

RADIO *and Television* TODAY

Season Starts with New Lines and Trade Sho

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PERIODICAL DIVISION

JUNE



Callahan

P. R. MALLORY & CO., Inc.

MALLORY

Roots You Deeply Into the Soil of Profits



VIBRATORS



CONDENSERS



VOLUME CONTROLS

Mallory Replacement Vibrators, Condensers, Volume Controls and other replacement parts enjoy a long-standing reputation for trouble-free operation and long life that has been won in actual service.

Mallory's leadership begins with the set manufacturers who use Mallory products for original equipment. They are the "who's who" of the radio industry and their specification of Mallory products is a tribute of which any parts manufacturer could be proud.

In the replacement field, Mallory's leadership is equally wide

because radio service engineers have learned that they can depend upon Mallory for complete customer satisfaction.

Mallory has brought standardization to many items that has immeasurably simplified installation. This has led directly to lower inventory investment with faster turnover . . . and to faster, easier, more profitable service work. Follow the formula of thousands of successful service men. Insist on the best . . . it costs no more . . . Mallory's nation-wide, selected distributor setup is equipped to give you tops in service.

Use

P. R. MALLORY & CO., Inc.
MALLORY
APPROVED
PRECISION PRODUCTS

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

Cable Address—PELMALLO

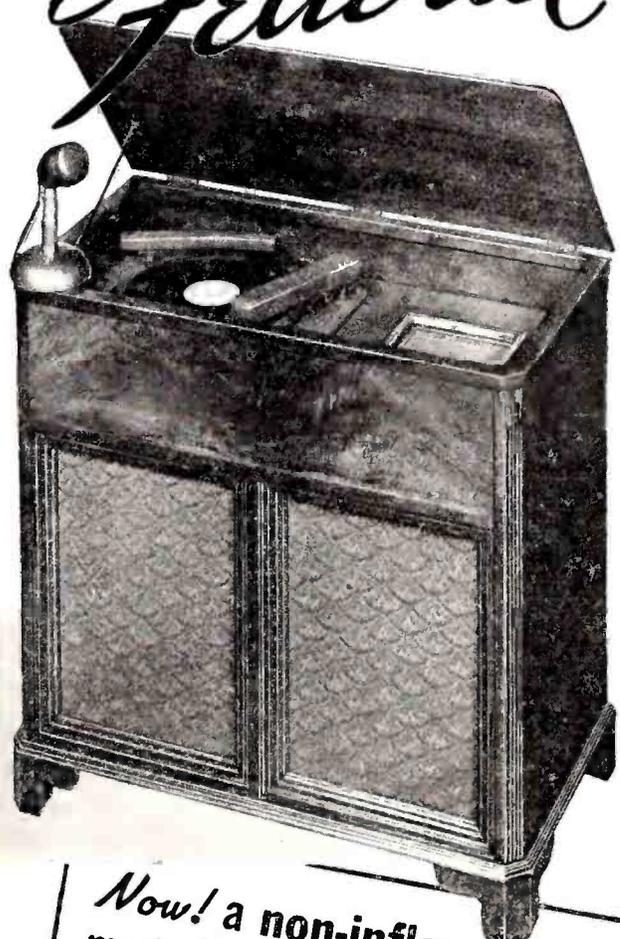
AMERICA'S GREATEST Home Recording VALUE

\$99⁹⁵

and it's a

Federal

At the amazingly low price of \$99.95, here is the most wonderful value in home entertainment you have ever had to offer your public. It's a 5-in-1 Federal; a microphone Recorder, an excellent Radio, a hi-fidelity Phonograph, a home Broadcaster, an off-the-air Recorder. Beautiful cabinets in Crotch Mahogany or Burl Walnut, exquisitely finished, look twice the price. Crash a fresh new market with this Federal headliner. Write today, sure, for complete details.



Federal gives you the most complete line of recorders in price range and variety — for every purse and purpose

Table Model No. 111	\$ 54.95
Table Model No. 106	69.95
Console Model No. 211 (Illustrated)	99.95
Console Model No. 201	119.95
Console Model with Record Changer No. 301	119.95
Console Model with Record Changer No. 306	149.95
Deluxe Console Model with Record Changer No. 311	189.95
<i>All above prices without Microphones. West Coast Prices, slightly higher</i>	
Little Pro, Portable No. 12LP Popular for schools	199.00
Symphonic Model, Portable No. 16SM, For professional use	399.00

Now! a non-inflammable metal base Disk at the Lowest Prices ever offered

1. Non-Inflammable—Safe for Home
2. Heavy Metal Base—Non-warp, Non-slip
3. Hundreds of Playbacks
4. Half the price of other Professional Disks

RED LABEL Federal Disk
 Sizes and Prices
 No. PN-6 1/2—6 1/2-inch . . . 20c each
 (Package of 5 for \$1)
 No. PN-8—8-inch 30c each
 No. PN-10—10-inch 40c each
 No. PN-11—11-inch 50c each
 No. PN-12—12-inch 60c each
 (Prices west of Rockies, slightly higher)



FEDERAL RECORDER CO., Inc.

50 West 57th Street Dept. 6311 New York, New York

MANAGERS HELPED US CREATE

Are Asking For!"

... Gorgeous New Concert Grands
That Combine
Superb Tone and Authentic Period Design



"Our customers want design that really belongs with their other furnishings, and tone quality to match. I know this line will meet their demands, at prices we can get," says big New York buyer.

"This combination of superb tone and true period design, at such prices, is a sure-fire proposition. They open a market we haven't been able to supply before," says buyer for leading West Coast store!

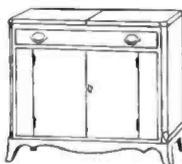
"At last, here are instruments with appeal to buyers with taste, and prices they can pay. We'll move plenty of them!" says famous Mid-West dealer.

Stunning, authentic period design—plus finer tone—plus sensational value! Here at last are really fine instruments for the home where taste rules—priced right into the heart of the popular market! They're instruments you can sell—because a dozen leading dealers advised us on design and features and told us this is what they can sell in volume.

Authentic period designs, in choice of walnut, mahogany and bleached mahogany, are offered in nine cabinet and chassis combinations. Each is a true period piece, at home among costliest furnishings.

And with finest design we have combined the finest in tone—ample power to handle deep bass and the full power of a symphony—dual controls giving command of tone balance new in this price class—a new curvilinear speaker for true reproduction throughout the full tone range—and other important advancements.

Each model includes a much improved automatic record changer and, of course, each is the last word in radio reception.



BACKED BY 35,000,000 NATIONAL ADVERTISEMENTS! A continuous, hard-selling national campaign in "Saturday Evening Post," "Life," "Time" and "Better Homes & Gardens"—the most intensive campaign put behind a quality line in years—will break at least one hard-hitting advertisement every week through the selling season and send Concert Grand customers in to you already sold!

STEWART-WARNER

Concert Grand



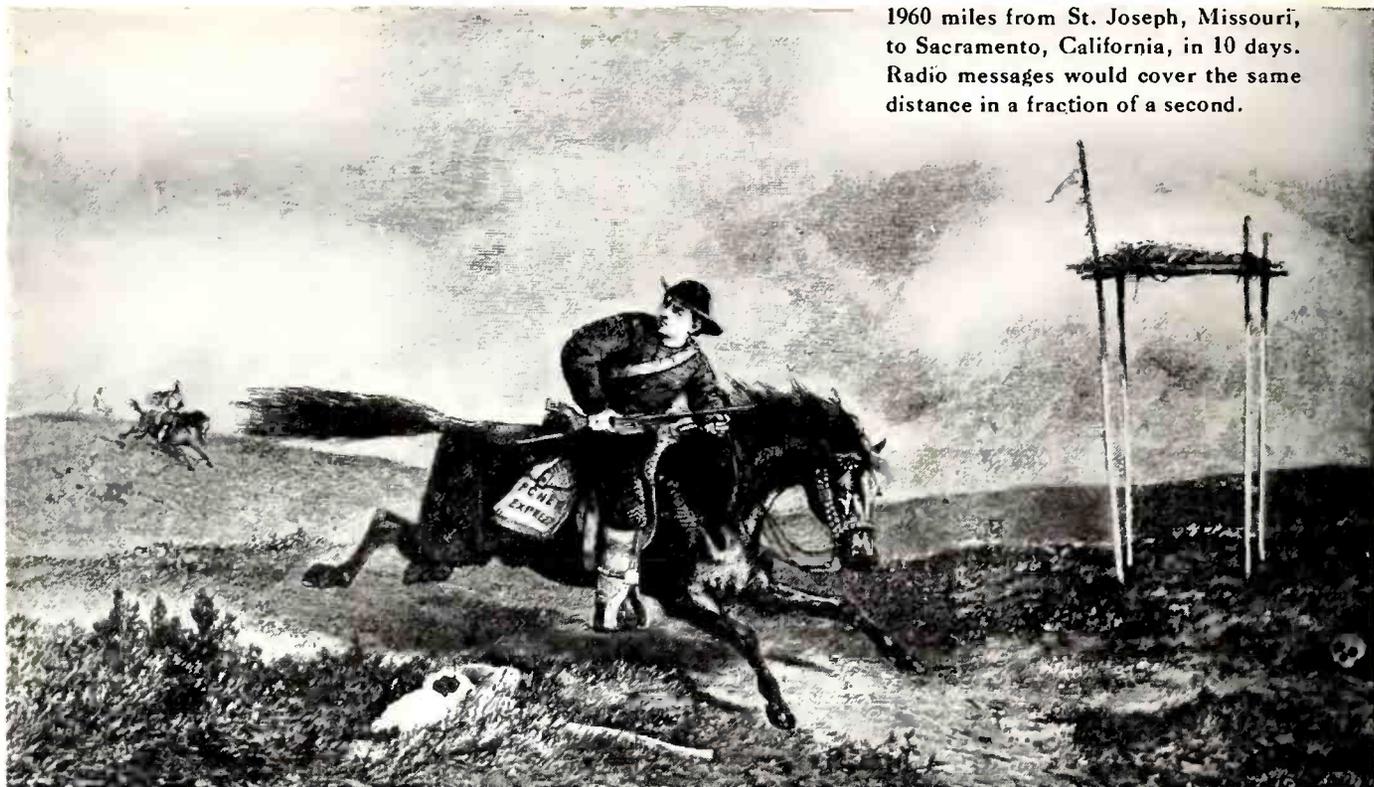
The thrilling new Microphono recorder, complete with microphone, enables the recording of anything from the voices of family and guests to high spots in your favorite radio programs... with tone fidelity that compares well with that of the better commercial recordings! Available in portable, table, console and Concert Grand models at attractively low cost!

Another Stewart-Warner Product. Also makers of Dual-Temp Refrigerators and Scotch Maid Electric Ranges



Radio Would Have Made The Pony Express A Local!

Back in 1860 the wonder of the day was the picturesque Pony Express. Racing horses in relays, riders carried the mail 1960 miles from St. Joseph, Missouri, to Sacramento, California, in 10 days. Radio messages would cover the same distance in a fraction of a second.



What a difference the Services of RCA would have made in 1860...

Communication is the life-line of civilization. Up to a hundred years ago, civilization spread slowly, because communication could travel no more swiftly than the gallop of a horse.

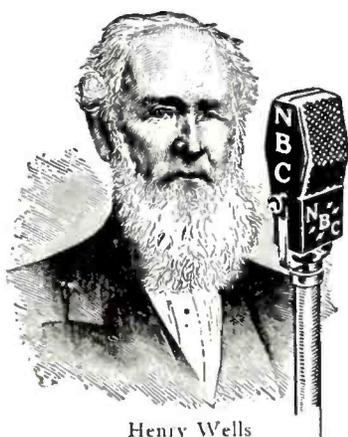
In contrast, if the West were being opened up today, the Services of RCA would coordinate developments with instantaneous communication. Portable broadcasting equipment would go wherever pioneers went. Over nation-wide broadcasting networks a running history of progress and achievement would be heard by millions. R.C.A. Communications would keep two-way contact between our scattered outposts and forty-three foreign nations.

Young men, following the classic ad-

vice, would "go West" carrying RCA Victor Pick-Me-Up Portable Radios. And through the RCA Photophone, motion picture audiences in the East would hear as well as see the saga of the winning of the West. Lonely settlers would carry into the wilderness their favorite musical selections on Victor and Bluebird Records.

Yes...the Services of RCA in every field of radio and sound could have contributed immensely to building our country in 1860. But...the contribution they could have made is in no sense greater than the actual contributions they are making to our civilization today.

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



Henry Wells



RADIO CORPORATION OF AMERICA *RADIO CITY, N. Y.*



RAYTHEON

MAKES

THEM ALL



All the vast RAYTHEON engineering resources are exclusively devoted to anticipating fast moving radio circuit developments and pioneering in tube design to meet these developments *in advance*.

That is why there is a replacement RAYTHEON for every socket.

That is why thousands of the best *businessmen* in service work depend exclusively upon RAYTHEONS.

That is why RAYTHEONS are used as standard

equipment in leading important receiving sets, auto radios, sound systems, coin operated phonographs, commercial communications receivers, amateur equipment and hearing aids.

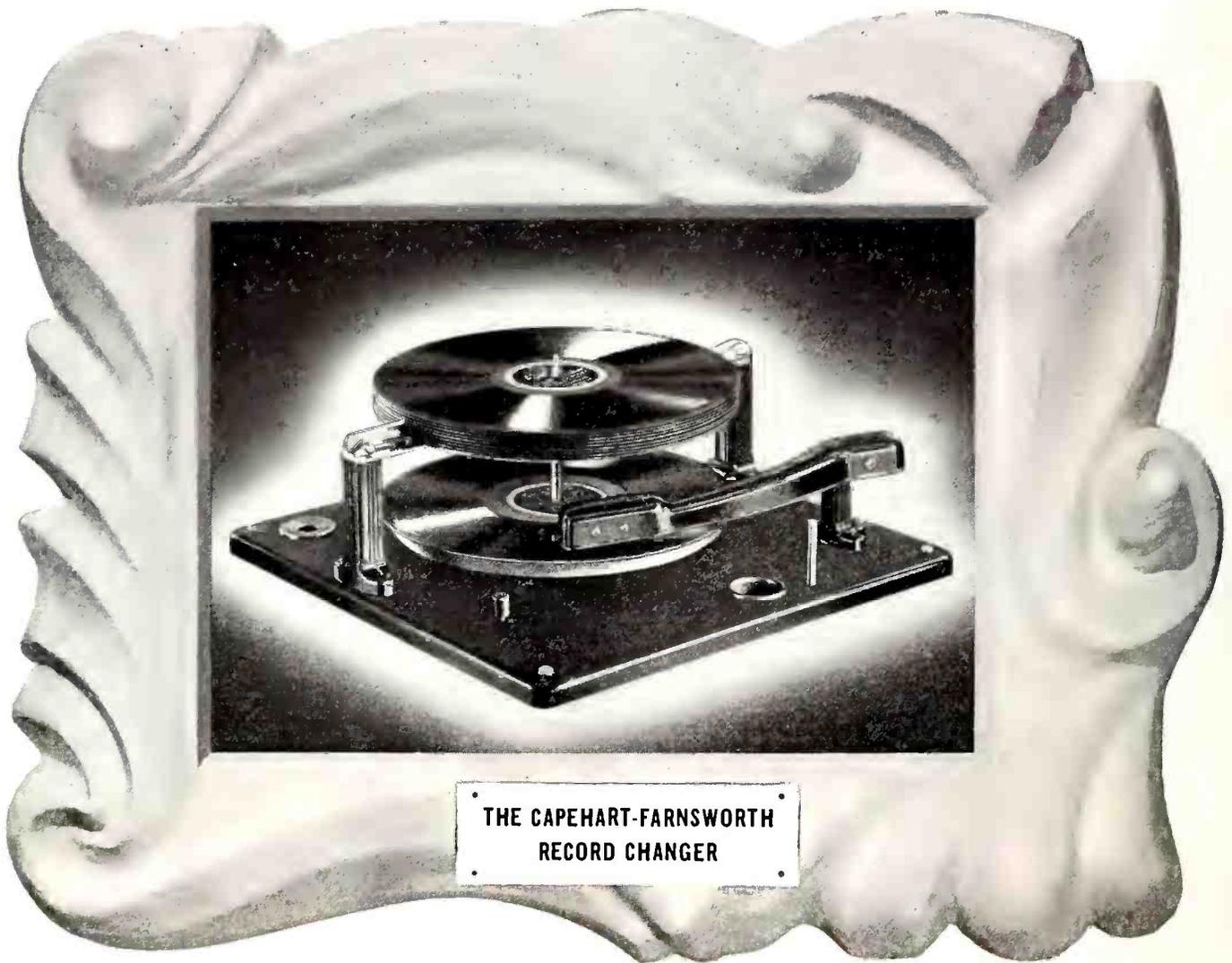
The presence of RAYTHEONS is your guarantee that the equipment was engineered around the best of materials.

Your Raytheon Distributor has an unusual tube deal for you. See him without delay.

WORLD'S LARGEST EXCLUSIVE RADIO TUBE MANUFACTURERS

RAYTHEON PRODUCTION CORP. • New York • Chicago • Newton, Mass. • San Francisco • Atlanta

• FARNSWORTH gives you



... the heart of Farnsworth's superb 1941 radio-phonograph line ... the changer the whole industry is talking about ... the one that sets an entirely new standard for the medium-price field.

• • •

The new Capehart-Farnsworth changer plays up to 14 records automatically ... is extremely simple to load and unload. It handles any standard-size record ... without chipping, cutting or scratching ... unflinchingly plays each record to the end of the selection, then softly, gently feeds the next record into position. Rubber-cushioning insulation and opposed spring-mounting make it

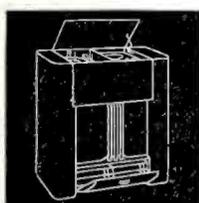
one of the quietest changers ever built, and its simple, fool-proof mechanism eliminates service problems.

This truly marvelous changer is one of the many big features of the 1941 Farnsworth radio-phonograph line ... made to fit every price-bracket competitively ... backed by powerful advertising in *The Saturday Evening Post*, *Life*, *Collier's* and through a national spot-radio broadcast campaign, as well as a complete program of merchandising helps ... *clinched* by the well-known Farnsworth policies designed to protect *your* profit-interests. Farnsworth Television & Radio Corporation, Fort Wayne and Marion, Indiana.

every style of combination

A QUICK LOOK AT FARNSWORTH CABINET TYPES

The sketches on this page will give you a slight impression of the tremendous Farnsworth strength and position in the combination field . . . one of the broadest, most complete lines in the industry . . . with a type of cabinet to suit *every one of your prospects*. Don't wait! See your Farnsworth distributor and get the *whole* story on this great profit-making line.



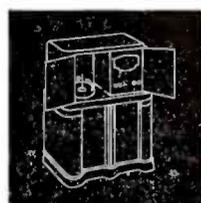
One-piece
Lift-lid Types



Divided
Lift-lid Types



Front-opening
(Single
Compartment) Types



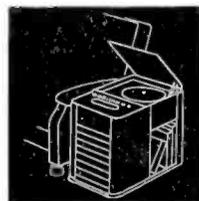
Front-opening
(Double
Compartment) Types



Half-top and Front
opening (Single
Compartment) Types



Tip-Top-Tuning
Type



Chair-side Type

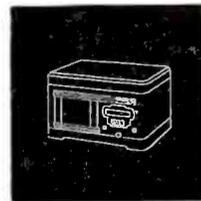
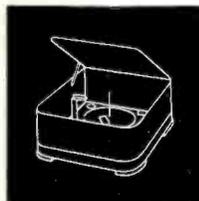
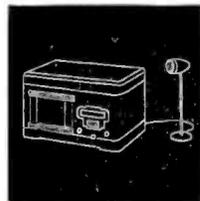


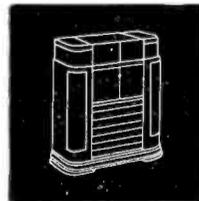
Table-model Type



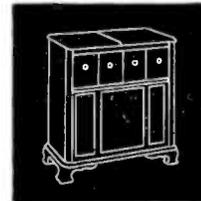
Automatic Record
Player Attachment



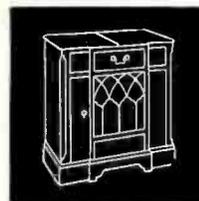
Home Recorder



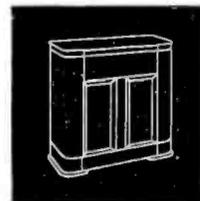
High-boy Types



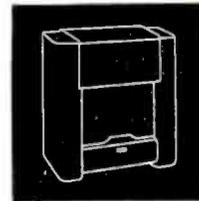
Low-boy Types



Period Types



Conventional Types



Modern Types

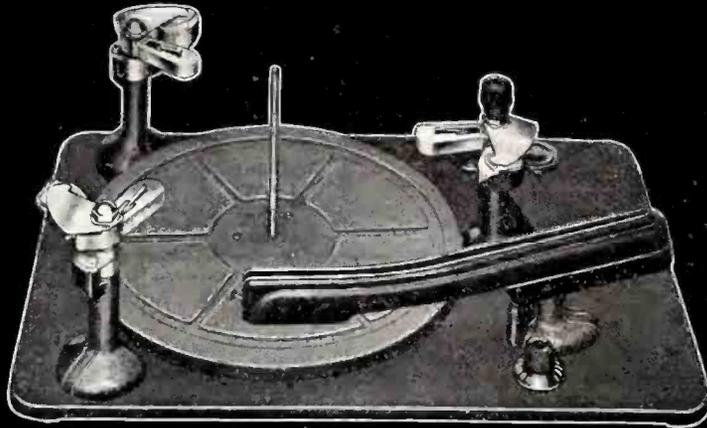
There's an equally startling line of 1941 radios in the Farnsworth picture for '40. Don't overlook it . . . a few minutes spent in visiting your distributor now may save you many months wishing you had.

FARNSWORTH . . . MAKERS OF RADIO AND TELEVISION TRANSMITTERS AND RECEIVERS THE CAPEHART, THE CAPEHART-PANAMUSE AND FARNSWORTH PHONOGRAPH-RADIO COMBINATIONS

Automatic

SEEBURG AUTOMATIC RECORD CHANGER MODEL "H"

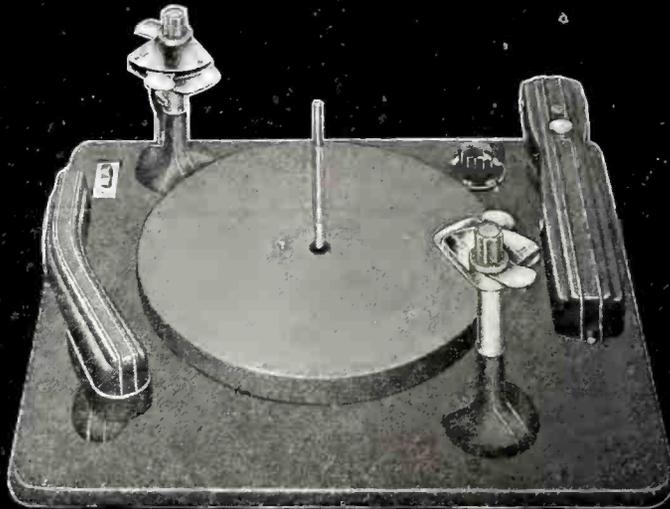
Plays fifteen mixed 10" and 12" records—gravity type. Guide arm and lifter cam feature permits playing of extremely warped records. Three-point suspension with two oilless bearings in each post. Play-Meter can set to play from 1 to 15 records or repeat a record up to 15 times, then stop automatically. Tone Arm is in extreme outward position when stopped automatically. No need to lift off record when re-loading, one control knob turning blades and arms to re-loading position. Pressure on Play-Meter knob rejects record.



Record

SEEBURG RECORD-O-MATIC

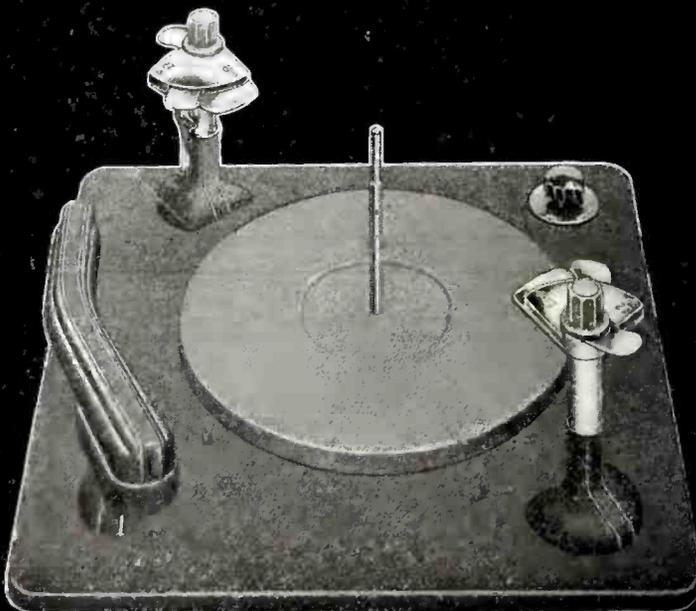
Has all advantages of Model "J" Changer. In addition: Cutting head assembly contains no steel stampings—all parts cast for rigidity; hardened cone bearings at all essential points; lead screw has support bearings at each end; larger main bearing and ball thrust to carry weighted turntable; 1½ oz. pressure crystal pickup in aluminum tone arm gives long record life; crystal or magnetic cutting heads; cutter has plunger type; automatic engagement with lead screw; separate switch for manual play-back frees Tone Arm from automatic mechanism—any size record may be played manually.



Changers

SEEBURG AUTOMATIC RECORD CHANGER MODEL "J"

Compact; 14" long, 14" wide, 3" deep. Handles 14 ten inch or 10 twelve inch records, gravity type. Two post suspension. No screws or brackets on top surface. Simplest changer mechanism. Long main bearing, ball thrust. One control button for all operations. Rigid counterbalanced pickup arm with crystal cartridge. Selector blades will not chip or break records. Needle pressure, 2½ oz. Handles warped records and all commercial thickness variations. Tone Arm, held in outward position by latch under panel, automatically released by starting switch.



and Recorders

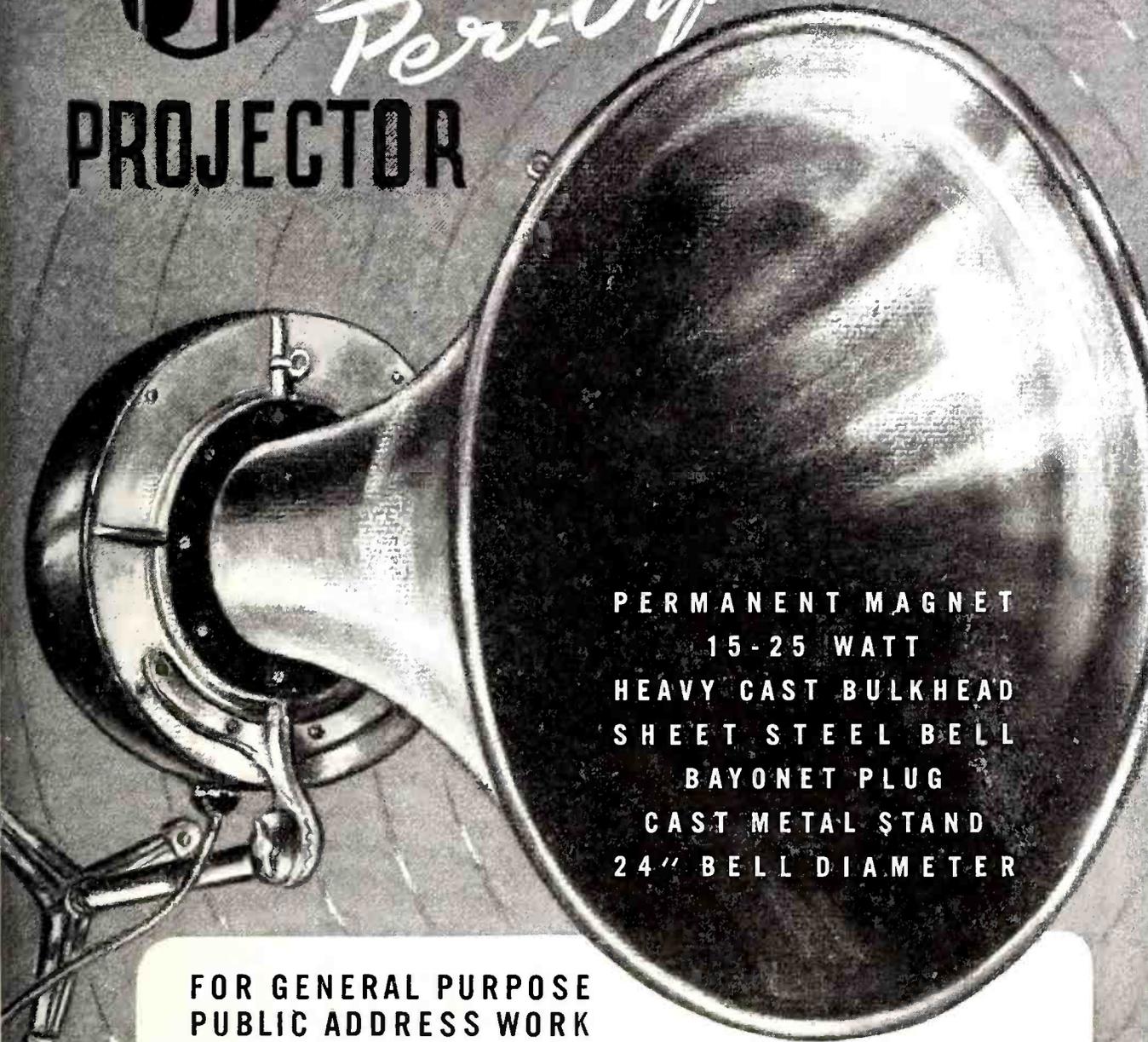
PRECISION MADE

by Seeburg



J · P · SEEBURG CORPORATION
1500 DAYTON STREET · CHICAGO, ILLINOIS

NEW Jensen *Peri-Dynamic* PROJECTOR



PERMANENT MAGNET
15-25 WATT
HEAVY CAST BULKHEAD
SHEET STEEL BELL
BAYONET PLUG
CAST METAL STAND
24" BELL DIAMETER

FOR GENERAL PURPOSE PUBLIC ADDRESS WORK

This new type "S" Projector employs an especially designed, highly efficient, 8" Permanent Magnet loud speaker *sealed into an enclosure*, taking full advantage of the JENSEN *Peri-Dynamic PRINCIPLE*. The result is sharp improvement in middle frequency response and in that quality of crispness and intelligibility so essential to the reproduction of sound in public address applications. In addition, feedback troubles are substantially reduced by practically eliminating back side

radiation. And of course, the loud speaker becomes thoroughly protected from weather.

The Projector is rigidly constructed of cast aluminum and sheet steel; mechanical modes likely to generate objectionable resonance are thoroughly subdued. Electrical access to the loud speaker is gained by a strong bayonet type separate plug and socket assembly.

Dealer's price, (No. SPH-81) complete with PM speaker, only..... **\$3120**
NET

Mounting standard extra.

Jensen
6601 S. LARAMIE AVE., CHICAGO

New 1941 RCA Victor Models Acclaimed

"THE HOTTEST LINE"



Presidential Model Will Win a Big Profit Vote!

Leader of the greatest quality-value line RCA Victor has ever built, this outstanding new radio is made to order for your increased profits! Features Over seas Dial, Stabilized Electric Tuning Speech Clarifier, 10 RCA Victor Preferred Type Tubes, 2 built-in Antennae — one for foreign and one for domestic programs, Parallel Push-Pull Audio System, 12-inch Electro-dynamic Speaker a stage of radio frequency amplification and several other features that will win sales for you! It's Model 110K.

For finer radio performance, RCA Victor Radio Tubes. Trademark "RCA Victor" U. S. Pat. Off. by RCA Mfg. Co., Inc.

Postal Telegraph
SER=OG NEWYORK NY 24 1259A
H C BONFIG=
RCA MFG CO INC=
1940 MAY 24 PM 12 34
YOUR NEW LINE OF 1941 RCA VICTOR RADIOS RINGS THE GONG STOP THE OVER SEAS DIAL STORY MAKES THE BEST ADVERTISING FEATURE WEVE SEEN IN A LONG TIME STOP YOUR GOING TO SEE A LOT OF IT IN VIM COPY= AL HIRSCH VIM STORES.

BY DIRECT WIRE FROM
WESTERN UNION
CLASS OF SERVICE
P213 15=WUX PHILADELPHIA PENN MAY 23 42BP
RAYMOND ROSEN AND CO=AL SLAP
HAVE JUST SEEN YOUR NEW 1941 RCA VICTOR LINE THINK IT HOT
CONGRATULATIONS=
LIT BROTHERS LEO LERNER.

Postal Telegraph
STANDARD TIME INDICATED
CAMDEN, N. J.
211 FEDERAL ST.
BILL 328-1237
P20 23 SER=OG NEWYORK NY 24 1158A
H C BONFIG=
RCA MANUFACTURING CO INC=
1940 MAY 24 PM 12 34
CONGRATULATIONS ON YOUR SPLENDID NEW 1941 RCA VICTOR RADIO LINE STOP YOUR CONSOLES MERIT SPECIAL COMMENDATION STOP THEY ARE IDEAL FOR FURNITURE MERCHANDISING= WALTER ENOEL MICHAELS BROTHERS.

RCA
RADIOGRAM
RCA COMMUNICATIONS INC
RECEIVED AT 218 COOPER ST., CAMDEN, N. J. AT
MAY 25 25 VIA RCA= PI CHICAGO ILL 22 4940P
H EDGAR
RCA MFG CO CAMDEN NJ=
CONGRATULATIONS ON WHAT WE CAN REALLY CALL A DEALERS LINE NEW RCA VICTOR MODELS HAVE EVERYTHING WE NEED TO MAKE SALES PROFITS AND SATISFIED CUSTOMERS= JACK TUNNIS TUNNIS BROTHERS.



RCA
RADIOGRAM
RCA COMMUNICATIONS INC
RECEIVED AT 218 COOPER ST., CAMDEN, N. J. AT
MAY 27 27 VIA RCA= PI CHICAGO ILL 22 4940P
HERB EOSAR
RCA MFG CO CAMDEN NJ=
NEVER SAW MERCHANDISE THAT HAD SUCH EYE APPEAL EAR APPEAL AND PURSE APPEAL NEW 1941 RCA VICTORS WILL BE MY HEAVY ARTILLERY IN THE BATTLE FOR PROFIT=
JAS EARLE WOOLAWN RADIO AND MUSIC CO.

FOR MORE SALE AND PROFITS VOTE



Dealers as...

IN HISTORY!!!

Complete line of new instruments in console, table, farm and Pick-Me-Up models receive rousing welcome! New extra quality features, new low prices win enthusiastic praise from coast to coast!



**New Pick-Me-Ups —
For a Landslide of Sales!**



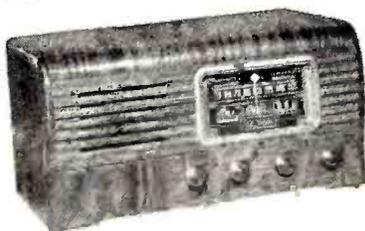
Available in 6 different finishes to cover every type of taste, these new easy-to-carry sets play outdoors and in, operate 3 ways — on self-contained battery, on AC current, on DC current. All are superheterodynes, have 5 RCA Victor Preferred Type Tubes (2 of them double purpose, to provide 7-tube performance), permanent magnet dynamic speaker, built-in Loop Antenna, easy reading, clock-type dial in four colors, automatic volume control, and other proofs of quality and value. Model illustrated is 15BP-2 in brown airplane luggage finish.

Also available in gray airplane luggage . . . brown leatherette . . . brown lizard grain leatherette . . . bakelite . . . solid mahogany and mahogany veneer. Long-wearing zipper type carrying case. Available for Models 15BP-1 and 15BP-6.

**Here's Your "Biggest Buy
in Town" Candidate!**

RCA Victor Model 19K—and you've never seen anything like it—for quality, performance, for beauty — at so low a price! Has 9 RCA Victor Preferred Type Tubes, new stabilized Electric Tuning, American and improved foreign reception, Built-in Rotatable Loop Antenna, large 3-band Edge-lighted speaker, a stage of radio frequency amplification, 4-point tone control, 12-inch Electro-dynamic Speaker, Push-Pull System, and other extra quality features.

Available at all RCA service stations . . . including RCA Building, New York City, San Francisco Fair — and Golden Gate Exposition, San Francisco.



**The Farmer's Choice...
This Unmatched Battery Value**

Here's eye appeal, ear appeal, purse appeal! Model 15-BT has 5 RCA Victor Low drain tubes, American-foreign, Police and Amateur reception, economy blinker and battery saver switch, a tuned stage of radio frequency amplification, 5-inch speaker, moisture proof coils, automatic volume control. Is convertible to 110-volt AC operation. Cabinet provides ample space for batteries.



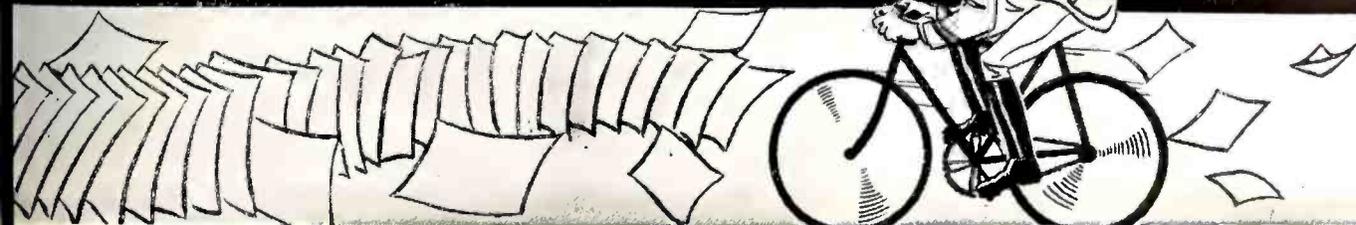
**A Super Value
Your Customers will Cheer for!**

RCA Victor Model 18T has a cabinet of walnut and walnut-and-maple veneers that is new in design and beautiful to look at. This set features superb American, Police and foreign reception, efficient built-in Magic Loop Antenna, a stage of tuned radio frequency, Electric Tuning, continental-type slanted type, Electro-dynamic Speaker, automatic tone compensation, and other fine features.



RCA Victor

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





New 1941 RCA Victor Models Acclaimed by Dealers as...

"THE HOTTEST LINE IN HISTORY!"

Complete line of new instruments in console, table, farm and Pick-Me-Up models receive rousing welcome! New extra quality features, new low prices win enthusiastic praise from coast to coast!

Post Telegraph

354-00 NEW YORK NY 24 12594

H. C. BOYD CO.
RCA MFG CO. INC.

YOUR NEW LINE OF 1941 RCA VICTOR RADIOS HINDS THE GONG STOP THE OVER HEAD DIAL STORY MAKES THE BEST ADVERTISING FEATURE EVER SEEN IN A LONG TIME STOP YOUR GOING TO SEE A LOT OF IT IN YOUR COPY AT WELSH VIM STORES.

PROG NO 24 PM 12 34

WESTERN UNION

BY SERVICE WIRE FROM

2215 15th ST PHILADELPHIA PENN WY 83 4707

RAYMOND ROSSER AND COAL SLAP

HAVE JUST SEEN YOUR NEW 1941 RCA VICTOR LINE THING IT NOT

LIT BROTHERS LEO LEDER.

CONGRATULATIONS

Postal Telegraph

212-23 324-05 NEW YORK NY 24 11084

H. C. BOYD CO.

RCA MANUFACTURING CO. 4602

CONGRATULATIONS ON YOUR SPILLING NEW 1941 NOW WELSH RADIO LINE STOP YOUR COACHES HEART SPECIAL CONGRATULATION STOP THEY ARE LOCAL YOUR FURNITURE MERCHANTS... WALTER ENDEL MICHAELS BROTHERS.

PROG NO 24 PM 12 34

RCA Radiogram
RCA COMMUNICATIONS INC.

PACKAGED BY 218 COOPER ST. CAMDEN N. J. AT
MAY 25 1941 RCA PI CHICAGO ILL 22 4940P

H. EDGAR
RCA MFG CO CAMDEN N.J.

CONGRATULATIONS ON WHAT WE CAN REALLY CALL A DEALERS LINE NEW RCA VICTOR MODEL HAVE EVERYTHING HE NEED TO HAVE SALES PROFITS AND SATISFIED CUSTOMERS. JACK TOMBS TEXAS WHITES.

RCA Radiogram
RCA COMMUNICATIONS INC.

PACKAGED BY 218 COOPER ST. CAMDEN N. J. AT
MAY 27 1941 RCA PI CHICAGO ILL 22 4940P

H. EDGAR
RCA MFG CO CAMDEN N.J.

NEVER SAW MERCHANTS THAT HAD SUCH EYE APPEAL EAR APPEAL AND PURSE APPEAL NEW 1941 RCA VICTORS WILL BE BY HEAVY ARTILLERY IN THE MARKET FOR PROFITS. SEE FABLE WOODLAND RADIO AND MUSIC CO.



Presidential Model Will Win a Big Profit Vote!

Leader of the greatest quality-value line RCA Victor has ever built, this outstanding new radio is made to order for your increased profits! Features Overseas Dial, Stabilized Electric Tuning, Speech Clarifier, 10 RCA Victor Preferred Type Tubes, 2 built-in Antennas — one for foreign and one for domestic programs, Parallel Push-Pull Audio System, 12-inch Electro-dynamic Speaker, a stage of radio frequency amplification, and several other features that will win sales for you! It's Model 110K.

