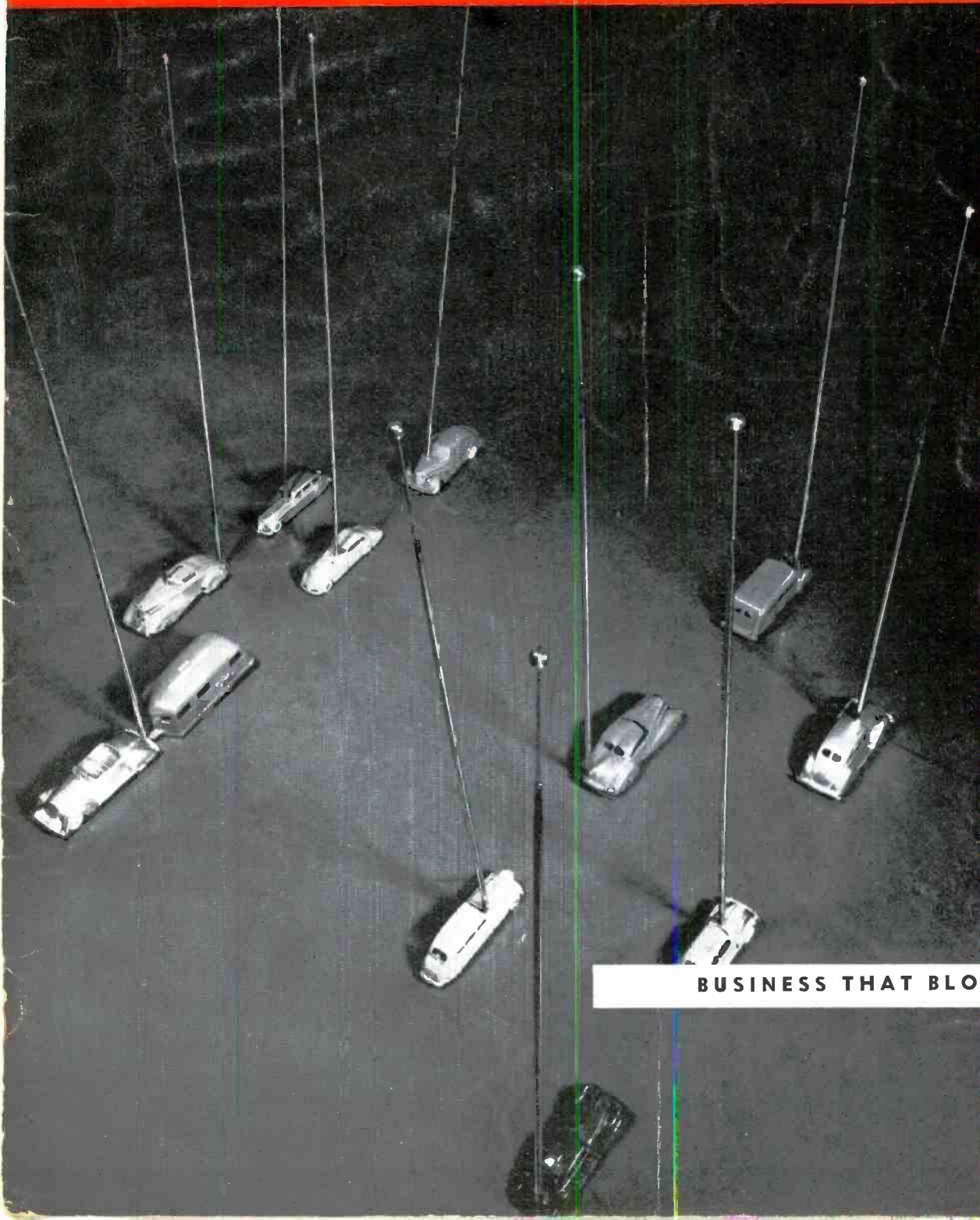


RADIO

*and
Television*

RETAILING

APRIL • 1940



LATEST ON F-M & TELE

SERVING SOUND MARKETS

BATTERY RADIO MODELS

NEW LINE SUGGESTIONS

STORE STREAMLINING

MERCHANDISING RECORDS

ELECTION TIE-IN TIPS

BUILT-IN SET PROFITS

JOBGING RADIO PARTS

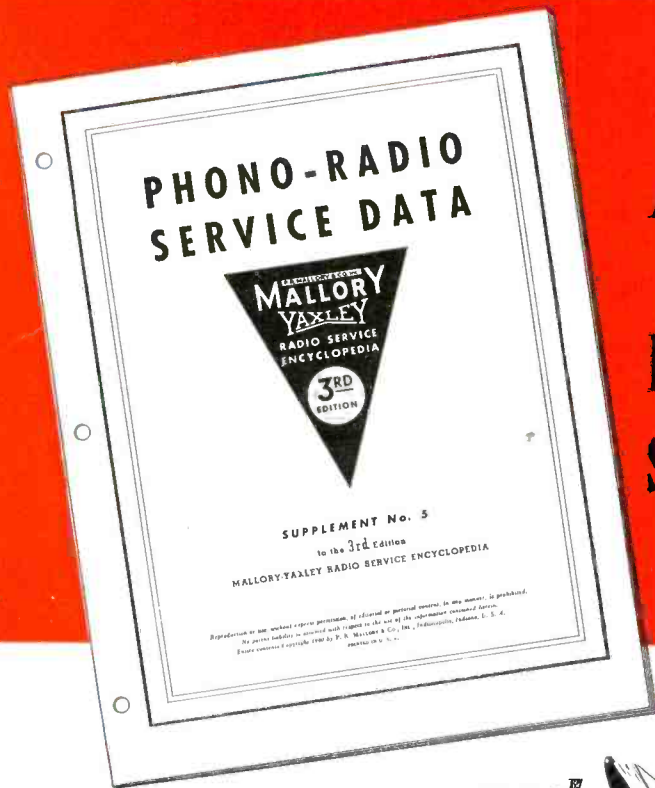
APPLIANCE SALES IDEAS

SERVICE SHORTCUTS

TWO NOISE SILENCERS

BUSINESS THAT BLOOMS in the SPRING

A
McGraw-Hill Publication
Price 25c



**There's
Extra Profit
in
PHONO-RADIO
SERVICE WORK**



**... and
the 5th Supplement
to the MYE helps
you get your share**

Here is the first compilation of complete authoritative data on representative types of Phono-Radio equipment . . . record players, record changing mechanisms, phono-radio combinations, recording apparatus and crystal pick-ups . . . their construction and their maintenance. It will save you plenty on the very first Phono-Radio job you tackle. Yet this 5th Supplement is just one-twelfth of the invaluable information that is yours with your subscription to the Mallory-Yaxley Supplemental Monthly Technical Service.

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Use

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

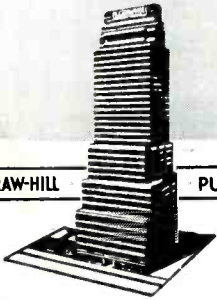
P. R. MALLORY & CO., Inc.
INDIANAPOLIS INDIANA

Cable Address—PEIMALLO

Use

YAXLEY
REPLACEMENT
VOLUME CONTROLS

RADIO *and Television* RETAILING



A McGRAW-HILL

PUBLICATION

APRIL 1940

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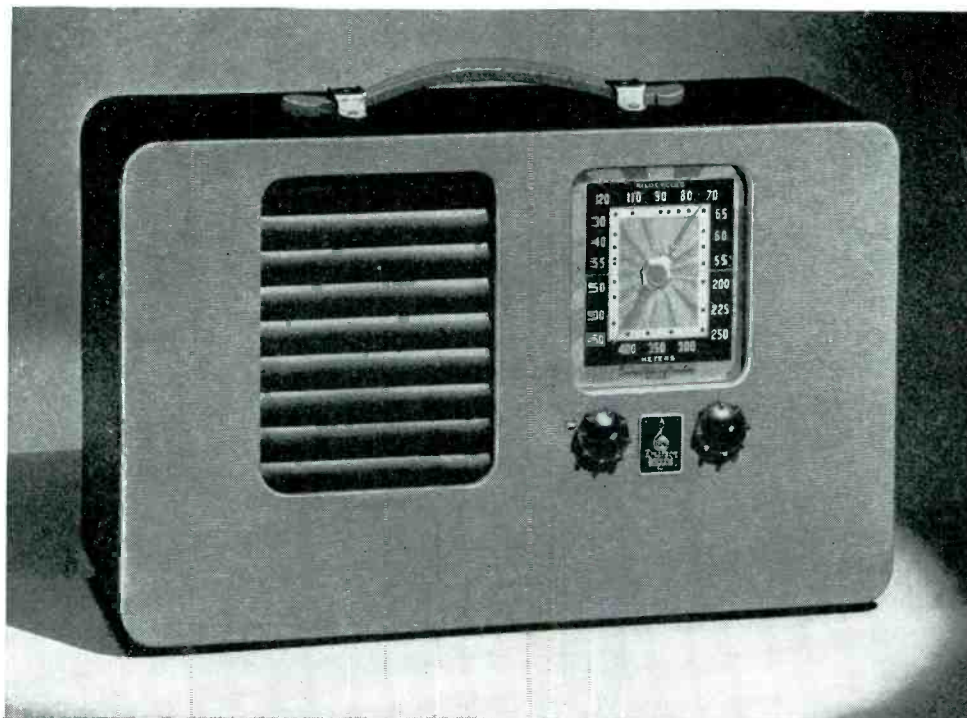
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SALES STATIC . . . I gotta have it back tonight!

EMERSON LEADS AGAIN

America's Most Outstanding New 1941 Portable Line, Including A Sensational Price Leader, "Super-Power" Long-Distance and American-Foreign Models, with New Exclusive Features . . . Priced for Volume Sale and Substantial Profit . . . Ask Your Distributor NOW!



"3-Way" Model 357—With 5-inch Permanent Magnet Dynamic Speaker . . . Large "Eye-Ease" Dial . . . Automatic Volume Control . . . Acoustically constructed cabinet finished in two-color fine grained simulated leather—tan front and maroon frame.



Model 339 COMPLETE \$29.95
With 6½-inch Permanent Magnet Dynamic Speaker . . . Large "Eye-Ease" Dial . . . Automatic Volume Control . . . Sliding-door cabinet finished in tan Old English grain simulated leather.

"3-Way" Model 338 (at right)
\$24.95 COMPLETE

Available in Old English Grained Tan or Buffalo Grained Blue.
With 5-inch P.M.D. Speaker—Large "Eye-Ease" Dial—Automatic Volume Control.

\$19.95

COMPLETE
WITH BATTERIES



"3-Way" Model 363 (above)
COMPLETE, \$34.95

AMERICAN—FOREIGN—POLICE
Super-Sensitive "Inner-Ceptor" Loop Antenna, specially designed and powered for long distance reception—6½-inch Permanent Magnet Dynamic Speaker—Large "Eye-Ease" Dial—Automatic Volume Control—Attractive cabinet finished in blue buffalo grained simulated leather.

**PRICES SLIGHTLY HIGHER
in WEST and SOUTH**

EMERSON RADIO AND PHONOGRAPH CORPORATION • NEW YORK, N. Y.

"World's Largest Maker of Small Radios"

WITH 3-WAY PORTABLES

Giving YOU the Promotion "Deals", the Irresistible Advertising and Point-of-Sale Materials—to Attract the Crowds and Cash In on EMERSON'S Undisputed First Place in ALL Markets!



Handsome catalog and sales-builder for use of dealers. Send for FREE copy.

HERE are but a FEW of the new 1941 Emersons—and how they do sing out their STYLE, TONE, PERFORMANCE, QUALITY, VALUE! Standard Broadcast models. . . Super-Power models for long-distance reception. . . American-Foreign models—and a GREAT price LEADER!

All Models are 6-Tube Superheterodyne—including separate output tubes for battery and electric power, respectively. Other exclusive Emerson features such as Automatic Error-Proof Power Shift, Extra I. F. Amplifier Stage, "Miracle Tone Chamber," Super-Sensitive "Inner-Ceptor" Loop Antenna.

Ask your Emerson distributor NOW for details of the advertising and sales promotion campaign—the Self-Selling Display Units—the window cards and literature—the dramatic newspaper mats.

Get started NOW and cash in on the great wave of Emerson popularity.

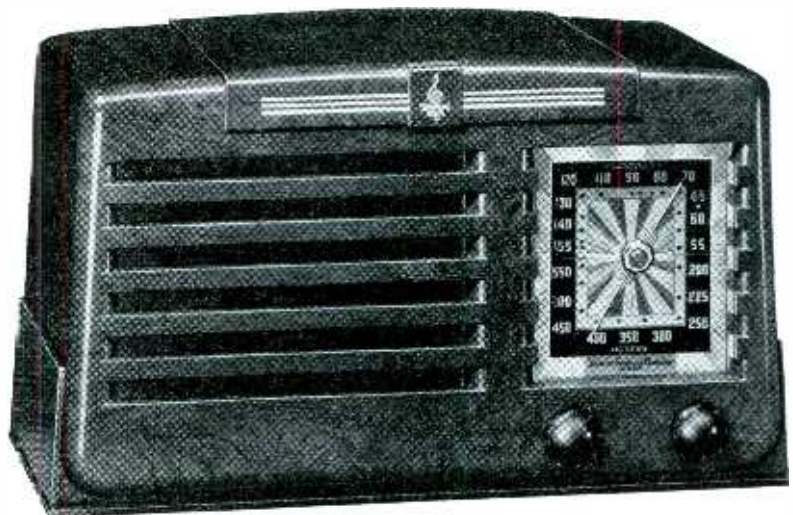
PLUS—More Money for You in a Great Promotion of the *Emerson* "CAMPAIGNER"

Super-Size Chassis
Bigger Loop Antenna
Wider-Range Speaker
"Miracle Tone Chamber"

With 6½-inch Electro Dynamic Speaker—Automatic Volume Control — Large "Eye-Ease" Dial — Large "Inner-Ceptor" Loop Antenna for increased sensitivity—no outside wires, just plug in.

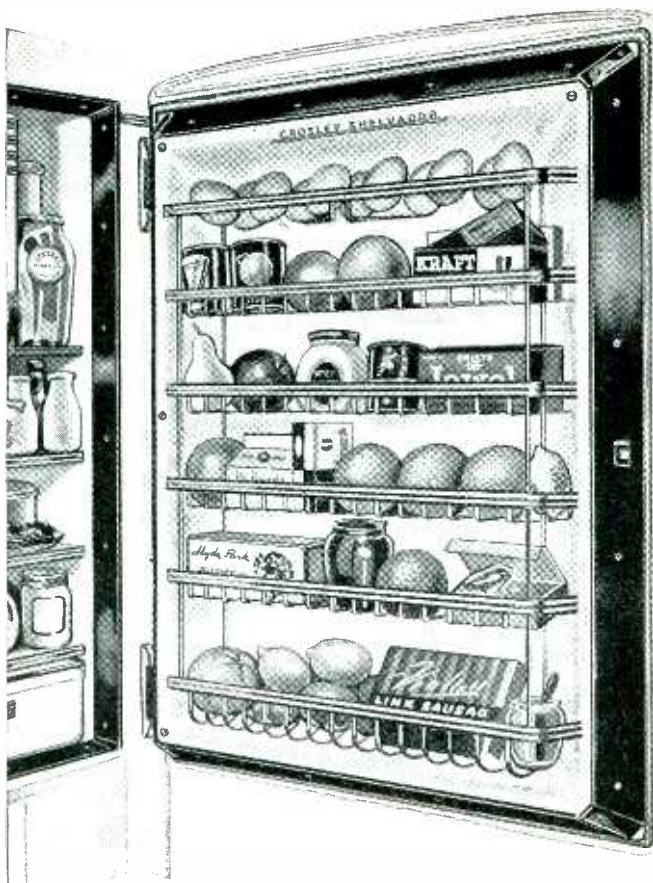
\$12.95

Slightly Higher in West and South



EMERSON RADIO AND PHONOGRAPH CORPORATION • NEW YORK, N. Y.
"World's Largest Maker of Small Radios"

CONVENIENCE SELLS THE **SHELVADOR!**



Every woman can see at a glance the advantages of the shelves-in-the-door. You don't have to argue that she needs

THIS ← **CONVENIENCE**

Point out the amazing mechanical perfection of 1940 Crosley electrical refrigerators. A woman will listen. It's impressive. **BUT** she's mentally stacking eggs in the Shelvador—packing fruit on its shelves—filling it with little items. She's selling herself that she needs

THIS ← **CONVENIENCE**

A woman takes the many features of Crosley refrigerators for granted. She acknowledges the superiority you claim—**BUT**, her attention is really on the Shelvador. It takes no elaborate explanation to show her how handy it is. She's convinced of

THIS ← **CONVENIENCE**

Selling Crosley refrigerators is just this easy. It's a different selling story. It's an "exclusive" selling story. "Convenience" is what women want most in refrigerators. You can demonstrate that the Shelvador has it. And you can prove that the Shelvador permits the storage of more food than any other refrigerator built.

THE **SHELVADOR** SELLS REFRIGERATORS!

Here's the best "step up" of the industry. 18 models. \$10 and \$20 steps—each logical and easy to sell.

Shelvadors sell at \$99.95 to \$249.95 with models designed for easy sales steps all the way up! You can instantly fit any family need and pocketbook! There's no high jump into long profit models.

CROSLY

Crosley incorporates the best features of 1940 electric refrigeration, and as a big "plus" Crosley has the Shelvador. Only Crosley has it. Only Crosley dealers have this "exclusive" feature. Cash in with it!

Prices slightly higher west of the Rockies.

WIRE - PHONE - WRITE
your distributor or the Crosley factory.

*The CROSLY CORPORATION, CINCINNATI,
Powel Crosley, Jr., President,
Home of the "Nation's Station"—WLW-70 on your dial.*

*Easy to Pick up
Lots of EXTRA CASH
in Your Town!*

★ Just Hook-up with
AIRTEMP
"Packaged" Plug-in-type
Summer Air Conditioners

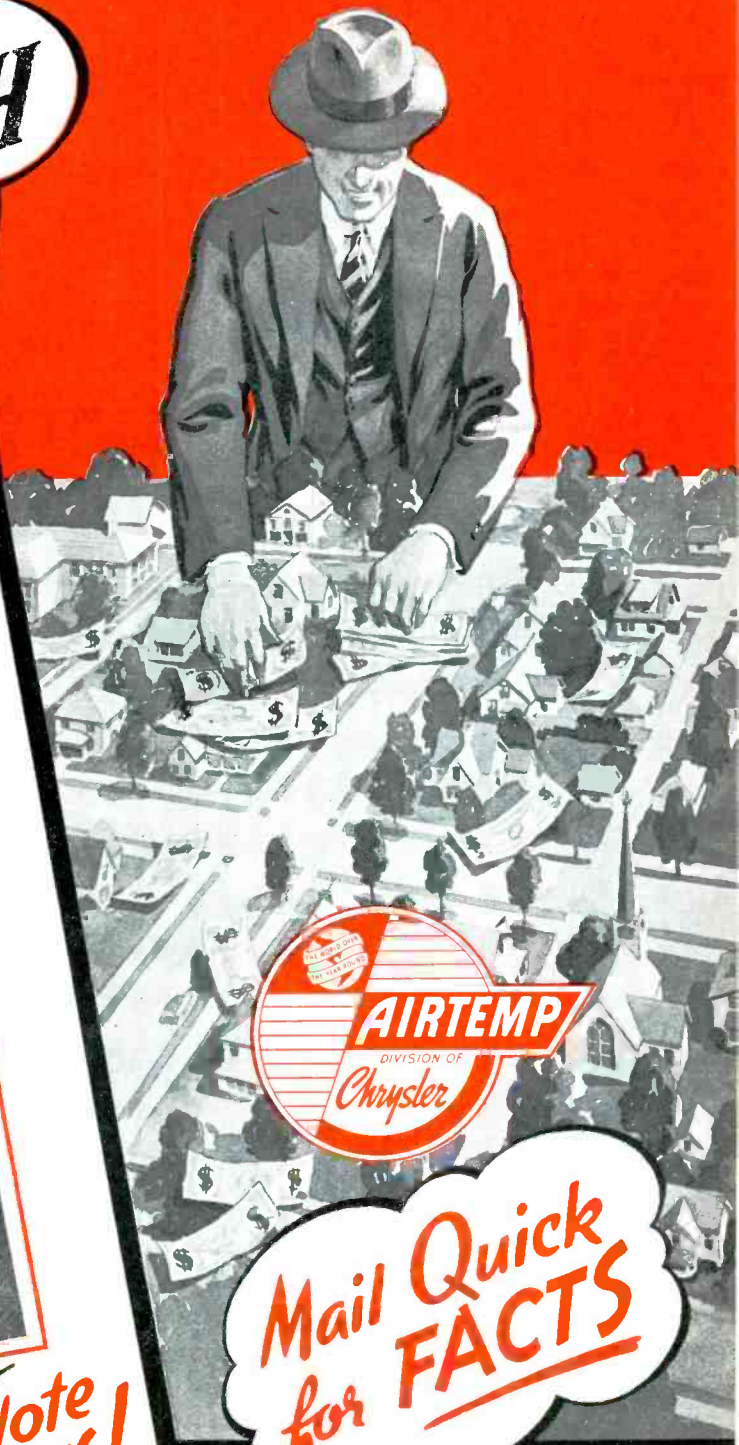


★ "You Can Sell Room Coolers"
— says "RADIO RETAILING"

See March issue, page 35. A few excerpts for your information:
"Room coolers are coming fast to chalk-up plus sales on dealers' charts to put plus profits in dealers' pockets."
"Not only are room coolers important to the radio-appliance dealer for their direct sales and profits, but for the many prospects for other appliances."
"The average man can now afford new, low-priced 'Packaged' units such as the AIRTEMP COOL-BREEZE."

We quote the above facts because we believe they hit the nail squarely on the head from the standpoint of earning extra profits this summer. And we'd like to add this about Airtemp "Packaged" Summer Air Conditioners. (1) Made and sold by a company whose name stands for excellence in engineering, skill in merchandising, and acceptance by the public. (2) Your present sales force can sell it. No engineering experience required. (3) No trade-ins. No allowances. (4) Merchandise superior in design and construction. (5) Your present customers are also prospects. (6) Backed by a sound merchandising plan. We feel that you'll be doing yourself a good turn when you mail the handy coupon at the right.

✓ **Note
FACTS!**



*Mail Quick
for **FACTS***

RUSH

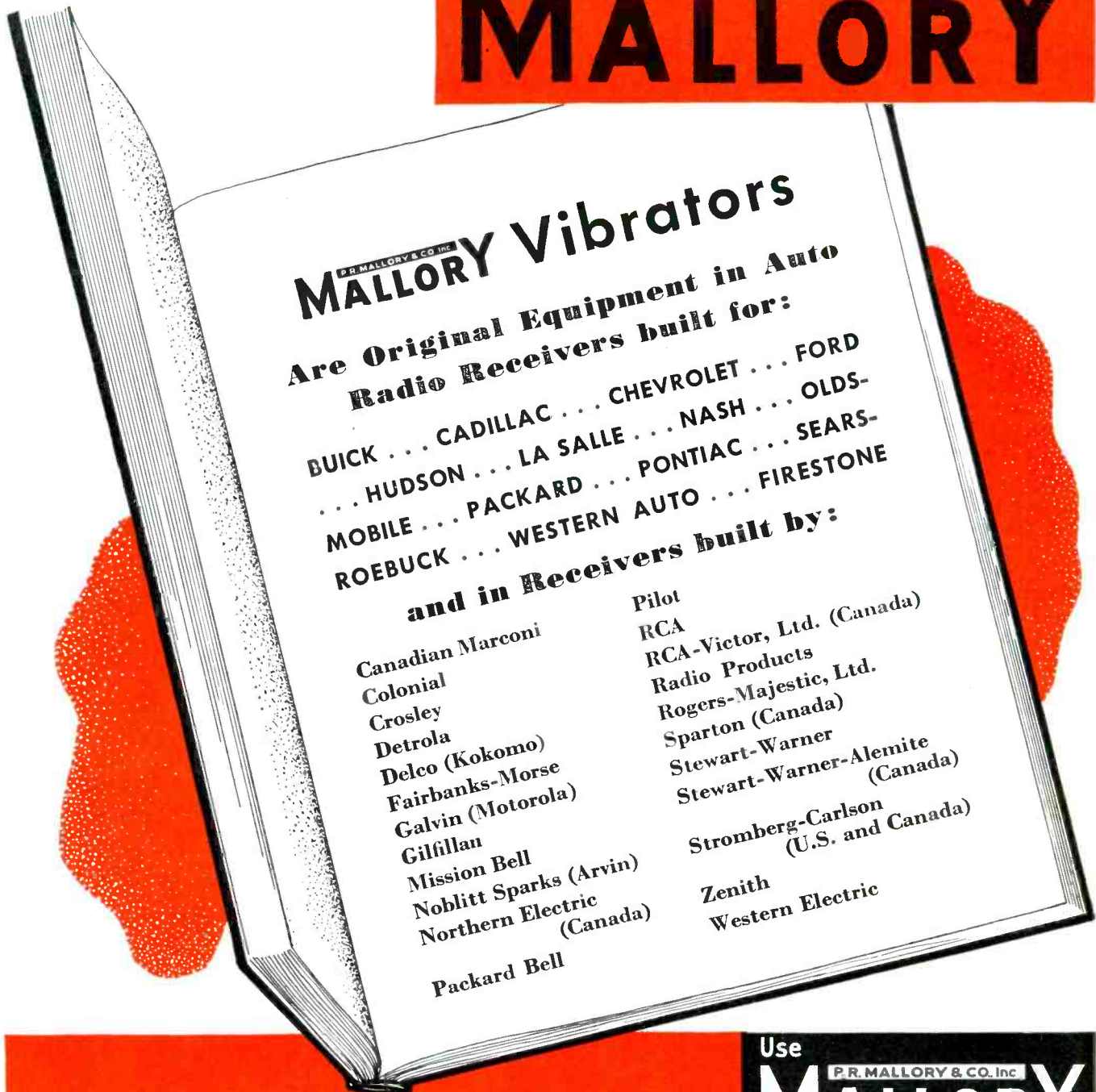
AIRTEMP DIVISION,
Chrysler Corporation,
Dayton, Ohio.

Looks to me like a real thing to get some extra summer business. Rush information about Airtemp Room Coolers and all available money-making facts.

Name.....
Address.....
City.....State.....
(Do you handle room coolers now? If so, please give make.).....

**Recite the BLUE BOOK
of Radio Manufacturers
and you'll name the users
of**

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



P. R. MALLORY & CO. Inc.
MALLORY Vibrators

**Are Original Equipment in Auto
Radio Receivers built for:**

- BUICK . . . CADILLAC . . . CHEVROLET . . . FORD
- . . . HUDSON . . . LA SALLE . . . NASH . . . OLDS-
- MOBILE . . . PACKARD . . . PONTIAC . . . SEARS-
- ROEBUCK . . . WESTERN AUTO . . . FIRESTONE

and in Receivers built by:

- | | |
|-------------------------------|--|
| Canadian Marconi | Pilot |
| Colonial | RCA |
| Crosley | RCA-Victor, Ltd. (Canada) |
| Detrola | Radio Products |
| Delco (Kokomo) | Rogers-Majestic, Ltd. |
| Fairbanks-Morse | Sparton (Canada) |
| Galvin (Motorola) | Stewart-Warner |
| Gilfillan | Stewart-Warner-Alemite
(Canada) |
| Mission Bell | Stromberg-Carlson
(U.S. and Canada) |
| Noblitt Sparks (Arvin) | Zenith |
| Northern Electric
(Canada) | Western Electric |
| Packard Bell | |

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



Vibrators

No wonder P. R. MALLORY & CO. Inc. MALLORY Replacement Vibrators lead with Radio Service Engineers

In practically 80% of all auto and other battery operated radios . . . Mallory made Vibrators are standard original equipment. They have won this position of leadership through merit alone. In the case of each manufacturer, the adoption of Mallory Vibrators has followed the most exhaustive efficiency and life tests.

Mallory Replacement Vibrators are identical in construction, quality and performance to those supplied to manufacturers as original equipment. As a radio service engineer, you

can't afford to ignore the advantages offered by Mallory Replacement Vibrators.

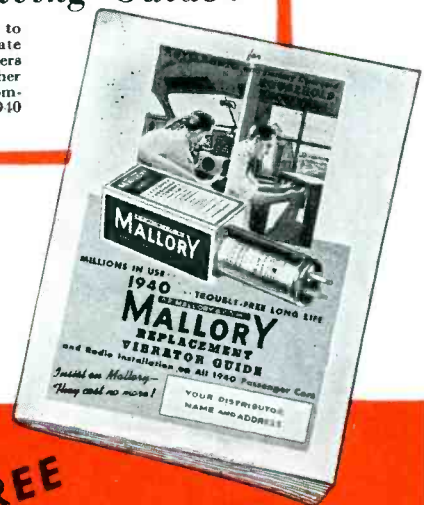
They insure satisfaction because you can make precision replacements of a character equal to . . . and in some special cases superior to that of the original vibrator itself.

Remember . . . it's your reputation that goes into every job you complete . . . so insist on the best. Mallory Replacement Vibrators cost no more.

P. R. MALLORY & CO., Inc.
INDIANAPOLIS INDIANA
 Cable Address — PELMALLO

Have You Asked for Your Copy of This Time Saving Guide?

Your distributor may still be able to supply you with this important accurate guide to Vibrator Replacements. Covers all models and makes of auto and other battery operated receivers. Includes complete dope on radio installation in 1940 cars. Better hurry!



Use **YAXLEY** REPLACEMENT VOLUME CONTROLS

IT'S FREE
 —ask your distributor



COMPARE THE FACTS!

*Sales Are Better Where Margins Are Better . . .
Thanks To Kelvinator's Sensationally Successful Step-Up
Plan. 79.8% of Kelvinator Dealers' Business Is In
Refrigerators From \$139.95* and Up!*

Yes, the evidence is pouring in—and it proves the soundness of Kelvinator's 1940 program.

Look at the chart showing the percentage of Kelvinator's sales by models and prices, and then compare these facts with your own sales. The evidence shows clearly that Kelvinator dealers are selling higher priced merchandise.

Those who sell Kelvinator have more than a selling plan . . . they have a *working* selling plan. And it's working because it was carefully planned months ago with logical and easy-to-sell step-ups between models. There are low-priced models for the vast low income market . . . and beautiful, full-featured models (including the new "Moist-Master" controlled humidity system) specifically designed to get the rapidly-growing replacement business. Throughout Kelvinator's

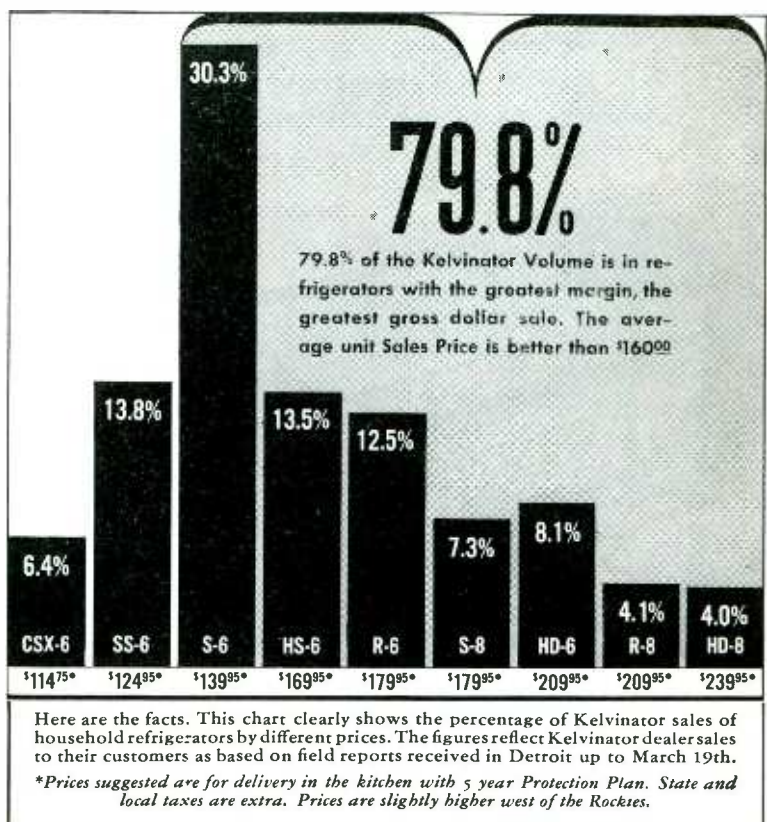
line of sixes and eights the salesman can step-up sales because plus-features in each step offer visible and provable added value to the customer.

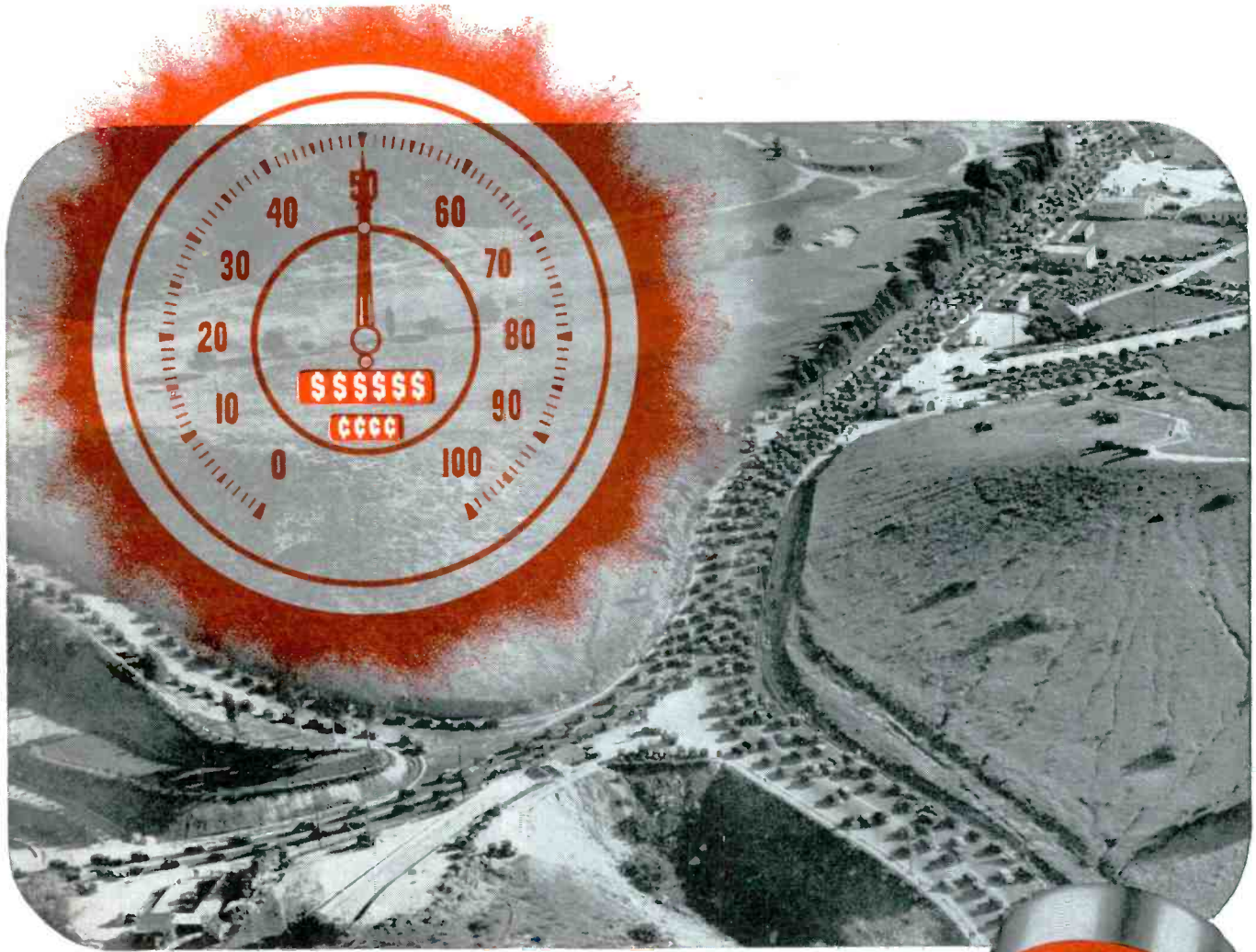
Kelvinator's Step-Up Plan might just as well be working for you. Get ready now for the heavy selling season that's just ahead. See your nearest Kelvinator Distributor or Branch Office—or write or wire direct to Kelvinator Division, Nash-Kelvinator Corporation, Detroit, Michigan.

