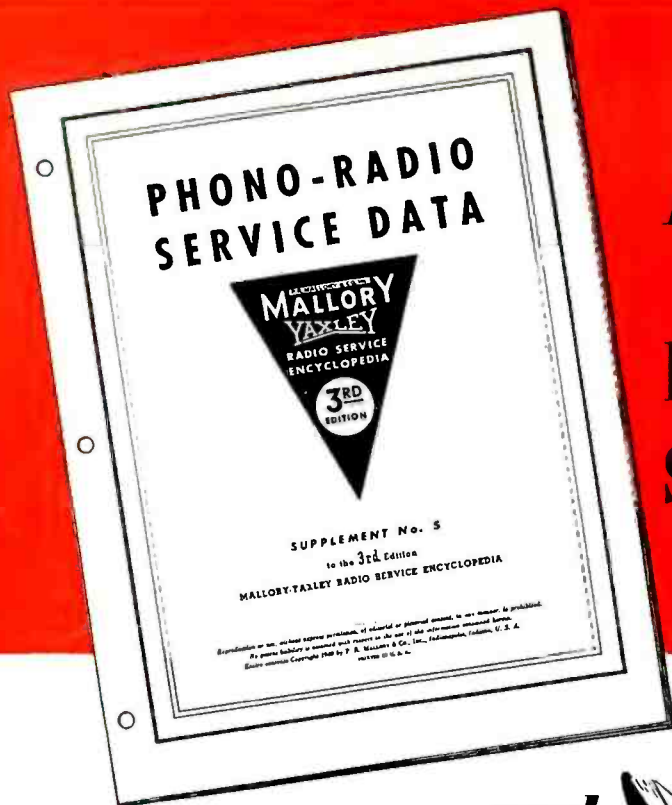


RADIO *and Television* TODAY



In every Home-Office-Factory
are people waiting to buy. ★ ★

APRIL



**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.

You'll be missing a real profit opportunity if you don't get in on the up-to-the-minute information offered by this service.

HOW TO GET IT:

You can obtain the complete service (including all five initial issues) by sending in your check or money order for only \$1.50 direct to us. Or—you can save 50c by having your Mallory-Yaxley distributor order the service for you. Don't be without it. You'll say it's the greatest bargain you ever bought.

Use

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

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

Use

YAXLEY
REPLACEMENT
VOLUME CONTROLS

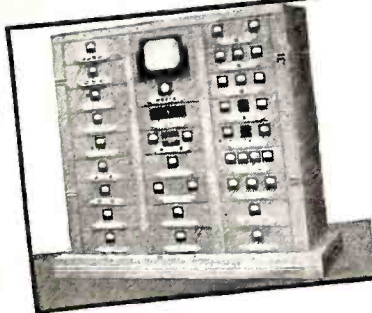


1 The show begins! The Farnsworth Television Camera picks up the actions of the speaker and converts them into electrical impulses.

Farnsworth

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.

2



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!*

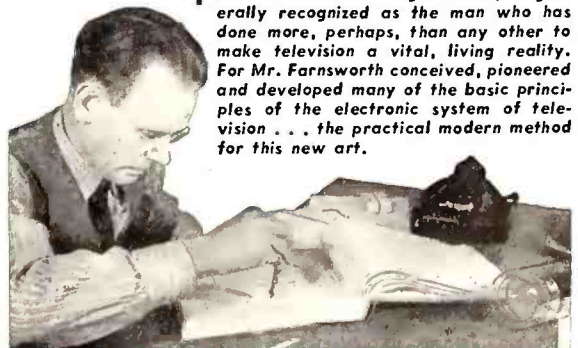
Every show in Farnsworth dealers' stores has been packed and jammed with people. The demonstrations of the Farnsworth Traveling Unit have awakened keen public interest in television . . . the new art in whose development Farnsworth has played a major role. *And enormous store-traffic has been created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

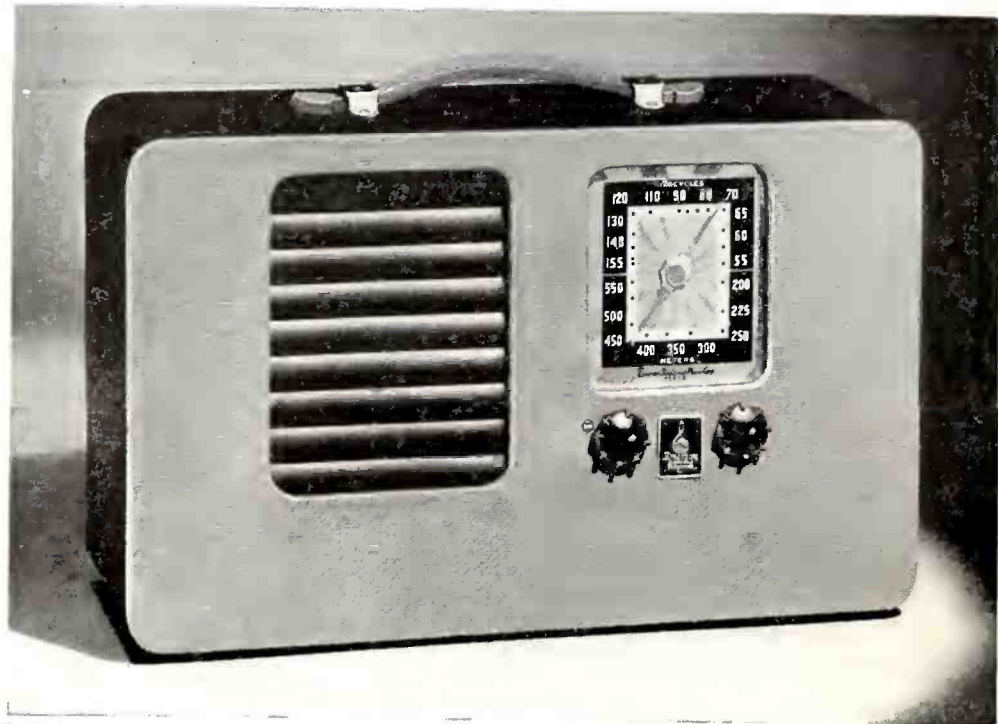
Farnsworth Television & Radio Corporation, Fort Wayne and Marion, Indiana

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.



EMERSON LEADS AGAIN

America's Most Outstanding New 1941 Portable Line, Including "Super-Power" Long-Distance and American-Foreign Models . . . Priced for Volume Sale and Substantial PROFIT . . . Ask Your Distributor NOW!



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)
COMPLETE, \$24.95
 Available in Old English Grained Tan or Buffalo Grained Blue
 With 5-Inch Permanent Magnet Dynamic Speaker . . . Large "Eye-Ease" Dial . . . Automatic Volume Control.

"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.

\$19⁹⁵

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

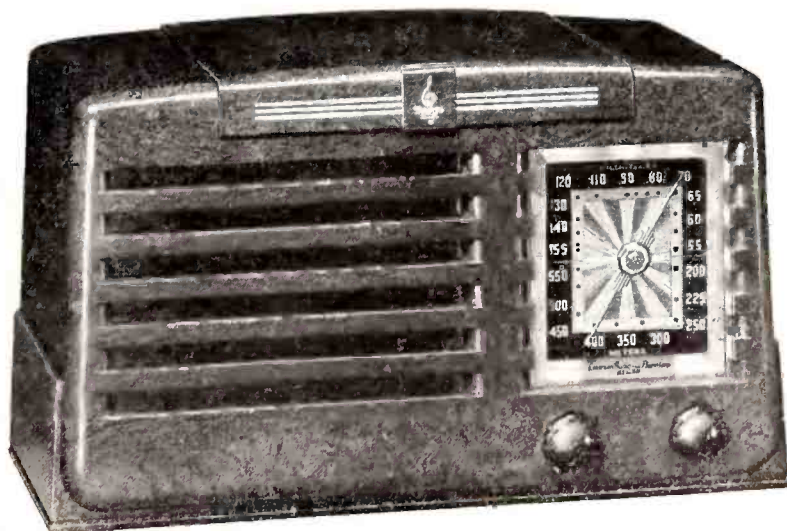
Emerson "CAMPAIGNER"

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.

\$12⁹⁵

Slightly Higher in West and South



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

"World's Largest Maker of Small Radios"

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



the
BOOK-CADILLAC
*Center of
 the Auto World*

...insists upon
**RAYTHEON
 TUBES**

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



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



... 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.



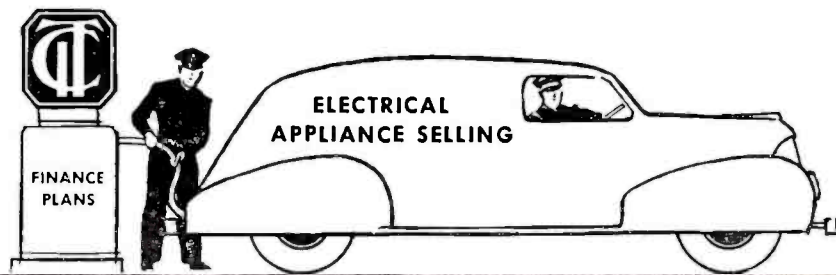
Radio Corporation of America

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.



Help Your Business Get Ahead!

Sell on Time at C.I.T.'s Lower Rates with Limited Recourse

Here are the quick, essential facts about C. I. T.'s Financing Service that today is *proving* its success as a business builder:

If your appliance business has been operating under the Limited Recourse Plan, you can retain all the benefits of the service at rates as low as any available through a national sales finance company.

If you have been selling under Full Recourse, your liability can now be limited under C. I. T.'s Limited Recourse Plan—at rates never higher than your former rates and, frequently, at rates even lower.

C. I. T.'s financing service is especially designed to fit the needs of modern appliance merchandising. It provides ample finances for all merchandise requirements, an attractive rate structure that stimulates sales—together with the aid of trained representatives in the field who can help smooth the way for profitable instalment selling. Why not establish your account now with the nearest of C. I. T.'s more than 200 local offices? Begin at once to benefit by these successful selling plans and facilities.

Check *all* the advantages you get with these C. I. T. Special Services



Low Refrigerator Purchaser Rates . . . Automatically attractive to customers. This rate structure is as low as any now offered by a national finance company. And favorable rates are only *one* of the benefits you get with C. I. T. service.



Home Demonstration Plan for Major Household Appliances . . . 25% of your floor-planned appliances may become active salesmen—in the home—the logical place for closing sales. A sure way to keep things moving when one out of every four C. I. T. floor-planned appliances can be doing duty as demonstrators, at any one time. Ask your local branch office for details.



Special Home Modernization Field Force to Help You . . . Throughout the country, our trained Home Modernization Staff calls exclusively on contractors and appliance dealers. Your representative, contacting you closely and frequently, will be glad to help you get the utmost value from your C. I. T. service.

C. I. T.

CORPORATION

Sales Financing

*A Unit of Commercial Investment Trust Corporation
Branches in all Principal Cities*

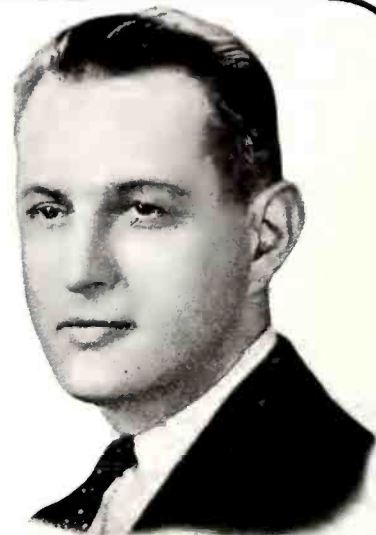
NEW YORK • CHICAGO • SAN FRANCISCO

"Looks like a gold mine to me"

...says Dale Neiswander,

Interstate Supply Co., St. Louis, Mo., about RCA Franchise

"In this business the three sales necessities are test equipment, receiving tubes and power tubes. RCA offers us all three—*plus a name* that stands for quality. Add them all up and you have what looks like a gold mine to me! Yes sir, that RCA Franchise is a money maker for Interstate."



There's Gold for you in the RCA *Big Three*

A SMART AND POPULAR MISSOURIAN, Dale Neiswander has that "show me" attitude. That's why we're mighty glad to have him say he thinks the RCA Franchise is profitable.

RCA has more service experience in every field of radio and sound than has any other organization. This enables RCA to design test equipment which answers every need in the field. Obsolescence is minimized because RCA makes the trends in radio... and knows far in advance what the trends will be.

RCA developed the receiving tube business

... and no one else has caught up yet. The tubes America knows best are easiest to sell.

Not only does RCA offer types of Power Tubes that no one else makes...but RCA also knows the tube requirements of transmitters as few can because RCA makes transmitters.

You can't help but agree... It Pays to Go RCA All the Way in Test Equipment, Receiving Tubes and Power Tubes.

Over 335 million RCA Radio Tubes have been purchased by radio users... in tubes, as in parts and test equipment, It Pays to Go RCA All the Way.

Only RCA Offers All Three

**TEST EQUIPMENT
RECEIVING TUBES
POWER TUBES**

Transmitting, Cathode Ray and Special Purpose Tubes



Tubes and Test Equipment

RCA MANUFACTURING CO., INC., CAMDEN, NEW JERSEY

A Service of the Radio Corporation of America

RADIO *and Television* TODAY

KEEP GOVERNMENT OUT OF RADIO MERCHANDISING!

Every man in the radio business will be stunned at the full implications of the new government policy by which the FCC chairman presumes to dictate *how* and *when* radio merchandise shall be sold—and even addresses the public with advice *not to buy* radio products which lack his approval!

Of course, as everyone knows, there is today a patent struggle involved at Washington. At this time, the radio industry's engineers cannot agree on uniform recommendations for future operations. With the radio industry thus divided, government officials have seized the opportunity for an outrageous assumption of authority to meddle into merchandising—an attack that concerns the future of every manufacturer, every distributor, every dealer and every serviceman.

USE AIR TO BLOCK SALES

If such a policy is persisted in, we may see the FCC demanding further air-time from its helpless broadcast licensees, to publicly interfere with the merchandising of radio receiving sets, combination-phonographs, and other associated products.

Servicemen may hear a Washington voice coming over sets they have just fixed, advising Mrs. Jones against purchasing the very tubes they have just installed.

Dealers making receiver demonstrations may suddenly hear bureaucrats counselling their customers to buy no push-button sets or no FM sets, because "still newer things are ahead" in the bright future of radio. Or, the capricious and political-minded Commission, today officially approving FM, may 30 days later be cautioning the public against the new system because it will obsolete 45 million existing receivers!

SPEECH HURT RADIO

Already such FCC interference with the radio trade's normal flow of merchandise has begun.

On April 2, the new FCC chairman (with experience in radio limited to only a few months), did the whole radio business a disservice when, amazingly, he demanded and

got a 125-station hookup to talk nationally on television in a way that will hurt radio-console sales the country over, for months to come.

As we go to press, reports from all parts of the country show an immediate slowing up of radio receiver sales following the Fly television outburst, which should have been confined to the metropolitan television area. Jobbers, dealers and the public all over the nation were given premature notice for the first time that "television is now ready to go forward," as the chairman put it.

BUREAUCRATS BORING IN

Yet, conversely, in the television areas where such promotion would have been pertinent, the Commissioner ordered television advertising and selling *stopped*. This was done on pain of license modification, the "Papa-spank" threat that hangs over every broadcaster and transmitter licensee!

The FCC was created to serve as traffic cop of the wavelengths only. There it is needed and is unquestionably boss! But when its autocratic arm reaches over into the homes and stores and service-benches of America and attempts to order or advise what shall be purchased and what shall not, it is time the whole radio industry and trade united to shut bureaucracy out of our end of radio!

THE BIG ISSUE

Every dealer and every distributor should clearly understand that the issue now involved is no longer television alone, but the sale of radio sets and supplies—your business! The trade must realize that government through this approach, is creeping in on the \$400,000,000 radio business itself, from which 200,000 families derive their support.

So the whole radio industry, whatever its temporary internal differences of opinion, must keep alert to the greater danger that besets each individual business through government meddling. It is time for all radio interests to unite in demanding that in the merchandising of radio the government keep

Hands Off!

EDITOR, Orestes H. Caldwell;
PUBLISHER, M. Clements;
Managing Editor, Darrell Bar-
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L. M. Capron; STAFF, N.
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N. Y. Telephone PLaza 3-1340
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Vol. 6, No. 4. April, 1940

RADIO AS IT IS TODAY

Business Remains at High Level

Radio and appliances, in company with automobiles, hardware and furniture, continued to furnish the bright spots in a nationally spotty retail sales picture for March and April.

Automobile production and sales are near boom levels, with some companies reporting the largest first quarter in their experience.

Retail radio inventories continue heavy, but sales are holding up, some 25 per cent over last year, and eating into this inventory.

The outlook for May radio sales is good, and there appears to be no threat of any more serious liquidation than has already occurred.

With new models and the political conventions drawing close, radio sales will run contra to general business, and the June quarter should see radio sales up about 30 per cent as compared with 1939.

Refrigeration sales and production are currently over 40 per cent greater than last year, with several manufacturers unable to keep production pace with the demand for the lower priced units.

May looks bright for the radio-refrigerator dealer.

"Frequency-Modulation" Expects FCC Go-Ahead

More than 110 applications for frequency-modulation stations are now before the Federal Communications Commission at Washington. A number of these seek permits for 50-kw FM transmitters, assuming that the Commission will grant the FM broadcasters' request for an increase of the limiting power from 1 kw to 50 kw, in order to render better service to FM listeners and reach a wider radius with this noise-free, high-fidelity reception.

Among the present broadcasters which have asked for 50-kw FM stations are WTMJ, Milwaukee; WDRC, Hartford; WTIC Hartford; two Detroit stations, and two Chicago stations. RCA-NBC has recently joined the ranks of applicants for FM licenses, and has filed for FM stations at Washington, Cleveland, Chicago, Denver and San Francisco.

Favorable reaction from the Commission is expected to the testimony presented during the eight days of hearings at Washington during the third week of March. Major E. H. Armstrong, inventor of the new system (as well as of important milestones in present amplitude-modulation broadcasting), proposed that the 42 - to - 44 - megacycle band be divided

into ten FM channels, and he also advocated taking one of the television channels (6 megacycles wide) and turning it into thirty FM channels.

If the No. 1 television channel is converted to this purpose, it would give a continuous FM band of 40 FM channels, which the FM advocates declare will be necessary to accommodate the large number of station applicants. On the other hand, use of Television Channel No. 1 would mean shifting the present NBC transmitter on the Empire State tower at New York, involving an estimated expense of \$100,000 to convert the antenna to the next lower television channel, and involving further shifts of both CBS and Philco from Channel No. 2 to No. 3.

Representatives of the leading FM groups, broadcast engineers, station owners, receiver manufacturers and laboratory scientists all collaborated



Indian chief radio dealer reports heap big sales in his area of Sweet Hall, Va. Chief Custalow is shown with J. H. Carmine, center, and J. M. McKillop, Philco officials.



Major E. H. Armstrong, left, the industry's No. 1 frequency modulation expert, is shown with FCC chairman James L. Fly, at the FCC hearings on FM status.

between March 18 and 25 in an effort to present a complete and clear picture of the advantages and potentialities of this new type of radio transmission invented by Major Armstrong.

Definite action by the Commission is not expected until after its hearing on television which started April 8, and the decision will probably not be forthcoming until about May 1. A so-called "green light for FM" by the FCC would set aside a definite FM band with sufficient channels to take care of the development of the new broadcasters; would permit commercial status; establish a standard 200-kilocycle channel width; and allow higher powered stations up to 50,000 watts.

Little opposition to these proposals,

except in the matter of frequency allocations, was experienced at the Washington hearings. Meanwhile, the increasing tide of applications for FM stations being filed each week from all over the nation is expected to exert a strong influence on the Commission's ultimate answer.

Radio-receiver manufacturers are requesting the earliest possible action by the Commission on the FM channel allocations, in order to provide sufficient FM band-width on their new receivers shortly to be announced. It is expected that a large number of standard console radios intended for sale on the Eastern seaboard, will be offered this season with FM bands. In order to include these announcements

in time for the June shows and the buying bulge expected to accompany the political conventions, FCC ruling is urged at the earliest moment. Among the manufacturers now licensed by Major Armstrong are General Electric, Stromberg-Carlson, Stewart-Warner, Pilot and Zenith.

Whole Industry Gets Together for Chicago Parts Show

A long but lively series of events are being finally planned for the annual radio industry gathering at the Stevens Hotel, Chicago, June 11-14. The RMA convention and membership meeting is all set for June 11 and 12, and the Radio Parts National Trade Show, sponsored jointly by RMA and Sales Managers Clubs will cover the entire Exhibition Hall, June 11-14.

Exhibitors have shown an extra advance interest in the Show, and practically all space has been reserved by the 142 booths already planned. The "Radio Special" train will again run from New York to Chicago. Three days, June 11-13 are "Jobber Days," and June 14 will be "Open House" for the whole industry. The Show, which promises to have a record success, is again under the management of Ken Hathaway.

For RMA members and guests is the annual industry banquet June 12, with a special program planned by Chairman Paul Galvin and committees. The yearly golf tournament is planned for June 13 at the Calumet Country Club.

Organization meetings scheduled for the period include the joint meet-

ing of the Sales Managers Clubs, June 10; National Radio Parts Distributors Association dinner meeting for members, June 13; (NRPDA general meeting for members and non-members is June 14); Show Exhibitors annual luncheon June 14; "The Representatives" annual meeting June 14; Third Annual Convention of RSA, June 14.

How Radio Listening Has Swelled National Vote

While population increased by only 20 per cent between 1920 and 1936, ballots cast in Presidential elections of those years increased 71 per cent!

During the same period, radio receivers increased from a negligible number in 1920 to 33,000,000 in 1936!



Above is Paul V. Galvin of Galvin Mfg. Co., now extra busy as chairman of RMA Convention (June 11-12) Committee.

Below, President Edward Wallerstein of Columbia Recording Corp. greets C. B. Wikoff (standing) who is the new CRC treasurer.



This is striking evidence, according to industry leaders, that radio has become the modern version of the old New England town meeting, and "brings out the vote."

Because of a minimum of forty-five million active radios, at present, another huge outpouring of ballots is predicted next November. The National Association of Broadcasters plans to insure the widest possible participation of voters this fall by urging one and all to "Listen Before You Vote," and invites all radio manufacturers, distributors, dealers and servicemen to cooperate and share in the benefits of this campaign.

During May and June broadcasting stations all over the nation are using spot time to get the public to equip itself with the best possible radio receiving sets to listen to all arguments before casting the first ballot. Campaign leaders of the principal parties have approved the idea behind the radio-industry drive, to get all citizens to "Listen Before You Vote."

Commercial Television by Sept. 1? See p. 14.

Concluding a week of intensive television hearings and discussions by the FCC and by members of the U. S. Senate, Chairman Fly now indicates "hope of commercialization in a few months." A full report of Washington television events April 8 to 12, appears on pages 14 and 15.

FCC Might Regiment Women's Hats!

Agencies of the Federal government are now infringing on constitutional guarantees of freedom of the press and business, by attempting to censor and control advertising and merchandising, declared Elisha Hanson, general counsel of the American Newspaper Publishers Association, addressing the N. Y. Advertising Club, April 4.

From the policy set forth by the F. C. C. in regard to television, said Mr. Hanson, it would only be a short step to limit women in their choice of hats, dresses and shoes and make men wear blue, black or brown shirts "according to government prescription." He added that, under such a philosophy, new household appliances and luxuries would not be permitted to be marketed "until they have reached a stage of perfection which even a Washington bureaucrat can perceive."

"I pause to ask you," he said, "what would we have today if bureaucracy could have stepped in twenty years ago and prohibited broadcasting until it had been perfected; prohibited the sale of crystal receiving sets because in a year or so the battery re-

(Please turn to page 63)

STREETFULS OF SALES

BUILDING UP SPRING VOLUME VIA SELLING ACTION TO THE HOMES AROUND YOU

Of all the months in the year, May ranks sixth in volume of retail sales.

May is a *good* month, though for radio-refrigeration dealers it does present a few problems all its own.

To cash in on the potential May business you've got to be on your toes. You can't let "spring fever" get into your blood, sap your enthusiasm, kill your drive, and yet expect the old cash register to keep on playing a ringing tune.

New radio models are now only a few weeks away. Our current stocks aren't going to be worth a *dime more* next month, than they are now, and probably *dollars less*.

So our first May problem is to get our radio stock way down, and to be "open to buy" the new models.

The second problem, which May presents is Mother's Day. Every line has so intensified its Mother's Day promotion, that for the next few weeks, *every* retailer is the radio man's major competitor for the consumer's dollar.

But radio, records, combinations and refrigerators are certainly as appropriate and long lasting gifts for Mothers as any other.

And so perhaps, we can answer our two May problems at once.

WHAT TO DO

Let's check the radio stock carefully.

Price it right, and make the prices on the slowest moving models the most attractive.

Doll up the window displays.

Keep sentiment dominant and specific merchandise secondary to the Mother's Day theme.

Then use the phone, letters, personal calls, and newspaper advertising to tell the community in general—and your own customers in particular—what a fine, long-lasting Mother's Day gift a radio or refrigerator is. And how much can be saved by buying now—lower prices, better trade-in allowances, etc.

Some novel sales theme might be used to focus attention on your store, particularly now, when every other business is trying to draw attention away from you.

A "private sale" for your own customers only, announced by mail and phone, has been known to produce surprising results.

A "20 per cent sale"—"deduct 20 per cent from our regular prices, plainly marked," pulls too.

The "treasure chest key" idea will always bring people in, and give you a chance to sell.

The "grab bag" is another "something for nothing" idea that can always be counted on to bring people to your store and make them *talk* about you.

If you don't like any of these thoughts, get one of your own, as good or better. The point is that you should focus positive attention on your store to offset the combined Mother's Day promotions of all the other retailers.



**EVERY OTHER
HOUSE IS A
PROSPECT**

AND THERE ARE MORE ON THE FRONT COVER

NOW!



**YOU'VE GOT TO
MAKE TRACKS
TO THEIR DOORS**

For Immediate Action

New radio models will appear shortly. Get your stocks 'way down and be "open to buy."

Direct early May selling into the gift-buying period around Mother's Day on May 12.

Get your portables into displays and demonstrations, as outdoor activity starts.

Cash in on coming political conventions by taking part in radio's "Listen Before You Vote" promotion.

APRIL, 1940

Immediately after Mother's Day we look ahead to Memorial Day, the traditional beginning of the summer "outdoor season."

It's portable time!

Let's be sure that the assortment and stock of portables is right, and that your replacement-battery stock is ready for the demand which is apt to "peak" suddenly.

Customers can be lost, as well as sales, if you have to send your customers to a competitor because stock has not anticipated demand.

Give portables the benefit of window displays, advertising and sales promotional effort the last half of the month, not only for immediate sales, but to pave the way for later ones too.

Portables may be much more than radio "bread and butter" this year, what with war news, political conventions, and a Presidential campaign competing for general interest.