For finer radio performance, RCA Victor Radio Tubes. Trademark "RCA Victor" logo. U. S. Pat. Off. by RCA Mfg. Co., Inc.

Here's Your "Biggest Buy in Town" Candidate!

It's RCA Victor Model 19K — and you've never seen anything like it — for quality, for performance, for beauty — at so low a price! Has 9 RCA Victor Preferred Type Tubes, new stabilized Electric Tuning, American and improved foreign reception, Built-in Rotatable Loop Antenna, large 3-band Edge-lighted Dial, a stage of radio frequency amplification, 4-point tone control, 12-inch Electro-dynamic Speaker, Push-Pull Audio System, and other extra quality features.

See exhibit of all RCA services... including Extension... at RCA Building, New York World's Fair — and Golden Gate Exposition, San Francisco.



New Pick-Me-Ups — For a Landslide of Sales!



The Farmer's Choice... This Unmatched Battery Value

Here's eye appeal, ear appeal, pure appeal! Model 19-BT has 5 RCA Victor Low drain tubes, American-foreign, Police and Amateur reception, economy blinker and battery saver switch, a tuned stage of radio frequency amplification, 5-inch speaker, moisture proof coils, automatic volume control. Is convertible to 110-volt AC operation. Cabinet provides ample space for batteries.

Available in 6 different finishes to cover every type of taste, these new easy-to-carry sets play outdoors and in, operate 3 ways — on self-contained battery, on AC current, on DC current. All are superheterodynes, have 3 RCA Victor Preferred Type Tubes (2 of them double purpose, to provide tube performance), permanent magnet dynamic speaker, built-in Loop Antenna, easy reading, clock-type dial in four colors, automatic volume control, and other proofs of quality and value. Model illustrated is 19B-2 in brown airplane luggage finish.

Also available in gray airplane luggage... brown leatherette... brown bagator grain leatherette... bakelite... solid mahogany and mahogany veneer. Long-wearing slipper type carrying case. Available for Models 191P-1 and 191P-4.

A Super Value Your Customers Will Cheer For!

RCA Victor Model 18T has a cabinet of walnut and walnut-and-maple veneers that is new in design and superb American. Police and Amateur reception, efficient built-in Magic frequency Electric Tuning, convenient Speaker, automatic tone compensation, and other fine features.

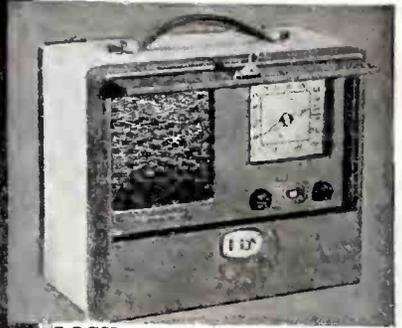
FOR MORE SALES AND PROFITS VOTE

RCA Victor

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



SURE, I'M CHEERING!
SO WILL YOU WHEN YOU BACK
THIS YEAR'S CELEBRATION LINE—
WESTINGHOUSE
21st BIRTHDAY RADIOS



LOCK-me-up portable. Model WR-680. Brown pigskin leatherette, contrasting white band. Lock and key. Operates on batteries, AC or DC. 4 batteries—6 tubes.



READY-to-go-portable. Model WR-678. Covered with durable airplane linen. White and brown check, dark brown band. Batteries, AC or DC. 3 batteries—5 tubes.



TAKE-me-anywhere portable. Model WR-679. Brown leatherette with oyster white saddle-stripe. Batteries, AC or DC current. 3 batteries—5 tubes.

HE SAID BLUNTLY—

"I'm in business to make money"

So are you! And here is a real profit-making opportunity . . . a chance to sell *more* radios of a fast-moving line in its celebration year and make your full profit on every set.

"All right, let's hear about it"

Your profit story for *this year* starts back in 1920 . . . the year Westinghouse made history by offering the public the first commercially built radio . . . the year Westinghouse transmitted the first radio broadcast from KDKA. These two outstanding contributions to the radio industry are being impressively celebrated by KDKA and this year's Westinghouse radio line . . . *the 21st Birthday Series*. You cash in!

"Sure, but how do I . . ."

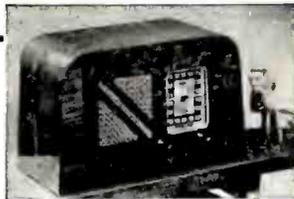
For faster sales and bigger profits—ride with this winning celebration line! The line with instant eye appeal. Styling by America's foremost radio designers. Exquisitely grained cabinets. Mechanical and tone performance second to none. And prices (with profit margins) that sure will make you cheer.

"Want to get action?"

Phone your Westinghouse Distributor, now.



MODEL WR-184. Walnut cabinet. 6 down-push buttons. AC-DC. Underwriters Listed.



MODEL WR-177. Modern richly grained walnut cabinet. Built-in loop antenna. AC-DC.



MODEL WR-186. Hand rubbed walnut. 6 down-push buttons. AC-DC. Underwriters Listed.



MODEL WR-179. Hit-of-the-season design—contrasting walnut. 5 down-push buttons. AC or DC.

Westinghouse Precision **RADIO**

RADIO *and Television* TODAY

WOULD YOU TRADE PLACES?

The test of a man's satisfaction with his present occupation, comes when he considers leaving it for something else.

Would you trade your job in radio for anything else? Would you swap a place in radio, for any other field?

Oh yes, we know radio has been called a cut-throat game, a lousy racket, a price-cutting mess. Its principals and employees have been declared underpaid. And its ethics are sometimes compared to jungle warfare.

Yet after all, what other business offers such opportunities—such a variety of interest—day after day, month after month. Or such ever-renewing chances for new sales and profits, as each older development becomes saturated.

☆ ☆ ☆

Radio is never finished.

Something new is always happening.

New interests, new models, new methods, are always pushing to the front.

We no sooner passed through all-wave, AFC, and push-button control, then along came portables, frequency modulation and television. New sales opportunities are always beckoning on.

Hemmed in by no narrow limits, radio serves every group and class. Today its appeal and interest are universal, whether it is bringing in a European news bulletin, political speeches, the music of Toscanini or the light swing of Benny Goodman. Every cross-section of American life is a pleased purchaser for our products.

Where else will you find a business that combines such glamor, interest, and profit—in so glorious a mixture?

☆ ☆ ☆

In this year of 1940, we all count ourselves fortunate to be Americans. The readers of these lines can feel ourselves fortunate, too, to be "in radio."

America in 1940 is the Best Place on Earth.

And radio is the best business in America—any way you look at it.

We are in a grand business today.

It will be even more wonderful tomorrow.

EDITOR, Drestes H. Caldwell;
PUBLISHER, M. Clements;
Managing Editor, Darrell Bar-
tee; Merchandising Editor, H.
L. M. Capron; STAFF, N.
McAllister, G. H. Mayorga,
William E. Moulie, M. H. New-
ton, R. A. Neubauer, J. A.
Sanborn, B. V. Spinetta, R.
Y. Fitzpatrick, 201 N. Wells
St., Chicago, Ill.; CALD-
WELL-CLEMENTS, INC., 480
Lexington Ave., NEW YORK,
N. Y. Telephone Plaza 3-1340.
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Audit Bureau Circulations.
Vol. 6, No. 6, June, 1940.

RADIO'S YEAR OF OPPORTUNITY



Radio's dramatic bomb-by-bomb broadcasts of the battle news pulls extra listeners to extra sets.

BIG EVENTS SET THE PACE FOR DEALERS' SELLING

In every Presidential Election Year, since broadcasting began, the sale of radio sets has run substantially *above* the curve of general business.

This year, piled on top of the interest in politics, is the intense public concern in the tragic news of Europe. On the air, the almost-hourly reports by skilled American observers abroad have set new highs in first-hand presentation of gigantic drama.

Meanwhile American baseball holds its radio audiences. And new musical and dramatic broadcast programs are constantly being added by the networks to enhance their listener appeal.

Certainly the stage is set for a remarkable year of opportunity in radio. Never before has any group of business men been the beneficiaries of such a conjunction of vast forces, all helping to stimulate radio sales.

For the early months of 1940, radio's selling pace was far ahead even of 1939 (when ten and one half million radio sets were sold.) With the disquieting events of May in Europe, sales have become slower on all fronts, but there is still prospect of 10 to 12 million radios being sold during 1940.

Added to previous census figures, such sales mean that at this moment, there are in use in the United States nearly 50,000,000 radios, in homes and autos and as extra sets. Never before did service men and

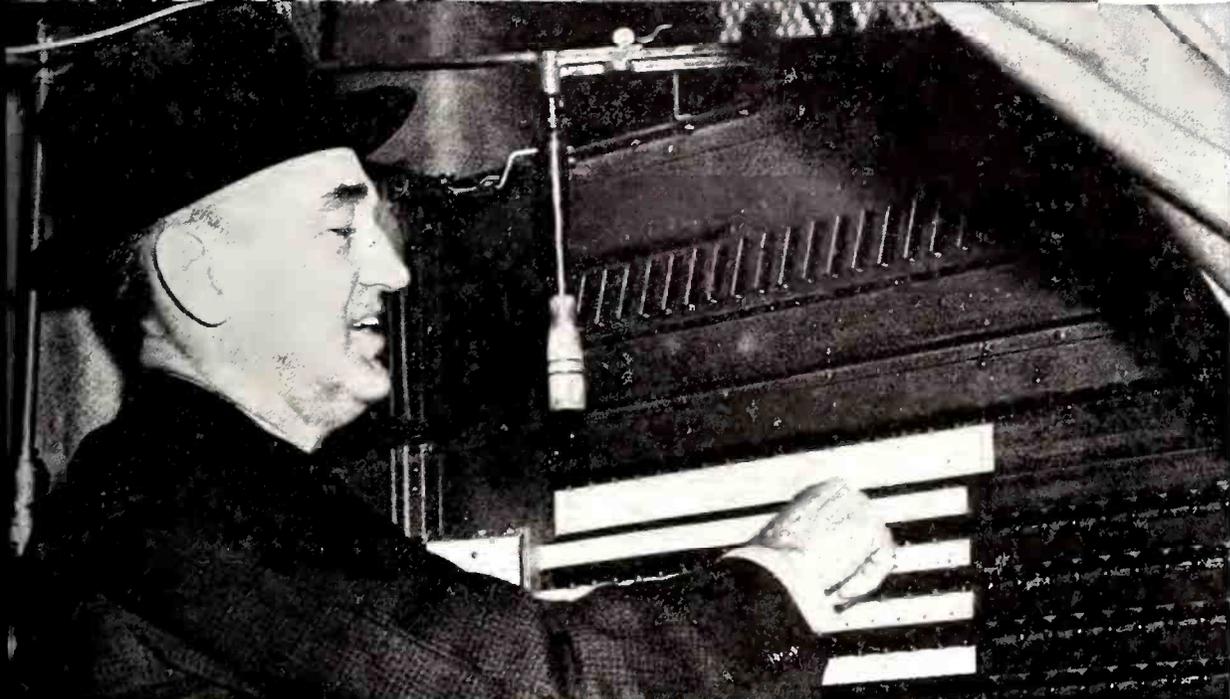


One of the stars on new summer air shows is Jessica Dragonette, heard on Ford Hour on CBS network, Sundays at 9 p.m.

NEW PROGRAMS



Fans flock to radios again for Big League scores. This is Crosley Field, Cincinnati, floodlighted by GE.



ELECTIONS

"Listen Before You Vote" idea attracts millions as presidential contest nears.



NEW DRAMAS

all those who sell parts, tubes and supplies, have such a market in which to work.

During May, consumer purchasing of all "durable and higher-priced merchandise" which includes radios, showed some decline, particularly in large Eastern cities.

Damp, unseasonable weather, and the sharp drop in agricultural prices has offset the increased purchasing in some industrial centers.

A decline in the sale of higher priced radio, appliances, jewelry, house furnishings and expensive wearing apparel was attributed by many retailers to war psychology, especially as it had effected stock market values.

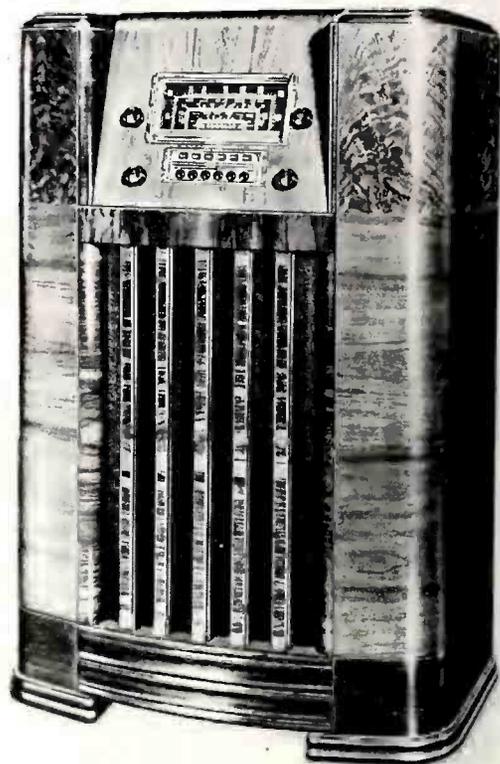
With new models beginning to make their appearance, and with the political conventions only a few weeks away, radio sales should shake off their sluggishness of the last two weeks, and get going in earnest for another big year.

Ear-catching season of radio plays gets under way. Here's Gale Page, soon to open on NBC's Hollywood Playhouse.

RCA Victor's Presidential model, 110K. Ten tubes. Overseas dial. 12-inch dynamic speaker. Built-in antennas.



Crosley Model 25AY. Seven tubes. Six push-buttons. Three bands. Built-in loop.



RADIO LOOKS ITS



Farnsworth radio-phonograph, with Tip-top tuning. Radio door tilted forward for chairside tuning.



Zenith chairside 10-S-549. Ten tubes, with Wavemagnet. Walnut.



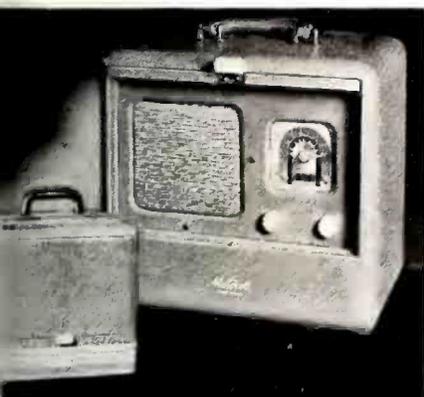
DeWald Recordomat. Radio, phonograph, recorder, microphone address. \$149.50.

General Electric "Electioneer" model J-805. Dual beamscopes. Six feathertouch tuning keys. 9 watts.

Westinghouse WR-179. Five push-buttons. Easy-reading dial. Built-in loop. Cabinet of walnut veneers. Weight 7 $\frac{3}{4}$ lb.



BEST FOR 1940-41



Top, left. Motorola 3-power portables, Models 65 BP-3 and 65 BP-4. Sliding door, closed front.

Top, right. Emerson EM-345 combination radio-phonograph. Price \$29.95.



Left, lower. Automatic Recordex. Table model R-60. Visible recording. Serves as public-address. Push-button control. \$99.50.



Wilcox-Gay Record-o A-93 Deluxe Modern. Automatic record-changing, phono, radio, recorder, \$169.50.



Left—Admiral combination 11-tube Model 58-A11. Magic Eye. Five bands. Automatic record changer.

Right—Sentinel twin commode. Model 220D with 7-tube radio; matching model RCD with automatic record changer which plays through 220D.

SELLING IN THE UPPER BRACKETS

Every dealer knows that profits ride on the higher priced sets.

Yet year by year, the proportion of higher-priced sets to total sets sold, gets smaller and smaller.

Much of the reason for this condition is the defeatist attitude of many dealers.

Many dealers say they can't sell big consoles, and so, don't try.

One great department store has recently announced that it will sell *only* compacts and portables.

The American public still enjoys the highest standard of living on the face of the earth. And they are still *quality* conscious, and *do buy* quality products when that quality is evident, emphasized and *sold*.

Yes indeed, the higher-priced consoles and combinations can be, and *are being sold*.

To Sell Higher-Priced Sets

1. Have an assortment in stock
 2. Display them prominently
 3. Study their advantages
 4. Demonstrate in the home
-

Not by the dealer who lets his window displays, his floor stock, and his selling be the outward and visible sign to the customer of his "compact complex" and defeatist attitude.

DEFEATISTS

But the dealer who *knows* his radio, who displays, stocks, sells, and demonstrates, the *quality* of the better sets, honestly, intelligently, and enthusiastically, is selling the higher priced consoles and combinations, and making a nice profit doing so.

Sure, you *do* have to *sell* the higher priced jobs, and use every practical means to break down the tendency to buy on the basis of "price."

But it *is* being done.

It's hard to sell what you haven't got, and so, the first step in selling in the higher brackets is to have an assortment of these models in stock.

The second step is to display them *prominently*.

You just can't *hide* the good jobs, as so many dealers do, and expect the public to demand them.

CUSTOMER IMPRESSION

If you have a dozen cheap jobs on floor for every "good" one, this domination of your display is certain to make a "price" impression on your

customer, make it harder then, to sell quality.

The third step is to learn everything you can about the features, the performance, the construction, the quality of the set which makes it *worth* the higher price.

These quality features must then be dramatized, and made to stand out, in your selling and in your displays.

SHOW VALUE

One excellent way of focusing attention on the larger sets was employed by an enterprising dealer recently.

He mounted all the parts, every condenser and resistor, every coil, every bolt, screw, nut and piece of wire, from a small set and from a large job, on two velvet-covered boards, placed side by side.

What a comparative story he told with, and from, these display boards.

Not only were there hundreds of *more* parts, but bigger, better, stronger parts in the quality job, which anyone could see, and touch and understand.

This display made a perfect setting for this dealer to *talk* quality, to *prove* quality and to *sell* quality.

Few people are willing to pay much for an intangible quality which they can't see, or feel, or hear.

PROVE QUALITY

Prove to them that this quality is there, show it to them, let them see it and hear it, explain what it means to them, and the sales resistance to quality disappears.

Take the fourth step.

Demonstrate the quality radio, in the home if necessary, side by side with the old one, and any real salesman can make so skillful an appeal to the pride of possession which is inherent in every American, that the sale is made.

Of course, the integrity of the dealer, and his sincere enthusiasm for his quality radio are priceless ingredients in selling these sets in the higher price brackets.

Your store, your displays, your advertising, your selling methods, must all be in keeping with the products you sell.

You can't lay emphasis on *price*, as many dealers do, and expect to sell *quality* jobs.

You can't stress the bargain appeal of your long trade-in allowances, or the merits of your \$39. consoles, and expect people to rush in to buy your \$100. jobs.

CAN BE "SOLD"

The point is that most people will buy on price, but can be sold on quality.

And the *selling* is up to every dealer, on every sale.

Probably the greatest *single* factor in selling radio in the upper brackets is *viewpoint*.

Anyone, you know, can make a product a little inferior, sell it a little cheaper.

No one can take much pride in that kind of a job, and so, when a dealer becomes so price conscious that he is price *fearful*, his viewpoint is warped.

ORDER-TAKING

He can generate no enthusiasm, because he has no pride, in his quality products, in his store, in his displays, perhaps even in himself and his service.

From such a price-fearful viewpoint, it is hard, if not impossible, to reserve the selling superlatives, and the display prominence, for the quality radio that earns his profits.

This viewpoint, too, is the greatest single factor in the displacing of honest, serious, selling effort, by the apparently easier order-taking and price-cutting methods of doing business, now so common in the radio trade.

FORGET VOLUME

And it is this viewpoint which makes most dealers see *volume* before profits, *price* before quality—makes them envious of the chain, and mail-order houses which have *nothing* but *price* to offer.

There lies the fundamental difference in selling effort, and in profits and reputation earned.

Radio consoles and combinations can be sold in the upper price brackets

A CHECK LIST FOR 1940

Ten Cardinal Points of American Radio Selling

- Go out and get the business.
- Demonstrate in the home.
- Follow up former customers for new sales.
- Cooperate with manufacturers in newspaper advertising.
- Use the mail to send out circulars, booklets.
- Have an attractive, clean store; courteous staff.
- Keep attractive displays in your show windows.
- Offer installment payments on higher-priced sets.
- Use service calls as openings for receiver selling.
- Sell programs, tone quality, convenience—not technical details.

only by *selling* them.

But every dealer who has geared himself up to sell the upper values, and who does an honest follow-up on his old customers, and a sincere, consistent quality selling job, seems to be selling these upper-bracket sets with the long profits riding on them.

And that's the payoff—not only in dollars, but in the pride of a good job well done.

Federal recording radio, Model 211. Six tubes. Recorder and phonograph combination. Price \$99.95, less mike.

Stewart-Warner Concert Grand. 8-tube recorder with automatic record changer. Cabinet also comes with 8 and 10-tube record changers and radios.



LOOKING AHEAD IN



The new art of "frequency modulation" radio exemplifies how merchandise lines may suddenly change. (Shown is Stromberg Carlson FM set.)

Today, radio, sound amplification and records are the principal merchandise of the radio man.

But tomorrow the list will include many additional items and services—all related to the radio tube and its circuits.

Among the new merchandise lines already on the horizon are (1) ultra-short-wave broadcasting (including frequency modulation), (2) television, and (3) electronic musical instruments (creating original music through radio-tube circuits).

And beyond these are a host of electronic applications for the home, shop and factory.

Ultra-short wave broadcasting—whether amplitude-modulation or frequency-modulation, offers many new possibilities of greater fidelity and freedom from noise. Already the story of frequency modulation has been pretty thoroughly covered in these columns. (See last issue, May, pages 16 to 19 and 46, 51 and 52.)

But new applications of FM are

also possible. Take rural coverage for example. FM at 42 mc does not penetrate very long distances. But an FM chain service to farm areas might well be set up by installing small FM transmitters every few miles on electric-light poles, relaying programs to the surrounding countryside and using radio as the connecting links of the chain.

FM may also bring back the carrier-current inter-office communicator of a few years ago. Chief trouble with those early sets was noise from the power lines. But using FM, this noise would be silenced, and the intercommunicator might once more become an active article of merchandise.

PROJECTION TELEVISION

Television, too, may develop in new directions of projection screens, permitting larger pictures in the home. RCA recently showed its stockholders a parabolic-reflector unit, capable of projecting pictures 4½ ft. x 6 ft. from a 2 x 3 in. tube, and expects to have a new projector capable of even a 9 x 12 ft. picture.

British inventors have used lenses to project the intensely-brilliant tube-end picture onto the wall screen. In place of a cathode-ray tube, Scophony employs an oscillating crystal to set up waves in a liquid, through which the beam from a local light-source is modulated by diffraction. In another direction, the Skiatron process produces chemical opacities or shadows which then serve as a sort of "changing slide" in a stereopticon projector. Van Ardenne employs polarization in a zinc-sulphate solution, through which polarized light is transmitted. Kerr cells have also been used. And local arc sources have been modulated in various other ways. Still other ingenious possibilities have been suggested, to produce the desideratum of large home pictures.

It is evident, therefore, that no blank wall of television development has yet been reached, and that improvements in picture-size, detail and illumination are yet to be expected.

MUSICAL INSTRUMENTS

Meanwhile musical instruments are going ahead in a way to indicate that here is a valuable new line of merchandise for the radio dealer. Under the patents of B. F. Miessner, L.

Hammond, Theremin, Ranger and other inventors, commercial instruments are being offered to the public. These find a ready market among people who like to create their own music, rather than to listen to reproduced melodies. This market is bound to grow, repeating the demand for musical instruments of a generation ago, in pre-radio days. Electronic pianos, organs, violins, mandolins, and even synthetic horns, all find a place in the new technique of self-played music in the home.

"ELECTRIC EYES"

Many other uses are found for radio tube devices and relays, especially in connection with photo cells or electric eyes—applications which because of his special knowledge, the radio man can best install and service.

These electric eye relays turn on lights when it gets dark, and turn them off again when they are not needed. Such electric eyes respond to the slightest shadows; even a wisp of smoke will serve to ring a bell.

If we wish, they will push doors open for us, at the approach of our own shadow. Silently, and automatically, without the touch of a human hand or the faintest apparent impulse, the door swings open as one comes near it. One's mere shadow, falling upon the sensitive plate of a photoelectric cell, has served to set up the current that opened the door.

INDUSTRIAL USES

In industry and business it is necessary to match shades of colors with exact, undeviating accuracy. Fabrics, dyed materials, paint samples must be matched, and mistakes cannot be tolerated. Pastes, powders, special items (like coffee and corn-flakes) need to be tested for color shades. But when it comes to color-matching, the human eye is easily misled (especially the poor, inexpert *male* eye). But a portable electric color-matcher, with one of these magic tubes in it, now effectually solves the problem.

Then there are thermo-electric detectors, which can see through the clouds or fog, detect the warmth of the face of a man who is a mile away—an instrument which can also warn navigators against remote ice-bergs. Once again, the uncanny power of electron tubes!

RADIO

COUNT ANYTHING

Stockyards count cattle by photo-cells; movies count patrons; toll-collectors count autos. In one of our big paper-manufacturing plants, the logs are being counted by an electric eye, automatically, as they flash by. Cans and packages are counted, and faulty labels are instantly detected. Cows are washed and sprayed by a photo-cell device.

And in the Gulf Southwest, oil prospectors, without pointing a drill but with this electronic magic wand, are definitely locating great pools of petroleum—5,000 feet below the surface of the ground.

The industrial uses of radio tubes vary from brain surgery to home-talking pictures—from under-water signaling to smoke-elimination, from burglar-alarms to the wholesale extermination of injurious insects, from railway control to safety devices around dangerous machines. In factory production, these tubes are used to regulate, to analyze, to synchronize, to measure and to grade many commodities.

RADIO MAN HAS KEY

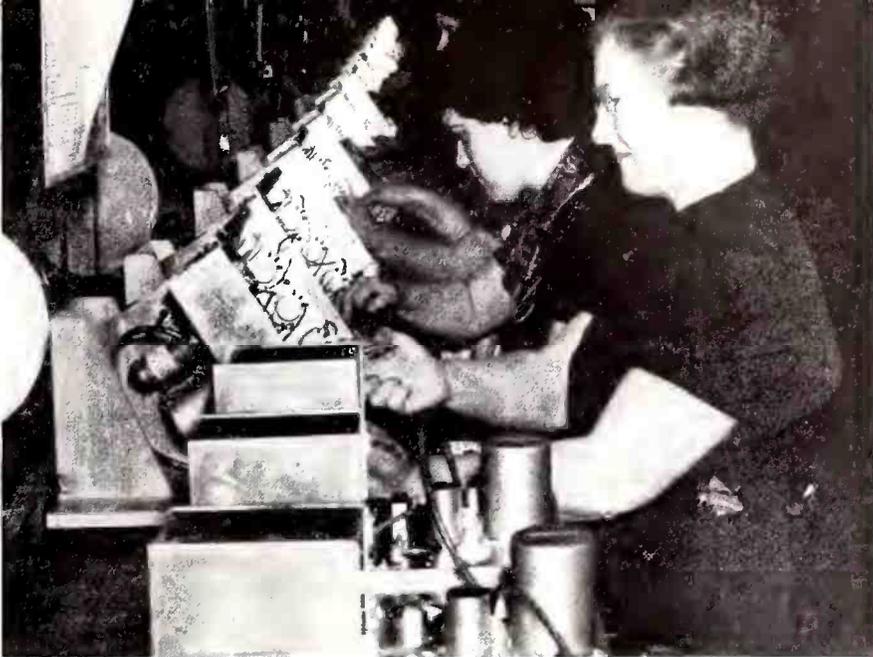
It is in this wide rich field of the days to come that the radio man's own future is cast. The tubes, the circuits, the controls, the principles, used in these devices just listed, are all exactly the same as those with which the radio man has become familiar in his radio sets and sound equipment.

As he works in radio and sound, he will find himself steadily overtaken by new lines demanding to be handled, and to which he alone has the key of competent knowledge.

For Auto Radio Sales

A pair of suggestions, devised to increase the public interest in car radio listening, have been advanced by Carl George, program manager, WGAR, Cleveland. These ideas outline co-operative action between RSA chapters and local stations, and are reported by National Association of Broadcasters:

"Certain police cruisers could be designated to short wave the license number of a car that they have chosen as being driven safely. This information would be passed on to the studio announcer and he could immediately



Television-receiver manufacture is now a production-line operation at RCA-Victor's Camden plant, as demand for sets increases.

announce that the driver of the car bearing license number 000 has been recognized by the Police Department as being a safe driver under observation.

"Because of his safe driving he will receive a complete check up on his auto radio by an RSA member with new parts supplied at cost, providing he telephones his identification into the station within ten minutes after the announcement is made.

"While this program is on the air we could also give safe driving hints to all drivers who have car radios tuned into the program."

The second idea is concerned with questions:

"Conduct a daily quiz program for auto radio listeners and have spotters

telephone in the license plate numbers of cars that pass a given point. Then the announcer will say: 'If the driver of the car bearing license number LX-157 can answer this question, he will receive a free auto radio check-up by a qualified RSA member.'

"This auto radio listener would be required to phone in the correct answer to the question within ten minutes after it is asked on the air, in order to qualify for the prize. This will encourage all auto radio owners to listen to the program and will give the announcer an opportunity to put in a good plug for set repair and proper tune-up. License numbers would be chosen at random just like a participant in a studio quiz bee would be picked."

Croycraft All-Electronic Orchestra using instruments and conductor's monitoring system developed by B. F. Miessner. Frequently heard on radio network.





SELL 'EM IN

ONE PROSPECT CAN LEAD YOU TO A STRING OF OTHERS

Chain selling can defeat chain store selling every time, when properly conceived and sincerely carried out.

Chain stores close each transaction and customer relation when the customer walks out the door, and depend upon price to bring them back.

You can, and should follow each customer up with a friendly attitude by mail, by phone, and by personal call, to make sure the product you sold is giving satisfactory use, to get a lead on any friend who is in the market for an item, and then by your friendly service to be on the job and favorably in the customer's mind when this customer can be sold another.

In the final analysis, it comes down to the simple premise that you must justify your higher prices by service and friendliness, which is *worth more to the customer than it costs her*, and you can do this by putting your customer relations on a personal, friendly basis, while your chain store must always be very impersonal and mechanical.

If you meet, and beat the chains in this way, there will be no need of trying to kill them by legislation. You will be a better merchant, and yours a better store for having met open

competition in the true American way. Henry Ford sells a million cars a year, to people who can afford no better, and who are enabled to enjoy all the benefits of economical private transportation for business and pleasure, but there are plenty of customers left to make the Buick dealers, as a class, the most prosperous in the industry, and there are plenty of buyers for Nash, Studebaker, Hudson, Packard and Cadillac.

So, too, with the chains.

WORKS BOTH WAYS

Have you ever stopped to think that the same principle which permits legislating the chain store out of business can also be used to legislate you out of business? The power to tax is the power to destroy, always.

Independent dealers should not want chain stores put out of business. Chain stores serve a very useful purpose, as well as an economic need.

True, they have taken some business away from the independent dealer, but only because the dealer has let them.

Chain stores may sell for lower prices than you can, but all they have to offer is price.

Price, of course, is an important factor, but not the most important by a long shot, in influencing people to *continue to buy*.

Only when you do not offer the other controlling factors, which *you can*, and *the chains cannot*, does price alone become the dominant trade factor.

And what are these vital factors in influencing trade which you can use to beat the chains?

First, is friendly personal service.

Every chain store is an impersonal merchandising machine, to whom each customer can only be a cog in that machine.

STORE PERSONALITY

Your store is *you*. It has *your* personality, *your* friendly greeting, *your* sincerity, *your* integrity, all of which is strongly in *your* favor.

Chain stores take little or no part in civic affairs, and so can attract only negative public opinion.

You and your store, can take part in many civic activities. You can help the Junior debs, the Women's Clubs, the Boy Scouts, the Girl Scouts, etc., by cooperating in their many activities, and thereby reflect on your store



en soon forget the price they paid, but long remember the satisfaction they get. No chain store can compete with your honest "satisfaction guaranteed."

Many people must buy on a price basis, but there are plenty who will buy *better merchandise with better service* in a more *friendly spirit* from you. And isn't it better that as many as possible enjoy the health, comfort, and convenience of electric products, even though some of this business does go to low price retailers, than that we should deny these people appliances and their benefits because prices were beyond their reach?

Sure it is, but let's see that the chains don't get any business that *really belongs to us*. Let's not fall into the viewpoint that we are being wronged, when actually we're only "laying down on the job."

So let's sell merchandise with ser-

his personality, make his customers his friends, and keep everlastingly after it.

PAY-OFF IS 37-1

A striking example of "selling 'em in rows" or "using the user" comes from Edgar Morris Sales Co., Washington, D.C. The Westinghouse reports on this company show how one salesman actually made 37 sales by using leads from one well-sold customer.

Whether you call it "follow-up," or "chain selling" or just good merchandising sense, this story from Washington reveals dramatic details on how one customer can lead the smart salesman to three dozen others.

The first sale was made to Ida Monroe, and that transaction was directly responsible for nine more sales. These nine gave the salesman

ROWS AND LEAVE THE CHAINS BEHIND

a friendship of people, young and old, which can be translated into far greater future sales than the chain store's price appeal only.

Chain stores sell you an article at a low price and it's yours.

You can and should sell the *service and satisfaction that a radio should give*, and see that it does give it, and far more than justify the difference in price, for it is a proven fact that wom-

vice and satisfaction, and you will find no chain can meet your competition, for your rightful customers. This is so because no chain can function economically unless it maintains a highly centralized management, which must always mechanize and depersonalize their operation, making them unwieldy and slow to change, and highly vulnerable to the sound merchandising of an alert, smart dealer who will capitalize

an additional 27 leads which finally turned into sales. Many of the group were related to each other—which is an important fact to remember; on the list of 37 were 4 Monroes, 4 Logans, 3 Willfords, 2 Millers and 2 Henry's.

Any policy, or method, which turns one sale into 37 more sales is a darned good policy in *any* dealer's language, worth talking about and *acting on*.

Record RMA Convention and Trade Show Expected

Attendance at the sixteenth annual RMA Convention, Radio Parts National Trade Show, and meeting of allied industry organizations, June 11-14, at the Stevens Hotel, Chicago, promised to exceed former years, according to reports received from all sections of the country. Meetings included those of the National Radio Parts Distributors Association, the Sales Managers Club, the Radio Servicemen of America, the "Representatives," and other industry organizations.

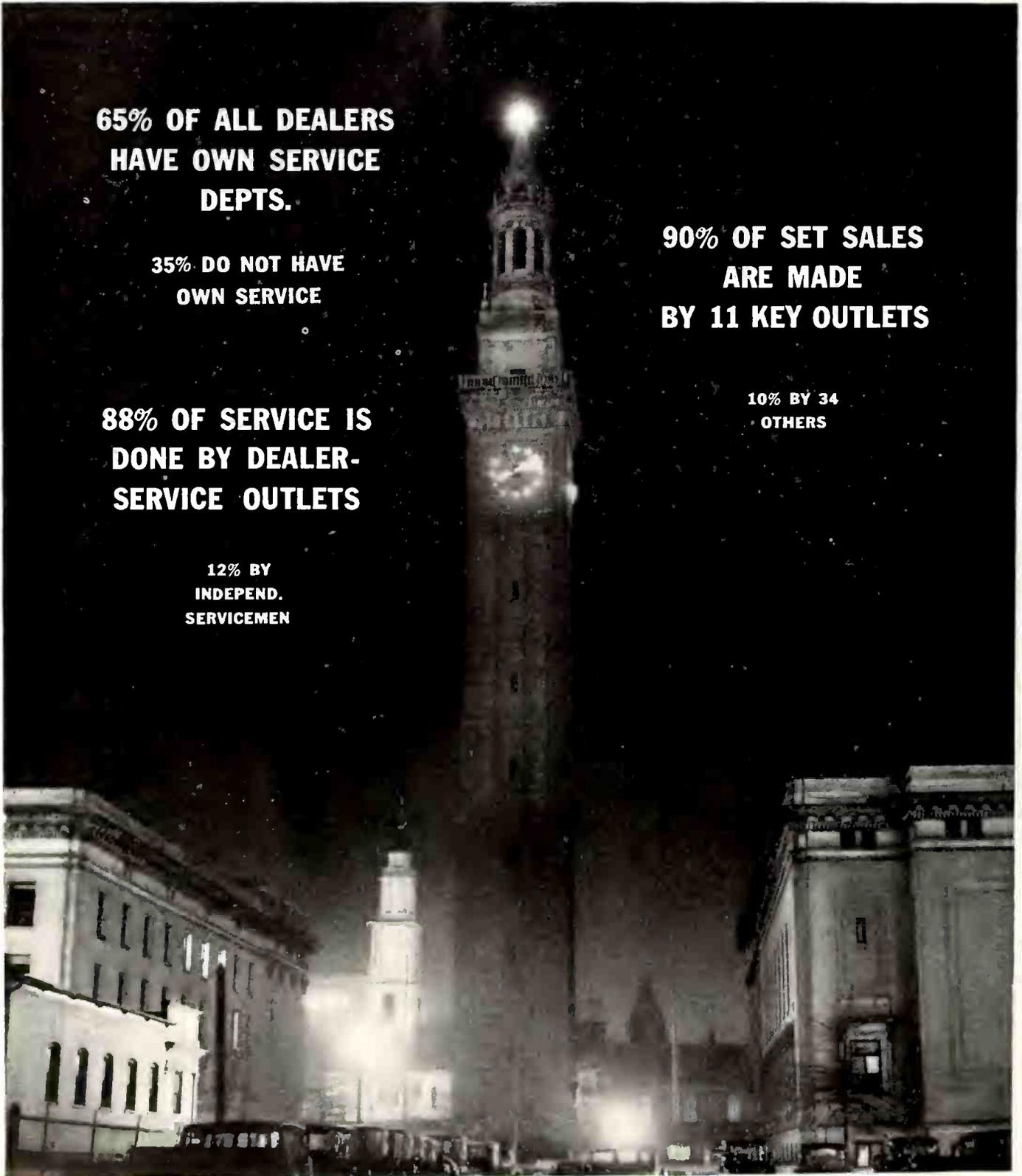
Advance reservations for the Parts Show and also the annual RMA Industry Banquet Wednesday eve-

ning, June 12, far exceed those of past years. The Parts Show has already overflowed the Stevens Hotel Exhibition Hall, with manufacturers having reserved 160 booths.

Important business sessions and election of officers of all RMA Divisions was scheduled for Tuesday afternoon, June 12, including meetings of the Set Division of which James C. Knowlson is chairman, the Tube Division under the chairmanship of B. G. Erskine, the Parts and Accessory Division with Chairman H. E. Osmun, and the Amplifier and Sound Equipment Division, under Chairman J. Mc-Williams Stone.



WHO GETS THE VOLUME IN



**65% OF ALL DEALERS
HAVE OWN SERVICE
DEPTS.**

**35% DO NOT HAVE
OWN SERVICE**

**88% OF SERVICE IS
DONE BY DEALER-
SERVICE OUTLETS**

**12% BY
INDEPEND.
SERVICEMEN**

**90% OF SET SALES
ARE MADE
BY 11 KEY OUTLETS**

**10% BY 34
OTHERS**

In this picture towers the familiar civic center landmark of Springfield, Mass., city chosen for the second of a series of market studies to be made by RADIO TODAY. Herewith are presented the results of the study—the

figures on the New England town where the magazine's representatives have made a complete census of every local radio activity. The first survey, covering the market facts on Dayton, Ohio, was published last month and

some of the old-time market beliefs were shattered. Similar investigations will continue in other cities until they have provided a generous cross-section of the radio market, with analyses of various unusual and typical situations.

SET SALES AND SERVICE?

Second in series of city-wide surveys shows radio business in Springfield, Mass., is centered in "key" outlets. Servicemen stocking sets and selling aggressively.

While the 1940-41 season is being solidly established as one of top significance, it is increasingly important that the trade's two most vital elements—sales and service—be fully recognized as moving closer together.

The pairing was done years ago, when radio began to realize that these two were already in a clinch, unmistakably drawn to each other. And now, while radio has a superb chance to roll up a lot of extra volume, the relation between the two engages special attention. Who gets the service business—who chalks up the sales—and what are the details of the growing bond between them?

CHECK ON STORE STATUS

The character of the "sellingest" types of radio outlets are now under special scrutiny for several additional reasons. In the first place, all dealers want to know what style of doing business is most likely to insure volume. While leading radio outlets in the country give a heavy play to the sales-and-service combination, retailers certainly want to know what the details are.

Also, jobbers and manufacturers are making marketing plans for new merchandise, and any strengthening of the tie between service and sales are of interest to the executives who must head their promotion into the key branches of the trade. In the past, there has been some tendency to work with endless lists of radio outlets, with a certain division between "sales" and "service." The trend away from this division is definite and steady, and deserves recognition. Not that the independent serviceman gets a lower rating; his position is secure. But in most cases, if he has size and success, he is now selling sets.

Thus the position of radio servicing and its relation to sales becomes the most interesting part of the market situation. In other words, *Who Does the Servicing Today?*

Further, the idea of service-as-a-key-to-greater-sales is a development which has taken place in other fields where it was finally realized that replacement parts and service-on-the-spot were things that belonged in another corner of any sales room. The stabilization of automotive and electrical trades is practically based on the idea. In many cases a dealer is not allowed to sell at all, unless he is equipped to service what he sold. Franchises depend on it.