KELVINATOR

SAYS

*Look at the Size!
Look at the Name!
Look at the Price!*





WATCH YOUR *Profit-Mileage* GO UP WITH UTAH VIBRATORS

More cars on the roads—more Utah Vibrators in cars. You, too, can cash in on the constantly growing preference for the vibrators carrying the Utah trade-mark. (Last year the increase in demand for this one Utah product alone amounted to 63%—and it's still going up.)

Bigger profits and satisfied customers are assured. Utah's rugged, time-proved construction provides absolute dependability. Only the finest materials available are used in the manufacture of Utah



Vibrators. They are "Life Tested" in Utah's laboratory—the industry's most versatile and best equipped. And they carry a 12 months' guarantee—against defective workmanship and materials.

WRITE FOR YOUR FREE COPY of the new vibrator replacement bulletin. It's complete—contains all the information a competent serviceman needs for auto radio and battery-operated home receiver replacements—just tell us where to send your copy. Utah Radio Products Company, 810 Orleans St., Chicago, Ill. Canadian Sales Office: 560 King Street West, Toronto. Cable Address: Utaradio, Chicago.



The Utah line provides exact replacements for every vibrator requirement.

VIBRATORS

SPEAKERS • TRANSFORMERS • UTAH-CARTER PARTS

Are you satisfied
with small potatoes
..... when the
BIG ONES
are easier to dig?



THE STEWART-WARNER DUAL-TEMP OFFERS YOU THE ONLY COMPLETELY DIFFERENT AND EXCLUSIVE SALES STORY IN THE INDUSTRY—AND THE MOST POWERFUL ONE!

NEW! FREEZING LOCKER at 22 below freezing holds over 50 pounds of food—offers savings and safeguards never known before! Preserves freshness and flavor for weeks at a time! Greatest demonstration feature in years!

NO WILTING AND DRYING! Genuine high humidity in every inch of the regular storage space!

STERILE AIR! Sterilamp rays kill bacteria, prevent mold, eliminate ice box odors!

NO DEFROSTING! No moisture stolen from foods to form frost!

NEW ROOMINESS! Full shelves clear to the top—no frosty coils!

Get all the story from your Stewart-Warner distributor—or write Stewart-Warner Corporation, Chicago.

STEWART-WARNER

REFRIGERATORS ANOTHER STEWART-WARNER PRODUCT

A DEPENDABLE PRODUCT BY A DEPENDABLE COMPANY

Also Makers of Magic Keyboard Radios and Electric Ranges

You used to make real money on a refrigerator sale. Remember?

But your discount on today's \$119—or \$99—or \$89 sale is darned small potatoes compared to your discount on the \$199—or \$219—or \$249 you used to take in . . . and that several thousand smart dealers are still taking in today!

Prices are down because saturation is up. But what does that make you? With prices cut to half what they used to be, can you locate and sell *twice* as many prospects, to make the same income as before?

You used to get good prices because you sold housewives a *replacement* for their old ice boxes—sold them far better food and health protection than they had ever known. *Today those same housewives are still able and willing to pay good prices for something BETTER. But they're not interested in "the same old thing—priced cheap."*

The proof? Several thousand dealers, with the higher-priced, higher-profit Stewart-Warner Dual-Temp, are selling 60% replacement business against around 25% for the rest of the industry—by selling a new, far better kind of food protection to replace the kind you're still selling!

You too can "dig big potatoes, not little ones," if you sell . . .

- the only refrigerators that answer every objection and every demand of the replacement buyer . . .
- the only refrigerators that prospects can't duplicate down the street at a lower price . . .
- the only refrigerator that replaces the well-known faults of other refrigerators with advantages never before offered!





the
BOOK-CADILLAC
*Center of
 the Auto World*

...insists upon
**RAYTHEON
 TUBES**



Popular meeting places
 are the Book-Casino (top)
 and the Motor Bar (right).

Probably not in all the world is there a place to compare with the Book-Cadillac, Detroit, as the accepted rendezvous for the giants of the auto industry and other leaders in the business, civic, and social life of our nation. Here they gather for conventions, balls, and banquets. They know, and demand, the utmost in service, convenience and comfort. And here they get it . . . for it is the progressive policy of the management to provide it.

Among other modern facilities for their enjoyment is a superb 84-tube radio installation, operated from a central control and transmitting music and voice from any source to numerous function rooms and lobbies. Of course, the tubes are the heart of such a system. So in the Book-Cadillac they must be the best obtainable . . . RAYTHEONS! "They give us a feeling of confidence," says L. E. Ames, executive of the hotel, "for at all times their performance is the peak of perfection."

Remember, these RAYTHEONS are "stock" tubes, the kind that are giving such outstanding service everywhere. For back of them are years of experience of expert engineers who devote their time exclusively to developing and improving tubes for every purpose. They are constantly pioneering in tube design and construction . . . constantly anticipating future requirements in the fast-moving radio circuit field.

When you use RAYTHEONS for replacements, you know you are supplying tubes that meet the most exacting demands of important users. It builds good-will! It builds business! It gets you the important service contracts! It increases profits! Yet RAYTHEONS *cost no more!* No wonder the *businessmen* in service work use RAYTHEONS.



**WORLD'S LARGEST EXCLUSIVE
 RADIO TUBE MANUFACTURERS**

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

LOOKS LIKE \$50 MORE.
PERFORMS LIKE \$50 MORE..
WORTH \$50 MORE..



A NORGE SUPER-VALUE THAT STOPS THE SHOPPER

When prospects shop around as they do nowadays, a product must have FEATURES to make them stop, look and listen, features that add up to a BIG VALUE total—plus a price tag that talks business to average pocket-books.

That's the kind of product you have in the new Norge ME-34 Electric Range. Its eye-appeal is instantaneous. Its size is impressive. Its lavish equipment, sturdy construction,

fine workmanship and beautiful finish give it the appearance, the performance and the value your prospects associate with ranges costing easily \$50 more.

Seven Norge models cover the entire electric range field. Floor stock of four will sell most women. New extra generous finance plans for your customers and for you. Investigate the complete line of Norge appliances . . . the opportunity for profit from matched unit sales.

NORGE DIVISION BORG-WARNER CORPORATION • DETROIT, MICHIGAN

In Canada: Canadian Radio Corporation, Fleet Street, Toronto
ROYAL ROLLATOR REFRIGERATION • ELECTRIC AND GAS RANGES
WASHERS AND IRONERS COMMERCIAL REFRIGERATION

1940
NORGE DIVISION BORG-WARNER CORPORATION
670 E. Woodbridge Street, Detroit, Michigan
RUSH ME DETAILS of Norge 1940 Electric Range line. No obligation, of course.

Name _____
Firm _____
Address _____
City _____ State _____ B.R.111

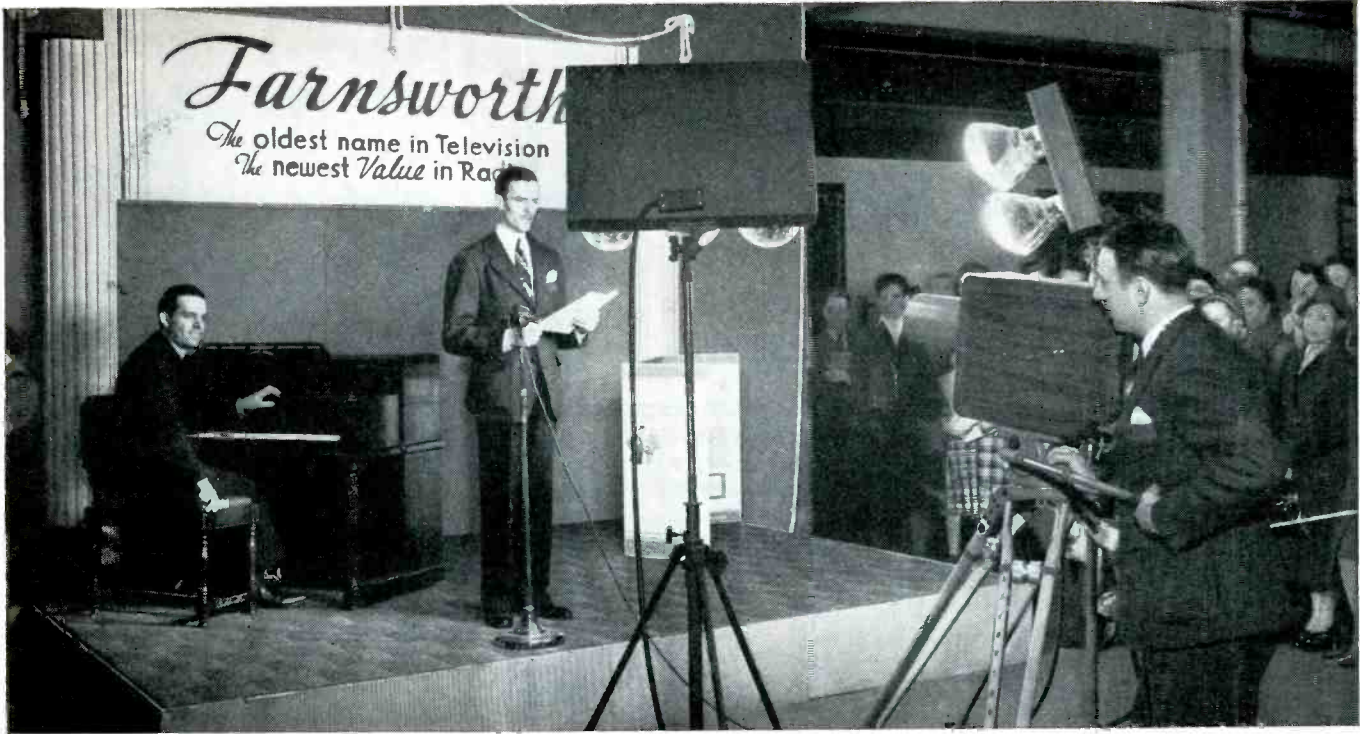
SEND THE COUPON FOR FULL DETAILS ABOUT THE

NORGE

ELECTRIC RANGE

Ever See So Many BIG VALUE FEATURES on a LOW-PRICED ELECTRIC RANGE?

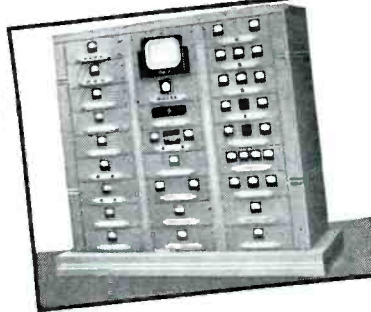
- 1 BIG DIVIDED COOKING TOP, two inches longer than usual, gives maximum work space in the center.
- 2 FOUR TOP ELEMENTS—1-2000 w. power-speed element for speed cooking; 3-1200 w. closed elements.
- 3 NEW SIX-HEAT SWITCHES.
- 4 TWO LIGHTED SIGNAL INDICATORS—one for oven, one for top elements.
- 5 CONVENIENCE OUTLET ON BACK RAIL.
- 6 EFFICIENT OVEN, sealed bottom, two elements totaling 4000 w. for preheating and 2350 w. for baking. Performance equaling ovens with much higher wattage.
- 7 HIGH-SPEED BROILER, waist-high.
- 8 OVEN HEAT CONTROL with pre-heat, bake and broil switch.
- 9 OVEN LIGHT HEAT INDICATOR.
- 10 TOP OVEN VENT prevents wall soil.
- 11 FULL 20-INCH OVEN TAKES LARGEST ROASTER.
- 12 COMBINATION BROILING and ROASTING PAN.
- 13 TWO OVEN RACKS—non-tilting, non-spill, easy-out.
- 14 EMBOSSED OVEN RACK SLIDES.
- 15 ONE-PIECE, PORCELAIN ENAMEL OVEN LINING.
- 16 FULL ROCK WOOL INSULATION.
- 17 BIG STORAGE COMPARTMENT.
- 18 FLUSH BACK fits close to wall.
- 19 RECESSED FRONT for toe room.
- 20 BEAUTIFUL NEW DESIGN with monogram nameplate in white and gold enamel.
- 21 BEAUTIFUL REFRIGERATOR PORCELAIN ENAMEL FINISH.
- 22 SPARKLING CHROMIUM TRIM.
- 23 WELL TYPE COOKER at low extra cost for extra economy in cooking soups, cereals; for deep fat frying.
- 24 LAMP and AUTOMATIC TIME CONTROL CLOCK at low extra cost; can be attached by anyone in a few minutes.
- 25 Backed by the reputation and resources of the Borg-Warner Corporation, of which Norge is a Division.



1 The show begins! The Farnsworth Television Camera picks up the actions of the speaker and converts them into electrical impulses.

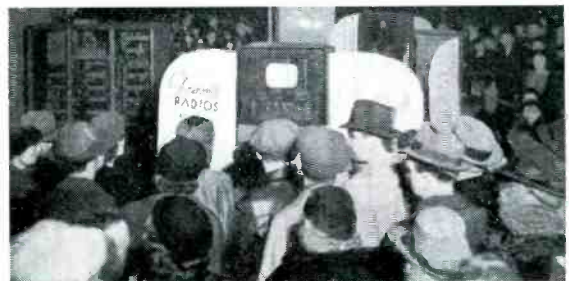
Farnsworth

2 Control Board of the Farnsworth Mobile Unit . . . which amplifies the video impulses from the camera, injects blanking and synchronizing pulses and feeds the composite signals to the receivers.



has brought half a million people their first sight of television

3 Crowds watch . . . as these signals are reconverted into moving images on the Farnsworth Television Receivers.



FROM Portland, Oregon, to Portland, Maine . . . in little villages and in towering cities . . . the nation-wide Farnsworth Television Tour has given half a million men and women a wholly new experience in their lives . . . *actual television!*

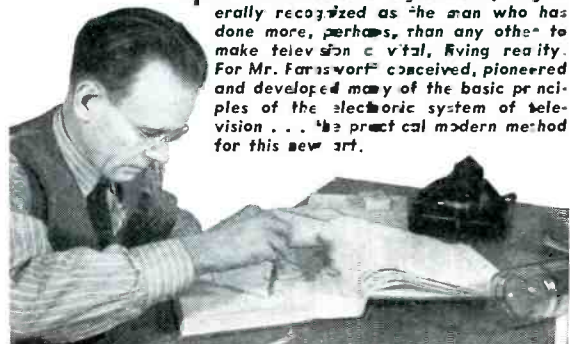
Every show in Farnsworth dealers' stores has been packed and jammed with people. The demonstrations of the Farnsworth Traveling Unit have awakened keen public interest in television . . . the new art in whose development Farnsworth has played a major role. *And enormous store-traffic has been created through the radio departments where Farnsworth radios are sold.*

The Farnsworth Television Tour is another of the many spectacular Farnsworth promotions to help Farnsworth radio dealers move more Farnsworth merchandise. From coast to coast, it has helped dealers establish the fact that Farnsworth is the greatest name in television and the rising name in radio. In the months ahead, Farnsworth dealers will profit from many new aggressive promotional activities. Get the complete story from your Farnsworth distributor. *Your future is with Farnsworth!*

WATCH FARNSWORTH FOR '40!

Farnsworth Television & Radio Corporation, Fort Wayne and Marion, Indiana

4 Philo T. Farnsworth, Director of Research of the Farnsworth organization, is generally recognized as "the man who has done more, perhaps, than any other to make television a vital, living reality. For Mr. Farnsworth conceived, pioneered and developed many of the basic principles of the electronic system of television . . . the practical modern method for this new art."



**"The RCA Franchise hits the
Profit Jackpot every time!"**

...says *A. L. Cowles,*

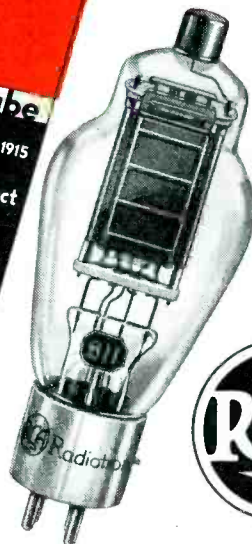
BLUFF CITY DISTRIBUTING COMPANY, MEMPHIS, TENNESSEE

"Here's the way I look at the RCA Franchise: RCA is the only company that has a complete line of products essential to a business like ours. It has test equipment, receiving tubes and power tubes—the Big Three. In addition, there's the RCA name. A

name that stands for quality. Hence with the RCA Franchise we can not only sell a *standard complete line*—but one we *know* will give satisfaction to our customers. That's why I think the RCA Franchise hits the *profit jackpot* every time."



**Let the RCA *Big Three* help you
hit the Profit Jackpot!**



DOWN Memphis way A. L. Cowles is one of the best liked men in town. And he's a man whose keen, straight thinking is respected by all. When he says something is profitable you can be sure he knows it from experience.

He says RCA Test Equipment is tops in the field. And no wonder... for it is backed by more actual service experience in radio and sound than any other equipment is. Cunningham Receiving Tubes are tops, he says. And that's natural, too... because

RCA was first in the business. No other tubes command as much acceptance. Cowles says RCA is tops in Power and Special Purpose Tubes. And no one questions that! RCA builds types no one else can offer. Values are highest all along the line because RCA knows the requirements of transmitters as only the leading manufacturer of transmitters can.

Only RCA offers all three... and the best in all three. That's the point to keep in mind when you're in business for profits.

Only RCA offers You All Three

**TEST EQUIPMENT RECEIVING TUBES
POWER TUBES**

(Transmitting, Cathode Ray, Special Purpose Tubes)

Over 95 million Cunningham 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 CO., INC., CAMDEN, NEW JERSEY
A Service of the Radio Corporation of America**

Hotpoint

OFFERS A NEW SALES ANGLE FOR WASHER DEALERS

NOW YOU CAN CONDUCT A COMPLETE HOME LAUNDRY ACTION DEMONSTRATION IN YOUR STORE!

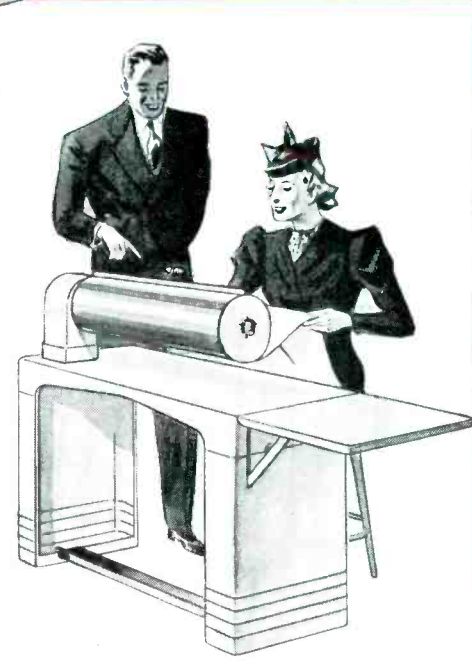
The Complete Home Laundry
INTRODUCING THE HOTPOINT
TUMBLER DRYER



1. "I've given more demonstrations and actually closed more sales with Hotpoint's 3-Step, 3-Profit Plan, than ever before in such a short time. But I'm not surprised — it's the most logical sales plan I've ever seen. You see, first, using the Hotpoint Washer as an example, you actually demonstrate for your prospect Hotpoint's famous Thriftivator washing action, and show her how Thriftivator action REMOVES THE DIRT BUT SAVES THE CLOTHES. Prospects are interested in trying a smart, modern Washer like this! Then, just a step away . . .



2. . . . you introduce the prospect to the new Hotpoint Tumbler Dryer. Drying clothes is the next step — and problem — in doing the family washing — so it's naturally and effectively the next step in Hotpoint's demonstration. I show my prospect how Hotpoint's new Tumbler Dryer dries clothes damp-dry, ready for ironing, in only 15 minutes, and how soft, fluffy, and pure the clothes are when they come out of the dryer. They do "eat up" the story of this Dryer service and how it eliminates heavy clothes baskets, clotheslines and bother about the weather.



3. . . . we take the third step and I seat the prospect at the new Hotpoint Ironer. Yes, I let her try it, so that she can convince herself how simple it is to iron *sitting down*. It's hardly necessary to refer to the old-fashioned, back-bending ironing method! You can be sure she's thinking of it — and comparing it with this new-found ironing ease! And is she ready to sign the order after this 3-Way Demonstration? She is, indeed — and she's so enthusiastic she sends in all her friends. Yeah, man! You can bet I'm looking forward to a great year with Hotpoint in 1940."

NOW — YOU CAN SELL A COMPLETE HOME LAUNDRY SERVICE... AND MAKE A

3 WAY PROFIT

GAIN from the experience of this alert dealer. Stock Hotpoint's complete line of modern Home Laundry Equipment — the sensational new Washers and Ironers and the new Hotpoint Tumbler Dryer. Demonstrate it with Hotpoint's logical, effective 3-Step, 3-Profit Plan. Take this opportunity of tripling your profits. Get ALL the facts. Mail the coupon today.

EDISON GENERAL ELECTRIC APPLIANCE CO., INC., 5680 W. Taylor St., Chicago, Ill.

Hotpoint

WASHERS • CLOTHES DRYERS • IRONERS
ELECTRIC RANGES • REFRIGERATORS • WATER HEATERS
DISHWASHERS • ELECTRASINK

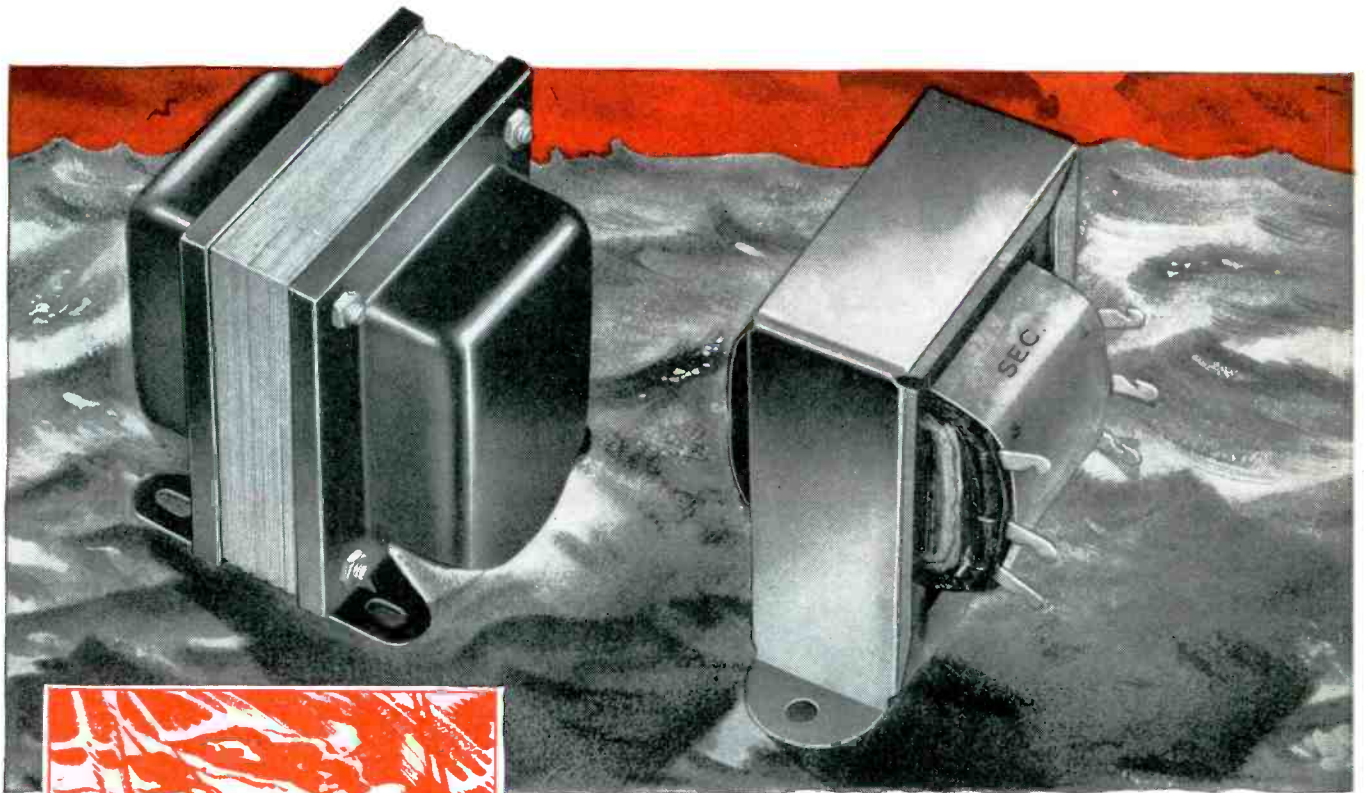
Edison General Electric Appliance Co., Inc.
5680 W. Taylor St., Chicago

I want to know more about Hotpoint's 3-Way, 3-Profit Plan and Hotpoint's new and inexpensive way to create showroom traffic. Please send me complete details.

Name _____

Address _____

City _____ State _____



UTAH TRANSFORMERS ARE *"Dressed"* FOR ROUGH WEATHER!

"The weather-resistance of a skipper on a fishing smack"—that's what they say about Utah Transformers.

A non-corrosive, protective film of cellulose acetate provides absolute insulation—prevents breaking down, even under extremely high humidity and other atmospheric conditions which are so frequently destructive to ordinary transformers. The high safety factor of their insulation is proved by the extra hours of satisfactory performance of the Utah Transformers which are standard equipment in millions of receivers throughout the world.

Precision manufacturing and the use of other scientifically selected materials such as high silicon content

steel, used in all laminations, make Utah Transformers uniformly dependable. These fully guaranteed transformers are individually boxed, with complete instruction sheets.

Utah Transformers are sold through parts jobbers everywhere. If you do not have your copy of the new Utah illustrated catalog containing complete information about the transformer line and other Utah products—write for it today—there is no obligation. **UTAH RADIO PRODUCTS COMPANY**, 810 Orleans Street, Chicago, Illinois. Canadian Sales Office: 560 King Street West, Toronto. Cable Address: Utaradio, Chicago.



TRANSFORMERS

SPEAKERS • VIBRATORS • UTAH-CARTER PARTS

AUDIO and VIDEO

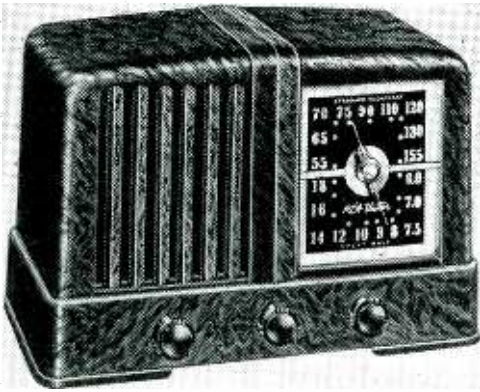
TELEVISION "TAKE-BACK" by the FCC for the reason given in its March 23 order set a bad precedent. The Commission admittedly suspended its September 1 limited commercial license permit with chastisement of a receiver manufacturer in mind and we agree with those who say that on this one point at least it was definitely "out of bounds." In fairness to the Commission, however, the radio industry should be reminded that the whole difficult problem was initially tossed into Washington's lap when it failed to present anything like a united front at the January hearing. . . . NEW RADIO LINES are already beginning to make their appearance, a month or more earlier than in previous years. In this, we think we see the further filling in of traditional "valley" months, perhaps at the expense of extreme peaks most of us have come to consider normal. More uniform month-by-month volume would be good news for all. . . . "LISTEN WHILE YOU RIDE" is a neat companion-slogan for "Listen Before You Vote," discussed in greater detail elsewhere in this issue. There are eleven million extra hours of listening on the air every day for the man who owns an auto-radio. Seven million do and with proper promotion another million-and-a-half can be induced to buy this spring and summer. . . . RURAL RADIO DESIGN will not be left out in the rain this year. We like to think that increased attention to battery sets is a result of our first "Designing Dealer" story, published in February. At any rate, one large company that has never before gone

after rural radio business on a major scale tells us an engineer surveying consumer and trade needs in the south verified our statement that this field has long been neglected, induced the factory to get busy. Others are following suit. . . . PREMIUM EXCURSIONS, merchandising "hooks" we have deplored for many a long year, will wash themselves out if the experience of a few hundred dealers who went on one just a short time ago is often repeated. Transportation accommodations for men and women with considerably less stamina than youngsters who enthusiastically catnap in "Snow Trains" were, putting it mildly, discouraging. . . . FOREIGN NEWS broadcast by European and other distant shortwave radio stations may be rebroadcast by American stations for the further edification of listeners here if the FCC modifies rule V10(D) in accordance with the recommendations of a committee it has had studying the question since WNYC and WRUL stirred things up during the early days of the war. . . . AUTO IGNITION NOISE, particularly the sort of hash transmitted by busses and trucks, is still playing hob with shortwave reception and is a looming source of trouble in connection with television video. There must be some way to induce car manufacturers to "include this out" in machines made after a certain date, just as automobiles now must have safety glass. . . . SAFETY FACTOR is one of the things manufacturers of sound equipment should never dispense with, even in their effort to bring prices down within reach of more

users. Important enough in connection with radios, safety factor in the parts making up a sound system is absolutely essential. Many customers use such equipment for business purposes and failure is more than an annoyance. It costs users money. . . . MUSIC WEEK is May 7-13. Radio and records are music. C. M. Tremaine, of the Committee promoting this affair, has seals, pamphlets, displays that cost very little. He may be reached at 30 Rockefeller Plaza, New York. Details appeared in our March issue news pages. . . . FREQUENCY-MODULATION in the metropolitan New York area got a boost early in April when a station heretofore on the air only a few hours daily stepped up service to 15 hours. Considered a pity by listeners out east on Long Island and in Westchester is the location of this station, separated from these areas by a ridge of hills and Manhattan's skyscrapers. It hasn't had too much "oomph." . . . YOU'VE GOTTA KNOW what the consumer wants and not just guess about it if you want products to click. Funny how often design that seems obvious fails to meet the public's needs in some little detail. Take phonos with hinged tops. Dealers keep telling us that people like to decorate these tops with bric-a-brac, can't if they have to remove the stuff to play a disc. . . . *Ideas like this whang you right in the eye everytime you get away from your desk and out in the field. Which is where we're headed this fine Spring day. . . .*

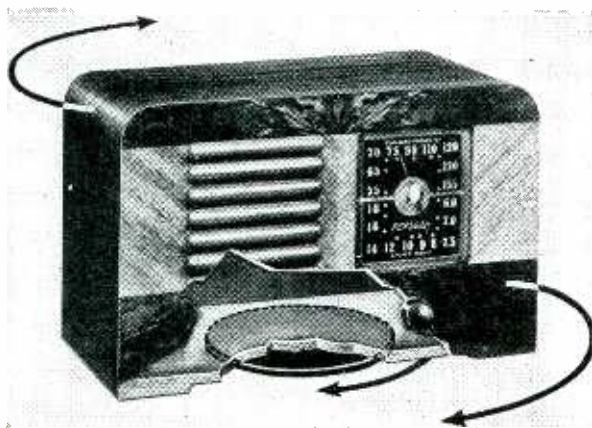
Mac
W. MacDonald
EDITOR

Three new RCA Victor AC-DC Models give you new extra value features to help make sales easy!



HAS NEW ROTO BASE

This new exclusive RCA Victor feature enables your customer to "aim" the set for better reception! In addition, it offers five Preferred Type RCA Victor Tubes plus Plug-in Ballast Resistor, providing 7-tube performance... built-in Magic Loop Antenna... American and foreign reception... Pentode Beam Power Output... Permanent Magnet Speaker. Rich mahogany plastic cabinet. Model 46X21.



HOW ROTO BASE WORKS

Roto base is a new, exclusive RCA Victor feature which makes it possible to rotate the radio in any direction for convenience of tuning and for obtaining "peak" efficiency from the loop antenna. Your customers select the station they wish to hear, then simply rotate it to the point of best reception.

- ★ New Roto Base!
- ★ Electric Tuning!
- ★ Foreign Reception!



ELECTRIC TUNING

You can offer this important feature in this new "luxury" Little Nipper. Has six push-buttons. Other features are the same as Model 46X21. Beautiful wood cabinet. This is Model 46X24.

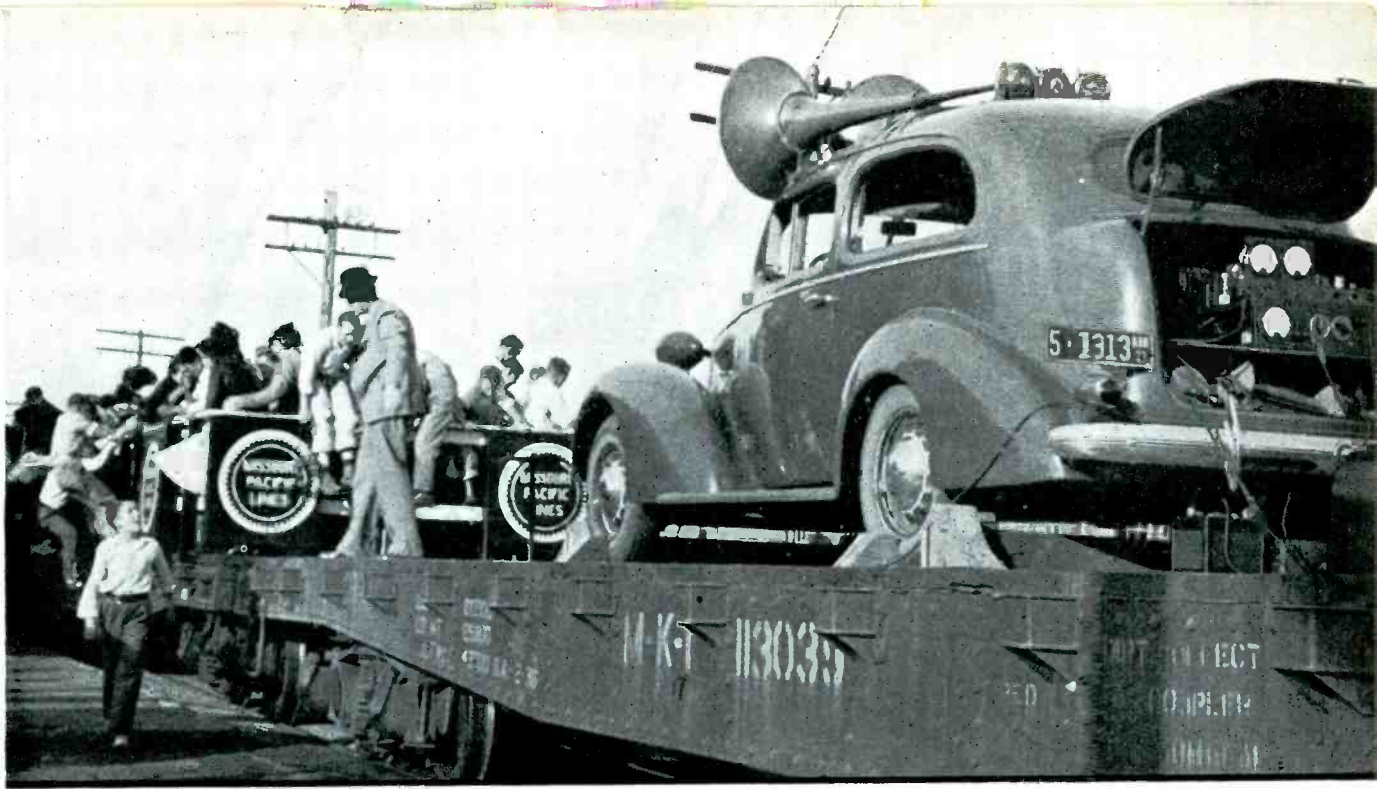
Profit getters in a great big way are these three new RCA Victor Little Nippers... They have all the features that made their predecessors outstanding values—plus *new* features that stamp them the biggest money's worth you have ever been able to offer in the low price brackets!... Look them over. Your own keen sense of a set's salable features will tell you these new Little Nippers have what it takes to pull in the profits. Feature them—and they'll make you money!