Be sure and tie in with your local station in the nationwide "Listen before you vote" campaign. Such cooperative effort can't possibly do you any harm, and there are lots of reasons why it will help you, now, and continue to do so for a long time to come.

REFRIGERATION BUILD-UP

Refrigeration sales are building up fast this month to their peak in June.

To make real money in refrigerators this year, you'll have to merchandise them, and sell them.

Use your low priced jobs as leaders.

Advertise them every way you can to bring people in, and then, with a thoroughly trained sales force, *sell up to the complete boxes*. The money is in the higher priced units. And you've got to *sell* them.

Keep your outside crew closely following up all leads, and canvassing for new ones.

Keep your stock turning fast, by keeping it in direct relation to sales.

Don't overlook the replacement market, which will run to one-third of total refrigeration sales this year.

This market is prime to sell the higher priced units, because 1940 "complete" boxes are still far lower in price than the 5 to 10-year-old boxes they will replace.

And the older boxes did not have the features, the controlled humidity, the multiple temperature zones, the frozen food storage, which all show the old user a lot more refrigeration for a lot less money.

FOLLOW OLD CUSTOMERS

So follow up all your old users, and your old radio customers, too, by phone, by personal call, by direct mail, to tell them and sell them, the deluxe jobs of 1940.

With radio sales now 20 to 25 per cent over 1939, and refrigeration sales currently 30 per cent better than last year, May will be a good month, in sales and profits, if you keep after business systematically, with your crew enthusiastically selling and asking people to buy.

It would be wise not to overlook the fact that while you can't make money without sales volume, it takes a lot more than volume to put money in the bank.

Remember that radio inventory is going to depreciate fast in the next 30 to 60 days, and you've got to get it out.

And with dollar margins on refrigerator units down, you have less to play with if you want anything for yourself.

That means

Watch refrigerator selling prices.

Get radio stocks down—

And keep your selling efforts hitting on all cylinders, systematically and consistently.

TELEVISION BATTLE

Hope Rises in Washington that Industry Can Soon Agree on "Standards" and Restore Sept. 1 Date

On February 29 the Federal Communications Commission gave television an "amber light," authorizing the beginning of "limited commercial television broadcasting" for Sept. 1, 1940. This Feb. 29 action followed extensive hearings at Washington during January, when the plans for promoting television sales, technical aspects, etc., were thoroughly covered by witnesses representing all leading groups in the industry.

Accepting the FCC approval as valid, television men in New York immediately began to carry out merchandising plans already discussed in full detail at the FCC hearings. On March 12, 500 radio dealers were apprised of the plans at a meeting in the NBC studios. And on March 20 advertising announcements appeared in the metropolitan dailies, giving details of price reductions, and outlining programs broadcast from the Empire State transmitter. Some of these ads are shown here.

COMMISSION REVERSES SELF

Four days after the publication of these advertisements, Chairman Fly of the FCC issued a statement that "Promotional activities on the part of RCA have prompted the FCC to order a further hearing, April 8, to determine whether research and experimentation and the achievement of higher standards of television transmission are being unduly retarded by this company, its subsidiaries and other licensees, and whether the effective date for beginning limited commercial operation should not be changed from Sept. 1 to some subsequent date." Meanwhile by Commission order the new rule permitting such commercial operation was suspended indefinitely.

The Commission's reversal of its previous action threw a bombshell into television and radio-trade activities in New York and elsewhere. All television promotion and advertising was immediately suspended, and television men settled down to await the outcome of the April 8 hearings.

CHAIRMAN ASKS RADIO TIME TO "EXPLAIN"

Meanwhile the FCC and particularly its chairman, James L. Fly, came in for sharp criticism from newspapers and cooperating dealers on its sudden change of policy, and for its interference with the advertising and merchandising of television sets, generally believed to be outside

of the legal functions of the Commission. Smarting under press attacks Chairman Fly went on the Mutual and NBC Red networks, April 2, and to the nationwide audience of 125 stations undertook to explain his action.

The chairman's half-hour address was in part an enthusiastic appreciation of the future wonders and delights of television, and these remarks to a nation-wide audience yet totally without television facilities, had the

effect chiefly of causing doubt in connection with radio purchases—and so immediately slowed down radio sales!

Thus by his actions within four days' span, the chairman was able to create considerable television enthusiasm throughout the whole nation, in places where it could do no good, but only cancel radio purchases—while at the same time he stopped all promotion and sale of television sets in the only areas where such sets could be used and enjoyed by the public!

FCC and Senate Hearings

To understand television's hectic week in Washington, April 8 to 13, both "on the Hill" and at the hands of the FCC, it is necessary to realize that events in the capital proceed not from logical evidence presented at hearings, but from subtler political causes at work in this Election Year.

So widespread and devastating was the press criticism of the Commission's unprecedented interference into television merchandising and advertising—with political evidence that the FCC was halting a great new industry promising thousands of jobs and vast investment—that it immediately became necessary, from a political standpoint, to do two things:

First, to establish that the FCC, an Administration body, had proceeded with *lofty* (if mistaken) *motives*, and *within the radio statute*.

Second, to reverse the Commission, and restore the green "go-ahead" signal for television, as quickly as it could be done, with proper "saving-of-face" for the Commission majority.

FCC WITNESSES

The first of these steps was evident in the hearings which during the whole week occupied the Commissioners, in the superb ICC Auditorium. Including the RCA (cited specifically for "advertising and selling" televisions), a dozen witnesses asked to be heard.

In the order in which the witnesses were scheduled to appear, the interests represented were: Dumont, Don Lee Broadcasting, Philco, Zenith, CBS, RCA-NBC, Cathray, American Television, DeForest, Sanabria, Farnsworth Television, and National Television.

Progress in the FCC hearings was slow. And from them, attention was suddenly shifted to the Senate's In-

terstate Commerce Committee where a resolution to investigate the FCC had been introduced by Senator Lundeen of Minnesota.

SENATORS HEAR FCC AND RCA

In the Senate Committee room, the FCC chairman was called to appear before his confirming superiors and defend his own record in delaying television. He stated his belief in flexible standards for general use, cited the law authorizing the FCC to fix standards, and declared that if by sales or advertising he found any group attempting to "lock down" standards, he "would immediately move in to protect the public's interest."

David Sarnoff, president of RCA, was then called and testified that his company had invested \$10,000,000 in television research, and is now ready, with its licensees, to proceed with commercial television development, if it can get FCC authorization. Mr. Sarnoff foresees television as an industry doing a billion dollars annually in receiver sales and programs, and employing 500,000 to 600,000 people.

"ACTION NOW!"—SARNOFF

He urged that the public through use be allowed to determine which system will give it the best service, and recommended that any promising system be authorized for public test. RCA is now spending \$2,000,000 yearly on television research, he said, but is unable to learn what the Commission thinks it should or not properly do to promote television development. The vast television research of RCA has been set forth to the public and industry in more than a thousand scientific papers and reports, and 50 competitors have been licensed to build televisions.

Referring to the rapid changes in the radio art, Mr. Sarnoff predicted that little present equipment in radio is likely to survive the next ten years. He testified that 1200 to 1300 television sets have been sold by RCA, and declared that for \$4 to \$40 these could be adapted to operate on any known system of television, although he doubted there would be any need for such changes. New RCA developments will give home television pictures 18 by 24 inches.

Solution of the television problem, said Mr. Sarnoff, lies in action, not in words. He urged that the FCC let the television industry go on, to create its new services and new jobs.

WHEELER URGES COMPROMISE

Chairman Burton K. Wheeler of the Senate Committee, outstanding Senate leader, and an aspirant for the Presidency, declared that there is a demand on the part of the public that television be developed in the United States, not only for its entertainment service, but to create a new industry, new jobs and new payrolls. "Television must go ahead," he said. He urged that television leaders get together with the Commission, and attempt to agree on acceptable standards so that the FCC authorization for "limited commercial operation" can be restored as of Sept. 1.

Edwin M. Martin, secretary and patent counsel of Farnsworth Television, testified to the important patents held by his company which, although wholly independent of RCA, has exchanged television patents with that company. W. A. Roberts, for Dumont, described the principles of his system.

"BRAZEN AND BUNGLING"

Meanwhile on the floor of the Senate itself, Senator W. Warren Barbour, of New Jersey, introduced a bill to curb the FCC. The measure, he explained, would explicitly deny to the commission any power to control or interfere with radio experimentation, research or development, or with

TELEVISION MILLIONS

Past, Present, Future

PAST—Expenditures for	
Research.....	\$25,000,000
PRESENT—Current	
Outlays during 1940...	\$4,000,000
FUTURE—Possibilities	
Ann'l Sales Vol.....	\$1,000,000,000
Ann'l Set Sales.....	3,500,000
New Plant Investment...	\$200,000,000
New Employment.....	500,000

the use, manufacture or sale of transmission or reception equipment, including television sets, or the business policies of broadcasters. The FCC's handling of television, Senator Barbour characterized as "brazen and bungling."

In the House, Representative Cunnery asked for an investigation of "radio monopoly." His resolution related to the "allegations and charges" regarding irregularities in activities pertaining to radio and broadcasting.

DUMONT AND PHILCO

As first witness in the FCC's own hearings, opening Monday, April 8, Allen B. Dumont described his flexible receiver which will handle pictures from 400 to 800 lines, at 15 to 30 frames. Using his developments in "retentive" screens, he recommended a larger number of picture elements, with frame numbers as low as 15 per second. His company, he said is ready to begin production, and he recommended a 625-line picture, but cautioned against freezing of standards whether by FCC edict or commercial action. Mr. Dumont asked a "go ahead" for television now.

David Smith, Philco engineer, testified that Philco has been ready for a year for mass production of television but does not yet see the commercial

opportunity to justify large-scale manufacture. He reported on Philco's work in vertical polarization, and on its recommended standards of 24 frames and 605 lines. Philco has been on the air with television since 1936, he said, with programs averaging 5 to 10 hours a week. He declared that further improvements were desirable, and that if Philco could be assured that standards would not meanwhile be frozen, the Philadelphia laboratories would continue television research.

"SEPT. 1" URGE WITNESSES

M. A. Sanabria, Chicago, associated with Dr. Lee DeForest, urged against monopoly in television patents. Marshall P. Wilder, American Television Corp.; William B. Campbell, National Television Corp., and J. E. Brown, Zenith Radio Corp. recommended commercialization of television operation on or before Sept 1.

Edwin M. Martin, for Farnsworth, reported on his company's extensive research toward larger home picture-tubes, more sensitive cameras, improvements in uhf transmission above 150 mc, and development of new circuits. Some 92 engineers are at work on these problems, he said.

Mr. Martin supported the RMA standards, declaring that within these standards appreciable improvement of picture quality is to be expected. He urged that commercialization of television be permitted forthwith, since the public must play a part in the development of programs and program technique, while income is needed to carry the expense of operation. Commercialization is essential, said Mr. Martin, and should not be delayed.

FDR SENDS FOR FLY

On April 12, Chairman Fly, called to the White House for a presumable personal admonition by President Roosevelt, announced that limited commercialization of television might be ordered "in a few months."

New York City Newspaper Ads of March 20 Which Led to FCC's Midnight "Stop Order"

The Radio Corporation of America on

TELEVISION for the Home!



LOOK AND LISTEN!

ENTIRE STORE OPEN THURSDAYS UNTIL 9 P. M.



Learning Habits for
RCA TELEVISION

NEW PRICES PUT THRILLING PROGRAMS WITHIN REACH! REACH RCA VICTOR'S FINEST RECEIVER

PRICED \$205; FORMERLY \$300. NOW \$205

ADAPTERS LOW AS \$39.95! PROGRAMS NOW GIVE WIDER COVERAGE. MAKEUP SETS INCLUDE ALL-WEAVE SILK-GRAB GARD AND TELEVISION!

DAVEGA CITY RADIO

RCA VICTOR and 30 DAVEGA STORES ANNOUNCE NEW LOW PRICES on

TELEVISION for the Home

Quantity Production Now Makes Possible Savings up to 20%.



NOTE

PRICE PER LOW PRICES SET SHOWN AT 10% OFF \$205

ONLY 10% DOWN BUYS IT!

DAVEGA CITY RADIO

ADRAMAM STRAUS

RCA VICTOR TELEVISION SET FORMERLY \$600

\$395

including superb all wave 11-tube receiving set



4. Think you can't afford a television set? Here's a chance to get a superb RCA Victor television set for only \$395. This is the lowest price ever for a television set of this quality.

5. You can't see a television set until you've seen it. So come in and see this RCA Victor television set. You'll be amazed at the picture quality and the sound.

6. This RCA Victor television set is the perfect gift for the holidays. It's the gift that keeps on giving.

7. You'll get a lot of pleasure out of your RCA Victor television set. It's the gift that keeps on giving.

SOUND GROWS UP!

SIZABLE PROFITS READY FOR RADIO MEN

Looking over the sound situation, its market opportunities, its dealers, and its manufacturers, two things stand out.

First, the market is lucrative, fairly stable, and far from saturated.

Second, radio men too often—by their own inaction, their own apparent lack of *interest*—hand this fine business to non-radio competitors on a silver platter.

For no man is better able to sell sound, and to maintain sound jobs, than the radio man, whether retail dealer or service dealer. "Sound" belongs to the radio man.

A RADIO JOB

Certainly if garage men, hardware men, music men, insurance men and undertakers can successfully sell sound—and they are doing so—there is no reason why radio men can't sell sound.

Sound is a specialty item.

Sound selling is *specialty selling*.

There is more actual profit in the sale of *one* good sound installation than radio men make "taking orders" for a *dozen* radios.

Radio men seem to shy away from sound because it isn't a "package item," because people don't stand in line to *buy* it. Radio men seem to think there is some mystery in selling sound, and don't realize the profits that are being made in it.

Any alert radio man can sell sound, if he really wants to, and can make a fine profit if he does sell it.

THREE DEPARTMENTS

There are three branches of the sound business.

First is the temporary rental of portable sound equipment, and the sound truck.

Second, is the permanent installation of sound equipment.

Third, is sound maintenance and service work, which includes modernization of sound installations.

Finding the prospect is naturally the first step in selling sound, and within walking distance of your store, there are a dozen or more *good* sound prospects, waiting to be sold.

Having found the prospect, the next step is to create the desire for sound equipment, by pointing out how sound will *help* the purchasers, showing him that *you* are the one to buy it from.

In selling sound, direct mail, personal letters, personal calls, references to and pictures of other installations, and even demonstrations should be used.

The sound truck is rented primarily for publicity purposes. For announcing some coming civic event, theatrical or motion picture performance, special sales events, carnival, fair or political rally.

The prospects are obviously the sponsors of the event, and the time to go to work with your full bag of tricks is *immediately* you hear of the plans for the event.

RENTALS

Sound equipment is appropriately rented, for banquets, special church affairs, such as bazaars, bingos, picnics, school exhibitions, carnivals, conventions, fairs, lawn fetes, athletic competitions, political rallies, and many other affairs of non-frequent recurrence. The buildings where such affairs are held are good prospects for permanent installations, too.

As soon as you hear of the plans for any such events,



Now you can sell 3-way mikes. This RCA has switch for uni-, bi-, or non-directional pickup.



Athletic fields are sound buyers. This one at Coffeyville, Kan., bought the Clarion amplifier from Carroll Radio Service.



Here's how a sound man draws all eyes to his statement that he will tackle any job. It's the brain-child of a Canadian jobber who uses University equipment and has used thousands of these pictures as a business card.

find out who's "who" and point out the high value and low proportionate cost of sound equipment rentals.

Basically, sound will attract attention, will extend the range of the voice or of musical instruments, to reach hundreds, or tens of thousands of people. And thus it can bring primary entertainment, background music, speeches, or control, to large groups of people far more effectively and economically, than by any other means.

Devoid of technical language, make your selling talk point out to your prospect how sound will help him to do a better, more interesting, or more spectacular job.

That is what *he* is interested in, and what he will *pay* for.

In many cases the use of the sound truck and the rental of portable equipment go together, and very frequently rentals lead to the sale of permanent installations.

PROSPECTS

In the March issue of *RADIO TODAY* there is a tabulation of 50 different classes of sound prospects, with their uses for sound and the equipment most appropriate for their use.

In every town in the land there are some prospects for the use of sound, more in some, of course, than in others.

To convert these prospects into customers, you've got to go after them, and sell them on the use and value of sound.

How?

There are many different ways, but here is a practical suggestion that works and which any dealer may adopt, or adapt to his needs.

First, pick out your prospects.

Think just *why* and *how* sound would help each of these prospects.

Put just *one* thought on a post-card. And every two or three days mail *another* card, with another thought.

After three or four such seeds, phone for permission to make a survey (and do a little selling).

Put your survey report in the form of a written sales presentation, and with a floor plan spot the equipment locations.

If possible get pictures of other similar installations in
(Please turn to page 53)



Merchants like sound novelties for ad stunts. This one in Brooklyn, N. Y., is an old-fashioned music box with contact mike hooked to Clarion amplifier. Speaker is used outside window.

RECORDERS SPEAK FOR THEMSELVES

Radio men are constantly looking for more and better things to sell—the low-price radio business being what it is.

Within the last few months many an alert radio dealer has learned that recorders are “going to town.” And keen merchandisers are helping recorders on their way.

Many an outstanding selling job has proven beyond doubt that this “novelty” of a few years ago now has a real market, and a great latent demand.

Good recorders are being sold profitably.

True, recorders are specialty items, and the sales successes are being chalked up by specialty selling methods.

But recorders are not *hard* to sell. In fact, a recorder record “speaks for itself.”

HOW CAN CUSTOMERS USE?

The principal point, of course, in recorder selling, is to make the use of the recorder specific, in terms of each prospect. Just how the recorder can be used by the prospect to his own direct advantage, is what he wants to know. That's the sales clincher.

Prospects? They're all around us. The music teacher—to show the

progress of pupils, to facilitate specific fault correction, and to sell to parents as a permanent record of the musical growth of the young ones.

Night clubs, cabarets, hotels—to record feature music, or events—records sold, or given to guests as souvenirs.

Police, detectives—to record statements, confessions, descriptions of lost persons, etc.

Lawyers—for recording depositions, rehearsing summation effect, practicing.

LOTS OF PROSPECTS

Schools—for correcting speech defects, for making permanent records of important lectures, prominent speakers, glee clubs, debating societies, etc.

Homes—to record the “cute” sayings of the little tots, show the progress in speech, and make a record of the parties, amateur theatricals, and favorite or unusual radio program.

Selling recorders is a specific *specialty* selling job.

Prospects should be systematically listed, and grouped by recorder application.

Each group should then be sent three or four post-cards, each carrying a single specific recorder thought, to

plant the seed, and then a phone or personal call.

At this point many alert dealers put their selling story on a record and send it along to the prospect, with a note offering to loan a record player if desired.

USE RECORDINGS IN SELLING

Some enterprising dealers have even made recordings of their telephone conversations with their prospects, and a few days later, taken them to the prospect. Few people know just how their voices and telephone conversations sound to another. But resurrecting such an apparently dead thing as a phone conversation seldom fails to impress the possibilities of the recorder, and bring forth many application ideas. When this happens, the sale is more than 75 per cent made.

Other dealers do a good selling job by giving practical demonstrations of the use of the recorder, on subjects either directly related to the prospect's use, or of broadcast events of special interest or significance.

Another method which has been successfully used is the sale of a “recording service” with a sales follow-up of all customers who become “regular.”

REPEAT BUSINESS

Recorders require record blanks, which provide a repeat business that exposes more people to your selling displays of radio, combinations, record players, etc.

Recorders are on the march, sales are increasing fast, more companies are now producing recorders than ever before, and smart dealers are making a nice profit selling recorders, as *plus* business.

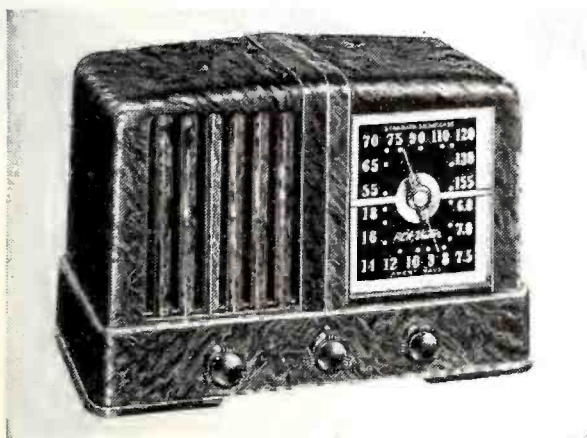
You Can Sell Recorders to—

Actors, Singers	Lawyers
Advertising agencies	Musicians
Amateur theatricals	Music lovers
Band leaders	Night clubs
Business Conferences	Police depts.
Detectives	Sales managers
Doctors	Schools
Homes	Teachers and students
Hotels	of voice, music, drama
Large stores	Vaudeville artists

An Iowa dealer gets extra store interest and extra profit from his RCA recorder. C. R. Hutchcroft, Indianola, here records the talents of two customers.



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

NEW SETS

New spring models to snap up sales

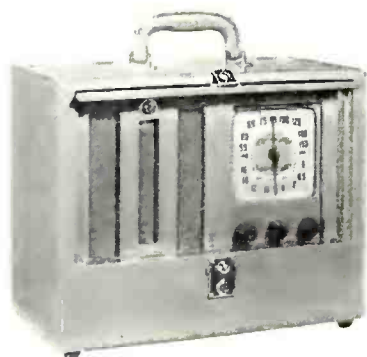
RCA Victor combination

RCA presents a 7-tube, medium priced radio-phono, model U-43, in 18th Century style, walnut or mahogany. Has automatic record changer, 12 in. dynamic speaker and loop antenna.



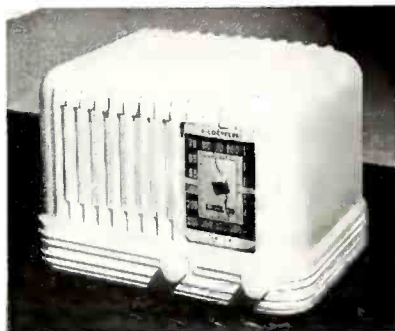
Sentinel model 218-W

★ A 5-tube, AC/DC superhet with loop antenna, P.M. speaker, beam power output. 540-1730 kc. 117-230 volts. Dial light. Walnut bakelite, \$14.95; ivory-onyx, \$16.95. Sentinel Radio Corp., 2020 Ridge Ave., Evanston, Ill.—RADIO TODAY



Portomatic portable

★ Port-O-Mat model BE-27 operates from AC, DC, or batteries. Drop front cover protects controls. Finished in cowhide or rawhide. Seven tube super covers two bands and features neon indicator for off-on. Portomatic Corp., 985 Madison Ave., New York, N. Y.—RADIO TODAY.



Westinghouse table radio

★ Model WR-175, 5-tube, AC-DC superhet, with 5-in. electro-dynamic speaker, built-in loop antenna. Walnut or ivory plastic. \$12.95 for walnut, \$15.95 for ivory cabinet. Westinghouse Elec. Supply Co., 150 Varlick St., New York, N. Y.—RADIO TODAY.



Admiral farm console

★ A 5-tube, 1½ volt battery superheterodyne, model 24-A5, has 2 bands; 535 to 1730 kc., and 5750 to 18100 kc. 8 in. P.M. dynamic speaker. Two stage I.F. Operates from "AB" packs. Continental Radio & Telev. Corp., 3800 Cortland St., Chicago, Ill.—RADIO TODAY.



Sonora "Candid" radio

Sonora designs a "Candid" superhet battery portable for America-on-the-Go. Resembling a camera, it has built-in aerial, dynamic speaker and plays standard broadcast band.



Emerson 3-way portable

★ Model 363, an AC, DC, battery portable with "inner-ceptor" loop antenna, one of three new models, has 6½ in. P.M. dynamic speaker, A.V.C. and signal, indicating when set is in operation. Luggage type cabinet in blue buffalo grained simulated leather. \$34.95. Emerson Radio & Phono. Co., 111 8th Ave., New York, N. Y.—RADIO TODAY.

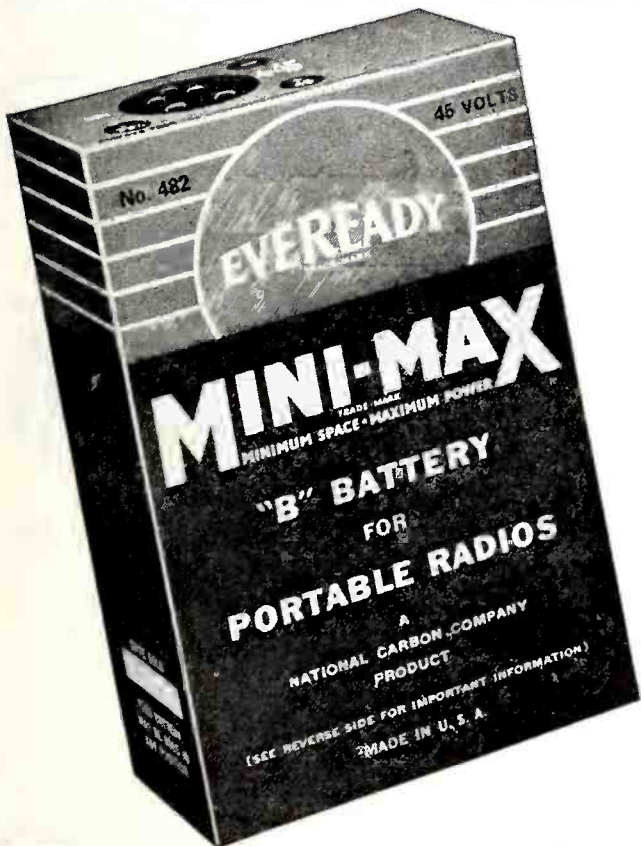


Motorola auto radio

★ Model 550 push-button auto radio designed to fit and match every car. Custom push button control heads fit 1939 and 1940 instrument panels. Choice of either bulkhead or dash speaker. List, \$49.95. Galvin Mfg. Corp., 4545 Augusta Blvd., Chicago, Ill.—RADIO TODAY.



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.

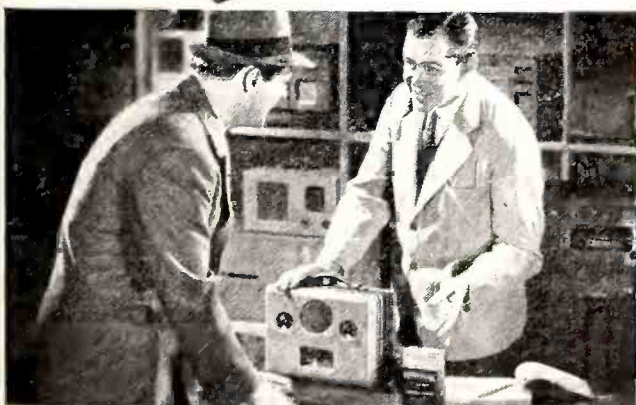
That means *good* news for you... particularly if you're all set to sell the sensational, lightweight "Eveready" "Mini-Max" "B" battery—the battery that has made portable sets really *portable*.

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 | TRAV-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.