RADIO STATISTICS OF SPRINGFIELD

List of retail sales and/or service stores, from directories, mailing services, manufacturers' and jobbers' lists, etc.....	111
Verified as Out of Business, Inactive, Radio Discontinued, Dual Names, etc.....	43
Active radio establishments, all types, retail only.....	68
Dealers.....	43
Dealers with own service departments and Service shops stocking sets.....	28
Independent servicemen, full or part time.....	22
Servicemen employed by dealers and dealer-service stores.....	34

In order to speak with specific authority on the new link between service and sales, RADIO TODAY has started a series of surveys. These are conducted by the magazine's own manpower—an expensive and thoroughgoing investigation of a number of representative towns. The first of the surveys was presented in the May issue of RADIO TODAY, where a study of Dayton, Ohio revealed that 79 per cent of the service volume in the town is being done by dealers who have their own service departments.

RADIO TODAY herewith carries the check-up into Springfield, Mass., a town of some 400,000 population, mainly industrial, where the market includes the western counties of Massachusetts and a small part of Northern Connecticut. Springfield is 100 miles from Boston, and 135 miles from New York.

The findings in the Massachusetts town were strikingly similar to those unearthed in Dayton, with some variations because of peculiar characteristics of the former:

1. The per cent of the large dealers having their own service departments is even greater than that in the Ohio city.

2. The bulk of the servicing in Springfield is being done by outlets which operate their own service departments.

3. Service establishments which operate on a big scale are, for the most part, carrying receivers in stock.

4. The number of servicemen who operate from their homes, and part-time servicers, decreases as local industrial employment goes up, indicating that their radio business is a second and temporary choice.

RANKING OUTLETS

It can be seen that a select group of top-ranking retailers are marked for special importance in the radio market. The majority of them emphasize "complete radio sales and service" to the folks in Springfield, and they get the business. Through their stores flows the kind of volume that manufacturers and jobbers are looking for.

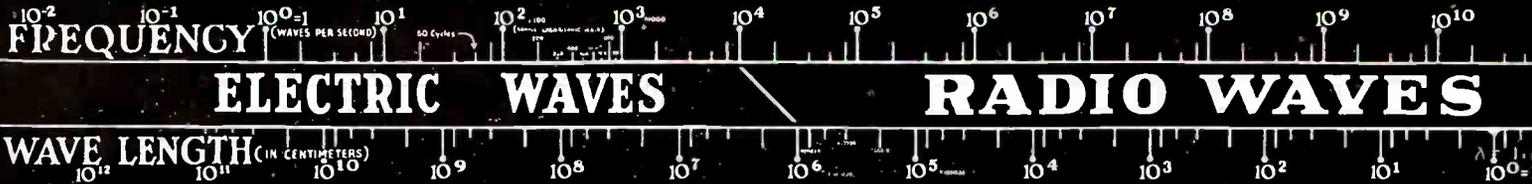
This does not mean that the smaller outlets lost in the shuffle, or that the smallest of the dealer fry in Springfield does not have the makings of a house of first importance. As long as widespread distribution is sought by the several hundred manufacturers in the trade, the pint-size store will have a place in the sun.

However, in the current effort to guide radio distribution efficiently through the swiftest channels, the leading stores must be charted as outfits which are all set to serve their public with sets, parts, test equipment, and allied products. Possibly they discovered that this set-up gave them a general command of the needs of the radio home, to such an extent that they survived the pitfalls (every trade has them) of radio selling, and became successful retailers of radio. Or perhaps they found that the sales-and-service method gave them a string of extra "ins" for the homes of their area. In any case, they stand at the exact front of the retailers' ranks.

OPPORTUNITIES AHEAD

The situation is one which indicates an opportunity for the independent serviceman, however small at the moment, to lift the business standing of his shop up to new levels, by using his direct contacts with the insides of the homes. Certainly he has his foot in the door, via his service jobs, and he has a great chance to start selling extra radios, radio-phonographs, portables, etc., so that extra profits will be rolling in. An aggressive attitude toward *selling* has much to do with improving the financial status of the smallest service shop.

RADIO & BEYOND!



REFLECTION

LAW OF REFLECTION
Angle of incidence = Angle of reflection

REFLECTION OF WAVES AS A CONCAVE SURFACE
CONCAVE AND CONVEX MIRRORS

IMAGE POSITION GIVEN BY:

REFRACTION

DU TO CHANGE IN VELOCITY OF WAVE ON ENTERING NEW MEDIUM

Wave length decreased in same ratio as velocity. For light entering glass or water etc. the long waves, slow down less than short waves. Produces dispersion of light.

IMAGE POSITION GIVEN BY:

CONVEX LENSES
CONCAVE LENSES

DIFFRACTION

OCCURS WHEN WAVE FRONT ENCOUNTERS AN OBSTACLE, CRUCIAL TEST FOR WAVES

DIFFRACTION OF WAVES

INTERFERENCE

PRODUCED BY TWO WAVES OF SAME VELOCITY AND WAVE LENGTH TRAVELING IN OPPOSITE DIRECTIONS, EITHER PRODUCED BY USING DIRECTLY AND REFLECTED WAVES

INTERFEROMETER

POLARIZATION

POLARIZATION BY REFLECTION

Mechanical Analogy of Polarization

POLAROID DISCS

ELECTROMAGNETIC WAVES CAN BE POLARIZED

RADIO SPECTRUM, FREQUENCY and WAVE LENGTH ALLOCATIONS

MARITIME	RADIO BEACON	AERONAUTIC	DILECTRIC FIBRE	BROADCASTING	POLICE	AMATEUR	TELEVISION

TRANSMITTERS
ALLOCATIONS
RADIO RECEIVING

FREQUENCY (in HERTZ PER SEC.)
WAVE LENGTH (in METERS)

ALL WAVE RECEIVER (Wave bands changed by plug-in coils)

TELEVISION RECEIVER

RADIO TUNED CIRCUIT

WAVE METER
RESONANCE CURVE

SUPERHETERODYNE RECEIVER

DETECTORS OF RADIO WAVES

RENT'S RECTIFIER	LAMP INDICATOR	CRYSTAL DETECTORS	DIODE	ONE TUBE CRYSTAL	TRIODE	VECTRODE	PERMUTOR

NOTIFIED OUTPUT

CHART OF ELECTROMAGNETIC RADIATIONS

Edited by Dr. Arthur H. Compton, Nobel Prize Winner, and compiled by R. J. Stephenson and D. L. Barr.

Reproduced from 42 x 62-inch wall-chart in eight colors, copyrighted by W. H. Welch Scientific Co., 1515 Sedgwick St., Chicago, and available at \$10

and All Radiations
Second, or second

SUN
Observer on Earth

GAMMA RAYS
 RADIATION REPRESENTATION OF URANIUM ATOM
 RADIUM IN THE HOSPITAL
 PRODUCTION OF X-RAYS

COSMIC RAYS

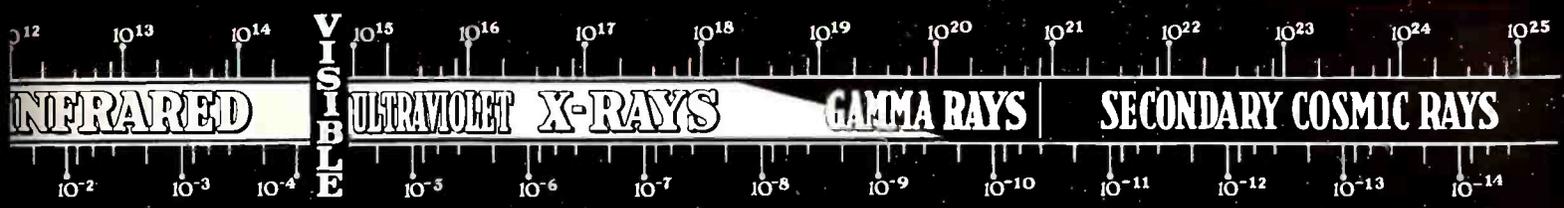
NUCLEUS
 This Uranium nucleus emits alpha particles to produce a new atom, U²³⁴, of atomic no. 82, atomic no. 84. This in turn emits Beta Rays and Gamma Rays. The half life period of U²³⁸ is 4.5 billion years. One of its atoms will be transformed into Pb²⁰⁶ in 4.5 billion years.

VISIBLE SPECTRA
 Produced by electron transitions in atoms where less energy is involved.

HYDROGEN ATOM
 The effect of the electric field of the electron on the nucleus is the same as in the hydrogen atom. The electron falls from orbit 2 to orbit 1, emitting a photon of energy $h\nu$.

ULTRA VIOLET LAMP
 Higher voltage makes possible more powerful and shorter waves length and greater penetration.

X-RAY TUBE
 Radium used, containing a trace of radium, is enclosed in a tube of molybdenum and is 10 cm. from the anode. The gamma rays from the radium are filtered by 1 mm. of lead.



MEASUREMENT OF STAR TEMPERATURE
 Curves of intensity of temperature curves of light from stars are plotted in the diagram below. The wave length where maximum energy is found has a linear relationship $\lambda_m \propto T^{-1}$. The absolute temperature T of the star is found.

RANGE OF THERMOCOUPLS
 PYROELECTRIC
 THERMIST
 THERMOCOUPLE
 THERMOPILE

SUN BURN
FLUORESCENCE
X-RAY PHOTOGRAPHY
RADIOACTIVITY

SPECTROSCOPE
PHOTOELECTRIC AND PHOTOGRAPHIC EFFECTS OF ULTRA VIOLET
X-RAY SPECTROSCOPY
ELECTROSCOPE

COMPTON EFFECT
 CONSERVATION OF ENERGY AND MOMENTUM BETWEEN COLLISION OF X-RAY PHOTON AND ELECTRON

THE HYDROGEN SPECTRA
 WOULD APPEAR AS SHOWN BELOW. THIS IS CALLED **BALMER SERIES**
 AND IS EMITTED WHEN AN ELECTRON FALLS FROM ORBIT 2 TO 1, OR 3 TO 2, OR 4 TO 3, ETC. SERIES LIMIT CORRESPONDS TO ELECTRON FALLING FROM INFINITY TO ORBIT 1 (SEE DRAWING OF HYDROGEN ATOM ABOVE).

EFFECT OF MAGNETIC or ELECTRIC FIELDS ON SPECTRAL LINES
PARADAY EFFECT
ZEEMAN EFFECT
STARK EFFECT

BRIGHT LINE SPECTRA OF SEVERAL ELEMENTS
 STRONTIUM (Sr)
 ARGON (Ar)
 CALCIUM (Ca)
 LITHIUM (Li)
 HELIUM (He)
 BARIUM (Ba)
 POTASSIUM (K)
 SODIUM (Na)
 NITROGEN (N) BAND SPECTRA

THE VISIBLE SPECTRUM
 SOLAR SPECTRUM
 FRAUNHOFER LINES
 WAVE LENGTH IN ANGSTROMS

PARTICLE CHARACTERISTICS
 Electromagnetic Radiations Have Particle Characteristics
 To each electromagnetic wave of frequency ν there are associated PHOTONS of energy
ENERGY OF PHOTON = $h\nu$ ($h = 6.625 \times 10^{-34}$ Joule-sec.)
MASS OF PHOTON = $h\nu/c^2$ $c =$ velocity of light
MOMENTUM OF PHOTON = $h\nu/c$ = 299,774 Kms/sec.

PHOTOELECTRIC EFFECT
 Characteristic of particles is that they are localized in space and obey the laws of conservation of energy and momentum. The PARTICLES are the PHOTONS—short effect is much more pronounced for high frequency waves. It is of radiations that the frequency is greater than the critical frequency ν_0 . In the latter wave characteristics are more pronounced.

COSMIC RAY EXPLORATION
 ALSO SHOWING ATMOSPHERIC PHENOMENA
 ROSSBY LAYER
 SHORT WAVE REFLECTED
EARTH
 Radio activity of earth discharges ionospheric layers. When the discharges were found to originate with elevation a new radiation type called the **COSMIC RAYS** was discovered.

RADIO SETS TODAY



RCA new line

★ Included in RCA Victor's new line of 28 models, \$9.95 to \$115, is the "Pick-me-Up" 3-way portable, 15BP-3 featuring built-in loop antenna, 5 in. P.M. dynamic speaker, and table model, 18-T, an 8-tube instrument with magic loop antenna, Roto-Base, big slanted dial, victrola and television plugs. RCA Mfg. Co., Camden, N. J.—RADIO TODAY.

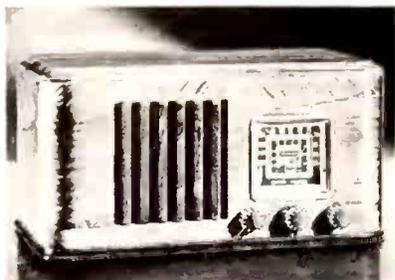


Admiral table model

★ Model 55-A7, Admiral's new 7-tube, A.C., 2-band superhet features automatic push-button tuning, R.F. stage, super aeroscope and 6-in. P.M. dynamic speaker. Continental Radio & Television Corp., 3800 W. Cortland St., Chicago, Ill.—RADIO TODAY.

Crosley table model

★ A 5-tube, 110 v., AC-DC super-



Motorola Bike Radio, B-150, complete with aerial, batteries and mounting accessories, opens new market.

het, Model 18AN, has 2 bands, 5 in. electro dynamic speaker, built-in antenna. Clock type illuminated dial. Walnut cabinet, dark brown molded base. Crosley Corp., 1329 Arlington St., Cincinnati, Ohio—RADIO TODAY.



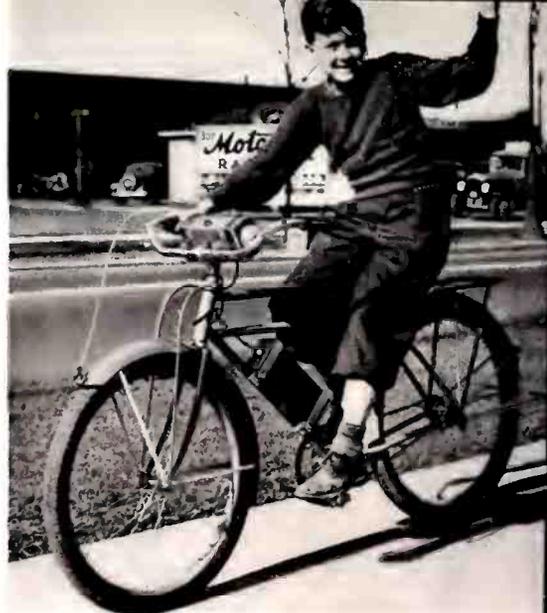
GE 3-way combo

★ Model JB-508, 5-tube portable radio-phono combination operates on AC-DC or batteries. Speed regulator, crystal pick-up, record storage compartment. Plays 10 or 12-in. records. Radio features are built-in-Beamoscope, 5 in. speaker, washable simulated pigskin case. General Electric Co., 1285 Boston Ave., Bridgeport, Conn.—RADIO TODAY.



Sentinel home recorder

★ Fine radio reception, phonograph record reproduction and home recording are combined in Model 216J, priced at \$149.50. The superhet radio has 7 tubes and 10 in. E.D. speaker. Sheraton period cabinet. Crystal pickup, plays 10-12 in. records. Microphone and stand included. Sentinel Radio Corp., 2020 Ridge Ave., Evanston, Ill.—RADIO TODAY.



Homocord models

★ Model 110 cuts and plays 12-inch disc with lid closed with crystal pick-up and cutter. Seven tube superhet radio. Walnut cabinet. Complete with crystal mike. List \$69.95. Model 120 is console with same features. Model 130 is console recorder, radio with automatic record changer. List \$139.95. Homocord Mfg. Co., Inc., 457 W. 45th St., New York, N.Y.—RADIO TODAY.

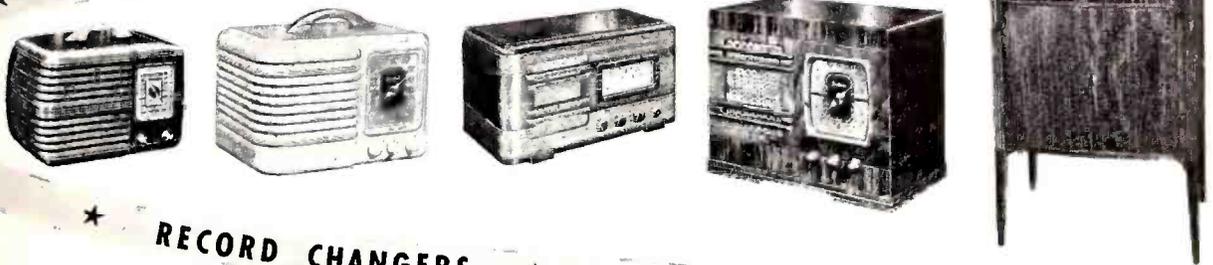


Westinghouse "Carryette"

★ WR-679 is a 5-tube portable superhet with built-in loop, 5 in. p.m. dynamic speaker. Operates on AC, DC or self-contained batteries. Covered in brown leatherette with oyster white saddle-stripe. Leather handle, brass hardware. \$24.95 with batteries. Model WR-678, identical except for brown and white airplane linen cover. Westinghouse Mfg. Corp., 200 E. 5th St., Mansfield, Ohio—RADIO TODAY.

A PARADE OF SUPER-VALUES TO GREATER PROFITS!

★ TABLE MODELS ★ CONSOLES ★ HOME RECORDERS ★



★ RECORD CHANGERS ★ PERIOD CABINETS ★



★ AGAIN THE GREATEST LINE OF BATTERY SETS ★



Here's a record-breaking line of super-values that will make 'em STOP, LOOK, LISTEN AND BUY! . . . Featuring stepped up performance and new striking cabinet designs . . . Backed by Sentinel's traditional reputation for super-quality. It's real "over-the-counter" merchandise with service reduced to a minimum, to protect dealer profits. National advertising, local advertising, direct mail campaigns, colorful literature, forceful banners, mat service, show cards, and a big, beautiful new display stand will help you sell!

See Sentinel while at the Radio Parts Show, Room 1619, Blackstone Hotel, Chicago

RED HOT Campaign Specials!
Get your share of the election boom in radio sales with these added Sentinel values!

- 1. For the Big City Market**
The leader in the Sentinel Parade. A knock-out value packed with eye-appeal—price-appeal . . . a sure-fire seller for plus sales and profits.
- 2. For the Great Farm Market**
Here's value that can't be challenged!—a battery set complete with 1,000-hour pack—listing of less than \$20.00. A sure bet to meet all competition.

Write TODAY, for all the facts on the entire sizzling Sentinel Line. Use the handy coupon.

Sentinel

QUALITY RADIO SINCE 1920

SENTINEL RADIO CORPORATION,
2020 Ridge Ave., Dept. RT-6, Evanston, Ill.

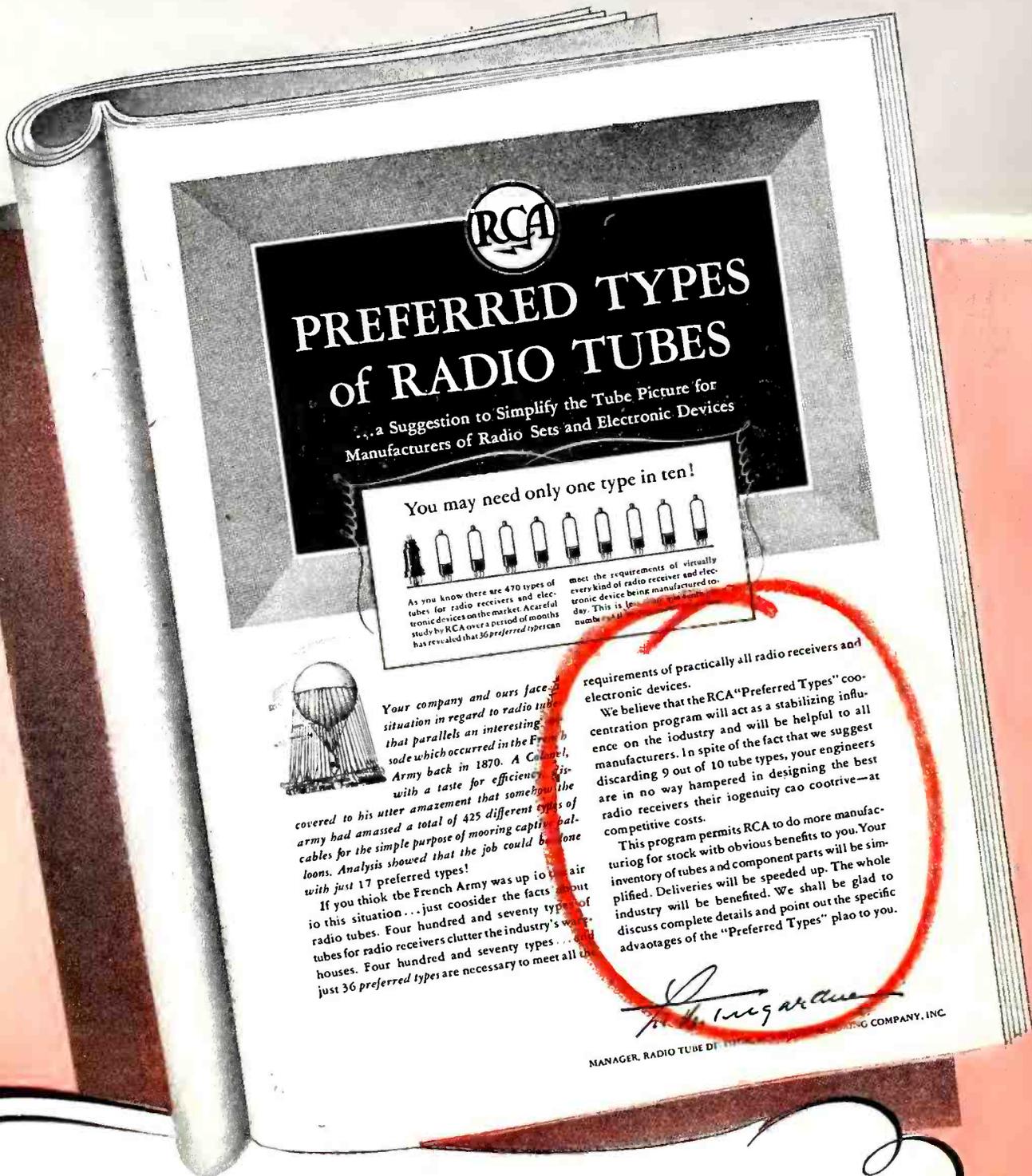
I want a fast-moving radio line. Tell me all about the campaign specials and the new 1941 Sentinel Line.

Dealer's Name _____

Address _____

City _____ State _____

PROMISE... and PERFORMANCE!

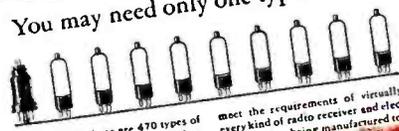


RCA

PREFERRED TYPES of RADIO TUBES

... a Suggestion to Simplify the Tube Picture for
Manufacturers of Radio Sets and Electronic Devices

You may need only one type in ten!



As you know there are 470 types of tubes for radio receivers and electronic devices on the market. A careful study by RCA over a period of months has revealed that 36 preferred types can meet the requirements of virtually every kind of radio receiver and electronic device being manufactured today. This is less than 10% of the total number of types.



Your company and ours face a situation in regard to radio tubes that parallels an interesting episode which occurred in the French Army back in 1870. A Colonel, with a taste for efficiency, discovered to his utter amazement that his army had amassed a total of 425 different types of balloons for the simple purpose of mooring captive balloons. Analysis showed that the job could be done with just 17 preferred types!

If you think the French Army was up to the air in this situation... just consider the facts about radio tubes. Four hundred and seventy types of tubes for radio receivers clutter the industry's warehouses. Four hundred and seventy types of tubes are necessary to meet all the

requirements of practically all radio receivers and electronic devices.

We believe that the RCA "Preferred Types" concentration program will act as a stabilizing influence on the industry and will be helpful to all manufacturers. In spite of the fact that we suggest discarding 9 out of 10 tube types, your engineers are in no way hampered in designing the best radio receivers their ingenuity can coörrive—at competitive costs.

This program permits RCA to do more manufacturing for stock with obvious benefits to you. Your inventory of tubes and component parts will be simplified. Deliveries will be speeded up. The whole industry will be benefited. We shall be glad to discuss complete details and point out the specific advantages of the "Preferred Types" plan to you.

J. Edgar Hoover
MANAGER, RADIO TUBE DIVISION, RCA ELECTRONIC COMPANY, INC.

"THE WHOLE INDUSTRY will be benefited," predicted this original announcement of the RCA Preferred Type Tubes Program, which appeared in December, 1939.

Only 6 months later, sixteen manufacturers who have adopted the program to their production, publicly endorse it... lend to its advancement the weight of their names... precisely because they have benefited from this program.

Six months... Already, inventories are simplified. Already, warehousing costs are lowered. Already deliveries are quicker. And more production has meant less costly production of better, more uniform tubes!

In the months to come, the Preferred Type Tubes Program will see still further advances—still further benefits to manufacturer, distributor, dealer and consumer alike.



16

LEADING SET MANUFACTURERS

Have Now Endorsed and Adopted RCA Preferred Type Tubes Program

JUST six short months ago—as a decade ended and a new decade began—came the significant and timely announcement of the most far-reaching policy in the history of the tube industry: the RCA Preferred Type Tubes concentration program.

That announcement, here reprinted, pointed a way out of the confusion that for ten years had increasingly hampered the industry.

The promises of that program, and its predictions, are *working* in practice—to the betterment of the entire industry!

To these sixteen manufacturers who have so helpfully endorsed this program, adopted it, and co-operated in its advancement, we wish publicly to acknowledge our sincerest appreciation and thanks.

Over 335 million RCA Radio Tubes have been purchased by radio users.

Andrea



F. A. D. Andrea, President
Andrea Radio Corporation
Woodside, L. I., N. Y.

Continental



J. H. Clippinger, Vice
Continental Radio
Television Corpora
Chicago, Ill.

Detrola



John J. Ross, President
Detrola Corporation
Detroit, Michigan

DeWALD



David Wald, Presid
DeWald Radio Mfg.
New York, N. Y.

Emerson



Ben Abrams, President
Emerson Radio and
Phonograph Corporation
New York, N. Y.

**FADA
Radio**



J. M. Marks, President
Fada Radio and Electric Co.
Long Island City, N. Y.

Farnsworth



E. A. Nicholas, President
Farnsworth Television and
Radio Corporation
Fort Wayne, Indiana

GAROD



Max Weintraub, President
Garod Radio Corporation
New York, N. Y.

Gilfillan



Gilfillan Brothers, Inc.
S. W. Gilfillan, President
Los Angeles, California

Hallicrafter



W. J. Halligan, Presid
Hallicrafters, Inc.
Chicago, Illinois

PACKARD-BELL



Herbert Bell, President
Packard-Bell Co.
Los Angeles, California

Pilot



I. Goldberg, President
Pilot Radio Corporation
Long Island City, N. Y.

Sentinel



E. Alschuler, President
Sentinel Radio Corporation
Chicago, Illinois

Sonora



Joseph Gerl, President
Sonora Radio and Television
Corporation
Chicago, Illinois

Stromberg-Carlson



Fred N. Anibal, Radio Sales
Mgr., Stromberg-Carlson
Telephone Mfg. Co.
Rochester, N. Y.

WURLITZER



Ray C. Haimbaugh, Chi
Rudolph Wurlitzer
North Tonawanda, N.

Preferred Type Tubes

RCA Manufacturing Co., Inc.
Camden, N. J. • A Service of the
Radio Corporation of America

RECORD PROMOTION

Retailers of discs get the benefit of large-scale sales work now being done by the manufacturers.

Promotional events are happening fast in the record business. The June-July period will offer the retailers of discs a fresh batch of sales advantages. Prices of classics are being revised. Hundreds of consumer ads are helping out.

Many of the summer plans for merchandising records are being announced just as radio manufacturers unveil new radio-phonograph combinations in their 1940-41 lines. Thus the dealer's new contact with record buyers gives him a chance to try for extra sales of these re-designed, restyled instruments.

Some radio men have pointed out that although the winter season is regarded as the best period for selling serious music, yet many of the concert-style programs go off the air in the summer, and the music lovers must turn to recorded versions. This fact is another one which helps the sale of records as well as the introduction of the new combinations.

BLACK LABELS

RCA Victor, Camden, N. J., has announced, at popular prices, a new Black Label series of classics, in a move to get "the world's greatest treasure house of music" into popular editions. The new records are marked 75c for the 10-in. size and \$1 for the 12-in. size, while a charge of 25c is made for albums to hold the longer works. The Black Labels are new electrical recordings from Victor's

storehouse of masters.

Album sets and single records which open this series include works of Schubert, Tschaiakowsky, Beethoven, Mozart, Brahms, Mendelssohn, Grieg, Chopin, Wagner, Debussy, and others. They are being widely advertised in newspaper ads in key cities.

Victor also has a big promotion on "music to fit into a summer cottage or a canoe." Ten albums and 15 single records are gathered into a "summer" list and will get the benefit of window displays, special mailings, newspaper ads, etc.

GREEN LABELS

From Columbia Recording Corp., 1473 Barnum Ave., Bridgeport, Conn., comes news of Green Label recordings, which are popular classics at \$1 for 12-in. discs. The new records will be supported by a promotion program including coast-to-coast radio advertising, point-of-sale display material, and extra publicity.

Columbia also announced a price reduction for its 7000-M series of 12-in. Blue Labels, from \$1.25 to \$1. Future records in the series will bear the Green Label. Plans for the series include the "exclusive signing of world-famous artists, orchestras and bands to record a wealth of music never before offered at such low prices."

First of the Green Label group features Andre Kostelanetz and his orchestra on two discs. One has two

Wax Worth Watching

THE SMOOTHIES singing Down by the O-Hi-O with orchestra—Bluebird B10710.

RUBY NEWMAN and his orchestra playing Falling in Love with Love from the Universal picture, "Boys from Syracuse"—Decca 4139.

BEN BERNIE and his orchestra playing My Wonderful One Let's Dance from "Two Girls on Broadway"—Vocalion 5492.

ORRIN TUCKER and his orchestra playing Not Yet, with VC by Bonnie Baker—Columbia 35452.

TOMMY DORSEY and his orchestra playing It's a Lovely Day Tomorrow from "Louisiana Purchase," with VR by Frank Sinatra—Victor 26596.

HARRY JAMES and his orchestra playing Four or Five Times, with vocal by ensemble—Varsity 8298.

BING CROSBY with John Scott Trotter and orchestra singing Sierra Sue—Decca 3133.

EDDIE LA BARON and his orchestra playing Latins Know How from "Louisiana Purchase," with vocal by Una Wytte—Royale 1879.

DORIS RHODES with orchestra singing Let There Be Love—Columbia 35449.

THE EDISONERS singing The Riff Song—Varsity 8305.

AL DONOHUE and his orchestra playing This is the Beginning of the End from "Johnny Apollo," with VC by Paula Kelly—Vocalion 5479.

sides of highlights from George Gershwin's "Porgy and Bess" and the other has Debussy's "Claire de Lune" linked with Ravel's "Pavane Pour Une Infante Defunte."

A new album from Columbia is "Tango"—four records played by Ramon Litte and his Orquesta Tipica, with dance instructions by Arthur Murray. This follows the highly successful album "Gay Nineties" with Beatrice Kay, the Elm City Four, and Ray Block and his orchestra.

Much interest surrounds the new, complete Columbia catalog with its lists of thousands of Masterworks, Popular and "Add-A-Part" records. The book has an eye-catching cover, convenient sections, and a mass of information important to salesmen.

EXPANSION IN SALES

Plenty of new titles are likewise forthcoming from Decca Records, Inc., 50 W. 57th St., New York City, for the summer lists of appropriate discs for dealers to merchandise.

Decca is expanding its distribution facilities to "a new high." A completely stocked distributing branch has been announced for Oklahoma

(Please turn to page 82)



Twin pillars of records on either side of a group of Victrolas get attention for this window at Lyon & Healy, Chicago. Children's discs get the corner at left.



▼
Booth
925
▼

PRESTO

**OFFERS YOU GUARANTEED
PROFITS IN HOME RECORDING**

FREE!

Counter display racks for complete dealer stock of discs and needles! . . . Window and wall displays . . . Direct mail order cards imprinted for dealers! . . . Newspaper mats for dealers!

NEW!

Disc and needle *kits* to sell with home recorders! . . . Lower-priced discs and needles! . . . Long wearing cutting and playing needles! . . . Everything you need to ride the home recording boom this fall.

ALSO Two new high quality sound recorders for your commercial, educational and professional customers who want *something better* in recording equipment.

AND 5 amazing new developments in sound recording and reproducing equipment being shown for the first time.

VISIT PRESTO • BOOTH 925

PRESTO RECORDING CORPORATION
242 West 55th Street, New York, N. Y.

World's Largest Manufacturers of Instantaneous Sound Recording Equipment and Discs



IT'S REFRIGERATOR TIME!

Above, left, an impressive wall of useful whiteness in a special display at Brown - Bricker, East Liberty, Penna.

Above, right, the roomy frozen-food compartment of a Philco proves that it has all the size of an auto receiver.

Directly at left, the center of a big summer promotion by Westinghouse — 10 weekly "Advise-a-Bride" contests.

Below, left, a snappy unit of Crosley's traveling show shows the seven temperature zones in the new Shelvador.

Directly below is the brand new BH6-40 by General Electric, a completely featured 6.2 cubic foot model, \$182.25.



On June 10th, in Chicago, your Philco distributor hears the story of the sensational new radio and radio-phonograph inventions Philco engineers have produced for 1941.

Within a few short days, he'll be home with the news that will be your major source of profits for the coming season.

Watch for the date of his meeting. Be prepared . . . and ready to cash in with Philco . . . when the sensational news is out!

AT THE PARTS SHOW

Monster Tube Shown by Sylvania

A dramatic center of interest in the Sylvania radio tube exhibit will be a jumbo Loktal construction type radio tube on a transparent mirror, indirectly lighted from behind. The intricate construction of the tube will be brilliantly lighted showing the grid, filament, cathode, mount supports, etc., while trick lighting effects show only the exterior.

The theme of the exhibit will be the importance of the radio tube in the quality operation of a radio set. Several types of tubes, those for special applications as well as regular, will be displayed in the double booth, 18-20.

For the dealer, to point up the story that the volume of radio renewal tubes is greatly dependent on the volume of radio set servicing, there is one section of the exhibit devoted to the orderly display of sales, advertising, business, and technical helms available to Sylvania radio servicemen.

Pray to Show Kit by Radiocrafters

Frank Pray will represent New England Radiocrafters at the trade show, promoting a line of constructional items for kit merchandisers and specialty manufacturers. Pray's company makes a line of indicating discs and knobs and plain and vernier dials for FM sets. 2½ meter transceivers, emergency plane-beacon receivers, etc. His newest line is a switch coil kit of extremely low price, featuring coil forms impregnated with polystyrene and a switch assembly that can be built up to almost any requirement. Radiocrafters are located at 1156 Commonwealth Ave., Brookline, Mass.

Aerovox to Flash Movies in Exhibit

Factory-scene movies will be feature of the Aerovox booth (No. 208 Culomb St.) where the motion picture "Behind the Aerovox Label" will be flashed on a big screen. The exhibit will also

include photo murals, facsimile reproductions, along with condensers themselves, in a brightly colored set-up designed by Aerovox advertising manager Paul Kuch.

Charley Golenpaul, sales head, and S. I. Cole, president, will be on hand to greet visitors and Lou Kahn will be ready to answer technical queries.

Clarostat Shows Product Improvements

The Parts Show exhibit of Clarostat Mfg. Co., a double booth at 620-622 Hertz Ave., will star the latest advances in controls, resistors and resistance devices. Several new products will be shown for the first time, in an entirely new display. At the booth will be Vic Mucher, who heads the sales activities, assisted by Eddie Trefz who compiles the Clarostat technical data, and by sales representatives. George Mucher, the company's engineering chief, will be on hand to answer the special resistance inquiries.

Hytron Celebrates Steady Growth of Company

As guests visit the elaborate exhibit of the Hytron Corp., Salem, Mass., a double one at 212-214, they are reminded of a number of facts and policies of the company which has manufactured radio tubes exclusively for almost 20 years.

The firm is continually widening the scope of its activities to include all markets requiring vacuum tubes. reports Lloyd Coffin, president. "Following through with this policy, Hytron established the Hytronic Laboratories some two years ago so as to provide more complete research and engineering facilities.

"An increasingly important Hytron development is the Bantom GT type of tube construction, the only modern type of tube successfully manufactured throughout the industry and preferred by radio set manufacturers.

"Hytron has been a pioneer in min-

ature pentode tubes, making possible the vacuum-tube wearable hearing aid. Transmitters and short wave diathermy machines are but two of the many fields utilizing Hytron power tubes. This continually broadening market now includes many industrial fields, chemical and electro-medical applications.

"Emergency and public service communications are rapidly standardizing on Hytron tubes, many of which are manufactured by Hytron exclusively.

"Since Hytron's entry into the transmitting field two years ago, approximately 300 of the country's finest radio wholesalers, have taken on the line.

"Hytron prestige lies in its experi-
(Please turn to page 72)

THE RECORDING DISC that "Scooped" the Market

Genuine Recordio discs possess three striking points of superiority: They are non-inflammable—U.L. accepted. They do not deteriorate with age. And they are very inexpensive.

Recordio discs made possible today's volume market—a market Wilcox-Gay commands as evidenced by consistent sales leadership.

Recordio discs are available to ALL dealers. Write for our proposition.

Wilcox-Gay's New RECORDIO DISC MERCHANDISER



WILCOX-GAY CORPORATION
World's Largest Producers of
Recording Discs
CHARLOTTE, MICHIGAN

Always Watch
WILCOX-GAY!

THE PRICELESS INGREDIENT EXPERIENCE

Many promising ideas "click"—in the blueprints, but fail under actual test. This failure is often due to intangible factors. One of these intangibles is EXPERIENCE. There is no substitute for the experience gathered from trial-and-error methods, nor is there a short-cut to its attainment.

SALES STRATEGY FOLLOWS THIS PATTERN CLOSELY.

An idea that fires the imagination of a manufacturing organization may be quickly smothered by an impatient public, reluctant at being the Guinea Pig. Too often the element of experience comes too late.

Wilcox-Gay pioneered the recording radio and brought it through an amazing year of development.

Wilcox-Gay engineers visualized a recording instrument whose operating mechanism was as simple as a box camera, and whose recording discs were as foolproof and inexpensive as the film for that camera. And they saw this basic idea in conjunction with a radio and phonograph. And all this at a price the average family could pay. Stupendous task? YES! Impossible? Old heads in the business said so. But, the phenomenal progress of Wilcox-Gay during this past year of RECORDIO bears mute testimony to the soundness of another idea—that couldn't happen.

You'll "take off your hat" to the new 1940 line of Recordios with starting new features . . . exclusive to Recordio. And, of greater importance, behind the 1940 RECORDIO is the priceless ingredient . . . EXPERIENCE.

WILCOX-GAY CORPORATION
CHARLOTTE • MICHIGAN

Experience Looms BIG

WILCOX-GAY!



"Changing the Scenery"

EGMONT ARENS AND RADIO TODAY

Egmont Arens, who is acting as consultant for RADIO TODAY in matters of typographical and illustrative presentation, is a famous industrial designer who has been particularly successful in designing electrical household equipment and other articles for consumer use.

Mr. Arens, who was one of the pioneers in introducing modern forms to America, aims to produce designs that are "humanistic" rather than modernistic. Thus, in radios, as well as in other appliances, he believes that the final measure of good design is how well suited the design is to human use.

Radios, like other household appliances such as refrigerators, vacuum cleaners, kitchen mixers, he declares, should be first of all easy to use. In other words, human necessities and attitudes will be a much stronger influence on the design of radios of the future, he thinks, than will period or modern styles in furniture. Such innovations as push-button control and chair-side models are examples of this tendency. Naturally, such features influence the design of the radio, and it is reasonable to predict that each year more and more emphasis will be placed on this type of design, as it has in automobiles which every year are "easier to use." Once invention turns in that direction, development will come with great speed.

"Of course, we cannot abandon conventional or period design in 'furniture' cabinets at one swoop," says Mr. Arens, "but I predict that radios, in a few years will look less and less like cupboards and more like radios, just as the automobile no longer looks like a buggy.

"A designer needs to be a psychologist as well as an artist. He has to study and know the likes and dislikes of people. He ought to know in advance what features of a radio will click with the public. Consumer research has become an integral part of the modern designer's approach. Such research can also be valuable in showing what to avoid. We have saved manufacturers thousands of dollars by telling them what people wouldn't buy. So you see, the modern designer knows, too, what *not* to design. That is as important as knowing how to make 'designs that click.'"

Radio Festival Continues Success in June

Radio Festival Week, which has been celebrated in dozens of cities coast-to-coast, and which continues in early June as appropriate dates depend on local needs, is already one of the most successful radio promotions to be staged by the NAB-RMA groups, in cooperation in many cases with the RSA.

The Festival is designed to celebrate the qualities of the American broadcasting system, and to emphasize radio's connection with the schools of the country. It is an all-industry stimulus to precede the "Listen Before You Vote" campaign, directed by Arthur Stringer, campaign manager for the RMA-NAB joint promotions. Mr. Stringer's headquarters are at 1626 K. St., N.W., Washington, D. C. There are many ways in which dealers and servicemen may profitably cooperate in the Festival.