Trademark "RCA Victor" Reg. U. S. Pat. Off. by RCA Manufacturing Company, Inc.
For finer radio performance—RCA Victor Radio Tubes



RCA Victor

RCA MANUFACTURING CO., INC., CAMDEN, N. J.
A SERVICE OF THE RADIO CORPORATION OF AMERICA



Working

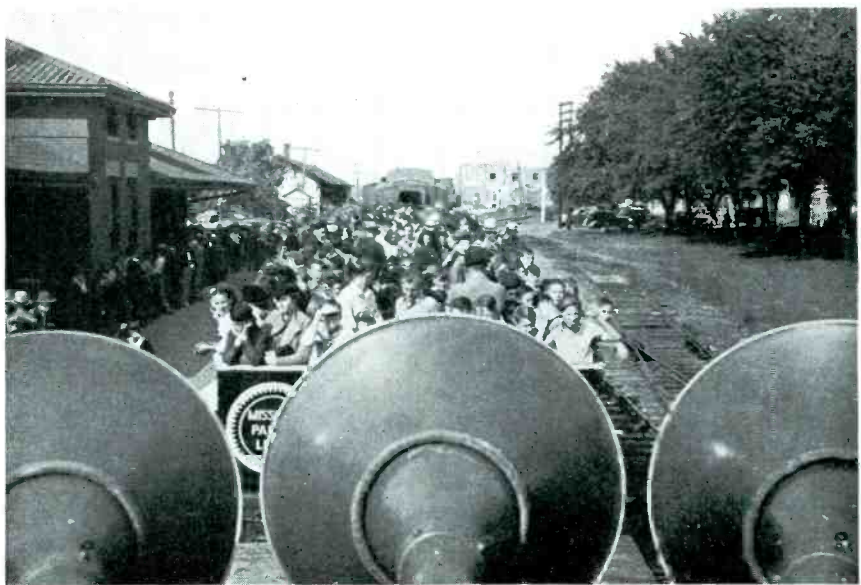
On the RAILROAD

SOUND EQUIPMENT really *did* work on the railroad during this novel rental by Carroll (Art) Radio Service of Coffeyville, Kansas. In fact, it worked on *three* railroads . . . *Missouri-Pacific, Santa Fe and Missouri, Kansas and Texas.*

Coffeyville's Junior Chamber of Commerce celebrated Annual Festival Day by conducting a tour of 30 local industries, staged two trips for the public over the tracks of connecting railroad lines, arrangements permitted sightseers to take their seats on a 9-car train and remain aboard throughout the tour. (Engines and crews changed.)

Job specifications were difficult. The committee wanted all passengers to hear ballyhooed data about each industry as it was passed, special statements by bigwigs en-route. To complicate matters, sound was also wanted at a point remote from the rails at the noon hour, between trips.

Carroll's solution was to roll his truck up on flatcar 6 (rolling it off



and then on again for the noon event). Pickups originated in closed passenger coach 1, used as a studio, were piped back to the truck by remote control. Coach 2 was covered by one inside speaker, also wired back to the truck's amplifier. Open flatcars 3, 4 and 5 (carrying most of the "rubbernecks") were directly served by the soundtruck's three speakers, faced forward toward the engine. Coaches 7, 8 and 9, strung

out behind, were handled by individual speakers, wired forward to the amplifier.

Used in the soundtruck to overcome extremely high noise level encountered while clicking over the rails was a 200-watt *Clarion* amplifier. Power was obtained from the truck's built-in 110 volt a.c. 1kw. plant. Remote pickup control was battery operated. Remote speakers were fed via 500-ohm lines.

BEFORE

JUST LIKE HUNDREDS OF OTHERS

Mr. and Mrs. Davison stood back one slack day, took a critical look, decided the shop must seem colorless and dull to the average customer, agreed to do something, consulted an architect



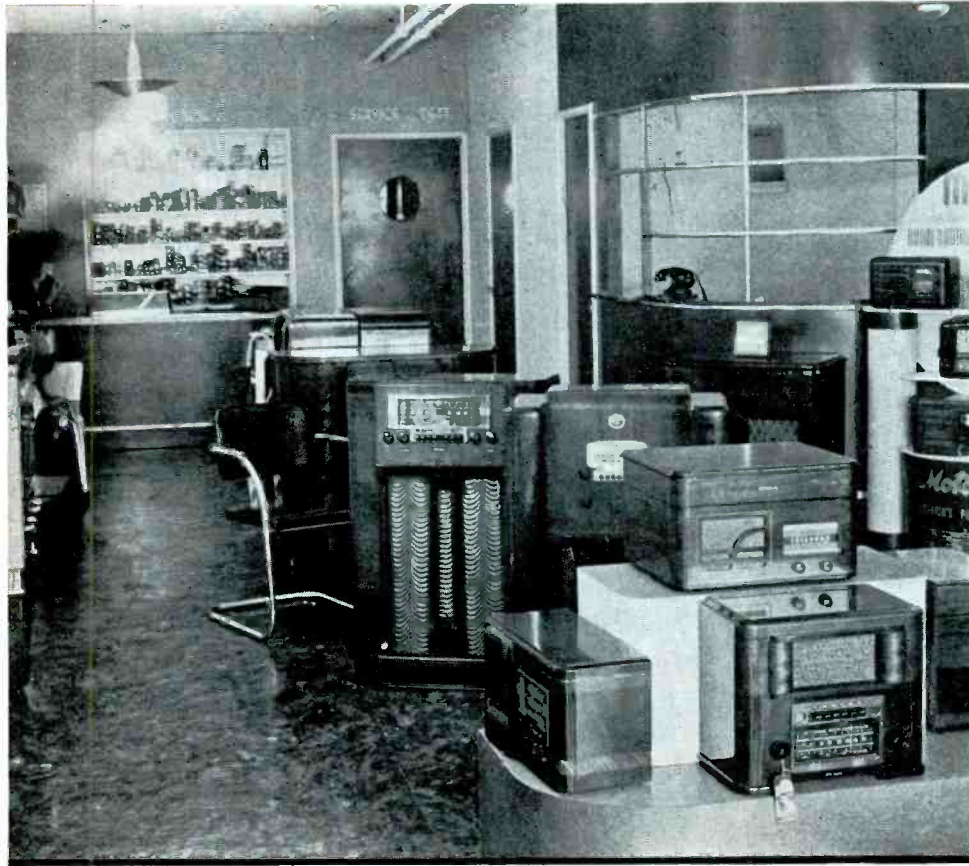
Streamlined



TUBES TEAMED UP FOR PROFIT

Tube test counter and service department entrance were deliberately placed close together. Makes it easier to sell people repairs by shunting them through the door when tubes are not the trouble

\$800 MODERNIZATION upped sales
30 per cent for Z-D Radio of Seattle



AFTER

NO WONDER THE DAVISON'S SMILE

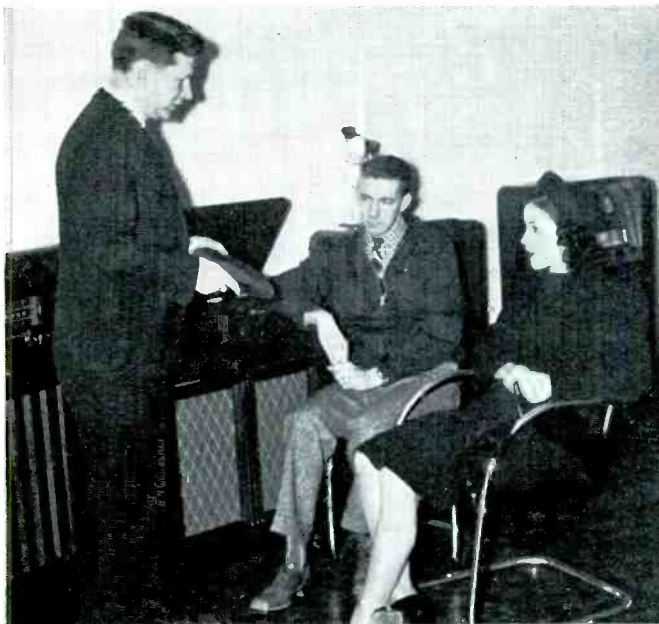
Office shifted from left rear to right, enclosure painted dark green with chromium trim. Counter moved from left to rear, recessed, finished in rose and white. Other walls oyster-white and linoleum mottled blue



STORE

PHOTO Short

by NAOMI SWETT-GRAY



RECORDS BRIGHTEN THIS CORNER

Discs, and machines on which they may be played, sell best when set apart where they may be demonstrated without interruption, the Davisons found. Such a corner was provided, plus comfortable chairs



OUTSIDE SELLING STREAMLINED TOO

To customers who send big consoles to the Z-D shop for extensive repairs new deluxe automatic record changing phonocombinations are loaned. Two out of ten switched from service to trade-in during the month of March

On the WASHINGTON



SPECIAL

To RADIO and Television RETAILING

WASHINGTON, APRIL 11—REOPENED TELE HEARING STILL ON—
CONSENSUS OPINION NEWSMEN HERE FCC WILL MODERATE
STAND AVOID GENERATING FURTHER CAPITAL FOR ANTI NEW
DEALERS—FACE SAVING SEEN IN REPEATED INSISTENCE COMMIS-
SION WILL CONTINUE PROTECT PUBLIC INTERESTS REPORTER
WARNINGS NOT TO TAKE EARLY RESTORATION LIMITED COM-
MERCIAL PERMIT FOR GRANTED—FOLLOWING SENATE INTERSTATE
COMMERCE COMMITTEE QUESTIONING OF FCC'S CHAIRMAN FLY
CHAIRMAN WHEELER SIGNIFICANTLY RECOMMENDED SECURING
PRACTICAL AGREEMENT TELE STANDARDS ALL INTERESTS BY
SEPTEMBER 1—COMMITTEE OBVIOUSLY IMPRESSED SARNOFF STATE-
MENT FUTURE TELE BUSINESS WORTH BILLION DOLLAR SALES
ANNUALLY PLUS 500,000 EMPLOYEES WITHOUT UPSETTING RADIO
OR OTHER INDUSTRIES—CALLED COMMISSIONER CRAVEN WHO
WAS SOLE DISSENTER IN FCC BOMBHELL TAKEBACK BUT PER-
MITTED WRITTEN STATEMENT AND RECESSED INDEFINITELY—
CONGRESSIONAL INVESTIGATION FCC SUGGESTED SENATOR
LUNDEEN PROBABLY WILL PROVE UNNECESSARY—BARBOUR
MEASURE INTENDED LIMIT FCC POWER SIMILARLY EXPECTED
SHELVED—FOLLOWING CONFERENCE PRESIDENT ROOSEVELT
WHITE HOUSE FLY EXPRESSED HOPEFULNESS SOLUTION TELE
COMMERCIALIZATION IN FEW MONTHS ASKED RECEIVER FLEXI-
BILITY SUFFICIENT HANDLE VARIOUS TRANSMITTERS—PRESS
EXPECTS RESTORATION LIMITED COMMERCIAL LICENSES BEFORE
SEPTEMBER.

HANGING FIRE while broad-
casters, manufacturers and
other interests wear a groove in
the Federal Communications Com-
mission's doorstep are further
merchandising plans for Frequency-
Modulation and Television.

Neither service is wholly depend-
ent upon establishment of complete
standards, assignment of additional
channels or governmental sanction
for sponsor-supported programs
(receivers of both descriptions are
being sold in increasing quantities
on the basis of existing perform-
ance) but it is obvious that mer-
chandising on a broader scale
hinges largely upon these three fac-
tors.

Precisely what the FCC will do,
and particularly the dates upon
which it will do it, is something
that can at this time be known only
to the Commission itself. The fact
that hearings are still being held
and briefs still being filed indicates
that even this body has not yet
made up its mind. Predictions are
therefore difficult in connection
with F-M and impossible on Tele-
vision. Our best guess about the
former is that:

1. F-M will probably get one of
the channels at present assigned to
Television, video service getting
back all or part of its "donation"
elsewhere on the ultra-highs.

Merry-Go-Round

F-M AND TELEVISION hang fire as broadcasters, manufacturers and other interests wear groove in FCC's doorstep

2. This will permit licensing of many more F-M stations as they take up much less room on the airwaves than do tele transmitters.

3. Assignment of these additional F-M channels will probably take place within the next month.

4. "Limited Commercial" licenses will probably be issued to certain F-M stations shortly after channel reallocation.

5. Full commercial licenses for certain F-M stations is not beyond possibility later in the year.

But don't "put the finger" on us if these things fail to materialize. We promise not to brag about our clairvoyance if they do!

Tele Kickback

Last month, in "Straight Type," we told you that the FCC had decided to permit certain television transmitters to operate under "limited commercial licenses" beginning September 1, allowing advertising on these channels.

Along with the Commission's statement to this effect came an admonition to television receiver manufacturers. While it saw no reason why consumers fully aware of the fluid state of the art with respect to standards and willing to assume the financial risk at present involved for the sake of programs already available should not buy receivers "nothing should be done which will encourage a large public investment in receivers which, by reason of technical advances when ultimately introduced, may become obsolete in a relatively short time." (Ed Note: *Italics* are ours.)

That was on February 29.

On March 12 RCA president David Sarnoff told the press: "Our successful experience in the production of satisfactory television programs, and the dependable performance of television receiving sets within a radius of 70 miles from the NBC television transmitter on the Empire State Building, together with the recent favorable action of

the Federal Communications Commission, enable us now to proceed to establish television on a broad public service basis . . .

"The Radio Corporation of America has licensed other and competing radio manufacturers for the use of its inventions in the field of television for the manufacture and sale of transmitters and receiving sets. . . .

"An active merchandising campaign is being announced by the RCA Manufacturing Company, in which the new RCA-Victor television and radio receivers will be offered at moderate prices. *The new receivers have been priced on the basis of quantity production before volume sales have been reached, a reversal of usual merchandising methods . . .*"

On March 20, following Sarnoff's prediction, RCA Manufacturing

Company did announce the proposed active merchandising campaign, placing a full page statement in two New York newspapers with which Bloomingdale, Abraham & Strauss, Davega and Liberty Music simultaneously placed tie-in space. (Cath-Ray Television Corp. advertised its own combination televisor and radio in the same papers, same day. General Electric reduced the list prices of all 5 televisors in its line at about this same time, made them retroactive to March 15th, but did not climb aboard the consumer advertising bandwagon. Other manufacturers watched, and waited.)

Then came a bombshell.

On March 23 the FCC issued a formal statement reopening television hearings, set the date for April 8, said that "the current marketing campaign of the Radio Corporation of America is held to be at variance



"... GIVES, THEN TAKES"—FCC Chairman James Lawrence Fly

with the intent of the Commission's television report of February 29." *Simultaneously, the Commission suspended its previously extended authorization for limited commercial television transmissions to begin September 1, said the question as to whether this date would be postponed would be decided following the April 8 hearing.*

Reaction Instant

Reaction to the Commission's reopening of television hearings and particularly to its suspension of the September 1 "green light" for limited advertising support of programming was instant.

Quietly pleased were those who for any reason would prefer to see commercial television go slower.

A statement from Allen B. Du Mont read as follows: "I am the rare exception in upholding the FCC in its television citation of March 23, ordering a leading company to explain its high-pressure merchandising of inflexible television receivers. Frankly, I'm not in accord with the widespread criticism of the FCC's action by other television interests and by an obviously misinformed or at least inadequately informed press. . . .

Receivers now coming off our production lines are *flexible*. By means of several inexpensive refinements, these receivers can handle any television signal of any number of lines from 400 to 900, and any picture rate from 15 to 30, in any combination. . . ."

Critics of the FCC were more numerous. Newspapers such as the *New York Tribune* belted the Commission unmercifully. Particularly virulent was syndicated columnist David Lawrence. To our own office came a resolution from a New York Dealer group deploring the FCC's "Indian Giving" and dealers contacted immediately following the order were almost uniformly derogatory.

Criticism split sharply into two general types:

(a) *Some critics contended that the public was quite willing to pay for service already available and take its chances about obsolescence, said that if the FCC waited until there was no danger of improvements rendering existing merchandise obsolete the result would be indefinite postponement, wondered whether we would have regular*



A Statement by The Radio Corporation of America on TELEVISION for the Home!

Enjoy the Magnificent RCA VICTOR Television and Radio Receiver



\$395

LOOK and LISTEN!

See how NBC Programs are brought before you, and some special transmissions.

DRAMA
The "Hollywood" "Theaterland"

SPORTS
Baseball, Football, Basketball, Hockey, Boxing, Wrestling, etc.

NEWS
The "Today Show" "The News"

MUSIC
The "Music Box" "The Grand Ole Opry"

EDUCATION
The "Education Series"

CHILDREN
The "Children's Hour"

COMEDY
The "Comedy Hour"

SCIENCE
The "Science Series"

ARTS
The "Arts Series"

RELIGION
The "Religion Series"

GENERAL
The "General Series"

RADIO CORPORATION OF AMERICA






Theaterland Music Box Today Show Children's Hour

"... BONE OF CONTENTION"—New York newspaper ad of March 20. Sparks flew in Washington

radio broadcasting even yet if present FCC reasoning had applied back in the early 20's.

(b) Other critics pinning their attack chiefly on the supposition that the FCC's function is solely to assign and then police communications channels said it was "plainly out of bounds" when it monkeyed with manufacturing or merchandising matters, directly or indirectly.

FCC "Fireside Chat"

To all this FCC Chairman James L. Fly, speaking before the Advertising Club of New York at an April 2 luncheon and to the nation that night via the Mutual Broadcasting System and the red network of NBC, said television could not logically be compared with aural broadcasting as even crystal sets sold the public in the early days still worked and rendered a service on today's broadcasting while television might be compared to a lock (transmitter) and key (receiver) and that "a substantial change in the lock would render the key useless."

Fly further stated that "it would

be a great tragedy if today some heedless power, for the sake of an immediate short-sighted interest, should obstruct television's progress and leave it dwarf-like in the shadow of its own great potentialities."

He continued: "No one can successfully assert, and no single person has asserted, that now is the time to lay down the principles which shall govern all future developments of television. But television is on the march. Its future is assured. We venture to hope that soon a set of standards will prove itself as meriting adoption. We know there can never be absolute assurance that future discoveries will not demonstrate their inadequacy. I do believe, however, that the American public would deem the Commission unfaithful to its trust if it adopted, or standing by, permitted at this time the crystallization of, any set of standards for television contrary to the engineering opinion of the industry and without adequate trial, or that did not give promise of reasonably satisfactory public service over a reasonable period of time."

Of particular interest was Fly's self-propounded question, and his answer: "Does the Commission wish to discourage members of the public from purchasing television receiving sets today?"

"The answer is emphatically 'No'.

"As a matter of fact, it is only by having receiving sets in the homes of members of the public that experimentation in program techniques can be successfully carried on. But it is important that the general public know that when they buy television sets they are definitely partaking in a program of experimentation. . . . I do not believe that persons in a position to afford television entertainment at this time will be unduly deterred by that knowledge from getting the immediate benefits which are now available in areas served by television transmitters. I certainly hope they will not be deterred. . . ."

And, of almost equal interest: "Let me make it clear that we neither have nor desire any regulatory power over the sale of receivers or over advertising. But any action we take under our duty to license experimental operations and to encourage advances in radio, must of course be taken in the light of actualities. . . . By sales activity alone the standards of the science might be locked against their improvements."

On this note further merchandising expansion of television hangs suspended until the FCC makes a statement following the April 8 hearing. Meanwhile sales in the New York and Philadelphia areas continue but on a basis only slightly faster than that applying before the fireworks, less actively than might otherwise have been the case.

RCA, releasing no statement, not following up its initial newspaper ad up to presstime, nevertheless continues to move televisions through retail stores in reasonable quantities, check with distributors indicating that the ad plus dealer meetings increased dealer demand and netted a fair sales gain despite later adverse effect of the FCC's March 23 ruling.

From Farnsworth came a statement to the effect that "Recent reopening of television hearings by the FCC after previously having authorized limited commercialization of telecasting, beginning Sep-

tember 1, caused no change in the plans of the company." President E. A. Nicholas said he "believed firmly that television is ready to go ahead and that commercialization will be permitted in the near future, that Farnsworth had shaped its plans accordingly, without undue haste in getting into general production of television receivers."

F-M Session Less Stormy

Interlocking of Frequency-Modulation and Television problems insofar as the Washington Merry-Go-Round about frequency assignments by the FCC are concerned became instantly apparent at an informal hearing on the first mentioned subject held in that city from March 18 to March 29 inclusive. (Crowd in attendance was so large the Comish had to move from Interstate Commerce Commission hearing room accommodating 200 to a larger auditorium with space for 300 in the Department of Labor's building.)

Into the first day's discussion by Major Edwin H. Armstrong, "daddy" of F-M, crept a suggestion for widening the band at present available to the service, despite a previous FCC statement that such discussion would be out of order during the meeting. The Commission listened with interest, nevertheless, when Armstrong suggested that ten F-M channels would solve the allocation problem, said that television station operators would soon find out that their Number 1 channel was not the best for video service anyway, proposed that this tele channel be turned over to F-M and that tele be compensated by space assignments higher in frequency.

John Shepard of the Yankee Network and president of Frequency Modulation Broadcasters, Inc., likewise asked the FCC to turn over a tele band to F-M, suggested the band between 41 and 44 mc., said it should also permit F-M stations to use up to 50 kw. of power, thought facsimile might be "multiplexed" on the same channel. (W. G. H. Finch later repeated the facsimile-frequency modulation multiplexing proposal.)

The RMA did not appear but did release a press statement to the effect that "experimental work now being done by several members has not reached a point where it would

be possible to formulate a conclusive industry report," said its Board of Directors had instructed the RMA engineering department to expedite experiments.

Zenith's John R. Howland suggested "that brakes be put on F-M enthusiasm a little bit."

Surprise statement to many came from RCA's general counsel, Frank W. Wozencraft, who said that *the public's best interest would be served at this time by giving F-M a "green light"*. (NBC was reported to have filed application for F-M station licenses in Washington, Chicago, Denver, Cleveland and San Francisco.) He added that "there might never come a time, however, when the whole country could be served on the ultra-high frequencies with any type of transmission."

John V. L. Hogan said that F-M's period of experimentation "was over." FCC Chairman Fly cleverly asked, almost after each such statement, if men assembled at the hearing did not think a further period of experimentation was needed, quite evidently wanted to "feel out" the meeting. Significant, many felt after this exercise of the Chairman's native caution, was his suggestion that F-M Broadcasters, Inc., and others present at the hearing utilize the weekend "break" in the hearing to formulate suggestions which might be useful to the Commission when it considered F-M station allocations on a national basis.

F-M Broadcasters, Inc., returned Monday with an admittedly rough, preliminary suggestion that 40 stations might be licensed to begin with in metropolitan centers with populations in excess of 200,000. Asked by Fly about secondary service areas outside these centers, the group said that amplitude modulated stations on the broadcast band could better serve them at present.

RCA's Wozencraft presented an alternative allocation suggestion which would allow three existing tele stations operating on band Number 1 to remain, rather than give way to F-M, said these stations were in New York, Chicago and Los Angeles. He said F-M might take the Number 1 tele channel elsewhere. (An RCA research exec later said that if Empire

(Continued on page 78)



BUILDING CONTRACTORS AND ARCHITECTS keenly aware of new field. Extensive promotions in both radio and building trade now under way

By S. GORDON TAYLOR*

BUILT-IN RADIO is coming into its own!

Radio, as well as record players, home recorders, intercommunication systems and allied equipment, is suddenly being recognized by the building interests themselves as something which should be an integral part of the new home; or if not actually built into the walls, at least appropriately housed to match surroundings.

During the past year this idea has been publicized by at least two of the leading architectural publications. Manufacturers in the radio field are bringing out special booklets on the subject. Perhaps most important of all, a home builder's publication which distributes copies

* *Special Correspondent*

to a million prospective homebuilders each year, through the newsstands and building material dealers, is placing strong emphasis on built-in radio in its editorial columns.

The prospective home builder, the professional builder, the architect, and owners of existing homes are therefore being deluged with propaganda—propaganda which is made to order for the radio dealer! The fact that it comes to them through the publications in their own fields makes it just that much more effective.

Special emphasis is being placed on the application of built-in radio in new homes because it is during the construction that the ideal job can be done, with remote speakers, a multiple antenna system and in-

Built-In **RADIO**

tercommunication system wiring built into the walls.

161M New Prospects

Before going further into the subject itself, let's analyze the picture so far as new home construction is concerned.

According to figures presented by F. W. Dodge Corp., publishers of the leading new construction statistical reports, there were over 161,000 private homes built in the United States during 1939. Figures for the first two months of 1940 show that this building boom is not only continuing but gaining momentum, with about 10% more houses going up than during the same period last year.

The modern new home goes in strong for conveniences and refinements. What were considered luxuries a few years ago—oil heaters, mechanical refrigeration, automatic water heaters, automatic washers and ranges, etc., are now commonplace even in the lower priced homes. For the most part these houses are being tailored to the individual family, with careful attention to space economy.

Applications and Installations

The term "built-in radio" is used in the foregoing in its general sense and may include:

(1) Radio and allied equipment actually built into the walls; (2) similar equipment built into furniture such as bookcases, window seats, closets or special cabinets; and (3) equipment installed in existing movable furniture or in a cabinet custom built to match the decorative scheme of the room.

The first two lend themselves most effectively to installation during construction of the house, although the second is likewise applicable to existing homes. Any of the three may include not only radio but a record player and perhaps a home recorder, the latter a bet

PROFITS

which should not be overlooked by the dealer in selling an installation.

During construction, wiring provision is easily made for permanently installed remote speakers or plug-in outlets for portable speakers in other rooms, with individual volume control; convenient power outlets; an all-wave multiple antenna built into the roof or attic (or above the roof if it is of metal) with an outlet at the radio location and others in the nursery or other rooms where an individual receiver may have advantages. Intercommunication facilities can likewise best be provided during construction, with built-in wiring linking the system together to provide communication between the nursery and mother's room, the front door and kitchen, the recreation and living rooms.

The third type of installation is oftentimes best adapted to existing homes and permits any radio equipment of the owner's choosing to be matched into its surroundings by an appropriate special cabinet or by housing it in one of the regular pieces of furniture.

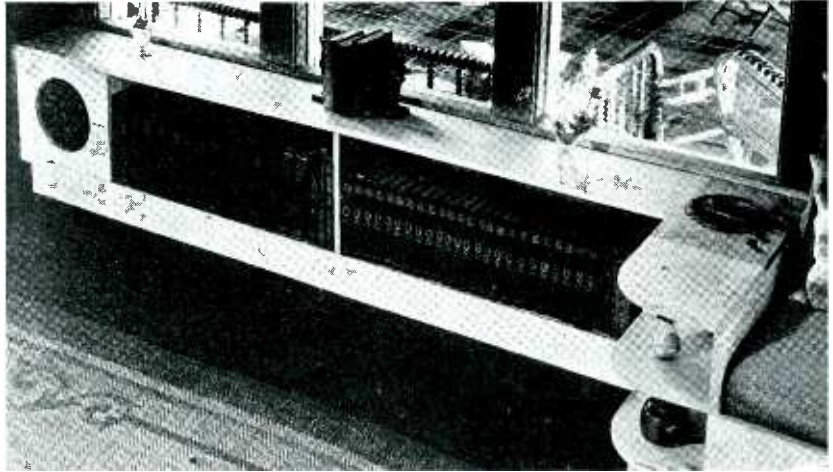
Where equipment is actually built into walls or permanent furniture there is a definite space saving but to many a more important consideration is the improved tonal quality obtainable through the baffling thus provided for the speaker.

More Dealer Angles

First and foremost these installations result in a higher unit sale. Not only is more and larger equipment involved but legitimate installation charges for a complete built-in system may represent a good portion of the entire cost—and an

(Continued on page 78)

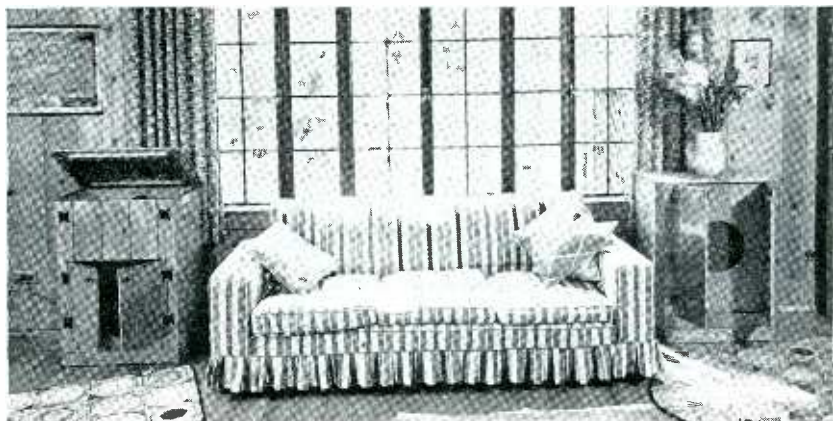
CUSTOM-BUILT CABINETS—Cabinet at left houses radio chassis and automatic record player with storage space beneath for record albums. One at right contains amplifier and speaker



INSTALLATIONS NEED NOT BE ELABORATE—The idea is not confined to homes under construction. The inexpensive installation pictured here is in a country house where convenience is combined with effectiveness by installing a Lafayette chassis face up in the arm of the divan and the speaker at end of bookcase



ANOTHER METHOD—It is apparent that careful thought was given this built-in radio installation. It has the air of "belonging" to its surroundings and at the same time the installation provides infinite-baffle



LETTERS *About*

MERCHANDISING METHODS less opportunist, more constructive, asked by trade as season of set unveilings nears

NO GRANDSTAND PLAY for the mere sake of a "story" but a sincere effort to use its reportorial and research facilities in the interests of the entire industry is the three-article series this installment concludes.

In January *Radio Retailing* began asking dealers what they needed in new receiver lines to be released by June, reported trade preference with respect to *types, prices, and cabinets* in its February issue. In March, additional published facts and figures dealt with individual radio model *features*.

From the beginning our object has been to provide a closer interchange of thought between manufacturers and retailers in the interim lull between Christmas clearout of existing stocks and development of 1940 lines. "Timing" was deliberate, even this final article reaching manufacturers *before* they complete designs, to keep the effort constructive.

To what extent tabulated dealer opinion will influence factory policy remains to be seen. This we do know, however: Sales managers

DESIGNING DEALERS . . .

Outlined what consumers want in the way of radio *types, prices and cabinets*

...in February **RADIO RETAILING**

Classified individual model *features* in order of existing popularity

...in March **RADIO RETAILING**

Conclude with general industry *policy* suggestions aimed at more profit for all

... here in **RADIO RETAILING**

*Manufacturers Must
"Pick It Up" From There*

and engineers in many plants wrote for extra copies of the first article. And, beating them to the punch, we pre-printed the second and mailed it in advance of publication.

From a very gratifying number of dealers not contacted by fieldmen during early interviews, meanwhile, we have received letters calling to our attention the fact that the trade is quite as interested in the merchandising *policies* accompanying new lines as in the technicalities of the sets themselves. To the most illuminating of these we devote the remainder of our "Designing Dealer" survey space. . . .

Say We're On Right Track . . .

I have been greatly interested in your studies of what the consumer and the dealer want and you have certainly hit the nail on the head with facts in your February and March issues.

Let's hope that these suggestions are acted upon by designers this year.
WINNIPEG ALBERT C. BIRCH

I have the privilege of contacting several of the factories in Chicago when they get up designs and I believe too much policy is dictated by engineers.

My suggestion is that sales managers of the various organizations spend at least one week on the retailer's floor to find out what the public demands are, instead of guessing.

As you know, the public is very fickle in its ideas and I believe by getting this information first hand each year a greater contribution can be made to the radio industry.

MILWAUKEE C. SCHEDER
Radio-Record Buyer, Schusters

Your article series has given "Designing Dealers" a chance they have long been waiting for.

I had just about given up hope that anyone cared whether or not they built a line of radios which could be truthfully called "latest models with all modern developments incorporated."

BANGOR, PENN. JOHN W. ARNTS

Advertising, Two-Edged Sword . . .

Advertising moves merchandise and it also molds public opinion. In my estimation much national newspaper copy

about radio has been a slow poison, demoralizing retail radio selling.

When, for example, manufacturers copy blazently reads: "\$30 for your old radio, regardless of make, shape or condition," the public isn't duped any more on values. Most buyers consider it an open invitation to chisel. Either the merchandise isn't worth what dealers ask for it or the dealer "must make too much profit."

Manufacturer turnover of sales managers certainly has bred many a sales promotion and advertising scheme which good, long-term judgment would have vetoed had there been a thought for the future of the industry. Expansive promotion has also shown up the lack of quality in much merchandise offered the public.

In short, there has been too much selling of "blue sky."

MISHAWAKA FLORIAN S. KELLEY
Florian S. Kelley Co.

The biggest market for sales in our field still lies ahead. But the public is getting fed up on promised results that cannot be obtained.

Set manufacturers, almost without exception, have always done one thing that costs the dealer a lot of cash and a lot of headaches. They have always over-rated their sets in advertising.

CHICAGO C.A.S.

Please try to induce radio manufacturers to be conservative in their designs, and in their promotions.

ATLANTA ECONOMY RADIO SERVICE CO.

We believe that radio manufacturers should pool their resources and put a good program on the air to bring to the attention of the public just how important radio is to the average listener.

This would be most effective if it had the backing of all manufacturers and if carried on over a period of time would really build business for dealers and the entire industry on a sound foundation.

WATSONVILLE, CALIF. CHARLES H. MCGEORGE
McGeorge Radio Service

Manufacturers may find this suggestion useful.

Dwell on the usefulness of radio in general and not so much on the appearance and features of specific sets.

We music dealers sell entertainment, not furniture.

Give us a break. Let the furniture

* Editor

NEW LINES

By **W. MacDONALD***



Most important, keep so-called wholesale-retail houses out of this business.

This is a splendid idea of *Radio Retailing's* to give manufacturers a better idea of what we would like to have.

EVEN RADIO & APPLIANCE CO.
DUBUQUE, IOWA

Cut out trade-in allowances. Cut out barber shop, drugstore, grocery store and blacksmith shop radio distribution.

Let's make this a business again instead of a racket.
CLEVELAND

R.A.L.

I can't let this opportunity slide by without telling you something about what I think of the miserable tactics used by some of our larger manufacturers.

I refer particularly to "group deals" of several allied products at materially reduced prices. This practice does not build up consumer confidence in the business. And it reflects seriously on the contingent liability dealers may have in outstanding paper.

We have come to expect this condition every January and the results are always the same. Very little business, a long series of complaints from our customers and many unnecessary repossessions.

During 1939 we merchandised about one thousand radio sets and I believe this qualifies us to make the above remarks.

SAHLI MOTOR CO.
BEAVER FALLS, PENNA.

Random Resolution . . .

I herewith submit, somewhat late, a New Year's Resolution for radio manufacturers:

"We hereby resolve that during the coming season we will without stint or reservation get back of sane engineering principles in the design and construction of our products.

"That we will again refresh our memories on the virtues of what used to be called a tuned r.f. stage or two ahead of the first detector and that we will acquire the money for including same, if necessary, by the exclusion of straight sales gadgets.

"That we will so build our products that we will find it unnecessary to exaggerate and to make questionable claims in our advertising.

"That we will quit kidding the long-suffering radio listener with thingamajigs that the average dealer has to explain away instead of explain.

"Last but not least, that we will spend some of our enthusiasm in attempting to educate the public to better radios at fair
(Continued on page 79)

manufacturers advertise furniture. Concentrate radio copy on the value of radios as musical instruments.

WALDEN, N. Y. SOHNS MUSIC SHOP

Prices and Discounts . . .

I think manufacturers are making a mistake by offering short discounts on low-priced sets. It leaves the dealer with the impression that factories are making a profit at his expense.

