last week was an announcement from the Tel-Aviv, Palestine, area which reveals that a distributor there is now prepared to take on a line of American radio parts and tubes. A representative of the firm is now in the U. S. and can be reached through RADIO TODAY, 480 Lexington Ave., New York, N. Y.



Edward J. Rehfeldt, recently appointed director of foreign sales and sales promotion for Thordarson Elec. Mfg. Co.

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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 BOOKLETS

Catalog describing the entire new line of full range speaker equipment is available from Jensen Radio Mfg. Co., 6601 S. Laramie Ave., Chicago.

Complete new low-priced Audiograph Sound Equipment line is described in a new catalog offered by John Meck Industries, Randolph at Elizabeth Sts., Chicago, Ill. Will be sent upon request, mentioning this publication.

Folder illustrates panel mounting kits for 1940 car radios. Also the special cables and shaft bushings. Chart of kits for all cars. F. W. Stewart Mfg. Corp., 340 W. Huron St., Chicago, Ill.

New bulletin describes the Vibrotest insulation tester. This instrument also measures voltage and current. Associated Research, Inc., 16 N. May St., Chicago, Ill.

Bulletin 101-D covers the solderless fittings for small copper tube transmission lines. Isolantite, Inc., 233 Broadway, New York, N. Y.

Leaflet describes line of PM speakers and new Music Box speaker enclosures for 8 and 12-inch units. Atlas Sound Corp., 1447 39th St., Brooklyn, N. Y.

Seventy-six page product catalog gives complete line of coils, auto radio controls, resistors, capacitors, wire, and test equipment of Consolidated Wire and Associated Corp., Peoria & Harrison St., Chicago, Ill.

Replacement transformer catalog just off the press is labeled 352-E and is a complete service encyclopedia. Covers power, choke, and audio transformers for all model receivers. Free from parts distributors. Thordarson Electric Mfg. Co., 500 W. Huron St., Chicago, Ill.

Free illustrated bulletin describes the PA 240 watt RF amplifier kit manufactured by the Allen D. Cardwell Mfg. Corp., 81 Prospect St., Brooklyn, N. Y. Circuit diagram and instructions are included.

Belt and Ballast Book by J. F. D. Mfg. Co., 4111 Ft. Hamilton Pkwy., Brooklyn, N. Y., includes replacement belts for over 900 different sets. Ballast replacement charts, tester, and home antennas are illustrated.

Test equipment catalog is thumb indexed for the automotive and radio instruments made by Ted Nagle Equipment Corp., General Motors Building, Detroit, Mich. New radio equipment includes cath ray tube oscilloscope, and complete set analyzer.

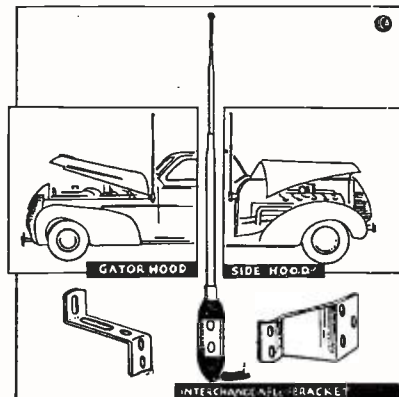
Free 256-page capacitor replacement manual may be obtained through jobbers. Manual gives all capacity values, working voltage, circuit diagram, and original part number. C-D Capacitor Manual for Radio Servicing. Cornell-Dubilier Electric Corp., South Plainfield, N. J.



UNI-MOUNT

UNDERHOOD ANTENNA

Only ONE Aerial for ALL Type Mountings



Fits All Model Cars Including Latest 1940 Styles. Dual Brackets designed so that they can be interchanged in a minute for both Underhood and Alligator types. Eliminates drilling of holes on body of car. Static discharge ball tip supplied on all type antennas. Made of Admiralty Brass. Triple-Chrome Plated. Guaranteed Rust-Proof. Both Underhood and Alligator Mounting Brackets are included as standard equipment with every aerial. No need for duplicating stocks—one Aerial fits on all cars. All antennas are supplied with Shielded Lo-Loss Lead-in Cable. Individually Boxed.