TO "CLEAR THE AIR"

More pointers on Radio Today's campaign to stop radio noises, at a good profit.

Manufacturers and dealers, service men and broadcast stations, even program sponsors, can help themselves by making the public conscious of the fact we can "Clear the Air," and that responsible radio dealers and service men are ready to "go to work" as soon as the set-owner permits them to do so.

"Every little noise has a meaning all its own," and you must know what the sounds mean. Noise in a radio, as you well know, may come from a variety of causes.

But just going ahead each in his own way, is not enough, on this big job.

IT MEANS SET SALES

Your noise elimination work should always be done with an eye to future set sales. If you can do your work on a "satisfaction guaranteed" basis, and get better results than your competitor who sold the set, but couldn't satisfy the customer, you're in a mighty good position to sell the next set that customer buys.

And customers do talk, too, and spread your reputation. Many a dealer, while operating his service

department at a profit has found that up to 75 per cent of his set sales could be directly traced to his fine service work.

A Broad Vision for Noise-Elimination Drive

Editor, RADIO TODAY:

In your "Clear-the-Air" drive, you have conceived a splendid campaign. My congratulations to RADIO TODAY for undertaking this important task. After all, while there is nothing new in the radio-noise problem, little or nothing has been done so far about it. Such individual efforts as have been made until now, have gotten nowhere. Our industry has long realized that nothing short of a concerted effort on the part of everyone in the industry could really prove successful. Your campaign can be made to represent the entire industry.

My personal suggestions are briefly:

- 1 Create a real interest among users of electrical equipment to exercise the Golden Rule in the matter of abolishing the radio-noise nuisance. Your "Radio Magic" network broadcasts can be of immeasurable aid in reaching the general public. Having created

such general interest, you can follow up with newspaper publicity and perhaps syndicated literature for distribution among servicemen, dealers and jobbers. See that the trade knows about these activities and really cashes in on them.

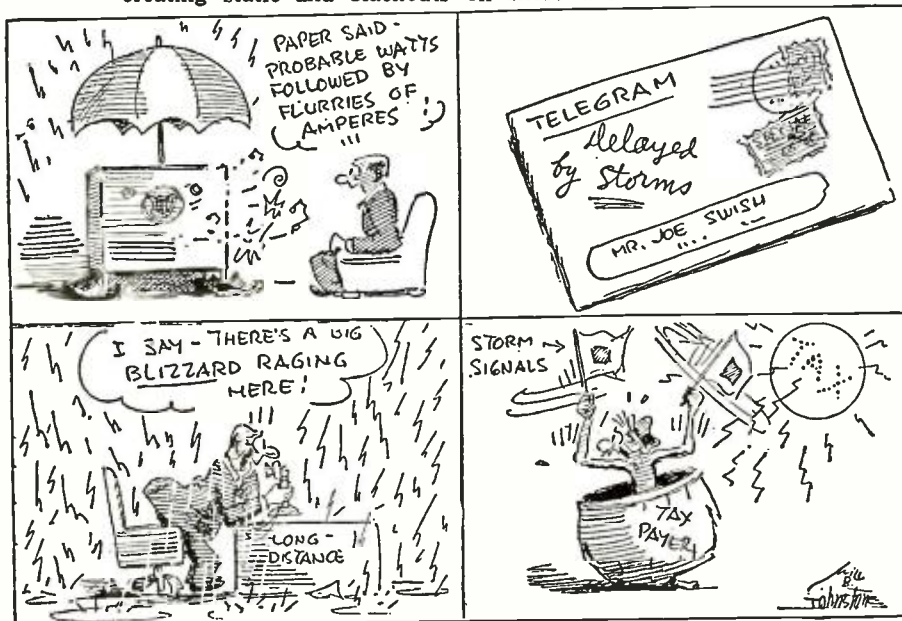
- 2 Conduct a campaign among electric-appliance manufacturers so that noises will be suppressed at their very source. It might be well to evolve some sort of official seal for the "Clear-the-Air" campaign, to be made available only to those manufacturers whose products positively do not produce radio noises. Ask the general public and the trade to look for such approved appliances or equipment.
- 3 Set up some sort of "bureau of standards" whereby not only appliances and equipment but particularly so-called noise killers can be checked and approved. As you realize, some awful junk has been sold in the name of radio noise killers, particularly by the street hawkers.
- 4 Permit manufacturers of approved noise-killing aids to make use of the official seal or label both on their products and in their advertising. Encourage more extensive advertising of such merchandise.
- 5 See that proper lectures, either delivered personally or made available in the form of copy to be read, preferably with suitable slides, are available to service groups, jobbers, electric appliance manufacturers and merchandisers, etc. We need a lot of promotion along this line.
- 6 Encourage the public utilities to extend their noise-sleuthing activities. Give them due credit when found to be doing a good job, both in RADIO TODAY and through publicity in their local newspapers.
- 7 Devote a section of RADIO TODAY to this campaign, dealing with problems found, how solved, new equipment available, etc. Encourage advertisers to feature noise-killing equipment in this section.

Needless to say, Aerovox is keenly interested in your campaign and is ready to back you up to the limit.

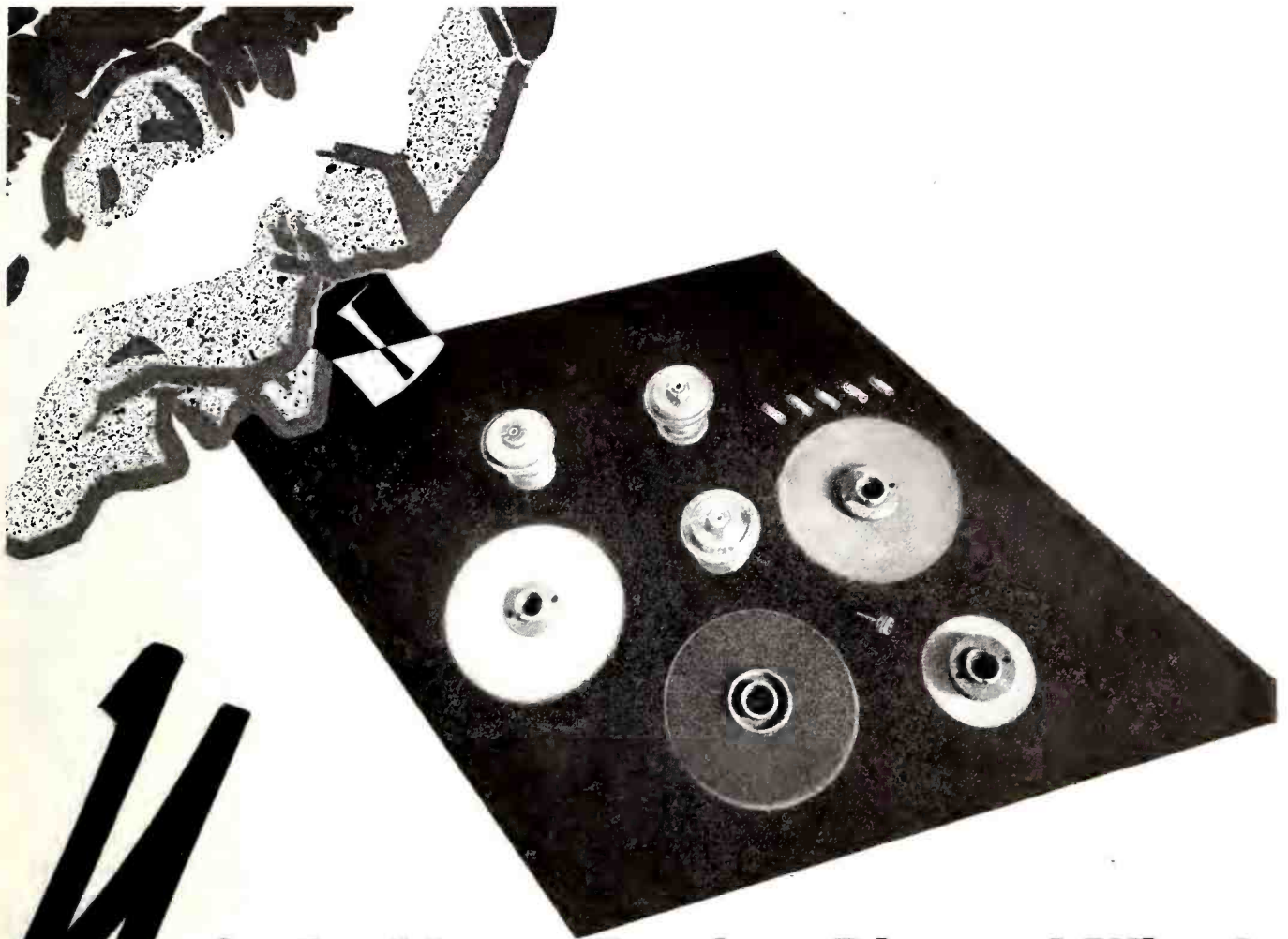
A couple of years ago our engineers developed a rather complete line of noise suppressors including sufficient choice of types to handle the different

(Continued on page 49)

INTERFERENCE! Magnetic storms due to sunspots add to general uproar, creating static and blackouts on shortwave and wire lines.



N. Y. World Telegram



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

RADIO TUBES

ALSO MAKERS OF



HYGRADE LAMP BULBS

RECORD SALES BAND

Milwaukee merchandisers get together in a club, for the good of the local business.

One of the most unique sales-makers of its kind in the United States is the Milwaukee Victor Record Sales Club which has been in existence in Milwaukee, Wis., for the past 20 years. It meets once a month to discuss new recordings and new methods of selling more records, is composed of sales girls and owners of local record departments or stores.

The club was organized originally by Mrs. Adele V. Holtz, now promotion manager for the Taylor Electric Co., and a handful of faithful record enthusiasts. Today its membership totals 25 persons, all of whom are vitally interested in records.

THE COME-BACK

These five original members have been part of a situation which is almost unprecedented in the merchandising field. They were chiefly interested in record sales when the phonograph was in its glory; they saw the decline of records with the advent of radio, and today they have witnessed a phenomenal return to the popularity of discs.

"When records began to fade out of the picture we who started the Milwaukee club had faith in the belief that records would come back," says Mrs. Holtz. "We believed that even-



Using a smile and a radio-phonograph in her demonstrations is Adele V. Holtz, head of the sales-stirring Record Club.

tually the sale of records would ascend a new peak because we were confident that the individualism of music lovers would again express itself in the desire to choose music according to personal tastes."

A REAL HELP

Although the monthly gatherings of the club are strictly informal, they serve a definite purpose, Mrs. Holtz states. Members hear all the recording releases for the current month. The records are played and the angles which will appeal to the consumer are pointed out. Records for the month are classified according to appeal and tips are given as to which particular selections should be suggested to the various types of customers.

Whenever a well-known symphony is played, Mrs. Holtz gives the background of the author, tells of his personal highlights and explains the type of music he writes. This enables the sales girls to have additional "ammunition" with which to inform the customers of various angles which will help to sell more records.

Alice Faye, at left, can afford to be choosy, but she picks a combination, with radio, phono, and brilliantly lighted bar. It's a Radio-bar, bleached Swedish Moderne.

Members of the club also discuss which records are moving best and it is often brought out that a record which will collect dust in one shop will move like wild-fire in another principally because one shop caters to a different class of people.

The club has been instrumental in promoting an excellent feeling of comradeship even among competitors. This has been an important factor in maintaining the record business in Milwaukee on a high level and keeping it free from cut-throat practices.

Tips on how to properly display merchandise and new ideas in store arrangement are also exchanged at the meetings. If one girl has had an interesting experience in handling a customer she will usually relate it at the meeting in order that the others can profit from her experience.

Some time ago George K. Throckmorton, president of RCA Victor, was a guest of the club at a dinner. The guests informed Mr. Throckmorton in a joking way that he should put out a better recording of Jingle Bells for Christmas to take the place of the old, uninteresting one then for sale.

The members of the club were all surprised some months later when Mr. Throckmorton sent each a personally autographed recording of a new record by the Victor Salon orchestra with Rosario Bourdon conducting. Its title was "Jingle Bells."

(Continued on page 59)

Wax Worth Watching

OZZIE NELSON and his orchestra playing The Man Who Comes Around, with VR by Rose Anne Stevens—Bluebird B10626.

BING CROSBY with John Scott Trotter and his orchestra singing Tumbling Tumbleweeds—Decca 3024.

KATE SMITH singing The Woodpecker Song with orchestra—Columbia 35398.

THE THREE SUNS playing Hawaiian War Chant—Varsity 8220.

ARTIE SHAW and his orchestra playing Adios Mariquita Linda—Victor 26542.

GLENN MILLER and his orchestra playing Sierra Sue with VR by Ray Eberle—Bluebird B10638.

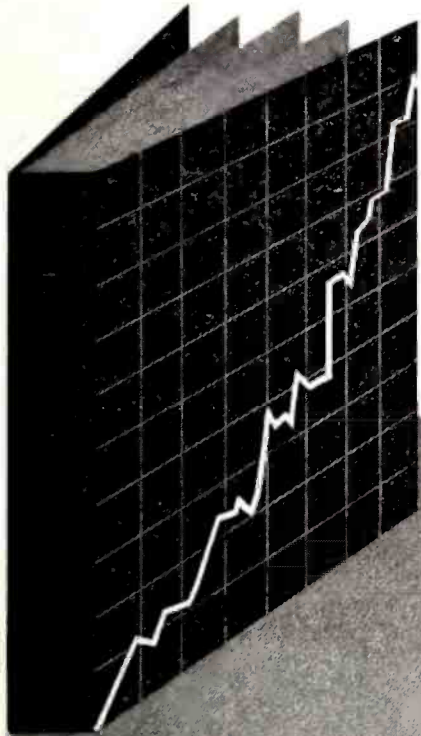
RAY NOBLE and his orchestra playing Too Romantic from "The Road to Singapore" with VC by Larry Stewart—Columbia 35385.

GEORGE OLSEN and his orchestra playing The Woodpecker Song—Varsity 8167.

HOOSIER HOT SHOTS in a novelty hot dance singing Ma, She's Making Eyes at Me—Vocation 05390.

DICK ROBERTSON and his orchestra playing Row, Row, Row with VC by Mr. Robertson—Decca 3031.





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"

NEW MODELS

Spring sales soar with new merchandise



Stromberg Labyrinth model

★ Walnut Chippendale console, 460-PF, with Garrard record changer for 10 and 12 in. records. Acoustical labyrinth. Carpinchoe leather speaker, tone and bass controls. 12-tubes, 8-button motor tuning, remote control provision. Television connection. \$395. Stromberg-Carlson Tel. Mfg. Co., 100 Carlson Rd., Rochester, N. Y.—RADIO TODAY.



Emerson Campaigner

★ Model No. DQ-333, table radio with plastic cabinet. Has loop-antenna, large speaker, "Miracle Tone Chamber." Covers Standard Broadcast. Priced at \$12.95. Emerson Radio & Phono. Co., 111 8th Ave., New York, N. Y.—RADIO TODAY.

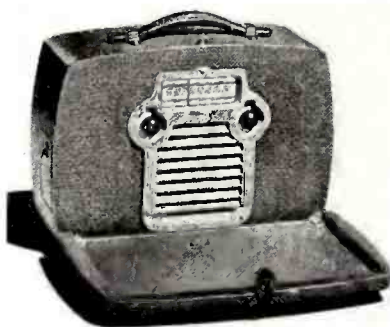


Sentinel 3-power portable

★ Model 213-P, a 5-tube, AC, DC, battery portable. Superheterodyne. 4 in. permanent magnet speaker, 540-1730 kc. Brown, stag leather grained covering. \$24.95 (complete with batteries). Sentinel Radio Corp., 2020 Ridge Ave., Evanston, Ill.—RADIO TODAY.

Andrea-Gram portable phono

★ Portable electric phonograph, Model G-20, enclosed in dark brown luggage type cabinet with handle. Plays 10 and 12 in. records with cover closed. Crystal pickup, 6½ in. Alnico permanent magnet speaker. Has non-spill needle cup. 110-125 volts, 60 cycles, AC. \$29.95. Andrea Radio Corp., 48-20 48th Ave., Woodside, L. I., N. Y.—RADIO TODAY.



Admiral 5-tube portable

★ Priced at \$19.95, the Admiral model 35-G6 portable radio has an automatic power switch for choice of 1½ volt battery or AC-DC operation. Heavy duty dynamic speaker. Aeroscope magic antenna. Brown tweed case with bakelite carrying handle. Continental Radio & Television Corp., 3800 Cortland St., Chicago, Ill.—RADIO TODAY.



RCA console

★ Model K-82, a 7-tube receiver with built-in rotatable loop antenna, push-pull output, 12-inch loudspeaker. Plug-in connection for victrola and television. RCA Mfg. Co., Front & Cooper Sts., Camden, N. J.—RADIO TODAY.



Automatic phono-radio

★ Model 434A, a 5-tube superhet, table model combination, for AC only. Dynamic speaker. Built-in automatiscope loop. Hand rubbed walnut cabinet. List price, \$39.95. Automatic Radio Mfg. Co., Inc., 122 Brookline Ave., Boston, Mass.—RADIO TODAY.



Phono record cabinet

★ Caswell-Runyon's No. 204 phonograph record cabinet with grilling to take 50 records. Walnut or mahogany veneer. Top 21¾ x 15½ in.; 26 in. high. \$11.70. Caswell-Runyon Co., E. Franklin St., Huntington, Ind.—RADIO TODAY.

Cath-ray televisior

★ New low-priced television receiving set has a 7-inch Kinescope. 10-inch speaker. Cabinet on mobile casters. Features "Syncroloc Hold" keeping pictures continuously locked in synchronization. \$149.50. Cath-Ray Television Corp., 13-19 University Place, New York, N. Y.—RADIO TODAY.

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!

FACTORY TO YOU makes lower prices and closer cooperation possible. Gale gives you everything you need to do profitable refrigerator volume. Real help . . . protected territories . . . no high pressure or quotas.

FEATURES that SELL! Model for model, price for price, Gale gives you features that give you a head-start with value-wise prospects. It's a complete line! A profitable one regardless of how many refrigerators you sell!

GALE PRODUCTS

GALESBURG, ILLINOIS
In Canada, GALE Products, Peterboro, Ontario

Division of
Outboard, Marine
and
Manufacturing Co.

**"ANY DEALER CAN
MAKE EXTRA PROFITS
WITH GALE"**



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!

GALE Products
1631 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 _____





An eye-filling part of the traveling show which introduces Crosley models in 20 leading cities.

Get in on this Season's

REFRIGERATOR INNING

Boxes start building up new peak for radio merchandisers

Refrigeration sales complement radio sales almost perfectly, and so merit aggressive merchandising by radio men.

The sales of boxes are now fast building up to their seasonal peak in June.

Refrigeration merchandising is moving much faster, competition is keener, prices are lower, than ever before.

If you haven't already got your refrigeration plans made and working, better hurry up, because the season is almost here, and it won't wait.

You'll have to be on your toes and keep pace with the fast moving procession if you don't want to miss the big boat this year.

A lot of refrigeration business may come to your store, but most of it you'll have to go after, hard, if you don't want to see someone else sell it.

That means an outside crew that knows what it's all about, alert, enthusiastic, and on its toes.

Well, trained, well paid, well managed man-power is mighty important this year.

Let's not make the mistake this year, of carrying too many lines.

One or two lines which your men thoroughly know, can be sold more enthusiastically, and more effectively, than half a dozen lines which conflict, and confuse customer and salesman alike.

BATTLE FOR PROFITS

Alert dealers, this year, are going to open their full bag of tricks, and do a selling job on the deluxe boxes. That's where the money is.

Summarizing the thoughts of many successful dealers, 1940 merchandising methods look like this.

- Concentrate stock and selling effort.
- Sell systematically.
- Keep an outside crew on its toes.
- Follow up all old customers.
- Cold canvass for new prospects.
- Get leads from own users.
- Bring 'em in with the price leader, then sell 'em on the deluxe features.
- Use the phone.
- Use direct mail regularly.
- Follow up engagement and wedding announcements.
- Check the ice-man's deliveries.

Tell *everybody* you can about the 1940 features, multiple temperatures, controlled humidity, operating economy. "More refrigeration than ever, for less money than ever."

And "ask 'em to buy 'em."

This year from 30 to 35 per cent of all refrigerators sold will replace boxes 5 to 10 years old.

The comparison of features, and prices, old and new, makes this an easy market to sell.

The difference in operating economy and refrigerating efficiency, alone, will almost pay for the new box.

And so smart dealers are going after this higher priced market with all they've got, and not let a single "price" customer buy without receiving "the works" on the complete refrigerator.

"Complete refrigeration" — that's the thing to sell.

And the profit pay-off will be mighty close to the enthusiastic, trained, efforts of happy man-power, supported by a co-ordinated and consistent sales promotional campaign.



Two new Westinghouse models is the new "Humidest" with transparent door.

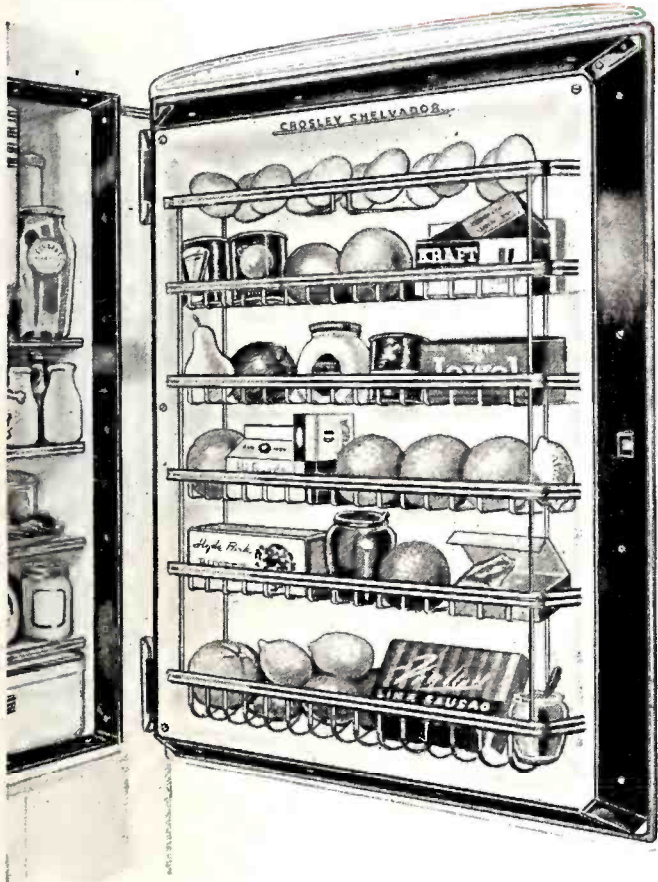


Norge adds four new Rollator models to 1940 line—3 sixes and 1 eight. Priced from \$112.95 to \$179.95.



Philco LU-6 at \$119.95, a 6 3/4 cu. ft. many-featured model, one of two new ones. LR-6 is \$139.95. See page 63.

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.

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

CROSEY

SERVICE MAN WITH A



Customers' names are filed together for handy reference by Mrs. Flint, also an expert at handling telephone service calls.

Leave a card with your name, address and phone number in every set. A well-done job leads to others.

Profitable radio servicing revolves about a few cardinal principles. Once these have a chance to function together, your profits will steadily mount.

How all these things work to a good advantage is pointed out in the story of Ray Flint, successful serviceman of Cleveland, Ohio.

In his own words, Flint describes the methods and technique that have built up a profitable business.

"People don't want to be reminded of the serviceman when their radio is working right. When it stops, the most natural place to look is in the phone book. I get new business from the phone book ad almost every day."

He has had the same space for over seven years.

Flint carries a combination tube and set analyzer in order to make an accurate survey of the condition of the receiver and give a safe cost estimate.

With a large assortment of tubes and parts in the car, he is equipped to do many jobs in the home, thus saving time and transportation costs.

GETTING THE PRICE

"I check the set completely, and estimate the cost of repairs. If they don't want to pay a fair price to do the job right, I won't touch it. My customers are more interested in getting their sets fixed right, than in bargain prices. I always use standard parts, and couldn't guarantee the work if cheap components were used. When a set comes in that has parts known to give frequent trouble, I replace all of them.

"To make money in the service busi-

ness, you must have a good reputation, good equipment, and an ample stock of parts. You can't make a profit, if you have to run out and buy a volume control, or condenser every time one is needed."

Flint has a stock of over three hundred tubes. Most of these are carried in two large cases in the back of his car.

He stocks the tube shelves for several of the dealers. Dealers want a quick turnover in their stock, and not knowing what types to carry, they turn the whole business over to Flint. If they have some types on their shelves that don't sell, he takes them back and replaces them with others.

When asked why he didn't open a store in an up-town location in place of his home-shop, his answer was simple,

"Too much overhead; in my business, location doesn't mean a thing. Here, at home, there is someone to answer the phone any time of day or night. Mrs. Flint can handle telephone customers as well as I can."

BUILDING BUSINESS

Flint's advice for starting or building-up a service business is to make the rounds of the dealers, and solicit their service work. Many dealers consider service as part of their overhead, and are glad to let out their repair jobs. This should bring enough work to keep going at first.

Put an ad in the phone book just as soon as a new issue comes out. This is not expensive, and it certainly brings results.

Build up a stock of replacement parts as fast as possible. Every time you buy a tube, get two, and put the extra one in stock. The same way with condensers, resistors and volume controls. Set aside a percentage of the receipts from every job for capital. You'll never get ahead if you take all of the money out of the business as soon as you get it. Charge a fair price and turn down any work you can't do at a profit. Repeat customers are the mainstay of this business and more important, the chief source of new business. Be strictly honest in your dealings with them.