Connecticut is the first state to support the Festival 100%. All nine of

the stations there celebrated the event. Stations in New York City, Rock Island, Ill., Philadelphia, Davenport, Iowa, Sacramento, Calif., Richmond, Va., Denver, Huntington, W. Va., Louisville, Miami, Roanoke, Zanesville, Ohio, besides the Connecticut cities, and others are lined up.

Car Receivers Get Many Boosts

New steps are being taken to make this a big summer for auto radio listening.

Active station executives in various parts of the country have already scheduled announcements designed to increase the hours of such listening and/or the number of auto radio installations.

Reports of auto radio promotion have reached NAB headquarters from Boston to San Francisco. In the former city John Shepard, III, president of the Yankee Network, is lending aid, and in the latter city, Ralph Brunton, president of KJBS, is ac-

tively engaged in making the listeners of northern California auto radio and new set conscious.

Three fifteen-minute programs per week over the Brunton stations, KJBS, San Francisco, and KQW, San Jose, also discuss new home sets with ample attention given to console models.

KDKA, Pittsburgh, has scheduled three announcements per week straight through the summer.

The KRGV, Weslaco, Texas, campaign was of the intensive type, covering the period of April 21 through the 27th. Station Manager Ken Lowell Sibson preceded it with the appropriate letters to all radio dealers and motor car dealers.

WGAR, Cleveland, is running auto radio announcements at regular intervals over several weeks. In addition the station will build special features for broadcast which call attention to the use of auto radios.

The 1940-41 Recorder Biz Has Profit Dimensions

Besides all the homes, schools, lawyers, and teachers which are waiting to be sold recorders, the following should be on the list for dealers' promotions of the finely engineered new instruments now available.

Musicians, vocalists—to study their own work for self-correction, and to facilitate applications for auditions.

Advertising agencies, booking offices, casting directors—to record auditions for later reference or study.

Actors, amateur and professional—"to hear themselves as others hear them," to perfect their timing and diction, and as souvenirs for folks back home.

In every community there are far more prospects than you realize at first thought. The above is but a skeleton outline to give some idea of recorder uses.

The recording service itself is a profitable operation, and experience proves it to be also a prolific source of three-quarter sold prospects for purchase of equipment.

No doubt about the business being there, but you've got to go after it.

Canadian RMA Hits Unapproved Imports

At the annual meeting of the Radio Manufacturers Association of Canada, A. L. Brown of Montreal, the president, declared that "import prohibition of radio sets which have not been approved by the Canadian Electrical Code is the immediate objective of the Association."

Brown said that the announcement by the Minister of Transport that only one radio license would be required for each household having one or more radios in use, instead of a license for every receiver, had "improved radio sales."

Mr. Dealer!

It pays you to sell

The Complete Battery Replacement Line

FOR ALL Portable and Farm Radios

SELL BURGESS—the ACCEPTED line—demanded for years by experts in all forms of radio and experimental work and by radio users everywhere.



SELL BURGESS—the QUALITY line—laboratory built—time tested—built to give uniformly long service.



SELL BURGESS—the COMPLETE line of replacement batteries for all makes of portable and farm radios. There are no gaps.



No. 176D60—The most popular combination "A and B" Pack for farm sets. Also available in other types.



No. B30—The ideal 45-volt "B" battery for use with most portables—two required. Equipped with duplex socket for either large or small plugs. Weight only 2 lbs., 9 oz. Size 5 1/4" x 4 1/2" x 2 1/4".

No. 4F—The ideal 1 volt A battery for portables where space is limited. Rated 40 watt-hours. Light weight—only 1 lb., 5 oz. Size 4 1/4" x 2 3/8" x 2 1/8".

BURGESS at National Trade Show

Investigate this profitable line. Visit the Burgess Battery Company exhibit at the show in Booth No. 10—just left of the main entrance.

Get your copy of the revised "Burgess Replacement Guide to Portable Radio Batteries."

See the new Burgess No. M30 "Multi-PLY" "B" battery which embodies the latest scientific advances in dry battery engineering—achieving a new high in service life per unit of weight.

RECOMMENDED FOR THE FOLLOWING PORTABLES

Arvin	802	La Favette	CCSBA	RCA	BP55, BP56, BP63
De Wold	345	Motorola	40-65-BP	Sentinel	109XL, 202BL, 205BL, 172BL
Emerson	DJ311, DJ312	Packard-Bell	56, 57	Stewart-Warner	02
Fada	P28, PD28, P94	Pilot	X-1450, X-1451	4A1, 03 3L1 to 05-3L0	
G. E.	HB410, HB411	X-1452, X-1453	A	Westinghouse	WR676 and others
	HB412, JB513, JB508		T-1351		

Sell Burgess for Better Profits!

EXCEPTIONAL SERVICE ★ UNIFORM PERFORMANCE ★ LOW OPERATING COST
CHROME-PROTECTED CELLS ★ LONG SHELF LIFE ★ RUGGED CONSTRUCTION

BURGESS BATTERIES

THE COMPLETE REPLACEMENT LINE

BURGESS BATTERY COMPANY

FREEPORT, ILLINOIS

ROOM COOLER SEASON



General Electric's ½ h.p. room cooler, one of three new models ready for big summer market now on hand.

More people are going to find relief from discomfort this summer, through room-coolers, than ever before.

Public acceptance is mounting fast, and a demand is beginning to be shown.

Dealers who expect to cash in on this summer sales-builder should get down to brass tacks right away.

The preliminary work for successful June and July sales must be done now.

Your list of prospects must be prepared and classified.

Your direct-mail teasers must be planned, printed, addressed, and ready to go.

DEMONSTRATE EARLY

Early demonstrations in doctors', dentists', lawyers' and other professional offices must be arranged and scheduled soon, to avoid the confusion if delayed until the hot weather strikes.

Rental arrangements with hospitals and hotels should be made now, for they move slowly.

The line you are going to carry must be selected, your requirements determined, and your June orders placed.

The room-cooler selling season is short, and sweet, three months at best, and a one month's peak.

When the season is on, you will have no time to plan—or do anything else but sell—and sell.

The best home prospects are the homes of the professional people and store owners whose offices and places of business are made comfortable by room-coolers.

Every office demonstration is aimed at three or more further sales.

FOLLOW FAST, SELL HARD

Every demonstration should be followed fast—and sold hard.

Time is an important element.

Planning is a vital factor in conserving time. And now is the time to do your planning, to be all ready when the selling starts.

Room coolers this year, are due to

receive more merchandising attention, more advertising, more sales promotion, with more dealers selling, than they have had heretofore.

And more will be sold than ever before.

Room coolers provide an almost perfect complementary season to radio and refrigeration.

They are a radio-refrigeration dealer's natural.

But dealers who wait too long are almost certain to "miss the boat."

And you don't make money *that* way, in this business.

Room Cooler Accessories Now Ready

A complete kit of professional air conditioner tools is now offered by Philco Radio & Television Corp., so that Philco-York air conditioning service men will be fully prepared to handle all servicing problems. The announcement was made by Robert F. Herr, manager of Philco's parts and service division.

Mr. Herr has also announced a new automatic starting timer for the firm's portable air conditioning units, a device that will start the conditioners at any exact time selected.

Higher Price "Box" Models Go Well

Regardless of heavy advertising emphasizing 6 cu. ft. refrigerators priced from \$99.95 to \$139.95, Anchor Distributing Co. of Pittsburgh, Penn., reports their Deluxe Model Crosley Shelvevadors, priced at \$179.95 and \$199.95 are the season's biggest sellers.

An analysis, made by Mr. Harold W. Goldstein, general manager, says the high unit sale is the result of a line of merchandise designed for easy step-ups.

Norge Lands Big Govt. Contracts

Norge will supply household electric refrigerators for the posts of the U. S. Army, Navy, Marine Corps and Coast Guard, as per a contract recently signed with the Procurement Division of the U. S. Treasury. The agreement extends through Jan. 31, 1941.

"CAP" SAYS—

"Too many cooks spoil the broth"



H. L. M. CAPRON
Merchandising
Editor

Too many models spoil the line, and too many lines spoil the dealer, too.

Pick your radio line at random, and analyze its sales.

With some 50 models to choose from,
perhaps 10% are *hot*, and
another 15% are *warm*
but 70% are "also rans."

If these "also rans" were eliminated, or never even entered in the race, a lot of advantages would result to manufacturer, distributor and dealer.

Production would be more uniform and efficient.

Production costs would go down.

Turnover would be speeded up and surplus production reduced, which in turn would reduce price cutting, and produce more profits all along the line.

If this vast array of "also rans" is because the industry doesn't *know* what the public wants, or will buy,

it's high time they tried a little consumer research instead of the "cut and try" methods now being practiced.

Dealers carrying three or four lines, or lines with models at \$10 price steps or less, can't get an honest selling job done.

Selling enthusiasm can't be kept high—and spread thin over a hundred models too, it just isn't human. And *selling* is important.

There are too many models in the lines.

There are too many "half lines" in dealers' stores.

There are too many "half dealers" handling every line.

Which adds up to uninspired selling, cut price order taking, and our own "dog eat dog fight."

One dealer doing an honest *selling* job for one line is better than half a dozen dealers just *cutting prices* and *taking orders* on half a dozen lines.

Better for the manufacturer and dealer too.

But so long as 70% of our models are "also rans" dealers are going to try to pick the "hot" ones from several lines, and darned few dealers will give any line full line presentation and *selling*.

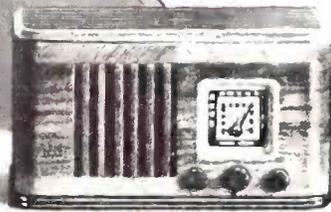
And that's worth plenty of thought too.

Or don't we care?

CROSLEY-ON THE MARCH!



with the
greatest line of radios
the industry has ever
known...



The Sensational New 1941 Line of

CROSLEY

GLAMOR-TONE

RADIOS

35 COMPLETELY NEW MODELS

Here they are... Crosley 1941

NEVER BEFORE IN 20 YEARS OF BUILDING HOUSEHOLD RADIO SETS HAS CROSLEY ANNOUNCED A LINE LIKE THIS

AMAZING NEW TONE AND ALL-AROUND PERFORMANCE

We have tried fifty ways of describing GLAMOR-TONE and its performance and have found only one—HEAR IT! That's why we are telling the nation—"COMPARE the radio you own with CROSLEY and its GLAMOR-TONE."

UNEXCELLED PROFIT OPPORTUNITY IN NEW MERCHANDISING PLANS

GLAMOR-TONE is definitely "store-minded" because as you step up in price, you step up in eye-appeal, features, performance and PROFIT! Ask your CROSLEY distributor for the New Crosley Merchandising Chart—and cash in on this great plan.

STRIKING NEW BEAUTY IN NEWLY-STYLED CABINETS

To every expert who has seen these GLAMOR-TONE Receivers, the beautifully styled cabinets of completely new design have been a source of wonder and excitement. Yes, the cabinets have glamor, too!

GREATEST NATIONAL AND LOCAL ADVERTISING IN CROSLEY HISTORY

Aggressive, powerful national magazine and newspaper advertising all year long. Striking full-color pages—exciting black and white pages and fractional pages—dominating space in newspapers (even some of that is in full color!) will create the GREATEST CONSUMER DEMAND FOR THE NEW LINE IN CROSLEY HISTORY!

35 GREATER-THAN-EVER VALUES beginning at \$7.95 for Model 10AA all the way up to \$149.95 for Model 31BF



MODEL 33BG A 6-tube combination radio-phonograph and recording unit, complete with table microphone. Has public address system, a method of adding voice with radio or recording. Broadcast, INTERNATIONAL SHORTWAVE

and image police bands; 8-inch super-dynamic speaker, variable tone control, bass compensation and Heliscope loop aerial.

PRICE \$69.95*

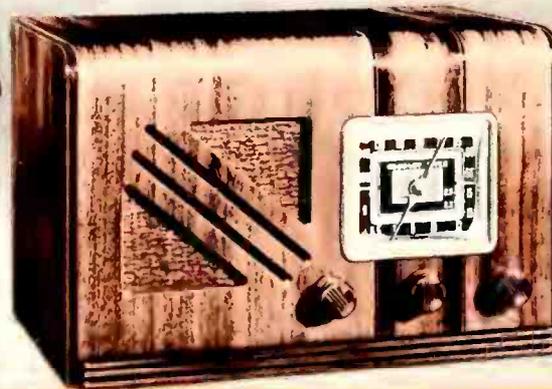
MODEL 24AJ A 7-tube AC with 3 complete bands, 550 to 18,000 Kc. 3-gang condenser, push-pull audio, 8-inch super field speaker, variable tone control, bass compensation. A massive, table-model cabinet, hand-rubbed finish.

PRICE \$29.95*



MODEL 20AP Famous CROSLEY "Fiver." A 5-tube power transformer AC set that made radio history. Two complete bands plus image police, 6-inch speaker, bass compensation, Heliscope, loop aerial. Hand-rubbed walnut finish.

PRICE \$19.99*



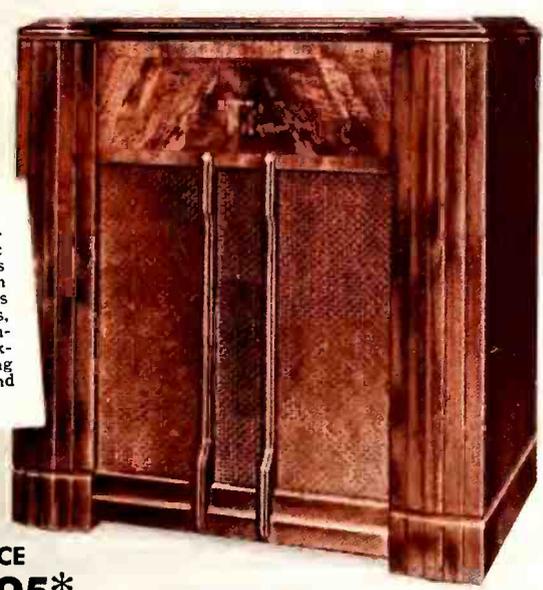
AND OF COURSE CROSLEY HAS FREQUENCY MODULATION SETS

*Prices slightly higher in the far west and south

CROSLEY

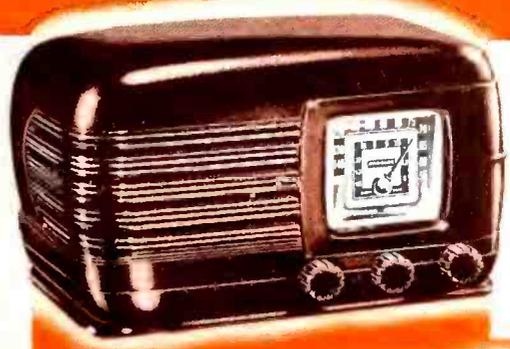
GLAMOR-TONE Radios!

MAKE NO PLANS UNTIL YOU INVESTIGATE THE PROFIT POSSIBILITIES IN THIS GREAT CROSELY LINE



MODEL 30BC A 7-tube radio-phonograph combination with automatic record changer. Plays fourteen 10-inch and ten 12-inch records. Chassis features include: 3 bands, 3-gang condenser, push-pull audio, 10-inch speaker, tone control, rotating Heliscope loop aerial and bass compensation.

PRICE \$79.95*



MODEL 13AE A 5-tube AC-DC superheterodyne with 2 bands—broadcast and INTERNATIONAL SHORT WAVE, Heliscope loop aerial, illuminated "gold-glow" dial, in mottled brown bakelite cabinet.

PRICE \$12.95*

MODEL 27BD A 3-way completely self-contained AC-DC battery portable with CROSELY extra long life battery block, 5 1/2" P.M. dynamic speaker, "gold-glow" dial, semaphore "off-on" indicator. Hinged, front cover for protection of set. Airplane luggage style weather-proof case.

PRICE COMPLETE \$19.95*



CROSELY ROAMIOS—5 AUTO MODELS FROM \$14.99 TO \$34.95



PRICE \$149.95*

MODEL 31BF The radio that has everything. A 9-tube, AC radio combination with phonograph and automatic record changer, recording unit with table-type microphone, public address system, method of fading

voice with recordings or radio, 8 electric push buttons, 12-inch concert speaker, rotating Heliscope loop aerial and many other Crosley engineering refinements. Deluxe period-type cabinet.

EVERY HOUSEHOLD MODEL IN 1941 CROSELY LINE INCLUDES THESE FEATURES

- ✓ Jewel-case Protector
- ✓ Heliscope Loop Aerial*
- ✓ Antenna Booster Coil*
- ✓ Automatic Volume Control*
- ✓ Illuminated "Gold-Glow" Dial*
- ✓ Dual-Purpose Tubes

**in every set over \$7.95*

Important to Every Radio Dealer
The entire Crosley Household Radio Line uses only 15 tubes.

WIRE, PHONE OR WRITE TODAY FOR FURTHER INFORMATION... AND LOOK

IS ON THE MARCH!



Here they are... **Crosley**!

NEVER BEFORE IN 20 YEARS OF BUILDING HOUSEHOLD RADIO SETS HAS CROSLLEY ANNOUNCED A LINE LIKE THIS

AMAZING NEW TONE AND ALL-AROUND PERFORMANCE

We have tried fifty ways of describing GLAMOR-TONE and its performance and have found only one—HEAR IT! That's why we are telling the nation—"COMPARE the radio you own with CROSLLEY and its GLAMOR-TONE."

UNEXCELLED PROFIT OPPORTUNITY IN NEW MERCHANDISING PLANS

GLAMOR-TONE is definitely "store-minded" because as you step up in price, you step up in eye-appeal, features, performance and PROFIT! Ask your CROSLLEY distributor for the New Crosley Merchandising Chart—and cash in on this great plan.

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STRIKING NEW BEAUTY IN NEWLY-STYLED CABINETS

To every expert who has seen these GLAMOR-TONE Receivers, the beautifully styled cabinets of completely new design have been a source of wonder and excitement. Yes, the cabinets have glamor, too!

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Aggressive, powerful national magazine and newspaper advertising all year long. Striking full-color pages—exciting black and white pages and fractional pages—dominating space in newspapers (even some of that is in full color!) will create the GREATEST CONSUMER DEMAND FOR THE NEW LINE IN CROSLLEY HISTORY!

GLAMOR-TONE Radios!

MAKE NO PLANS UNTIL YOU INVESTIGATE THE PROFIT POSSIBILITIES IN THIS GREAT CROSLLEY LINE

MODEL 13AE A 5-tube A.C. D.C. superheterodyne with 2 bands—Broadcast and INTERNATIONAL SHORT WAVE. Helioscope loop aerial, illuminated "gold-glow" dial in moulded brown bakelite cabinet.

PRICE **\$12.95***

MODEL 10BC A 7-tube radio-phonograph combination with automatic record changer. Plays records 10-inch and non-11-inch records. Chassis features include: 3 bands; 1-jugnt condenser, push-pull audio; 10-inch speaker; tone control, rotating Helioscope loop aerial and bass compensation.

PRICE **\$79.95***

MODEL 278D A 3-way completely self-contained A.C. D.C. battery portable with CROSLLEY extra long life Battery block, 55% P.M. dynamic speaker "gold-glow" dial, emergency "off-on" indicator. Ringed, front cover for protection of set. Airplane luggage style in either proof case.

PRICE COMPLETE **\$19.95***

CROSLLEY ROOMIOS—5 AUTO MODELS FROM \$14.99 to \$34.95

EVERY HOUSEHOLD MODEL IN 1941 CROSLLEY LINE INCLUDES THESE FEATURES

- ✓ Jewel-case Protector
- ✓ Helioscope Loop Aerial*
- ✓ Antenna Booster Coil*
- ✓ Automatic Volume Control*
- ✓ Illuminated "Gold-Glow" Dial*
- ✓ Dual-Purpose Tubes

*In every set over \$7.95

Important to Every Radio Dealer
The entire Crosley Household Radio Line uses only 15 tubes.

WIRE, PHONE OR WRITE TODAY FOR FURTHER INFORMATION... AND LOOK



MODEL 10AA A 4-tube combination radio-phonograph and recording unit, complete with variable microphone. Has public address system, a method of adding voice with record recording. Broadcast, 10-in. Helioscope loop aerial, and image police bands; 8-inch super-dynamic speaker, variable tone control, bass compensation and Helioscope loop aerial.

PRICE **\$69.95***



MODEL 24AJ A 7-tube AC with 3 complete bands, 50 to 14,000 Mc. 3-jugnt condenser, push-pull audio, 8-inch super sized speaker, variable tone control, bass compensation. A miniature, table-model cabinet, hand-rubbed finish.

PRICE **\$29.95***



MODEL 20AP Famous CROSLLEY "Eminent" A 5-tube super-heterodyne AC set that made radio history. Two complete bands plus image police, 8-inch speaker, bass compensation, Helioscope loop aerial. Hand-rubbed walnut finish.

PRICE **\$19.99***

MODEL 31BF The radio that has everything. A 9-tube, AC radio combination with phonograph and automatic record changer, other Crosley engineering refinements, public address system, method of fading

voice with recordings of radio, 4 electric push buttons, 10-inch concert speaker, rotating Helioscope loop aerial and many other Crosley engineering refinements. Deluxe period-type cabinet.

PRICE **\$149.95***

* Prices subject to change without notice by the manufacturing plant.

CROSLLEY

AND OF COURSE CROSLLEY HAS FREQUENCY MODULATION SETS

IS ON THE MARCH!

NEW PRODUCTS

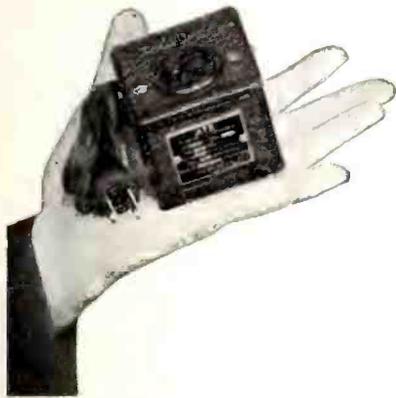


Atlas mike switch

★ Inter-cable switch for attaching cable to mike has push to talk switch, or knob may be turned for off-on operation. Brass construction with chromium plate, noiseless contacts. Threads $\frac{5}{8}$ -in. x 27. List, \$1.75. Atlas Sound Corp., 1449 39th St., Brooklyn, N. Y.—RADIO TODAY.

Utah speakers

★ New bi-directional speaker, wall reproducer, and Baflex reproducer for PA systems and intercommunicators. Baflex unit delivers bass and highs to 9500 cps. Wall reproducer for intercom. systems has moulded housing for improved tone quality. New speakers for high fidelity include 8, 10, 12-inch units and 15-inch model with 15 and 23 pound magnets. Utah Radio Products Co., 812 Orleans St., Chicago, Ill.—RADIO TODAY.



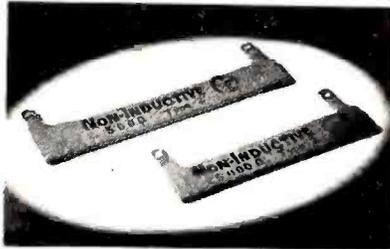
ATR inverter

★ Midget 110 volts DC to 110 volts AC inverter is designed for phonograph motor operation. Three models are available; PCP is for small motors, razors, etc. PCP-F has built in filter to prevent interference, and PCP-R is equipped with leads instead of receptacles for installation in set. List, \$6.50 to \$6.95. American Television & Radio Co., St. Paul, Minn.—RADIO TODAY.



Clarion mobile PA

★ Dual powered sound system operates from 6 v. DC or 110 v. AC delivers 19 watts with response from 50 to 10,000 plus or minus 3 DB. Complete with built-in record player, 2 speakers, cords, baffles, and mike. List, \$155.27. Transformer Corp. of Amer., 69 Wooster St., New York—RADIO TODAY.



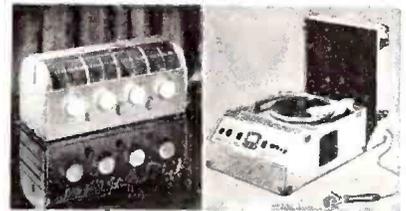
Clarostat resistors

★ Non-inductive, wire wound power resistors are offered in 10-watt sizes to 3000 ohms, 25 watts to 7500 ohms, 100 watts to 25,000 ohms. Especially designed as antenna loads and matching resistors. Clarostat Mfg. Co., 285-7 N. 6th St., Brooklyn, N. Y.—RADIO TODAY.



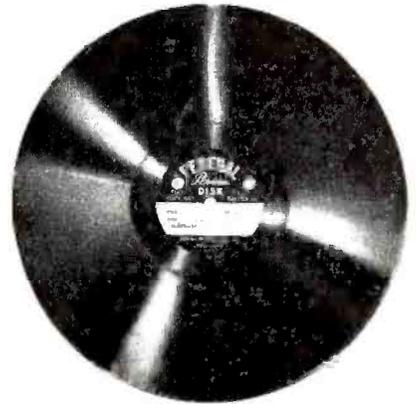
Terminal 8-watt PA

★ Model T-8 amplifier has two high impedance input circuits with mixing controls. Delivers 8-10 watts with good frequency response for use with record players, FM tuners, etc. Less tubes, \$13.50. Multi output impedances. Terminal Radio Corp., 68 W. 45th St., New York, N. Y.—RADIO TODAY.



Webster-Chicago sound

★ Unique designing in new mixing amplifier unit on left. Available in 4 and 2-channel inputs, 25, 45, and 75 watt power stages may be added. Full vision slide rule control scales. Portable recorder on right cuts up to 10-inch records at 78 rpm. Crystal cutter and pickup. Complete with amplifier, V.I. meter and monitor speaker. The Webster Co., 5622 Bloomingdale Ave., Chicago, Ill.—RADIO TODAY.



Federal recording disk

★ New metal base disk with non-inflammable coating features finest reproductions without surface noise. $6\frac{1}{2}$ -inch sizes are 20c and 12-inch disks are 60c each. Long playing life and non-burning shavings. Federal Recorder Co., Inc., 50 W. 57th St., New York, N. Y.—RADIO TODAY.

Rapid electroplating

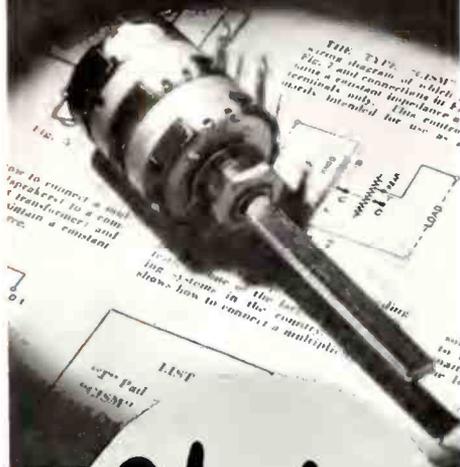
★ Silver plating kit contains 1 oz. silver compound, undercoat, polish, plating brushes, and battery in steel case. Ideal for retouching worn spots on turntable rims, mikes, etc. Easy to use. No. 706, Lists, \$5.00. Rapid Electroplating Process, Inc., 1414 S. Wabash Ave., Chicago, Ill.—RADIO TODAY.



Bogen intercom.

★ Model 4A master to remote system with capacity of 4 remote units. Equipped with all-station paging position, and also "silent" position to prevent noise pickup. List price for one master, one remote, \$36.75. David Bogen Co., Inc., 663 Broadway, New York, N. Y.—RADIO TODAY.

The RIGHT Product . .



Plus
The RIGHT DATA

★ Successful servicemen everywhere are turning more and more to Clarostat controls these days for two very obvious reasons:

The Product . . .

★ Two decades of pioneering and specialization can't go unnoticed. Clarostat controls are carefully made. They are precisely fitted to intended applications. Exclusive refinements insure the better-than-expected kind of service from these components. The serviceman has the satisfaction of knowing that his materials are the best that money can buy.

The Data . . .

★ Meanwhile, to make certain that the right type control will be used, Clarostat provides the most extensive, up-to-the-minute listings of control requirements of all standard receivers in use. The Clarostat Service Manual has become the guide with those servicemen known for the quality of their jobs. It is this close partnership of THE RIGHT PRODUCT selected by means of THE RIGHT DATA which spells THE RIGHT JOB, the Clarostat way.

Ask for MANUAL . . .

★ Local jobber has your copy of the Clarostat Service Manual covering control replacements. Ask for it—it's free. Also copy of Plug-In Resistor Replacement Manual for 15c to cover cost of limited edition. Or write us direct.

CLAROSTAT MFG. CO., Inc.

281 N. 6th St.

Brooklyn, N. Y.



NEW THINGS



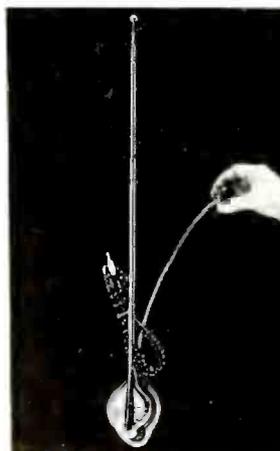
Oxford-Tartak speaker

★ Model 12DM2 heavy duty PM speaker will handle 20 watt continuously. Newly designed voice coil and spider for cone mounting improve the performance of this addition to Permag line. Oxford-Tartak Radio Corp., 915 W. Van Buren St., Chicago, Ill.—RADIO TODAY.



Electro Voice mike

★ Model 605 dynamic has Alnico magnet and output of —57 DB. Response is 45 to 8,000 cps. Available in hi-impedance, 50, 200, and 500 ohm models. Finished in gunmetal or chromium. Electro-Voice Mfg. Co., Inc., 1239 South Bend Ave., Chicago, Ill.—RADIO TODAY.



Radiart Ro-Tenna

★ Mechanical wind-up auto antenna is controlled from knob on dash. Flexible cable raises or lowers antenna to any height. Clamp mounts control knob under dash without drilling of holes. Radiart Corp., 13229 Shaw Ave., E. Cleveland, Ohio—RADIO TODAY.

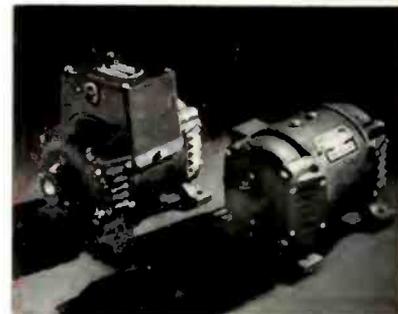


Taco antenna system

★ Master antenna system provides for wide frequency range to include FM reception. High signal gain with noiseless reception is possible with full isolation of primary and secondary of transformers. Kit includes all wire, insulators, and antenna transformer. 15 to 25 sets may be coupled to same antenna. Technical Appliance Corp., 17 E. 16th St., New York, N. Y.—RADIO TODAY.

Aerovox plug-in units

★ Complete line of plug-in capacitors have octal base for quick changing in continuous service equipment such as police, airplane, etc. Units have molded base and non-corrosive connections between elements and base pins. Series AP. Aerovox Corp., New Bedford, Mass.—RADIO TODAY.



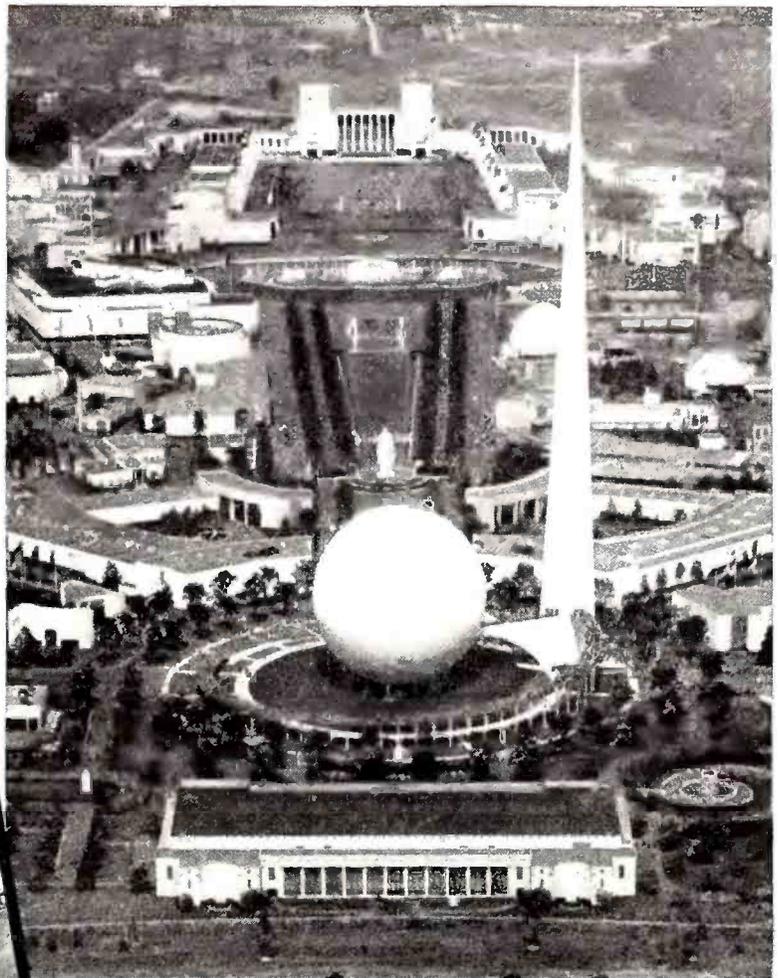
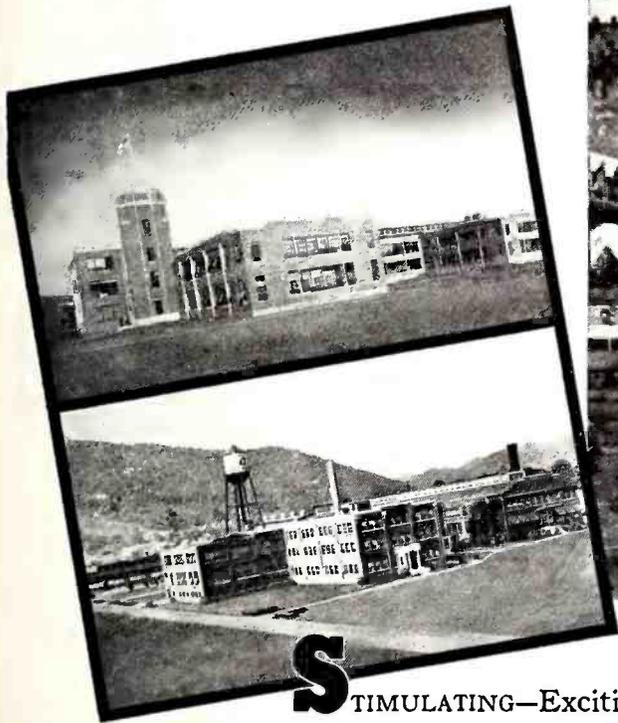
Pioneer converters

★ New models of rotary converters for converting 6 to 220 volts DC to 110 or 220 volts AC in power ratings of 40 to 5000 watts. Models are available with or without line filter. Pioneer Gen-E-Motor Corp., 466 W. Superior St., Chicago, Ill.—RADIO TODAY.

Western Electric FM xmitter

★ New 1 kw. frequency modulation transmitter features crystal control of carrier frequency to .0025 per cent, audio response flat from 30 to 15,000 cps. Frequency range is 42 to 50 mc. Partition mounting of equipment isolates transmitter from outside case both electrically and mechanically. Western Electric Co., 195 Broadway, New York, N. Y.—RADIO TODAY.

TOMORROW TODAY



STIMULATING—Exciting —Inspiring—The World's Fair prospects Tomorrow's reality Today. The moment the latest models, the latest inventions are marketed, man blueprints and starts to produce what he visions for tomorrow.

So, too, at Sylvania. In the giant tube plants at Emporium, Pa., and Salem, Mass., engineers, spurred on by their inveterate dissatisfaction of even the very best of today's achievements, characteristic of the American Way of Life, intensify their research and prepare to put into production the radio tubes of tomorrow.

These two plants house the most efficient production and testing equipment known to the world. Their engineering staffs are famed for their outstanding contribution to the advancement of the radio industry. In these two plants thousands of skilled workers take justifiable pride in producing Sylvania Set-Tested tubes.

On your way to the World's Fair, plan to visit either or both of these great units. You will see the marvels of radio tube manufacturing at their best. You will see talented research men working on radio tubes which can help you reap fat profits for your own *world of tomorrow*.

SEE US IN BOOTH 18-20, NATIONAL RADIO PARTS SHOW, HOTEL STEVENS, CHICAGO, JUNE 11-14

S Y L V A N I A

SET-TESTED



RADIO TUBES

HYGRADE SYLVANIA CORPORATION . . . EMPORIUM, PA. . . ST. MARYS, PA. . . SALEM, MASS. . . IPSWICH, MASS.
ALSO MAKERS OF HYGRADE LAMP BULBS AND MIRALUME FLUORESCENT LIGHT FIXTURES

TYPICAL SOUND INSTALLATIONS

No. 7—Outdoor jobs. Greatest sound season opens with new opportunities. How portable and mobile equipment is being used

The season of outdoor activity is gaining momentum every day and right along with it goes the number of prospects for sound rentals, sound installations, and new equipment sales to bring that old job up to 1940 requirements.

The old stand-by, baseball, is getting under way. While the average sound man is not going to put in a job for a major league team, there are plenty of "home town" teams sponsored by local companies. Many of these have their own field where permanent sound equipment can be sold. Companies sponsoring local ball clubs are excellent prospects for complete sound systems.

SELL RESULTS

Contact the team manager and the publicity manager of the company, if it has one. Sell the manager on the idea of boosting the team's popularity with a sound system that will deliver detailed announcements of player positions, batting line-up, etc.

Sell the publicity manager or company officials with the advertising and

good-will advantages of a well proportioned and engineered sound installation.

Of course there is no need to repeat that the political groups are tuning up for big verbal battles. Local party headquarters are planning rallies and they will need to rent a PA system. For many of the active organizations, it will be wise to push the sale of a compact, easy to operate, sound job that will cover their needs.

COMPACT EQUIPMENT

A complete outfit for such service would include a 15 to 20 watt amplifier of the 6-volt DC and 110-volt AC type with minimum of two mixing channels on the input side, two 12-watt 10 or 12-inch speakers with appropriate baffles depending upon indoor requirements, two 10-12 watt speakers mounted in weather-proof metal horns, phono turntable if not built-in the amplifier, with provision for use on 6 volts DC, hand mike, banquet stand mike, set of cables with locking connectors.

In selling a sound system to organi-

zations who will not have a trained operator, it is important to design the system to be as compact, and as easy to set-up as possible. Amplifiers now featuring built-in turntables will simplify connections and operation.

Sound systems sold to groups who are going to use them under a variety of conditions, should be practically fool-proof.

Speakers are not going to be placed in the best positions on many jobs and for this reason they should be selected to give the least trouble with feedback. Uni-directional mikes will help to control feedback, but bad sound reflections will find their way into the front of the mike. There is no invisible wall which prevents sound originating in back of the mike from getting around in front. The feed-back problem must be licked with a combination of the directional mike, speaker baffles and horns which control the sound beam.

Metal horns, even the short types, will concentrate the sound beam until it is far enough away from the mike to feedback.

Another prospect for several complete sound systems is your city and many of its departments. Even the smallest of towns have active committees for promotion of civic affairs.

SOUND NEEDS

Municipal celebrations are not just empty gestures by political leaders to advance their own ends. Behind them are very definite and sound motives. To a certain extent they represent an accounting to the taxpayer, enabling him to see for himself at first hand where his money is going and why. In other instances the affairs are for his benefit and amusement—such as various activities in the parks, music, dancing, choral gatherings, athletic contests, etc.

But perhaps more important, many of these festivities result in wide publicity and free advertising for the city—and favorable advertising in the form of newspaper articles and notes is just as important to a city as to any other business organization because it all helps to bring visitors, new residents and new business.

The success of these occasions is oftentimes directly dependent on the effectiveness of the PA system. If the public is assured that it can hear as



Sound plays a big part in activities of New York's municipal airport. Thirty-watt Cinaudagraph speakers mounted on adjustable stands, delivered the 200 watts from Lafayette amplifiers to 300,000 visitors at the inauguration of airfield.

well as see it will turn out in larger numbers—and large crowds lend the dramatic punch.

BOOST FOR CITY

All of which provides important reasons why every city should have sound equipment which it can use on such occasions, and suggests a market for the PA dealer which is far from being a saturated one. Too often municipalities think of sound equipment only in terms of a single impending occasion. They should be sold on its general utility for all sorts of functions; not only for special ceremonies but for every city-sponsored affair which involves crowds, music, speechmaking, announcement or entertainment.

A typical example of the many advantages of city-owned sound equipment was recently demonstrated at the inauguration of the New York City municipal airport, La Guardia Field.

Here, a giant crowd of 328,000 heard with ease the full ceremonies even though idling plane motors were delivering plenty of decibels.

The City of New York owns eleven sound systems. Three of them are installed in trucks and others are portable or semi-portable. All of these are used for various types of temporary service such as those mentioned. Even such a tremendous sound job as that involved at the opening of the airport can be taken in stride.

SOUND TRUCK AIDS

At the dedication, semi-portable equipment, consisting of three standard Lafayette model 490T amplifiers with peak output of 100 watts each, and eight Cinaudagraph 30-watt horn-type speakers on telescoping stands, constituted the set-up. Two of the amplifiers were in actual service, with the third serving as a "spare" in case of emergency. This equipment was set up the morning of the dedication and taken down again immediately after the affair was over. It had, however, been given a try out a few days previous, to determine best speaker placement and arrange other details.