Write for 1940 Auto-Antenna Catalog

INSULINE CORP. OF AMERICA

30-30 Northern Blvd.
Long Island City, N. Y.



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OF MOST
SERVICED
RADIOS

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In one handy manual you have all the diagrams of the most often serviced radios today. Over 80% of all sets you service every day are included. These important, hint-giving, trouble-shooting circuits will make your job easier, permit faster and better repairs.

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Circuit data, hints, information are time-savers and money-makers for you. Let this diagram manual be your guide to bigger profits and easier service work. Why work blind-folded when 4 out of 5 diagrams you will ever need are included in this new low-priced manual. Compiled by M. Beitman, B.S., radio serviceman, author, teacher in Chicago schools.

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NEW SERVICE HELP

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Get your copy of this radio man's biggest time-saver. No need to spend money for bulky, space-wasting manuals. Only \$1.95 today, brings your copy of the handiest "on-the-job" handbook of useful diagrams. (Models 1926 to date.) Well printed, with complete service data and values, large size 8 1/2 x 11 inches. Limited quantity at the special \$1.95 price. Rush order now.

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Ship complete Service Manual. I may return the manual for a full cash refund if I am not satisfied.

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 Send C.O.D. I will pay postman \$1.95 and a few cents postage.

NAME
Write address below and send this corner.

What a "break!"

— for the READER
— for the ADVERTISER

in the 1940-41
edition of the

RADIO YEAR BOOK

and

TRADE DIRECTORY

To be issued in March
as a section of RADIO TODAY

Just think . . . the 4th annual buyer's guide, telling where to buy everything in radio and giving every advertisement a 12-month life . . . bound as a unit into a big, colorful merchandising issue of RADIO TODAY, vibrating with ideas and opportunities for the Spring selling season.

25,000 circulation guaranteed—Covering all worthwhile radio markets.

Remember . . . if you don't tell your full story in the RADIO YEAR BOOK, nothing that you can do later on will make up for it.

Don't wait. Order your advertisement today—opposite your directory listing (subject to prior sale).

RADIO
and Television
TODAY

480 Lexington Avenue, New York

Cooperative Radio Show Scores in NY Area

Further success is reported for the three-cornered radio promotion now in progress in the New York metropolitan area, where distributors and the Station WMCA are cooperating with the League of Metropolitan Appliance Dealers in a lively broadcast series presented in the interests of independent merchants.

Distributors whose products are mentioned in the program share the expense of the program, while in return the dealers see that WMCA tabs are installed on push button sets. To identify themselves with the promotion, dealers display a decalcomania emblem which shows that they are League members, and that they endorse the products of the cooperating distributors.

"Amdico" Under Way in New Quarters

Now that the reorganization of the Airplane and Marine Direction Finder, Inc., has been finished, the new Airplane & Marine Direction Finder Corp. has moved its laboratories and factories to Clearfield, Pa.

McMurdo Silver is general manager of the firm and Wm. F. Diehl is director of engineering and manufacturing. These execs report that "Amdico" is already busy on several government contracts recently received.

Transducer Labs in Development Work

All the manufacturing and experimental activities of Transducer Corp. are now being handled by Transducer Laboratories, under the direction of B. Eisenberg, located at 42 W. 48th St., New York City.

The Laboratories are handling all microphone sales and repairs that were carried on by Transducer Corp., as well as new experimental work in the electro-acoustic and allied fields.



Over 1,000 dealers saw this pre-showing of Motorola auto radio in a 3-day "open house" at Jackson Distributing Co., Chicago. The sets were shown on the new Motorola "Mainliner" display boards. D. M. Lucas of Jackson Co. reports "a flying start in auto radio sales for 1940."