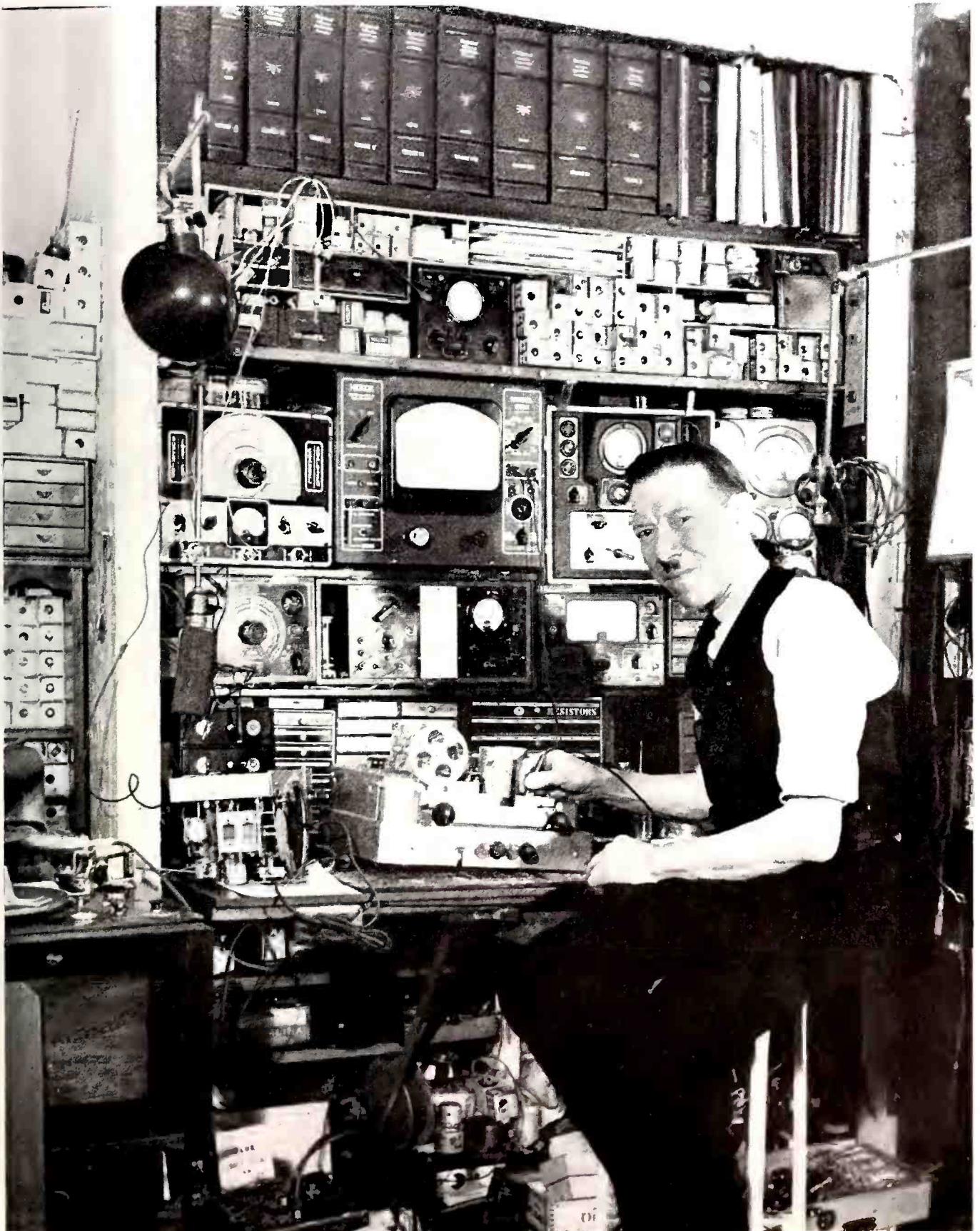
At right, Ray Flint holds down the driver's seat at his service bench where a variety of equipment and parts are readily available.

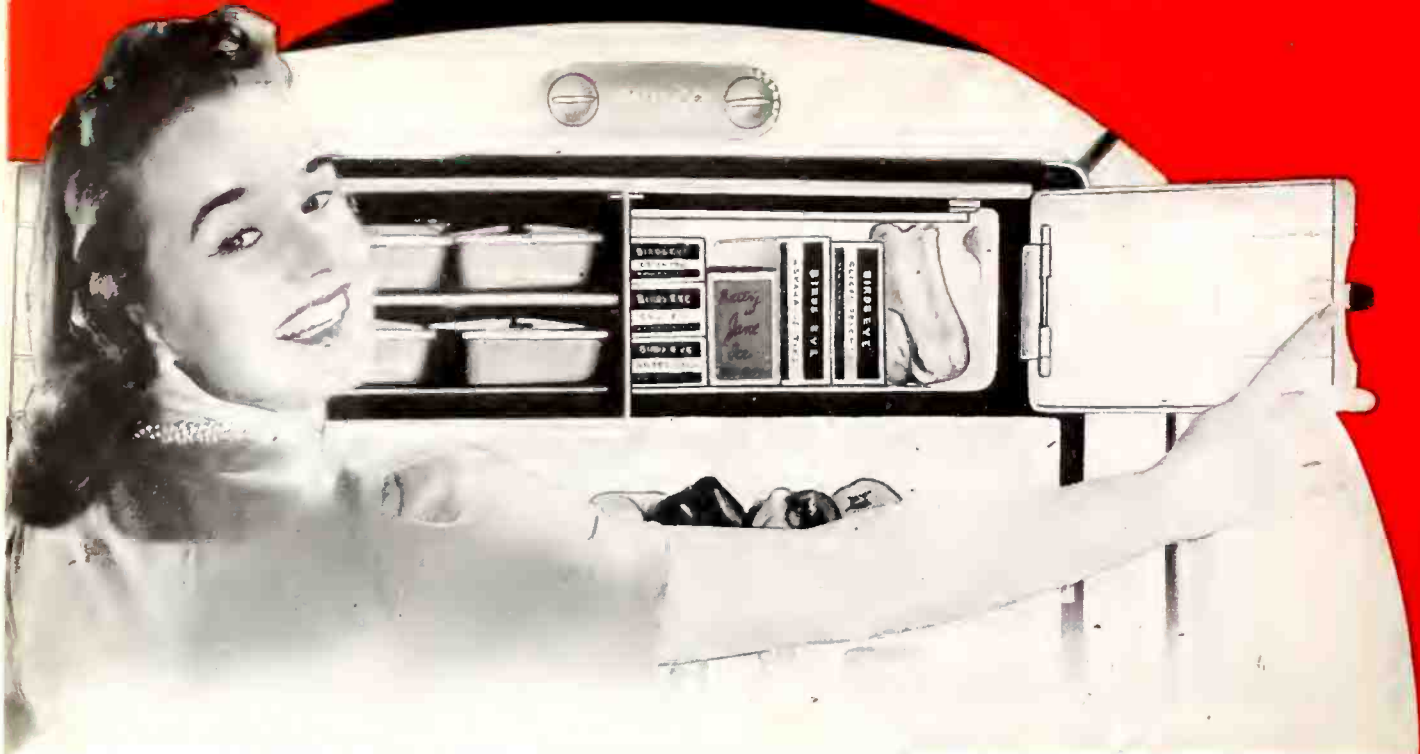
What to do —

1. Solicit service work.
 2. Advertise in phone book.
 3. Build and control a replacement parts stock.
 4. Set aside a percentage of receipts for capital.
 5. Be fair to your customers.
-

PROFIT PLAN

Cleveland expert has unbeatable trio of reputation, equipment and stock.





S
P

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!

**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!

*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

ing into Spring with these

PHILCO PROFIT BUILDERS!

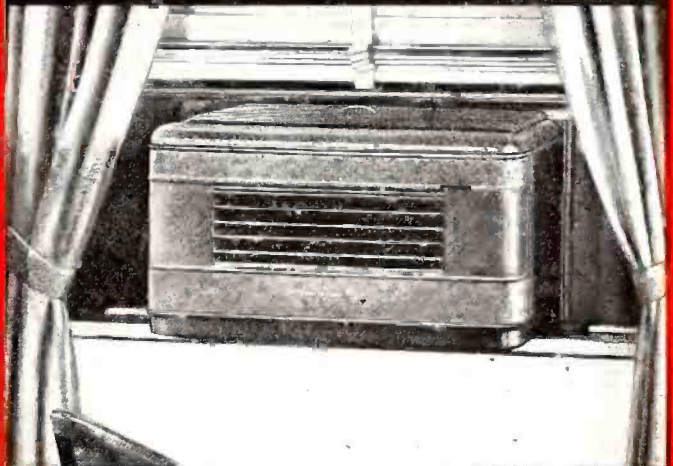
PHILCO AUTO RADIOS



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!

AIR CONDITIONERS • DRY BATTERIES

Mail
Coupon
NOW!

PHILCO, Dept. 604

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 _____



Going into Spring with these

PHILCO PROFIT BUILDERS!

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!*

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!

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.

PHILCO, Dept. 604
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 _____

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

FOLLOW THE SIGNAL

Presenting modern service methods in pictures.



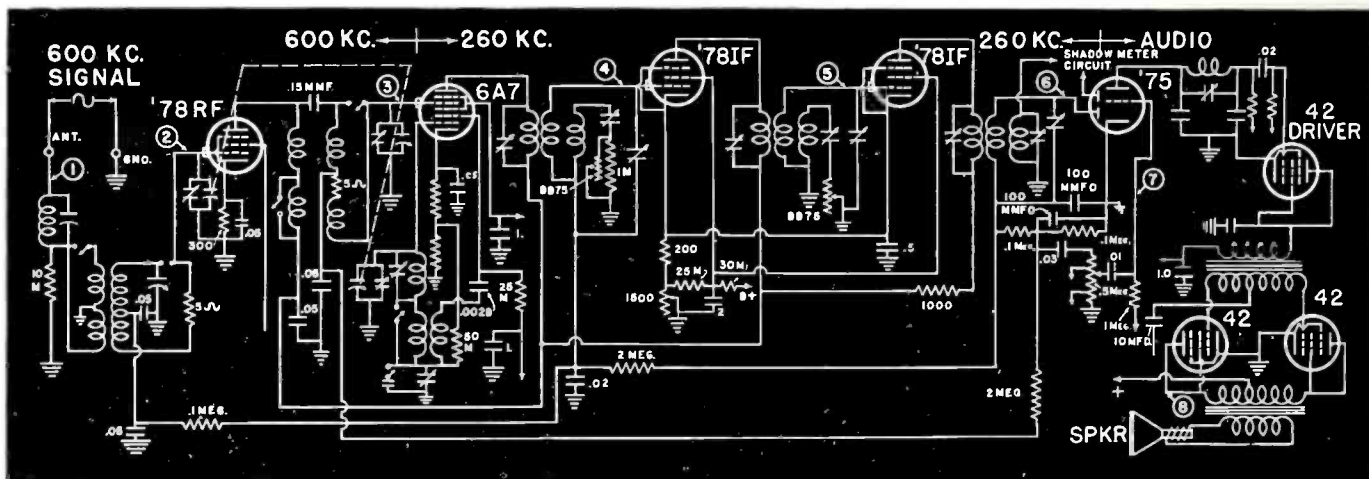
John Rider, author of Signal Tracing, gives the system a work-out in his lab.

Speed in finding troubles in radio receivers is the all-important factor in making servicing pay real profits.

Signal tracing has proven itself to be the method that gets those tough jobs licked in the shortest time.

In the following group of pictures, the simplicity of the technique of servicing a receiver by following the signal from stage to stage and observing at what point the signal departs from normal is shown.

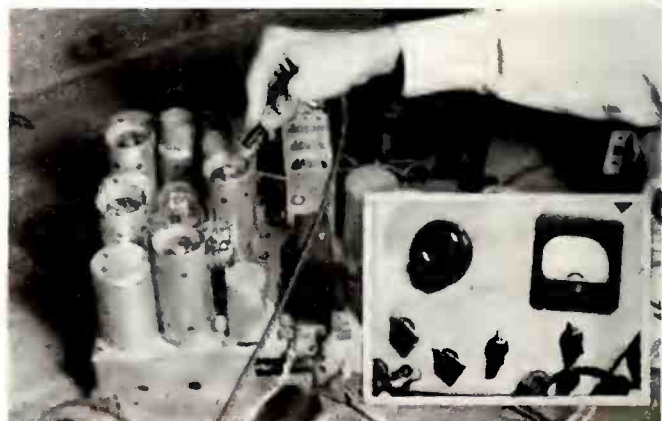
The signal tracing procedure involves: a. checking the current or power consumption to eliminate transformer and/or rectifier as source of trouble, b. connecting a signal generator to Ant.-Gnd. terminals, c "following" signal with suitable indicating device, such as tuned vacuum tube voltmeter, or one of many specially designed units available. Instruments shown in these pictures are the RCA Chanalyst, signal tracer and the Signalyst test oscillator.



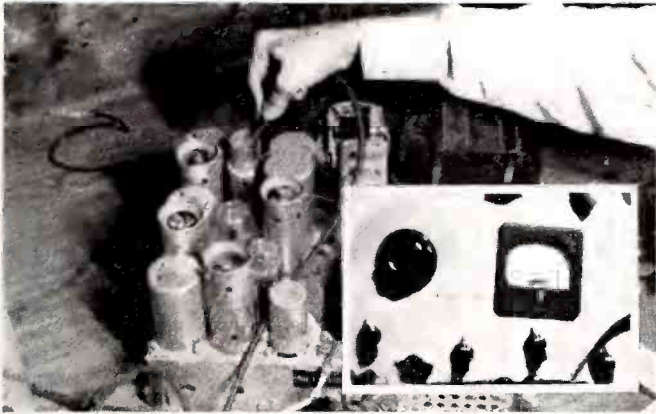
Partial schematic of Philco model 201 used in the signal tracing tests. Test points in the circuit are numbered the same as corresponding pictures. Diagram includes the parts of set active in the signed paths for RF, IF, and audio.



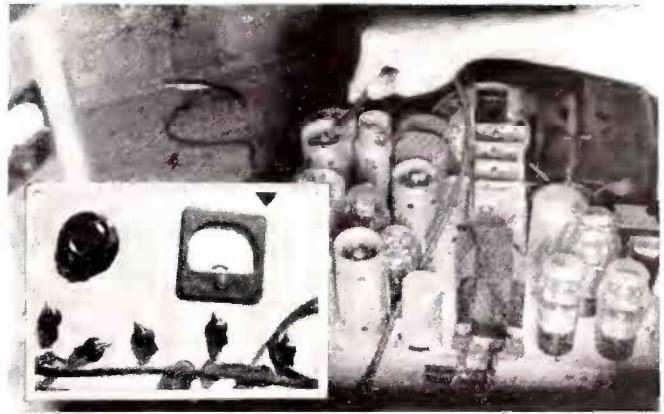
1. Here the signal generator leads have just been connected to the antenna terminals of the set and the RF probe of the signal tracer is being touched to the Ant. post to measure the strength of the 600 KC. signal. In the inset picture of the tracer, the three knobs in lower left corner are Multiplier, Attenuator, and Band respectively.



2. The RF test prod has been shifted from the antenna post to the grid cap of the '78 RF amplifier. The attenuator knob on the signal tracer has been advanced from 1 to 3, in order to bring the electron eye tube to the reference level of just closed. The voltage gain through the antenna transformer is therefore 3. This is an average figure.



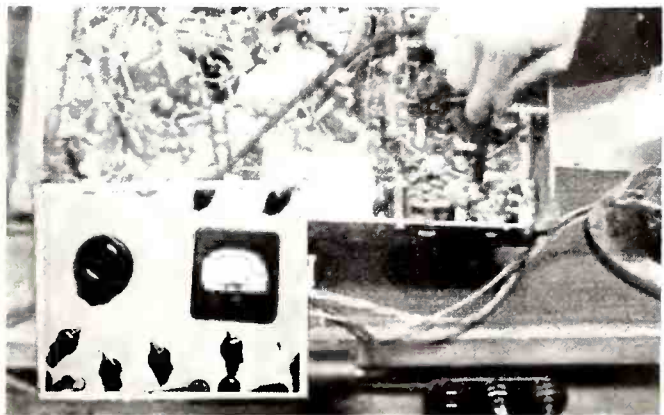
3. Following along in normal sequence, the probe is now on the grid of the 6A7 mixer. The left multiplier knob has been moved from 1 to 10 and the attenuator knob is at 2.4. The electron eye tube is again just closed at its reference position and the gain from the antenna is 24. The gain of the RF stage alone is $2\frac{2}{3}$ or 8. This is low because of the strong AVC.



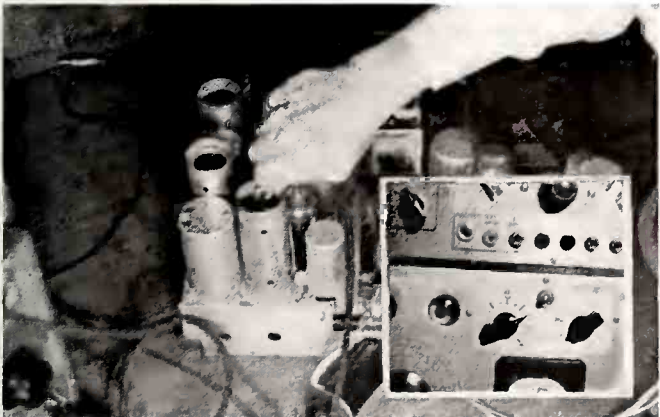
4. Here the signal is picked up on the grid of the first IF tube. It will be noticed on the controls of the instrument that the band A is now being used and is tuned to resonance at 260 KC., the intermediate frequency. The attenuator knob is up to 8, indicating a total voltage gain from antenna of 80. The conversion gain of the mixer is $80\frac{1}{4}$ or approximately 3.3.



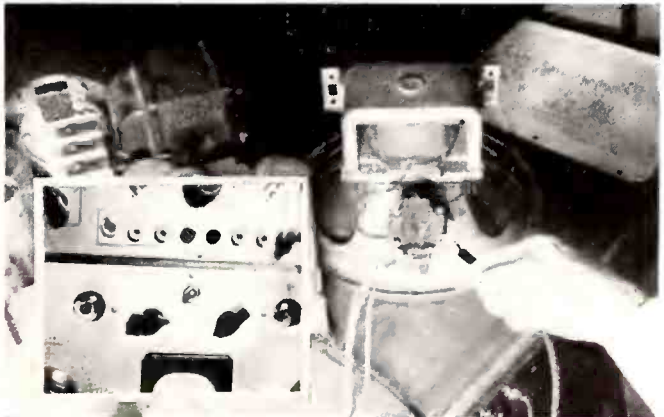
5. We are now up to the second IF stage with the tracer lead on the grid cap of the '78. The multiplier is up to 100 and the attenuator is resting at 2.5. The voltage gain through the various stages up to this point is 250. Dividing 250 by the previous figure of 80, the first IF stage is giving the gain of approximately 3. AVC is working.



6. Following right up to final point in the intermediate frequency circuits, the prod is on the diode plate of the '75 second detector. The chassis has been flopped over to get at this point. In many sets, it may be simpler to make all tests on the bottom. The multiplier knob is now set at 1000 and total gain reads 4400, giving the 2nd IF stage again of $4400\frac{1}{250}$ or 17.6.



7. The form of the signal has now changed but the tracing methods are still the same. Here the AF probe from the signal tracer is connected to the triode grid of the 75 audio-second detector. Again an electronic eye and calibrated attenuator measure the level of signal. The volume control on the set has an effect on signal level and should be set at maximum for sensitivity measurements.



8. The final check on the signal was made at the plate of the push pull 42 output tubes. This broad jump skips over the 42 triode connected driver, but at the same time shows the versatility of following the signal. The signal may be checked at as many points as necessary to localize the trouble. Signal tracing equipment does many other things including the measurement of AFC, AVC voltages, power consumption, etc.

CIRCUITS FOR SERVICE

Alignment and servicing data for new models. Auto radio repair hints. Diagrams of new equipment.

Stromberg-Carlson Model 412

This 6-tube super tunes three bands, 0.54 to 1.7 mc., 2.3 to 7.6 mc., and 7.6 to 23 mc. The oscillator and antenna coils are permeability tuned on all bands.

The IF transformers are aligned in the following order. Set the range switch to the broadcast band and tune to the low frequency end of the dial. Feed a modulated signal at 455 kc. to the grid cap of the 6A8 using a 0.1 mfd. capacitor in series with the oscillator lead. Leave the grid cap on the tube. Adjust the IF trimmers for maximum output starting with the secondary of the second transformer and working back in order to the primary of the first transformer. The oscillator output should be kept as low as possible and the tone control switched to the treble position.

RF ALIGNMENT

To align the shortwave C band, replace the 0.1 mfd. capacitor in the oscillator output lead with a 400 ohm carbon resistor and reconnect to the antenna terminal. Set the signal generator and receiver tuning dial to 8 mc. and adjust the antenna and oscillator iron cores for maximum signal. Set the signal generator and receiver tuning to 20 mc. and adjust the oscil-

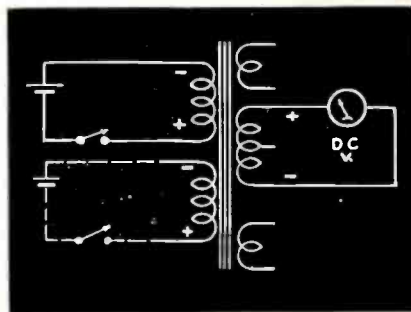
lator air trimmer for maximum signal. This capacitor is of the plunger type and is adjusted by loosening the lock nut and moving the plunger in or out. When two positions of best operation are found, use the minimum capacity one; most outward position of plunger. Adjust the 20 mc antenna capacitor for maximum signal.

The medium-wave or B band, is aligned by adjusting the oscillator and antenna iron cores for maximum signal output at 2.5 mc. The antenna and oscillator trimmer capacitors are adjusted for peak signal at 7 mc.

Alignment of the broadcast band is made with a 200 mmfd. capacitor in the signal generator lead. The oscillator, tapped RF coil, and antenna coil iron cores are adjusted for maximum response at 600 kc. The trimmer capacitors on these three coils are then adjusted at 1,500 kc. The alignment procedure should be repeated until no further improvement results.

Transformer windings that are on the same core and improperly connected so as to "buck" one another, will put a short circuit on the line and stir up plenty of trouble.

Where polarity marks or other code information is not immediately available, the correct way to connect the windings for series or parallel operation is easily determined as follows.



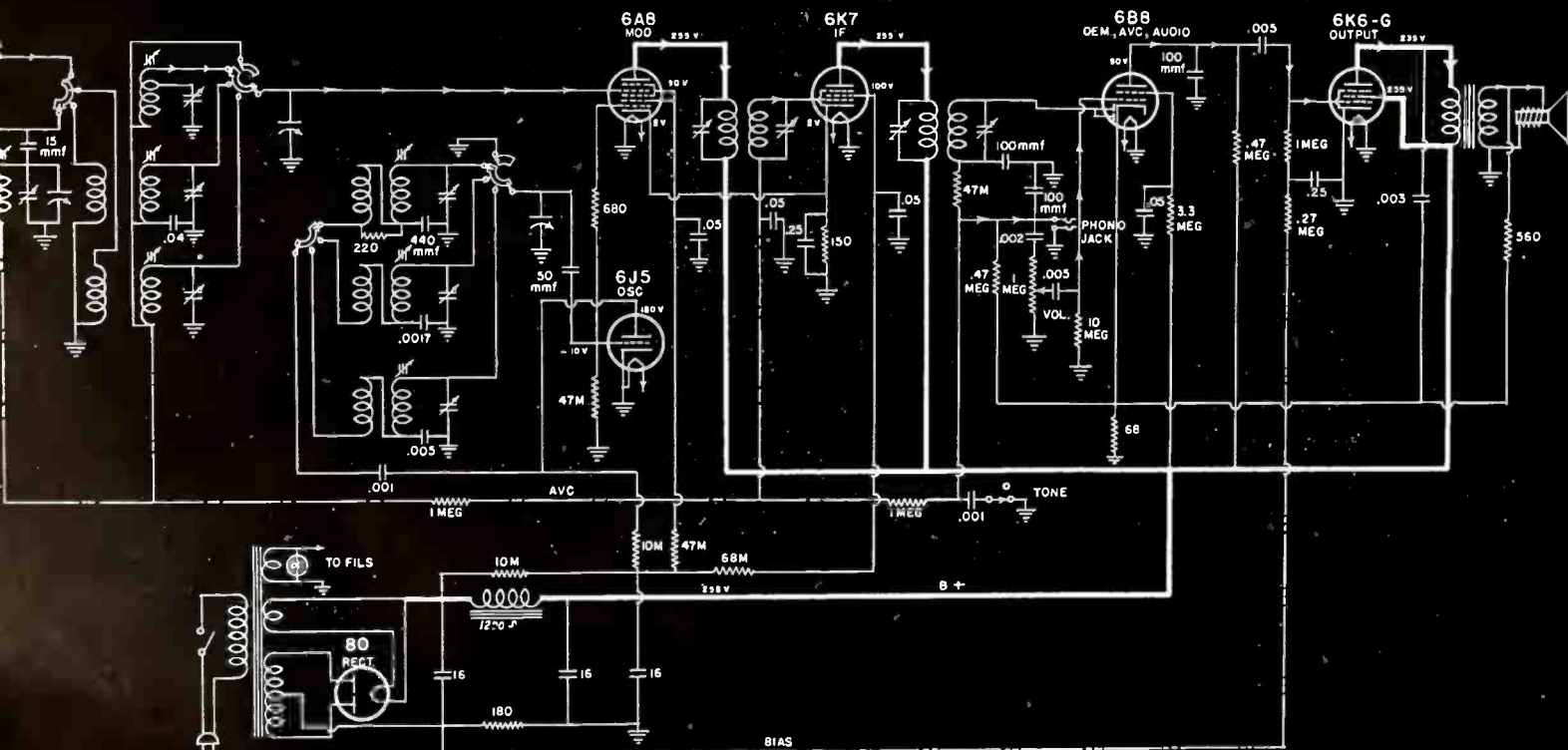
In the accompanying circuit, the DC "kick" method of determining transformer polarity is shown. In this method, a dry cell is connected through a switch to one of the two primaries. A DC 0-25 voltmeter is connected to the high voltage secondary winding. As the switch is closed momentarily, the voltmeter will move up or off scale. As the switch is opened, the voltmeter will "kick" in the opposite direction.

(Continued on page 50)

How to Interconnect Transformer Windings

Often a transformer is found with dual primaries for 110-220 volt operation. One example is the CV-40 power supply used with RCA BT-41 and BK-41 battery receivers. (See circuit on page 51, RADIO TODAY, February, 1940.)

STROMBERG-CARLSON 412



Selling Sound

APRIL, 1940

PUBLISHED SEMI ANNUALLY AS A SECTION OF RADIO TODAY

Probit More... WITH CLARION SOUND EQUIPMENT

ENGINEERED . . . PRICED, AND NOW INDIVIDUALLY STYLED
FOR GREATEST PUBLIC DEMAND

FROM A LONG LINE OF
Sales Makers



Clarion A95T—Brand new and designed for fast selling! 71 watt super power. Six simultaneously operated channels with every modern amplifier feature. Complete with phano attachment, tubes and built-in monitor speaker. List only \$174.90



Clarion A41T—Compare the value! 25 watt, 4 channel, new sloping panel—brown finished panel and matching case. Complete with tubes in cabinet. List only \$61.50

Everywhere the Clarion Plan protecting profits has won over Sound distributors — just as unmatched performance made Clarion an overwhelming choice with the public. Now Clarion offers another great sales exclusive—Individuality of design! New, streamline functional design so different, so original that anyone can recognize a Clarion installation. Today, more than ever, your Na. 1 Profit Opportunity lies with Clarion!

ONLY CLARION GIVES YOU ALL THIS!

Modern, distinctive amplifiers from 7 to 100 watts. Mobile and sound-truck units. Special systems for theatrical and musical requirements. School and recording equipment. Intercommunicators, mikes, mike stands, speakers and speaker baffles. Exclusive noise-free, low hum pre-amplifying stages. Improved low distortion, inverse feedback circuits remote control, built-in meter and speaker monitoring. Built-in speech compensators, multi-mike channels with mixers, individual treble and bass equalizers, compact single and dual speaker portables.

A PROFIT PLAN FOR EVERYONE!