If we must sell cheap, low-priced sets the prices and discounts should permit the dealer to make a legitimate profit.

T. R. BANKS RADIO SERVICE
CHARLOTTE, N. C.

Let's have live-and-let-live discounts. This is more important than all your technical improvements.

LAMONI, IOWA BASS RADIO SHOP

The price differential on the smaller sets is too small.

When selling up just a dollar or two can give the salesman little more than a visible gadget or so that he may point out as the difference.

NEW YORK S.D.S.

Prices should be balanced to give the retailer a discount of not less than 40-off, and all models from \$30 up should include an additional mark-up of 10 per cent in order that we may allow the public a 10 per cent trade-in value for their old radio.

I am sending a carbon-copy of this letter to my distributor.
NEW ORLEANS ERNIE SIMONDS

Distribution and "Deals" . . .

Keep people who are not really in the radio field from buying sets and particularly from buying at prices that permit them to beat legitimate retailers of radio by a mile.

IN RESPONSE to a recent survey, conducted by *Radio Retailing*, on dealer and consumer radio needs rural dealers and buyers reported unusual demand for home type battery-operated sets comparable to receivers available for listeners in electrified districts.

They asked for a full line of table and console models, equipped with all the important new refinements, units that could stand beside the electric receiver with justifiable pride.

In analyzing the reports it was clearly evident that the rural dealer was of the definite opinion that the general set manufacturer had neglected the rural market in not providing sets of more modern design, in general answering the above requirements.

A careful check of the field showed that, while there was room for more complete battery-operated radio lines, there were many rural dealers not fully familiar with models already available.

Ready and Coming

Out of a total of 31 companies contacted 14 supplied photos and descriptive material on battery-operated sets which they make especially for the rural home, and areas without benefit of electric-line supply. A number of companies replied they were not quite set for production but planned to introduce sets of this type in the near future, so as to take full advantage of the farm radio market.

The town and country dealer may ask with justice, (considering some of the farm sets marketed in past years) are the new receivers the

Farmers Will Rise to NEW RURAL RADIOS

MANUFACTURERS breathe new life to neglected market. Latest battery sets provide "big city" performance and appearance at moderate price

By CARL DORF*

right kind of merchandise? Do they have consumer appeal? Are the cabinets styled to rival big city models? Are they inexpensively priced, tone-quality equal to line-operated sets and is ample volume provided?

The new sets answer these requirements in full and they go further. Several of them are equipped for short-wave reception, include pushbutton tuning, and a good idea of their cabinet design can be had from the illustrations accompanying this article.

Typical Modern Features

The majority of the new sets are superheterodynes, employ from 4 to 5 tubes, and use the new 1.4 volt low-drain battery tubes throughout, along with self-contained, single unit A-B battery packs. Farm sets are outstanding for economical operation. With new low current tubes, battery life is often extended to

over 1000 hours of useful service. Checking the specifications of a typical 5 tube set with 1½ volt tubes, showed that the "B" battery drain was 10 ma. and the "A" consumption 0.3 amperes.

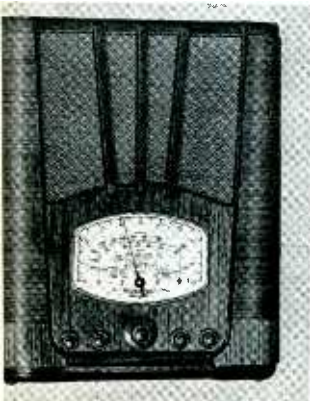
Typical sets employing the low-drain tubes includes a type 1A7G as mixer-oscillator, a 1P5G i.f. amplifier, a 1H5G as second detector, a.v.c. and first audio, and a type 1C5G power amplifier pentode or the 1Q5G or 3Q5G beam power tube. This latter operates in a parallel filament arrangement.

Other sets are available for 6 volt storage battery operation, chargeable from a wind-charger or engine-driven generator. Models of this type are frequently made so that they can also function from 110-volt a.c. power lines. Typical type tubes used in such sets include a type 6D8 combined modulator-oscillator, a type 6K7 i.f. amplifier, a 6T7 second-detector, a.v.c. and first audio., a 6G6 power amplifier pentode and in some cases the type 6V6 beam-power tube.

Practically all the sets have automatic volume control and use the permanent-dynamic type speaker. Units are manufactured for single, two-band and three-band coverage.

One feature of several new instruments is the "economy blinker" which is protection against accidentally leaving the set turned on. A discharge current from the chassis is used to actuate the red bulb.

* Staff



ANDREA

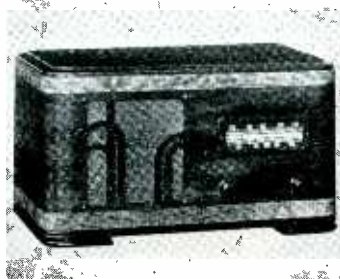
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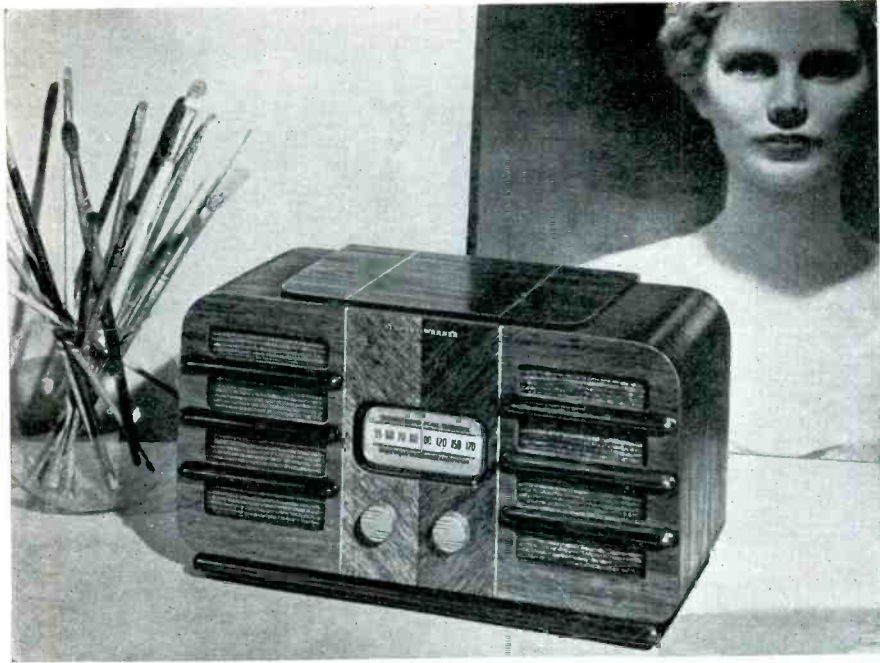
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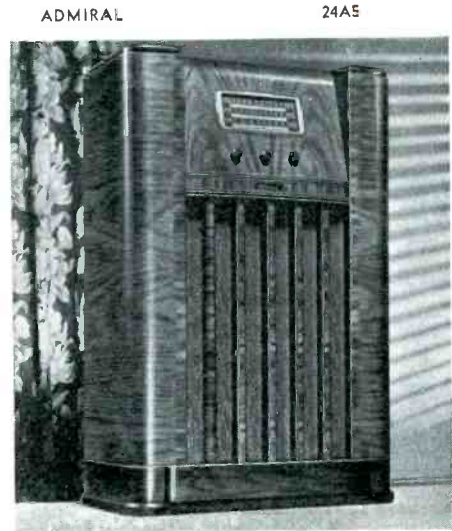
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STEWART-WARNER 484



ADMIRAL 24A5

The 1940 farm radios breathe new life to the rural radio market, ruling out those old sales resistance headaches.

Old Headaches Gone

According to one manufacturer, with something like 4 to 4½ million farm homes still without electrification, the recent improvement in battery sets should bring new pleasures in radio entertainment to thousands of rural homes. Also, with the benefit of the new sets there is a big potential replacement market for the millions of old battery units now in use in unelectrified districts.

One company reports that its total sales of farm radios for the first three months of 1940 surpass those of any previous year in the history of the company. A battery manufacturer shows impressive figures on actual sales and estimated figures for radio storage and dry batteries for 1940. It advises on a new 2 volt radio "A" type, a low-drain battery with self-discharge virtually eliminated. This battery it is said, will operate the average radio receiver 6 months to a year or even longer.

Every farmer and rural dweller needs a radio set. The farmer's business is tied-in with radio, the crop and weather reports are aimed directly at him and in order to get these reports quickly he must own a good radio.

The 1940 line of rural radios is the answer to greater sales in this field.

SENTINEL

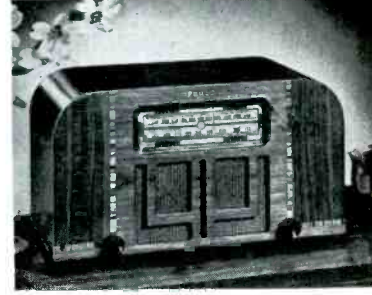
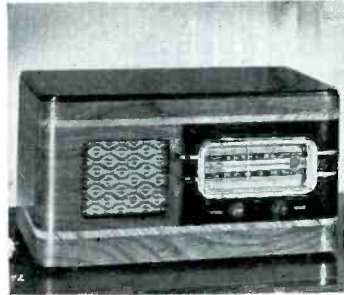
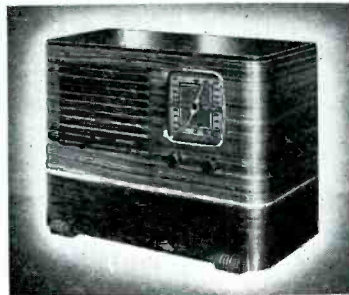
175 BTW

RCA VICTOR

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PHILCO

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FARNSWORTH

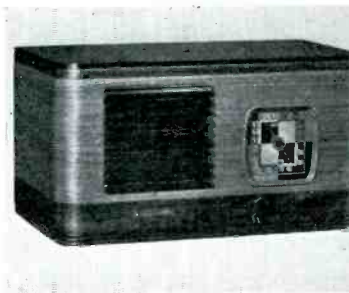
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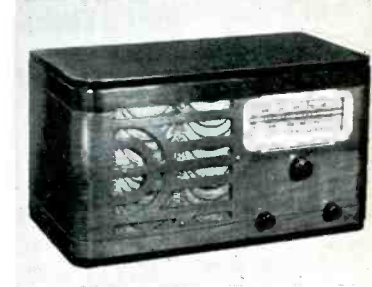
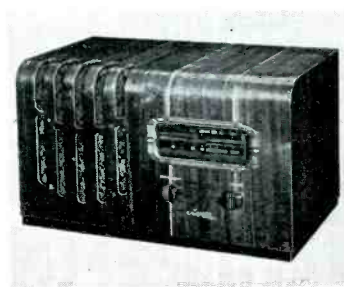
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WILCOX-GAY

A58



Listen . . .

BALLOTS CAST in the 1936 presidential election exceeded those of 1920 by 71 per cent. During this same period radio receivers in use upped from an estimated 100,000 maximum to 33,000,000.

It would be rash to attribute the entire increased vote to the greater use of radio during campaigns but both political and industry leaders agree that its influence in bringing people to the polls is very much similar to that of the old-fashioned local rally . . . on a streamlined, national scale. And since 1936 radio ownership has increased another 11,000,000 to 44,000,000 active sets.

Radio's effect on the voter this year will be profound. In turn, the effect of this increased listening can be important to both broadcasters and the radio trade.

Tie-Up Profitable

To members of the Radio Manufacturers Association March 29 went the following letter from the National Association of Broadcasters:

"Not for four more years will it be possible for the radio industry to take advantage of the intense national interest created by a presidential election. The basis of the plan to achieve this purpose is a combination of four words . . . 'Listen Before You Vote.'

"The act of listening involves radio sets, tubes, parts and service . . . all branches of the manufacturing end of the business; just as it involves something to listen to . . . the program.

"The political listening curve (Ed.—See illustration re-printed from March *Radio Retailing*) will begin a slow ascent in April with the first broad peak coinciding with the Republican Convention in Philadelphia next June. The curve will hold and maintain its position on a slightly higher plateau in July and then begin a further ascent to peak at the November election.

"Trade papers have agreed to

carry this promotion to the radio trade. . . . Public announcement of the slogan 'Listen Before You Vote' will be withheld for some weeks so that manufacturers may have ample time to take advantage of this unique sales opportunity.

"Manufacturers and the trade may find it profitable to effect visual tie-up with the theme, perhaps by suitable window-displays. The idea also lends itself for inclusion in black and white copy and on billboards."

Leading Lights Approve

For a quick check on the attitude of political parties toward the campaign theme opinion of both the Democratic and Republican National Committees was sought. Both approve.

Approval of nationally influential non-partisan organizations, important because they can do much toward popularizing the theme particularly in the effort's early stages, was also solicited. Following are excerpts from a few of the replies:

A. F. of L. president William Green . . .
 "I am of the opinion that the theme which

you have decided upon is a very simple and striking one. 'Listen Before You Vote' will make a very deep impression upon the minds of all.

"It will have a splendid psychological effect. We will endeavor to use it in the publication of our bulletins and through dissemination in our literature, and in this way give it as wide publicity as possible."

AMERICAN ASS'N. for ADULT EDUCATION's director Morse A. Cartwright . . .

"It would be even better if your slogan were to read 'Listen and Think Before You Vote!' "It seems to me important that voters throughout the country should be impressed with the importance of their responsibility in a national election and that they should be appealed to from the point of view of the educational duty devolving upon them to inform themselves fully of issues before they exercise their suffrage."

YMCA National Council general secretary John E. Manley . . .

"Anything that can be done to lead voters to be more thoughtful regarding the issues concerning which they should be informed and on which they must vote is a basically important service.

"I do not know of any medium through which this can be accomplished more effectively than by radio."

GEN'L FED. of WOMEN'S CLUBS president Saisie Orr Dunbar . . .

"Radio has demonstrated its ability to present the many sides of controversial questions and, in doing so, to bring the public information from the best minds of the day.

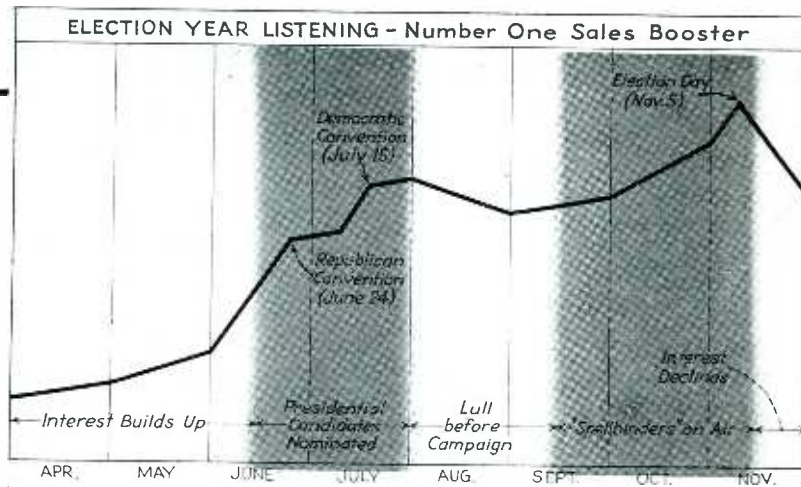
"If this policy is continued in connection with the 1940 election, all of us will do well to heed, and to help popularize, the slogan 'Listen Before You Vote.'"

NAT'L. FED. of PRESS WOMEN'S president Mrs. J. E. Goodbar . . .

"Listen Before You Vote' is indeed arresting and constructive.

"If obeyed, it may bring the radio listener

(Continued on page 80)



BEFORE YOU VOTE

ALL-INDUSTRY CAMPAIGN now gathering headway
 will stimulate demand for radios, tubes, parts, sound
 systems and service through November

NOW! GET EUROPE DIRECT!!

WITH THESE NEW 2-BAND 1 1/2 V. BATTERY SUPERHETS

Look at these features!

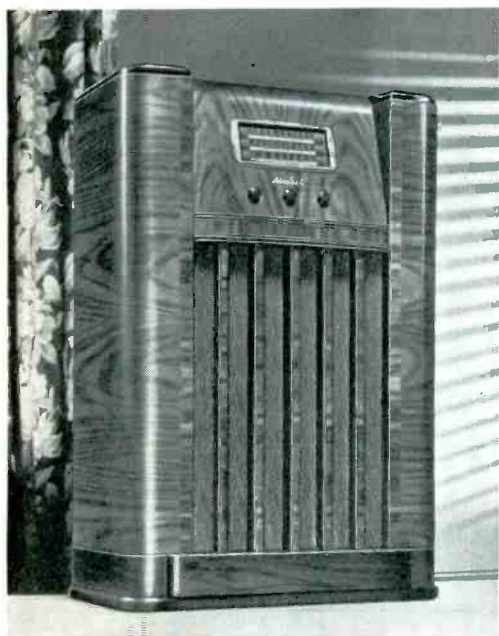
- Two Bands — Short Wave and Broadcast! (535 to 1730 KC and 5750 to 18,000 KC)
- Two Stages of I. F. Amplification
- Automatic Volume Control
- Heavy Duty P. M. Dynamic Speaker
- Iron Core Antenna Coil
- New Low Drain Tubes
- Economical Operation From All Standard "AB" Packs

By



Model 10-A5—5 Tube 1 1/2 Volt Battery Superhet Table Model with two bands and 8 oz., 6 inch speaker

All Admiral Radios now equipped with R. C. A. preferred type tubes.



Model 24-A5—5 Tube 1 1/2 Volt Battery Superhet Console with two bands and 8" speaker



Model 40-A4—4 Tube 1 1/2 Volt Battery Superhet with 6" speaker. Tuning range 535 to 1730 KC



Model 41-B4—4 Tube 1 1/2 Volt Battery Superhet with 6" speaker. Tuning range 535 to 1730 KC

ADMIRAL INTRODUCES MANY NEW FEATURES IN THESE SMART PORTABLE RADIOS FOR 1940

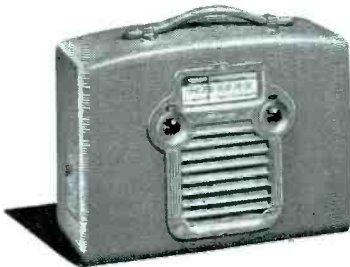
GUARANTEED CAR PERFORMANCE—THREE WAY (AC-DC-BATTERY)—AUTOMATIC POWER SWITCH—AEROSCOPE MAGIC ANTENNA



Model 35-G6—6 Tube Superheterodyne with 7 oz. P.M. heavy duty dynamic speaker. Brown leatherette cabinet with detachable cover and leather handle \$29.95



Model 33-F5—5 Tube Superheterodyne with heavy duty P. M. dynamic speaker. Brown tweed cabinet. Bakelite carrying handle \$19.95



Model 34-F5—5 Tube Superheterodyne with heavy duty P. M. dynamic speaker. Brown Leatherette cabinet. Leather carrying handle \$24.95



Model 37-G6—5 Tube superhet with 7 oz. heavy duty P.M. dynamic speaker. Combination leatherette and butt walnut cabinet. \$29.95

Prices slightly higher in Far West and South

CONTINENTAL RADIO & TELEVISION CORPORATION

3800 W. CORTLAND ST., CHICAGO
EXPORT OFFICE: 116 BROAD ST., N. Y.

“Phono Packages”

Click On Volume Rentals



EQUIPMENT FOR LARGE AFFAIRS—Portable case houses amplifier and motor. External speaker mounted on 36 inch circular baffle. Thirty dance records supplied with installation

HOW ONE MAN can handle several small sound installations in an evening

By SOLBERT J. WHITE, E.E.*

ONE OF THE BEST ways to start building business around neglected angles of the sound business is to find a way of increasing volume from the rental of amplifiers to house parties, small club dances and similar affairs . . . the type of installation where you furnish turntable, records, medium-powered amplifier and a loudspeaker.

Considering the fact that there are from 50 to 100 small parties and social functions going on every Saturday night in any city of 100,000 population and that these affairs call for some form of musical reproduction. A compact phono sound system with the necessary records on a rental basis is the answer for such occasions.

Finding the Business

The important requisites required in building up this business are low rental price, effective advertising, self-contained units for easy handling and installation and the right kind of equipment for the job. To find wide demand for renting phono-systems remember the cost should be considerably below the price of hiring an inexpensive orchestra.

Observe the circular “Are you throwing a Party?” in the accom-

* Sound Specialist

panying illustration and the sales letter below:

Dear Reverend McLaughlin:
You will gather from the enclosed circular that our Dance Music Amplifiers serve as an economical substitute for an orchestra.

Because of the very small expense involved, many churches are now conducting weekly social dances as a means of attracting the young people of the neighborhood, and thus spreading the influence of the church in an interesting and effective manner.

Our equipment is also engaged by churches to

BUILDING YOUR SOUND BUSINESS

Number One of a Series About DEVELOPING NEW MARKETS

provide musical entertainment following basketball games, bingo parties and other similar events.

Yours very truly,

Music amplification is carried on by this company as its major activity.

Equipment Suggestions

Sometimes as many as 75 installations are made in one month. The average for the year is about 400 rentals. The instruments are delivered, connected and instructions for operating given to someone on the party committee. They are removed later in the evening or the following day. As volume business at a low rental price is the objective, no operators are furnished. It re-

quires no great intelligence to attend to the equipment, adjust volume and change records. Using our system of delivery and pickup it is possible to handle half a dozen rentals in one evening.

The instruments are constructed in two styles. One is a complete-self-contained outfit, consisting of motor, crystal pickup, an 8 to 10 watt amplifier and a 12-inch loudspeaker. This model is intended for homes and small clubrooms. A larger system comprises an amplifier and turntable built into a portable case and an external speaker. High volume necessitates a separate loudspeaker, otherwise feedback will cause a serious difficulty.

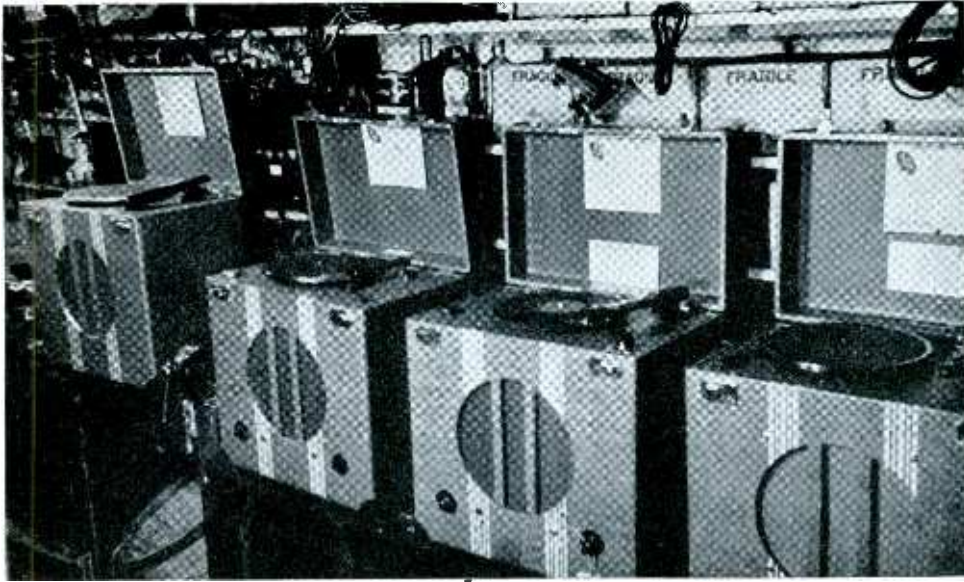
Aim to provide the best in musical reproduction. The mounting of the speaker is of particular importance. Clean and strong reproduction of bass helps to furnish tempo that is necessary for dancing.

Mass Methods Essential

Plan to build up the rental angle of your business on a mass scale.

Design a neat circular and mail to all social clubs, churches, caterers, banquet managers of hotels, high-schools and college fraternities. During the holidays insert small advertisements in local newspapers.

Furnishing recorded music could be the main profitable line of almost any sound business, yet it is neglected, because most dealers consider it “peanuts.” The whole future of sound amplification is to provide the public with perfect reproduction of music. The objective



SETUPS FOR SMALL JOBS—Self-contained music reproducers, all checked and ready for house parties and club dances. Consist of turntable, crystal pickup, 8 to 10 watt amplifier and a 12-inch speaker

of sound engineers is to achieve greater fidelity, and even today we have a standard of fidelity that should remove the stigma of "canned music" from this form of entertainment.

Another practice for popularizing rented phono-amplifiers is to construct the amplifier with a microphone channel. Offer its use at an additional cost. They go for a "mike" in a big way. It helps to pep up a party. Here again, the rate should be attractively low, the idea being to build volume, until six or more rentals are obtained each week.

"Dr. Wu" Delivers

During the past Christmas and New Year season this particular "Sound Studio" had so many daily rentals for small parties in homes and offices, they were compelled to call in Western Union messengers to aid in making deliveries and pickups.

We had considered an arrangement with a communication company whereby the public could call upon its service for a sound system, in a manner similar to that by which theatre tickets and flowers are delivered within the city.

Suggested prices for rentals without the services of an operator would be \$3.50 to \$5.00 for small units, for use in homes and clubs. For larger functions where an external speaker is required the rate should be between \$5.00 and \$7.00. If a microphone is furnished, an additional charge for same could be \$2.00 to \$3.00.

DANCE MUSIC AMPLIFIERS



Would you like six hours of continuous dance music at your next party?

We furnish for your evening's pleasure the latest dance music from phonograph records amplified by the finest reproducing equipment which the art of sound amplification has produced. EXCELLENT FOR PARTIES, DANCES, BAZAARS AND OTHER SOCIAL FUNCTIONS WHERE EXPENSES MUST BE HELD TO A MINIMUM.

WHITE'S HIGH FIDELITY MUSIC AMPLIFIERS are unlike anything formerly used for this purpose. They render rich, sparkling, lifelike tone quality. The loudspeaker illustrated above is our exclusive invention. The sounding board is decorated in gay, lively colors, and will add an attractive note to any affair.

This equipment is supplied with a large assortment of the LATEST swing records, representing all the best orchestras in the country. There is enough power to fill the largest hall.

NOTHING LIKE IT ANYWHERE!


RENTAL PRICE
\$7.00 PER EVENING

Make Reservations in Advance by Phoning
SCHUYLER 4-4449

ALSO AVAILABLE

- Symphonic and Operatic Music
- Music for Barn Dances
- Bar Room Songs
- Cowboy Songs
- Negro Spirituals

WHITE SOUND STUDIO 47 WEST 86th ST.
NEW YORK, N. Y.



Are you throwing
a Party ?

Telephone
SCHUYLER 4-4449

DANCE MUSIC

Enjoy good dance music at your next party! Rent our electric phonograph with latest swing records. For homes and clubs. Also microphone systems.

White Sound Service
151 W. 63rd St. TRafalgar 4-3022

Amplifiers Rented

WHITE—TR. 4-3022. Electric Phonographs with latest dance records for parties.

EFFECTIVE ADVERTISING—Small newspaper ads like the two illustrated, circular (cover and inside pictured) move twenty to thirty rentals per week

COUNTER AND BOOTHS—Here's Bradford's new main sales spot. Five booths left (not in photo) are labelled

"For Classical Records Only" while five right bear a sign reading "For Popular Music Only"



Remodeling for RECORDS

By HERBERT MARX*

UP TWENTY-TWO PER CENT went the record business of Bradford's, 63-year-old Milwaukee music house in 1939, 700 per cent better than in 1934 and an alltime peak for the firm.

To get still more of it department manager Stuart Randall, who kept the activity alive throughout the radio years when discs were "doggo," has now remodeled, moving to the main floor just inside the store's entrance.

Even Air-Conditioned

First remodeling move was to air-condition. Four new soundproof booths were then added, making a total of 10, five on one side of the pictured counter and labelled "For Classical Records Only" and five on the other side labelled "For Popular Music Only."

To further expand disc demonstration facilities "open air" listening posts, machines equipped with earphones, were added. These take little space, handle overflow customers. Stocked are Columbia, Vocalion, Brunswick, Victor, Blue-

*Special Correspondent



OVERFLOW LISTENING POSTS—Customers listen with earphones

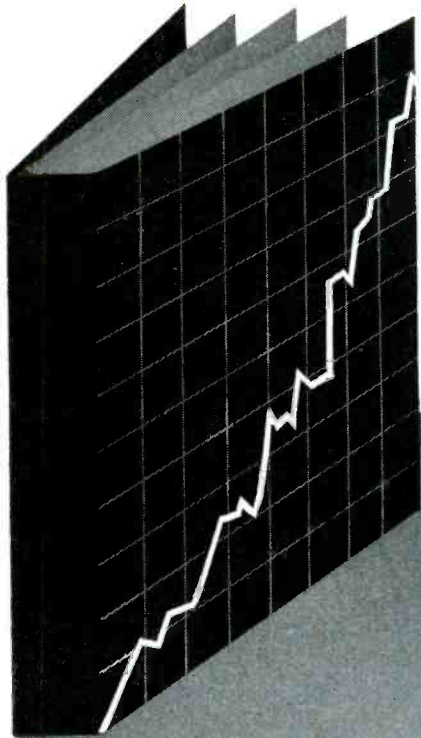
bird, Decca, Commodore, Variety and Jennet discs. Employees brag that Bradford's was the first store in town to sell Victor.

Advertises Liberally

Newspaper advertising plus an intensive and practically continuous direct-mail campaign brings in much new business but the backbone of the firm's record merchandising

today is the length and quality of its service to old customers down through the years. A staff of experienced "record librarians" keeps this service up to snuff.

The record department is headquarters for local jitterbugs and through these young adherents of swing the store's radio department has sold many sets and combinations to parents.



Sales Success Story

Month by month for the past year, Columbia Records have been chalking up sales gains that have no equal in the industry. If we might borrow a phrase, we could say that our sales graph has been nothing short of phenomenal. And it's all been because more and more people have been saying "Give me that Columbia Record". No wonder then that more and more dealers are stocking Columbia . . . more and more men and women who sell records are realizing that there are extra profits in Columbia. Nothing succeeds like success.*

COLUMBIA RECORDING CORPORATION



A Subsidiary of Columbia Broadcasting System, Inc. • Bridgeport • New York • Hollywood

It's one more way of saying—"Climb with Columbia"

SALESMEN!

Save *SPRING* Selling Time

HERE'S THE WAY to make sure prospects
can pay *before* you shoot the works

By CASWELL ODEN*

WELCOME, SWEET
SPRINGTIME, we greet
thee in song. Murmurs of glad-
ness fall on the ear. Voices long
hushed . . .

All of which is to say that we salesmen sincerely welcome the return of warm weather and, with it, the beginning of refrigeration's hottest season. We'll be busy pushing boxes, making every minute count. And this brings up the important problem of *Lost Motion*.

Did you ever sell a refrigerator (or any other appliance, for that matter), spend considerable time and effort selling it, and then when you were figuring the sale in for Saturday . . . have it rejected by your credit department?

Of course you have. I have too. But I don't do it as *often* as I once did.

There is, naturally, no way of eliminating this lost motion altogether; but we can cut down on it to a great extent if we teach ourselves to be credit-minded at all times.

As a matter of fact, I'm getting so that I can't even *do* a good selling job unless I know, or feel quite certain, that the prospect's credit is good. I just sit there and say to myself, "Why should I get excited over you, Mrs. Prospect! I don't even know whether you *can* buy the box or not. I think I'll find out first. Time enough to get excited then."

But if I feel quite certain that credit is good, I have more enthusiasm. If I *know* it is good, you can't get rid of me. I'll never forget the woman who beat me off

* Salesman

the porch with a broom. Her credit was AAAA!

There are so many angles to this subject of getting credit info, if you can, and if you want it, before wasting too much time on a prospect, that I hardly know where to start.

Some Say . . . WPA

We don't check, or even try to check, *everybody* before selling. But some salesmen will spend two solid hours selling a woman a box, finally persuade her to buy it—and then discover that her husband has a WPA job. That, to my mind, is the height of something or other. The salesman could have found that out—in nine cases out of ten—during the first ten minutes.

No, we don't check or try to check everybody in advance. You know the cases where we *don't* bother. There are prospects we feel pretty sure of. We learn to tell, in so many little ways. The appearance of the house. How the woman talks. Just a chance remark—out of dozens she can make—convinces us, or even tells us *definitely*. We won't lose much motion on these people.

And even with some of the doubtful ones—doubtful in *our* mind—we don't try to check in advance. If the sale is an easy one, why bother? But if we are doubtful and at the same time we're going to have to spend a lot of time, then we want to check in advance—if we can.

The Bare-Hand Type

Leaving you to be the judge of the cases where you'd *like* to have the dope in advance, we can now confine ourselves to the *way* we get it.

With some people we can come

right out and ask for it. With others we can't, or wouldn't try, and here we get it on the sly, during the conversation.

Now, frankly, we ought to have just as much respect for Mrs. Jones, whose husband earns \$1200 a year, as we have for Mrs. Williams, whose husband earns \$5000. And I, for one, have. But the fact still remains that where Mrs. Williams usually has to be handled with kid gloves, we can quite often handle Mrs. Jones with our bare hands (*figuratively* speaking).

Assuming Mrs. Jones is the bare hand type, we still wouldn't bother if the sale was easy, or if we could



REFRIGERATORS — Spotlight the capacity of modern boxes and dramatize convenience features insuring maximum effective use of this space, says Westinghouse

make it in a hurry. But let's say we can't.

It is in the afternoon. We've sold Mrs. Jones, but we've still got to sell her husband. That's an evening call, and our evening time is very valuable.

Several days are going to elapse before we call. Mrs. Jones won't buy until we see her husband, but maybe we can get the info we want anyway. How do we ask for it—without offense?

"Well, look, Mrs. Jones, suppose I take the information I need here, have it okayed, and then we can send the box right in as soon as Mr. Jones says all right."

Something like that. Our emphasis, of course, is on "send the box right in" and not on "have it okayed." Mrs. Jones gets the idea that our purpose is to save time (which it is), not to check up on her, and our request does not offend her.

The Kid-Glove Type

Leaving the bare hand type, we go to the kid glove type, Mrs. Williams. Here we get the information casually during the conversation.

How do we do it? It's an art!

We have the same stage we had with Mrs. Jones—afternoon. Naturally, I'm going to put the correct

words in the prospect's mouth—and of course they are words which she may or may not say. But also remember this: I am using only one "lead up" for each bit of information—and we have many. If we fail to click with one, a few minutes later we are using another one. It runs something like this:

"This is a nice block here, Mrs. Williams. Especially for people with children, having the school right around the corner. Have you been here long?"

"Oh, yes. About four years."

"Houses are pretty hard to get in this section, aren't they?"

"Oh, I don't know. . . ."

"I was talking to a lady day before yesterday. She was trying to get a house over here. Her children have so far to go to school now. I told her to try Winslow & Company—they have most of the houses around here, haven't they?"

"Yes, they have some. But she could try Braddock too. That's who we rent from."

A little later. . . .

"It was amusing, Mrs. Williams. There I was between the devil and the deep blue sea. She wanted a Coldfood, and her husband wanted a North Pole Special. Of course, it didn't make any difference to me, because I had them both to sell. That is, it didn't make any difference ex-

cept that I wanted to sell the Coldfood because I thought they'd be better satisfied with it. But they just couldn't agree, and there I was! Her husband—he works over at Campbell's. Some sort of efficiency expert, and he thinks he knows everything. What kind of work does your husband do, Mrs. Williams?"

"Oh, he's an engineer."

"Pennsy?"

"Yes, he's been with the railroad for nineteen years."

Later. . . .

"Seriously, Mrs. Williams, you won't find this six-foot box too large. Take my word for it, you're going to wish you'd bought a seven. You're thinking about the way you buy food now—not the way you'll buy with an electric box. It reminds me of Mrs. Nottingham last year. I wanted to sell her a six-foot box, but she insisted a five was large enough. Two months after she got it she wanted it exchanged for a seven. Every time I think about her I have to laugh. Believe it or not, Mrs. Williams, she had accounts with every store in the city!"