One of the sound trucks was also on hand and was used as an auxiliary when it was found that the idling motors of a number of planes made the speeches inaudible at one remote portion of the crowd. The truck took up its station at that point. It employed a radio tuner, which is part of its permanent equipment, to pick up the program as broadcast from the municipal station WNYC, relaying it to the surrounding crowd by means of its 50-watt Lafayette amplifier driving four roof-top speakers.

CENTRAL STAFF

The positioning of the speakers, and the methods of mounting are quite interesting. Instead of depending upon poles, buildings, etc. for mounting points, telescoping stands were used. With such stands, the speakers could be placed at the most advantageous positions. In this way, the best speaker positions may be determined with only a few minutes of experimenting. The stands support the horn-type speakers just above the heads of the crowd.

Summer Sound Prospects

1. Local baseball clubs
2. Political organizations
3. City, park and police departments
4. Safety campaign sound trucks
5. Rentals to picnic and reunion groups

Responsibility for maintenance and operation of all this portable sound equipment is centralized in the chief engineer of WNYC and his staff. The equipment is available to all city departments whenever temporary PA facilities are required. Staff members plan and make these installations, thus insuring maximum effectiveness and relieving non-technical department heads of all details. Similar arrangements may be made with other qualified city agencies for operation of the equipment.

This centralization avoids a good deal of duplication both in man-power and equipment. However for obvious reasons this does not extend to permanent sound installations in schools, parks, etc. Each of these, and there are over a hundred of them, are the property and responsibility of the individual departments.

It will be quickly seen that the municipality opens up a wide field of profitable sound jobs.

ALL ARE PROSPECTS

Few cities would be justified in establishing and maintaining as elaborate a set up as that of New York. However, in every progressive city there are needs along this line and the potential market is certainly one worthy of concerted sales action by PA dealers.

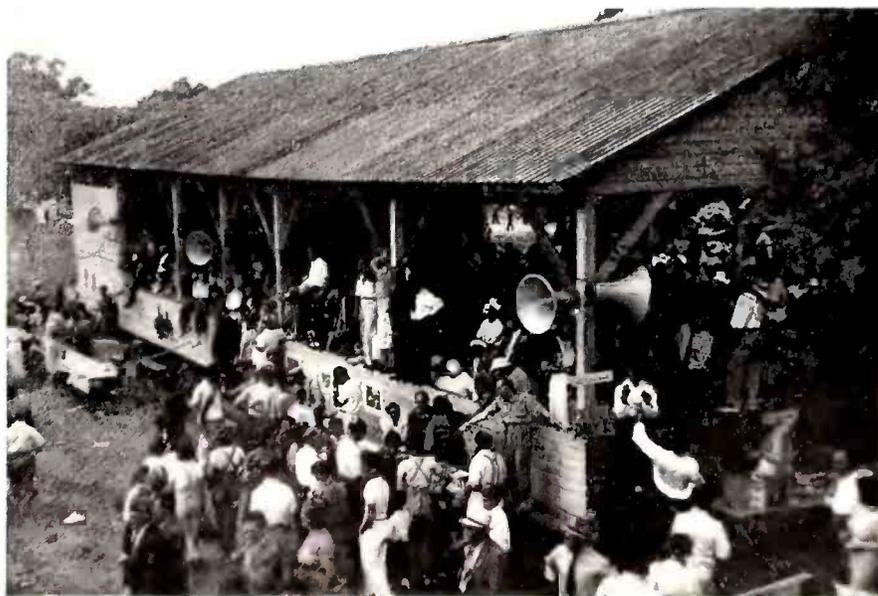
The equipment need not necessarily be portable in the sense that it is all enclosed in a carrying case. If it is such that it can be readily transported from point to point in a car, it is usually sufficient—and practically all standard sound systems meet this requirement. Obviously an amplifier that can be operated either from a.c. lines or a car battery may offer advantages where outdoor service is involved, but such details depend on the requirements of the individual prospects.

BUSINESS AND SAFETY

Prospects in this field include not only city governments but business men's organizations as well. An active chamber of commerce or other similar group is usually keenly alive to the value of promotional activities. In Atlanta, for instance, local businessmen donated two fully equipped sound cars to the city for use in traffic regulations and in promoting traffic safety. This is typical of the variety of applications for PA that can be found by the imaginative dealer who digs for them.

A similar safety program has just been organized in San Antonio, Texas. The panel truck was leased to the city by a local dealer for one dollar per year. The sound equipment consists of an Erwood amplifier with built-in turntable, and two Jensen speakers mounted in Atlas horns. This equipment was obtained from Olsen Radio Supply of that city.

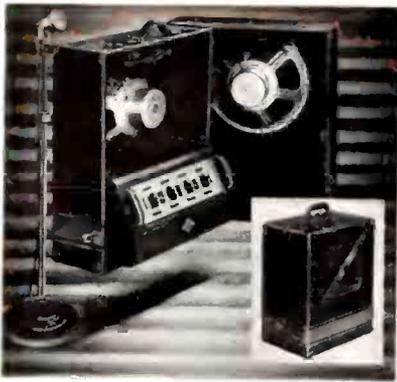
This is typical of the variety of applications for the PA specialist that can be found by the imaginative dealer who digs for them.



Picnics and outings of all types offer rental opportunities for sound systems for speeches, dancing, etc. For this job, White Sound Service of New York used four University model LH trumpets.

SOUND PRODUCTS

New equipment for Summer sales



Clarion portable PA

★ Compact portable sound system, CS-38, delivers 25 watts over frequency response of 40 to 12,000 cycles. Two mike and two phono channels are provided with mixing of any three. Mike gain is 114 db. Two 12-inch PM speakers, floor stand, and choice of one of four mikes, and all cables, complete system. List \$139.13. Transformer Corp. of Amer., 69 Wooster St., New York, N. Y.—RADIO TODAY.



RCA hi-fi speaker

★ Small size dynamic speaker has wide response range due to "accordion edge" cone suspension. The 7-inch PM unit has response from 80 to 7000 cycles. Model MI-6233 with the folded cone mounting rim permits greater quality from a small reproducer. Power capacity is 3 watts continuously. RCA Mfg. Corp., Camden, N. J.—RADIO TODAY.



Erwood amplifier

★ Four low impedance input circuits with individual gain controls, master volume control, frequency controls, AVC, and automatic volume expansion are features of new 75-watt high gain amplifier. Output impedances matched with switch facilities. Transformers are fully shielded and impregnated. Erwood Sound Equipment Co., 224 W. Huron St., Chicago, Ill.—RADIO TODAY.



Webster-Chicago mikes

★ Super-dyne dynamic mike has head adjustment through 90 degrees. Gun-metal finish. List price \$39.50, in high and low impedance types. Mike on right is new Uni-vel cardoid with full range response. List price, \$49.50. Webster Co., 5622 Bloomingdale Ave., Chicago, Ill.—RADIO TODAY.



Jensen Peri-dynamic

★ New type S projector has permanent magnet speaker for handling 15 to 25 watts. Sealed speaker enclosure improves middle frequency response for better speech reproduction. Weather-proof construction, bayonet type electrical plug connector. Complete with speaker, \$31.20 net. Jensen Radio Mfg. Co., 6601 S. Laramie Ave., Chicago, Ill.—RADIO TODAY.

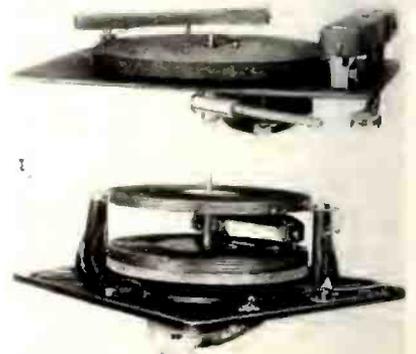


Bogen sound amplifier

★ Model E14 amplifier is equipped with optional AC phono turntable for mounting on top. Amplifier has inputs for 2 mikes and phono; base and treble compensation, variable tapped output. Amplifier, list, \$64.50, phono assembly, \$19.95. David Bogen Co., Inc., 663 Broadway, New York, N. Y.—RADIO TODAY.

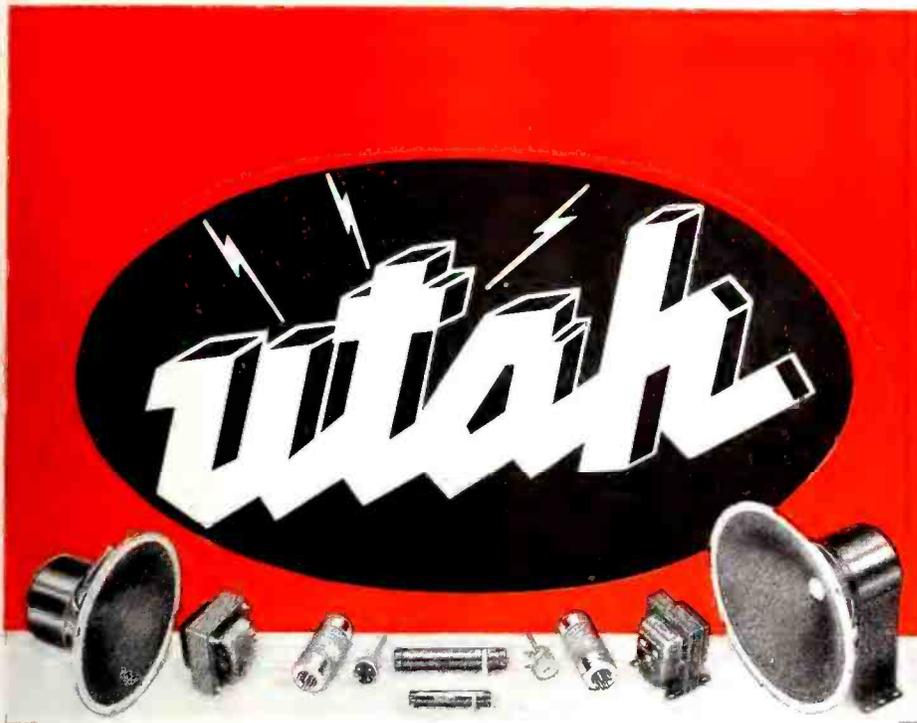
Durakool mercury switch

★ Unbreakable metal mercury switch is solenoid actuated. Mercury is displaced to close contacts. Sealed to operate in explosive atmospheres; relay will operate 300 times per minute. Available up to 200 amps. capacity. Durakool Inc., 1010 N. Main St., Elkhart, Ind.—RADIO TODAY.



GI turntables

★ Model GI-R70 recorder turntable has automatic operation of the feed-screw when cutter arm is lowered. Tangent play-back arm. Crystal pickup, rim-drive motor. Model GI-C120 drop-type record changer handles 10 12-inch records, or 12 10-inch. Direct drive motor; cycling switch, tangent crystal pickup. General Industries Co., 3537 Taylor St., Elyria, Ohio—RADIO TODAY.



WHY THE NAME BEHIND THESE PRODUCTS

Is Important to You

You can use or sell the products backed by the Utah trademark with full assurance that they will give satisfactory performance. Competent designing, which keeps pace with *all* industry developments; careful engineering, which provides maximum efficiency; and precision manufacturing, which affords maximum economy, have won preference and acceptance throughout the radio and sound equipment industries.

Service men, dealers, jobbers and

manufacturers selected 5,963,621 Utah transformers, vibrators, Carter parts and speakers during the last year alone. You, too, can benefit by insisting on these products which for over 18 years have been recognized for their uniformity and high quality. They can help you meet your requirements successfully and profitably.

Utah products are distributed nationally—by recognized jobbers only. Look for the Utah trademark on the part or carton.

UTAH RADIO PRODUCTS COMPANY, 814 Orleans St., Chicago, Ill.
In Canada: 560 King Street West, Toronto. Cable Address: UTARADIO, CHICAGO
In the Argentine: Ucoa Radio Products Co., S.R.L., Buenos Aires

If you don't have a copy of the latest Utah catalog, ask your jobber for one—or write us direct.



**TRANSFORMERS • SPEAKERS
 VIBRATORS • UTAH-CARTER PARTS**

UTAH TRANSFORMERS

are standard equipment in millions of receivers, all over the world. And there is a *complete* line of Utah replacement transformers.



"Do you know why I've standardized on Utah Transformers?"

"I certainly do. They have a non-corrosive, protective film of cellulose acetate which provides absolute insulation—prevents breaking down even under extremely high humidity and severe atmospheric conditions. They're fully guaranteed. And the high safety factor of their insulation is proved by the extra hours of satisfactory performance they give."

SEE THE UTAH CATALOG FOR DETAILS

UTAH VIBRATORS'

outstanding design and advanced engineering have maintained their leadership.



"Do you know the demand for Utah Vibrators increased 63% last year?"

"Sure, there are 5 main reasons: 1. Complete exact replacements can be made with the Utah line—2. Absolute dependability is assured by Utah's rugged, time-proved construction—3. Finest materials available are used in the manufacture of Utah Vibrators. 4. 'Life Tested' in Utah's laboratory—the industry's best equipped—5. They have a 12 months' guarantee."

FOR DETAILS SEE THE UTAH CATALOG

UTAH-CARTER PARTS,

including vitreous enamel resistors, volume controls, potentiometers, rheostats, plugs, "T" and "L" pads, long and short jacks, imp jacks, jack switches, push-button switches, plug-in type D.C. relays.



"Do you know why I always insist on Utah-Carter parts?"

"That's easy. You've found they save time and money. Experience has taught you that satisfactory performance is assured at every Utah-point in the circuit."

DETAILS ARE IN THE UTAH CATALOG

UTAH SPEAKERS—

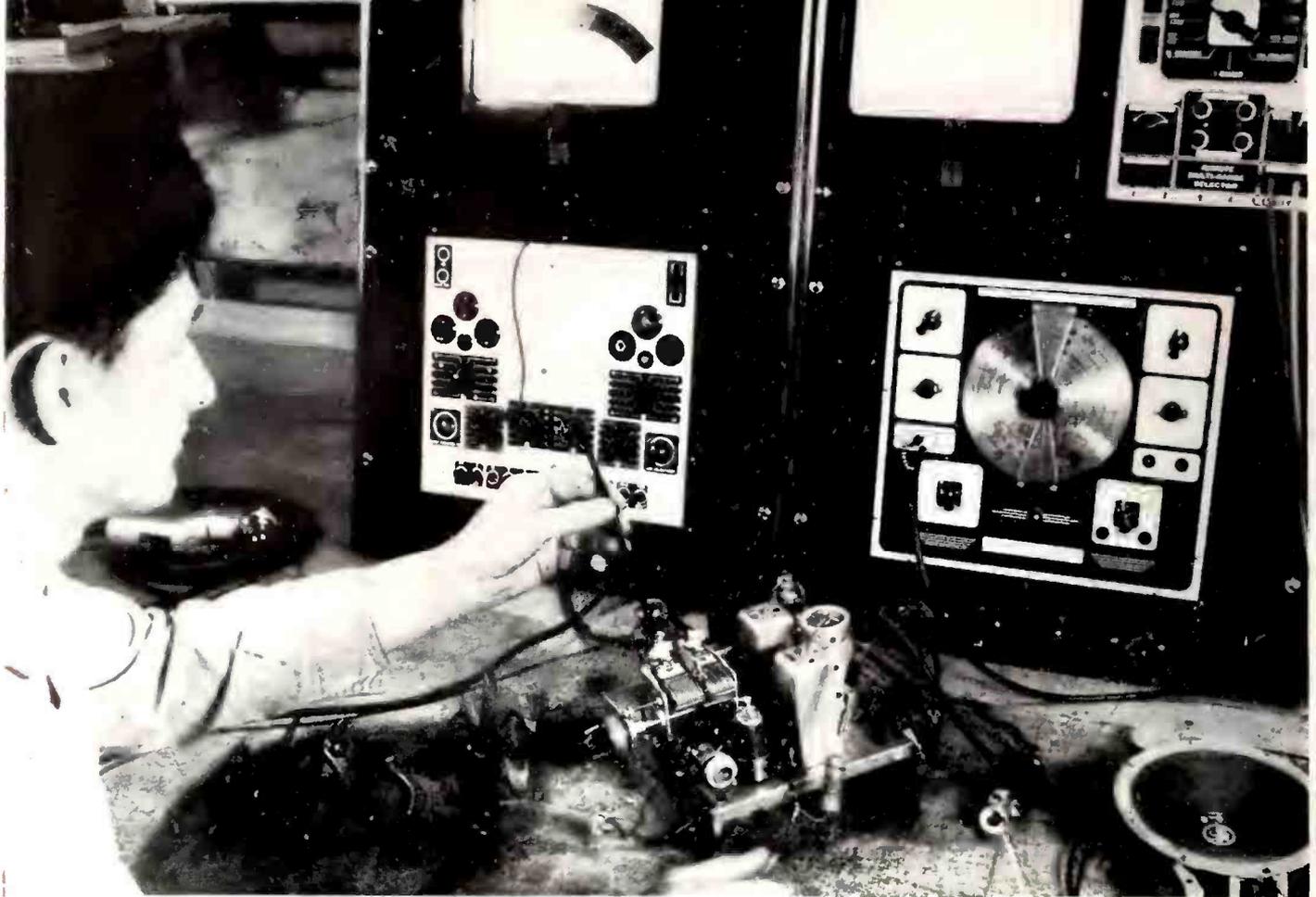
ninety-three different models to meet practically every radio receiver and sound equipment requirement.



"How many Utah Speakers were used by the radio and sound equipment industries last year?"

"1,676,622—the preference for Utah Speakers is continuing to rise rapidly. They have a balanced line, and ruggedness and adequate power handling capacity are built-in characteristics."

COMPLETE FACTS IN UTAH CATALOG



SIGNAL SERVICING

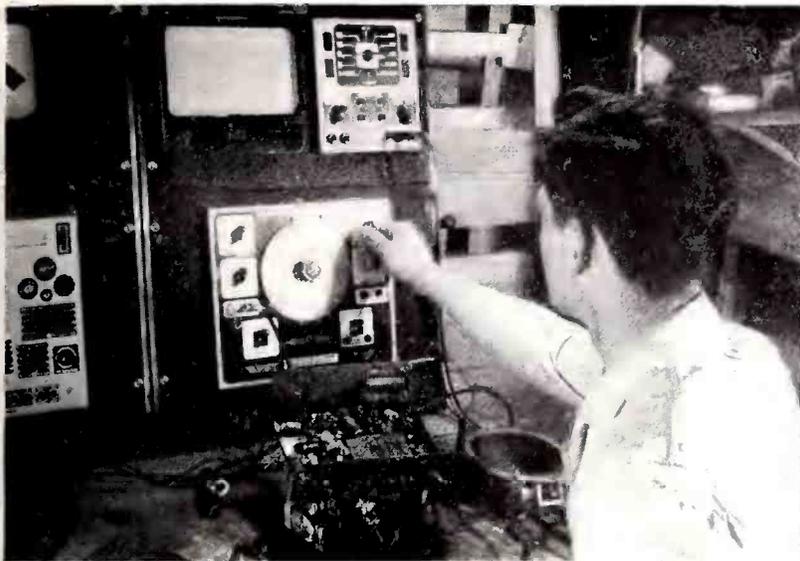
Practical servicing of receivers by feeding signals into radio and audio circuits as seen by Radio Today's camera.



1. At left, first step in servicing by the signal substitution method is the testing of all tubes for shorts, leakage, gas, as well as mutual conductance.

2. Filament and plate voltage must be at least available at the power supply. Step two is the checking of voltage at the output of filter. Shorts, and opens are spotted by comparing measured and standard values.





3. If the set still won't talk, an output meter is connected to the voice coil while an audio signal is applied to grid of output tube. A good husky signal will be necessary. Signal may also be applied to screen and cathode to check effectiveness of bypassing.



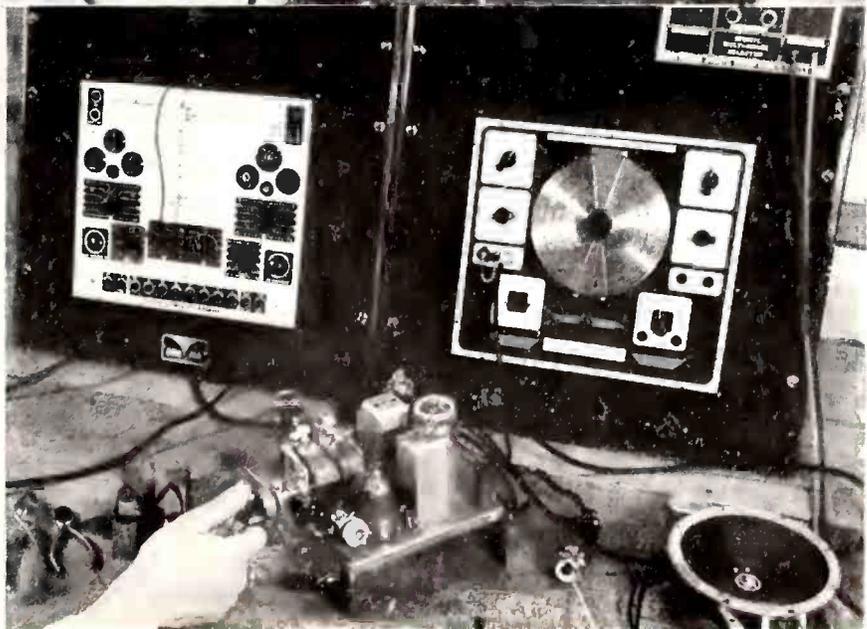
4. After checking audio circuits, a modulated signal of IF is applied to second detector diode or grid. By watching the output meter, and varying the signal strength, intermittents, open bypass capacitors may be spotted.

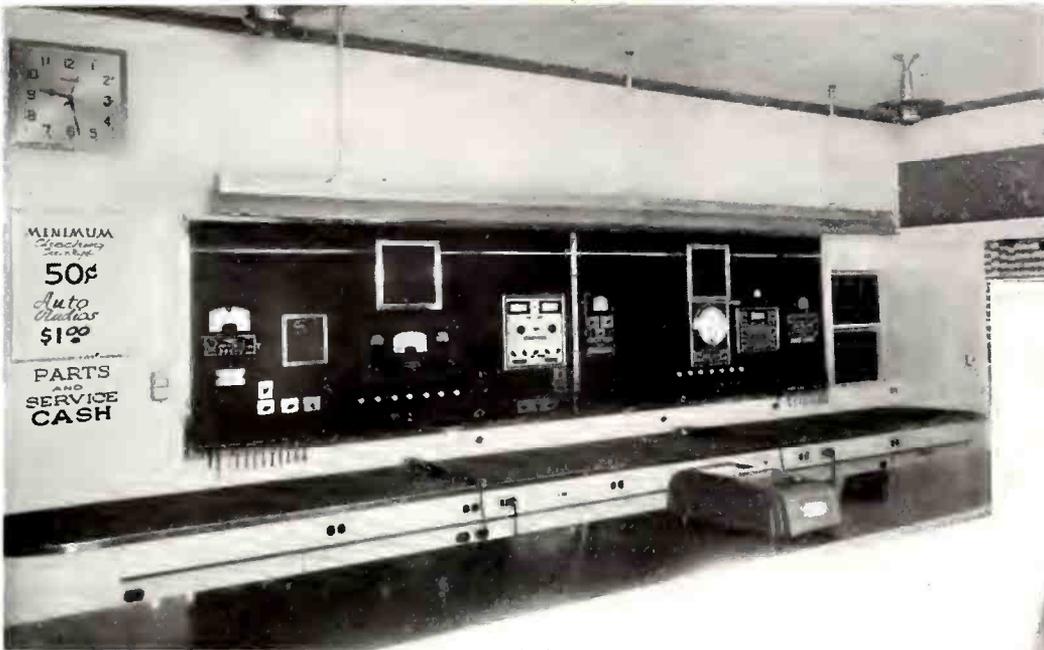
Step five covers the IF stage or stages. A modulated signal 5. is applied to first grid and then plate checking amplification. Signal applied to screen and cathode should give little or no output.



6. Coming up to the first detector, a modulated RF signal is applied to grid. A dead oscillator will stop the signal from getting through. Shorted IF windings will show up by inability to align at maximum capacity.

7. Checking the RF end up to antenna is last step. Signal Substitution, developed by Precision Apparatus Co., 647 Kent Ave., Brooklyn, N. Y., may be used with almost any signal generator, tube tester, and multimeter. Meter in 2 is Triplett 1200A. Oscillator in 6 is Hickok PSG-15. Other pictures show Precision tube tester 915, signal generator, E-200, meter, 862.





Meet Clifford Wilcox, proprietor of this good-looking shop at 1423 NW 23rd St., Oklahoma City, Okla.



The interior is up-to-the-minute, with modern plastic finishes, stainless steel trim, and metallic service counter. Note price policy, too.

SERVICE IN STYLE!

Mr. Wilcox believes that the outside of his place should indicate the kind of stream-lined service to be expected within.



Delivery truck and store interior represent modern efficiency, cleared for action.



Revolutionary Tube Tester

TRIPLET

4



MODEL 1621
only \$34.⁸⁴

DEALER NET PRICE
(without carrying case)

NON-OBSOLESCENT "Quick-Change" FEATURES

FOUR EASILY REMOVABLE SECTIONAL PANELS

- 1 If RED•DOT Lifetime Guaranteed Instrument is damaged accidentally, return the separate panel on which it is mounted for replacement or repairs.
- 2 Speed Roll Chart complete with mechanism can be replaced when there are new factory releases by removing only four screws from front of panel.
- 3 New socket panel to meet future radical tube changes which present spare socket cannot accommodate will be available at nominal charge upon return of old panel.
- 4 Flexible lever switching section and power supply in separate panel can be replaced to meet unanticipated tube changes.

This revolutionary tester has the new Triplet Lever-type switch, permitting individual control for each tube element. Also takes care of roaming filaments, tapped filaments, plural cathode structures and dual function tubes. Operation is simplified. Simply set the switch according to instructions appearing on the speed-roll illuminated chart, immediately above each lever. Only three lever settings required for most tubes; never more than four. Conclusively checks all present receiving tubes, including Miniatures, Bantam, Jr., and the new Midgets. Has Neon shorts test, and noise test jack. Gracefully proportioned wood case natural finish. Beautiful two-tone brown-tan sloping panel; polished metal chrome trim with inlaid color. Model 1621 Portable Tube Tester . . . Dealer Net Price (without carrying case) \$34.84 Case \$5.00

THE TRIPLET ELECTRICAL INSTRUMENT CO., Section 196 Harmon Dr., Bluffton, Ohio



MODEL 1613—Dealer Net Price . . . \$34.84
A Portable Tester containing RED•DOT Lifetime Guaranteed Instrument, Roll Chart, Speed Chart, All Levers, including Local Bantam Jr. and Miniature Provision for full filament voltages—20 to 110 volts.

★ ★ ★

ONE OF THE LITTLE TRIPLETTS

Model 670 AC Ammeter . . .
The little tester with the big 3" meter.
. . . Dealer Net Price . . . \$9.00

(13 in the family)

MODEL 1213—Dealer Net Price . . . \$22.00
Sockets to test all present day tubes, including Bantam, Jr., High Voltage Series tubes (117, 6X4) and the 11-3011 Miniature Ball-Tube Containing Tube Chart, Folder, Tube Chart, RED•DOT Lifetime Guaranteed Instrument.



TESTING POWER SUPPLIES

No. 2—Transformerless half-wave and voltage doubler systems. Servicing the older types of AC-DC sets. Characteristics of circuits.

Continuing the subject of servicing power supplies introduced in the March issue of RADIO TODAY, let's first "tag" the various types of "transformerless" circuits.

The type of circuit found most often in the current run of compact, and some console, sets is the half-wave rectifier with the usual condenser input, choke or resistance filter. It is possible to use a half-wave rectifier with present sets because of the high efficiency of the tubes with voltages around 100.

In Fig. 1A, is the half-wave rectifier as used in the GE models H-639 AC and H-639 DC. This is typical of the circuits being used.

While rectifier action is well understood, some of the reasons for tube and condenser failure are puzzling.

PEAK CURRENT

The peak value of current that the rectifier must pass per operating portion of the cycle is determined by the DC load current, and the capacity of the input condenser. This is apparent from the fact that the larger the capacity of the input condenser, the higher the average voltage output of the rectifier. With this high average voltage, the rectifier tube can only conduct at the very peak portion of the wave.

The short conductive cycle of the tube means that the rectifier current must be very high in order to supply the energy to the condenser, which it gave up during the relatively long interval between tube "firing" periods.

The peak current passed by the rectifier during the short conducting period can be six or eight times the

DC load current. When the load of the set is in the order of 100 MA., the rectifier has probably surpassed its rated peak current value, (350 MA. per plate for 25Z5, 35Z6), and the cathode will be destroyed.

POSITIVE PEAK

Particular trouble may occur when the set is turned on at the peak of the positive AC cycle and the rectifier must charge a large capacity condenser and start to supply the load, almost instantaneously. When the rectifier cathode is not fully heated, the tube will probably fail. If it shorts during failure, the AC applied to the electrolytic capacitor will quickly ruin it.

In sets that were brought out right at the time when half-wave and voltage doubler systems were first used, plenty of service "kick backs" can be avoided by installing 25 to 50 ohm resistors in series with the plates of the rectifiers. These resistors will limit the high surge current and peak operating current thus protecting both tube and capacitor.

RIPPLE CURRENT

The capacity of the input condenser has a very great bearing on its own life in half-wave and voltage doubler power supplies. The RMS, or effective, ripple current which the electrolytic capacitor can safely stand has been given by manufacturers as 10 MA. per microfarad of capacity for 60-cycle halfwave or doubler applications. For 25 cycles, the safe limit is 7 to 8 MA. per mfd.

In the graph of Fig. 1B, the ripple current per microfarad for various sizes of input condensers and DC currents is shown. Below a 50 MA. load, the 10 mfd. input is ok. For a 100 MA. load, the 20 or 40 mfd. condenser is under the "bar" and either might be used from the ripple current standpoint. The 40 mfd. would be chosen however because of the better filtering action and the better voltage regulation.

If an input condenser is being replaced in a set and it is decided to use a higher capacity unit to reduce hum, the increased peak current that the rectifier must handle will have to be taken care of by protective resistors in the plates of the tube. The peak voltage rating of the capacitor can remain the same because the ripple voltage across the condenser goes down with a larger capacity at about the same rate the output voltage is built up.

A close approximation of the effective or RMS ripple current through the input capacitor may be made by multiplying the DC load current by 2.4. If the ripple current is greater than 10 MA. per mfd., the capacitor will break down in a short time.

DOUBLER TYPES

Voltage doubler systems used in radio sets are either of the (1) common line type, or (2) the balanced or symmetrical type which gives full wave output.

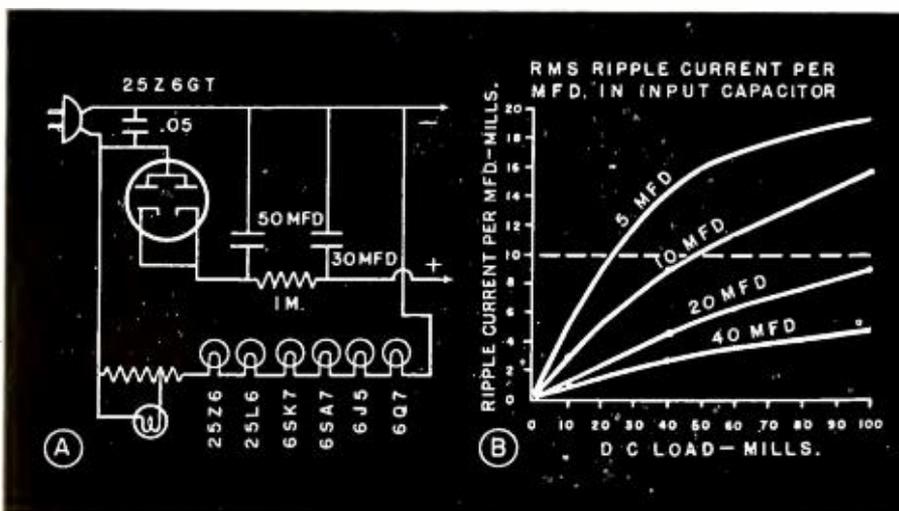
Fig. 2A, shows the conventional symmetrical type of doubler used in Kadette 1149, 1159, Crosley 719, etc.

The balanced type of doubler develops approximately twice the peak line voltage by charging two condensers that are connected in series so that their charges add numerically. When the supply line marked 1 is starting on its positive half cycle, the left hand diode of the 25Z5 permits the electrons to flow from its cathode to the plate through the supply generator and back through line 2 to the capacitor C_b where they "pile up." The accumulation of electrons on one side of this capacitor makes it negative with respect to its other terminal and therefore, a "charge" is built up. When the supply line 2 is on its positive half cycle, the same action takes place with condenser C_a becoming charged by the electrons from the right hand cathode piling up on the plate end of C_a.

With the two condensers charged approximately to the peak of the AC voltage and connected so that the charges add, the voltage across the two will be somewhat less than twice the peak of the AC wave. This would be $2 \times 1.41 \times 110$ v. less circuit drops.)

(Continued on page 58)

Fig. 1—Conventional half-wave power supply used in a GE model. Graph shows safe size of capacitor to use at various DC loads. Condenser should operate below dashed line.



The CENTRALAB Family

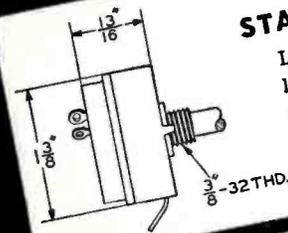
of VOLUME CONTROLS

In every branch of the electronic industry Centralab Controls play a major part in producing certain, smooth, flawless attenuation. Set manufacturers, servicemen and experimentors turn to Centralab for positive performance. Whatever your Volume Control needs may be . . . specify Centralab.

All controls furnished with any desired maximum resistance and with appropriate tapers. Control and resistor problems melt away when you put Old Man Centralab on the job.

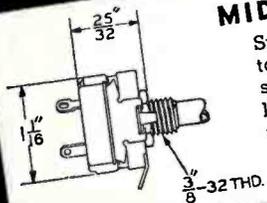
STANDARD

Long famous for the reliability of Centralab's non-rubbing contact and long wall type resistor. Available plain, or with one, two, or three taps, and with SPST, DPST, or SPDT Underwriters Approved switches.



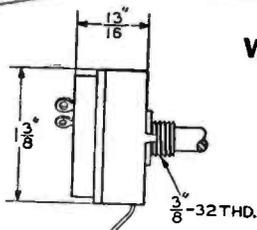
MIDGET

Small in size, but large control efficiency due to the long straight path of the wall type resistor. Fits well in crowded chassis as solder lugs do not project far beyond the control triple, plain, or tapped, with SPST, SPDT, DPST, and a special dial lite push switch for battery sets.



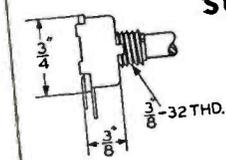
WIRE WOUND RADIOHM

Identical in size and appearance with the Standard Radiohm except has brown colored base. Resistances range from 2 ohms to 10,000 ohms. Rating 3 watts. Furnished plain or with SPST, SPDT, or DPST Underwriters Approved switches.



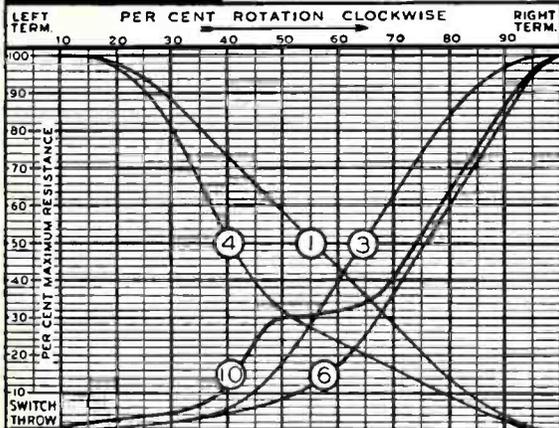
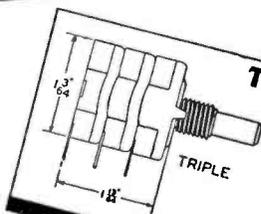
SUB-MIDGET

The smallest diameter reliable control. Long wall type resistor gives low noise level. Rapid Transfer of heat from resistor to metal shell gives maximum load rating of 1 1/2 watts. No switch or taps. Available as grounded or insulated rheostat or potentiometer with solid or tubular shaft.



TWIN AND TRIPLE CONTROLS

Two or three sections assembled in tandem for special purposes. Each section fully shielded and has independent connections. All variable controls also attached to a single shaft. Twin one inside the other. Supplied with or without Underwriters Approval snap switches.



The resistor curve of a volume control is more important than its overall resistance . . . that is why Centralab controls are furnished with the variety of curves shown here. Curve six is most widely used for high resistance radio grid and diode controls. Curve 1, or 4, are best for C bias, and Curve 3 for antenna C bias. Curve 10 is used on tapped controls.

Centralab

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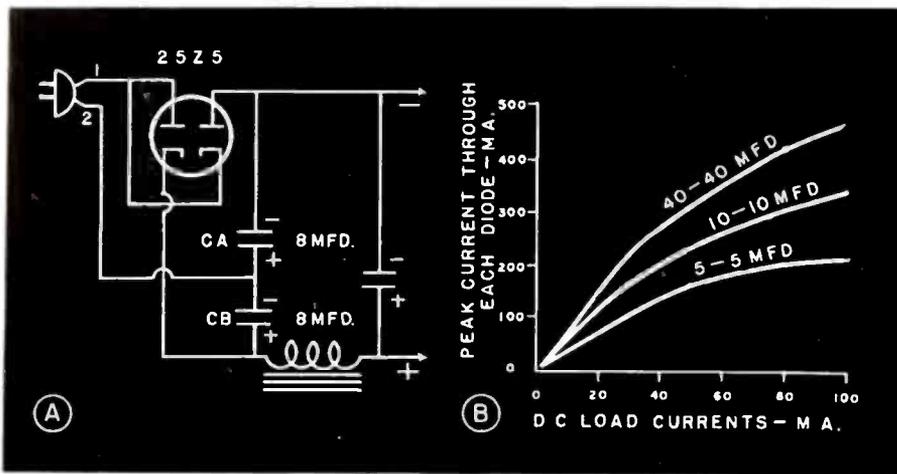


Fig. 2—Balanced type of voltage doubler circuit. Output of this rectifier is full-wave. Peak current through each plate increases with DC load and input capacity.

PLATE RESISTORS

The ripple current condition in the full wave doubler capacitors is approximately the same as the half wave rectifier. The curves in Fig. 1B are also representative of the doubler.

When the two capacitors C_a and C_b are of unequal capacity, a ripple voltage at the line frequency will appear across the output of the rectifier. If hum is present in a set using the symmetrical doubler, these two condensers may be unbalanced enough to cause a bad ripple voltage at the line frequency. Under normal operation, of course, the hum is of 120-cycle frequency.

The peak current through each diode of the doubler goes up with the capacity of C_a and C_b and with the DC load.

Fig. 2B shows the high values of current that pass through the rectifier on peaks.

As in the case of the half-wave systems, the older sets with voltage doublers should have 25 or 50 ohm resistors put in the rectifier plate leads to limit the high peak currents, thus protecting tube and condensers.

LINE CIRCUIT

The second type of voltage doubler is the half-wave or common line circuit. Two versions of this system are used. The common feature of the two is the grounding of one side of the AC supply.

Fig. 3A shows the circuit which uses two capacitors with separate positive and negative leads, and Fig. 3B is the more usual type with a common negative lead condenser.

In both circuits, the condenser C_1 is charged to approximately the peak line voltage when the plate of the left hand diode section is positive. When the other line terminal becomes positive the line voltage adds to the charge of the condenser, and the right diode section of the tube then rectifies the combination of the AC line voltage and the DC charge on the condenser.

SAME POLARITY

The half wave action of this type of circuit is apparent since the capacitor C_1 is only charged every half cycle.

It is not necessary to have a paper

or a polarized electrolytic capacitor in the C_1 position even though the current flows in two directions through it on successive cycles. The reason is that on the cycle in which the load draws current, the capacitor C_1 is not totally discharged. The charge thus flows in and out but never reverses polarity.

The peak current conditions in this type of rectifier is almost the same as the others. It is a good idea to add the series limiting resistors in the plate leads of the rectifier to protect the tube and capacitors.

HUM CAUSES

Hum in the set due to power supply trouble may be caused by unequal capacitors in the symmetrical doubler, too small an input capacity in any of the circuits, or incorrect filament sequence. The series connected filaments of the receiving tubes should start in such a manner that the high gain audio and RF tubes are nearest to the chassis electrically. The common order from the chassis end is, second detector, mixer, or oscillator, RF and IF tubes, and then the audio output and rectifier on the "high" end of the string. The object is to keep the AC ripple voltage between the cathode and

filament of the high gain tubes as low as possible. This source of trouble is usually rare, except in those cases where the set may have been "butchered."

Oscilloscope Has New Circuit Features

Important new circuit developments are incorporated in the type 208 cathode ray oscilloscope manufactured by Allen B. Du Mont Labs, Inc., Passaic, N. J.

Using the "intensifier" type of cathode ray tube, the 208 has the advantages of high deflection sensitivity without loss of the bright trace line.