Now in its third big year, the CISE Plan has attracted distributors everywhere. In a market confused, the CISE Plan protects the Sound distributor and insures his profits. Real profits—as witness Clarion's sales for 1939—up more than 100%.

Membership in the CISE is available to jobbers, distributors, sound specialists, contractors—everyone. Several choice territories still available. Enjoy the big-profit advantages of (1) factory purchasing power, (2) exclusive sales territory, (3) free engineering and consultation service, (4) free consumer sales aids, and (5) live leads furnished to you. Take advantage of this sure-fire selling plan, and the hottest line in P.A. history. Send for complete facts about the CISE and the line that offers you your biggest profit opportunity—now!

ONLY CLARION OFFERS SUCH
Complete
ADVERTISING SUPPORT

In promotional activity on your behalf, as in product performance and sales appeal, Clarion leads all others. Advertising support includes

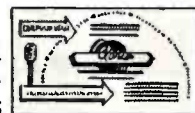


SALES—AROUSING NEWSPAPER MATS



HARD-HITTING
FOLLOW-UP MAIL

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ARRESTING WINDOW DISPLAYS



COMPELLING
SALES LETTERS
(BI-WEEKLY)

AND A NEW

*24 page
Catalog*

"You have one of the finest lines of Public Address we have ever heard or used."

*Read what
they're saying*

"You are doing us fellows in the field a favor. You have just what I've been looking for a long time."

"Last year was our most successful year in Public Address thanks to your co-operation."

TRANSFORMER CORPORATION OF AMERICA 69 WOOSTER ST. NEW YORK, N. Y.

TYPICAL SOUND INSTALLATIONS

No. 6—Industrial Plants. Selling sound to business men for factory use. How to capture a growing industrial market.

It has been proven many times that the most obvious is the most overlooked, and when sound engineers overlook obvious profits, that is news. There are increasing profits in the sale of industrial sound equipment if the P.A. engineer can only learn how to approach businessmen and apply a few simple selling principles. The sound selling season is well under way and the sale of equipment to factories, mills, and other industrial establishments is on the upgrade.

MUST "HELP THE BUSINESS"

Businessmen are well acquainted with the power of "public address." They have seen its use in churches, auditoriums, ball parks, theatres; and usually they would use sound themselves if they were given a good reason to use it. It's up to you to point out this reason.

The majority of P.A. customers buy sound equipment for entertainment

purposes. But a business man will buy P.A. only if you can prove it will help his business. Before we go into the sales analysis and methods of approach, let's look into the successful story of a typical P.A. sale for an industrial establishment. The salesman on this job might have been you.

The scene is a large Brooklyn, N. Y., factory. The persistent sound salesman on this job first contacted one of the executives with the idea of selling an inter-office communicating system, for use between two offices. This first installation met with success. Very rapidly, thereafter, further results were felt.

Inter-communication sets were ordered for other offices. Then, the real shocker came. The factory felt a need for a p.a. system covering the entire plant of eight floors which occupied the good part of a city block.

The sound man handling the job had to do a little thinking to put it over properly. He prescribed the necessary

amplifier. He laid out wiring circuits with some outside consultation. He devised the use of two-way baffles by employing the bell sections of parabolics and placed them back to back with a single cone speaker in the center. He was paid \$3,000 for the installation.

This sound job may seem a bit out of your reach—but is it? Why can't you take a stab at a job of this size?

WHAT IS NEEDED

What is required, specifically, is a complete understanding of *what* you are selling; *Whom* to sell; *How* to sell; *How* the p.a. system will help the customer's business; *What* and *How much* you should tell the customer about the system.

First, let us begin with your prospect list, your market. What factory would want a p.a. system? Any plants employing fifty men or over, are suitable prospects. Names of the officers of the organization are not hard to obtain. Names can be taken from city directories, or by telephoning the company and asking for the name of the right individual.

After you have compiled a sizable prospect list, you should send out some mailing piece to pave the way for a later personal call. You may not be able to see a man every time, but you can be sure that your letter reaches his desk. A proper letterhead indicating your ability to do this type of work is always helpful. One p.a. operator has printed on the back of his letterhead a list of all the installations he has completed, and that sort of thing carries a great deal of conviction.

Another good method of promotion by mail is the sending of snapshots of actual installations. Pictures tell the story better than any written letter. Some of the literature put out by p.a. manufacturers can be very helpful.

MAKE THE CALL

All this material and effort is directed towards one aim—to get in to see your prospect. After you have obtained your interview, plan your next move carefully—you have a selling job ahead. Guard your approach. You have spent time and money to attract this man's interest, and you must protect the work you have done. You must "ease in" carefully. You must approach your prospect as another business man.

Sound Over the Orange Bowl



Famed Florida Orange Bowl gets its sound and light from the same supporting towers. Bob Lehfeldt of Flagler Radio Co., Miami, installed twenty Atlas Sound Corp. 8-inch cone size trumpets to cover the field.

You must show him how he can promote production efficiency, aid plant co-ordination, facilitate communication, hasten factory procedure, better labor relations. Try to show him that instant communication can start production moving at a more rapid pace, help locate any man in the plant immediately, help dispatch official orders with more promptness—in short, you must show him how to save time and money. Explain how the p.a. system can be used to address all the workers in the plant, how helpful it can be in case of emergency.

Point out to your practical businessman that emotion also plays a part in business. Explain how the use of music-playing devices for lunch hours and working periods makes for more cheerful, and efficient workers.

Illustrate how a p.a. system will help improve his public relations. Explain how a record-playing system is used for automatically guiding factory tours for outside visitors in other plants.

CREATE CONFIDENCE

As mentioned before, you must approach the factory official as a practical businessman interested in saving him money. You must be able to present an impressive appearance, so that when you enter his private office you will create confidence with your manner of approach. You should present yourself as a sales engineer—not as a radio repair man!

The next step is important, and probably the move that swings the deal—the demonstration. Rig up an inter-communicating system, but make the demonstration unique. Instead of using the standard two-way call system housed in the customary cabinets, change the remote unit slightly. Use a larger speaker instead of the small

Know —

What you are selling
Whom to sell
How to sell
What to bill the customer
How PA will help his business

After you feel that you have your prospect well sold, take the final selling step. Submit a written proposal and estimate and prepare it in such a form that it will shut out competitive bidders. What you should sell mostly is your engineering skill and ability. Impress your prospect on the importance of a well engineered installation. Recommend good wiring, even if it means obtaining outside electricians for the work.

WRITTEN PROPOSALS

In your bid, state a guarantee, and include provisions for servicing and maintenance. The idea of servicing brings to mind future income for the sound dealer, for this is more highly profitable than radio set repairing.

The question of financing the installation may come up. Well, you know how these things can be handled. You don't expect to carry the cost of the job. That is a function of a finance company. The business man favors time payment because it is his assurance of prompt servicing if he may need it.

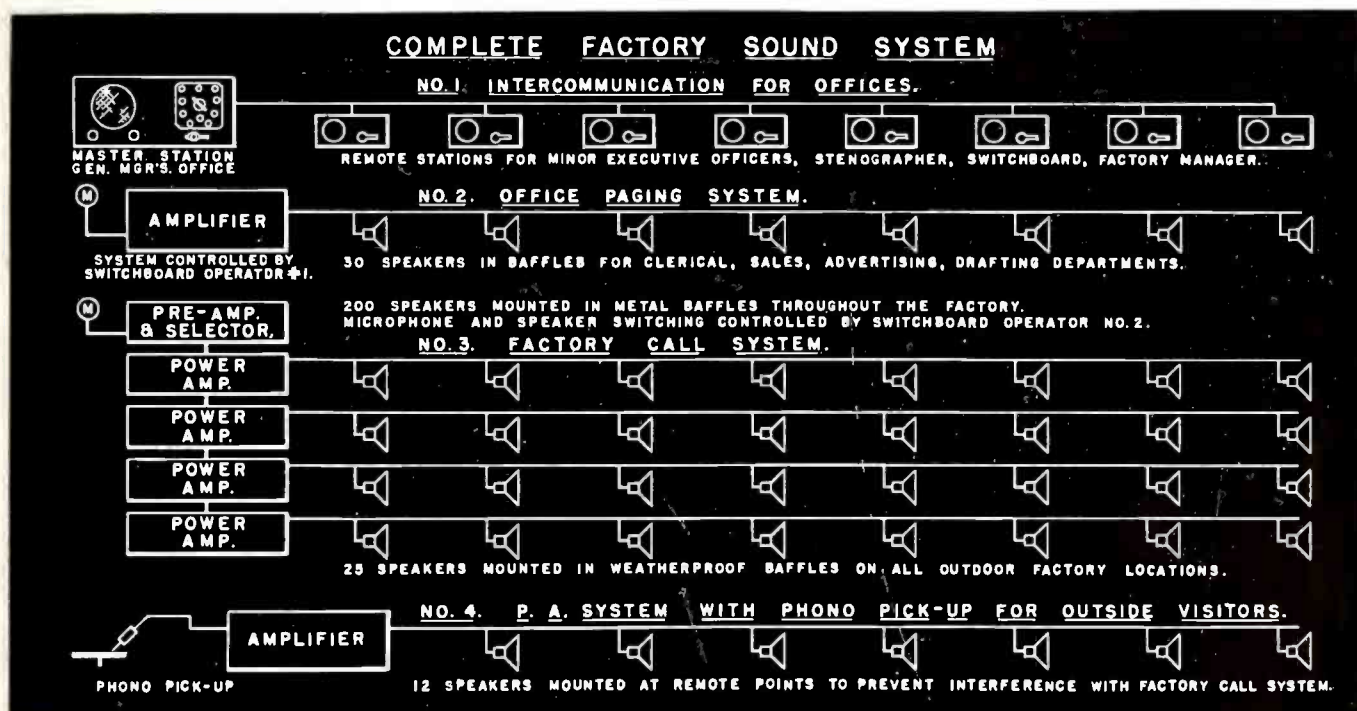
Thus, we cover the subject of selling industrial p.a. accounts. Before you forget these suggestions, bear in mind the one outstanding factor, that of understanding the prospect's interest in p.a. If he is buying, he is doing so for a good business reason. It's your duty to point out this reason. If you can't talk to the prospect in terms of what p.a. will do for his business, then you can't hope to sell him. Remember—it's product efficiency and resultant greater profits.

If you will put some of these suggestions into use, and combine with them the benefit of your own experience, you should be well on the road to good substantial profits in this form of p.a. activity.

standard one, and put it in some kind of a special baffle. Explain how that baffle is designed for a particular purpose. Imply by convincing demonstration that the whole system will suit his particular purpose.

Illustrate next the simplicity of handling the p.a. or call system. Explain how it all can be controlled by a switchboard operator handling regular telephone messages. Explain how easily additional units can be added.

Whatever your sales approach, make one thing certain. Let your suggested plan, the one designed for the specific problem, be such that it cannot be duplicated easily by a competitive salesman. Incorporate enough features of your own invention and sell him on the advantages of these features.



Four units of a factory sound system include intercommunication, paging system, factory call system, and public address system for entertainment and directing of visitors. Any one or combination of these is a good profitable job to sell. Survey needs of local industries and submit suggestions for sound system.

IDEAS FOR SOUND MEN

**More places to sell P.A. and new applications
that suggest expansion of the prospect lists.**

Industrialists Need Plenty of Sound Equipment

Many new reports indicate that sound equipment is being more widely used in steel mills. In these mills, large cranes are used and p.a. is found to be more satisfactory than hand signals. Also, there is considerable noise about such places because enormous ingots are handled there; the ordinary voice would be lost in the din. Sound systems are also used between the control pulpits.

Power plants are becoming more sound-conscious because it is often necessary to direct workmen in various part of a building. Many times, all the departments have to be reached at once, in a hurry.

Plants of all kinds are now awake to the fact that guides can function better if amplifiers are used. Their explanations of the factory operations may otherwise be inaudible above the noise of the machinery.

"Talking Rooms" on Dep't Store Tour

The Alexander Smith talking rooms are now on a tour of department stores in cities throughout the nation. The rooms are miniatures with real furnishings in perfect scale, and each has a talking mechanism. A recorded voice explains each room's color

scheme, how it is achieved, and why.

The rooms are in Swedish modern, modern, eighteenth century, Victorian and early American styles, and originally were designed for a permanent display of home furnishings at Rockefeller Center, but such wide interest in them was manifested, it was decided to send them on a tour of the country.

You Can Put on A Show With Sound Effects

A novel idea for sound men to use in getting his products and his services to the attention of the local prospects is the "sound program" stunt. He prepares a complete entertainment period, with his public address equipment, and offers to present it for local clubs and organizations who are always open for free entertainment.

The "sound program" may be built so that it will have dramatic, comic and educational qualities. Little known facts about the amplification of voices and music can be demonstrated. The sound man may show, for the sake of comedy, "how a politician can lose votes because of poor p.a. facilities," or "how a bad mike connection can ruin a funny story." Mysterious effects may be demonstrated by unusual adjustments of the system. The playing of novelty records,

and the distortion of singers' voices may also add to the interest.

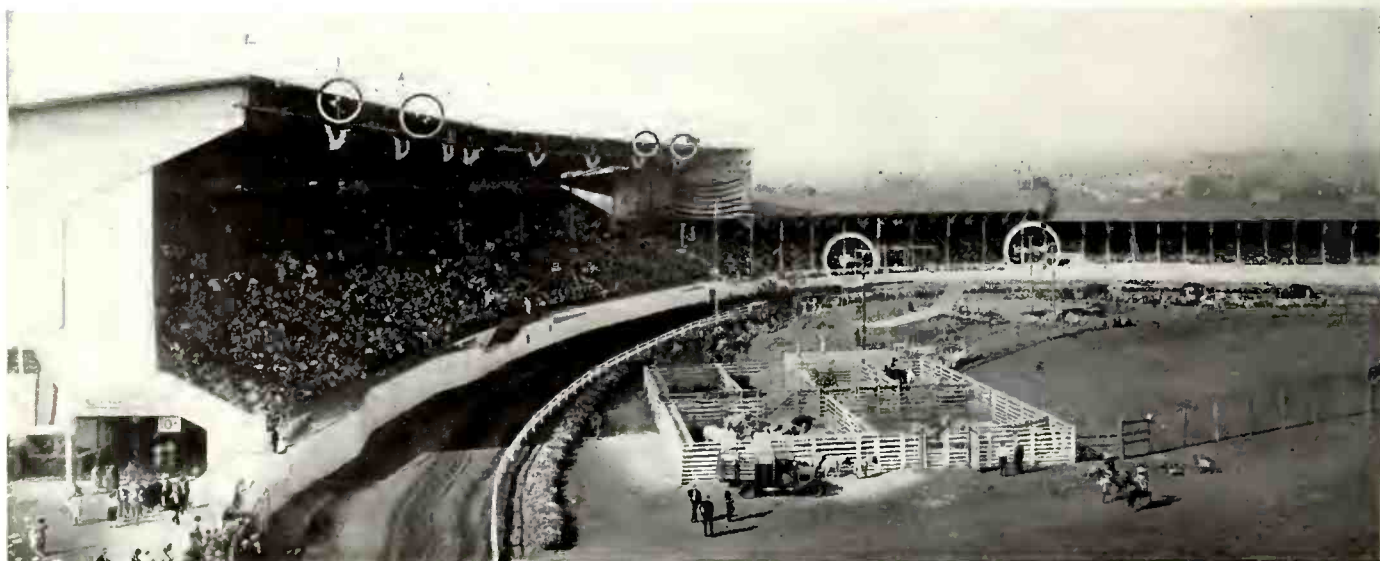
It is suggested that the sound man be sure to demonstrate briefly *the right way* to install and adjust the system, so that he will identify himself as the local expert on the subject.

Control of Sound in Auditoriums

Acoustical science can now be applied to better advantage than ever before in the planning of modern auditoriums, according to C. C. Potwin of ERPI, New York, in a paper before SMPE convention.

Greater attention should be given to the design and development of the basic theater structure. The shaping of surfaces for the control of sound reflections is effective and can be kept within a desirable architectural limit. Furthermore, such shaping can be made to function successfully if the basic design is developed to control reverberation.

The all too prevalent idea that "the more acoustical material used, the better the results" should be discouraged. Acoustical materials can be used more efficiently if they are distributed asymmetrically with due regard to the geometry of the reflecting surfaces. In general, they should not be concentrated in large compact areas on single surfaces.



Big sound installation at Washington State Fair, Puyallup, Wash., is adjudged one of the best in entire Northwest. Huge grandstand area is covered by Atlas Sound Corp. projector speakers mounted on towers and edge of canopy.

THERE IS NO PREMIUM FOR JENSEN QUALITY

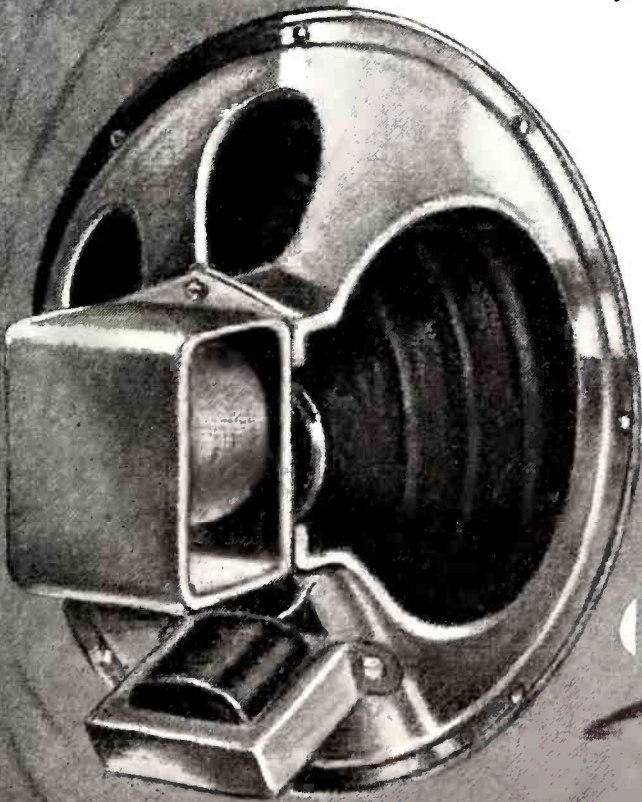
There is no replacement speaker of a higher quality than JENSEN—yet there is no price premium to pay for that quality!

A JENSEN replacement speaker is available for as little as \$2.30 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

P.A. SALES PROBLEM

*A sharp appraisal of the factors needed
to give sound equipment a better break.*

How can we steer the sound business squarely up to the sales level that it deserves?

The sound man—the hard-working public address retailer—needs more business and more profits. This industry is a large-scale affair and it should offer dollars for the pocket of the dealer, if it could find a solution for its problems of distribution.

The sound product itself has been greatly improved in performance and appeal. Manufacturers have made impressive strides in design and range of application. The problem is how to get this efficient new equipment to the consumer in a clean-cut, aggressive, profitable way.

In an effort to get the problem into open discussion, and to air all the possible solutions, RADIO TODAY has called upon the executives of the business to say what should be done. Suggestions and ideas from these leaders are presented herewith.

EVERYBODY SELL; FORGET COMPETISH

How to bring the sound business back to the level of 1937? I don't think that is the real question. What is more vital to every member of the sound or public-address industry is that the sound business be increased *beyond* its 1937 level, to a point in keeping with its natural trend. Furthermore, this

advancement should be profitable to all concerned. With these conclusions as objectives, how can they be attained?

Certainly not by the methods and practices employed in the past. Old methods rarely apply to new conditions. In my many conversations on this subject with individuals interested in the P.A. business, either as jobbers, sound specialists, or service men, the tendency has been to blame all the ills of the industry on this or that action of the other fellow.

The service man says the jobber sells to his customers. The jobber reports that the service man doesn't know how to merchandise P.A.—therefore, no business. A sound specialist will blame all of his inactivity on the mail-order houses. "Why try to sell P.A. when your customer probably has this or the other catalogue in his hand." Mail-order sales executives complain about jobbers, service men, and sound specialists ignoring their catalogues and buying elsewhere—and so on ad infinitum.

But what's the use of this tearing down of the other fellow's house. Some one once said, "there's a time and place for everything and everyone." What the sound industry needs is a little more effort on the part of everyone to improve his own respective backyard and considerably less discussion about what the other fellow is doing incorrectly.

The most inferior sound system offered today is in reality a pretty good unit. It will do a fair job—but not unless the prospective user knows about it. Let all branches of the P.A. industry concentrate on ways and means of reaching more P.A. prospects with better sales presentations and my guess is that sound sales in the future will make those in 1937 appear too small to mention.

HUBERT L. SHORTT, *President*
Transformer Corp. of America
(Clarion)
69 Wooster St., New York, N. Y.

"PERSONAL SERVICE" IS SOUND DEALER'S KEY

We are indeed glad to see that someone is waking up to the fact that there is something wrong in the sound industry. It is our honest opinion that the fault lies mainly with the method of distribution and the lack of real energetic sound dealers. Generally speaking, the radio parts distributor is at

"Talking Car" sound system introduced by Radio Wire Tele., 100 6th Ave., N. Y., features 6 V. DC, or 110 V. AC operation, high efficiency 5-watt under dash amplifier. Speaker under hood. Ideal mobile unit.

his best when handling straight package merchandise that can be handed over the counter when a dealer happens to come in and ask for this particular piece of merchandise.

We have quite a few parts distributors who are doing what we call a very good job; but the bulk of the parts distributor's customers are not well enough equipped technically and not sales minded enough to actually go out and do a job of selling sound equipment.

Of course, the mail-order catalogs cut in on the dealer's business, for the latter loses sight of the fact that the one big thing he has to offer that cannot be obtained from the mail-order catalog is personal service—service before the purchase, soliciting the sale of the equipment, analyzing the customer's needs, and selling him the equipment which will do the job best for him. Installation service and service after the sale are also very important.

H. A. WILSON, *Sales Manager*
Operadio Mfg. Co., St. Charles, Ill.

SELL SOUND THE YEAR 'ROUND

April is an excellent month for selling sound. Other good months are: September and May, January and June, August and October, November and March, February and December, and July.

Too many sound operators are possessed with the erroneous conclusion that there is only one so-called "sound season" which begins in the Spring, continuing on through the Elections. To this, we say "true"—but how about the selling opportunities twelve months in the year?

Selling sound is an all-year-round proposition, and the sooner the industry realizes this vital factor, the better for everyone concerned.

Right after Elections, invariably sound operators shut down tight on sound. Expensive sound equipment gathers dust in the corner of the shop, sound trucks are disassembled for the cold winter ahead. This sort of an ostrich attitude will lead only to a loss of investment in expensive equipment on hand.

Sound men should stimulate sales straight through the fall months, such as Thanksgiving activities; the winter months, and Christmas; inter-communication and indoor P.A.; night club and auditorium P.A. The indoor possibilities are unlimited.

If the sound industry will only bear this suggestion in mind, there's no doubt that 1940 will be "P.A.'s Biggest"

R. C. REINHARDT, *President*,
Atlas Sound Corp.
1447 39th St., Brooklyn, N. Y.



Compare these SOUND AMPLIFIER Values!

An **AUDIOGRAPH** Amplifier or Complete Sound System is the best buy for every installation.



25-Watt Mobile \$36.00

Complete for 6 v battery and 110 v a-c line operation without external packs. Operates with any modern high impedance microphone. 4 And 8 ohm output impedances. Optional phono-player built in top, \$21.00 net additional.

Complete portable system offered, as illustrated on left. Also systems for truck mounting. See catalog for complete listings.

25-Watt A.C. \$27.00

This super-power amplifier has three inputs, high and low compensating tone control, output impedance variable from 2 to 500 ohms. Conservatively rated at 25 watts. Uses two 6SF5 input tubes, a 6SC7 mixer, a 6N7G power driver, two 6L6G in push-pull output, and an 83 rectifier.

Complete portable system, illustrated on right, with two 12-inch pm speakers, aero-linen carrying case, less microphone and stand, dealer net only . . \$57.00



15-Watt A.C. \$17.40

Power to cover large audiences at low price. Push-pull 6L6 output stage gives this amplifier power that many far more expensive units cannot match. Has separate input channels for microphone and phono, dual action tone control, 4 and 8 ohm output impedances, etc. Both single and dual portable speaker systems are offered, in aero-linen cases. Write for catalog with complete description.

8 Watts \$11.97

The value sensation of 1940. A complete 8-watt power amplifier. Has microphone and phono inputs, tone control, three stages with adequate gain for all modern microphones.

Complete portable system illustrated on left, with 8-inch pm speaker, aero-linen case, 25 ft. speaker cable, less microphone and cable, dealer net only \$20.40



Sound Accessories

The **AUDIOGRAPH** Catalog and the **AUDIOGRAPH** distributor offer you every accessory to complete a sound installation at prices that save money. See him first!

FREE . . . "How to Match Speaker Systems"

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Get your copy of this booklet, Chapter 1, of a New Encyclopedia on Sound Installation Problems, written by John Meck.

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- ★ 100% STORM-PROOF

★ Here you have the ultimate in high acoustic conversion efficiency . . . NEW Atlas Sound "Morning Glory" Projectors and "Dyna-Flux" Permanent Magnet Compression Type Speaker Units. ★ The new projector line offers air column sizes for all public address purposes. Three driver unit models are also available . . . with varied power ratings. ★ You'll welcome this new achievement in speaker design . . . allows the use of super-powered p. a. speakers at a price within your reach.

Write for CATALOG F-40 now!



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CORPORATION**

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P. A. EQUIPMENT

Sound products of new design

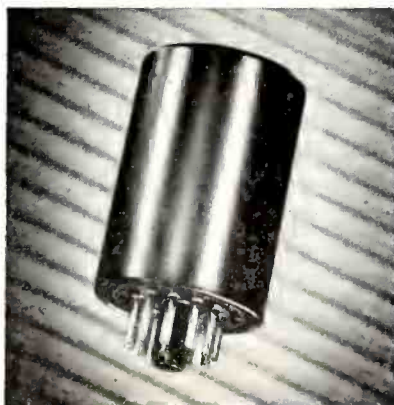


Amperite P. G. dynamic

★ New pressure gradient mike has elipsoid pickup pattern, high output level of -55 db, and plus or minus 3 db response from 40 to 10,000 cycles. Pickup from back is reduced to a minimum. All models are equipped with switch, and finished in satin chrome. Model PGH, list \$32, PGAL, \$25. Amperite Co., 561 Broadway, New York, N. Y.—RADIO TODAY.

Eastern Mike stand

★ New hollow base mike stand is made of die-cast metal with polished chrome finish. Rubber base ring acts as shock absorber. Net weight of 6 lbs. may be increased by filling base with sand or shot. Eastern Mike Stand Co., 56 Christopher Ave., Brooklyn, N. Y.—RADIO TODAY.



Kenyon plug-in transformers

★ Complete new line of high fidelity transformers plug into 11-prong octal socket. Uniform size. Made in following classes; line to line, crystal mike to line, low impedance to grid, interstage, output transformers and chokes. With no DC in windings, response is plus or minus 2 db from 30 to 20,000 cycles. Kenyon Transformer Co., Inc., 840 Barry St., New York, N. Y.—RADIO TODAY.