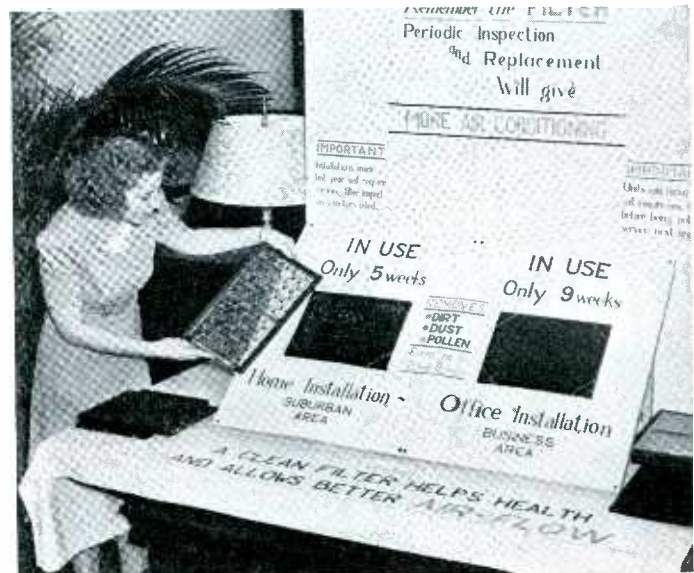
"I don't believe in that. We've bought nearly everything in this house from Crabapple's."

And that's the way it goes. When

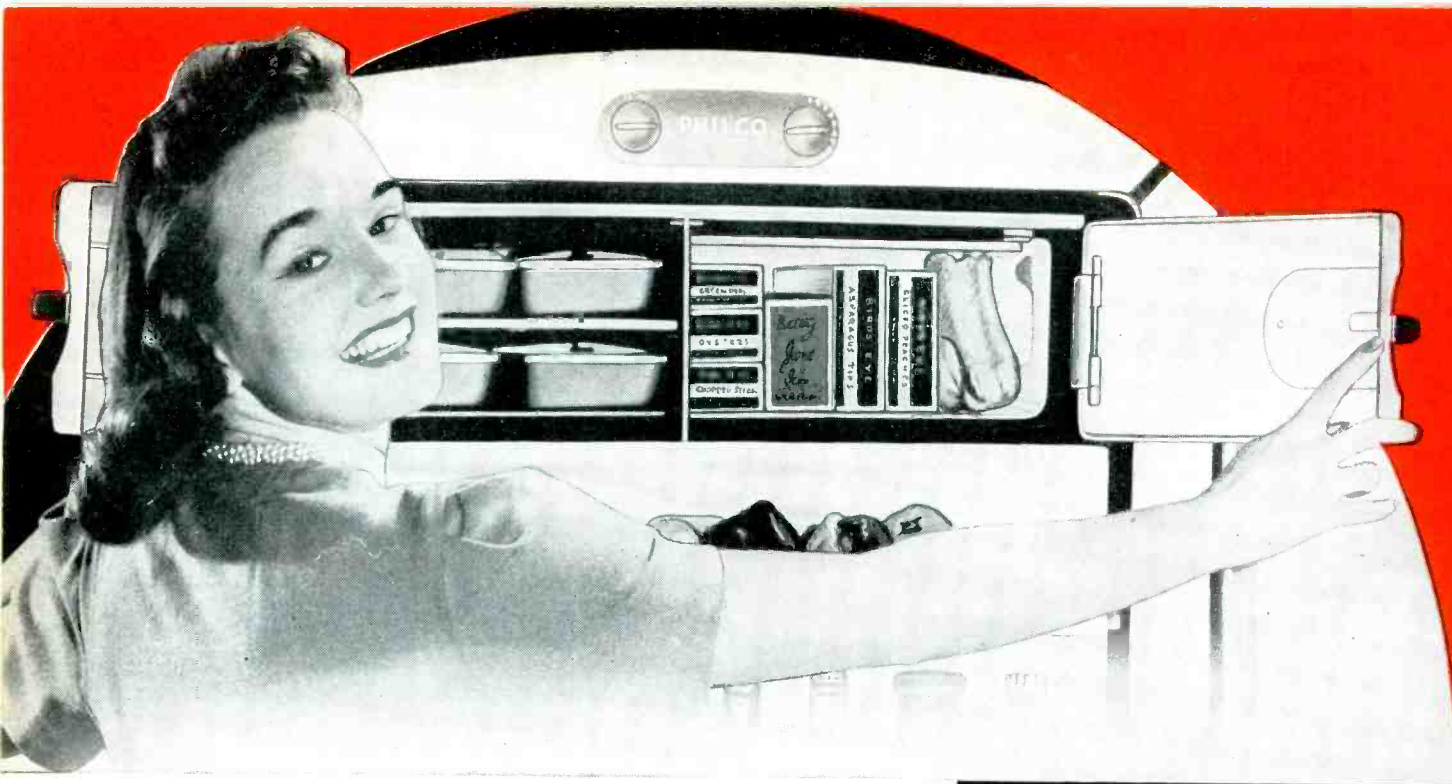
(Continued on page 80)

Three APPLIANCE Demonstration Ideas

WASHERS—Hotpoint suggests putting a fragile glass medicine-dropper through the rolls along with a handkerchief to illustrate wringing without crushing



AIR-CONDITIONERS—"Dirty story" told by visual comparison of new and used Philco filters impresses the prospect, is more effective than 1,000 words



PHILCO ADVANCED DESIGN

with the Horizontal Evaporator and Separate, Giant-Size Frozen Food Compartment
—the 1940 Sensation in Refrigeration!

New ideas, brand-new, modern conveniences, Advanced Design and engineering . . . that's what Philco *promised* to bring to refrigeration as the one effective weapon against ruinous, profit-destroying, price competition! And that's why Philco, now, is the sensation of the industry. Philco Advanced Design gives you your *one* opportunity to SELL UP, to enjoy the highest average unit sale in the industry. The Philco LH-6 already is the *quality leader* in the refrigerator field! Already it's *selling in volume* at a higher price and a *bigger profit* to the dealer. Because it offers Advanced Design . . . real, valuable *extra* services that are *worth the money* to the buyer!

*Four Great Philco Lines
that reach their Sales
Peaks in the Spring!*

Philco All Year 'Round Means Profits

HOME RADIO • PHONOGRAPHS • TELEVISION • AUTO RADIO • RADIO TUBES • PARTS • REFRIGERATORS

New Spring Line of PHILCO PORTABLES

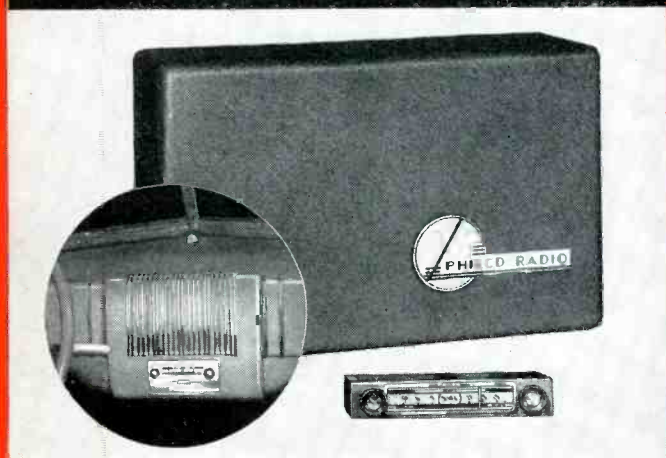


The new Spring line of Philco Portables is ready now . . . for big Spring and Summer radio profits! Four new models with new beauty, new convenience, new tone quality, new power and . . . *new sales appeal!* Smart new textures and color patterns . . . new circuits presenting brand-new performance features . . . new design that gives far greater portability. And what values! See them at your Philco Distributor's . . . cash-in on the tremendous demand for Philco Portables. And get your share of the Spring Profits in the amazing Philco Radio and Radio-Phonograph values your distributor is offering NOW!

oving into Spring with these

PHILCO PROFIT BUILDERS!

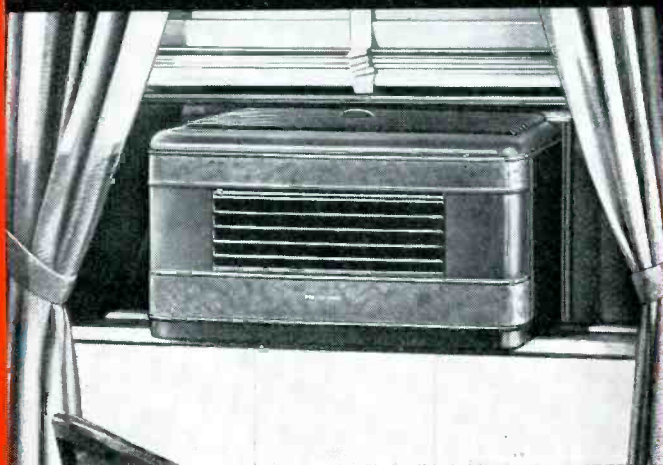
PHILCO AUTO RADIOS



The finest, most complete line of auto radios ever built! New Philco features bring amazing performance and convenience that make the 1940 Philco the easiest-to-sell auto radio in the field. A model for every purse and preference.

Be sure to see Philco's sensational new SHORT-WAVE AUTO RADIO! Tunes in foreign stations *direct*. Enables you to switch to American short-wave broadcasts when standard reception is difficult. Every car owner is a prospect whether he has an auto radio or not. The *first* short-wave auto radio . . . brings you sales and profit possibilities hitherto untouched!

PHILCO-YORK AIR CONDITIONERS



Here at last is the key that opens the vast air-conditioning market . . . *real, complete* air conditioning at an amazingly low price! Every home and office is a prospect for the new Philco-York Air Conditioner. Easily, quickly installed . . . no wiring, no plumbing. **FULL PROFITS . . . no trade-ins!** Supported by a strong advertising and merchandising campaign.

All Year 'Round!

RS • AIR CONDITIONERS • DRY BATTERIES

Mail
Coupon
NOW!

PHILCO, Dept. 605

Tioga and C Streets, Philadelphia, Pa.

Please tell me more about the Philco All Year 'Round profit opportunities. I am particularly interested in—

- Philco Radios, Radio-Phonographs and Portables
- Philco Auto Radios
- Philco Refrigerators
- Philco-York Air Conditioners

NAME _____

STREET _____ COUNTY _____

CITY _____ STATE _____

For PARTS JOBBERS Only

By HAROLD F. JENKINS*

FOR FIVE YEARS two of our salesmen have regularly covered scheduled routes, calling on a large number of radio dealers in New York and Pennsylvania. Their combined mileage totals 1500 each week, now nosing a 400,000 mile grand total.

From their experience, we have learned that more radio parts can be sold in this territory from "peddler's packs" than in any other way. We also have learned a few simple twists that hold our customers' business consistently.

Rigid Schedule Followed

First, and perhaps topping the list in importance, stands the word "schedule."

Our routes are timed so closely that we call on each customer the same day of each week, and even the same hour of a particular day.

Servicemen know when we are coming. Their lists are made out. They are at their store instead of on a call on the far side of town.

Tests made prove that an off-schedule trip finds three out of ten men away. Time is lost waiting for their return or we miss them altogether. Those we do find in have not checked their stocks. Longer calls are needed to obtain an order. On the other hand, a trip on schedule finds nine out of these same ten waiting for our man, with a pretty good idea of what they want to buy. And they have more time to consider new items.

How often do we call on our out of town dealers? Some every week, most every two weeks.

Each salesman averages 12 calls a day. Some calls are 25 miles apart, most closer. Time on each call rarely exceeds 30 minutes. Mere "order takers," you may say. Hardly. Efficient salesmanship is a better classification.

To maintain close schedules we long ago discarded the idea of trucks. Ordinary 5-passenger pleasure cars are used.

Speed is increased by doing this. It is surprising how much can be

packed in them. Condensers, resistors, volume controls, tubes, and other fast-selling parts are carried for spot delivery. Special coils, cones, and other less used parts are shipped from store stocks.

Stock Studied Saturdays

Our salesmen are required to be thoroughly familiar with store stocks.

Each Saturday, when not on the road, they must give things the once-over. When receiving a special order on the road they nearly always can tell if it will be shipped promptly or be delayed because of the necessity of obtaining from the manufacturer.

Pinning it down even closer on store stocked items, they can even tell the buyer on what day, and at what hour it will probably be delivered. How? Every railroad route, every truck and bus schedule out of Elmira (N. Y.) is known, with the time the carrier leaves and when it reaches any particular town or city.

A standing rule calls for all orders to be in the mail or other shipping terminal within one hour of receipt. We find, in many cases where shipping into small towns is a once-a-day proposition, that an hour's difference at our end may mean a day's difference at the point of delivery.

Stuffed Shirts Discouraged

Other things count, too.

Perhaps we shouldn't mention this, as darned near all our accounts read *Radio Retailing*. But we shall. Our salesmen dress with a purpose.

Working on the theory that it is always easier to talk with people when all are on the same plane, they do something which might be called eccentric. They don't dress overly well. I do not, however, mean that they wear overalls. Neatness and cleanliness are essential, but a few wrinkles in the trousers are permissible. And shirt sleeves in summer. No stuffed shirts, these men.

The reason for this? Suppose you are half submerged in the motor compartment of a car when a representative calls. With grease on your hands. Dust on your

britches. Suppose the salesman is dressed to kill. Even though there is no definite feeling of antagonism on your part, there is an atmosphere which psychologically spells sales resistance.

Integrity and faith in our concern is built up by "reverse selling," one of our most valued tools.

If we have something new, something untried, we frankly say that its merits are yet to be proven. Bringing out the fact that we would like to have the serviceman try it himself, and that we will value his later comments and criticisms, sells more than praising the article to the skies.

Cure for Overselling

High-pressure selling is completely out.

To oversell a man is easy. Yet, the next trip around will show the real cost of such tactics. Smaller than usual will be order number two. Perhaps, no order at all. For, there on the shelves, are entirely too many of something or another.

Salesmen receive a straight salary, plus expenses. There is no incentive to oversell because of added commissions. But, there is the incentive to do a good, honest job of selling because that same salary is forthcoming whether business is booming or in the doldrums.

Probably our sales system is unorthodox. Too precise in some spots, the opposite in others. Nevertheless, according to our estimates, some quarter of a million radios around these parts have one or more tubes or parts replacements in them which came from our stocks.

If DEALERS Peek . . .

This inside story may interest them, at that, illustrating as it does the lengths to which distributors go to give retailers better service

*Fred C. Harrison Co.

ARVIN HAS THE

Hot Numbers!

Radio-Phonograph Combination
MODEL 302
 Deep Brown Finish **\$14.95**



MODEL 302A
 Ivory Finish
 Illustrated.. **\$16.95**

... And more Radio Dealers are "steaming-up" on Arvins every day.

● The new Arvins are made-to-order for fast sales. Beauty . . . style . . . performance, they've got all that plus low prices that make folks take notice.

Arvin sales are 'way ahead of last year . . . and moving faster every day. Be sure to see Arvin's hot numbers . . . compare them on any basis and you'll see why they sell so well.

NOBLITT-SPARKS INDUSTRIES, INC., COLUMBUS, IND.

Prices slightly higher in West and extreme South

They Sizzle with Sales Appeal

This Arvin Radio-Phonograph is plenty hot. Plays 10" and 12" records or brings in radio broadcasts with rich tone. Self-starting constant speed phonograph motor. Four tubes, including rectifier. 20-foot attached aerial. Unbreakable cabinet. Carrying case only \$2.95 extra.



LOW COST CAR RADIOS

Model 510, a compact but powerful superhet with illuminated thumb-wheel dial for fast, easy tuning. Easily installed under instrument panel. A real performer at this low price. . . . \$14.95

Model 510 with four push buttons and thumb-wheel dial tuning \$17.95



Arvin Model 402A. This snappy little set thrills everyone. A small but mighty AC-DC radio in a smartly styled unbreakable cabinet. 20-foot aerial attached. Size 6½" wide, 5½" high, 3¾" deep. Three tubes including rectifier. Ivory finish (Model 402 walnut) \$6.95

Model 502, a larger, more powerful superhet. Has lighted dial. Ivory or walnut finish . . . \$9.95



Arvin 602 Models. Powerful AC-DC superheterodynes with built-in loop antenna and carrying handle. 6 tubes including rectifier. Fine performance. Permanent magnet speaker. Lighted airplane type dial. Size: 11½" wide, 9½" high, 6¼" deep.

Model 602A ivory plastic cabinet \$18.95

Model 602 walnut plastic cabinet \$16.95



HOTTEST BATTERY-ELECTRIC PORTABLE

Model 802, complete with batteries \$24.95

Folks like everything about this radio . . . its fine performance on batteries outdoors, on AC-DC current indoors. Superheterodyne circuit. Built-in loop antenna.

Model 803, same as above, except Underwriters' approved for 110 AC or battery operation . . . \$26.95

PROFIT WITH

ARVIN

HOT NUMBERS

I'm Bringing YOU Business!

Every house needs
Westinghouse



GREATER STORE TRAFFIC is the first objective of the "Advise-a-Bride" Program. All advertising directs the reader to dealers' stores. Tie in with this "stopper" window display.



PROSPECTS MUST COME TO YOU for their free entry blanks. Get them to "register" when they come in! You'll find many are good prospects that can be followed up and sold.



TRADING UP is made easier because attention is focused on the higher-priced models during the contests. This means bigger units of sale, extra dollars for you.

NEW WESTINGHOUSE "ADVISE-A-BRIDE" CONTESTS OPEN DOOR TO BIGGER REFRIGERATOR SALES AND PROFITS

You've a *date* with this girl . . . and *April 18th* is the day. Then for *five consecutive weeks* she's going to work for you—bring you dozens, possibly hundreds, of "live" refrigerator prospects. Not only will she "bring 'em in," but she'll help you *sell* them—and many will be the more expensive, more profitable models. Who is she? Why, the WestinghouseBride, around whom the year's most spectacular refrigerator promotion has been built.

Nearly *half a million dollars* will be

spent to put this young lady over—in magazines, radio, newspapers and displays. Another \$23,000.00 in prizes will be given away *free* in the most simple, most practical contest-program ever developed. It's a *retailer's own* type of promotion—free from red tape, and with a whale of a sales "kick." Your Westinghouse Refrigerator Representative will be glad to give you all the details. But, you'd better act **NOW!** Here's one "bride" that's going places . . . and how!

WESTINGHOUSE ELECTRIC & MANUFACTURING COMPANY • DEPT. 114 • MANSFIELD, OHIO

TUNE IN "MUSICAL AMERICANA", THURSDAY NIGHTS, N. B. C. BLUE NETWORK

Westinghouse Refrigerator

The Pacemaker.. now Faster for '40!

Product Preview



RCA

CONSOLE—Model K-61, clean-cut designed cabinet, is a 6-tube superhet; features 12-inch dynamic speaker; built-in loop antenna; 6 pushbuttons; domestic and foreign reception; 3 point high-frequency tone control; provision for television and phono attachments; sloping instrument dial panel for easier tuning. Measures 38 $\frac{1}{4}$ high, 25 $\frac{3}{4}$ wide, 12 $\frac{3}{4}$ inches deep.



RADIO-PHONOGRAPH—Model U-43 is housed in 18th century style console cabinet. Features automatic record changer for 10 and 12-inch records; has 12-inch dynamic speaker; built-in antenna; 7-tube radio chassis, receiving domestic and foreign broadcasts. Height 34, width 32, depth 16 $\frac{1}{8}$ inches. RCA Mfg. Co., Camden, N. J.

ADMIRAL



PORTABLE—Model 35-66 a 6-tube set, with automatic power-switch, for operation on a.c.-d.c., or

batteries. It is enclosed in a brown leatherette carrying case with detachable cover. Convenient for overnight trips and outings. Price \$29.95. Continental Radio & Tele. Corp., 3800 Cortland St., Chicago, Ill.

WESTINGHOUSE



TABLE TYPE—Model WR-175, a 5-tube superhet has automatic volume control; 5-inch dynamic speaker; built-in antenna; gold dial with center spot of sapphire blue; 10 to 1 vernier tuning; beam-power output; frequency range from 530 to 1600 k.c. Available in walnut plastic \$12.95; ivory plastic \$15.95. Westinghouse Radio Headquarters, 150 Varick St., New York, N. Y.

MOTOROLA

AUTO RADIO—Model 250, a two unit superhet with 4-station pushbutton tuning; built-in noise filter; easy-to-read dial. Employs 6-tubes and measures 4 $\frac{1}{8}$ x 4 $\frac{3}{4}$ x 10 $\frac{3}{4}$ inches deep. Price \$24.95.

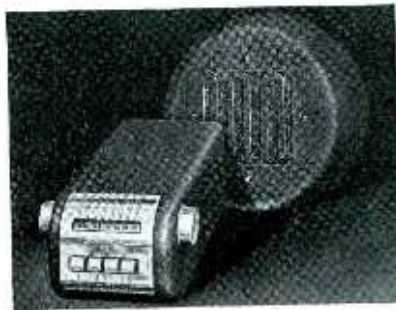
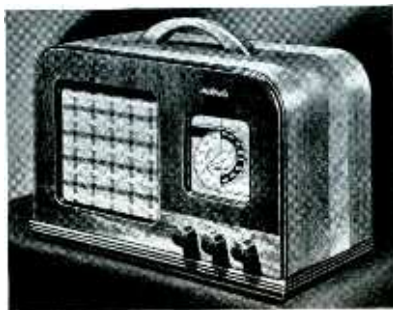


TABLE TYPE—Model 40-60 W, a 2-band 6-tube set for operation on 110-volt a.c.-d.c. Has built-in loop antenna and tone control. Galvin Mfg. Corp., 4545 Augusta Blvd., Chicago, Ill.



RADIOBAR

COMBINATION—A completely enclosed cabinet bar with automatic record-player and radio chassis. The set has pushbutton tuning, covers short-waves and the record player is of the drawer-type. Attractive cabinet in bleached Swedish Moderne finish, top opened available for bar service with liquor storage compartment. Radiobar Corp. of America, 296 Broadway, New York, N. Y.

SENTINEL



TABLE TYPE—Model 212-W has a convenient handle to carry set about; 6-tube, 2 band, a.c. or d.c. superhet. Housed in walnut bakelite cabinet; list price \$19.95; available in ivory-onyx-\$22.95.



PORTABLE—Model 213-P is a 5-tube a.c. or d.c. and battery superhet. Available in brown, stag leather grained covering. List price \$24.95, complete with batteries. Sentinel Radio Corp., 2020 Ridge Blvd., Evanston, Ill.

SONORA



PORTABLE—"Candid" model resembles a camera in appearance and construction. The case is molded of Durez; is available with carrying handle or shoulder strap. Has built-in batteries; uses the new miniature tubes in a superheterodyne circuit; includes built-in aerial; dynamic speaker. Measures 8 1/4 x 5 x 4 inches; weighs 4 1/2 lbs. Sonora Radio & Tele. Corp., 2626 W. Washington Blvd., Chicago, Ill.

or d.c. superhet with built-in antenna. Lists from \$14.95 to \$19.95. Kadette Radio Corp., Ann Arbor, Mich.

STEWART-WARNER



COMPACT—Model 07-5R3 with 4-inch electro-dynamic speaker; 5-tube superhet with A.V.C. and a tuning range from 540 to 7000 k.c.; equipped with built-in antenna. Modern in design, compact, light-in-weight and available in ivory molded plastic cabinet.



PORTABLE—Model 357 has built-in antenna; 5-inch permanent magnet dynamic speaker; automatic volume control. Carrying case of two-color grained simulated leather, tan front and maroon frame. Price \$19.95. Emerson Radio & Phono. Mfg. Co., 111 Eighth Ave., New York, N. Y.

KNIGHT



SUPERHET—Model A10830 with built-in Air Magnet loop antenna; 5 tubes; pushbutton tuning; 5 inch p.m. speaker; illuminated dial; provision for television. Allied Radio Corp., 833 W. Jackson Blvd., Chicago, Ill.

AUTOMATIC



RADIO - PHONOGRAPH — Walnut table model, #434-A, measures 15 1/2 x 14 x 8 1/2; 5-tube superhet; tunes 1720 to 545 k.c., features built-in automatic antenna; a.v.c., dynamic speaker. List price \$39.95. Automatic Radio Mfg. Co., Inc., 122 Brookline Ave., Boston, Mass.



CONSOLE—MODEL 01-8B7, an 8-tube superhet featuring attractive cabinet design and finish, wide tuning range and simplicity in dialing. Has built-in antenna; 8-pushbuttons; stands 41-inches high and uses a 10-inch electro-dynamic type speaker. Stewart-Warner Corp., 1826 Diversey Parkway, Chicago, Ill.

ANDREA

PORTABLE ELECTRIC PHONOGRAPH—Has self starting rim drive electric motor; 9-inch felt-covered turntable; crystal pickup; 6 1/2-inch magnetic speaker; operates on 110-125 volts, 60 cycles a.c. Model G-20, housed in luggage type cabinet, has closed non-spill needle cup. Weight 14 1/2 lbs.; price \$29.95. Andrea Radio Corp., 48-20 48th Ave., Woodside, N. Y.

EMERSON



PORTABLE—Model 363 is a 3-way portable with built-in loop antenna; features American, foreign and police broadcasts; 6 1/2-inch permanent magnet dynamic speaker. Luggage style case finished in blue buffalo grained simulated leather. Price \$34.95.



PHILCO

MODEL U-12—Combination phono table-type has silent mercury on-and-off switch; three point bass and treble tone control; pushpull audio, built-in antenna, top-loading needle socket and automatic needle cup; plays either 10 or 12-inch records; covers domestic and foreign short wave broadcasts and police calls. Philco Radio and Television Corp., Philadelphia, Pa.

KADETTE



TABLE TYPE—"Topper," a plastic model, features an all directional sound diffuser; speaker and deflecting dome is placed in top of radio using the cabinet as an effective baffle. Available in ivory, walnut, ivory with brown top and knobs, and brown with ivory top and knobs; 5-tube a.c.

There are
Other Good
Refrigerators
at Low Prices
... *but*



HOME ECONOMIST VIRGINIA FRANCES gives Terry Arden (JOAN MARSH) a refrigerator recipe. Because refrigerator demonstrations such as this are an actual part of the story plot of Hotpoint's movie "BLAME IT ON LOVE," you know your audience will be sold easier and faster than ever.

Hotpoint Has The Product and The Prize Promotion

CERTAINLY, there are other good refrigerators at low prices... but none of them has a promotion to boost sales for you like Hotpoint's feature-length sound movie, "BLAME IT ON LOVE."

Hotpoint retailers from coast to coast have applauded and acclaimed "BLAME IT ON LOVE" as the year's Greatest Promotion in Electric Appliances.

And there is good reason for such overwhelming enthusiasm because...

● **BLAME IT ON LOVE** makes YOUR store the center of appliance buying in your community—develops store traffic because people come to YOUR showroom for free tickets to the big show—focuses the spotlight on YOUR store as headquarters for reliable Hotpoint Appliances.

● **BLAME IT ON LOVE** gives you the opportunity of a lifetime to tell a 54 minute uninterrupted sales story to an audience of prospects which you select yourself.

● **BLAME IT ON LOVE** makes new customers out of old prospects and develops new pre-sold prospects for you to turn into sales.

Plan now to lead the parade in your community. Stage the **BLAME IT ON LOVE** promotion in your town. Ask your distributor for details or write

EDISON GENERAL ELECTRIC APPLIANCE CO., Inc.
5630 W. Taylor St., Chicago, Illinois

plus Measured Humidity



BESIDES giving you the great "BLAME IT ON LOVE" promotion that is advertised nationally, Hotpoint also provides you with an additional plus sales aid — Measured Humidity — the year's greatest advancement in electric refrigeration.

Easy-to-Demonstrate Features

1. **MEASURED HUMIDITY** in the 6-way cold storage compartment keeps meats in prime condition by providing exactly the right combination of moisture and cold.
2. Pop-Ice Trays.
3. Adjustable Height **STAINLESS STEEL** Gliding Shelves.
4. Glass-Topped Hi-Humidity Compartment with **MEASURED HUMIDITY** for fruits and vegetables.
5. Vacuum Sealed Thriftmaster.
6. **STAINLESS STEEL** Speed Freezer.
7. All Steel Cabinets with Thermocraft Insulation.
8. Food Safety Gauge.

ELECTRIC

Hotpoint

REFRIGERATORS

ELECTRIC RANGES • WATER HEATERS • WASHERS AND IRONERS • CLOTHES DRYERS • DISHWASHERS • ELECTRASINK

I'M GLAD THE BOSS SELECTED THE COMMERCIAL CREDIT PLAN



*"It Helps Me Sell —
Keeps My Customers Sold"*

"I'VE SOLD hundreds of appliances on the instalment plan. That's how I know there is a lot of difference in finance plans, and in the folks that offer them.

"Here's why I'm interested. Most of my commissions come from time sales. I naturally want these customers coming back to me for other appliances. Maybe I am selfish, but I want more sales—and more commissions. So, I'm particular about the finance plan and the finance company I recommend.

"With the Commercial Credit Plan we've got very low rates and liberal terms for the customer. The Plan also provides for Combination Sales, Farmer Sales, Short Term Note Sales and 'Add-On' Sales. Most finance plans have some, but none have all

the features offered under the Commercial Credit Plan.

"There is the personal angle, for instance. To do the job right a finance company—like a salesman—must know human nature and how to deal with people. They must be cooperative. They must be *considerate* of deserving people and play ball with them when circumstances justify it. That's another reason why my customers and I like the Commercial Credit Plan.

"The boss is naturally profit-minded. He likes the safety features of the Commercial Credit Plan because we have fewer repossessions. Commercial Credit also gives him a cash reserve on each time sale to protect him against loss on his time sale profits. That's their new Dealer Reserve Plan. Why not tell *your* boss about it."

COMMERCIAL CREDIT COMPANY, FIRST NATIONAL BANK BLDG., BALTIMORE, MD.

PROFIT-MINDED DEALERS

Send for these folders:

1. GREATER PROFIT OPPORTUNITIES
 - Highlights the following features
DEALER RESERVE PLAN
LIMITED LIABILITY PLAN
PURCHASER DISCOUNT PLAN
2. DEALER'S WHOLESALE PURCHASE PLAN
 - Fully describes terms, rates and methods of financing dealer's purchases.



SERVING THE APPLIANCE INDUSTRY FROM COAST TO COAST

CLARION



AMPLIFIER—Model A-95, 71 watt power unit, has a peak wattage of over 100; facilities for 4 microphones; 2 phono inputs; maximum gain of microphone input, 127 db; 4 beam power tubes. Complete with tubes and phono equipment for \$174.90 list.



PORTABLE SOUND SYSTEM—Model C-443, 24.36 watt portable system offers higher power, multiple inputs and all features of permanent installation. Housed in single carrying case. Frequency response is 40 to 9500 cps. and total overall gain of microphone inputs is 120 db. Output transformer is provided with impedances of 2, 4, 8, 16, 250, and 500 ohms. Transformer Corp. of America, 69 Wooster St., New York, N. Y.

ALLIED



SOUND SYSTEM—Model A12255, "Speechmaster" portable one-unit sound system; consists of amplifier, speaker, microphone and lighted flip-top reading table, all built into one case; features 14 watts usable power output, also available in 7 watt size; inverse feedback; phono connection. Allied Radio Corp., 833 W. Jackson Blvd., Chicago, Ill.

BELL SOUND

RECORDER—Model RC-2-P is a complete, self-contained, portable combination recorder and phonograph. Easy to operate and is equipped

with crystal microphone with desk stand and 15 ft. cable. Compact, leatherette covered carrying case has compartment for microphone, cables and records. Bell Sound Systems, Inc., 1183 Essex Avenue, Columbus, Ohio.



REGAL

INTER-COMMUNICATION—The "Tokfone" 600 series 2-way communication unit is designed for use between any master and any of ten or less remote stations. It is said, that it is now possible to have five simultaneous private conversations without crosstalk or interference. Regal Amplifier Mfg. Corp., 14 W. 17th St., New York, N. Y.



KENYON

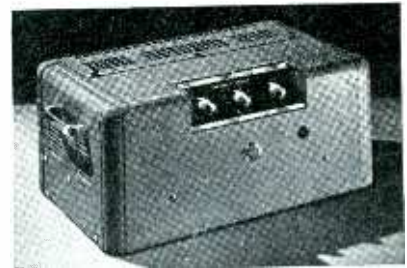
AMPLIFIER KITS—Three new kits featuring CATH-O-DRIVE modulation system, peak limiter, modern stream-lined cases; 5, 15, and 60 watt output ratings. Kenyon Transformer Co., Inc., 840 Barry St., New York, N. Y.

SETCHELL CARLSON



AMPLIFIER—Model RA-50 is a dual channel, 50-watt amplifier (two 25-watt output channels, separately controlled); features built-in six button radio tuner; pushbutton tone selector with volume compensator; beam power output. Encased in metal cabinet. Setchell Carlson Mfg. Co., 2233 University Ave., St. Paul, Minn.

WEBSTER-CHICAGO



AMPLIFIER—Model W860, a 60-watt unit housed in a modern wrinkle finish case. Provides electronic mixing of two high-gain microphone inputs, multi-stage inverse feed back, voice coil and line impedance outputs. Utilizes four 6L6 beam power output tubes with a 6x5 rectifier. Gain rated 125 db. The Webster Company, 5622 Bloomingdale Ave., Chicago, Ill.

HALLICRAFTER



RADIOPHONE—A new compact, 25 watt radiophone for use on small commercial and pleasure boats. It provides for 2 way communication; has 5 corresponding receiving frequencies, plus an extra weather report channel; 7-tube superhet; single compact cabinet designed either for table or bulkhead mounting. Hallicrafter, Inc., 2611 S. Indiana Ave., Chicago, Ill.

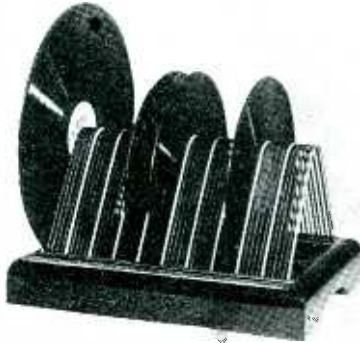
UNIVERSITY

SPEAKER—A new parabolic type reproducer featuring one-piece construction, to eliminate such difficulties as water leakage and rattles. Made with "rubber-tired" rim speaker mounting to prevent metallic resonance. Has universal "U" mounting fork. University Labs., 195 Chrystie St., New York, N. Y.



MUSICRAFT

RECORD RACK—Holds fifty records in a wire frame covered in contrasting shades of gold and brown fabric. Finished in walnut; complete with index and numbering materials. List price \$3.50. Musicraft Records, Inc., 10 West 47th St., New York, N. Y.



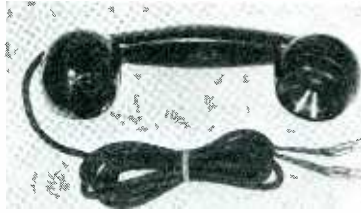
TURNER

MICROPHONE—New low cost microphone named the "Han-D," shaped to fit the hand. Available in both crystal and dynamic types; has hook which allows it to be used as a hanging mike for stage work and call systems. A positive contact on-off slide switch affords easy action. The Turner Co., Cedar Rapids, Iowa.



ATLAS

SPEAKERS—Model DR-42 double re-entrant sound projector with a 3/2 foot exponential air column. They advise cut-off at 140 cycles and a projection angle of 80 degrees. Overall length 17 1/2 inches, bell opening 2 1/2 inches. Model PM 23 "dyna-flux" compression speaker unit used with the DR42 is a permanent magnet type with a power rating of 18 watts, voice coil imp: 15 ohms. Atlas Sound Corp., 1448-39th St., Brooklyn, N. Y.



UNIVERSAL

TELEPHONE—French-type phone in molded case with cupped speaking piece. Four wire cable permits separate connection between mike and earphone. Universal Microphone Co., Ltd., Inglewood, Calif.

CORNELL-DUBILIER

CAPACITORS—The new line of FA units are made for low-voltage radio applications which require high-capacity capacitors in compact form. They are available in working voltages of 12, 15, 18, 25 and 35 volts and in capacities of 500, 1000 and 2000 mfd. Units are housed in aluminum cans with Bakelite terminal caps. Cornell-Dubilier Elec. Corp., South Plainfield, N. J.