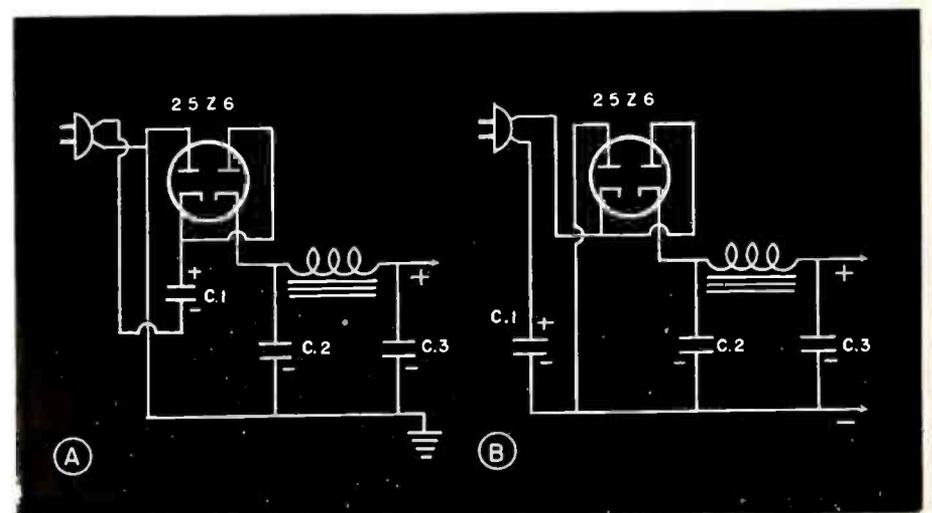
An extremely wide range of frequencies may be handled by both the vertical and horizontal amplifiers. The vertical, or Y axis amplifier is uniform at plus or minus 2.5 per cent from 2 to 100,000 cps (sinusoidal). The voltage gain of the vertical amplifiers is 2000, thereby giving a maximum deflection sensitivity of 0.010 r.m.s. volts per inch. Direct connections to the deflecting plates are provided for observation of DC or extremely high frequency voltages.

COMPENSATED AMPLIFIERS

The wide range of the deflection amplifiers is realized by a combination of compensated resistance-capacity coupled stages and direct coupled tubes. The plate circuits of the amplifiers include a small amount of inductance to offset the decreasing capacity impedance at high frequencies. The final deflection amplifiers are 6V6G's connected in a phase inverter circuit. These tubes are V_3 , V_4 , V_7 , and V_8 in the block circuit diagram shown. One of the horizontal and vertical 6V6G's is directly coupled to a potentiometer in the cathode circuit of their respective driver triodes, in this case, they are one half of a 6F8G, marked V_2 and V_6 . The amplified signal voltage appears across the cathode load, which includes the potentiometer R_2 . The grid voltages of V_3 and V_4 are therefore 180 degrees out of phase since one

(Continued on page 60)

Fig. 3—Two types of series line doublers shown deliver half-wave power. The capacitor C_1 charges every other half cycle and adds its charge to line voltage on the following half cycles.



SERVICE NOTES

Lubrication of Record Player Motors

Loss of speed in phonograph turntables is usually due to thickening of the lubricant used, or no lubricant at all. The following instructions are given by Wilcox-Gay Corp., Charlotte, Mich., for their electric record players and phonographs, however, the suggestions are suitable for most players.

For reduction-gear type units, the motor should be removed from the motor board. Remove the shaft and worm gear assembly and clean with kerosene or other grease solvent. Wash the worm wheel and gear housing in a similar manner. Apply 600-W motor lubricant to the worm and worm wheel and put a small amount of the oil in the housing.

The complete cleaning method is to be advised rather than the mere adding of oil to the housing.

RIM DRIVES

For record players using the rubber tired idler wheel, the first step is removal of the turntable. Apply a few drops of electric motor oil, obtainable at auto service stations, to the shaft, permitting it to run into the upper bearing. The idler shaft should be oiled with only one or two drops taking care to prevent the rubber tire from getting any benefit from the lubricant. Rubber and oil don't get along well together. Oil the turntable spindle bearing and the lower motor bearing. The lower bearing is usually taken care of by a felt wick which should be saturated with oil.

RCA Circuit Diagrams Have Stage Gain Values

The technical information and service data sheets for the 1941 RCA models now include the stage by stage gain values in addition to voltages and component parts and sizes. With this additional information, the serviceman can now tell where a set is falling down and what portion of the circuit requires investigating to bring back the old pep. The gain of RF and IF transformers is also given to further simplify location of trouble.

An instruction sheet on the use of gain data shows graphically the method of measurement, and points in the circuit of a typical set where the tests are made. Similar pictorial treatment of signal tracing methods appeared in RADIO TODAY for April, pages 34, 35.

What Radio Needs— An RF Stage

Editor, RADIO TODAY:

With great interest and approval I have enjoyed your various campaigns for the betterment of the radio business in general.

Would it be possible to enlist your support of a cause which would certainly insure the public's receiving more for their money and at the same time relieve service men in general

from one terrific headache? A headache caused by the modern radio's lack of selectivity?

Many a sale has been lost in the last two years because, by actual trial, the customer's six or eight year old radio with a tuned R. F. stage ahead of the first detector, will out-perform the new radio with a two-gang tuning condenser.

We servicemen are deluged with a wave of cross-talk, interference, and heterodyned reception and we are helpless.

Perhaps you, with the power of the press and your forceful presentations can influence the manufacturers in the right directions.

The technical answer to what the

public now demands is an R.F. stage ahead of the mixer!

(Signed) VERNON W. GOSNELL,
Radio Service Mgr., Boston Store,
Milwaukee, Wis.

Sylvania Tube Base Chart

A revised base diagram chart which covers 376 types of tubes is now available from Hygrade Sylvania Corp., Emporium, Pa., or through Sylvania jobbers. Standard RMA bottom of base numbering system is used and the tubes are cross indexed by types and base diagrams. The new chart is smaller than former issues, although more tube types are listed.

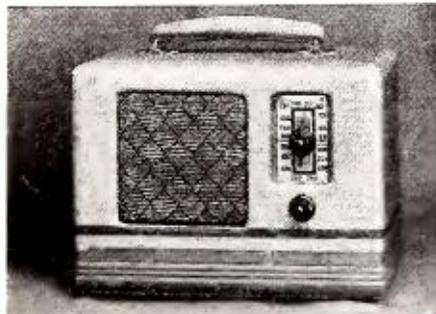
If it's performance you want

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Model P-41 — 5-tube Superheterodyne — PM Speaker — Automatiscope Loop — AIR-PLANE CASE...19.95

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Model P-51—5-tube Superheterodyne — Large PM Speaker — Automatiscope Loop — Beautiful case with cover comes in 7 different colors (Maroon, Blue, Gray, Olive, Brown, Ivory, Alligator)24.95

Complete with batteries



Model P-81—6-tube Superheterodyne — Large PM Speaker — Very powerful performer — Beautiful two-tone case in 7 different colors as Model 51 with Ivory trimmings.....29.95

Complete with batteries

WRITE, WIRE OR PHONE FOR FURTHER DETAILS

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Quality in PAPER CONDENSERS



- For those applications requiring paper type condensers, be sure to check with the new 1940 AEROVOX catalog.



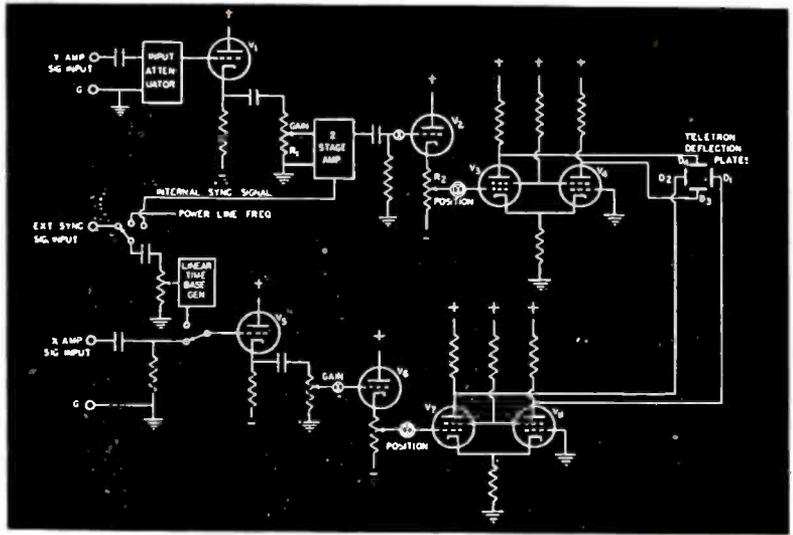
Despite the preponderant use of electrolytics, AEROVOX maintains a wide choice of paper condensers to meet those needs where only paper dielectric can safely and satisfactorily be used. Thus you can have uncased units for your own grouping and container; inexpensive paper tubulars; various types of metal-can jobs, bakelite-case units; oil-filled high-voltage capacitors, etc., etc.



All of which is typical of AEROVOX policy to provide condensers that fit into your exact requirements, rather than expecting you to improvise or warp your requirements to meet an otherwise limited choice of condensers.

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- More pages, more items, more choice! Ask your local AEROVOX jobber for a copy—or write us direct. Also ask about a free subscription to the monthly AEROVOX RESEARCH WORKER.



Block schematic of new oscilloscope shows direct connection of amplifiers and centering controls.

New Oscilloscope

(Continued from page 58)

grid is grounded, and the other connected to the cathode end of R_2 .

Since the potentiometer R_2 is also in a DC path and the phase inverter deflection amplifier tubes are direct connected to the cathode ray tube, it serves as the beam position control. Conventional "centering" controls have used a voltage divider system to apply the proper voltages to the plates for positioning. Because R_2 is a small part of the total cathode load circuit, it acts as a positioning control and has but slight effect on the amplitude of the signal.

The points marked X in the diagram are the connections for test signals of very low frequency or DC. DC or very high frequency test voltages may be inserted at the doubly circled X position for still better response characteristics.

Another important circuit feature is the input attenuator on the vertical amplifiers. The two position switch gives ranges 0-25 and 0-250 volts r.m.s. The input impedance is constant at 2 megs and 20 mmfd. shunt capacity. A full variable gain control operates in the cathode of the input tube.

This oscilloscope will prove an extremely valuable tool to the serviceman because of its wider frequency response range and its freedom from distortion and frequency discrimination in the input circuit.

RCA Introduces New Test Oscillator

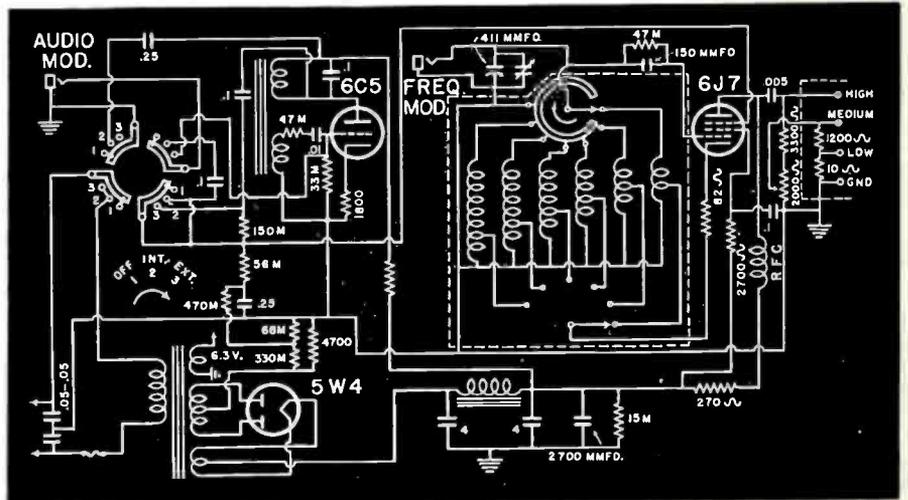
Alignment of modern radio sets is one of the serviceman's most repeated jobs. The basic instrument is the test oscillator about which the accuracy of the results hinge.

Model 167 signal generator with several new features has just been announced by RCA Mfg. Co., Camden, N. J.

Ease of operation, appearance, and versatility are the keynotes in its design. The scales for the 6 bands from 100 to 30,000 kc. are engraved on the front panel. Frequencies may be accurately set with the double ended knife-edge pointer. Scale lengths total over 50 inches.

Three RF output terminals are provided for Low, Medium, and High test signals. A variable attenuator graduated from 0-10 gives ranges from 4 microvolts to 0.01 volts on the Low

(Continued on page 62)



6C5 functions as oscillator for internal modulation and as an amplifier for external in RCA No. 167 signal generator.

ATR VIBRATORS



PROVEN UNITS of the HIGHEST QUALITY

Engineered to perfection, ATR Replacement Vibrators set high standards of performance and construction. Their greater life and reliability is made possible by new designs utilizing 3/16" diameter tungsten contacts with full wiping action. Other important features:

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- HIGHLY EFFICIENT Magnetic Circuit with formed base.
- MICA AND METAL STACK SPACERS with Two-Bolt Stack construction.
- EXTRA FLEXIBLE LEADS with Tinned Clamp Supports.
- HIGHEST PRECISION Construction and Workmanship.

Visit the ATR exhibit at the Radio Parts Show, Booth 831.

Write for FREE ATR 1940 16-PAGE VIBRATOR GUIDE

The most comprehensive and complete in the industry, covering ATR replacement vibrators for practically all standard vibrator-operated receivers, including Automotive, Aviation, Police, and Household Sets.

ATR vibrators, the heart of vibrator-operated power supplies, are proven units of the highest quality, engineered to perfection. They are backed by more than ten years of vibrator design and research, development and manufacturing—ATR pioneered in the vibrator field. American Television & Radio Co. has consistently devoted its efforts and energies to the perfection and production of vibrators and associated equipment, and today, after ten years of painstaking, persistent and diligent work resulting in steady development and progress, is considered the World's leader in its field. All ATR Products incorporate only the best materials and workmanship and are carefully manufactured under rigid engineering inspections and tests, making them the finest that can be built.

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MODEL VC-11 DECIBELOMETER



A NEW INSTRUMENT FOR SOUND ENGINEERS

The Model VC-11 will duplicate the output of practically any microphone, making possible amplifier gain tests and characteristic measurements on all audio components.

FEATURING—

- ★ Two bandspread ranges—0-420 and 0-16550 cps.
 - ★ 10 outputs covering 0 to -90 db.
 - ★ Built in vacuum tube voltmeter assuring flat output at all frequencies.
 - ★ Appointed with engraved Bronze panel, GR controls, and solid Walnut cabinet. Obsoletes the regular audio oscillator.
- NET \$65.00 F.O.B.

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announces its enlarged new line
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RECORDING EQUIPMENT

The personnel and facilities of this organization, strengthened by the addition of Mr. William A. Bruno, will henceforth be concentrated upon producing and marketing the products formerly manufactured by Bruno Laboratories. This worthy line will embrace professional and home recording apparatus and public address accessories . . . drawing upon the rich background of Mr. Bruno for its advances in theory and development.

Watch for further announcements

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Specialists in High Precision Instruments . . . Development Work

SERVICE NOTES

(Continued from page 60)

range, and 0.01 to 0.25 volts on the Medium range. The High range is fixed at 1 volt. A 400-cycle audio signal is also available separately at a level of 8 volts across 50,000 ohms (no load). Modulation percentage is approximately 30.

AUDIO AMPLIFIER

In the circuit diagram shown, the power modulation switch circuit reveals that the 6C5 audio oscillator tube is used as an amplifier when external amplitude modulation is employed. The advantages of this arrangement are, lower required modulating voltage, constant impedance to the source of

modulation, and isolation of the RF oscillator and modulating source with the result of less RF radiation. A jack on the front panel gives the audio connections.

FM JACK

The frequency of the test oscillator 167 may be modulated through a front panel jack with a standard modulator.

The electron coupled 6J7 oscillator is suppressor grid modulated. Coil selection switch is of the shorting type. Calibration accuracy is within 2 per cent.

This compact and moderately priced oscillator is well suited for use by the serviceman, whether he uses the output meter indication or the visual cathode ray oscilloscope method of alignment.

Job Record Card a Timely Business Aid

SET OWNER'S WARRANTY JOB NO. _____ KEEP THIS WITH RADIO Owner Name _____ Street _____ City _____ State _____ Date Delivered _____ Radio Model or Serial _____ NUMBER AND CONDITION OF TUBES Good _____ Bad _____ Cost of Job \$ _____ Charge \$ _____ We Guarantee Satisfaction or Refund		CUSTOMER'S RECEIPT Job Number _____ Date _____ and a guarantee to give it the next occasion. Name _____ Model or Serial _____ Will Deliver _____ Signature _____
YOUR IMPRINT HERE 100 - \$1.00 250 - 1.75 500 - 3.00		
Owner's Name _____ Phone No. _____ Street _____ Date Delivered _____ City _____ State _____ Radio Model or Serial _____ Complaint _____ Tubes Replaced _____ Total \$ _____ Material Replaced _____ Total \$ _____ (Material on Reverse Side) Total Material and Tubes _____ Sales Tax _____ Check-up Service _____ Repair Service _____ Adjustment Service _____ Signature _____ Total Charge \$ _____		

A new radio job record card, which includes a customer's receipt stub for claiming radios left at the service shop, has been issued by Hygrade Sylvania Corp., Emporium, Pa. It appears at a time when dealers and servicemen are repairing great numbers of compacts and portables, and the "claim ticket" becomes important in the radio business.

The three parts of the card have perforations between, for ease and neatness in tearing. The set owner's warranty, which is the customer's bill and statement of repair work done, has a guarantee on the back. The serviceman's own file card gives complete information on the repair job, and will fit the Sylvania Index File Cabinet.

The Job Record Cards come from Sylvania jobbers at reasonable prices, with or without dealer imprint.

Servicemen Give Hospitals Sets

Reconditioned radios were to be sent to any hospital superintendent requesting one during the week of the National Radio Festival (June 3-8) as part of WOR's cooperation with the National Association of Broadcasters for the Festival.

Milton Kay, on his "Clarion" program, made the offer on behalf of the Radio Servicemen of America.

On a special program Thursday, June 6, George Duvall, national president of the RSA was to appear on the program to report on the offer. This was to be an all-request program with all musical numbers being those requested by shut-ins.

Boston RSA Hold Meeting

The Boston Chapter of the Radio Servicemen of America held an instructive meeting on May 28 at Norfolk House Center, Elliot Square, Roxbury, Mass. The subject of frequency modulation antennas was discussed as the opening session of a series of lectures and demonstrations. Visits to the Yankee Network's 132-megacycle transmitter in Boston are to be included in the course as it progresses.

N. U. SIXTY DAY SPECIAL
 Limited May 1 to June 29
 only \$12
 DEALER DEPOSIT
 You receive delivery at once.
 Your deposit is rebated on completion of 650 purchase points.
 Regular Dealer Price \$24⁹⁰

DACO TUBE TESTER

Model 303 P5 Features

- Enclosed in Portable Leatherette Case
- Extra Large, Full Vision Meter
- Standard R.M.A. Circuit
- Snap-Switch Control
- Neon Short-Leakage Test
- All Filament Voltages from 1 to 117 Volts
- Provisions for Latest Tube Types
- Spare Sockets for New Types, Preventing Obsolescence
- High Quality Parts Used Throughout
- Complete, Easy Reference Tube Chart
- Ruggedly Constructed Throughout
- Simplified Operation
- Tests Pilot Lights
- Tests Ballast Tubes

**SEE YOUR N. U. DISTRIBUTOR OR SEND COUPON
 GET IT FREE THE N. U. WAY**

You get this Daco Model 303 P5 Tube Tester by depositing only \$12.00 with your N.U. distributor. By buying N.U. Tubes, Condensers, and Batteries, you earn purchase points and on completion of 650 purchase points in 2 years, your deposit will be rebated.

Join thousands of other N.U. dealers; have the best equipped shop in town. Over 50,000 completed deals in our 10 years of successful operation of this plan.

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 57 State Street, Newark, N. J.

National Union Radio Corporation
 57 State St., Newark, N. J. RT-640
 DACO 303 P5

- Please reserve one for me.
- Please have your salesman show it to me.

Name

Address

City State

Sentinel Ready With Brand New Line

Details on the new 1941 Sentinel radio line, which includes all types of battery, electric sets, portables, phonocombinations, record players, home record makers and period consoles, were released this week. The altogether re-styled and re-designed line will be backed by a new advertising and promotion campaign, of fresh vigor and size.

The sets are being shown at the Blackstone Hotel in Chicago during the Parts Show, June 11-14.

Prices of the new Sentinel sets are generally lower than last year's models. Other models incorporate technical improvements which are stated to increase value considerably at no higher cost to dealer or consumer.

Emphasized in the line is a broad range of conventional consoles, completely re-designed and restyled; table models in a choice of wood or colorful plastic cabinets styled in the modern manner; portables in new handsome luggage type cases; and radio-phonograph combinations with and without automatic record changing mechanism. The console grouping is featured by the introduction of several sets in cabinets of authentic Hepplewhite, and Sheraton design to meet the rapidly growing demand for period style in radios. An entirely new addition to the line is The Sentinel Record-Maker.

Heading the list of sales helps is a brightly colored display stand, designed in compact and eye-catching form to hold as many as 9 radios. A poster at the top has the timely phrase "Listen with a Sentinel Before You Vote."

Philadelphia Maker of Auto Aerials Expands

Snyder, Inc., the Philadelphia manufacturers of auto aerials and grille guards, has recently doubled its production as a result of expansion in plant facilities and equipment. Ben Snyder, and officials of the company, announced the production increase after a new check-up.

Snyder now declares that it is "the only manufacturer in the world that manufactures the component parts and completely assembles auto aerials in the plant . . . due to the recent installation of modern power and plating equipment."

Mr. Snyder and his field men are at Booth 406 at the Parts Show in Chicago, to explain his new manufacturing and distribution plans.

Chicago Exporter Expands; Named by Sonora

Harry J. Scheel, export specialist whose address was formerly 330 S. Wells St., Chicago, now occupies improved, enlarged quarters at The Merchandise Mart, Chicago. Mr. Scheel points out that "in spite of the unrest in many of the export markets today, we feel that our business justifies expansion . . . to take care of present business and volume that we hope to build in the future."

The appointment of Mr. Scheel as sole export sales agent for Sonora Radio & Television Corp., Chicago, has been announced by Joseph Gerl, the president of Sonora. The announcement says that "Mr. Scheel and his organization have already taken up their duties and are busily expanding existing Sonora export business on a world-wide scale."

Rep Available

Manufacturers Representative desires an additional line for Chicago and surrounding territory. Write Box T, RADIO TODAY, 480 Lexington Ave., New York, or in Chicago phone White-hall 4347.

Farnsworth Has Three More Distributors

Three additional distributors of the Farnsworth line of radios and automatic radio-phonograph combinations have been announced by Pierre Boucheron, general sales manager. They are Sunset Electric Company, of Seattle; Miller Brothers Company, of Chattanooga, Tenn., and Wholesale Appliances, Inc., of Little Rock, Ark.

Appointment of these companies raises to 56 the number of Farnsworth distributors throughout the country. Mr. Boucheron said less than 4 per cent of the nation's potential market remains open.

DEWALD

Proudly presents

RECORDOMAT

5-in-1 COMBINATION

COMPARE

these 5 sensational features:

- ✓ 9-TUBE, 3-BAND, PUSH-PULL, 10-WATT RADIO, 12" SPEAKER
- ✓ Voice and Music RECORDER
- ✓ Radio RECORDER
- ✓ Quality PHONOGRAPH
- ✓ MICROPHONE Address System



Model 908

"Proven Quality Since 1921"

DeWald puts a real Sales-Kick into home recorders with RECORDOMAT a fine musical instrument, combining 5 operations in one versatile unit and bringing professional-type recording to the popular-priced field. Get YOUR share of this great new market by writing or wiring at once for full details!



Model 907

INVITATION . . .

See our complete new line, listing from \$9.95 to \$174.50, at the
BLACKSTONE HOTEL
CHICAGO . . . June 11-15

DEWALD RADIO MFG. CORP.
436-440 Lafayette St. New York, N. Y.

"IMITATION
IS THE
SINCEREST FORM
OF
FLATTERY"

BRUCE A. COFFIN, General Manager
HYTRON CORP.



WHEN Hytron originated and perfected the Bantam* GT tube, it represented the first modern change in glass tube design in many years. It was an important milestone, not alone because Hytron solved the many technical problems which stood in the way of making a small glass tube and proved that such was practical—but Hytron also solved many replacement problems for dealers and servicemen because of the interchangeability of the GT tube with the Metal, MG and G series.

BANTAM GT'S LEAD

Today, Hytron's Bantam GT's are the standard of the industry. In 1939 fifty per cent more GT type tubes were sold for initial radio set equipment than the nearest competitive series! And the use of GT series tubes is ever increasing!

Another exclusive Hytron development which is being widely imitated are the Bantam Jr. miniature pentode tubes for hearing aids. Again, Hytron led the way by successfully accomplishing what the others thought was impossible!

We here at Hytron are happy to have been in a position to serve the industry so well. This wide acceptance of our ideas proves HYTRON LEADERSHIP once again.

1940—OUR TWENTIETH YEAR

Sell Hytron tubes for trouble-free performance, unequalled customer satisfaction and maximum profit. Behind them are more than 19 years of experience in making radio tubes exclusively—and the skill of engineers, foremen, and workers who have been with Hytron ten, fifteen years and even longer.

These unseen factors can't be copied and yet they are immediately recognized by those who demand the best.

When you buy Hytron, you buy not only a radio tube—but a quality tube built upon 19 years' experience in the exclusive manufacture of radio tubes.

Visit Hytron's dynamic exhibit featuring the manufacture of radio tubes at the Radio Parts National Show, Booths 212-214.

*Trade-name registered.



HYTRON CORPORATION

23N. DARBY ST.
SALEM, MASS.

MANUFACTURERS OF RADIO TUBES SINCE 1921

SERVICE EQUIPMENT



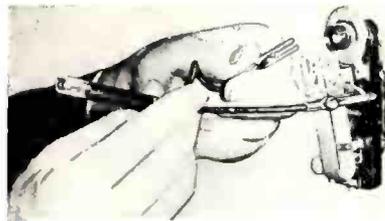
Teleso Decibelometer

★ Calibrated audio oscillator and decibel meter duplicates output of microphones for frequency checks of amplifiers and sound systems up to 16,550 cps and input levels from 0 to -90 DB. VTVM insures flat response on two band spread ranges 0-420, and 0-16,550. Net, \$65. Teleso Products, Inc., 1135 N. Cicero Ave., Chicago, Ill.—RADIO TODAY.



Precision tester

★ Compact AC-DC multimeter has 31 ranges on larger 3 5/8-inch meter. Six DC scales from 6 volts to 1200 volts, six AC ranges from 12 volts to 2400. Ohmmeter range to 5 megs, decibels -10 to plus 62. Wire wound shunts and metallized multipliers accurate to 1%. Price, \$14.95. Precision Apparatus Co., 647 Kent Ave., Brooklyn, N. Y.—RADIO TODAY.



Littelfuse tester

★ New tester for low AC and DC voltages the Tattelite pocket neon lamp for indication on 3 to 25 volts. Lamp is housed in molded transparent tenite, has flexible leads with alligator clips. List, \$1.75. Littelfuse Inc., 4757 Ravenswood Ave, Chicago, Ill.—RADIO TODAY.

Radex align loop

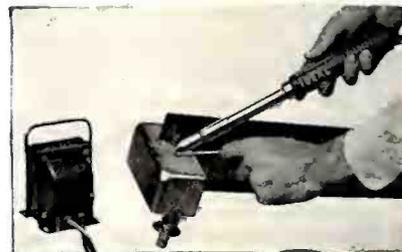
★ Shielded loop antenna for use with any signal generator for use in aligning sets using this type of aerial. The unit is complete with

dummy antenna and shielded generator leads. Radex Corp., 1733 N. Milwaukee Ave., Chicago, Ill.—RADIO TODAY.



Morrison signal tracer

★ Compact signal tracing instrument uses a 6J7GT in handy test probe with gain control. Tracer is connected by flexible cable to an operating set for its power and indicating method while probe is used to find trouble in dead sets. Price \$8.95. J. L. D. Morrison Co., 1923 35th Pl. N. W., Washington, D. C.—RADIO TODAY.



Ideal soldering iron

★ Quick heating soldering iron uses arc principle. Internal carbon electrode heats regular copper tip in less than one minute. Complete with 500 watt transformer with easy carrying handle. Iron only heats when control button on handle is held down. Ideal Commutator Dresser Co., 5079 Park Ave., Sycamore, Ill.—RADIO TODAY.



Du Mont oscilloscope

★ Improved circuits are incorporated in type 208. Using the intensifier tube, high gain, wide frequency response amplifiers, constant impedance input characteristics, and sweep frequencies from 2 to 50,000 cps. Rugged mechanical design. Allen B. Du. Mont Labs., Passaic, N. J.—RADIO TODAY.



Triplet AC meter

★ Model 1270 AC circuit analyzer indicates amps, volts, and watts. Five wattage scales, 0-20, 500, 1000, 2000, 4000. Current, 260 ma., 6.5, 13, 26 amps. Voltage, 130, and 260. Low wattage range is fused to prevent damage. Cords and switches rated for continuous load. Net, \$29.83. Triplet Electrical Instrument Co., Bluffton, Ohio—**RADIO TODAY.**



RCA oscillator

★ Model 167 test signal generator covers 6 bands from 100 kc. to 30,000 kc. on large engraved dial with knife edge pointer for accurate readings. 400 cycle audio signal is available separately and oscillator may be frequency modulated. High RF output of 1-volt. List \$34.50. RCA Mfg. Corp., Camden, N. J.—**RADIO TODAY.**



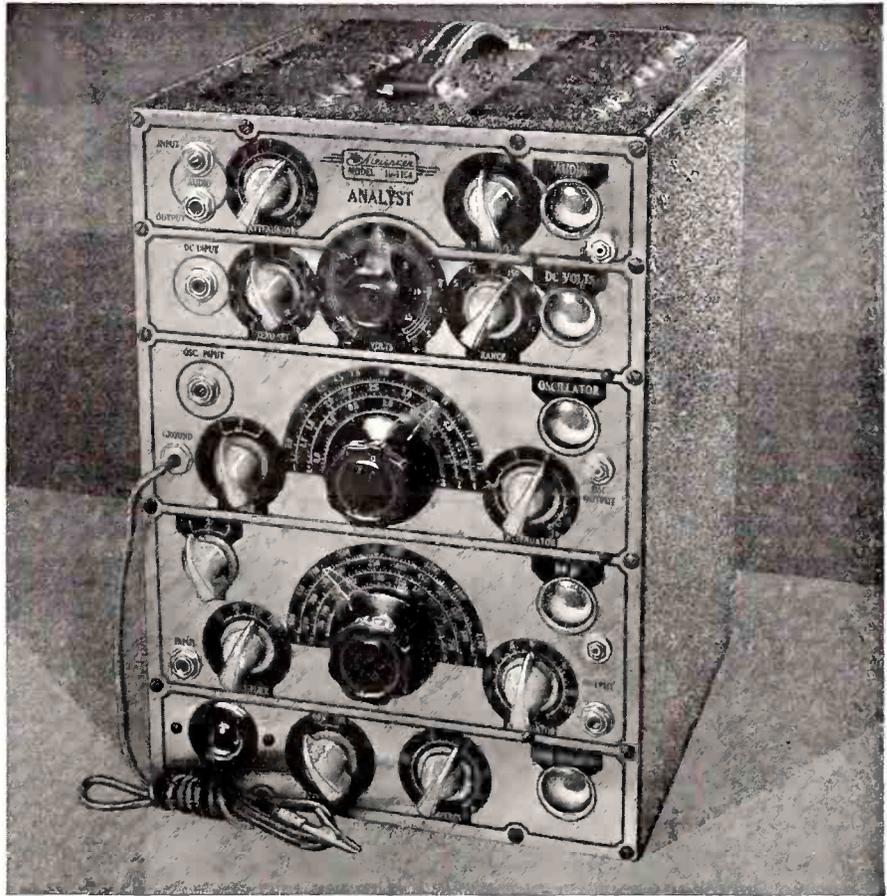
DeJur meter line

★ New line of instruments including ammeters, milliammeters, microammeters, and voltmeters in 2, 3, and 4-inch sizes, round and square cases. Designed for radio, recorder, transmitter use. DeJur-Amsco Corp., Shelton, Conn.—**RADIO TODAY.**

NOW AVAILABLE—

The Famous **MEISSNER ANALYST**

Completely Wired and Tested
Ready to Operate



The Key to More Profitable Servicing!

In every section of the country, enthusiastic servicemen are praising the dependable performance of the Meissner Analyst. The endorsement of technicians who know the problems encountered in the service field can mean only one thing—Dollar for Dollar, Feature for Feature—The precision built Analyst is the best buy!

Today the Analyst is supplied completely assembled, wired and laboratory tested. Designed and engineered with an eye on future requirements, it is ready to "go to work" for you the same day you place it on your service bench... master of every service problem, the Analyst does a complete job, paving the way to more profitable operation.

We couldn't improve the Analyst by hanging an extra fifty dollars on its price. But don't take our word for that... Compare it with any instrument available on the market today. Or, best of all, ask the man who uses one!

Complete Meissner ANALYST, Model 9-1025, Only \$88.50 net

INSTRUCTION MANUAL

Get your copy of this big NEW 168-page book, "How to Build Radio Receivers". Contains added material on Frequency Modulation theory and design principles as well as complete instructions on the Analyst. See your Jobber or send 50c at once to the address below. Order it today!

COMPLETE CATALOG FREE

Meissner's entire line of receiver components and complete kits is described and illustrated in this big 48-page catalog. Over 600 items of vital interest to the serviceman and experimenter. Write for your free copy today. A postal card will do!

ADDRESS DEPT. T-6

Meissner MT. CARMEL ILLINOIS

"A FAMOUS NAME FOR TWO DECADES"

CLEAR THE AIR

How noise reducing antennas improve reception and bring profits to the serviceman.

Noise reducing methods for power line-carried disturbances have been covered in other articles in Radio Today's campaign to Clear the Air. Just as important as reducing noise is the problem of getting a good, "clean," signal to the receiver. With the return of the loop antenna, a certain amount of signal strength has been sacrificed for convenience, portability, etc. Where radiated noises are severe, such as locations near hospitals, electric traction systems, stores with neon signs, and factories with rotary equipment, a tuned loop, even though it is shielded against capacity pick-up, will not reject the magnetic noise radiations which are also "floating around."

When the level of noise pick-up gets out too far in front of the signal, owners of the little compacts begin to grumble while the owners of better sets really howl. In the case of the more expensive sets, a good, noise-reducing antenna is as essential as the dual speakers, matched audio tubes, and other features that have been built into a quality receiver.

BETTER RECEPTION

With the quality and noise discriminating features of FM coming before the public, owners of AM sets will become more critical—demand better reception. That is where the serviceman fits in. Go after the owners of good sets and install a type of antenna which will pick up *all* the program quality.

When you can show a signal strength improvement equal to one or two stages of AF, your prospect is going to be

interested. This is but one of the facts brought out in the antenna research activities of Amy, Aceves, and King, well known firm of consulting engineers and licensors of many antenna kit manufacturers.

HOW TO DO IT

How about the outdoor antenna? Can it help increase signal strength at the receiver? Can it reach out farther in search of program diversification? Can it minimize background noise?

The answer is yes to all three questions. But, the answer must be qualified. Unless the outdoor antenna system can be made noise-free, it has little reason for use in the broadcast band, when compared with the convenience of the indoor antenna or loop. Unfortunately, the noise-reducing antenna has a tarnished reputation in some quarters. It is a safe guess to say that more than 75% of the so-called "noiseless" antenna kits did not reduce noise, as compared with an ordinary antenna wire, by any amount to justify the claims.

Nevertheless, there are available well-engineered antenna kits—and master antenna systems for apartment buildings—which have been steadily improved in design and which represent years of study and research in the ways by which interference is picked up or introduced into radio receivers. All that these antennas require, from the installation standpoint, is to have the actual pickup structure, be it a doublet, "T" or simple vertical rod of proper height, in a noise-free location, suitable couplers and transmission line, and a good quiet ground, in order to

effect an amazingly high degree of interference reduction.

TWO METHODS

This interference reduction is accomplished by either, or both of, two methods.

The antenna proper must be located in an area that has the highest signal strength, and lowest noise pick-up. The choice of the antenna position must be made by actual tests of the possible locations. (See Service Notes, page 57, May, Radio Today.)

After the quietest antenna position is found, the signal must be brought down to the set without getting contaminated with more noise. This is where twisted pair, shielded pair, and other types of lead-in cable do the trick. If the lead-in cable passes through a "noise" zone, voltages will be coupled two each of the wires in the pair either inductively or capacitively. The noise voltage would then appear between each wire and ground but not between the two wires themselves.

OUTDOOR BEST

Measurements made of relative signal and interference pickup of several types of loop and outdoor antennas with and without noise reducing devices give some amazing results. The results given in graphical form are as follows: Fig. 1 shows a typical instance of relative signal levels from a tuned loop *vs.* an outdoor antenna of the tuned and untuned types.

From these graphs the superiority of the outdoor antenna over the loop

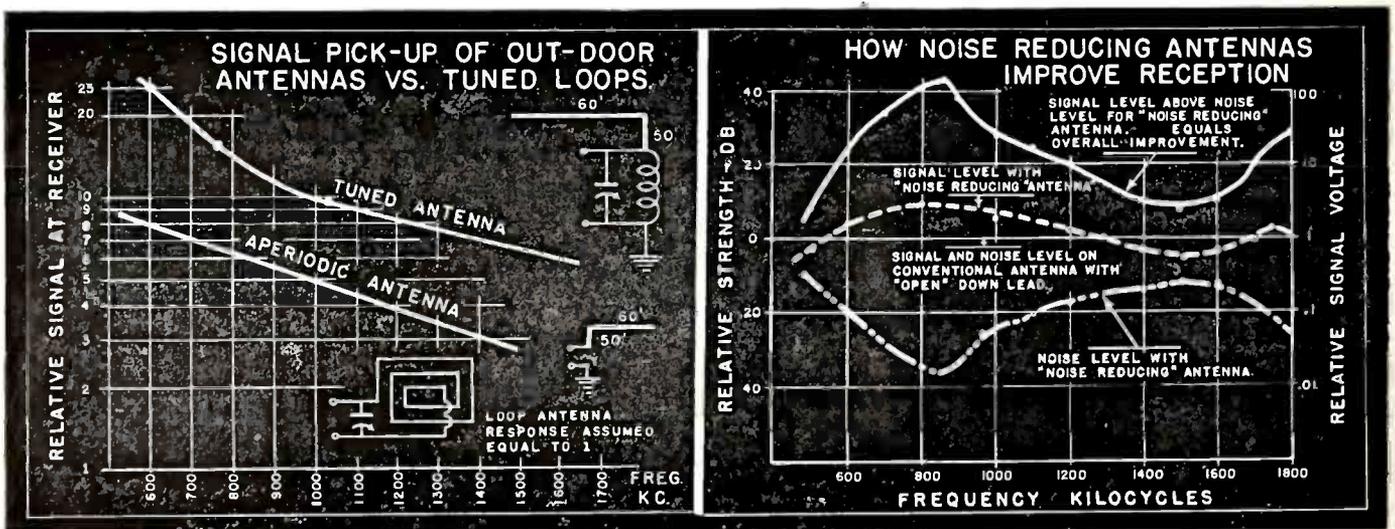


Fig. 1—Relative signal strengths of tuned and aperiodic antennas compared with tuned loop. These graphs are from tests made by Amy, Aceves & King, 11 W. 42nd St., N. Y.

Fig. 2—Noise reducing antennas improve both signal strength and signal to noise ratio. Improvement of noise reducing antenna over common type averages about 22 db.

for signal strength alone is established in these particular examples by inspection of Fig. 1.

Fig. 2 is a composite of the overall improvement on a certain noise-reducing antenna system on the market as compared to the conventional outdoor antenna with open down lead.

The curve in the center of the graph indicates the improvement in signal strength with the noise reducing antenna. Both a decibel and voltage ratio scale are shown to indicate the relative values. The 0 DB line is used to represent the signal and noise level on a conventional antenna with "open" downlead. The final results of the noise reducing antenna are apparent in the curve at the top of Fig. 2. Since the signal strength has been increased slightly, noise level reduced greatly, the algebraic difference of the two is the final improvement in signal to noise ratio.

GAIN OF ONE STAGE

The average increase in signal to noise ratio over the noise level is about 22 DB which is about the same as the gain of one stage of an audio amplifier tube. Or in musical terms, it is equivalent to raising or lowering orchestra volume from *piano* to *forte*, or piano volume from *mezzoforte* to *fortissimo*.

The ability to soften the background noise from an annoying *forte* level to a tolerable *pianissimo*, when listening to say a philharmonic concert, is too obvious to require any sales effort. Particularly so when it can be done for \$7.00 or less.

So it behooves the dealer and serviceman to stand by the outdoor antennas provided with good noise-reducing equipment. Your customers can then attain maximum set performance and a minimum of the background noises, which have done so much to mar high-fidelity radio entertainment.

New York Service Group Has Convention

The Independent Radio Service Men's Association of New York City, of 225 Broadway, held their semi-annual convention on June 3, at 210 E. 188th St., Bronx, N. Y. The newly formed group discussed ethics of the association, business standards, and selected committees for the several city districts.

New England Rep for Clarion Products

News of the appointment of H. Gerber, 49 Portland St., Boston, Mass., as sales representative in the New England areas for Clarion sound products comes from Transformer Corp. of America. Mr. Gerber has expressed special enthusiasm for the Clarion Institute of Sound Engineers sales plan.

Radex Expands

New and larger quarters for the Radex Corp., Chicago, have been opened at 1733 N. Milwaukee Ave. in that city. The firm has just announced a new "shielded align loop antenna"—to be used to align loop antenna radio receivers.