Thordarson hi-fi amplifier

★ The Tru-Fidelity Studio Amplifier is the latest addition to sound line. Continuously variable high and low frequency level control. Amplifier housed in gray cabinet with "brushed steel" panel. Three low-level, and two medium-level channels are provided. Output is 10 watts undistorted. Thordarson Electric Mfg. Co., 500 W. Huron St., Chicago, Ill.—RADIO TODAY.



Regal Tokfone

★ New line of intercommunicators includes 600 series units features two-way communication between any Master and any of ten or less remote points. Five simultaneous private conversations may be carried on. Regal Amplifier Mfg. Corp., 14 W. 17th St., New York, N. Y.—RADIO TODAY.



Par-Metal amplifier case

★ Deluxe amplifier foundation unit has grille screen covers, chrome and red trimmed handles and is finished in grey ripple enamel. This type available up to 10 x 17 x 3. Parmetal Products Corp., 3262 49th St., L. I. City, New York.—RADIO TODAY.



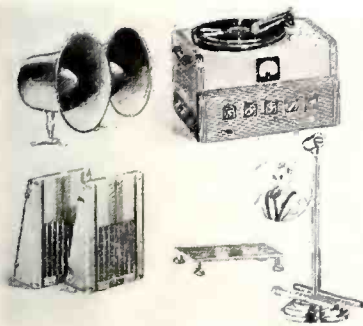
University parabolic

★ Featuring one-piece construction for weatherproof operation, and non-resonant rubber tire rim, this new horn has universal mounting bracket, and floating rubber speaker mounting. University Labs., 195 Chrystie St., New York, N. Y.—RADIO TODAY.



Shure Unidyne mike

★ Model 555 mike employs uni-phase principle for true cardioid unidirectional pickup. Mike tilts through 150 degree angle. Available in 35-50 and 200-250 ohm and high impedance model. List \$60. Shure Bros., 225 W. Huron St., Chicago, Ill.—RADIO TODAY.

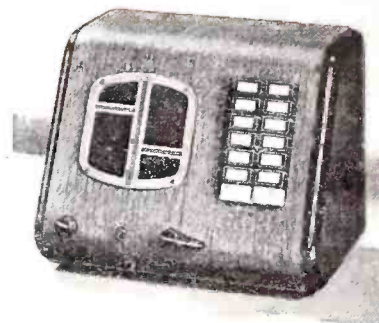


Knight PA system

★ Model A12239 is specialized electioneering system for operation on 6 volts DC or 110 volts AC. Complete equipment includes 30-watt amplifier, dynamic mike, stand, marine horns, and 2 Jensen speakers with all necessary cables. Allied Radio Corp., 833 W. Jackson Blvd., Chicago, Ill.—RADIO TODAY.

Western PA recorder

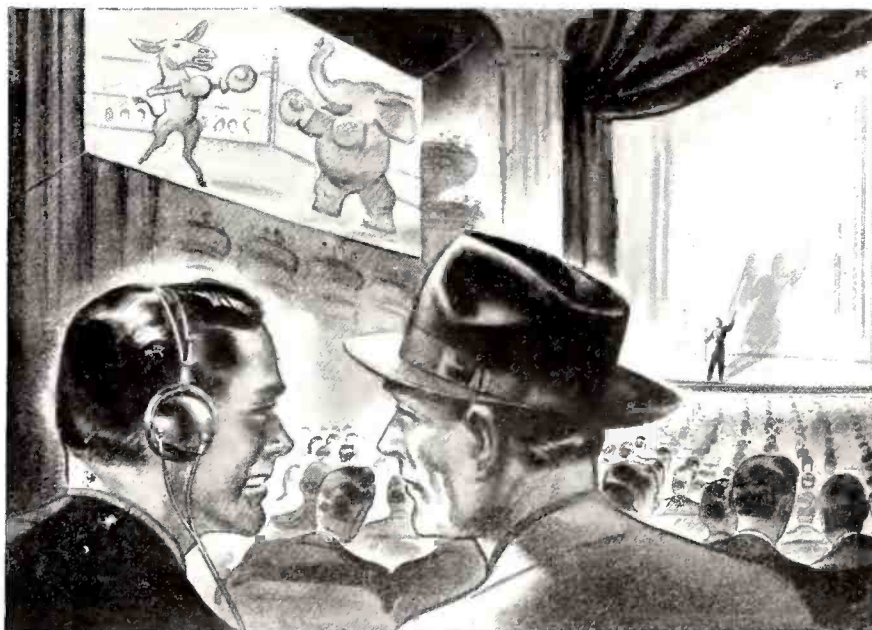
★ Combination public address amplifier, phonograph, and recorder is self contained in carrying case 17 x 18 x 8. Amplifier rated at 6 watts. AC power. Ten-inch turntable. Separate crystal pickup and cutter. Western Sound & Electric Labs., Inc., 311 W. Kilbourn Ave., Milwaukee, Wis.—RADIO TODAY.



Operadio communicator

★ Master intercommunicating station shown is model 420-12 which will give two-way conversation with 1 to 12 speaker stations. Two or more master stations may be interconnected to give complete flexi-

bility. No cross-talk. May be combined with paging system. Operadio Mfg. Co., St. Charles, Ill.—RADIO TODAY.



“HE SAYS THEY SHOULD HAVE USED UTAH SPEAKERS”

THREE OF THE 90 DIFFERENT MODELS OF UTAH SPEAKERS

The heated words of thousands of politicians are being added to the normal output of the nation's sound equipment systems. New public address facilities are being installed in increasing numbers. And the demand is growing by leaps and bounds.

Sound equipment men know that the profit possibilities are big IF the system is "right." One way to be sure of maximum profit is to standardize on Utah's high fidelity speakers specially engineered for high power public address systems.

Utah public address system speakers give you, in addition to many others, these outstanding features:

1. Special Utah phenolic resin cement treatment provides an extra sturdy voice coil assuring maximum safety under EXTREME OVERLOADS.
2. Completely dust-proofed.
3. All cementing operations completely cured before final test, assuring perfect centering, made possible by THE MODERN METHOD—use of THERMO-PLASTIC cements throughout.
4. Rugged formed-steel cone housing for maximum strength and rigidity—rust-proofed, aluminum finish.
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H-15-P



F-12-P



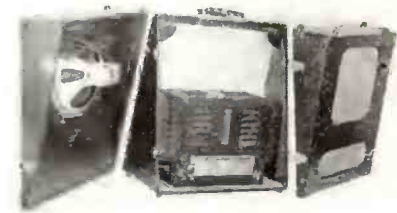
G-1210



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NEW SOUND PRODUCTS



Lincrophone PA

★ Unique portable public address system delivers 25 watts. Three section case houses amplifier, two 10-inch speakers, mike and floor

stand. Four stage amplifier employs inverse feedback for unusually flat response. Lincrophone Co., Inc., 1661 Howard Ave., Utica, N. Y.—RADIO TODAY.

Clarion power amplifier

★ Model A-95 71-watt amplifier has inputs for 4 mikes, and 2 phono, all of which may be operated simultaneously. Master gain control, remote control, inverse feedback, and optional DB meter or 2-inch monitor speaker are few of features. One of a new line of sound systems. Amplifier and phono equipment, \$174.90.



Transformer Corp. of America, 69 Wooster St., New York, N. Y.—RADIO TODAY

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RELIABILITY—HUM
SUPPRESSION and
20% OVERLOAD
CAPACITY



MODEL 3545

• Provides advanced engineering in volume compression and expansion circuits—hum suppressed to a new low level. Hear this new amplifier.

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says, "Years of experience in the public address and sound equipment field, combined with careful workmanship, have resulted in a line of equipment that makes possible profitable sales."

The Sound Engineers' biggest problem—is stressed in all Erwood designs. Each item has been designed to insure sound satisfaction under various acoustic conditions and wide variations in power supply.

Send for Complete Catalogue

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Atlas sound projector

★ Model DR-42 "morning glory" type projector has wide angle coverage of 80 degrees. The exponential air column horn is completely weather-proof, non-resonant. Model PM-23 driving unit is rated at 18 watts. Projector, \$20; driver, \$30. Atlas Sound Corp., 1448 39th St., Brooklyn, N. Y.—RADIO TODAY



Bell Record-O-Fone

★ Complete portable recorder, model RC-2-P contains amplifier, speaker, and recording-playing mechanism in one case. Crystal mike and cutter head for quality. Visual indicator shows proper recording level. 60-cycle AC. Weight, 35 lbs. Bell Sound Systems, Inc., 1183 Essex Ave., Columbus, Ohio.—RADIO TODAY.

ONE-PIECE GIANT BELL SUPER STRENGTH CONSTRUCTION		NON RESONANT RUBBER TIRE RIM		New University One Piece Parabolic
OVER SIZE SWIVEL BOLT MECHANISM		FLOATING RUBBER CONE SPEAKER MOUNTING		
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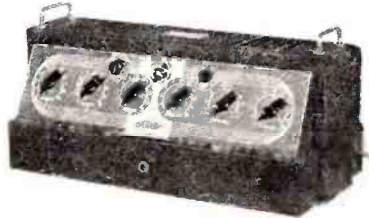


Western Electric multi-mike

★ All purpose cardoid mike has adjustable pickup pattern. Built-in switch controls, six pickup ranges from non-directional to cardoid directional. The mike can be tailored to fit the installation by adjusting the pickup for minimum feedback. Increased power output from amplifier is possible before feedback occurs. Multi-mike is available in both desk and floor stand mountings. Western Electric Co., 195 Broadway, New York, N. Y.—RADIO TODAY.

Rowe PM driver

★ New group of permanent magnetic driver units feature Alnico magnets of high flux density, one piece diaphragm and intergral voice coil. Model 7 has voice coil impedance of 16 ohms; power rating of 18 to 20 watts continuous. Parts are accurately machined and interchangeable. List, \$49.50. Rowe Industries Inc., 3120 Monroe St., Toledo, Ohio—RADIO TODAY.



Operadio amplifier

★ Model 855-AR delivers 55 watts. Uses volume expansion and compression, visual level indicator, and three mike and one phono channel. Neon bulb gives warning of output tube failure. May be remote controlled. Operadio Mfg. Co., St. Charles, Ill.—RADIO TODAY.



ASTATIC MODEL T-3 MICROPHONE

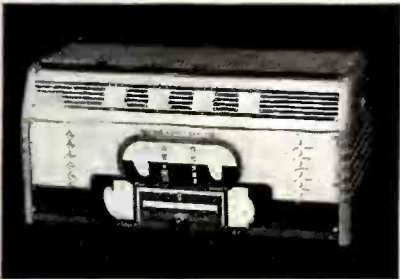
Highly Praised for Flexibility and Performance

● Public address men, entertaining artists and speakers alike marvel at the performance and flexibility of Astatic Model T-3 Crystal Microphone. Self locking, tilting head adjustable to directional or non-directional position. All chrome finish. Complete with interchangeable socket connector and 25-ft. cable. List Price \$25.00. See your Astatic Jobber or write for literature.



MICROPHONE LABORATORY, INC.

Youngstown, Ohio
In Canada: Canadian Astatic, Ltd., Toronto, Ont.
Crystal Products Licensed under Brush Development Co. Patents



Setchell Carlson dual PA

★ Combined dual channel amplifier and push button radio tuner are featured in model RA50. Three mikes, one phono may be mixed and each 25-watt channel has its own master gain control. Push button tone control and 6-station push button radio. List, \$139. Setchell Carlson, Inc., 2233 University Ave., St. Paul, Minn.—RADIO TODAY.



N-U sound-extra tubes

★ Designed especially for audio work, 13 most used types of tubes have been improved with respect to emission, gas, grid current, and uniformity. Included in the group are the 6L6G, 6J7G, 6N7G, 6C5G, 6F6G, 5U4G, and other common tubes used in amplifiers. National Union Radio Corp., 57 State St., Newark, N. J.—RADIO TODAY.

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Special Amplifiers and Sound System Installations Custom-Built to Your Specifications

Because no two sound system requirements can be exactly alike, our designing and production staff is geared to create a special amplifier that meets your individual needs.

This One-of-a-Kind amplifier will cost no more than a mass production, all-purpose unit which may not so completely solve your sound problem.

Send your rough specifications to our chief engineer, Mr. A. C. Shaney, and see what twenty years of specialized amplifier engineering can mean to you in terms of professional advice and lower costs.

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Monarch output meter

★ Vacuum thermocouple meter for output power measurements incorporates protective circuit, variable input impedance from 3 to 25,000 ohms. Seven power ranges on ladder type attenuator from 30 milliwatts to 30 watts. Monarch Mfg. Co., 3341 Belmont Ave., Chicago, Ill.—RADIO TODAY.



Webber tube tester

★ Model 150 checks loktals, 117 volt tubes, bantams, miniatures. Hot neon leakage tester, English reading scale. Housed in metal case with strap handle. Net, \$19.95. Earl Webber Co., 1313 W. Randolph St., Chicago, Ill.—RADIO TODAY.

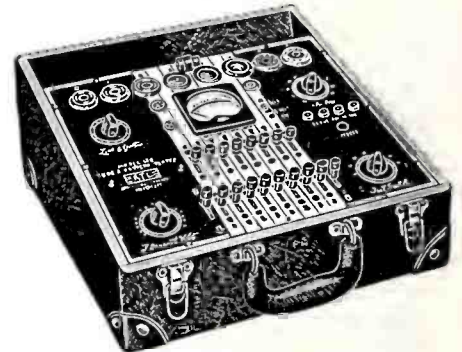


Sprague dual atoms

★ Three new dual capacity electrolytics include 20-20, 16-16, and 8-8 rated at 150, 250, and 450 volts. These new units have separate positive and negative leads. Sprague Products Co., N. Adams, Mass.—RADIO TODAY.

Simpson Micro-Testers

★ Line of 8 small test instruments in pocket-size cases come in variety of AC and DC ranges. Model 280 is an AC ammeter with ranges of 1, 2.5, 5, 10 and 25 amps. Other models cover AC and DC volts, DC mills and microamps. Simpson Electric Co., 5216 W. Kinzie St., Chicago, Ill.—RADIO TODAY.

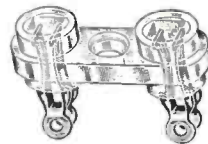


RTL tube checker

★ Permutation type switching circuit in Model 120 permits testing of all present type receiving tubes and any possible future variations in present base connections. Three DC voltage ranges to 1,000 are incorporated. Counter and portable models. Radiotechnic Lab., 1328 Sherman Ave., Evanston, Ill.—RADIO TODAY.

Radio City utility meter

★ Model 456 is an AC-DC instrument for general use. Voltage ranges for AC and DC are to 1,000 volts, resistance to 0.5 meg., and DB ranges from -12 to 54. Also available in laboratory type case; model 456P. Radio City Products Co., 88 Park Pl., New York, N. Y.—RADIO TODAY.



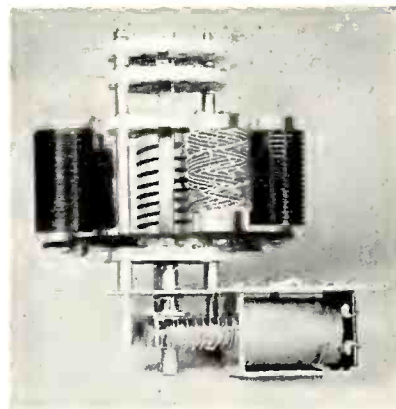
Amphinol crystal socket

★ Transparent low-loss polystyrene is the material used in new crystal holder. Phosphor-bronze contacts are silver plated for low resistance. Single center screw mounting. American Phenolic Corp., 1250 W. Van Buren St., Chicago, Ill.—RADIO TODAY.



Aerovox midget capacitors

★ High capacity and low voltage are the features of new metal can electrolytic condenser line. Capacity ranges from 1000 to 3000 mfd. Working voltages of 6, 12, 15 DC. Small units have mounting strap. Aerovox Corp., New Bedford, Mass.—RADIO TODAY.



Coto-Coil switch unit

★ Bandswitch coil unit for remote control use has electro-magnet stepping switch. Various combinations of poles and contacts are available. Coto-Coil Co., Inc., 71 Willard Ave., Providence, R. I.—RADIO TODAY.

Brach FM antennas

★ FM-12-AR kit is a dipole antenna and FM-6-VR is a vertical type, both featuring iron core coupling transformers, and reception of broadcast, short wave and frequency modulation signals. L. S. Brach Mfg. Corp., 55 Dickerson St., Newark, N. J.—RADIO TODAY.

Welch radiation chart

★ School type illustrated wall chart covers gamut of Electromagnetic Radiations. Prepared by A. H. Compton, the multi-colored chart includes power, radio, heat, light, X-rays, cosmic rays and related radiations. W. M. Welch, Scientific Co., 1515 Sedgwick St., Chicago, Ill.—RADIO TODAY.

TO "CLEAR THE AIR"

(Continued from page 22)

categories of noise sources. Also, we introduced a noise-analyzer whereby the proper type filter can be instantly selected and properly hooked up for reducing any noise to a minimum. We have distributed tens of thousands of our 8-page folder, "Clear Reception," with telling results. But . . .

The general educational job is far beyond our capacity. We realize the need for a concerted effort. Your campaign seems the logical answer.

There is a potential business running well up into the millions of dollars if we can make the public, the electrical appliance manufacturers, users of electrical equipment, radio set owners, local authorities and public utilities fully aware of the possibility of radio-noise elimination.

More power to you for a well-thought-out campaign!

CHARLES GOLENPAUL
Sales Mgr. Aerovox Corporation
New Bedford, Mass.

Television Service Station Has New Prices

New reduced prices for television installation and service have been announced by MacAdams Equipment Co., Inc., 503-7 W. 56th St., New York City. The company has specialized in this service to the trade, in New York City, Westchester, Long Island and New Jersey, and now makes the reductions in keeping with the reductions being made on the sets themselves.

An average dealer installation price for a television receiver and antenna is now \$20, plus material. The MacAdams company is a factory authorized RCA Television Service Station "with personnel trained and experienced in doing television work for dealers, NBC, and CBS." The firm has already installed or serviced over 200 of the tele receivers in the New York area.

Wisconsin Servicemen Elect Officers

P. R. Arthur has been named president of the newly organized Chippewa Valley Radio Servicemen's Association of Eau Claire, Wis. Other officers named are H. C. Bauer, vice-president; H. M. Parker, secretary, and V. G. Olsen, treasurer.

The purpose of the organization is to furnish honest, efficient service to radio owners by experienced men with modern equipment and to try and correct conditions causing radio interference.

Neely Has Meeting

Norman B. Neely, manufacturers' representative of 5334 Hollywood Blvd., Hollywood, Calif., staged a big technical meeting Mar. 21, which was attended by over 100 leading engineers of the area. A feature was an illustrated lecture, "Square Waves and Their Application" by Bill Hewlett, Hewlett-Packard Co., Palo Alto, Calif.

The 5 essentials of a good REPLACEMENT VIBRATOR

MANUFACTURER'S RELIABILITY

REPUTATION FOR HIGH QUALITY

GENERAL ACCEPTANCE BY TRADE

DEPENDABILITY IN OPERATION

REPEAT SALES — SELF ADVERTISING

The value — to YOU — of any Replacement Vibrator must be ultimately judged by these arbitrary standards. The in-built quality of the instrument itself — its efficiency and long life — is reflected clearly in the light of these considerations.



Meissner reliability is unquestioned! For many years this name has consistently been applied only to merchandise of the highest quality in its field.

Meissner Vibrators have proved no exception to this rigid rule. When the original quality of the unit which Meissner took over two years ago did not measure up to Meissner standards, immediate steps were taken to re-design it. After a year of intensive development the present unit was evolved — second to none in performance and dependability!

These new Vibrators have been on the market for some time and their increasing sale has given evidence of the "swing to Meissner". General acceptance has increased by leaps and bounds according to reports from Meissner jobbers.

Operating dependability has been proven by severe life tests and in the field. Let the NEW Meissner Vibrator prove to YOU that it's really best in the field. Repeat Sales will tell their own story!

GET YOUR COUNTER DISPLAY NOW!

This attractive counter display in striking Meissner orange-and-black will sell Vibrators for you. Contains two each of three most popular replacement vibrators — at a special low price!

In addition—a big, clearly printed Wall Chart, showing the proper replacement Vibrator for any make of auto set—any model—is packed Free with each display. A good start for any dealer-serviceman's stock and a real opportunity for profits. See your Jobber at once or write today for further details and prices!

FREE CATALOG AND VIBRATOR GUIDE

Meissner's big 48-page complete catalog describes over 600 items of interest to the radio serviceman. New 12-page Vibrator Guide lists all 4-, 6-, 12-, and 32-volt Vibrators for every model of auto or farm radio set ever made. Complete cross-reference and base diagrams. Write for either one or both to the address below—free and postpaid. A postal card will do.



ADDRESS DEPT T-4

Meissner MT. CARMEL ILLINOIS
"A FAMOUS NAME FOR TWO DECADES"

SERVICE NOTES

(Continued from page 36)

The direction the meter moves when the switch is closed is noted and also which primary lead is connected to the positive terminal of the battery. The battery and switch are then connected to the other primary while the voltmeter is left as it was originally. The switch is again closed and the direction of movement noted. If the meter moves in the same direction it did when the switch was closed in the other primary, the lead connected to the positive terminal of the battery may be labeled "positive." If the voltmeter moves in the opposite direction, reverse the battery leads and identify the "positive" winding lead.

For series operation the two windings are interconnected "positive" to "negative," while the two "free" leads go to the line.

For parallel operation of the windings, two "positive" leads are connected together and also the two "negative" leads are joined.

Crosley Model 719

There are three versions of the 719 model. One model has mechanical push button tuning, the second has push button tuning and a loop antenna, while the third shown in the schematic has the electric Magnetune push button tuning.

The circuit is a conventional super-het. Bias for the 25L6GT output pentode is obtained by the voltage drop across the 140 ohm series cathode resistor. When the station buttons are operated, the 25L6GT cathode circuit is opened and the Magnetune coil is connected directly across the power supply. The coil thus energized by the DC operates the tuning condensers.

The voltages marked on the schematic should be measured with a 1000 ohm per volt meter on the 250-volt scale, at full volume control and no signal input.

455 KC. IF

Connect the signal generator through a 100 mmfd. capacitor to the antenna lead on the set. If it is necessary to ground the signal generator to the chassis, do so with a series .001 condenser. Turn the tuning condenser completely out of mesh and turn volume control full on. Set generator at 455 kc. and adjust second IF transformer trimmers for maximum indication on the output meter. Adjust 1st IF trimmers for maximum output. Always use lowest signal input that will give reasonable indication.

The series wave trap found on some models is to be tuned to interfering code stations around 455 kc. Before aligning the IF stage transformers, this trap should be tuned away from 455 kc. to allow the signal to get through. After IF alignment, the trap should be retuned to the frequency of the interfering station or to give mini-

mum output at 455 kc. when the signal generator is connected as recommended.

To align the RF end, leave the tuning gang turned to minimum capacity and set the generator to 1725 kc. Adjust the padder on the oscillator section of the gang until the signal is heard. The set need not tune through 1725. Set the generator at 1400 kc. and tune in the signal. Adjust the padder on the antenna gang section for peak output. Do not re-adjust oscillator padder. The signal generator is connected to the antenna throughout the alignment of the IF and RF sections.

Radio Noise from House Fuses

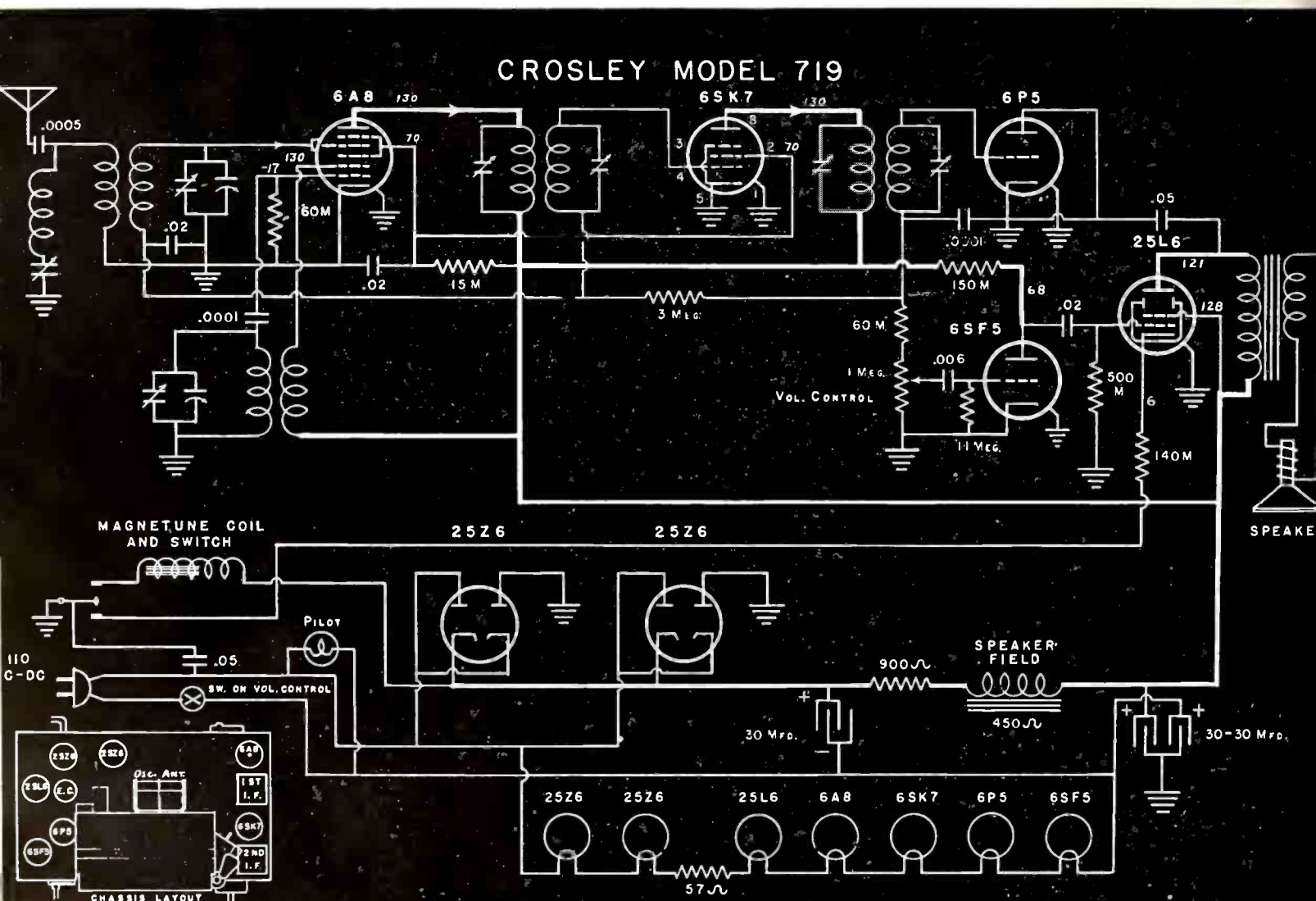
Editor RADIO TODAY:

In your March issue, Page 30, in regard to "Clearing the Air" of radio noise and interference, you forgot one important cause—House fuses!