EICOR

DYNAMOTORS—New Line of compact sturdy units designed for continuous performance and long life. Light in weight per watt output, low starting current. Eicor, Inc., 515 S. Laffin St., Chicago, Ill.



PERMO PRODUCTS

RECORDING NEEDLE—A new cutting needle constructed to withstand abuse, provide clean quiet cut grooves and to fit all standard home recording machines. The average life of the stylus ranges from three to five hours depending upon types of records. Permo Products Corp., 6415 Ravenswood Ave., Chicago, Ill.

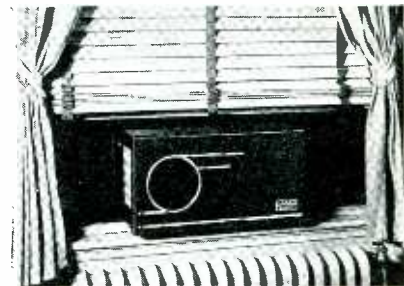
BENDIX

WASHER—Utility model for home laundry, washes, rinses, and damp-dries in exactly the same manner as higher priced models. Chief difference is that the higher priced models work automatically, whereas with the utility model, the operator sets, manually, the control dial for the various washing, rinsing, and damp-drying cycles. List price \$99.50. Bendix Home Appliances, Inc., South Bend, Ind.



GALE

AIR CONDITIONER—DeLux model featuring improved capacity and complete disposal of water created by condensation. Has cooling capacity of 4700 B.T.U. The unit is equipped with an acoustical liner and is finished in a neutral color to harmonize with room decorations. Gale Products, Galesburg, Ill.



NASH-KELVINATOR

REFRIGERATOR—A new low-priced, 6 1/4 cu. ft. model is to be added to the Kelvinator and Leonard 1940 line. Equipped with high-speed, automatic control freezer, light when door is opened. Exterior finished in Permalux. Price \$114.75. Nash-Kelvinator Corp., Detroit, Mich.



THERE IS NO PREMIUM FOR JENSEN QUALITY

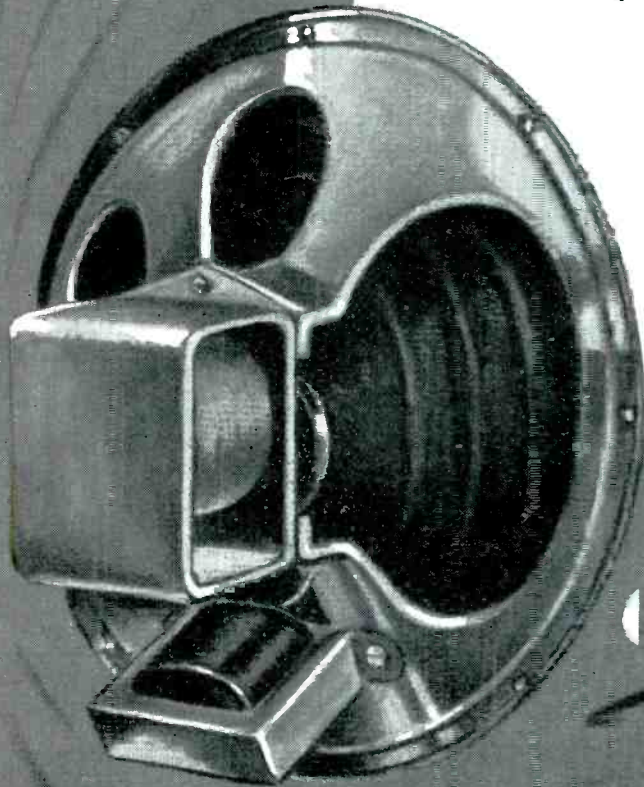
There is no replacement speaker of a higher quality than JENSEN—yet there is no price premium to pay for that quality!

A JENSEN replacement speaker is available for as little as \$2.50 less the usual trade discount.

The use of bucking coils to reduce hum...larger wire to give more sensitivity...dustproofing to insure trouble-free operation...are JENSEN'S contribution to your reputation as a Serviceman.

And then there is the dominant quality, typical of every JENSEN product, inherent by habit and instinct of those who have been designing and building JENSEN products for ten years or more.

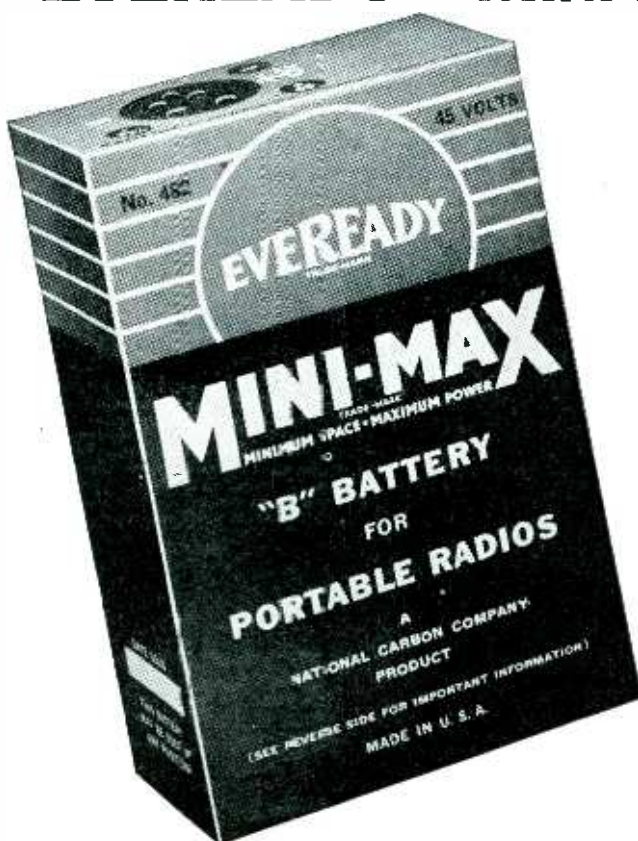
JENSEN speakers cost more to make—but they cost you no more because they give your customer satisfaction!



Jensen
Replacement
Speakers



and that means plenty of orders for
“EVEREADY” “MINI-MAX” “B” BATTERIES!



When political speeches start filling the air, portable radio set owners will start filing into your store. For the nominating of presidential candidates will be **BIG NEWS** in the biggest portable season ever.

That means *good* news for you... particularly if you're all set to sell the sensational, lightweight "Eveready" "Mini-Max" "B" battery—the battery that has made portable sets really *portable*.

Delivering twice the service life of any other "B" battery of equal size, the "Eveready" "Mini-Max" battery combines *minimum* weight and size with *maximum* power. As a result of this amazing compactness and super-performance, approximately 30 leading manufacturers have designed sets around the "Mini-Max" battery.

Check over your stock of "Eveready" "Mini-Max" "B" batteries now, and *be sure* to order enough to take care of the busy buying season just ahead. And don't forget—there's a good demand starting *right now* for battery replacements in sets that were gifts last Christmas. Get your order in today!

Leading radio manufacturers making portable sets for the "Eveready" "Mini-Max" "B" battery:

- | | | |
|------------------|--------------|--------------------|
| ARVIN | GILFILLAN | SPARTON |
| CLIMAX | HOWARD | STEWART WARNER |
| COLONIAL | KADETTE | STROMBERG CARLSON |
| CROSLY | MAJESTIC | TELEX |
| DETROLA | MISSION BELL | TRAY-LER |
| DEWALD | MOTOROLA | TROY |
| EMERSON | PACKARD BELL | WARWICK |
| FADA | PILOT | WESTINGHOUSE |
| FARNSWORTH | RCA | WILCOX-GAY |
| GENERAL ELECTRIC | SENTINEL | <i>And Others!</i> |
| | SONORA | |



Long-lasting, sensationally small, the "Eveready" "Mini-Max" "B" battery was the big portable radio news of 1939. This year, it promises to be the pace-setter of the replacement market! It has set the standard for portable "B" battery size and shape.

NATIONAL CARBON COMPANY, INC.

General Offices: New York, N. Y.

Branches: Chicago and San Francisco

Unit of Union Carbide  and Carbon Corporation

The words "Eveready" and "Mini-Max" are registered trade-marks identifying products of National Carbon Company, Inc.

On the Newsfront

June Convention Program

Helpful data for planning your schedule

WASHINGTON—During the Sixteenth Annual RMA Convention and National Parts Show, to be held June 11-14, at the Stevens Hotel, Chicago, the convention committee has arranged for many industry and group meetings to include the Radio Servicemen of America, Sales Managers Club and other organizations of the industry.

Tuesday, Wednesday and Thursday, June 11, 12, and 13, will be observed as "Jobber Days" and the show will hold "open house" for radio servicemen, amateurs and others in the industry on Friday, June 14th. The tentative program follows:

Tuesday, June 11

- 10 A.M.—Bd. of Directors Meetg. Pres. A. S. Wells, West Ball Room, Third Floor.
- 12 Noon—Radio Parts Nat. Trade Show, Exhibition Hall.
- 12.30 P.M.—Membership Luncheon Meetg. North Ball Room. Presiding, Pres. A. S. Wells. Annual Business Meetg. RMA Membership to follow luncheon.

Annual Membership Meetings

- 2.30 P.M.—Set Division, Chr. J. S. Knowlson, Dining Room 1.
- Parts & Accessory Divn., Chr. H. E. Osmun, D. R. No. 2.
- Amplifier & Sound Divn., Chr. J. M. Stone, D. R. No. 3.
- Tube Divn., Chr. B. G. Erskine, D. R. No. 5.

Wednesday, June 12

- 10 A.M.—Radio Parts National Trade Show, Exhibition Hall.
- 10 A.M.—Export Comm., Chr. S. T. Thompson, Dining Room No. 5.
- 12.15 P.M.—Credit Comm. Luncheon Meetg. Eastern & Western Divn. Business session with NCO fol. Lunch D. R. No. 1.
- 12.30 P.M.—Luncheon Meetg. New RMA Bd. of Directors. Elec. of President and other RMA officers. D. R. No. 2.



RCA TERRITORIAL CONFERENCE—Executives and representatives get together at Camden to plan intensive RCA Parts distributors' promotion program. From left to right: E. C. Hughes, Fred Dobbs, F. J. Gallagher, W. P. Laws, A. C. Nash, D. J. Finn, L. W. Teegarden, W. H. Allen, A. L. Saltzman, C. V. Bradford, W. H. Autenreith, John Allen and D. M. Branigan

7 P.M.—Annual Cabaret and Banquet, Grand Ball Room.

Thursday, June 13

12.30 P.M.—Radio Industries Golf Tournament, Calumet Country Club, Luncheon Club House.

7.30 P.M.—Dinner.

N.U. In Battery Business

Announces complete line of replacement radio types

NEWARK—National Union Radio Corp. announces its entry into the battery business with a complete line of "National Union" radio replacement types.

The new batteries are for sale ex-



POINTS OUT FEATURES — *W. P. Hariford* of Thordarson, on his recent trip through the southern states, shown discussing new multi-shield audio-transformers with *C. C. Walther* of Walther Bros., New Orleans. *J. E. Muniot*, Rep. middle background, just managed to get in the picture

clusively by the radio service profession in the replacement field and, according to the company, have been specially priced with this channel of distribution in mind.



CRC's PRES. GREET'S TREAS. — *Edward Wallerstein* of Columbia Recording Corp., talks over new duties of *C. B. Wikoff* (standing) whom he has just appointed Treasurer of CRC

Another Co-op Effort

Servicemen, broadcast stations work together

ELMIRA—The Interstate Radio Association, composed of 35 members in and around Elmira, have just completed arrangements with this city's twin stations, WESG and WENY for a 3 months trial cooperative publicity campaign.

On alternate days, a station will broadcast a spot announcement relative to radio servicing and will refer the listeners to an Interstate member. In return, each member of the Association will display a large card in both his store and car window which will read "For Best in Radio Programs Tune in WESG, WENY. For Best in Radio Servicing call an Interstate member." Similar small cards are to be slipped under the tuning-knobs of dealer display sets and receivers returned to the owner after repairing. In addition the members will conduct a listener survey determining preferred day and night stations. The results will be compiled in a monthly report for the Elmira stations.

Frisco, Next Stop for NAB

WASHINGTON—The annual convention of the National Association of Broadcasters is set for August 4-7 in San Francisco.

Among NAB projects under development is a consumer-relations program in cooperation with representative industries in business groups and including the national promotion projects of the NAB with RMA, the Radio Servicemen of Am. and other groups.

Brach Ups Norden

NEWARK—Alexander Norden, Jr., has been elected vice president of the L. S. Brach Manufacturing Corp., this city. New title became effective March 1.

Edison G-E Promotes

George A. Hughes elected Chairman of Board

CHICAGO—The Edison General Electric Appliance Co. of Chicago (Hotpoint Company) announces the election of George A. Hughes as chairman of the Board, A. D. Byler as president and R. W. Turnbull first vice-president. George W. Scott, for many years secretary-treasurer of the Hotpoint Co. was re-elected to this office.

Hughes, known in the electrical industry as the "father of the electric range," has been President of the Company since its organization. In his new position he will continue to be active in the business. Byler, vice-president and general manager for the past 16 years, joined the Hotpoint Co. as industrial engineer in 1920. As President he will continue to direct manufacturing and engineering operations in addition to his other duties. Turnbull will continue to direct sales activities.



WITH CROSLY CORP.—William T. Wallace has been appointed manager of the Crosley Radio Division. He will direct the merchandising activities of this division and cooperate with distributors in developing radio sales

Westinghouse Competition

EAST PITTSBURGH—Each week, for five weeks starting April 18, Westinghouse Electric and Manufacturing Company will conduct a series of "Advise-a-Bride" competitions in which \$23,000 worth of electrical appliances will be given away as awards. Ten "Aristocrat" refrigerators and ten "Commander" ranges will be awarded to writers of winning letters. As second awards, 50 "Streamline" irons will be given away weekly.

Details of the competition are being announced to dealers throughout the country at a series of 60 dealers' conventions. Names of winners of the refrigerators and ranges will be announced on the Westinghouse Thursday evening radio program, "Musical Americana" and the winners of the 50 irons will be notified by letter.

Manson RMA Director

WASHINGTON—Dr. Ray H. Manson, vice president and general manager of Stromberg-Carlson Tel. Mfg. Co., has been elected to the RMA Board of Directors. Dr. Manson has been active in the engineering work of the association for many years.

Louis Shapiro

MILWAUKEE—On page 42 of *Radio Retailing's* March issue Sam Shapiro was, in error, called operator of Royal Radio Stores. We should have said Louis. There never has been a Sam Shapiro in this operation.



TO MANAGE REFRIGERATION — Just made manager of the refrigeration division of The Crosley Corp., is **George T. Stevens**, who comes direct from the Allied Stores where he served as merchandise manager of appliances

Crosley Names Shipley to New Post

CINCINNATI—William M. Shipley has been named manager of major account sales for The Crosley Corp., as announced by Thomas W. Berger, general sales manager. Mr. Shipley has a wide range of experience in the retail, wholesale and manufacturing branches of the industry.

Elected Directors

CINCINNATI—R. C. Cosgrove, vice-president and general manager of the manufacturing division, Crosley Corp.,

was elected to the board of directors at the annual meeting of stockholders.

The board membership was increased from seven to nine. Another newly elected member was James W. Shouse, for the past three years vice-president and general manager of the broadcasting division.

New Committee Members

MILWAUKEE—The Wisconsin Radio, Refrigeration & Appliance Assn., reports the complete personnel of its new executive committee as follows: A. Van Antwerpen, Paul Dye, W. H. Roth, Herbert Koenen, Al Hass, Frank W. Greusel, Gordon Fairfield, Gordon Ische, and Oscar Goelzer.

Messrs. Dye, Roth and Koenen are three new directors. Mr. Koenen was elected for a two year term to fill a vacancy and the other three were elected for terms of three years each.

Joins Columbia Records

BRIDGEPORT—William T. Meyers, considered one of the chief figures responsible for the recent upswing in the phonograph industry, received appointment as executive consultant for chain-store and sales policies announced from Edward Wallerstein, president of CRC.

His duties which bring him into close cooperation with H. S. Maraniss, assistant to the president and Paul E. Southard, sales manager of Columbia, have a direct bearing on the increased importance chain stores have been placing on records.

Emerson Launching Portable Drive

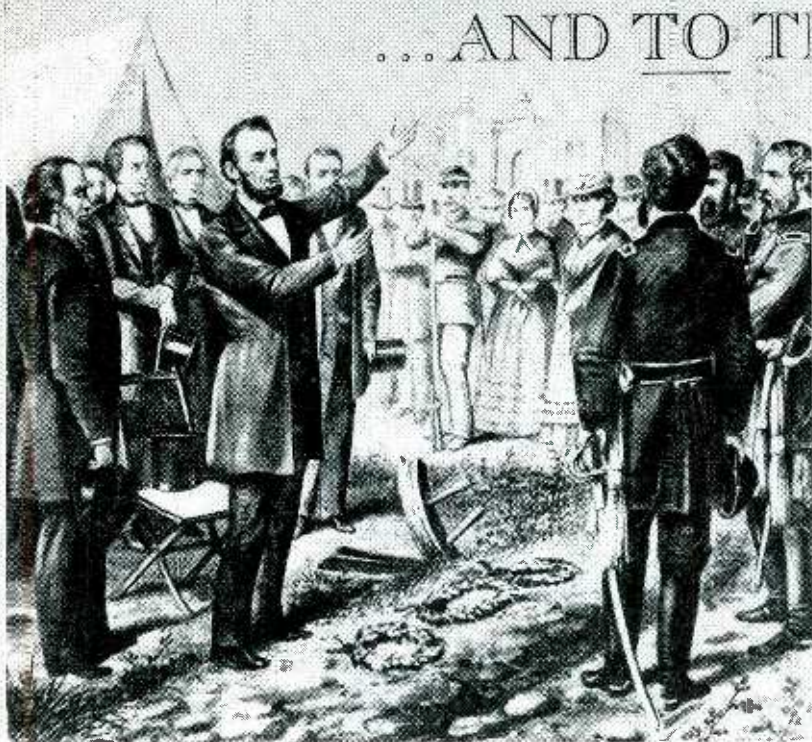
NEW YORK—Emerson Radio and Phonograph Corporation is launching an extensive drive on battery type portables, plans a variety of newspaper ads, a large self-selling store display, other dealer-helps.

Sets featured are of the "3-way" type, run on batteries, ac or dc. General sales manager Charles Robbins reports that literature mailed distributors, contacts in the East, South and West, have already been well received, indicates certain success of the portable drive.

Stromberg-Carlson Ups Two

ROCHESTER—W. C. Lewis becomes merchandise manager, while William J. Fraser will take over Lewis' former duties as S-C western New York sales representative.

This company further reports that Lee McCanne, assistant general manager, has been elected to the board of directors of the Electrical Association of Rochester. He will serve as a manufacturer's representative to aid the organization in sales promotion activities for the local electrical industry.



...AND TO THE PEOPLE!

Carved now in marble in America's most noble memorial, are the immortal words of the Gettysburg Address. Few even among those gathered on the battlefield heard them as they were spoken. Days, weeks, and even months and years were consumed before the speech traveled to all parts of the world. Radio would have winged it *to the people* instantly.

A Service the Family of RCA Might Have Rendered

THE Family of RCA has kept a good many dates with history. As we shape our plans for presenting all sides of the issues of democracy *to the people* in this election year, we recall one date with history we wish we could have kept. It was before our time.

Just suppose there could have been an NBC microphone before the speakers at Gettysburg! Then the greatest words ever spoken by an American would have received an instantaneous world-wide hearing. Out over the two major National Broadcasting Company networks! Across the world via R.C.A. Communications, the radio message service of the Radio Corporation of America! To ships at sea through the radio services of Radiomarine!

The assembled crowd on the battlefield would hear each word clearly, impressively, thanks to a sound system developed in RCA Laboratories and built

by the RCA Manufacturing Company. Listeners everywhere would hear a lifelike reproduction of the speech on RCA Victor radios. And motion picture audiences would listen to the address recreated by the RCA Photophone Magic Voice of the Screen.

Record lovers would, of course, turn to Victor for a higher fidelity recording of the American masterpiece. And the Gettysburg Address would be relived time and time again on RCA Victrolas.

You may be sure that the members of the Family of RCA will continue to dedicate themselves to their responsibilities *to the people*. Whatever radio can do will be done to further the cause of government "*of the people, by the people, for the people.*"

Trademarks "RCA Victor," "Victor," "RCA Victrola" Reg. U. S. Pat. Off. by RCA Manufacturing Company, Inc.



Radio Corporation of America

RADIO CITY, N. Y.

RCA Manufacturing Co., Inc.
Radiomarine Corp. of America

National Broadcasting Company
R.C.A. Communications, Inc.

RCA Laboratories
RCA Institutes, Inc.



EXPORT HEAD—H. J. Naper, just appointed director of foreign sales for The Webster Company, now operating its own export department

Awards For Best Slogan

CHICAGO—The Erwood Sound Equipment Company has just announced a \$450.00 Slogan competition, open to all radio jobbers and servicemen. Its purpose is to obtain a slogan best describing its sound equipment.

Three "awards" have been offered, namely an 18-watt complete portable system, a 20-watt mobile unit and a 12-watt portable system. They come complete with tubes and the total cash value of the three is \$452.30. Blanks may be obtained by applying direct to the company and the competition closes May 15, 1940.

Stewart-Warnermen Advanced

CHICAGO—William F. Terry, formerly assistant purchasing agent for Stewart-Warner radio parts, has been appointed radio division superintendent in charge of production.

His duties include the supervision of production and assembly for radios and parts. Paul Eckstein has been placed in the southeastern territory as a radio and appliance field man, under the direction of S. H. Rogovin, district manager.

Spector Sales

NEW YORK CITY—D. S. Spector, recent general sales manager for Andrea Radio Corp. announces his new company of Spector Sales Associates, manufacturer's representatives.

Harry R. Clark will be associated with Mr. Spector. With this announcement they advise that they have been appointed exclusive eastern sales representative for the Clough-Brengle Co. of Chicago. Address of new company, 17 East 42nd St., New York City.

Announces New Execs

CAMBRIDGE—The board of directors of Harvey Radio Laboratories Inc., announce the election of Frank Lyman, Jr., as president, succeeding J. B. Parker. Other changes include the election of J. S. Lyman as vice-president, succeeding C. A. Harvey who recently resigned. Ralph A. Vacca, the company's project engineer since 1936 has been named chief engineer. N. R. Hinckley was appointed marine sales manager.

Germain, Andrea D.S.M.

NEW YORK—E. S. Germain has been appointed domestic sales manager of the Andrea Radio Corporation.

"Brownie" has a background of 20 years experience dating back to the Columbia Phonograph Company, later with Brunswick-Balke-Collender, still later with Zenith and RCA.

Sales Engineer For Chicago

NEW YORK—Frank Murphy is to act in the capacity of sales engineer in the Chicago area for the Clarostat Mfg. Co., Inc. He has spent considerable time at the plant, familiarizing himself with the company's products and production facilities. He will work with L. G. Cushing, who has been connected with the company since 1923.

Territory Expanded

NEW YORK—George C. Isham, Hygrade Sylvania sales representative recently took over the entire New York state territory, (metropolitan area excluded) and part of Pennsylvania. Isham with several years service, was in the Hygrade lamp department and the radio tube division.

Two New Exide Execs

PHILADELPHIA—R. C. Norberg, former v.p. and general manager of the Electric Storage Battery Company, has been elected president, succeeding John R. Williams, retired. Frank T. Kalas,

general sales manager, has been elected vice president and a member of the board, succeeding H. B. Gay, also retired.

Blair-Steinberg

NEW YORK CITY—Haskel A. Blair and Herman A. Steinberg have joined forces and formed a new manufacturer's sales organization under the name Blair-Steinberg Sales Co. They plan to cover the New York, Phila., Baltimore, Washington and Virginia territory. Nat Furman, also a member of the company will devote himself to metropolitan New York. Offices 423 Broome St., New York City.

Export Distributors

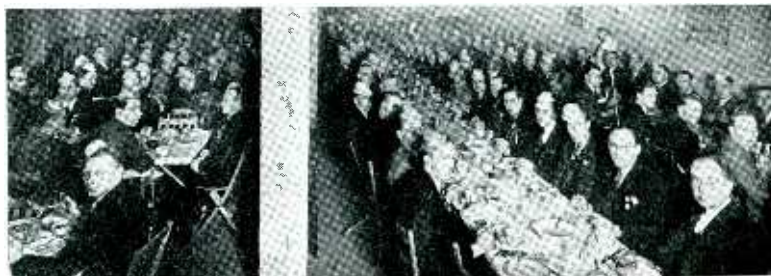
DETROIT—Additional South and Central American outlets for products of Norge Division Borg-Warner Corp., are being placed under contract according to R. W. Gifford, export manager. Credit for signing the new distributors goes to E. N. Guild who is now in Columbia, expects to visit the West Coast countries, returning via Central America.

Announces Rep. Appointments

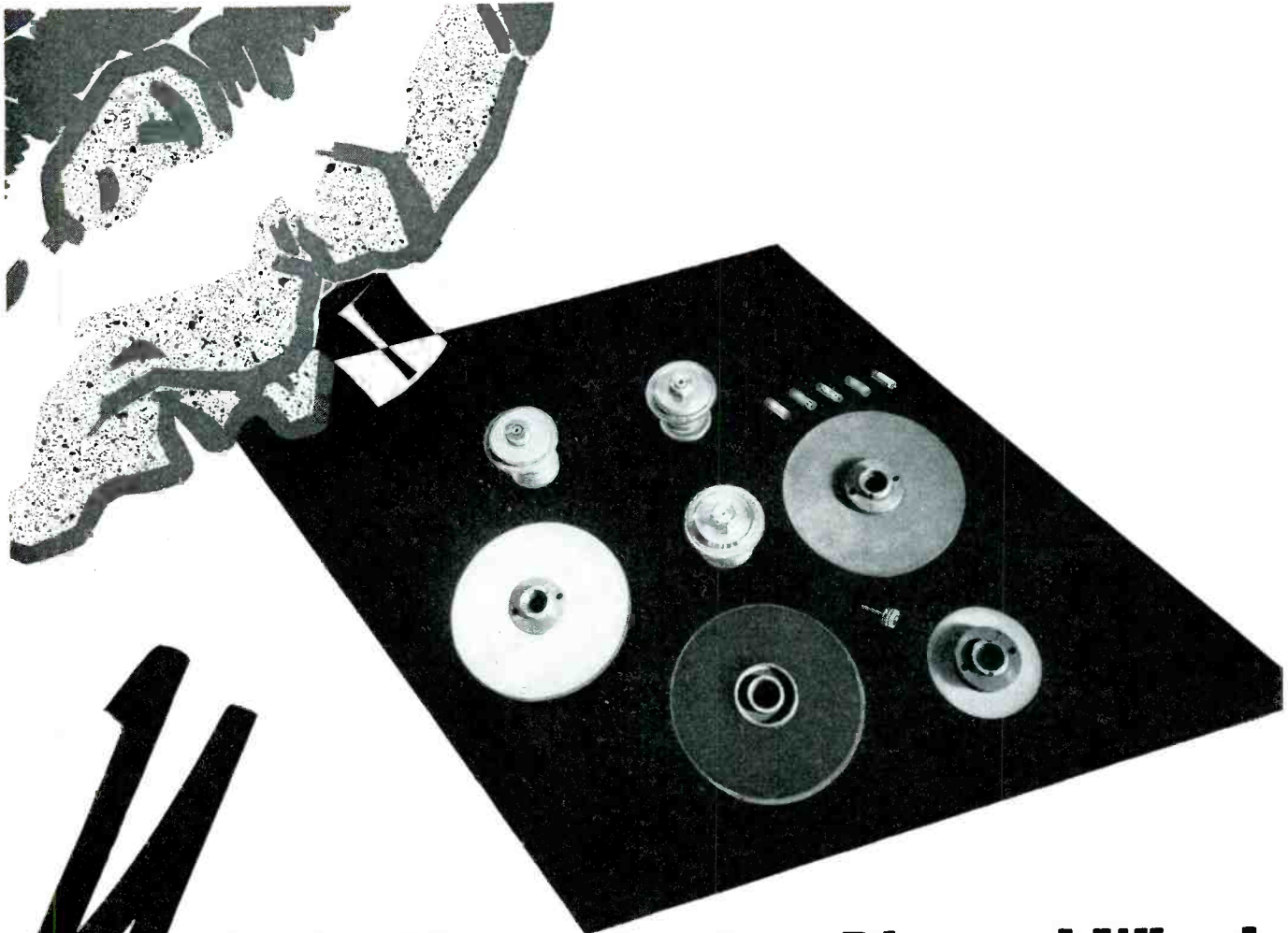
NEW YORK—As of April 1st. The Harper Company will act as sales representatives for the Sterling Manufacturing Co., makers of panel and industrial meters, the Hipower Crystal Co., transmitter crystals, Nash Products Co., manufacturers of recording accessories and the Kainer Co., speaker baffles, projectors and horns.

Chamberlin With Permoflux

CHICAGO—P. C. Chamberlin recently joined the Permoflux Corp., with wide experience in radio speaker design. He pioneered many new and original developments in the field. For the past four years, he has been associated with Radio Speakers, Inc.



RADIO SERVICE ENGINEERS—A group of 225 Iowa full-time radio servicemen pictured at their annual banquet at Des Moines. They were all-attention for the camera and for the principal speakers who followed the dinner



You're Looking at Precious Diamond Wheels that mean better SYLVANIA TUBES for you!

NO lady would wear them, but the diamond wheels and capsules of diamond dust pictured here are valued at several thousand dollars. We value them, too, not for their cost, but for the finer quality their use enables us to build into Sylvania Radio Tubes.

The grids in Sylvania Tubes must be wound to very accurate specifica-

tions. So we cut the hard Tungsten Carbide mandrils with diamond wheels and rub them to a perfect cylindrical surface with diamond dust.

The use of such costly abrasives is but one of the many special Sylvania operations that insure quality in Sylvania Tubes and *satisfied customers* for you!

Hygrade Sylvania Corporation, Emporium, Pa.

S Y L V A N I A

SET-TESTED

ALSO MAKERS OF



RADIO TUBES

HYGRADE LAMP BULBS

Plant Addition

GALESBURG—C. P. Rossberg, general manager of Gale Products announced the completion of the plant's building addition. The new floor space, 18,000 square feet, like the balance of the plant will be devoted to construction of refrigerators and portable air conditioning units.

Dealer Helps

CABLE MERCHANDISER—*General Cement Manufacturing Company* of Rockford, Illinois, offers its jobbers a cable and belt merchandiser designed to help sales of dial spools. It is a four shelf rack made of heavy gauge metal with a drawer in the base. The various spools are arranged as to heavy and thin linen and there is a compartment with receptacles for eyelets and clamps.

P. A. CATALOG—*Transformer Corp. of America*, has a new 1940 catalog featuring a complete new line of "Clarion" amplifiers and complete sound systems ranging in power from 7 to 100 watts, mobile systems, recorders, school systems, musicians sound equipment, record-changers, transcription players, intercommunication systems, microphones, speakers, speaker baffles and horns. Write Clarion Institute of Sound Engineers, 69 Wooster St., New York.

SOUND CATALOG—Catalog F-40, just released by the *Atlas Sound Corp.* of 1447 Thirty-Ninth St., Brooklyn, N. Y., describes this firm's new line of loudspeakers, "marine" horns, parabolic baffles, "chandelier" baffles, enclosures, projectors, microphone stands and accessories. Obtainable without charge. Mention *Radio Retailing*.

AUTO DISPLAY—*Galvin Manufacturing Corporation's* novel D560 display shown in the accompanying illustration, is especially made for featuring Motorola models 350 and 550 all-purpose receivers.



The new sets compactly housed have separate speakers to fit into and match the instrument panels of cars. This 2-set promotional aid rounds out its line of auto radio display boards.

VISUALIZER—A compelling sales tool recently made available by the *Hotpoint Company's* refrigeration division, is the refrigerator door visualizer. Installed on the open door of a 6-ft. DeLuxe unit, the aid utilizes three sliding panels to describe the advantages of Hotpoint measured humidity by means of colorful illustrations and copy. The lower portion of the visualizer points out the 5 zones of cold.

DEMONSTRATION RECORD—*Philco Radio & Television Corp.*, makes available to its distributors and dealers a special record to demonstrate the superiority of Philco radio-phonographs. This method of sales promotion presents a dramatic comparison between the sound of music poorly reproduced and the same music properly reproduced. It is a 12-inch disc recorded on both sides and requires eight minutes to play.

LURES CUSTOMERS—*Hygrade Sylvania Corp.*, has a fascinating and entertaining green puzzle tag. Dealer imprint appears on the front of the tag together with problem directions which are appended with dealer copy aimed to lure customers into the store which reads, "We will be glad to solve it for you if requested, and we can help solve your radio problems, too." The cost of imprinting is: 100 tags-\$2.25, 250-\$4.25, 500-\$7.50, 1000-\$13.00.

SPRING CATALOG—A new 124-page Lafayette 1940 Spring catalog prepared by *Radio Wire Television Inc.*, lists and illustrates radios and radio-phonograph combinations, featuring the Radiocorder. Also, new line of P. A. equipment, parts and tools for the servicemen. Available free of charge. Mention *Radio Retailing* when writing.

RESISTOR TUBE MANUAL—The *Clarostat* Plug-in Resistor Tube Replacement Manual is just off the presses. It contains 32 pages of listings, arranged by respective sets and resistor type numbers, and again, as a numerical listing of all types with corresponding Clarostat standard and universal types. Copy of manual may be had by sending 15 cents in coin or stamps to Clarostat Mfg. Co., Inc., 285-7 North Sixth St., Brooklyn, N. Y.

1940 SPRING-SUMMER CATALOG—*Allied Radio Corp.*, has just issued a new 160-page catalog. This index contains illustrations and descriptive data on their full-line of radio and phonograph combinations, parts, sound equipment and amateur receivers and parts. Copies free of charge.

PREFERRED TUBE TYPES—RCA, in a new booklet, with this title,



CANDID SHOT—These two men "talking shop" are (left) *George Davis*, assistant manager of the *Radio Supply Company* of Los Angeles and *Ernest V. Roberts*, of *Fry & Roberts*, manufacturers representatives

compares the firm's standardization to that in other fields, including the automotive. Available through distributors.

Distribution News

COLUMBIA RECORD—Three new distributors for territories in Indiana, Kentucky and Texas, have just been appointed by *Columbia Recording Corp. Philco Sales and Service, Inc.*, Louisville, will service customers in the state of Kentucky and southern Indiana. *Rodefeld Co.*, Indianapolis, will service the central portion of Indiana. *Southwestern Music Corp.*, Houston, will serve customers in the southern portion of Texas. *The Harten Dist. Co.*, Cincinnati, formerly served the territories now covered by *Philco Sales* and *Rodefeld*.

STROMBERG-CARLSON—*Consolidated Mills Co.*, Birmingham, Ala. are appointed distributors for the S-C line for the entire state of Alabama. *United Electric Service*, Monroe, La. will serve the northeast quarter of Louisiana.

FARNSWORTH—*White Hardware Company* of Savannah, Ga., just appointed distributor of receivers and radio-phonograph combinations.

RADIOBAR—Four new factory representatives include *R. H. Campbell* of Chicago (Illinois, Indiana and Wisconsin), *Albert Raffogel* of Cleveland (Ohio, West Virginia and western Pennsylvania), *Harry Richards* of Grand Rapids (western Michigan) and the *Robert Howard Company* of Newark (northern New Jersey).

Men and profitable ideas



Meet at the **Radio Parts National Trade Show** *June 11 to 14*

It's the time when, and the place where the members of the entire industry get together . . . It's your big chance to really pick up good, helpful ideas—ideas that you can turn into profits.

You get a complete picture of your industry, its latest developments, and its plans for the coming season. You learn what's ahead for you, and what to do about it.

It's all vital to the profitable operation of your business. Be sure to come!