HERE'S WHY WARD AERIALS

give you the edge over competition -

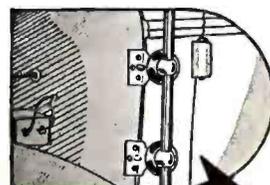
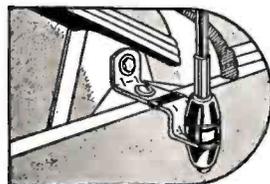
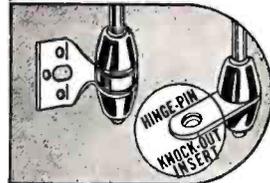
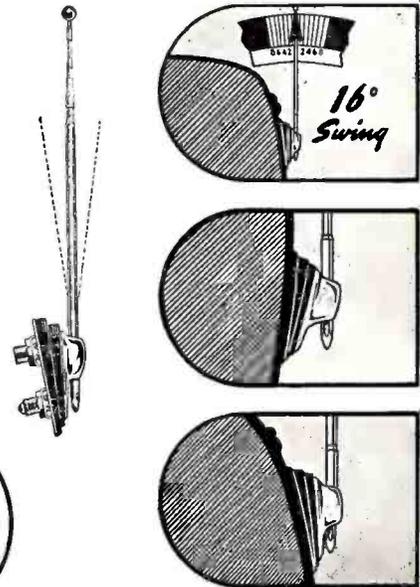
• The 1940 Ward Line of Aerials is brimful of extra values, exclusive features and effective "sales clinchers" that enable you to dominate competition on price, quality and performance. Compare it item for item, feature for feature and dollar for dollar with anything on the market. You'll see quickly why Ward Products give you the edge!

FLEX-ANGLE

fits all cowl contours

Again Ward scoops the field with a 3-section unit that has a 2-bolt single mount on which the antenna can be adjusted to vertical position within a 16" range, adapting it to all cowl contours.

E3-68 (3-section, 68")
List price \$3.35



TRI-MOUNT

Three purpose antennae

Stock only one model for three types of installations—alligator, underhood, and hinge. Aerials are completely assembled and include three-way lead and Ward UNI-PLUG. Necessary installation brackets supplied at NO EXTRA COST.

LIST PRICES:
T2-48 (2-section, 48").....\$1.95
T3-68 (3-section, 68").....\$2.90
U3-93 (3-section, 93").....\$3.65

Many other exclusive items and PLUS features. Dealer Displays and Sales Helps at no extra cost. Use coupon for information.



WARD PRODUCTS CORP.
203 WARD BLDG., CLEVELAND, OHIO

Please send me your 1940-41 catalog, and let me know how I can get my share of these profits.

NAME
ADDRESS
CITY & STATE.....
 Dealer Jobber

FCC APPROVES FM; BLOCKS TELEVISION

A definite go-ahead has been given to frequency modulation by the FCC while, almost within the same week, it continued its ban against commercialization of television until the "engineering opinion of the industry is prepared to approve one of the present competing television systems."

CHANNEL SWITCH

The commission's ruling on FM also involved television, since in order to award frequency modulation a continuous band in the 40-megacycle region, it withdrew from television the former No. 1 channel which has been occupied experimentally by NBC-RCA at New York and transferred this section to frequency modulation. As a result, FM will enjoy a continuous band from 44 mc. to 50 mc., affording ether space for some forty FM channels.

Meanwhile through co-operation of Government departments, channels formerly used by the Federal government in the region of 60 to 66 mc. will be cleared so that they may be

used for television, in place of the television channel now assigned to FM. All of these shifts become effective as of January 1, 1941.

After the extensive FCC hearings on television, Senate committee inquiry and even White House intervention, it was expected that the FCC would give approval for commercialization of television, restoring its former authority for full go-ahead as of Sept. 1. In this however, television workers were given a disappointment, as the FCC's ruling, issued May 28, continued its ban against commercial operation until agreement can be reached among engineers as to the best system to use.

EXPERIMENTS CONTINUE

Meanwhile, the Commission will license applicants to "provide further experiments on the different systems on a comparative basis." Additional cities under consideration by the Commission for television facilities include San Francisco, Los Angeles, Chicago, Washington, Albany, Cin-

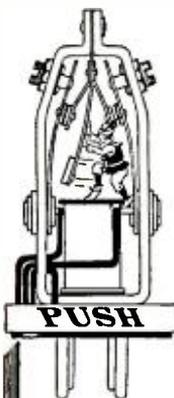
cinnati, and Boston.

"There is no room for squatters" in the public domain occupied by television, said the Commission in announcing that these experimental stations will be apportioned among various parts of the country with the view of forestalling any concentration of facilities in particular centers of population to the exclusion of the rest of the country. To further prevent monopoly and promote free competition, there will be strict limitation on the number of stations authorized to any one licensee.

"It is essential to the progress of television," continues the report, "that there not be a mere semblance of competition, but that there be a genuine and healthy competition within an unfettered industry."

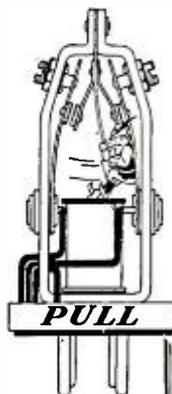
NO FROZEN STANDARDS FOR NEW ART

Widespread public distribution of sets of a system operating on present levels, the Commission holds, will undermine incentive for further advance in television broadcasting and make frozen television standards an accomplished fact. Under present conditions television transmission will satisfactorily serve only sets designed to receive the number of lines and frames and the type of synchronizing



PUSH-PULL

A NEW AND
REVOLUTIONARY
DEVELOPMENT
IN AUTO RADIO
VIBRATORS



★
Increased high amplitude of the reed.

★
Increased high frequency of the reed.

★
More positive wiping action of the points.

★
Higher output voltage with less drain.

★
50% less R. F. interference.

★
Two years ago we placed on the market the first successful adjustable vibrator. Jobbers and dealers the country over offer nothing but praise for its design, construction and performance. Its sales success has been phenomenal.

★
Now—after 15 months of research and testing, production is under way on a new and radically different type of vibrator—the DeLuxe Push-Pull James Vibrapowr Unit. It embodies principles of design and construction never before used in any auto radio vibrator.

★
DeLuxe Push-Pull James Vibrapowr Units list at \$3.95 for the non-synchronous type—and \$4.95 for the Push-Pull synchronous type. Regular non-synchronous types list at \$2.95. Twenty different models are now available. All types are guaranteed one year. Your inquiry will bring complete details regarding discounts, plan of selling and a technical description of the operation of the unit.

Literature on Request

JAMES VIBRAPOWR CO., Inc.
341 No. Crawford Ave. Chicago, Illinois

THE RAGE FOR RECORDERS

Recorders, blanks and other equipment for home recording will be featured in the

July Issue of



This fascinating and phenomenal new field will be the subject of a special study, pointing the way to bigger volume through the use of sales methods adopted or developed by successful dealers.

Makes . . . Models . . . Prices . . . Features . . . Data on the latest products will be given.

This issue will be read with especial interest by the all-important music type of outlet, and by many others to whom the recorder is a merchandising "natural."

To the manufacturers of recorders, blanks, needles, microphones, pickups, amplifiers, etc., this issue provides

A Rare Advertising Opportunity!

pulse transmitted. Due to this "lock-and-key" relationship of the television transmitter and receiver, substantial changes cannot be brought about, once widespread distribution of receivers operating on a particular combination of these factors has locked the system at such standards.

The Commission will continue its study and observation of television developments and plans to make a further engineering inspection and survey in the early fall. Meanwhile, the Commission announces, it stands ready to confer with the industry and to assist in working out problems concerned with visual broadcasting.

The action of the Commission was unanimous.

Opinions Vary Widely on FM Sets for First Year

A wide range of opinions have been expressed on the number of frequency-modulation radios expected to be sold during the first twelve months of active FM operation. Lee McCanne, of Stromberg-Carlson, one of the companies which has been a leader in FM development, made a public estimate of two million FM radios for the first year, and similar very large sales have been predicted by others active in the FM picture.

On the contrary, other experienced radio manufacturers have given estimates no higher than 25,000.

RADIO TODAY, in presenting its report on FM in its April issue, undertook

"as a good reporter," only to average current industry opinions for the first twelve months following June, 1940. For its figure, which has been questioned by some readers, RADIO TODAY holds no brief, and cordially invites readers interested to present their own estimates based on further observation and experience.

Du Mont Starts Cathode Ray Tube Contest

A prize contest open to engineers, laboratory workers, servicemen and others, for new and practical applications of cathode ray tubes and allied equipment has just been announced by Allen B. Du Mont Labs., Inc., Passaic, N. J. The contest period extends from June 1, 1940 to May 31, 1941 and entries may be made any time during this period. Open to anyone regardless of position, title, or engineering qualifications, the contest prizes will consist of \$100, \$50, and \$25 for three best papers dealing with actual applications of cathode ray tubes, oscillographs, or other cathode ray equipment. Each contestant may submit any number of papers. Theoretical discussions, and suggestions cannot be considered.

Finch Sees Big Year for Facsimile

"Facsimile for the home by radio is now ready to move forward on a large scale," declares W. G. H. Finch, president of Finch Telecommunications, Inc., 1819 Broadway, New York City. Mr. Finch makes the statement in connec-

tion with the recent action by the FCC on the subject of FM, which opens up a complete new band of frequencies for broadcasting and facsimile on a commercial basis.

Mr. Finch predicts "an early demand by broadcasters for station facsimile transmitting equipment and a comparable public demand for facsimile units." The way is now open for the company to start large scale deliveries on both groups of products; Finch has already doubled the space in New York sales offices and showrooms and has increased factory personnel at Passaic, N. J.

Employment for thousands of persons in the manufacturing, installation and servicing of the new equipment, and a new realm of radio education and entertainment are seen in the FCC permission for "multiplexing" of facsimile and binaural transmissions on the same channel.

Television Association Started in New York

A newly formed Association for the Advancement of Television, Inc., has been granted a New York state charter as an organization whose exclusive aim is the advancement of the theory and practice of television electronics and its associated arts and sciences. New York television engineers have started the Association as a non-commercial, non-profit organization, to hold frequent meetings and to be addressed by nationally known television engineers. Information on the Association comes from S. I. Bazil, 10 Rockefeller Plaza, N. Y. C.



FOR HIGH FREQUENCIES

1. Small Coil Forms
2. Pentode Acorn Socket
3. Victron Terminal Strip
4. Triode Acorn Socket
5. Victron Bushing
6. Flexible Coupling
7. Padding Condenser
8. Tuning Condenser

When constructing ultra-high frequency equipment, you will find that the parts shown above will simplify your problems. All were designed with the actual constructor's needs in mind by men thoroughly familiar with high frequency technique. Among them you will find an acorn socket with built-in by pass condensers. You will find a flexible coupling that works around corners, so that you can lay out your circuit for electrical efficiency rather than mechanical necessity. You will find tuning condensers small enough to fit in compact layouts, and miniature coil forms to go with them. National makes what you need.

NATIONAL COMPANY

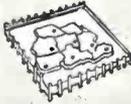


MALDEN, MASS.

WANTED DISTRIBUTOR

Handle distribution fast-selling Clarion streamlined P. A. Big profits waiting. Clarion distributors country over enthusiastic fool-proof Profit Plan that rides rough-shod over competition . . . that last year boosted Clarion sales 100%, and going even stronger first five months of '40. Territories closing rapidly. Urge you act at once. Here's what you get:

THE PLAN



Five-point Clarion sales plan offers distributor factory purchasing power; exclusive territory; free P. A. engineering and consultation service; prepared national advertising and local sales promotion; furnished leads.

THE LINE



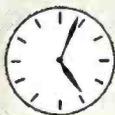
Clarion line looks like no other P. A. equipment. New, functional, streamlined design easily recognized on the job. One installation responsible many sales. You cash in on eye-appeal of Clarion individuality. Line is complete—every P. A. prospect a customer.

THE HELP



Clarion only P. A. line backed by all this professional sales help—newspaper mats, bi-weekly sales letters, window streamers, blotters—all over your name, PLUS big, new 24-page catalog that sells Clarion P. A. right off the page for you.

THE TIME



to act is now. Send for more news of Clarion sale plan and what it means to you. In this momentous election year, here is your big opportunity to increase profits with the Sound Equipment that outsells all others. Write today.

TRANSFORMER CORPORATION OF AMERICA

69 Wooster Street

New York, N. Y.

ATC Names Execs and Starts Tele Production

The post of general sales manager for American Television Corp., 130 W. 56th St., New York City, has been given to Gene W. Latham, who resigned as metropolitan sales manager for Allen B. DuMont Laboratories, Inc. Mr. Latham's 20-year experience in radio has been with RCA Victor, Emerson, General Motors, Atwater Kent, and others.

Associated with Mr. Latham as district representatives are Victor E. Olson, E. Thornton Rice Jr., and Henry A. Bell Jr., whose territorial assignments are Brooklyn and Queens, New Jersey, and Bronx and Westchester, respectively. The latter three also leave the DuMont Laboratories to take over their new posts.

ATC also announced that it has started production of its popular-priced line of sight-and-sound sets for the home, to be sold under the trade name of "Videor."

Royale Is Named by Stromberg Carlson

Picked as sales representative for Stromberg Carlson in the Philadelphia, Baltimore and Washington districts is Allan R. Royale, according to news from Lloyd L. Spencer, Stromberg's general sales manager. Mr. Royale takes the post formerly occupied by Clifford J. Hunt, who is now the SC distributor division manager. He has worked for the past 12 years with Stromberg jobbers in the Philadelphia area, and was with Joseph E. Hornberger Co., at the time of the new appointment.

Ward Gives Employees Bonus

Bonus checks were presented to 136 employees of the Ward Products Corp., Cleveland, Ohio, as surprise gifts at a recent company dinner. The checks were distributed by Ralph N. Wiesenberg, president of Ward.

Grateful employees presented the Ward management with a handsome bronze plaque. This award was made to the officials, which, besides the president include Arthur E. Wiesenberg, treasurer; and Harry R. Wiesenberg, vice-president and secretary.

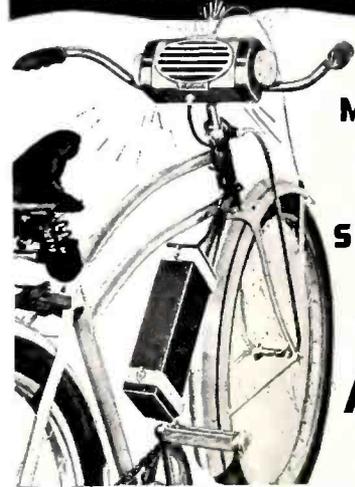
Farnsworth Shows Newest Models

Farnsworth Television & Radio Corp. held its second annual international sales conference June 3 and 4 at Edgewater Beach hotel, Chicago, with more than 300 representatives of distributors from all parts of the United States and several points in the export field on hand.

Introduction of the new Farnsworth line of radio receivers and radio-phonograph combinations for the 1940-41 season was the high point of the conference. The company also revealed its new and expanded program of advertising, sales promotion and merchandising.

"The new line," announced general

NEW Motorola BIKE RADIO



MUSIC
·
FUN
·
SPORTS
AS
THEY
RIDE
·

BE FIRST TO FEATURE THEM

• New, 3-tube superheterodyne Motorola Bike Radio. With AVC, 4" P. M. Dynamic Speaker, long-life "Ray-O-Vac" "A" and "B" batteries. Brightly finished in vermilion with blue grill. Mounts on handle bars with rubber shock-proof mounting. EASILY \$1995 INSTALLED

FOR FULL PARTICULARS WRITE YOUR MOTOROLA DISTRIBUTOR OR

GALVIN MFG. CORP'N 4545 Augusta Blvd. Chicago, Ill.

New!



QUAM SPEAKER CATALOG

Just Off the Press!

With an exciting new and important development of vital interest to every serviceman, jobber and sound engineer, beside all the regular precision-built Quam Speakers so widely used by servicemen and sound engineers everywhere. At the Chicago Radio Parts Show, get your copy at Booth 117. If you are not attending, write to the factory, today!

QUAM-NICHOLS COMPANY
Cottage Grove at 33rd Pl., Chicago, Ill.



Youngest Sales Manager at the Show?

While sales managers by the dozen are registering at the Hotel Stevens for the annual Junetime uproar, there is considerable talk about who is the youngest gent in the outfit. Observers say that thousands of dollars worth of radio parts and tubes are being sales-managed by lads under thirty, and execs in other trades declare that it's unusual for the fast-steppin', fire-eatin' youngsters to occupy so many of the key posts.

So far, the Sales Managers Clubs have not been consulted in this matter, but probably the youngest sales manager in the trade is Vin Ulrich, of Hytron. He's an M.I.T. man, still in his middle twenties. You may remember that he was formerly the technical editor of Radio Today, where he was credited with much of the trade's progress in dynamic testing of radios.

sales manager Pierre Boucheron, "includes AC-DC table models and consoles, AC table models and consoles, portable AC-DC battery receivers, battery farm sets and automatic radio-phonograph combinations in both table models and consoles."

Farnsworth also made important announcements at the distributor conference concerning frequency modulation, home recording and television equipment.

A sales clinic was one of the features of the second day's program. Demonstrations at the sales clinic, conducted by E. J. Hendrickson, sales manager of the Farnsworth division, were based on fresh and first-hand experience gained in the field.

Conference program included talks by E. A. Nicholas, president; E. H. Vogel, executive vice president; B. Ray Cummings, vice president in charge of engineering; J. P. Rogers, vice president and treasurer; Edwin M. Martin, patent counsel and secretary; J. H. Pressley, chief engineer; John S. Garceau, advertising and sales promotion manager, and others.

Another feature of the sales conference was a display of Farnsworth television equipment and electronic devices from the Fort Wayne plant, supplemented by demonstrations of television by the Farnsworth unit.

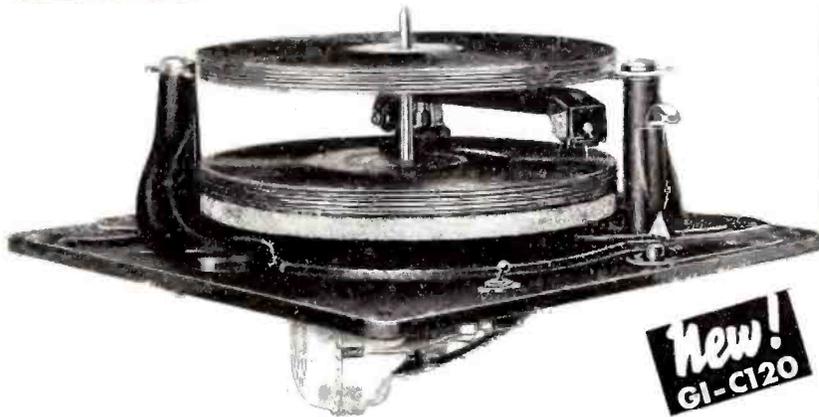
Recoton Sales Manager Honored

Stephen Nester, sales manager of Recoton Corp., has been named as the winner of the New York Advertising Club's Silver Medal given periodically in their Selling and Advertising Essay Competitions. The presentation was made at the Hotel Roosevelt, before a gathering of over a thousand members of the Club.

Clement Resigns RCA Post

Lewis M. Clement has resigned as vice-president in charge of research and engineering of RCA Mfg. Co., Inc. Mr. Clement has made no immediate plans but has said that a well-deserved vacation is next on his schedule.

STREAMLINED!



New!
GI-C120

Has Real Sales Appeal

Here is a record changer that looks at home in the finest cabinets. Eye appealing in every detail.

Whether loading or unloading records or playing records manually, you never need three hands to operate the GI-C120—one simple adjustment does it all.

Get your share of the record changer business this year — get behind this product of the world's largest phonograph motor manufacturer.

New Model "LX" Motor

Self Starting - Rim Driven - Fan Cooled

Lower in cost, lighter in weight and more compact in design than any of the previous "X" series motors, this newest addition to a famous family has already achieved outstanding popularity. It's tailored to fit 1940 requirements.



New!
"LX"

Send for
NEW
Catalog

The **GENERAL INDUSTRIES CO.**
4038 TAYLOR STREET ELYRIA, OHIO

Recoton Sales Manager Honored

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A GOOD NAME GOES A LONG WAY



Ken-Rad Dependable Radio Tubes are made in a modern Kentucky plant by skilled, intelligent American workers.
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



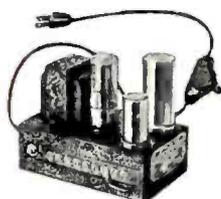
**LET THE HIGH LINES
MAKE PROFITS FOR YOU!**
**SELL GTC
PORTA-POWER
CONVERTS BATTERY OPERATED
RADIOS TO ALL-ELECTRIC**

MODEL "P"
For 6 volt radios
"Twin-Powered"



↓
Converts 98% of all 6 volt radios. Vibrator disturbance is eliminated. High fidelity performance assured. List price \$13.95.
COSTS YOU \$8.37

MODEL "L"
For 2 volt radios



↓
Supplies "A", "B" and "C" power to 4 to 8 tube battery-operated radios using 2 volt tubes. List price \$9.95.
COSTS YOU \$5.97

MODEL "U"
For 1½ volt portable or farm radios



↓
Powers any portable or battery radio using 1½ volt tubes. Provides "A" and "B" power. List price \$7.50.
COSTS YOU \$4.50

MODEL "G"
For 1½ volt radios of 4, 5, or 6 tubes



↓
For 1½ volt radios of 4, 5, or 6 tubes requiring more power than Model "U" provides. List price \$9.50.
COSTS YOU \$5.70

Be sure to stop in Booth 1008 at the National Radio Parts Show to see the complete line of GTC PORTA-POWER for electrifying Battery Radios of all types.

GENERAL TRANSFORMER CORP.
1254 W. VAN BUREN ST. • CHICAGO, ILLINOIS

SHOW NEWS

Hytron Celebrates Growth

(Continued from page 36)

ence gained in the exclusive manufacture of radio tubes since 1921. Unaided by income from outside sources or other products, Hytron has grown steadily.

"Our company today lists approximately 300 receiving tubes and 15 transmitting types as stock items. Dozens of other types are manufactured and are available on special order. They maintain complete engineering and research personnel familiar with the ever-increasing uses for radio tubes."

CD Executives All Headed for Stevens

Special plans are being made for the executives of the Cornfield-Dubilier Electric Corp., South Plainfield, N. J., attending the National Radio Parts Show. This year, the entire group of capacitor executives are at the Hotel Stevens event, led by Octave Blake, president, and Leon Adelman, advertising and sales manager.

Still Time for Daco Tester on NU Deal

The special offer made by the National Union Radio Corp., 57 State St., Newark, N. J., on the Daco Tube Tester Model 303 P5, runs to June 29th. Until this date, the tester is available to dealers on an NU contract for \$12. This will be refunded when 650 purchase points have been earned.

Fouch to Banquet Universal Reps

Another annual banquet for representatives of the Universal Microphone Co. who attend the Parts Show has been planned by Universal president, James R. Fouch. As this is the tenth event of the kind at which Mr. Fouch is host, the party motif will be "tin" this year.

Emerson Convention June 24-25 at New York

Invitations to its annual distributor convention in New York on June 24-25 have been sent to all of its distributors by the Emerson Radio and Phonograph Corporation, Charles Robbins, general sales manager, announces.

Advance news of the 1941 Emerson Line indicate that not only will there be a greater variety of styles, but there will also be an entirely new grouping of new items for the trade to promote. Completeness of line and of price brackets is being featured, all backed by the most extensive national advertising and most generous cooperative arrangements in Emerson's history. A new sales promotion department, headed by Philip Gillig, plans more extensive and active field service in behalf of distributor and dealers.



**PORTO-POWER
RADIO
BATTERIES
HIGH POWER
PERFORMANCE
IN PORTABLES**

For twenty years jobbers, dealers and service men have acclaimed Acme Batteries for their higher performance ratio and longer life. That is why customers insist on Acme for original equipment and replacement.

All batteries feature the most recent developments in battery construction, including the famous Acme pioneering achievement, "Balanced Power." Acme batteries are factory-tested for longer life. From Acme's own laboratories and plant comes a complete line of batteries designed to meet the most exacting requirements. They are guaranteed to fit standard makes of portables.

SPECIAL ACME DESIGN AND CONSTRUCTION SERVICE

If your battery problem is unique, if you want a special construction call on Acme. You get this extra service at no extra cost and at a tremendous saving in time and money.

Make extra profits with the Acme line. Sell with the assurance that your customers will come back to you for replacements. Write today for illustrated Bulletin J.



BOGEN SOUND SYSTEMS

Sound Specialists!
Servicemen!

1940 IS A SOUND YEAR
Increase your sales with BOGEN

BOGEN Equipment Offers You—

- Exclusive performance features.
- Popular prices to minimize competition.
- National acceptance and prestige to inspire customer confidence.
- Most complete selection of equipment in the country to help concentrate your sales efforts.

VISIT OUR EXHIBIT AT THE RADIO PARTS NATIONAL TRADE SHOW ON JUNE 11, 12, 13 AT THE STEVENS HOTEL, CHICAGO BOOTH 1029 STEINMETZ AVE. ROOMS 535A - 536A - 537A

Buy BOGEN and you buy the BEST

Literature available at your jobber or write

DAVID BOGEN CO.
663 Broadway New York, N. Y.

Largest Manufacturer devoted exclusively to production of sound systems — amplifiers — recording and intercommunication equipment and sound accessories.

Ward Products Appoints Altmeyer



John Altmeyer of Ward Products

Just named for the post of assistant sales manager for the Ward Products Corp., Cleveland, Ohio, is John Altmeyer, who heads jobber sales and advertising for the firm.

Mr. Altmeyer previously worked with the Brush Development Co. as advertising manager, and with the G. M. Basford advertising agency as account executive.

Trinkle to Handle Philadelphia Resistor Sales

The condenser representative for Sprague Products Co., North Adams, Mass., in the Philadelphia area, Wilmer S. Trinkle, has been appointed to handle the industrial representation on Sprague Koolohm resistors in that area. The news comes from Harry Kalker, Sprague sales manager. Mr. Trinkle has handled condenser sales in the Philly area for many years and now takes on the resistors which "are meeting with widespread acceptance by leading industrial concerns who find them the answer to resistance problems which cannot be met with conventional types."

Meissner Reports Strong Lift in Business

At Meissner Mfg. Co., Mt. Carmel, Ill., business is up nearly 40 per cent. Reports from C. V. Rockey, Meissner vice-president, show that for the first third of 1940 volume increased 39.2 per cent over last year.

It was said that "consistent development and regular announcement of new products with wide sales appeal, supported by an aggressive sales and advertising campaign" is credited for a good part of the gains. Meissner's policy also calls for careful watching of the future needs of the serviceman, amateur and experimenter.

Doyle Sales Manager

The new sales manager and treasurer for James W. Doyle, Inc., makers of transformers and electrical windings is Everett E. Gramer, according to news from Mr. Doyle.

New Attack on "Upstairs" Houses

Renewed action against the "upstairs" houses in the metropolitan New York areas has been undertaken by the dealers' group of the Electrical & Gas Association of New York. It is a vigorous effort to cut down the enormous amount of radio volume which is missed by radio dealers, because the discount outfits get standard radio models and sell them at cut prices.

Mortimer H. Fogel, 118 Liberty St., New York City, is chairman of the dealers' group of the Association, and has called several meetings with local distributors, in an attempt to get jobbers to agree to stop supplying radios to the discount firms. Substantial prog-

ress in respect to 1941 merchandise has been reported by Mr. Fogel, who estimates that there are some 200 of the houses in his area, who are robbing legitimate dealers of their radio profits. It is pointed out that while established dealers do the real sales and service job on radio, the discount interests often reap the profits (if any) because of price appeal.

In his study of the situation, Mr. Fogel has found that the discount evil is growing, and that many old established retailers who have spent their lives and fortunes in the radio business are now suffering greatly because of the practice. He has urged dealers and distributors to support the 1941 clean-up with renewed energy, and he plans to enlist their aid in concrete programs outlined at future meetings.



IRC
RESIST-O-CABINET
FREE
...ask your
jobber how you
can get it!

HOW DO YOU KEEP YOUR RESISTOR STOCK?



Don't throw your resistors and other small parts haphazardly into cigar boxes, bottles or tins! Keep them in this handy cabinet made just for the purpose. Arrange them in partitioned drawers with each range plainly marked. Be able to tell the exact condition of your stock at a glance. Ask your jobber today how you can get the IRC All-Metal Resist-O-Cabinet without one cent of extra cost!

And remember: Just as the Resist-O-Cabinet is the finest container for your stock, so are IRC Type BT Insulated Metallized Resistors unquestionably finest for any radio need. *IRC's stay put!* Judged by any test, you will find they excel in every mechanical and electrical characteristic. 1/2-, 1- and 2-watt sizes, all ranges. Accept no substitutes. Insist on IRC's!

Catalog of all IRC Resistor and Volume Control types, Rheostats, etc., free on request

INSULATED *Metallized* RESISTORS

INTERNATIONAL RESISTANCE CO.
401 NORTH BROAD ST., PHILADELPHIA, PA.

SALES HELPS

Clarion Ready with Sales Helps for Sound

A complete series of sales tools, unusual in the sound industry, is being released by Transformer Corp. of America, 69 Wooster St., New York City, as part of a large-scale advertising campaign launched in behalf of Clarion P.A. products. The promotion materials are issued without cost to authorized distributors of the Clarion Institute of Sound Engineers.

These sales aids include colorful and streamlined window displays, re-



minder-blotters, envelope stuffers in the form of consumer folders, newspaper mats, window streamers, sales letters, etc.

Another distributor help is the new Clarion 24-page catalog in two colors, packed with descriptions of products, sales and technical details.



Attention-getting new package for a dozen electrolytic condensers by Solar Mfg. Corp., Bayonne, N. J. Presented as ideal service stock for quick replacements."

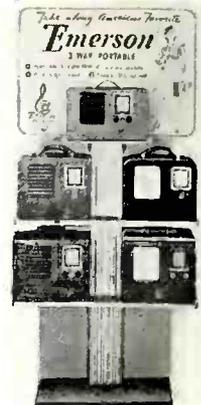
Gay Streamers For Dealers Abroad

Now available to radio dealers in all Spanish-speaking countries are two bright new window streamers in three colors, plugging Lafayette radio and sound equipment. They are offered in connection with "a new dealer proposition" presented by Radio Wire Television, Inc., formerly Wholesale Radio Service Co., Inc., 100 Sixth Ave., New York City.

Sales Film in Full Color

A talking film in full colors, which gives a striking presentation of the Philco refrigerators and all of their features, has been produced by the company for use by its distributors.

Besides an impressive dramatization of the refrigerators and their advantages, the film also provides many pointers on how the dealer and the dealer salesman may sell them.



Emerson's new "silent salesman" for new 3-way portables, a timely display now popular with dealers. It holds 5 of the firm's line of 10 models.

MUSICAL TOWERS

For Bigger Sales and Service Returns

Here's a sure profit-maker! Handle the complete Sunco amplifying system of tower and helpfy 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, 8, and 12 mile dia. coverage. Can be used as P.A. unit. Automatic record changer play 10" and 12" records mixed. We have many specially recorded low-noise acetate discs for this work. Ask about them. **REAL MONEY FOR SOUND EQUIPMENT SPECIALISTS** — Protected territory, everything furnished, speakers, accessories, installation and service directions. Get the facts about this

money-making offer. No obligation, **WRITE TODAY!**

SUNDT ENGINEERING COMPANY
4763 Ravenswood Ave., Chicago, Illinois

Sell & Use LITTELFUSES



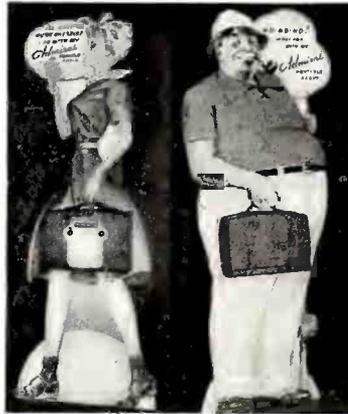
Write for Catalog

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



LITTELFUSE INC.
4763 RAVENSWOOD AVE. CHICAGO, ILL.

Full Color Displays for Portables



A pair of life-size displays for Admiral portable radios, produced in full color, are now being offered to dealers. These are available from Continental Radio & Television Corp's jobbers, with orders for "deals."

The timely nature and the snappy design of these sales helps have already won special favor among retailers. They are 63" high, appropriate for floor or window use.

AMPLIFIERS FROM 8 TO 900 WATTS!

THORDARSON

The new line of Thordarson amplifiers comprehensively covers most amplifier requirements.

THORDARSON ELEC. MFG. CO.



AMPLIFIERS

The finest line outstanding audio experts can design. Distributed by outstanding Parts Merchandisers.

500 W. HURON ST., CHICAGO

REMEMBER DAD
FATHER'S DAY

JUNE 16th



The 4-color poster by McClelland Barclay which helps dealers celebrate Father's Day June 16th. It comes from Father's Council, 625 Madison Ave., N.Y.C.

Burgess Aggressive in Battery Replacements

New sales announcements are being made by Burgess Battery Co., Freeport, Ill., on the company's line of replacement batteries for all portable and farm radios. While the seasonal interest now runs high in these types of radios, the Burgess firm points out that its line covers the needs of these sets, without exception.

The company is exhibiting in its booth (No. 10) at the Parts Show in Chicago a new M30 "Multiply" "B" battery, presented as a product of extra long life, for its weight. This freshly engineered product is recommended for portables made by Arvin, DeWald, Emerson, Fada, GE, Lafayette, Motorola, Packard-Bell, Pilot, RCA, Sentinel, Stewart-Warner and Westinghouse.

Burgess is now offering copies of a revised "Replacement Guide to Portable Radio Batteries," as part of its current efforts to help dealers and servicemen.

Stewart Warner Lines Aimed at New Profits

Stewart-Warner Corp. introduces this month a "special de luxe line of radio receiving sets incorporating several exclusive innovations in tone and design," according to L. L. Kelsey, manager of the SW radio division. The new models are first shown to some 300 Stewart-Warner radio distributors and key dealers at the national Stewart-Warner radio conventions to be held in Chicago, June 14-15 at the Drake Hotel. At the convention the new 1941 standard line of Stewart-Warner radios will also be shown.

The de luxe sets, according to Kelsey, augment the regular 1941 line of Stewart-Warner radios which, as heretofore, will be designed for the lower and middle price markets. Included in the regular 1941 line will be console and table model sets for frequency modulation. New models also will be introduced in phono-radio combinations, plastics, portables, stationary battery sets, and many other types of sets.

Concerning the company's intention

to open new outlets for radio merchandising by introducing superior sets for the higher income brackets. Kelsey said, "... by combining the results of our own radio engineers' successful experiments, with the expert counsel of several outstanding music critics and furniture designers we have entry to a new rich market for radio merchandising. Our beliefs in this respect have been substantiated by representatives of 12 of the leading retail outlets in the United States, who have enthusiastically endorsed our proposed plan for merchandising this new quality line of radio receiving sets."

New Jobber in Omaha

John H. Brown, parts manager for the H. C. Noll Co., Omaha, Neb., job-

bers, has resigned his post and will have a business of his own under the name of All State Distributing Co. The new parts manager at the Noll firm is Carl Krumei, Jr.

Additional Plant For RCA

RCA Mfg. Co. now has a new plant site at Bloomington, Ind., where the company will expand the production of "Nipper" table model radios. Officials say that the limited facilities at Camden, N. J., do not provide enough of these units to meet the new market demands. The firm now has plants at Harrison, N. J., Indianapolis, Ind., and Hollywood Calif., besides the Camden and Bloomington sites.

As Usual...

the "Quality" of the Show

Webster Electric Pick-Ups . . . Crystal Pick-Up Cartridges . . . The New Webster Electric Recorder Heads . . . and Webster Electric Sound Equipment

Webster Electric Equipment will be on Display in Booth 421, Radio Parts Manufacturer's Trade Show, Exhibition Hall, Stevens Hotel, June 11th to 14th

The word quality and Webster Electric are inherently synonymous. They always have been . . . and they continue to be so.

This year, Webster Electric offers manufacturers and jobbers a superlatively fine Pick-up and Crystal Pick-up Cartridges that, for performance, exceed anything previously offered.

The new Webster Electric Recorder Heads are designed to provide a new standard of Webster Electric performance.

And, as usual, Webster Electric Sound Equipment with its reputation for tone fidelity will also be on display.

We invite your inspection of the Webster Electric Line.

Licensed under patents of the Brush Development Company

Licensed by Electrical Research Products, Inc., under U. S. Patents of American Telephone and Telegraph Company and Western Electric Company, Incorporated

WEBSTER ELECTRIC COMPANY, Racine, Wis., U. S. A. Established 1909. Export Dept.: 100 Varick St., New York City. Cable Address: "ARLAB", New York City

Webster  Electric

"Where Quality is a Responsibility and Fair Dealing an Obligation"

MANUFACTURERS OF TELEPHONE INTERCOMMUNICATION AND PAGING SYSTEMS • POWER AMPLIFIERS AND SOUND DISTRIBUTION EQUIPMENT • RADIO PHONOGRAPH PICKUPS • IGNITION TRANSFORMERS AND FUEL UNITS FOR OIL BURNERS

Take it from me
OHMITE parts
do a swell job



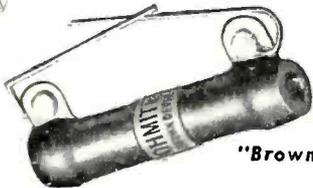
● "YES, SIR! I'm free of worries when I install Ohmite Parts—'cause I know they stay at work through thick and thin!" It's proved by leading manufacturers of commercial, amateur and broadcast equipment who specify Ohmite units for their products. And by the many Servicemen, too, who make it a habit to say "Ohmite Parts for Me Every Time!"

See Your Jobber for: ★ Adjustable Dividohms—Easily adjusted to resistance you want—or tapped where needed. ★ Brown Devils—10 and 20 watt vitreous enameled resistors for voltage dropping, bias units, bleeders, etc. ★ Cordohms—Replace internal voltage dropping resistors in A.C.-D.C. radio sets. Tapped Cords for pilot light also available.

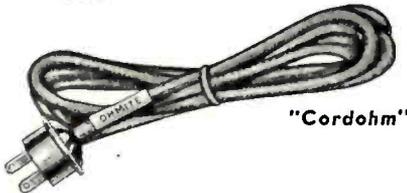
Visit Ohmite Booth 119 at the Radio Parts Trade Show



"Dividohm"



"Brown Devil"



"Cordohm"

MAIL COUPON NOW!

OHMITE MANUFACTURING CO.
4876 Flournoy Street, Chicago, Ill.

SEND FREE CATALOG 17

Name

Address

City State

OHMITE
RHEOSTATS RESISTORS TAP SWITCHES

NEW BOOKLETS

Now being issued by Thordarson Elec. Mfg. Co., 500 W. Huron St., Chicago, is a brand new amplifier catalog, with complete information on a string of new sound products.

Catalogs #140 and 440 describe Webster-Chicago's new microphones, recorders, and amplifiers, while #240 covers complete line of intercommunicators. The Webster Co., 5622 Bloomington Ave., Chicago, Ill.

An Engineering Data Sheet which gives physical properties, heat treating data and other information on the beryllium alloy, Berylico #25, is available from the Beryllium Corp. of Pennsylvania.

Bulletin 13-25 includes latest models of Janette rotary converters and dynamotors. Also included are custom built gas engine plants for 500 to 5500 watts AC & DC. Janette Mfg. Co., 556 W. Monroe St., Chicago, Ill.

Two sales leaflets covering Solar Quick-Check condenser analyzer and Red Cap condensers with description, illustrations and prices of both. Solar Mfg. Co., Bayonne, N. J.

"Precision Portables" is name of Triplet Elec'l. Instrument Co.'s (Bluffton, Ohio) new circular on its complete line of portable instruments for exacting measurements.

Specifications and prices of Premax police type auto antennas are given in Bulletin PR-40. Premax Products, Div. Chisholm-Ryder Co., Inc., Niagara Falls, N. Y.

Booklet, 122X of the Shallcross Mfg. Co., Collingdale, Pa., covers the electrical and mechanical specifications of non-inductive, wire-wound precision resistors.

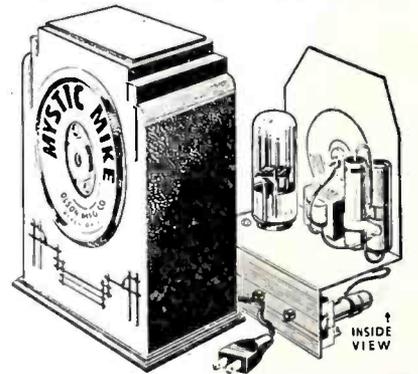
Bulletin No. 190A entitled "Capacitors for Power Factor Correction of Fluorescent Lamps" presents fluorescent lamp circuits, suggested corrections and descriptive material and prices on capacitors. Cornell-Dubilier Elec. Corp., So. Plainfield, N. J.

RCA Mfg. Co., Camden, N. J., has just issued a Sales Aid Catalog which includes scores of sales aids from neon counter signs to direct mail postcards, giving the descriptions and prices.

Leaflet entitled "How to Make a One-Man Recording" describes the new Audiodisc chip chaser which controls the thread while recording. Audio Devices, Inc., 1600 Broadway, New York, N. Y.

Usalite replacement guide for all types of 1939 and 1940 portable radio sets and comparison chart of radio batteries have just been released by the U. S. Electric Mfg. Corp., 222 W. 14 St., New York, N. Y.