These fuses cause plenty of noise and interference when you least expect them to.

(Signed) SILENT X
Poughkeepsie, N. Y.

Our correspondent is right. Ordinary Edison-base house fuses sometimes prove to be the source of interference that is very baffling to locate. Sometimes these fuse contacts corrode, due to the presence of gases or moisture



(leaking gas from refrigerators is one cause), and then the fuse sets up an interrupter or rectifier action as the current flows through the circuit, creating alarming noises in the radio set. If the trouble can be located in the fuse it is quickly corrected by sand-papering or filing off the corroded material, so that bright metallic contact is made between the fuse and its receptacle, particularly at the center contact.

Reducing Fluorescent Lamp Radio Interference

The new fluorescent lighting sources introduced by several manufacturers, if not properly installed, may cause radio interference to nearby sets.

Mr. W. P. Lowell, Jr., engineer for the Hygrade Sylvania Corp., Emporium, Pa., offers the following suggestions for the reduction or elimination of such interference.

"Radio interference may be caused by direct feedback from the fluorescent unit through the electric power lines to the radio set. This is minimized or eliminated by the use of good auxiliaries (current control) which have a small condenser (.005 mfd.) parallel with the length of the lamp, or starting switch.

It is, of course, desirable to have the metal parts of the fluorescent lighting unit well grounded and be sure that all electrical contacts are well made, particularly that the lamp is well seated in the sockets.

RADIATION NOISE

Radiation from the lamp to the electric power line, and thence to the set is the second type of "noise coupling" between set and lamp. This may be helped by proper grounding of the set and sometimes by a capacity-inductance filter between line and the radio set.

One of the most difficult types of interference is that caused by direct radiation from lamp to the receiving antenna, or to the radio set itself. One solution is obvious, move the antenna and set as far away from the fluorescent lighting unit as possible. Another device is to shield the antenna leading-in wire and a last resort, call for the installation of 1/4 in. mesh galvanized screen completely around the fluorescent lamp with the screening grounded."

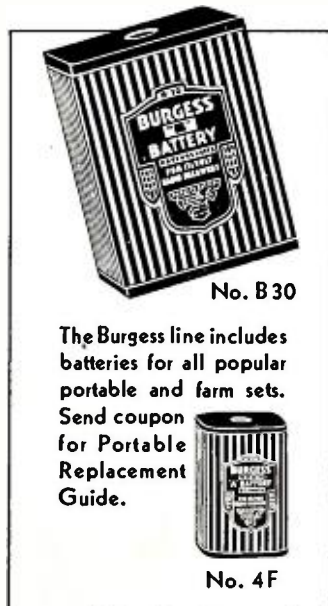
A circuit diagram and further discussion on fluorescent lamps will be found on page 41 of August 1939 RADIO TODAY.

Speaker Parts for S-W Campus Models

Two different types of speakers for Stewart-Warner Campus models 07-51 and 07-51H have replacement cones listed under the same part number. One cone has a bakelite spider with two mounting holes and should be ordered as 114886-E. If the cone and voice coil assembly has a round spider made of material similar to the cone, specify 114886-L.



Since Radio Began— These Stripes Have Identified Better Batteries



The Burgess line includes batteries for all popular portable and farm sets. Send coupon for Portable Replacement Guide.

Years ago—Burgess pioneered the first successful portable radio batteries. Since that time, close collaboration with scientists and radio experts, tests under most adverse conditions, and unending laboratory research have constantly improved Burgess quality.

Today—as always in the last 20 years—Burgess stripes identify the Best in Batteries.

Capitalize the profitable new market . . . Sell Burgess Batteries with new portables and for replacement.

BURGESS

Burgess Battery Co.
Freeport, Illinois

Please send Portable Replacement Guide and complete information on the Burgess line of Radio Batteries.

Name.....
Company.....
Address.....
City-State.....





**The
Cheapest
Electrolytics**

★ Believe it or not (with due apologies to Ripley), the very cheapest capacity you can use is offered by the full-sized heavy-duty AEROVOX metal-can electrolytics.



★ With honest-to-goodness full-rated dry electrolytic sections, with nothing subtracted by way of ultra-etching or tricky treatment of foils, with adequate separators and electrolyte and can surface for prompt and effective radiation of generated heat, these units stand up to hour-after-hour operation, day in and day out, for many years on end.



★ So if you're building or servicing on that sort of basis, by all means use these full-sized, tried-tested-proved jobs. To do otherwise is to spend far more money in the long run.



Ask Your Jobber . . .

★ Let him show you some of these heavy-duty AEROVOX electrolytics—Types E, G, I, EM, SM, GM. Ask for latest catalog and note extensive listings. Or write us direct.



SERVICE NOTES

New HF Tube and Chart by RCA

Receiving Tube Characteristic Chart, 1275B, including data on all types of radio set tubes has a complete socket connection diagram reference. Classification tables break down the various tube types into their usual services such as detectors, power amplifiers, etc. This booklet is available from the Commercial Engineering Section, RCA Mfg. Co., Harrison, N. J.

A push-pull beam power amplifier for use at full rating on frequencies up to 200 mc. has just been announced by the RCA tube division. The 829 will deliver approximately 83 watts at 500 plate volts and 0.7 watts driving power at 200 mc. in class C telegraph CCS. The new tube is a twin beam power pentode with a center tapped 12.6 volt filament. All-glass construction is used with plate leads out the top.

Book Review

Applied Acoustics

By H. F. Olson, and F. Massa
Second Edition
Published by P. Blakiston's Son & Co.,
1012 Walnut St., Philadelphia, Pa.

This text by Olson and Massa, Acoustic Research Director, and engineer in the Sound Engineering Division of RCA respectively, is a complete work on sound and acoustics.

Although primarily of interest to the sound engineer, its chapters on microphones, speakers, horn type loud speakers, calibration of microphones, testing of loud speakers, architectural acoustics, and measurement of noise, will be valuable to the sound dealer, and serviceman working with public address equipment.

SOLVES PA PROBLEMS

Of importance and interest to sound men is a graphical comparison of acoustical, electrical, and mechanical systems. The understanding of microphone, and speaker operation is greatly aided by the interrelation of the quantities more generally known.

The subject of loud speakers and enclosures is described in both words and mathematics. The acoustical labyrinth, acoustical phase inverter, folded horn and other much-used systems are covered in the chapter on loud speakers.

Frequency characteristic curves of the various horns and speaker enclosures help in selecting types of equipment.

The chapter on architectural acoustics covers the subjects of reverberation, sound absorption, sound proofing, sound reinforcement systems, and many other similar subjects. A complete tabulation of the sound absorption coefficients at several frequencies or building materials is included.

This valuable text and reference manual is bound in washable fabric. Its 494 pages include 283 illustrations, diagrams, charts, and reference tables. The price of Applied Acoustics is \$5.50.

Typical Troubles

Up to the minute service hints on late model sets. 1.—Auto radios

Philco

CHRYSLER C1708

Noisy operation is due to bad 7B8 oscillator-detector tube. Substitute good 7B8 even if tester shows original tube ok.

(Continued on page 54)



A simple circuit gives you an effective tone compensating system to boost or attenuate the bass and treble frequencies independently of each other. It may be incorporated in your present amplifier or receiver.

It is the same system used in the finest THORDARSON Amplifiers. All you need is a T-14C70 choke, 4 resistors, 5 condensers, 2 THORDARSON R-1068 tone controls, and 6C5 tube. Complete details and instructions are available in the THORDARSON AMPLIFIER GUIDE 346-D.



AMPLIFIER GUIDE

A 32-page Guide giving, in addition to the Dual Tone Control, diagrams and instructions on 10 Amplifiers and other information of considerable value. Available at your THORDARSON Distributors for 15c.

THORDARSON

ELEC. MFG. CO., CHICAGO
TRANSFORMER SPECIALISTS SINCE 1895

SOUND GROWS UP

(Continued from page 17)

use, and present pictures and survey, personally, to the prospect.

Now is the time to point out that proper equipment must be used, that it must be fitted to the job it has to do, located correctly for best coverage, and maintained in good condition, and that you, *the radio man*, are best qualified to do this.

Ideas will help to sell *any* job, and so you should mix a few *real* ones in your selling.

Remember that many people are hard of hearing, and that sound can be disseminated by individual phones, earpieces, or bone conductors, as well as by loudspeakers.

Special church pews equipped with these individual devices have increased church attendance.

Several rows of seats so equipped in theatres have attracted new patrons and paid for themselves in short order.

Schools too, for classroom and auditorium, can use this type of installation.

Electronic chimes will reproduce the finest carillon, for churches, at a fraction of the cost of a bell-carillon installation.

Paging, or call systems, are being used by hotels, large stores, industrial plants, parking lots, bus terminals, airports and many other similar businesses, for locating people, or giving instructions to individuals or groups.

Actually, sound has some practical application wherever people gather together, for business or for pleasure, in the open, or in a building. Prospects are all around you.

Sound Sales Engineers in Meeting

In progress at RCA headquarters at Camden, N. J., are the periodic sales conferences on merchandising plans for the company's complete line of RCA sound equipment. Sales engineers from all parts of U.S. are attending, including P. B. Reed, Atlanta; John Yost, Cleveland; A. C. Lindquist, Chicago; S. D. McIntosh, Dallas; H. V. Somerville, Kansas City; A. W. Schneider, New York; C. D. LaHar, San Francisco, and Perry Smith, Boston.

Robert Shannon, executive vice-president; Henry C. Bonfig, commercial vice-president; Frank Deakins, vice-president in charge of special apparatus; George Ewald, commercial sound section manager, and Fred D. Wilson, manager of field sales, are to address the group, as are representatives of the advertising and engineering departments.

Erwood Launches Sound Slogan Contest

A \$450 slogan contest, open to all radio jobbers and service men, has been announced by Erwood Sound Equipment Co., 224 W. Huron St., Chicago. The purpose is to get a slogan best describing Erwood sound equipment.

The awards are an 18 watt complete portable system, a 20 watt mobile job, and a 12 watt portable system, offered complete with tubes. Contest blanks come from the Erwood firm; competition closes May 15.

Rissi Completes Big Police Radio Job

A 45-unit radio installation has just been completed by Rissi Bros., Inc., Grand Rapids, Mich., the distributing company which is a branch of Rissi Bros. at Detroit, for the local police Radio Bureau. The two-way communication system, believed to be one of the largest of its kind to be made at one time, was designed by police Lieut. Kirchner in consultation with the radio jobber.



A Giant Tube Tester - MODEL 325

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



A Giant Set Tester MODEL 320

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

Giants

in everything but price

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

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

Ask for new catalog of remarkable Simpson values.

SIMPSON ELECTRIC CO.
5216-18 Kinzie Street, Chicago

SIMPSON

INSTRUMENTS THAT STAY ACCURATE



An Advanced Signal Generator MODEL 310

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

KENYON

HELPS MAKE 1940 THE
BIGGEST P.A. YEAR

with **3** new

UNIVERSAL P.A. KITS
YOU CAN BUILD YOURSELF

Smart P.A. men everywhere are building their own P.A. jobs and making EXTRA PROFITS doing it.

KENYON'S 3 new UNIVERSAL KITS will win your approval at once because like all Kenyon Products you know they're RIGHT. Then, too, their commercial appearance will win sales for you; they're streamlined beauties with the "professional touch." Build them for your particular application. Universal output transformers make them adaptable to any requirement.



KENYON "50"

The KENYON "50" uses 6F6, 6SF5, 6H6, 6SJ7-80. Conservatively rated at 5 watts class A. 110 dh Gain. Basic kit consists of Par-Metal punched deluxe chassis with screen cover and 5 KENYON QUALITY TRANSFORMERS. Serviceman's net price of foundation kit, \$18.60

KENYON "150"

The KENYON "150" uses 6SJ7, 6C5, 6H6-80 pp 6V6. Conservatively rated at 15 watts class AB. 110 dh Gain. Basic kit consists of Par-Metal punched chassis, sloping front cabinet and 6 KENYON QUALITY TRANSFORMERS. Serviceman's net price of foundation kit\$22.78

KENYON "600"

The KENYON "600." Here is a real amplifier designed for broadcast but available for the first time at a real saving. Uses 6SJ7-6SF5, 6N7, 6F6, 6H6 pp 6L6-82-83. Power Supply on separate chassis reducing all possibility of hum pick-up. Smart, modern with up to the minute circuit design. Rated at 60 watts output 125 dh gain with pp 6L6's operating class AB-2. Basic kit consists of 2 Par-Metal punched chassis, amplifier screen cover, sloping front cabinet and 7 KENYON QUALITY TRANSFORMERS. Serviceman's net price of foundation kit.\$36.03

Ask for Free Bulletin fully describing these amplifiers at your jobbers . . . or write us direct.

FREE CATALOG

Just off the press. The biggest in our history. Profusely illustrated. Graphs, charts, special sections on Amateur, Laboratory Standard, New Plug-in, Broadcast, Industrial and other transformers. Copy sent free to those requesting it on their letterhead.



KENYON
TRANSFORMER CO., INC.
840 BARRY STREET - NEW YORK, N. Y.

SERVICE NOTES

(Continued from page 52)

FORD F-1740

Noisy and intermittent: Wiring in IF transformers grounds to can. Both transformers must be removed at same time as shield cans are riveted together. Primary windings may be burned out. Replace coils or slip insulating tubing over leads. Bad hum in set is due to open filter capacity.

STUDEBAKER S-1726

Set dead: Bottom cover plate is without ventilation holes and wax from tone control condensers melts down onto 7C5 output tube socket. Replace condensers and drill holes in plate over socket.

MOTOROLA 29B

Low sensitivity and hissing: Replace the 1000 ohm resistor in cathode of RF tube and 820 ohm resistor in cathode of first IF tube with 400 ohm resistors and re-align set.

United Motors Service

BUICK 980534-5

Set dead: 15,000 ohm 2-watt screen supply resistor for RF, oscillator, and IF stage open. Replace with same size unit.

PONTIAC 983705

Noisy operations; series mica tracking condenser in oscillator breaks down. Replace with .000865 mfd. unit. Also the air tuned 2-12 mfd. oscillator trimmer causes similar trouble.

PONTIAC 983667

Noisy set, intermittent operation: Series oscillator tracking condenser breaks down. Replace with .000865 mica unit.

PONTIAC 983679

Set dead, fuse blown: Metal cover plate over power supply section shorts "A" lead. Insulate with tape or fibre strip.

High Quality Direct Coupled Amplifier Developed by ACA

Most radiomen can remember the quality and simplicity of early direct-coupled amplifiers, such as the Loftin-White, and also some of the headaches that went along with them.

The Amplifier Co. of America, 37 W. 20th St., New York, has recently introduced a line of 10, 20 and 30 watt amplifiers that feature a direct coupled push-pull circuit. Using a pair of 6SJ7's and a pair of 6L6's in the output stage, 10 or 20 watts may be realized with 250 and 325 volts on the plates of the power stage.

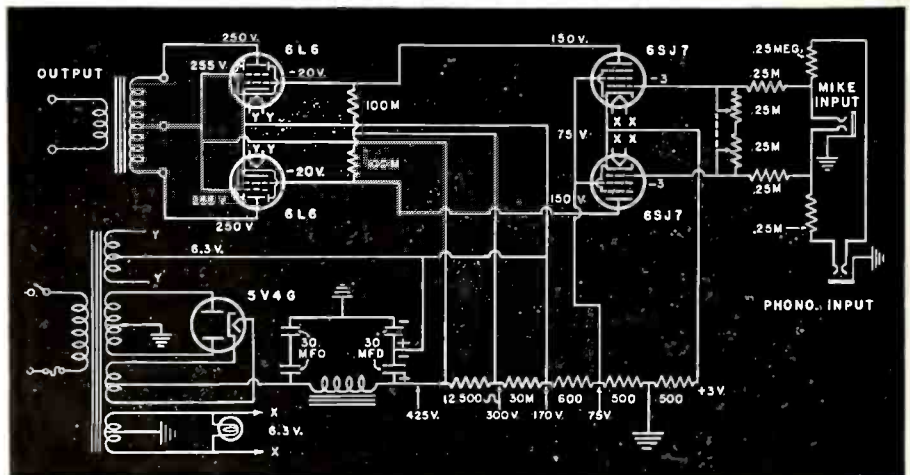
PUSH-PULL BALANCING

The simplicity of the circuit is shown in the wiring diagram. The direct coupling between the plates of the 6SJ7's and the grids of 6L6's is possible by operating the electrodes at the same potential above ground but at the same time connecting their cathodes to the bleeder resistor at the point which will give the correct bias and proper plate voltage.

The voltages marked on the tubes are the actual effective voltages, while those on the voltage divider are measured to ground. It will be noticed that the 6L6 plates operate at 420 volts above ground, the control grids at 150, and the cathodes at 170. The actual plate voltage is therefore only 420-170 or 250 volts, and the grid is 150-170 or -20 volts, which is the correct bias. The push-pull arrangement stabilizes and overcomes defects of previous direct coupled amplifiers.

The frequency range of the amplifier is very broad and extremely flat. A response of plus or minus 1 db from a few cycles to 20,000 cps is readily obtainable.

The input and output connections may be varied for dual channel operation. The amplifiers are available in both kit and wired models from the manufacturer.



Circuit of direct coupled amplifier built by Amplifier Co. of America. P.P. circuit permits use as dual channel unit with separate inputs.

Naper Picked to Head Webster-Chicago Exports



Appointed as foreign sales head for Webster-Chicago, H. J. Naper.

The latest expansion in the sales departments of Webster-Chicago, makers of all types of sound equipment, is the organization of their own export department. H. J. Naper has been named director of foreign sales, to head up the new activity.

Mr. Naper has for the past six years been employed in the export department of a large Chicago company, where he gained a wide knowledge of foreign trade trends.

Germain to Head Sales for Andrea

The appointment of E. S. Germain as domestic sales manager for Andrea Radio Corp., 48-20 48th Ave., Woodside, N. Y., has just been announced. Mr. Germain, who is widely known as "Brownie," has had 20 years' experience as a successful sales executive in radio. He has worked with Columbia Phonograph, Zenith, RCA, and others.

The Andrea firm is one of the companies aggressively at work on television, as the executives believe "it is here to stay." Andrea points out that the dealers who get started on television early, will be the ones to cash in on the biggest profits.

Philco Radios in New Trade-in Drive

An intensive Spring promotion for Philco radios has been announced by Ernest B. Loveman, general advertising manager of the company. The program features a tieup with dealers and distributors which provides a greater trade-in allowance on old radios.

Store displays, newspaper advertising, and an ad drive in national magazines are parts of the drive.

Universal Picks Insignia

Universal Microphone Co., Inglewood, Calif., has adopted a trade mark for its products, consisting of the letter "U" superimposed upon a flash. It is now registered at U. S. Patent office.



"always specify
Centralab"

Div. of Globe-Union Inc.

900 E. Keefe Ave.
MILWAUKEE, WISC.

Centralab

KEEPS LATE
HOURS WITH THE
SERVICEMEN



With fingers weary and worn the poor lad probes for trouble in the shape of some nice noise, sarcastic shorts, "lousy" leaks and open circuits.

When he finds them . . . Centralab replacement parts end his worries. Hams . . . servicemen . . . or set builders agree on CENTRALAB . . . Fixed Resistors . . . Volume Controls . . . Ceramic Capacitors . . . Switches.

• BUY DIRECT FROM THE MANUFACTURER AND SAVE •

THE NEW MODEL 1230 SIGNAL GENERATOR WITH FIVE STEPS OF SINE-WAVE AUDIO

"I can't see how you do it at that prices!" That one sentence states the consensus of opinion of the top-flight radio experts who examined and checked this new instrument, but you needn't be an expert to appreciate the amazing value we are offering in this new, most-advanced Signal Generator. Designed for appearance by one of the foremost instrument designers and engineered by a Radio Engineer who has specialized in frequency measuring devices for the past fifteen years, the Model 1230 is our bid for all of the 1940 Signal Generator business.

RADIO FREQUENCIES from 100 K.C. to 90 Mega-cycles in bands by front panel switch manipulation. All direct reading and accurate to within 1% on I.F. and Broadcast bands, 2% on higher frequencies. The R.F. is obtainable separately or modulated by any one of the five Audio Frequencies.

AUDIO FREQUENCIES:
5 steps of SINE-WAVE audio 200, 400, 1000, 5000 and 7500 cycles WITH OUTPUT OF OVER 1 VOLT. Any one of the above frequencies obtainable separately for servicing P.A., hard-of-hearing aids, etc.

ATTENUATION:
Late design, full-range attenuator used for controlling either the pure R.F. or modulated R.F. The Model 1230 comes complete with tubes, shielded cables, moulded carrying handle and instructions. Size 14" x 6" x 11". Shipping weight 15 pounds. Our net Price.....



SPECIFICATIONS:

CIRCUIT:
The Model 1230 employs an improved electron coupled oscillator circuit for the R.F. affording positive protection against frequency drift and a Hartley oscillator circuit for the A.F. section.

DIAL MANIPULATION:
Large 5 1/2" dial etched directly on front panel, using a new mechanically perfected drive for perfect vernier control.

APPEARANCE:
The front panel is etched by a recently perfected process which results in a life-long attractive finish and the instrument comes housed in a streamlined shielded cabinet.

CURRENT SOURCE:
The Model 1230 operates on 90 to 130 Volts A.C. or D.C. any frequency.

\$12.85

SUPERIOR INSTRUMENTS CO.

136 LIBERTY ST.

DEPT. T4

NEW YORK, N. Y.

Mr. JOBBER! N.R.P.D.A. Has an Important Message for You!

On Thursday, June 13th, 1940 at 7 P.M. at the Stevens Hotel in Chicago, there will be held the First Annual Meeting of the NATIONAL RADIO PARTS DISTRIBUTORS ASSOCIATION.

This will be a Dinner Meeting, for NRPDA Members exclusively, immediately after which a Business Meeting will be held. Complete reports will be rendered by your Officers. A feature of this meeting will be an Open Forum which will afford Members the opportunity to express their opinions on the major issues facing our Industry.

You cannot afford to be absent from this important meeting. Use the coupon below and mail it at once to N.R.P.D.A., 5 West 86th Street, New York, N. Y.

It is up to ALL of us to make this meeting a success. Let us set an example to the entire Radio Industry by showing that we can and will solve our business problems through mutual cooperation.

Since it is essential to make the necessary preparations well ahead of the date of the dinner, only Members making reservations in advance can be admitted to this meeting. It is to your advantage to send your check AT ONCE covering reservations for the number of individuals in your organization who will attend.

NOTICE TO NON-MEMBERS

If you have not yet become a Member of N.R.P.D.A. but plan joining this growing group of influential and far-sighted jobbers at Show Time, we suggest that you send your check covering your dinner reservations and request that we send Application for Membership in N.R.P.D.A. (Only enrolled members may attend this dinner.)

MAIL THIS RESERVATION COUPON NOW

N.R.P.D.A.
Arthur Moss, Executive Secretary
5 West 86th Street, New York, N. Y.

Please reserve places at your Dinner Meeting, Thursday
June 13th, 1940, at 7 P.M. Enclosed is my check for \$.....
(\$2.50 per person).

NAME OF COMPANY.....

ADDRESS

CITY..... STATE

NAME OF INDIVIDUAL



S. K. MacDonald, mfrs. rep of 1343 Arch St., Philadelphia, president of "The Representatives." This group is now active in planning "Radio Special" train from New York to Chicago Radio Parts Show, June 11-14.

Gale in Big-Scale Expansion

The big addition to the plant of Gale Products, Galesburg, Ill., is now complete, according to news from C. P. Rossberg, Gale general manager. Some 18,000 sq. ft. of floor space have been added to the new structure which was finished about 18 months ago—extra room for making more Gale refrigerators and portable air conditioning units.

Gale sales manager L. H. D. Baker reports sales of Gale boxes far ahead of last year, and says that the expansion of facilities therefore comes at an appropriate time. One of the major factors in the sales increase, he declares, is the "Kit Plan," which was introduced to help dealers with their problems on inventory, loss leaders, and full margins. Mr. Baker reports ready acceptance of the plan, by both large and small dealers.



One of Gale Products' two new portable room coolers complete with two-way switch for year round use as circulator.

Dealers to Get Benefit of Frozen-Food Interest

In an exclusive tie-up with Birds Eye Frosted Foods, Philco now makes it possible for dealers to give away seven of the Frosted dinners, with the purchase of each advanced design Philco refrigerator. The promotion is nationwide, and will be backed by local newspaper ads, and by cooperative work between refrigerator dealers and Birds Eye retailers, according to the announcement by Ernest B Loveman of Philco.

Purchasers of the 1940 model Philcos will be given certificates, which will be honored by Birds Eye representatives. Both groups of dealers will use posters and hand bills publicizing the offer, and it is expected that Birds Eye dealers will be able to supply refrigerator retailers with "hot" leads on prospects for boxes.

Mr. Loveman points out that this big-scale promotion is only the first of a series of refrigerator merchandising ideas which Philco plans in a vigorous effort to help dealers raise their average unit sale and dollar margin.

Emerson "Campaigner" in Profit Program

A "Campaigner" radio model, with newspaper advertising and point-of-sale material designed to tie in with the 1940 political campaigns, is now being merchandised throughout the U.S. by distributors and dealers for Emerson.

The set features a super-size chassis, a bigger loop-antenna, a larger speaker and a "Miracle Tone Chamber" and is priced at \$12.95.

Emerson president Ben Abrams, in announcing that the Campaigner will during coming months be the company's most-featured model, said that the promotion has a double advantage for the dealer: to raise his starting-price by giving the public a genuine buying incentive (thus increasing the seller's dollar profit), and to make it easier to set up the customer to higher price brackets.

National Union Has New Line of Radio Batteries

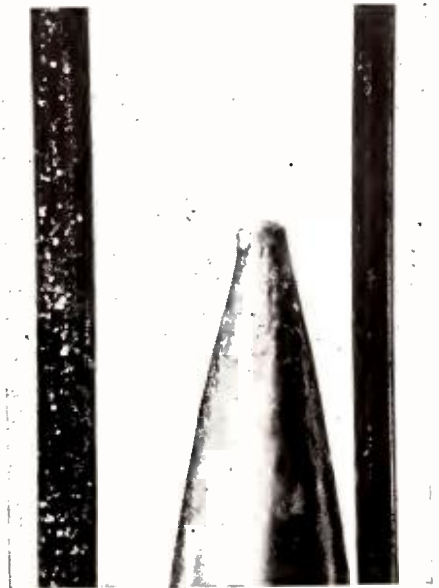
A complete line of radio batteries is now being introduced by National Union Radio Corp., 57 State St., Newark, N. J., as "a complete renewal service for all popular radios." The batteries will be sold exclusively by radio service dealers.