The insignia being used by New York dealers as part of the League's promotion of independent dealers.

Ken-Rad Engineers Are RSA Stars

When the RSA of Evansville, Ind., held its annual banquet, two of the featured speakers were engineers from Ken-Rad Tube and Lamp Corp., Owensboro, Ky. G. W. Bain, Ken-Rad chief engineer, discussed frequency modulation, and C. R. Wexler, circuit laboratory head, spoke on recent trends in receiver design.

Garod in Triple Expansion

Garod Radio Corp. during January moved to new quarters at 70 Washington Street, Brooklyn, N. Y. "Our new plant," reports Maurice Raphael, general sales manager, "is three times the size of our former plant and in it is installed the most modern equipment for the efficient production of radio and television receivers."

"It's right up our alley for Profits"
 ... says **ELLIOTT WILKINSON**

of Wilkinson Brothers, Dallas, Texas

"Sure we're enthusiastic about the RCA Franchise! It's right up our alley for profits! Not only does it cover all three essentials in our kind of business—test equipment, receiving tubes and power tubes—but it means we can sell our customers products we know are well worth every penny that's asked for them! Nobody can compare with RCA. We're counting on doing a land office business in all three in our new store in Oklahoma City, as well as Dallas."



Only RCA Offers You All Three

1. TEST EQUIPMENT
2. RECEIVING TUBES
3. POWER TUBES

(Transmitting, Cathode Ray and Special Purpose Tubes)



Put this RCA Big Three to work for You!

YOU'LL find it pays! The RCA Franchise not only gives you *all* three, but the *top* three as well. Ask progressive Elliott Wilkinson, crackerjack Dallas Parts Jobber, who has been doing a whale of a job with everything in his line.

He'll tell you RCA has had more service experience in every field of radio and sound than any other organization. That's why RCA Test Equipment is tops. RCA developed the receiving tube business... no one else has contributed so much. RCA quality is widely recognized... acceptance is without equal... profit for you is assured. And no one questions the leadership of RCA in the power tube field. With types of tubes no one else makes... with performance based on a knowledge of transmitter requirements that only the manufacturer of transmitters can have... RCA Power and Special Purpose Tubes have no peer.

Never forget... only RCA offers you all three... and the best in all three.

Over 335 million RCA Radio Tubes have been purchased by radio users. In tubes, as in parts and test equipment, it pays to go RCA All the Way.



Tubes and Test Equipment

RCA Manufacturing Company, Inc., Camden, N. J. • A Service of the Radio Corporation of America

Motorola

AMERICA'S FINEST AUTO RADIO
for 1940

First again in 3 BIG WAYS

Eye Appeal

New streamline beauty that will make your eyes sing! Colorings fresh and sunny as a day in June. Prominent stylists acclaim its graceful lines. Yes, Motorola is "Lovely to Look At."

YOUR CUSTOMERS WILL RAVE ABOUT IT!

Ear Appeal

Step up—play it! Its clear, sweet, radiant tone will take your breath away. Touch the tone control—in comes your program accented just the way you like to hear it. Famous musicians and singers thrill to its matchless pitch. Yes, Motorola is "Delightful to Hear."

YOU'LL APPROVE ITS TONE WHEN YOU HEAR IT!

Price Appeal

There's no "can't afford me" about Motorola. The price tag's low—a model to fit everybody's taste and pocketbook. Real value that folks appreciate these days. More for your money, so people say. Yes, Motorola is "Easy to Own."

SALES WILL BE EASIER THAN EVER TO MAKE!

Nationally Advertised
to 60,000,000 Readers
In 11 Leading Magazines



Model 500 Motorola

7 TUBES • PUSH-PULL • 7" SPEAKER
6-STATION PUSH-BUTTON TUNING

\$49⁹⁵

OTHER MODELS FROM \$24⁹⁵ to \$69⁹⁵ LIST

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