An Unusual PROFIT-BUILDER The OLSON MYSTIC MIKE



HOME BROADCASTING STATION with EXTENSIVE MARKET

The new MYSTIC MIKE is really a miniature broadcasting station which operates without internal connection to a radio. Music or speech may be transmitted to any radio set anywhere in the same building by simply plugging into any socket. May be used for inter-room communication. In great demand for Bingo parties and games. There are also many other practical uses. Terminals are provided for attachment of any record player rendering the player wireless. Rugged mechanism is housed in an attractive plastic cabinet.

Popular Retail Price of \$9.95

MYSTIC MIKE'S low price stimulates volume sales. This amazing device has proven to be a tremendous profit maker. Dealers and distributors wanted everywhere. Write today for full details and Wholesale prices.

Our new recorder for home and school use is tops in appearance and performance. Territories still available. Write for details.

Olson Manufacturing Company
Dept. 106 362 Wooster Ave. Akron, Ohio

**YOUR PERMO POINT
NEEDLE JOBBER OR
DISTRIBUTOR HAS
NEWS OF THE
GREATEST SALES
PROMOTIONAL,
PROFIT BUILDING
DEAL EVER OFFERED
THE RADIO TRADE!**

See Him Immediately

OR WRITE

FOR FURTHER INFORMATION



PERMO PRODUCTS CORP.

Manufacturing Metallurgists

6413-17 RAVENSWOOD AVE. CHICAGO, ILL.

Hambleton Heads Crosley Exports



Appointed export manager for Crosley, Roscoe L. Hambleton.

The Crosley Corp.'s new export manager is Roscoe L. Hambleton, who comes to the Cincinnati firm from the overseas department of General Motors, according to news from Crosley general sales manager Thomas W. Berger.

Mr. Hambleton's experience in foreign markets includes many years residence abroad, particularly in the Far East. He has also covered both Central and South America and travelled extensively in the Orient from Japan to Java.

Philco 1941 Line Hailed By 800 at Chicago

Approximately 800 distributors, key dealers and officials of Philco were scheduled to gather at the Edgewater Beach Hotel, Chicago, June 10, to view Philco's 1941 line of radios and radio-phonographs.

"More new and spectacular inventions are included than ever before in Philco history," Larry E. Gubb, president of Philco Radio & Television Corporation, announced. "Philco engineers have developed a new and remarkable kind of circuit. This is now perfected, giving reception—even in the lowest priced models—which has never been approached before.

"In radio phonographs Philco has perfected the first basic improvement in record reproduction since Edison invented the phonograph. These are not mere refinements but sweeping, basic improvements which bring remarkable new benefits to the radio buying public."

In addition to Mr. Gubb, and James T. Buckley, president of Philco Corporation, the entire Philco executive and sales staff were to be present for the convention. Convention speakers included Sayre M. Ramsdell, vice president; T. A. Kennally, general sales manager; James A. Carmine, assistant sales manager; William Grimditch, vice president in charge of engineering; David Grimes, chief engineer; W. Paul Jones, head refrigerator division; Harry Boyd Brown, head air-conditioning division; John Gilligan, manager of specialty sales; and Larry Hardy, manager of compact sales.

In accordance with the usual Philco custom, dealer meetings will be held in all key cities throughout United States immediately following the Chicago convention.

James to Represent Clarion Sound

R. C. James of the Northwestern Agencies, 2411 First Ave., Seattle, Wash. has been named sales representative for the Northwestern areas, for Clarion sound equipment. Announcement was made by Transformer Corp. of America, through its sound distributor organization, the Clarion Institute of Sound Engineers. Mr. James carries a complete stock of Clarion products in Seattle.

Harvey-Wells Company Under Way

A new concern, Harvey-Wells Communications, Inc., with factory facilities at Southbridge, Mass. has been formed for the manufacture and sale of quality radio communication equipment of all types.

C. A. Harvey, James B. Parker and R. A. Mahler have recently severed relations with Harvey Radio Laboratories, Inc., Cambridge, Mass., to organize the new firm in conjunction with John M. Wells.

Mr. Wells was formerly the research head for American Optical Co., and is now the president and treasurer of the new Harvey-Wells Communications, Inc.

6 ways to STOP FEEDBACK
... all in ONE mike!

You can tackle any P. A. job with a NEW 639B

Now there's a companion microphone to the 639A Cardioid. It's the Western Electric 639B.

It offers you six patterns at the turn of a switch. Non-directional, bi-directional, and cardioid—plus patterns 1, 2 and 3, which permit you to shift

the angle of minimum response to 150°, 130° and 110°. With these patterns, low frequency reverberation and feedback don't stand a chance!

This mike will be a business builder for you. Get full details. Send the coupon today.

Western Electric
639 B CARDIOID
DIRECTIONAL MIKE

GRAYBAR ELECTRIC CO., Graybar Bldg., New York.
Please send full details on Western Electric's new 639B Cardioid Mike. RT 6-40

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

SPEAK-O-PHONE Recording

announces

10

NEW MODELS

**RECORDERS
TRANSCRIPTION UNITS, etc.**

All improved, different, definitely of interest to the entire industry, these new products by veteran producers. 10 to 16 inch turntables; list from \$90 to \$600... on display in Booth 305, Stevens Hotel, June 11-15th

Don't fail to examine this great line

FREE...

Be sure to stop at our Booth for free sample of a splendid new recording disc... just what you have been waiting for!

**SPEAK-O-PHONE
RECORDING & EQUIPMENT CO.
21 West 60th St., New York, N. Y.**

Radio Servicemen Licensed by City

The common council in Madison, Wis., has adopted an ordinance, introduced by Alderman Harvey M. Lang, a radio dealer, providing for the licensing of all radio repair men who have been in business for less than two years. The measure also obliges new repair men entering the business to take an examination and secure a license.

The ordinance provides that a \$10 fee be charged for the examination and the annual license fee be \$3. Radio servicemen who have been in business more than two years are exempt from the examination unless the city board of electrical examiners deems it advisable that the dealer be given an examination.

Philco Wins a Big Market Survey

News from Philco reveals that the company's radio came out the winner in a poll of 11,000 people interviewed in a recent market survey conducted by Scripps-Howard newspapers in Cleveland, Columbus, Evansville, Knoxville, Fort Worth and San Francisco. Philco led among both men and women, in brand preference.

The men were questioned about autos and accessories, and the majority said that a new car was their chief want. But auto radios ranked second, indicating a widespread public interest in the new car radio models.

Farnsworth Jobber Group in Further Growth

On his return from a field trip, Pierre Boucheron, general sales manager for Farnsworth Television & Radio Corp., Ft. Wayne, Ind., announced the appointment of two new jobbers. These are the Charles S. Martin Distributing Co., Atlanta, Ga., (branches at Athens, Ga.) and the Benjamin T. Crump Co., Richmond, Va.

The Farnsworth company now points with pride to "the strong jobber organization built up in less than

a year... a list which now includes 56 aggressive distributors... with further expansion planned for the near future."

Promotion at Universal

Robert Griffin, who for the past five years has been a purchasing agent for Universal Microphone Co., Ltd., Inglewood, Calif., has been promoted to the post of sales and service manager of recorders and supplies in the Southwest.

Universal recently introduced a new Uni-Cord recorder, a model which features compactness, and is billed as "the better low cost recorder."



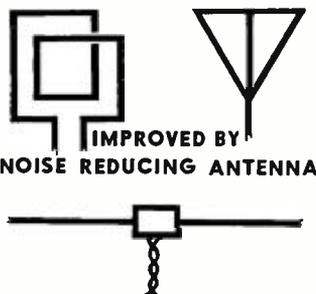
See Us at the Chicago Radio Parts Show
BOOTH 413 AND ROOMS 528A-530A
UNIVERSITY LABORATORIES
195 CHRYSTIE ST., NEW YORK CITY

Millions of Sets Need Noise Reducing Antennas!

LOOP reception is a compromise—in signal strength, noise ratio and all-around performance. It is a doubtful sales point against **OUTSIDE ANTENNAS**. Yet the external noise reducing antenna is far more efficient and need not be unsightly.

The loop is necessarily within the region of greatest interference. And don't forget—most loop sets come equipped with binding posts to which a noise reducing outside antenna may be easily connected.

LOOP ANTENNA OR PLAIN ANTENNA



**USE ALL WAVE
NOISE REDUCING ANTENNAS
LICENSED BY A. A. K. Inc.**

For

—Better broadcast, short wave and F.M. reception.

—Better performance with any set. Freedom from Man-Made Static.

See your jobber and be sure to use antenna systems licensed by A.A.K.

AMY, ACEVES & KING, INC., Consulting Engineers—Specialists in Radio, 11 W. 42nd St., New York

Stromberg Names Pair of Jobbers

Consolidated Mills Co. of Birmingham, Ala., and the United Electric Service, Inc., of Monroe, La., are new jobbers for the Stromberg-Carlson line, according to an announcement of radio sales manager Fred N. Anibal.

Consolidated is located at 2226 First Ave., North, and is headed by Seymour B. Kroninburg. They will handle the line throughout the entire state of Alabama. United Electric Service, Inc., at 308 North 3rd St., in Monroe will serve the northeast quarter of Louisiana. G. F. Becker is general manager of the firm.

Line of Chemicals to Be Sold by J. F. D.

The J. F. D. Mfg. Co., 4111 Ft. Hamilton Pkwy., Brooklyn, N. Y., has acquired the Stangard Chemical Products Co., Brooklyn, and will now market a whole new set of additional products through its jobber organization.

These products include cements, lacquers, stains, solvents, varnishes, paints, coatings, lubricants, enamels, and acetate-coated recording blanks. J. Finkel heads the J. F. D. company.

Pair of Jobbers for RCA

The Wyatt-Cornick Co., Richmond, Va., and The Yancey Company, Inc., of Atlanta, Ga., have been appointed distributors of RCA Victor radios, Victrolas, receiving tubes, and Victor and Bluebird records, according to Fred D. Wilson, manager of RCA field sales activities.

Both jobbers are newly formed companies.

Expansion for Alliance Motors and Recorders

Alliance Mfg. Co., Alliance, Ohio, is now moving into a new factory in that city, where the quarters will be more than twice the size of the former ones. Officials say that the expansion was necessary because of greatly increased business on the Alliance "Even-Speed" phono-motors, fractional horse power motors for other uses, and the entry of Alliance into the phonograph-recorder field.

The company will announce to radio jobbers and manufacturers this month, the details on the new Alliance recorder.

El Paso Firm Has Buying Guide

A buying guide and list price catalog for the radio trade, with manufacturer's index and order blanks is being released by the jobbers, Momsen-Dunnegan-Ryan Co., El Paso, Tex. Hundreds of parts are included within the nifty 3-colored cover. It is suggested for dealer use as a silent salesman, and as a helpful reference book.

VELOCITY

AMPERITE

2 GREAT MIKES!

P.S. DYNAMIC



**AMPERITE
VELOCITY**
with exclusive
**ACOUSTIC
COMPENSATOR**

Actually a combination Velocity-Dynamic, having best features of both types.

Model RBHk, hi-imp: (RBMk, 200 ohms); LIST \$42.00

Model RBSHk, hi-imp: (RBSK, 200 ohms); LIST \$32.00



Features
new superior
**UNI-DIRECTIONAL
elipsoid pickup
pattern.**
**ELIMINATES
FEEDBACK TROUBLE.
HAS FLAT RESPONSE.**



Model PGH, hi-imp: (PGL, 200 ohms);

40-10,000 CPS..... Chrome LIST \$32.00

Model PGAH, hi-imp: (PGAL, 200 ohms);

70-8000 CPS..... Chrome LIST \$25.00

AMPERITE KONTAK MIKE

Puts musical instruments across. Beautiful results with any amplifier, record player, and most radio sets.

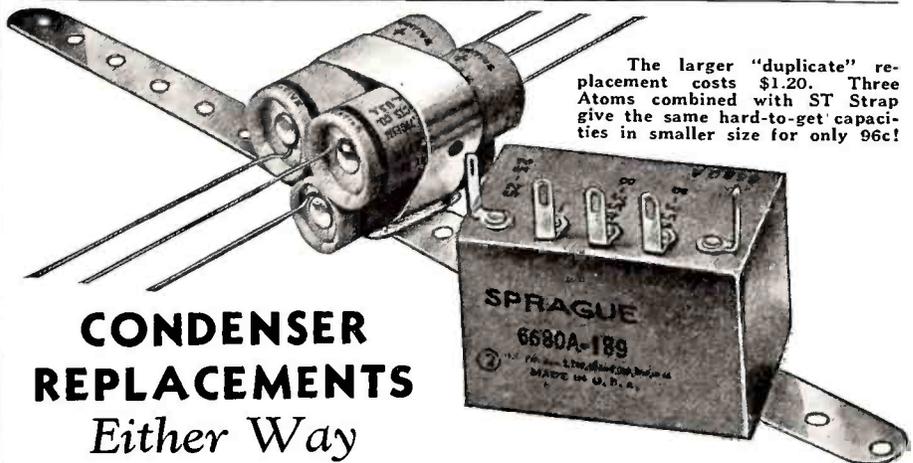
MODEL SKH (hi-imp)..... LIST \$12.00

MODEL KKH, with hand volume control, LIST \$18.00

Plug extra..... LIST \$1.50

AMPERITE

WRITE FOR FREE SALES AIDS
561 BROADWAY
NEW YORK



CONDENSER REPLACEMENTS

Either Way

It pays to try Sprague for any exact duplicate condenser requirement. As leading suppliers to the largest set makers, we can supply almost any needed unit promptly—and identical to the original specifications.

But don't forget, you can save on most hard-to-get replacements, simply by combining several Sprague Atom midget dries. Just strap 'em together (see picture) with Sprague ST Mounting Straps—supplied free—and you have a smaller, better unit and actually at less cost than an exact duplicate! Using ST Straps, you can make up almost any combination of capacities and voltages using standard Sprague Atoms stocked by every Sprague jobber. Big new catalog of Sprague Condensers and Koolohm Resistors FREE.

NEW MANUAL ON RADIO INTERFERENCE

Just the book you've been looking for. Complete—fully illustrated... tells what to do, how to do it to eliminate all types of man-made radio noise. 25c net.

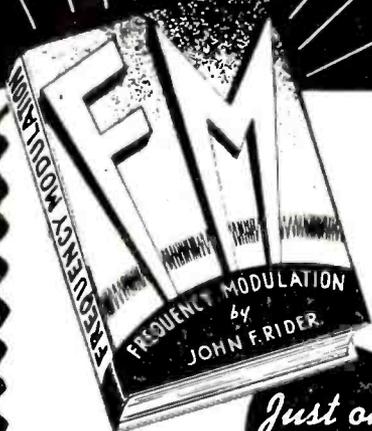


SPRAGUE

CONDENSERS
KOOLOHM RESISTORS
TEST EQUIPMENT

SPRAGUE PRODUCTS CO. NORTH ADAMS, MASS.

**5000
SOLD THE
FIRST MONTH**



**136 Pages
72 Illustrations**

**Just out
ONLY
\$1.00**

Now is the time to get into F. M. . . . the greatest development in radio since the beginning! FCC has authorized commercial transmission. This means more and more F. M. stations will be broadcasting . . . more and more receivers will be put into use. Already, thousands of servicemen are preparing themselves to cash-in on the service that will soon be required, by studying this brand new Rider Book, the first authoritative description and analysis of the fundamentals of F. M. and how to service the new F. M. receivers. Don't wait . . . get your copy of this important new book right now to be sure that you are ready to reap the profits of this new opportunity.

YOU NEED EVERY ONE OF THESE FAMOUS RIDER BOOKS

Frequency Modulation • Servicing By Signal Tracing • The Oscillator at Work • The Cathode Ray Tube at Work • Servicing Super-heterodynes • Automatic Frequency Control Systems.

"Hour A Day With Rider" Books on: Resonance and Alignment • Automatic Volume Control • D-C Voltage Distribution in Radio Receivers • Alternating Currents in Radio Receivers.

JOHN F. RIDER PUBLISHER, INC.
404 Fourth Ave., New York City
Export Div.: Rocke-Int. Elec. Corp.,
100 Varick St., N.Y.C. Cable: ARLAB

Read RIDER BOOKS

Coon of Portland Draws Service Audiences

A well-attended series of service meetings has been concluded in Oregon, Washington and British Columbia, by W. B. (Bill) Coon, one of the best known service engineers in the Northwest area. The meets were held in conjunction with Don Burcham, district sales manager for P. R. Mallory, & Co., Inc., Indianapolis, Ind.

Mr. Coon has been a very active and successful service engineer since 1924. He has conducted classes on the use of oscilloscope signal tracing and the use of other instruments, and is counted an outstanding authority on radio service problems.

Providence Jobber Gets Columbia Records

News from Paul Southard, sales manager for Columbia Recording Corp., Bridgeport, Conn., is that Philco Distributors, Providence, R. I., are now the wholesalers for Columbia, Brunswick and Vocalion records in the state of Rhode Island and in Bristol county, Mass.

Philco headquarters are at 17 Lyman St. in Providence. Al Simons, well known in the Rhode Island radio and musical trades, heads the firm.

Soundview Radios Get Three New Reps

Three new representatives have been named by the Karns-White Corp., 1775 Broadway, N. Y. C., makers of Soundview Marine radios. They include Edward J. Grady, for the New England States; Leslie M. Friedman for Philadelphia, Baltimore and the Washington, D. C., area; and Hugh Snyder of the S & S Co. for Mississippi, Alabama, North and South Carolina, Virginia and Florida.

Employees Take to Classes on Condensers

Aerovox Corp., New Bedford, Mass., reports peak interest in the school classes held one evening per week at the plant. Employees learn more about the condensers made at the factory, as

company executives and engineers lecture and demonstrate at the meetings. Courses are directed by Louis Kahn, Aerovox official who previously taught at Rutgers.

Wexler Talks on Receiver Design

The guest speaker at the Louisville, Ky., Servicemen's meeting last month was Charles R. Wexler, head of the Circuit Laboratories for Ken-Rad Tube & Lamp Comp., Owensboro, Ky. Forty-five servicemen were present, to hear Mr. Wexler's discussion of "Trends in 1940 Radio Receiver Design". The talk was enthusiastically received and the speaker was invited to return at a later date.

New Sales Head For Lear Avia

Robert S. Van Cleve has been named director of sales for Lear Avia, Inc., aircraft radio specialists at Roosevelt Field Mineola, L. I., N. Y. He will supervise the firm's sales activity in the commercial and military aeronautical fields.

Mr. Van Cleve's former experience in sales engineering has been with RCA, Bendix, Willard Battery, and others.

Shoemaker to Southwest for U. S. Record

Herbert Shoemaker, veteran record man, has joined the sales department of the United States Record Corp., makers of Royale and Varsity records, as district sales manager of the Southwestern territory which includes the states of Oklahoma, Texas, Nebraska, Colorado, New Mexico, Louisiana, and Arkansas.

Radio Dealer Opens

A new radio store in American Fork, Utah, has been opened by a local radio expert, Earl Wooden. The shop is called "Earl's Radio Service", and Mr. Wooden is prepared to service "all makes of home and auto radios and electrical appliances." He now handles Philco and Emerson radios, and Sylvania tubes. This Spring, he plans to stock refrigerators, ranges and washers.

JFD

Many big things in store for the 1940-41 season. Visit our booth at the Show—or see your J.F.D. jobber.

J. F. D. MANUFACTURING CO.

4111 FORT HAMILTON PKWY., BROOKLYN, N. Y.

Always in the Lead!

The products of J.F.D. are important to the jobber, dealer and serviceman because they furnish two essential classes of merchandise:

- 1—Staple radio items in steady demand—such as J.F.D. auto aerials, ballast tubes, dial belts, etc.
- 2—The very latest developments in radio specialties—such as FM and Television antennas.

Keep out in front with J.F.D. Write for new 24-page catalog showing items in growing demand.



Crosley Corp. executives set the company's sales pace for 1940, at the big Cincinnati convention. At left is L. Martin Krautter, ad manager, presenting large scale ad program. In center group are Powel Crosley, Jr., president; R. C. Cosgrove, vice-pres. and general mgr.; and Lewis M. Crosley, exec. vice-pres. At right, William T. Wallace, radio division mgr., unveils Glamor-Tone lines.

New Glamor-Tone Radios Shown by Crosley

Approximately 300 Crosley distributors and their representatives were shown the new line of Crosley radios, radio-phonograph combinations and home recording models, May 24 at the Crosley national convention held in the Gibson Hotel, Cincinnati. The prices range from \$7.95 to \$149.95.

Included in the 1941 line of radios are table models, consoles, radio-phonograph combinations with and without automatic record players, home recording devices, frequency modulation sets, portables and auto radios.

The company has prepared a greatly increased advertising schedule in newspapers, general magazines and trade publications. The revised cooperative plan for newspaper advertising offered to dealers is expected to result in greatly increased space. The advertising program in general magazines also is greatly enlarged and there will be a generous use of full color pages. There will also be a greatly increased list of dealer helps.

Advertising on the new radios will be keyed by a new theme expressing the performance of the new receivers, which will be known as the Glamor-Tone line.

While the emphasis was on the new radios, other Crosley products were

presented, as Shelvador electric refrigerators, Crosley ranges, washers and other household appliances.

The speakers included Powel Crosley, Jr., president; Lewis M. Crosley, executive vice president; Raymond C. Cosgrove, vice president and general manager, manufacturing division; Thomas W. Berger, general sales manager; Neil Bauer, manager distributor sales; William T. Wallace, manager, radio division; George T. Stevens, manager refrigeration division; R. J. O'Connor, manager, range-washer division; William M. Shipley, manager, major account sales; E. Reinhold, manager, beverage cooler division; and Duncan J. Morgan, manager market analysis.

The advertising program was presented by L. Martin Krautter, manager advertising and sales promotion, who introduced Roy S. Durstine, of Roy S. Durstine, Inc., advertising agency, and H. G. Little, Cincinnati manager of the agency.

Ward Leonard in Baltimore

Ward Leonard Electric Co., Mount Vernon, New York, has opened a branch office in Baltimore, Maryland, where Wilson K. Winbiger is in charge. The office is located in the Hearst Tower Building.

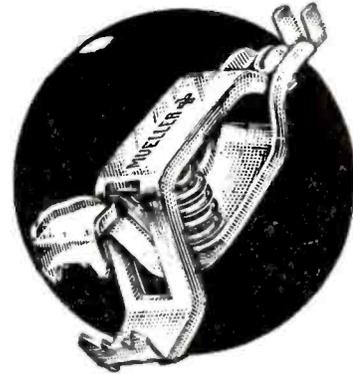
Lasure on Flying Trip Eastward

Now making his annual tour in eastern U. S. is Harry A. Lasure, pioneer factory representative of 2216 W. 11th St., Los Angeles. He will fly to Detroit and finish the trip by car, with visits to several of his factories prior to his appearance at the Stevens Hotel in Chicago during the Parts Show period, June 11-16.

Quinnell at Magnavox

The chief engineer of the speaker division of The Magnavox Co., is now L. E. Quinnell, according to news from the company's headquarters at Ft. Wayne, Ind.

MUELLER



The Original and Only Complete Line of

• CLIPS •

- Alligator Clips
- Wee-Pee-Wee Clips
- Copper Clips
- 300 Ampere Clips
- Insulated Clips
- Insulated Grid Clips

KNOWN FOR 31 YEARS AS THE BEST MADE!

Send for Free Samples and Catalog 980

Mueller Electric Co.

1573 E. 31st Street Cleveland, Ohio

The WINNER \$69⁹⁵

- Records and Plays 12 inch records.
- Microphone can be faded in while recording off the air.
- Radio plays while record is being made.
- High Fidelity Phonograph.
- Superheterodyne Radio and 8 in. dynamic speaker.
- Dual Motors rim and center drive.
- Patented unbreakable feed screw.

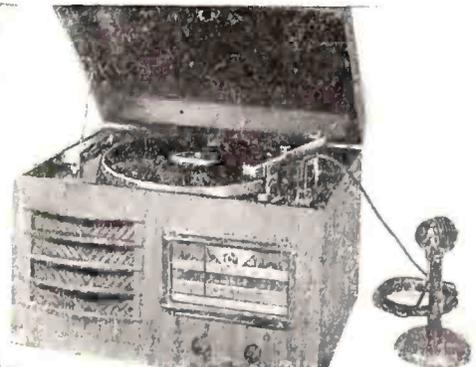
Model No. 120, console, \$89.95
Model No. 130, console with automatic changer, \$139.95.

Radio Show
Booth No. 303

HOMOCORD

HOMOCORD MANUFACTURING CO., Inc., 1600 Broadway, New York, N. Y.
Some Territories Still Available for Jobbers

P
H
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R
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HOME BROADCASTER

RECORD PROMOTION

(Continued from page 32)

City, Okla., by Decca Distributing Corp., a wholly owned subsidiary. This is the fifth such branch to be opened this year (others at Syracuse, Newark, Milwaukee and Jacksonville) and it brings the total to 26.

The sales news from United States Record Corp., 1780 Broadway, New York City, includes the release of a Royale album of the Irving Berlin hits from the musical comedy "Lou-

✓ Your BEST ELECTION BET!



\$29.40 Dealer
Net Price

Complete

MORNING GLORY PROJECTOR, P.M. UNIT and BRACKET

EVERYTHING you can ask for in a High-Powered Speaker for Election P. A. Work . . .
★ 100% Weather and Mechanical Protection
★ . . . High Acoustic Transfer Efficiency . . .
★ Super-Power Projection Qualities . . .
★ Crisp, Remarkable High Fidelity . . . Built ruggedly for the hard service of sound truck application . . . Sturdy mounting bracket supplied. There isn't a doubt . . . the "Morning Glory" will win your vote ★ See your Jobber . . . or send for CATALOG F-40 describing the entire line of ATLAS Sound Speakers and Accessories.



Write Department RT-6
ATLAS SOUND CORPORATION
1445 39th Street Brooklyn, N. Y.
SEE YOU AT THE SHOW—BOOTH 503

isiana Purchase." These are recorded by the orchestras of Johnny Green and Eddie LeBaron.

This company has a new Accessories Division which is adding a series of lively announcements for retailers of records and related merchandise. Portable phonographs, record cabinets and racks, and needles, under the trade names of Varsity and Royale, are set.

"Recordaid" Service for Dealers

The fourth of the "Recordaid" booklets, which are issued bi-weekly by Alex A. Gettlin, 1616 Walnut St., Philadelphia, Pa., has just appeared with 48 pages of record lists including all labels—Victor, Bluebird, Decca, Brunswick, Columbia, Vocalion, Royale and Varsity. "Recordaid" is attracting considerable attention among record dealers who want a consolidated catalog of current releases. The service gives all records of a title in convenient form, and lists titles on reverse sides.

With the appearance of the May 11th issue, Mr. Gettlin announced an additional service for "Recordaid" subscribers. Printed white gummed stickers will be supplied, without extra cost, for use with green stock envelopes.

RCA Starts Record Promotion Drive

The new line of RCA Victor radios and Victrolas will promptly get the benefit of "one of the largest advertising and promotional campaigns in radio history."

Radio, newspapers, national magazines, plus a series of innovations will support the 28 new instruments, led by the "Presidential" console model radio, announced David J. Finn, manager of advertising and sales promotion. It was estimated that radio alone will bring the RCA Victor story to more than 90,000,000 persons

through 15,000 hours over 53 different broadcasting stations.

"RCA Victor presents its platform for 1940," is the theme, with each model nominated as a candidate for national acceptance. Heavy emphasis is laid on the new "Over-Seas Dial" incorporated in the "Presidential" and one other console model.

Heading the promotional pieces is a 12 by 7 foot, three-piece store background accommodating up to 18 display radios. Line folders, wall charts, window streamers, envelope enclosures, "Over-Seas Dial" cards, broadsides, individual model displays, elec-

New

"A" & "B" RADIO BATTERIES
for ALL 1.4 volt
PORTABLE RECEIVERS



● Top-quality, high efficiency batteries for EVERY PORTABLE RADIO NEED.

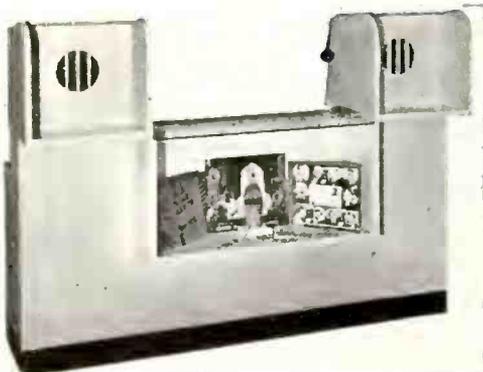
See Them at

RADIO PARTS SHOW—CHICAGO
BOOTH 22—JUNE 11TH TO 14TH

U. S. ELECTRIC MFG. CORP.
222 W. 14th St., N.Y.—323 W. Polk St., Chicago

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→

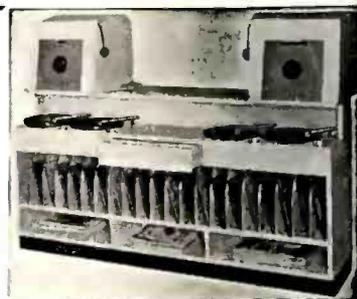
- Ideal unit for small dealers needing maximum economy in equipment and floor space. Takes only 12 sq. ft. floor space—Fits any size or shape of store—Island fixture or against wall.
- Provided with record bins to hold 500—either 10" or 12" records and albums.
- Four listening stations with separate 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.

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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.

tric signs and mailing pieces are also offered.

The entire list of promotional possibilities is summed up in a colorful, 30-page dealer book "The RCA Victor Platform for 1940," issued for distributor salesmen.

Speak-O-Phone Ready With New Lines

The news from Speak-O-Phone Recording and Equipment Co., 23 W. 60th St., New York City, is that the company is now ready with complete new lines in recording equipment and blank discs. C. A. Austin, the firm's head, has announced the details.

The new lines include five complete recorder models ranging in price from \$87.50 to \$600. Transcription units, in 12-in. and 16-in. sizes, and priced from \$89 to \$145 are also ready, featuring extra heavy turntables. The 16-in. job has a built-in stroboscope, providing a constant check on the speed. Speak-O-Phone also has a line of cutting mechanisms in the \$115 price range.

New series of blank discs for recording, which are acetate with paper core, offers six, eight and ten-inch sizes priced at 20c, 25c and 40c respectively.

The company is offering a complete program of sales helps for dealers. Attractive discounts are available to jobbers, according to the firm's announcements.

Recoton Styles Needles to New Market

Reports from the Recoton Corp., 178 Prince St., New York City, are that the users of cutting needles are now exercising more care in their purchases of these products. Recoton has noted a definite trend in this direction.

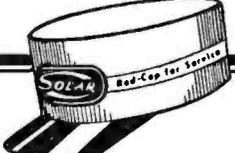
To fit this kind of a market, the Recoton company points out that its needles are being made of special Swedish steel alloy to increase the life of the cutting edge. Diamond dust polishing, and individual inspection of each needle are also features of Recoton construction. Also, each style needle has a flat on the shank to make it impossible to insert it at a wrong angle.

Recording Specialists Open Hollywood Store

National Recording Supply Co., 1065 N. Vine St., Hollywood, Calif., is a new retail business formed by Glenn Wallich, in association with F. H. Brown. National will sell recording equipment and accessories, and the firm has been named Hollywood sales representatives for Universal Microphone Co., Inglewood, Calif.

Mitchell Heads Crosley Auto Section

New manager of the automobile division of the Crosley Corp., Cincinnati, is Sam C. Mitchell, a widely known executive in the household appliance and automotive industries, according to the announcement by Crosley manufacturing vice president and general manager, R. C. Cosgrove.



RED-CAPS

SPEED SERVICING

Smaller diameters . . .

as few as 12 condensers cover most repair requirements.

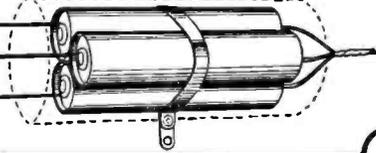
Stock these new, smallest dry electrolytics . . .

build your own filters!

RED-CAPS for Service — today!

Write for Bulletin R-C

SOLAR MFG. CORP., Bayonne, N. J.



PINCOR

A SIZE FOR ANY JOB



DYNAMOTORS

Pincor Dynamotors are as much "at home" on tough jobs as on ordinary ones. No wonder they are specified by governmental and commercial users universally for air craft, marine and broadcast service, police units, sound systems, auto radios, etc. Available in a wide variety of types and frames for any requirement. Highest efficiency and regulation. Capacities: 5 to 850 watts. Input, 6 to 110 volts; output, up to 1750 volts. Specify "Pincor"—and be sure of thousands of hours of dependable, quiet service. Mail coupon for complete information.

Pioneer Gen-E-Motor Corporation
CHICAGO, ILL.

Export Address: 25 Warren St., N.Y., N.Y.
Cable: Simontrice, New York

PIONEER GEN-E-MOTOR CORPORATION
Dept. R-2F, 466 W. Superior St.
Chicago, Ill.

Please send information on Pincor Dynamotors, Motor Generators and special power supply units.

Name

Address

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



WAXES AND COMPOUNDS

FOR
INSULATION & WATERPROOFING
of ELECTRICAL and RADIO
COMPONENTS

● such as transformers, coils, power packs, pot heads, sockets, wiring devices, wet and dry batteries, etc. Also WAX SATURATORS for braided wire and tape and WAXES for radio parts. The facilities of our laboratories are at your disposal to help solve your problems.

FOUNDED 1846
Zophar MILLS, Inc.
129 - 26th ST., BROOKLYN, N. Y.

SEE OUR COMPLETE LINE OF PHONO- MOTORS

at the **TRADE SHOW**

Stevens Hotel, Chicago

June 11th-14th

BOOTH No. 416

Alliance Mfg. Co.

ALLIANCE, OHIO



Sylvania president B. G. Erskine personally greets visitors at the factory "open house" event held three days at Emporium, Pa.

Sylvania Conducts Popular "Open House"

A big "open house" event was staged for three days, May 21, 22 and 23 at the Hygrade Sylvania plant in Emporium, Pa., when relatives and friends of employees crowded the factory to get a complete explanation of how radio tubes are made. Sylvania president B. G. Erskine and manufacturing manager H. W. Zimmer have declared the event to be a great success, as the many guests expressed their appreciation and approval of the plant procedure.

Groups of 25, guided by a Sylvania representative, visited all production departments, the plant hospital, printing plant and engineering departments. Special exhibits of recreational activity, safety equipment, and merchandise were applauded by the guests. Souvenir booklets and free lunches were features.

In an invitation letter, Mr. Erskine had pointed out that "we believe that working conditions here are much better than average . . . that employees are interested in their work . . . and that members of their families will enjoy an opportunity to see just what we do here. . . ."

Television and FM Star in Rochester

A star attraction at the Home Show staged at Rochester, N. Y., was the demonstrations of television and FM staticless reception staged by Dr. George R. Town, chief of Stromberg Carlson's television laboratory, "Bill" Fraser, SC sales representative.

Television pickups "in the flesh," fashion revenues, dancers, comedians, etc., were part of the show. FM, created wide discussion among the guests as it demonstrated its freedom from static. A complete line of Stromberg receivers flanked the demonstrations.

Radio Protector

A new product which helps to keep radio sets clean and shiny during handling and shipping is being offered

to radio men by the Crosley Corp., Cincinnati. This "Jewel Case" protector is made of "a soft tubular-knit cloth . . . containing a natural, colorless, cotton oil which makes it also ideal as a polishing and dusting cloth."

Selectar Corp. Gets Into Recorder Market

Aggressively announcing its entry into the professional and home recording market with a complete line of recorders, microphones, pick-ups and other accessories is the Selectar Mfg. Corp., 30 W. 15th St., New York City. The company has formerly specialized in making precision instrument in varied electro-mechanical fields.

The new Selectar line centers around the widely known Bruno products, and William A. Bruno has been retained to direct the technical activities of the new firm, and to insure "continuous source of advanced design." The Bruno line will be included in the new Selectar lines which will be ready for distribution shortly.

Norge Ready for Record Newspaper Advertising

A national newspaper advertising drive of peak proportions is being scheduled by Norge, just as the company makes a big step-up in factory production schedules. The program will be centered around the Norge Rollator electric refrigerators.

General merchandising manager James A. Sterling announces that the ads will appear in 164 major U. S. cities, and in newspapers in 2,900 small towns. Full color pages in metropolitan supplements will be run. It is estimated that total daily circulation of the papers in which the ads will run is over 22,000,000.

Dr. Goldsmith to New Offices

Dr. Alfred N. Goldsmith, consulting engineer in research, development, patents, etc., in radio and other fields, has announced the new location of his offices at 580 Fifth Ave., New York, N. Y.

WEBSTER - CHICAGO

Five *NEW*
Products
for 1940



DYNAMIC
MICROPHONE



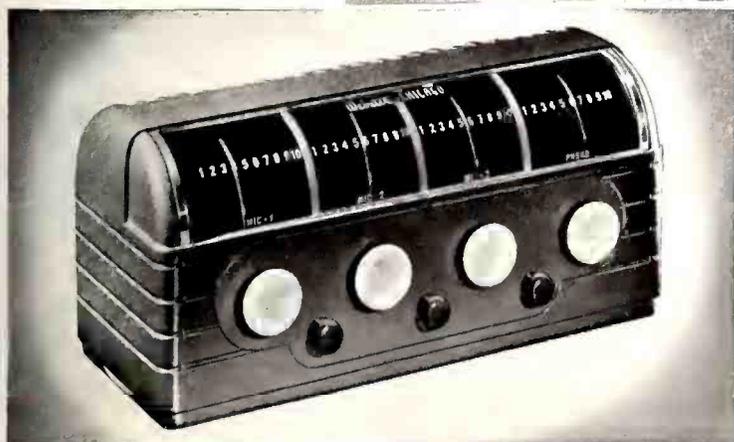
UNIDIRECTIONAL
MICROPHONE



"AMPLICALL"
INTERCOMS



PORTABLE
RECORDERS



"MASTER"
AMPLIFIERS

Booth 116
Room 557-A

WEBSTER-CHICAGO

"The Sound of Tomorrow"

Model 600

DACO RADIOMETER

"The Master Instrument"

DACO engineers have now developed the only complete instrument to service **ALL RADIOS-TELEVISION-SOUND**

amplitude } modulations are all
frequency } very simple for this
video } great instrument

The magnificent beauty of this remarkable instrument encloses built-in synchronization of signal tracer RF-IF amplifier electronic volt ohm milliammeter oscilloscope of wide range sweep generator sweep amplifier audio and supersonic frequency oscillator fundamental RF-IF oscillator loud speaker and all internal and external analysis.

**OPENS NEW FIELDS OF SERVICE
INCREASES EFFICIENCY OF SHOP
PROTECTS PROFESSIONAL STANDING
SMALLER SPACE . . . LESS TIME**

**DIGNIFY YOUR SHOP — BE THE FINEST
SERVICE IN YOUR COMMUNITY AND**

INCREASE YOUR PROFITS

PRICE WITH \$194.90
CABINET

PRICE WITH \$179.90
RACK PANEL

HUNDREDS OF FEATURES include 7" meter — 7" dials degree scales both ends, 1,000 volts AC-DC up to 10,000 volts if wanted, resistance range to 100 megohms — DB range —20 to +46 audio supersonic 20 to 150,000 cycles — RF-IF oscillator 9 bands AM-FM-video range 50 KC to 100 MC, calibrated output attenuator, direct reading in microvolts — oscilloscope, selective positioning of hor. and vert. deflector plates, cathode ray modulation — sweep generator range 10 to 25,000 cycles with sync. selector and lock-in control — sweep amplifier also used as separate low gain video amplifier — internal 60 cycle calibrated voltage — complete signal tracer of 6 bands and video amplifier, selection for AM-FM and television, amplifier gain internally calibrated input through constant capacity attenuator.

BUILT TO LAST FOR MINUTE PRECISION IN — SERVICE — LABORATORY — PRODUCTION

Beautifully streamlined, iridescent gray or black wrinkle finish cabinet, black and polish silver finish panel, 19" wide x 24½" high, designed rack panel if desired. Instrument 32" high x 24" wide x 16" bottom depth x 7" top depth. Heavy chrome handle — chrome trim strips join panel and cabinet.

MODEL 303C7
IMPERIAL
COUNTER MODEL

DACO TUBE TESTER TUBE SELLER

A real companion to the Radiometer

DACO again has accomplished the almost impossible task by automatically operating red "replace" and green "good" lighted windows simultaneously with this full size 7" meter — it really convinces your customers and increases tube sales.

Tests all tubes — tests all elements separately — tests under proper power load — obsolescence proofed DACO-Dayrad circuit — ask about our four year guarantee against wear or obsolescence.

THE MOST BEAUTIFUL TESTER OF ALL, with DACO new double column lighted fast rotary index chart, black and silver panel, cabinet 16" x 16" x 6" high x 3½" high, chrome trim.

PRICE WITH
LIGHTED
WINDOWS

\$44.90

PRICE WITHOUT
LIGHTS OR
PORTABLE MODEL

\$34.90

BEAUTIFUL
BLACK LEATHERETTE
PORTABLE CASE

Choice of Gray Black or Blue colors

See your jobber or write
Tube testers \$19.90 to \$59.90
and full line other radio equip.

DACO complete line
is the **WORLD'S COMPLETE LINE**

Export Division
646 N. Michigan Ave., Chicago, Ill., U.S.A.
Cable Address "COREXCO"

Dayton Acme Co.

Please send information

- Radiometer
- Other tube testers
- Tube seller
- Other equip.
- Time payment
- Rebuilt equip.

Name _____
Address _____
City _____ State _____

DAYTON ACME CO.
2339 GILBERT AVE. CINCINNATI, OHIO