JOBBER DAYS

Tues., Wed., Thurs., June 11, 12, 13

OPEN HOUSE

Friday, June 14

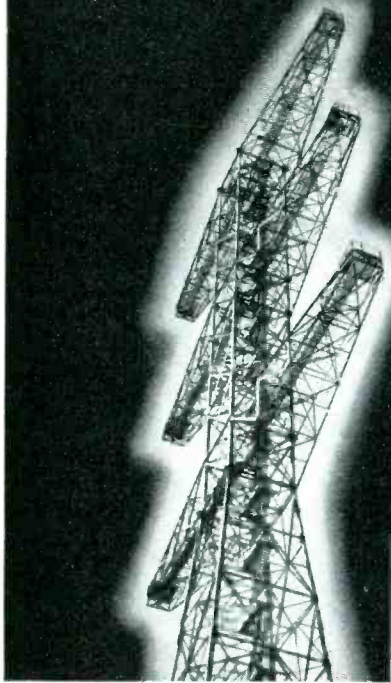
Stevens Hotel, Chicago

Radio Parts National Trade Show

Sponsored by Radio Manufacturers Association and Sales Managers Club
Executive Office • 53 WEST JACKSON BOULEVARD • CHICAGO

FOR NEW TEST REQUIREMENTS OF

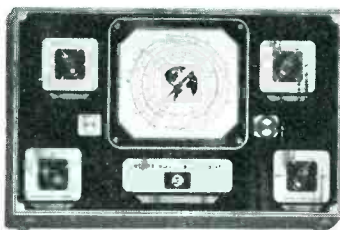
Frequency Modulation



1. F.M. assigned channels 40 to 44 mc.
— band width 100-200 kc.
2. F.M. intermediate frequencies 2 to 5 mc.
— each stage aligned at exactly the same point.
3. Checking limiter and discriminator circuits.



WESTON Model 787
U.H.F. Oscillator



WESTON Model 776
direct-reading Oscillator



WESTON Model 772
Super-Sensitive Analyzer

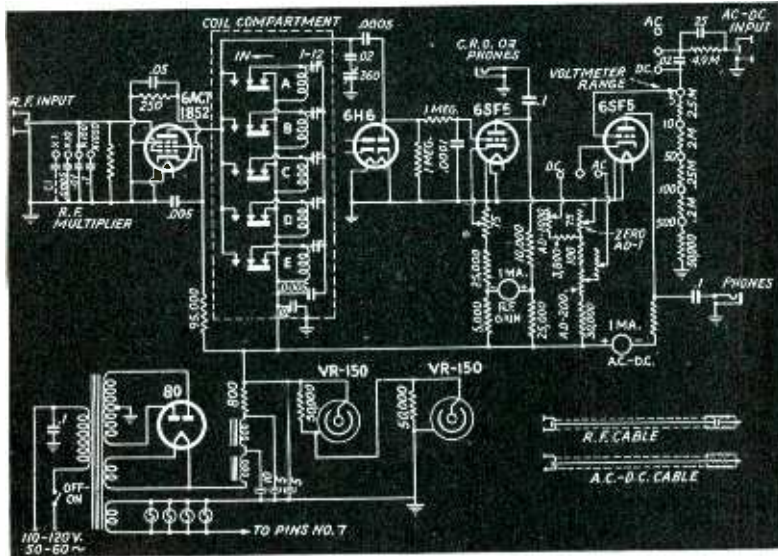
HERE ARE THE ANSWERS:

1. The WESTON Model 787 is the only service Oscillator which reads 40 kc. per division at 40 mc. This precise tuning is absolutely essential to test the band width of F.M. receivers. Each instrument is individually hand calibrated at 2 mc. intervals. (The broad frequency coverage of Model 787...from 22 to 150 mc. fundamental frequencies...safeguards against obsolescence in the event of changes in assigned channels.)
2. The WESTON Model 776 Oscillator supplies an absolutely stable signal source. Laboratory tests have shown that the frequency drift is less than .05% at 5 mc. for an operation period of several hours. This stability is the result of newly improved control circuits. With Model 776, too, an individually hand calibrated scale insures dependable accuracy over its entire frequency range of from 50 kc. to 33 mc., fundamental frequencies.
3. Because of frequency limitations of present visual aligning equipment, current measurements down to 1 microampere offer the only means of checking I.F. alignments, cut-off point on limiter tube, and adjustment of discriminators. WESTON Model 772 Super-Sensitive Analyzer offers all ranges necessary to make these sensitive measurements; *plus* additional ranges for all customary voltage, current and resistance measurement needs.

Full particulars on the above instruments are available in bulletin form, and will gladly be sent on request. Weston Electrical Instrument Corporation, 581 Frelinghuysen Avenue, Newark, New Jersey.

WESTON *Instruments*

for the Service Department



Dynamic Signal Analyzer

The signal tracer schematic shown here is model 660 by Jackson. An r.f. channel provides measurements from 90 kc. to 16 mc. In addition a.f., d.c., a.c., and gain measurements may be made. An electronic voltmeter permits sensitive measurements while a phone jack allows each stage under test to be monitored aurally.

Referring to the schematic, a 6AC7-1852 high gain pentode is used in the r.f. stage. The input of this tube is resistance-coupled and contains the necessary capacitor-shunt multipliers to provide the desired ranges for service work. The first range is indicated as XI and has only the shunt capacity of the test lead across the input circuit.

The plate circuit of the pentode contains the pushbutton switches for selecting the various frequency ranges. Five circuits are tuned alternately by 360 mmf. condensers on which is the dial calibrated in frequency.

The output of the 6AC7-1852 feeds one diode element of the following 6H6 which rectifies the signal, impressing it on the 6SF5 audio and gain stage. Another 6SF5 follows this tube and serves as electronic voltmeter. The grid circuit of this contains the voltage divider network for obtaining a.c. and d.c. voltage ranges from 10 to 500 volts.

In the cathode circuit of the first 6SF5 is the r.f. gain meter. This acts as a separate electronic meter which is useful for measuring the gain of any stage. This is extremely useful in

checking overall performance of a single stage or an entire receiver.

The power supply uses two VR-150 voltage regulators so that even if the line voltage should vary, the gain and voltage measurements of the instrument will always remain substantially constant.

The test cables are 40 inches long and are of two types. The r.f. cable contains a series capacity in the tip whereas the a.c.-d.c. cable incorporates a series resistor.

Radio-Phono-Recorder

Useful for home or similar recording purposes the model 101 recorder by Federal also contains provision for radio as well as play-back.

In the radio position, a 6A8G serves as mixer, coupling directly to the antenna. A wave trap reduces interference from unwanted signals. The 6K7GT acts as i.f. amplifier, feeding

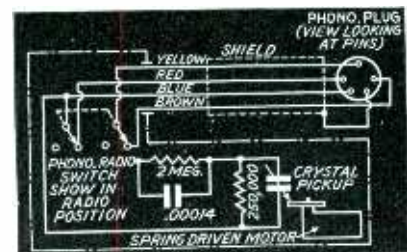
the 6H4 detector which rectifies the signal and supplies a.v.c. voltage to the i.f. and mixer. Following the detector is a 6J7GT high gain pentode first audio amplifier which in turn is followed by the 6V6GT output amplifier.

In the "record" position either microphone or receiver may be used respectively for making recording "off the air" or personal types. For "play back" just the first audio and output amplifier are used. The switches below the detector and output tube serve to change the circuit from radio, record, and playback.

Spring-Wound Phono Portable

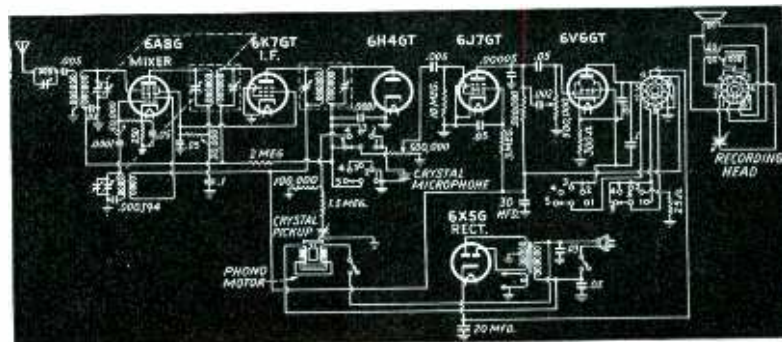
Popularity of battery portables brings forth a combination portable and built-in phono by Emerson. To conserve power, a spring-wound motor is used to operate the turntable; the audio amplifier and speaker system serve to reproduce the output of the crystal pickup.

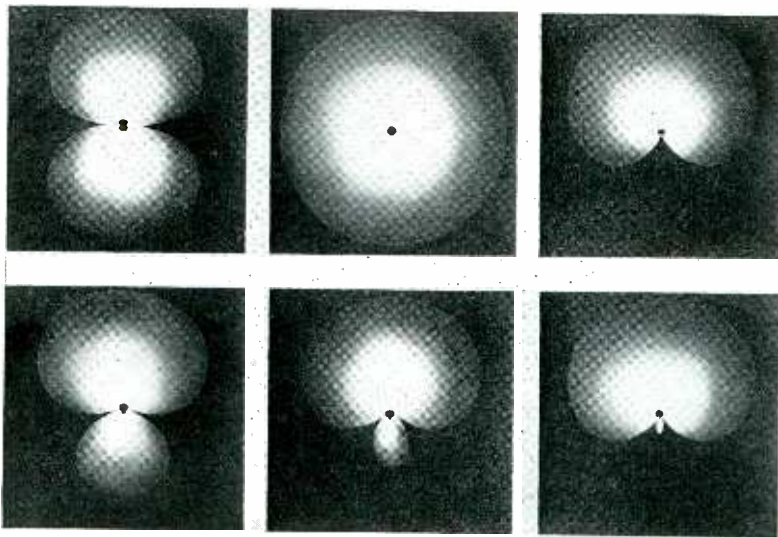
The phono circuit connects to the first audio amplifier by a 5 prong plug. A d.p.d.t. switch permits either phono or radio operation. One section of this switch connects the crystal pickup to the amplifier circuit



when in the phono position, the other section disconnects the output of the detector.

The resistor-capacitor network in the crystal pickup circuit serves to compensate for the frequency response of the pickup. Since the leads from the plug to switch are high impedance grid circuits, a shield covers these wires to prevent stray coupling to other circuits.





Directional Microphone

By rotating a selector switch imbedded in the rear of Western Electric's new "multimike", sound engineers may choose a sensitivity pattern best suited to the acoustic characteristics of each studio or location.

Exact constructional details of the microphone are lacking at this time. We do know that it's a dynamic—velocity type with an impedance of 30 ohms. Output is 84 db. and frequency range stated at 40 to 10,000 cycles.

Any one of the six patterns shown may be chosen by the operator to obtain the desired results. Non-directional, bi-directional, cardioid directional, or hyper-cardioid characteristics give about all the directional qualities necessary.

When switched to the hyper-cardioid position a soundman may pick up programs more successfully in reverberant halls, where the hollow ringing of reflected sound ordinarily depreciates naturalness and echos tend to blot out the desired sound.

In this position two areas of deadness result. These areas extend radially from the rear of the mike. The rotary selector sweeps these areas forward. By aiming the dead areas at disturbing sources of noise or echo, improved operation is achieved and feed back reduced.

Installing Crystal Pickups

Many servicemen have been modernizing old phono combinations by replacing the old pickup with a crystal unit. Herewith is some valuable information pertinent to the subject as contained in Supplement 5, Malloy-Yaxley Service Encyclopedia.

Since the impedance of a crystal pickup is highest at the low frequency, the choice of load resistance will directly govern the low frequency response. This is illustrated in Fig. 1,

for various resistance values from 100,000 ohms to 5 Megohms shunting the pickup. The best values for a uniform response appears to be around 5 megohms. The values shown will hold true on practically all pickups, the higher priced models giving somewhat better results.

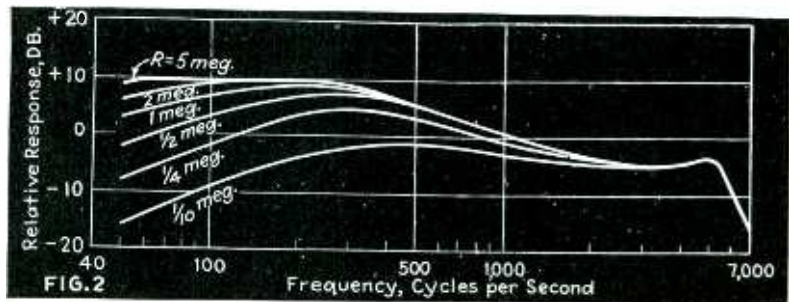
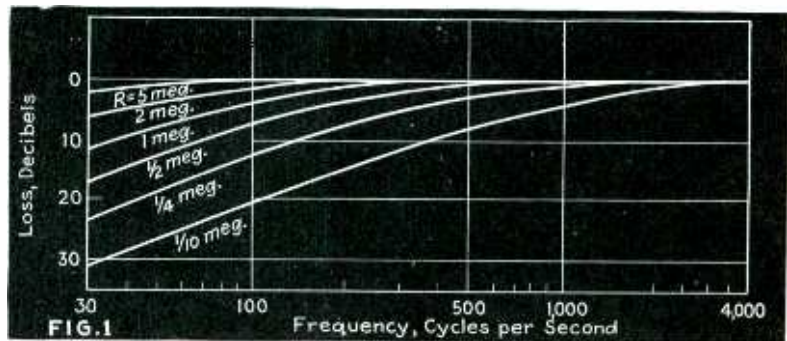
Experience has shown that for home

cases, the practical solution is to reduce the bass response using shunt resistance values less than .5 megohm.

In ordinary circuits, capacity will have no effect with respect to frequency discrimination. Shunt capacity will act merely to reduce the voltage output of the pickup uniformly for all frequencies.

Occasionally the audio system will have such high gain that the pickup will overload the first stage at full volume and necessitate working at such a low setting of the potentiometer that volume adjustments are critical and quality of reproduction poor. The remedy in this case is to shunt the pickup by a condenser of .001 mfd. or larger. Increase the condenser capacity until there is no overloading apparent.

When a volume control is provided on a simple crystal record player which is located some distance from the receiver, there will usually be a loss of highs due to the effect of connecting the lead capacity in conjunction with the potentiometer resistance. Best results are obtained by opening the control wide at the record player and controlling volume at the set.



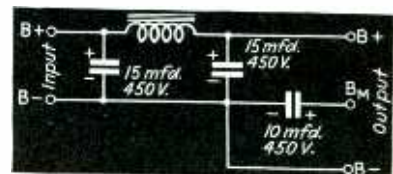
reproduction on receivers with good speakers, most listeners prefer an elevated bass response. Fig. 2 shows the relative response of a crystal pickup with capacity of the cable in shunt with the crystal. In an average installation this capacity approximates 150 mmf. It can be seen here that an elevated bass response can be obtained using input values to the set of .5 megohm or greater. Below this the base falls off rapidly.

In sets with small speakers an elevated bass response would usually cause the excessive distortion due to the cone stiffness and poor radiating ability at these frequencies. In such

Filter Unit

Designed for use on vibrator packs but adaptable to almost any power supply the model VF-223 filter by Malloy gives maximum suppression of hum with minimum voltage drop.

The filter condenser is a three sec-



SAVE ON CONTROLS...



★ They always fit . . . and they'll handle almost all replacement jobs.

★ Plug-in shafts . . . easier to install . . . fewer "Specials" required.

★ One stock does the work of two . . . Use midgets to replace both midgets and the larger, standard-size controls.

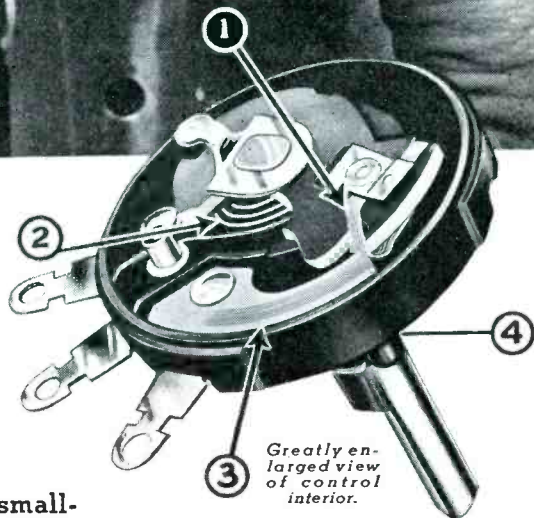
★ Small in size . . . Designed for real dependability.



by Using

MIDGETS

Universally!



Greatly enlarged view of control interior.

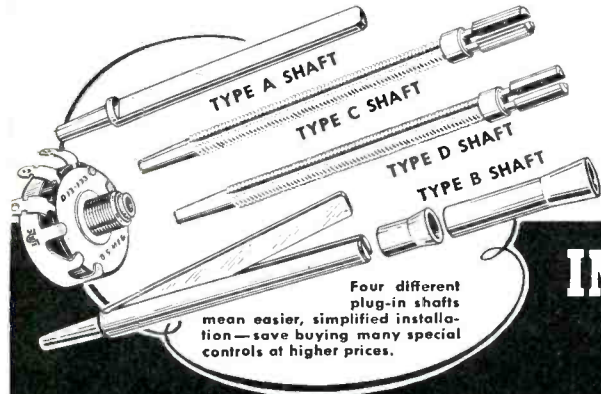
Although IRC Controls are made in every type for every radio need, there is a fast-growing trend on the part of servicemen and jobbers to concentrate on IRC Midget Controls for every replacement need. And it is a logical move! It means stock simplification in that a small supply of IRC Midgets equips you for the big majority of jobs. It means using replacement controls

you are sure will fit—even in the smallest of modern sets. It means easier installations, thanks to the exclusive IRC plug-in shaft features. Above all, it means real dependability, for IRC Midgets have every engineering feature of the larger size "standard type" IRC Controls.

The Only Midgets With EVERY STANDARD-SIZE CONTROL FEATURE

When you buy an IRC Midget you get an exact miniature of the famous IRC standard "CS" Control. Nothing has been left out. Not a single important design feature has been changed. Exclusive features include (1) IRC 5-Finger "Knee-Action" Silent Element Contactor; (2) IRC Spiral Spring Connector; (3) IRC Metallized-type Resistance Element; and, (4) Thrust Washer used to avoid end play in shaft.

Certainly, it is a trend well worth your while to investigate. A study of their possibilities will quickly convince you that IRC Midgets offer the biggest savings in time, space and stock simplification, *plus* the utmost in true dependability.



Four different plug-in shafts mean easier, simplified installation—save buying many special controls at higher prices.

INTERNATIONAL RESISTANCE COMPANY

401 N. Broad St., Phila., Pa.

In Canada: 187 Duchess St., Toronto, Ont.

tion type. Two 15 mfd. sections are used in conjunction with a 90 ohm choke to form a conventional pi-section filter. The third 10 mfd. section connects to a separate terminal so that a filtered intermediate voltage may be obtained if desired. If an intermediate voltage is not desired, connect terminal BM to B+; this will increase the output capacity to 25 mfd.

In applications where an intermediate voltage is required, this may be obtained by using the proper series dropping resistor connected between B+ and BM, or by using a voltage divider connected between B+ and B- with the tap connected to BM.

The value of the resistor will vary for various applications and may be calculated by Ohm's Law.

Modern R. F. Stages

A great many complaints have arisen with respect to modern set design due to omission of r.f. stages to simplify pushbutton requirements and reduce cost.

In Philco's AR-1 and AR-7 auto radios a novel circuit arrangement permits the use of an r.f. stage without additional tuning considerations.

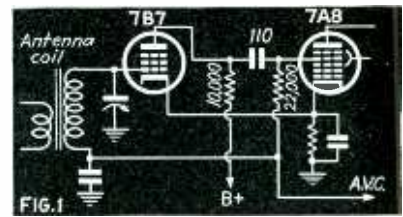
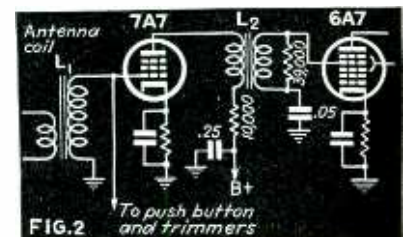


Fig. 1 shows a simplified version of an untuned r.f. stage. Actually, in this instance, the input circuit is tuned; the output, coupling to the mixer tube is resistance capacity coupled. Fundamentally this circuit is not new. However, its application is a new slant on the subject.

Iron core coils are used to increase selectivity and reduce interference from adjacent channels. The principle of operation is to provide higher gain within the selectivity range of the coil than a tuned circuit at the mixer alone would achieve. The resistance-capacity coupling circuit also has a certain amount of selectivity. Thus, more gain and selectivity results.

Another coupling system in use is illustrated in Fig. 2. This is similar to Fig. 1 in the grid end but makes use of a close-coupled untuned iron core transformer between the r.f. stage and the mixer. A 39,000 ohm resistor is shunted across the secondary to broaden the response. Likewise a 10,000 ohm resistor is inserted in series with the bottom end of the primary to further broaden the circuit. A much higher gain is available from this circuit than from Fig. 1 because of the increased coupling between the 2 stages.

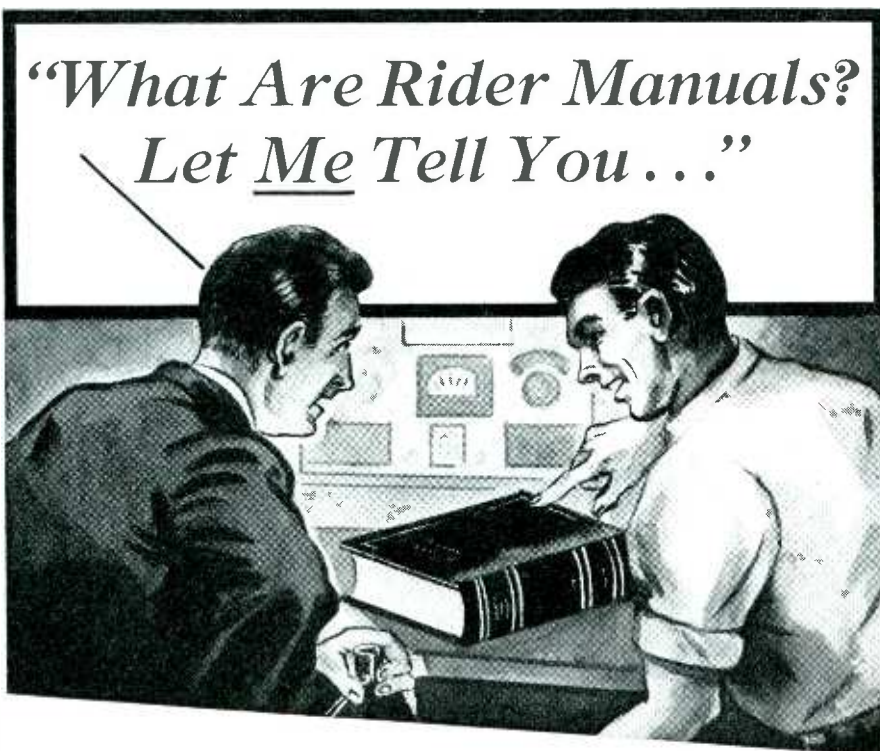


Electrostatic Shield and Antenna

A simplified version of a Faraday shield which adapts itself to modern radio has been devised by Fishwick.

As illustrated, small wires separated by approximately 1/4 inch are molded in an asphalt paper. One end of these wires is bared and pressed in a small metal clip which contacts each wire. This results in a sort of "comb effect" of metal wires which have several important uses.

The most common application of this type shield is to electrostatically shield loop antennas. When this screen is placed on either side and grounded, no capacity coupling can take place to the loop; consequently



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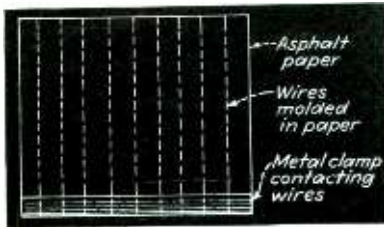
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local disturbances of a static nature cannot enter a receiver so equipped. Magnetic coupling to a loop is not affected however, as long as one end of the shield wires is open. If both ends of the wires were connected with metal contact strips, magnetic shielding would result also.

Receivers equipped with this shield will usually have a lower interference level and a better null point on the loop so that disturbing areas can be minimized by pointing the loop at the source of disturbance.

Considerable use has also been given the shield as an antenna in itself. Under these conditions it acts as a large plate or surface giving greater pickup than a short single wire. Its light weight permits it to be built into the back of any cabinet.



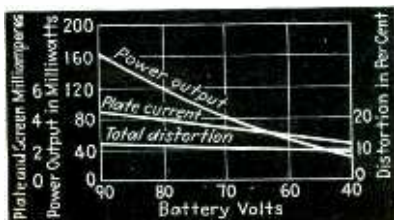
Battery Power Pentode

Among the new low drain battery tubes of the loktal type recently announced by Sylvania is a new power output pentode labeled 1LB4.

This tube was especially designed for service in low drain battery operated receivers where long battery life is desired. It is extremely economical because the filament and plate current drains are unusually low, for the relatively large power output available.

Heretofore in order to obtain a power output approaching that of the 1LB4, a filament current of 100 milliamperes, or high plate and screen currents, or a combination of both were necessary. Whereas the new type operating in Class A, with 90 volts applied to plate and screen, has a rated power output of 200 milliwatts with a filament current of only 50 milliamperes and a total plate and screen current of only 6 milliamperes.

Upon looking at the operating characteristic curves, it is to be noted that the battery volts in Fig. 1 are the total B-supply volts, the voltage applied to the plate is the total voltage minus the bias voltage. It is



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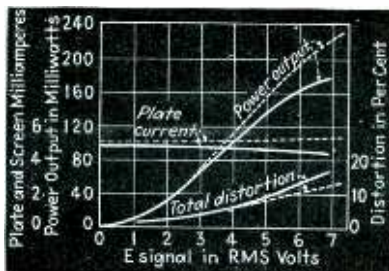
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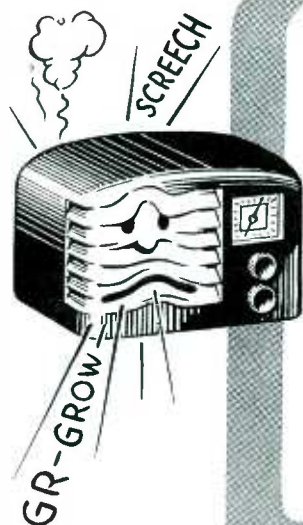
preferable to operate Type 1L64 with self-bias since the grid voltage will be reduced accordingly as the B-voltage drops with decreasing battery life. The curves do not show 200 milliwatts output since a full 90 volts is not available in this case.

Figure 2 shows power output, distortion, plate and screen current versus input signal using a fixed bias, as shown by the dotted line; and performance with self-bias shown by the solid line. The greater power output obtained under the fixed bias arrangement is naturally due to the fact that there are 9 volts more B-voltage since it is unnecessary to subtract the bias voltage.



Economical Filter Circuits

Used in the RCA model 5Q66, the filter circuit shown here makes itself conspicuous by the absence of a filter choke.



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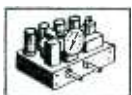
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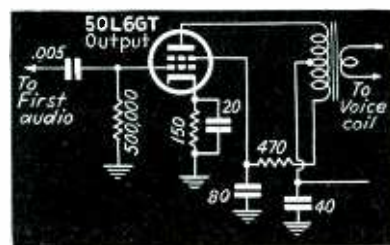
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Plate voltage for the 50L6GT is taken directly from the cathode of the rectifier, the only filtering present in this circuit is a 40 mfd. condenser. This is permissible since the gain in the plate circuit of the output tube is low, consequently any hum in this circuit is not amplified materially.

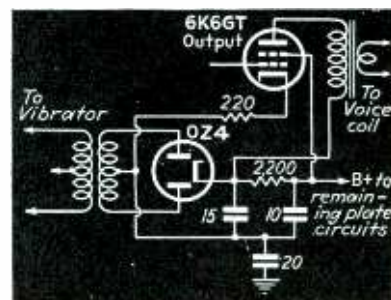
Any hum in the screen supply voltage would cause hum in the output, so a resistance-capacity filter consisting of a 470 ohm resistor and an 80 mfd. condenser effectively reduce this. Resistor-capacitor filtering could also be used in the plate circuit were it not for the fact that the high plate current of the output tube would cause a correspondingly large voltage drop in the filter resistor. The screen circuit draws little current so that the voltage drop is of little consequence here. Plate and screen voltage for the other stages are taken off the screen circuit also.

It is interesting to note that part



of the output transformer is in series with the filter network. Thus the small amount of inductance available is put to work to improve the filter action.

A somewhat similar system is used by Motorola in their model 300 auto radio. In this set, plate voltage for the output tube is also taken direct from the rectifier cathode which is shunted by a 15 mfd. condenser. Voltage for the screen of the 6K6GT and plates and screens of other stages



flows through a 2200 ohm resistor which is shunted on the output side by 10 mfd. The increase of resistance permits smaller values of filter capacity.

Loktal Base Connections

In the construction of the loktal types every advantage has been utilized

to produce a strong, rugged tube, capable of withstanding severe shocks and vibrations, such as would occur in automobile, air-craft, and portable radio receivers. In order to supply additional support for the electrodes, it is sometimes desirable to employ one of the otherwise unused pins for additional strength. Since this pin extends through the glass base, as do the other contact pins, the result is that two base pins are common to one element.

This duplication of contact pins should in no way cause any difficulty. However, for the convenience of those who might wish to make measurements at the socket, the "standard" or usual connections should be used in wiring, leaving the duplicate pin free. This will also be advantageous in case of future tube replacements in the event of any changes in tube structure eliminating this double connection. Such changes in tube design may dispense with the extra pin entirely.

Circuit and basing diagrams should be labeled "Internal Connection" (IC) at the "non-standard" connection, so that no difficulty may be encountered in making point-to-point measurements and to avoid the possibility of using the corresponding socket spring as a wiring terminal.

The following Sylvania loktal tubes have two contact pins common to one electrode at the present time:—

	Pins connected	Pin to be used
7B6	4 and 7	7
7C6	4 and 7	7
7E6	4 and 7	7
1LN5	5 and 8	8

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By James A. Nash

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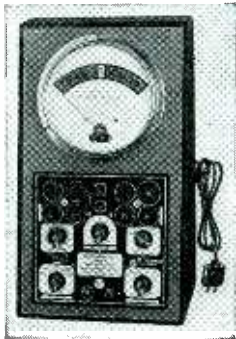


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Filament Current	1.25 amps
Plate Voltage	500 volts
Screen Voltage	200 volts
Grid Voltage	-45 volts
Plate Current	240 ma.
Screen Current	32 ma.
Grid Current	12 ma.
Driving Power	0.7 watt
Power Output	83 watts

1LB4—Battery operated power output pentode by Sylvania. Operation is described elsewhere in this section. Characteristics are:

Filament Voltage	1.4 volts
Filament Current	0.05 amp.
Plate Voltage	90 volts
Screen Voltage	90 volts
Grid Voltage	-9 volts
Plate Current	5 ma.
Screen Current	1 ma.
Plate Resistance	0.2 megohm
Mutual Conductance	925 umhos
Load Resistance	12000 ohms
Power Output	200 mw.
Harmonic Distortion	10 per cent

7F7—Twin triode with loctal base by Raytheon:

Heater Voltage	6.3 volts
Heater Current	.3 amp.
Plate Voltage	250 volts
Grid Voltage	-2 volts
Amplification Factor	70
Plate Resistance	44,000 ohms
Transconductance	1600 umhos
Plate Current	2.3 ma.

12K8—Similar to the 6K8 except for a 12.6 volt 0.15 amp. heater (RCA).

1628—A three element tube by RCA designed for use as an oscillator or r.f. amplifier at ultra-high frequencies up to 500 mc. at full rating and 675 mc. at reduced ratings. Maximum plate dissipation is 40 watts, plate voltage 1,000 maximum, power output 35 watts maximum.

HY69—Filament type beam power tetrode by Hytron for use in mobile on portable transmitters or other services where quick heating is desirable. Plate dissipation is 40 watts, maximum plate voltage 600 volts.

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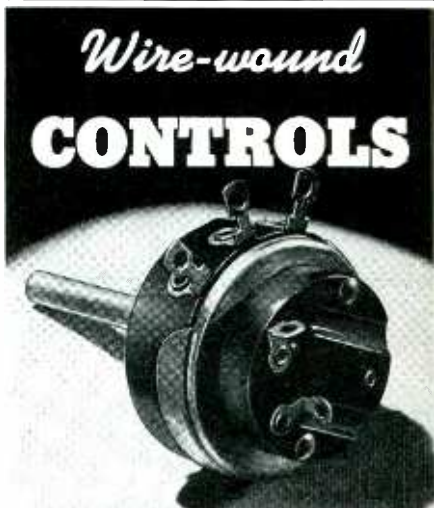
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Practical NOISE SILENCERS

SIMPLE METHODS for reducing
noise level in troublesome locations

By DANA A. GRIFFIN*

WHEN a receiver owner asks the average serviceman about the possibility of installing a noise silencer to alleviate a severe noise situation, the serviceman usually runs for the nearest exit, thereby losing an opportunity to make a ten dollar bill and secure a lot of customer satisfaction in the bargain.

While many of the noise silencers that have been described are tricky and complicated, the two to be outlined herewith are just the opposite. In fact if a harness is made up including the parts shown inside the dotted line in Fig. 1, attachment to points A and B in the average receiver can be made in five minutes to make a preliminary test.

The noise silencer must be under-sold to the extent that the prospect must clearly understand that he can only secure partial relief, not complete noise elimination. While such installations are not particularly useful on the broadcast band except in static ridden localities remote from broadcasting stations, there are thousands of short wave fans, who will be glad to pay to eliminate some of their difficulties with ignition and the hundreds of other man made noises.

Explanation

Silencer circuits in the audio system have the advantage of automatic operation. They are extremely difficult to get balanced, however, and every model requires different treatment. The radio frequency type on the other hand, can easily be applied to practically any superheterodyne without difficulty, using the circuits to be described. Not only is the installation easy, but the result is bound to be satisfactory, unless the prospect expects complete noise elimination including the tube hiss which of course no silencer can touch.

If the receiver uses diode or plate detection, the answer to the prospect's query on noise silencers should be an emphatic yes, keeping in mind that the use of a manual control is

necessary. A drawback? Not in the least. Remember, no ardent radio fan is deterred by another control if it produces results. When the rest of the family uses the set, the silencer is cut out of the circuit at a flip of the switch, and the operation

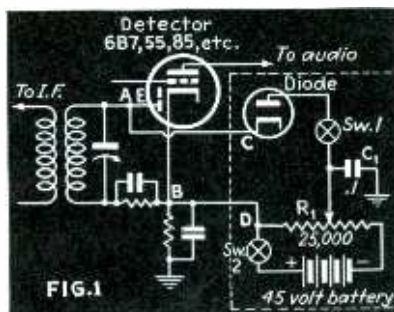


Fig. 1—Simple noise silencer adapted to a standard diode detector

is just the same as though the installation had never been made.

The first circuit is the most popular, as the great majority of receivers use diode detection. In Fig. 1, if the wires A-C and B-D are disconnected we have the basic diode circuit employed with ten or fifteen types of dual purpose diode-triode and diode-pentode tubes, as well as the 6H6 and separate audio amplifier. If an extra diode is connected as shown in the diagram, and the other external wiring is completed, we have

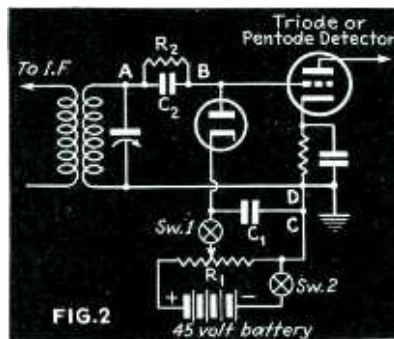


Fig. 2—Connection and circuit variations of the silencer for a triode or pentode detector

a working silencer after making a few simple adjustments.