The new line includes 10 different numbers, in both standard and portable sizes. To help build the dealer's battery business, each of the NU packs has a "caution" note warning the customer about improper installations and suggesting that the radio dealer be called in, in cases of doubt.

Sylvania Promotion

George C. Isham, Hygrade Sylvania sales representative, has recently taken over the entire New York State territory, excluding the greater New York Metropolitan area, and part of Pennsylvania.

WORLD'S SMALLEST TUBE drawn by SUPERIOR



Pure nickel tube 26/10,000 of an inch in diameter (right) compared with the point of a common house pin (center) and a strand of human hair (left) magnified approximately 180 times.

ELEVEN MILES TO THE POUND!

.0026" OD
.008" Wall
.0010" ID

• Superior craftsmanship has produced this superlatively small pure nickel tube. Although it has no commercial value as yet, it is a perfect example of the unusual ability of Superior Tube Company — whose entire facilities are focused on producing tubing from 5/8" OD down.

Such specialization, in many metals and in both seamless and welded types, has forced a position of leadership which industry recognizes as exceptional. We will gladly discuss any metal tubing problems with you. Just write,



SUPERIOR TUBE COMPANY
THE BIG NAME IN SMALL TUBING
DEPT. R. NORRISTOWN, PA.

RECO TON
Recording
Needles

MAKE BETTER RECORDINGS

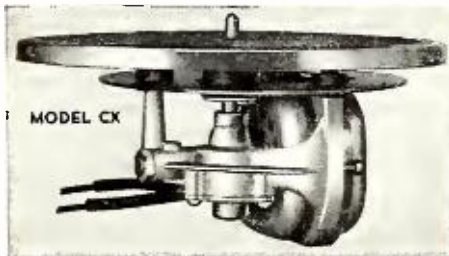
Because

- Diamond-dust Polished
- Absolutely Uniform
- Swedish Steel Alloy

Write for price list also ask about our Sapphire Cutting Needle.

RECO TON
CORPORATION
178 Prince St. New York, N. Y.

Depend On Phonograph
MOTORS
Built by Specialists



LIGHT-WEIGHT for your portables and table models, or heavy-duty for big combinations, electric or spring drive . . . you get the dependable motors you want—at the right prices—when you pick the famous General Industries make. Designed and built by phonograph motor specialists who have produced millions.

Single motors in a wide range of selection. Motor-and-pickup assemblies. Complete record changer units, including motor, pickup and record changer, assembled on mounting plate. High quality materials. Most successful original basic designs, kept up-to-date for a quarter century by our own engineering department.

Send now for new free Catalog and Prices.

The **GENERAL INDUSTRIES CO.**

4038 TAYLOR ST., ELYRIA, OHIO



"Steamline functional design" in sound products of individuality, was the keynote of this meeting of Clarion sound execs. The Transformer Corp. of America officials offer new Spring line of P.A., "basically different in appearance." L. to r: J. R. Schoenbaum, special products engineer; N. F. Manicardi, cost control; W. W. Whiteside, production head; Roy Neusch, treas. and mgr.; Hubert L. Shortt, president; W. H. Wells, CISE sales; F. X. Dostal, chief engineer; and George J. Sandberg. Center: 70-watt amplifier.

**Emerson in Big Sales
Drive on New Portables**

A brand new 1941 line of seven "Three-Way" portable radios is now being introduced throughout the country by distributors of Emerson Radio & Phonograph Corp. The line is launched via an elaborate local and national campaign, including trade presentation books, a big store display unit, and a series of newspaper ads and other dealer helps. The promotion theme is based on the "Super-Sensitive," "Long Distance," and "American-Foreign" receivers featured in the announcements.

The new line includes a promotion leader at \$19.95, complete with batteries, a "super-sensitive" long-distance model at \$29.95, an American-Foreign set at \$34.95 and a selection of other models, in a choice of colors at \$24.95. There is also an all-walnut model at \$34.95. All complete with batteries.

Among the features of the new 1941 line is an automatic, foolproof power-shift for battery and light-socket operation on which U. S. patent claims have been granted. "The

plug itself is the switch—with no supplementary devices to get out of order." This development, which employs two independent output tubes—one for battery operation and one for AC-DC light-socket operation—makes it possible to get the full output of house current and also the most economical and efficient output from battery operation. Because of other exclusive i.f. and built-in loop developments, the sensitivity of the new Emersons, particularly the long-distance and the American-foreign models, has been vastly increased.

**Pacific Coast Firm
Open for Radio Lines**

W. L. Sexton and Ralph Lamm, executives of Troy Radio & Television Co., 1142-44 S. Olive St., Los Angeles, Calif., have expressed an interest in representing eastern radio manufacturers who need coverage on the Pacific Coast. The Troy organization has jobber and dealer set-ups, and is prepared to blanket the Western States generally, or just Southern California. Radio manufacturers in the East may contact the Troy officials directly.

**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.

Export Dept.
116 Broad St., New York, U.S.A.
Cable Address: Minthorn, New York

KEN-RAD

DEPENDABLE RADIO TUBES

RECORD NEWS

(Continued from page 24)

RCA Starts Series of Popular Albums

With the release of six new popular albums, the first group of a series, RCA Victor has recently entered a new sales field of recorded entertainment. These records are described as "between the field of dance and classical music," aimed at the middle class buyer.

The albums list at \$2.75, and contain three 10-inch records, brightly packaged on the cover. The initial releases include Strauss Waltzes, Dinner Music, Famous Serenades, Opera in English, Tchaikowsky Program, Americana in Verse, and Alec Templeton's Musical Portraits.

Improvement Continues in Farnsworth Capehart Sales

Sharp increases in the sales volume being done by the Capehart division of Farnsworth Television & Radio Corp. are revealed in a letter to Capehart dealers, written by Farnsworth president E. A. Nicholas. Latest check-up, at the end of February, showed 1940 business to be about 70 per cent in excess of the totals for 1939.

Mr. Nicholas reported that new models will be added to the Capehart-Panamuse line, and that the company will continue the policy of selling direct to a restricted number of dealers in local areas.

Meyers Appointed Columbia Record Executive

Appointed to a new position with Columbia Recording Corp. is William T. Meyers, who will serve as executive consultant for chain-store sales policies for the Bridgeport, Conn., firm. Mr. Meyers has had a total of 14 years' experience in the field; he was for 12 years an RCA general manager in Chicago, and more recently worked with the Earl J. Goetze Corp. in Kansas City.

New Type Needle Ready at U. S. Record

A new "Suisse Royale" phonograph needle is announced by United States Record Corp., 1780 Broadway, New York City, as an importation for the trade made after extensive research and preparation. The needle is made of Swedish surgical steel, with a newly designed tapered point, guaranteed to give at least 10 perfect playings.

"Suisse Royale" will be packed 25 to a package, to retail at 25c. Dealer discounts are "unusually high." Needle cartons open into a lively counter display box. They will be backed by an ad drive to consumers and to the trade; samples are available from U. S. Record headquarters or from the firm's distributors.

Transparent Covers for Columbia Album

A brand new idea in the packaging of record albums has been introduced by Columbia Recording Corp., 1473 Barnum Ave., Bridgeport, Conn., with the appearance of the 4-disc album "Strauss Waltzes in Dance Tempo" by Al Goodman and his Orchestra. This set, No. C13, is packaged with "Lumarith," a transparent celluloid product which will keep the record album clean and attractive. The device is used to give the record dealer another advantage in displaying and selling popular albums.

A trio of new distributors for Columbia, Brunswick and Vocalion records have been announced: Philco Sales & Service, Inc., Louisville, Ky.; Rodefield Co., Indianapolis; and Indiana & Southwestern Music Corp., Houston, Tex.

Recoton needle

★ New "Transcription" phonograph needles designed especially for reproduction of home-recorded, studio-recorded and professional discs. Shadow-tested for performance and alignment with groove. Built for fine tone and absolute minimum background. Recoton Corp., 178 Prince St., New York City.—RADIO TODAY.



FARM SETS?

YOU BET . . . and below is just one of the many smart new models that make up the swell CLARION line.



It's a 4-tube 1.4-volt battery operated model—and it's a peach. A genuine wood cabinet, paneled in contrasting shades.

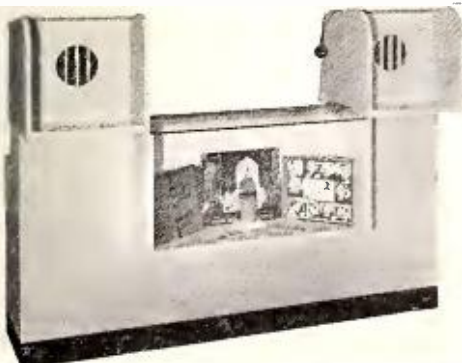


And here's a peach of an AC-DC in a light tan colored cabinet, with handle for easy transportation. . . . Yes, Clarions are priced right, to please the public and to make money for you.

Write for proposition, NOW
WARWICK MANUFACTURING CORP.
 1700 Washington Blvd. Chicago, Ill.

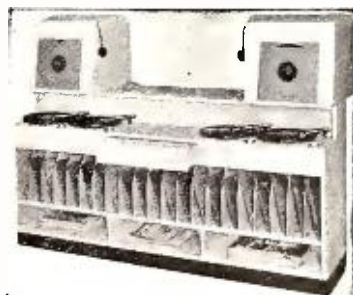
The RECORD BAR* you've been waiting for!

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



←FRONT VIEW . . . BACK VIEW→

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



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

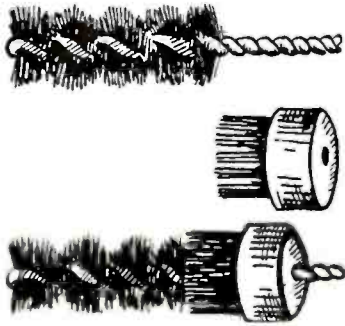
EST. 1920

*Patent pending. Copyrighted.

Send for Free Folder

"JIFFY" JACK BRUSH!

CLEANS JACKS, inside and face,
QUICKLY IN ONE OPERATION



This brush, when placed in the chuck of an ordinary hand or power drill, will quickly and thoroughly clean the inside and face of the jack. Now, you can do this job as often as desired and have it done in just a few minutes. You will be sure, too, that the jacks are thoroughly clean for best sound reproduction. Now in daily use by many broadcast stations, moving picture producers and telephone exchanges. Order a supply today from our nearest office. Prices quoted below are prepaid.

Dealers and Jobbers Wanted

Quantity	PRICES	
	Round	Long
1M or more	\$70 per M	\$22.50 per M
500 to 1M	\$90 per M	\$27.50 per M
100 to 500	\$110 per M	\$32.50 per M
Less than 100	\$140 per M	\$45.00 per M

FLOUR CITY BRUSH CO.

309 FIFTH AVE. SO. MINNEAPOLIS, MINN.

PACIFIC COAST BRUSH COMPANY
2245 E. 38TH ST., LOS ANGELES, CALIF.



The scene at Shuler Supply Co., New Orleans jobbers, when Thordarson sales manager W. S. Hartford visited there. L. to r., Mr. Hartford; "Bill" Shuler, owner; Harold Ballam, manager; Joe Muniot, Thordarson rep.

Philco Starts New Sales-Stirring Promotions

Philco's big promotional campaign on air conditioning this Spring will include a series of 200 sales and engineering meetings to be held in each of the 48 states between April 1 and May 10, according to Robert F. Herr, parts and service manager for Philco.

Eleven experts will address each of the meetings, which will be sponsored locally by Philco jobbers. The purpose

of the air conditioning units will be explained, along with "how to use" details and the proper sales approach. The meetings fit in with the company's current advertising campaign on the units, which includes large-scale direct mail and a heavy schedule in national magazines.

Mr. Herr has also announced a cooperative mailing campaign to stimulate sales of Philco parts and accessories. A series of the mailings have been prepared for use by distributors, dealers and RMS members.



*What's your future
in Radio?*

NEW! By John F. Rider THE OSCILLATOR AT WORK

Get your money's worth—KNOW! This new book tells all about ALL oscillators. It explains the theory by means of simple illustrations, diagrams and curves. It gives you the practical facts you need to combine theory and practice. Get your copy TODAY! 256 pages—illustrated—\$1.50.

THE CATHODE RAY TUBE AT WORK By John F. Rider

This is the most complete and practical book ever written on the subject—the only one prepared especially for the radio serviceman. New applications of the cathode ray tube during the past five years require that servicemen know its operation. 336 pages—over 450 illustrations—\$2.50.

AN HOUR A DAY WITH RIDER BOOKS
On Resonance and Alignment—On Automatic Volume Control—On D-C Voltage Distribution in Radio Receivers—On Alternating Currents in Radio Receivers. 60c each.

JOHN F. RIDER PUBLISHER, Inc.

404 Fourth Avenue, New York City

Export Div.: Rocke-Int. Elec. Corp., 100 Varlek St., N. Y. C. Cable: ARLAB

BANISH BEWILDERMENT—INCREASE PROFITS

Read RIDER BOOKS

YOU don't need to gaze into a crystal globe—just look around you. Television—radio facsimile—electronics in industry; these and other developments are crystallizing right under your very nose TODAY. Here lies the future of the servicing industry—here lies YOUR future in radio. . . . If you are ready to capitalize. Know as much about these developments as you know about a superhet—OR ELSE!—see the most profitable part of your business go to a competitor. Read carefully the contents of the following books—and ORDER TODAY!

SERVICING BY SIGNAL TRACING By John F. Rider

Use the system of servicing which is proved and endorsed—fastest—most modern—the system you can apply to all receivers regardless of age, type or make. Servicing by Signal Tracing operates independently of every limiting factor heretofore encountered. In this new book you learn how all receivers are brought to a common servicing level. You learn how components receive a functional check while the circuits are in an operative condition. Over 360 pages—hard covers—only \$2.00.

SERVICING SUPERHETERODYNES—Changes, changes, changes! That has been the history of the superheterodyne circuit. Make repairs quickly by analyzing the different parts of the circuit quickly. Rider shows you how. 288 pages—profusely illustrated—price \$1.00.

FREQUENCY MODULATION

WILL BE EXPLAINED AND INTERPRETED
IN THE MAY ISSUE OF

**RADIO
and Television
TODAY**

22,000 regular readers will be told—

What it is—How far it has gone—How it compares with radio of today—What it means in terms of profit to the dealer, the jobber and serviceman.

MANUFACTURERS—This discussion of FM and its probable effect upon the trade, will give your advertising message a background of intense reader interest. Closing date—May 6.

CALDWELL-CLEMENTS, INC.

480 Lexington Avenue, New York

SALES HELPS

Display for Two Auto Sets



Another streamlined display board announced by Motorola is the 2-set job, designed to feature the Model 350 and the new 550. This board shows how these models are compactly housed, and how their separate speakers fit into and match the instrument panels of cars whose manufacturers have provided for dash panel installation.

Complete line of Motorola displays now includes the "Mainliner" for 5 sets, a 2-set Standard job, and an aerial display.

Pinocchio Theme to Help Tube Sales

A new window display featuring a timely tieup with Pinocchio, the popular character of fantasy from the current Walt Disney film hit, is now being distributed to Sylvania dealers and servicemen through jobbers. The display is lithographed in eight arresting colors and stands 40 inches high. The drawing for the display was done by the Walt Disney studios.

Sylvania urges retailers to exploit this timely tieup aggressively, announce in their windows the dates for the lo-



cal showing of Pinocchio, and display pictures taken directly from the film which can be secured from the theatre manager.

JIM QUAM Says



I have a revolutionary idea that I wish to present to the radio parts industry. It contemplates the establishment of a fund to which all the radio parts manufacturers who operate on a sound business-like basis will contribute. This fund will be used to support, in the style to which they would like to become accustomed, the fellows in our field who have no knowledge of business or manufacturing, who can't read a balance sheet or analyze costs, and who prices and sell below costs, and who finally and inevitably blow up after pulling their suppliers in for hundreds of thousands of dollars. I don't suppose it's practical. But it's a lovely dream anyway and think of the money that would be saved.

QUAM-NICHOLS CO.
33rd Place & Cottage Grove CHICAGO 1674 Broadway NEW YORK



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.) RT-440

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

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While every precaution is taken to insure accuracy, we cannot guarantee against the possibility of an occasional change or omission in the preparation of this index.

Three-Ply Bonus Offer Ready for Philco Boxes



Gleaming kitchen radio-and-clock now offered with Philco models.

New move by Philco to help dealers make higher average unit sales of refrigerators has been announced by Sayre M. Ramsdell, Philco vice-president. The program also ushers in two new models, and follows the company's merchandising tieup with Birdseye Frosted Foods.

During the new program, a Philco kitchen radio with built-in Sessions electric clock will be offered free with the purchase of any Philco advanced design refrigerator. The set is valued at \$30. To those who buy the lower priced models, a \$4.50 Hammond electric clock will be offered. A third item, a glass water chiller, will be given away to all those visiting Philco dealers to inspect the new line.

With the addition of new models LU-6 at \$119.95, and LR-6 at \$139.95, the low-priced group now includes four numbers. The others are the LX-6 at \$129.95 and the LS-6 at 149.95.

Namco Now a Factor in Domestic Radio Market

Now ready to announce a complete line of "Namco" radios for sales in the U. S. through jobbers and dealers. is the Namco Mfg. Co., Inc., 142 W. 26th St., New York City. For the past six years, the firm has been prominent in radio sales abroad, but will now emphasize freshly styled table model and portable sets in the domestic market.

Namco is licensed by Hazeltine and RCA and is headed by H. A. Schoenen, president. Other officials are P. L. Schoenen, treasurer, Jack Ravdin, chief engineer, and A. G. Schoenen, in charge of production.

FCC Regimentation of Business

(Continued from page 11)
ceiving set would be proved better; then have restricted the advertisement of battery sets because of the possible development of electrical receiving sets?

"What would have happened to our great automobile industry if in its early or middle stages such a restricting hand had been laid on it? How many gas or electric ranges, gas or electric refrigerators, electric washing machines would we have in our homes if before they could have been advertised for sale they had had to be approved by some government agency akin to the Federal Communications Commission today?"



STANDARDIZE SALES SERVICE

WITH **TRIPLETT**

MODEL 1612

Counter Type Tube Tester

\$29.84

DEALER NET

Has **RED-DOT**
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 Locals, 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



5", 6" and 7" sizes, square, round, fan and portable cases.

MODEL 426

Four-inch Modernistic Square Instrument . . . AC or DC . . . All popular ranges. This is one of 23 different electrical measuring instrument styles manufactured by Triplett. Instruments available in 2", 3", 4",

WRITE FOR CATALOG
Section 194 Harmon Drive

THE TRIPLETT ELECTRICAL INSTRUMENT CO.
Bluffton, Ohio



★ Yes, Clarostat scores again with its new Plug-In Resistor Tube Service Manual. Most extensive, up-to-the-minute, dependable listing of plug-in resistor tube replacements and equivalent types. Just another typical Clarostat contribution to the serviceman's working library. ★ Available through local jobbers for 15¢ a copy. ★ Or send 15¢ in stamps or coin direct to Clarostat Mfg. Co., Inc., Dept. RT-4, 285-7 N. 6th Street, Brooklyn, N. Y.



MUSICAL TOWERS

For Bigger Sales and Service Returns

Here's a sure profit-maker! Handle the complete Sunco amplifying system of tower and belfry chimes. It's the best sound installation proposition in the field—not only do you get the best equipment, but also expert technical assistance and sales help.



Sunco "Master" has wide range of usage. Broadcasts chimes or organ music. Powered for 2, 6, and 12 mile dia. coverage. Can be used as P.A. unit. Automatic record changer play 10" and 12" records mixed. We have many specially recorded low-noise acetate discs for this work. Ask about them. **REAL MONEY FOR SOUND EQUIPMENT SPECIALISTS**—Protected territory, everything furnished, speakers, accessories, installation and service directions. Get the facts about this

money-making offer. No obligation, **WRITE TODAY!**
SUNDT ENGINEERING COMPANY
 4763 Ravenswood Ave., Chicago, Illinois

Sell & Use LITTELFUSES



Get this new catalog FREE. Shows complete line of Littelfuses for radio, transmitters, rectifiers, meters, instruments. **FUSE MOUNTINGS**—all kinds. When you want fuses—**LITTELFUSE!** See your jobber or write:

Write for Catalog



LITTELFUSE INC.
 4763 RAVENSWOOD AVE. CHICAGO, ILL.

Spector Sales Reps Get Under Way

Spector Sales Associates, 17 E. 42 St., New York City is the name of a new firm of manufacturers representatives specializing in radio and electrical items. The concern is headed by David S. Spector who recently resigned as general sales manager for Andrea Radio Corp. Harry R. Clark, well-known radio figure, will be associated with the company's New York activity and there will be other associates in Philadelphia and Boston.

The Spector Company has been appointed exclusive sales representatives for the Clough-Brengle Co., 5501 Broadway, Chicago, for the area which includes New York, New Jersey, Pennsylvania east of Altoona, Delaware, Maryland, the District of Columbia and the New England States.

Blair-Steinberg Co. a New Sales Rep

Haskel A. Blair and Herman A. Steinberg have formed a new manufacturers sales organization under the name Blair-Steinberg Sales Co. at 423 Broome St., New York City. They will cover New York, Philadelphia, Baltimore, Washington and Virginia territory. Nat Furman will specialize on the coverage of Metropolitan New York for the organization. Lines now being handled are Cornell-Dubilier, Bogen, University, and Atlas Resistor.

Speak-O-Phone Entertains at Improved Quarters

The quarters of the Speak-O-Phone Recording & Equipment Co., 23 W. 60th St., New York City, have been greatly enlarged to accommodate increasing business. The new layout includes convenient soundproof studios, so that visitors may fully test the new Speak-O-Phone recording units. Sound men are cordially invited to inspect the studios and the elaborate demonstration facilities.

Stromberg Has New Merch Manager

W. C. Lewis is now the Stromberg-Carlson merchandise manager, while William J. Fraser will take over Mr. Lewis' former post as SC western New York sales representative, according to radio sales manager Fred N. Anibal.

Mr. Lewis joined Stromberg-Carlson in 1928, and after 5 years' experience with the accounting division he entered the sales department.

Harper Announces Lines

Announcement has been made by Sam Harper of the Harper Co., 63-12 Haring St., Rego Park, N. Y., that the company has been appointed as sales representatives for Sterling Mfg. Co. (panel and industrial meters) Hipower Crystal Co. (transmitter crystals), Nash Products Co. (recording accessories) and the Kainer Co. (speaker baffles, projectors and horns).



Ed Carlson, sales engineer for Webster-Chicago, likes flying, and likes landing amongst reception committee. He's shown at Oconomowoc, Wis., "Eskimo Party."

Stevens to Head Crosley Refrigerator Sales

The Crosley Corp. has announced George T. Stevens as manager of the refrigeration division of the company, according to Thomas W. Berger, general sales manager of the firm. Mr. Stevens comes directly from Allied Stores, a company which has retail outlets throughout the U.S.

It has been announced by R. C. Cosgrove, vice-president and general manager of The Crosley Corp., Cincinnati, that Roy S. Durstine, Inc., 580 Fifth Ave., New York City, is now Crosley's advertising agency for all products.

H. G. Little, who recently resigned as a vice-president of Lord & Thomas, will head the agency's work on the account.

Other executives who have recently joined Roy S. Durstine, Inc., include George Cooke who has resigned from the Stromberg Time Corp.; Walter J. Daily, previously in charge of advertising and sales promotion for General Electric in Cleveland; and Matthew Hufnagel until recently with Batten, Barton, Durstine & Osborn.

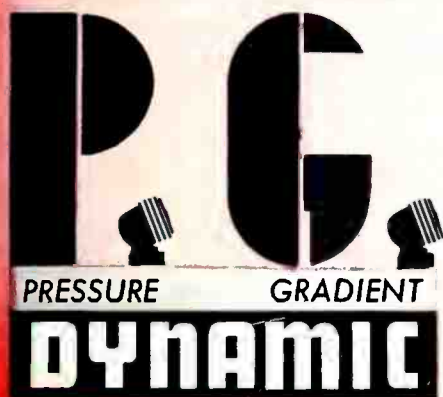
Norden Promoted by L. S. Brach Co.

Alexander Norden, Jr., the popular sales executive for L. S. Brach Mfg. Corp., 55 Dickerson St., Newark, N. J., has been named a vice-president of the company. Brach is now merchandising a complete line of antennas including those for frequency modulation, television, police and autos. The company is a specialist in noise-reducing systems for the home and for shop demonstrations.

Tobias Appointed

Dana A. Griffin, general manager of Communication Measurements Laboratory, 136 Liberty St., New York City, manufacturer of F-M Receivers, announces the appointment of David F. Tobias, 30 Church St., New York City, as sales representative for New York and New Jersey.

AMPERITE Announces the **BIGGEST ADVANCE**
in the Dynamic since its Inception!



- **UNI-DIRECTIONAL.** NEW SUPERIOR ELIPSOID PICKUP PATTERN
- **ELIMINATES FEEDBACK** TROUBLE BECAUSE IT HAS LOWEST FEEDBACK POINT OF ALL DIAPHRAGM TYPE MICROPHONES
- **FLAT RESPONSE.** FREE FROM ANNOYING PEAKS, GIVING STUDIO-QUALITY REPRODUCTION.

The P.G. diaphragm follows air particle velocity where amplitude is a GRADIENT of the PRESSURE. In ordinary dynamics amplitude is restricted from following air particle velocity.

The P.G. DYNAMIC is a radical improvement in this type of microphone. You can actually hear the difference. Case is designed according to modern acoustic principles. Rugged, not affected by temperature, altitude or humidity. **HAS UNUSUALLY HIGH OUTPUT. —55 DB.**

MODEL PGH (PGL, 200 ohms). Excellent for high fidelity P.A. installations, broadcast studio, and professional recording. With switch, cable connector, 25' cable. Chrome finish. LIST \$32.00 (40, 10,000 C.P.S.)

MODEL PGAH (PGAL, 200 ohms). For speech and music. 70-8000 C.P.S. Switch, cable connector, 12' cable. Chrome, LIST \$25.00



**COMBINATION VELOCITY-DYNAMIC
ACHIEVED WITH
ACOUSTIC COMPENSATOR**



An exclusive Amperite feature: By moving up the Acoustic Compensator you change the AMPERITE VELOCITY to a DYNAMIC microphone without peaks. At the same time you reduce the back pickup, making the microphone practically UNI-DIRECTIONAL.

WITH ACOUSTIC COMPENSATOR:
MODEL RBHk: RBMk (200 ohms) with switch, cable connector.
Chrome, LIST \$42.00

RSHk: RBSk (200 ohms). Switch, cable connector, Acoustic Compensator.
Chrome or Gunmetal. LIST \$32.00

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Puts Musical Instruments Across**



So beautiful is the tone produced with the Kontak Mike, that it was used in the Philadelphia Symphony to amplify a mandolin solo. Gives excellent results with any amplifier, radio sets, and record players.

- MODEL SKH (hi-imp) LIST \$12.00
- MODEL KKH, with hand volume control. LIST 18.00
- Plug extra List 1.50
- FOOT PEDAL for making beautiful crescendos LIST 12.00

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