Before taking these things up, a word on the theory of operation is in order. One half of the incoming signal is rectified by the diode detector. As current flows, a voltage drop occurs across the diode load resistor. Now if the extra diode were connected as shown without any bias, the next half cycle r.f. pulse would tend to cause an equal but opposing voltage drop across the load resistor. The result being that no signal or audio voltage could build up across the load resistor. If the extra diode is biased-off by a certain amount so that it is not effective, that is it does not operate on the desired signal, the operation of the detector is normal insofar as the signal is concerned. However any noise peaks in excess of the signal voltage will cause the extra or reverse diode to conduct, causing cancellation insofar as the excessive noise is concerned.

The bias is obtained in this case by the use of a potentiometer across a battery. The plate of the extra diode is biased more negatively as the strength of the signal is increased. This diode cannot conduct unless the peak signal voltage exceeds the battery voltage which is applied to the diode plate. In actual practice the potentiometer is turned from the negative or "off" end until the quality of the signal becomes poor. Then it is backed off a little so that the signal comes through unaffected. In this condition a very substantial reduction in the incoming noise can be obtained.

Practical Considerations

To return once more to the circuit considerations, lead A-C must be very short, and for this reason one half of a 6H6 is recommended for the extra diode. Its small physical size also has much appeal in sets that are crowded full of parts (what set isn't). Of course receivers with 2½ volt tubes present another problem. Here a 56 with the grid and plate strapped together is a satisfactory tube. A third variation is encountered in the receivers using full wave diode detection. Both halves of the 6H6 can be used in the 6 volt sets, connecting a cathode to each of the diode plates in the set. The plates of the extra diodes are connected together and wired to the arm of the potentiometer. In 2½ volt receivers, a small 6 volt transformer and the 6H6 make the easiest solution, otherwise two tubes would be required. The by pass condenser C-1 should connect to the diode plate and go directly to ground. The remainder of the wiring can be any convenient length. This permits long potentiometer and battery leads so

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these parts can be located at any spot that is suitable mechanically.

The battery can be located in the rear of the receiver and the potentiometer can be brought out as a panel control. The best place to put the 6H6 is on a bracket under the chassis. This eliminates a hole in the chassis, and at the same time insures short leads as the tube can be mounted close to the last IF transformer. The added capacity of the extra diode will necessitate realignment of the secondary circuit. It is well to check the entire alignment of the IF amplifier while the set is available.

The potentiometer is provided with a double pole single throw switch so that when the silencer is turned off by opening the diode plate circuit, the drain of the potentiometer across the battery is cut off. The life of the battery should closely approach shelf life unless the silencer is used a great deal.

Adjustment

The final construction kink is the insertion of resistance between points A and E in the signal diode plate circuit. The necessity of resistance at this point can only be determined experimentally. This is done by placing the receiver in operation, and tuning in a signal. As the silencer potentiometer is advanced, it may be found that the set will block just as the noise level is being cut down. If this occurs, sufficient resistance should be inserted, so that the silencer cuts the noise before the signal starts to suffer. Then as the potentiometer is advanced further, the signal will be heard again after passing through a null point. Without extra resistance the set will stay blocked as the potentiometer is advanced. The quality will be poor on the wrong side of the null point, as the reverse diode is then doing the detecting. In practice the value of resistance will be found to range between 500 and 5000 ohms.

The circuit shown in figure 2 is suitable for use with receivers using plate detection. The theory of operation is somewhat different than that of the diode.

In the plate detector, the grid is biased negatively and the plate current rises on the positive half of the RF cycle. If we provide a means of stopping the grid from swinging more positive than the signal amplitude, we secure a silencing action. This is done by means of the grid leak and condenser which are inserted between points A and B, and the extra diode. The grid leak and condenser do not function in the normal manner in this circuit as the grid is biased negatively.

Now, if we bias the cathode of the

diode in a positive direction so that the bias just exceeds the peak signal input, the detector will operate in the normal fashion. If an excessive noise peak comes along the diode conducts, setting up a voltage drop across the grid leak. This tends to make the grid negative while the excessive noise is attempting to make it positive. This cancellation gives us noise silencing as the grid of the detector cannot swing more positive than the limit set by the diode bias. The value of grid leak and condenser require some experimentation. Values of resistance between 50,000 and 250,000 ohms, and capacities of 50 and 250 mmfd should be tried to secure the best action.

Ferretting Out Intermittents

By B. J. Dasher, Jr.

Condensers that open intermittently and cause erratic operation can often be located by twisting and pulling slightly at the leads while the set is in operation. Encased condensers can be checked by twisting the lug terminals.

This method is not recommended for servicemen over 200 pounds.

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Simple INTERFERENCE LOCATOR

By
R. R. DOHERTY*

THE CONVERSION outlined turns portable battery set into an interference locator with a visual indicator and headphone connection. With a flip of the switch it becomes a regular set again. The basic plan can be adapted to any battery set by juggling the size and spacing of the added components. Operation is as follows:

When the double-pole double-throw toggle switch on top of the cabinet is snapped toward the headphone jack position it cuts off the speaker in the set, shorts out the a.v.c. control, and cuts in the headphones. A flip in the opposite direction cuts out the headphones and restores the a.v.c. and loudspeaker to the circuit.

By using a universal tapped output transformer a match is made for the headphones and meter rectifier. It also enables the units to be switched in and out of the circuit with a simple switching system.

The output meter should be either 0-1 or 0-1½ milliamp full scale reading. The size of the meter case was important in this particular installation in order to fit the space available.

Place the meter, switch and jack on the cabinet, as shown in the sketch, to permit good vision for the meter when the cabinet handle is held in the

left hand, leaving the right hand free to tune the set, and allowing the phone cords to hang out of the way.

This additional equipment does not detract materially from the radio when it is used in the regular manner, the

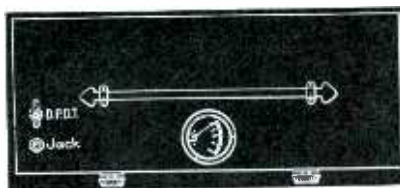


Fig. 2—Positioning of components is important for ease of operation later on. When carried in the left hand, meter is in full view, switch is accessible and jack permits headphone cord to hang out of the way. Right hand is free for tuning controls

loop and visual indicator will assist in ferreting out stubborn cases of interference.

In wiring the extra components, the ungrounded lead of the original output transformer secondary to voice coil is opened and connected to one lever of the double-pole double-throw switch. The universal transformer has its secondary connected to one point of the switch. The speaker voice coil lead is connected to the other point on the same circuit side.

The a.v.c. bus, which is usually the

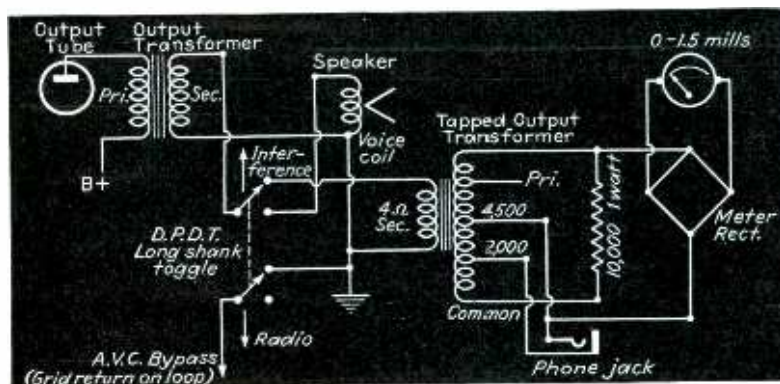


Fig. 1—Circuit changes necessary to convert a standard portable to an interference locator. No major wire changes are necessary, a.v.c. connection can usually be made to ground-return end of loop. Standard tapped output transformer worked backwards allows proper match to headphones and rectifier. When wiring adapter, keep leads away from first audio stage and detector output to avoid feedback

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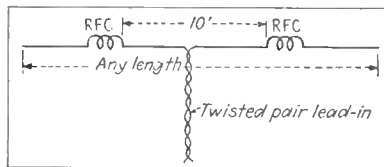
City and State

ground return end of the loop, is connected to the other lever of the double-pole double-throw switch, one point of this section of the switch is grounded, the other point left open. The open point should be on the speaker-operate side of the toggle switch, otherwise the a.v.c. would be inoperative when using the radio in the regular way.

The primary side of the universal output is connected as shown, these connections gave the maximum deflection on the meter with a given signal. The response is adequate in the phones and the set volume control gives the adjustment necessary to keep the meter needle from banging the pin on strong signals.

Parts list

- 1—Universal output transformer, tapped primary to 4 ohms
- 1—0-1 or 0-1.5 millimeter with rectifier
- 1—D.P.D.T. long shank toggle switch
- 1—Long shank jack
- 1—10,000 ohm 1 watt resistor
- 1—Phone plug
- 1—Set of 2500 ohm phones



Antenna For Broadcast. F.M., Television

By Louis Passavanti

A simple method for adapting a standard broadcast antenna with twisted-pair feeders for frequency modulation is shown in the accompanying illustration.

The overall length of the entire antenna is not critical. The center section, between the r.f. chokes, should be approximately 10 feet so as to be resonant to the f.m. or television frequencies.

The r.f. chokes are made from one pi-section of standard 2.5 millihenry chokes. These should be mounted in

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a suitable container so that they will be waterproof. They must also contain suitable lugs for supporting the antenna weight.

The action of the chokes on high frequencies is to isolate the 10 foot section from the remaining antenna. In other words, on f.m. or television frequencies, the impedance of the choke is sufficiently high to be considered infinite; therefore they may be considered as insulators. On the broadcast band the impedance of these pi-windings is relatively low, they offer no serious isolation at these frequencies and the entire antenna works in normal fashion.

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CROSLY 103

Oscillates on portion of dial . . . solder the strap from the gang condenser to the case.

FORD MAJESTIC

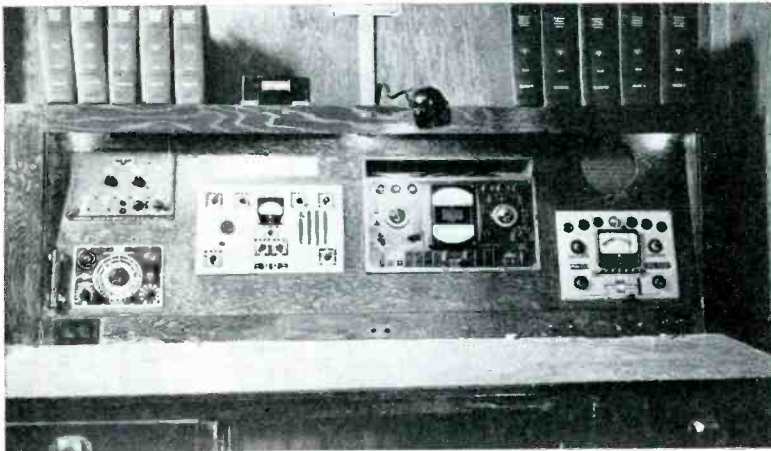
Rectifier fails . . . replace 500,000 ohm resistor across rectifier plates.

G-E A-53

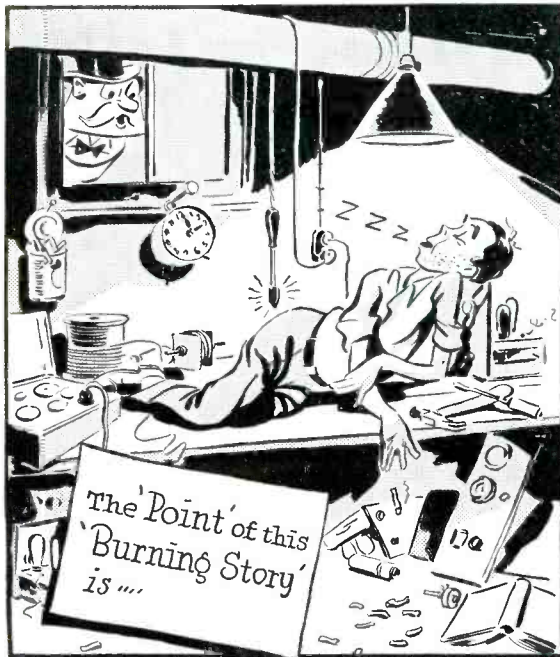
Distortion . . . check audio coupling condenser. Also check a.v.c. bypass condenser at bottom of first i.f. coil.

G-E F-65

Oscillation, tone control inoperative . . . replace output transformer after inspecting other components of the circuit. The tone circuit controls degeneration at certain frequencies by feeding back the signal from the output transformer.



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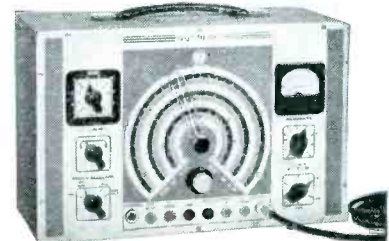
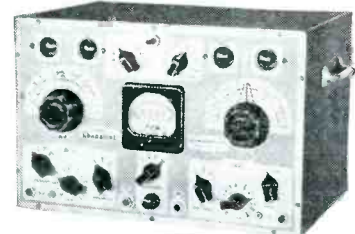
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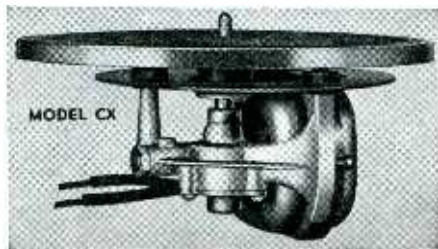
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PHILCO F1740

Intermittent hum and distortion accompanied with high current drain . . . check 7C6 tube for gas.

Set inoperative on all pushbutton positions . . . check 300 mmf condenser between low end of oscillator coils and chassis. Replace this condenser with the exact value.

RCA 48

Intermittent . . . suspect volume control and audio transformer coupling detector to pushpull 45's and located in the filter condenser pack.

RAC 85TI

Weak or dead on high frequency end of short waves . . . check 33000 ohm resistor connected from suppressor of 6A7 to ground.

SILVERTONE 6226 Wireless Record Player

Turntable runs slow . . . replace rubber tire on idler wheel which has become oil-soaked.

RCA 128

Fades after a few minutes operation . . . check .05 mfd grid return bypass on 6D6 r.f. tube for open.

RCA 280

Low volume . . . open in reactor coil of 3200 ohms. One end of this connects to volume control.

RCA C7-6

Dead spots on s.w. band . . . replace 12000 ohms screen resistor (R5) with 30,000 ohms.

RCA T7-5

Dead on low frequency end of short waveband . . . replace oscillator grid leak with 100,000 ohms.

RCA 1939 automatic tuning models

Tuning condenser rocks back and forth when pushbutton is pressed . . . insert a small spring behind the fly-wheel so that when the current is interrupted the motor will disengage.

SILVERTONE 45-42A

Refuses to oscillate on low frequency end of broadcast band . . . remove 50 mmf. mica condenser connected between 1C6 mixer and band switch and wire direct. Also remove 50,000 ohm resistor from same terminal on tube socket and connect across low frequency padder.

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STROMBERG-CARLSON 642

Fading . . . yellow cathode resistor in third r.f. tube defective. Replace with 400 ohm unit.

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Station indicator in head gets out of step with switch in set. . . . this is usually caused by a slight resistance at some point in the "A" lead. The solenoid in the head draws very little current while the set unit draws much more, causing a greater voltage drop and impairing action. Check and tighten all "A" connections which connect to the car wiring right to the solenoid driving switch. Failure is more apt to occur when battery voltage is low.

G-E K66

Motorboating at low volume . . . replace 4 mfd screen grid bypass on the 58 i.f. with an 8 mfd. electrolytic.

GRUNOW 12A, 12B

Noisy . . . suspect loose mounting bracket on coils.

GRUNOW 1191

Dead . . . check .05 mfd. condenser in plate return of second i.f. tube. When this shorts it usually destroys 2000 ohm resistor also.

MOTOROLA 9-49

High pitched whine . . . voice coil and field ground to a rivet on the set housing, rivet not making good contact; solder a jumper from speaker to chassis.

PHILCO 17

Distortion . . . look for increase in value of 1 megohm carbon resistor in plate and screen circuit of silencer and first a.f. tubes.

PHILCO 37-38 Battery Set

Low volume with high pitched howl . . . partially open audio coupling condenser.

PHILCO 40-150T

Distorted and weak . . . check .01 mfd screen bypass on p.p. 41 output tubes for leakage.

PHILCO 40-180

Pushbuttons drift . . . replace 370 mmf mica silver condensers on each side of oscillator coil.

PHILCO 57

When servicing this set, bore several half-inch holes in the cabinet bottom as most service calls are caused by overheating due to improper ventilation.



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PHILCO 90

Weak on low frequency end . . . replace 10,000 ohm resistor connecting antenna coil to ground with the 51,000 ohm resistor across the low frequency padder. Then put the 10,000 ohm resistor across the padder. Realign i.f. and oscillator.

PHILCO 118X

Poor sensitivity on short waves . . . look for open .003 mfd condenser connected from one terminal of band switch to ground.

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PHILCO 190XF

To improve short wave reception wind several turns around inside of cabinet and connect one end to terminal 3 of loop.

PHILCO 936

Vibrator hash . . . connect ground terminal on terminal strips to ground with heavy strap.

OLDSMOBILE 982161

Oscillation in i.f. . . . connect a .0005 mfd mica condenser from the 7B6 diodes to ground. Several values should be tried as too large a capacity may cause audio distortion.

RCA VICTOR 5X3

Oscillation . . . replace cathode bypass on i.f. amplifier stage.

RCA 85TI

Weak on all bands . . . check 6.8 meg resistor (R13) in grid of first detector for increase in resistance.

RCA VICTOR 120

Loud hum . . . isolate green wire coming through hole in chassis and connecting to grid of 2B7. Try moving this lead in different positions with insulated rod.

STEWART WARNER 112

Vibrator hash . . . inspect vibrator shield can for good contact to case. If motor noise is extremely bad try shielding the tone control leads and pilot light wires.

STROMBERG CARLSON 60

Oscillation, distortion . . . check grounding of 6B7 shield can. To insure good ground, remove shield base, clean chassis and bolt securely in place.

ZENITH 5905, 5906

Low volume, squeals when volume control is advanced . . . check 8 mfd. condenser (C-21 which is part of No. 22-571) for open.

Fading . . . look for short in trimmer condenser on i.f. stage.

ZENITH 6D311

Distortion . . . remove back chassis bolts. These bolts are long enough to make contact with filament prong on output tube and may also cause cathode resistor to burn out.



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Lifetime
Guaranteed Instrument

Model 1612 is a "customer acceptance" tube tester that is impressive in appearance, and in the quick "readings" it gives with its fine, business-like 7-inch meter. A quick spin of the illuminated Roll-Dex Speed Chart will give you the settings in a flash. Entire chart scanned in less than 10 seconds. Has all tube sockets including Loctals, Bantam Jr., and the new 1.4-volt Miniature. Tests High Voltage series including 117Z6G; also Gaseous Rectifiers and Ballast tubes. Future tubes provided for by filament voltages in 20 steps from 1.1 to 110 volts. Has Neon Shorts test; Noise test jack, and separate line voltage control meter. Suede finish Silver Grey and Maroon Seamless Case and Panel of heavy, streamlined steel. Dealer Net Price \$29.84.

Model 1613 Portable Tester . . . Same as above but has detachable cover with handle . . . Sloping panel . . . Dealer Net Price \$34.84



MODEL 327-A

Model 327-A is one of 23 different electrical measuring instrument case styles manufactured by Triplett. Instruments are available in 2", 3", 4",

5", 6" and 7" sizes, square, round, fan and portable cases.

Write for Catalog!—Section 204 Harmon Drive

TRIPLETT ELECTRICAL INSTRUMENT CO.
Bluffton, Ohio

WASHINGTON REPORT

(Continued from page 25)

State's NBC tele transmitter had to give up band 1 assignment it might be silent for as much as four months while changeover to another frequency was made and that expense might be in excess of \$100,000.)

Chairman Fly, terminating the meeting, said that F-M allocation briefs should be filed with the Commission for study by April 15.

Among those attending the F-M hearing, in addition to men mentioned in earlier paragraphs, were representatives of: CBS, Commercial Radio Equipment Company, International Business Machines Corp., Jansky & Bailey, McNary & Chambers, Muzak Corp., National Life & Accident Insurance Co., Radio Pictures, Inc., Stromberg-Carlson Telephone Mfg. Co., Westinghouse Electric & Manufacturing Co., Association of State Foresters, Brown Bay Phones, Office of Education of the Federal Security Agency, Mackay Radio & Telegraph, National Association of Educational Broadcasters, National

Congress of Parents and Teachers, National Committee on Education by Radio, National Council of Chief State School Officers, National Education Association and Ohio State University.

The actual outcome of the hearing may only be surmised until the FCC looks over April 15 F-M allocation briefs, decides what to do about them, and when . . . all of which will take time.

(Stromberg-Carlson, just as we go to press, starts its first consumer magazine advertising campaign in behalf of F-M radios, beginning in the *New Yorker*, *Time*, *Life* and the *Saturday Evening Post*. New York newspaper ads had appeared earlier.)

BUILT-IN RADIOS

(Continued from page 27)

extra profit margin. Yet in many cases this is no skin off the owner's nose. By having the installation built-in he is saving the cost of a perhaps expensive console cabinet. Once he has been sold on the built-in idea, it is only a step to selling

him on the additional convenience of an intercommunication system, extra loudspeakers, etc.

Finally there is the market offered by the speculative builder who puts up whole groups of homes for sale. He is faced with the keenest type of competition and oftentimes the inclusion of one feature which his competitors cannot boast in their homes gives him the edge in selling. Such a feature might well be built-in radio.

Architects Your Allies

It has been the purpose of this article to suggest the possibilities offered to the radio dealer in this new development. While the groundwork for promoting the whole idea of built-in radio is being laid by the present and impending editorial activities in the building field itself, nevertheless selling effort is going to be required on the part of the dealer. Fortunately this sales effort can be highly concentrated on prospects whose names can be obtained from plans filed with local building departments and local building material dealers. In fact it may be possible to inaugurate

Mr. Serviceman:

We're Proud of the R.S.A.!

The Only National Organization of Servicemen

Servicemen, broadcasters, manufacturers, jobbers, trade associations and trade journals, all have contributed their share toward making the RSA the fine organization it is today.

RSA is doing everything possible to earn and keep this continued support from the whole industry by providing an outstanding program of activity—Year-Round Sales-Promotion to build Public Confidence, Technical Help for Members, Bulletins, and many other important business-aids are regular RSA features!

RSA needs the help of every good serviceman—so Join us now!



Let's Grow Together in 1940!



RADIO SERVICEMEN OF AMERICA, Inc.

JOE MARTY, JR., EXECUTIVE SECRETARY
304 S. Dearborn Street, Chicago, U.S.A.

MAIL THIS COUPON NOW!

RADIO SERVICEMEN OF AMERICA, INC.

304 S. Dearborn St., Chicago, Ill.

Name

Address

City State

I am interested in R.S.A. Membership. Tell me about it.

I am enclosing \$4.00 for National dues and initiation. Covers dues up to Jan. 1, 1941.

(Does not include Local Chapter dues where Local Chapters are organized.)
RR-440

some sort of cooperative scheme with a leading building material dealer whereby he will initiate the sale of built-in radio along with the lumber, plumbing, heating and other materials and equipment which he handles—then call you in to carry on, with a commission to him on business you close.

Local conditions and the dealer's ingenuity will govern activities but certainly the propaganda being carried is something which dealers should capitalize. With close to 200,000 home builders each year being made "built-in radio" conscious, and many times this number of existing home owners, the field is definitely one worth shooting at.

That manufacturers are alive to the possibilities offered by this field is evident from the fact that Radio Wire Television Inc. (Lafayette) and United Teletone Corp. (Cinadagraph) are among the prime movers in sponsoring the present promotional activities. Each of these organizations has a special brochure in preparation which not only lists their equipment suitable for this application, but also contains comprehensive technical and practical data which will be of service to

dealers contemplating activity in the field of built-in radio. Additional data of this type will also appear in coming issues of *Radio Retailing*.

ABOUT NEW LINES

(Continued from page 29)

prices instead of atrocities at atrocious prices.

"S' help us!"
IRONWOOD, MICH. L. W. VAN SLYCK

Quality and Performance . . .

In spite of present difficulties the future of the radio business still looks good to me.

I certainly would hate to have the radio industry live over the thirties again and so do not recommend that "start over again" to solve current problems.

Things will straighten themselves out when manufacturers go back to that old principle of quality and performance above all, as they must eventually do.

Until a couple of years ago, it seems to me, radio manufacturers never permitted sets to leave their plants below a certain minimum performance standard, regardless of price. And they will come to this way of doing business again.

HIGH POINT, N. C. W. P. BIVINS
Guilford Radio Service Co.

Contrary to the apparent opinion of the manufacturers, not everyone in this country has gone tone-deaf.

There are still some salesmen left who have "guts" enough to sell a high-class radio.
DETROIT L.S.

It is our personal belief that manufacturers have been entirely too conservative in their attitude toward high-priced, good radios.

The public will buy in the frame of mind that the manufacturers themselves produce.
AUGUSTA, GA. AUGUSTA RADIO CO.

In a store such as ours quantities of really good furniture is displayed. Such furniture is in the best styles and well built.

We attract people of good taste in furnishings hence we have a demand for radios in cabinets of equally good construction and design.

There could be better cabinets in the average radio line without much trouble.
PITTSBURGH JOSEPH VARNE CO.

We have found that the present trend toward giving consoles mere bulk and visible features rather than real quality turns many actual console prospects to smaller types.

Yet many of these consumers do not actually buy the table types either, preferring to wait until consoles that suit them come along, continuing to use old

6 EXCLUSIVE Design FEATURES

- ONE-PIECE GIANT BELL SUPER STRENGTH CONSTRUCTION
- OVER SIZE SWIVEL BOLT MECHANISM
- BREATHER WITH SCREENED RUBBER RIM

New University One Piece Parabolic



6 EXCLUSIVE Selling FEATURES

- NON RESONANT RUBBER TIRE RIM
- FLOATING RUBBER CONE SPEAKER MOUNTING
- UNIVERSAL MOUNTING "U" BRACKET

UNIVERSITY LABORATORIES
115 CHRYSTIE STREET NEW YORK CITY

Write For Details See Your Local Dealer

ONAN ELECTRIC PLANTS

ALTERNATING AND DIRECT CURRENT

ONAN ELECTRIC PLANTS furnish DEPENDABLE ELECTRICITY in the field where current is not otherwise available for RADIO and ELECTRICAL Apparatus Demonstration. Operate Transmitters and Receivers, Telephonic Communication Systems, Moving Picture Projectors, Promote Radio and Electrical Sales in districts remote from Power Line Service.


350 to 50,000 WATTS

Any Voltage—Any Frequency—Over 40 STOCK MODELS. COMPLETE, Ready for Shipment and Immediate Operation. Thousands of ONAN ELECTRIC PLANTS in Daily use in ALL PARTS OF THE WORLD on Farms, in Schools, Theatres, Public Buildings, City, State and Federal Departments, and for Emergency Standby Service.

Write NOW for Literature and Discounts.

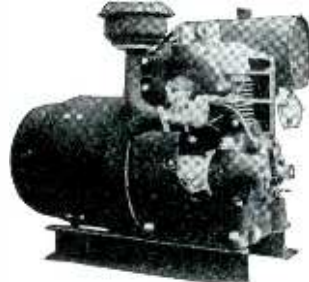
D. W. ONAN & SONS

633 Royalston Ave. Minneapolis, Minn.



110 VOLTS AC ANYWHERE!

With KATOLIGHT. Furnish standard 60-cycle AC for operating sound truck equipment, AC radios, transmitters, flood lights, motors, moving picture projectors, etc.



A complete line of light and power plants ranging up to 10,000 watts capacity. Also 6, 12 and 32 volt battery charging plants. Diesel plants, rotary converters, and frequency changers.

List prices \$50.00 and up.
Jobbers and Dealers Write For Latest Catalog

Kato Engineering Company

Elm and Front Streets
MANKATO, MINN., U.S.A.

A GOOD NAME GOES A LONG WAY

No expense is spared to safeguard the high quality and performance of dependable Ken-Rad Radio Tubes.

Ken-Rad Tube & Lamp Corp.
Owensboro, Ky.

KEN-RAD

DEPENDABLE RADIO TUBES



radios they really wish to discard.

Business is thus lost in both large and small set classifications.

AMES, IOWA CARR HARDWARE CO.

"Designing Dealers" have done their part.

Radio Retailing has helped them make their new radio needs articulate.

Manufacturers must carry the ball from here.

LISTEN BEFORE YOU VOTE

(Continued from page 32)

directly in touch with rival candidates and rival policies in much the same close and intimate style that characterized the days of town meetings and of platform debates between candidates."

D.A.R. president general Mrs. Henry M. Robert, Jr. . . .

"I am in entire accord with the suggestion 'Listen Before You Vote.' With one of its major objects Education for Citizenship, the group has for many years included in its program the obligation not alone for voting but for intelligent voting.

"I will be happy to mention the slogan in my column 'If I Could Talk to You' in the May number of our National Historical Magazine which comes from the press about April 25."

NAT'L. FED. of MUSIC CLUBS president Mrs. Vincent Ober . . .

"The theme 'Listen Before You Vote' is a most timely one. It is easy in times such as the present for unfounded prejudices to flourish. We should keep open minds and seek the truth of all situations without allowing prejudices to stunt our decisions or to influence our voting.

"Citizens of the United States are too frequently unconscious of the privilege which is theirs, but this same privilege should inspire us to become an informed people with an unrestricted right of franchise."

NAT'L. ASS'N. of CREDIT MEN'S executive manager Henry H. Heimann . . .

"The suggestion you have of adopting the slogan 'Listen Before You Vote' is in keeping with the democratic way of analyzing problems through the public forum.

"Any move of this kind would naturally enlist my interest."

Additional news regarding the "Listen Before You Vote" campaign will be published in these columns as plans progress. Meanwhile, manufacturers, distributors and dealers are urged to study possible tie-in methods so that practical promotion may be ready for the first big listener interest boom in June.



SALES STATIC . . . Customer: "You don't charge just to look at my radio, do you?"

SPRING SELLING TIME

(Continued from page 39)

we leave the house we drive to the corner, stop the car, take out a contract, and write it up from memory.

Ah! You Have It

And it isn't hard to do. True, it requires effort, conscious effort—

but conscious effort which soon becomes second nature. We are perpetual credit-checkers; we simply develop the knack of talking in a way, and about things, that is constantly drawing out information.

And it is a very valuable knack to develop. For not only do we get the bad news on many prospects before spending too much time and effort on them (cut down on the Lost Motion), but we also do a lot of selling jobs when we know credit is good . . . and, well, do you do a good job under such circumstances?

But somebody may find out his credit was checked before he bought and not like it?

Yes, yes. We may get run over by an automobile, too, if we don't watch ourselves. But you won't have much trouble in this respect, honestly you won't. If it's a kid glove case, and you're worried about it, put the credit company wise to the fact that when they call the husband's place of employment, or the landlord, they shouldn't say who's calling.

You must remember that we have come right up to the vernal equinox. With the sun entering Aries this way we can't be too skittish about people who don't want their credit checked until they buy something! Most of the kid glove people have boxes anyway, now, and the people who are buying them, the great majority of them, don't care whether you check them in advance or not.

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Want **VOLUME** and **PROFIT** ?



SELL Gale

If you sell on QUALITY
Just compare GALE with any other make.

If you sell on PRICE
GALE prices make you the tough competition.

If you sell on FEATURES
GALE gives more, model for model, price for price.

If you sell on NAME
The GALE name stands for quality and extra value.

THE KIT PLAN licks your biggest problems! It lets you show more models and at the same time cut your inventory investment. Builds volume and profits! It's NEW! It's GOOD! It will make money for you!

LOW PRICES put Gale in a more favorable position than ever! Gale prices are emphatically RIGHT! With Gale, you meet competition without sacrificing your margin. Your profits will NET bigger with Gale!

GALE PRODUCTS

GALESBURG, ILLINOIS
In Canada, GALE Products, Peterboro, Ontario



Your present sales force can profitably sell GALE Portable Air Conditioning Units! Compact, plug-in appliances—easy to sell, easy to install (no plumbing or special wiring). Two models, popularly priced!

Division of
Outboard, Marine
and
Manufacturing Co.

**"ANY DEALER CAN
MAKE EXTRA PROFITS
WITH GALE"**

GALE Products
1641 Monmouth Blvd.,
Galesburg, Illinois

GENTLEMEN:

Send facts on Gale refrigerators
Rush full information on Gale Portable
Air Conditioning Units

COMPANY _____

STREET _____

CITY _____

BY _____

STATE _____

TITLE _____

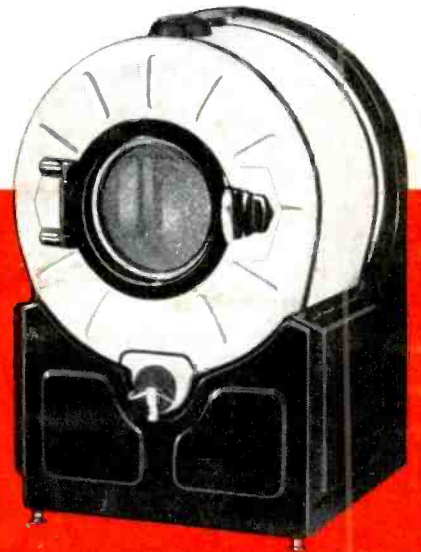


NOW! Bendix Crashes the Mass Market

\$99^{50*}

UTILITY
MODEL

WASHES . . . RINSES
DAMP-DRIES



UTILITY MODEL—looks like the Standard . . . washes, rinses and damp-dries.

IT'S HERE! The amazing "scoop" product promised to Bendix Distributors and Dealers sixty days ago. Unbelievable, but true; a Bendix Home Laundry that washes, rinses and damp-dries in the same efficient way as the original "successor to the washing machine" . . . but at the market-crashing price of \$99.50*.

Utility Model Will Dominate the Low Price Market

Prediction: *The Utility Bendix will be as dominant a factor in the price brackets below \$100 as the De Luxe and Standard models have been in the over \$100 class.* (Bendix sold nearly 50% of all washers over \$100 in 1938 and over 50% in 1939.)

Performs the Same Operations as the De Luxe

The only important difference between the new low priced Utility model and the original De Luxe Bendix is that with the Utility model the housewife remains in attendance.

Functionally, it is the same machine, performing in identically the same manner and possessing the same capacity as its predecessors so far as washing, rinsing and whirling-dry operations are concerned. Workmanship and materials are of the same high quality . . . demonstration is as dramatic and appealing to prospects.

Amazing Advertising Values

Imagine the increase in floor traffic, inquiries and sales that will follow the advertising, displaying and demonstrating of a washer about which it can truthfully be said to the prospect:

"The Utility Bendix is safer—more sanitary—more convenient—less wearing on clothes—more economical to operate—easier and less tiresome to use than any conventional type washer irrespective of price . . . and your hands need never touch water from the time you put clothes in until you take them out."

Leadership in All Washer Markets

Dealers who handle the Bendix line from now on will enjoy leadership in the long-profit end of the market PLUS volume sales in the price groups below \$100. Think what this can mean to *you* in turnover, in net profits, in lower inventories!

Heavy National Advertising This Spring

Opening with a sensational full page announcement in Life Magazine, April 8th, the public will be hammered with a constant barrage of Bendix advertising in McCall's, Woman's Home Companion, Good Housekeeping, American Home and Parents' Magazine — total circulation 13,140,872, supplemented by 18,000,000 newspaper circulation in all major markets listing dealers.

Dealers Will Be Added in Some Territories

The Bendix franchise will not be ped-



The Standard Bendix Fully Automatic

The De Luxe Bendix Fully Automatic

dled to everyone. Those aggressive dealers who have helped pioneer with us will not be "sold down the river," BUT . . . we are going to broaden our distribution. You know what the dealer response to this announcement will be. Don't wait. Write or wire, now . . . today.

*Model U. Slightly higher in Southwest and west of the Rockies. Small installation charge.

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BENDIX HOME APPLIANCES, Inc., South Bend, Ind.